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A HISTORY OF THE DEFENCE OF VICTORIA AND
ESQUIMALT, 1846-1893

by Ronald Lovatt

1980

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Abstract

This is the first of a series of studies which together will relate the history of the defence of Victoria and Esquimalt. It begins in the pre-confederation period of British Columbia's history and describes a wide range of historical attitudes and events which influenced the defence of Victoria and Esquimalt. It ends with an Anglo-Canadian agreement to place the first permanent batteries of modern coast defence guns and a British marine artillery garrison at Esquimalt in 1893. Within the broader historical scene, it shows how Fort Rodd Hill came to be a coast defence battery site and why it was built, equipped and manned in a particular way.

Acknowledgement

This report would have taken much longer to complete if J.E. Rippengale had not, on his own initiative, obtained copies of many of the essential documents and reports during a visit to England in 1976 and lodged them at Fort Rodd Hill National Historic Park in anticipation of their usefulness to a historian.

Introduction

This study is the first of a series which, when concluded, will portray the whole history of the defence of Victoria and Esquimalt to 1957 and, within the whole, the history of Fort Rodd Hill in particular. The purpose of the series, and of each study, is to provide historical information for the successful interpretation of Fort Rodd Hill National Historic Park

The major archival sources of information used in the preparation of this study were the Public Record Office and the War Office Library in London, England, and the Provincial Archives of British Columbia. Because largely primary sources were used and much of the information, so far as the author is aware, is not described elsewhere, extensive end-notes are provided.

Each chapter of the text begins with a general introduction, continues with each historical event discussed in a titled sub-chapter and ends with a summary. The conclusion contains a summary of the whole period. The reader may therefore obtain; an overview by reading the abstract, chapter introductions and summaries, and the conclusion; a more detailed history by reading the whole; or the history of a particular aspect by reference to a sub-chapter or several sub-chapters.

For the reader's convenience a sketch map of the geographical features in the Victoria-Esquimalt area referred to in the text is included at Figure 1. To allow easy comparison of the many suggested defence plans summary tables of them are included. A militia lineage chart is at Figure 17. Military terms used in the text are explained in a glossary.

Throughout the text, the two names Victoria and Esquimalt are often used together, sometimes hyphenated. No precedent is inferred in their juxtaposition.

Abbreviation Used

Bart	Baronet
B.C.	British Columbia
cwt	Hundredweight
DAG	Deputy Adjutant General
G.C.B.	Knight Grand Cross of the Bath
G.C.M.G.	Knight Grand Cross of the Order of St. Michael and St. George.
K.C.B.	Knight Commander of the Bath.
H.M. Govt.	Her Majesty's Government
L	Pounds Sterling
H.M.	Her Majesty('s)
H.M.S.	Her Majesty's Ship
H.M.Ss.	Her Majesty's Ships
Hon.	Honourable
ML	Muzzle Loading
M.P.	Member of Parliament
N.I.	Naval issue
pdr	Pounder
QF	Quick firing
R.A.	Royal Artillery
RBL	Rifled breech loading
R.C.A.	Royal Canadian Artillery
R.E.	Royal Engineers
RML	Rifled muzzle loading
R.M.L.I.	Royal Marine Light Infantry
R.N.	Royal Navy
RSM	Regimental Sergeant Major
tn	ton

V.I.V.R.C.

Vancouver Island Volunteer Rifle
Corps

V.P.R.C.

Victoria Pioneer Rifle Corps

V.R.V.C.

Victoria Rifle Volunteer Corps

The Pre-Confederation Period

General

There were three main threats to the survival of pre-confederation British Columbia. Firstly, the possibility that the activities of a white population might be resisted and perhaps overwhelmed by a much larger native Indian population. Secondly, that aggressive American expansionism might absorb British interests and territory. And lastly, that international conflict could bring an attack by a war time enemy of Britain. The threats were sometimes coincident, but fortunately never coordinated. They can be considered separately.

Survival in the shadow of these threats could only be guaranteed by political and administrative policies which asserted and protected British sovereignty while avoiding antagonism. Overall policy was dictated in London, England, by the Colonial Office of the British government. From 1846 local administration was in the hands of the colonial governor, assisted by a council and legislature. This local civil jurisdiction required the presence of a disciplined, recognizable Imperial force to give it authority and confidence. The Royal Navy, and, to a lesser degree, the British Army, provided this presence. The Royal Navy's commitment was considerable and continuous throughout the period.

Victoria and Esquimalt, two adjacent harbours on the south coast of Vancouver Island, were the centres of colonial administration and Imperial presence. Victoria was also the major centre of commerce. As they both grew their security became increasingly important. Their citizens, the governor and the Royal Navy, all expressed their concern for the protection of the two harbours to the Colonial Office. By 1871, when British Columbia became a province of Canada, the first plans for coastal defence had materialised and a local volunteer unit had been raised.

The Indian Threat

The colonist's fear of an Indian attack was rooted in the numerical disparity between the two races. Before 1850, the white population of the Colony of Vancouver Island was less than one hundred; a tiny, isolated, white enclave in a coastal Indian population of some thirty thousand.¹ In 1854 it was still only 744 with 386 of that number in Victoria and on Puget Sound Company (Hudson's Bay Company subsidiary) farms in the Esquimalt area. But the threat of being engulfed by overwhelming numbers of Indians was never more than a potential menace while each of the many bands remained an entity. Internecine differences among the bands precluded any general uprising.

Indian numerical superiority was reduced in 1858 when many thousands of miners swarmed into the colony, most of them passing through Victoria on their way to the mainland goldfields. The miners were followed by settlers. The disparity between the Indian and white population declined further when two major epidemics of smallpox swept through the Indian people in 1862 and 1869. The first of these killed an estimated one third of the total Indian population on the coast.

While the menace of a major Indian war virtually disappeared in the 1860's, individual and group lawlessness continued. Simple offences could, and sometimes did, result in individual deaths. The isolated settler or party was frequently in peril. But incidents of this type did not pose a hazard for the white colony as a whole, or even for a community like Victoria, provided they were confined and not allowed to become a cause with wide appeal. Prompt and fair administration of colonial law for both sides prevented this from happening.

Countering the Indian Threat

Both the menace and the weakness of the Indian presence were appreciated by the colonial governors, particularly Governor James Douglas. In two despatches to the Colonial Office, London, he described an administrative policy for the colonial territory which ensured the security of the white population by exploiting the Indian weakness:

By retaining their confidence and taking advantage of their mutual animosities we may therefore always manage to prevent extensive combinations of the tribes for the purpose of assailing the settlements.²

A conviction founded on experience, that it is only by resorting to prompt and decisive measures of punishment in all cases of aggression that life and property can be protected and the native tribes of this colony kept in a proper state of subordination.³

Thus no incident would be allowed to fester and become a cause for a general uprising.

To administer this policy the governor needed backing for his personal authority. For this he called upon the captains of Royal Navy vessels visiting the coast. As early as 1850 Governor Richard Blanshard, the first governor of the Colony of Vancouver Island, sailed aboard H.M.S. Daedalus to arrest two Indian murderers at Fort Rupert. Sailors and marines from the ship extracted retribution by razing the Indian village which had harboured the criminal. The pattern was repeated in 1853 when Governor Douglas led marines and bluejackets from H.M.S. Thetis to the Cowichan valley to arrest the murderers of shepherd Peter Brown. There were several other expeditions of this type involving the Royal Navy until the civil administration was strong enough to use its own resources alone, some years after British Columbia became a province of Canada.

Frequently there were long periods when Royal Navy vessels were absent from the coast on duty elsewhere and their help was not available. To provide a measure of continuous protection, Governor Douglas raised a force of Voltigeurs from among former Hudson's Bay Company servants, mostly of mixed French Canadian and Indian blood, who lived in a small community on the Colquitz River near Victoria.⁴ In exchange for 20 acre grants of land, a colourful uniform and a company musket, they were called upon to provide a guard in Fort Victoria, an escort for the governor among the Indians, patrols for the countryside about Victoria and to take part in expeditions to apprehend law breaking Indians. Their numbers varied, probably reaching a peak in 1856 when 18 of them joined 400 seamen and marines in an expedition to the

Cowichan valley to arrest an Indian who had attempted to murder a white settler, Thomas Williams. In March 1858 their strength was recorded as Lieutenant Henry McNeill and nine privates, all accommodated in barracks in Victoria. The last action of the Voltigeurs seems to have been to assist in the capture of the Lamalchi Chief at Montagu Harbour in 1863.⁵

Other precautions were necessary, particularly before the gold rush of 1858, in case the general administrative policy failed and law and order collapsed. Settlers and travellers in the country found it prudent to be armed while those in farming communities practised musketry and alarm drills. The Hudson's Bay Company relied on forts to protect its trading property and personnel.

Fort Victoria, the first fortification in the Victoria-Esquamalt area, was constructed in 1842 on the shore of an inlet providing a protected anchorage on the southern shore of Vancouver Island. It was in the common style of Hudson's Bay Company fur trading forts of the era (Figure 2). An upright log pallisade surrounded the fort compound which contained several buildings used as messes, offices and stores. Two log tower bastions at opposite corners mounted 9-pounder muzzle loading cannon. The fort was never attacked although there were occasions when the cannons were fired to demonstrate their destructive capability as a warning to recalcitrant Indians.

The summer months were the most dangerous times for Fort Victoria. Every year the annual summer migration of northern Indians resulted in a large encampment near the fort. For many years it was a time when caution was needed to avoid a clash. By 1862, the encampment had become an intolerable nuisance to the residents of the new town of Victoria and, with the small pox epidemic, a health hazard. The northern Indians were ordered home that year.⁶ Unfortunately they took the smallpox with them, spreading it along the coast.

By the middle of the 1860s, the fear of a widespread Indian uprising had diminished so much as to be no longer of consequence. Fort Victoria itself no longer had any protective value. The valuable harbour site it occupied was consumed by the new town of Victoria and

the last bastion was demolished in 1864. A Parks Canada plaque at the entrance to Bastion Square on Government Street, Victoria, marks the site of Fort Victoria today.

The Russian Threat

British and Russian interests on the northwest coast of North America did not conflict when the two nations were at peace with each other. When they were at war their conflict included their colonies and fleets in the Pacific region.

Russia maintained an interest, particularly in fur trading, in the northern territory of the northwest coast until 1867. She declared the southern limit of this interest, the southern boundary of Alaska, in 1821. The Russian America Company trading in Alaska signed an agreement with the Hudson's Bay Company in 1839 whereby each company agreed to respect the rights and property of the other. Russia sold Alaska to the United States of America in 1867.

In another theatre, in Europe, Russia was of importance as a member of alliances by 1850. Four years later Russian aggression in the balkans was opposed by Britain and France. The Result was the Crimean War, 1854-56. The fighting was carried to the northeastern Pacific Ocean when British and French warships sought to destroy Russian naval power and thus ensure the safety of the Pacific trade and colonies of the allies.

Countering the Russian Threat

When Britain declared war on Russia in 1854 she brought her empire into the affray. The tiny Colony of Vancouver Island could do little, nor did it present a very lucrative target for a Russian attack. Besides, the agreement between the trading companies of both nations was recognized by the national governments. As Victoria was then largely Hudson's Bay Company property, and its inhabitants mostly company employees, it could afford to be complacent about its defence.

The Royal Navy in the Pacific had a broader responsibility to protect all British trade and possessions in the area from Russian naval attack. The French flotilla in the Pacific had similar responsibilities. A combined plan was developed to attack the Russian base in the Aleutian Islands with the hope of catching the Russian warships there.

Petropavlosk was assaulted by a combined British and French force in 1854. It was a bloody and inconclusive affair.⁷ There were no Russian warships in the harbour. Afterward, the Royal Navy warships involved in the battle retired to Esquimalt to refit. The shot damaged vessels and the wounded requiring treatment, brought the reality of war to Victoria, emphasised the importance of Esquimalt to the Royal Navy's Pacific Squadron, and showed the inadequacy of the facilities there. Hospital huts were built at Esquimalt in time for the second assault on Petropavlosk in 1855.⁸ They were not needed because the Russians had evacuated the base before the allies arrived.

The American Threat

The pre-confederation period was marked by suspicion of American intentions toward the British possessions. There was good cause for this suspicion in the aggressive, expansionist attitude generally displayed by Americans in the area and voiced by politicians in Washington. A treaty between Britain and America established the international border in the northwest at the 49th parallel in 1846, but did not allay the suspicions of the British subjects who moved north to the new Colony of Vancouver Island. The events surrounding a gold rush beginning in 1858 seemed to justify the colonist's attitude. In the last decade of the period the American menace evolved to two specific forms, one dependant upon Anglo-American relations and the other a possible action against Victoria by extremists.

Local suspicion in Victoria of American intentions had its roots in events in the northwest before the Treaty of Washington established the international boundary at the 49th parallel in 1846. Prior to the treaty, British commercial interests, almost entirely incorporated

in the Hudson's Bay Company, had extended further south. They had eventually come under pressure from American immigration. The American settlers were encouraged by a bellicose, expansionist attitude expressed in Washington. The situation had reached flash point locally when negotiation between Washington and London resulted in the Treaty of Washington and settlement of the boundary. There were some among those who moved north of the new boundary who believed that the American claim had been spurious, their methods underhand and that the whole pattern could easily be repeated. Governor Douglas was among them. Nor did the new boundary entirely curb the ambition of American extremists.

From 1846 until 1858 there was no need for concern, but the situation changed dramatically in August 1858 when the gold rush began to the Fraser river. In the first weeks some three hundred British citizens of Victoria were suddenly in the shadow of a tent city containing some six thousand American fortune seekers.⁹ The situation seemed to be a repetition of the start of the Columbia river assimilation. However Governor Douglas asserted administrative control over the influx and emphasized British sovereignty so effectively that there was no serious challenge to colonial authority on Vancouver Island or the mainland.

A serious challenge to British rights did occur on an Island between Vancouver Island and the mainland where sovereignty was in some question due to a vague definition of the sea boundary in the Washington Treaty. The Hudson's Bay Company had used San Juan Island since 1850 as a fishing station and farmed it since 1853. American officials tried to impose duties and taxes on British residents and British officials in their turn tried to impose British law on American squatters. In 1859 a company pig was shot by a squatter, inflaming the dispute over jurisdiction. Shortly afterward an ambitious American general, William S. Harney, ordered troops under his command to land on the island, ostensibly to protect the Americans there from Indian attack. In Victoria, the American action was seen as an affront to British sovereignty which should be repulsed. At the Governor's request, the Royal Navy sent warships and marines to the scene. "See

'Countering the American Threat.'" A clash was averted when cooler heads prevailed. Washington and London began discussions on the location of the international sea boundary. With them the "Pig War" was reduced to an agreed joint military occupation of the island until the dispute could be settled by arbitration.¹⁰

The placing of British and American garrisons on San Juan Island in 1860 brought a degree of calm to colonial fears of American intentions. It was clear that both Washington and London respected the international boundary and that Washington could and would control local extremists in Oregon. The menace of American absorption receded further as British, Empire and Canadian immigration to British Columbia increased in the early 1860's, and American interest was diverted by the Civil War which broke out in 1861. It was that war which brought a new form of American menace to Victoria; the spectre of an American attack in an Anglo-American war.

The American Civil War began on 12 April 1861 when confederate troops under Beauregarde began their bombardment of the union Fort Sumter. It ended with Lee's surrender of the confederate army at Appomattox Court House, 9 April 1865. It was a war remarkable for, among other things, the numbers involved, the intense fighting and the considerable casualties on both sides. It was also a war which saw the introduction of a new era of military and naval technology with the use of ironclad ships, rifled guns, shells, submarines and mines. "See 'Military and Naval Technological Development'."

For the first two years of the war there was a distinct possibility that Britain would intervene on behalf of the confederacy. British ire was stirred when a union vessel stopped the British steamer Trent on 8 November 1861, and forcibly removed two confederate envoys aboard her. They were eventually released after strong British protest. Another crisis occurred when the Alabama, destined to become the most famous of the confederate raiders, was built in Britain and released to the confederacy in spite of union protests. The protests were even stronger when it became known that two ironclad rams were being built for the confederacy. The British government eventually seized the

ships, but only after receiving a sharply worded union note. Matters finally came to a head in the last six months of 1862 when the British government came close to offering mediation to end the war, and intervention on the confederate side if the union refused the offer. The decisive confederate defeats at Gettysburg and Vicksburg, and signs that Russia supported the Union, all helped stay Britain's hand. From 1863, very slowly at first, relations between Britain and the union, and, after 1865, the United States of America, began to improve.

The events of the American Civil War and the crisis in Anglo-American relations in the first two years were fully reported in Victoria. Nervousness in the city was soothed somewhat by the possibility of a British garrison being stationed there and the action of some members of the community in forming a volunteer corps. "See 'Victoria Rifle Pioneer Corps' and 'Vancouver Island Volunteer Rifle Corps.'" But the news of the first battle ever fought between iron-clad ships, the fight between the union Monitor and the confederate Virginia, formerly Merrimac, on 9 March 1862, seemed to have most serious implications for Victoria. Additional reports of successful union naval assaults on Port Royal, 7 November 1861, and on Savannah and New Orleans in April 1862 were bound to focus local attention on the defenceless state of Victoria. When, at the end of 1862, news was received of the possibility of ironclad monitors being stationed on the west coast, Governor Douglas warned the Colonial Office:

It is stated on good authority that four Ironclad ships are to be sent out to this coast, one for San Francisco one for the Columbia River and one for Puget Sound of the same class as the Monitor intended for Harbour defences and a seagoing Ironclad steamer for the service of the American possessions generally. One of the monitors will be finished this month [January 1863] and is to come out from New York immediately in Sections to be put together in San Francisco.11

He went on to point out that this would completely upset the naval balance of power as Captain Richards of H.M.S. Hecate had advised him that one ironclad could engage and destroy all Royal Navy wooden ships in the area without damage to herself. There was no British

ironclad on the Pacific Station at that time. H.M.S. Zealous, 1867-72, was the first.

There was no response from London to the warning or to the nervousness in Victoria over the possibility of an American attack. As far as the British government was concerned that danger had diminished with the end of the crisis in Anglo-American relations in 1862. But the mood in Victoria persisted. It reached a point, early in 1864, when the House of Assembly, Vancouver Island, saw fit to send a memorial to the Secretary of State for the Colonies to protest the defenceless state of both Victoria and Esquimalt. The memorial presented the issue clearly and suggested a defence plan. "See 'Coastal Defence of Victoria and Esquimalt.'" When the American Civil War ended the immediate need for defences to meet a possible attack on Victoria and Esquimalt ended too.

One year later, in 1866, a new menace loomed. Victoria was considerably alarmed when it was reported that thousands of Fenians were preparing to launch an attack. The damage that such a raid might cause was of immediate local concern, particularly in Victoria, the colony's centre of commerce and chief port. Forewarning of such a raid, even if suspect, had to be taken seriously. As a precautionary measure the local volunteers camped in Beacon Hill Park during the week of alarm, but the report was never substantiated. "See 'Victoria Rifle Volunteer Corps.'" Another similar rumour was received in 1868, but caused less alarm.

Countering the American Threat

When the possibility of American assimilation suddenly seemed very real with the start of the gold rush in 1858, the immediate response had to come from local colonial officials. Governor Douglas acted quickly to maintain British sovereignty through civil regulation and called upon British naval and military units in the area for assistance whenever he needed it. Before the second gold mining season, Britain rushed military and naval reinforcements and key administrative

personnel to the area to assist the Governor maintain law and order. They were on hand when the San Juan crisis broke in 1859. As the colony grew stronger the military and naval assistance was reduced.

The first four hundred miners reached Victoria aboard the Commodore in April, 1858, to begin the gold rush. To control them, and the thousands who followed, Governor Douglas rapidly instituted a number of administrative measures. Among the more important were the extension of his authority by proclamation over the mainland territory north of the 49th parallel, the licencing of miners, customs charges on imported goods, restrictions on spirits, arms and ammunition, and the appointment of British subjects as magistrates and revenue officers. In May, Douglas visited the miners on the Fraser river, and at Hill's Bar was in time to prevent bloodshed between miners and Indians. On that occasion he addressed the miners in a speech which summarised the tenet of his policy. He later reported:

I refused to grant them any rights of occupation to the land and told them distinctly that H.M. Govt ignored their very existence in that part of the country which was not open for the purposes of settlement and they are permitted to remain there merely on sufferance, that no abuses would be tolerated, and that the laws would protect the rights of the Indian no less than those of the white man. 12

But the Governor's presence, his blunt, authoritative statements, and regulations were not enough. It was necessary, at least, to make some show of force to those who were unconvinced by words. Fortunately, H.M.SS Satellite and Plumper were surveying in the local waters and H.M.S. Savannah arrived at Esquimalt on 12 July 1858 with a Royal Engineer boundary survey party of 65 officers and men commanded by Major J.S. Hawkins R.E.. Satellite did guard duty at the mouth of Fraser river in June and July, intercepting all craft to check mining licenses and collect customs revenue. In August, after miners had attacked Indians in the Fraser canyon in reprisal for Indian murders, Douglas used marines from Satellite and 15 of the Royal Engineers in a personal expedition to the troubled area to restore law and order.¹³ He was able to do so without resorting to force. No doubt the pre-

sence of an armed and disciplined military escort helped.

But the governor was clearly operating at the limit of his resources. The Colonial Office recognised this and sent reinforcements. A force of 165 Royal Engineers was despatched at the end of 1858, all of them tradesmen who would provide the necessary skills for orderly development of the colony with the ability to act as soldiers when necessary.¹⁴ Before they were fully assembled in British Columbia, H.M.S. Tribune, a steam frigate of 31 guns, and H.M.S. Pylades, a steam corvette of 21 guns, the former with a force of 161 Royal Marine Light Infantry, commanded by Captain Thomas Magin, arrived from China and the East Indies.¹⁵ The marines were fresh from the China War. These ships and marines had been ordered to Esquimalt by the Admiralty on the prompting of the colonial office. They arrived on 14 February 1859. The Governor, obviously relieved, wrote "...the men are generally in good health and I feel much satisfaction in having so effective a force available in emergency."¹⁶ He must have felt even more relieved by the arrival of Judge Matthew Baillie Begbie, appointed as Judge of British Columbia, an Attorney General, a Colonial Treasurer, a Collector of Customs and a Chief of Constabulary to strengthen his administration. By May 1859, the majority of the marines and all of the Royal Engineers were encamped at Queenborough (New Westminster) on the Fraser river; a military force of 292 officers and men under the command of Colonel Richard Clement Moody R.E. on the main route to the inland goldfields. It is not surprising that there were no more incidents in the gold fields of the type experienced the previous year.

When American troops landed on San Juan Island on 27 July 1859, Governor Douglas turned immediately to the Royal Navy for help. H.M.S. Tribune left Esquimalt for the island on 29 July. She anchored in Griffin Bay within gun range of the American camp. Four days later H.M.S. Plumper joined her with two officers and 44 men of the Royal Marine Light Infantry and one officer and 14 men of the Royal Engineers, all from Queenborough. H.M.S. Satellite joined on 3 August. The remainder of the marines were moved from the mainland to Esquimalt on 6 August.

Governor Douglas's orders to the Royal Naval commander, Captain G.F. Hornby, although belligerent in tone, were not specific. Hornby's own appreciation of the situation on the island led him to avoid a confrontation. He was supported by Rear-Admiral R.L. Baynes, Commander of the Pacific Squadron, when the admiral reached Esquimalt aboard his flagship H.M.S. Ganges on 5 August 1859. Baynes sent his assessment directly to the Admiralty who concurred with all naval moves in the crisis.¹⁷ The British government's negotiations with Washington occupied the remainder of the year and resulted in an agreement to jointly garrison the island until its jurisdiction could be decided. On orders from London, Baynes formed the British garrison from the Royal Marine Light Infantry (Figure 3). They landed on the island on 21 March 1860 and remained there until ordered back to England when the island became American in 1872.

As soon as the enlarged civil administration was firmly in control of the colony the naval and military reinforcements were withdrawn. The Admiralty had suggested that the Royal Marine Light Infantry could withdraw in 1859, after the arrival of the Royal Engineer detachment, but Admiral Baynes retained them while expecting to have to provide a garrison for San Juan Island. Those not assigned to the garrison were used to fill vacancies in ship's complements. Colonel Moody's Royal Engineer detachment was disbanded in 1863 on orders from London. Those returning to England sailed aboard H.M.S. Chameleon on 11 November.

The engineers sailed at a time when Anglo-American relations had improved after difficulties during the first two years of the Civil War. In the first year, 1861, the War Office had seriously considered sending British troops to garrison Victoria in addition to the Royal Engineers and Royal Marine Light Infantry already in the area. The following year the Admiralty ordered some guns landed for the defence of Esquimalt. "See 'Coastal Defence of Victoria and Esquimalt.'" But the urgency to carry these measures further and establish a defence was lost when Anglo-American relations improved.

While London relaxed after 1863, Victoria and Esquimalt did not. Possibly the departure of the Royal Engineers heightened the awareness

of the lack of defences. In 1864, the citizens of Victoria formed the Victoria Rifle Volunteer Corps, the most successful of its volunteer units. In 1865, Rear-Admiral Denman, aware of the rapid growth of the naval establishment at Esquimalt, urged the Admiralty to decide its future and to consider the installation of batteries for its defence if it was to continue as a Royal Naval establishment. "See 'Coastal Defence of Victoria and Esquimalt.'"

Victoria's volunteers, the increased importance of Esquimalt and the plans for the coastal defence of the two ports were all characteristics of the 1860s which would continue after British Columbia became a province of Canada. The history of each must be considered briefly, separately and in a little more detail to complete the account of the defence of Victoria and Esquimalt in the colonial years.

Victoria's Volunteers - General

Residents of the Colony of Vancouver Island had always expected to have to act in their own defence if the occasion arose. Those who were close to Fort Victoria would have manned the bastions and stockade had the fort been attacked. Musketry and the firing of small cannon were practised, but there was no attempt to form a volunteer unit until the town of Victoria had a large enough population to support such a unit. A group of citizens volunteered their services in 1859. They were the pioneers of a movement which survived many difficulties to become, by 1871, an accepted feature of the community of Victoria.

There were four distinct groups of volunteers during the period 1859-71. Three of them formed titled volunteer military units. They had a number of similar characteristics. Enlistment was for a term and the officers were elected. Each volunteer paid monthly dues and purchased his uniform, accoutrements and practise ammunition. The unit rented or purchased a drill hall and hired drill instructors. Although the governor usually gave encouragement, the government rarely provided financial help to the unit other than supplying rifles and a small allotment of ammunition for annual range classification. In

these circumstances it is remarkable, perhaps, that the volunteer movement survived at all.

A brief account of each unit of Victoria's volunteers follows. Together they began a lineage which passed to the first Canadian militia company to be formed in Victoria and has extended through the years to the present militia artillery unit in the city (Figure 17).

Mr Hecatan's Group of Volunteers

In August 1859, when anxiety among Victorians was at a peak with the landing of American troops on San Juan Island, Mr. Hecatan of the sheriff's office in Victoria wrote to Governor Douglas suggesting the formation of a volunteer military corps.¹⁸ The governor gave his approval and a public meeting was held to obtain volunteers. Subsequently a list of 67 names was submitted to the governor for a corps of regular military equipment. It is not known if the volunteers were assembled again. It seems most probable that enthusiasm waned rapidly as the San Juan crisis declined sharply at the end of August. However, the incident did draw attention to the lack of a reserve of government arms in the colony.

The Victoria Pioneer Rifle Corps (Figure 4)

The Victoria Pioneer Rifle Corps was the first volunteer unit in Victoria and the colony. It was formed entirely from the black community of the town in April 1860, soon after black volunteers had been refused entry to all the white Hook and Ladder volunteer fire company. Governor Douglas approved the formation of the corps. It elected its first officers in 1861 and was sworn in by Chief Justice Cameron on 5 July of that year, shortly after the outbreak of the American Civil War. The corps mustered between 40 and 60 members during the first three years of its existence. Financially, it was almost entirely self supporting, receiving only one small grant of 45 pounds in 1861 to augment income from membership subscriptions and donations from the

black community.¹⁹ Uniforms, equipment and a drill hall were all purchased by the corps. Its first weapons were probably Hudson's Bay Company muskets. In March 1864, the government supplied twenty-five rifles from its reserve. The corps drilled regularly, at least until 1864, but apparently never practised marksmanship.

In 1864, the corps was the centre of controversy when it was refused permission to participate in the welcoming parade in Victoria for the new governor, Governor A.E. Kennedy, by the all white parade committee. Accusations of racial prejudice and bigotry were freely traded in the local press and arguments flared over the proficiency of the corps and whether the parade was purely civilian or not. Instead of parading, the corps marched to the government buildings the following day, 30 March 1864, and there ceremonially presented Governor Kennedy with an address of loyalty.²⁰ The return march was the beginning of the corps retreat into oblivion.

In its last two years the corps was virtually ignored by the governor and government. The financial and moral support for it within the black community, which had been so strong, dwindled as the community shrank with the departure of many of its members from Victoria. Public attention was diverted from the corps by the activities of other, white, volunteer units. The Victoria Pioneer Rifle Corps ceased to exist as a unit in June 1866 when its rifles were withdrawn by the government.²¹

The Vancouver Island Volunteer Rifle Corps

A second volunteer unit, the Vancouver Island Volunteer Rifle Corps, was formed in Victoria in June 1861, one month before the swearing in of the Victoria Pioneer Rifle Corps. Volunteers for the corps came from the "loyal and industrious Canadian portion of the population".²² They were stimulated to volunteer by the tension at the time between Britain and America at the outbreak of the American Civil War. Two hundred signatures were on the petition to the governor for the formation of the corps, all British subjects. Some 131 men were enrolled at an inauguration meeting on 30 June. After three ballots spread

over two more meetings at the Lyceum, Victoria, on the 4th and 8th of July, Major George F. Foster was elected to command the corps. The day after his election, Foster, on his own initiative, approved the formation of an artillery company on the suggestion of 24 members of the corps who became the company's first members. A field piece was borrowed from the Royal Navy for the artillery company and both riflemen and artillerymen began drills on 24 July. Officers were elected at a full meeting of the corps on 20 August.

Despite its enthusiastic and promising start, the corps declined rapidly after September 1861. Lieutenant-Colonel Foster was given leave of absence from September 1861 until June 1862 to attend to business affairs in England. Captain G.T. Gordon of the Rifle Company, commanding the corps in Foster's absence, was soon embroiled in an embezzlement scandal, was imprisoned, escaped and left the colony. Leaderless, the rifle company, at a private meeting on 27 November 1861, indulged their grudges against Foster and the artillery company by voting to outlaw the latter, passing rules for the corps membership and conduct and electing a new company commander and head of the corps. Months of bitter animosity between the two companies followed until Governor Douglas, on advice from Colonel Moody,²³ ruled in favour of the artillery-company commander's claim to command of the corps and condemned the riflemen's action.

The corps did not survive its internal quarrels. Foster, on his return, tried to revive his shattered command but failed. Eventually the leaders of the remnants of both companies individually asked the governor to disband the corps. The Vancouver Island Volunteer Rifle Corps was disbanded by public proclamation on 16 July 1862.²⁴

The Victoria Rifle Volunteer Corps

The Victoria Rifle Volunteer Corps, frequently referred to as the Victoria Rifles, was formed on 19 March 1864, shortly after the Victoria legislature had expressed its concern at the defenceless state of the city, and of Esquimalt, in a memorial to the colonial secretary in

London. "See 'Coastal Defence of Victoria and Esquimalt.'"

The errors committed during the formation of the Vancouver Island Volunteer Rifle Corps three years earlier were not repeated. At the formative meeting in St. Patricks Hall, on 19 March 1864, 64 volunteers elected a committee of management to draft rules and regulations for the unit, hire a drill instructor, consider a uniform and run a programme of five drills per week for a probationary period of one month.²⁵ On 22 April the volunteers met again and elected their officers from among their ranks: Captain D.M. Lang, Lieutenant B.W. Pearse, Ensign A.T. Elliott. The first two of these had previous volunteer experience in England. A fourth officer, J. Gordon Vinter, appointed adjutant and honorary captain, was an experienced drill instructor and was paid for his services as adjutant. A simple uniform, locally made, was selected and Enfield pattern '53 rifles were issued from the government reserve. Regular drill nights followed.

A series of successes marked the first year. The first public appearance on 13 May 1864, drew an appreciative crowd of about three hundred. It was followed by a greater success on the Queen's birthday, 25 May, when the corps was inspected by Governor Kennedy on Beacon Hill, staged a drill display and march past and then entertained the governor and 30 honorary members and prominent citizens to lunch at its drill hall on Broughton Street. However, a month later, when it offered its services at the time of the Bute Inlet massacre of 14 white men by Indians, it was criticised for its lack of marksmanship and conspicuous dress. The criticism was taken to heart by the membership which quickly arranged for regular rifle practice, using government ammunition on repayment, on a new rifle range they established at Clover Point. On 20 October 1864, the corps held its first successful rifle competition and a few days later chose a new uniform of dark green. The government endorsed the year's successes with a grant of \$1000 which was used to pay the adjutant. A final accolade was bestowed when the Daily British Colonist referred to the corps as having "...the appearance of a company of well drilled regulars...."²⁶

A second company for the corps was initiated at a public meeting on 3 August 1865. It was independent of the first company but formed on the same successful pattern; an elected committee and a probationary drill period for all followed by the election of officers. The two companies differed in the colour of their uniform but shared the same drill hall. After only a few weeks of successful coexistence, at a meeting of the officers of both companies, Captain Lang was unanimously elected commandant of the corps. The governor endorsed this mark of solidarity and common purpose. In the summer of 1866 both companies, totalling some 90 men, camped as one corps on Beacon Hill during a Fenian scare. "See 'The American Threat'."

It was a severe blow to the corps when their popular commandant, and the man directly responsible for their success, Captain Lang, resigned on 2 October 1866 before leaving the colony. Governor Kennedy accepted the resignation with regret and paid tribute to Lang's achievement. Fellow volunteers later presented him with a sword as a mark of their esteem. Lang's departure was a turning point for the corps.

From 1867 to 1873 British Columbia was economically depressed. Government grants to the corps were delayed and minimal. Many members could no longer afford subscriptions or uniforms and enrollment declined. Company No. 2 was disbanded in February 1867, its few remaining members bolstering Company No. 1. Although an Ordinance passed by the legislature on 9 March 1869 gave the corps long awaited legal status and prescribed rules of conduct for it,²⁷ it was little more than an active, uniformed rifle club during the final seven years of its existence. Nevertheless, it did survive as a unit and its members formed the nucleus of the first Canadian militia company to be formed in Victoria and the Province of British Columbia in 1873. "See 'Raising of the Militia in Victoria'."

Development of Esquimalt as a Royal Navy Station

There can be little doubt about the importance of the Royal Navy's role on the northwest coast of North America. It acted as both policeman

and defender. The Pacific Squadron, based on Callao and Valparaiso, frequently sent ships to the area on routine patrol or when the security of British interests was specifically threatened. Those ships found Esquimalt a useful anchorage during their stay on the coast. During the Crimean War, the squadron operated directly against Russia, the declared enemy of Britain and her empire in that war. The attacks on the Russian base at Petropavlosk revealed the importance of Esquimalt as a war base.

Because the squadron's base in South America was so distant and was of doubtful value in war as it was not on British territory, a permanent base at Esquimalt became an increasingly attractive proposition. Esquimalt had much to offer. Strategically it was well located. The harbour was close to Victoria, the seat of government of a British colony, and possessed a healthy climate. It had a deep water anchorage with easy access and shelter in all weather conditions. A sheer shore line allowed ships to moor alongside. Many of the navy's resupply and refitting needs were available locally: Douglas fir, tested for suitability in 1845 for replacement spars and masts; remarkably strong rope manufactured from the local nettle hemp plant, tested in 1850; coal, mined at Fort Rupert in 1846 and Nanaimo in 1852; fresh vegetables and meat from adjacent Puget Sound Company farms, and fresh water in adequate quantity from nearby springs in the Road Point-Colwood area. The only deterrents to the full exploitation of all these resources in peace time were the high prices demanded by the Hudson's Bay Company and the inferior quality of the coal compared with the Welsh anthracite shipped to Callao on ships trading with South America.²⁸

After the first assault on Petropavlosk in 1854, damaged warships put into Esquimalt. Some of their crews needed hospital treatment ashore. The ships were able to complete repairs and take on fresh supplies of food and water although there were no shore facilities in the harbour at that time other than the temporary workhuts and pits constructed by the ships crews themselves. The particular lack of a hospital prompted Rear-Admiral H.W. Bruce to request that three hospital

huts be built. These were completed by the Hudson's Bay Company on Governor Douglas's order in 1854, in time for the second assault on Petropavlosk. They were the first permanent buildings of the future naval base.

The growth of the base is illustrated by the following chronology of major events:

- 1848 HMS Constance anchors in Esquimalt harbour.
- 1851 Rear-Admiral Hornby, commanding the Pacific Squadron, recommends Esquimalt harbour and shore be reserved for the Royal Navy.
- 1852 HMS Thetis refits in harbour using Thetis Island.
- 1854 Three hospital huts constructed.
- 1858 Captain G.H. Richards, HMS Plumper, recommends Esquimalt as best harbour in the area and suggests a light on Fisgard Island.
- 1859 HMS's Tribune, Pylades, and 161 R.M.L.I. arrive from China. Rear-Admiral Baynes, commanding Pacific Squadron, presses for transfer of his headquarters to Esquimalt.
- 1860 Admiralty approves construction of coal storage on Thetis Island. Fisgard Lighthouse completed.
- 1860-62 Ammunition stores constructed on Cole Island.
- 1862 Admiralty debates transfer of Pacific Station headquarters to Esquimalt.
- 1863-64 Staff & stores transferred from Valparaiso to Esquimalt. Old R.E. Boundary Survey barracks on northwest shore of Constance Cove converted to naval hospital.
- 1864 Commander-in-Chief Pacific Squadron resides at Maple Bank house near the hospital. Permission for private wharves in the harbour refused from this year.
- 1866 Machine shops and supply stores built.
- 1867 St. Pauls Anglican church completed. Dry dock planning.

1870 Visit of Royal Navy's Flying Squadron of 6 warships; 4 warships of Pacific Squadron also in port. Some 3,500 sailors and marines present.

By 1871, Esquimalt was a major station for the Pacific Squadron. Its one serious deficiency was the lack of a dry dock. Until this was completed Royal Navy vessels requiring hull repairs had to use the facilities at San Francisco.

Coastal Defence of Victoria and Esquimalt

Whenever war seemed imminent between 1854 and 1871 there were suggestions that some form of artillery defence should be provided to protect the harbours of Victoria and Esquimalt from attack by enemy ships. No batteries were sited. Nevertheless, the suggestions are important as part of the evolution of the Victoria-Esquimalt defences.

The first threat of war and the first consideration of coastal defence occurred in 1854 with the outbreak of the Crimean War. Governor Douglas solicited the colonial office for arms for the colony. He included a request for "....a few heavy guns to defend Victoria harbour"²⁹ His suggestions fell on deaf ears in London. It is not surprising that they did because there was little danger to Victoria from Russian warships at the time, certainly not enough to warrant the expense of despatching guns and gunners from England and of erecting batteries.

The Royal Navy had almost nothing to defend at Esquimalt until after 1858. When Admiral Baynes, commanding the Pacific Squadron, recommended the transfer of his headquarters to Esquimalt in 1859 he suggested also that the War Office should consider placing shore batteries to defend the harbour.³⁰ Such batteries were a War Office responsibility.

More serious consideration was given to the defence of Esquimalt and Victoria at the beginning of the American Civil War. The War Office considered sending a regiment of infantry to garrison Victoria. There was much correspondence on the location of a suitable barracks

during 1861. The project was dropped at the end of April 1862,³¹ just when the Admiralty was considering the mounting of guns to protect Esquimalt. Two 68-pounder and six 32-pounder guns were ordered to be landed from H.M.S. Bacchante and H.M.S. Topaze. They were intended to be mounted at Hospital Point (Duntze Head), although the larger pieces lacked garrison slides and all of them required wooden platforms. The guns were landed in September 1862.³² It is possible that some work may have been done in preparing the site but if it was it was quickly abandoned.

The end of the difficulties the civil war had raised between Britain and the union, at the end of 1862, removed any immediate need to act further on the defences of Victoria and Esquimalt. But the issue did not die. Governor Douglas pointed out, in January 1863, that the balance of naval power would shift with the introduction of American ironclads to the west coast. "See 'The American Threat.'" However Esquimalt was not on the list of colonial ports considered for defence by the Defence Committee in London in 1863. "See 'London's Plans for Defence of Empire Ports.'" Undaunted, the House of Assembly, Vancouver Island, addressed a memorial to the Secretary of State for the Colonies on 16 February 1864:

We her Majesty's loyal and faithful subjects, the Members of the Legislative Assembly of Vancouver Island in Parliament assembled desire respectfully and earnestly to bring to the notice of your Grace the present defenceless condition of the harbours of Victoria and Esquimalt, where in the event of sudden hostilities, the Government and private property and even Her Majesty's Ships of war on this station might be destroyed by an Iron-clad in defiance of all that could be effected from land to impede the advent of such a vessel.

The portion of Her Majesty's Pacific Squadron here to fore cruising in these waters has well sufficed to protect the settlements from the evils incident to Indian wars; and for this your memorialists are deeply grateful.

In consequence however of the growing and of the great prospective importance of this and the sister colony of British Columbia and of the present threatening aspect of affairs in various parts of the world your memorialists feel it to be their duty to lay before your Grace the pressing need of further protection by the mother country in the shape of

suitable defences for such vital points as the Harbour of Victoria and Esquimalt which in time of war would be the principal base of operations for the naval and military forces of the Empire in this part of the North Pacific. Such defences might, while peace continues be manned by a few Artillerymen and Marines directed to train the Volunteer Corps which the dutiful subjects of Her Majesty in this Colony would at once embody, when assured that the Imperial Government was prepared to do its part for the defence of this isolated portion of the British dominions,

The raising of Volunteer Companies without the previous existence of one or more fortified places as a rallying point for these bodies would your Memorialists believe be a futile undertaking.

Your Memorialists would further represent that this Colony has by onerous taxation in a form eminently favourable to British Interests supported its own Government for three years past provided for Harbour Improvements, the Extension of Roads and also for the many charities of Victoria.

In conclusion your Memorialists feel that they have strong grounds for their present application as well as in reference to the past career of this colony and its isolated and defenceless condition as to the solicitude invariably shown by the Imperial Government for the protection of its most distant dependencies.

And your Memorialists earnestly pray that your Grace may be pleased to take such steps in the matter as may afford the colony the much required protection.³³

The suggestion of defences with a permanent garrison of artillerymen and marines, to be supported by local volunteers trained by the regular garrison, would become the core of many plans and the characteristic of the defences eventually established.

At the same time, the Pacific Squadron was becoming increasingly concerned about the defence of Esquimalt, now important to the squadron because of its newly improved facilities. In 1865, Rear-Admiral the Hon. Joseph Denman, then commanding the Pacific Squadron, felt that the point had been reached when a decision on the future of Esquimalt and on the defences was necessary. In a despatch to the Admiralty he wrote:

....it appears to me that their [the northwest coast colonies] value principally consists in the facility they might afford for maintaining our Naval forces in these sea, and also for the means of repair and supply to the Squadrons on the North China Station and in Japan; but in every point of view it appears to me indispensable either to take immediate measures for securing the possession of them in case of hostilities for rendering them effective for these purposes; or on the other hand, to lose no time in relieving the country of the responsibilities involved in continuing to hold them without making due provision for their defence.³⁴

In practical terms he suggested that guns be mounted; one 110-pounder Armstrong pivot gun at Signal Hill; one 40-pounder Armstrong gun and two 68-pounder Armstrong guns at Duntze Head; three 32-pounder guns at Ashe Head; and one 40-pounder gun on Inskip Island.³⁵ He also proposed that torpedoes, a new naval weapon at that time still to be accepted for service, should be used to prevent monitors, heavily armoured small ships mounting one or two large guns, entering the harbour. The Admiral's plan was acceptable to the Admiralty and to the Colonial Office, but stagnated at the War Office. Esquimalt was part of a larger colonial defence problem which had yet to be approached by the authorities in London.

Summary

British Columbia's lively period of pre-confederation history ended on 20 July 1871. There had been three major threats to its survival during the pre-confederation years. One, that of an Indian uprising, was no longer of consequence. The others, from America and Russia, had evolved to a possibility of Fenian raids from the territory of the former and of attack from either if a state of war existed with Britain.

Anglo-American relations had improved steadily since the first two difficult years of the American Civil War. A treaty between the two countries in 1871 cleared up many of the remaining differences and speeded up the final settlement of the sovereignty of San Juan Island. Some doubts remained however; doubts about American intentions and

about Russian-American friendliness.

Britain's most likely enemy in the Pacific was Russia. Russia had repudiated the terms of the Treaty of Paris of 1856, signed after the Crimean War, which had limited her naval strength in the Black Sea, and had resumed an aggressive policy in Eastern Europe. If Britain and Russia did go to war then British trade routes across the Pacific Ocean would be menaced by Russian warships. Esquimalt would undoubtedly be a useful, if not essential, base for Royal Navy counter operations, as it had been during the Crimean War, 1854-56.

It was possible that Esquimalt itself would be attacked by an enemy of Britain because of its value to the Royal Navy's Pacific Squadron. Such an attack could also include adjacent Victoria, or Victoria itself could be the primary target as a commercial port and centre of government.

There was considerable local concern in Victoria at such possibilities. By 1871, it had hardened to the point where a defence plan had been suggested by the legislature in Victoria. It included the construction of coast defences and the establishment of a regular artillery garrison. The latter was to be supported by local volunteers trained by the garrison. A volunteer unit had existed in Victoria since 1860. The current unit in 1871 was an inadequate infantry company.

Showing similar concern, the Commander-in-Chief of the Royal Navy's Pacific Squadron had suggested to the Admiralty that a gun defence was necessary for Esquimalt because the naval installation there would be important in time of war. Admiral Denman had produced a detailed plan for the placement of guns in 1865 to support his suggestion.

Britain held the final responsibility for the security of British Columbia, Victoria and Esquimalt. She had met that responsibility during the pre-confederation period, but, as yet, neither Victoria or Esquimalt had acquired a high enough status as ports within the British Empire sufficient to warrant their defence by gun batteries. A sign that the status of Esquimalt might change in the near future was the visit of the Royal Navy's Flying Squadron in 1870 during its world cruise.

Militia and Coaling Station

General

In 1871, when British Columbia became a province of Canada, the Dominion assumed responsibility for its defence. During the next six years, the Dominion's militia organization was extended to include the new province and a plan was drawn up for the coastal defence of Victoria and Esquimalt.

Esquimalt was of importance to the Royal Navy's Pacific Squadron. By 1877, it would be recognised in London as one of several key naval stations in the British Empire. The recognition came as a result of revolutionary changes in military and naval equipment, tactics and strategy which forced a review of Empire defence. Impetus was added to the review by worsening relations between Britain and Russia.

Military and Naval Technological Development

The 19th century was the century of industrial revolution in Europe. The rapid advance of engineering skills of all types, and the proliferation of inventions, touched every aspect of life. Military and naval weaponry was not immune. Three particular developments formed the basis for a revolution in naval warfare. They were; the rifled shell gun, the ironclad, steam powered warship and underwater mines and torpedoes. They completely changed modes of naval warfare which had existed, with little change, for centuries. Naval bases were suddenly essential for fuel supplies as well as for refits and provisions. At the same time they were at the mercy of vessels now immune to cannon shot and independent of tide, current and wind. A surprise raid, precisely timed, with the purpose of destroying fuel supplies, was feasible and could cripple a flotilla or a fleet almost as effectively as

sinking all its ships. It is not surprising that a new emphasis was placed on the defence of ports. All the major nations were affected but none more than Britain with her world wide empire and dependence upon her navy for defence of both homeland and empire.

Cannon had been in use in ships and in coastal fortifications for many years. By the time of the Crimean War, 1854-55, they were usually made of cast iron and were mounted on a simple wheeled truck carriage of wood or iron. They fired spherical shot and some specialist missiles such as chain shot. The spherical shape of the shot ensured stability in flight and therefore predictable consistency in range and accuracy for a given amount of propellant powder. The maximum amount of powder that could be used was determined by the strength of the cast iron of the gun. The effect of the shot on the target was determined by target resistance, propellant charge and range. Cannon of this type were loaded from the muzzle and fired using a small vent at the breech end. Loading required the cannon to be run back sufficiently from any embrasure to allow space at the muzzle for the work of loading. The cannon was then run forward again for firing. Recoil on firing was arrested by breeching ropes attached to the carriage and the wall of the ship or fortification. Traversing right or left required movement of the whole carriage using long wooden handspikes. Elevation and depression of the barrel was achieved by pushing wooden wedges (Quoins) under the breech end, or removing them. These simple artillery pieces were best employed in mass, firing together, as in a ships broad-side, to produce a maximum shock effect.

The successful introduction of rifles for the infantrymen had already shown the considerable advantages of such weapons over smooth bore muskets with regard to range and accuracy. These advantages would also apply to a rifled gun, and there were others. Rifling the barrel of an artillery piece would allow an elongated shot to be used. The rifling would impart spin to such a projectile to ensure its stability in flight and thereby ensure accuracy and range. The elongated shot would be bigger and heavier than a round shot of the same diameter. Thus an immediate increase in the power of artillery could be achieved without increasing gun size. If at the same time, a bigger

propellant charge could be used, the shot and charge breech loaded, and the shot could explode on impact (a shell) or on a fuse, then the rate of fire, range and target effect would all be increased considerably. The challenge of developing such an artillery piece was an engineering problem worthy of the age.

There were many attempts to produce a rifled breech loading gun, and many failures. There was one outstanding early success in Britain. William Armstrong designed a gun of wrought iron, built by shrinking hoops round a basic barrel. The new material and the method of construction greatly increased the strength of the barrel enabling bigger charges to be fired, thus giving greater range. The barrel was rifled with a large number of shallow grooves spiraling one turn to 30-40 calibres, and the elongated projectile was coated with lead to engage the barrel grooves and impart spin. A system of breech loading, to give more rapid fire, was devised, whereby a vent piece was dropped through a slot in the top of the barrel to close the barrel at the breech end. A large screw plug gave access to the barrel at the breech end for loading and, when screwed in, it and the vent piece completed the closure of the barrel.

Trials of the Armstrong gun for British service occurred between 1855 and 1858. By 1863, it had seen service with the army in China and New Zealand and with the navy in Japanese waters. While the users agreed on the improved range, accuracy and target effect, the breech closing proved unsatisfactory because unskilled maintenance or handling could result in cracked or blown out vent pieces.

The early difficulties experienced with the rifled breech loading (RBL) gun sharply divided military and naval gunners. One school favoured the robust, proven reliability of the muzzle loading (ML) cannon above all else, the other preferred the advantages offered by the RBL concept. The two schools argued for many years until the issue was finally settled by the production of a satisfactory system of breech closing.

An early attempt to settle the controversy for the British Army and Navy was made by holding extensive trials of both types of gun

between 1863 and 1865. The length of the Trials and the expense involved, £ 35,000',¹ was a measure of the importance attached to them and to the issue. Three weapons were considered: The Armstrong rifled breech loader (RBL); a new Armstrong rifled muzzle loader (RML) having a new rifling of three deep grooves with a projectile with metal studs to engage the rifling; and a RML gun with twisted hexagon rifling by Joseph Whitworth, another English engineer. At the end of the trials the trial committee decided on the Armstrong RML gun, principally for its advantages of cheapness, reliability and simplicity. It was the most practical combination of artillery design achievements to that date. Rearmament of ships and the army with this type of artillery began immediately. The RML gun with various modifications, particularly in ammunition, continued in service until the turn of the century. It became obsolete when further engineering advances finally produced an acceptable breech loader.²

Two other British artillery developments occurred in 1863. The first was when Captain Palliser of the 18th Hussars of the British army devised a method whereby smooth bore cannon could be bored out and then fitted with a rifled liner to convert the old gun into a stronger rifled muzzle loader. Many older cannons were converted using this method in the following years, until the 1890s. The second development occurred at a trial when a 7-inch Armstrong gun fired a 200 pound shot at a 4.5 inches thick iron plate backed by 18 inches of teak.³ The shot failed to penetrate but a 68-pounder RML shot fired under similar circumstances did. The results were puzzling at the time for the reverse was expected to happen. When it was realized that it was muzzle velocity not weight of shot that made the difference the race was on for increased muzzle velocity through longer barrels, stronger guns, better propellant powders and better shot and shell design.

The early promise of the rifled gun and the destruction the new shot and shell could wreak upon the hull of a wooden ship led to the development of the armoured warship. France laid down the world's first seagoing ironclad frigate, the La Gloire, in 1858. The British Admiralty quickly revised its earlier rejection of iron as a ship-

building material and ordered H.M.S. Warrior, the first British ironclad, in 1859.⁴ The hulls of these and many ships to follow were of sandwich construction; an outer skin of iron plate several inches thick, a middle of wood several times thicker and an inner thin skin of iron to contain wood splinters. Early ironclads had basically the same external appearance as wooden warships of the day with guns firing broadside, rigging and spars carrying considerable canvas and a single screw driven by a coal fired steam engine as a secondary means of propulsion.

Ironclads changed in appearance as their armament changed. Fewer and more powerful RML guns replaced the broadside rows of smooth bore cannon. The new guns could be concentrated in one part of the ship behind the heaviest armour. When this was done there was a requirement for the concentrated guns to be able to engage targets over a much wider arc than before to provide at least the same facility as guns lining the length of a ship. An early solution was a loopholed casemate. It was quickly replaced by two developments: Sponsons on the ships sides which allowed a bow to stern arc of fire on each side and, even better, the revolving midships turret giving an engagement arc of almost 360 degrees. The American Monitor of the civil war showed the way and gave its name to a class of ships. By 1874, HMS Infexible, a typical modern warship of its day, was equipped with two turrets, each of 750 tons with two 12.5-inch RML guns.⁵ Turreted guns were traversed by turning the whole turret, at first mechanically by hand and later by hydraulic power. In other mountings where the gun was required to traverse independently, traversing points, traversing gear and arcs were developed to allow this to be done.

The larger guns demanded greater and more sophisticated control over recoil than the ropes which arrested the recoil run of the lighter cannon on its truck carriage. Recoil slides, inclined planes and friction plates were soon in use to dampen the recoil of the bigger pieces.

Armour, heavier guns and carriages, turrets and sponsons all helped increase the weight and size of warships and encouraged the development of more powerful marine engines. As better engines were installed and the cruising range of screw driven vessels increased there was less

need for sails and the rigging that carried them. Warships gradually assumed the shape that became familiar in the two world wars of the 20th century.

By the 1870s, ~~steam powered armoured warships with heavy guns~~ could sail at ten knots independent of wind and current for considerable distances, concentrating at will to attack. Their guns were powerful and accurate enough to enable them to engage a target at long ranges. Any unarmoured target was at their mercy. These new warships were not afloat in great numbers yet but undefended harbours and ports and the essential fuel, repair and supply facilities they contained were suddenly in great jeopardy from them.

When the new danger was recognized it sparked a new era of coastal fortification that would last to the middle of this century. Britain began a large and sophisticated fortification programme at home on the recommendations of the Royal Commission appointed to study the problem in 1859.⁶ Other powers followed suit with great coastal fortresses like those at Kronstadt, La Spezia and Antwerp. Britain eventually extended her fortification programme overseas to include the rearmament and updating of the Imperial fortresses at Halifax, Bermuda, Gibraltar and Malta, all of them bases which had long been recognised as being critical to the operations of the Royal Navy.

The new port defences included rifled artillery mounted in strong batteries. The pieces could be traversed to concentrate fire and engage moving targets. Landward fortifications ringed the port and protected the batteries from rear assault. Other weapons were developed to stop any attacking ship running through the fire of the batteries at speed to enter a harbour. The self propelled Whitehead torpedo, a British invention, was successfully tried against a target hulk in 1870. Mines and minefields using the new electricity for firing were the subject of much study and trial. These weapons would not be perfected operationally for some years but by the 1870 s they were already in the planner's armoury.

In the 1870s, a ~~new British requirement appeared in the field of~~ coastal fortification when it was realised that the new warships in the

Royal Navy required a string of coaling station around the world if they were to operate in defense of the Empire. The Admiralty eventually designated these stations and their fortification became a new priority.

Fenian threat to Victoria, 1871

When British Columbia became a Province of Canada the defence of the province became a Dominion responsibility. The first step in the execution of this responsibility was to extend the Dominion militia organisation to include the new province. The process was speeded up by a threat of Fenian invasion and insurrection which developed in December 1871, a few months after the province had joined confederation. The alarm was given when Lieutenant-Governor Joseph W. Trutch received an anonymous letter warning that some Fenians were training surreptitiously in Victoria. Trutch took the warning seriously and with the senior naval officer Esquimalt, Captain R.P. Cator, arranged for two visiting gun vessels to give protection. H.M.S. Sparrowhawk was stationed at the entrance to Victoria harbour to intercept all incoming vessels and H.M.S. Boxer was on call in Esquimalt harbour. A system of gun signals was arranged to bring Boxer and a small party of marines to Victoria in any emergency.⁷ The threat of Fenian attack proved false but it had repercussions which benefitted Victoria. The Lieutenant-Governor in a letter to the Governor-General of Canada pointed out that it was fortuitous that the two gun vessels were in Esquimalt at the time and emphasized the defenceless state of Victoria. Subsequently, the Admiralty agreed to retain the gun vessels at Esquimalt. Trutch also raised the question of a permanent garrison for Victoria and this was considered by the Dominion's Adjutant-General of Militia, Colonel F. Robertson-Ross. The colonel proposed instead that a force of 500 militia should be raised in the province.⁸

Raising of the Militia in Victoria

The Adjutant-General's proposal for raising militia companies was quickly accepted. Arms, equipment and clothing for 1000 men to meet present and future needs, at an estimated total cost of \$50,000, were

ordered by Colonel Robertson-Ross from England to be delivered direct to Victoria. The order arrived a year later in the summer of 1873. Meanwhile, Colonel Robertson-Ross visited the province in November 1872 to discuss the details of organisation with, among others, Captain F.J. Roscoe, commander of the Victoria Rifle Volunteer Corps. Five companies of infantry and an artillery unit were decided upon with two of the infantry companies to be raised in Victoria. On his return to Ottawa, Colonel Robertson-Ross was able to resolve differences which had arisen over local and Dominion preferences for the appointment of Deputy Adjutant-General for the new Military District No. 11 (British Columbia). The officer appointed would be the senior permanent military officer in the province. Captain C.F. Houghton M.P., the Dominion choice, took up office in Victoria on 9 October 1873. Nine days later a Committee of Council of the Dominion government approved the plan for the militia in the province and Houghton was ordered to proceed with its organisation.⁹

On 2 December 1873, at a meeting at the Mechanics Institute, Victoria, Lieutenant-Colonel Houghton - the promotion had come with appointment - sought to embody the Victoria Rifle Volunteer Corps, complete, into the militia.¹⁰ Captain Roscoe and the officers of the volunteers rejected the proposal, preferring resignation to allow the militia company, when formed, to choose its own officers. Captain Roscoe announced the end of the Rifle Volunteer Corps and Colonel Houghton immediately recruited 44 of those present for the first militia company. The new militiamen then elected Roscoe as their captain and two other long service former volunteers, J.G. Vinter and R. Wolfenden, as officers. In effect, the meeting was merely a reorganisation of the volunteer rifleman as a militia company.

The new militia thrived. A second company of 50 was raised on 19 December 1873. The officers were; Captain E.C. Pooley, Lieutenant J.R. Hett and Ensign Burleigh McKenzie. A year later a new drill hall was completed for the two companies and a militia band was formed. Drills were fixed at one per two weeks and marksmanship was encouraged. The successful organisation of a militia was commendable but it did little to improve the defence of Victoria and Esquimalt against sea attack.

Dominion Proposals for Coast Defence

Major General E. Selby-Smyth, the new commander of the Canadian Militia, directed the preparation of the first army plan for coast defence batteries for the protection of Victoria and Esquimalt in 1875. He visited Victoria during a tour of inspection and quickly recognized the danger to the city and to the naval base from sea attack. In his opinion the key defensive position lay between the two harbours at Macaulay Point where a battery of guns and strong fortifications could command both entrances. On the invitation of Admiral the Honourable Arthur Cochrane, he visited Esquimalt. There, in the naval gun store, he found two 7-inch and four 40-pounder Armstrong RBL guns. He asked for these to be retained for mounting at Macaulay Point and not returned to England as planned.¹¹ Convinced of the importance and the practicality of establishing a coast artillery defence of the two harbours, he directed Colonel G.F. Blair, a former Royal Artillery Officer, to prepare a detailed defence plan.

Blair's report was submitted on November 15, 1875. Like the General, he appreciated the importance of Macaulay Point, which he referred to as Battery Point, claiming that it would be possible to mount there "....at least 30 guns, that would bear on the mid channel of both harbours at ranges from 2,000 to 2,500 yards."¹² He recommended the distribution of the guns in the dockyard store in batteries:-

four 40-pounder Armstrong guns	- Point Ogden (today Ogden Pt. docks)
three 7-inch Armstrong breech loaders	- Battery Point (Macaulay Point)
three 68-pounders of 95 CWT	- Fisgard Island

The 40-pounders at Ogden Point were intended to be a horse drawn moveable battery capable of being repositioned at any point from Esquimalt harbour to Cordova Bay when required. The total expense of

mounting all of the guns and erecting the various works was estimated at \$600, or L120, and Blair felt that 100 men in two batteries of 60 and 40 could be raised locally with little or no difficulty. He suggested that guns, ammunition and stores, valued roughly at \$15,000, or L3,000, might be a gift of Her Majesty's Government to the Dominion"conditionally on the guns being effectually mounted and manned."¹³ Finally, almost as an afterthought, he reported that "Booms and torpedoes would be useful adjuncts to these guns, and on this subject I have consulted with Captain Long of Her Majesty's Ship "Fantôme", the senior naval officer on this station."¹⁴ He did not disclose the results of his discussion in his report.

General Selby-Smyth submitted Blair's plan to the Minister of Militia and Defence. It appears to have rested there. In his Annual Militia Report for 1877 the general referred to the plan, emphasized the importance of the Macaulay Point Battery, expressed his disappointment that".... no steps have been taken to procure transfer of the guns...."¹⁵ and pointed out that although the defence of the area might be considered to be mainly an Imperial responsibility the honour of both Imperial and Dominion authorities was involved. Detailed plans for an earthwork to contain the guns at Macaulay Point were prepared in 1876 and he submitted these for the minister's approval on May 21, 1877. The submission was made at a time when public concern for coast defence had been aroused in Victoria.

Victoria's Alarm over Russian Flotilla

In 1877, the two years of rebellion and unrest in the Balkans took on a more serious aspect when Russia declared war on Turkey on April 24. The Russian advance on Constantinople threatened Turkey, Asia Minor and the Suez Canal. Britain was alarmed and a Russo-British war seemed quite possible. "See 'Anglo-Russian Tension 1877-78'".

The news of the Russian advance had hardly reached Victoria when a report was received that a squadron of nine Russian warships had entered San Francisco. This show of naval strength so close to Victoria was alarming even though the largest Russian ship was only

a corvette of 2000 tons. While in harbour, the squadron was watched by a British warship. All nine Russian vessels left San Francisco on May 17 under sealed orders. The incident provoked a great deal of comment in the Daily British Colonist in Victoria and a lively concern about the lack of defences to beat off such a squadron if it chose to attack Victoria or Esquimalt. When the Russian advance in the Balkans was checked at Plevna in July 1877 the concern temporarily abated but a certain nervousness over the lack of defences remained.

London's Plans for Defence of Empire Ports

The defenceless state of various ports in the Empire critical to naval operations in time of war had been a matter of concern among military and naval circles in London for some time before the crisis of 1877. The Defence Committee had conducted a review of the defence and armaments of the colonies in 1863. Under the heading North America, the committee remarked upon: Quebec, Halifax, St. Johns and St Andrews in New Brunswick, Sydney, Cape Breton, St. John's, Newfoundland and the Bermudas but made no reference to the fledgeling Esquimalt.¹⁶ At that time, the Secretary of State for War was not prepared to undertake any new defence works in the colonies, but the committee's proceedings did serve notice of the critical state of things and of the size of the Empire's coast defence problem.

A major step toward a solution was taken in December 1874. The Admiralty formally drew the attention of the War Office, specifically the Inspector-General of Fortifications, to the defenceless state of naval establishments throughout the empire including Esquimalt. The Inspector-General acknowledged the importance of these stations and estimated the cost of defending them all with guns and works at about L1,000,000.¹⁷ Similar defence of certain commercial harbours in Britain was estimated at another L1,250,000. The Secretary of State for War did not act even though His Royal Highness the Commander-in-Chief expressed his concern, perhaps because of the considerable expenditures already committed for fortification of the major naval ports of Britain. At this time the Admiralty had not expressed a priority, nor had it pursued the problem beyond initial recognition of the vulnerability of its coal supplies.

The possibility of war with Russia after the Russian declaration of war on Turkey, 24 April 1877, added impetus to the discussion of coaling station defence. The particular problem of Esquimalt was emphasized on 25 May, when Captain J.C.R. Colomb, Royal Marine Artillery, an influential defence critic, lectured at the prestigious Royal United Service Institute in London on "Russian Development and our Naval and Military Position in the North Pacific."¹⁸ His paper reflected concern felt in London and summarised the situation with regard to Esquimalt. His main points were: The coal supply from the Nanaimo fields was extensive, of considerable importance and undefended; naval stores in Esquimalt were sufficient for two years for three ships and thus worth defending; Esquimalt's importance would increase when the graving dock was completed; the established militia garrison of the whole territory of British Columbia was weak, not up to strength, and its field artillery lacked the friction tubes to fire its guns; a steamer from Petropavlosk could reach Nanaimo, averaging eight knots, in 15 days whereas reinforcements from England via the Cape would take 80 days; finally, it was quite possible that the Pacific Squadron would take up to two months to concentrate at any given point in time of war to take effective counter action. At question time Captain Bedford Pim R.N., M.P., who was stationed in the Pacific for six years, endorsed Colomb's remarks and added that if war had broken out while the Russian squadron was recently in San Francisco, the squadron commander would have known within six hours and in four days moderate steaming could have reached Vancouver Island whereas it would take up to six weeks before all Royal Navy ships were informed of the declaration of war. To prove his point he read out a list of Ships of the Pacific Squadron and their whereabouts at the time:-

<u>Shah</u>	26 guns	602 men	Peru
<u>Amethyst</u>	14 guns	220 men	Chile
<u>Opal</u>	14 guns	232 men	San Francisco
<u>Fantome</u>	4 guns	125 men	Sandwich Islands
<u>Albatross</u>	4 guns	125 men	Panama
<u>Daring</u>	4 guns	126 men	Esquimalt
<u>Rocket</u>	4 guns	72 men	Esquimalt ¹⁹

and remarked scathingly on the Shah always being out of order and the Opal hardly moveable. The point had been strongly made. The ships of the Pacific Squadron were normally widely dispersed on their peace time duties and would take time to concentrate. Before they could do so the one base and coal supply guaranteed to be available for them in war could be destroyed with impunity. The situation was immediately dangerous because the Russian declaration of war on Turkey could lead to war between Britain and Russia.

While the war clouds gathered the Defence Committee in London discussed the defence of both ports and coaling stations on May 18 and June 5, 1877. It could not decide which group should have preferential treatment, but did draw up priority lists for locations within each group. That for the coaling stations was:-

1. Simon's Bay, Cape of Good Hope
2. Hong Kong
3. Singapore
4. Jamaica
5. King George's Sound
6. Trincomalie
7. Mauritius
8. Esquimalt
9. St. Lucia
10. Falkland Islands
11. Ascension
12. Fiji²⁶

The committee considered the defences of all stations on the list. The total estimated cost for permanent works, armaments and ammunition, gun boats and submarine defences for these stations was L2,297,412, which, it was suggested, could be provided as a loan. Garrisons of infantry, artillery and engineers totalling 13,850 men were considered desirable. The committee recognized that it would be impossible to supply these from the British army alone.

Within the overall plan for all twelve coaling stations, Esquimalt was scheduled for permanent defences of eight 10-inch guns, six medium

and light guns, works and submarine defences costing a total of L120,000. The garrison was intended to be 578 British infantry, artillerymen and engineers augmented by 150 militia artillerymen. To meet any immediate need, the provision of temporary works was considered. A second estimate of L343,000 provided for Esquimalt to be defended in this case by six 61/2-ton guns and six light guns, with works costing L9,000, a garrison of 688, including 500 infantry and a gun boat.²¹ The urgency to provide either permanent or temporary defences at Esquimalt was lost when the Russian advance into the Balkans was checked at Plevna in July 1877.

Summary

Between 1871 and 1877, the Dominion authority in Ottawa and the Imperial authority in London, England, were both concerned with the defence of Victoria and Esquimalt. Although there was common purpose, their approaches were separate and different.

A Fenian crisis in December 1871, caused a sharp protest from Victoria at the lack of defences. Shortly afterward, the Dominion's militia organization was extended to include the new province with the establishment of Military District No. 11 and the raising of infantry companies and an artillery unit. The two infantry companies in Victoria were formed about a core of former members of the disbanded Victoria Rifle Volunteer Corps. After a visit to the area in 1875, the commander of the Dominion's militia had planned coastal defences for Victoria and Esquimalt, but the loan of guns from the Royal Navy's dockyard at Esquimalt, upon which the plan depended, had not been arranged and so the plan was still in limbo in 1877.

In London, a new focus had been given to consideration of the requirements of colonial defence by the technological revolution in naval warfare. The Royal Navy now required a world wide network of coaling stations to fulfill its role in defence of the empire. By 1877, the Admiralty had selected twelve such stations and had decided their relative importance. Esquimalt ranked eighth. The Defence Committee had discussed plans for defending each station.

Britain's relations with Russia had deteriorated after the Russian invasion of the Balkans in the spring of 1877. The decline had given urgency to the discussions of empire defence in London. News of the Anglo-Russian differences had caused concern in Victoria and a coincidental visit of a Russian naval flotilla to San Francisco had alarmed the city. Both the urgency in London and the alarm in Victoria had ebbed when the Russian advance was halted at Plevna in July, but the difficulty in Anglo-Russian relations which had stemmed from the Russian presence in the Balkans was not over.

The First Coast Defence Batteries

General

The smoldering crisis in Anglo-Russian affairs came very close to conflagration early in 1878. In the emergency, Britain was obliged to act swiftly to provide defences for coaling stations and other major ports around the world. Batteries were mounted to defend Victoria and Esquimalt, and a militia unit was raised to man the guns, through the co-operative action of authorities in London, Ottawa, Victoria and Esquimalt. When the works were completed, the long term planning of permanent defences was resumed.

Anglo-Russian Tension 1877-78

When the Russian advance through the Turkish empire in the Balkans was halted at Plevna in July 1877, it seemed that the Russian threat to Egypt, the Suez canal and Asia minor had been contained. Such hopes were shown to be false in December when Plevna fell and the Russian advance continued. The British fleet was ordered to Constantinople, the key to the Dardanelles and Russian domination of the eastern Mediterranean, in January 1878. It was recalled after reassuring reports. At the end of the month, Russia and Turkey finally signed an armistice. Turkey remained in possession of Constantinople with the Russian army at the city gates. The British fleet was once again ordered to enter the straits but paused when the sultan refused permission. Russia and Turkey finally signed the Peace Treaty of San Stefano on 3 March 1878, but the European powers, including Britain, remained dissatisfied with the Russian presence at the edge of Asia Minor. A period of tense negotiations and secret treaties followed. It ended with the Berlin congress, 13 June - 13 July 1878, when Russian withdrawal was secured and Turkey was left with only fragments of the Ottoman Empire in Europe. While the main events of the crisis period, December 1877 - July 1878, were centered on the Balkans, Britain's opposition to Russian designs led her to consider preparations for defence of her possessions world

wide as there were Russian warships outside the Black Sea and Russian bases and ports on other seas.

Early Reactions in Victoria

All of the events of the crisis were reported in Victoria. The news increased local apprehension over Russian warships in the Pacific. A peak of excitement occurred early in February 1878 when the British fleet sailing to Constantinople and Russian armies besieging the city seemed about to clash. At this crucial time internationally, it was reported locally that a squadron of five Russian warships had entered San Francisco Harbour.¹ A conference was hurriedly called at Esquimalt to discuss the threat these ships posed to Victoria and Esquimalt and the defence measures necessary to meet it.² Those attending were: Mr. A.C. Elliott, premier of British Columbia; Colonel Houghton, DAG of Military District No. 11; Captain F.C.B. Robinson, Senior Naval Officer Esquimalt; and Captain Cooper commanding Esquimalt dockyard. During discussion, Captain Robinson, on his own initiative, offered to provide guns from the dockyard store for coast defence batteries. Colonel Houghton undertook to raise volunteers from the local population to man them. After the conference the Lieutenant-Governor of the province sent a telegram to the Governor-General of Canada formally requesting the loan of guns and ammunition from the navy and announcing the intent to raise volunteers to man them.

On Sunday 17 February 1878, the day after the Esquimalt conference, the following advertisement appeared in Victoria's Daily British Colonist:-

PERSONS DESIROUS OF ENROLLING themselves as a Volunteer Artillery Corps, are urgently requested to report themselves personally to the Deputy Adjutant General of Militia at the Drill Shed, between the hours of 12 m. [sic] and 2 p.m. on Monday next the 18th instant.³

The response was sufficient for Colonel Houghton to raise three detachments immediately, commanded by: Captain Croasdale, a retired Royal

Navy Lieutenant; Captain Machell, a retired British army Captain; and Captain C.T. Dupont, a former officer of the Victoria Rifles, Montreal Militia, and an employee of the Inland Revenue Department in Victoria.⁴ Two days later, on 20 February 1878, the volunteers began daily drills each evening from 4 to 9 p.m. The first gun drill took place on March 9 on the wharf of Esquimalt dockyard, with Croasdale's and Dupont's detachments receiving instruction on a 65-pounder gun.⁵

Early Dominion Reaction

The Lieutenant Governor's request for guns and ammunition from the dockyard for coastal batteries arrived in Ottawa shortly after General Selby-Smyth, in his annual Militia Report for 1877, had repeated his concern at the lack of action to borrow guns and erect the batteries. The local British Columbia plan bore a close similarity to the plan the general had proposed in 1875. "See 'Dominion Proposals for Coast Defence.'" Neither the request from British Columbia nor the general's concern appear to have raised much alarm with the Dominion government at this time, although, on advice, the Governor-General did relay the request to the Colonial Office.⁶

Colonial Defence Planning in London

There was greater concern for the defenceless state of Victoria and Esquimalt in London, England. The first step toward improving the defences of colonial ports had been taken on 16 February 1878, the day of the conference in Esquimalt, when the Secretary of State for the Colonies, Sir Michael Hicks Beach, suggested to both the Admiralty and the War Office:-

...whether, in view of the fact that many of the more important colonial ports are now unprovided with any adequate system of defence, it would not be advisable to cause an inquiry to be held and a report to be made as to the most pressing requirements of this nature, and the best means of meeting them in any sudden emergency; in order that Her Majesty's Government may be in a position to consider any demands from the Colonies for assistance in this matter, and any action it may be necessary to take on the subject.⁷

The suggestion was received enthusiastically and a Colonial Defence committee was rapidly assembled. Its members were: Admiral Sir Alexander Milne, Bart., G.C.B. representing the Admiralty and president of the committee; Sir Henry Barkly, G.C.M.G., K.C.B., an under-secretary of the Colonial Office and General Sir Lintorn Simmons, K.C.B., R.E., Inspector General of Fortifications and the War Office representative. The committee was separate from the Defence Committee which had considered the defence of colonial ports in 1863 and 1877 and which existed still, but with a much broader purpose.

The Colonial Defence Committee, or Milne committee as it came to be known, acted swiftly in accordance with its charter. The first four meetings were held on March 5, 8, 9 and 12. First, the most likely, immediate and maximum attack to be expected on colonial ports was defined as a Russian squadron of four unarmoured ships "...armed with guns of about equal power with our 7-inch 7-ton gun, and, in one instance, with our 9-inch 12-ton gun,..."⁸ To meet this threat only thirty to forty 6 1/4-ton guns were readily available in store for the defence of all the colonial ports. No torpedoes or torpedo-boats were available. With this information the committee then selected the Cape of Good Hope, Mauritius, Ceylon, Singapore and Hong Kong as key ports requiring immediate attention. They were discussed and a report with detailed recommendations for the mounting of coast defence batteries at all of them was rapidly produced. It was quickly followed by another report with recommendations for the Australian Colonies, Tasmania and New Zealand.

The Colonial Defence Committee was not made aware of the Defence Committee's priority list of coaling stations, established in 1877,⁹ at the start of its deliberations. "See 'London's Plans for Defence of Empire Ports.'" As soon as the list was announced, Admiral Milne wrote to the Secretary of State for the Colonies on 12 March 1878, pointing out that his committee had considered some of the ports on the coaling station list and seeking confirmation of the committee's priorities. A reply was given within 48 hours. The Milne Committee was to provide detailed statements on guns and equipment to be ordered

from manufacturers for colonial port defence, a recommended distribution of the guns in store, a description of measures to be taken by the colonies themselves, and was to give highest priority to those places "...which involve most important Imperial as well as Colonial interests."¹⁰ Clearly, coaling stations ranked high in this priority.

The first and immediate result of this clarification of purpose was a suggestion from the committee, on 14 March, that a warning should be sent to the colonies outlining what was expected of them. Accordingly, the following secret telegram was sent to all colonial governors, including the Governor-General of Canada, on 20 March 1878, by Sir Michael Hicks Beach:

In view of the critical state of affairs at present existing on the continent of Europe, I think it desirable to furnish you with the following instructions on certain points relating to the defence of the colony under your government, and to invite your special attention to the general question, in order that you may have full time and opportunity for maturing your views as to the measures which should be taken in the event of any outbreak of war. I may remind you that in such an event, the danger against which it would be more immediately necessary to provide, would be an unexpected attack by a small squadron, or even a single unarmoured cruiser, with the object of destroying public or private property, or levying contributions on the Colony, rather than any serious attempt at the conquest or permanent occupation of any portion of the country.

2. No amount of vigilance on the part of Her Majesty's ships could entirely guard all our Colonial ports against the possibility of such an attack, and you should therefore at once consider, with such military or other authorities as you may find it possible to consult, what are the ports and places within your government for which no sufficient defensive measures have as yet been taken, and for which it is most important that a defence should be provided, with the view of framing a scheme which would enable you, at short notice, to extemporize such measures of defence as the means at the disposal of your Government may permit, and you will communicate to this Department the details of any scheme upon which you may determine as suitable for this purpose.

3. I need not point out to you the importance in any such scheme of arrangements for the efficient training and armament of any local force that may exist, or for the formation of such a force where it is at present wanting.

4. In regard to any stores of coal in the Colony under your government, you should concert such measures as may seem to be practicable, to be carried out in the event of an outbreak of war,

so as to prevent an enemy's vessels from getting supplies either by the removal of such stores to some place of safety, or to a distance from sea, or in extreme cases by destroying them.

5. If the necessity should arise, the Governors of the respective Colonies in the same seas should where practicable, communicate with each other by telegraph in cypher, in case of enemy's ships appearing off the coast, and simultaneously communicate the same to this Department, and in each Colony responsible agents, having facilities for observing the approach of hostile ships, should be appointed to transmit information to their respective Governments.

6. In such an event the removal of buoys from the channels leading into harbours is a measure which will probably suggest itself on the approach of an enemy's ships, as well as a prohibition to pilots to place their services at his disposal.

7. It is to be understood that you are not now required to consider any plans for defensive works of a costly character requiring long preparation, except so far as they may connect themselves with any temporary measures of this kind already suggested as suitable to meet a sudden emergency.¹¹

With the colonies warned, the Milne Committee returned to the consideration of port defences. Six of the first seven coaling stations on the priority list had already been dealt with. The Governor-General of Canada's requisition for the loan of guns from Esquimalt dockyard had been received in London. Consequently, the Colonial Defence Committee next turned to consideration of the defences of Esquimalt, the eighth station on the coaling station list.

A report with two suggestions for temporary defences was sent to the colonial office on April 1, 1878.¹² It recommended that six 7-ton guns and six lighter guns for the defence of Esquimalt harbour and three 7-ton and three medium guns for the defence of Victoria, which it regarded as inseparable, should be sent out immediately at a cost, including works, of £25,600 and £13,200, respectively. Because it would take several months for the guns to reach Victoria after they were available, and speed in establishing the defences was considered essential, the committee also recommended an alternative plan, closely aligned with the requisition relayed from Victoria. It suggested that the Admiralty should place the four 7-inch and one 9-inch 12-ton guns and any others presently in store at Esquimalt, at the Lieutenant-Governor's disposal for the defences there. The Milne Committee felt that with this loan of guns and

...an appeal to the loyalty and patriotism of the inhabitants of Victoria such a response might be elicited as would enable Her Majesty's Government with confidence to leave the defence of the naval stores and station in Esquimalt Harbour, as well as the town of Victoria, in their hands.¹³

The report containing the two recommendations was passed to the Admiralty by the Colonial Office on 10 April 1878, with the suggestion that Esquimalt should be treated as an Imperial Station. As such, the provision of defences would be a matter for agreement between the Admiralty, the War Office and the Treasury in a similar manner to the provision of defences at Imperial Fortresses such as Halifax, Nova Scotia. At the same time the Colonial Office volunteered to approach the Dominion of Canada for militia to man and defend the works if requested. The Admiralty replied on 26 April that it was "...of opinion it is extremely desirable that the harbour of Esquimalt should be provided with shore defences to guard it from attacks from the sea."¹⁴ The Colonial Office acknowledged the Admiralty opinion, repeated its view that the matter was an Imperial question, and from this time 1 May 1878, acted as if it was. The other departments involved generally conformed to this approach.

Dominion Alarm and Reactions in London

In Ottawa, the warning telegram to all colonial governors had arrived. A reply to the requisition for guns from Esquimalt dockyard was awaited. The equilibrium of the Dominion government was suddenly disturbed by the arrival of the steamer Cimbria in Ellsworth, Maine, with a reported 60 Russian Officers and 600 seamen aboard. General Selby-Smyth suggested to the Dominion government, on 3 May 1878, that the Russians were probably intended to man fast armed steamers to be purchased in America for the disruption of Atlantic mail and trade. The General recommended a torpedo defence of Atlantic coast harbours and emphasised the need for warships to be in position to intercept the armed steamers before war was declared. He added, after his signature:

P.S. I have so frequently brought to notice the totally unprotected state of the harbours of Victoria, and the entrance of Esquimalt in Vancouver Island, as well as of the immeasurably important coal mines of Nanaimo, that I need only once more urge very earnestly that guns now lying in Esquimalt dockyard and obsolete for naval service, in fact, kept back from being sent to England partly at my request two years ago, may be at length be handed over and mounted on McAulay's Point, to command the entrance to both harbours. A new battery of artillerymen has been authorized to be enrolled at Victoria.¹⁵

A telegram expressing the Dominion government's new concern over the defenceless condition of the Atlantic seaboard, and suggesting that a fleet of fast cruisers would be necessary to intercept raiding steamers if war was declared, was sent to the Colonial Office on May 4.¹⁶ No mention was made of Esquimalt.

The telegram was passed to the Colonial Defence Committee on 8 May. The committee considered the defence of the Canadian Atlantic ports and gave its recommendations in a report later that month. The request for cruisers was considered by the Admiralty and eventually rejected. More immediately, the Secretary of State for the Colonies informed the Governor-General by telegram, on 9 May, of the existence of the Milne Committee and of its recommendations for the defence of Esquimalt. A copy of the committee's report was despatched to the Governor-General of Canada on 11 May, via the Consul General in New York. Another telegram to the Governor-General on 11 May authorized the use of the guns in store in Esquimalt for the defences there, asked for the organization of a force to work the guns and man the defences, offered the assistance of skilled officers from Britain if required and stated that "Cost will be considered separately."¹⁷

This exchange of telegrams between Ottawa and London during the period 3-11 May provides an interesting contrast in priorities. Ottawa was alarmed about the Russian threat to commerce on the east coast. The Colonial Office was prepared to have its Colonial Defence Committee consider this concern, but was more immediately interested in the defence of the coaling station of Esquimalt.

Guns in Store in Esquimalt

Although the telegrams on 9 and 11 May appeared to be explicit, some confusion had arisen in London and Ottawa as to exactly what type of guns were currently in store in Esquimalt. The confusion was not cleared away until 18 May. The Armstrong RBL guns General Selby-Smyth had noted at Esquimalt, and which he believed were still there, had in fact been returned to England. The guns actually in store in Esquimalt were:

naval reserve-
one 9-inch 12-ton gun
three 7-inch 6 1/2-ton guns
four 64-pounder 71-CWT guns
four 64-pounder 64-CWT guns
two 9-pounder guns
one 7-pounder gun
two 20-pounder RBL guns
in excess of naval reserve-
one 8-inch 9-ton gun
one 12-pounder RBL
one 9-pounder RBL¹⁸

To further complicate matters the Admiralty signal to the senior naval officer Esquimalt had released the naval guns to the Provincial government and not the Dominion government. The confusion did not stop the provision of guns as they were asked for locally. The loan was transferred to the Dominion later.

Erection of the Batteries

There was an instant response to the 11 May Colonial Office directive to the Governor-General. Lieutenant-Colonel De La Chevois T. Irwin, Inspector of Artillery at Kingston, Ontario, was ordered to Victoria to organize the defences. He left Kingston on 13 May 1878, travelling via San Francisco to arrive in Victoria on 27 May. That evening he attended a parade of the artillery volunteers at the Drill Shed, James Bay, with Colonel Houghton. The Daily British Colonist reported:-

Artillery Company - Last evening thirty-one recruits were enrolled at the drill shed as artillerymen under the Canadian Statutes.

Before swearing them in Colonel Houghton, D.A.G., explained the duties and regulations of a company and stated that it would as soon as sworn in, come under the Mutiny and Militia Acts. After having been sworn in Mr. C.T. Dupont was elected captain by acclamation, Mr. D. McNaughton 1st Lieutenant and Mr. N. Pinder 2nd Lieutenant. The first drill will take place this evening May 28, and will be more especially for those who have no knowledge of artillery routine and were not members of the late volunteer company.¹⁹

Training proceeded apace with Irwin's assistance:-

The artillery Company last evening [Thursday, May 30] held their second drill at the drill shed. The attendance was good, there being some forty men present. Captain Dupont, prior to exercise, informed them that Colonel Irwin would on Monday next at 8:30 p.m. commence a series of lectures on gunnery which it would be well for all to attend. The lecture will commence at 8:30 p.m.; drill at 7:30 p.m.²⁰

Authority to release the guns in store on loan, until replaced by guns from England or until required by the navy, had reached Esquimalt before Irwin. A formal request for them was made on 1 June. Three days later a 64-pounder Palliser converted, rifled muzzle loader was hauled to the drill shed in James Bay Victoria, by Mr. G. Stelly's team of horse.²¹ A second gun of the same type was delivered in the same way on 17 June. Both guns were used for training the militia gunners at the drill shed until they were emplaced in the defence works.

Lieutenant-Colonel Irwin, using Colonel Blair's report of 1875 as a guide, commenced siting the coast defence batteries in June. He selected a two gun, 64-pounder position at Finlayson Point first. Excavation of the battery began on 11 June with 18 men starting at 7 a.m. Three days later the earthworks were ready and the platforms and other woodwork was started. The battery was finished on 21 June and the two 64 pounders were taken from the drill shed and mounted there in July (Figure 5). Meanwhile the excavation of the battery at Macaulay Point had started on 14 June. Three 7-inch guns were to be mounted there.²²

At this point in the preparations, on 20 June, with the artillery

company in training and earth works under construction at Finlayson Point and Macaulay Point, Rear-Admiral A.F.R. De Horsey, commanding the Pacific Squadron, arrived at Esquimalt aboard his flagship H.M.S. Shah. Lieutenant-Colonel Irwin had been directed by General Selby-Smyth to request assistance from the Admiral in siting the batteries. Captain F.G.D. Bedford of H.M.S. Shah, Gunnery Lieutenant Charles Lindsay and Captain Alexander Burrowes, Royal Marine Artillery, were soon teamed with Lieutenant-Colonel Irwin.²³ Irwin's plan for further batteries, each of two 64-pounder guns, at Holland Point and Saxe Point, and a single 64-pounder at Rodd Point was amended when Captain Bedford pointed out that it allowed for only the single 64-pounder at Rodd Point to effectively cover Royal Roads, the most likely approach for a hostile ship wishing to shell the dockyard.²⁴ The decision was made to replace the three batteries with one battery on Brother's (Deadmans) Island, the site of a naval cemetery.

The work of completing the four batteries now in Irwin's plan moved rapidly ahead. On 14 July, the three 7-inch guns were mounted at Macaulay Point and the battery there was completed six days later. Earth works for a battery of two 64-pounders at Nias Point (Victoria Point) were then started. At the end of the month work began on the Brother's Island battery. By the end of August the first coast artillery defences for Victoria and Esquimalt were complete. The batteries were:-

Finlayson Point	Two 64-pounders 71 CWT RML converted on wooden carriages and slides, naval pattern.
Nias Point (Victoria Point)	One 64-pounder RML 64-CWT naval pattern on wooden carriage and slide, front pivotted. One 64-pounder RML converted 71 CWT on common wood truck carriage.
Macaulay Point	Three 7-inch RML 6 1/2-ton on wrought iron naval carriages and slides.
Brother's Island	One 8-inch RML 9 ton on wrought iron naval carriage and slide. Two 64-pounder RML 64-CWT on common wood truck carriages. ²⁵

The batteries shared similar characteristics (Figures 7,8,9,10). All of the guns were mounted en barbette; on a terrace with a wooden platform, behind an earth rampart and parapet shored with timber and intended to offer some protection from the fire of enemy ships to the men serving the guns. Expense magazines were underground with a protective parapet joining them to the guns. All of the work was done by hired labour, with horses, ropes and pulleys to position the guns. The Royal Navy assisted by moving the guns for Brother's Island from the dockyard to the Island. The three 7-inch and single 8-inch guns were protected from the weather by A-frame wooden shelters. All construction and gun mounting was done under the technical supervision of Lieutenant-Colonel Irwin.²⁶ The completion of the four batteries in less than three months was a remarkable achievement.

The militia artillery company was gazetted as the Victoria Battery of Garrison Artillery on 20 July 1878.²⁷ Six days later, at 5 p.m. on 26 July 1878, it fired its first round from a 7-inch gun at Macaulay Point. In a repeat performance on 29 July, twenty-eight men of the Victoria Battery marched to Macaulay Point again to fire a thirteen gun salute at 3 p.m. in honour of the Lieutenant-Governor on the occasion of the opening of the third provincial assembly. They were commanded by Lieutenant-Colonel Irwin²⁸ (Figure 6). This ceremonial salute was fired many times during the following years and is still fired today by the descendent of the Victoria Battery of Garrison Artillery, 5th B.C. Field Battery R.C.A.

There were further firings in August. Macaulay Point Battery guns were fired on 17 August and Brother's Island Battery on 24 August. These were proof firings normally conducted on the mounting of ordnance. They marked the completion of the temporary defences and the beginning of eighty years of coast artillery defence of Esquimalt and Victoria.

Assessment of Probable Effectiveness

The batteries raised for the defence of Esquimalt and Victoria were recommended by the Colonial Defence Committee to meet a likely immediate and maximum attack by four unarmoured ships armed with guns equivalent to the British 7-inch and 9-inch. "See 'Colonial Defence Planning in London'"

Some indication of the possible effects that the coast batteries could have had in the event of such an attack is given in the following statement issued by the Colonial Defence Committee:-

The 7-inch 7-ton gun, though a less powerful weapon than would ordinarily be used for coast defence, is still a formidable gun. It will pierce with its 112 lb. shell iron plates exceeding eight inches in thickness at 1,000 yards, or six inches at 2,000 yards. It seems scarcely probable that cruisers protected with heavier armour than this would be likely under present circumstances to visit distant coasts. The 64-pounder wrought-iron gun of 64 CWT, firing a battering shell of 90 lbs weight, is also a powerful and accurate auxiliary gun, and though not regarded as an armour-piercing gun, is capable of penetrating iron plates exceeding five inches in thickness at 1,000 yards, while against unarmoured ships its fire would be very effective, as well as against the unprotected parts of the armoured vessels.

But the converted 64/32-pounder of 58 CWT,... is an entirely different and in all respects inferior weapon. The calibre is the same as that of the wrought iron 64-pounder, but owing to the comparative weakness of construction, it cannot fire the 90-lb battering shell with the heavy charges which are used in the other, and is consequently unable to compete with it in range, penetration, or accuracy of fire. Its shell will not penetrate the thinnest armour afloat at the shortest range, and is therefore useless except against unarmoured ships. It is undoubtedly cheap, and owes its introduction to the economy effected by turning to some account the otherwise useless smooth bored guns.²⁹

With this statement and the plans at Figures 11 and 12, the key importance of Macaulay Point battery is readily discernible. The defences were not tested by an attack. If they had been then many other factors besides gun characteristics, such as standard of training of the militia serving the guns and their steadiness under fire would have counted. But on simple comparison the batteries provided a defence which more than matched the expected attack.

Payment for the Defences

The question of payment was shelved in the initial rush to provide the defences. In May 1878 the Colonial Office had made it clear that it considered the provision of guns and works for the defence of Esquimalt and Victoria was an Imperial matter. The Treasury agreed that the first cost of defence measures should come from the Army and Navy estimates.³⁰

The militia gunners had been raised by the Dominion which would bear the cost of them. The Admiralty raised the question again of who would pay for the guns, stores and ammunition provided from the dockyard, at the end of September 1878 ³¹ (Appendix A). The Secretary of State for the Colonies restated his position and suggested that no charge should be made for a loan which was in the best interests of the security of the naval dockyard at Esquimalt. Thus the guns and stores of the batteries were provided at no cost to the Dominion.

Royal Navy Proposals for Permanent Defences

When Admiral De Horsey directed Captain Bedford to assist Lieutenant-Colonel Irwin with the siting of the temporary batteries to defend Esquimalt and Victoria he also requested a detailed report on the defence of the two ports. Captain Bedford completed the report on 27 June 1878. He agreed with Lieutenant-Colonel Irwin's plan for batteries at Finlayson Point, Macaulay Point, and Holland Point (Victoria Point), and suggested three alternative plans for other batteries specifically sited for the defence of Esquimalt harbour. He also pointed out that the current strength of the militia artillery was only 50, barely enough to man a total of five guns, and that priority would be given by the militia to manning those guns defending Victoria. With no warships assigned specifically to Esquimalt, he envisaged local volunteers from the dockyard having to man the guns defending Esquimalt in an emergency. He thought they would be of little use without a dockyard guard "strengthened and composed of picked Marine Artillerymen."³² Bedford's plan included suggestions that the entrance to Esquimalt should be moved and trained technicians to maintain and operate the minefield should be provided. Booms and buoyed cable were also to be used to further obstruct the entrance.

Admiral De Horsey forwarded Captain Bedford's report to the Admiralty on 28 July 1878. In his covering letter he stated that he agreed with the report in most respects, particularly with the general inadequacy of the current temporary arrangements, but disagreed with some detail. So far as he was concerned the salient feature of the coastline was the

peninsula between Victoria and Esquimalt, which was surrounded by water except for a narrow gorge at Portage Inlet. He felt that this peninsula, and the dockyard which was on it could easily be defended by a handful of men. It was desirable therefore that it should be made impregnable with redoubts and a regular garrison. The Admiral preferred a different deployment of the guns available for the coast defence batteries. See Table 2.

In the last four paragraphs of his report he made his strongest recommendations:-

12. Although Victoria harbour from its shallowness could not be attempted by an enemy's ship of any size, its defence as well as that of Victoria city has not been overlooked in the above suggestions. But I submit that in the absence of defensive works of any extent not now contemplated that city is not defensible except by sufficient land forces to meet an enemy in the field. On reference to Appendix No. 4 [not included here] it will be seen how easily it can be taken in the rear by an enemy landing in Cadboro Bay, Cormorant Bay or indeed anywhere along a coast line of some 18 miles or more extent and yet within a march of only 3 to 5 miles of the city.

13. Finally I would with all deference for entering on the subject draw their Lordships special attention to the necessity of Esquimalt being defended by Imperial resources and under naval control. The dockyard is Imperial property and bears the same relative position to our squadron in the Pacific as Halifax does to the squadron in the North Atlantic but with three fold force as there is no Bermuda or Jamaica in these waters, no British possession within possible reach for supplies and repairs. It is lamentable to think that in the present defenceless condition of this harbour and viewing the trifling number of volunteer militia any fairly organized enemy's expedition should suffice to destroy the dockyard and be masters of the position until again ejected by hard fighting. This is assuming the absence of H.M. ships, which in case of war must be counted upon. They could not remain here as mere floating batteries, and even if used for that purpose it is easy to conceive their being enticed away by a feint or by false information.

14. A nucleus of one hundred Royal Marine Artillerymen at Esquimalt under Naval Authority, would with the defences proposed and with the assistance in case of attack of the Volunteer Militia render this dockyard secure. A most trifling expense, I submit where such large interests are at stake, such a body of Marine Artillery would be valuable for many duties now requiring expensive hired labour and if consisting of a proportion of men skilled in trades a portion of the cost of maintenance would be reimbursed by their workmanship in the dockyard.

15. I have nothing to add to Captain Bedford's report relative to the employment of torpedoes [mines] except to strengthen his opinion that they would be useless without specially trained torpedoists [submarine miners] for their management, and to express my want of faith in any extemporary work and partial adoption of that means of defence, nor do I see much occasion for resort to torpedoes to guard this small harbour, as an enemy if not prevented by guns from approach could attain his object without entering the harbour.³³

The points the Admiral makes: the primary importance of the defence of Esquimalt; the necessity for a permanent garrison of about 100 Royal Marine Artillerymen; the need for assistance from the local militia; the importance of gun defence, and the necessity for skilled submarine miners if a minefield is to be used, are important because they become the essential elements of future plans for the permanent defences for Esquimalt and Victoria.

The Admiral forwarded Captain Bedford's report and his own comments to the Admiralty, with copies to Lieutenant-Colonel Irwin and the Governor-General. The Colonial Office passed the report to the Colonial Defence Committee on September 20. Thus the stage was set for further consideration of permanent defences for Esquimalt and Victoria. The Inspector-General of Fortifications at the War Office pressed for the development of plans and in December 1878 obtained the agreement of the colonial office to the despatch of an officer to the Dominion for this purpose.³⁴

Summary

In 1878, when Britain and Russia seemed close to war, temporary earth-works mounting coast defence artillery were erected at Finlayson Point, Victoria Point, Macaulay Point and on Brothers Island to cover the sea approaches to Victoria and Esquimalt. A new militia unit, the Victoria Battery of Garrison Artillery, was raised in Victoria to man the guns. All of this was the result of swift co-operative action between authorities in London, Ottawa, Victoria and Esquimalt. To make it possible a new coordination body had been convened in London in January 1878; the Colonial Defence Committee, reporting to the Secretary of State for the Colonies and with representatives from the Colonial Office, the

Admiralty and the War Office. When the work was done and the emergency had passed it was inevitable, because of the success of the committee, that it would be included in the process of planning permanent defences for the coaling stations and ports of the empire.

Permanent Defence Planning

General

In 1877, the Admiralty, mindful of the Royal Navy's role in Empire defence and facing a new age of steam powered warships, had designated twelve coaling stations around the world as necessary for Royal Navy operations. The problem of how these stations should be defended had been considered briefly by the Defence Committee in London, but before any plans had developed an international crisis had intervened. Now, with the 1878 Anglo-Russian crisis over and the emergency defences it had provoked in place, it was time to resume a careful examination of Empire defence.

The detailed planning of the defences of ports and coaling stations throughout the Empire was a British War Office responsibility. As soon as the Anglo-Russian crisis was over, it began to collect information on the ports and stations by assigning various Imperial officers to make personal visits and submit their reports and recommendations. These, and the reports of colonial service officers, were examined by War Office fortification experts who then drew up planning recommendations.

The execution of War Office plans would be in accordance with government policy. In order to establish that policy a Royal Commission was appointed on 12 September 1879, to inquire into the defence of British possessions and commerce abroad. The Carnarvon Commission, as it is generally known after its chairman the Earl of Carnarvon, toiled until 1882 when it produced its third and final report with its conclusions and recommendations with regard to the defence of Esquimalt.

The Commission's recommendations exerted considerable influence upon the subsequent history of the defence of Victoria and Esquimalt. But the Commission was not unanimous in its recommendations. Because it was not, the reports of various officers and the verbal evidence

of the Canadian Prime Minister, Sir John A. Macdonald, are important not only as evidence placed before the Commission but also as the expression of various views which would continue to have influence until a compromise could be reached. The evidence and the Carnarvon Commission's recommendations are examined in this chapter.

There were two other aspects of the years 1878-1883 which cannot be overlooked; important technological advances occurred in coast defence gunnery and Victoria's militia gunners steadily improved as a unit. Both are treated in this chapter to bring the history of the defence of Victoria and Esquimalt wholly to 1883.

Imperial and Dominion reconnaissance of Esquimalt-Victoria area

As soon as the Anglo-Russian crisis of 1878 was over, the War Office pressed to have a qualified Imperial officer visit Esquimalt and report on its defence. The Colonial Office was most anxious that such an action not offend Canada. Accordingly, a joint reconnaissance by a Canadian representative Lieutenant-Colonel T. Bland Strange R.A., and a British representative, Colonel J.W. Lovell R.E., took place in 1879 by agreement of the Canadian and British governments. The two men were tasked with reporting on:-

- I. General question of vulnerability and means of defence.
- II. The means to be adopted for placing the harbours of Esquimalt and Victoria in an efficient state of defence, by permanent works, the extent to which the temporary works may be made available being reported.
- III. Whether these two harbours Victoria and Esquimalt may be considered independently, or whether on the other hand, a scheme of defence must necessarily embrace both, bearing in mind that Esquimalt, as an Imperial station, is of primary importance.
- IV. The garrison required to be permanently maintained, and the manner in which such garrison should be constituted, stating the extent to which assistance in this respect may be expected from local resources.
- V. The advisability of providing defences for the coaling stations at Nanaimo, from which the dockyard at Esquimalt and steam ships navigating the Northern Pacific along the coast of America are chiefly supplied with coal.¹

Both men arrived in Victoria on 13 August 1879. They called upon the Lieutenant-Governor and others, and, accompanied by Lieutenant Hussey

R.E. and Captain Dupont, inspected the naval establishment at Esquimalt and the militia gunners and infantry, the construction site of the new graving dock and the temporary batteries erected by Colonel Irwin. Before leaving the area they visited Burrard Inlet, Bute Inlet and the Alberni Canal, these three being possible alternative sites for the transcontinental railway terminus and the Royal Naval station, and visited the towns of Nanaimo and New Westminster, going inland as far as fifteen miles above Yale. Lieutenant-Colonel Strange was the first to submit a report.

Lieutenant-Colonel T.B. Strange's Report.

Strange began by considering the general situation. He described the United States naval base and arsenal at San Francisco, the railroad between San Francisco and the eastern states which could move large bodies of troops rapidly and the network of telegraph lines which would allow the United States to launch, control and maintain a large scale attack on Esquimalt and British Columbia. He pointed out that the Russian base at Vladivostock was in direct telegraph communication with St. Petersburg and during the recent Anglo-Russian crisis the Russian Squadron in San Francisco, or even a solitary Russian warship, could have attacked Victoria and Esquimalt, shelled the town and burned the dockyard, before the scattered Royal Navy Pacific Squadron or the two ports knew that war had been declared. Victoria and Esquimalt had no rail link with the east, no telegraph connection with either Ottawa or London except through the United States, and depended upon Washington territory for food supplies. Nevertheless, the Colonel felt:

"....it is by no means impractical to place the few vital points in a position of security by the emplacement of powerful guns, supplemented by torpedoes and telegraph signals; and that a comparatively small garrison, aided by local resources and the completion of communication by the Canadian Pacific Railway, would maintain the integrity of the Empire,...."²

Accordingly, he recommended the defence of Esquimalt, which he regarded as the best location for a naval station, Nanaimo, for its coal, and the

railway terminus on the coast. This brought him to the question of whether both Esquimalt and Victoria should be defended. He suggested that while it was strategically possible to fortify the peninsula between Esquimalt and Victoria to secure the naval establishment and to abandon Victoria, this would be morally inadvisable. In any case, fortification of the peninsula (Macaulay Point) would assist both ports in practice. Further, both the Dominion and Imperial governments had set some precedent recently by providing temporary batteries for the defence of both harbours. Strange went on to suggest that there was a recognisable division of responsibility between the two governments because "The defence of Esquimalt is mainly an Imperial question, as more intimately connected with the Royal Navy station and graving Dock"³

The Colonel thought that permanent defences could be provided for both Esquimalt and Victoria by upgrading the temporary batteries erected in 1878 and siting some new batteries. In his specific recommendations he treated each harbour separately.

Beginning with Esquimalt he recommended two new batteries: At Rodd Point, four 9-inch twelve ton RML guns on travelling platforms and carriages protected by a blockhouse on Belmont Hill and with a portion of the battery enfilading the salt lagoon; at Signal Hill, two 9-inch twelve ton RML guns on Moncreiff lift carriages with all round traverse. The temporary batteries on Brother's Island and at Macaulay Point would be rendered permanent by renewing the gun platforms, improving the pivot for the 8-inch gun, revetting the works with masonry and building expense magazines and artillery stores at each position.

For the defence of Victoria he recommended one new battery of two 7-inch six and a half ton RML guns at Holland Point to command the entrance to Victoria harbour. The temporary batteries at Finlayson Point and Victoria Point would be rendered permanent by revetting the interior slopes of the gun emplacements with stone or brick and other slopes with cedar. A keep was to be constructed on Beacon Hill to secure the rear of all three batteries. It would be supplemented by stockades at the gorges of the batteries.

To complete the defences, Colonel Strange suggested a battery of four horse drawn 16-pounder RML field guns for the militia to meet boat

landings on any of the local beaches, torpedoes (mines) operated by a regular garrison and telegraph lines to early warning stations at Albert Head and east of Victoria. Like the armament, the garrisons were also considered separately. A permanent force of two hundred marines was recommended for the Esquimalt works because:-

1. Being completely under the command of the Admiral of the Station, there would be no divided responsibility.
2. The armament at present mounted is of the naval pattern, and could be replaced, if necessary from the Dockyard stores, together with ammunition etc. Repairs could also be performed by the dockyard artificers.
3. The pay, supplies, and clothing of such a force could all be carried out by the Admiralty authorities.
4. If any other force than the marine artillery were employed, it would necessitate special pay, commissariat, store, and medical departments.⁴

They would be supplemented by an auxilliary battery of dockyard employees who would man the guns on Signal Hill.

Another permanent force of one hundred Canadian gunners was recommended for the Victoria works and to furnish detachments for Nanaimo, New Westminster and the Burrard Inlet railway terminus. Strange recommended Canadian gunners for these tasks because he saw them "....as better suited to training militia than the mere presence of a garrison of Royal or Royal Marine Artillery."⁵

He was impressed with the gun practice of the Victoria Battery of Garrison Artillery and with their capable commander Captain Dupont. Seeing them as having a valuable role in the defence of both harbours, he felt their numbers should be increased by converting the rifle company in Victoria to artillery. He also suggested raising another battery in Nanaimo.

Colonel Strange's recommendations presented a Canadian military view: Defend Esquimalt and other important points on the west coast of Canada by economically upgrading and strengthening the present defences and by providing adequate numbers of Canadian troops to meet clearly Canadian responsibilities while recognising the Royal Navy station at Esquimalt as an Imperial responsibility. The Colonel's

report was submitted to the Lieutenant-General Comanding the Canadian militia on 7 November 1879. It went via the Governor-General to the Secretary of State for the Colonies, London, on 25 November and reached the Camarvon Royal Commission on 13 January 1880.

Lieutenant-General Sir E. Selby-Smyth's Comments.

The Lieutenant-General Commanding the Militia of Canada felt disposed to add his comments to Colonel Strange's report in a covering letter. By way of introduction, he stated that he was fully aware of the importance of defending Esquimalt, pointed out that he had first broached the subject four years earlier and remarked that his suggestions had not been acted upon until the sudden emergency of 1878. Turning to the question of responsibility, he wrote that it "...may be considered the protection of Esquimalt is an Imperial rather than a Dominion liability but that it intimately concerns the honour of both and the supremacy of British naval power in that ocean."⁶ He was clear as to which nation he thought the potential enemy..."...I naturally keep in view that Russia might be the enemy against which we must take precautions, for with respect to our neighbour over the border I think we need not give ourselves the slightest anxiety..."⁷ His specific comments on detail were few. Stress was laid on the importance of the peninsula between the two ports (Macaulay Point) and on the commanding position of one or two long range guns on Signal Hill. He suggested that the naval stores might be moved to the north-west shore of Constance Cove to place them as far as possible from a bombarding ship, and expressed his belief that enough volunteers could be mustered in Victoria and Esquimalt for the defences. The General's letter was at once self vindicating, an expression of his frustration at Dominion government disinterest in military preparedness and an endorsement of Colonel Strange's report. The letter went with the Strange report to the Camarvon Commission.

Colonel J.W. Lovell's Report.

Colonel Lovell was the Commanding Royal Engineer of the British garrison of Halifax, Nova Scotia, when he was ordered by the British War Office to make a reconnaissance of the Esquimalt area. He completed a lengthy,

detailed report on all the places he visited with specific recommendations for the defence of each.

Colonel Lovell, like Colonel Strange, recognized the possibility of an attack by the United States or Russia in the event of war, and described the nature of each threat in much more detail than Strange had done. He concluded that Esquimalt would be worth defending against a large scale American assault because of its commanding position over sea trade in the area. A Russian assault would not be so large but might involve a force of several thousand troops, ironclads and steamers launched from Vladivostock and using neutral American shore waters to get close to Esquimalt with impunity. This maximum risk approach led to the conclusion that Victoria and Esquimalt should be strongly defended by large numbers of heavy guns.

Colonel Lovell carefully assessed every important topographical feature of the coastline about Victoria and Esquimalt. He pointed that the many beaches on the immediate waterfront would allow an enemy to land small boat parties in many places. A major hostile expedition could easily land without interference over beaches at Sooke, Pedder Bay, or at several places on the Saanich peninsula, and use good roads to march on Victoria and Esquimalt. The Royal Naval dockyard and town of Esquimalt could be viewed and fired upon by a vessel lying in Royal Roads along a series of depressions in the coastline. Colonel Lovell acknowledged the difficult entrance to Victoria harbour but pointed out that it could also be bombarded with ease by a ship lying off shore at the entrance or in Ross Bay.

Although the report remarked upon the limited money available and upon the Colonial Defence Committee's assessment in April 1878 that only a defence against a single ship or small squadron of moderate power was contemplated, nevertheless it advocated substantially stronger defences than those proposed by Colonel Strange. To prevent enemy ships closing to bombardment range, Colonel Lovell advocated heavy long range guns in batteries placed forward of both harbour entrances. Like Colonel Strange, he made detailed recommendations for each harbour.

For the defence of Esquimalt, four batteries were to be established. One of not less than six 10-inch guns was to be sited on Sangsters Knoll, considered a key position commanding the sea from Albert Head to Esquimalt. Another, of six 7-inch guns, was to be at Rodd Point with two guns enfilading the Sangsters Knoll battery. Two 12-inch or 10-inch guns on counterpoise carriages were to be at Signal Hill and a strong battery of six 10-inch guns at Cape Saxe. The harbour entrance would have a minefield of twenty seven 100 pound observation mines. "This," the colonel wrote, "would complete the sea defence of Esquimalt harbour, not to my full satisfaction, but as effeciently as appears compatible with the views of the Colonial Defence Committee."⁸

Turning to the defence of Victoria, he stated "...it seems desirable that this city should not be left at the mercy of an enemy."⁹ Accordingly, he recommended that the guns at Signal Hill and two of those at Saxe Point should be able to fire on the outer part of the entrance to Victoria harbour. In addition, a battery of six 10-inch guns was to be sited on Beacon Hill, to cover an arc from the harbour entrance to Ross Bay, and a minefield of sixteen 100-pound obstruction (contact) mines was to block the harbour entrance.

His armament plan did not include the temporary batteries erected in 1878. He felt they should remain a Dominion responsibility entirely until the permanent defences were completed and should then be dismantled.

The garrison necessary to man the permanent defences was calculated on the premise that "...a weakly fortified place with an inadequate garrison in an isolated position beyond reach of support and open to an attack by a large force courts its own destruction, and that of the interests it is supposed to protect, and leads to a useless sacrifice of men, money and with a loss of honour and prestige."¹⁰ Thus it was necessary to have a total garrison of 1138 Imperial troops (118 artillery, 100 engineers, 20 submarine mining engineers, 900 infantry) and 854 local militia (354 artillery, 500 infantry). Colonel Lovell was opposed to a garrison of marine artillerymen under naval command because he felt that the wartime duties of the naval officers of the Pacific Squadron and the Esquimalt station would entail frequent changes of command at Esquimalt and the absence of senior officers, both of which would promote diffi-

culties for such a garrison. He felt that the militia artillery in Victoria, should be strengthened by enrolling the militia infantry company of the city as artillerymen. The 500 infantry he had recommended could be raised easily, he thought, at the time of any emergency.

The Colonel recommended that Nanaimo should be fortified while it supplied coal to Esquimalt, but noted that a railway between the two towns would equally ensure the coal supply. He envisaged New Westminster defended by field artillery and the proposed railway terminus on Burrard Inlet by coastal batteries. There was no doubt in his mind that a Canadian telegraph link across the Rockies was "...of the greatest importance..." and that "for military reasons...all pressure that is possible should be made use of to expedite the completion of this trans-continental railway."¹² He forecast that the railway would also bring an increase in trade to the coast and increasing immigration, both of which would in turn enhance the importance of Victoria and Esquimalt and emphasise the necessity for their defence. Finally, he estimated it would cost £33,020 for the construction of the works he proposed for Victoria and Esquimalt alone.

Colonel Lovell's report is an interesting contrast to that of Colonel Strange. It presented the view of an Imperial engineer officer experienced in the military science of fortification who was currently serving in one of the few Imperial fortresses in the Empire, Halifax. His report was submitted directly to the War Office in December 1879, on his return to Halifax. It was passed to the Carnarvon Commission by the Colonial Office on 19 April 1880.

Sir John A. Macdonald's Statement before the Royal Commission.

The Prime Minister of Canada was in London, England, in 1880. He appeared before the Carnarvon Commission on 29 July 1880. The Commission questioned him on the general aspects of Canadian defence with stress on the problem of Esquimalt.

In response to the first question posed by the Earl of Carnarvon, the Prime Minister expressed his opinion that the danger of a war occurring with the United States was annually decreasing, "... so much so that it is

in the highest degree improbable that there will ever be a war between England and the United States, except for causes altogether unconnected with Canada of which I cannot judge."¹³ He went on to suggest to the Commission that "...for all practical purposes I should think that you may leave that contingency out of the question."¹⁴

He talked at length about the Canadian Pacific Railway, the progress that had been made to date and the plan for its completion. New Westminster was to be the western terminus and it was the intention to build a line from Nanaimo to Esquimalt with a regular steamer connection between the mainland terminus and Nanaimo. When completed, the Canadian Pacific Railway would be an important trade route, particularly for shipment of grain from the prairies to the east. Under questioning, Macdonald agreed that if there was a war with the United States the railway would be very vulnerable. If it was cut in the prairie region, where such an operation would be easiest, then the Prime Minister thought it would be possible to ship the grain instead through the western ports. Thus the western terminal would become important.

Esquimalt was important for the protection of the western terminal of the Canadian Pacific Railway and the sea trade to it. The Prime Minister therefore felt that "The defence of Vancouver Island is absolutely a necessity."¹⁵ Furthermore, he stated that "The two points we think where the principal obligation rests upon England are Halifax and Esquimalt."¹⁶

In response to questions from the Commission with regard to Imperial and Colonial responsibilities in time of war, perhaps a war between Britain and Russia, the Prime Minister stated that:-

...war between England and a European Power is not likely to arise from anything in which Canada has an interest, and in such a case Canadians would not consider themselves bound to make any large sacrifices in men or money. The utmost injury which Russia, for instance could inflict upon Canada, would be to harass her commerce, and perhaps destroy towns and villages on the coast by means of swift cruisers and Canada would do what she could to protect her commerce and shores

with the assistance which has always been promised by the Imperial Government.¹⁷

The point was made that Canada had drilled up to 40,000 men annually in the militia since 1865 and these would form the core of any Canadian force to be organised in time of war. Further preparations in time of peace would be politically unpopular. The government could only proceed with steps for maintaining defence by annual votes obtained from Parliament.

Macdonald's evidence presented new factors not considered by any of the military reports submitted to the Camarvon Commission. It was the Canadian government view and it described the defence of Esquimalt as necessary to Canada but solely an Imperial responsibility. There was no enthusiastic offer of joint participation. In its place was an expression of loyalty to be counted upon in an emergency.

Colonel C.H. Nugents's Memorandum

Colonel Lovell's report was welcomed by the fortifications branch of the British War Office and studied at length. A senior officer of the branch, Colonel Nugent, produced a memorandum on 28 December 1880 which gave the War Office position. It contained a recommended plan for the defence of Esquimalt and Victoria and less costly alternatives, all different from, but containing elements of, the Strange, Selby-Smyth and Lovell recommendations.

Colonel Nugent first considered the strategic situation of Esquimalt. It was the only British coaling station on the Pacific shore of America. Unfortunately it was remote from the major British trade routes converging on San Francisco and the Isthmus of Panama. If it was necessary as a naval coaling station, then it required protection. "At present," the Colonel wrote "the only nations which should excite apprehension with respect to Esquimalt are the United States and Russia."¹⁸ Against the United States Esquimalt was defenceless.

...as against Russia the problem is not so difficult, and in providing what is necessary to meet her, we provide all that it is wise to provide for a rupture with the United States, and what is at least sufficient to add weight to our position should dispute unhappily arise between us.¹⁹

The Colonel pointed out that Russia had no vessel in the Pacific at that time carrying more than ten inches of armour.

Turning to the location of batteries for the defence of Esquimalt, he disagreed with Colonel Lovell's suggestion for a key work on Sangster's Knoll. Such a work would be very expensive and could be easily isolated by an enemy and then subjected to seige. If captured, its guns could be used against the dockyard. But he did agree that, wherever they were placed, long range heavy guns were necessary to keep enemy ships outside bombardment range of the dockyard. He suggested there should be a battery of two 10-inch casemated RML guns at Rodd Point, another of two 10-inch guns on Signal Hill, a larger battery of three 10-inch and two 64-pounder RML guns on Brothers Island, and three 10-inch and six 64-pounder RML guns at Macaulay Point. The estimated cost of these works was L71,125 with a further L37,149 for armament.

To allow for the complete protection of Esquimalt dockyard, Nugent felt that consideration should be given to moving the establishment to the head of the harbour at Plumper Bay, a retirement of 1,500 yards, which would lessen the risks from bombardment. An alternative was to bombproof the principal buildings in their current location. And, commented finally, "The construction of the long delayed Canadian-Pacific railway will afford the best prospect of security to Esquimalt"²⁰ by allowing speedy reinforcement.

Nugent reasoned "The defence of Victoria so depends upon that of Esquimalt that the two may be very fitly combined, and, indeed, the defence of Esquimalt upon this side becomes far more complete, if Beacon Hill, a strongly elevated position in front of Victoria, be firmly occupied."²¹ He recommended a battery of four 10-inch and three 64-pounder RML guns for the top of Beacon Hill with the lighter guns mounted for landward defence. At the sea edge the temporary works at Victoria Point and Finlayson Point were to be improved. The new works were estimated to cost L42,125 with an additional L15,648 for armament.

To complete the plan a permanent garrison of 1200 Imperial troops backed by a militia force of 500 would be necessary. Like Lovell, Nugent did not favour marines. He felt they would be removed for sea duty at

the outbreak of war. He agreed also with Lovell's suggestions for blocking both harbour entrances with minefields and for field guns for the defence of Nanaimo, but regarded a Nanaimo-Esquimalt rail link as a preferable alternative to the field guns, allowing easy reinforcement of the coal town from Victoria.

Colonel Nugent's memorandum was an interesting amalgam of the reports of Colonel's Strange and Lovell and the remarks of General Selby-Smyth. It was an important step in the development of War Office plans for the defence of Esquimalt and Victoria.

Colonel W. Crossman's Report.

Colonel Crossman succeeded Colonel Lovell as the chief military engineer of the British garrison of Halifax, Nova Scotia. He submitted his report to the War Office, on request, after a visit to the Victoria area. He was conversant with both Lovell's and Nugent's reports before his journey. His report is remarkable for its conciseness and precision. It confirmed many of the points made by Lovell and Nugent but presented a fresh set of conclusions and recommendations.

Crossman was sure that "In considering the defence of Esquimalt, the position of the Naval Yard must determine the plan to be adopted."²² He valued the fifty-three wooden buildings in the yard, the roads, ground levelling and stores at L100,000 and pointed out that because of the fire risk, the limited wharf space and the need for more workshop and storage space, reconstruction was due within a few years. While the yard remained in its present location it was vulnerable to bombardment and a strong battery and work at Sangster's Knoll, recommended by the late Colonel Lovell, was essential to prevent this. The cost of such a work would be not less than L50,000 and Crossman suggested that it would be cheaper to move the present dockyard facilities to the head of the harbour at Plumper Bay. Such a move would simplify the plan for the defences.

The Colonel went on to discount several of the battery sites recommended by his brother officers. Signal Hill was not high enough for the guns placed there to give plunging fire and it did not command the shore to Macaulay Point. Guns should not be placed there or on Beacon Hill where a public park and racecourse existed so that "...even if it

were absolutely necessary to occupy if for defence, so great objection would be raised by all classes that there would be considerable difficulty in obtaining possession of it."²³ In fact, it was not necessary to site guns anywhere between Holland Point and Beacon Hill. To do so would merely encourage an enemy to use beaches further east for an unopposed landing and would also draw fire on Victoria. Colonel Crossman concluded that "Works constructed by the Imperial Government should be confined to those absolutely essential for the defence of the naval stores"²⁴ and that, "These can all be placed on the Esquimalt Peninsula and the ground to the west of it."²⁵

In his detailed plan, the Colonel recommended three battery sites and an alternative. Four 10-inch and two 64-pounder RML guns were to be sited on Brother's Island. Five 10-inch RML guns, casemated and shielded, were to be placed at Rodd Point. If the naval yard remained in its present location a strong enclosed work would be necessary at Sangsters Knoll. But if the yard was moved, as he had suggested, to Plumper Bay then the battery at Rodd Point could be reduced by two guns which should be mounted at Duntze Head. A minefield was necessary to close the harbour mouth. It should be controlled and maintained from Duntze Head. The Esquimalt peninsula could be protected from landward attack by a field position constructed from Thetis Cove to Portage Inlet. Of the present temporary works, he wrote "Nothing is being done to keep them in repair... from the want of the expenditure of a few dollars annually... will soon become unserviceable."²⁶ Consequently, it would be better to remove the guns and abandon the works. He agreed entirely with Colonel Lovell's recommendations on the garrison necessary, but cautioned that no more than 500 men could be raised locally at the present time. His estimate of the cost of his plan included £50,000 for the removal of the dockyard and totalled £184,500.

Colonel Crossman's report, brief and to the point, was sent by the War Office to the Colonial Office on 10 October 1881. It was forwarded to the Camarvon Commission eight days later.

The Royal Commission (Carnarvon Commission)

The Commission was appointed in the London Gazette of 12 September 1879.

Its members were:-

Earl of Carnarvon	-Chairman
Right Hon. Hugh Culling Eardly Childers M.P.	-Appointed Secretary of State for War and replaced 2 August 1880 by Earl of Camperdown.
Sir Henry Thurstan Holland M.P., K.C.M.G. Admiral Sir Alexander Milne Bart, G.C.B.	-Former chairman of the Colonial Defence Committee of 1878.
General Sir John Lintorn Arabin Simmons G.C.B.	-Inspector General of Fortifications
Sir Henry Barkly G.C.M.G., K.C.B.	-Member of the Colonial Defence Committee of 1878
Thomas Brassey esq. M.P.	-Replaced 2 August 1880 by Samuel Whitbread esq. M.P.
Robert George Crookshank Hamilton esq.	-Account-General of the Royal Navy and Comptroller of Navy Pay.
Captain Herbert Jekyll R.E.	-Secretary.

The Commission's task was to inquire into the condition and standard of the defences of the more important sea ports within the British Empire and of coaling, refitting and repairing stations which were established or would be required by the Royal Navy for the protection of the Empire's commerce. Special attention was to be paid to the Royal Navy Stations. The Commission was to consider the question of size and proportion of Imperial and Colonial forces required for garrisons, armament and responsibility for the cost of the defences.

The inquiry began immediately and by the time of the Commission's first report it had established a list of ports and stations and heard much evidence on armament and of a more general nature from many witnesses including the First Sea Lord and the Commander-in-Chief of the British Army. It then called for more detailed reports from officers sent to examine all the ports and stations listed while continuing to hear

evidence. After receiving the reports of Colonels Strange, Lovell and Crossman, Colonel Nugents memorandum, and with Sir John A. Macdonald's evidence to hand, the Commission produced its third report in 1882 in which it dealt specifically with Esquimalt.

The Commission was not unanimous in its conclusions on the defence of Esquimalt. All but two members were of the opinion that:-

From a military point of view, and in the present stage of commercial development of the province, it would be inexpedient to construct powerful works of defence at Esquimalt, and to establish a large garrison.

In the event of hostilities with the United States, it is our plain duty to your Majesty to declare that Esquimalt could not be defended, and that, in the event of hostilities with any other Power, there would probably be little fear of molestation if there were neither ships works, nor stores to tempt attack.²⁷

This view was extended by questioning British Pacific strategy with the statement that it was a:-

...matter for grave consideration whether the Pacific squadron would not be of more service for the protection of British interests in the Pacific if employed to reinforce the China Station. In that event, the present naval establishment of Esquimalt might be dispensed with.²⁸

But this suggestion was qualified in a way which shifted the final decision on Esquimalt to the Colonial Office and the Dominion government:-

Whilst we are of opinion that purely military considerations would lead the Imperial Government rather to concentrate its forces at stations on the other side of the Pacific Ocean, we do not overlook the fact that in the Dominion the wish may be strongly entertained that Vancouver Island should continue to be the station of the Pacific Squadron, and that Esquimalt should be so defended by permanent works as to render it a coaling and refitting station, to which, except in the case of war with the United States, the squadron could at all times resort with confidence. Should this be found to be the wish of the Dominion, and should the Canadian Government determine to provide adequate works and garrison for the defence of Esquimalt, we are of the opinion

your Majesty's Government should supply the armament; and should give any professional assistance that may be devised.²⁹

With this position the Carnarvon Commission excluded Esquimalt from its list of First Class Coaling Stations for which it recommended appropriate defences in detail.

It was significant that the two members who could not support the Commission's report were members of the Colonial Defence Committee which had had to meet the emergency of 1878. One of the two was Admiral Milne, former chairman of the Colonial Defence Committee and now the Admiralty representative on the Carnarvon Commission, who wrote:-

I do not concur in the view of the other members of the Commission, that in order to strengthen the China squadron to act against Russia in the Western Pacific the present Pacific Squadron should be transferred to the China command, and I am of opinion that the naval station at Esquimalt and the town of Victoria should be defended at a moderate outlay, as recommended by the Colonial Defence Committee of 1878, leaving it to the professional authorities at the War Office to decide what is necessary....

So long as peace is maintained, there is ample employment for the ships of this squadron to watch our extensive national interests on the coasts of the American Continent, and especially at Vancouver, the naval station at Esquimalt, with the town of Victoria, and probably, in a few years hence, the terminus and harbour of the Canadian Railway.

I agree with the Commission that Vancouver [Island] and British Columbia would fall to any well-organized attack by the forces of the United States; but I do not consider that the naval station at Esquimalt should be exposed to serious danger if attacked even by a small squadron of any other country, which would probably be the case if the Pacific squadron were withdrawn.

The Colonial Defence Committee of 1878 decided that this station and the neighbouring town of Victoria should be reasonably protected, and I see no new grounds to alter the opinions then expressed. It is a question to be decided between Her Majesty's Government and the Dominion of Canada, which was bound by Order in Council to use all its influence to secure the continual maintenance of the naval station at Esquimalt, whether these defences should be undertaken by the Dominion or continued, as at present, by the Home Government.

In war, or a prospect of war, the Commander-in-chief on the station would at once concentrate his squadron, most probably at Esquimalt, ready to act against any enemy intending to attack our commerce or local interests,...

I consider this proposal to remove the Pacific squadron is not within the scope of the instructions under which the Commission is acting, for it is one which would require the special consideration of the Admiralty and the Foreign Office, and is, in my opinion, an interference with the Executive Departments of the State.³⁰

Sir Henry Barkly agreed with Admiral Milne's opposition to the transfer of the Pacific Squadron and to the abandonment of Esquimalt.

Faced with the choice presented in the positions of the Carnarvon Commission and its detractors, neither the British government nor the Admiralty accepted the Commission's recommendations on the Pacific Squadron and the defence of Esquimalt. Thus the requirement for defending Esquimalt against an attack by any other country than the United States, and notably by Russia, remained, but without the policy definition required for further permanent defence planning.

Technological Development of Gunnery.

The years of the Carnarvon Commission were also years of military technological development. Two aspects of the progress made are of importance here for they would eventually show in the Esquimalt-Victoria coast defence batteries, one in the increasing power of guns and the other in the control and accuracy of fire.

In the 1860s and 1870s a more powerful gun usually meant a heavier gun. It was only when knowledge of powder combustion characteristics increased and was combined with advances in chemical manufacturing that a more powerful gun with little increase in weight could be developed. By the 1880s a slower burning, less dense powder was combined with a long chamber to allow a larger propellant force to be exerted on a projectile over a longer time. The result was an increase in the muzzle velocity of the projectile and, consequently, better penetrating power. And this could be done with little increase in the weight of the gun.

A longer chamber and new powders did not prevent muzzle loading but did increase the difficulties of doing so. Longer barrels necessitated running the gun back further to load or loading in a reduced space between the muzzle and the rampart, casemate or turret wall. The longer chamber made it more difficult to sponge out smoldering debris before loading again. Consequently, by the 1880s, most naval powers had turned to the breech loading gun for warships and army fortification gunners were seeing this type of gun as their new weapon. At this time, all guns made by Krupp, the leading German manufacturer, were breech loaders.

Paralleling gun development in the 1860s and 1870s there was a great deal of experiment with methods of improving the control and accuracy of the fire of coast batteries. As early as 1864, a system of position finding and fire control was used in war by the batteries defending the city and port of Copenhagen. All batteries, and a number of observing stations using theodolites, were equipped with a gridded chart of the coastline and were linked to each other and a controlling station by morse telegraph cable. The controlling station allotted the target to be engaged to two of the theodolite stations which sent their observed bearings to the target to all batteries. Each battery plotted the two bearings it received on its chart, obtained the target position from the intersection, and read from the chart the bearing and range applicable to the battery. This data was used by the battery to engage the target, when ordered to do so by control. Experience soon showed that the system could be used to effect simultaneous engagement of more than one target, to concentrate fire as necessary to meet any change in the attack and to correct the fall of shot onto the target by observing and transmitting the bearing of the shell burst or splash as well as the target.³¹ The system was a ~~quantum~~ leap forward in the development of coast artillery gunnery.

In 1876, a similar but more sophisticated system was tried at the fortress of Kronstadt. Newly developed position finding instruments were used instead of theodolites and data was transmitted through dials and numbered indicators instead of by morse code. To enable the target to be engaged by the guns, even if it was obscured from them by smoke

or mist, the casemate wall behind each gun was marked with an arc of a circle. By laying the gun trunnion sight on the ordered wall marking and using a tangent scale for elevation, the gun could be trained on the correct bearing and range to engage an unseen target accurately.

A series of practices at various types of targets moving at various speeds and angles of approach proved the success of the system. There were a number of first round hits from 11-inch guns and when three batteries engaged a target 42 feet long and 14 feet high, with a total of 110 rounds (projectiles), beginning firing at 3,500 yards, the target was hit 43 times before being totally destroyed at 1640 yards.³²

A major trial of a British system of position finding developed by Captain Watkins occurred in March 1879 at Plymouth under the supervision of a War Office committee which had been formed in 1873 to oversee range and position finding development. Over several days the position finder data was compared with that obtained by theodolite. Comparative target practice was conducted using both the position finding system and the common service practice of direct laying and range estimation. The trial committee found that the advantages of the position finder were that hidden targets could still be engaged, that plotting of position finder data allowed anticipation of the course of a manoeuvring vessel, that fire direction and change of targets could be effected swiftly without lengthy explanation, that the long base used allowed greater accuracy and that the whole system was adaptable to electric firing. The disadvantages were considered to be the system's susceptibility to human error or electrical failure, the need to provide the isolated observing stations with defence, the inability of one position finder to cope with more than one target at a time and the fact that installation of the system needed extensive preparation. Nevertheless, the trial was considered a success and it was recommended "That the Watkin Position Finder be adopted, where applicable, for all the most important Batteries of the outer line of defence of our principle fortified harbours"³³ It would be a matter of time and further improvement before the system would be adopted for use at other fortified harbours.

Position finding was based on the use of two stations and horizontal angles. Another development occurring in the same period made use of the observed vertical angle, an angle of depression from the horizontal, to a ship target. The observed angle of depression and the known vertical height of the observer could be used in a simple geometric calculation to establish the horizontal distance or range to the target. This was a far more accurate method of establishing the range than the observation of a gun sergeant. The first instrument used to obtain the angle of depression was a theodolite. Special instruments, more robust, simple and equally accurate, were quickly developed. Captain Watkins, of position finder fame, developed the Depression Range Finder which was adopted for British service. A production order for this instrument was placed in 1881, by which time it could be used in conjunction with the position finding system, during direct observed fire by the guns, or as an emergency position finder due to the inclusion of a horizontal scale plate on the final trial version of the instrument.³⁴

Militia Gunners of Victoria

While the Carnarvon Commission followed the course of its inquiry between 1879 and 1882 and the technical development of coast artillery gunnery continued in Europe and Britain, the Victoria Battery of Garrison Artillery completed periods of annual training and annual firing practices, undertook some ceremonial duties and, in 1883, was reorganized as a regiment.

The batteries annual inspections were favourably commented upon. The first inspection and practice was on 14 December 1878. The Lieutenant-Governor and Lieutenant-Colonel Houghton watched as the battery performed infantry drill and then used the two 64-pounder guns at Finlayson Point to fire a total of eight rounds of shot and shell at a floating barrel target anchored 1100 yards away. Houghton reported:

The guns were well served and the practice was remarkably good, none of the shots missing the target by more than three feet laterally, or, as I should judge, four feet perpendicularly, two of the shells actually bursting directly over the target and within three to four feet of it.³⁵

In 1879, Colonel Lovell inspected the battery during his reconnaissance of the area and reported:-

The militia artillery appeared to take great interest in their duties, were smart in serving the guns, answered very fairly questions put to them as to ranges, charges, fuzes etc. and made excellent practice at the targets, much to the credit of their very capable and earnest instructor, Captain Dupont, the Acting Assistant Adjutant General.³⁶

A year later, the annual inspection and firing practice took place while the battery was in camp on Beacon Hill, Victoria, for the first time. With the target at 1400 yards range it was reported that "...the shooting throughout was exceedingly good and the time excellent."³⁷ The next practice occurred in 1882 when in conditions of heavy rain, a high wind and strong tides the usual anchored, floating barrel target broke free and drifted to a range of more than 2,000 yards. The Lieutenant-Governor, who was present, complimented the battery on the results achieved under such difficult conditions.

Besides completing its firing practices the battery was called upon for various ceremonial duties including firing a gun salute for the visit of the U.S. Corvette Alaska on 27 March 1879 and for the arrival and departure of the Governor-General, His Excellency the Marquis of Lorne, and Her Royal Highness Princess Louise, when they visited Victoria in 1882. These salutes, unlike the first fired by the battery, were completed in uniform. Enough had arrived to clothe everyone by December 1878. The Royal Artillery headdress of the period, a busby, was ordered from London at personal expense and was worn at the Beacon Hill camp in 1880. To help their evening training periods at the drill shed the battery dismounted one of the guns of the Victoria Point battery at the beginning of the annual drill season and moved it, complete with its platform, into the drill shed, returning it to the battery at the end of the season.

The general standard of training and practice of the Victoria Battery gave little cause for concern. There was much greater concern for the temporary works and the guns in them. Sergeant Bramah, a pensioned gunner, intended as Master Gunner and caretaker of the works, died soon

after his arrival in Victoria on 4 May 1879. A parsimonious government replaced him with a part time caretaker. Two years later Colonel J. Wimburn Laurie, the Deputy Adjutant General, reported the inevitable result in detail:-

There are no fences round the batteries and cattle range over the parapets and tramp them down, mischievous persons take out and throw away the quoins and tampions and fill the guns with sticks and stones hence everything movable is taken away and kept under lock and key; but the guns are kept painted (although unfortunately a rusty, red color), and the vents and sight slots are well plugged with grease, so that, though the batteries and the armament present rather a dilapidated appearance, in contrast with those on which regular troops are constantly employed, the guns are not really deteriorating, and the caretaker conscientiously does his best to preserve the guns; and the stores are in good order and well cared for although the storehouses are very cramped and damp.³⁸

The authorities had one other concern with regard to the Victoria-Esquamalt defences. The Victoria Battery had dwindled to half its authorized strength of eight officers and 115 non-commissioned officers and men and could not recruit more. In 1883, the new Deputy Adjutant General of Military District No. 11, Lieutenant-Colonel J.G. Holmes, formerly of A Battery School of Artillery, Kingston, provided a solution when he obtained authority to reorganize the militia of the province. The reorganization was described in the Canada Gazette of 13 October 1883:-

The formation of a Provisional Regiment of Garrison Artillery is hereby authorized in the Province of British Columbia, to be designated the British Columbia Provisional Regiment of Garrison Artillery. The Headquarters to be in Victoria. To be composed as follows:-

Seymour Battery of Garrison Artillery, New Westminster to be No 1 Battery.

Victoria Battery of Garrison Artillery, half to be No 2 Battery.

Victoria Battery of Garrison Artillery, half to be No 3 Battery.

No 1 Company of Rifles Victoria, to be No 4 Battery.

To be Major Commanding Captain Charles Thomas Dupont from Victoria Battery.

No 2 Battery Victoria. To be Captain:- 1st Lieutenant Arthur William Jones. To be 2nd Lieutenant provisionally:- 2nd Lieutenant (provisionally) Walter Shears.

No 3 Battery Victoria. To be Captain:- 1st Lieutenant James Lawson Raymur. To be 2nd Lieutenant provisionally: 2nd Lieutenant (Provisionally) George Alexander Keefer.

No 4 Battery Victoria. To be Captain:- Lieutenant William Henry Dorman vice Wolfenden appointed Adjutant. To be 2nd Lieutenant provisionally: 2nd Lieutenant (provisionally) George Jay
To be Adjutant, with rank of Captain, from 20th December 1878:
Captain Richard Wolfenden (late R,E,) from No 4 Battery.
To be Surgeon, Surgeon Joseph Beauchamp Matthews from Victoria Battery.

The new regiment began regular weekly drill parades in November. Staff Sergeant Kinsella of the permanent militia and formerly of the Royal Artillery was appointed to act as Regimental Sergeant Major and instructor to the regiment. He arrived from Quebec on 17 October 1883 and was RSM from 9 November 1883 until 2 February 1885, continuing afterward as an instructor.

The reorganization of the militia to provide a regiment of garrison artillery strengthened the ties between the militia and the defence of Victoria and Esquimalt and made better provision for that defence in time of war.

Summary

Between 1879 and 1882 serious consideration was given to the problem of providing permanent defences for Esquimalt and Victoria. There were both similarities and differences among the plans proposed by Dominion and Imperial Officers. It was expected that the problem would be resolved by the Carnarvon Royal Commission during its exhaustive inquiry into the defence of the Empire's important ports and coaling stations. But the Commission's report and recommendations with regard to Esquimalt were not unanimous and revealed a fundamental difference of opinion with the Admiralty on the necessity for maintaining a naval station at Esquimalt. In 1883 the position was reached where the Commission's recommendations for Esquimalt were not acceptable to the British government, the Admiralty remained firm on its need for a defended station at Esquimalt and the division of responsibility for the defence of Esquimalt had yet to be agreed between the Dominion and Imperial governments. Thus there was a need to defend Esquimalt, but it was without the clear definition required

by the War Office to allow it to make detailed plans and execute them.

Notable developments had taken place in two other areas by 1883 which would eventually have considerable effect on the defence of Victoria and Esquimalt. Technical advances in guns and gunnery were increasing the effectiveness of coastal batteries, while locally, in Victoria, the reorganisation of the militia had increased its coast artillery role and the strength of its commitment to the defence of Victoria and Esquimalt in time of war.

Anglo-Canadian Defence Agreement

General

The controversial recommendations of the Carnarvon Commission precluded any immediate action by the British War Office to develop plans for the defence of Esquimalt, but planning for other ports and stations in the Empire forged ahead. Lieutenant-General Sir Andrew Clarke, Inspector-General of Fortifications, revised the Commission's recommendations and was able to produce a less costly scheme without any reduction in standard. The new scheme was approved by the Secretary of State for War on 19 March 1884. Work began on the fortifications at Hong Kong and Aden that year. In 1885, when there was a crisis in Anglo-Russian affairs, the programme was advanced. The defence of Esquimalt was reconsidered that year, but a further eight years passed before the British and Canadian governments were able to reach agreement to allow work to begin. By that time, 1893, the defences of twelve other ports and coaling stations scattered throughout the Empire had been completed.

Afghan Border Crisis 1885

The crisis in Anglo-Russian relations in 1885 resulted from an incident on the Afghan Border. Russia had been steadily expanding into central Asia for many years: She took Tashkent, Turkistan, in 1864, and in the next two decades absorbed all the central Asian Khanates up to the ill defined northern frontier of Afghanistan. Britain sought to maintain Afghanistan as a neutral buffer state protecting British India. On 30 March 1855, Russian troops attacked Afghan troops at Penjdeh. The clash brought Britain and Russia rapidly to the brink of war. As a preliminary, Britain occupied Port Hamilton on the Korean coast on 26 April, to provide a base for operations against Vladivostock, and sought the agreement of other powers to the passage of British warships through the Dardenelles into the Black Sea. Fortunately, neither Britain nor Russia was prepared to go further. An agreement on 18 June 1885 ended the crisis.

Pacific Squadron reaction to the crisis

At the first signs of an impending crisis in Anglo-Russian relations, Rear Admiral J.K.C. Baird, commanding the Pacific Squadron, directed Commander F. Edwards of H.M.S. Mutine to review the defences of Esquimalt with the Deputy-Adjutant General of Military District No. 11, Lieutenant-Colonel Holmes. Edwards completed his report aboard Mutine in San Francisco on 9 December 1884.¹

The report revealed that the temporary batteries erected in 1878 had survived, but they had serious deficiencies and there were other deficiencies in the defences as a whole. All of the batteries required repairs to the earth banks and woodwork. The guns were in satisfactory condition, but some wooden carriages and slides were rotting. Magazines and store rooms were dilapidated and not weatherproof. However, there was enough powder for perhaps 100 rounds per gun and 280,000 rounds of Snider rifle ammunition were available. To man the defences there were some 140 officers and men in the local militia artillery and 45 in the rifle company. They were all considered to be trained and fairly efficient. Rifles and equipment for a further 1000 men were held in store. Although a permanent force Canadian artillery battery of five officers and 100 men had been authorized by Canadian statute as a regular garrison, they had not materialised. "See 'C Battery, Regiment of Canadian Artillery'."

Edwards recommended permanent defences for Esquimalt and Victoria. He suggested a series of forts be built, each containing one 43-ton BL gun, four 18 or 25-ton BL guns and some lighter long range BL guns, all on Moncreiff or similar carriages. The forts were to be positioned at Signal Hill, one on each of the west and south sides, Macaulay Point, Finlayson Point and Clover Point. He ruled out a fort on Brother's Island as he felt it would be too vulnerable to a determined night attack by a small boat force. One more fort of up to ten heavy guns was suggested for Albert Head, but only if it was strongly defended to protect its isolated position. The entrances to both harbours were to be mined and a Royal Navy turret ship (monitor) was recommended for permanent station at Esquimalt.

Admiral Baird endorsed Edward's report remarking that "...the erection of the forts might easily and at no great expense be carried out."² He thought that a turret ship was most desirable, particularly as the dry dock was nearing completion. Baird forwarded the report to the Secretary of the Admiralty on 15 January 1885.

Victoria and Ottawa reaction to the crisis

When news of the growing crisis reached Victoria the implications for the city were thoroughly discussed in newspaper editorials, public meetings and at meetings of Victoria City Council and the Provincial Executive Council. Concern focussed on the weak defences. The Executive Council advised the Lieutenant-Governor to convey the strength of the local concern to the Dominion and Imperial governments. Accordingly, a telegram was despatched to Ottawa on 13 April 1885. It was emphatic. The province, including the valuable facilities at Esquimalt, the Nanaimo mines and the Canadian Pacific Railway terminus, was exposed and would be practically defenceless if war occurred. The telegram made it clear that "... effective defence of these places is altogether beyond the means of the province, is a national work in the highest sense of the term...."³ There was a Russian fleet at the mouth of the Amoor river and "... only one small corvette, and some small shore batteries, insignificant as to guns and works"⁴ to meet it. The situation was considered to be one of extreme urgency.

Lieutenant-Colonel Holmes, the Deputy Adjutant General of Military District No. 11, ordered the defences prepared. The militia gunners were allotted duties:-

2 Battery	-Guns at Finlayson Point and guard for the main magazine at Beacon Hill.
3 Battery	-Macaulay Point guns
4 Battery	-Brother's Island guns
H.Q. STAFF	-To camp at Macaulay Point, All to be mounted except the paymaster. ⁵

Parades were held more frequently, an ambulance corps of one sergeant and eighteen men was formed and all officers were ordered to become thoroughly familiar with the armament and coastline.

By contrast, the Dominion government showed little concern and took less action. Sir John A. Macdonald, the Prime Minister, was approached by a deputation of British Columbia senators and members of parliament, but to no avail. The Dominion Government was already fully occupied with the second northwest rebellion, the railway which would have made reinforcement of British Columbia relatively easy and cheap was not yet complete and Macdonald had already expressed the view that Esquimalt was an Imperial responsibility. Nevertheless, the telegram from the province was passed to the Governor-General who forwarded it to the Colonial Office on 20 April 1885.

Rejuvenation of the Colonial Defence Committee

The telegram from British Columbia was one of several received by the Colonial Office from the colonies as the crisis mounted. The need for speedy interdepartmental discussion and joint decision in London on a wide range of issues became increasingly urgent. On the initiative of the Honourable R.H. Meade, the Assistant Under-Secretary of State for the Colonies, a Colonial Defence Committee was appointed in April 1885 to provide the necessary coordination.⁶ It was an instant success and led a prolonged life. At first it was a simple interdepartmental committee of representatives of the Admiralty, the Colonial Office and the War Office under the chairmanship of the Inspector General of Fortifications, Major-General Sir Andrew Clarke. In the following years it increased in size and importance as it dealt with an ever widening range of Colonial defence matters including the provision of defences and garrisons for all defended ports in the Empire, the development of schemes of defence for each colony and the organization, conditions of service, training and equipment of colonial military and naval forces. It is some measure of the committee's importance and success that in its first six years it held 58 meetings to deal with 470 agenda items, printed 87 advisory memoranda for wide circulation and commented upon 61 local defence schemes. From the beginning it held to a moderate and economic approach to its task:-

They are fully aware, however, that the best interests of the colonies demand that their military and naval expenditures should be moderate, and they consider that moderate expenditure, if wisely directed, is sufficient to secure safety. They look upon it as one of their chief functions to prevent the Colonies from spending money on measures of defence not absolutely necessary, and to advise them, so that available resources for these purposes are entirely expended in the most profitable manner.⁷

Emergency measures for Esquimalt

The Lieutenant-Governor's telegram and Commander Edward's report were both discussed by the newly formed Colonial Defence Committee at the end of April 1885. To meet the immediate need the Committee recommended that minefield equipment for the two harbour entrances, valued at L9,000, with a detachment of two officers and six non-commissioned officers to operate it, and six 16-pounder RBL guns to protect the minefields, limbers, one hundred rounds of ammunition per gun and ammunition wagons, should be despatched by the quickest route. The detachment was intended to train a corps of 50 submarine miners to be raised locally. The cost of the necessary boats and buildings, and the pay and allowances of the detachment were to be defrayed by the local government.

The emergency ended before the plan was approved. The committee's paper was returned by the Colonial Office for explanation of why the committee considered the recommendations of the Carnarvon Commission were not now suitable.⁸

A British-Canadian Joint Plan

The Colonial Defence Committee replied with a memorandum, dated 5 August 1885, which argued that there was now a commercial reason to be added to the naval one for defending Esquimalt. The transcontinental railway was due for completion that month. There was no doubt that this would lead to a substantial increase in trade in the immediate future. Thus, the time of Esquimalt's increased importance, forecast by many, had arrived. The opportunity should be seized to agree a plan for permanent defences and shared costs with the Dominion government.

The memorandum included the Committee's plan for permanent defence of Esquimalt. The defences proposed were:-

At or near Signal Hill	- two 9.2-inch BL guns
South of Duntze Point	- two 6-inch BL guns
At Duntze Point	- four 9-inch RML guns
Macaulay Point	- Reconstruct works with 6 ft. parapets, new carriages and platforms
Victoria Point	
Finlayson Point	
	- Maintain. No extra expenditure recommended.
Esquimalt minefield defence	- four 16-pdr guns on travelling carriages
Victoria minefield defence	- two 16-pdr guns on travelling carriages
Landward defence	- six 16-pdr guns on travelling carriages
	- three machine guns. ⁹

The battery on Brother's Island would be redundant when the new defences were complete. The works there could be abandoned then and the guns returned. Costs were estimated at £20,000 for works and £48,000 for armament. The committee suggested that the Dominion should furnish a garrison and bear the costs of construction of the works and their maintenance. The Imperial government would supply the armament and submarine mines, which would be delivered free of charge, and skilled assistance in the design and construction of the defences and in training a submarine mining detachment.

The Secretary of State for the Colonies passed the proposals to the Governor-General of Canada on 27 October 1885, referring to the telegram initiated by the Lieutenant-Governor of British Columbia earlier in the year. As soon as they arrived they were sent to the Minister of Militia who consulted Major-General F. Middleton, Commander of the Canadian Militia.

The general was mainly concerned about the provision of a suitable garrison. He noted that there were ten guns mounted at present and the plan proposed twenty more. Allowing fifteen gunners and two non-commissioned officers per gun, and fifteen staff sergeants, he calculated a garrison of 525 other ranks and thirty officers was required. Of this total the local militia could supply 12 officers and 202 other ranks and the authorized permanent force Canadian artillery battery, not yet formed,

"See 'C Battery, Regiment of Canadian Artillery'", would provide another four officers and 100 other ranks for a total of 16 officers and 302 other ranks. To meet the deficit the general advocated a permanent Imperial garrison of not less than 100 marine artillerymen and the enlargement of the local militia as the population increased. In the interim, if there was any emergency, reinforcements could be rushed from the east by the newly completed railway. The general also felt that some of the Canadian permanent force battery could be trained in the operation of torpedoes (submarine mines), that the construction of the works could be supervised by Canadian officers if the Imperial authorities prepared the plans and that the abandonment of Brother's Island should be reconsidered. With these conditions he recommended acceptance of the Imperial proposals and added a postscript that the supply of ammunition must not be overlooked.¹⁰

A committee of the Privy Council of Canada accepted the formal recommendation of the Minister of Militia, based on General Middleton's comments;

...that the offer of Her Majesty's Government be accepted, subject to the following modifications;-

1. That the Imperial Government will furnish with guns specified in the despatch a proper supply of ammunition for the same.
2. That the force to be kept in garrison as mentioned in the report of the Major-General shall be considered as the contribution of the Canadian Government.
3. That the Imperial Government will establish a depot of Marine Artillery of not less than 100, and maintained at the expense of that Government; and
4. That when the population of British Columbia will permit the Active Militia shall be increased to complete the number of men required by the despatch of the Secretary of State for the Colonies.¹¹

The Governor-General forwarded General Middleton's report and the Canadian conditional acceptance to the Colonial Office on 28 November 1885. In his covering letter he remarked that the Minister of Militia was confident that the permanent force Canadian battery could be raised as soon as a barracks was constructed"...which he hopes will be during the summer

of 1886".¹² He considered the depot of marine artillerymen at Esquimalt would "...relieve the Dominion from a very serious difficulty and be the means of adding greatly to the efficiency of the local force...."¹³ and suggested 250 rounds of ammunition per artillery piece, together with machine gun ammunition, would relieve a serious strain on Dominion resources. Finally, he pointed out that the Prime Minister of Canada, Sir John A. Macdonald, was in London and could supply any further information that may be necessary.

War Office reconsideration of armament and mines

The Canadian reply was considered to be agreement in principle. The next stage was to work out details of the plan. This was a War Office responsibility, particularly that of the Inspector General of Fortifications.

In the course of developing General Clarke's proposals for ports and coaling stations throughout the Empire, a number of questions had arisen already about the use of new BL armament and submarine mining defences. The War Office felt that practical answers could only be obtained by despatching two officers, Lieutenant-Colonel Fairfax Ellis and Major G. Barker R.E. on a world tour to confer "...with the local authorities at each station to ascertain on the spot their requirements and measures necessary to complete the defences of the Stations in a satisfactory manner."¹⁴ They were also to explain the latest views of the Defence Committee presided over by the Commander-in-Chief. The Admiralty ordered its local naval commanders to afford the two officers cooperation.

Fairfax Ellis and Barker travelled during 1886 and completed individual reports on thirteen ports and stations by 1 January 1887, including Esquimalt. At that time they summarized their general findings in a report to the War Office.¹⁵ Because new warships were being armed with large numbers of medium and quick firing (QF) guns, they felt that it would be necessary to supplement the present defences with 6-inch BL and a number of QF guns. All defences needed organisational improvements and regular testing. Many details, e.g. clearance of fields of fire, planting of shrubs for concealment, telegraph communications etc, required completion. They thought the 7-inch gun was no longer suitable

because it was deficient in accuracy and penetration power by modern standards. Any gun of this type already mounted should be bored up to 8-inch and polygrooved, when it would be an acceptable shell gun, or be replaced by a 6-inch BL gun. Finally, they stressed that an efficient system of range and position finding was badly needed. Watkin's system, "See 'Technological Development of Gunnery.'" should be provided as soon as possible. It was appreciated that this might take time. Meanwhile Depression Range Finders could and should be supplied quickly.

The visit of the two officers to Esquimalt during 1866 coincided with the arrival of Lieutenant-Colonel E.D.C. O'Brien the Commanding Royal Engineer in Canada, from Halifax. All three discussed the defence of Esquimalt with Rear-Admiral Sir M. Culme-Seymour Bart., the Commander-in-Chief Pacific Station, then also at Esquimalt. At the same time, three surveyors of 18 Company Royal Engineers, ordered from Halifax by the War Office, and eventually commanded by Lieutenant Lang R.E. who was sent with survey instruments from England, began mapping possible battery sites.

Lieutenant-Colonel E.D.C. O'Brien's Report

Lieutenant-Colonel O'Brien had left Halifax, accompanied by the three surveyors, on 19 July 1886. He had been ordered to Esquimalt by the War Office to make a report on two proposed plans for the defence of Esquimalt: the Colonial Defence Committee plan and an alternative War Office plan. "See 'Colonel Crossman's Report'". O'Brien had copies of the plans with him when he arrived in Victoria.

The Colonel argued in his report that the batteries at Victoria Point and Finlayson Point should not be retained because they would merely draw fire on Victoria, were not capable of long range fire and were unnecessary because the entrance to Victoria, could be controlled from the Esquimalt peninsula. He pointed out that an enemy ship off Macaulay Point and sheltered by it could not be fired upon by the batteries proposed for Signal Hill and Duntze Head but could see and bombard the new dock and a portion of the naval dockyard. There was therefore a need for heavy guns at Macaulay Point. It was also true that the proposed battery on Signal Hill was masked by Brother's Island and that

those guns and the ones at Duntze Head lost valuable range by being several hundred yards from the waters edge. Sangsters Plain provided a good position from which Royal Roads could be denied to enemy ships and:-

The occupation of Rodd Hill is also most desirable as a good flanking fire can be brought to bear across the minefield and in front of Brother's Island towards Macaulay's Point. Rodd Hill itself is a rock that with a small expenditure can be rendered quite sufficiently inaccessible to assault. There is however only room for 3 large guns on it, if placed at anything approaching the intervals shown in the latest types of Batteries supplied by the War Office. Rodd Hill is isolated and liable to be taken in reverse by infantry fire from the ground in rear, which can however be prevented by posting the infantry of the defence in the strong positions indicated...¹⁶

With these arguments Colonel O'Brien then made his detailed recommendations and forwarded them with outline drawings of the works, marked maps and several watercolour sketches of the terrain drawn by himself. His recommendations were:-

- | | |
|-------------------------|--|
| Sangster Plains Battery | - One 9.2-inch BL gun |
| | - Two 6-inch BL guns |
| | - Two 16-pdr and two machine guns for landward defence. |
| | - A self contained, strong work with its own garrison barracks. |
| Rodd Hill Battery | - Three 9-inch RML guns, two machine guns. |
| | - All guns on the rock with a small barracks for the garrison. Guns screened from musketry fire from rear by rope mantlets. Protective wall at rear. |
| Macaulay Point Battery | - One 9.2-inch BL gun } on disappearing |
| | - Two 6-inch BL guns } carriages. |
| | - Two 64-pdr, two 16-pdr in a flanking battery to cover entrance to Victoria harbour. |

- Brother's Island Battery
 - One 9-inch RML gun
 - Two 7-inch RML guns from Macaulay Point.
 - The guns to have disappearing carriages or a 6 foot parapet with undercover loading.

- Duntze Head
 - Two 64-pdr guns } for minefield
 - Two 16-pdr guns } defence.
 - Two 16-pdr naval guns with emplacements for two more.
 - fixed electric light, to illuminate minefield
 - moveable electric light, arc Macaulay Point to fixed light area
 - electric light engine house and test room

- Signal Hill
 - Excellent position for conduct of defence.
 - One 7-inch gun from Macaulay Point positioned near crest of hill to fire on hills behind Rodd Hill Battery.
 - One 64-pdr gun to enfilade main road to Victoria and to cover sea between Macaulay Point and Brother's Island.
 - One 64-pdr gun at foot of hill to cooperate with Macaulay Point and Brother's Island batteries.

- Dockyard
 - Two Hotchkiss guns to deal with torpedo boats.

- Submarine Minefield
 - At entrance to Esquimalt harbour only.

- Field Force
 - Four 16-pdr guns, two machine guns.¹⁷

Colonel O'Brien's plan was a modification of the War Office plan with some guns repositioned and an increase of two 6-inch BL and two Hotchkiss guns. The works were to be manned by a garrison similar in strength to that recommended by Colonel Lovell; 450 artillerymen, 90 engineers and 1000 infantry.

The report included a list of local sources of construction material and an assessment of labour availability and costs. Bricks, lime, sand and stone for concrete were all available locally. Portland cement would be best shipped from England. The cost of local white labour had not come down in spite of increased immigration to the province. There

were few good skilled artisans available. Although the Esquimalt-Nanaimo railway had been built using Chinese labour there was a strong feeling locally against the employment of Chinese. Colonel O'Brien felt this could be overcome if the artisans were sappers. He used the following comparison to show that using sapper artisans and Chinese labour would also be very much cheaper.

	pounds sterling
93 R.E. 300 days of 10 hours per diem.	2381
100 chinese 300 days at \$1 per diem	<u>6000</u>
	<u>8381</u>
93 white artisans 300 days at \$3 per diem (min)	17198
100 white labourers 300 days at \$2 per diem	<u>12320</u>
	<u>29518</u> ¹⁸

Even when the cost of the colonial allowance for the Royal Engineers and a small amount for the Chinese for living on the site of their work was added to these estimates, the saving was still considerable. The Colonel estimated the cost of the works in his plan to be L99,800 and thought they would take two years to complete using Chinese labour and a company of sappers. The time could be shortened by six months if two companies of sappers were used.

To complete the report, Colonel O'Brien suggested an alternative, minimum defence at an estimated cost of L23,270. It could be adopted if financial restrictions forbade the full plan. In this case the defences would be:

- Brother's Island - Two 9.2 inch BL guns on disappearing carriages
- One 64-pdr gun
- Rodd Hill - Two 6-inch BL guns
- One 64-pdr gun, one machine gun
- Dockyard - Four 16-pdr guns
- Two Hotchkiss guns
- Electric Light
- all for minefield defence
- Signal Hill - Four 16-pdr guns
- One machine gun
- Minefield - at entrance to Esquimalt harbour.¹⁹

The 7-inch guns of Macaulay Point used in the full plan, in this alternative, would be sent to Burrard Inlet instead of using new guns there. The alternative plan would require a garrison of 220 artillerymen, 90 sappers and 1200 infantry.

Colonel O'Brien's report was approved by Admiral Culme-Seymour. The Admiral had been consulted at various stages of the development of the plan, particularly with regard to the positioning of the mine-field and the clear channel through it. In his letter of approval he made the particular point that he considered the batteries proposed for Sangsters Plain and Rodd Hill to be essential.²⁰

The report was completed in Halifax with the assistance of Captain Rawson R.E., an officer trained in submarine mining. It was despatched to the War Office on 14 January 1887.

A New British Coast Defence Armament Policy

While Colonel O'Brien was making his reconnaissance in Esquimalt the Colonial Defence Committee had established a policy on the type of armament which was to be used for coast defence of ports throughout the Empire. The policy was explained in a memorandum dated 31 December 1896:

14. The Colonial Defence Committee have frequently dealt with the question of guns for the defended ports of the Empire, and have pointed out that a medium B.L. and lighter QF armament is, in most cases, sufficient for coast defences. The reasons that have led them to this opinion are the great advantage that shore guns have over those on ships, and that unarmoured or lightly armoured vessels are especially at a disadvantage in fighting shore batteries mounting even light artillery. Against cruisers a medium gun will amply suffice, and by its greater handiness and speed of fire will prove more effective than the heavier natures. The cost of armaments and emplacements rapidly rises as calibres increase, and by restricting the size of their guns in the future the Colonies will secure economy, efficiency, and simplicity at the same time.²¹

As a result the proposed armament for Esquimalt was changed by increasing the number of BL guns from four to six and making them all of medium calibre (6-inch) instead of half medium and half of heavy (9.2-inch) calibre.²² The 6-inch BL gun of the time was considered to be

extremely accurate up to 5,000 yards range, could fire one round per minute, and its projectile would penetrate eight inches of wrought iron at 2,500 yards range. With a new hydro-pneumatic mounting the gun was lowered for loading below ground level and then raised for firing, affording complete protection for the gunners serving it.²³

The new armament allotment was used by the War Office with the reports of Colonel O'Brien, Admiral Seymour, Lieutenant-Colonel Fairfax Ellis and Major Barker to amend the outline plan which had received agreement in principle from both Britain and Canada in 1885.

Establishing the British Position for Agreement with Canada

The amended plan for the defence of Esquimalt was ready by the middle of 1887. It called for the following armament:-

- | | |
|------------------------------|---|
| Macaulay Point | - Three 6-inch BL on hydro-pneumatic mountings. |
| Rodd Hill | - Three 6-inch BL on hydro-pneumatic mountings. |
| Sangster Knoll | - Four 9-inch RML polygrooved and adapted for high angle fire to command a wide zone to a range of 7000 yards with a position finder. |
| Minefield defence | - Two 6-pdr QF |
| General defence | - Six 16-pdr RML |
| General defence of batteries | - Six rifle calibre machine guns. ²⁴ |

The Colonial Defence Committee endorsed the new plan and forwarded it to the Colonial Office with added comment and recommendations. The Committee explained the change in armament as an improvement and an economy, and emphasized that the establishment of a battery on Sangster's Knoll would render "...it highly dangerous for any vessel to anchor or remain stationary within practical bombarding distance."²⁵ The existing armament was to be dismounted when the new was in place. Overall, the Committee felt that the changes in armament did not affect the general conditions of the Anglo-Canadian accord of 1885.

The plan was then discussed by the Treasury, the War Office, the Admiralty and the Colonial Office with the intention of achieving

agreement on all details and thus a firm British proposal for presentation to Canada. Costs were subjected to considerable scrutiny. In the process the War Office asked the Admiralty to consider the problem of landing the guns at Esquimalt and transporting them to the various works. Captain Rose of H.M.S. Triumph, at Esquimalt, submitted a detailed report on the best method, the equipment needed and the cost.²⁶ All differences between the departments were resolved, with one exception. The Admiralty refused to supply marine artillerymen for the garrison.

The Admiralty was adamant. It was willing to help Canada recruit marine pensioners for C Battery, "See'C Battery Regiment of Canadian Artillery,'" but was quite unmoved by any argument of the Colonial Defence Committee for marine garrisons at certain stations in the Empire, including Esquimalt. It made no difference when the Committee presented its argument to the British cabinet:-

At Esquimalt a special case arises. This is a purely naval station, to be defended for naval purposes at joint Imperial and Colonial cost. The Dominion Government can provide a considerable force of volunteer artillery and will be able to send an ample infantry garrison into Vancouver in time of War. The difficulty arises in the provision of the permanent artillery force, which is absolutely essential for the proper custody of the new type armament which is to be supplied. The Canadian Government have already asked that Marines may be provided for the purpose, to be paid from Colonial funds: but, this offer having been refused, they are driven to an attempt to obtain pensioners, a measure which, in the opinion of the Colonial Defence Committee, is extremely questionable. In the case of Esquimalt, therefore, the Committee have no hesitation in strongly urging that the sole solution of the difficulty is to be found in the employment of Marines. The Dockyard is an Admiralty establishment. No Royal Artillery could be quartered in Vancouver [Island] without violating a long recognized principle. There appears however, to be no reason whatever against the employment of Marines, and the increase of this force on the Pacific Station at Colonial charge would appear to be a definite Imperial advantage.²⁷

The argument focussed attention on the ability of Canada to supply a permanent artillery garrison.

C Battery, Regiment of Canadian Artillery (Figure 16)

The attempt to recruit marine pensioners for C Battery was a failure, as the Colonial Defence Committee had predicted. Recruiting posters in England had advertised for single men (Figure 15). Most pensioners were married. Four years after the battery had been authorized it was finally formed in 1887 with drafts of fifty men from each of A and B Batteries. The Battery Commander was Major James Peters, and the other officers were Captain T. Benson, Lieutenant G.H. Ogilvie, Surgeon J.A. Duncan and Quartermaster G.R. White.

The Battery travelled west by rail as soon as it had been formed. It arrived in Victoria aboard the sidewheel steamer Princess Louise on 10 November 1887. The local militia and a good number of the citizens were on the wharf to greet the new arrivals. Single men of the battery were accommodated in the Agricultural Hall which had been fitted out as a barracks, while married men, their families, and the officers found their own private accommodation in houses nearby. A plan to build a barracks at Work Point for the battery was announced in December 1887 by the Minister of Militia,²⁸ but three years would pass before C Battery was able to occupy the new, partially completed barracks there in 1890. It was the first unit to do so.

The battery spent its first winter in Victoria. It moved to a temporary camp on the Skeena River during the summer of 1888 when there was a possibility of an Indian uprising in the area.²⁹ The battery was called out again the following summer when a miners strike at Wellington threatened to get beyond the control of the local authorities. Lieutenant-Colonel Homes moved the battery and some of the militia, a total force of 150, to Wellington in response to the local magistrates requisition for military assistance. No confrontation occurred and the battery returned to Victoria at the end of August.³⁰

But useful service on the Skeena River and at Wellington could no disguise the failure of the attempt to provide a Canadian permanent force garrison for the Victoria-Esquimalt defences. By the end of November 1890, C Battery strength had dwindled to seven officers and 40 other ranks.³¹ Reenlistments at the end of the normal three year engagement had been few and there had been twenty-two desertions. Only thirty men had been recruited locally. Reinforcement by a draft from eastern Canada every three years could not prevent the decline in strength. One cause of this unsatisfactory state of affairs may have been the

fact that the battery had spent much of its first three years clearing the forest from the Work Point barrack site and helping to build the barracks. Even when the battery moved in in 1890 only the main barrack block and officers quarters were ready. The married quarters, cookhouse, canteen, recreation room and guard room had yet to be built. Perhaps the accommodation would have been of less concern if pay and pensions had been better. The permanent militia were on lower rates of pay than the mounted police and did not receive a pension as the police did.

C Battery's situation did not improve during the remaining years of its service in Victoria. Its condition and difficulties were symptomatic of a general malady afflicting Canada's militia. Remedial treatment began when Major General I. Herbert was appointed to command the militia in 1890. His solution for the weakness in Esquimalt was to withdraw C Battery to Quebec, ask for a British garrison and take steps to improve the local militia.

Victoria's Militia Artillerymen

The failure of the C Battery experiment was a disappointment to the enthusiastic militia artillerymen of Victoria. It was hoped that a regular artillery unit would provide an example of standards to be achieved and a cadre of instructors to help achieve them. This was not to be so. Nevertheless there was no backsliding among the local gunners.

The reorganization of 1883 which had grouped three batteries in Victoria and one in New Westminster in one unit, the Provisional Regiment of Garrison Artillery, served as a boost to morale and started two years of activities which did much to establish a strong esprit de corps in the Victoria batteries. The Regiment's first annual camp on Beacon Hill in July 1884 was a tightly disciplined affair with a daily programme of foot and gun drill which began at 4:45 a.m.. Each day some men were allowed to pursue their normal occupations in Victoria between 6:30 a.m. and 6:30 p.m. and then return for evening training until 10:00 p.m.. The camp ended with a series of parades and inspections including one by the Commander-in-Chief Pacific Station, Rear-Admiral Lyons.

Victoria City Council acknowledged the pride and interest shown by many

citizens in the camp by granting \$200 toward camp expenses and waving charges for water, fuel and the camp ground.³² Three months later, in October, Captain Wolfenden and a force of 40 from the regiment participated in a joint exercise with the Royal Navy, defending Beacon Hill against a naval attack, and earning the congratulations of the Admiral for their efforts. It is most probable that it was in this first year that Major Dupont gave the regiment the motto "Nunquam Non Paratus" (Never not prepared) to be followed later by its own crest. Both of these unofficial insignia have been retained by the regiment's descendants and survive today. The award of the motto helped foster the pride of unit which was so evident in the regiment's second year, 1885, when the defences were ordered prepared and manning duties were scheduled at a time of Anglo-Russian crisis. "See 'Victoria and Ottawa Reaction to the Crisis.'" After the crisis, in October, when the Governor-General, the Marquis of Landsdowne, visited Victoria, the regiment was able to supply the ceremonial guard and escort for the occasion and drew many compliments for its appearance and steadiness.

Major Dupont retired after the Governor-General's visit. He was succeeded by Captain Wolfenden. When the regiment's title was changed in May 1886 to British Columbia Brigade of Garrison Artillery, Wolfenden was promoted to Lieutenant-Colonel. His two years of command were notable for the steady improvement in training standards and participation in public events and inter unit competition. In 1886, in addition to the regular annual drill period, one officer and six other ranks of the brigade achieved certificates of proficiency at an artillery school run by Lieutenant-Colonel Holmes during which both the 7-inch and 8-inch guns of the defences were fired. In July, Sergeant Robert J. Plummer of 4 Battery travelled with the Canadian Artillery team to England for the annual garrison artillery competition at Shoeburyness. On his return he was promoted and styled Master Gunner.³³ Three officers, Lieutenant-Colonel Wolfenden, Major E.G. Prior and Captain Jones represented the brigade at the Dominion Rifle Association Prize Meeting in Ottawa. After a successful annual drill period and inspection during the winter, the brigade, together with militia infantry companies, was at Beacon Hill on 21 June 1867 for a major parade and sham fight with sailors and marines

of the Pacific Squadron in celebration of Queen Victoria's Jubilee. November 1867 was a particularly busy month. Officers of the brigade undertook various social duties at the high point of Victoria's social season, the ball at Government House on 2 November. The brigade paraded to welcome C Battery on its arrival in Victoria on 10 November and seven days later completed a successful firing practice at Finlayson Point battery. On 26 November the Minister of Militia, Sir Adolphe P. Carron, inspected the brigade and expressed his satisfaction with what he saw. In June 1888, at the conclusion of a successful two years, Lieutenant-Colonel Wolfenden handed over command to Lieutenant-Colonel Edward Gawler Prior.

Colonel Prior's period in command was to be a very lengthy one and a time of great change. It started routinely. The annual drill period in 1888 ended with the usual inspections in October. The following summer the brigade paraded in public to celebrate the Queen's birthday and Dominion Day. That autumn, Lieutenant-Colonel Prior instituted two new training features in the brigade's routine, recruit classes and regular 'march outs' when the brigade would parade in strength through a portion of Victoria. The resulting improvement in bearing and drill, together with frequent rifle practice, well fitted the brigade for its duties in aid of the civil power during the coal strike at Wellington in 1890.

But the annual drill periods, ceremonial parades, and social duties, while contributing considerably to the strength of the brigade's esprit de corps were not enough. Gunnery practice was infrequent and when it did occur it was conducted with guns which were becoming rapidly obsolescent and using gunnery methods which were out of date. The brigade badly needed regular artillery instruction using modern equipment and methods if it was to take its proper place in the defence of Victoria and Esquimalt against a naval assault. The best chance of realising this assistance lay in the successful completion of an Anglo-Canadian agreement to establish permanent coastal batteries of modern guns with a well trained regular garrison of artillerymen.

A British Proposal

By the summer of 1888, a British proposal for joint Anglo-Canadian defence of Esquimalt had been agreed among the various departments in London. It was sent to Canada on 13 June 1888. The terms were that the British government was willing:-

- a. To provide an armament of-
Six 6-inch guns on hydro-pneumatic disappearing carriages
Four 9-inch RML guns adapted for long range fire
Six 16-pdr RML guns
Two 6-pdr QF guns
Six machine guns
together with an equipment of ammunition; the total cost of the above being L31,080
- b. To provide submarine mining stores and boats of the value of L12,000.
- c. To erect buildings for the storage of the submarine mine stores and boats of the value of L12,000.
- d. To provide all designs, together with skilled superintendence, in building the necessary works, if the Dominion Government desired it.³⁴

and suggested the Dominion Government should provide:-

- a. All sites required for the erection of batteries and buildings.
- b. All charges relating to the building of the new works and improvement of the existing emplacements.
- c. For the efficient maintenance of the works of defence when completed.
- d. To provide and maintain in a state of efficiency the necessary garrison, VIZ:-

60 permanent Artillery
240 local Volunteers or Militia
15 permanent Submarine Miners
50 local Volunteer or Militia Submarine miners.

- e. Trained instructors for the Artillery and Submarine Miners who would belong to the permanent forces above referred to.³⁵

It was estimated that the cost of the sites, works and buildings would be £41,000.

Within a few weeks of the despatch of the British proposal the Admiralty gave notice of a change in its position with regard to marine garrisons for certain stations in the Empire. Both the Colonial Office and the War Office welcomed the news. A warning telegram was despatched by Lord Knutsford, Colonial Secretary, to Lord Stanley, Governor-General of Canada, on 5 September 1888, informing him that further Imperial proposals on a permanent garrison would follow. After details had been worked out at the Admiralty, Lord Knutsford was able to make a new British proposal on 2 May 1889:-

After full consideration...it appeared to Her Majesty's Government that your Ministers would probably find it difficult, as well as very expensive, to provide and maintain at Esquimalt an efficient permanent garrison with officers capable of undertaking the instruction of the complementary local forces, and they have decided to offer the services of 75 Officers and men of the Royal Marines, specially selected and trained for the duties of a permanent garrison at that place, 60 as Artillerymen and 15 as submarine miners. The annual cost of this force, which would have to be borne by the Dominion Government, would, it is anticipated, amount to £6,978. The Officers would be available for the duty of instructing the local forces.³⁶

Before the proposal was despatched, the Admiralty had selected the marines to be trained as submarine miners and was making arrangements for them to attend a one year course of instruction at the Military School of Submarine Mining at Chatham. At the same time the War Office sent plans for the works at Rodd Hill, Macaulay Point and Sangsters Knoll to the General Officer Commanding Canada, at Halifax, for his approval.

Canadian Rejection

The British proposal was rejected by the Dominion Government on 13 August 1889. In a Committee of Privy Council the Minister of Militia and Defence, Sir Adolphe P. Caron drew attention to the correspondence of 1885.

"See 'A British Canadian Joint Plan.'" He pointed out that C Battery had been maintained in Esquimalt at \$47,000 per annum and there had been a large expenditure on barracks. Esquimalt, he felt, was "...more than an

ordinary coaling station, as for Imperial purposes it is second to none, being the most important harbour and coaling station on that side of the continent."³⁷ The 75 marines "...would be of considerable benefit..."³⁸ and sufficient, with Canadian forces, for a peace time garrison. It was to be remembered that Canada had built the Canadian Pacific Railway without Imperial aid "...which is a work of incalculable advantage to the Empire and may be considered a strong factor in the defence of Esquimalt, as Imperial troops for that point and for Australia and the Far East, as well as our permanent corps, stores etc, can be poured in by its means at any time from Quebec, Halifax, and from other parts of the Dominion."³⁹ Canada's share of the defences should be the provision of C Battery and constructing the works. Britain should maintain the 75 marines and supply the armaments "...as originally understood."⁴⁰ Both Prime Minister Macdonald and Caron assured the Governor-General that the Dominion Parliament could not take on the extra expense of the marines. The Governor-General sent the Canadian rejection and argument to the Colonial Secretary and informed him that he did not approve and would continue to press the matter with Macdonald and Caron after visiting Esquimalt.⁴¹

Interval of Deliberation

The Colonial Office was surprised by the Canadian government's reaction to the British proposal and hastened to make a reply. The content of the reply was discussed with the War Office and it was agreed "...that the best course will be to inform Lord Stanley that there appears to be some misconceptions as to the terms proposed..."⁴² The marines had been offered to save the Dominion unnecessary expense. They would provide excellent instruction and through reliefs would remain up to date with the latest knowledge of gunnery and submarine mining in England. If C Battery could carry out duties with submarine mines and hydro-pneumatic guns then it would be suitable as a permanent force, if not, it should be replaced by marines. It was to be pointed out that in the British proposal the British government was proposing to spend L53,000 on the defence of Esquimalt, which was considered to be a fully proportioned share. Finally, "Esquimalt is not, and will not be for many

years a strategical point of first class importance, and in view of the very large expenditure which is now being incurred for the defence, Her Majesty's Government cannot go beyond the proposals of the 13th June 1888."⁴³ Lord Knutsford sent the reply to the Governor-General of Canada on 7 November 1889.

Three years of silence followed. Both the War Office and the Admiralty regularly pressed the Colonial Office for action after the first year. The War Office developed detailed plans for the works and had the 6-inch disappearing guns manufactured during 1890. On 29 December 1891, the Admiralty asked for a decision on the two officers and 20 other ranks who had completed their training as submarine miners. Getting an evasive reply, it asked again a year later, on 28 October 1892, pointing out that the detachment, pending a decision, was not available for general service and that the men had been deprived of the advantages they expected after three years of specialist training. This time Lord Ripon, Colonial Secretary, apologized for the delay, confessed disappointment at the lack of decision in Canada, but indicated that some action could now be expected as a result of the appointment of a new Minister of Militia and Defence, Mr. Bowell, who was to visit Esquimalt and then convey his views to the Canadian cabinet. Lord Ripon had also arranged for Major Clarke, secretary of the Colonial Defence Committee, to discuss the matter with the Dominion Prime Minister, Sir John Abbott, and Finance Minister, Mr. Forster, during their visit to England.

The deadlock and silence had been broken. On 25 December 1892, Lord Stanley despatched a telegram to the Colonial Office summarising the proposals of the new Minister of Militia which were to be discussed by cabinet:-

Canadian contribution to capital expenditure to be 30,000 for works, 10,000 for buildings and cost of sites. Existing barracks at Victoria to be accepted as part payment of above. Imperial Government undertaking responsibility of constructing works. Canadian contribution toward annual expenditure to be detachment of Royal Marine Artillery, 100 permanent Canadian Artillery, 400 local militia. Proportion hereafter to be determined of annual cost for maintenance of works.⁴⁴

Two days later, in amplification of the telegram, the Governor-General wrote:-

I believe that the present Prime Minister and Minister of Militia are really in earnest in desiring that an agreement shall be not only accepted but carried out an early date. And in this connection I must observe that during the time that Sir A. Caron held the office of Minister of Militia, and that the late Sir. J. Macdonald was Prime Minister, I was never able to perceive any desire on their parts to approach the subject in a serious spirit.⁴⁵

He admitted that the Canadian government had:-

...so far complied with the undertaking (1885) as to raise the battery of Canadian Artillery now stationed in Victoria, which it was intended to maintain by local enlistment. But it has been found practically impossible to keep it up to strength without sending drafts from the other battalions stationed in Ontario and Quebec, for men are not to be got for the permanent militia at a place like Victoria, where white men can command high wages. Nor is this all, for the distance between Victoria and the rest of the Dominion is so great that no constant and efficient inspection can be attained. And unless Officers and men are kept up to the mark, it would be unwise to place in their sole charge the valuable and elaborate modern armament which has been detailed for Esquimalt.⁴⁶

There was therefore good reason for establishing a Royal Marine Artillery garrison, under the command or inspection of the Admiral or Senior Naval Officer Esquimalt and charged with looking after the guns and works. The Canadian artillery battery could continue to be allotted to the defence of Esquimalt but be kept at less cost and in better condition in Ontario or Quebec, able to move in five days by rail to Esquimalt. With regard to construction of the works, Lord Stanley continued:-

...I regret to say that our experience of public works in Canada had been not altogether satisfactory. It would be far preferable on all grounds that the Imperial Government should themselves construct the works necessary for the defence of Esquimalt, and that the Dominion Government should pay over to Her Majesty's Government the sums which they have already agreed to allot for the purpose of such defence. Not only would the work be far better done, because the contractors would be free from political influence, but also any changes which from time to time might be deemed necessary by the Imperial authorities during the construction of the works would be carried out without the lengthened correspondence and friction, which would be certain to occur if the Dominion Government were required to make such changes.⁴⁷

The Governor-General disclosed that he had had a series of informal meetings on the whole subject with the Minister of Militia and General Herbert, commander of the Canadian militia and that these had resulted in the present Canadian proposal. Both Lord Stanley and General Herbert believed that the proposals of 1885 and 1888 would have to be set aside to some degree to get agreement by 1 February 1893. The deadline had been suggested first by the Admiralty as the date on which it would return the marine submarine miners to general service.

Final Agreement

The British government, anxious for an agreement, was quick to respond to the new Canadian position. In January 1893, the Secretary of State for War recommended the Treasury accept the new proposal:-

The Dominion Government to provide all sites for works and buildings; to contribute 10,000L towards housing the garrison, the existing barracks being taken at evaluation as part contribution; to pay 30,000L (ie. half the estimate) to ward the cost of the works, and to give every assistance in obtaining Chinese labour; to contribute half the cost (subject to a minimum of 500L per annum) of maintenance; to pay the actual cost of the 75 regulars found by the Imperial Government; to keep 100 permanent Canadian Artillery in the eastern province ready to be moved to Esquimalt and to reorganize the local militia. The Imperial Government to construct and maintain the works and buildings, also to provide 75 regulars, the armament, equipment, and submarine mining stores.⁴⁸

The Imperial government's financial commitment would therefore be: Armament, equipment, submarine mining stores and buildings estimated at L53,080 in 1888; construction of defence works estimated at L60,000, at least, including a Canadian contribution of L30,000; annual maintenance of works and buildings estimated at L500 per annum minimum, in addition to the Canadian contribution of L500 per annum. The Treasury accepted the new proposal on 8 February 1893, remarking: "My Lords had hoped for more favourable terms, but cannot withhold their consent to those proposed, if both the War Department and the Colonial Office consider that no better can be obtained."⁴⁹

At this stage the Admiralty raised a difficulty over the supply of 75 marines. It claimed that it had only agreed to two officers and 15 other ranks for submarine mining. Lord Ripon, Colonial Secretary, made

it clear that an Admiralty refusal would jeopardise the whole agreement. The difficulty was resolved at a meeting at the Colonial Office between Lord Ripon, the First Lord of the Admiralty and the Secretary of State for War, on 24 February 1893, after which a joint minute was issued:-

The offer of the Canadian Government is to be accepted on the understanding between the three departments, the Admiralty, War Office, and Colonial Office, that the supply of 75 Marines by the Admiralty shall, at the expiration of five years from the arrival of the Artillery Marines, be reconsidered with respect to the provision of an adequate garrison by the Canadian Militia if fit for the purpose.⁵⁰

The intention was to despatch one officer and 15 marines, submarine miners, immediately and another officer and 60 marines in two years time to complete the detachment.

Canadian agreement with the new financial terms was signalled by the Governor-General on 30 March 1893, in a telegram to Lord Ripon stating: "Minister of Militia informed me late last night that estimates concerning Esquimalt passed through House of Commons. There was no hostile criticism."⁵¹

But General Herbert was not satisfied with the detailed arrangements for the marines. He regarded the Admiralty proposal as unacceptable to the Canadian government and suggested that two officers and 15 submarine miners should be despatched as an advance party as soon as possible after 1 July 1893 and the detachment completed to full strength within six months. General Herbert was in London on 13 May 1893 to argue details with the Admiralty and reduce the annual estimated cost of the marines from L8,527 to the L7,000 the Canadian government had budgetted. Costs were reduced by holding to a total strength for the detachment of 75 all ranks, by not issuing heavy winter clothing and by accepting an issue of rations in kind by the Canadian government. The final agreement was that two officers and 17 marines would be despatched about 1 August 1893 and one officer and 55 marines within six months to complete a detachment of three officers and 72 marines. An allowance of one shilling and six pence per diem for officers and one shilling and three pence per diem for the men was to be paid directly to the detachment for rations, fuel and light. The barracks in Esquimalt was to be handed over "...with bedsteads,

fixtures, cooking utensils, and all articles for the use of the detachment that are now the property of the Canadian Government."⁵²

The Canadian government agreed to the detailed proposal for the marine garrison on 15 June 1893, and, in July, to a revision of the terms after a period of five years from 1 April 1894.

The advance guard of the Royal Marine Artillery detachment, Lieutenants F.N. Templar and G.E. Barnes, three sergeants and fourteen marines, all trained in submarine mining, arrived in Victoria on 18 August 1893. They were quickly followed by Major H.H. Muirhead, Royal Engineers, who was to supervise the construction of the works and buildings. C Battery left Victoria at midnight, 19 August 1893. Lieutenant-Colonel Holmes, the Deputy Adjutant General, left with them, transferred to Military District No. 10, Winnipeg.

Summary

After the Carnarvon Commission report there was no immediate attempt to develop permanent defences for Esquimalt. Disagreement among commission members and between the Commission and the Admiralty suspended any decision. But the need for decision did not go away and was once again brought to prominence by a crisis in Anglo-Russian affairs in 1885. The crisis prompted the Royal Navy to report on the deficiencies of the Esquimalt defences, caused the local militia to make preparations for war and alarmed the local citizens and their government sufficiently to warrant communication of their fears to Ottawa and London by telegram.

The local alarm felt in Esquimalt and Victoria was duplicated in other stations of the British Empire. To coordinate the necessary emergency defence measures a Colonial Defence Committee was appointed in London, in April 1885. The crisis ended before anything immediate was done for Esquimalt, but the committee went on to develop a plan for permanent defence of the station. The British proposals were agreed in principle by Canada but there were differences to be resolved, notably with regard to the type and strength of a regular garrison of artillerymen. Canada wanted a garrison of 100 marine artillerymen from Britain, the Admiralty refused to supply it. In spite of the differences,

detailed planning proceeded in London, coordinated by the Colonial Defence Committee, until Britain was ready to present a second stage proposal to Canada in 1888.

Canada rejected the new plan even though it had been amended after presentation to include a marine artillery garrison. It seemed that Britain had reneged on the original agreement and scorned the Canadian contribution to date. The Colonial Office offered an explanation of the British position and remained firm. Canada did not reply and the stand-off lasted for three years until a change of government occurred in Ottawa.

In the last weeks of 1892, the Canadian authorities put together a fresh set of conditions for agreement and presented them to Britain. After a few hectic weeks of hard bargaining among the various departments concerned in London, the Colonial Office was able to accept the Canadian proposal even though it involved an increased expenditure for Britain. The estimates for the Canadian commitment were passed by the parliament in Ottawa at the end of March 1893.

The Anglo-Canadian agreement, so long in the achieving, was quickly put into action. On 18 August 1893, the advance party of the new Royal Marine Artillery garrison arrived in Victoria, C Battery, Regiment of Canadian Artillery, the regular garrison since 1887, left on 19 August. Shortly afterward Major H. H. Muirhead R.E. arrived from England to supervise the construction of the permanent works of the defences.

Conclusion

During the early pre-confederation years of British Columbia's history, Victoria was the centre of commerce, the major centre of population, and the seat of government for the area that is now the province of British Columbia. Nevertheless, it was a very small community; a population of a few hundred with a Hudson's Bay Company post, Fort Victoria, as the focal point. The fort offered protection in the event of an Indian attack. Firm but just administration of colonial law with occasional assistance from ships of the Royal Navy, and a general policy of maintaining the internecine differences among the Indians helped ensure that such an attack did not occur.

In the same period Esquimalt was little more than a sheltered deep water anchorage conveniently close to Victoria. Because it was easier of access than Victoria harbour for all but the smallest of vessels, it was used with increasing frequency by both merchant and naval ships. Warships of the Royal Navy's Pacific Squadron used it while visiting the colony, as a base for duty on the coast and during the Crimean War, 1854-55, after the assaults on the Russian base at Petropavlosk. The first buildings of the future naval yard, three hospital huts, were erected during that war.

In 1858 when the goldrush to the mainland goldfields began, Victoria experienced a sudden and dramatic increase in population and trade. The majority of the new inhabitants and most of the miners were American citizens. Their presence raised the spectre of American assimilation of the colony. That possibility seemed very real for a short period in 1859 when American troops landed on San Juan Island, between Victoria and the mainland. The American Civil War, 1861-65, reduced the influx of Americans, but Anglo-American differences in the early years and the military might deployed in the war only served to make an invasion of the colony a stronger possibility as far as Victorians were concerned. Even when the Civil War ended, the threat remained, manifest in the activities of the Fenians.

With slim resources of manpower and money there was little the Colonial government could do to provide its own protection. Some citizens

of Victoria did form volunteer units, beginning with the Victoria Pioneer Rifle Corps in 1860. The colonial government obtained arms and ammunition from Britain for them and occasionally was able to make grants to help defray their expenses. But the units were more a spirited expression of concern than they were a force to be reckoned with. There were other expressions of concern. Governor Douglas frequently requested help from the Colonial Office in London, England, and in 1864 the House of Assembly, Vancouver Island, sent a memorial protesting the defenceless state of Victoria.

Protesting to London was reasonable for Britain was responsible for the security of her colonial interests in the area. At first, until 1858, occasional visits of warships of the Royal Navy's Pacific Squadron sufficed to control Indian banditry. The gold rush posed a potentially much greater danger. The British government diverted a force of Royal Marine Light Infantry and two warships from China, and sent a force of Royal Engineers and several colonial administrative officials from England. They arrived early in 1859, in time for the second gold rush season and the San Juan Island incident. Britain considered similar aid again in 1862, when Anglo-American relations were at a low ebb. At that time an infantry battalion was proposed for Victoria and guns were landed from Royal Navy ships for the defence of Esquimalt. The guns were not mounted.

The increased activity in the area since 1858 had made Esquimalt much more important to the Royal Navy's Pacific Squadron. Between 1860 and 1867 a building program provided storage for coal, ammunition and supplies, a larger hospital and machine shops for ship maintenance and repair. Staff and stores were transferred to Esquimalt from Valparaiso. By 1871 Esquimalt was a major station for the Pacific Squadron and the point had already been made, by Admiral Denman in 1865, that consideration should be given to defending it with batteries of guns.

In 1871 British Columbia became a province of Canada. The Dominion assumed responsibility for its defence and, within the overall responsibility, the defence of Victoria and Esquimalt. The Dominion's militia

system was extended to the new province with two infantry companies raised in Victoria in 1873, largely recruited from former members of the Victoria Rifle Volunteer Corps. Two years later a plan was developed to obtain surplus guns from the Esquimalt dockyard store and mount them in batteries at the entrance to Victoria and Esquimalt harbours. At the same time, in London, the skeleton of a system of Empire defence had been devised. To fulfill its role in the age of the steam engined warship, the Royal Navy required a world wide network of coaling stations and ports. The vital fuel supplies and repair facilities they held needed the protection of gun batteries to prevent their destruction by raiding enemy vessels. Esquimalt was ranked eighth in a list of twelve coaling stations to be defended.

Planning for the defence of Victoria and Esquimalt came to a head abruptly in 1878, when a crisis in Anglo-Russian relations made war between the two countries see imminent. The Victoria Battery of Garrison Artillery was hastily formed from Volunteers to man guns loaned from Esquimalt dockyard on Admiralty orders. The Dominion sent Lieutenant-Colonel D.T. Irwin west to supervise the construction of the works and mounting of the guns at Finlayson Point, Victoria Point, Macaulay Point and Brother's Island. Much of the impetus for all this action was supplied by the Colonial Defence Committee, or Milne Committee, formed in London in the crisis to expedite empire defence measures. It was a notable achievement, but the batteries could only be considered temporary. Better guns, more carefully sited in stronger works and manned by well trained artillerymen were required for the permanent defences.

A Royal Commission in London, the Carnarvon Commission after its chairman the Earl of Carnarvon, inquired into the defence of British possessions and commerce abroad between 1879 and 1882. It considered the reports of a number of Dominion and Imperial army officers who made detailed examinations of the particular problem of Esquimalt, and heard evidence from the Canadian Prime Minister, Sir John A. Macdonald, on 29 July 1880. In its third report, in 1882, the Commission concluded that the Pacific Squadron should be transferred to the China station and Esquimalt abandoned as a Royal Navy station, but added that if the Dominion

government felt the station should be maintained, and would furnish a garrison and works, then the Imperial government should give the armament and professional assistance necessary. There were two dissenters on the Committee, one of them Admiral Sir Alexander Milne, who could not endorse the recommendations and recorded their opinion that both Esquimalt and the Pacific Squadron were essential to Imperial interests and Esquimalt should be defended. The dissension, and the sides taken by the departments concerned in London, induced a period of limbo in the development of the defence of Victoria and Esquimalt.

Another crisis in Anglo-Russian affairs in 1885, promoted the newly reconstituted Colonial Defence Committee to reconsider the defence of Victoria and Esquimalt. The crisis was short lived, but planning for permanent defences was continued on the argument that the completion of the transcontinental railway and the Esquimalt dry dock had added new commercial reasons for defence to those already propounded by the Admiralty.

At the end of 1885, the British government proposed a plan for the permanent defence of Victoria and Esquimalt to Canada with a cost sharing prescription whereby the Dominion would provide the garrison and construct and maintain the works and Britain would provide armament, submarine mines and skilled assistance with construction and training. The Dominion government agreed in principle, but requested a garrison of 100 marines to be paid for by the Imperial government.

British authorities then worked out a detailed plan for the defences which provided for gun batteries of the latest type at Macaulay Point, Rodd Hill and Sangster's Knoll, a minefield at the entrance to Esquimalt harbour and a marine garrison to be paid for by Canada. The emphasis in the plan was on the defence of Esquimalt with some incidental defence for Victoria provided by Macaulay Point battery. The plan was presented to Canada in 1888.

Canada promptly rejected the proposal on the argument that a regular Canadian garrison was already in place and had been so for a year, that Canada could not contribute more financially and that Britain should supply the marines at her own expense. The British replied that the marines were intended to replace the Canadian regular garrison, C Battery Regiment

of Canadian Artillery, which was not competent to maintain and operate the new gun and submarine mining equipment, and that, in any case, marines would cost Canada less than C Battery. A stalemate ensued.

Negotiations reopened in 1892 after a change of government in Ottawa. Some intensive bargaining between December 1892, and July 1893 finally produced an agreement. The basic British proposal of 1888 was accepted by Canada. A marine garrison was to replace C Battery and be paid for by Canada. But Britain would contribute to the construction of the defences and to their maintenance, and accept the existing barracks at Work Point at evaluation as part of the Canadian contribution.

The advance guard of the Royal Marine Artillery garrison arrived in Victoria on 18 August 1893. C Battery left for Quebec at midnight, 19 August. Shortly afterward Major H.H. Muirhead, Royal Engineers, arrived from England to supervise the construction of the defence works. Among them would be Upper and Lower Battery at Rodd Hill.

Appendix A. List of Ordnance Stores supplied to Dominion Government from Esquimalt Naval Yard for use in Batteries mounted in 1878.¹

War Department

	Quantity	Remarks
Tools, artificers'-		
Hammers, claw, 20B, small	2	
Miscellaneous		
Handspike, common, 7ft.	4	
" " 6ft.	8	
Hides, tanned, or powder, 80lbs	3	
Needles, brass, 4-inch	15	
Ordnance-		
Bags, canvas, instruments, extracting projectiles, 9", 8", 7", & 64-pdr	2	
Barrels, powder, without copper hoops whole	2	
Bits, vent, naval, 17-inch	2	
" " " 15-inch	2	
Boxes, leather, tube, S.S., small	2	
Boxes, tin, travelling, carriage, grease	1	
Brackets, metal, trunnion, sight, 64-pdr converted from 8-in.	4	
Cans, tin, oil, travelling, carriage lubr, 12,9, or 6-pdr	1	
Caps rifled B.L. 7-inch & R.M.L.	2	
Canvas Sponge-		
L.B. gun, 32-pdr, 80 or 64-pdr R.M.L.	2	
Carriages-		
Wood, naval, complete, with coins, sliding, revolving, with beds, 64-pdr. 71-cwt	2	
Iron, wrought, naval sliding R.M.L. 7-in 6 1/2-ton D.P.	3	
Cartridges-		
Flannel, empty, R.M.L. gun, 7-in 10lbs.	50	
Drill, R.O. raw hide, 64-pdr	2	
Cases (A) for 7-in	6	
Leather, No. 4 for 64-pdr. M.L.	4	
Clamps, Moveable, for tangent sights-		
10", 8" and 7" M.L.	6	
64, 80 and 40-pdr M.L.	4	
Funnels copper-		
R.M.L. Shell	2	
Cartridge	3	

	Quantity	Remarks
Fuzes complete-		
Percussion, Pettman's general service	1	
Time, wood, Boxer, M.L.		
20 seconds	1	
9 seconds	1	
5 seconds	1	
Gunpowder, service, large grain	200 lbs	
Hoops, copper, powder, barrel whole	8	
Implements, shell and fuze, parts of		
Bags, canvas-		
Cylinder, wood, common	5	
Hook borer	5	
Bits ditto	30	
Cylinders, wood, common	5	
Instructions, Naval	2	
Extractors, fuze, small	5	
Drivers, screw, diaphragm, shrapnel	3	
Handles, hook, borer	5	
Hooks, ditto	5	
Keys, iron, fuze and plug, general		
Service	5	
Instruments, extracting, 7-in 64-pdr	1	
Projectiles, R.M.L. guns	1	
Landyards, friction, tube, naval long	11	
Levers wood, iron, pointed, light,		
land and naval	12	
Cast-Iron guns, 64-pdr R.M.L.		
71 cwt from 8" 65 cwt	2	
R.M.L. guns, without elevating plates		
7" 6 1/2 tons, 10 ft. 5 in. wrought iron	3	
Pivot pieces, for elevating, arc,		
complete, with plate, elevating steel		
pivot, keep-pins	6	
Pins, iron, friction, tube	5	
Plates, iron, guide' guns, iron,		
wrought	5	
Plugs, metal, fuze, hole, general		
service	4	
Prickers, priming, iron, garrison, or		
wires, priming-		
17-inch	6	
12-inch	2	
Primers, brass, shrapnell shell	1	
Rammers, gun, with wood staves, R.M.L.		
64-pdr	2	

	Quantity	Remarks
Screws iron-		
Fixing-		
Brackets, for trunnion sights, 64-pdr converted	8	
Plate, elevating	24	
Preserving		
Brackets, for trunnion sights 64 pdr converted	8	
Plate, elevating	24	
Plate guide R.O.	5	
Sight and pin, friction, tube	10	
Shells-		
R.M.L. empty, common	2	
Without fuze-hole plugs. 64-pdr	2	
Shrapnel } Boxer }	2	
Shot R.M.L. case 64-pdr	2	
Sights, rifled gun M.L.-		
7-in centre-		
Fore	3	
Hind	3	
Tangent Scale-		
7-in	6	
64-pdr	4	
Trunnion-		
7-in	6	
64-pdr	4	
Slides-		
Iron, R.M.L. complete, with winch gear, 7-in 6 1/2 tons D.P.	3	
Wood, heavy, with rollers, 7-in B.L. or 64 pdr M.L.	1	
Ditto without rollers, 64-pdr M.L.R.	1	
Sockets, metal with set screws, hind centre light M.L. 7-in & 64-pdr	3	
Sponges, without caps, with wood staves, gun-		
R.M.L. 7-in	6	
S.B. iron 32-pr or 64 -pr R.M.L.	2	
Straps, leather, tube box, long, or fuze box and tube pocket	5	
Tampeons, wood gun, R.M.L.		
7-in	3	
64-pdr	2	
Tubes quil, with loops, shot	125	
Wad-hooks, R.M.L. gun,		
7-in 6 1/2 tons and 64-pdr	8	
Worsted, white, for cartridges	8	

	Quantity	Remarks
Wrenches-		
Iron, fixing, elevating, rack	1	
Transferring axle band for wood slides	1	
Cylinders-		
Tin, No. 19	1	
Zinc, No. 11	1	
Naval		
Keys-		
Iron, for gun gear, galvanized	1 (1 1/4lb)	(DY)
" " " " not galvanized	4 (4 3/4lbs)	(DY)
Barrows, hand, for beams, shot and shell	6	(DY)
Crows, gunners or bars, crow (310A)	1	(C)
Jacks, hydraulic, Tangye's (10 tons)	1	(C)
Cordage-		
H.L., white, 3 in	148 fathoms	(DY) Italian
H.L., tarred, 4 in	30 fathoms	(DY) St. Petersburg
H.L., tarred 2 in	16 fathom	(DY) Riga
R.L., tarred 2 1/2 in	84 fathom	(DY) Italian
Blocks wood-		
Double L.V.S. 8 in.	4	(DY)
Single L.V.S. 8 in.	4	(DY)
Double L.V.S. 9 in.	6	(DY)
Treble L.V.S. 9 in.	6	(DY)
Thimbles-		
Iron galvanized (679)	8	(C)
" " (681)	22	(C)
Hooks-		
Iron, galvanized (390)	2	(C)
" " (388)	28	(C)
Pivots-		
Metal, screwed, complete	3	(DY)
" " solid, complete	(1.1.4) 2	(DY)
Screws, metal, for pivots	(0.3.20) 20	(DY)
	(0.0.8)	

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Glossary

ARTILLERYMAN. A soldier serving large calibre mounted firearms
e.g. guns, howitzers

ARTILLERY STORE. A storage place for tools and equipment associated
with artillery pieces

BASTION. A projecting portion of a rampart or fortification attached
at its base to the main enclosure, with two flanks

BATTERY. A grouping of artillery pieces. A fortification with art-
illery pieces. An artillery unit in the army equivalent to a
company. An artillery unit complete with guns, equipment,
ammunition, personnel and transport.

BOMBPROOF. Resistant to shells and mortar bombs

BREECH. The part of a gun barrel behind the bore

BRIGADE. A military formation consisting of a variable number of units

BRUNSWICK RIFLE. A British army rifle of the period 1837-1860's.
A heavy weapon weighing about 11 1/2 pounds with bayonet fixed
and with a bore of .704 inches. Cartridge and ball were loaded
separately at the muzzle.

CALIBRE. The diameter of the bore of a gun

CANNON. An artillery piece

CASEMATE. A vault or chamber, especially in a rampart, with embra-
sures for artillery

COMMISSARIAT. Food supplies, Food supply organization

COMPANY. A body of soldiers. Specifically, a unit of infantry.
Periodically, a unit of artillery

CORPS. An organized subdivision of the military establishment

CORVETTE. A sail warship ranking next below a frigate

DEPRESSION RANGE FINDER. A military instrument for calculating
the range to a target using the angle of depression between
the instrument and the target. Specifically for use with coast
artillery.

Glossary (cont'd)

DISAPPEARING CARRIAGE. A type of gun carriage which raises the barrel above a parapet for firing and allows lowering below the parapet for loading.

ELECTRIC LIGHT. Early name for searchlight. Sometimes DEFENCE
ELECTRIC LIGHT

ENGINE HOUSE. Accommodation for engine(s) supplying electricity to
ELECTRIC LIGHT(S)

ENFIELD PATTERN 53 RIFLE. A British army rifled musket of the 1850s and 1860s weighing approximately 10 pounds with bayonet and of .577 inch bore. A very successful weapon with many derivatives.

ENFILADE. Subject to a raking gunfire along the direction of the length

EXPENSE MAGAZINE. Storage for ready use ammunition for the service of a particular gun or guns

FIXED ELECTRIC LIGHT. An ELECTRIC LIGHT set in one direction, usually with a wide beam to illuminate an area

FLOTILLA. A group of naval ships. Usually two or more squadrons of small warships

FRIGATE. A square rigged warship intermediate between a corvette and a ship of the line.

GARRISON ARTILLERY. Permanently emplaced artillery. Description of an artillery unit intended to man emplaced artillery pieces.

GORGE. The rear entrance of a fortification

GUNNER. See ARTILLERYMAN above

HOTCHKISS GUN. A light anti-torpedo boat gun of the 1880s using a brass cartridge case, fixed ammunition, a sliding block breech and having a recoil system

HYDRO-PNEUMATIC MOUNTING. A specific type of DISAPPEARING CARRIAGE.
See above

Glossary (cont'd)

- IRON CLAD. A warship sheathed in iron armour
- IRONCLAD RAM. A warship specifically designed for ramming and sheathed in iron armour.
- KEEP. A strong, secure part of a fortification
- LIMBER. A wheeled vehicle to which a gun may be attached
- MARINES. A class of soldier serving on naval vessels or in close association with a naval force
- MARINE LIGHT INFANTRY. Marines trained and equipped as Light Infantry
- MARINE ARTILLERYMEN. Marines trained as artillerymen
- MONCRIEFF LIFT CARRIAGE. A carriage in which the gun was mounted on counterweighted arms, designed by Captain Moncrieff of the Edinburgh Militia Artillery. The first British DISAPPEARING CARRIAGE. See above
- MOVEABLE ELECTRIC LIGHT. An ELECTRIC LIGHT able to be traversed over an arc, usually having a narrow beam
- MUSKET. A heavy, large calibre, shoulder firearm
- PARAPET. A defensive wall or elevation of earth, stone, etc. to protect soldiers in a fortification
- PIVOT GUN. A gun mounted to traverse over an arc on a frontal fixed pivot
- POSITION FINDER. A coast artillery instrument for establishing the position of a target using horizontal, observed, intersecting angles
- QUOIN. A tapered wedge used under the breech end of a gun barrel to adjust the elevation of the barrel
- REGIMENT. A military unit consisting of a variable number of sub units, e.g. batteries
- REVVETTING. Facing to support an embankment
- RIFLING. Spiralled grooves in the bore of a firearm

Glossary (cont'd)

SAPPER. A soldier trained in military engineering, Alternatively, a Royal Engineer, a soldier of the British army engineers.

SHELL. A hollow artillery projectile containing a bursting charge

SHOT. A solid artillery projectile

SQUADRON. A unit of naval vessels

SUBMARINE MINE. A moored underwater explosive charge designed to explode when struck by a ships hull (contact mine) or to be fired electrically from a shore station

SUBMARINE MINEFIELD. A pattern of submarine mines

TAMPION (TAMPEON). A wooden plug for the muzzle of a gun

TANGENT SCALE. A gun sight scale used in laying the gun in elevation

TORPEDO. Early name for a submarine mine. Later a self propelled, explosive, submarine projectile

TORPEDO BOAT. A warship specifically armed with torpedoes (projectiles)

TRUNNIONS. Two opposite points on which a artillery piece is swivelled in elevation or depression

VENT. An opening at the breech of a gun through which fire is touched to the powder

VENT PIECE. A metal piece dropped in to close the breech end of a breech loading gun. Held in place by a large screw

VOLTIGEURS. Formerly, a member of a skirmishing company attached to each infantry regiment of the French Army. Skirmishers employed by the Hudson's Bay Company at Fort Victoria

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Table 1. Proposed Armament Plans for the Defence of Victoria and Esquimalt 1862-78.

	1862 Admiralty	1865 Admiral Denman	1865 Colonel Blair	1877 Defence Committee	1878 Colonial Defence Committee
a. Duntze Head	2X68-pdr 6X32-pdr	1X40-pdr		Total Allotted	Total Allotted
b. Signal Hill		1X110-pdr		8X10-inch 6Xmed:light Submarine Defences	Esquimalt 6X7tn 6Xlight
c. Ashe Head		3X32-pdr		<u>Alternative</u> 6X7-inch 6Xlight	<u>Victoria</u> 3X7 ton 3X medium
d. Inskip Island		1X40-pdr			<u>Alternative</u> 4X7-inch 1X9-inch
e. Point Ogden			4X40-pdr		
f. Macaulay Point			3X7-inch		
g. Fisgard Island			3X68-pdr		
h. Esquimalt harbour Entrance		Torpedoes	Torpedoes		

Table 2. Proposed Armament Plans for the Defence of Victoria and Esquimalt 1878-80.

	1878 Lt. Col. IRWIN	1878 Captain BEDFORD	1878 Admiral DE HORSEY	1879 Colonel STRANGE	1880 Colonel LOVELL
a Macaulay Pt.	3X7-inch	3X7-inch	1X7-inch 2X64-pdr	3X7-inch	
b Finlayson Pt.	2X64-pdr	2X64-pdr	2X64-pdr	2X64-pdr	
c Victoria Pt.	2X64-pdr			2X64-pdr	
d Brothers Is.	1X8-inch 2X64-pdr	1X8-inch 2X64-pdr		1X8-inch 2X64-pdr	
e Dutze Head			1X64-pdr		
f Signal Hill			1X8-inch	2X9-inch	
g Holland Pt.		2X64pdr	1X7-inch 2X64pdr	2X7-inch	
h Saxe Pt.		2X64-pdr			2X12-inch
i Rodd Pt.		1X9-inch	1X7-inch	4X9-inch	6X7-inch
j Dockyard		1X9-inch	1X64-pdr		
k Scraggs Rocks			1X64-pdr		
l Sangsters Knoll					6X10-inch

Table 2. Continued.

m.	Beacon Hill		6X10-inch
n.	Clover Pit		
o.	Esquimalt Harbour Entrance	mined	27 X 100 lbs mines
p.	Victoria Harbour Entrance		16 X 100 lb mines
q	Field Defence		4 X 16-pdr

Table 3. Proposed Armament Plans for the Defence of Victoria and Esquimalt 1881-1887

	1881 Colonel CROSSMAN	1884 Commander EDWARDS	1885 Colonial Defence Committee	1886 Colonel O'BRIEN	1887 Colonial Defence Committee
a. Macaulay Pt.		1X43tn 4X18or 25tm	3X7-inch	1X9.2in 2X16pdr 2X6in, 2X64pdr	3X6-inch
b. Finlayson Pt.		1X43tn 4X18or 25tn	2X64-pdr		
c. Victoria Pt.			2X64-pdr		
d. Brothers Is.	4X10-inch 2X64-pdr			1X9-inch 2X7-inch	
e. Duntze Head			2X6-inch 4X9-inch	2X64-pdr 4X16-pdr	
f. Signal Hill		2 Forts each 1X43tn 4X18or 25tn	2X9.2-inch	1X7-inch 2X64-pdr	
g. Holland Pt.					
h. Saxe Pt.	5X10-inch				

Table 3. Continued

i.	Rodd Pt.				3X9-inch	3X6-inch
j.	Dockyard				2XHotchkiss	
k.	Scraggs Rocks					
l.	Sangsters Knoll				1X9.2-inch 2X6-inch 2XMGs 2X16-pdr	4X9-inch
m.	Beacon Hill					
n.	Clover Pt.		1X43 tn 4X18or 25tn			
o.	Esquimalt Harbour Entrance	minefield	minefield	4X16-pdr minefield	minefield	2X6-pdr minefield
p.	Victoria Harbour			4X16-pdr minefield		
q.	Field Defence			6X16-pdr 3MGs	4X16-pdr 2MGs	6X16-pdr 6MGs

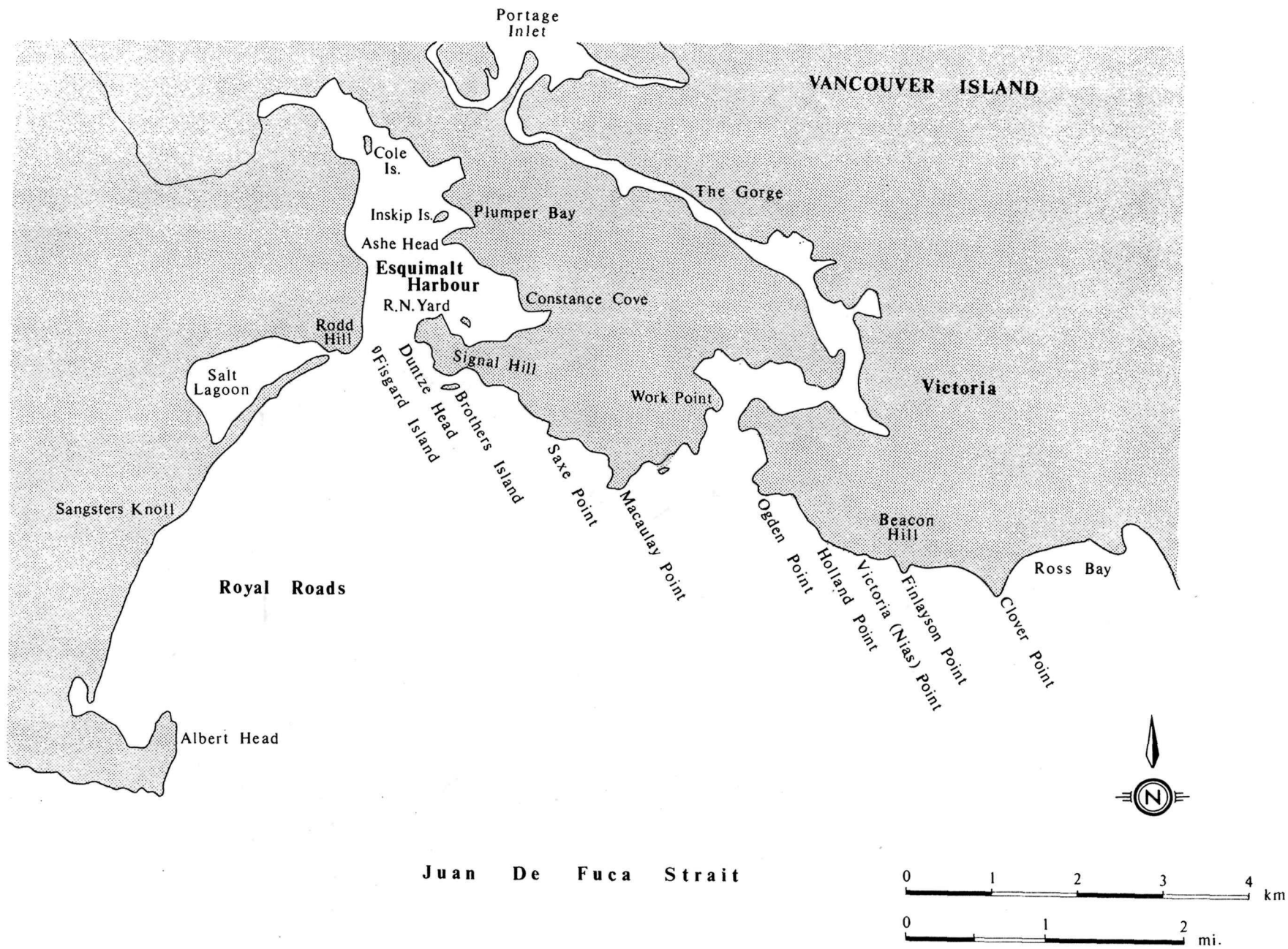


Figure 1 Sketch Map: Main Geographic Features Victoria-Esquamalt Area. (Drawn by author.)



Figure 2 Fort Victoria. Bastion and portion of stockade. Before August 1860. (Provincial Archives of British Columbia.)

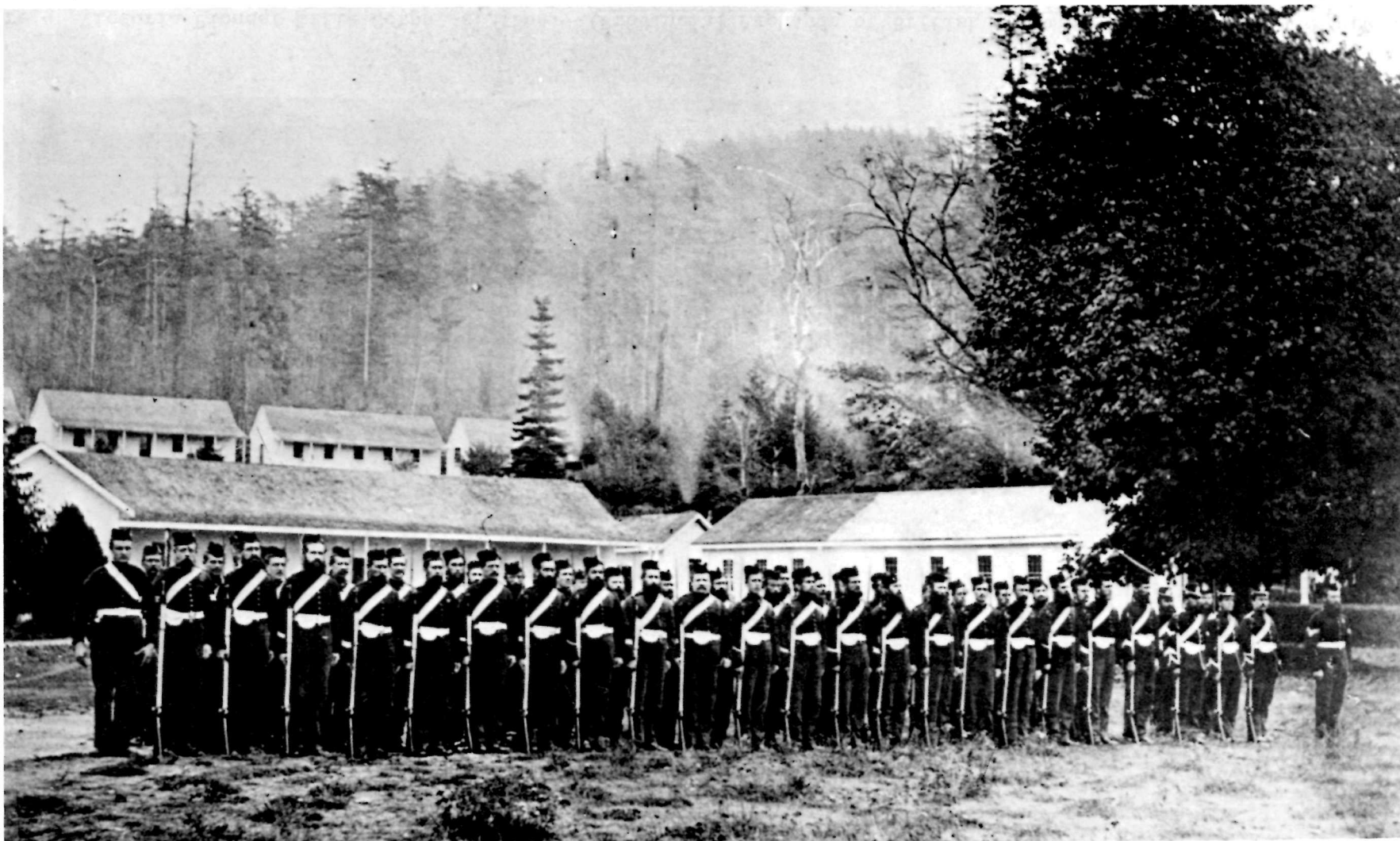


Figure 3 Royal Marine Light Infantry Garrison, San Juan Island, c. 1860. (Provincial Archives of British Columbia.)



Figure 4 Victoria Pioneer Rifle Corps, c. 1864. (Provincial Archives of British Columbia). The colour was presented to the Corps at a ceremony on 14 March 1864. It was hand sewn and silk embroidered by wives of the Corps members. This photograph may have been taken immediately after the ceremony.

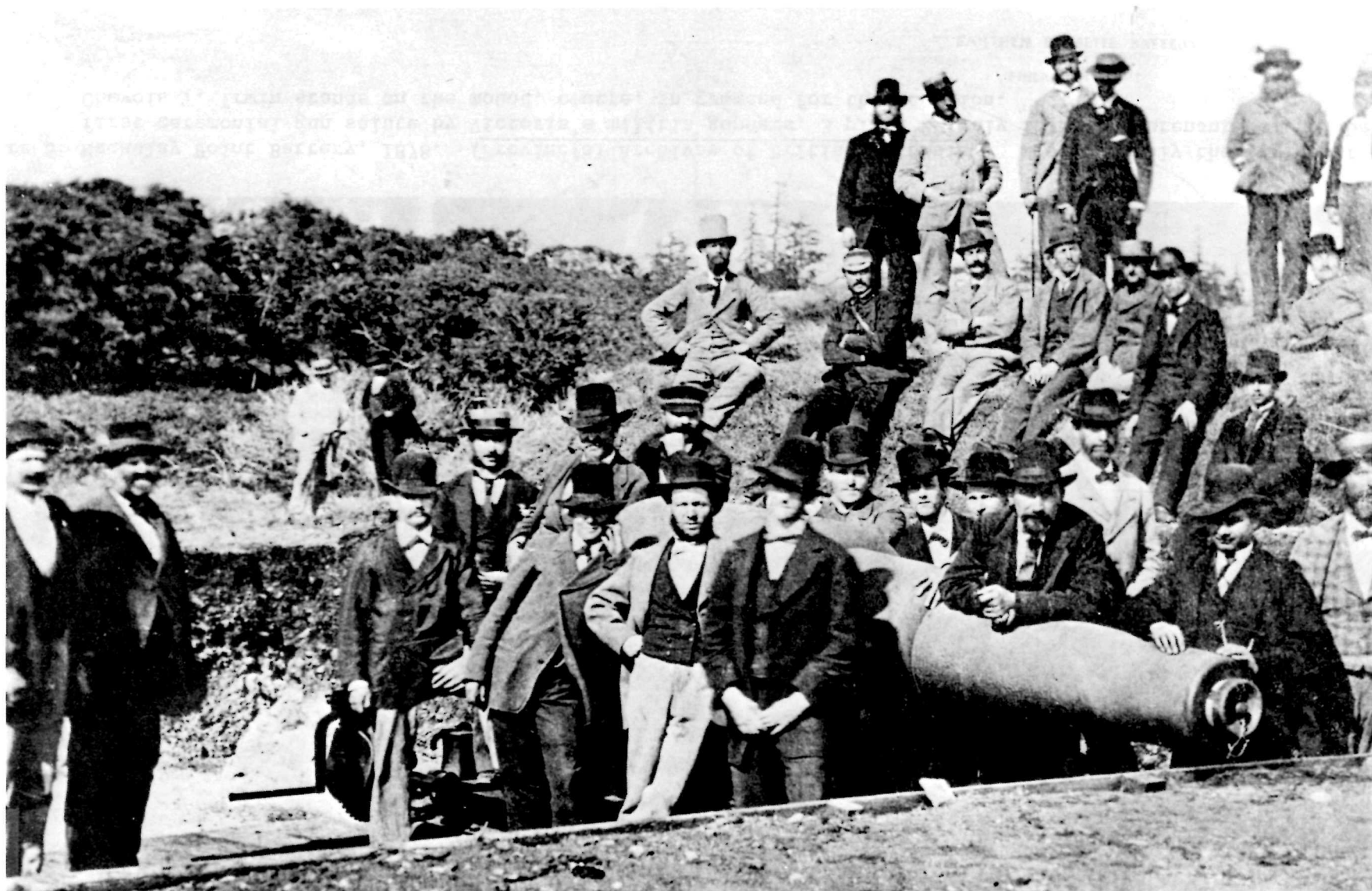


Figure 5 Victoria Battery of Garrison Artillery, Finlayson Point, 1878. (Provincial Archives of British Columbia). Taken after the construction of the battery and before uniforms had arrived. On the mound at right, in a top hat, is Premier A.C. Elliott. Standing next to him is Dr. J.B. Matthews, staff surgeon. The man at the left of the six standing on the mound is Mr. A.W. Jones who eventually commanded a battery. In front of him, seated in uniform, is Lieutenant Colonel De La Chevois T. Irwin. To his right, also seated in light top and suit, is Captain C.T. Dupont.



Figure 6 Macaulay Point Battery, 1878. (Provincial Archives of British Columbia.) Most probably the firing of the first ceremonial gun salute by Victoria's militia gunners, 3 p.m., 29 July 1878. Lieutenant-Colonel De La Chevois T. Irwin stands on the mound, centre, in command for the occasion.

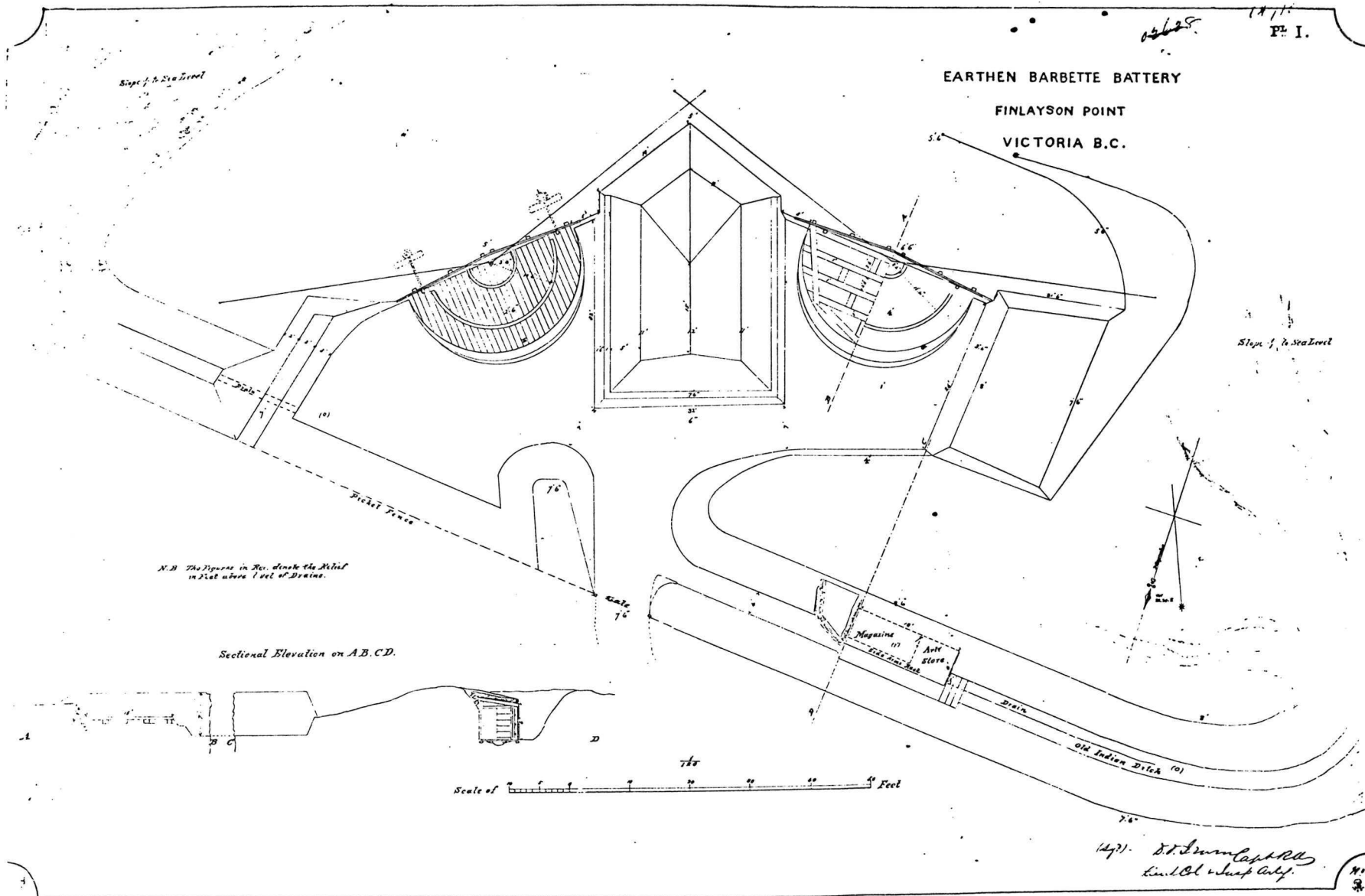


Figure 7 Plan of Finlayson Point Battery, 1878. (Public Record Office, Great Britain.) Plan I of a series by Lieutenant-Colonel D.T. Irwin.

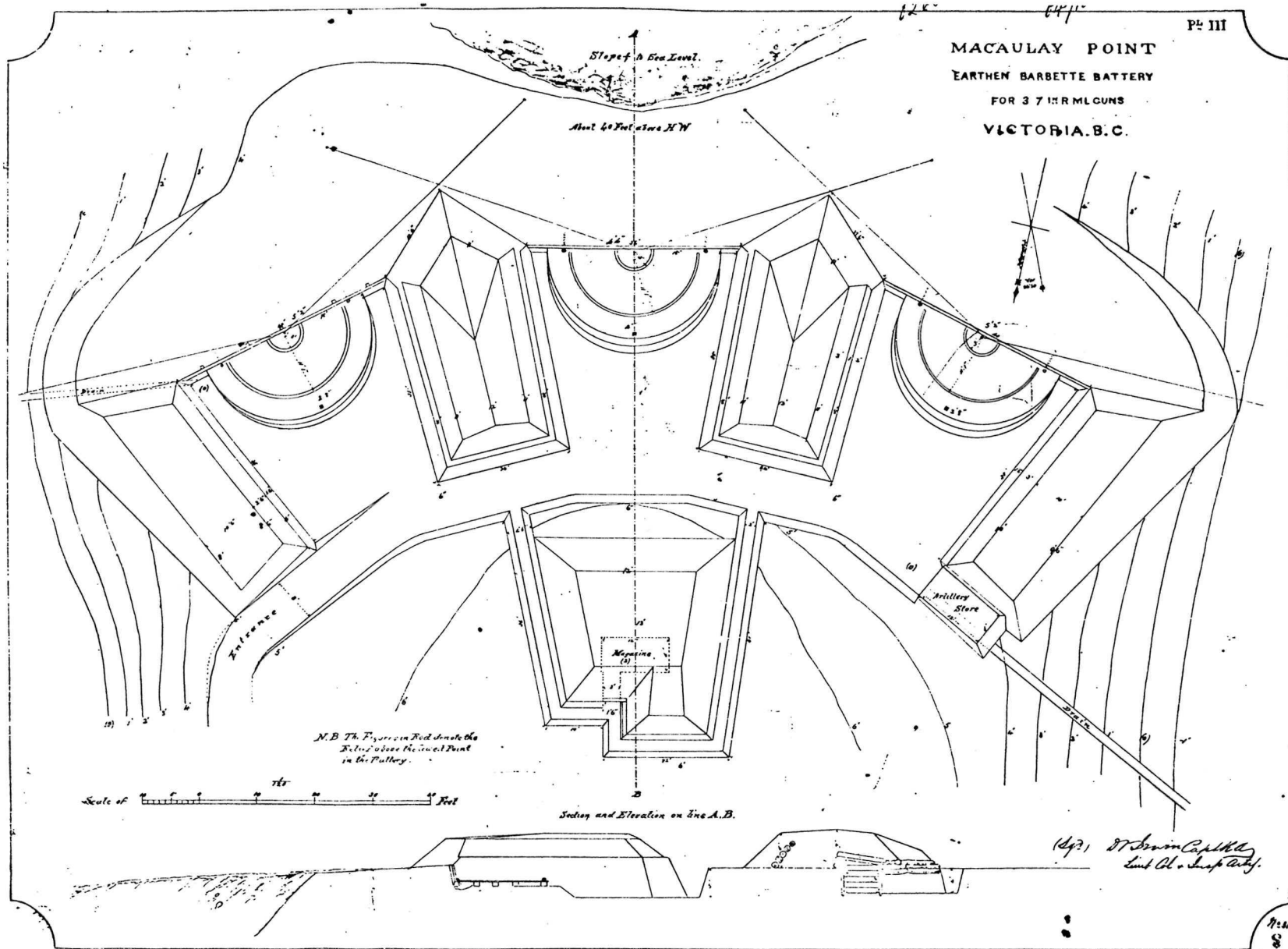


Figure 8 Plan of Macaulay Point Battery, 1878. (Public Record Office, Great Britain.) Plan III of a series by Lieutenant-Colonel D.T. Irwin.

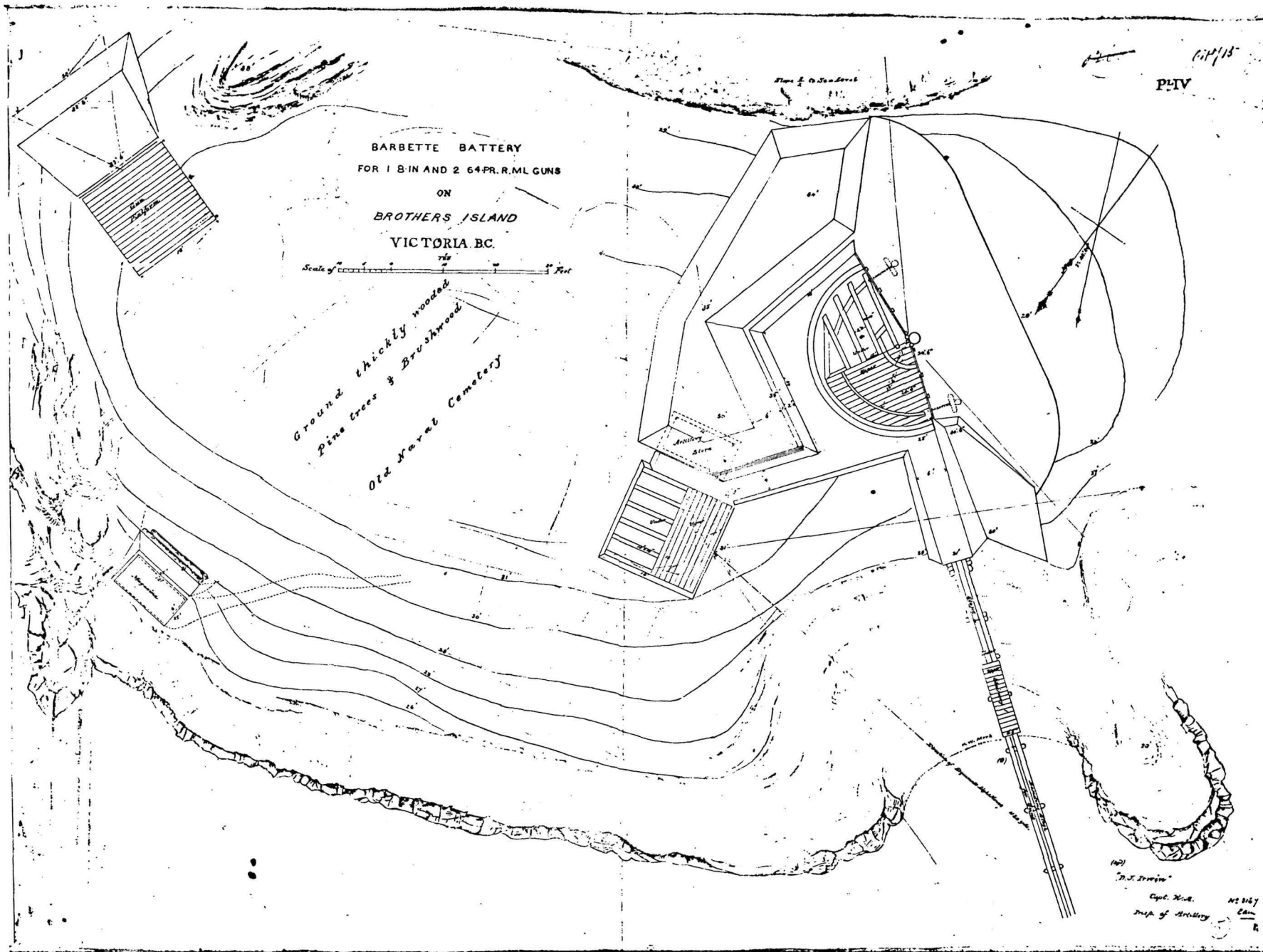


Figure 9 Plan of Brother's Island Battery, 1878. (Public Record Office, Great Britain.) Plan IV of a series by Lieutenant-Colonel D.T. Irwin.

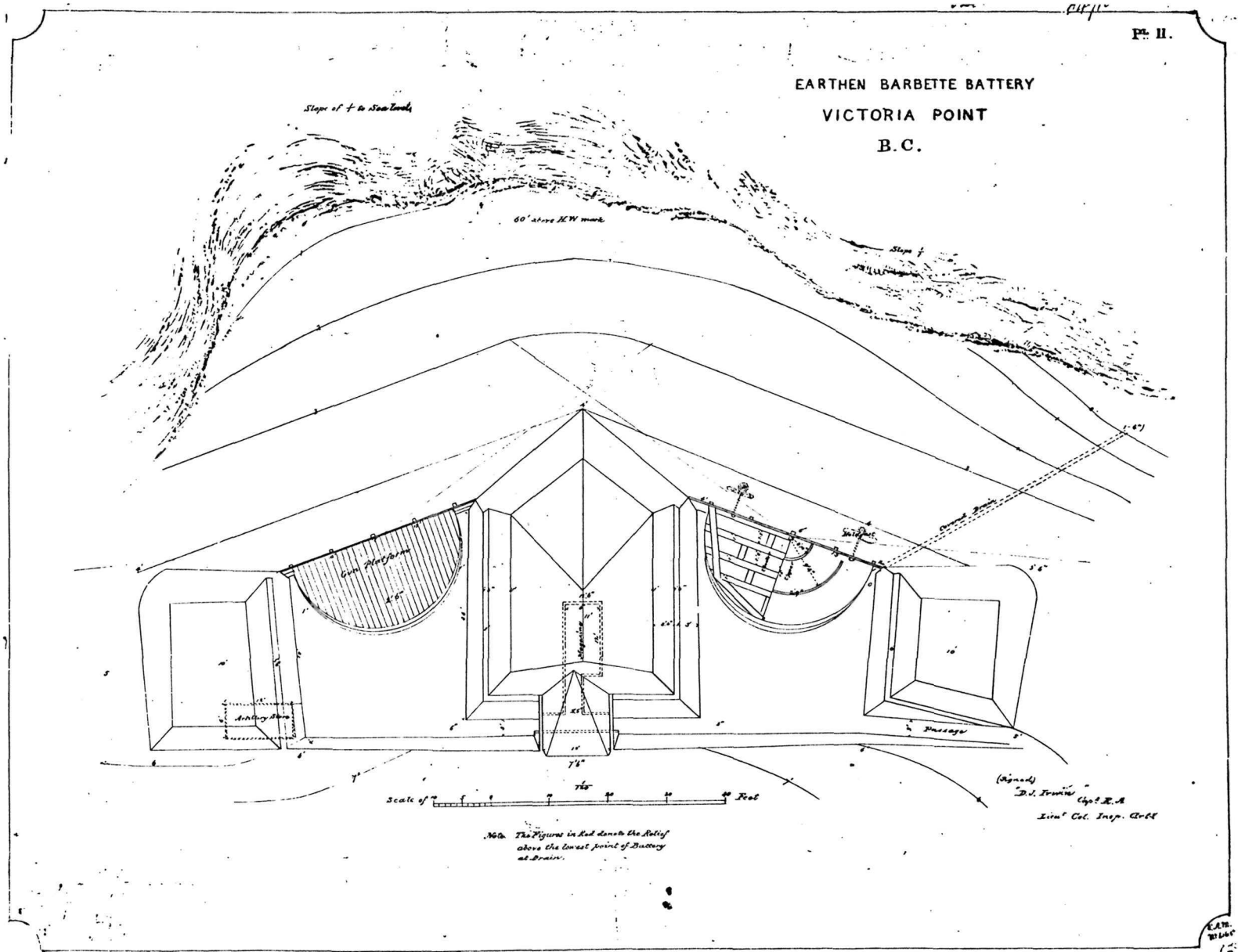


Figure 10 Plan of Victoria Point Battery, 1878. (Public Record Office, Great Britain.) Plan II of a series by Lieutenant-Colonel D.T. Irwin.

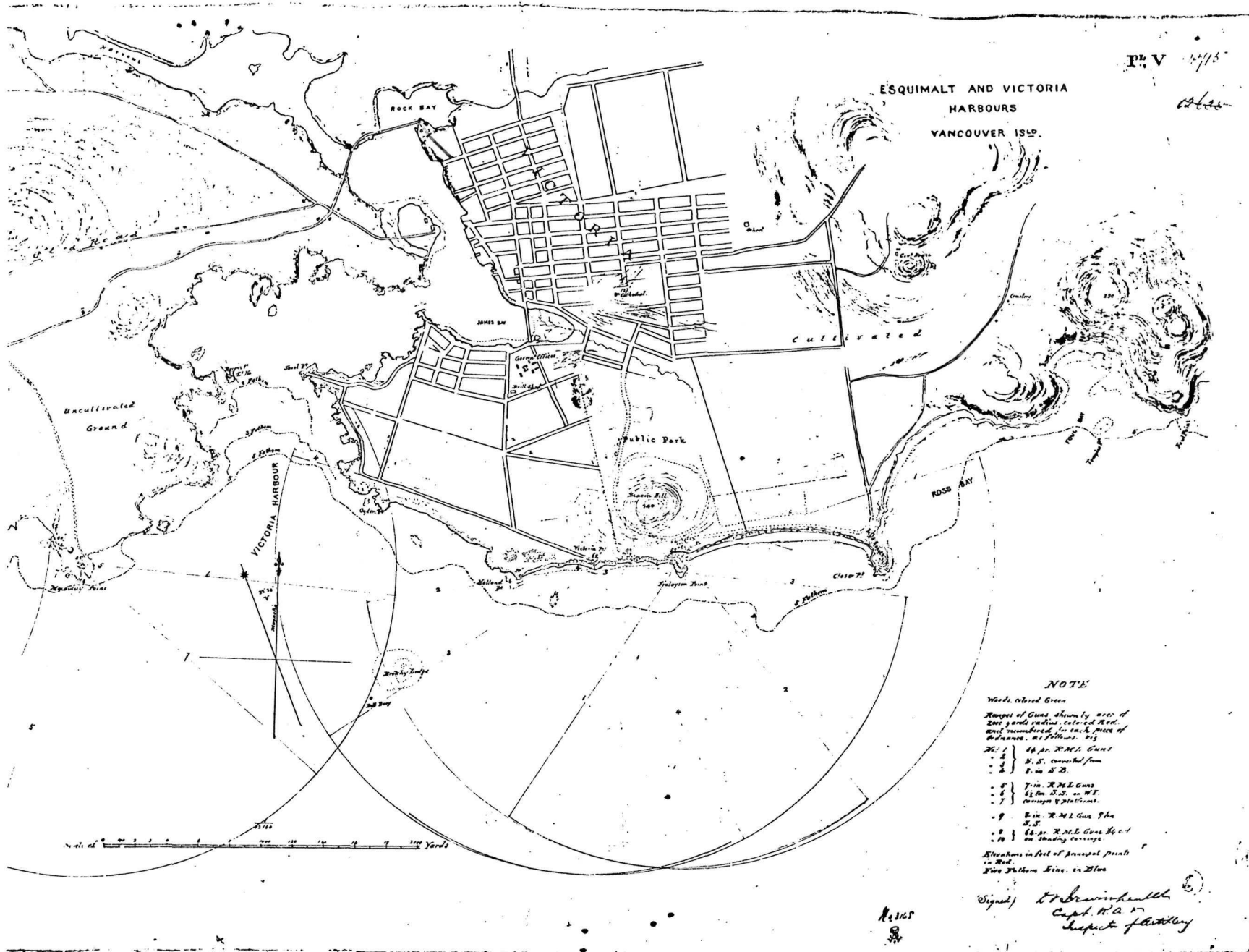


Figure 11 Plan of Victoria-Esquamalt Defence, 1878, Victoria area. (Public Record Office, Great Britain). Right half of Plan V of a series by Lieutenant-Colonel D.T. Irwin.

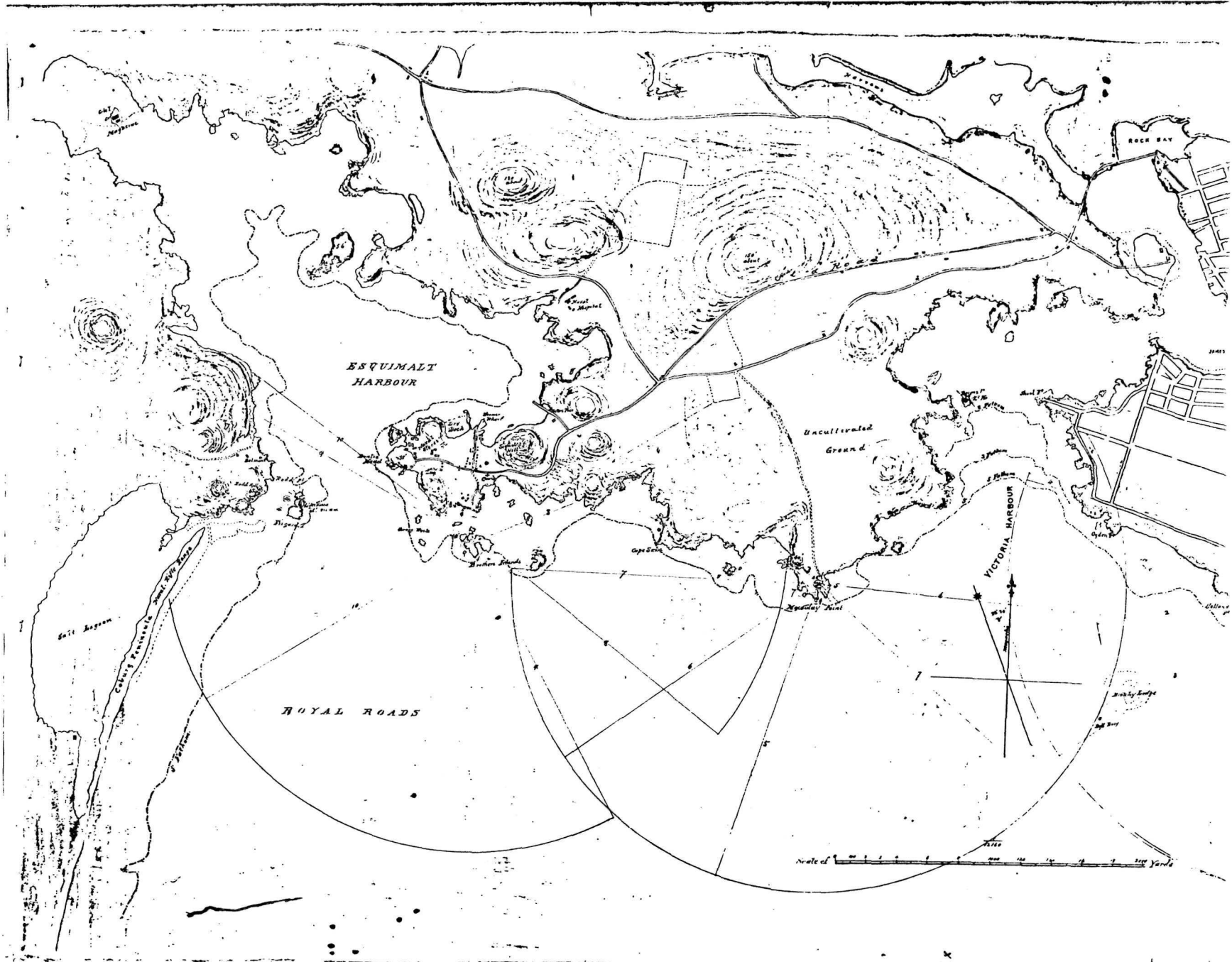
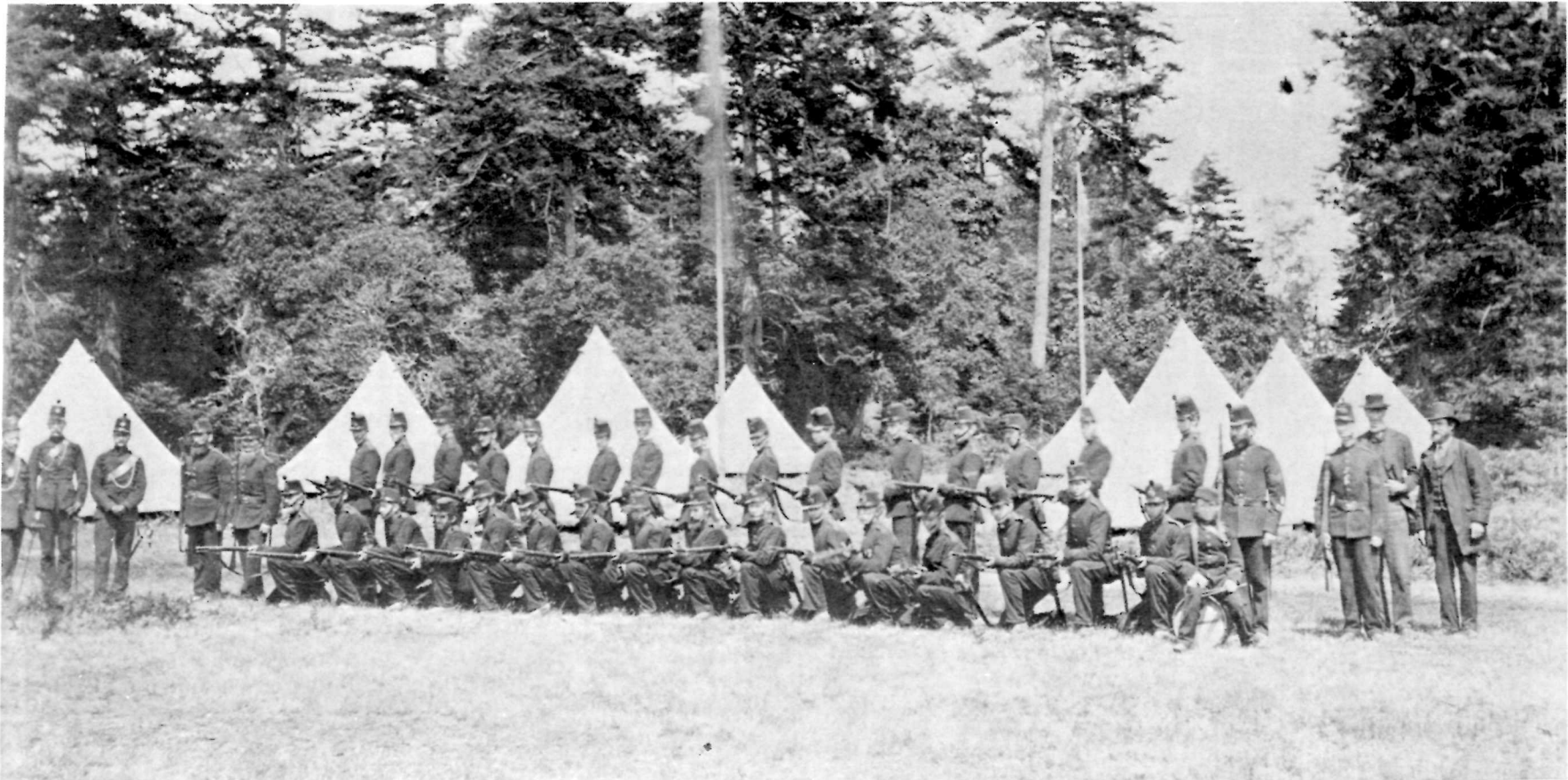


Figure 12 Plan of Victoria-Esquamalt Defence, 1878, Esquamalt area. (Public Record Office, Great Britain). Left half of Plan V of a series by Lieutenant-Colonel D.T. Irwin.



"Victoria Rifles," Victoria, B.C. in camp, Beacon Hill, 28 July 1880. Cap^t Green, Cap^t Dorman, Cap^t E.H. Fletcher, and thirty six N.C.Os and men, including "the band," one drummer
The rifle appears to be the Snider, which fired black powder and lead ball and "went off" with a cloud of white smoke. Photo loaned about 1940 by Cap^t J.A. Fletcher, son of Cap^t E.H.
Fletcher. (Cap^t J.A. Fletcher, barrister, Vancouver) see companion photo. City Archives, p. 571.

Figure 13 Victoria Militia Rifle Company, 1880. (Vancouver City Archives.) Known locally as the "Victoria Rifles", a title also bestowed on earlier volunteer companies.

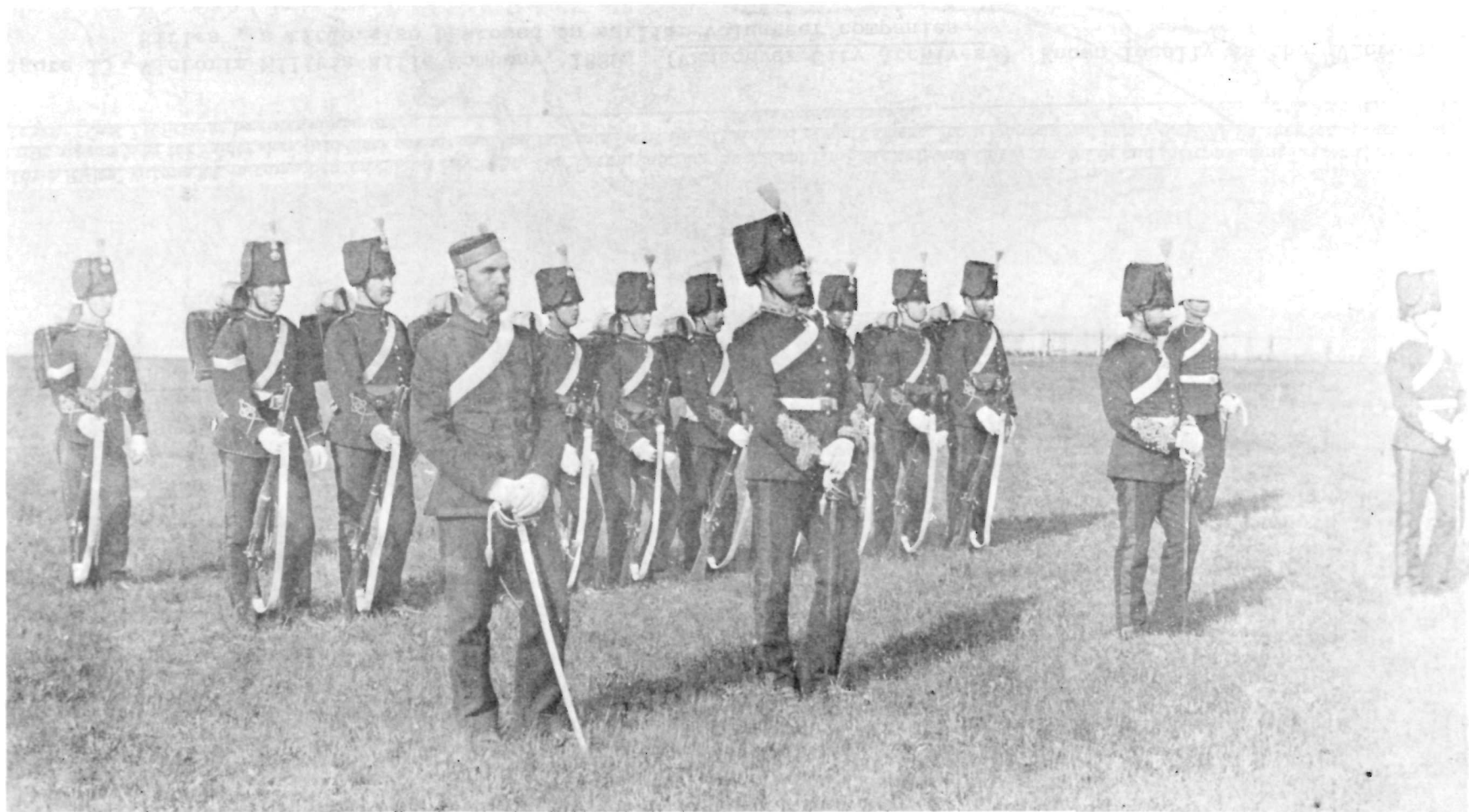


Figure 14 British Columbia Provisional Regiment of Garrison Artillery, c. 1884. (Provincial Archives of British Columbia.) The officer in a different uniform at the left is R. Wolfenden, ex Royal Engineer, later Commanding Officer, and Queen's Printer for the province.



WANTED

Pensioners, Royal Marine Artillery

FOR SERVICE IN

BRITISH COLUMBIA

UNDER THE CANADIAN GOVERNMENT.

Pensioners volunteering for service as above must have been discharged with character not inferior to good, must be unmarried, not above 45 years of age, in good health, not less than 5ft. 6 ins. in height, and 34 ins. round the chest.

They will be required to pass a medical examination in England; those selected will be conveyed to Canada free of expense and on arrival there, enlisted for a period of 3 years.

The Canadian Government do not undertake to provide men with free passages back to England at the termination of their engagement, as it is expected they will become permanent settlers in the Dominion.

The pensions of men who are accepted for this service will be paid in Canada.

Pay, etc., will be as follows:—

PAY.

Staff Sergeants	- - - -	Pol. 1.00 per day.
Sergeants	- - - -	0.80 "
Corporals	- - - -	0.70 "
Bombardiers	- - - -	0.50 "
Buglers [under 18 years of age, 30c.]		0.40 "
Gunners	- - - -	0.40 "

IN ADDITION

FREE RATIONS.

1 lb. bread, 1 lb. meat, 1 lb. potatoes, 2 ozs. cheese, 1 oz. pot barley, oz. coffee, $\frac{1}{2}$ oz. tea, 2 ozs. sugar, $\frac{1}{2}$ oz. salt, $\frac{1}{2}$ oz. pepper; also fuel, light, barrack accommodation, and medical attendance.

Good Conduct pay for Bombardiers and Gunners at rate of 2 cents per day for first year's service, 3 cents per day for second, and 4 cents per day for third, to be paid at termination of engagement; and on re-engagement for three years, 5, 6, and 7 cents per day for each successive year.

FREE KIT ON JOINING.

1 Cloth Tunic.	1 Pair Cloth Trousers.
1 Serge "	1 " Serge "
1 Forage Cap.	1 " Boots.
1 Winter "	1 " Mitts.
	1 Muffler.

And thereafter a similar issue annually, winter cap, mitts, and muffler *excepted*, with badges, &c., according to rank.

An annual allowance, after first year's service, of three dollars will be granted to each soldier to enable him to keep up his winter kit, including boots.

ALSO ISSUE OF

REGIMENTAL NECESSARIES.

FREE ON JOINING.

To be kept in serviceable order at the soldier's expense during his whole period of service, viz:—

2 Grey Shirts.	1 Hold-all.	1 Button Stick.
1 Cotton Shirt.	1 Fork and Knife.	1 Sponge.
2 Knitted Shirts.	1 Spoon.	2 Pairs Socks.
1 Cloth Brush.	1 Razor and Case.	2 Pairs Drawers.
1 Button Brush.	1 Comb.	1 Pair Braces.
1 Pair Shoe Brushes.	2 Towels.	1 Box Blacking.
1 Shaving Brush.		

Apply, with Certificates of service, to

Colonel Commandant,

Eastney Barracks,

PORTSMOUTH.

Figure 15 Recruiting Poster: Royal Marine Artillery Pensioners. (Public Record Office, Great Britain.)

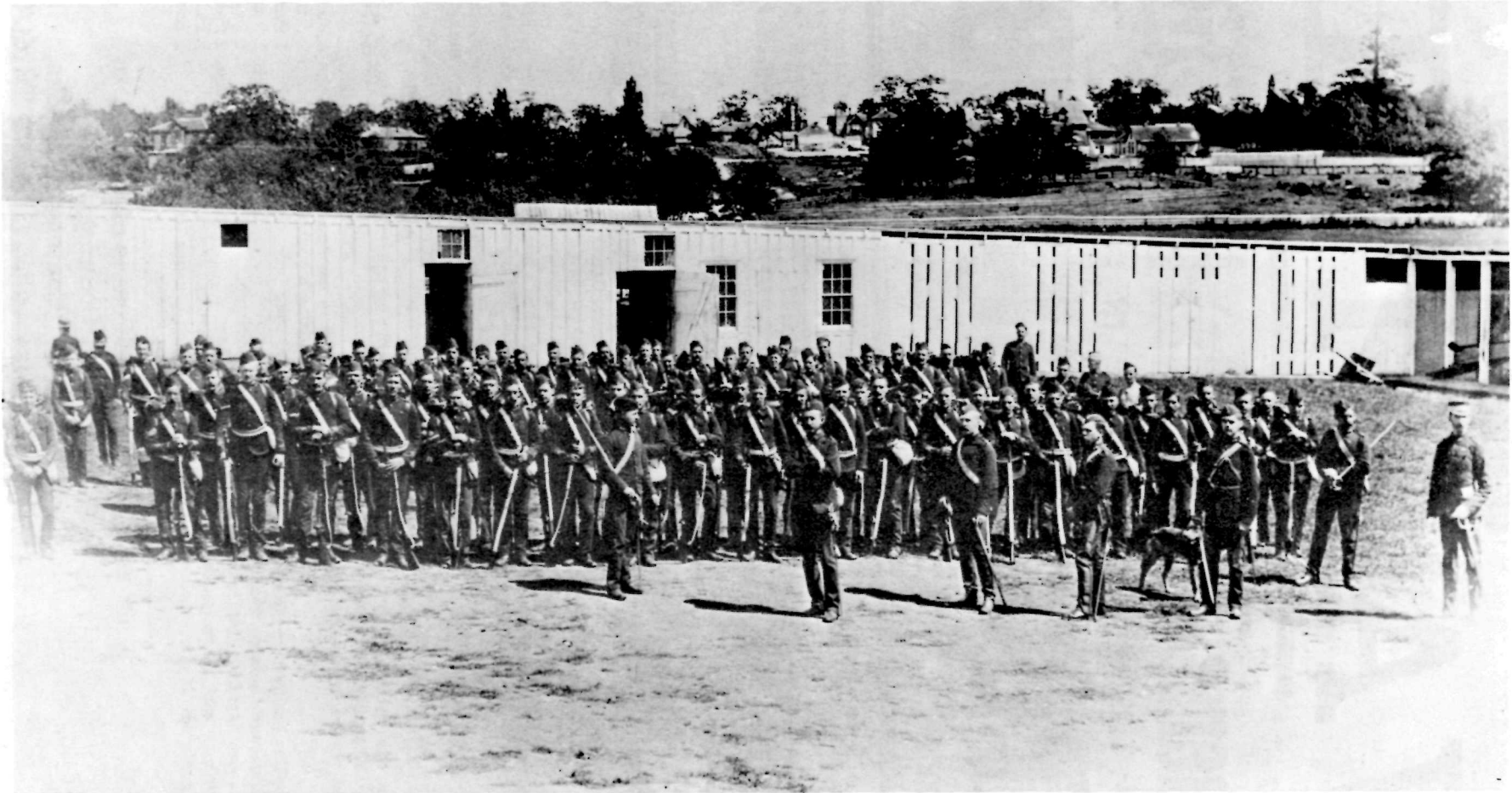


Figure 16 C. Battery, Regiment of Canadian Artillery, 1888. (Provincial Archives of British Columbia.) In front of their barracks at Beacon Hill, Victoria, before leaving for the Skeena River.

Militia Lineage Chart

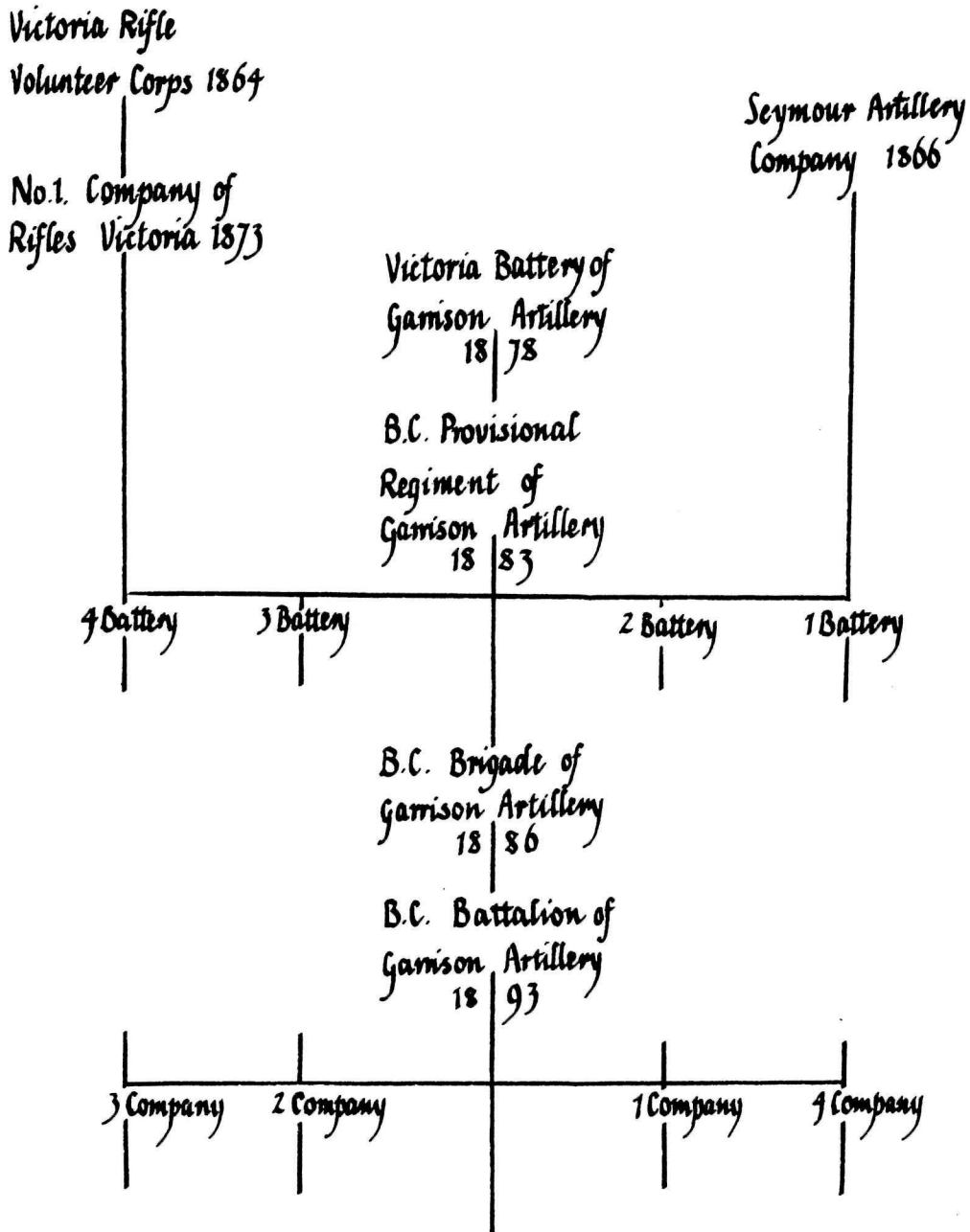


Figure 17 Militia Lineage Chart, 1864-1893. (Drawn by Author.)

