Bricks in Pre-1871 Victoria: Their Manufacture, Trade and Use

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One of British Columbia's earliest resource-based industries was brickmaking. With the exception of sawmilling it probably has been the most widespread manufacturing process in the province, having been pursued by over 150 firms, with plants from Atlin to Sooke and from Prince Rupert to Fernie. However, in sharp contrast to metallurgical and coal mining, logging, fishing, agriculture and the manufacturing processes associated with them, brickmaking today has only a small impact on the provincial economy, having been reduced to one plant in the Fraser Valley. Nevertheless, many factors make the study of bricks in nineteenth century British Columbia an important, though often overlooked, aspect of the province's economic history: the competition in trade between imported and domestically produced bricks that began in the early 1850s; the government intervention in and encouragement of the industry, starting with Governor Douglas and continuing with the Provincial Ministers of Mines in the first decade of the twentieth century; the expansion of brickyards during periods of rapid economic growth and urban development; the search for export markets; and the brick industry's struggles against high labour, transportation, fuel and capital costs.

In British Columbia bricks have served utilitarian, cultural and economic needs. The Europeans and Americans who established land-based settlements as early as the 1780s came from cultures where bricks were considered commonplace and, to some extent, indispensable. On the Northwest Coast of North America, as in many other places in the New World, brick became symbolic of permanent settlement and Old World standards of construction and a finished appearance in places where buildings looked, and often were, new, raw and temporary. On the Northwest Coast, where monetary profit was a primary concern to many early visitors, bricks served immediate economic needs as well because they were cheap to transport as ballast and required less skill to lay than cut stone. Brick was also a status symbol, whether used in the chimneys of Fort Victoria or in the stores, warehouses and hotels that were built

around the fort in early gold rush days. In addition, brick construction became the standard for official buildings after 1858. For example, among some of the Colony of Vancouver Island's first all-brick buildings were the Colonial Administration Buildings (more popularly termed the "Birdcages") and the Victoria District Gaol in Bastion Square; later, in the 1870s, the Dominion Customs House and the Victoria City Hall continued the use of brick in important government edifices. All of these factors help explain why bricks appear in the manifests of early Spanish ships that sailed to Vancouver Island's west coast, why Robert Gray transported thousands of bricks from New England to Fort Defiance, why the Hudson's Bay Company brought bricks from England to use in its own coastal establishments and for trading purposes, and why James Douglas was eager to begin a brick industry at Fort Victoria in the early 1850s even before sawn lumber was in common use there.

British Columbia's brick industry began in Victoria and remained centred there until after 1886, when the growth of Vancouver resulted in the establishment of rival brickyards nearer that city, particularly in the Fraser Valley. The use of bricks in British Columbia's colonial and early provincial periods and the responses of entrepreneurs and government officials in the face of demands for more and cheaper bricks can best be examined by looking at the Victoria area. This article will focus on the brick industry in Victoria before 1871, particularly during the pre-1858 era dominated by the Hudson's Bay Company, and provide the basis for the future study of bricks and their manufacture, trade and use throughout the province during the late nineteenth and early twentieth centuries, when brickmaking reached its height of importance in the provincial economy.

In Victoria the trade in and use of bricks began in the 1840s, and their manufacture began in the early 1850s. By 1855 at least two separate brickyards were in production, supplying building materials for local use and export to other coastal communities. With the rapid increase in Victoria's population after the 1858 gold rush and the demand for bricks in other parts of British Columbia, large deposits of clay just north of the city limits were exploited, laying the basis for an industry which was the main source of domestically produced bricks at the time the colony joined Confederation in 1871. The Victoria brickyards continued to remain a major local industry throughout the rest of the nineteenth century and well into the twentieth, in spite of competition from Fraser Valley yards and others after the mid-1880s.

Prior to 1852 all brick used in and around Fort Victoria was imported

from either Britain or the United States. When the fort was built in 1843 the fire and common bricks used in the chimneys, ovens and forges were almost certainly of British origin, although no written evidence has yet been located to substantiate this. Rather, the assumption is based on the fact that Fort Victoria was supplied from Fort Vancouver, where archaeological excavations have indicated that British bricks were in sole use before 1844. In that year, one year after Fort Victoria was built, the first non-British bricks were used at Fort Vancouver. These were a product from the Willamette Valley, where brickmaking had been started by American settlers in 1841.¹

After the completion of Fort Victoria, bricks continued to be an import commodity for use in new buildings at the fort and for use by other Hudson's Bay Company posts on the coast, as well as by the Russian American Company in Alaska, Statistics on shipments and quantities are fragmentary, but some documented examples exist. In 1847, for example, the barque Cowlitz arrived at Fort Victoria with a load of bricks, but their origin was not recorded,2 and in 1849 James Douglas purchased 25,000 "best stock bricks" for the Hudson's Bay Company from the firm of Fry and Davison.3 Douglas also makes reference in a letter to a shipment of bricks which were landed from the Harpooner in 1850, of which 1,000 firebricks had been destined for the Russian American Company. Apparently this part of the shipment was mixed in with common bricks, and Douglas had not been informed of their destination, with the result that inadvertently they had been used in building a baking oven at the fort.4 It is not known whether any bricks from the Willamette Valley were ever shipped to Fort Victoria.

During the early 1850s a steady demand existed for bricks in the vicinity of Fort Victoria and in other centres such as Nanaimo in the Colony of Vancouver Island. Among the new buildings requiring bricks were those on the farms of the Puget's Sound Agricultural Company, the separate farms operated by the Hudson's Bay Company, the three Colonial schools (two at Victoria and one at Nanaimo), the Victoria

¹ Lester A. Ross, Fort Vancouver 1829-1860: A Historical Archaeological Investigation of the Goods Imported and Manufactured by the Hudson's Bay Company, U.S. Dept. of the Interior, National Parks Service (Fort Vancouver National Historic Site, June 1976), 1068.

² Hartwell Bowsfield, ed., Douglas to Barclay, 29 Jan. 1851, in Fort Victoria Letters (Winnipeg: Hudson's Bay Record Society, vol. XXXII, 1979), 146. Hereafter referred to as Fort Victoria Letters.

³ Douglas to Barclay, 18 Oct. 1849, in Fort Victoria Letters, 54.

⁴ Douglas to Barclay, 10 April 1851, in Fort Victoria Letters, 169.

Parsonage, the Victoria District Church, Governor Blanshard's residence, John Tod's house, James Douglas' house, Dr. J. S. Helmcken's house and the mine manager's house and other buildings built to accommodate the coal miners and their families in Nanaimo.

James Douglas wanted to establish a local brick industry at Fort Victoria for at least two reasons: to reduce the cost of bricks in the colony and, as Richard Mackie has observed,⁵ to produce enough for export. His first proposal for manufacturing bricks was outlined in a letter to Archibald Barclay on 22 December 1850:

A few Brickmakers would be also exceedingly useful in this Country and might depend on finding constant and profitable employment. I would not advise the Committee to engage them as Servants; as that would destroy all motive to exertion, and only serve to throw a number of useless men upon our hands.⁶

Initially his plan was to have the brickmakers sent at their own expense, but with the inducement of a contract for 500,000 "good bricks" at from seventy to ninety shillings per thousand.

A month after Douglas wrote to Barclay about brickmaking he sent another letter clarifying the price the workers should be paid. His original figures, he noted, had been based on the price of one hundred five shillings per thousand for the bricks imported on the *Cowlitz* in 1847, and he had overlooked the figure of thirty shillings per thousand for "best stock bricks" quoted by Barclay in a letter of 1850. Douglas observed:

That being the case, they may be made here, at a much cheaper rate than was proposed in my letter, and I therefore hasten to correct the error, as it is essential to the success of the experiment that the bricks be produced at as cheap a rate as possible, at the same time producers must have a fair remuneration for their labour to induce them to remain in the Colony.

As a compromise Douglas proposed that the Vancouver Island brick-makers should be paid at a rate fifty per cent higher than in England. Thus, assuming a rate in England of thirty shillings per thousand, at Fort Victoria it would be forty-five. After Douglas' request, the Hudson's Bay Company did recruit brickmakers in England, but as "engaged servants" at a salary of fifty pounds per year, instead of as independent

⁵ Richard Somerset Mackie, "Colonial Land, Indian Labour and Company Capital: The Economy of Vancouver Island, 1849-1858" (unpublished Master's thesis, Dept. of History, University of Victoria, 1984), 153-54. Hereafter referred to as Mackie.

⁶ Douglas to Barclay, 22 Dec. 1850, in Fort Victoria Letters, 141.

⁷ Douglas to Barclay, 29 Jan. 1851, in Fort Victoria Letters, 146.

contractors. However, once they had become acquainted with the country, Barclay suggested, Douglas could cancel their indentures and enter into the other contract arrangements with them that he had recommended.⁸

Before any brickmakers had arrived in the colony as a result of his requests, Douglas expressed his added concern that there was "not a single Bricklayer or Mason in this Colony and no Masons or Plasterers tools," and proposed that masons, bricklayers and tools be sent "by the first ship." The Governor and Company replied that bricklayers would in fact be sent by the first vessel going directly to Vancouver Island.¹⁰

Partly in response to Douglas' suggestion, and partly as a result of the settlement and development of four farms around Fort Victoria by the Puget's Sound Agricultural Company, brickmakers and bricklayers came to Vancouver Island. Although James Douglas acted at first as Agent for the farms which were operated by a subsidiary of the Hudson's Bay Company, the development of industries on the farms was controlled independently by each farm's bailiff. What happened in the early 1850s, therefore, was the simultaneous rise of brickmaking on at least one, and possibly two, of the Puget's Sound Agricultural Company's farms, and the manufacturing of bricks by the Hudson's Bay Company itself.

The Hudson's Bay Company responded promptly to James Douglas' request for a brickmaker, sending George Mason, who arrived aboard the *Norman Morison* in October 1851. However, due to the lateness of the season it is unlikely that he began making bricks until the following spring. The exact location of his initial works is not known, but within a few years he had established a brickyard southeast of the fort, on the northern side of what became Beacon Hill Park. In his work first for the Hudson's Bay Company and, after the expiry of his five-year indenture, as an independent tradesman, Mason is reputed to have been assisted by Robert Porter, whose period of indenture expired around the same time.¹¹

Mason's method of manufacturing bricks remains a source of conjecture, but almost certainly he would have employed the "soft mud" technique with a maximum of hand labour. The clay would have been

⁸ Barclay to Douglas, 16 April 1851, cited in Fort Victoria Letters, 146n. The salary of fifty pounds was comparable to that of the teacher engaged for Craigflower Schoolhouse at around the same time, compared to the seventeen pounds per year which the Puget's Sound Agricultural Company paid its labourers.

⁹ Douglas to Barclay, 23 April 1851, in Fort Victoria Letters, 179.

¹⁰ Barclay to Douglas, 16 July 1851, cited in Fort Victoria Letters, 179n.

¹¹ PABC — Vertical File, "Robert Porter."

dug by hand and mixed with water, possibly with the assistance of horses turning paddles. A quantity of the softened clay or "pug" would then have been pressed by hand into wooden moulds lined with tin and either sanded or moistened with water. The green bricks would then have been arranged in long rows on the ground and possibly covered with boards or tarpaulins to dry. The air-hardened bricks would then have been stacked in a scove kiln comprising loosely spaced bricks interspersed with straw and sticks. Fire holes would have been built into the bottom of the temporary pile, the whole affair covered with broken bricks, clay and wood, and a slow fire set and allowed to smoulder for up to several weeks to burn the bricks. After cooling, the kiln would then have been dismantled. Due to the need for air drying the green bricks before burning, brickmaking by this method was concentrated in the hotter, drier months.

One reference indicates that bricks were made at Esquimalt Farm (also referred to as Colwood Farm) as early as 1853. Brian Coyle, citing a letter from Governor James Douglas to Pelly, Simpson and Colvile in London in October 1853, observed that Esquimalt Farm included both a lime kiln and a brick kiln. What became of any bricks manufactured in what was presumably a scove kiln is not known through documentary evidence, nor do any of the farm buildings exist which contain bricks. Neither is the identity of the brickmaker revealed, although it could have been Robert Porter who had arrived along with most of the Esquimalt Farm settlers on board the *Tory* in May 1851.

Common bricks were manufactured at Craigflower Farm beginning in 1853 and continuing until at least 1856, and possibly afterwards. This is documented in the diary of Robert Melrose, 18 one of the farm's labourers. Following are his entries relating to bricks and lime burning:

June 8, 1853	Discovered Lime-stone	
June 15, 1853	Commenced to make bricks	
July 4, 1853	First Lime Kiln burnt off	
July 18, 1853	and Lime Kiln burnt off	
July 30, 1853	3d Lime Kiln burnt off	

¹² Brian Charles Coyle, "The Puget's Sound Agricultural Company in Vancouver Island, 1847-57" (unpublished Master's thesis, Dept. of History, Simon Fraser University, 1977), 32. Citing a letter from Douglas to Pelly, Colvile and Simpson, 8 October 1853, HBCA.

Robert Melrose, "Royal Emigrant's Almanack Concerning Five Years Servitude Under the Hudsons Bay Company on Vancouver Island" (unpublished diary), PABC.

August 23, 1853	Brick kiln burnt off
August 25, 1853	Commenced to plaster the houses with Lime
September 14, 1853	James Wilson & the Author's Vent put up
September 20, 1853	James Stewart's Vent put up
September 21, 1853	Andrew Hume & Duncan Lidgate's Vent put up
September 23, 1853	John Hall & James Whyte's Vent put up
September 27, 1853	William Veitch and James Liddle's Vent put up
August 9, 1854	Brick Kiln burnt off
August 11, 1854	4th Lime Kiln burnt off
October 6, 1854	Mr. McKenzie's vent put up
November 2, 1854	2 more vents put up
November 16, 1854	School vents finished
April 19, 1855	House for Brick Machine put up
June 18, 1855	Clay Mill erected
November 10, 1855	Brick kiln burnt off
February 22, 1856	James Downie commenced to make bricks
May 10, 1856	Brick Kiln burnt off

From Melrose's entries it is apparent that bricks at Craigflower were probably being made entirely by hand prior to the installation of the brick machine or clay mill during the spring of 1855. This is verified by a reference in a letter from Andrew Colvile to Kenneth McKenzie dated 13 January 1854 in which he states:

All the articles you ordered are being prepared and Mr. Stanley is instructed to engage the man you wanted. He is also preparing a machine to be worked by hand for making tiles and bricks for you. . . . ¹⁴

This reference likely refers to the machinery that was installed a year later.

Although Melrose's diary indicates that local bricks were widely in use at Craigflower Farm during the 1850s, some imported firebricks also were used in conjunction with the local soft product in 1854-1855 at the Colonial schoolhouse adjacent to the farm. Firebricks in the four hearths

¹⁴ Colvile to McKenzie, 13 Jan. 1854, Correspondence Outward, PABC.

in Craigflower Schoolhouse bear the imprint "RUFFORD/STOUR-BRIDGE," indicating they were produced by the firm of Francis T. Rufford, Hungary Hill, Stourbridge, England. This business, which began making firebricks by 1800, had supplied the Hudson's Bay Company's Columbia Department for its Outfit of 1852. Since all firebricks during this period were imported into the colony, it is not unusual to find the imported and local products in juxtaposition.

Of particular interest in Melrose's entries is the fact that construction of "vents" (chimneys) did not begin until after the first batch of bricks had been burnt. Subsequent periods of chimney construction also coincide with the burning of later kilns. Such correlations suggest strongly that chimneys on the farm were made entirely of locally produced bricks. However, after the introduction of the brick machinery in 1855 Melrose makes no further reference to the construction of chimneys, although he does write that at least two brick kilns were burned off. This may suggest that bricks were being produced at Craigflower during 1855 and 1856 that could have been available for use beyond the settlement.

Due to the low capital investment needed for making bricks other short-lived, seasonal brickyards may have been in production around Victoria in the mid-1850s, encouraged by the possibility of ready sales in a captive market. One such venture is suggested by the purchase of bricks for the Victoria Parsonage from a man named Gabriel in September 1855. The order was a small one, probably about 5,500 bricks, a quantity that could have been made by one person over the previous summer.¹⁵

In the early 1850s the Hudson's Bay Company considered the possibility of making bricks in at least one other centre on Vancouver Island: Nanaimo. Geologically the choice was obvious because good quality clay, including fire clay, is frequently found adjacent to coal beds, as exemplified by the Eardington Brick Works and Colliery in South Staffordshire. George Robinson was in charge there¹⁶ when he was selected as the manager and superintendent of "the Company's Coal Mine and Brick Works at Nanaimo." Although suitable clay was present and George

Entry for Sept. 1855 in "Fort Victoria Journal" (unpublished manuscript), PABC. Hereafter referred to as "Fort Victoria Journal." The quantity was calculated from the amount paid Gabriel (£12/10/0), divided by the rate in 1853 for bricks of £2/4/0 per thousand.

¹⁶ H. Keith Ralston, "Miners and Managers: The Organization of Coal Production on Vancouver Island by the Hudson's Bay Company, 1848-1862," in The Company on the Coast (Nanaimo: Nanaimo Historical Society, 1983), 52.

¹⁷ Randolph Vickers, "Account of Life and Times of Vancouver Island Pioneer George Robinson" (unpublished family history, n.d.), [citing a letter from W. G. Smith to Board of Management of Western Dept., 1 June 1854].

Robinson had the mandate and supposed expertise to oversee the production of bricks, no record of brickmaking at Nanaimo before or shortly after Robinson's arrival on the *Princess Royal* in 1854 has yet been located. Nevertheless, the Nanaimo clays did give rise later in the nineteenth century to several commercial brickyards.

The accounts of Kenneth McKenzie, Craigflower's bailiff, verify that he was selling bricks beyond the farm as early as 1854. For example, the entry for April 25, 1854, records the sale of 500 bricks for the sawmill at Albert Head. In October 1856 Dr. J. S. Helmcken purchased 1,550 bricks, likely for the first addition to Helmcken House, In December 1857 McKenzie recorded that George Greenwood and James Liddle conveyed bricks from Craigflower to "Dallas Bank," the new home of Alexander Munro which McKenzie was building at Esquimalt Harbour. Photographs of the completed house show it to be of frame construction, but with substantial brick chimneys.

In spite of the fact that Craigflower Farm had the capability of producing its own bricks, Kenneth McKenzie purchased an additional 20,000 from George Mason in Victoria in July 1857.²⁸ The reason for this transaction, akin to bringing coals to Newcastle, may never be known, but two apparently unrelated events may have had a bearing on it. At the end of July 1857 the indentures of the original Craigflower settlers expired and many of the men, including Robert Melrose, did not renew them. Whether or not brickmaking took place at Craigflower after Melrose's last entry for it in 1856 is not known through any other written accounts found in association with the farm. Nevertheless, McKenzie's labour force was greatly reduced at the end of July, and making bricks would have been difficult to carry on.

Equally as revealing is the fact that the transaction with George Mason took place exactly one week before the first of four shipments of bricks left Victoria for Washington Territory during July and August 1857. The 20,000 bricks obtained from Mason could have formed the bulk of the exports sent across the Strait of Juan de Fuca at this time. If McKenzie had secured a major order for bricks, it is possible that due to his labour

¹⁸ Daybook, vol. 3, Kenneth McKenzie Collection, PABC.

¹⁹ Ledger, 1856-58, vol. 4, Kenneth McKenzie Collection, PABC.

²⁰ Ibid.

²¹ Daybook, vol. 20, Kenneth McKenzie Collection, PABC.

²² PABC — Visual Records Division, Photograph no. 15257.

²⁸ Daybook, vol. 14, Kenneth McKenzie Collection, PABC.

difficulties he needed to augment his own stockpiles with other locally made bricks. However, until further documentation comes to light it remains conjecture that McKenzie was the vendor to the United States.

The export of bricks to Washington Territory is revealed in the records of the United States Customs for 1857 and early 1858 which show that at least 32,000 bricks were landed in the Territory directly from Victoria.²⁴ This information is represented in table 1.

TABLE 1

Bricks Imported to Washington Territory from Victoria, 1857-58

Date	Importers	Vessel	Origin	Quantity
July 23', 1857	J. Stevens	Schr. Mary Dunn	Victoria	1,000
Aug. 10, 1857	J. Cornish	Schr. Mary Dunn	Victoria	12,000
Aug. 19, 1857	James Jones	Schr. Urla Pigeon	Victoria	3,000
Aug. 25, 1857	J. Stevens	Schr. Mary Dunn	Victoria	1,000
Dec. 12, 1857	Washburn & Wheeler	Schr. J. N. Eley	Victoria	4,000
Dec. 28, 1857	Washburn & Wheeler	Rob Roy Victoria		10,000
May 1, 1858	Washburn & Wheeler	Schr. H. C. Page	Victoria	1,000

Documentation reveals a growing export market for bricks through Victoria in the period before 1858, notably to Russian America, Washington Territory and possibly Hawaii. The shipments to Washington Territory in 1857 and 1858 comprise the largest known export of bricks from Victoria, either for ones made there or for those merely trans-shipped through there. The intended trans-shipment of firebricks to Alaska in 1850, previously mentioned, was not likely a unique occurrence, but no further information has yet been found which reveals the extent of this trade.

Whether or not bricks were sent from Victoria to Hawaii remains uncertain, but correspondence in August 1857 between James Douglas and Robert Clouston, the Hudson's Bay Company's agent at Honolulu, indicates that this definitely was contemplated. Responding to an enquiry

²⁴ United States, Puget Sound Custom District, Import Entry Registers, Record group 36, Series II, vols. 1-45, Federal Archives and Record Center, Seattle. Thanks to Karl Gurcke for bringing this source to my attention.

from Clouston, Douglas wrote, "I observe your desire to procure bricks, any quantity can be supplied from this Colony, provided they be sold to advantage." In light of the large shipments to Washington Territory at the time which would have reduced existing stocks, the seasonal nature of brickmaking, and the fact that early in 1858 the gold rush caused prices to soar for building supplies in Victoria, it is unlikely that if an actual order were subsequently received from Clouston it would or could have been filled. Nevertheless, Douglas' response proves that by 1857 he considered the brick industry on Vancouver Island able to participate actively as an exporter.

Governor James Douglas' other plan, to reduce the cost of bricks, was also effective. Whereas he was obliged to pay £5/4/o per thousand for them in 1849, and in 1851 a price of £5/16/o was recorded for bricks likely destined for Governor Blanshard's residence, by 1853, when the Victoria District School was built, the price per thousand was only £2/4/3²⁷ and in 1857 George Mason sold bricks at \$12 per thousand, or approximately £2/14/o. The reduction in price between 1851 and 1853 undoubtedly was the result of the rise of the local brick industry. Of particular note, too, is the fact that Douglas' target price of forty-five shillings per thousand (£2/5/o) was attained.

The local trade and manufacture of bricks which began during the early 1850s expanded with the rapid growth of Victoria after 1858. The pages of the city's early newspapers provide a clue to a greatly increased local market for bricks. For example, eight different advertisements for bricks appeared in the Victoria *Gazette* and *Colonist* from March to July 1850. In part they read:

March 29 Bricks. 26,000 English building

bricks. For sale by Sam'l Price &

Co. (Gazette)

April 9 Bricks & lime. 40,000 U.S. brick.

For sale by John T. Little, Wharf

St. (Gazette)

April 28 Builders' materials per barque

"Leonesa" from San Francisco. 9000

California bricks. (Gazette)

Mackie, p. 154, citing Douglas to Clouston, 11 Aug. 1857, Fort Victoria, Correspondence Outward, 1856-58, PABC.

^{26 &}quot;Fort Victoria Journal," Aug. 1851.

²⁷ Ibid., 22 Aug. 1853.

²⁸ Account Book, vol. 14, 1857, Kenneth McKenzie, PABC.

April 30	Bricks. 100,000 bricks for sale. The bricks are on Mr. Work's land. Apply at the Brick Yard to Arthur Porter. (Gazette)
May 3	Lime! Lime! Bricks! Bricks! 20,000 Victoria bricks. For sale by John T. Little, Wharf St. (Gazette)
June 27	"Imports". 20,000 fire bricks from Honolulu. 27,000 bricks from San Francisco. (<i>Colonist</i>)
July 23	50,000 California brick. 20,000 English building brick. Samuel Price & Co. (<i>Gazette</i>)

The information from the foregoing advertisements is shown in table 2, which itemizes the numbers of bricks by origin.

TABLE 2

Quantities and Origins of Bricks Advertised
in Victoria Newspapers
March to July 1859

Date	Calif./ U.S.A.	England	Victoria	Other
March 29		26,000		
April 9	40,000			
April 28	9,000			
April 30			100,000	
May 3			20,000	
June 27	27,000	· · · · <u></u>		2,000
July 23	50,000	20,000		
TOTALS	126,000	46,000	120,000	2,000

Since many other bricks could have been consigned before arrival or manufacture, the advertisements can be considered only as a partial inventory of bricks for sale at the time. In fact, besides the newspaper advertisements, records from the Custom House for Vancouver Island at Victoria do corroborate the arrival there of 226,000 bricks for the period before August 1859. Although no places of origin for the bricks are listed in six separate entries, the figures do prove that more bricks had been imported than the advertisements had enumerated, with imports out-

numbering the locally made bricks during the period possibly by almost two to one.²⁹

During 1858 and 1859 most of the local and imported bricks would have been used in Victoria itself in the many brick buildings erected then, including: the Royal Hotel, the Victoria Hotel, the Hudson's Bay Company Warehouse, the Colonial Administration Buildings, and Fisgard Lighthouse. Nevertheless, a demand for bricks from Victoria grew in other places, too. For example, this order written by Robert Burnaby, Colonel Moody's Secretary, was sent to Victoria in March 1859 from Queensborough:

If you have any really good bricks such as you could recommend will you be kind enough to send seven thousand as early as possible by Schooner if you hear of one coming this way — or as quickly as may be otherwise — to be delivered... on the shore and stacked above high water mark.

If you can get good firebricks in Victoria please send four thousand — if not to write for them in San Francisco, care being taken that they are to be of the very best quality — also twelve dozen plain flat tiles....³⁰

During the 1860s Victoria remained a supplier of bricks for New Westminister because numerous attempts were made to begin brickmaking in the vicinity of the Royal City at this time without lasting success.

One tiny, isolated shipment overseas is recorded which illustrates more the stature with which brickmaking was viewed in Victoria, rather than where typical or potential markets lay. "Specimens of red bricks, manufactured near Victoria," was a listing in the Vancouver Island section of the *Illustrated Catalogue* of the International Exhibition of 1862 in London, along with a fir spar, gold, garden seeds, a pair of antlers, a sample of wool, oulachon oil, and a bundle of kelp, among other commodities.³¹

Two of the 1859 Victoria newspaper advertisements indicate that a substantial number of the bricks for sale were being produced locally, probably from at least two different sources. One of these was the brick-yard on John Work's land which was operated by Arthur Porter, who had arrived in Victoria in July 1858. He and his brother, James, who joined him in the brick trade originally were from Sunderland, England, and had reached Victoria separately via the United States. The "Porter Bros. brick fields," located north of town on what was then known as the

²⁹ Vancouver Island, "Custom House Journal," PABC.

³⁰ Robert Burnaby to A. F. Main, 14 March 1859, Colonial Correspondence, PABC.

³¹ The Illustrated Catalogue of the Industrial Department, vol. III, Colonial and Foreign Division (London: Her Majesty's Commissioners of the International Exhibition of 1862, [1862]), 61.

Saanich Road, was in business in 1858 according to Edward Mallandaine, an architect who arrived in Victoria that year. Mallandaine believed that bricks "of unusual size" from this source had been used in the construction of the Victoria Hotel which, he said, was the first allbrick building in the city.³² Porter's yard was mentioned in the 1863 British Columbia and Victoria Guide and Directory, and continued to be included in directories until the early 1880s. Subsequently it was operated by the Humber family.

If, as seems likely, another Victoria brickyard was the source of the 20,000 bricks advertised by John T. Little, its exact identification remains uncertain. However, besides Arthur Porter, several other local brickmakers or yards could have been the supplier, including George Balls, George Mason, Robert Porter and the yard at Craigflower Farm. Although details of his operation have not been substantiated, George Balls is alleged to have made some bricks for the Victoria Hotel in 1858,33 and he is known to have supplied bricks for Race Rocks Lighthouse in 1860.34 Nevertheless, a partnership in land ownership and the saloon business during the 1860s between Balls and George Mason suggests some earlier link in the brick trade as well. George Mason himself, no longer under contract to the Hudson's Bay Company, continued as a brickmaker at least as late as 185935 and reputedly was then still assisted by Robert Porter (no relation to Arthur). Their works were located near St. Ann's Academy, north of Beacon Hill Park, until they moved operations further away to a site on Belcher Avenue, now Rockland Avenue near Moss Street.³⁶ On the other hand, the fate of the well-equipped brickyard at Craigflower remains a mystery after 1857, and no record of the sale of the machinery has been located, so there is a possibility that it, too, was still supplying bricks for local consumption in 1859. Therefore, since no other brickyards are known to have existed around Victoria then, the

³² Colonist, 9 April 1904, 4. The reference to "unusual size" was clarified in 1983 during renovations to the building, still standing in downtown Victoria. The bricks were discovered to approximate the dimensions of English Standard bricks, which are slightly larger than ones manufactured according to North American standards. Of course, this also begs the question whether the bricks were really from England and not Victoria at all.

³³ Colonist, 8 April 1904, 4.

³⁴ Pearse to Young, 4 Sept. 1860, Colonial Correspondence, PABC.

⁸⁵ Indenture between George Mason and Alfred Waddington, 8 Nov. 1859, PABC.

³⁶ PABC — Vertical File, "Robert Porter." See also a "Sketch Plan of Fort Victoria" by Alex Halkett, 1926, PABC — Maps Division.

reference to 20,000 bricks for sale by John T. Little on Wharf Street likely was to bricks manufactured by one of these sources.³⁷

Several other indicators point to a brisk trade in bricks in Victoria from 1858 to about 1864. For example, in May 1859 the Victoria Gazette had published a notice for the sale or lease of a brickyard "comprising eight full sized lots, with a good well of water, conveniently located." Applications were to be made to John T. Little, Wharf Street. In addition, a year later the Colonist noted that several firms were "now busily engaged in burning brick." One of these firms probably was that of Archibald and F. Fox who, in March 1861, had written to Captain Luard of the Royal Engineers at Sapperton stating that they had sent an order of 14,000 bricks by the scow Mary Ann, and quoting a price of \$10.50 per thousand and freight of \$5.50 per thousand. The Foxes' ability to supply bricks in early March certainly points to their having been in production for at least the previous year. However, neither the exact date of their commencement nor their yard's initial location are known.

The seasonality of brickmaking and the competition, coupled with the depressed economy after 1864, may have compelled some brickmakers either temporarily to abandon brickmaking altogether or at least to diversify their activities. For example, George Mason was listed in the directory only as a saloon keeper during the 1860s, although he was shown again as a brickmaker on the Saanich Road by the 1870s. Of interest, too, is the fact that for Archibald Fox during much of the 1860s brickmaking was only a part-time occupation, because he was listed in the directories of 1860 and 1863 as proprietor of a "haircutting saloon, Yates St." Nevertheless, by 1868 brickmaking was listed as his only occupation, with his yard on the Saanich Road.

One of Victoria's greatest advantages in the brick business was that it was the major population centre in the northwest until late in the nine-teenth century. In addition, the quality of the local clay for common

³⁷ That George Mason was the actual source is suggested by the fact that the quantity exactly corresponded to the size of the sale he had made to Kenneth Mc-Kenzie two years earlier, indicating that Mason may have routinely burned kilns of 20,000 bricks at a time.

³⁸ Victoria Gazette, 12 May 1859.

³⁹ Colonist, 5 June 1860.

⁴⁰ Fox to Luard, 14 March 1861, Colonial Correspondence, PABC.

⁴¹ This brickyard at first was probably only a part-time operation for the Foxes, because they were listed in the 1860 and 1863 directories as proprietors of a "hair-cutting saloon, Yates St."

bricks was good and the expertise of the established brickmakers was difficult to compete against by newcomers in the field. This is partly demonstrated by the fact that during the 1860s many brickyards were started in communities in British Columbia, Vancouver Island and Washington Territory, but apart from those in Victoria few were successful, and none at this period seemed able to continue in production or compete with the yards around Victoria, even though prices for the bricks produced in Victoria were considered exorbitant, at least by the *British Columbian* in New Westminster. For example, it is interesting to note that in the summer of 1861 S. Meyer Clark, proprietor of a new brickyard on San Juan Island, had produced 200,000 bricks selling for \$7.00 per thousand at the yard, a figure substantially cheaper than Archibald Fox's in Victoria, but the Victoria yards and not Clark's survived the economic depression of the 1860s.

The existence of many short-lived brickyards, especially those which left few written records, may only be verified by artifact examination, sometimes assisted by archaeological excavations. For example, evidence exists that in the mid-1860s a brickmaking site was located in an area of Beacon Hill Park some distance from the place at the north end of the park where George Mason had operated. In a letter of 21 July 1866 to the Colonial Secretary the Victoria Cricket Club asked if it could "prepare a piece of land in Beacon Hill Park, in the vicinity of the Brick Fields, for the purpose of a public cricket ground."44 Permission to use this land had been requested in 1864⁴⁵ and apparently cricket had been played there since that time. The possible location of this brick field may be deduced by reference to two photographs of 1864 and 1865 which show cricket scenes on the grounds immediately to the west of Beacon Hill.46 One taken of "the Victoria Eleven" in 1864 shows a tall wooden framework with a tarpaulin draped over it in the background. The structure has no relevance to the game and is too large to serve as a clubhouse. It is exactly what one would expect to find in a seasonal brickyard to shelter drying bricks and may have been used for that purpose. No other written documentation has been found that deals with the brickfields referred to in the Cricket Club's letter, but the evidence

⁴² British Columbian, 27 Sept. 1864.

⁴³ The North-West [Port Townsend, W.T.], 8 Aug. 1861.

⁴⁴ Charles A. Bacon to W. A. G. Young, 21 July 1866, Colonial Correspondence, PABC.

⁴⁵ J. Barnell to Governor Kennedy, 2 June 1864, Colonial Correspondence, PABC.

⁴⁶ PABC — Visual Records Division, Photographs no. 7795 and 7796.

strongly suggests that they were close to Beacon Hill's western slope. This area was, in fact, labelled as a cricket field on later maps.⁴⁷ Although the area has been disturbed by park landscaping, archaeological excavations may reveal some features to help substantiate the presence of a brickyard there. In another example where no written evidence exists at all, bricks recovered from the Brule house beside the Sooke River have been studied and are believed to have been produced on-site solely for the chimney of this house, reputedly built in 1859.⁴⁸ Whether or not other similar brickyards were established before 1871 in other areas near Victoria is still a matter for speculation and further study.

From the mid-1860s until the end of the century, except for the brick-yards along the Saanich Road, no references to other yards in the Victoria area have been found. The manufacture of bricks at Esquimalt Farm, if it happened at all, likely was short-lived around 1853. The brick production at Craigflower Farm is well documented for the period 1853 to 1857, but probably did not continue after that time. George Mason began making bricks for the Hudson's Bay Company in the early 1850s. Some time after 1853 he was assisted by Robert Porter at a site north of Beacon Hill Park, and eventually the two men established a brickyard of their own near the present corner of Rockland Avenue and Moss Street, but probably did not continue there beyond the early 1860s.

Starting with the building boom that began in Victoria and other British Columbia communities with the 1858 gold rush, brickyards began to be located north of Victoria along the Saanich Road. Arthur Porter's yard on John Work's property was the first in production there by 1858; by 1868, and possibly as early as 1861, Archibald Fox was also manufacturing bricks in that vicinity. Eventually this was where George Mason also started another brickyard. Over the next several decades others were established in the Saanich Road area, the last one closing as late as 1961. Also, around the turn of the century and particularly during the period just before World War I, many other brickmaking ventures were attempted in the suburbs of Victoria and north into the Saanich Peninsula and in the Gulf Islands. Today, however, none of these businesses remain.

The study of brickmaking's origins in Victoria and the use and trade of bricks there reveals how closely linked to the early colonial economy bricks were. Few other manufacturing processes can claim to have had

⁴⁷ D. R. Harris "A Map of the City of Victoria, British Columbia..." (London: James Wylde, engravers, 1884).

⁴⁸ Sooke Region Museum, Catalogue no. 979.81.1.

such early beginnings in British Columbia. This is partly accounted for by cultural and economic reasons as much as by actual necessity, since native stone could have sufficed for many of the jobs for which bricks were employed. In addition, brickmaking can be undertaken with very little equipment or capital expenditures relative to manufacturing processes such as sawmilling and canning. Lastly, brickmaking did not require a full-time or even continuous commitment from those who worked at it. Hence it was particularly suited to the transient labour force in British Columbia after 1858 and could adapt readily to the fluctuations in the colonial economy.

As settlements expanded in the province during the nineteenth and early twentieth centuries, brickyards were started in many places where good (and sometimes poor) clay deposits were easily accessible. Most of these brickyards were short-lived in comparison to those in the Victoria area which operated for more than a century. Nevertheless, the entrepreneurial spirit of the operators, the technology they used, their market, labour and transportation considerations all have similarities to those experienced in Victoria during the period before 1871.

The study of the trade, manufacture and use of bricks in Victoria during the colonial period provides new insights into industrial, economic and even architectural history important to the analysis of Victoria's rise as a major urban industrial centre by the end of the nineteenth century and in the analysis of the brick industry as it developed elsewhere in the province after 1871.