

1887.
NEW ZEALAND.

REPORT ON THE NEW ZEALAND FORCES,

(BY MAJOR-GENERAL SIR G. S. WHITMORE, K.C.M.G., COMMANDER OF THE FORCES.)

Presented to both Houses of the General Assembly by Command of His Excellency.

The COMMANDER of the COLONIAL FORCES to the Hon. the MINISTER of DEFENCE.

SIR,—

Defence Office, Wellington, 25th April, 1887.

I have the honour to report, for the information of His Excellency the Governor, that I have carried out the inspection of almost the entire Volunteer forces, as well as of the Permanent Militia, and am satisfied that since last year the efficiency of all arms and branches of the defence forces has made remarkable progress. I annex a detailed account of the inspections.

The Act of last session separating the field force from the police has been carried out completely, and the Permanent Militia constituted under the Act has been thoroughly organized throughout its various branches. These are (men of all ranks)—Garrison Artillery, 120; Torpedo Corps, 50; Engineers, 20—all of which are, as regards their scientific instruction, under the superintendence of Lieut.-Colonel Boddam, who, however, reports to Lieut.-Colonel Roberts, N.Z.C., in general command of the whole Permanent Militia Force; the Field Artillery, 50, Major Gascoigne; the Rifles, 110, Major Tuke. The two latter corps are under their respective officers, but are, of course, equally with the other three branches, under the command of Lieut.-Colonel Roberts, to whom they also report.

The Garrison Artillery is divided into four batteries of thirty (all ranks), at each of the larger ports; each station, in addition, having its second-class torpedo boat, fitted with dropping and Whitehead torpedoes, sheds and stores, implements and appliances, with test-rooms, electric light (at three ports), tanks for cables and gun-cotton, &c., and detachment of Torpedo Corps.

The Naval Torpedo officer of the Australian station, Lieutenant Ottley, R.N., and Admiral Tryon carefully inspected our submarine preparations, and expressed a very high opinion of them, as well as Lieutenant Falconer's arrangements for carrying out the Auckland submarine defence, and Mr. Blackler's competence to manage our Whiteheads.

The Engineer Corps has been exclusively employed on defence works, and has proved itself to be composed of high-class military artificers and artisans. The Field Artillery is divided into four batteries, to work the field and fixed six-pounder rapid-firing Nordenfeldts, now on their way from England. They are, till these guns arrive, employed on the works of the unfinished fortifications. The Rifles are employed on the defence works, and in Native districts. They are subdivided into ten small sections called companies, so as to be capable of expansion.

The principle on which all these branches are organized and subdivided is the same. They are highly instructed in their several duties, and, as regards the scientific branches, consist of the smallest number compatible with the due care of the valuable arms, instruments, stores, &c., necessary for defence purposes, thus forming a nucleus capable of easy expansion should circumstances arise to render it necessary to use them in war. In each corps the men needing a special scientific training are now efficient, and those who would be further needed to complete them in war in order to work their guns, mines, boats, &c., could be easily obtained, not being required to possess nearly so much technical training. Moreover, some of the Naval and Artillery Volunteers are being instructed in each branch at the several ports, and in case of emergency could reinforce the batteries and submarine stations sufficiently to make them capable of effective action.

In case of war it, therefore, will be optional to the Government to call out the Volunteers for active service, or enrol the full number of Artillery and Torpedo Corps required in the Permanent Militia, or to do both to a certain extent. Meanwhile a reserve of Rifles is held available to support the law within the colony, or to reinforce the scientific branches if required for defences from without. The Artillery as at present constituted can only find two men per gun of heavy ordnance, including all ranks.

Lieut.-Colonel Boddam's report on defences, which have been entirely under his superintendence, and which have made marked progress during the past year, I attach herewith. I have to repeat what I said in my report last year in favour of this officer, who has done excellent service to the colony with very little scientific assistance, and that confined to officers instructed by himself. He has, in addition to his multitudinous duties, done good service in the charge of the Artillery and Torpedo branches. During this summer the former corps was assembled at Point Gordon under canvas,

put through a course of battery drill and practice, and instructed in the mounting and use of the new 6in. disappearing-carriage Elswick guns, of which the two first had just been mounted at this port, under Lieut.-Colonel Boddam's superintendence.

The Volunteer force as a whole has made great progress, and has practised and learned most of the movements and tactical evolutions of the organization created last year. It has been taught the theory of military tactics, as applied to any civilized warfare conceivable in this country. The general average rifle-shooting has been more attended to, and is much improved. Elementary field fortification, such as might be of use in case of an attempted and unexpected landing of the enemy, has been practically taught to many commissioned and non-commissioned officers and Engineer Volunteers throughout the colony, and at a recent examination all the officers who had had opportunities of study or instruction passed a very creditable examination, and several a brilliant one. The clothing of the force, and its equipments, are much more uniform than last year, and, although the latter still to a large extent consist of stores, then half worn out, handed over to us twenty-three years ago by the Imperial Government, a beginning has been made in the replacement of the worst of the belts and pouches, which were very bad. Here I may remark that in 1885 the colony had for more than twenty years neglected the proper equipment of the local forces, and that we have even now no reserve of arms or military stores. Although out of the Volunteer vote you have purchased as much as it would bear in this direction during the last two years, we still have only pouches for at most twenty rounds of ball cartridge—a quantity utterly inadequate except for parade purposes; and, although the belts of the force have been partially replaced by new ones where absolutely worn out, still there are many patterns and many belts which are barely serviceable, and very unsightly. You have ordered for this year more belts, together with pouches; so that, when received, five thousand men will have good belts, and will be enabled to carry sixty rounds of ball cartridge each—forty rounds less than is now required for breech-loading arms; but this is hardly sufficient, and in future years, if peace continues, or at once, if war is declared, a further provision must be made for, at least, the Permanent Militia and existing Volunteer force when raised to a war footing, as well as some reserve in case the Militia is ever called out. With regard to small arms, the uncertainty of the Home Government as to the proper arm, the condemnation successively of the Martini-Henry and Martini-Enfield, and the general recognition of the necessity of adopting a repeating rifle, has prevented your importing any new description of arm for our Volunteers till the question is settled of the best arm for the service. Meanwhile 3,000 more Sniders have been ordered, of which 1,500 have arrived, to replace worn-out arms now in the possession of the Volunteer force. But as soon as the improved repeating arm is definitely adopted you have decided, if possible, to order 2,500 to be sent out.

The two batteries of nine-pounder breech-loading field-guns ordered last year are at present in course of shipment in England. When they arrive the regiment of Volunteer Artillery will have nearly half its proper complement of guns and limbers, without ammunition wagons, which, however, can be dispensed with, and ordinary carts or expresses utilized instead, fitted with spare boxes for ammunition to fit the limbers, and such boxes can be made in the colony.

The absolute emptiness of the colonial magazines two years ago, the entire want even of small-arm ammunition, and unserviceable description and insufficient supply of the equipments in use have prevented the department from obtaining almost any of the more modern military material it should possess. Noticeably, we have not been able to equip as we should our Naval Brigades, even at the four ports, with proper machine guns or launches—rendering the duty of guarding our mine fields not only one of danger, but one that cannot be efficiently carried out without the always extravagant course of hiring or buying boats during a scare, hurriedly adapting them for the work by temporary expedients, and giving them arms not intended for such a purpose. We are very short of tents, although you have, in these two years, imported 400 of the 600 we possess. These have been much on issue, but have been well cared for, stored, and repaired by Captain Anderson, so they may be regarded as serviceable still. The life of a tent is, however, limited, and not only have we less than quarter the full tentage of the existing force (all of which, of course, could never be required), but it will be necessary to continue replacing tents as they become unserviceable.

There are also other military stores with which, though required in the event of war, we are entirely unsupplied. The requisites for proper ambulance, signalling by heliograph or lime light, field electrical telegraph, and tools for entrenchment are supplied to the colonial forces in other colonies; and (although many of the medical officers have, at their own expense, formed small ambulances and purchased appliances, and some material has been procured by each Volunteer Engineer Company, while signalling lamps and flags have been bought by many Volunteer corps) the actual supply is very far short of what is required.

As regards education, this branch is under the superintendence of Lieut.-Colonel Bailey, the President of the Council, which at present consists only of himself, Captain Coleman, and, to such an extent as his time permits, Lieut.-Colonel Boddam, with Lieutenant Douglas, R.N., for secretary. The work these officers have done during the past six months, including musketry, has been very considerable, and it has been most efficiently performed. I enclose Lieut.-Colonel Bailey's report upon the subject.

I cannot conclude this report on the general subject of the colonial forces under my command without drawing your attention to the fact that we are behind almost every civilized colony or country in our arms. I will not add to what I have said before on so many occasions and in so many capacities during the past years as regards our artillery guns. They are not now so wholly insufficient as they were, and the arm, though an old one and of many calibres, is still a useful and accurate one. But as regards our small arms we have only the Snider, a useful weapon in principle, and up to three or four hundred yards a reliable one, when in good order. But there is a limit to the duration of the best grooved rifle, and ours are all of old pattern, some very long in use, and quite 20 per cent. are more or less worn out in the extractors and grooves. As against

the arms of almost any foreign country our men would be at a considerable disadvantage wherever the nature of the ground or the light enabled the enemy to open fire at a long range. The introduction of repeating arms will, moreover, add to our disadvantages in warfare, with only old single-shot Sniders to reply. I am aware that it is undesirable to have too many descriptions of arm, and that, while the question of the final arm for adoption by Her Majesty's service is under consideration and experiment, it would be unwise to commit the country to an arm which might soon become obsolete. But there seems to be no doubt that a repeating arm is to be adopted in the British as in other armies, and that an improved barrel is to be fitted to it, carrying a smaller bullet. The experiments designed to discover what arm best reconciles these requisites are in very forward condition, and it seems almost certain that either the Burton-Lee or the Lee repeating and breech action, with perhaps the Enfield barrel, will be selected. One of these, or possibly some other still better pattern, is certain to be adopted this year. In the meantime, you have ordered 500 Burton-Lee American repeaters to be sent out at once for sale to the New Zealand Rifle Association and Canterbury Honorary Reserve Volunteers. I respectfully submit that the Parliament of New Zealand should make provision, if my view is accepted, and that a special vote be taken for at least five thousand rifles of the approved pattern repeating arm, with a supply of not less than five hundred rounds of ammunition per rifle. I think £20,000 would not exceed the cost of such rifles, with bayonet and ammunition complete; and, considering the importance of our submarine defences, and the certainty that any hostile men-of-war would attempt to take up or explode our torpedoes before attempting to force an entrance to our ports, I submit that a suitable smaller vote be taken to put the port Navals in a position to guard our mine fields.

The annual camps of exercise have been held successfully, 5,000 men having attended the three camps. At Pareora and New Plymouth there was some instructive drill, besides the usual sham-fights; and at Auckland the alarm was practised in turning out the troops, though one day's instruction was lost, as, in deference to representations made by many religious persons, further work was not insisted upon on Good Friday.

The manner in which the troops manœuvred in brigades and battalions at the larger camps was excellent, and elicited general praise. The discipline of the men when under arms or on duty was also very good, and not a single police complaint has been made against any Volunteer. The behaviour of the men when on pass has been in some instances unfavourably noticed by portions of the public Press, but I have, after careful inquiry, satisfied myself that, as I find stated in the Taranaki local journals, the strictures passed on the men at the camp there, at all events, were based on information absolutely untrue in most cases, and grossly exaggerated in others. If further camps are held in the colony the force has now attained sufficient familiarity with its duties in other respects to undertake its own cooking, as would be the case with regular troops, and the locality would only need, therefore, to provide raw provisions. Such an arrangement would be, on the whole, more satisfactory to the Volunteers, more instructive as regards their duties on real service, and more economical.

The encouragement offered to cadet corps by you has had the effect of calling a large number of such bodies into existence which are a credit to the colony. Indeed, the Christchurch, Dunedin High School, Wanganui, and Nelson College Cadets (the latter of whom won the bayonet exercise tournament at New Plymouth, open to all Volunteers) are as nearly perfect as it is possible to conceive.

The Cavalry Volunteers labour under great disadvantages. They can seldom meet. It is not possible for the men to keep the same horses always, and these require as much training as the men, so that they can rarely attain the precision of regular cavalry movements, and if they do reach it in any corps it is impossible to maintain it. On the other hand, the mounted infantry organization seems more suited to the country armed with a carbine and revolver instead of a sword. The same exactitude is not necessary in mounted infantry as in cavalry, and looser but quicker movements are required. There are two favourable examples of mounted infantry in Captain Cotton's Canterbury and Major Harris's Auckland corps. The sword is practically of less value than the carbine for the duties mounted men would have to perform out here. Speaking of the force as it exists, the Cavalry of the South Island as well as of the North Island have made great efforts, and have improved their efficiency during the last year. The greatest progress I have noticed has been in the two youngest corps, Heretaunga and Rangitikei (the latter till this year an honorary corps); while the Waverley Troop has improved also on its excellent last year's form. The Cavalry in the Auckland Province have always been employed on frontier service, and are excellently trained to the duties of mounted infantry. In this respect they are very efficient.

The Field Artillery throughout is good, and maintains its high character. The readjustment of the guns has had a good result. Three batteries of garrison artillery are embodied: one (the O) at Auckland has attained great excellence; those at Lyttelton and Port Chalmers have but lately begun the work.

I have, &c.,
G. S. WHITMORE, Major-General,
Commanding Colonial Forces.

The Hon. the Minister of Defence.

DETAILED REPORT OF INSPECTIONS.

Auckland.—25th September, 1886: Present, 900; absent, 256. Absentees who were neither absent on leave, nor sick, or had other reasonable excuse, ordered to be fined, as provided by the Act. General appearance and drill, good, except the cavalry (Lancers), which has since been disbanded at its own request.

Napier.—October, 1886: Present, 191; absent, 17. Drill much better than last year; attendance, good; appearance of Volunteers and equipments, very good. Of those absent most had reasonable excuse.

Blenheim Cavalry.—20th October, 1886: Included below. Inspected corps at its annual training. It had been lately reorganized, but was very much better than before. The attendance was good, and the drill and horses very creditable.

Blenheim Volunteers.—22nd October, 1886: Present, 168; absent, 32. An improvement on last year, when the town corps was above the average. The Spring Creek corps has since been disbanded. Some absentees without excuse were fined, but some were cadets without arms.

Nelson Volunteers.—30th October, 1886: Present, 330; absent, 11. It is always a pleasure to inspect this station. Almost every man was present who could have been. I only heard of one man being fined. Lieut.-Colonel Pitt deserves great credit for the way in which his force manœuvres. It was good last year and even better this. The Cadets were excellent as usual.

Westport.—2nd November, 1886: Present, 48; absent, 1. I had not previously inspected this station, and the Volunteers were not accustomed to annual inspections, &c. I made some concession to their convenience. Almost every man was present. The men were of admirable physique, and did their company drill well. The cadets were good.

Greymouth.—3rd November, 1886: Present, 124; absent, 8. The same remarks apply as for Westport.

Kumara.—4th November, 1886: Present, 55; absent, nil. The same remarks apply as for Westport, only there were no cadets.

Dunedin.—9th November, 1886: Present, 1,005; absent, 313. I varied the usual custom, as it was a public holiday, and accepted a review and sham-fight at the Heads. The attendance was rather less than if I had seen the men at Dunedin. The men, though drenched with rain, showed much good spirit, and moved under disadvantages very well. The High School Cadets deserve special mention.

Invercargill.—12th November, 1886: Present, 260; absent, 72. The attendance of the Cavalry might have been better. It seems there was some mistake in giving notice of the inspection. The attendance of the rest was good, and the men's appearance was smart, and their drill fairly good. Perhaps there was some room for improvement, but the force is under exceptional disadvantages. The absentees were chiefly Cavalry and Naval Volunteers who were at sea.

Oamaru.—16th November, 1886: Present, 461; absent, 20. The attendance was very creditable, and few if any men were absent who could have been on the ground. The number of Cadets who were fairly well trained was remarkable. The inspection was unusually satisfactory, and showed much progress since last year. The two heavy guns might be better kept.

Timaru.—17th November, 1886: Present, 364; absent, 129. The same remarks apply as to Oamaru, only the force present was smaller, and the absentees more numerous. The two heavy guns at this station were well kept.

Ashburton.—18th November, 1886: Present, 94; absent, 15. I had not inspected this station before. One corps was almost perfect. The other, an honorary corps, was also fairly good. The attendance was good. The two corps moved well together.

Christchurch.—19th November, 1886: Present, 1,008; absent, 95. This was the best inspection I had ever been present at in this colony. The force was large, the attendance almost to a man of those who could have been present, and the Artillery, Cadets, and the 1st Canterbury Battalion quite as good as can be required of New Zealand Volunteers. The manner in which the troops marched and manœvred was most creditable. The Cavalry were only partly present, other detachments having paraded at other stations. I wish to call special attention to the excellence of the Cadets and Mounted Infantry, on which I have not before reported.

Wellington.—11th December, 1886: Present, 531; absent, 107. Last year I was not able to report as favourably as I can this year of the Cavalry (whom I saw this year at the Hutt) and the Infantry battalion, which is now complete in its officers and organization. The improvement in so short a time has been very remarkable. There were some absentees, but few who, under the Act, were necessarily fined. The Navals here were as good as last year, as were the Artillery, and quite up to the average of other stations.

Waiuku Cavalry.—6th January, 1887: Present, 61; absent, 3. Two men only absent without leave; one, prevented by his employer, resigned; the other had a reasonable excuse. I inspected the corps both mounted and dismounted. The men were steady, and well trained with their carbine and in skirmishing. Horses useful and steady.

South Franklin Mounted Infantry.—7th January, 1887. The less I report of the attendance of this corps the better. It was not good. But, as it was harvest time, and some mistake occurred about the notices, and as the men wrote expressing regret, I have allowed it to pass as no inspection. What men I saw were efficient in their special arm. The attendance at the Auckland encampment was good.

Te Awamutu Cavalry.—8th January, 1887: Present, 38; absent, 5. Te Awamutu men almost all present, or had a reasonable excuse. The Raglan contingent (18) were all absent, not yet being in uniform. This corps deserves equal credit with the Waiuku for its efficiency as a frontier force. The horses were excellent, and the men's drill was very creditable.

Thames.—11th January, 1887: Present, 123; absent, 15. The two corps at this station keep up the character of the celebrated Thames Volunteers. Their appearance was excellent, and their movements very creditable. The attendance was good, and few, if any, were absent without good cause.

New Plymouth.—14th January, 1887: Present, 190; absent, 35. Several country corps and cadet corps were assembled. The movements of the Volunteers were an improvement, as regards the country corps, upon last year. The local corps was very good then, and has kept up its character. The number of absentees was not so large as it appears.

Waverley-Patea Light Horse.—15th January, 1887: Present, 52; absent, 6. This corps was well drilled last year, and is better now. The absentees without good excuse were very few, if indeed there was one. I was particularly struck with the steadiness and excellence of the horses.

Wanganui.—17th January, 1887: Present, 276; absent, 21. Though there were 21 absentees, few were in the district and not sick, who were absent—only one or two. Last year the attendance, especially of the Cavalry, was indifferent; but this was entirely altered this year, and a great improvement in all respects is perceptible. The battalion movements were above average, and the bayonet practice excellent. The Cavalry are a fine troop, but, I understand, comprise an unusually large number of recruits. Their horses, however, are very good.

Feilding.—18th January, 1887: Present, 179; absent, 10. This inspection was of four corps, three of Rifles and one of Cavalry. Almost every man not absent on leave, or sick, was present; I believe every man, in some of the corps, who was on the rolls. The rifle corps of Feilding and Palmerston drilled better than last year. The Marton corps had kept up its high character. The Rangitikei Cavalry has made a surprising improvement.

Wairarapa-Greytown.—19th March, 1887: Present, 170; absent, 46. These Volunteers I could not inspect last year. On this occasion the attendance as a whole was not what I could have wished. A Native corps paraded which is quite equal to the European ones in drill. As the several corps so seldom meet it is hard for them to do battalion drill with much exactitude. They are, however, at home with their weapons, and do the manual, firing, and bayonet drill very well. I think another year the whole will have practised battalion drill more since they attended the camp and have seen other corps.

RETURN showing Distribution of Ordnance in New Zealand to 31st March, 1887.

Corps.	FIELD GUNS.					24-pr. S.B. Howitzer Ships' Carriage.	GARRISON GUNS.								H'CHKISS GUNS.		1-in. Nordenfeldt.	3-pr. S.B. Iron Gun.	
	R.B.L.						R.M.L.			Smooth-bore.		4 2/5ths Mortars.	6-pounder.	8-pounder.					
	40-pounder.	12-pounder.	9-pounder.	6-pounder.	24-pounder S.B. Howitzer		6-in. 5-ton R.B.L.	7-in. 7-ton.	64-pr. 64-cwt.	64-pounder converted.	32-pounder Iron Gun.				24-pounder Iron Gun.	12-pounder Iron Gun.			
A Battery, Auckland	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
B " Dunedin	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
C " Timaru	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..
D " Wellington	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
E " Christchurch	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
F " Napier	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
G " Invercargill	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
H " Nelson	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
I " Oamaru	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..
J " Gisborne	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
L " Port Chalmers
M " Queenstown	1	..	..	..	..	..
N " Lyttelton
O " Auckland
<i>Naval Artillery.</i>																			
Auckland ..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Thames	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wellington	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Petone	1	..	..	..	..	..	..	..	..
Greymouth	1	..	..	..	..	..	..
Westport	1	..	..	..	..	..	..	..
Lyttelton	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Timaru	1	..	..	..	..	..	..	..	..
Oamaru	1	..	..	..	..	..	..	..	..	..	..
Port Chalmers	2	..	..	..	..	..	..	..
Dunedin	2	..	..	..	..	..	2	..	..	..	..	..	..	..
Bluff	2	..	..	..	..	..	..
Wanganui	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Peninsula	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hawera Rifles	1	..	..	..	..	..	..	..
<i>Garrison Permanent Artillery.</i>																			
Wellington	2	3	3	..	..	..	..	..	..	..	..	..	..
Auckland	3	3	4	..	..	..	..	..	..	..	..	..
Dunedin	3	3	..	..	..	..	..	..	..	..	..	..
Lyttelton	2	2	..	..	..	..	..	..	..	..	..	..
Torpedo Corps, Wellington	1	..
S.s. "Hinemoa"	1	..	..	..	..
In Store..	1	..	..	..	9	1	1	..	..	..
Totals ..	1	6	6	10	7	3	2	11	11	8	3	7	3	11	2	1	1	..	..

REMARKS.—The L, M, N, and O Batteries have no field-guns on issue to them. Nelson, Napier, Onehunga, Ponsonby, and Devonport Naval Artillery have no ordnance on issue to them.

RETURN of VOLUNTEERS to the 31st March, 1887.

District.	Corps.	Cavalry.	Corps.	Mounted Infantry.	Corps.	Naval Artillery.	Corps.	Artillery.	Corps.	Engi-neers.	Corps.	Rifles.	Corps.	Hono-rary Reserve.	Corps.	Total.	Corps.	Cadets.
Auckland	2	91	1	63	5	343	2	101	1	43	13	696	23	..	..	1,274	1	53
Waikato	1	64	..	..	..	..	..	..	..	..	1	45	3	..	..	172	..	..
Taranaki	1	67	..	..	..	..	..	..	..	..	..	..	1	..	..	67	..	..
Patea	1	..	..	..	..	..	..	..	..	..	..	120	2	..	..	120	2	92
Wanganui	1	57	..	..	..	..	..	..	..	..	..	101	2	..	..	158	1	49
Rangitikei	1	64	..	..	1	54	..	..	..	..	2	126	2	..	..	244	2	143
Wellington	1	50	..	..	..	..	..	..	..	..	3	154	4	..	..	204	..	..
Wairarapa	1	59	..	..	2	123	1	52	..	..	7	358	11	..	..	592	3	178
Napier	..	..	..	..	..	..	..	..	..	..	5	216	5	..	..	216	4	233
Poverty Bay	..	..	..	..	1	50	1	41	..	..	2	93	4	..	..	184	2	115
Thames	..	..	..	..	1	75	..	48	..	..	2	113	3	..	..	161	1	66
Total North Island	8	452	1	63	10	645	5	242	1	43	40	2,090	65	..	..	3,535	16	929
Nelson	..	..	..	..	1	63	1	50	..	..	3	152	5	..	..	265	1	51
Marlborough	1	48	..	..	..	..	..	..	..	..	2	124	3	..	..	172	2	136
Canterbury	1	72	1	40	2	127	3	159	1	51	16	940	25	71	..	1,460	6	323
Oamaru	1	45	..	..	1	62	1	53	..	..	6	318	9	..	..	478	5	395
Dunedin	1	52	..	..	3	193	2	112	1	68	16	860	23	..	..	1,280	8	594
Invercargill	1	54	..	..	1	45	1	63	..	..	4	214	7	..	..	376	1	63
Lake	..	..	..	..	..	..	..	..	..	..	2	81	3	..	..	123	3	138
Westland	..	..	..	..	2	103	..	..	..	..	4	237	6	..	..	340	5	251
Total South Island	5	271	1	40	10	593	9	479	2	114	53	2,926	81	71	..	4,494	31	1,951
Total all New Zealand	13	723	2	103	20	1,238	14	721	3	157	93	5,016	146	71	..	8,029	47	2,880

Lieutenant-Colonel ROBERTS to Major-General Sir G. S. WHITMORE, K.C.M.G.

SIR,—

Fort Cautley, Devonport, Auckland, 23rd April, 1887.

I have the honour to report that, in obedience to instructions from the Hon. the Defence Minister communicated through you, I assumed command of the Permanent Militia on the 24th of February.

The greater part of this force formerly formed that portion of the Armed Constabulary called the Field Force; the Defence Act of 1886 has, however, given to it a distinctly military character, and it is now chiefly maintained for the defence of the colony from external aggression, and is distributed throughout the several chief ports, with the exception of the detachment still held in reserve on the west coast of this Island at Opunake.

The force consists of 350 men, and is subdivided into five branches, viz.: Garrison Artillery (120), Field Artillery (50), Torpedo Corps (50), Engineers (20), and Rifles (110); the numbers include the officers. The distribution of the several branches is as follows:—

	Garrison Artillery.	Field Artillery.	Engineers.	Torpedo Corps.	Rifles.
Head-quarters, Auckland	27	22	1	16	12
Wellington	38	28	19	25	55
Lyttelton	27	...	...	5	...
Port Chalmers	28	...	...	4	...
Opunake ... ..	...	...	...	...	39
Taupo ... ..	...	...	...	...	4
	120	50	20	50	110

The Artillery Engineers and Torpedo Corps, being scientific corps, are under the general superintendence of Lieut.-Colonel Boddam, Engineer for the Defences; the Rifles are under Major Tuke; the Field Artillery under Major Gascoigne; all reporting to me as Commandant.

I have so recently assumed command that it has been impossible for me as yet to inspect the force at its several stations, owing to the fact that the Artillery were, till within a short time, assembled at Wellington, where I inspected them in camp. I may, however, say that a finer body of men it would be impossible to find than compose the several selected corps; a remark also applicable to the Rifles, who, if slightly inferior in physique, are men who have served the colony with credit to it and themselves for many years.

The conduct and discipline of the force has been throughout the year admirable, and will bear comparison probably with that of any military force in the world. The Artillery and Torpedo branches have attained great efficiency in their special work, while the practice with the heavy guns has been found excellent. With regard to the future recruiting of the force, it is now restricted to the Volunteers, and as yet, though the numbers coming forward are not very large, they have been sufficient, and a list of applicants is still available from which to recruit the ranks as vacancies arise.

The Code of Regulations for the force has taken some time to elaborate, as the requirements of each branch have had to be considered very carefully; it is, however, nearly complete, and will shortly be printed. The discipline of the force at present is maintained under the Act of last session.

I purpose this year making a quarterly inspection of the force, in order to insure uniformity of discipline and interior economy throughout the different detached stations.

I have, &c.,

J. M. ROBERTS, Lieut.-Colonel,
 Major-General Sir G. S. Whitmore, K.C.M.G., Commanding Permanent Militia.
 Commanding Colonial Forces, Wellington.

REPORT ON THE CONSTRUCTION OF THE HARBOUR DEFENCES OF NEW ZEALAND.

Lieut.-Colonel BODDAM to Major-General Sir G. S. WHITMORE, K.C.M.G.

SINCE the date of my last report, of the 12th May, 1886, considerable progress has been made in the construction of the defence works of the colony.

Method of carrying out Work.—The work has been carried out chiefly by means of day-labour, and, except at Wellington, where the labour of the Permanent Militia was available, by the unemployed. In the latter, although it was essential that work should be found for these bodies of men, still, their pay has been entirely charged against the defence vote. All other departments have under similar circumstances obtained this class of labour gratis or at a greatly-reduced rate, and under the existing circumstances I am of opinion that their employment has tended considerably to increase the cost of the works. The work has, however, been very well and thoroughly done, and pushed on more rapidly and satisfactorily than would probably have been the case if small contracts had been let.

Design of Works.—The difficulty to be contended with in the construction of the New Zealand works has been that they have had to be designed on an entirely new system. The improvements in machine and rapid-firing guns, and also the protection given to ships' guns, has necessitated placing and firing the older-type guns in more thoroughly-protected pits, and has necessitated not

only the designing of the pits, but the alteration of the fittings. The new designs not only give good protection, but have been found to increase the rapidity and accuracy of fire very considerably, and the whole of the details of the system have been worked out very successfully. The pits, magazines, and all details for the new-type guns are entirely original. A general design for a pit was received from England, but too late to be of assistance; it was also imperfect, and unsuited to the class of work here required, and would also have necessitated a considerable increase of cost. Capital drawings of the gun and carriage were furnished by the makers, and from these I was able to design the work. The pits and magazines for some of these guns are complete, and have been thoroughly tried. The foundations and general design of the pits have been found thoroughly suitable. The arrangements for the storage and supply of the ammunition admit of absolute safety and ample rapidity of supply. These guns as now mounted are thoroughly protected from all kinds of fire, can be as easily worked and rapidly fired as any ship's guns, and, by reason of their rigidly-immovable platform, excellent system of mounting and sighting, great range, and wonderful accuracy of fire, form as perfect a defence of the kind as could be desired.

State of Artillery Defences.—The muzzle-loading guns, with the exception of one (temporarily dismantled), are all mounted and fitted, provided with all necessary magazine and store accommodation, and available for service. Four of the new guns have arrived, and are ready for service. Five more are expected during the next month, and will be mounted immediately on arrival. Pits and magazines are ready for six more of these guns. When these have arrived the defence of the colony will be in a forward and efficient state.

Machine-guns.—The Nordenfeldt guns have unfortunately not yet arrived; the pits are, however, all ready for their reception, and they will be placed in position within a couple of days of their being landed. Until they are received the defence of the mine-fields cannot be satisfactorily carried out; but four are being landed and six more are daily expected, and the delivery of the remainder cannot be delayed more than a month or two longer.

Submarine Defences.—The submarine mining defences are in a very forward state. The whole of the mines, cables, and electrical gear, with the exception of some small wire, is to hand, and is of the very best description. The torpedo stations are all completed. There are all necessary appliances, as well as launches and boats necessary for laying down the mines rapidly, to hand. The work of loading and preparing the mines for actual service has been commenced; the firing- and observing-stations and test-rooms are all being got ready for service, and are in some instances complete.

Electric Lights.—Very powerful electric lights have been provided for the three ports that require them. The lights provided for Auckland and Wellington give a light estimated at 60,000-candle power, and are, I believe, the most powerful yet provided for any defence works. They are of the very best workmanship, and work most satisfactorily. These two lights are permanently erected and complete in every particular. The Lyttelton light has not been erected, as the shell-proof chamber for its reception is not completed; it is, however, itself, complete, and has been tried, and proved very satisfactory. It could be erected in one of the sheds of the submarine mining dépôt at Ripa Island in a few hours, and worked therefrom if necessity arose.

Brennan Torpedo.—In the original scheme of defence proposed, the Brennan torpedo was recommended as an additional defence for Wellington and Lyttelton. The orders for these torpedoes have been counter-ordered by the Government. I am of opinion that if the Brennan is not provided, additional submarine mining-plant of the value of £7,500 is necessary. At the same time I would not recommend it as an efficient substitute. The patent rights for this (Brennan) torpedo have now been purchased by the British Government; and for the class of work required, both at Wellington and Lyttelton, there can be no doubt that it is exactly the weapon that is wanted. Submarine mines can never be quite successfully employed at these places, both on account of the width of the channel and the exposure to the ocean swell. I beg to point out the advisability of coming to a decision in the matter at as early a date as possible.

Telegraphic Communication.—It is necessary to provide telegraphic communication between the several forts at each place, to enable the officer in command to direct the defence to the best advantage. In all cases where the erection of the line has helped the construction of the works, the line has been erected; in the other cases it has been left until the work was thoroughly completed. A complete system of telegraphic communication has been worked out; all instruments, cable, &c., not obtainable in the colony have been obtained from England; and the system can readily be completed, and will be carried out concurrently with the other work. The most advanced fort will also be connected to the signal-station of the port.

Whitehead Torpedo Boats.—Since the date of my last report twenty Whitehead torpedoes have been received, and two of the boats have been fitted with dropping-gear to fire these torpedoes. The other two boats will shortly be fitted with the gear by the artificers. These boats would be valuable in time of war for patrolling the water in front of the mine-fields. In the case of Dunedin, I do not consider a boat necessary or useful there; and this is, I believe, also the opinion of the naval authorities on the station. The torpedoes could be fired equally well from the shore, and the boat would then be available for the Wellington defences, where it is greatly needed. In addition to the guard-boats, it would be necessary at Wellington and Lyttelton to employ guard-vessels in war time, and at all the ports it would be necessary to arrange a system of hydrographic signals and rules to prevent surprise by day or night. I have carefully considered the subject, and could, with the assistance of officers of the Marine and Customs Departments, arrange a scheme that would effect the purpose without unnecessarily impeding navigation during war time.

Protection of Cables.—The protection of cables in war time is an integral portion of the defences of the colony, and requires to be provided for. At present there are no less than four cable-stations, and to efficiently protect the cables would be a matter of considerable expense. The only economical solution of the question is to run the main cable direct to Wellington, and defend

the cable-station here and also that on the opposite side of the Straits. There are, no doubt, good reasons for the course that was adopted in laying the cable in the first instance; but I believe I am correct in saying that if a new cable were laid to Australia, it would be best to run it direct to Wellington, for every reason: in any case, the advantages from the defence point of view should be borne in mind. The cable-stations at Lyell's Bay, Wellington, and White's Bay could be defended for about £6,000, the guns required for the purpose being in the colony. I beg also to point out the advisability of being able to fit out at a moment's notice a cable-repairing steamer. The necessary appliances are in the colony, and it would only be necessary to survey a suitable steamer trading to the port, and have the necessary plans and specifications for her alterations prepared. The repairing of a cable rapidly is of more importance in war time than even its defence.

Expenditure.—The expenditure for the year 1886–87 has been £139,429. This has been made up as follows: Cost of land, £10,653; works, wages, &c., £65,846; guns and equipments, £51,484; general expenditure, £11,446: total, £139,429. The estimate for last year was £130,000, which was afterwards reduced to £120,000. The excess has been caused by the increase in the land taken for the works, by a portion of the English orders having been delivered sooner than estimated, and by charges for works not in connection with, or estimated for, the works having been charged thereto. The accompanying return (Enclosure A) shows the amounts which have been expended and charged to the works over and above what was estimated. From this return it will be seen that, if the original estimated cost of the actual works is allowed, there will be still a balance of nearly £25,000 to cover liabilities to date and complete the works.

TABLE showing ESTIMATES for WORKS, LIABILITIES, and EXPENDITURE ON DEFENCE WORKS, New Zealand.

<i>Estimates of Expenditure.</i>	£	s.	d.	<i>Expenditure and Liabilities.</i>	£	s.	d.
Original estimate of cost of defences (<i>see</i> report, 12th May, 1886)	313,735	0	0	By Expenditure for years 1885, 1886, 1887	266,595	19	4
Amount required to be added on account of military labour allowed for, but not provided	15,000	0	0	Liabilities for English and other contracts incurred	71,124	13	10
Add for land purchased over and above that actually required for defences, and amount in excess of estimate	22,000	0	0	Balance available for meeting liabilities on, and required for completion of, works	24,794	6	10
Reinstatement of quarantine station at Ripa Island	2,000	0	0				
Add for amounts paid to General Steward, Public Works officers, and additional stores not actually required for works	10,780	0	0				
	<u>£362,515</u>	<u>0</u>	<u>0</u>		<u>£362,515</u>	<u>0</u>	<u>0</u>

E. M. TUDOR BODDAM, Lieut.-Colonel,
Engineer for Defences.

Wellington, 30th April, 1887.

REPORT OF THE COUNCIL OF MILITARY EDUCATION.

Lieut.-Colonel BAILEY to Major-General Sir G. S. WHITMORE, K.C.M.G.

SIR,—

28th April, 1887.

I have the honour to report as follows on the working of the Council of Military Education:—

The Council was established on the 1st of September, 1886, and its first duty was to institute a regular and methodical system of examination, in order that officers in all parts of the colony should be examined under exactly similar conditions, and with strict fairness and impartiality.

These objects have been attained in the following manner: Papers are prepared by the Council, and sent in sealed covers to all stations. Examinations are carried out as nearly as possible at the same time, in the presence of some of the members of the local Boards, and the sealed covers containing the questions are not opened until the candidates for examination are assembled. The members of the Board prevent communication among the candidates, and keep strict silence while they are writing their replies.

The candidates' replies are distinguished by a number only, and their names are therefore not known to the Council when awarding marks. This system has worked well so far, and appears to have given very general satisfaction. As, hitherto, officers have been rather behind the standard required, the questions at each succeeding examination are made slightly more searching and practical; and this will be continued until, in time, a higher standard is reached. For field officers and adjutants the examination is more severe, and subjects are introduced which, though elementary, belong to the higher branches of military education. To pass these examinations officers must read the usual text-books on military tactics, field fortification, and military administration.

The Council regret to have to report that instances have occurred in which officers of the Volunteer force, although able to pass the necessary examination, in purely military subjects, were nevertheless very deficient in ordinary elementary education, especially in their writing and spelling, which were exceedingly bad. It may soon be desirable to insist upon officers being required, before being elected, to pass at least the same standard as is laid down for the Permanent Militia.

A syllabus has been published which enables officers of all ranks and arms of the service to see at once what subjects they are required to pass in, and the text-books recommended. Where suitable text-books are not procurable they have been prepared by the Council, and are either printed or in course of being printed.

Since the establishment of the Council there has been one examination for field officers and adjutants, and three quarterly examinations for company officers. At these examinations eighteen field officers and adjutants have presented themselves, of whom two failed. One hundred and eighteen company officers were examined, the failures being thirteen up to the present. The answers on the whole are good, and show that a considerable amount of care has been taken in preparation.

The supervision of the musketry instruction of the colony having been placed under the Council, new target-practice regulations have been issued, which are in all respects similar to those recently published for the Volunteer forces in England, the number of points required to pass into a higher class being modified to suit the weapons in issue to the Volunteers. This should, after a little time, lead to much better and more practical shooting.

Under the new regulations prizes for good shooting are not given to individuals but to corps, according to the figure of merit attained by all their members. This should lead to great emulation amongst the various corps, which must result in a very marked improvement in the average shooting of the force.

The musketry returns and target-practice registers being the source from which the figure of merit is obtained, clear instructions have been issued to insure their being kept strictly in accordance with the regulations for the Imperial service, and I am in hopes that at the end of the present musketry season the returns will be found to have been more carefully and accurately kept than has been the case in the past. The returns during the past season were in many instances kept in the most deplorably careless and incorrect manner, which has caused an immense amount of unnecessary labour and loss of time in correcting them, so as to enable the general return to be prepared. This is unsatisfactory, as throwing doubt on the figures from which the figure of merit is computed.

The Council will, with the assistance of the District Instructors and District Adjutants, carefully supervise the musketry instruction of the various corps in the colony, and they trust ere long to see officers, non-commissioned officers, and men vie with each other in the interest taken in this the most important part of a soldier's education; so that, after a time, when the Volunteers of the colony are in possession of a more modern weapon, they will be second to none of Her Majesty's auxiliary forces in their practice with the rifle.

The Council is prepared to give instruction in military subjects to all officers desirous of qualifying for the direct commissions in the British Army which are annually offered for competition.

I have, &c.,

C. S. BAILEY, Lieut.-Colonel,
President, Council of Military Education.

Major-General Sir G. S. Whitmore, K.C.M.G., Commander of the Forces.

[Approximate Cost of Paper.—Preparation, nil; printing (1,550 copies), £8 10s.]

By Authority: GEORGE DIDSBURY, Government Printer, Wellington.—1887.