

1888.

NEW ZEALAND.

REPORT ON THE NEW ZEALAND FORCES

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

The ASSISTANT UNDER-SECRETARY of DEFENCE to the Hon. the MINISTER of DEFENCE.

SIR,—

Defence Office, Wellington, 8th June, 1888.

I have the honour to furnish you, for the information of His Excellency the Governor, reports on the New Zealand Defence Force and Harbour Defences to the 31st March, 1888, received from Major-General Sir G. S. Whitmore, K.C.M.G., late Commander of the Forces, and from Mr. A. D. Bell, the Engineer for Colonial Defences.

I have, &c.,

C. A. HUMFREY,

Assistant Under-Secretary of Defence.

The Hon. the Minister of Defence, Wellington.

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

SIR,—

31st March, 1888.

I have the honour to send you my annual report—for the information of His Excellency the Governor—of the state of the military forces of the colony.

Since last year the Permanent Militia has been largely reduced, and the two corps, viz., the Field Artillery and Engineers, absorbed in the garrison and regular Artillery and in the Torpedo Corps. Since then, too, Captain Falconer has assumed the position of Instructor of the latter corps, and his knowledge of the practical part of submarine mining has made the Torpedo Corps as efficient as its numbers will allow, and he has done much to render the Devonport and Wellington Naval Volunteers an effective reinforcement to their limited strength.

The Artillery have given as much time to the care and use of their guns as has been practicable under conditions which rendered work on the fortifications their chief duty. I am happy to say they have done their best to become effective, and that no guns in the world could be better kept than those under their charge. I could have wished that they might have had more practice with their arms, but the great cost of ammunition has limited their opportunities in this respect. I earnestly recommend the importation of Morris-tubes for all the breech-loading guns, in order to make it possible to give the men more practice with their own arms, at a much-reduced cost. The cheap ammunition used with the 6-pounder rapid-firing guns, which can be refilled out here, shows how largely the expense of practice can be reduced by having Morris-tubes available.

The Artillery can now mount their own guns, a work which General Harding Steward thought so difficult as to recommend our bringing out experts from Home for the purpose.

The necessity for retrenchment has compelled the Government to reduce the Permanent Militia very largely. But the actually-indispensable portion has been retained, and the opportunity of selection has been made use of; so that the best men, who show most promise in the scientific branches, have not been lost to the country.

The defence of three of our four main ports will depend so largely on an efficient submarine organization that I am in hopes it may be possible to afford further encouragement to the Volunteer Naval and Garrison Artillery Corps to render themselves an effective reinforcement to the Permanent Force in time of war. For this purpose much more practice is required than with other arms, while our Permanent Force is only sufficient to keep the material in order.

I am glad to learn that two more Artillery Instructors have been sent for. Sergeant-Majors Parker and Silver can hardly be improved upon, but similar experts are needed for Lyttelton and Dunedin.

I am sure no colony possesses men of better character, physique, or knowledge of their duties than New Zealand in its Permanent Force.

While the Government and the country must regret having had to reduce so many of its officers and men, who, in the difficulties of the colony, served it faithfully and well, I am bound to say that all have been as liberally compensated as circumstances would allow, and that the selection made has been the only one possible. All the officers who had been trained to artillery and submarine work are retained. I very much regret that the services of so distinguished an officer as Lieut.-Colonel Roberts should have been dispensed with, for few men have deserved better of the colony; but I trust his services may not be lost sight of, if it is possible to utilise them in some other capacity.

Except in Auckland the Volunteer spirit has not died out in the colony, and the numbers continue to keep up. I am in hopes that at Auckland, when the severity of the present depression abates, that station, the most exposed in war and the most difficult to reinforce, may once more develop the military spirit which has heretofore distinguished it. Of this I am quite sure, that, if unhappily danger should arise, the Auckland Volunteers will be found in their places to defend their city.

I think the Volunteers of the colony have, as a rule, used their increased capitation wisely, having very generally employed it to buy equipments of which they stood in need. I believe under the altered conditions of the colony they will be found to accept the reduced allowance willingly for a year or two, and that it will make no difference in their military spirit.

I inspected the Wellington Volunteers on the 10th December last. I could have wished that this force had manœuvred better, especially as regards the four-deep attack, which was done in rather a slovenly way. The number present was, however, very creditable, few being absent. The Heretaunga Light Horse, though improved since last year, will, I hope, improve still further in the future. The Navals and Artillery Battery leave little to be desired, and if they maintain their present efficiency will be found equal to any call upon them. Speaking generally, the Rifle Battalion is rather young, and is hardly, in physique, up to the standard of the southern battalions. This, however, is a fault on the right side, and will remedy itself. I am bound to note here that during the last six months the Wellington Navals, under Captain Duncan, have made great efforts to render themselves efficient sub-marine miners, and have practised big-gun drill. In the former they have had the advantage of Captain Falconer's unwearied efforts to make them reliable in case of need.

In conformity with your instructions, I proceeded in the end of January to the South Island, where I found that the South Island Volunteers could not assemble conveniently at that (harvest) season so as to allow me to make my inspections consecutively. I therefore arranged to inspect first at Dunedin, where, on the 1st February, 1,022 of the force paraded for me. The hour selected was rather late to manœuvre the men, and I therefore agreed to Lieut.-Colonel Wales's proposal to complete my inspection at the drillshed (Garrison Hall), which was completely filled by the force. The physique, as I have before reported, of the Southern Volunteers is magnificent, and both at Dunedin and Invercargill I found no falling-off in this particular. The attendance of all the corps, except the Hussars, was excellent, scarcely any being absent. The Cavalry, being largely composed of country settlers—occupied closely with their harvest at the time—was nevertheless fairly represented, and I ascertained from Captain Stronach that such absentees as there were had his permission to be absent after full consideration of the urgent nature of their applications. Speaking of what I saw I can report favourably of the Dunedin force, which has at least shown that it is possible to assemble 1,000 men at any time on short notice if required.

At Invercargill—where I next inspected, as the day for Christchurch was the 8th—I had a very full muster of all the troops except the Cavalry. This corps, called the Southland Hussars, is not one which, I think, can be maintained. It has been gradually dwindling, and has never yet made a good muster at any one of my inspections. It seems specially difficult to assemble it, and therefore, though the men who are available are a credit to the colony, I think it should be disbanded. The Artillery Battery, which is a sister battery to that at Dunedin, both being armed with 12-pounder guns, is in all respects, like it, admirable, and keeps its guns in excellent order—a remark which applies to all batteries of the New Zealand Regiment of Artillery, though, of course, some are slightly better than others. I specially remarked two Infantry rifle corps, who were present to a man. The Gore Rifles, on the other hand, did not turn out equally as compared with last year. Both at Dunedin and Invercargill I ascertained that the Volunteers were quite prepared for a considerable reduction of capitation, and that the extreme country corps would prefer retaining their organization, without capitation, to being disbanded. Four hundred men paraded at Invercargill.

Returning *via* Dunedin on Saturday, the 5th, I reached Timaru, and inspected on the 7th. There were practically only three corps present, though a few cadets were on the ground. The few corps present were almost all complete; but their inspection does not call for special remark. The Navals and Artillery were quite up to the standard of other stations, and the Rifle corps was much as last year. The guns—9-pounders—were in good order. I did not inspect the two Ashburton corps, as it was represented to me that so many of the men were absent harvesting that it would be difficult to secure a good muster. I may, however, observe that one of these two corps has the highest figure of merit of any Canterbury corps; while the other, last year an honorary corps, stands very high on the list of corps in class-firing.

I inspected Christchurch on the 8th, 1,006 men being paraded—a slight falling-off from last year; but this was fully accounted for by the absence of two corps then present. I regret that the old cavalry corps, the Christchurch Yeomanry Cavalry, were not present. This troop is so scattered that it is difficult at all times to assemble it, either in North or South Canterbury. The Mounted Rifles, however, were on parade, and is a very smart, well-mounted, and efficient corps. The Christchurch Volunteers as a whole were quite up to and improved upon last year's standard. I find the average rifle-shooting has been much attended to, and several high figures of merit have been recorded, especially high in the Scottish Corps. All the corps, however, have attained a very

serviceable figure of merit. Volley- and independent-firing have also been carefully attended to, and have produced very satisfactory results. I regret that so few stations in the colony have ranges suitable for these practices.

During the past year the Lyttelton Navals and Garrison Artillery have begun to qualify themselves for work with heavy guns and submarine mining, and I am in hopes further instruction may be possible during the current year. The Engineer Corps, under Captain Webster, has exerted itself very much to qualify itself in the several branches of military bridging, field fortification, and signalling, while some attention has also been given to submarine mining.

The 1st Canterbury Rifle Battalion made a very creditable appearance, and moved well. Since last year this battalion has improved considerably, and deserves commendation, especially for its steadiness under arms. The Field Artillery (Captain Martin) was admirable.

The last of this series of inspections was held by me on the 9th, at Oamaru, 315 being present, under Lieut.-Colonel Sumpter. The whole of the men moved and looked well, though there was some inequality in the manual firing and bayonet exercise. The battery showed great proficiency with its new arm, and the guns were exceedingly well kept. The Navals, as at other stations, have only to retain their present efficiency in order to perform any service required of them. I noticed much greater steadiness in the ranks and much more smartness among the men than last year; but some of the country corps then present could not this year arrange for trains to come in.

I then returned to Wellington, and, after waiting on you, proceeded to Auckland, where I happened to be at the ceremony of the opening of the Calliope Dock by His Excellency the Governor on the 13th February.

I have reported to you specially on the apparent falling-off of the Volunteer spirit in Auckland, and have made suggestions which may have more or less effect in restoring it. But I regret to say that I believe to a large extent this has arisen as one consequence of the prevailing depression in the city. I feel assured, however, that the military spirit I have so often had occasion to admire at Auckland in critical times would instantly revive at the prospect of public danger; and that a large force of Volunteers, with experience and training gained during the past three years or before it, would be available directly their services were required for the defence of their homes and city.

I must, however, except the Navals and the A Battery of Artillery, which show no signs of falling off. It is to be regretted that a few members of the former corps misbehaved at the opening of the Calliope Dock, and forgot the respect due to their uniforms. Inquiry into this matter established considerable palliation for the men's misconduct, and made it evident that it had been confined to a very few men. Two have been dismissed in consequence. I am obliged to say that I believe if more prudent precautions had been taken the occurrence would not have taken place. At my inspection of the Auckland garrison—though, to facilitate a good muster, I consented to the parade being ordered at an unusually late hour in the afternoon: when, in fact, it was getting dark, and in the drillshed yard, where there was little room to move—only 677 men paraded. As Auckland is the most exposed of our ports, and the most difficult to reinforce, I think it is desirable, if possible, to maintain a proportionately larger force there than elsewhere.

On the 3rd March I inspected the Nelson Volunteers, and I may remark that, although every man was present who was not either sick or absent from the province, Nelson was the sole station at which the Volunteers could be assembled at the usual hour in the afternoon. Nevertheless harvest and hop-picking was at the time in full progress. Although the purely show-movement of marching past was not executed as well as last year, chiefly through the country corps having been rather out of practice for a month or two, the movements of the force, both in battalion and skirmishing in the new manner, could not have been surpassed. Several difficult movements were carried out with an exactitude unusual in Volunteers; the officers, markers, non-commissioned officers, and men evidently knowing their drill very well. Not a single file was ever out in forming or re-forming line, there was no hesitation in changing front, and the marching of the whole force in line was admirable. The Artillery were not as smart as most batteries in dismounting their guns, which Lieut.-Colonel Pitt accounted for by saying they had lately changed their drill, and many recruits were in the ranks. In other respects, changing wheels on wounded guns, marching past,—where their line of guns was very good,—and in the mode in which they co-operated in the four-deep attack, the battery was smart enough; and its guns were beautifully clean,—a decided improvement, as I had had reason to complain of some neglect in this respect before. The Cadet corps and Navals were both most creditable, and at no place that I have inspected have I found the men so generally good in the manual, firing, and bayonet exercises. Lieut.-Colonel Pitt labours under unusual disadvantages in the scattered nature of the Volunteer battalion, and deserves the highest praise for the successful manner in which he has overcome them.

I do not purpose to inspect the West Coast Volunteers of either Island, having, in fact, rather exceeded what you wished me to do in the way of inspections already. But, as the West Coast corps of both Islands are chiefly isolated country corps, it would have been difficult to assemble them under present circumstances. I may, however, observe that all of them possess the good physique and good average shooting distinctive of so many country corps in this colony.

I inspected the Napier Volunteers on the 21st March, and found the Navals and Artillery excellent in their attendance and movements. The Rifles and Cadets were not fully or even sufficiently present. The Rifles are at present without a captain, Captain Blythe being in command of the district, and have recently lost another officer, which may account for there being an insufficient attendance.

In conclusion, I venture to recommend that some plan may be devised by which a certain number of the Navals and Garrison Artillery Volunteers at the four ports may be afforded encouragement to devote more time to the practical part of harbour defence. It would be unreasonable, otherwise, to expect those corps to do more work than other corps drawing the same capitulation, and the prescribed number of drills does not suffice to make either artillery-men or submarine miners

efficient. I must also point out that there are no Garrison Artillery Volunteers at Wellington, where they are much required. Till now it has been impossible to raise such a corps, but now I am informed that a very enthusiastic Volunteer officer is prepared to offer one.

I have the honour to state that I believe the Volunteers of the colony have now acquired so much uniformity of discipline, dress, and drill, and their officers have made themselves so much more efficient than formerly, that I am confident the continuous training which would become indispensable if they were called out for active service would, in a very few weeks, make them reliable soldiers, while their improved average practice with the rifle will make them formidable in the field.

I have, &c.,

The Hon. the Minister for Defence.

G. S. WHITMORE.

REPORT ON THE CONSTRUCTION OF THE HARBOUR-DEFENCES.

The RESIDENT ENGINEER to the UNDER-SECRETARY for DEFENCE.

DURING the present year the construction of the defence works has been steadily carried on. The progress has been at a somewhat slower rate than hitherto, partly owing to the fact that ordinary labour has, in the interests of economy, been as far as possible dispensed with during the year, and replaced almost entirely by military labour, the comparatively small numbers of the permanent forces available in each port necessitating work being carried on on a less extended scale; and partly owing to the fact that Major-General Schaw, C.B., R.E., was, when the year was about half passed, asked to report on the defences generally, and it was considered inadvisable to press on any works the designs of which had not yet been so far carried into execution as to establish them beyond the reach of advantageous alteration if necessary: or to initiate new works: until that report had been received by the Government and fully considered. The work done during the latter half of the year has therefore been mainly in the direction of completing minor points in existing works: in establishing labour and time-saving appliances: and in making other arrangements in view of facilitating the construction of the further works required to complete the scheme of defence.

The report of General Schaw deals fully with every aspect of the defences, and gives in complete detail a description of their present condition. It is therefore not necessary to add thereto by appending the usual summary of the progress attained towards the establishment of the scheme. The report being confidential, it would be out of place to refer thereto; but it may perhaps be permissible to quote the following extract: "I regret that in some instances I have felt it necessary to recommend alterations in the designs for the works, both with the view of greater economy and of greater efficiency; but, upon the whole, I consider that the works and defensive arrangements which have been made are very good, and that they reflect great credit on all who have been engaged upon them. The science of war, like all other sciences, is unfortunately progressive, and it is inevitable that changes must be made from time to time to keep the power of the defence abreast of the improvements in the power of the attack."

The resignation by Lieut.-Colonel Boddam of the position of Engineer for Defences having taken place so recently as January last, reference may perhaps be allowed to the paragraph of General Schaw's report above quoted, as to the work carried out by him. Lieut.-Colonel Boddam has left in this office a large store of valuable information and designs accumulated during his active superintendence of the defence works. For the reasons above stated there is little to report since the charge of them was handed over by him.

Prior to the 1st April, 1887, the defence works at the four ports were carried out under the superintendence of the officers of the Public Works Department, guided by plans and specifications, &c., from the office of the Engineer for Defences at Wellington, and visits of inspection made by him. On the above date the Public Works Department ceased to have connection with the defence works, the sole control of which was vested in the Engineer for Defences, with Inspectors of Works at the four ports, and that *régime* has obtained during the year now past and still obtains.

The fortifications have been constructed from their commencement almost entirely by day-labour, the contract system having been employed in some small instances only. As a general rule hard-and-fast contracts are not advisable in this kind of work, but the exigencies of the case have practically debarred even a trial of them. In the war-scare of 1885 day-labour was of course a necessity, and the work done during the prevalence of the scare, both in the hastily-extemporised emplacements and in the disturbance of the original contour of the sites previously selected by the Royal Engineer officers whose advice had been successively sought by the colony (Major-General the late Sir P. Scratchley and His Excellency Lieut.-General Sir W. Jervois), rendered it probable that contract-work to complete the same would be considerably more costly than day-labour under direct superintendence. Then arose the "unemployed" cry, and large numbers of these were drafted on to the defence works in the latter part of 1885-86 and in 1886-87. In 1887-88, for reasons above stated, the labour has been principally military labour. Towards the end of 1887-88 it was decided by the present Minister of Defence to employ convict-labour on the works, and arrangements are now in progress or completed for employing prisoners at all four ports. At Wellington they have already been at work some time at date of this report (31st March).

Where direct contract or schedule-of-rates contract can be employed, these are probably cheapest in the end. Good day-labour, efficiently supervised, is probably the best, and insures better, more careful, and more solid work, a matter of considerable moment in fortifications; but it is more expensive than either of the contract systems. "Unemployed" labour is not much good: all sorts and conditions of men have to be taken on, and the wage paid will not extract a good day's work even from those who are capable of giving it. The concentrated and compact nature of batteries and other defence works does not lend itself to the economical employment of large numbers of

men. Road, or railway, or other works upon which they can be extended are more suitable for the unemployed; and it is strongly recommended that this class of labour be not again drafted wholesale to the defence works.

Military labour is superior to "unemployed," but necessitates the men being almost altogether taken away from their drill and other proper duties. As more and more guns are mounted, with their costly gear and equipments, it is obviously advisable that the men of the permanent forces, now considerably reduced, should have their attention confined to the work of keeping these all in order, practising, drill, &c.

Prison-labour is probably well adapted to the defence works in this country. A band of prisoners can be turned to most kinds of work, under good supervision, and also comprises, as a general rule, men of all the trades. The defence works in the harbours are, generally speaking, in such distant and inconvenient positions that labour upon them is more costly than in ordinary work. By utilising existing buildings as temporary prisons, it is probable considerable advantage will accrue. So far as prison-labour has been tried at present, the results are more satisfactory than were anticipated, and there is reason to believe they will continue to be so, and that the defence works at places where the convicts are housed can be carried on both expeditiously and economically by their labour. At other points embraced in the scheme of defence where convict-labour cannot be employed, it will be advisable to have direct or schedule-of-rates contract, and, at points where neither of the above systems is feasible, ordinary day-labour.

In the appended return, giving expenditure and liabilities, will be found also notes opposite the principal heads giving items of general information thereon. The general points referred to in Lieut.-Colonel Boddam's last report (1887, H.—12) under the paragraphs, "Submarine Defence," "Electric Light," "Brennan Torpedo," "Telegraphic Communication," "Whitehead Torpedo-boats," and "Protection of Cables," have all come under the consideration of General Schaw, and are either dealt with in his report or form the subject of separate memoranda. It appears, with regard to the year's work, only necessary, after General Schaw's report, to remark upon the following two points:—

1. *Electric Lighting of Magazines.*—Experiments in lighting magazines by electricity were exhaustively carried out. The method of installation, however, was adversely reported against by General Schaw and by the electrical experts of the Telegraph Department, and it has been decided to revert to the ordinary approved method of lighting by candle-lamps.

2. *Provision of Laboratories.*—It has become necessary, in order to carry on the filling of cartridges and shells, and other operations with ammunition, that there should be erected as adjuncts to the main storage-magazine at each port laboratories in which all heavy- and machine-gun ammunition which does not come out from England ready for action and for immediate disposition in the various battery-magazines can be made up for issue thereto as required. It is proposed to proceed with the construction of these as being urgently required.

The thanks of the country have been conveyed to General Schaw in His Excellency's Speech on the opening of Parliament. It would be more than difficult to express a due appreciation of the time, care, and invaluable advice which that distinguished officer has so freely given at all times to the practical working-out as well of the smaller details as of the main features of the designs recommended and proposals set forth in his report upon the defences.

The officers commanding permanent artillery at the four ports have acquired very rapidly the special knowledge required to deal safely and quickly with heavy ordnance. The arrival in the colony of the 8in. breech-loading guns, weighing over 13 tons, with their cumbrous carriages and other gear, has severely tested the resources of both the construction branch and the artillery, the appliances available being very inferior to those usually at the disposal of artillery when engaged in the transport and mounting of heavy guns. Notwithstanding this disadvantage, the two guns which have so far arrived have been hauled to their destination up very steep inclines, and one has been mounted, without any hitch or accident.

The progress made in submarine defences has been comparatively slow, owing partly to non-arrival of certain essential stores which are now under order, and partly to alterations in the original scheme. The delay, however, has been compensated for by the whole of the Torpedo Corps having been put through a complete course by Captain Falconer, the Inspector of Submarine Mining; and that officer, having also placed the dépôts and their appliances in as complete a condition as circumstances would allow, will be in a position, having now trained men at his disposal, to put the submarine defences rapidly in a forward condition.

The duty of inspecting and reporting upon the mounted guns, artillery stores, magazines and ammunition, and their several equipments, has been detailed to a special officer, Lieutenant Douglas, R.N.

Further information and valuable suggestions connected with the perfection of the equipment and fighting-powers of the guns mounted in the colony, and embodying the latest ideas derived from the results of trials in England, have been forwarded during the year by the Agent-General and General Steward, R.E.

There have been no new transactions in acquiring land for defence purposes. The expenditure under that head for the year has been in settlement of claims consequent upon previous purchases. To enable certain of General Schaw's recommendations to be carried out it will be necessary to acquire one or two additional sites; but the expenditure involved will in no case be serious.

The Inspectors of Works at the forts have paid much care and attention to their duties, and have intelligently carried out the works under their superintendence according to the plans and instructions they have received. Under the existing system of control their duties are both onerous and responsible, and I am pleased to bear testimony to the value of their practical knowledge, and to the intelligence displayed in its application to the works in hand.

Particulars of expenditure, &c., will be found in the return annexed.

ARTHUR BELL,
Resident Engineer.

The Under-Secretary for Defence.
31st March, 1888.

HARBOUR DEFENCES.

RETURN showing the EXPENDITURE on HARBOUR DEFENCES in detail, from their Commencement to the 31st March, 1888, also LIABILITIES at that Date.

| Classification. | 1878-79. | 1879-80. | 1880-81. | 1883-84. | 1884-85. | Total Expenditure to 31st March, 1888. | | 1885-86. | 1886-87. | 1887-88. | Total Expenditure from 31st Mar., 1885, up to 31st Mar., 1888. | Great Totals Expenditure from 1878 to 31st March, 1888. | Liabilities known to exist at 31st March, 1888. | Grand Total Expenditure and liabilities at 31st March, 1888. |
|---|-----------|-------------|----------|-----------|-------------|--|-------------|-------------|--------------|--------------|--|---|---|--|
| | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. |
| I.—MATERIAL FROM ENGLAND. | | | | | | | | | | | | | | |
| 23 R.B.L. guns and carriages, &c.: 13 6in., 5 tons, and 10 8in., 13 tons, E.O.C. 1 | .. | .. | .. | .. | .. | .. | .. | 35,149 0 0 | 88,033 15 .. | 711,188 15 8 | 84,371 11 3 | 84,371 11 3 | .. | .. |
| 22 R.M.L. guns and carriages, &c.: 11 7in., 7 tons, and 11 64-pr., 62 cwt. 2 | .. | 26,356 13 0 | .. | .. | .. | .. | 26,356 13 0 | .. | .. | .. | .. | 26,356 13 0 | .. | .. |
| 8 R.M.L. guns and carriages, &c., converted 64-pr. from H.M.S. "Nelson" 3 | .. | .. | .. | .. | .. | .. | .. | 4,203 6 4 | .. | .. | 4,203 6 4 | 4,203 6 4 | .. | .. |
| 9 R.B.L. field-guns and carriages, Imperial-service pattern 4 | .. | .. | .. | .. | .. | .. | .. | .. | 900 0 0 | .. | 900 0 0 | 900 0 0 | .. | .. |
| 23 machine-guns and carriages: 20 Norden-felt, 6-pr., and 3 Hotchkiss (2 6-pr., 1 3-pr.) 5 | .. | .. | .. | .. | .. | .. | .. | .. | 1,745 12 2 | 6,398 9 6 | 8,139 1 8 | 8,139 1 8 | .. | .. |
| Ammunition generally for above various guns 6 | 10 7 10 | 799 0 7 | .. | .. | .. | .. | 809 8 5 | 3,504 5 11 | 3,352 8 | 9,111,890 2 | 18,746 16 10 | 19,556 5 3 | .. | .. |
| War Office stores, Miscellaneous equipments 7 | 4,830 0 0 | .. | .. | .. | .. | .. | 4,830 0 0 | .. | 3,975 14 7 | 485 18 10 | 4,461 13 5 | 9,291 13 5 | .. | .. |
| Major-General Steward, R.E., Military Adviser to Agent-General .. | .. | .. | 6,300 0 | .. | .. | .. | .. | 513 13 6 | 1,986 10 8 | 522 17 4 | 3,023 1 6 | 3,023 1 6 | .. | .. |
| 4 torpedo-boats, Thornycroft, 2nd class 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 11,035 17 0 | .. | .. |
| 20 Whitehead torpedoes and air-compressing machinery 9 | .. | .. | .. | .. | .. | .. | .. | 8,104 0 8 | 685 0 0 | .. | 8,789 0 8 | 8,789 0 8 | .. | .. |
| Submarine mining stores for submarine defence of ports 10 | .. | .. | .. | .. | .. | .. | .. | .. | 872 13 6 | 12,055 6 6 | 12,928 0 0 | 12,928 0 0 | .. | .. |
| Miscellaneous charges: Freight, insurance, shipping, &c. 11 | 857 0 4 | 415 11 1 | .. | .. | 2,226 13 10 | .. | 3,490 5 3 | 938 19 7 | 2,026 11 2 | 3,599 0 11 | 5,904 11 8 | 9,403 16 11 | .. | .. |
| Totals .. | 5,697 8 | 227,571 4 8 | 6,300 0 | 06,962 10 | 06,962 10 | 1046,531 3 8 | 51,813 6 0 | 53,578 6 | 546,075 10 | 1151,467 3 | 4197,998 7 | 033,277 5 | 10231,275 12 | 10 |
| II.—WORKS IN THE COLONY. | | | | | | | | | | | | | | |
| Defence works generally: Batteries, depôts, launches, engineering, and miscellaneous charges .. | 713 1 3 | 531 19 8 | 904 6 2 | 912 6 | 112,638 5 3 | 5,639 19 3 | 58,081 5 1 | 74,429 6 | 825,872 3 | 10158,382 15 | 7164,082 14 | 10 | .. | .. |
| Purchases, &c., of land: Sites for depôts and batteries .. | .. | .. | .. | .. | .. | .. | .. | 17,272 9 0 | 11,421 6 2 | 1,577 9 8 | 30,271 4 10 | 4 10 | .. | .. |
| Totals .. | 713 1 3 | 531 19 8 | 904 6 2 | 912 6 | 112,638 5 3 | 5,639 19 3 | 75,353 14 1 | 85,850 12 | 1027,449 13 | 6188,654 0 | 5194,353 19 | 8 | 3,144 6 | 3197,498 5 |
| Totals I. and II. .. | 6,410 9 | 528,103 4 | 4904 6 | 27,212 6 | 119,600 16 | 152,231 2 | 1127,167 0 | 1139,428 19 | 378,525 4 | 5340,121 3 | 9892,352 6 | 836,421 12 | 1428,773 18 | 9 |

1 All the 6in. guns have arrived in the colony. Eleven of them are mounted ready for action. Works for the twelfth are in progress; those for the thirteenth not yet commenced. Two of the 8in. guns have arrived, and the remaining eight will probably arrive within the next few months. The emplacement for one is complete, those for three others almost complete; for the remaining six not yet commenced.

2 These guns were all mounted in 1885.

3 A 7in. gun has been temporarily dismounted to make way for the more powerful 8in. B.L. This 7in. gun will be mounted on another site.

4 These guns have not been permanently mounted, and are at present used for saluting batteries or by the Volunteers. They are of old pattern, but could be utilised in war for better protection of minefields, &c.

5 These guns have been handed over to the Volunteers.

6 The three Hotchkiss guns are in the colony, but not mounted in the defence works. Ten of the Nordenföldt guns are for fixed mountings, and five of them are mounted. Ten are on field-carriages of a pattern specially designed for New Zealand. One has arrived, and the shipment of all has been notified.

7 The supplies of ammunition, up to 100 rounds per gun for all the M.L. guns, are in the colony. For the B.L. guns it has for the most part also arrived, and the balance is rapidly being shipped.

8 These are special stores required for the general service and equipment of the batteries.

9 These have been in the colony for some years.

10 Are all in the colony.

11 The freight and insurance charges upon the heavy ordnance and the ammunition are very high, and amount to a much larger sum than was anticipated.

RETURN of VOLUNTEERS to the 31st March, 1888.

| 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 | 1 | 46 | .. | .. | 5 | 332 | 2 | 108 | 1 | 45 | 11 | 588 | .. | .. | 20 | 1,119 | 1 | 53 |
| Waikato | 1 | 65 | 1 | 60 | .. | .. | .. | .. | .. | .. | 1 | 50 | .. | .. | 3 | 1,175 | .. | .. |
| Taranaki | 1 | 46 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 71 | .. | .. | 2 | 117 | .. | .. |
| Patea | 1 | 52 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 125 | .. | .. | 2 | 125 | .. | 67 |
| Wanganui | 1 | 67 | .. | .. | 1 | 50 | .. | .. | .. | .. | 2 | 78 | .. | .. | 3 | 130 | 1 | 30 |
| Rangitikei | 1 | 49 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 149 | .. | .. | 4 | 266 | 2 | 128 |
| Wellington | 1 | 45 | .. | .. | 2 | 117 | 1 | 47 | .. | .. | 3 | 154 | .. | .. | 4 | 203 | .. | .. |
| Wairarapa | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | 338 | .. | .. | 11 | 547 | 3 | 143 |
| Napier | .. | .. | .. | .. | 1 | 63 | 1 | 61 | .. | .. | 5 | 235 | .. | .. | 5 | 235 | 4 | 191 |
| Poverty Bay | 1 | 50 | .. | .. | 1 | 84 | 1 | 48 | .. | .. | 2 | 174 | .. | .. | 4 | 272 | 2 | 106 |
| Thames | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | 52 | .. | .. | 2 | 136 | 1 | 65 |
| Total North Island | 8 | 420 | 1 | 60 | 10 | 646 | 5 | 264 | 1 | 45 | 40 | 2,197 | .. | .. | 65 | 3,632 | 15 | 783 |
| Nelson | .. | .. | .. | .. | 1 | 60 | 1 | 55 | .. | .. | 3 | 152 | .. | .. | 5 | 267 | 1 | 55 |
| Marlborough | 1 | 50 | .. | .. | 2 | 137 | 3 | 165 | 1 | 47 | 2 | 112 | .. | .. | 3 | 162 | 2 | 103 |
| Canterbury, North and South | 1 | 85 | 1 | 99 | .. | .. | .. | .. | .. | .. | 16 | 835 | 1 | 69 | 25 | 1,377 | 7 | 578 |
| Oamaru | .. | 60 | .. | .. | 1 | 56 | 1 | 43 | .. | .. | 6 | 802 | .. | .. | 9 | 1,461 | 5 | 302 |
| Dunedin | 1 | 56 | .. | .. | 3 | 175 | 2 | 117 | 1 | 55 | 16 | 862 | .. | .. | 23 | 1,265 | 8 | 580 |
| Invercargill | 1 | 43 | .. | .. | 1 | 70 | 1 | 58 | .. | .. | 4 | 236 | .. | .. | 7 | 407 | 1 | 30 |
| Lake | .. | .. | .. | .. | .. | .. | 1 | 41 | .. | .. | 2 | 89 | .. | .. | 3 | 130 | 1 | 116 |
| Westland | .. | .. | .. | .. | 2 | 99 | .. | .. | .. | .. | 5 | 264 | .. | .. | 7 | 363 | 5 | 226 |
| Total South Island | 5 | 294 | 1 | 39 | 10 | 597 | 9 | 479 | 2 | 102 | 54 | 2,852 | 1 | 69 | 82 | 4,432 | 32 | 1,990 |
| Total all New Zealand | 13 | 714 | 2 | 99 | 20 | 1,243 | 14 | 743 | 3 | 147 | 94 | 5,049 | 1 | 69 | 147 | 8,064 | 47 | 2,773 |

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