

1874.

## NEW ZEALAND.

## REPORT BY MR. BLACKETT ON THE WANGANUI RIVER.

(TOGETHER WITH FURTHER PAPERS ON THE SAME SUBJECT.)

*Return to an Order of the 15th July, 1874.—(Mr. Bryce.)*

## No. 1.

His Honor the SUPERINTENDENT, Wellington, to the Hon. the MINISTER for PUBLIC WORKS.  
 SIR,— Superintendent's Office, Wellington, 2nd December, 1873.

I have the honor to request that, in order to obtain a survey and report on the present condition of the Wanganui River, and the best method of improving its channel, an experienced officer of your department may have his services placed at my disposal for the purpose in question.

The Provincial Government will most willingly defray any expenses which may be incurred.

I have, &c.,

WM. FITZHERBERT,  
 Superintendent.

The Hon. the Minister for Public Works, Wellington.

## No. 2.

The Hon. Dr. POLLEN to His Honor the SUPERINTENDENT, Wellington.

SIR,— Colonial Secretary's Office, Wellington, 4th December, 1873.

I have the honor to acknowledge the receipt of your letter of the 2nd instant, in which you request the services of an experienced officer of the Public Works Department may be placed at your disposal, for the purpose of surveying and reporting on the present condition of the Wanganui River; and, in reply, to inform your Honor that the Government have had much pleasure in complying with your request.

Mr. Blackett, the Assistant Engineer-in-Chief, has been directed to put himself at once in communication with your Honor.

I have, &c.,

His Honor the Superintendent, Wellington.

DANIEL POLLEN.

## No. 3.

REPORT ON THE WANGANUI RIVER, BY THE ASSISTANT ENGINEER-IN-CHIEF.

SIR,— Wellington, 4th February, 1874.

I have the honor to forward a report on the Wanganui River, made on the request of His Honor the Superintendent of Wellington, and under instructions from the Acting Minister for Public Works.

The object of the required survey was to ascertain the present condition of the river, and the best method of improving the channel.

I proceeded to Wanganui on the 4th December, 1873, and spent six days in obtaining the necessary information, and in examining the river from the bar to the head of the ordinary navigation, a distance of some twenty to thirty miles.

Besides this personal examination, I directed a complete survey of the river to be made, with soundings from the sea to a point about two miles above the town. This was done under the supervision of W. Hales, Esq., District Engineer, the survey being made by J. H. Jackson, Esq.

A plan of the survey is attached to this report, as well as a copy of an old plan of the river with soundings made in 1844. The latter I have added in order that a comparison may be made between the state of the river at that date and the present time.

An observation of these plans will show that comparatively little change has taken place in the general character and course of the river, and that the soundings have not materially altered: the principal changes being in the direction of the deeper channels, more particularly just above what is called the Landguard Bluff; these changes being for the better, as the channels are now straighter and more regular in their course.

The river, just before reaching the sea, passes by another bluff (Castle Cliff, about two miles to the west of Landguard Bluff), and impinges strongly against the foot of it, forming at that particular place a deep entrance channel.

It is extremely probable that at some former but remote time the river flowed into the sea immediately to the west of the Landguard Bluff, and that a range of corresponding height reached from there to the Castle Cliff. This range has been gradually worn away by the continued action of the river (a westward direction being given to the latter by the flood-tide in Cook Strait, which at this place flows to the west and north); and this wearing action to the westward is still progressing at a comparatively rapid rate.

The change in the position of the entrance channel has been naturally followed or accompanied by the formation of a sandspit between the river and the sea, reaching from the Landguard Bluff to the present entrance, the spit gradually lengthening as the wearing action proceeds.

Across this spit the sea occasionally breaks in very heavy gales.

At no very distant day, it is certain, unless measures be taken to prevent it, that the portion of the cliff or range yet remaining, viz. that on which the signal station is situated, will disappear altogether, it being of no great extent, and the river, having then no check, will most probably find its way to the sea in one or more wide shallow channels quite useless for navigation.

Across the line of entrance to the river, and at a considerable distance seawards, viz. from a mile to a mile and a half, lies the bar, which is changeable in extent and position, presenting channels of varying width and depth for navigation, according to the prevalence of strong winds or of heavy floods in the river. At the time I crossed it, there were 10 feet of water at high tide, representing about 4 feet at low water, the rise and fall being from 6 to 8 feet.

Inside the river, and about half a mile above the Landguard Bluff, there is a deposit of snags, as is usual in all rivers of like character, extending over half to three-quarters of a mile; the deposit having taken place where the descending current of fresh water is checked by the influence of the inflowing tide. In this case they are in considerable numbers, and spread over a large area, their influence being to reduce the depth of the water, both by their actual presence and the collection of sand and silt, and to increase its lateral action in floods, causing destruction to the adjoining banks, and a consequent widening of the river at this place, where there is only, as on the bar, about 4 feet of water.

Above this the river gradually deepens and retains a tolerably uniform depth of channel, free from obstructions; and soundings give 8, 9, 11, 13 and 15 feet over several miles of its upper course.

There are three distinctly and permanently deep portions of the channel within six miles of the bar, viz.,—1st, under the Castle Cliff (where the depth is as much as 36 feet); 2nd, under the Landguard Bluff (29 feet); and 3rd, opposite the town of Wanganui, about a quarter of a mile above the bridge (30 feet). In all these places the channel is narrow, and the river impinges with force against one of the banks. Within this same distance there are two permanently shallow places,—1st, the bar, and 2nd, the Snag Flat, where a depth of only 4 feet is to be found, the above depths being all given at low water.

This general description will show what is required to improve the navigation—namely, the deepening of the two shallow places last described.

In the case of the bar, it is at once evident that this object to any great extent cannot be attained by any ordinary amount of expenditure; its position being so far to seaward, works of such a character would be required as would be completely beyond the means of the province, or indeed of the colony, at the present time, and the result would not by any means justify the outlay.

Within the river, however, the case is different, and much improvement in the channel can be effected by the removal of the snags above described. This operation should be carried on in a defined line of not too great a width, so as to secure as direct a course as possible (that indicated by the pile-beacons lately erected under the direction of the Harbour Master seems to be well selected); and if persistently followed up, permanent good will be effected, and a really safe river navigation be secured, with the probable result that the increased velocity of the river in this newly cleared channel, more especially in floods, will have a beneficial effect in deepening the water on the bar and straightening the entrance across it; it is probable, also, that the destruction of the river banks now going on at this place will to a great extent cease.

With the view of still further directing the outflow of the river within a defined channel, it may at some future time be found serviceable to erect low transverse groins at moderate distances apart—say 5 to 10 chains—across the shallow flats outwards from each bank, the effect of which would be to arrest the velocity of the water where they were built, and cause a deposit of sand and silt between them, thus gradually raising the surface of the flats, and virtually narrowing the water way with good effect. These might be built in a rough cheap way with stakes and brush manuka wattled between; they should be built low enough to be submerged every tide. I should not, however, recommend this work being executed until the channel has been cleared and the effect observed.

The protection of the Castle Cliff is a work that demands early attention, and the protective works should be of a permanent character. This cliff, which is about 50 or 60 feet high, is composed of gravel above and clay (*papa*) below, and has a nearly vertical face, with a *talus* or slope at its foot, the highest point of the slope representing high water line, and the lowest point low water line. It varies from 6 to 20 yards in width, and is strewn with large angular blocks of the clay mixed with gravel, which fall from the face of the cliff. An examination of these shows that the destruction of the cliff is not due to the river alone, but that it is largely accelerated by the operations of a marine boring insect, which honeycombs the clay between high and low water in such a way as rapidly to destroy large masses, which on inspection and fracture are found to be completely perforated through and through with holes about  $\frac{1}{4}$  inch diameter in every direction.

I was at a loss on this discovery to devise means that would effectually resist both the wearing action of the river below and the combined action of the surf and the borers above, as in the im-

mediate neighbourhood there is nothing but clay and sand and a little gravel, woodwork in such a position being apparently out of the question. I determined, therefore, to examine the river in its upper course, and was highly gratified to find that a supply of stone could be procured at a spot about twelve to fifteen miles up the river, and in a very accessible position. This stone appears in the shape of various strata, 4 to 6 feet thick, protruding at different elevations from the high sloping banks of the river, which are here covered with large fragments which have broken off and slid down the hill-side, many of them as far as the water's edge, which is bordered with them. The rock is composed, for the most part of limestone crystallized and full of shells concreted together, and has at one time or other formed the bed of the sea. It is, however, sufficiently hard for the purpose required, and will form an admirable protection to the Castle Cliff and entrance channel, if laid in blocks of all sizes at random in a layer about 3 feet thick, so as to cover the *talus* and base of the cliff above prescribed, and to form a fringe along and below low water line, in the manner indicated in the plan.

If the river should scour under the outer blocks, they would simply sink a little, and others could be added from time to time, to make good any deficiency; the outer line being made straight and regular so as to give a direction to the outflow, and the largest blocks being placed next the channel.

To stop the work of the borers as much as possible, I would suggest that before the *talus* is covered with rock, it should, as the work proceeds, receive a good coat of loose brush manuka at least 6 inches thick, or of fascines, the surface being prepared to receive it, so that no part of the clay shall be exposed directly to the water or air. These works should be commenced in the river and carried gradually seaward. In reference to the cost of the necessary works, I should recommend that a sum of at least £2,000 be devoted to the removal of snags; and that amongst the plant required for this purpose a complete diving dress and apparatus be included, by which means much time will be saved in making fast to the snags.

The rockwork may be approximately estimated at about 11,000 cubic yards, which, at 10s., will give £5,500; to this may be added say £500 for preparing the slope and laying down brush manuka, and £1,000 for plant, gear, and contingencies, as well as a further sum, which may or may not be required, for the transverse groins, of £1,000, making a total of £10,000.

The snagging should be proceeded with at once, and prosecuted vigorously; the other works may be dealt with more leisurely.

It may not be out of place to give an opinion on the character of protective works best suited to this river generally. There can scarcely be a doubt that the method already adopted on parts of the river bank some distance above the bridge is the right one, viz. the laying down of fascines pointing transversely to the stream in layers or tiers, one over the other, binding these with stakes, and weighting the whole with clay, earth, and turf, willow stakes being planted freely along and above the water-line.

Upright wooden groins of piles and planking appear to be essentially bad and wrong in principle, and produce unlooked-for and prejudicial effects on the channel. One of these structures is standing in the river above the town, detached from the bank, and I should recommend its early removal.

I have, &c.,

The Hon. the Minister for Public Works, Wellington.

JOHN BLACKETT.

#### No. 4.

His Honor the SUPERINTENDENT, Wellington, to the Hon. the COLONIAL SECRETARY.

SIR,—

Superintendent's Office, Wellington, 16th January, 1874.

I have the honor to forward you a copy of a resolution passed by the Provincial Council on the 15th instant, with regard to the issue of a grant of a block of land in the bed of the Wanganui River, containing forty-eight acres, more or less, to the Mayor, Councillors, and citizens of the Borough of Wanganui, for the purpose of reclamation, and to form part of the estate of the Corporation of the Borough of Wanganui, under the provisions of Section 2 of "The Public Reserves Act, 1854."

I have further the honor to express my concurrence with this resolution, and to recommend that His Excellency the Governor may be advised to grant the land described in the Schedule to the Mayor, Councillors, and citizens of the Borough of Wanganui, for the purposes set forth in the resolution.

I have, &c.,

WILLIAM FITZHERBERT,

Superintendent.

The Hon. the Colonial Secretary, Wellington.

#### Enclosure in No. 4.

RESOLUTION agreed to by the PROVINCIAL COUNCIL of WELLINGTON, January 15, 1874.

RESOLVED,—1. That the Council recommends that His Excellency the Governor be advised, under the provisions of the 2nd section of "The Public Reserves Act, 1854," to grant to the Mayor, Councillors, and citizens of the Borough of Wanganui, all that parcel of land below high watermark in the bed of the River Wanganui, the boundaries whereof are more particularly described and set forth in the Schedule hereto, and containing by admeasurement forty-eight acres, more or less, for the purpose of reclamation, and to form part of the estate of the Corporation of the said Borough.

2. That an address be presented to His Honor the Superintendent, requesting him to concur in the recommendation contained in the foregoing resolution, and to forward the resolution, with an intimation of his concurrence, to the Hon. the Colonial Secretary.

#### SCHEDULE.

ALL that piece of land containing forty-eight acres, more or less, being a portion of the right side of the River Wanganui, lying between the production of the north-eastern boundary of country Section

No. 11 and the production of the north-eastern boundary of suburban Section No. 14, and bounded towards the north-east by a line of 5 feet in depth at low water spring tides; towards the south-east by a line of 3 feet in depth at low water spring tides, and by a line parallel to, and 390 links distant from, the south-eastern side of Taupo Quay, lying between Churton's Creek and the production of the south-western side of the Market-place; towards the north-west by the line of high water spring tides, and by the south-eastern side of Taupo Quay; and towards the south-west by the line of high water spring tides.

### No. 5.

MEMORANDUM by Mr. SEED for the Hon. the COMMISSIONER of CUSTOMS.

#### *Wanganui River Foreshore Grant.*

THE Superintendent of Wellington, in pursuance of a resolution of Provincial Council, applies for a grant of forty-eight acres in the bed of the Wanganui River. This includes the twenty-nine acres defined in the Schedule to the Wanganui River Foreshore Grant Act of last Session; nineteen acres more are therefore now asked for than was authorized to be granted by that Act. The remarks I made on the Wanganui River Foreshore Bill, when you referred it to me in the shape in which it was first submitted to the Legislature, apply with greater force to the extended area now asked for, than they did to the smaller area described in that Bill. I annex the copy of the Bill on which those remarks were written, attached to it is the letter of the late Mr. Balfour (dated 14th October, 1869), to which I desire to draw especial attention, as it goes very fully into this question of foreshore grants, and shows what action ought to be taken to prevent damage to harbours before grants of this nature are made by the Crown. It is impossible to over-estimate the importance of this question, as any ill-designed reclamation may do irreparable damage to a river or harbour.

Before this application is entertained, I strongly recommend that the Marine Engineer be sent to Wanganui, to report as to what effect the reclamation of this large area is likely to have on the Wanganui harbour and bar. Even if his report should not be adverse to the grant being made for the purpose of this reclamation, he will, no doubt, see the propriety of specifying conditions that should be imposed in the grant as to the manner in which the reclamation should be carried out; for although the general design might be unobjectionable, yet serious damage might result from its being carried out piecemeal,—for instance, by beginning opposite to the wharf and business part of the town, or even lower down the river, instead of beginning at the upper part of the area applied for, opposite the Market-place, and working downwards with the flow of the river.

I desire to state that those papers were referred to me whilst I was absent from Wellington, which accounts for the delay that has arisen in my attending to them.

17th February, 1874.

W. SEED.

I CONCUR that before application is entertained, the Marine Engineer should personally inspect and report. If it should be decided to grant application, an Act will have to be passed in which similar provisions to that in section 3, "Wanganui Foreshore Act, 1873," can be made, imposing conditions under which the reclamation must be carried out.

17th February, 1874.

W. H. REYNOLDS.

### Enclosure in No. 5.

Mr. J. M. BALFOUR to the POSTMASTER-GENERAL.

#### *Grants of Land in Harbours, &c.*

SIR,—

Marine Department, Wellington, 14th October, 1869.

The papers in connection with the application of the Superintendent of Auckland for grants of certain portions of the water areas of the harbours of Auckland and Tauranga, having been referred to me for remarks, I have the honor to report as follows:—

1. The principles involved being of very great importance, and the present case being likely to establish a precedent, I shall begin by a few general remarks, afterwards making some observations on the present application.

2. If, as I presume, the grantees are entitled to do anything they like with and upon any land for which they hold a Crown grant, and may subdivide and sell the same in smaller or larger sections, it must be clear that there is a possibility, if not a probability, of all such lands below high watermark in any harbour which are conveyed by Crown grant being reclaimed sooner or later, and not only so, but reclaimed in an irregular and patchy manner.

3. This may injure the public in two ways: it may obstruct water privileges, or convenience of water carriage, which proprietors of adjacent lands may possess or may think they have a right to, and it may very seriously injure the harbour itself by obstructing the flow of tidal currents and excluding tidal water, and so causing the deep water area to silt up.

4. Mainly for these reasons the English practice is very strict. I cannot recollect a single instance in which a grant of land has been made by the Crown in Great Britain except for some distinctly defined purpose, and on certain conditions, and then only in pursuance of an Act of Parliament. It is within my own experience that a proprietor in the Island of Mull, who desired to construct a small steamboat jetty in Tobermory Harbour projecting from his own land, required to carry an empowering Bill through the House of Commons. Again, certain landed proprietors on the River Dee, in Cheshire, obtained, by Act of Parliament, permission to reclaim the foreshores of that river; but it was on condition that they were to maintain a certain depth of water in the navigable portion of the river to all time coming, and the Admiralty were intrusted with the necessary powers to see that this was done.

5. Such being the English practice, I cannot but concur with the opinion of the Hon. the Attorney-General, attached to these papers, to the effect that "In no case should land under the sea be granted, unless it is shown what it is proposed to do with it, and that the purpose is a proper one."

I think the Crown should retain the land until it is made apparent that any proposed dealing with the land will at once be proceeded with. . . . The Crown may grant land under the sea to be reclaimed, but it has been held that the reclamation must be completed in a reasonable time after the making of the grant."

6. I should go farther, and recommend a closer approximation to the English practice. It would be a most proper arrangement that any such grants should only be made by Act of Legislature, due notice having previously been made, by advertisement and otherwise, of the intention to apply for such an Act, so that all interested parties might have ample opportunity to oppose should they consider it in their interests to do so. The Government of the colony would oppose, promote, or remain neuter, according as they should be advised that the proposed work would be injurious, beneficial, or innocuous as regards the navigable portion of the harbour. At Home, all such Bills are primarily submitted to the Board of Trade, and by it referred to the Admiralty; the Admiralty, if the case be a difficult one, calls in some eminent engineer, and after receiving his report, they inform the promoters of the Bill whether they will or will not oppose the Bill in Committee.

7. In support of these views, I must shortly sketch the modern theory of tidal harbours. It is maintained by engineers that all tidal harbours (whether the embouchures of rivers or mere arms of the sea) have their channels scoured out and kept open mainly, if not entirely, by the currents of ebb and flood; consequently, every acre of land reclaimed from the sea between the levels of low and high water must diminish the scour by excluding tidal water, and so must, theoretically at least, injure the harbour. I could quote from the writings of many of our greatest engineers, but it would take too much time. Their opinions are summarized by Mr. Bald, when he says "I hold that every inch of water excluded from a harbour must injure the navigation."

8. This is the general theory. In practice, it is not denied that reclamation, if judiciously conducted, on proper lines and in a regular manner, need not be injurious, and may, indeed, be beneficial; because the lines of embankment may be laid out in such a manner as to guide the tidal currents and confine them always to the same channel, which may thus be maintained at the same depth, or even deepened, by a smaller body of water than entered the harbour previously, because before the works were constructed the water may have been diffused over many and winding channels, whereas the works may confine the tide currents to one comparatively straight course.

9. If the works of reclamation be carried out in an irregular manner, however, even though well designed for the benefit of the harbour when completed, they may do great damage while in progress. A small piece of land reclaimed here and there, with probably sharp corners and re-entering angles, would so completely disturb and break up the normal run of the tide currents, as probably to injure the channel very seriously—perhaps even to a greater extent than the works when finished would be able to repair. Hence the importance of the Attorney-General's stipulations that the reclamation should be completed within a reasonable time.

10. I shall now refer to the particular cases before me.

*Auckland Harbour.*—In order to show more distinctly the nature of the application for a grant of a portion of the north shore of Auckland Harbour, I have laid down the areas as accurately as the information enabled me, on the accompanying chart. The portion tinted blue, on the south side of the harbour, has been already granted "in trust for the improvement of the harbour." The portion surrounded by a dotted red line, and tinted pink, is the area applied for by His Honor the Superintendent in 1867, and which the Secretary of Crown Lands recommended should not be granted. That his advice was sound, a simple inspection of the chart will at once show. (I believe it has not previously been laid down on any chart or plan showing soundings.) The area asked for covers the fairway of the harbour at the entrance, almost extending to the five-fathom line on the south shore, while in the upper part of the harbour it actually covers the whole of the water area, and extends to the low watermark on the south side. The portion surrounded by a pink line (approximately parallel to low watermark, and ten chains outside of it), and tinted purple, is, as nearly as I can delineate it, the area which Mr. Domett now proposes to grant. This is reasonable in amount, but the line is objectionable from an engineering point of view. On the assumption that it may all be reclaimed in time, it will simply have the effect of pushing the present high-water margin a certain distance into the harbour, and there repeating its present objectionable features. Thus the reclamation would displace tidal water without any compensating guiding action on the currents of ebb and flow. The portion, also surrounded by a continuous pink line, and hatched in pink, is what I should prefer to grant. It will be observed that the bounding line is drawn on easy curves which touch the extreme points of the shore; were the whole of the hatched area reclaimed, I believe the currents would be so much more regular that the harbour would not be injured, notwithstanding the considerable diminution of the water space. I believe, moreover, that the embanking and ultimate reclamation of mud flats of one portion, while forming a noble harbour endowment, would actually benefit the harbour, as the water ebbing from that extensive inlet must at present seriously interfere with the water flowing from the upper portion of the harbour, and force it over to the southern shore, there to deposit its silt. The area I propose to grant extends into various depths up to 10 and 12 fathoms, so that there would be ample choice of site for a graving dock or patent slip.

It might, however, be considered that the hatched area eastward of Stokes' Point would be amply sufficient to grant at present. I have less difficulty in recommending a grant in Auckland Harbour, as it is more an arm of the sea than an ordinary tidal harbour. It has no bar, and such an ample depth of water, that only very extensive interference with the tidal area would be likely to be injurious to the harbour from a nautical point of view, provided, of course, that the works were carefully laid out on proper lines.

11. *Tauranga Harbour.*—The harbour of Tauranga is very different. It is purely a tidal harbour, its channels being kept open solely by the scouring action of the currents. An amount of reclamation which would be innocuous at Auckland would probably damage Tauranga Harbour to an extent that would necessitate continuous and expensive dredging in order to keep the channel open. The accompanying chart shows (tinted pink) the area included between high watermark and a line 20 chains therefrom, and it shows the absolute necessity of considering such questions on a chart, and not on a land survey plan which shows neither low water line nor soundings.

The Provincial Secretary of Auckland, in renewing his application for a grant of certain lands in Tauranga Harbour, states that the application was for "all the lands between high and low watermark," and no doubt it was imagined that 20 chains from high water represented such tidal lands merely. A glance at the chart, however, shows that this is very far from being the case; in fact, a strip 20 chains in width covers the whole of the deep water channel of the harbour from the entrance right up to the town; and I am convinced that the Provincial Government would not desire such a grant, and equally convinced that His Excellency the Governor should not be advised to make it.

Further, Tauranga is one of those harbours to which the maxim applies in all its force, that all reclamation must be injurious, unless compensated by works of improvement, and as it is one of the few good natural harbours on the East Coast, it is all the more necessary to watch over it with care. I assume, as of course, that the Provincial Government is equally alive to the necessity of improving the harbour, and that it would not sanction any works which would be liable to damage it; but so long as the General Government of the colony is supposed to represent the Crown, as owner of all lands covered by the sea, I do not think it would be wise to grant any lands in Tauranga Harbour, except in accordance with the advice and opinion of the Hon. Attorney-General, above quoted. (Paragraph 5.)

I may state that the only conditions on which I should be prepared to recommend even a modified grant of land in Tauranga would be,—

- (a.) That the Provincial Government should prepare a plan showing what was proposed to be done with the land applied for.
- (b.) That the grant should be conditional on the works being completed within a certain period, the land otherwise to revert to the Crown.
- (c.) That all proceeds of sales of any such land should be set apart solely for the maintenance and improvement of the harbour; and
- (d.) That the Provincial Government should bind themselves, and give security of some sort, to maintain a channel through the harbour, at least as deep as the present channel, to all time coming.

The only other alternative which I can see, but which I certainly do not recommend, is that the General Government should grant the whole harbour to the province, and thus throw the onus of maintaining it entirely on the Provincial Government.

I have, &c.,

JAMES M. BALFOUR,

Colonial Marine Engineer.

The Hon. the Postmaster-General, Wellington.

## No. 6.

MEMORANDUM by Mr. BLACKETT.

*Wanganui River Foreshore Grant.*

Mr. SEED,—

28th February, 1874.

I have read the papers connected with the above, including Mr. Balfour's general remarks on foreshore grants, as well as yours directing attention to them. They are so obvious of application to the present case, that I may briefly say I can add nothing to them.

I concur entirely with the remarks as to the manner of carrying out such works, that is, as a whole, and not by piecemeal, as the land may be required from time to time for local purposes. Also, that they should be begun at the upper end and carried on continuously down the river.

Having been lately called upon to report upon the River Wanganui for the Provincial Government, in reference to the improvement of its channel, I was under no necessity of making another special inspection, having just had prepared complete plan and soundings of the river, including the part in question. I am, therefore, in a position to report at once that I consider the amount of reclamation proposed to be too great, and that it will encroach prejudicially on the present limits of the water-way.

I attach two plans, No. 1 and No. 2, to illustrate the following description:—No. 1 to a large scale, showing actual dimensions, and No. 2 to a small scale, showing general course of river, &c.

I propose that a total width of  $3\frac{1}{2}$  chains only (measuring from the face line of the houses on Taupo Quay) be reclaimed this width, being parallel from Churton's Creek to the south boundary of St. Hill Street, thence on a straight line to a point at corner near Market Reserve  $1\frac{1}{2}$  chain from the same face line, thence straight to another point (apparently a wharf) 1 chain from the shore line, thence in a straight line to meet the fascine protective works already executed, as shown on plans.

The angles formed by the meeting of these straight lines may, of course, be rounded off in actual construction.

The second straight line above described will cut through the two cylinders forming the most westerly piers of the Wanganui Bridge.

The work, I would suggest, should not terminate in a square line at Churton's Creek, but be carried down the river to the first projecting point, and Churton's Creek should be made to debouch in a confined channel placed at an angle with the front wall.

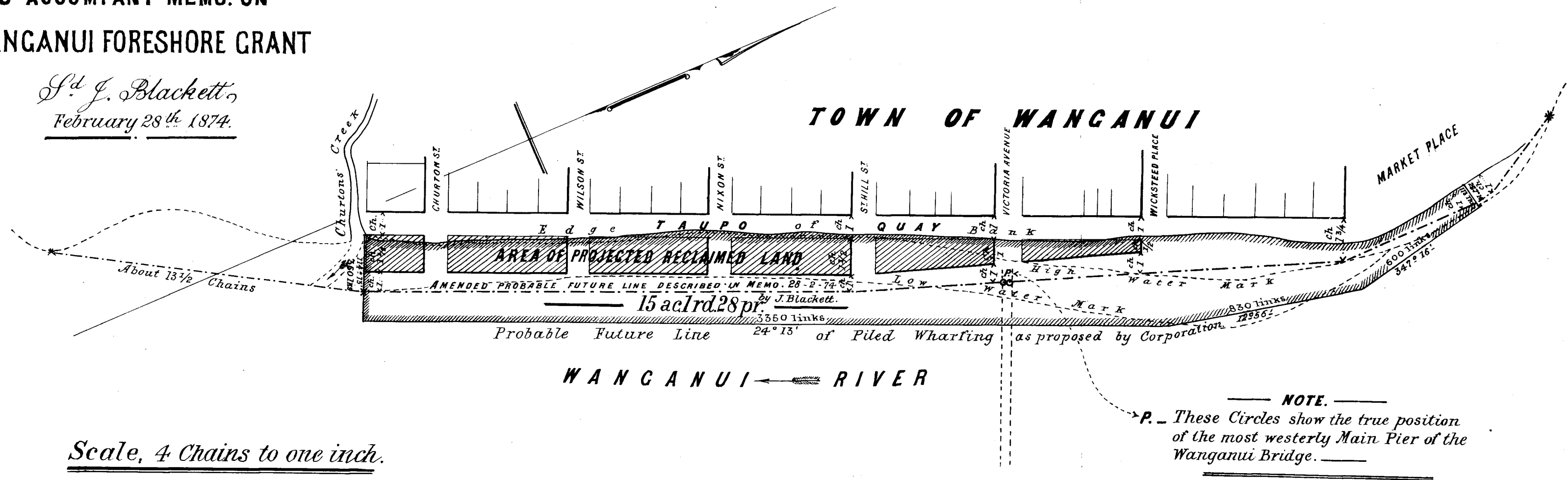
Should this reclamation be carried out, I may offer suggestions as to how the reclaimed land should be laid off, and have sketched this to scale on both plans, leaving Taupo Quay one chain wide, then four building blocks  $1\frac{1}{2}$  chains wide, and two of a tapered form, the least width being half a chain; and in front of these a public quay one chain wide, the importance of retaining which cannot be over-rated. A portion of the reclaimed land should be reserved for General Government purposes, such as custom house, warehouses, &c.

JOHN BLACKETT.

— PLAN — No 1. —

TO ACCOMPANY MEMO. ON  
WANGANUI FORESHORE GRANT

*J. J. Blackett,*  
February 28<sup>th</sup> 1874.





S<sup>d</sup> J. Blackett,  
February 28<sup>th</sup> 1874.

**WANGANUI  
TOWNSHIP**

**NOTE.**

The outer dotted line shows the extent of reclamation asked for - A.A.A.A. —————

The inner full line B.B.B is the line proposed to be substituted.

Hospital .

*Nixons Creek*

York Hill  
Sig<sup>l</sup> St<sup>e</sup>

*Court House*

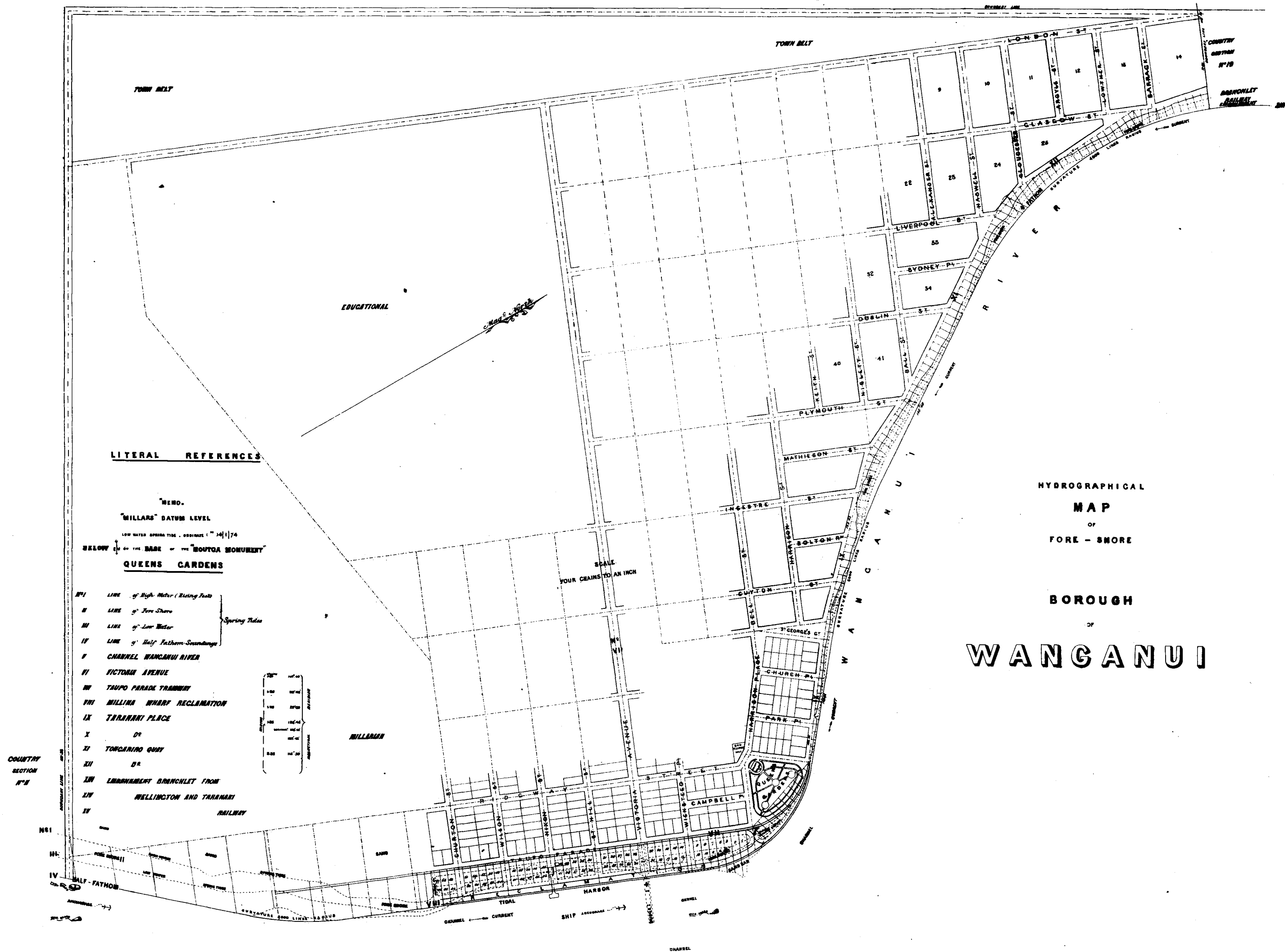
WANGANU  
TOWNSHIP

SHAKESPEARE'S CLIFF

S<sup>d</sup> J. Blackett,  
May 21<sup>st</sup> 1874.

Scale, 10 Chains to one Inch.





**LITERAL REFERENCES**

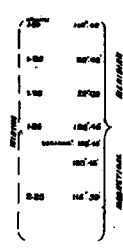
MEMO.

"MILLARS" DATUM LEVEL

LOW WATER SPRING TIDE, ORIGINATE ("141)74

BELOW 1/4 IN THE BASE OF THE "BOUTOA MONUMENT"  
**QUEENS GARDENS**

- I LINE of High Water (Rising Tides)
- II LINE of Low Water
- III LINE of Half Fathom Soundings
- IV CHANNEL WANGANUI RIVER
- V VICTORIA AVENUE
- VI TAUPO PARADE TRAMWAY
- VII MILLINA WHARF RECLAMATION
- VIII TARANAKI PLACE
- IX DO
- X TORCARING QUAY
- XI DO
- XII LARNHAM BRANCHLET FROM
- XIII WELLINGTON AND TARANAKI
- XIV RAILWAY



HYDROGRAPHICAL  
MAP  
OF  
FORE - SHORE

BOROUGH

**WANGANUI**



## No. 7.

MEMORANDUM by Mr. SEED.

16th March, 1874.

I HAVE only to-day received a plan showing the whole area applied for, hence the delay that has occurred in submitting this report to you.

The plan which was put up with the Superintendent's letter (or got with these papers in some way), and which was referred to Mr. Blackett, only shows a very small portion of the area of the projected reclaimed land (15 acres 1 rood 28 perches, out of the 48 acres asked for). I did not discover this until after the papers came back from Mr. Blackett. As soon as I did, however, I went to the Chief Surveyor of the province, and asked for a tracing of the plan of the land described in the schedule enclosed in Mr. Fitzherbert's letter. Mr. Jackson sent me this to-day. I think it should go to Mr. Blackett for any further remarks he may have to offer thereon.

His observations in this memorandum show conclusively, I think, the great danger there would be of the Port of Wanganui being seriously injured, if the grant of land asked for were to be made unconditionally. I think that Mr. Blackett's proposals should be adopted, and that any grant to be made should only be of such an extent as he thinks would not be injurious to the port; that it should be made subject to conditions to be prescribed by him as to the plan of reclamation, and how it should be carried out; and further and especially, that there should be reserved out of the reclamation a public thoroughfare on the bank of the river along the entire extent of the land to be granted.

The Attorney-General appears to be of opinion (see his minute of 19th January) that an Act should be passed authorizing this grant before it is made. As the Government will no doubt concur in that opinion, I recommend that Mr. Blackett be asked to specify what area he thinks may properly be granted for reclamation, without detriment to the river and entrance; and what conditions ought to be imposed as to the mode of reclamation. On his supplying this information, a definite reply can then be made to His Honor the Superintendent's letter of the 16th January last.

The Hon. the Commissioner of Customs.

W. SEED.

## No. 8.

MEMORANDUM No. 2 by Mr. BLACKETT.

*Wanganui River Foreshore Grant.*

MR. SEED,—

21st May, 1874.

I received the large tracing, showing what is asked for in connection with the above, and have reconsidered the matter, as requested.

I do not find it necessary to alter my first memorandum, nor the plan accompanying it, but have sent with this and the Plan No. 3, showing what lines I think the reclamation, if any, should take above and below the points already described. These are shown in red, and it will be observed that they are made to strike with suitable curves the salient points of the river bank above the town, and are marked with distances and angles below the town.

I may here be allowed to express an opinion that it will be premature to give any rights over the foreshore pending the decision as to what direction the branch line of railway will take from the main line to the Town of Wanganui. You will observe, on Plan No. 3, the defined position of the railway bridge, and it is, to say the least, highly probable that from that point, or near it, a branch line will be made to the town about a mile and three-quarters distant. This consideration should also influence the manner in which the reclaimed land in front of the town should be laid out for building, as should the branch line be made to connect with the shipping—as it almost certainly will be—a considerable space, both as to length and breadth, will be required for a railway station. Until we have sufficient information on this head in detail, it will be well to reserve all rights now held by the General Government.

JOHN BLACKETT.

## No. 9.

His Honor the SUPERINTENDENT, Wellington, to the Hon. the COLONIAL SECRETARY.

SIR,—

Superintendent's Office, Wellington, 11th April, 1874.

I have the honor to request that you will be good enough to reply to my letter of the 16th January last, in which I forwarded you a copy of a resolution passed by the Provincial Council, on the 15th of the same month, with regard to the issue of a grant of a block of land in the bed of the Wanganui River, containing forty-eight (48) acres, more or less, to the Mayor, Councillors, and citizens of the Borough of Wanganui, for the purpose of reclamation.

I have, &c.,

The Hon. the Colonial Secretary,  
Wellington.

WILLIAM FITZHERBERT,  
Superintendent.

## No. 10.

The Hon. the COLONIAL SECRETARY to His Honor the SUPERINTENDENT, Wellington.

SIR,—

Colonial Secretary's Office, Wellington, 14th April, 1874.

I have the honor to acknowledge the receipt of your letter of the 11th instant, in which you ask for a reply to your previous communication of the 16th January last, forwarding a resolution passed by the Provincial Council on the 15th of the same month, with regard to the issue of a grant of a block of land in the bed of the Wanganui River, containing forty-eight acres, more or less, to the Councillors and Citizens of the Borough of Wanganui, for the purpose of reclamation.

In reply, I have to state that the question is still under the consideration of the Marine Department, and that it will yet be some little time before a definite answer can be sent to your Honor. This delay is occasioned by the whole of the Marine Staff having been, and still being, engaged in lighthouse business.

His Honor the Superintendent, Wellington.

I have, &c.,  
WILLIAM H. REYNOLDS.

### No. 11.

The Hon. the COLONIAL SECRETARY to His Honor the SUPERINTENDENT, Wellington.

SIR,—

Colonial Secretary's Office, Wellington, 13th June, 1874.

Referring to your Honor's letter of the 11th April, on the subject of the grant of forty-eight acres, more or less, in the bed of the Wanganui River, which your Honor had recommended should be made to the Mayor, Councillors, and citizens of the Borough of Wanganui, for the purposes of reclamation, and to form part of the estate of the Corporation, and to my reply of the 14th April, I have now the honor to inform you that since Mr. Blackett's return to Wellington he has reported to the Government that it would be premature to give any rights over the foreshore of the Wanganui River, pending the decision as to what direction the branch line of railway to the Town of Wanganui will take from the main line, as, from the position selected for the railway bridge over the river, it is highly probable that from that point, or near it, a branch line will be made to the town, about a mile and three-quarters distant. This consideration, Mr. Blackett points out, should also influence the manner in which the reclaimed land in front of the town should be laid out for buildings, as, should the branch line be made to connect with the shipping, as it almost certainly will be, a considerable space, both as to length and breadth will be required for a railway station; and he recommends that until the Government are in possession of sufficient information on this head in detail, it would be well to reserve all rights now held by them over the foreshore in question. The force of Mr. Blackett's representations will, the Government feel assured, be at once recognized by your Honor, and you will perceive that, in the face of those representations, the Government cannot recommend His Excellency to make an unconditional grant of the land applied for. Independently, however, of the objections referred to, there is another one of a weightier character against an unconditional grant being made of so large a portion of the foreshore as that which you recommend. It has been pointed out to the Government that any reclamation at Wanganui, if not carried out on a well-considered plan, would certainly have the effect of seriously damaging the harbour.

The Marine Engineer, to whom this question was referred, has expressed his opinion that the amount of reclamation proposed is too great, and that, if carried out, it would encroach prejudicially on the present limits of the water-way; and he has prepared a plan (tracing of which is enclosed herein) showing what lines the reclamation (if any) should take. Mr. Blackett strongly urges that any reclamation should be carried out as a whole, commencing from up river above the town, and not by piecemeal from time to time, for local purposes, as any isolated piece of reclamation—although it might be a part of a well-devised plan for the whole—which would have square or bluff abutments to the river bank, would divert the river current, and cause alterations in the channel, and probably serious damage. It has been further strongly urged on the Government, that whatever reclamation may be permitted to be done, there should be a stipulation that a public thoroughfare should be reserved on the river side, along the entire length of the land reclaimed. The Government entirely concur in the views and opinions expressed above, and will, accordingly, only be prepared to recommend that a grant be made to the municipality of Wanganui of part of the foreshore of the river, as shown in the tracing transmitted herewith, subject to the reservation of so much of it as may be required for the projected branch railway and stations, such grant to be subject to conditions similar to those contained in section 3 of the Wanganui River foreshore grant of last Session, as to plans and specifications of works being submitted to the Governor in Council for approval, and as to owners of land injuriously affected by such works being entitled to compensation; and, further, that the mode of carrying out any reclamation or other works connected therewith shall be subject to the control and approval of the Engineer-in-Chief and the Marine Engineer, or other officers who may be appointed by the Government to supervise the plan and execution of such reclamation or other works.

I desire to add, that the Government regret that so much delay has arisen in dealing with this question. This delay was caused, in the first instance, through no proper plan having been supplied to the Government, showing the exact position and extent of the land applied for until the middle of March; and, afterwards, through the rather protracted absence of the Marine Engineer from Wellington, on duty connected with the Marine and Public Works Departments.

His Honor the Superintendent, Wellington.

I have, &c.,  
WILLIAM H. REYNOLDS.

### No. 12.

His Honor the SUPERINTENDENT, Wellington, to the Hon. the COLONIAL SECRETARY.

SIR,—

Superintendent's Office, Wellington, 16th June, 1874.

I have the honor to acknowledge the receipt of your letter of the 13th instant, No. 209, on the subject of the grant of forty-eight acres, more or less, in the bed of the Wanganui River, to the Mayor, Councillors, and citizens of the Borough of Wanganui, for the purpose of reclamation.

In reply, I beg to inform you that I have forwarded a copy of your letter and tracing to His Worship the Mayor, and so soon as I receive his reply I will communicate with you further.

I have, &c.,

WILLIAM FITZHERBERT,  
Superintendent.

The Hon. the Colonial Secretary, Wellington.

## No. 13.

His Honor the SUPERINTENDENT, Wellington, to the Hon. the COLONIAL SECRETARY.

SIR,— Superintendent's Office, Wellington, 15th July, 1874.

Referring to your letter of the 13th June last, and to my reply thereto of the 16th of the same month, on the subject of the grant of the foreshore of the Wanganui River to the Mayor, Councillors, and Citizens of the Borough of Wanganui, I have now the honor to enclose copy of a letter I have received from His Worship the Mayor, dated 10th July, 1874; and I invite your careful consideration of the arguments urged therein.

I have, &c.,

WILLIAM FITZHERBERT,

Superintendent.

The Hon. the Colonial Secretary, Wellington.

## Enclosure in No. 13.

His Worship the MAYOR, Wanganui, to His Honor the SUPERINTENDENT, Wellington.

SIR,— Borough Council Office, Wanganui, 10th July, 1874.

In reply to your letter of the 16th June, enclosing a copy of one from the Colonial Secretary (Mr. Reynolds) of 13th June last, I have the honor to inform you that after it had been duly considered by the Borough Council, the following resolution was agreed to:—

“That the Mayor acknowledge the receipt of His Honor's letter, and state that the Council concurs with the view expressed in the Colonial Secretary's communication enclosed therein.”

As, however, it is difficult to express in a single sentence all that the Council wishes to be taken into consideration by the General Government and yourself with regard to the rather complex subjects discussed in the Colonial Secretary's letter, I suggested that a letter should be drafted by myself and forwarded to your Honor, if approved of by the Council. This proposal was agreed to; in pursuance of which I now call your attention to the points in the Colonial Secretary's communication which, in the interests of the town and district of Wanganui, seem to demand the exercise of the greatest care on the part of both the Provincial and General Governments before action is taken.

The Corporation is of course anxious to secure to the town as large an acreage of the foreshore as possible, recognizing, as it does, that judiciously executed reclamation will render this a very valuable property. At the same time it is fully aware that to gain this at the expense of the port would be a fatal error. To this extent, then, the Corporation fully agrees with the General Government, but nevertheless trusts that care will be taken that the margin allowed for safety is not needlessly large. I submit that there is risk of such a mistake being made—a mistake on the right side, no doubt, but still a mistake—if the plan forwarded has been hastily decided on without a careful professional examination on the spot of all the physical facts and all the conflicting interests involved.

Connected with the port and river navigation, is the question of quay frontage, which the Corporation concurs with the Colonial Secretary in thinking should be preserved as a public thoroughfare, as indeed is indicated in the plan of the proposed reclamation prepared by the Borough Engineer, and forwarded to your Honor in January last. In reference to this, I desire to point out the advantage it would be to the town, if the grant was made so as to include as great a depth of water on the river frontage as possible, not arbitrarily limited to three feet, or any other measure, (as in the Schedule to “The Wanganui River Foreshore Grant Act, 1873,”) but being left merely contingent on such lines as, in the opinion of qualified persons, would give the town the maximum area of foreshore consistent with preserving the port from injury.

The Corporation sees the mischief that might arise if reclamation were carried on piecemeal, but hopes that as much latitude will be given in this respect as the facts will justify. It is evident that the value of the property to be granted to the Corporation would be seriously depreciated if conditions were needlessly attached to it which would render it impossible to utilize it for many years, for want of sufficient funds.

With regard to the railway, it is so evidently of the last importance to the town that it should be connected with the main lines, that the Corporation entirely agrees with the Colonial Secretary as to the necessity there is for reserving to the Government full power to use any public land required in connection with it. While writing on this subject, I take the opportunity of asking your Honor to urge the General Government to push on the Wanganui-Waitara Railway from this end of the line. Of its political importance, as affecting the Native question, you are well aware, and commercially it is of equal consequence to both town and country. Even without a railway, and with but a short period of peace, the settled district between Wanganui and Mount Egmont has progressed, both in wealth and population, more rapidly than any other part of the North Island, while with one, many resources, now lying dormant, would be utilized. Taken in conjunction with the river improvements, which I confidently anticipate will shortly be undertaken by the Provincial Government, the produce which the northern and southern lines of railway would, from the very first, pour into Wanganui in exchange for imports, would develop a trade which would not only enormously increase local and provincial prosperity, but would add materially to the colonial revenue.

Having regard to all the circumstances affecting the grant of the foreshore to this municipality, I cannot but think that, if the General Government is not in possession of sufficient data to enable it to decide finally on the area and boundaries of the grant, these should be obtained before it is made. Should there not be time to do this effectually, or if from any other cause it should be found impossible to make immediately any but the grant with its attached conditions (all perfectly fair and reasonable as safeguards of general, local, and private interest) proposed in paragraph six (6) of the Colonial Secretary's letter, and defined in the plan sent therewith, then I think the interests of the borough would be best consulted by leaving it to your discretion to delay taking further action.

In thus leaving the matter in your hands, the Corporation relies implicitly on the good faith of the General and Provincial Governments, feeling sure that, while local requirements are properly subordinated to those of a more general character, the former will not be lost sight of, and that if the municipality does not obtain all it expected, it will have all that it can justly claim, and be dealt with fairly and liberally throughout.

I have, &c.,

ROBERT PHABAZYN,

Mayor.

His Honor the Superintendent, Wellington.

