

2015 ARCHAEOLOGICAL INVESTIGATIONS AT OLD FORT ERIE N.H.S. (AfGr-3)



Old Fort Erie and the Migrations of the Wild Pidgeon in the Spring . Watercolour by Edward Walsh, 1804.

WILFRID LAURIER UNIVERSITY ARCHAEOLOGICAL FIELD SCHOOL

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MAY 2017

LICENCE No. P-048

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Acknowledgements

The author wishes to extend a thank you to everyone involved in the project and their contributions to making 2015 a successful season. I particularly want to thank Heather Gorman, Travis Hill, and Jim Hill of the Niagara Parks Commission, whose support and genuine interest in the project was evident from the initial planning stages, and continues to the present. I value greatly their knowledge of, and expertise in, War of 1812 and Fort Erie history. I also wish to acknowledge the Fort interpretative staff for their assistance which was evident in so many ways during the project, and all NPC grounds crew employees for assisting with site preparation, maintenance, and clean-up.

My Teaching Assistants for the project, Duncan Williams, Katie Anderson, and Justina Zivic, were as always, indispensable for the day-to-day operations in the field and the lab and much credit is owed to them for their professionalism in ensuring the daily operations ran smoothly.

Many volunteers also contributed to the project in so many ways, from excavation and survey, to post-excavation analysis. Former Laurier students Aaron Fehir, Don Patrick and Samantha Patterson assisted with the field excavation; continuing Laurier students Neil Peterson, Laura Inthof, Kimberly Tobin, Kristen Wise, and Sydney McGovern were helpful volunteers in the lab processing the thousands of objects found; Directed Study students Owen Harvey and Tyler Besser completed a detailed analysis of buttons and small finds and an analysis of the lithic assemblage, respectively, and whose reports are included herein as Appendices E and F; Work Study students Max Zibaei digitized the many field drawings and Justina Zivic catalogued artifacts and maintained order in the lab; Adam Shoalts, Ph.D. student at McMaster University spent the better part of the 4 week field season in his most interesting Unit; and Richard Gerrard, Historian, Heritage Toronto was on site for several days to aid in the identification of small finds and other artifacts. Owen Harvey also assisted with the image editing and formatting for his Button and Small Find report, Appendix E, and the editing of Appendix F, Lithic Analysis report.

Thanks to the students of the fall 2015 AR217 Archaeological Laboratory class for cataloguing the collections from various Units from the 2015 field school.

I also want to thank my wife, Dr. Lisabeth Robinson, Historian at the Western Reserve Academy, Ohio, for her interest and support, and most of all her keen insight into the findings.

Finally, a special thank you goes out to all of the students involved in the project this year: Danielle Bella, Tyler Besser, Iain Clemett, Nikki Fraser, Curtis Garde, Joshua Graf, Alexander Harrod, Owen Harvey, Tyler Martinek, James Nuhn, Katie Ossterhof, Noah Prymak, Robyn Pegg, Logan Terron, Kimberly Tobin, Mitchell Wilson, Kristen Wise, Yujia Wu, and Max Zibaei. It is due to their hard work that I am able to report on the discoveries discussed below.

I offer my sincere apologies to any whom I have inadvertently omitted from these acknowledgments.

1.0 Introduction

In the spring of 2015 a Wilfrid Laurier University archaeological field school was conducted on the site of Old Fort Erie, N.H.S. under the direction of Dr. John Triggs, Department of Archaeology and Classical Studies. The field school ran for six weeks from May 4 - June 12 and was carried out with the assistance

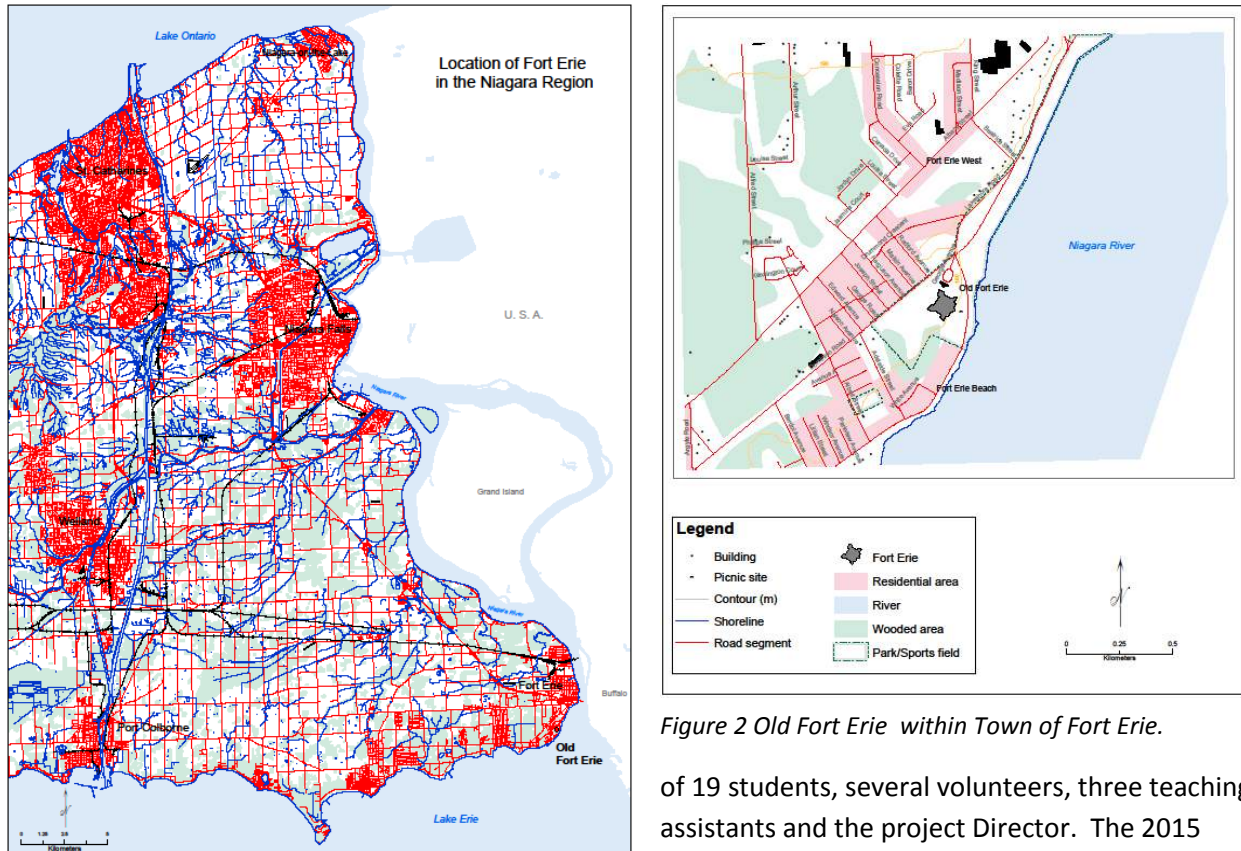


Figure 1 General location map showing Fort Erie at mouth of Niagara River.

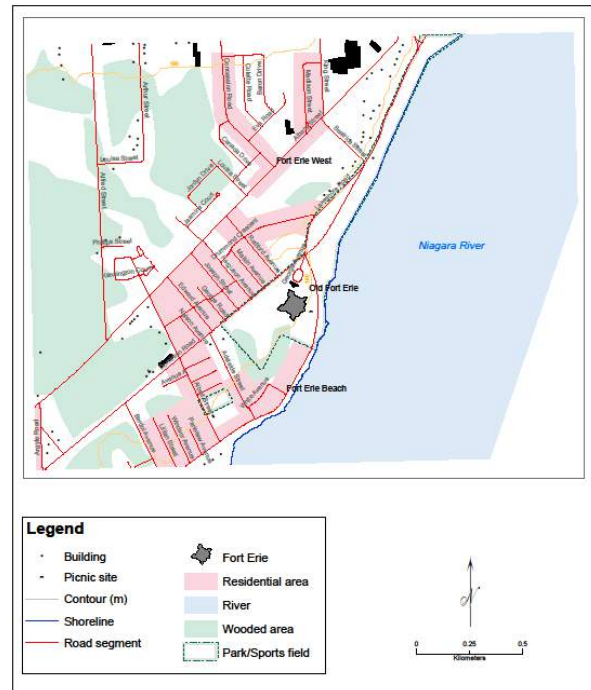


Figure 2 Old Fort Erie within Town of Fort Erie.

of 19 students, several volunteers, three teaching assistants and the project Director. The 2015 season marked the third such project on the site of Old Fort Erie in which research archaeology was conducted with the objective of addressing specific questions posed before the field work began (Triggs 2015a, 2015b). The overall purpose of the third season of excavation was to investigate an area to the south of the modern fort which was occupied during the 18th century when the first Fort Erie stood on the lakeshore. The area was also within the American encampment during the siege in the summer and fall of 1814, and promised to provide evidence of the occupation by American forces at that time. The general area is depicted on many 18th and 19th century maps, and the objective was to determine if evidence remained of both the 18th century occupation and the siege itself. If found, the 18th century fort the project would distinguish itself as the investigation of the oldest British military site in the province.

The investigation began on May 12 by first conducting a Stage 2 test pitting survey, as defined by the Ministry of Tourism, Culture and Sport, Archaeological Guidelines for Consulting Archaeologists, 2011. The test survey was carried out in the open area to the south and west of the extant Fort Erie, the

second fort. Based on the results of the survey three excavation areas were designated as Areas 1, 2, and 3 and several excavation Units were laid in for each area. Early in the excavation the findings were promising as evidence of the 18th century occupation was found just below the sod layer. Dating was based on several mid-late 18th century ceramics along with wrought nails and window glass which suggested the presence of structures in the general area. Diagnostic metallic artifacts such as a pewter British 5th regimental button, an unidentified pewter military button, a brass dome button, a tack and thimble also suggested that the area had been little-disturbed by metal detectors in recent years.

Over 4 weeks, from May 13 to June 5, manual excavation of 22 Units measuring 1 x 2 metres was carried out within Areas 1, 2, and 3: Area 1, Units A-E; Area 2, Units F, G, H, J, K, M, N, P, Q, R, X, and Y; Area 3, Units S, T, U, V, and W (Figure 3). Placement of excavation Units was based on test pit results which yielded the highest concentration of artifacts. Items such as ceramics, container glass, nails, window glass, smoking pipes, and lithics were all considered when laying in the excavation Units. Students were assigned a specific Unit, and over the course of the next 4 weeks, excavation proceeded using a stratigraphic excavation methodology and recording system based on the Harris matrix method (Harris 1979). In each area evidence was found of the 18th century occupation of the site.

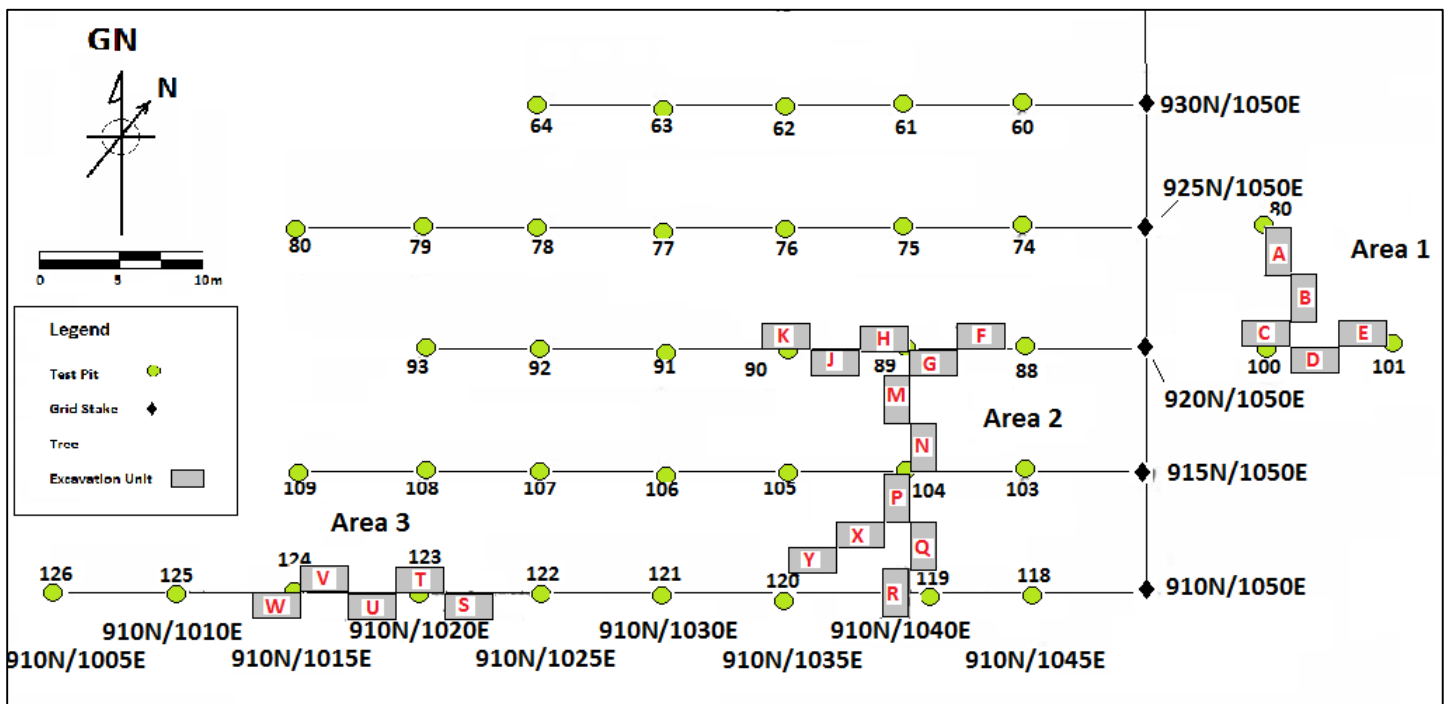


Figure 3 Plan showing excavation areas and Units. Not all test pits are shown. These are discussed further in Section 4.0.

Area 1 yielded evidence of a blacksmith shop dating to the 1780s and possibly earlier up to the construction of the new Fort Erie in 1805. Architectural elements such as walls, partitions, a forge and several other features were documented during the excavation in addition to thousands of artifacts that provided a picture of life at the fort in the last third of the 18th century. Area 2 was characterized by a complex stratigraphic sequence in which a succession of buildings was built in the same location. The discovery of a masonry double fireplace and associated artifacts suggested that the structure was an

officers' quarters dating to the period of the first Fort Erie. In Area 3 evidence indicating the presence of a nearby structure also dating to the period of the first fort was found in several excavation Units. Features such as a palisade trench and fence-line, posts, and pits, together with artifacts dating from the last third of the 18th century, all indicated that a residential structure was situated in the general area.

In addition to these findings, evidence of pre-contact period occupation spanning thousands of years from the late Archaic to the Middle Woodland periods was also found in all three Areas. Diagnostic chert projectile points and ceramics, together with settlement features such as pits and posts, point to an intensive occupation and re-occupation of the area by groups of people for millennia.

Unlike the 2012 and 2013 excavations, evidence of the siege from the 2015 investigation is sparse. A few American military buttons with identifying insignia were recovered but the findings are much less in evidence than in the earlier projects. That being said, previous work on the site in the general area, particularly the Douglass Battery investigation of 2013, did reveal substantial numbers of artifacts dating to the 1814 American occupation. As mentioned in the 2012 and 2013 reports, it is important to recognize that artifacts dating to this period in the fort's history, and all previous periods, is present at a minimal depth below the modern ground surface. It is for this reason that modern archaeological methods must be used to recover artifacts from carefully documented layers in precisely located excavation Units by employing using stratigraphic excavation methods. Artifacts found in undisturbed contexts are the unique purview of archaeology. They provide tangible evidence of the daily activities of the people stationed at the fort as well as other, sometimes unexpected information. A study of the artifacts found in context in 2012, for example, shed new light on the defensive and offensive strategies employed during the siege. These objects are the facts, which when found in context, provide the basis for reconstructing an archaeologically-informed narrative of the siege quite distinct from narrative formed using only historical records.

The following report documents the results of the 2015 project. Presented are the analysis and interpretation of artifacts and stratigraphic layers within an archaeological chronology represented by Periods defined across the site (Areas 1, 2, and 3). Periods discussed in the report are the same as those defined in the 2012 and 2013 reports for cross-comparison. The main distinction between earlier excavations and the 2015 investigation is that the latest work yielded archaeological evidence recovered from layers and features dating to the period prior to the war of 1812 when Fort Erie served as the sentinel fort guarding the approach to the Niagara River, between 1764 and 1805. The results from each excavation area are discussed in detail below.

2.0 Environmental Context

Fort Erie is situated in the Haldimand Clay Plain physiographic region, specifically in the sub-region referred to as the Niagara River Valley, a flood plain about 400 metres wide (Chapman and Putnum 1984). Overlying the sedimentary upper Silurian and lower Devonian age bedrock geology, the clay plain in the region of the fort is characterized by a very compact, glacio-lacustrine clay deposit varying in thickness from a few centimetres closer to the lakeshore to at least 40 centimetres in the area of the 2012 excavations based on test pit excavations in two Units (Fanning's Battery, Unit E and Western Redoubt, Unit A). The most significant outcrops of the bedrock geology are the Onondaga Formation and the Bois Blanc Formation, both sources of cherty limestone. Onondaga chert, the most abundant natural material from which chert was quarried by aboriginal peoples, is available in outcrops on the north shore of Lake Erie in the vicinity of the fort and for about 100 kilometres west to Nanticoke.

Situated only a few metres from the shoreline of Lake Erie, the land now comprising Fort Erie National Historic Site has been subject to periodic episodes of inundation due to rising lake levels. Historically, lake levels vary as much as a metre annually although rises of as much as 2.4 metres (roughly 8 feet) have been recorded (MacDonald and Cooper 2006: 11). In fact, the destruction of the first fort built in 1764 is directly attributable to damage from ice and fluctuating lake levels in the last third of the 18th century (see Historical Background, Section 3.0). The site of the 2012 excavation ranges from approximately 177 to 180 metres elevation, compared to the lake level of about 174 metres ASL. This area would never have been inundated even with a rise in lake levels of as much as 2.4 metres. Underlying sediments in the vicinity of the 2012 excavation are therefore all glacio-lacustrine clay deposits. Soils in the region of the fort are referred to as Luvisolic, characterized by slightly acidic A and B horizons formed over calcareous parent materials. Natural sediment formation (the clay-loam A-horizon) over the clay subsoil (the B-horizon) varies in thickness, depending on the situation of the Units, from 0 to 5 centimetres. However, this may not be representative of the actual A-horizon thickness in an undisturbed state. The thinness of the A-horizon in the excavation areas is due to heavy foot traffic during the siege which acted to compress the natural ground surface. Also, the absence of the A-horizon in some areas is due to the excavation and subsequent re-deposition of the original A-horizon for the creation of the defensive earthwork. This may have taken place over a buffer area running parallel to and adjacent to the earthwork, examined in 2012, for several metres yet to be determined. The scraping of the A-horizon in this fashion - in order to build a sufficiently high earthwork - was due to the extremely difficult task of excavating the very densely compact natural glacio-lacustrine clay subsoil, which necessitated 'borrowing' surface soil from a zone adjacent to the mound.

The topography of the northwestern area of the site, where the 2012 excavations were carried out, is characterized by a relatively flat field to the grid-north of the excavation area - the landward side of the earthwork. This stretches from the north side of the earthwork for a distance of as much as 50-80 metres to the parking lot and Lakeshore. To the south the land gently slopes down as much as 5 metres in elevation to the lakeshore on the south side of Lakeshore Road. Here a bluff about 1 metre high on average borders a relatively flat limestone shelf a few centimetres above the current lake level. On the western side of the historic site boundary is a tree line and wooded area about 40 metres wide, beyond which are several houses and yards. The fort itself is located on the east side of the excavation area.

Overall the area is poorly drained and in early spring groundwater can be heard flowing over the impermeable clay subsoil down slope towards the lake shore.

Vegetation in the area during the period of the siege in the early 19th century was likely mostly deciduous, although timber descriptions in Robert Gourlay's Statistical Account for Upper Canada in 1817 does indicate that local variations were common and a mixed conifer-hardwood forest may have also been present. Fort Erie National Historic Site is located in the most northern extent of the Carolinian biotic province, a zone more characteristic of areas south of Lake Erie. Clues as to the natural forest cover and botanical species present are available in historical sources such as diaries, travel journals, surveyor's notebooks, and maps compiled during the late 18th and 19th centuries (MacDonald and Cooper 2006: 19). Wood charcoal recovered during excavations at the Peace Bridge site by Archaeological Services Inc. from various contexts indicate that the area was dominated by ash, elm and oak, with lesser quantities of maple, beech, ironwood, white pine and larch (MacDonald and Cooper 2006: 22). Food species in the southeastern Niagara Region, available to aboriginal populations, and also during early settlement, included nuts (black walnut, butternut, hickory, oak, beech, and chestnut), berries (raspberries, blackberries, elderberry, strawberry, blueberry and cranberry), fruits (cherry, plum, crab apple, and currant) and cultivated vegetables. A wide variety of medicinal plants were also available (MacDonald and Cooper 2006: 25).

Fauna available to aboriginal populations, and early settlers, would have included a wide array of forest-dwelling animals. Among these were large mammals such as moose, white-tailed deer, wapiti



Figure 4 Old Fort Erie With the Migration of Wild Pigeons, dated 1804; by Edward Walsh, Sigmund Samuel Collection, 952.218, ROM2006_7733_1.

(elk), black bear, and small mammals such as raccoon, beaver, muskrat, snowshoe hare, cottontail,

marten, fisher, river otters, weasels, foxes, wolf, cougar, bobcat, lynx, woodchuck, chipmunk and grey squirrel (MacDonald and Cooper 2006: 27-28). Waterfowl would also have been available and included the passenger pigeon in profusion. A watercolour from 1804 by Edward Walsh shows hunters shooting into the overhead flocks of these birds which were ultimately hunted to extinction by the close of the 19th century (Figure 4). Also available were wild turkey, various species of ducks and geese. A wide variety of fish would also have been available to aboriginal populations and settlers. An analysis of the faunal remains from the Fort Erie 2015 excavations has yet to be carried out but it is clear that mammal, bird and fish remains are present in the sample, although the degree to which domesticated and wild species were relied upon during the siege remains to be determined.

3.0 Historical Context

by Adam Shoalts, Ph.D. student, McMaster University¹

Fort Erie is the oldest British military fort in what is now Ontario.² For a quarter of a millennium, under different guises, first as a modest depot, then as a stone fortress, later as ruins, and finally as a reconstructed tourist attraction, it has stood sentinel over the Niagara River. Established in 1764 after the Treaty of Paris formally ceded New France to the British Crown, the early Fort Erie was a remote outpost of the British Empire deep in the North American wilderness. Naturally the British had found it necessary to construct a series of forts in the newly acquired Great Lakes territory to control the area and the lucrative fur trade. This became a matter of urgency with Pontiac's uprising against British rule in 1763.

John Montessor, a captain in the Royal Engineers, was tasked with selecting a suitable location for a fort somewhere near the headwaters of the Niagara River at Lake Erie, and overseeing its construction. Work commenced in the summer of 1764, with five hundred men labouring on the fort. Significantly, this work force consisted of a mix of British regular troops and colonial volunteer Units, including two battalions of Connecticut and New Jersey Provincial forces. Such a mix of Units offers the possibility of testing Andrew Farry's spatial model of British regular and colonial irregular army relations that assumes "significant distinctions will characterize small-scale provincial and British contexts," including differences in ceramics, lead shot, and other distinguishable patterns, which Farry found on Seven Years' War military sites in New York state where both British and colonial forces served.³ If Farry's pattern holds, it may also prove possible to test it against the later Fort Erie, where there was a mix of militia and regular troops, including during the 1814 siege.

While a historical plaque on display at Fort Erie today states that there were two early forts in addition to the 1805 stone fort, this is unlikely. Certainly, the written evidence makes clear that this original fort was in an almost constant state of disrepair owing to lake storms and ice flows, but as David Owen demonstrated in his history of the site there is no reason to think the fort was ever entirely abandoned or completely rebuilt before 1805.⁴ Descriptions of this early fort are limited to sparse military records, a few paintings, and the occasional traveler's terse description (including ones penned by Robert Rogers and Lady Simcoe). Thus, little is known of this original fort, and it is hoped that archaeology will be able to shed more light on it. The almost constant repair work throughout the fort's troubled existence from 1764 to circa 1805 ought to have left behind a rich archaeological record. GIS mapping technology has allowed for period maps of the original fort to be superimposed on contemporary aerial photographs, using the barracks and demi-bastions of the reconstructed second

¹ This paper was prepared as a requirement of a Graduate Directed Study course under the supervision of Dr. John Triggs, Wilfrid Laurier University, Dept. of Archaeology and Classical Studies, in fall 2012.

² Older British forts were established on Hudson Bay and James Bay, but these were built by the Hudson's Bay Company, a private corporation, rather than the British military.

³ Andrew Farry, "Regulars and "Irregulars": British and Provincial Variability among Eighteenth-Century Military Frontiers," *Historical Archaeology* 2005, 39(2):16.

⁴ David A. Owen, *Historic Fort Erie 1764-1823: An Historic Guide* (Niagara Parks Commission: 1986), 18-19.

fort as location markers. This gives an approximate idea of where the bastions and walls of the original fort were located in relation to the modern landscape. Some of the major unresolved questions about this first fort are to what extent it functioned as a fur trade depot; how it was laid out and what buildings and barracks it contained, what it contained in the way of gun batteries and powder magazines, and if there is any evidence of ship-building activity at the site. Another major unresolved question about this original fort involves its somewhat mysterious depiction on three maps as apparently missing one half. Maps dating to 1794, 1798, and 1803 all display Fort Erie as consisting of only two landward facing bastions, with the waterside of the fort nonexistent. A letter dated May 20, 1781 stated that the fort "...is in general in a bad state of defense. *The face next the Lake is laid clear open by the late storms*, and the whole Fort must be picketed. The Artificers are now repairing the works..."⁵ It would seem extraordinary that a storm could have "laid clear open" the fort's walls, but this is apparently the case. In spring when the ice breaks up on Lake Erie, large ice flows drift down the Niagara River that in a storm can inflict considerable damage to any structures fronting the river. A June 24, 1781 report noted that, "Fort Erie (has been) new(ly) picketed, and the Stonewall, next the Lake repair'd..."⁶ While repaired, the fact that this wall and lakeside bastions are missing from the 1794, 1798, and 1803 maps indicate that the fort was regularly damaged by ice and storms. This is also clear from the documentary record. Accounts written throughout the 1780s describe the fort as in "ruins."⁷ A report dated December 6, 1788 provides more detail: "The whole of Fort Erie is in so wretched a state and altogether so much in ruins that it is not easy to say which is the worst part of it...*the front next the water which has a stone wall has been washed away by the encroachment of the Lake.*"⁸ In the summer of 1790 one Major Robert Matthews reported of the fort that, "The work consists of four small Bastions, two of bad mason work washed by the lake, and two on the land side stockaded, it is quite in ruin and was originally very improperly placed."⁹ If storms and ice really did wash away on multiple occasions the fort's waterside stone wall, perhaps some of the stone may still be found lying in the shallow waters of the river. At any rate, given that a 1792 report informs us that the fort contained a blockhouse that was, "54 feet long 30 feet wide...the upper floor projects two feet from the lower part which is built of stone" some archaeological evidence of these structures must presumably remain.¹⁰ Furthermore, a civilian visitor to the fort in 1796 noted in his journal that adjoining the fort were, "extensive stores as at Chippeway, and about half a dozen miserable little dwellings."¹¹ Two paintings of the fort also depict these buildings adjacent to the fort as well as gardens.

The maps also indicate that two wharfs existed below the fort. The cribbing of one these wharfs, labeled as "Grant's & Kirby's wharf" on an 1818 map, is still visible today in the waters of the Niagara River. An 1803 map also displays a "merchant's store" adjacent to this wharf, and this building appears on various subsequent maps. The other wharf is depicted as almost directly below the site of the second Fort Erie, and is labeled on an 1818 map as the government wharf. Given the extensive damage from ice

⁵ Owen, *Historic Fort Erie*, 31.

⁶ Ibid.

⁷ Owens, 31-32.

⁸ Owens, 32.

⁹ Owens, 33.

¹⁰ Owens, 34.

¹¹ Owens, 39.

to buildings and to the original fort, one wonders if archaeology might reveal that considerable local ship and boat maintenance took place near these wharfs.

By 1805 the British army began construction of a new stone fort in a location above the old ruined fort, a safe distance from the ravages of the Niagara River and Lake Erie. While we know much more about the construction, design and internal layout of this second Fort Erie, there are still major gaps in our knowledge of it. For example, archaeology could possibly reveal the location and extent of the fort's stables, which must have existed but are not mentioned in any of the written sources. It is also not known from the documentary record whether or not Fort Erie had a blacksmith shop. Based on other British forts in Canada, such as Fort St. Joseph, it seems likely that Fort Erie did.¹² In the absence of documentary sources, only archaeology will be able to yield any knowledge about the fort's blacksmith shop and stables. Such findings, in addition to what we may discover about any ship repairs and local gardens, ought to allow for a much better understanding of the extent to which Fort Erie functioned as a self-sufficient entity.¹³ The 1794 and 1798 maps of Fort Erie reveal plans for merchant shops clustered along the riverfront. Most of these shops did not come to fruition, yet some buildings, such as the King's Store, we know from later maps did exist. It is hoped that future archaeology will shed light on these neglected aspects of the site's history. Ground-penetrating radar and magnetometer surveys conducted at the site, in conjunction with the period maps superimposed over contemporary satellite images, may offer the best means of detecting the remains of such structures. Conversely, whereas other archaeological investigations of nineteenth century battlefields have relied on metal detector surveys (Sivilich), this would likely prove of less utility at Fort Erie due to the unfortunately pervasive practice of metal detector assisted pot-hunting over the years.¹⁴

Despite this unfortunate tendency, archaeological fieldwork in 2012 uncovered considerable numbers of musket and rifle balls, buck shot and birdshot. While most, if not all, of this ordnance is associated with the Siege of Fort Erie that occurred in the summer of 1814, the birdshot is a reminder that troops in peacetime at Fort Erie engaged in hunting. An 1804 painting by Edward Walsh, a surgeon in the 49th regiment of foot, depicts a man hunting passenger pigeons outside Fort Erie. The extent to which local game supplemented military rations at Fort Erie might be determined if the fort's refuse pits were to be excavated. It is also interesting to speculate to what extent soldiers at Fort Erie supplemented their diets by fishing in the rich waters of the Niagara River and Lake Erie. That such activity took place, particularly in the fort's early history, seems likely. It is also known that the Fort's garrison kept gardens outside the fort's walls, but detailed written evidence for this is scant.¹⁵

¹² John D. Light and Henry Unglik, *A Frontier Fur Trade Blacksmith Shop 1796 -1812*. (National Historic Parks and Sites, Environment Canada, 1987).

¹³ Steven L. De Vore demonstrates that nineteenth century wilderness forts in the American mid-west functioned as largely self-sufficient entities, with gunsmiths, blacksmiths, carpenters, and other craftsmen fulfilling the fort's needs. See Steven L. De Vore, "Fur Trade Era Blacksmith Shops at Fort Union Trading North Dakota Post National Historic Site," *Historical Archaeology* Vol. 24, No. 3, 1990. Given Fort Erie's strategic location on the Great Lakes trade route, it was presumably less self-sufficient and more dependent on trade routes.

¹⁴ Daniel M. Sivilich, "Analyzing Musket Balls to Interpret a Revolutionary War Site" *Historical Archaeology* Vol. 30, No. 2, 1996.

¹⁵ Excavations in 2013 on the south side of the fort opposite the main gate did indeed reveal evidence of the gardens dating to the pre-war of 1812 period. Another map in Richard Feltoe, *The Ashes of War: The Fight for*

Archaeology could possibly shed more light on what the living conditions were (in both peace and war) at the fort. For example, is it possible that soldiers, with their military rations supplemented by wild game, fish and vegetable gardens, actually enjoyed distinctly better diets than their civilian counterparts in Britain? Such a finding might also have implications for our understanding of troop morale and desertion rates among soldiers at Fort Erie.

It is also believed that in peacetime a separate officer's quarters existed outside the Fort. However, the documentary record offers scant clues about such an establishment. If the quarters could be located through a magnetometer or ground-penetrating radar survey, we would learn not only more about the fort's layout, but if an adjacent refuse pit were to be discovered, useful information about differences in diet between officers and enlisted men stationed at Fort Erie might be gleaned from it. As well, we could possibly confirm (or tenuously deny) the accuracy of the reconstructed officer's quarters at the fort today, which are decorated with white-tail deer hides and antlers on the assumption that British officers stationed at the fort hunted deer in their leisure time.

The War of 1812 and the Siege of Fort Erie:

Fort Erie was the scene of considerable action in the War of 1812. Its garrison fought in November 1812 at the battle of Frenchman's Creek and its cannons and nearby batteries occasionally exchanged fire with the American side of the river. In 1813, the British evacuated the fort, leaving it temporarily in American hands as British forces abandoned the Niagara Frontier. It was apparently partially dismantled and the outbuildings burned at this time but by the end of 1813 it was back in British hands. These early incidents in the war, however, pale in comparison to the role the fort played in the bloody Niagara Campaign of 1814. That year witnessed the United States mount its third and final invasion of the Niagara Peninsula. The Siege of Fort Erie became the climax of this last full-scale invasion. It also proved to be the war's bloodiest engagement. Though exact casualties are impossible to determine, an estimated 3,000 soldiers were killed, wounded, or captured during the six weeks of fighting. The vast majority of these soldiers remained buried on the battlefield today.¹⁶

Prior to its final invasion in 1814 the Niagara Frontier was aptly described by one American officer as already "desolated with fire and sword" from two years of warfare.¹⁷ On July 3, a well-trained and equipped army of 5,000 Americans rowed across the Niagara River from Buffalo under the cover of darkness, landing on the Canadian shore below Fort Erie. The capture of Fort Erie was to be the first step in their conquest of Canada. The U.S. Army, under the command of the capable General Jacob Brown, planned to march north to the shores of Lake Ontario, where they would rendezvous with the American

Upper Canada, August 1814-March 1815, (2014) also shows extensive gardens in the area surrounding the fort. Comment by J. Triggs, December 19, 2014.

¹⁶ The only known exception are the remains of the twenty-eight soldiers excavated at Snake Hill in 1987 and returned to the United States with all due ceremony. According to Ronald Way, who oversaw the reconstruction of Fort Erie from 1937-1939, the remains of 153 men lie beneath the monument outside the fort's walls. Documents written in 1814 by various American soldiers describe digging a mass grave for the British troops killed in the explosion of the northeast demi-bastion during the August 15 night assault, and put the number of dead at around 150. Way stated that three American graves were uncovered during the restoration inside the fort, and that these soldiers were added to the mass grave, making a total tally of 153 beneath the monument.

¹⁷ David B. Douglass, "Reminiscences of the Campaign of 1814, on the Niagara Frontier," *The Historical Magazine*, vol. II no. 1 July, 1873, 7.

fleet and from there subdue the remainder of Upper Canada. Alas for the Americans, only the capture of Fort Erie went according to plan. The fort's outnumbered garrison consisted of a mere 137 men under the command of Major Thomas Buck. Perhaps thinking that discretion is the better part of valour, Buck promptly surrendered after the exchange of only a few shots. (He was subsequently court-martialed for the surrender). On July 5, 1814, the Americans, heading north, encountered the British at Chippawa. The resulting battle proved a decisive U.S. victory. However, twenty days later the two armies clashed again at Lundy's Lane, resulting in heavy casualties for both sides and a strategic defeat for the U.S. army, as this action forced their withdrawal south to Fort Erie and scuttled any plans for further offensive operations.

Indeed, the American Army had been reduced to approximately 3,500 effective troops by August 1, 1814. With General Brown wounded, command devolved to the cautious General Ripley. Ripley initially contemplated a retreat across the Niagara to the American shore, but was persuaded to dig in at Fort Erie. American engineers had already undertaken some work to strengthen the site in July after its capture. It would now be transformed into a sprawling fortified encampment, covering some fifteen acres and stretching approximately 800 metres from the old British stone fort to Snake Hill near the Lake Erie shoreline. Eroded portions of the defensive earthwork built by the Americans linking the fort to Snake Hill are still visible on the grounds of Fort Erie today. While Benson Lossing, who visited the site in the summer of 1860, reported that the Americans had dug a double ditch and thrown the earth up into "parapet breastworks," thus far excavations have revealed the existence of only one ditch outside the earthwork.¹⁸ Part of this ditch is still clearly visible in the woods south of the Niagara Parks Commission's property. On the other hand, Ronald Way's speculation that the Americans constructed a "firing-step" has been confirmed as accurate. Such a step, made of earth, was uncovered along the earthwork during fieldwork in 2012, which would have enabled defenders to fire over the wall¹⁹. Interestingly, an 1816 account of the Siege written by an American officer recalled how as an "additional precaution" the troops stationed along this earthwork were armed with pikes fashioned from captured bayonets, "designed to be used in case of a charge." The officer related that:

"At twilight, every evening; a great number of pikes, constructed of the British bayonets which were taken on the 15th, were laid at two feet distance from each other, along the whole extent of our line. These being of a length equal to thickness of the parapet, would have been used with great effect in the event of an escalade."²⁰

Indeed, one can easily imagine the utility of such a weapon for close-quarter combat in the event the British attempted to storm the works a second time. (The British officer William Drummond also preferred a naval pike for hand-to-hand combat, and carried one in lieu of his sword during the ill-fated August 15 night assault.) To date, no bayonets have been uncovered along the American earthwork but

¹⁸ Benson J. Lossing, *The Pictorial Field-Book of the War of 1812* (New York: 1869, reprinted New York: Benchmark Publishing, 1970), 830. Excavations by Triggs in spring 2012 revealed the ditch in two areas: Fanning's Battery and the Western Redoubt. Comment by John Triggs, December 19, 2014.

¹⁹ The firing step found in Fanning's Battery East, Unit Q, is described in this report by Triggs. Comment by John Triggs, December 19, 2014.

²⁰ "Attack on Fort Erie," *Naval and Military Chronicle of the United States*, (Philadelphia: Vol. 1 no. II February 1816), 109.

unspent musket and rifle balls, buckshot, and buttons were uncovered along this defensive line²¹. Also uncovered was plenty of charcoal, suggesting that soldiers may have cooked their meals within the shelter offered by the earthwork and perpendicular traverses²². As an outer defense, the Americans constructed a line of abatis. Finally, for additional firepower and support, three U.S. warships, the Ohio, Porcupine, and Somers were anchored in the waters of Lake Erie just south of the American position. Overall, the small original Fort Erie had been transformed into a formidable fortress, succinctly described by British Lieutenant John Le Couteur as an “ugly customer.” The British, under Canadian-born Lieutenant General Gordon Drummond, had only approximately 3,500 men with which to attack the fort.

Near the waters of Lake Erie was a natural sand mound, called Snake Hill, which the Americans transformed into a fortified redoubt. Placed under the command of Captain Towson, this well-defended redoubt formed the left of the American position. The extreme right of the American position extended from Fort Erie’s ravelin to the river. Here an earthen wall was thrown up to link the fort to a gun Battery under the command of Captain David Douglass, a twenty-four year old, Yale-educated American artillery officer. Portions of this earthwork, said by Lossing to have originally been seven feet high, are still visible today.²³ Douglass described the site of his Battery as “a hillock, partly natural and partly formed by the ruins of an old lime-kiln, between the fort and the lake, nearest the later, eight or ten feet above the water-level, and about as much below the site of the fort.”²⁴ The lime-kiln may explain the ruins of Douglass’ Battery as depicted by Lossing in the summer of 1860. Lossing shows a considerable structure consisting of crumbling stone. Fortuitously for our purposes, Lossing’s illustration shows these ruins east of the river road, which, provided the road is in the same place today, would mean Douglass’ Battery is an area that can be excavated.²⁵

In a letter dated September 12, 1814, Douglass gives more detail about his Battery. He described the site of his Battery as: “...originally a sort of arched vault or magazine, raised above ground, and opening toward the water. In the course of one night, I dug away one side into a loose sort of platform, and placed my gun there...”²⁶ There is no mention of it as originally a lime-kiln in this letter. Instead Douglass seems to suggest that it was a powder magazine. Possibly it had once been a lime-kiln that was subsequently converted to a powder magazine, and then converted a third-time by Douglass into a Battery. These tantalizing questions, however, will only be resolved by an archaeological

²¹ In the Western Redoubt excavation area a line of ‘posts’ were found in the ditch parallel to the earthwork in Unit M. The context of these suggests that they may in fact be the line of pikes mentioned in the 1816 account by the American officer. Comment added by John Triggs, December 19, 2014.

²² As discussed in the current report, the charcoal is very likely the product of the destruction of the building by a direct mortar bomb hit on September 16 or 17. Comments added by John Triggs, December 19, 2014.

²³ Benson J. Lossing, *The Pictorial Field-Book of the War of 1812* (New York: 1869, reprinted New York: Benchmark Publishing, 1970), 829.

²⁴ David B. Douglass, “Reminiscences of the Campaign of 1814, on the Niagara Frontier,” *The Historical Magazine*, vol. II no. 1 July, 1873, 128.

²⁶ Douglass, 129.

investigation of the site.²⁷ Fortunately, from Douglass' written account of his Battery, coupled with historic maps, GIS, and the eroded earthwork still visible today, it ought to be possible with a fair degree of confidence to determine the location of the Battery.

Even more interestingly, Douglass provides detail about what he and his men did by September to protect themselves from the deadly British bombardment:

On the right of the platform, the ground had a considerable descent; and here I set all hands to work, as near the gun as possible. In a few days, they had made a sort of cellar, ten feet broad and twenty feet long, neatly and firmly walled up with sods. Adjoining this, they dug another similar one, walled in the same way. I caused the whole to be covered with a layer of logs; the cracks filled up with good mortar; and a second layer of logs to be placed over this. The men live in the large part and I in the smaller. I can enjoy the occasional privilege of a candle, in the evening; while those who live in tents are obliged to put their lights out, soon after dark. We are perfectly secure from any kind of annoyance the enemy can send against us; and, on the whole, they are considered about the most comfortable quarters in camp.²⁸

Such a structure would be ideal for archaeological investigation. Indeed, while Douglass notes the "cellar" dimensions as "ten feet broad and twenty feet wide" he curiously neglects to write how deep it was. Stratigraphy will have to answer this question. It will also be of considerable interest to see if there is any evidence that the British gunners targeted this location.²⁹ We now know from the archaeological record that the British guns hit a building located along the earthwork connecting the stone fort to Snake Hill.³⁰ Almost certainly, given the prominence Douglass' Battery had in firing on the British lines (something Douglass boasted about in his account of the siege), the British gunners would have targeted his location. We may then hope to learn just how effective Douglass' cellars really were in protecting his men. It may also be wondered why, if this design proved the most secure and comfortable in the camp, the rest of the American army continued to reside above ground in tents or buildings protected by traverses. Perhaps, given Douglass' engineering expertise, archaeology will reveal that this was a complex "bomb-proof" shelter that Douglass' counterparts in the infantry lacked the skill to create. That Douglass was a capable engineer held in high esteem by General Gaines, the American commander, is clear from Gaines' correspondence. Gaines wrote of Douglass that:

Among the many brilliant scenes which combined to disperse the clouds and darkness, and light up the dawn of that memorable morning (August 15), the defense of Douglass Battery stands rivaled by a few, and according to the relative number of the guns, surpassed by none. The youthful commander of that Battery excited my admiration. His constancy and courage, during a brisk cannonade and bombardment for several weeks...his gallantry and good conduct in defense, against a vigorous assault, by a vast superiority of numbers, are incidents which can

²⁷ The area of Douglass Battery was investigated by the Wilfrid Laurier Field School in spring 2013 and forms the subject of that report. Comment added by John Triggs, December 19, 2014.

²⁸ Douglas, 130.

²⁹ GIS analysis of lead shot indeed did provide evidence of British gunners targeting this position. Mortar shell fragments, a solid shot cannon ball and several British musket balls were found on the escarp side of the Battery. Comment added by Triggs, December 19, 2014.

³⁰ This is the structure referred to in the current report as the Officers' Quarters in the Western Redoubt excavation area. Comment added by Triggs, December 19, 2014.

never cease to be cherished in my memory, as among the most heroic and pleasing I have ever witnessed.³¹

While there are many unresolved questions concerning the siege, a major one concerns a blockhouse apparently constructed by the Americans inside Fort Erie proper. The existence of this work is known from only one written source, a reconnaissance report by Captain Romilly of the Royal Engineers, who scouted the American works after they had been abandoned and blown up on November 5, 1814. In his report dated November 10, 1814, Romilly noted that: "It appears that they constructed a work beyond the old fort, consisting of the bastions (1 and 2 in the sketch) the curtain was formed of high palisades and a log building behind them, loopholed."³² From this description, the blockhouse would have been within what is now styled the fort's terreplein. However, the 1930s reconstruction of the fort may have destroyed all trace of this structure.

Archaeology has in fact already revealed the existence of one building used by the Americans during the siege that was not previously known about, aside from an indication of its existence on a single map.³³ This building was situated along the defensive earthwork linking Fort Erie to Snake Hill, near the vicinity of Biddle's Battery. Glass, nails, and a wrought iron door handle excavated at the site all indicate the existence of a building. Pearlware and creamware uncovered at the site reveals that it served as an officer's quarters (as common soldiers would not have had such items), and is suggestive of the fact that even in the American republic, class differences remained between officers and enlisted men. Also uncovered here was a mangled sword hilt, apparently destroyed by an explosion from a mortar round, adding further evidence that this building served as an officer's quarters. The mortar round was excavated *in situ*, and reveals a direct hit by the British gunners. This has raised the question why General Drummond lifted the siege in September, given the evident effectiveness of his bombardment.³⁴ In addition, large quantities of unspent musket rounds were recovered at this location, suggesting that an ammunition chest was stored inside the building.³⁵

One of the more curious finds in the proximity of this building along the earthwork was the discovery of 47 drawn glass trade beads. These beads are either evidence of aboriginal allies attached to the American force, or perhaps war loot that American soldiers took from enemy warriors they fought during the September 17 sortie or even earlier at Chippawa on July 5³⁶. The American forces that crossed the Niagara River into Upper Canada on July 3 included some 500 Native warriors recruited by Congressman and militia General Peter B. Porter. However, desertions began almost immediately, with

³¹ "Attack on Fort Erie," *Naval and Military Chronicle of the United States* 117-20.

³² Owen, 53.

³³ The structure is depicted on two maps: the November 1814 Romilly plan, and the Cranfield 1815 plan. Comment added by Triggs, December 19, 2014.

³⁴ This interpretation was advanced by Triggs and is discussed at length in the archaeological section of this report. Comment added by Triggs, December 19, 2014.

³⁵ This and other archaeological evidence is discussed in the current report. Comment added by Triggs, December 19, 2014.

³⁶ The found in the Western Redoubt area in Unit H are in the same context as the location of the 11th and the 22nd U.S. regiments along the entrenchment. The 11th and 22nd fought on the American left at the Battle of Chippawa on July 5 under General Ripley. In fact, the British right on this engagement was taken by the native allies.

approximately 150 of the 500 warriors returning to the U.S. following the capture of Fort Erie on July 3.³⁷ After the battle of Chippawa (July 5, 1814) most of the remaining Native warriors deserted the U.S. Army and returned to New York State. By the time the Siege of Fort Erie began at the start of August, Native warriors still attached to the American army numbered no more than fifty, and it is not known for how long these men remained with the army.³⁸ These warriors were under Porter's command, and would have been stationed with the militia during the siege. As such, they were stationed along the earthwork connecting Snake Hill to Fort Erie, but to the left of where the beads were uncovered. That location, near Biddle's Battery, would have been occupied by U.S. artillery, U.S. regular infantry (possibly the 11th and 21st regiments), and in the nearby building itself, U.S. army officers. Could the beads have come from one of these soldiers?

In the War of 1812 it was common practice to loot the bodies of dead soldiers on the field of battle. Soldiers looted both for necessities as well as war trophies and for items to sell to local merchants or even their own officers. At the Battle of Chippawa American troops had ample opportunity to loot the bodies of Native warriors and are believed to have taken souvenirs from the British dead as well. Donald Graves notes that when the American soldiers were burying the British dead after the fighting, they likely helped themselves to mementoes.³⁹ The American soldiers may also have claimed as trophies whatever accoutrements of the dead Native warriors that took their fancy, including jewelry made of trade beads. There is other evidence of looting bodies during the bloody 1814 Niagara campaign. Lieutenant Colonel William Drummond's body was stripped and looted after he was killed in the August 15, 1814 night assault. Jarvis Hanks, a drummer boy in the American army, recalled that:

Drummond was laid under a cart. When I first saw him he was naked except his shirt. All the remainder of his clothing, his gold watch, sword, epaulettes, and money, had been plundered by some of our men. We even picked the pockets of those who were dead and dying in the ditch. In the course of the day, the soldier who got Drummond's watch, sold it to one of our officers, for a small sum compared with its real value.⁴⁰

As this example makes clear, looting was as much about claiming "trophies" as it was about necessity. The same night Drummond was killed at Fort Erie, despite the appalling carnage and confusion, his subordinate Lieutenant John Le Couteur retained the presence of mind to help himself to a dead officer's scabbard in the ditch outside the fort.⁴¹ Le Couteur had earlier claimed as the spoils of war, "a

³⁷ Carl Benn states that most American-allied warriors deserted the campaign after the Battle of Chippawa, returning to their homes in New York State. Carl Benn, *Iroquois in the War of 1812*, (Toronto: University of Toronto Press, 1998), 153 and 159. This is confirmed by Peter B. Porter's account.

³⁸ The various Nations present at the siege are listed in the Appendix of Joseph Whitehorne, *While Washington Burned: the Battle for Fort Erie, 1814*, pp. 143-144. Triggs attributes the unusual assemblage of beads to the first Nations of New York State for which there no archaeological examples in Ontario. The presence of large numbers of bird shot, suggests that these may be direct evidence of the location of the native allies, rather than booty. Comment added by Triggs, December 19, 2014

³⁹ Donald F. Graves, *Red Coats and Grey Jackets: The Battle of Chippawa, July 5, 1814* (Toronto: Dundurn Press, 1994), 136.

⁴⁰ Jarvis Hanks, "The Siege of Fort Erie, August to September 1814" in *Soldiers of 1814: American Enlisted Men's Memoirs of the Niagara Campaign*. Jarvis Hanks, Amasiah Ford and Alexander McMullen; edited, with an introduction and notes by Donald E. Graves. (Youngstown, NY : Old Fort Niagara Association, Inc., 1995), 40.

⁴¹ Lt. John Le Couteur, *Merry Hearts Make Light Days: The War of 1812 Journal of Lieutenant John Le*

capital black horse for a charger...(and) saddle & Bridle & Pistols and all."⁴² Captain Douglass claimed as a trophy what he believed was the sword of Colonel Hercules Scott, apparently killed while charging his Battery. Such conduct was by no means exceptional. It was reported that after the Battle of Fort George, the Canadian and British dead were literally stripped naked by victorious Americans eager for plunder. Likewise, the Americans received similar treatment following their defeat at Beaver Dams. John Norton reportedly quipped about this affair that, "the Caughnawaga Indians fought the battle, the Mohawks or Six Nations got the plunder, and FitzGibbon got the credit."⁴³

One of the most notorious cases of looting in the War of 1812 involved American soldiers stripping trophies from what they believed was the body of Tecumseh after his death at the Battle of the Thames. American soldiers not only stripped Tecumseh's body naked for war trophies, but according to first-hand accounts, actually cut pieces of skin from his body as souvenirs. It is thus not hard to imagine a U.S. soldier's haversack crammed with loot and trophies at Fort Erie, and that sometime during the four month occupation (which terminated on November 5, 1814) the beads were dropped and forgotten. On the other hand, perhaps one of the Native warriors still attached to the American force simply wandered by the location and dropped the beads there. Applying Farry's spatial model to the artifacts recovered in the vicinity of the beads might possibly provide confirmation or denial that American regular troops (as opposed to Native warriors or militia) were stationed at this location.

Fort Erie's story is a significant chapter in Canadian history. It was the site of one the country's bloodiest battles, the meeting ground for Robert Rogers and Pontiac, a strategic link in the Great Lakes chain, and a military post garrisoned from the 1764 until as late as the early 1820s. Investigating Fort Erie's long and rich history is a task that requires the tools of both the archaeologist and the historian. By skillfully employing these methods, we can hope to arrive at a more complete understanding of this important site's history.

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⁴² Le Couteur, 127.

⁴³ John Norton, *The Journal of John Norton*, edited by Carl F. Klinck, (Toronto: Champlain Society, 1970), cxx.

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4.0 Stage 2 Test Pitting Survey

Re-Establishing the Excavation Grid

For the first Wilfrid Laurier University field school in 2012 a grid system was established which was used for that season and the subsequent 2013 and 2015 seasons. The baseline for the site grid runs parallel to the 800 yard-long American earthwork extending from the middle of the south demi-bastion face¹ of the extant fort to a tree-line about 260 metres southwest of the fort. This was established by setting up a total station transit on the bastion and sighting a line that was parallel to the face of the bastion, and then turning angle of 10° to match the orientation of the earthwork as shown on contemporary plans. The position of the total station at this point was marked by an 8" spike and labelled grid point 1000N/1000E.

In 2015 the same grid was re-established in the area to the south and west of the ravelin that marks the front side of the fort; i.e., the general location of what would be designated as Areas 1, 2 and 3. On May 6 a baseline was surveyed along the 1050E line and staked out at 5 metre intervals, beginning at the site vertical datum at grid point 954N/1050E. Stakes were established at 950N, 945N, etc. every 5 metres down to 910N along the 1050 E line. Instrument set-ups were done on each of these new baseline points and surveyor flags were then established every 5 metres in a grid west direction;

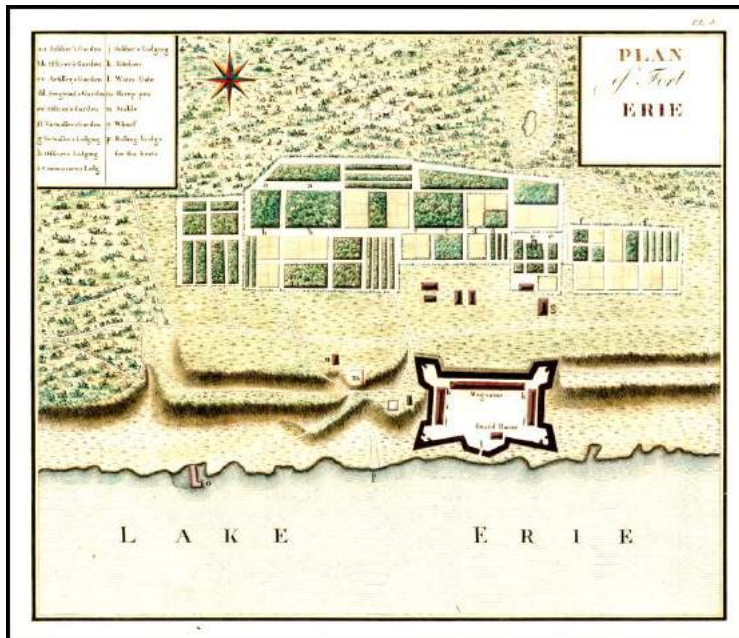


Figure 5 Map by Collot, 1796, showing structures and garden features to the north of the first Fort Erie on the lakeshore.

i.e., 1045E, 1040E, 1035E, etc. A total of 63 test pit locations were established and numbered as TP1 - TP 129 (Figure 6).

The area for the Stage 2 test pitting survey was located to the north of the old fort on the lakeshore, the first Fort Erie, constructed in 1764. The Collot plan, dated 1796 (Figure 5), shows the general area occupied by several structures and garden plots. Other contemporary plans and images also show the landscape in this area to be similarly constructed with buildings, fence-lines and gardens. As a preliminary step the Collot plan was geo-referenced using Geographic Information Systems (GIS) technology

¹ This position was 9.5 metres along the total length of the face of 19 metres. The transit was set up 60 centimetres from the face of the masonry wall marking the inside edge of the bastion, just inside one of the corners of the existing embrasure.

by Duncan Williams. This helped to establish more precisely the location of the test pits in relation to the 1796 map and the modern landscape (Figures 7, 8).

Excavation of 63 test pits in this location was carried out on May 12 by students working in pairs. All test pits were excavated to subsoil, unless prevented from doing so by building rubble or roots. All sediment was screened for artifacts in ¼ inch mesh. During the survey notes were kept on the stratigraphy for each pit, including notations on depth, soil type, stratigraphic layers, and artifacts. Test pits were given scores ranging from 1-5 by the supervisor, John Triggs, and artifact concentrations were highlighted. Based on the results, three separate areas were identified for further investigation: Areas 1, 2 and 3.

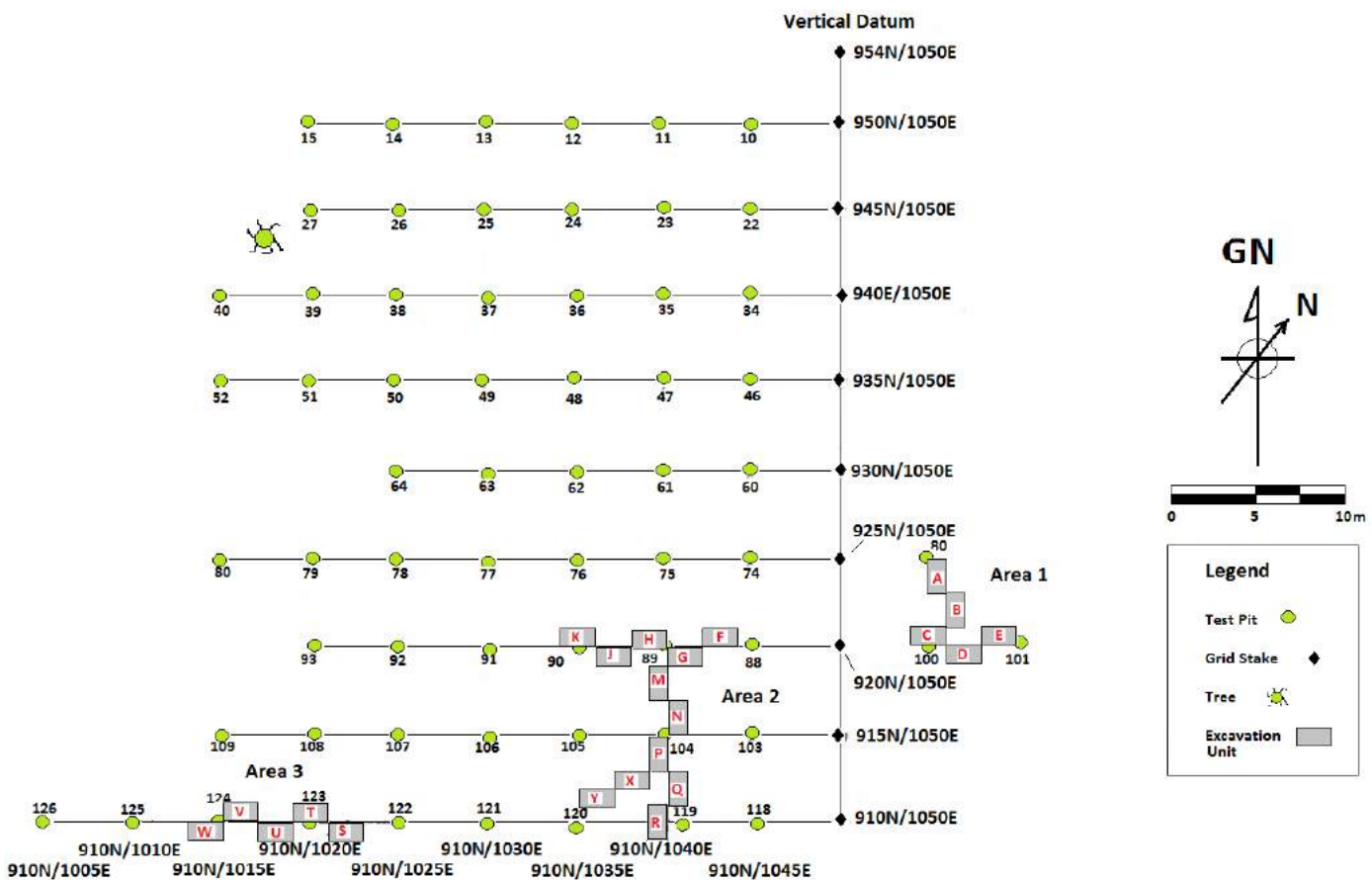


Figure 6 Site Plan showing vertical datum at 954N/1050E, on edge of ravelin ditch, test pits, and excavation Units for Areas.

1796 Collot map showing 2015 test pits and 2013 excavations

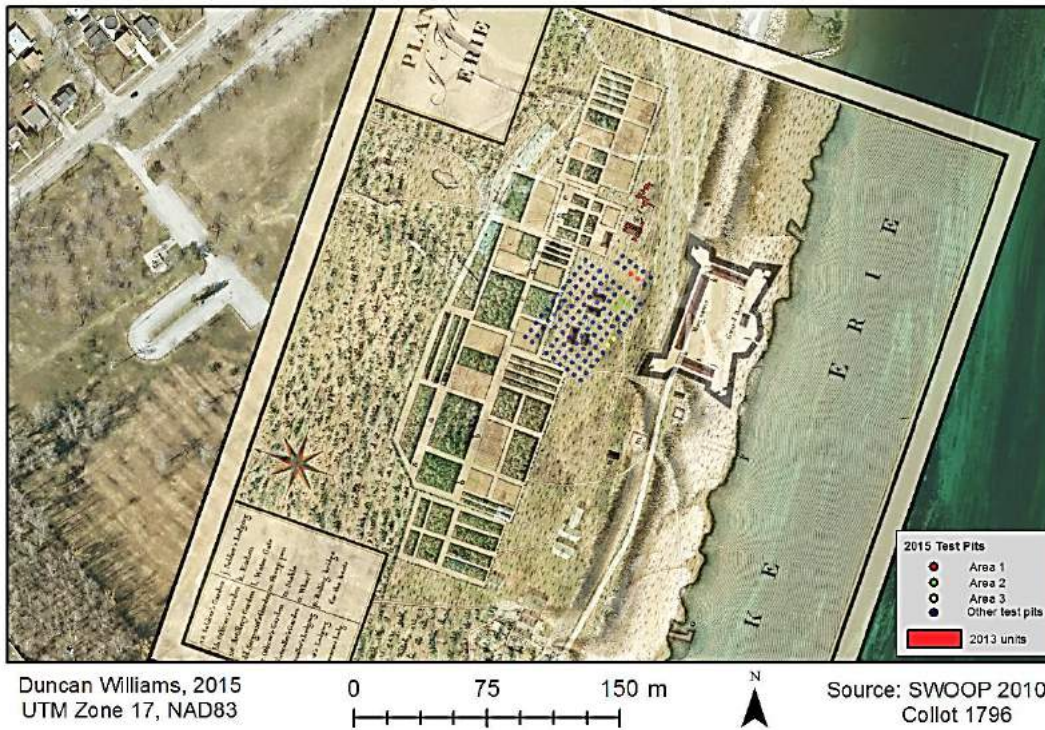


Figure 7 Map by Collot, 1796, superimposed on modern landscape of Fort Erie National Historic Site.

1796 Collot map showing 2015 test pits and 2013 excavations

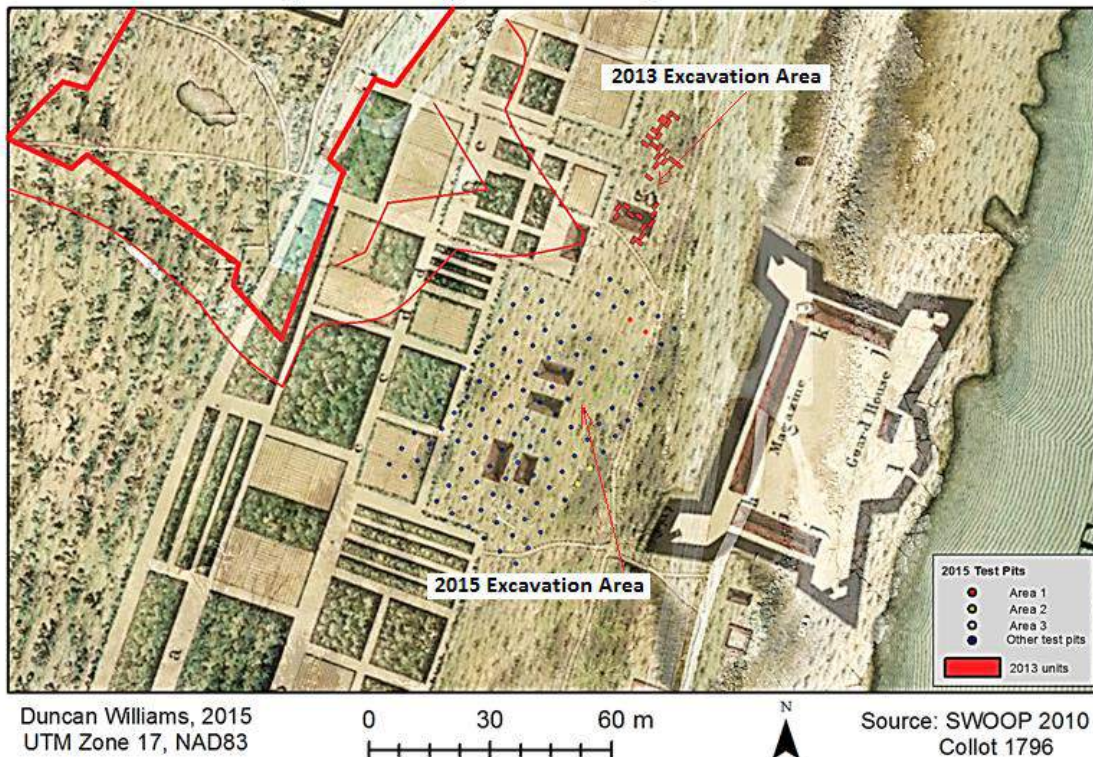


Figure 8 Detail of above showing test pits and excavation areas. The existing fort is outlined in red.

More than 5000 artifacts were recovered from the test pits (see Test Pit Artifact Catalogue – Appendix G, Volume II), the vast majority of which were brick fragments (n=3056), lithic flakes (n=519), and bone (n=229). Diagnostic artifacts such as ceramics dating to the 18th century occupation of the site, however, were numerous and include creamware pearlware, porcelain, and white salt-glazed stoneware. Architectural items such as pane glass (n=118) and wrought nails (n=174) were also abundant. A few smoking pipes and a buckle part were also recovered. The concentration of materials in contiguous/adjacent test pits was used as the criterion for laying in excavation Units in Areas 1, 2, and 3, discussed below.

Ceramic Type	Frequency
Blue Transfer	4
Coarse Red Earthenware	1
Coarse Red earthenware - glazed	1
Coarse red earthenware unglazed	3
Creamware, Other Decor	1
Edged	3
Painted	5
Plain	223
Salt-Glazed	16
Soft Paste Painted	8
Soft Paste Porcelain	4
Transfer Print	21
Grand Total	290

Glass	Frequency
Architectural – Pane Glass	118
Bottle Glass	89
Grand Total	207

Nails	Frequency
Ferrous	1
Spiral	1
Nail	1
Wrought Iron	173
Wrought	173
Nail	172
Spike	1
Grand Total	174

Other	Frequency
Smoking Pipes	6
White Clay Plain Bowl	1
White Clay Plain Stem	5
Clothing	1
Buckle/Buckle Part	1
Grand Total	7

5.0 Area 1 Archaeological Chronology

There are 46 phases grouped into VII major periods of occupation represented in the Area 1 stratigraphy. The analysis was completed by J. Triggs on November 11, 2015. All stratigraphic profiles were examined and the correlation chart made in the field by Assistant Site Supervisor, Katie Anderson, was revised and amended. The final chart is an archaeological chronology of the 46 separate events (phases) arranged in order corresponding to superpositional relationships and depicted on the Harris matrix for Area 1 (Figure 9). At the time of the analysis the artifact catalogue had not been completed. Reference to artifacts was not used to determine the correct place in the matrix but rather to compare

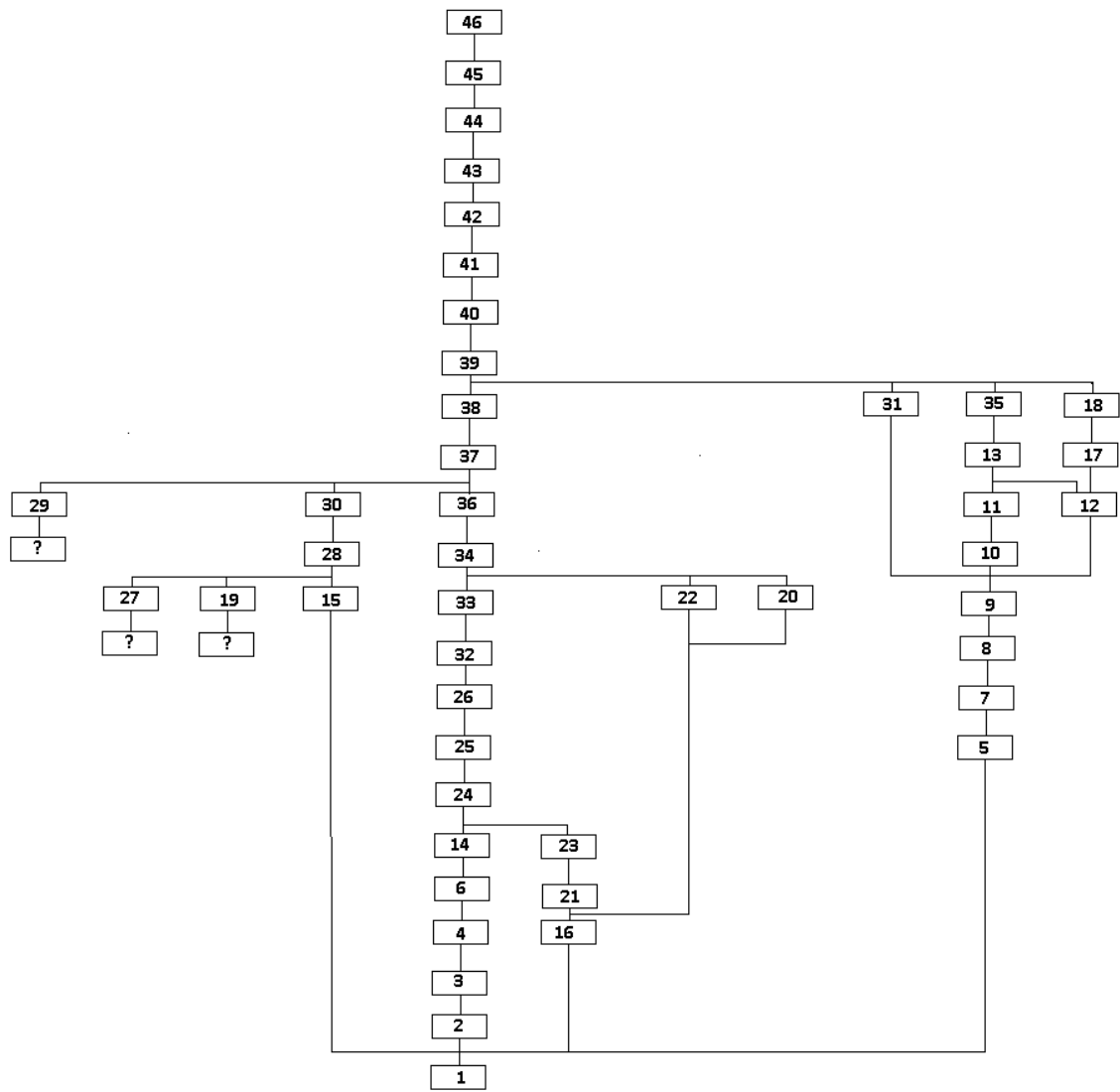


Figure 9 The stratigraphic matrix for Area 1 showing all superpositional relationships for all layers, features and interfaces for all Units. The boxes with '?' are those that represent layers that were not excavated.

layers for which correlations had been made based on similar soil/sediment descriptions while conducting field work.

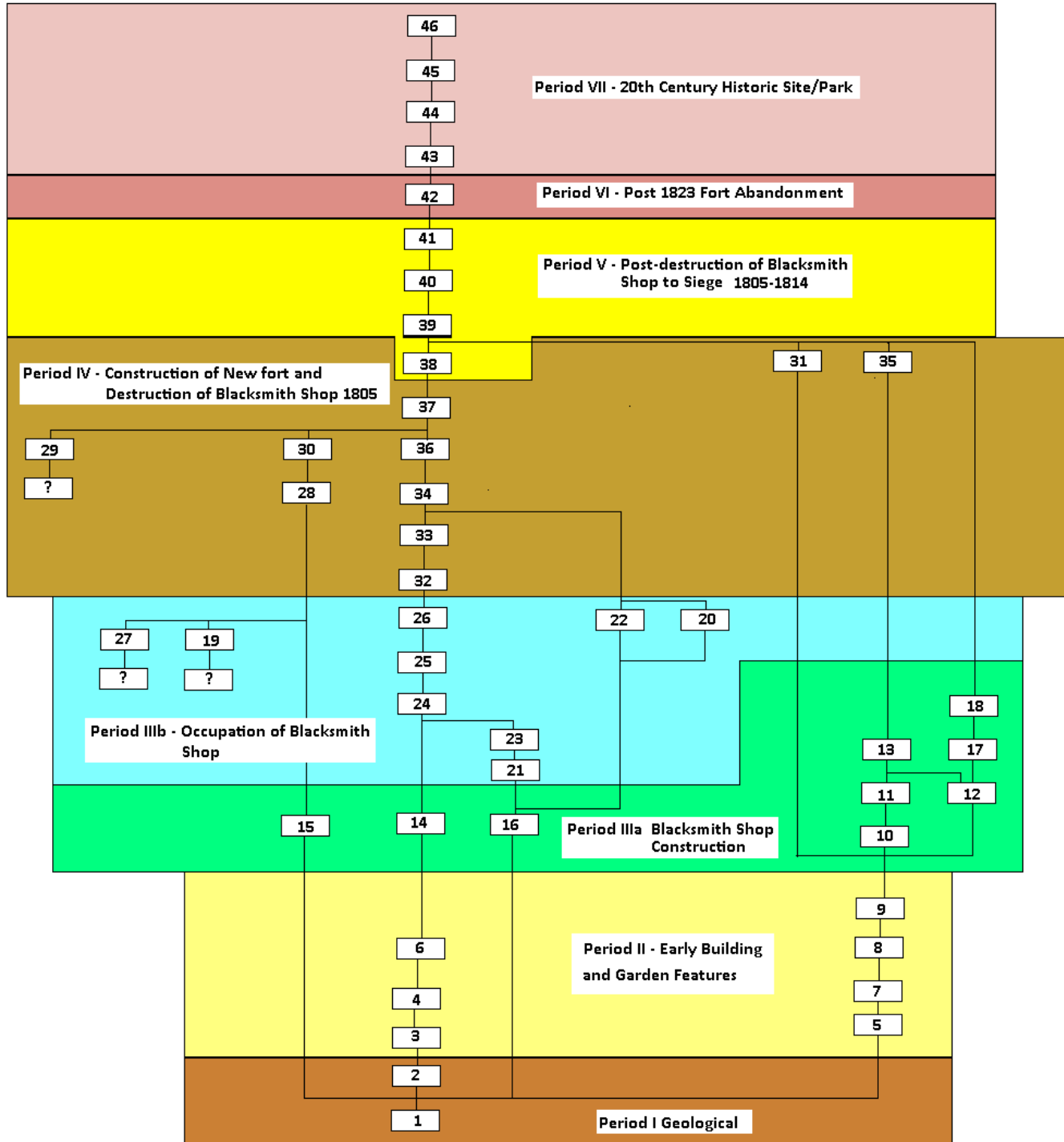


Figure 10 The Periods shown on the Phase matrix above represent major episodes in the archaeological chronology of Area 1 based on documentation and archaeological evidence.

Area 1 Fort Erie 2015 Correlation Chart			Danielle	Yujia	Owen	Kristen	Noah
Description	Period	Phase	A	B	C	D	E
Test pit fill	Period VII	46	3		3		3
Test pit interface	Period VII	45	4		4		4
sod	Period VII	44	1	1	1	1	1
topsoil	Period VII - 20th Century Park	43	2	2	2	2	2
Clay	Period VI - Post-1823 - Fort Abandonment - displaced soil capping previous ground surface	42	5	3	6	4	
Mottled clay	Period V	41	6				
Orange/black mottled	Period V	40	7	4			
Stone and brick layer - ground surface with destruction debris	Period V	39	8	5	5	3	5
Dark loam covering HFI building	Period V - Post-destruction Blacksmith Shop - 1805-1814 and Siege 1814	38			8		
Larger rubble	Period IV	37			7	5	5a
Rubble to the south of mortar line	Period IV	36		9			
Crushed mortar - shallow deposit	Period IV	35		10			
Mottled mortar	Period IV	34	9	6		6	6
Mortar layer and rubble	Period IV	33	10			9	

Rubble filled pit	Period IV	32				12	
Description	Period	Phase	A	B	C	D	E
Light brown mottled layer	Period IV	31			9		
Grey mottled interior	Period IV	30			11		
Light grey mortar patch	Period IV	29			18		
Mortar deposit overlying wood plank	Period IV - Construction of New Fort and Destruction of Blacksmith Shop - 1805	28			12, 15		
Compacted light brown sediment		27			16		
Interface for rubble filled pit		26				13	
Dark surface with charcoal inclusions		25				7	
Mottled surface over wood		24				8	
Floor planks		23		13	14	11	8
Mortar line between planks		22		14			
Second sleeper - floor repair		21					9
First sleeper - early floor layer - burnt		20					15
Interior dark surface	Period IIIb - Occupation of Blacksmith shop	19			17		
Mortar filled pit - construction activity	Period IIIa	18		11			
Interface for above phase	Period IIIa	17		12			
Dark loam sub-floor deposit	Period IIIa	16		16			10
Forge foundation in situ	Period IIIa	15			20		
Description	Period	Phase	A	B	C	D	E

Description	Period	Phase	A	B	C	D	E
Blacksmith shop interior - construction layer? - mottled surface with brick and mortar and patches of yellow sand - interior of building	Period IIIa	14				10	
Exterior wall mortar line projecting above lot 8 - HFI? In Unit C	Period IIIa	13		8	10		11, 11a
Second exterior ground surface - dark brownish black loam - original A horizon in Unit E	Period IIIa	12	11	7			
Builders trench fill	Period IIIa	11					12
Builders trench interface for east wall of building	Period IIIa - Blacksmith Shop Construction	10					13
Dark brown loam - garden layer?	Period II	9	12	15	13		7
Very dark brown (displaced A-horizon) from excavation of features phase 7 - garden bed?	Period II	8	13	17			
Dark loam filling pit - historic artifacts	Period II	7		19a			
Very dark brown loam filling shallow, large pit/trench	Period II	6				14	
Interface for pit on exterior of blacksmith shop - pre-building - with historic period artifacts	Period II	5		20a,b			
Very dark brown loam fill in shallow trench with fish and mammal bone - thin layer in possible habitation - living floor?	Period II	4				16	
Interface for shallow trench feature in subsoil - the trench bottoms out on bedrock - pre-blacksmith shop	Period II - Pre-Blacksmith shop pits - early construction features and/or garden trenches?	3				16a	
Subsoil	Period I	2	14	18	19	15	14
Bedrock	Period I - Geological	1				17	

Area 1 Five excavation Units were located in Area 1. The Area was defined by artifact concentrations found in three test pits, 80, 100, and 101. Artifacts found in the test pits included a high quantity of brick and mortar together with smaller quantities of architectural debris (window glass and nails), ceramics, container glass, bone and other domestic household items. The quantities of material in total suggesting the presence of a structure served as the basis for laying in Units A-E.

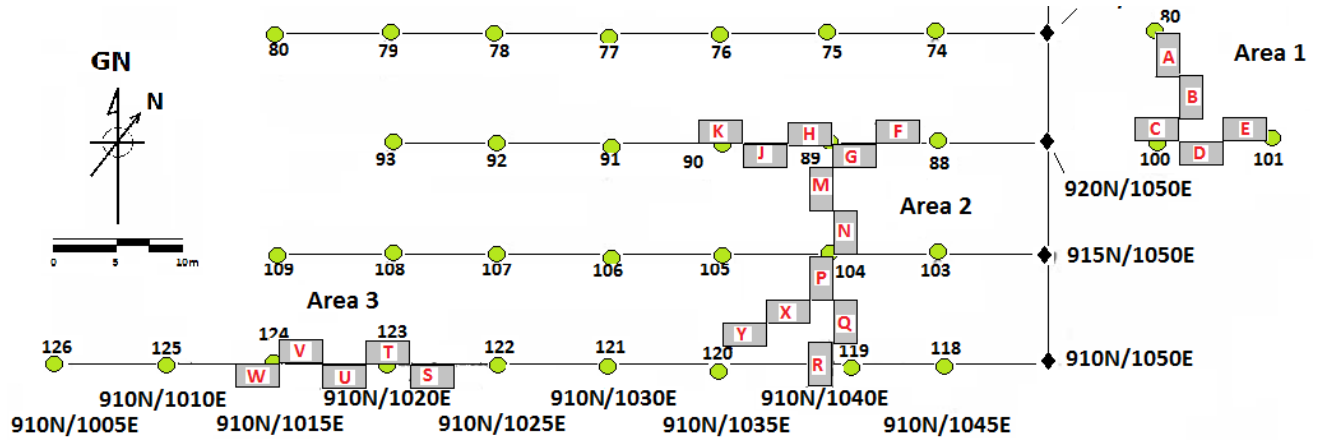


Figure 11 Site plan showing Units and Areas 1, 2 and 3. Only some of the test pits, in green, are shown.

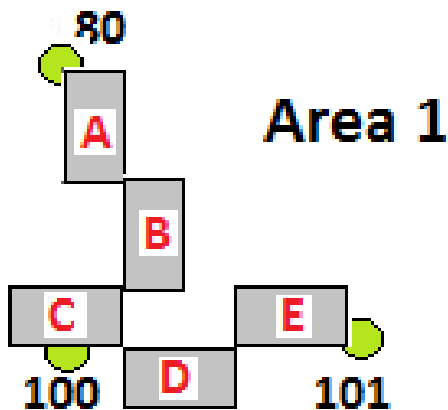


Figure 12 Area 1 showing Units A-E.

105E 920N	
Architectural	
Construction Material	343
Nails	2
Window Glass	1
Architectural Total	346
Faunal/Floral	
Bone	27
Faunal/Floral Total	27
Food Preparation and Consumption	
Ceramic Tableware	1
Glass Storage Containers	5
Food Preparation/Consumption Total	6
105E 920N Total	379

1055E 925N	
Architectural	
Construction Material	59
Nails	2
Window Glass	2
Architectural Total	63
Faunal/Floral	
Bone	2
Faunal/Floral Total	2
Food Preparation and Consumption	
Ceramic Cooking/Storage	1
Ceramic Tableware	4
Glass Storage Containers	3
Food Preparation/Consumption Total	8
1055E 925N Total	73

1060E 920N	
Architectural	
Construction Material	121
Nails	15
Window Glass	4
Architectural Total	140
Faunal/Floral	
Bone	19
Shell	4
Faunal/Floral Total	23
Food Preparation and Consumption	
Ceramic Tableware	8
Glass Storage Containers	7
Food Preparation/Consumption Total	15
Fuel	
Cooking/Heating	2
Fuel Total	2
Smoking	
Pipes	2
Smoking Total	2
(blank)	
(blank)	4
(blank) Total	4
1060E 920N Total	186

Period I Geological



Figure 13 Unit D showing bedrock and subsoil.

This is the geological period for the site comprised of bedrock, Phase [1], and the sandy subsoil, Phase [2]. The bedrock was only exposed in Unit D at the base of a shallow trench described below (Figure 13). All other Units had exposures of a light to medium brown sandy subsoil, which was not excavated to bedrock. Artifacts that may occur in the subsoil are those that have been introduced into these non-cultural layers through the action of natural processes (e.g., roots, freeze-thaw, and animal burrowing) or cultural processes (human/domesticated animal trampling). The depth of subsoil can only be estimated from where bedrock was exposed below at about 20-30 centimetres depth in Unit D.

Period II Early Fort - Pre-Blacksmith Shop Structure and Garden



Figure 14 Brick and rubble in trench found in Unit D.

A shallow trench feature cut into the natural subsoil was found in Unit D. The trench itself (Phase [3]) is about 15 cm. deep and bottoms out on the natural bedrock surface. The orientation of the trench parallels the orientation of the later blacksmith shop built in Period III, although the artifacts in the thin layer of dark loam filling the trench suggest habitation rather than blacksmithing activities. Fish and mammal bone were found in this 5-centimetre thick deposit (Phase [4]). The alignment of the feature with the later blacksmith shop suggests that the latter was built in the same location as the earlier building. The trench was later filled with a dark loam to the same level as the original cut in subsoil (Phase [6]), thereby providing a level interior floor surface to the building. In the nearby Unit B a shallow pit, Phase [5], was excavated into the subsoil for a depth of about 10 centimetres. The pit was later fill with a dark loam soil containing some historic period artifacts, Phase [7]. The purpose of the pit is unknown although it is likely associated with the nearby building.

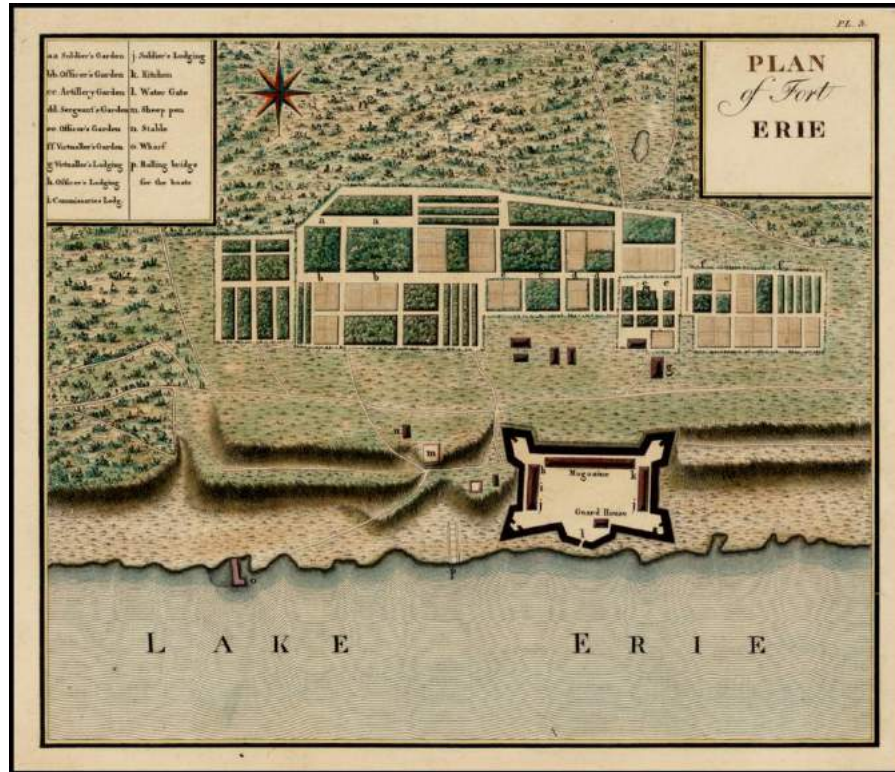


Figure 15 Map of Fort Erie, 1796, Victor George Henri Collot.



Figure 16 Old Fort Erie With the Migration of Wild Pigeons, dated 1804; by Edward Walsh, Sigmund Samuel Collection, 952.218, ROM2006_7733_1.

Two layers of dark loamy soil, Phases [8] and [9], each about 5-10 cm thick, are found in all Units in Area 1 with the exception of Unit D, the presumed structure. The rich organic sediment is not an original A-horizon although the loamy sediment does suggest a garden bed. Gardens were known to be in this area based on documentary evidence, and also archaeological evidence of planting beds found during excavations in 2013 a few metres to the east. It is these beds which may be depicted on a plan dated 1796 by Collott (Figure 15). Georeferencing of this plan (Figures 7 and 8) places structure 'g', identified as a 'Victualler's Lodging', in the approximate location of excavation Area 1. Gardens to the east and north ('ee' Officer's garden and 'ff' Victualler's garden) are in close proximity to the structure. Based on the stratigraphic evidence it is assumed that the garden and structure represented in Period II are earlier in date than the gardens depicted in 1796. It may be presumed that gardens were a fixture of the early fort throughout its history

(1764-1805). In 1791 a visiting American representative to the Council with the Indians in Northwest Territory (Ohio) described the gardens of a commanding officer 'complete with cherry, currant orchards, potatoes, cucumbers, melons, Indian beans (stringed beans), windsor beans, and peas'. Another

watercolour from 1804 by Edward Walsh (Figure 16) also shows gardens located in the same approximate area as the excavations carried out in 2015. In 2013, evidence of a structure, most probably an officer based on the artifacts recovered, was found in association with garden features. Artifacts found in the Phase [8] and [9] deposits are very few and include mostly chert along with a couple of nails, sherds of window glass and a unidentifiable metal button. The paucity of artifacts supports the idea that this is displaced subsoil and A-horizon used to create the gardens in the area.

Periods IIIa and IIIb

This Period is defined by the construction of the blacksmith shop, IIIa, and the subsequent occupation of that structure, IIIb. Artifacts found in several contexts within the structure serve to define the building as a blacksmith shop. The presence of scrap iron, partially made tools, horseshoes, nails and slag, and the base of what is thought to be the masonry forge, are all strongly suggestive of this function.

Several events are identifiable as construction activity in **Period IIIa**. Phases [10] and [11] mark the actual construction of the building; i.e., the builder's trench excavated into the ground surface, and backfilling of this around a line of mortar that is thought to be a for an exterior plank wall [13]. The trench itself is visible in Unit E as a shallow excavation about 10 centimetres deep running parallel to the mortar line defining the wall. The trench is only about 10 centimetres wide and was visible only in Unit E. The mortared line of the wall is composed of hard white limestone mortar with impressions of the edges of horizontal planks set into this. The line is visible along the east side of the building in Unit E and the north side of the structure in Units B and C. A small mortar filled pit found in Unit B (Phases [17] and [18]) contains what appears to be fragmented chunks of lime that has been slaked but not mixed with sand providing evidence of the actual on-site construction of the mortared base for the planks.



Figure 17 Rear wall of structure (and wall of forge (bottom) in Unit C (view facing west).

It is thought that the structure would have been oriented facing the water and as such the wall in Units B and C would have been the rear of the structure (Figure 17), the ground surface of which is defined by Phase [12] in Units A and B. Many of the artifacts from these units are found in this context and include a large number and wide variety of nails, along with food bone, ceramics, musket balls, container glass, a George III coin (unidentifiable date) and a few sherds of deteriorated window glass, possibly from the earlier structure (Period II).

Phases [14] and [16] are fill layers on the interior of the structure. In Units D and E, the deposit is about 15-20 centimetres thick and contains small-sized artifacts as might be found below a plank floor after having fallen through cracks. Ceramics, fish bone and scales, pipe stems, nails and small pieces of window glass are found throughout the layer. The subfloor layer was likely added to raise the interior level of the blacksmith shop

(which was once the interior of the Period II structure that had been excavated into subsoil) to that of the outside ground surface.

The forge itself is represented by large cut limestone blocks (30-40 centimetres largest dimension) found in Unit C (Phase [15]). A line of blocks in the east side of that Unit, running perpendicular to the rear wall of the building (the mortar line) extends as far south as Unit D where it ends. Further excavation would have to be carried out to determine the precise configuration of the forge but it does appear that the wall of the forge that was exposed is the east wall.

Occupation features associated with the blacksmith shop in **Period IIIb** include earthen floor layers, plank floors, and a pit. In Unit C, adjacent to the forge, two dark brown, compacted layers were found that probably represent the floor layer around the forge ([19] and [27]). The layer was not excavated due to time constraints and remains to be investigated at some later date. Samples of floor sediment should be checked for iron content and evidence of intense heat.

Evidence of the actual plank floors and underlying sleepers was found in Unit E [20] and [21]. The sleepers are spaced about 10 centimetres apart and run parallel to the east wall. The deteriorated wood beams are flattened on the top and apparently rounded on the base where they rest on the subfloor deposit [16]. One sleeper [21] is at a higher raised above the other sleeper [20] which also exhibits evidence of burning or scorching suggesting that it was replaced by the later, higher elevation, sleeper. Floor boards [23] were found in Units B-E still intact although very deteriorated due to moisture (Figures 18, 19). The alignment of the planks was from east to west perpendicular to the sleepers in Unit E and directly overlying the latest phase sleeper. Planks are about 30 centimetres, or 1



Figure 18 Phase 23 floor boards found in Unit B at the rear of the structure (view looking north).



Figure 19 Detail of Phase 23 floor boards found in Unit B at the rear of the structure (view looking north).

foot, in width and of undetermined length. Hardened mortar was added between adjacent planks in Unit B [22] perhaps as a fire prevention measure to prevent sparks falling below the floor level.

In Unit D, a mottled deposit of dark loam with charcoal and wood fragments is an earthen floor layer

contemporary with the wooden floor [24]. Artifacts found on the surface of the layer were lying flat and included slag and charcoal along with scrap iron, nails, an ox shoe and knife blade among other iron artifacts. Another deposit overlying the wooden plank floor in one area and also the Phase [24] floor layer is the latest floor deposit before the structure was razed. As with the earlier earthen floor this deposit [25] contains slag, iron scrap, several horseshoes, a variety of nails, along with a few ceramics, food bone and a U.S. military button, dating to the siege.



Figure 20 Phase 26 rubble-filled pit found in Unit D (view looking east).

The purpose of the pit may have been to adjust the working height to a comfortable level in consideration of the raised floor level (about 10-15 cm) created by the addition of floor layers [24] and [25]. Stability created by sinking the anvil into the earthen floor for a slight depth may have also been a factor.

Period IV Construction of New Fort and Destruction of Blacksmith Shop

Several layers of destruction debris are associated with the destruction of the blacksmith shop. This is assumed to have occurred in 1805 as a consequence of the construction of the new fort in 1805. The new fort was proposed in 1803 as shown on the map of that date by Gother Mann

The final occupation feature in the blacksmith shop is a pit found on the south side of Unit D (Phase [26] (Figure 20). The pit was excavated into the earthen floor surface [25] to a depth of about 30 centimetres. The estimated diameter is 40 centimetres based on the cross-section of the pit exposed in the south wall profile. Although filled with limestone rubble and large brick fragments, this fill dates to the Period IV and is related to the razing and destruction of the building ca. 1805. The function of the pit itself may have been to contain the anvil which in blacksmith shops would have been located near the forge which was located only 1.5 metres (about 4 feet) away.

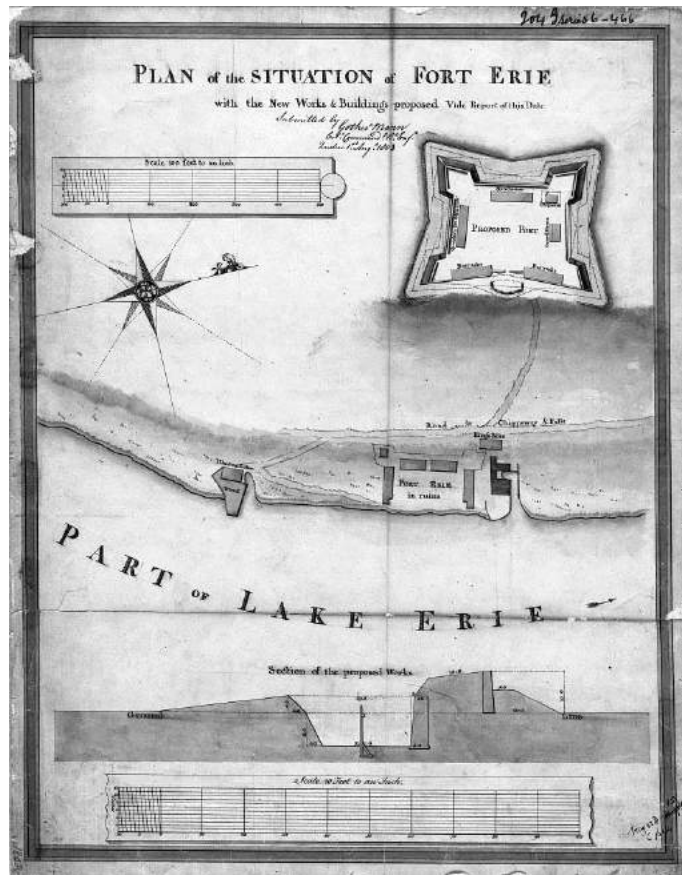


Figure 21 Plan of the Situation of Fort Erie, Library and Archives Canada, NMC 3801. Showing proposed fort with cleared ground on the landward side facing the existing fort built on the lakeshore.

(Figure 21). It was built in the approximate location shown on the plan in an area to the north of the old fort which is shown in ruins on the lakeshore. The construction of the new fort would have necessitated the removal of any structures located in the field of fire; i.e., in the area between the gate/ravelin and the lakeshore. A pen and ink wash of the shoreline and 'town' of Fort Erie on March 28, 1805 by Sempronius Stretton (Figure 22), shows the buildings inside the old fort as depicted the 1803 plan. It is also evident that the ground behind the old fort had yet to be cleared for the new fort construction.

Archaeological evidence found in deposits assigned to Period IV indicates that at least two of the structures depicted on the 1805 Stretton watercolour, and the 1804 Edward Walsh watercolour, were likely intentionally burnt and razed at this time. The removal of the structures would have provided a clear line of site from the fort situated on higher ground to the lakeshore and lake beyond.

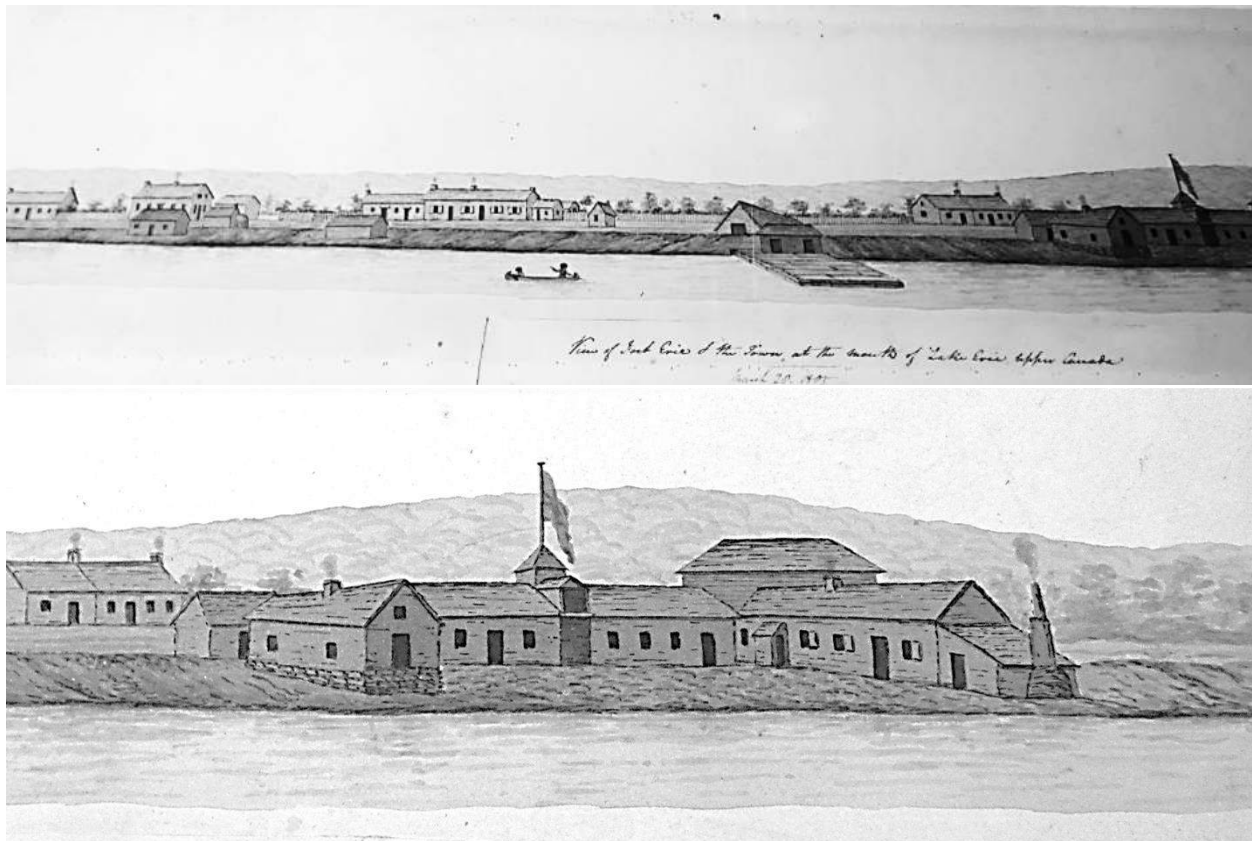


Figure 22 Sempronius Stretton (1781-1842). *Fort Erie and the Town* (ROM Cat.no. 1593; acc.no. 951.117.1) Black and brown washes, pen and ink. 162 x 692 mm. Inscribed lower corner: View of Fort Erie & the Town, at the mouth of Laker Erie Upper Canada / March 28, 1805

In Unit C, several deposits are found overlying the plank floor and the stones from the razed forge. Phase [28] is a mortar deposit overlying the plank floor. The mortar is presumably from the destruction of the forge as it corresponds to other mortar deposits in Area 1 in other excavation Units. In this unit the mortar layer is overlain by another deposit of grey mottled soil [30] and two adjacent deposits (Phases [29] and [31]), although not in superposition, are similarly composed of thin layers of sediment with high concentrations of mortar.

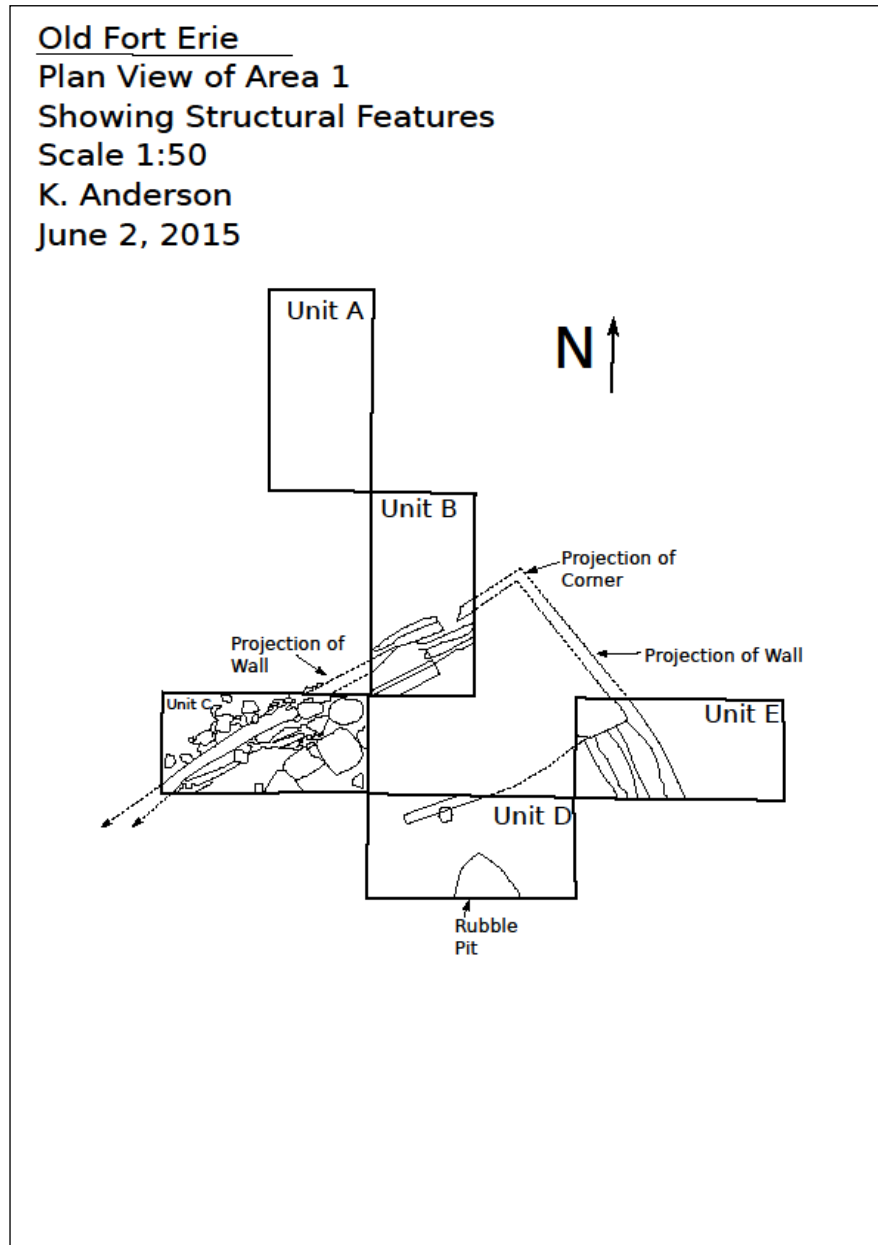


Figure 23 Plan showing projected perimeter of blacksmith shop based on finds in Units B, C, D, and E.

In Unit D, the anvil pit described in the preceding Period IIIb was filled in with stone rubble (Phase [32]), brick and scrap metal to a level slightly above what would have been the contemporary interior blacksmith shop floor level marked by phase [25]. The rubble consists of large brick pieces and stones 10-15 centimetres. largest dimension along with dark brown sandy loam. A musket lockplate and musket balls, together with window glass were found in the pit. Phases [33] and [34] are rubble deposits overlying the earlier floor layer, and the pit fill proper. These phases represent the latest destruction layers in the blacksmith shop interior and contain window glass, nails and scrap metal. Rubble and mortar from the same phase but on the exterior of the building are found in all units from this phase. In Unit C, the large rubble in phase [37] marks the final destruction of the blacksmith shop. Artifacts such as nails, scrap metal,

food bone and a few pieces of ceramic were found throughout the rubble representing the debris from the destroyed forge.

In Unit B, phases [35] and [36] are associated with the destruction of the exterior, north wall, of the blacksmith shop (Figure 23). Both phases include the broken pieces of mortar that formed the base of the exterior wall and the fragmented remains of this as a consequence of the building having been razed.

Period V - Post-Destruction Blacksmith Shop - 1805-1814 and Siege 1814

Phase [38] is limited to the exterior of the blacksmith shop in Unit C where a small area of dark brown loam covers the building debris. A few pieces of chert detritus found in the thin layer in the absence of any other artifacts suggests that this may be re-deposited subsoil/A-horizon used to intentionally cover the debris from the blacksmith shop. Phase [39] is a 10-20 centimetre thick horizon of dark brown sandy loam with brick and stone fragments along with mortar flecks. The deposit covers all previous destruction debris and forms a ground surface over top. Artifacts are plentiful and include a variety of ceramics, window glass, nails, container glass, smoking pipes, military buttons, and food bone. It is presumed that this is the ground surface created after 1805 when the new fort was built and the former buildings in the area were razed. It is also the ground surface contemporary with the 1814 siege. Two additional layers of sandy loam, less than 10 centimetres in total thickness, may have been added as a result of excavation activities either during the siege or before [Phases [40] and [41]]. Artifacts such as creamware and a few wrought nails point to an early 19th century date for the layers.

Period VI - Post-1823 - Fort Abandonment – 19th Century Ground Surface

A layer of light yellowish brown clay ([Phase [42]]) marks the next soil horizon to cover most of Area 1. The layer is less than 10 centimetres in thickness and provides a cap overlying the siege period layers. It seems likely that there would have been some build-up of sediment in the time following the siege and the establishment of the modern park in the early 20th century. Certainly, the park was used for recreational purposes as post-cards and photographs of the fort prior to ca. 1910 indicate (Appendix C). Artifacts found in the layer (Phase [42]) include a mixture of 19th century material such as creamware, wrought nails, smoking pipes, musket balls and food bone along with modern plastic.

Period VII - 20th Century Park

A thin layer of sod and topsoil (Phases [44] and [44]) marks the modern ground surface. The layers together are about 5 centimetres in thickness and are very compressed probably due to vehicle traffic and extensive foot traffic in the park. This period probably dates to the 20th century – probably post-1930s when the park was established as an historic site. Images from this time period show vehicular traffic in the vicinity of Area 1 (see Appendix C). Also, the entrance to the park at this time was almost precisely opposite Area 1 towards Lakeshore Road (see Appendix C). The final two phases [45] and [46] mark the archaeological test pitting that took place in spring 2015.

6.0 Area 2 Archaeological Chronology

Area 2

There are 56 phases grouped into VII major periods of occupation represented in the Area 2 stratigraphy. The analysis was completed by J. Triggs in April 2016. For the 12 Units in Area 2, all stratigraphic profiles were examined as well as the correlation chart made in the field by John Triggs. The final chart is an archaeological chronology of the 56 separate events (phases) arranged in relative order reflecting superpositional relationships and depicted on the Harris matrix for Area 2. At the time of the analysis the artifact catalogue had not been completed. Reference to artifacts was not used to determine the correct place in the matrix but rather to compare layers for which correlations had been made based on similar soil/sediment descriptions while conducting field work. Artifacts in each phase are referred to in the period-by-period discussion.

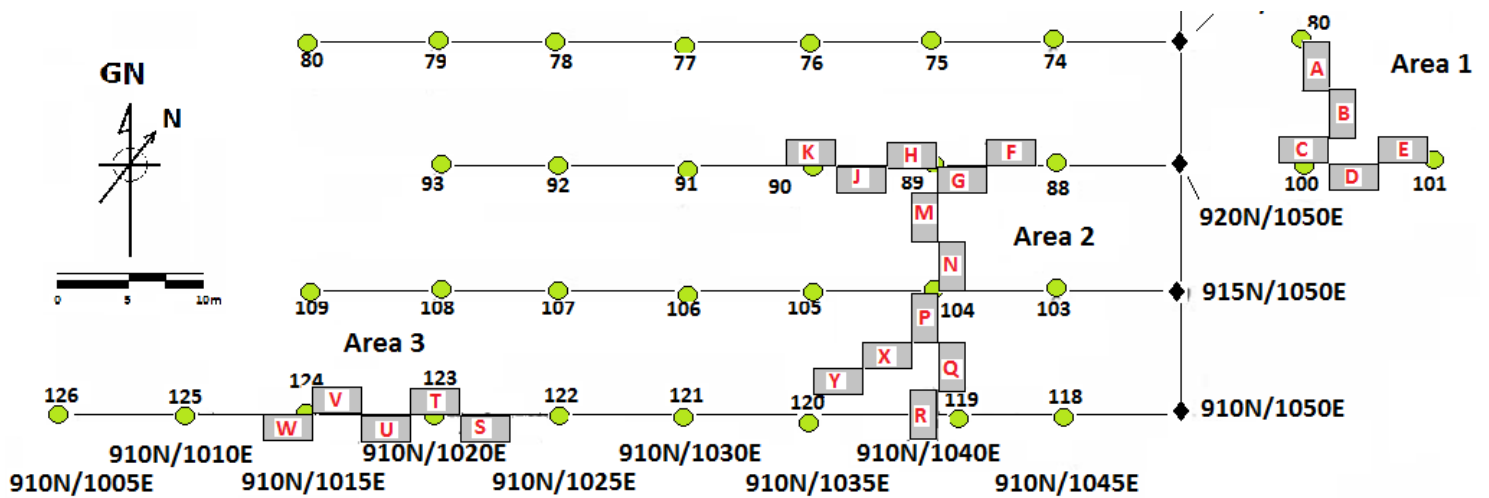


Figure 26 Site plan showing Units and Areas 1, 2 and 3. Only some of the test pits, in green, are shown.



View of Area 2 under excavation showing (view looking southwest), unit G in middle foreground.



View of Area 2 under excavation showing (view looking south), unit K in right foreground.

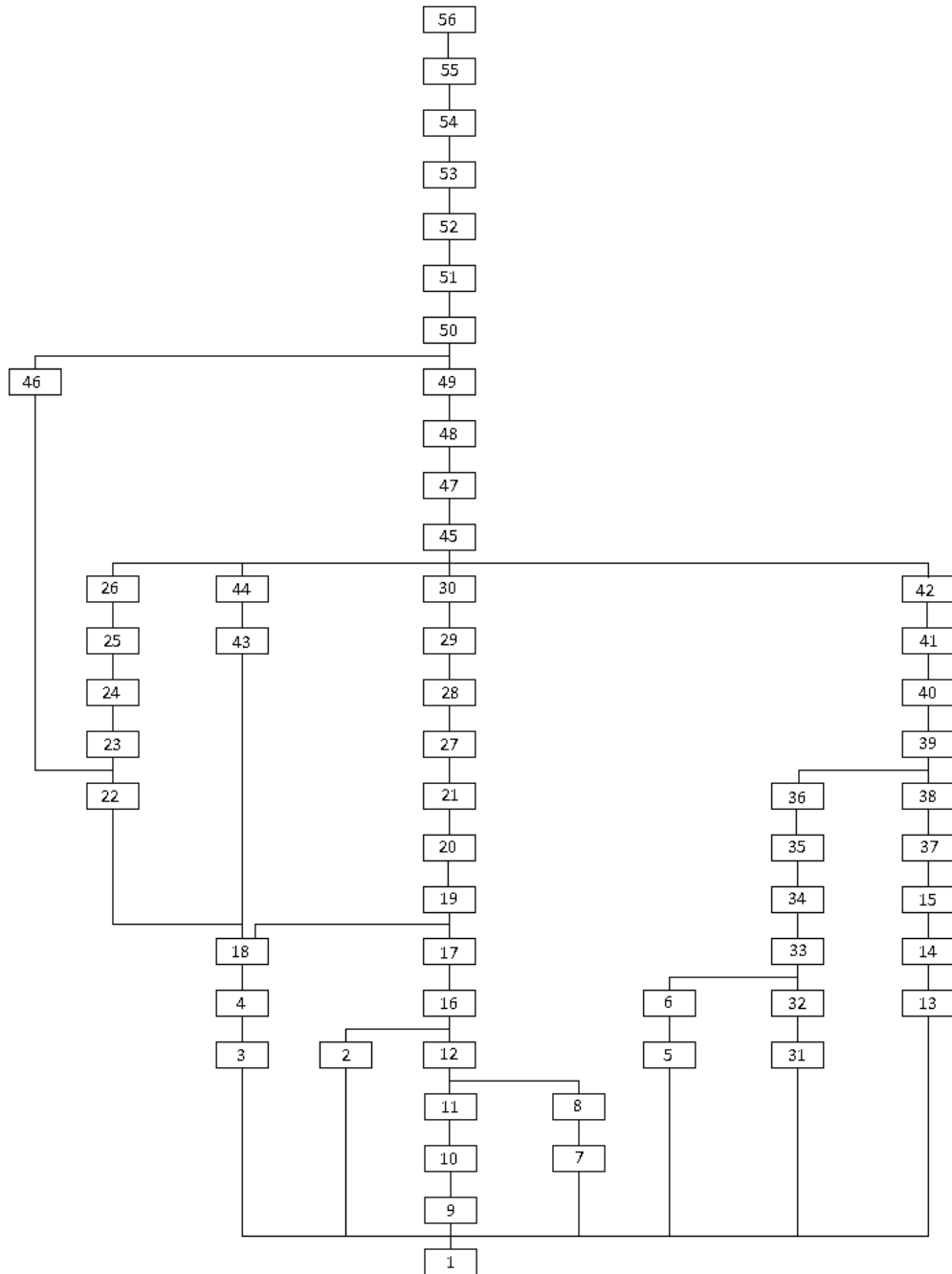


Figure 24 Stratigraphic matrix for Area 2 without periods.

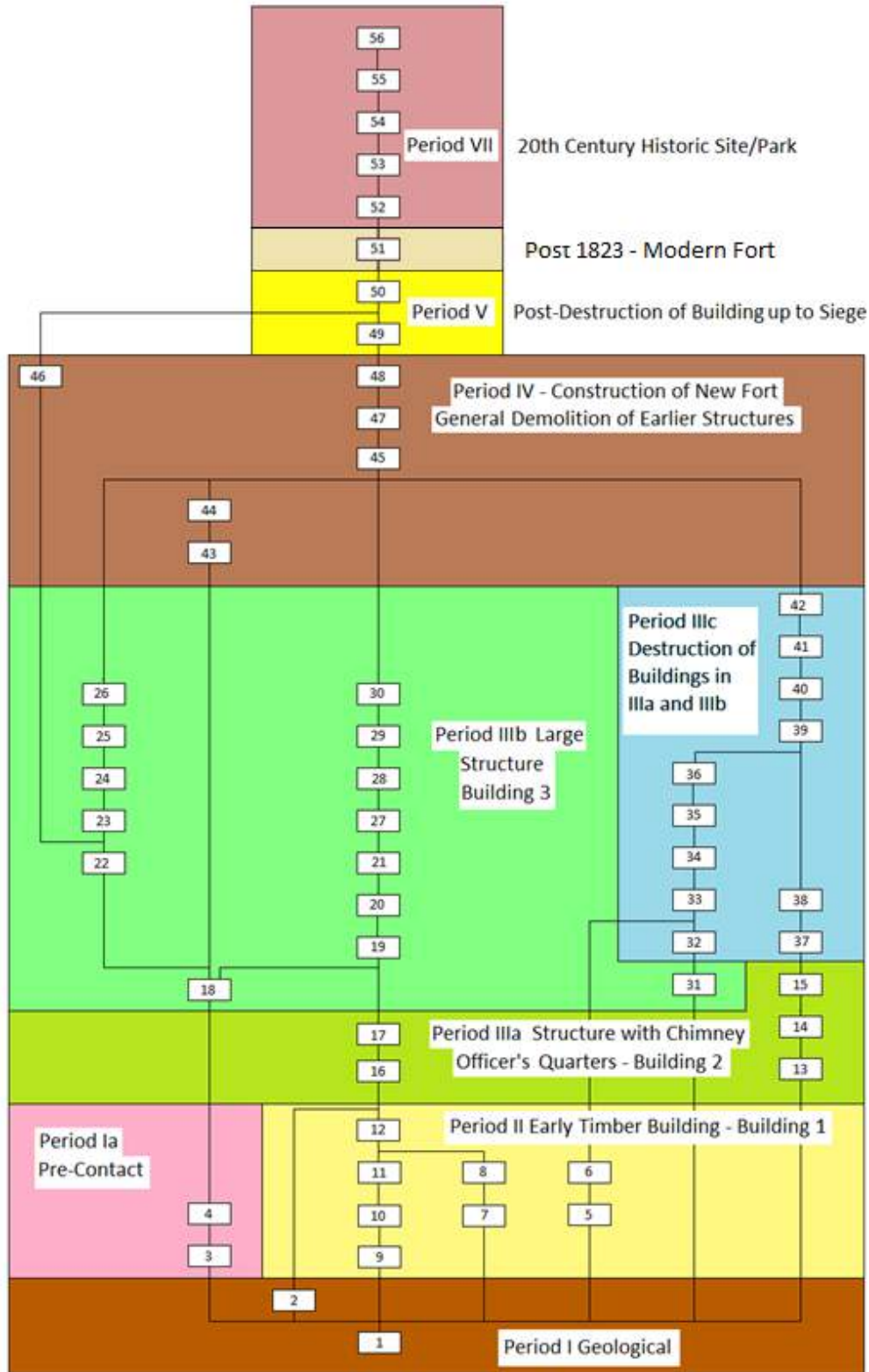


Figure 25 The Periods shown on the Phase matrix above represent major episodes in the archaeological chronology of Area 2 based on documentation and archaeological evidence.

Fort Erie 2015 - Area 2 – Correlation Chart															
Phase Description	Period Description	Period	Phase	F	G	H	J	K	M	N	P	Q	R	X	Y
				Aaron	Iain	Logan	Kim	Mitch	Josh	Nikki	Alex	Ty	Curtis	Adam	Don
2015 test pit fill	Modern	VII	56		3	3		3		3	3		3		
test pit interface	Modern	VII	55		4	4		4		4	4		4		
sod	Modern	VII	54	1	1	1	1	1	1	1	1	1	1	1	1
reenactor campfire	1990s- present siege	VII	53				3				5	3			
campfire interface	1990s- present siege	VII	52				4				6	4			
topsoil	Period VI - Post- siege - 20th Century Fort Abandonment - topsoil layer below sod	VI	51	2, 3	2	2	2	2	2	2	2	2	2	2	2
Uppermost destruction layer - dark brown sandy loam layer with stones, brick rubble, nails, ceramics, window glass	America Siege - Defensive Earthwork Construction and Post-Siege British Occupation/Abandonment	V	50	4	5	5	5	5	3	5	7	5	5	3	3

Phase Description	Period Description	Period	Phase	F Aaron	G Iain	H Logan	J Kim	K Mitch	M Josh	N Nikki	P Alex	Q Ty	R Curtis	X Adam	Y Don
thin dark sediment overlying rock fall	America Siege - Defensive Earthwork Construction and Post-Siege British Occupation/Abandonment	V	49											4	
orange red clay over and in amongst rock fall	Construction of New Fort up to Siege	IV	48											5	4
Rock fall from chimney demolition	Construction of New Fort up to Siege	IV	47									6	6	6	5
-sandy loam with heavy pebble inclusions - northeast corner of Unit	Construction of New Fort up to Siege	IV	46	6/8											
Lower destruction layer - dark brown sandy loam with some mottled clay - brick flecks, charcoal, and more mortar flecks than in other layers above	Construction of New Fort up to Siege	IV	45	5	6	6	6	6	4	6	8	7			
Post-abandonment feature - fire-reddened sand with charcoal - possible large post? - siege period? -	Construction of New Fort up to Siege	IV	44						8						

Phase Description	Period Description	Period	Phase	F	G	H	J	K	M	N	P	Q	R	X	Y
				Aaron	Iain	Logan	Kim	Mitch	Josh	Nikki	Alex	Ty	Curtis	Adam	Don
Post-hole interface	Construction of New Fort up to Siege	IV	43						9						
Mortar in situ on top of wall rock-fall from chimney - Unit P only on May 21	Building Two - Demolition - 1805	IIIc	42								11				
Rock-fall and mortar	Building Two - Demolition - 1805	IIIc	41								12		7		
Dark loam - is a trench on the north side of the dry-laid foundation wall	Building Two - Demolition - 1805	IIIc	40										8		
Mottled orange brown clay under upper layer of rock-fall in Units R and X	Building Two - Demolition - 1805	IIIc	39										9	7	
Rock-fall from chimney	Building Two - Demolition - 1805	IIIc	38											8, 9, 12, 13	
HFI - Unit X and Unit Y - destruction interface of chimney foundation	Building Two - Demolition - 1805	IIIc	37											10	6a

Phase Description	Period Description	Period	Phase	F	G	H	J	K	M	N	P	Q	R	X	Y
				Aaron	Iain	Logan	Kim	Mitch	Josh	Nikki	Alex	Ty	Curtis	Adam	Don
Dry-laid wall foundation in Unit R - east-west orientation	Demolition of Building Three?	IIIc	36										11		
Sandy loam with brick and limestone rubble - destruction layer - highest elevation	Demolition of Building Three?	IIIc	35					7					10		7?
Clay patch in Unit K - related to destruction layer above	Demolition of Building Three?	IIIc	34					8							
Possible subfloor layer covering sleeper trench and post in Unit J	Demolition of Building Three?	IIIc	33				7	9							
Post feature fill in Unit J - large	Building Three - North and East	IIIc	32				10								
Post-hole interface	Building Three - North and East	IIIb	31				11								
Isolated patch of sandy loam - subfloor layer	Building Three - North and East	IIIb	30		7										
Sleeper replacement?	Building Three - North and East	IIIb	29		12										

Phase Description	Period Description	Period	Phase	F	G	H	J	K	M	N	P	Q	R	X	Y
				Aaron	Iain	Logan	Kim	Mitch	Josh	Nikki	Alex	Ty	Curtis	Adam	Don
Interface	Building Three - North and East	IIIb	28		13										
Displaced clay - sub-floor deposit	Building Three - North and East	IIIb	27		10										
Latest trench fill for outer wall of building - East wall - repair?	Building Three - North and East	IIIb	26	9											
Interface	Building Three - North and East	IIIb	25	10											
Trench fill for east wall of building	Building Three - North and East	IIIb	24	14											
Interface	Building Three - North and East	IIIb	23	15											
Dark brown sandy loam - floor layer contemporary with sleeper in Unit M -	Building Three - North and East	IIIb	22	7											
Trenches inside structure - sleepers - clay loam - dark brown with mortar flecks and brick flecks and charcoal flecks -	Building Three - North and East	IIIb	21		8	7, 10	8		6		9	10			

Phase Description	Period Description	Period	Phase	F	G	H	J	K	M	N	P	Q	R	X	Y
				Aaron	Iain	Logan	Kim	Mitch	Josh	Nikki	Alex	Ty	Curtis	Adam	Don
Sleeper timber remaining in trench - deteriorated but still intact	Building Three - North and East	IIIb	20								9b				
Interface for later sleeper trenches	Building Three - North and East	IIIb	19		9	8, 11	9		7		9a	11			
Re-deposited A-horizon - sub-floor layer - sleepers cut into this layer -	Building Three - North and East	IIIb	18	11	14	12			5						
Sub-floor deposit associated with occupation of structure - some evidence of building demolition - stone rubble and mortar found in this layer in Unit N - but this appears to be intrusive from above layer -	Building Two - Occupation	IIIa	17							7	10	8	12=13		
Ash under large stone rock-fall	Building Two - with Double Fireplace	IIIa	16								12a		16	14	
Masonry chimney foundation in Units X and Y - mortared stones	Building Two - with Double Fireplace	IIIa	15											11	6

Phase Description	Period Description	Period	Phase	F	G	H	J	K	M	N	P	Q	R	X	Y
				Aaron	Iain	Logan	Kim	Mitch	Josh	Nikki	Alex	Ty	Curtis	Adam	Don
Hearth interface - use-life of hearth	Building Two - with Double Fireplace	IIIa	14											16	
Hearth	Building Two Construction - with Double Fireplace	IIIa	13											15	
Layer overlying early sleepers and posts - yellowish brown - appearance of being mixed sediments - subsoil and A-horizon? - reddish brown also - very small artifacts -	Building One - Destruction	II	12								16	9	14=15	17	7
Post-hole fill	Building One - Northeast and Southeast	II	11								13			20	
Post remnants in post-hole fill - about 10-15 cm diameter	Building One - Northeast and Southeast	II	10								14				
Interface for post-hole	Building One - Northeast and Southeast	II	9								15			21	

Phase Description	Period Description	Period	Phase	F	G	H	J	K	M	N	P	Q	R	X	Y
				Aaron	Iain	Logan	Kim	Mitch	Josh	Nikki	Alex	Ty	Curtis	Adam	Don
Early trench fill - sleeper? – E-W orientation in F, G, Q and R - north-south orientation in Unit X	Building One - Northeast and Southeast	II	8	12	15							12	18	18	
Interface for above trench - sleeper	Building One - Northeast and Southeast	II	7	13	16							13	19	19	
Robbed wall trench for west side of structure	Building One - Northwest	II	6					11							
Wall trench interface in Unit K - west wall of structure?	Building One - Northwest	II	5					12							
Shallow black sand-filled pit with chert only - presumably a pre-contact feature		Ia	4						11						
Interface for above		Ia	3						12						
Buried A-horizon		I	2							8					
Orange red sand subsoil and traces of A-horizon		I	1	16	11	9	12	10	10	9	17	14	17	22	

Period I Geological This is the geological period for the site comprised of the orange-brown



Figure 27 Unit M, lot 10, reddish brown subsoil with traces of the buried A-horizon, exposed at close of Unit, Phases [1] and [2].

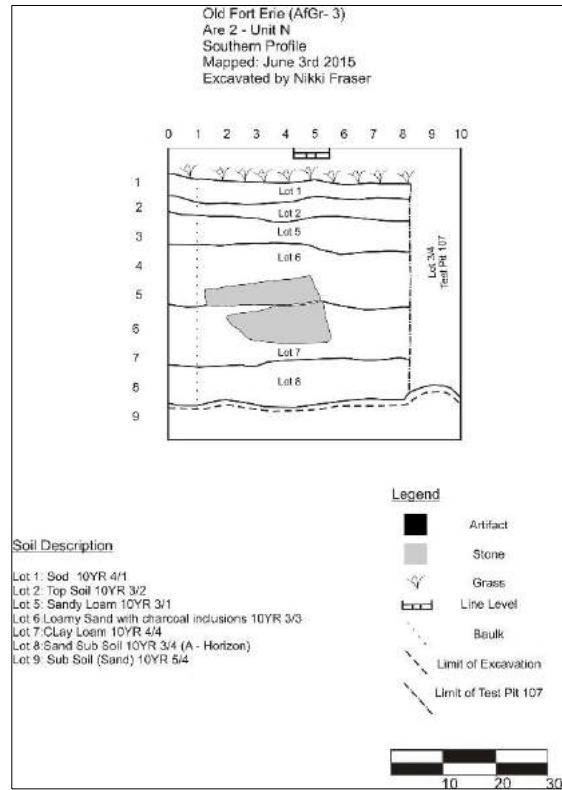


Figure 28 Unit N, lot 10, south profile, showing lot 8 sandy A-horizon [2] overlying the reddish-brown subsoil [1].

sand subsoil, Phase [1] and remnants of the buried topsoil – A-horizon Phase [2]. The Period I subsoil was exposed in all Units excepting Unit T, which was not completed as it was in an inaccessible location adjacent to the double fireplace found in this Unit and adjacent Unit X. The soil was troweled to a depth of about 10 centimetres below the surface in some Units to recover artifacts that may have been introduced into the layer through natural or cultural processes. In Unit N the dark brown A-horizon is represented as a continuous layer about 10 cm in thickness (Figure 27).

Period Ia Pre-Contact Feature



Figure 29 Unit M, lot 10, showing pit fill lot 11, Phase [4], at in the south end of Unit adjacent to reddish brown subsoil.



Figure 30 Unit M, showing pit interface lot 12, Phase [3], excavated into the reddish-brown subsoil, Phase [1].

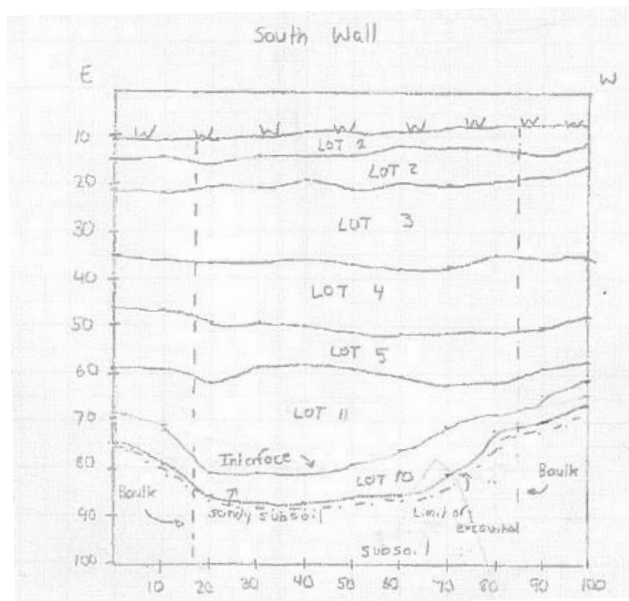


Figure 31 Unit M, south profile, showing pit/trench fill lot 11, Phase [4], overlying the interface, lot 12, Phase [3], intrusive into the reddish-brown subsoil, Phase [1].

A shallow pit or trench, Phase [3] was found intrusive into the subsoil in Unit M. The pit was confined to the south end of the Unit and was filled with a blackish-brown to black sandy soil. Based on the contours of the feature it was at least 10 centimetres in depth although it was difficult to discern the overlying A-horizon from the pit fill during excavation as shown in the south profile (Figures 30, 31). Only chert flakes and core fragments were found within the feature.

Period II Early Timber Structure

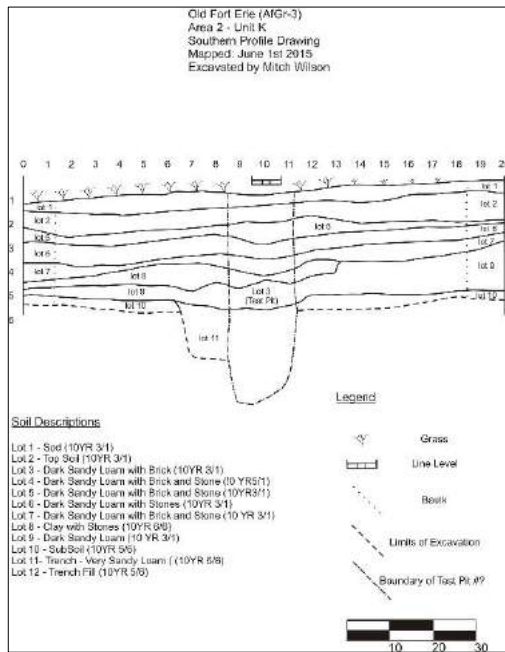


Figure 32 Unit K, south profile, showing trench fill marking wall of Building One (lot 11, Phase [6], overlying the interface, lot 12, Phase [5], which is intrusive into the reddish-brown subsoil, Phase [1].

This represents the first occupation phase during the historic period. The earliest evidence of a structure is found in Unit K where a 25-centimetre deep trench, Phase [5], was excavated into the sandy subsoil. Fill within the trench, Phase [6], consists of a very sandy loam, brownish-yellow in colour. In the south wall of the Unit the trench was truncated by a test pit excavated in spring 2016 and so the width can only be estimated as between 25 and 50 centimetres (Figure 32). The trench ran across the Unit in a north-south direction and intersected the north wall where it was less clearly defined. Artifacts found in the trench include bone and a single wrought iron nail.

Several sleeper trenches for sub-floor timbers are found in 5 other Units across Area 2. All trenches are excavated into subsoil to a depth of about 10-15 centimetres and vary in width from about 30-40 centimetres (Figures 33-35). In Units F, G, Q and R the trenches run in an east-west direction. In Unit X a similar trench was found running in a north-south orientation at an approximate right angle to the sleepers in other Units. All sleepers are in a stratigraphic position that identifies these as belonging to the earliest



Figure 33 Unit G, showing excavated sleeper trench, lots 15/16 (fill/interface) Phases [7] and [8] below rock in south wall (left). The early sleeper trench was intersected by a later wall trench running diagonally across the Unit (lower right).



Figure 34 Unit Q, showing excavated wall trench feature lots 12/13 (fill/interface) Phases [7] and [8] (middle of Unit).



Figure 35 Unit X, showing unexcavated sleeper trench, lots 18/19 (fill/interface) Phases [7] and [8]. The early sleeper trench runs at a different angle than the fireplace associated with a later structure, and at right angles to sleeper trenches in Units F, G, Q, and R.

structure in the area, although this building was later demolished and built over as discussed below. That a later building was present is also indicated by the orientation of the sleeper trench in Unit X, in front of the fireplace foundation, but at a different angle and a much lower elevation than the adjacent hearth stones. Artifacts found within the sleeper trench fill include chert flakes, brick fragments, 2 wrought nails and a single sherd of creamware.



Figure 36 Unit P, showing excavated post-hole, lots 13, 14, 15 (fill/post/interface) Phases [9], [10] and [11] cut into the natural subsoil.

Phases [9], [10], and [11] represent two posts found in Units P and X (Figures 36, 37). The post-holes are about 25-30 centimetres in diameter, and excavated into subsoil to a depth of about 10-15 centimetres where they rest on the limestone bedrock. Remains of the actual post were found in Unit P in the centre of the post-hole fill. The posts are substantial enough to have been upright supports inside a structure although they are also quite possibly from an even earlier phase of the building



Figure 37 Unit X, showing excavated post-hole, lots 20/21 (fill/interface) Phases [9] and [11] cut into subsoil. This post may represent an even earlier phase of construction in the timber building as it appears to be below the sleeper trench from Phase [7]/[8].

than the sleeper trenches in Phases [7] and [8]. The stratigraphic position of the post in Unit X may in fact be below the sleeper trench itself; i.e., the sleeper trench appears to have been excavated after the post was removed, suggesting that the earliest of structures in Area 2 may have had undergone multiple phases of construction. A single piece of patinated window glass and 2 bent, corroded wrought iron nails measuring 1.5 inches in length were found in the post-hole fill in Unit X.

The final Phase in Period II is a layer of mixed sand and loam, reddish-brown and dark brown in colour, which covers all features, posts and sleeper trenches associated with the earlier phases in the Period. The 15-20-centimetre thick deposit is a widespread sediment horizon in the south part of Area 2 which marks the destruction of the earliest building in the area. Artifacts found are small but numerous and varied in type, supporting the contention that this is a destruction layer. Nails of various sizes, window glass, brick fragments, mortar, bone, ceramics, buttons – one with a star and crown, a centre "GR" with "ROYAL CANADIAN VOLUNTEERS" around the perimeter - a 1781 silver 2 reale coin, container glass, and other items attest to a wide variety of activities associated with the early structure. It is difficult to assess the function of the building although the presence of domestic items does suggest a residence as opposed to a utilitarian function. If the sleepers in Units F and G, at the north end of Area 2 are

associated with the structure this would have been a substantial building, longer north-south than east-west. Interestingly, a structure is shown in the Edward Walsh 1804 watercolour that does fit this description – indicated by arrow below (Figure 40). The long, low profile of the structure is apparent, and as already discussed in connection with the blacksmith shop (small structure below the one in

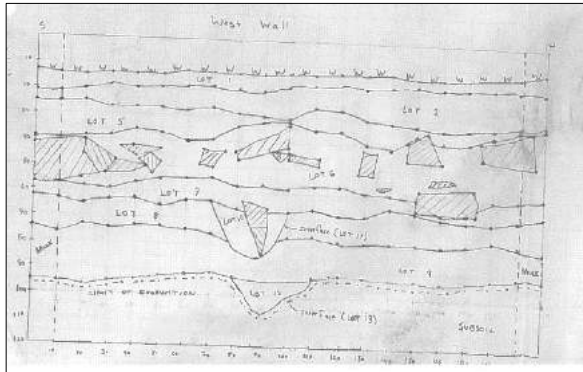


Figure 38 Unit Q, west wall profile, showing the destruction fill layer, lot 9, Phase [12], overlying the earlier sleeper trench, lot 12, Phase [7], [8].

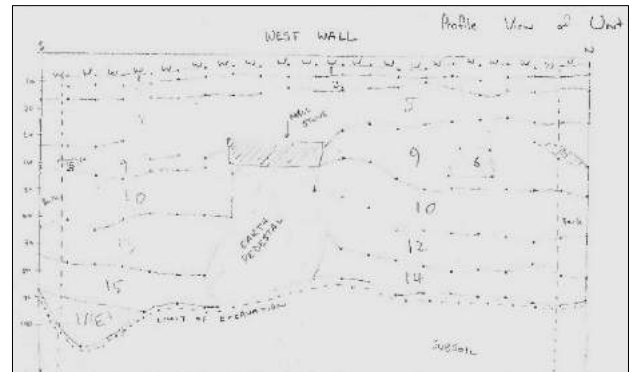


Figure 39 Unit R, west wall profile, showing the destruction fill layer, lot 14/15, Phase [12], overlying the earlier sleeper trench, lot 18/19, Phase [7]/[8], (lower left).



Figure 40 Edward Walsh watercolour, 1804, showing the rectangular structure – arrow – thought to be the latest phase of the structure in Area 2.

question), the building appears to correspond to the location of the remains found in Area 2. However, the building depicted is much later than the structure described in Period II and it is not likely that this is the building shown in the Walsh watercolour.

Period IIIa Construction of Building with Chimney

This Period is associated with the construction of a second building in the same location as the earlier



Figure 41 View looking west showing the hearthstone and rear chimney wall of the double fireplace in Unit Y. Ash, Phase [16], in the foreground was found below the rock-fall.



Figure 42 View looking west showing the hearthstone and rear fireplace wall and overlying rock-fall in north and south profiles.

building described in Period II. The defining feature of this structure is the masonry fireplace found in Units X and Y. The building is located in the south section of Area 2 in Units N, P, Q, R, X, and Y. Phases [13], [14], [15], and [16] represent the fireplace itself beginning with the large hearthstones (Figure 42) in Unit X, the ash on top of the hearth and in the area in front of the hearth (Figure 41). The fireplace itself [15] is constructed of large limestone blocks, loosely mortared or even dry-laid. Two hearthstones found in Units X and Y, on opposite sides of a common wall indicate that the structure is a double fireplace, perhaps located in the centre of a structure (Figure 43) which extends farther to the west. The presence of a fireplace itself suggests that it was a residence, as opposed to a utilitarian structure, an interpretation supported by the wide variety of material culture found in a layer associated with the use-life of the building, Phase [17]. If a residence, the fireplace may indicate either a soldiers' barracks or officers' quarters, however, the variety of ceramics recovered from contexts associated with the occupation of the building suggest that the structure served as an officers' quarters. Artifacts found include high status ceramics such as bone china and porcelain, together with other tableware ceramics such as pearlware, creamware, banded and printed wares. Other domestic items found were 2 bone buttons, a bone handled fork, smoking pipes, container glass, an eyeglass lens, and clothing buckle. The types of items are more clearly associated with a person of status such as an officer although no regimental insignia were recovered. However, 2 corroded pewter uniform buttons and a civilian button, such as would be worn by an officer wishing to demonstrate fashionable tastes and status, a gilt button with a face design of a star set within a floral border, was recovered. Food waste in the form of bird, mammal and fish bone also support the interpretation of the building as residential. Destruction debris found in the layer – window glass, wrought nails, and brick – point to the deposit as being a fill layer laid

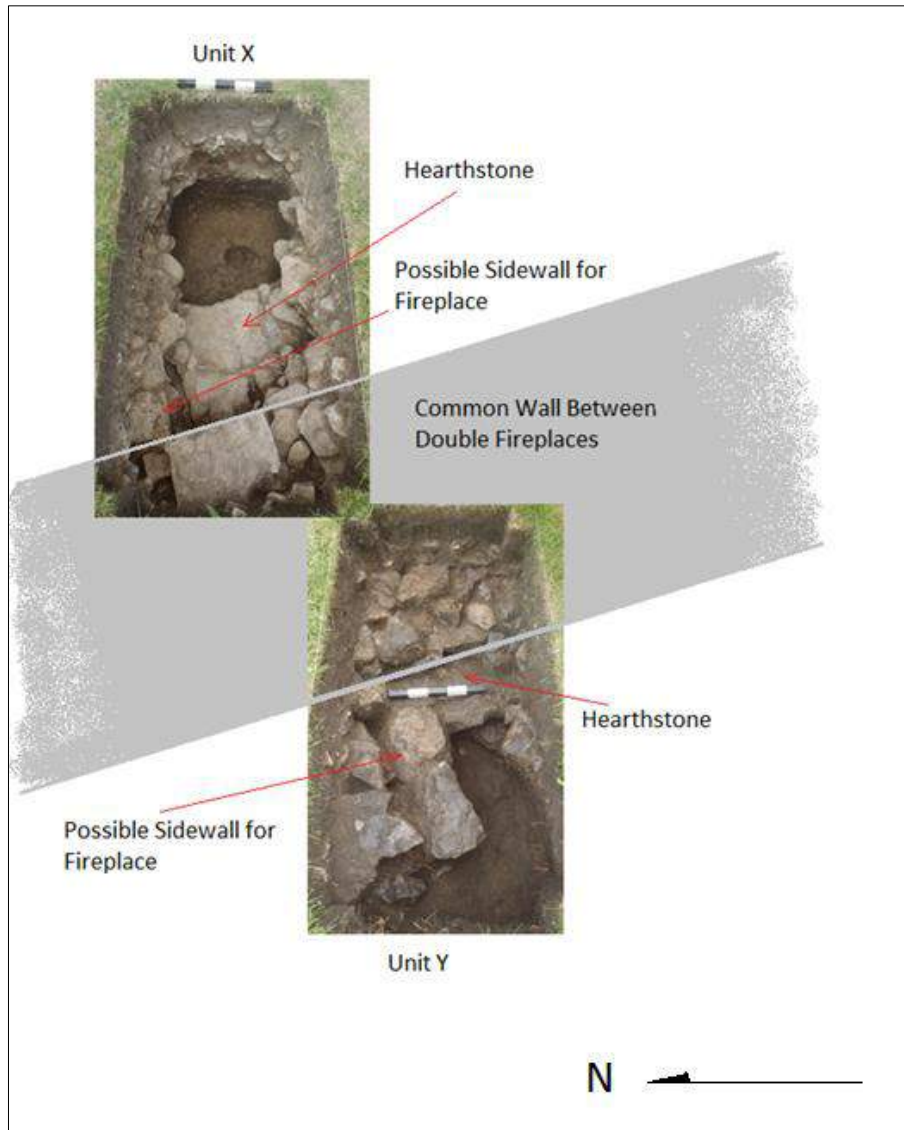


Figure 43 Overhead composite of Units X and Y showing the double fireplace. The slight off-set of the sidewall in Unit Y compared to Unit X indicates asymmetry but the common wall is evidence of contemporaneity. No excavation took place to the west of the fireplace in Unit Y but structural remains would be expected in this area. Excavation is planned for 2017 to investigate.

down during the destruction of the building. Limestone rubble found within the matrix of the sediment almost certainly is derived from the nearby chimney/fireplace. Large quantities of chert flakes within the fill also suggest that the fill was at least partially the result of excavation into natural subsoil - excavated and re-deposited to cover the architectural debris.

Period IIIb Modification of Officers' Quarters

Phases [18] to [31] are associated with what may be a larger structure in the same location as the Officers' Quarters in Period IIIa. The earliest evidence of this structure is in the northeast section of Area 2, Phase [18,] in which a layer of blackish brown sandy loam about 10-15 cm. in thickness covers all earlier features and layers. Artifacts found in the layer include nails and window glass, along with small quantities of ceramic, container glass, smoking pipes, food bone (fish, bird and mammal), and other items associated with a residential occupation. The presence of significant numbers of chert flakes and the occasional tool (e.g., projectile points and scrapers) suggests that the deposit may be re-deposited subsoil containing residual, or clearly ancient, artifacts from an original A-horizon. A significant number



Figure 44 Unit P, view looking south, showing the sleeper trench with blackened wood remaining in situ.



Figure 45 Unit M, view looking south, showing the sleeper trench fill as first exposed. Note the parallel orientation of the sleepers – Unit P in the south and Unit M several meters north towards the presumed centre of the structure.

of ceramics were recovered from Unit M including 18th century varieties such as creamware, pearlware, porcelain, tin-glazed and Bristol slipware. The latter two types are mid-18th century ceramics and suggest that the artifacts are related to the earlier occupation in Period II which were re-deposited as a fill layer in this later Period.

Phases [19] and [21] are sleeper trenches and associated interfaces for those found in six excavation Units. Phase [20] signifies the actual blackened, possibly charred, wooden remains of a sleeper in Unit P (Figure 44). In Units G, H, J, M, P, and Q the sleepers run parallel, or nearly parallel, to the axis of the double fireplace (Figures 45-47). This provides strong evidence that the structure associated with the fireplace was still standing at this time and that a north extension had been appended to the original building. In fact, a modification to the floor of the original double fireplace building (Period IIIa – officers' quarters) appears to have been made at this time. The addition of a sleeper superimposed on an earlier sleeper in the same location but at a lower elevation in Unit Q had the effect of raising the floor about 25 centimeters from the earlier floor level (Period II). Interestingly, the new floor in the modified and enlarged structure was about 40-50 centimetres the modern below ground and all sleepers are at approximately the same absolute elevation, thus providing a level floor stretching from the south end of the structure in Unit R to the northernmost excavated extent in Unit H. In Unit H, the discovery of another sleeper trench at right angles to the east-west sleeper trenches may indicate a mid-building support for the relatively long east-west sleepers. Referring to Figure 49, this north-south



Figure 46 Unit H, view looking west, showing the continuation of the excavated sleeper trench in Unit J. Note the parallel orientation of the sleepers with Units P and M above. Also, the north-south oriented trench at the bottom of the photo is contemporaneous with the sleeper and at right angles suggesting another interior structural feature possibly as a support for the east-west sleepers which spanned a significant distance.



Figure 47 Unit J, view looking west, showing the sleeper trench fill running in same orientation as Units P and M above. Another post pit feature can be seen on the left, belonging to Phase [31].

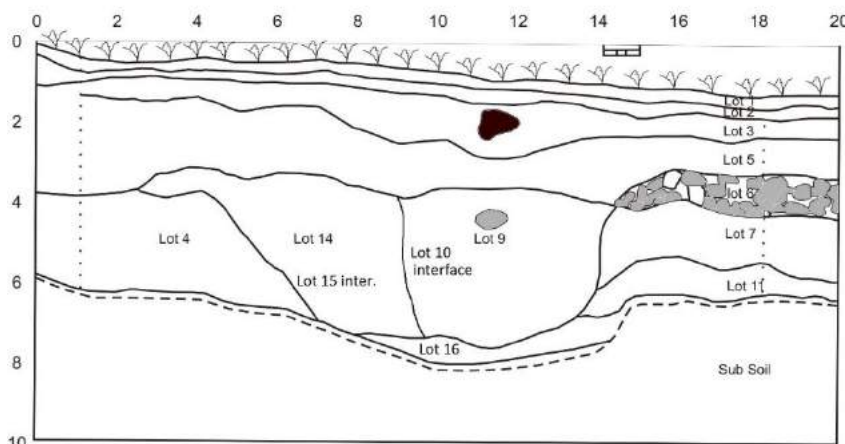


Figure 48 North profile of Unit F showing wall construction and repair trenches, Phases [23]/[24], (lots 14/15) and [25]/[26] (lots 9/10), respectively.

support sleeper is found at almost precisely the middle distance between the projected east wall location and the centre axis of the double fireplace.

Phases [22] to [26] are found exclusively in Unit F (Figure 48). All 5 phases are related to the east wall of the structure and indicate construction and later repair to this feature. The projected footprint of the building, Figure 49, is based on the intersection of the east-west trench in Unit H and the north-south trench in Unit F. The projection would incorporate a right-angle to the meeting of these features marking the corner of the structure at about 1.5 meters north of Unit F. Phase [22] is a layer overlying the original subfloor layer in Phase [18], which may be displaced fill from the excavation of the original

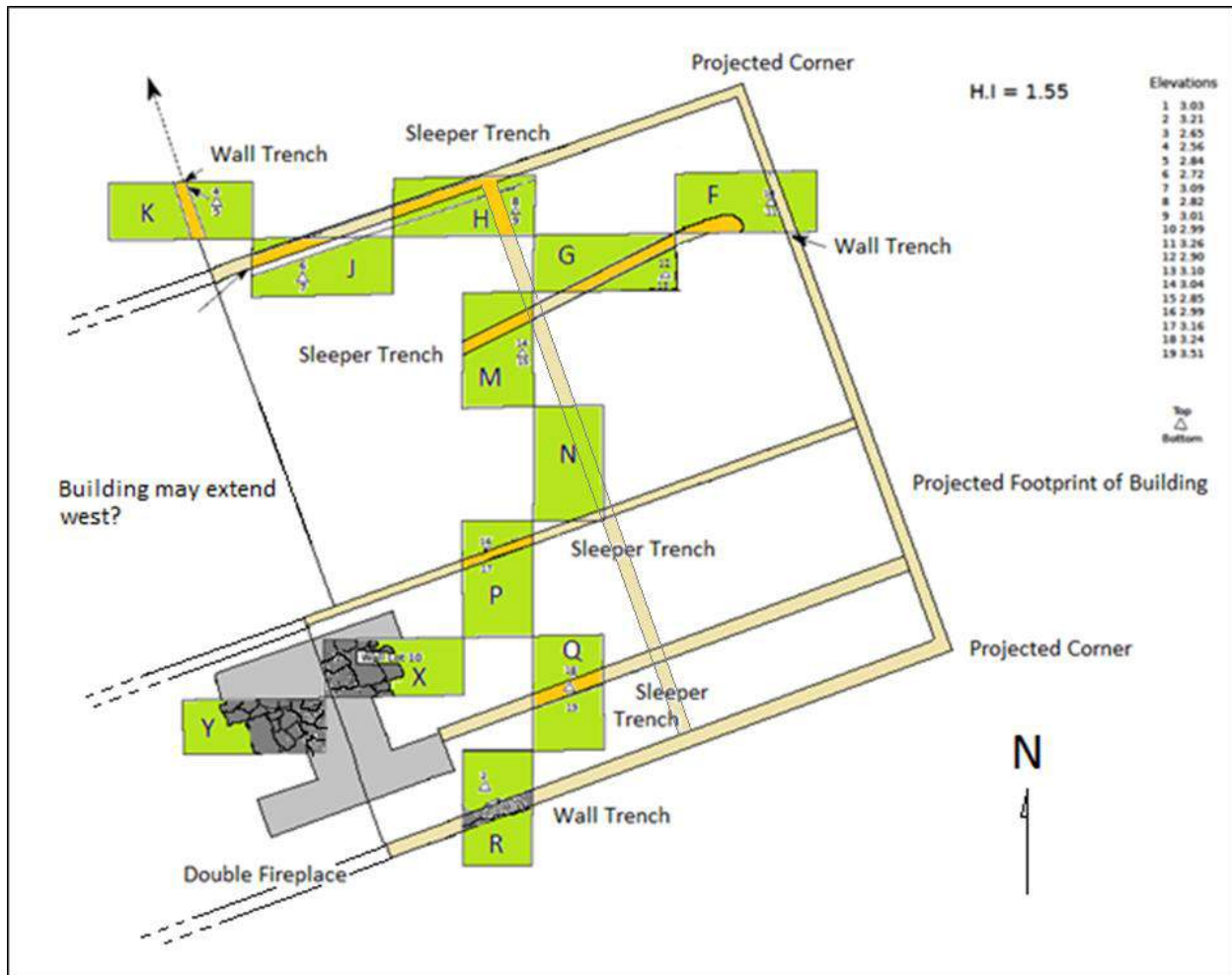


Figure 49 Plan view of Area 2 showing all excavation Units and architectural features revealed in excavation. The double fireplace in Units X and Y – Period IIIa – suggests that the building extends farther to the west. The alignment of the wall trench in Units J and H with the axis of the fireplace also suggests that the building extended at least this far to the north. The sleeper/wall trench in Units M, G and F also indicates a different phase of construction described below in Period IIIb, possibly indicating floor repair. Note: no evidence of the north-south sleeper trench was found in Unit N but it is possible that the considerable width of the trench in Unit H may have occupied such a large portion of Unit N that was not identified as a trench during excavation.

wall trench, Phases [23] and [24] (Figure 48). Artifacts within the deposit are few but include 6 sherds of plain creamware, bone, window glass, nails, a smoking pipe piece, a brick fragment, a polished copper pendant, attributable to a historic period aboriginal person, chert flakes and a polished stone net sinker. The pre-contact period net sinker and chert flakes suggest that the deposit was at least partially derived

from the natural subsoil into which the trench excavation intruded. Historic period material can be assumed to be contemporary with the excavation of the trench.

The original width of this 25 centimetre deep trench is unknown as it was intersected by a later trench in approximately the same location but to the east of the original. The trench within a trench, or two phases of construction in the same location, is indicative of wall repair/replacement. This would seem to indicate that periodic maintenance was necessary for the timber structures built on and in the ground in the absence of a stone footing.

Phases [27], [28], [29], and [30] are all found in Unit G. Phase [27] (lot 10 in Unit G) is a subfloor deposit consisting entirely of grey clay subsoil and is devoid of artifacts. The layer covers the original sleeper trench, Phases [19] and [21] (lots 8/9) (Figures 50 and 51). A later sleeper trench, Phases [28] and [29] (lots 12/13), probably a replacement for the original sleepers, was cut into the lot 10 subfloor layer (Figures 52,53). This later sleeper trench is in the same orientation as the earlier sleeper. Artifacts found in the trench include Royal pattern creamware, porcelain, wrought nails, dozens of brick fragments, window glass, and 3 chert flakes. The presence of brick is interesting in that it occurs in all

later deposits where wall or sleeper trench replacement occurs. An isolated patch of sandy loam, lot 7, represents phase [30]. Artifacts found in this small deposit are few but include creamware, nails, brick fragments, a straight pin and a few chert flakes. The deposit is likely displaced from an earlier context considering the presence of pre-contact artifacts.

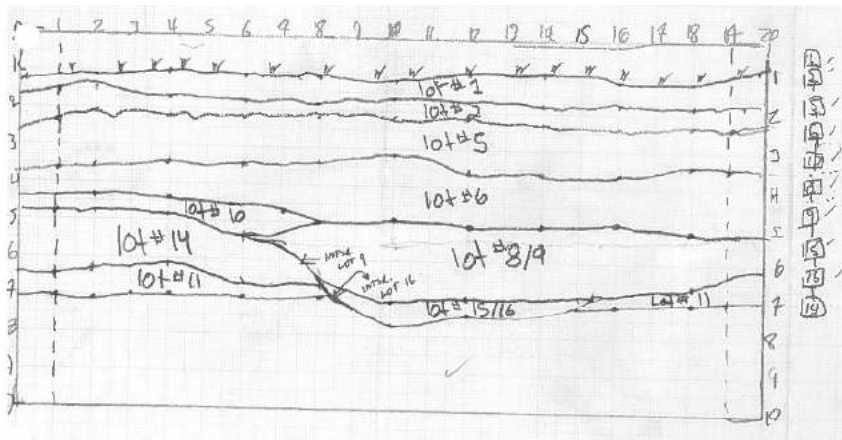


Figure 50 Unit G, south profile, showing lot 10 overlying the earlier sleeper trench from phases [10] and [20].

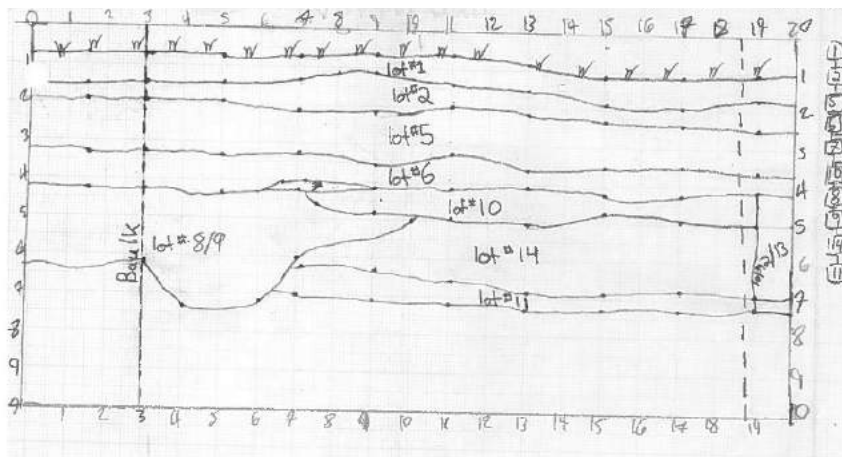


Figure 51 Unit G, north profile, showing lot 10 overlying the earlier sleeper trench from phases [10] and [20] and lot 7 [phase 30] superimposed on lot 10.



Figure 52 Unit G, view looking west, showing lot 12/13, Phases [28] and [29], sleeper trench in bottom right.

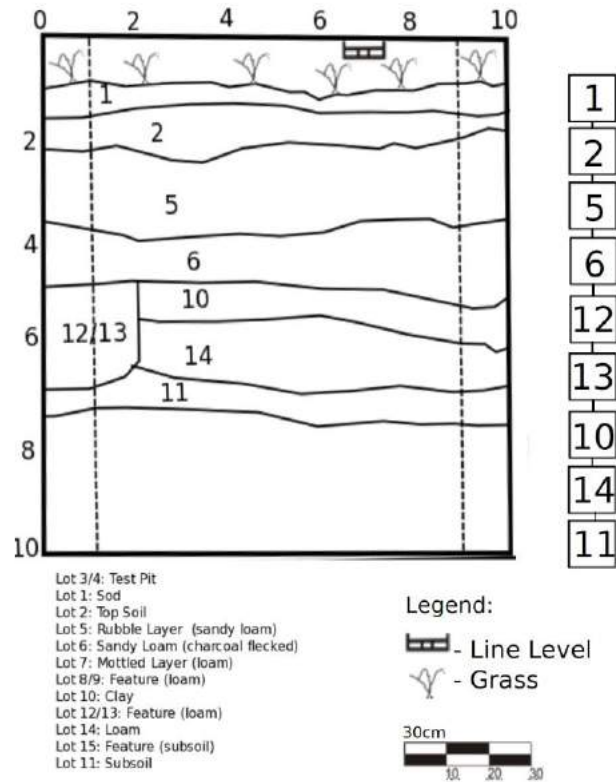


Figure 53 Unit G, profile of east wall, showing lot 12/13, Phases [28] and [29] sleeper trench intrusive into lot 10 subfloor layer (Phase [27]).



Phase [31] represents the latest phase in Period IIIb. This is a large post-hole in Unit J located in the southeast corner of the Unit (Figure 54). The hole was about 70 cm in diameter and 25 cm deep. It is of unknown function and in fact may date to an earlier period since it is cut into subsoil and overlain by the same fill deposit as the adjacent sleeper trench. Artifacts found in the pit fill which dates to the next period include nails, window glass, mortar, ceramics, a barrel hoop and a smoking pipe fragment. The presence of building destruction debris, including mortar fragments, suggests that the infilling was done at the same time as the entire structure was demolished, Period IIIc.

Figure 54 Unit J, view looking west, showing lot 11, Phase [31], posthole cut into the natural subsoil. The post-hole could be contemporaneous with the sleeper trench to the right, Phases [19] and [21].

Period IIIc Demolition of Officers' Quarters/Building Extension – Pre-1805

Phases [32] to [42] represent various phases related to the destruction of the officers' quarters and the larger building extension to this structure described in Periods IIIa and IIIb. The first event is the post fill in the post-hole described in Period IIIb, Phase [31]. The filling of the post [32] represents an event separate from the actual excavation of the pit for the post (Figure 55). Artifacts found in the fill

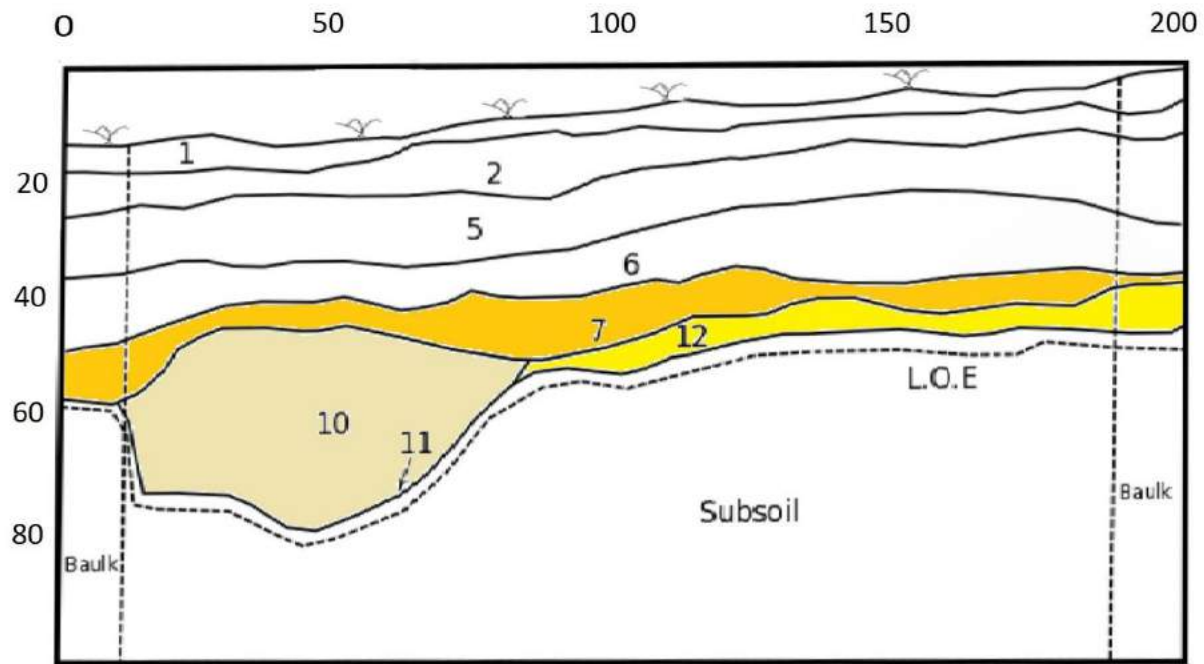


Figure 55 Unit J, south profile, showing pit lot 10 and interface lot 11 (Phases [31] and [32]) cut into subsoil and overlain by lot 7 (Phase 33).

represent a varied mix of domestic items and also architectural materials that indicate demolition activity. A deposit of dark sandy loam, Phase [33] (lot 7 above), about 10 centimetres thick, found in Units J and K, covers the pit fill and the adjacent sleeper trench described in Phases [19] and [21], lots 8 and 9 in Unit J. Artifacts found in Phase [33] include a large quantity of food bone, mammal, bird and fish, a lice comb, dozens of ceramic sherds dating to the late 18th /early 19th centuries – painted and printed pearlware, and porcelain predominantly – smoking pipes, native ceramic, chert flakes, about 50 wrought nails, glass beverage bottles, 2 pieces of window glass, limestone rubble and mortar. The ceramic assemblage is later in date than earlier phases and the bone indicates kitchen activity. The destruction debris further suggests a demolition of the structure described in Periods IIIa and IIIb and the concentration of material in Unit J, compared to the adjacent Unit K, may indicate that the former Unit marks the northern extent of the building, with most of the debris re-deposited as fill on the interior. The 2 pieces of window glass is strong evidence for the absence of a window in this part of the structure.

Another destruction layer containing brick and limestone rubble in a sandy loam matrix marks Phases [34] and [35]. This destruction horizon is widespread across Area 2 and is found in Units K (Figure 56), R, and Y. A clay lay, lot 8 Phase [34] contains the same types of material as Phase [33]. Interestingly, two door latch parts found in the deposit in Unit K provide further support for this being the north extent of

the structure – perhaps an exterior entrance. Among the Phase [35] artifacts are another door/latch part, several nails and a single piece of window glass in Unit K, but a significant number of nails and window glass in Unit R. The much higher frequency of window glass in this Unit points to a window at what would likely have been the front of the structure facing the adjacent roadway. Ceramics in this area of the site are also numerous and include pearlware, porcelain and 18th century varieties of tin-

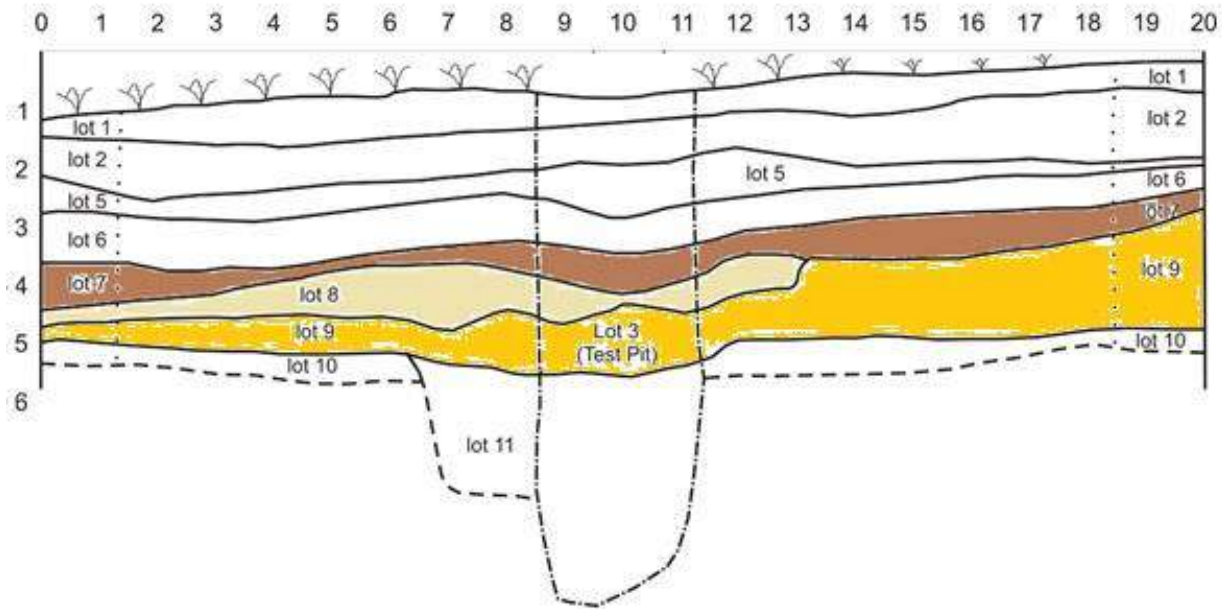


Figure 56 Unit K, south profile, showing lots 9, 8 and 7, Phases [33], [34] and [35], respectively.



Figure 57 Unit R showing dry-laid foundation for timber sills (arrow), and destruction debris from fireplace above and below.

glazed and Fulham/Lambeth stoneware. Pharmaceutical bottle fragments and smoking pipes are also present.

Phase [36] represents a dry-laid stone foundation that may have been laid to level the building at the south end of the structure (Figure 57). In Area 2, the slight decline in ground surface elevation from north to south may have necessitated this as a support for the timber sills, which were laid elsewhere on the ground – as in Unit F. The placement of timber sills on the stone foundation in Unit R, at the opposite end of the structure, would have raised the sills to a common height. Destruction debris surrounding this feature is probably derived from the destruction of the chimney/double fireplace a few metres to the north in Units X and Y.

Phase [37] is the destruction interface for the chimney/double fireplace in Unit X and Y. This is the surface of the stonework as found and which marks the specific moment in time that the fireplace/chimney was demolished. Figure 42 described above in Period IIIa

shows the destruction interface of the stonework after removal of the overlying rock-fall, Phase [38] in Units X and Y. In Unit X four layers of rock-fall were given separate designations during excavation as there appeared to be intervening thin and discontinuous layers of clay sediment between the rocks at various points (Figures 58-63). A layer of compact mottled orange-brown clay covered all lower rock-



Figure 58 Unit X showing lot 7, Phase [39], the sediment overlying all subsequent rock-fall layers.



Figure 59 Unit X showing lot 8 upper layer of rock-fall.



Figure 60 Unit X showing lot 9 clay layer between rock-fall layers.



Figure 61 Unit X showing the fireplace wall as first seen (large stone at bottom of image). Destruction interface lot 10, Phase [37].



Figure 62 Unit X showing lowest layer of rock-fall covering hearthstone.



Figure 63 Unit X with rock-fall removed, showing hearthstone in front of chimney foundation.

fall,

deposits, Phase [39], found in Units X and R. Artifacts found in the upper layers of sediment associated with the rock-fall (lots 7, 9, and 12) are few in number and include only nails, mortar, and a couple of sherds of undecorated creamware. In the lowest layer of rock-fall and sediment, lot 13, artifacts are more numerous and include food bone, ceramics (pearlware and creamware), container glass, and more than 75 wrought nails. The high number of nails in the lowest layer suggests that the wooden partition walls and roof of the structure were pulled down first and the stonework toppled over these and the floorboards. Nails types are varied, and range in length from 2 inches to 5+ inches, as well as spikes ranging in length from 6 - 9 inches, all of which indicate a variety of functions for specific purposes.

Phase [40] is a dark loam layer, Phase [40], found overlying the clay fill from Phase [39] and below a thin discontinuous layer of mortar, Phase [41], found in Units P and R. Artifacts found in Phase [40] are relatively few in number but varied and include bone, several wrought nails, pane glass, brick fragments, a few sherds of tableware ceramics (transfer printed pearlware and porcelain), a smoking pipe fragment, a gunflint, and a piece of wire from an epaulette. The final Phase [42] in Period IIIc is a thin, discontinuous layer of mortar covering the rock-fall in the south end of Unit P (Figures 64, 65).



Figure 64 Unit P showing ash layer, Phase [41], below mortar and rock-fall Phase [42].

In summary, the evidence for demolition of a structure in Period IIIc is incontrovertible. The destruction event is represented by artifacts such as nails and window glass, along with building debris such as stone, mortar, and brick. There is no evidence to suggest that the building was burnt as opposed to simply being dismantled in place and the debris covered over with a



Figure 65 Unit P showing mortar and rock-fall Phase [42].

thin layer of sediment. The destruction of the building, first an Officers' Quarters (Period IIIa) and then an extension onto this building (Period IIIb), was probably occasioned by the construction of the next phase of Fort Erie, the second (or even third) fort constructed on the higher ground to the north of the buildings described in Period III. A map dated 1803 (Figure 66), by Gother Mann, shows the proposed fort located to the north of the old fort on the lakeshore. This map is interesting as it shows the landscape from a military perspective only. Buildings which were known to be in the foreground of the proposed fort – the 'landfront' in fortification terminology – are not depicted. Yet we know from the Edward Walsh watercolour of 1804 (Figure 67), and the Sempronius Stretton sketch of March 1805 (Figure 68), that several structures were present in the landfront of the proposed fort between the old fort on the lakeshore – in ruins according to Gother Mann's map notation – and the heights upon which

the new fort would soon be constructed. In fortification design the landfront would have to be clear of any obstacles that would obstruct a clear line of sight for gunnery. In other words, the structures which are known to have existed based on documentary evidence, and for which archaeological evidence was found in Areas 1, 2 and 3 (to be discussed below), would have been required to be pulled down to provide this line of sight. The construction of the proposed fort began shortly after Stretton's drawing was made in the spring of 1805 and continued until 1807/1808. It is during this time that the buildings described in Periods IIIa and IIIb were demolished in Period IIIc. Artifacts found in the layers associated with the demolition are consistent with a domestic occupation of the building, during the late 18th century. Ceramics such as pearlware and creamware are more common than in Period II when several varieties of mid-18th century ceramics were recovered. These are still found in Period III but in smaller numbers and their presence in deposits dating to this time indicates deposition of older artifacts and disturbance from excavation into earlier layers. Military insignia from the siege period is absent in deposits attributed to Period III and are in evidence from the next period dated to the summer of 1814.

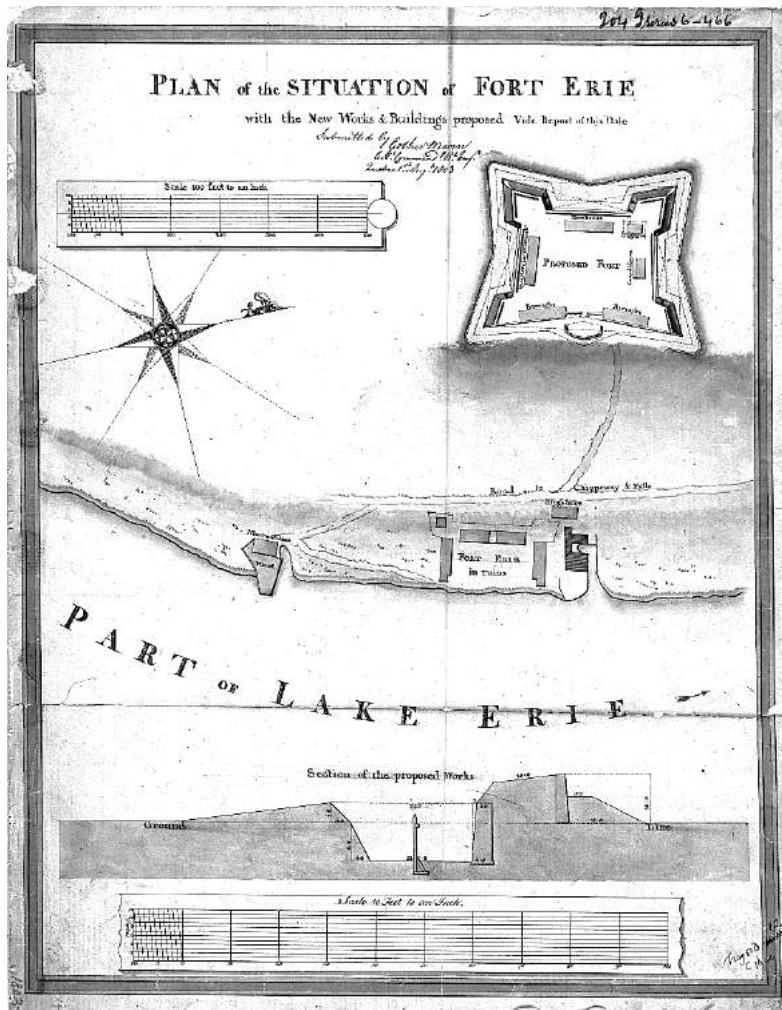


Figure 66 Plan of the Situation of Fort Erie, Library and Archives Canada, NMC 3801. Showing proposed fort with cleared ground on the landward side facing the existing fort built on the lakeshore.



Figure 67 *Old Fort Erie With the Migration of Wild Pigeons*, dated 1804; by Edward Walsh, Sigmund Samuel Collection, 952.218, ROM2006_7733_1.

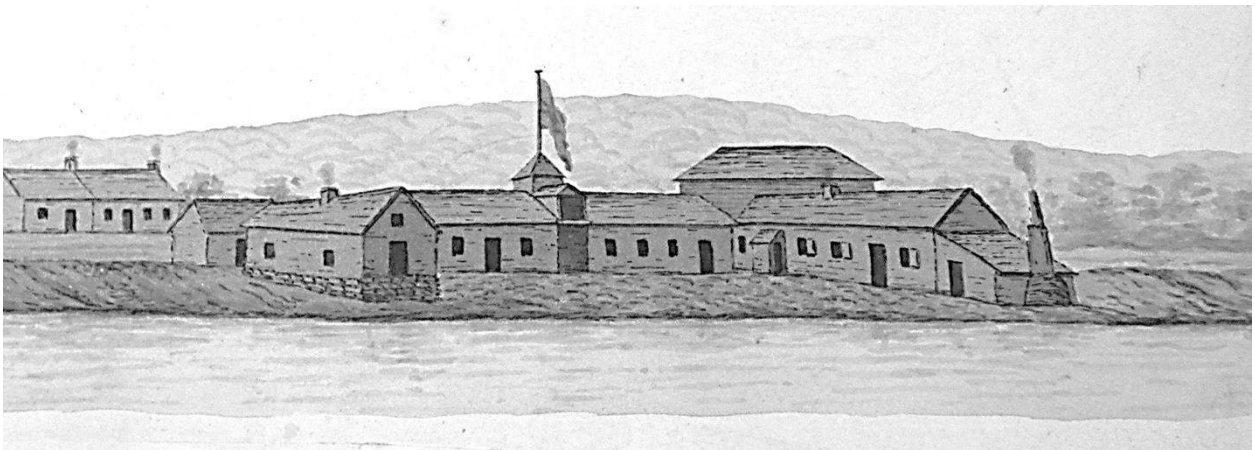


Figure 68 Sempronius Stretton (1781-1842). *Fort Erie and the Town* (ROM Cat.no. 1593; acc.no. 951.117.1) Black and brown washes, pen and ink. 162 x 692 mm. Inscribed lower corner: View of Fort Erie & the Town, at the mouth of Laker Erie Upper Canada / March 28, 1805.

Period IV Construction of New Fort 1805 to Siege Period Summer/Fall 1814

This Period includes events associated with the construction of the new Fort Erie between the years 1805 and 1807. During this time substantial disturbance took place to earlier layers, and debris associated with the 18th century occupation of the first fort was re-deposited in this later context. Artifacts are therefore unlikely to be in primary context but a concentration of items in the presumed centre of the former building, in Units J, M and P, suggest that materials were not displaced any great distance. It is also notable that, although displaced, all artifacts recovered appear to be associated with the occupation of the first fort from the 1770s onward.



Figure 69 Unit M showing post-hole Phases [43] and [44] adjacent to sleeper trenches from building in Period IIIb.

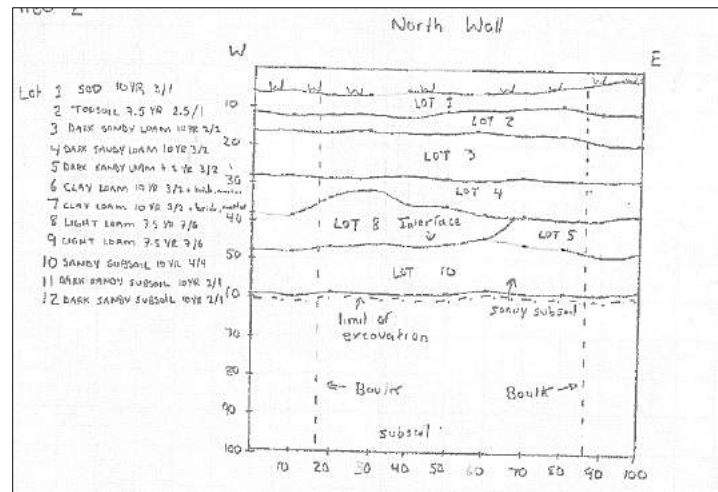


Figure 70 Unit M North wall profile showing post-hole fill lot 8 and interface lot 9, Phases [43] and [44].

Phases [43] and [44] designate a large posthole, at least 70 centimetres in diameter, interface and fill, respectively, which is intrusive into the subfloor layer defined in Period IIIb (Figure 69). Fill within the post-hole consisted of fire-reddened sand and charcoal. The hole was relatively shallow, only 10-12 centimetres deep (Figure 70, lot 8) and it appears that the large post rested in the hole rather than being supported by the sides of a deeply excavated pit. Artifacts found inside the fill include a few pieces of bone, a sherd of pearlware and creamware, and 21 wrought nails of varying sizes, highly corroded and with mineralized wood attached. The reddened soil indicates that burning of the artifacts took place in situ within the post-hole. The stratigraphic position of the post-hole is such that it could be contemporary with the buildings described in Periods IIIa and IIIb, but the location and size of the post inside the structure, adjacent to the sleeper trench described above in Period IIIb, does not correspond to the floor plan of the building in any logical way. Instead it appears to be a later intrusion into the subfloor deposit after the building had been demolished in Period IIIc. The question is, what does the post represent?

Considering the size of the post and the shallow depth, it seems clear that the large round timber element set into the post-hole was not meant to be part of a stand-alone structure such as a palisade, or it would have been set into the ground to a greater depth. However, the presence of nails and charcoal

in the post fill suggests that it might have been dug for a large, log base support for an anvil used during the fort's construction. A portable forge, mounted on a wagon, was a not uncommon occurrence on War of 1812 period forts. While the forge itself was mounted on cart the anvil would have been set on a stable platform, quite often an upturned section of log (Figures 71, 72). The archaeological footprint of such a portable forge would be minimal leaving only evidence of the anvil base and little else. A replica portable forge used at Fort York in Toronto for years left almost no trace within the ground (Richard Gerrard, pers. Comm. November 2016). The fuel source appears to have been charcoal although a few pieces of slag from coal burning were recovered from Unit K.

Phase [45] is a widespread destruction layer or horizon that is found in all Units except those with stonework; i.e., Units X, Y and R where the fireplace and dry-laid foundation

wall were found. The sediment is composed of a dark brown sandy loam with some mottled clay with brick flecks, charcoal, that overlies the destruction layers associated with Period IIIc. The surface of the deposit is about 25 cm below sod. Artifacts found in the layer are diverse in nature and numerous and date to the British occupation of the fort prior to 1805. The presence of so many artifacts from this



Figure 71 Portable forge War of 1812 Period replica (<http://4.bp.blogspot.com/-1kZlahwg5Ik/TiwRQ2pKKII/AAAAAAAAAE4/gQepAbLK7D0/s1600/wagner.jpg>)



Figure 72 Library of Congress image 1864, showing portable forge. (<https://southmountaincw.wordpress.com/2012/10/24/examples-of-items-contained-within-the-battery-and-forge-wagons-lost-at-monterey-pass/>)

period suggests that earth-moving on a large scale took place, enough soil being displaced as to create a new ground surface over all earlier destruction debris in a layer that was about 10 – 15 centimetres thick. Soil displacement on this large scale could be expected from the various excavations taking place in connection with the new fort construction.

Military buttons help to date the new soil horizon to the late 18th century through to the early 19th centuries. In fact, buttons from every regiment known to have been at the fort between 1783 and 1802 were recovered from layers attributed to this period in several units. Two military buttons found in Units F and P in this Period are interesting in that they are rare Royal Canadian Volunteer buttons. This was a colonial fencible regiment, along with the Queen's Rangers that garrisoned the fort after the 5th Regiment of Foot left in 1796. A 5th Regiment of Foot buttons was found in Unit H, dated to 1792-1796. The Royal Canadian Volunteers garrisoned Fort Erie from 1796 until 1802, when they were disbanded and replaced by the 49th regiment of Foot, under the command of then Col. Isaac Brock. It is not certain whether the Royal Canadian Volunteers were at Fort Erie continuously from 1796-1802, but it is known that they were there from 1799-1802 under the command of one of Captain R. Wilkinson. The Volunteers had previously been under the command of another colonial officer, Ensign McQuin of the Queen's Rangers.⁴⁵ Also found was a 65th Regiment of Foot button in Unit M. The 65th were stationed at the fort between 1787 and 1790. A Royal Regiment of Artillery button was also found in Unit H, which based on the style of the button can be dated to 1792. Two 34th Regiment of Foot buttons were found in Unit P, a regiment stationed at Fort Erie between 1783 and 1786. Some of the buttons are indicative of officer status and include gilt buttons, civilian in origin and not military, along with silver-plated cufflinks, a glass inset for a finger ring (double C) (Appendix E). Glass stemware, porcelain ceramics, teaware ceramics, and personal items such as a powder horn also suggest a residency by a person(s) of status such as an officer.

Table		
British Military Buttons – Period IV		
29 th Regiment	1776-1787	Not part of Fort Erie garrison
34 th Regiment	1783-1786	
53 rd Regiment	1786-1789	
65 th Regiment	1787-1790	
Royal Regiment of Artillery	1792	
5 th Regiment	1792-1796	Officers and enlisted
Royal Canadian Volunteers	1796-1802	Officers and enlisted
Royal Marines - cufflinks	No specific date	Officer

⁴⁵ Adam Shoalts, doctoral student in history at McMaster University, Hamilton, writes "The reason I find the Royal Canadian Volunteers so fascinating is that they are in some ways the oldest true Canadian military regiment. The regiment was to be recruited in Upper and Lower Canada, and it was a requirement that all officers in the regiment had to be residents of Upper or Lower Canada, no Britons permitted. Moreover, in a policy that seems prescient in light of so much subsequent Canadian history, the regiment was to have 2 battalions, one English-Canadian and the other French-Canadian. The regiment is also one of the earliest examples, and perhaps the most noteworthy, of the use of the name "Canadian" to refer to the English-speaking inhabitants of Upper Canada, rather than Loyalists, American settlers, British, English, Irish, Scottish, colonials et al.

Ceramics are also numerous and include banded, printed, edged varieties of creamware and pearlware, along with painted porcelain, and earthenwares. A few mid-18th century ceramics such as scratch blue stoneware and were also found. Food bone, container glass, smoking pipes, other clothing buttons (gaiter buttons, bone and metal buttons), straight pins, furniture tacks, bucket bales, a fishhook, an iron kettle piece, all are indicative of a domestic occupation. Significant numbers of nails, sheet metal, window pane glass provide substantial evidence of the re-deposited destruction debris from the earlier building in this location. The fact that construction activities disturbed earlier, natural soil layers at this time is indicated by the presence of a high frequency chert debitage.



A shallow pit about 50 centimetres in largest dimension and 10 centimetres in depth marks Phase [46] in the northeast corner of Unit F (Figure 73). Within the sandy loam matrix several stones and a few artifacts. The function of the pit is unknown although the artifacts, ceramics in particular (pearlware and creamware), date it to the same period as the other contexts in Periods III and IV. The stratigraphic position of the pit is such that it could belong to either period.

The final two phases in this Period are represented by the uppermost layers of rock-fall in Units Q, R, X and Y, Phase [47], and rock-fall with soil in Units X and Y (Phase [48]) (Figures 74-76). The rock-fall may be derived from the nearby chimney which had been partially demolished in the earlier Period IIIc.

Figure 73 Unit F showing feature lot 6/8 in the right bottom corner, Phase [46].



Figure 74 Unit Q showing rock-fall lot 6, Phase [47].



Figure 75 Unit R showing rock-fall lot 6, Phase [47].



Figure 76 Unit X showing rock-fall lot 5, Phase [48].

Period V 1814 Siege and Fort Abandonment

Period V represents the time in the summer and fall of 1814 when the British laid siege to the fort occupied by the invading U.S. army. The siege period is well-documented historically (see Historical Section) and excavations in 2012 and 2013 revealed evidence of the event in two separate areas: Fanning's and Biddle's Batteries situated on the breastwork connecting the fort to Snake Hill (2012), and Douglass Battery situated to the south of the fort, east of the 2015 excavation. Two phases in Period V in Area 2 are attributed to the time of the siege and the decades after when the fort fell into a period of disuse and abandonment.

Unlike in 2012 and 2013, no features were found that can be directly associated with the siege. However, several contemporary plans of the fort provide depictions of the siege period landscape in the vicinity of Area 2. A British plan of 1815 shows a breastwork, or more properly a protective traverse (Figure 77), as does another 1816 plan completed by Douglass (Figure 78). A GIS overlay of an 1815 map by Lt. Nicolls (Figure 79-81) provides another view that shows a traverse located very close to Area 2.

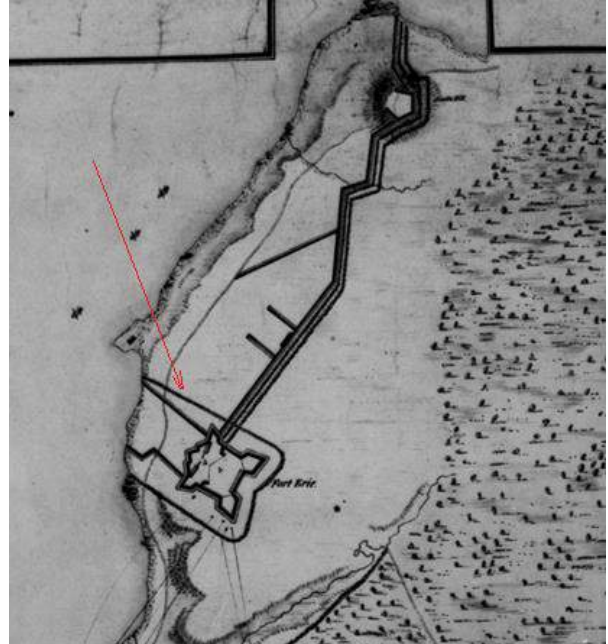


Figure 77 Detail of British [1815] Plan of the Operations of the British Army, in front of Fort Erie, in the Months of August & September 1814 under the Command of Lieutenant General Sir Gordon Drummond, Knight Commander of the Bath &c. &c. Copied from the Original of Lieut [W.A.] Nesfield by Geo. D. Cranfield D.A.Q.M. Genl. Kingston. Upper Canada. 3d May 1815, NMC 22341. Arrow points to traverse possibly found in Area 2.

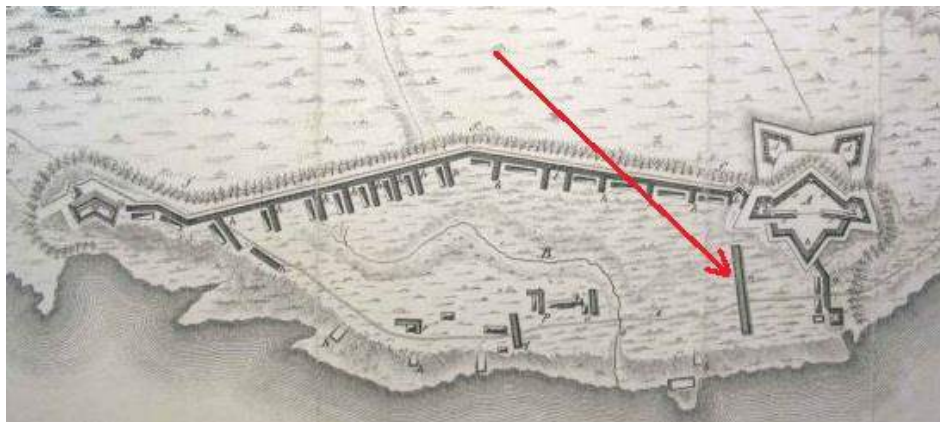


Figure 78 Detail of American 1816 Siege and Defense of Fort Erie, by D.B. Douglass and John Vallance, in Dennie, Joseph 1816 Attack on Fort Erie. Portfolio Magazine, Philadelphia. Arrow points to traverse possibly found in Area 2.



Figure 79 [1815] Plan of the Attack made upon Fort Erie (Upper Canada) by the Right Division of the British Army, under the Command of Lt Genl Drummond in August and Sepr 1814 [Sgd] George Philpotts Lieut Royl Engineers, Capt Romilly Comg Rl Engineers Niagara Frontier. G. Nicolls Lt. Col. Cg R1 Engineers in Canada Quebec 27th July 1815, Library and Archives Canada, NMC 22340.

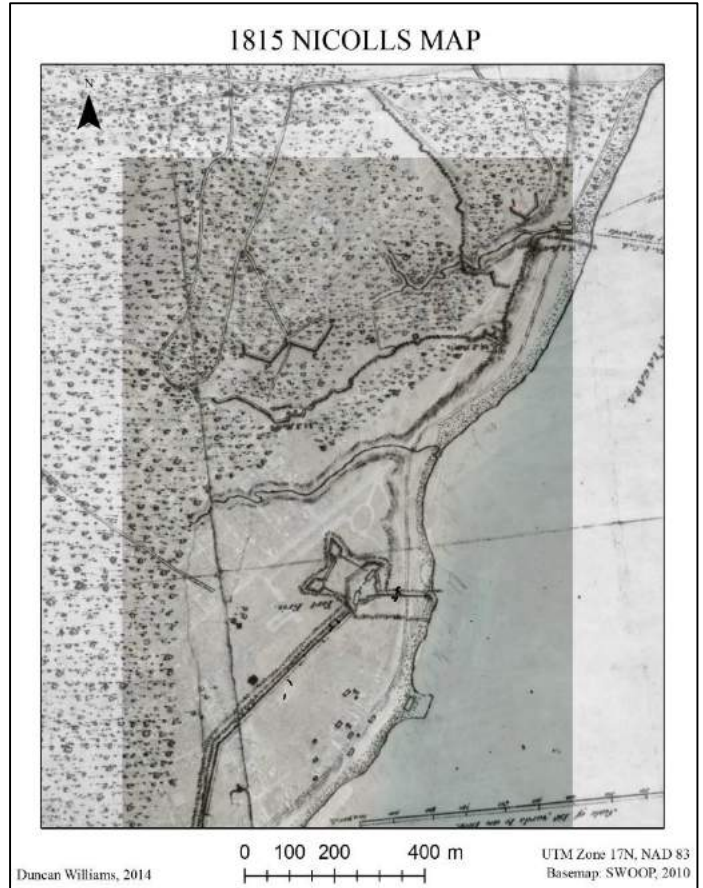


Figure 80 GIS overlay showing traverse on [1815] G. Nicolls map 27th July 1815, Library and Archives Canada, NMC 22340.



Figure 81 Detail of Nicolls plan showing traverse in vicinity of Area 2.

The test pitting survey conducted in the second week of May (Figs. 82, 83) covered the general area of where the traverses are depicted on the various contemporary maps. Perhaps not surprisingly, no evidence of the 1814 traverse (ditches or palisade posts) was found during the initial Stage 2 survey. However, based on the artifacts recovered in a fill layer, Phases [49] and [50], which covers all of Area 2, it is clear that evidence of the siege remains only a few centimetres below the modern ground surface. Phase [50] is the uppermost destruction layer on the site, consisting of a dark brown sandy loam with pieces of limestone, brick rubble, some mortar flecks, together with a high quantity of wrought nails,

1794 Plan Showing 2015 Test Pits



Figure 82 2015 excavation area during Stage 2 test pitting survey. View looking northeast towards the ravelin.



Figure 83 2015 excavation area with Stage 2 test pitting survey underway. View looking southwest taken from the ravelin in front of the south gate of the fort.

window glass, scrap metal, brackets, and door hardware.

Other artifacts found were indicative of a domestic occupation dating to the 18th and early 19th century occupation of the structure described above in Periods III and IV. Items included various types of tableware ceramics – porcelain, pearlware, creamware (decorated with painted, printed, moulded, banded, edged, sponged), and a few sherds of earlier 18th century wares such as rosso antico, tin glazed, white salt-glazed stoneware, scratch blue stoneware, Staffordshire slipware – barrel hoop fragments, two iron kettle fragments, beverage bottle container glass, pharmaceutical bottle glass, smoking pipes, glass tableware, straight pins, scissors, hook and eyes, buckles, bone buttons, furniture tacks, a bone toothbrush, clasp knife, whetstone, a flat file, a 1787 New Jersey cent ('Nova Caesarea'), and the ubiquitous food bone.

Based on the identifiable military buttons recovered the artifacts can be attributed to the earlier British occupation of the fort. Among the more than 40 plain and indecipherable military buttons were several 5th Regiment of Foot and a 29th Regiment of Foot (both spanning 1776-1796) (Appendix E). Other items such as cufflinks with gilt, and a few civilian buttons with gilt provide more evidence that the structure was occupied by a person(s), probably officers, of status. Musket balls, hardware and flints were also recovered. A single pewter 'US' infantry button, and 2 American infantry, 'I' buttons in a cartouche, are the only items which can definitely attributed to the American encampment, although it is very likely that other material found and described above in connection with the domestic occupation is American in origin.

The widespread layer Period V appears to be the result of soil re-deposition connected with the displacement of earth probably as occurred during the construction of the defensive works in the American camp. Certainly the traverse shown in the general vicinity of Area 2 on several contemporary British and American maps are clear evidence that a large defensive earthwork was constructed in this location. The presence of a high quantity of lithic flakes found in this deposit are evidence that excavation into the natural subsoil did take place at this time.



Figure 84 2015 excavation area. View Area 1 looking north towards British Fort Erie ravelin showing the general location of the American earthwork (traverse) constructed in 1814.

Period VI Post-Siege – 20th Century Fort Abandonment

Period VI represents the time between the end of the siege and the modern period of the fort as a recognised historic site in the early 20th century. The single layer, Phase [51], was found across the excavation area and excavated as the topsoil layer after sod removal. It is a dark loam layer that is found at a depth of between 5-10 centimetres below the present ground surface. Artifacts found in the



Figure 85 View of entrenchments at Old Fort Erie, undated photograph on file at Old Fort Erie, NHS.

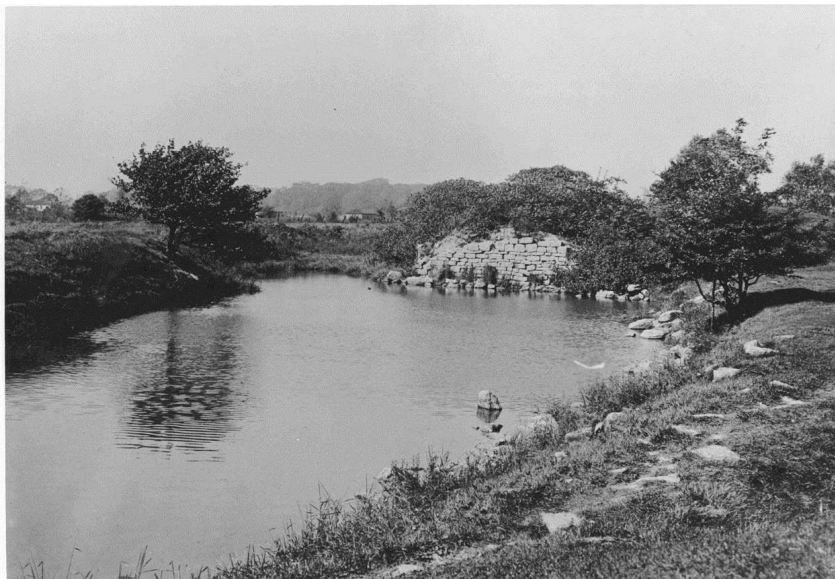


Figure 86 View of ruins of bastion at Old Fort Erie showing inundated defensive ditch. Undated photograph on file at Old Fort Erie, NHS.

layer date to all previous Periods of the fort's occupation suggesting that displacement of soil and disturbance to earlier layers took place at this time. Contemporary images of the fort do provide some indication of how much the landscape has changed in the decades after the siege up to the 20th century (Figures 85 - 91). Earthworks depicted on Figure 85, are no longer visible on the landscape to the same extent. Drainage of the original dry-ditch shown on the succeeding images would have involved considerable remodeling of the landscape. Likewise, the ruins shown on various images were cleared as the fort was re-built in the 1930s. The scale of landscape re-engineering appears to have been significant beginning in the late 19th century, as is supposed from the undated images. The period from 1823, when the fort no longer served a military purpose, to the late-19th century, is less well known although it seems likely that the processes of erosion and the ongoing, gradual deterioration of the fort following the intentional

mining of the fort walls by the American army in November 1814, acted to transform the landscape also.



Figure 87 Official guide to Niagara - The ruins of old Fort Erie, Scan from the book Official Guide Niagara Falls, River. Electric, Historic, Geologic, Hydraulic by Peter A. Porter with illustrations by Charles D Arnold published 1901, Niagara Falls Public Library Local History Collection, Record ID 91253.

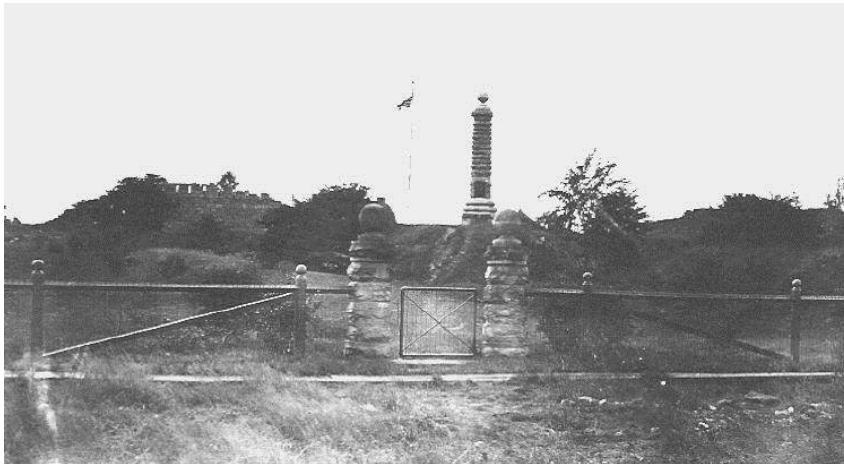


Figure 88 Old Ft Erie Park Ruins, Francis J. Petrie Collection, Date 1910. General Photograph Collection, Niagara Falls Public Library, Record ID 94822



Figure 89 Ruins of Fort Erie, 1920, M. O. Hammond, M. O. Hammond fonds, Black and white photograph, Reference Code: F 1075-9-0-22, Archives of Ontario.



Figure 90 Park scene showing the Old Fort at Fort Erie, Canada, Postcard, date Unknown, General Photograph Collection, Fort Erie (Ont.), Niagara Falls (Ont.) Public Library, Record ID 362528.

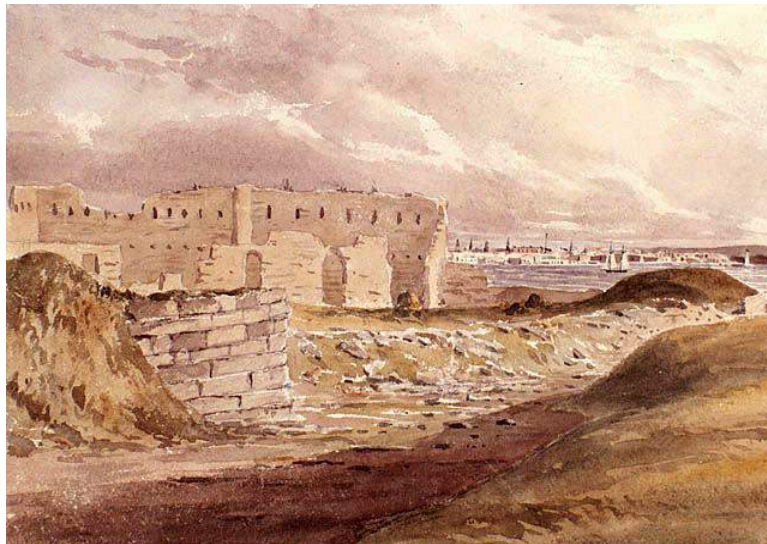


Figure 91 Undated watercolour showing ruins of Old Fort Erie as left by the American Army after destruction in 1814.

Artifacts found in the layer assigned to this Period for Phase [51] include the ubiquitous destruction debris found in earlier layers such as mortar, brick, mostly wrought nails, window glass. The quantity of brick found in this phase vastly outnumbers brick found in earlier Periods. The high frequency of this material suggests the demolition of brick ruins, perhaps remnants of standing chimneys that were torn down during the early decades of the 20th century when the commemorative monument was erected for the burials found on site (1906) and the fort was recognized as having value as an historic park (see Figure 88). These building materials occur together with domestic items such as decorated (printed, painted, banded, edged) late 18th/early 19th century ceramic tableware (pearlware, creamware, porcelain, yellowware), and mid-18th century types (rosso antico), container glass, glass stemware, smoking pipe fragments, cufflinks, a pair of scissors, brass tacks, an 1841 American penny, and even military buttons from the 18th century occupation; e.g., a 5th Regiment of Foot button. Modern items such as plastic toys and beer bottle glass were also found. The

range of material from the 18th century, the mid-19th century and into the 20th century provides evidence of disturbance to earlier deposits as a result of landscape modification on a large scale, but also the continued use of the site by people in the decades following the siege and abandonment of the fort, up to the modern era. The 19th century material may be attributable to the house shown on an 1850 plan (Figures 92, 93) and an 1852 plan of the site (Figures 94, 95).

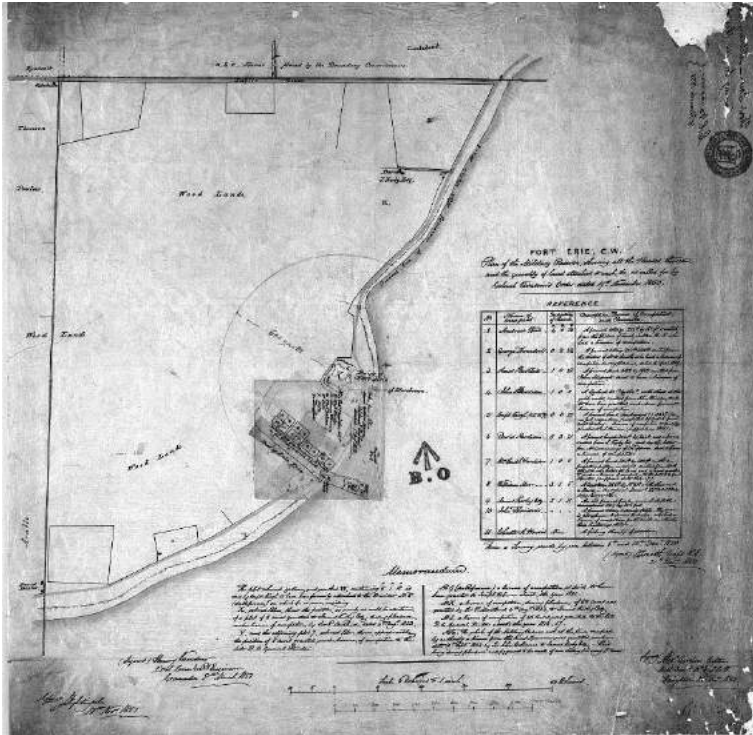


Figure 92 'Plan of the Military Reserve at Fort Erie, showing the houses thereon', NMC - 22343. Dated 1850. A portion of the plan around the fort copied from Gother Mann's 1803 plan shows a structure situated in the 2015 excavation area labelled as Douglass. The plan has yet to be georeferenced but the structure appears to be one in the vicinity of Areas 2 or 3, both of which yielded evidence of a structure dating from that time.

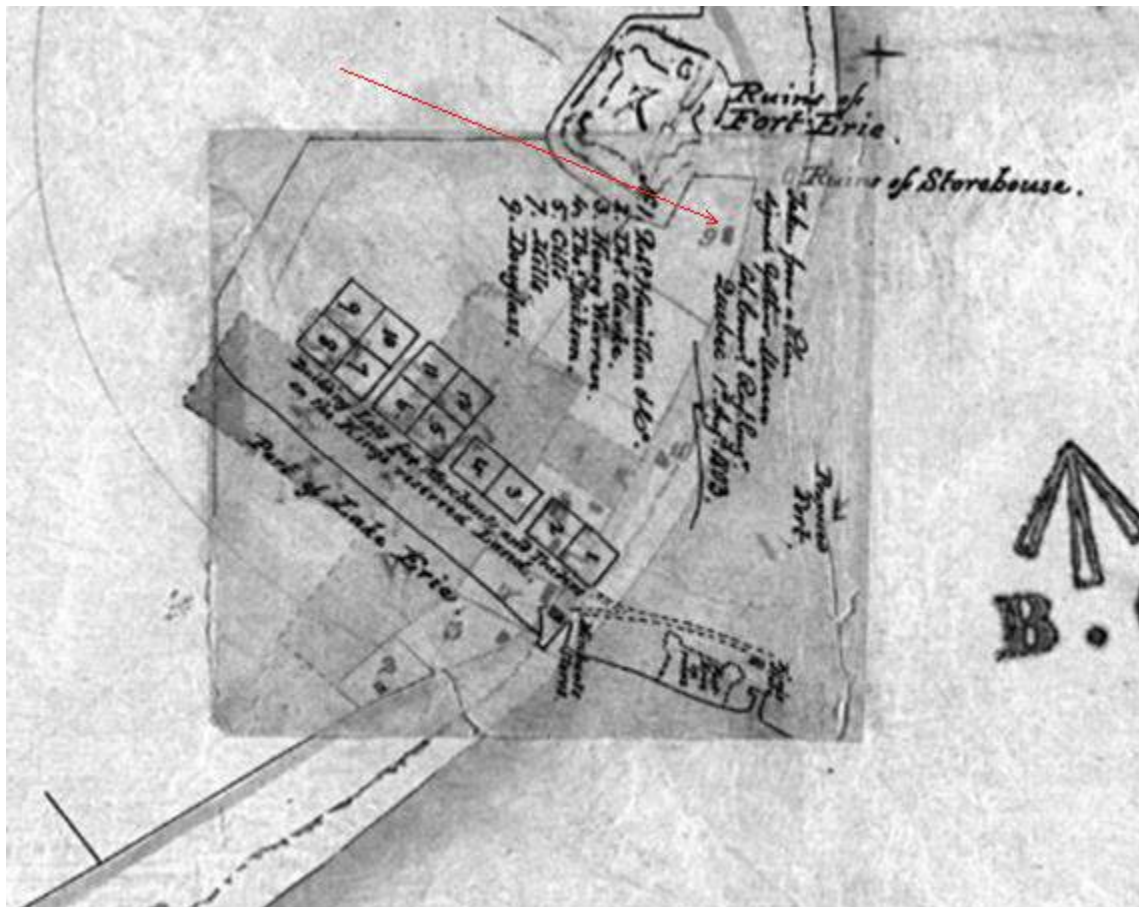


Figure 93 Detail of above plan showing structure 9 in 2015 excavation area.

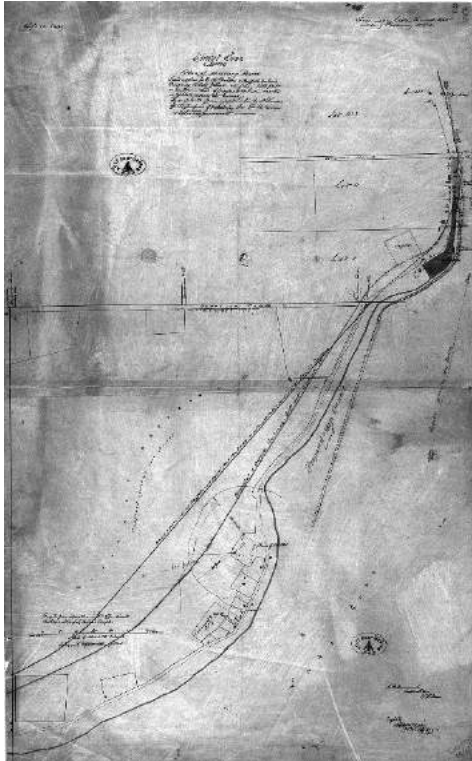


Figure 94 Fort Erie, Bertie, Plan of the Military Reserve, 1852, NMC-22344.



Figure 95 Detail of above plan of Fort Erie, Bertie, Plan of the Military Reserve, 1852, NMC-22344. A structure is shown in the approximate position as the building indicated on the 1850 plan.

Period VII Modern Fort 1930s to Present

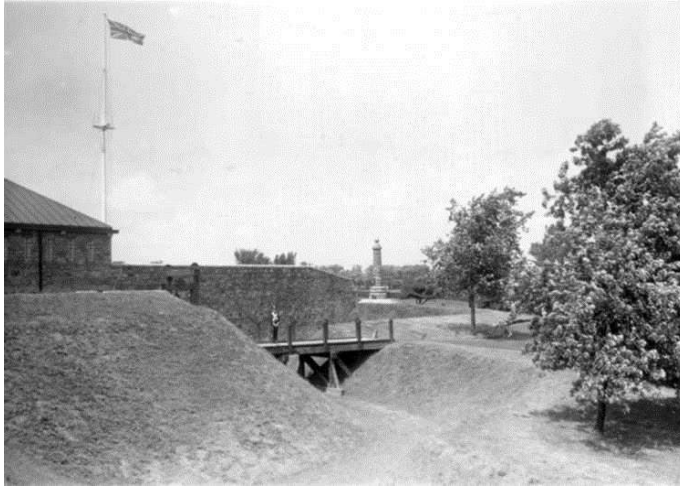
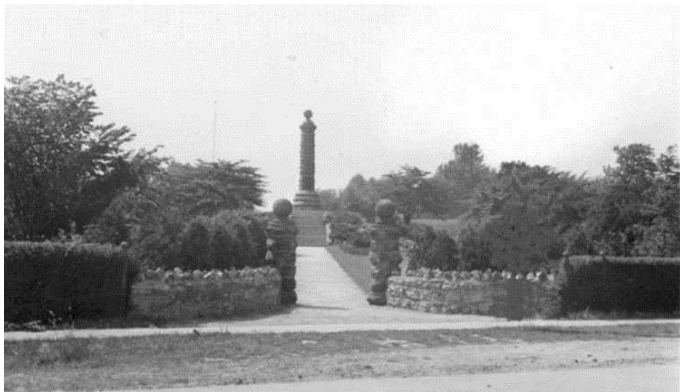


Figure 96 *The Old Fort Erie – 1939, Francis J. Petrie Collection, July 30, 1939. Niagara Falls Public Library Digital Collections, Record ID 94943.*



Figure 97 *Old Fort Erie during its reconstruction (1937-1939), Francis J. Petrie Collection. Niagara Falls Public Library Digital Collections, Record ID 94886.*



Period VII is represented by Phases [52] to [56], all of which are modern layers and features dating from the 1930s to the present. The earliest of these [52] and [53] are campfire pits below the modern sod layer that date from the 1990s when re-enactors camped on the grounds for weekend events. The pits are found in three Units (J, P, and Q) as shallow ash-filled pits, about 5-8 cm in depth, although it is assumed they were widespread and numerous based on the number of years the event was held⁴⁶ and the large number of participants. Phase [54] is the modern sod layer overlying the firepits. This layer, where undisturbed, may in fact date to the 1930s when the area was landscaped as in connection with the newly opened historic fort (Figures 96-98). The last Phases [55] and [56] represent the test pits excavated in Area 2 in May 2015. Artifacts recovered from the Phase 54 sod layer are few and include a ceramic sherd dating to the mid-18th century (rosso antico), a modern gun flint made of a composite material and used for one of the re-enactor events, brick, window glass, and scrap metal.

Figure 98 *The Entrance to the Old Fort Erie, Francis J. Petrie Collection, Niagara Falls Public Library digital Collections, Record ID 94932, probable date, post-1939.*

⁴⁶ Jim Hill, Superintendent, Heritage, Niagara Parks Commission wrote in December, 2016, "Turning the sod for surface fires has been the standard for thirty years and in the same area often using the location."

7.0 Area 3 Archaeological Chronology

Area 3

Stratigraphy in Area 3 is comprised of 40 phases grouped into historical Periods already defined for Areas 1 and 2. The analysis was completed by J. Triggs in November 2016. For the 5 excavation Units, all stratigraphic profiles and field notes were examined as well as the correlation chart made in the field by Triggs in order to construct the matrix drawings above. The Harris matrix diagrams above represent the archaeological chronology of the 40 separate events (phases) arranged in order reflecting superpositional relationships for all five Units excavated in Area 3. Correlations between layers in each unit are based on similar soil/sediment descriptions. Reference to artifacts was not used to determine stratigraphic position on the matrix. A period by period artifact analysis follows in a separate section. The reader is referred to the correlation chart and the matrix diagrams for the following discussion.

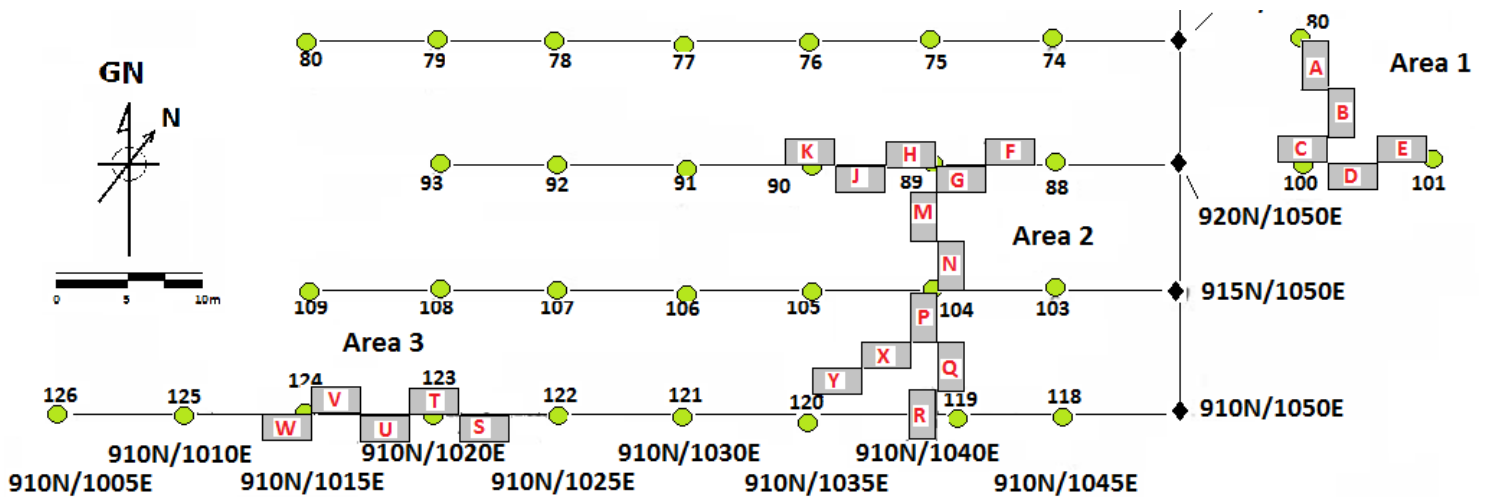


Figure 101 Site plan showing Units and Areas 1, 2 and 3. Only some of the test pits, in green, are shown.



Figure 102 Area 3 excavation Units after completion. View looking grid-east with Unit W in foreground and Unit S at far end of area..

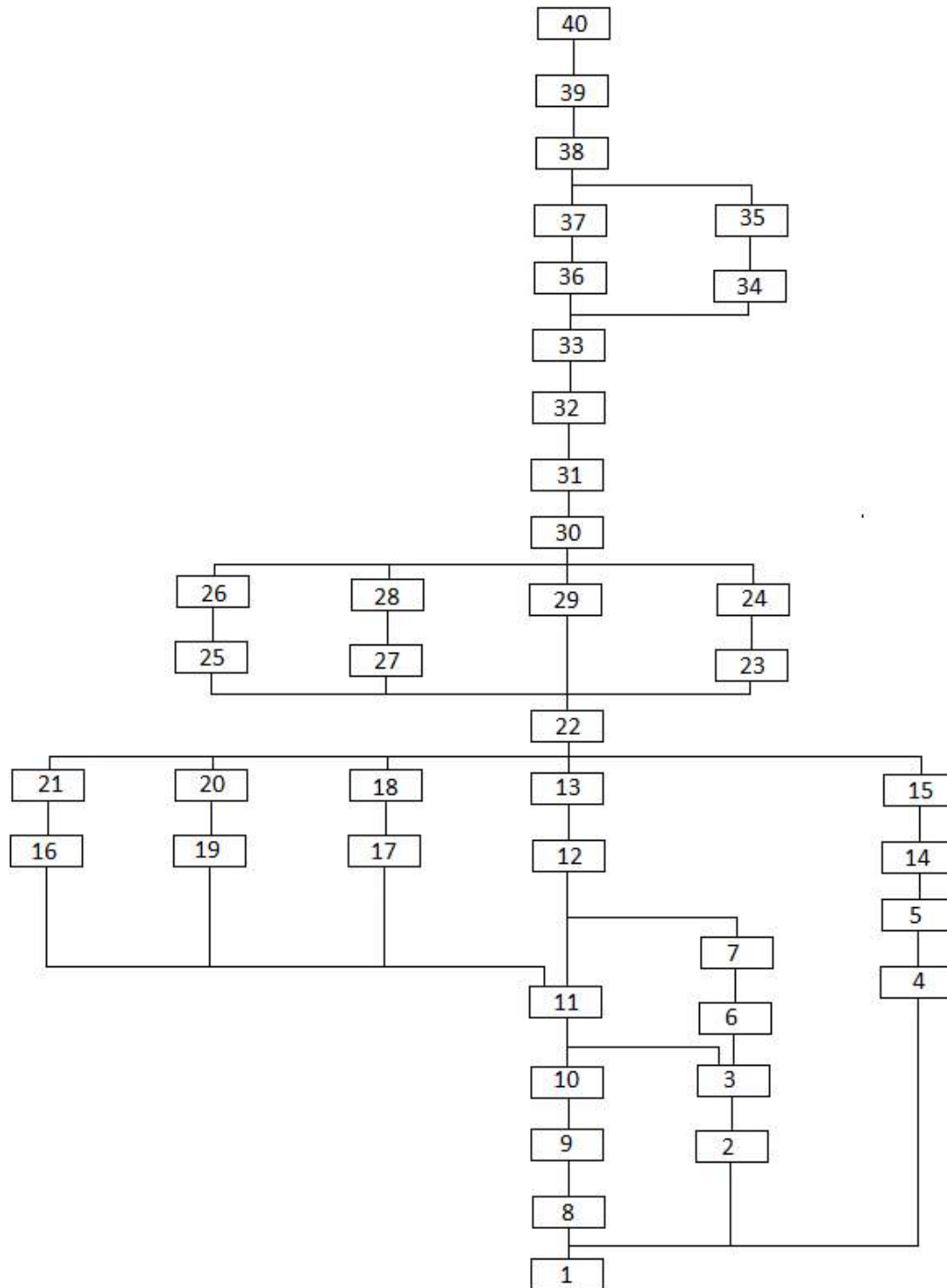


Figure 99 The stratigraphic matrix for Area 3 showing all superpositional relationships for all layers, features and interfaces for all Units.

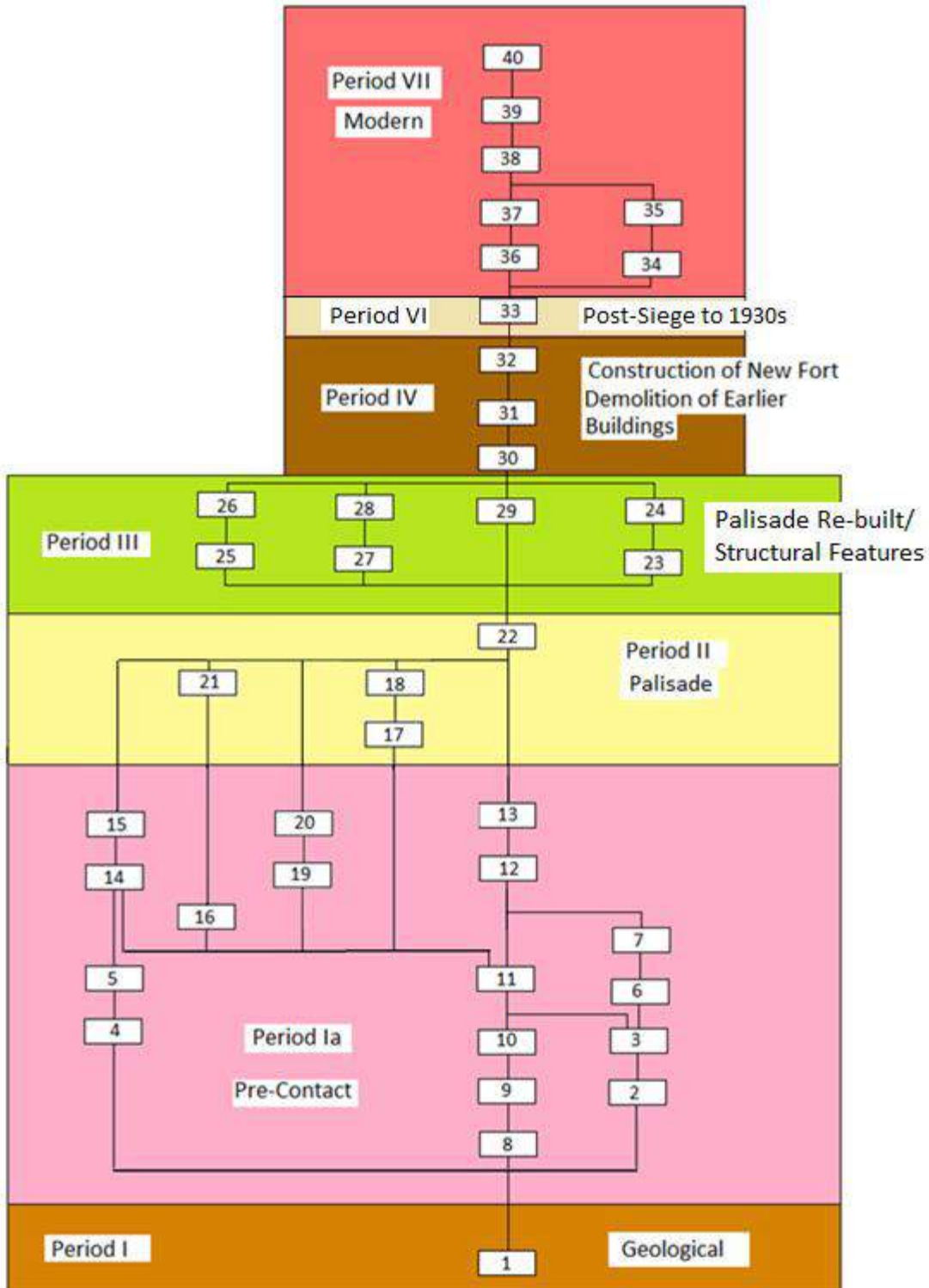


Figure 100 The Periods shown on the Phase matrix above represent major episodes in the archaeological chronology of Area 3 based on documentation and archaeological evidence.

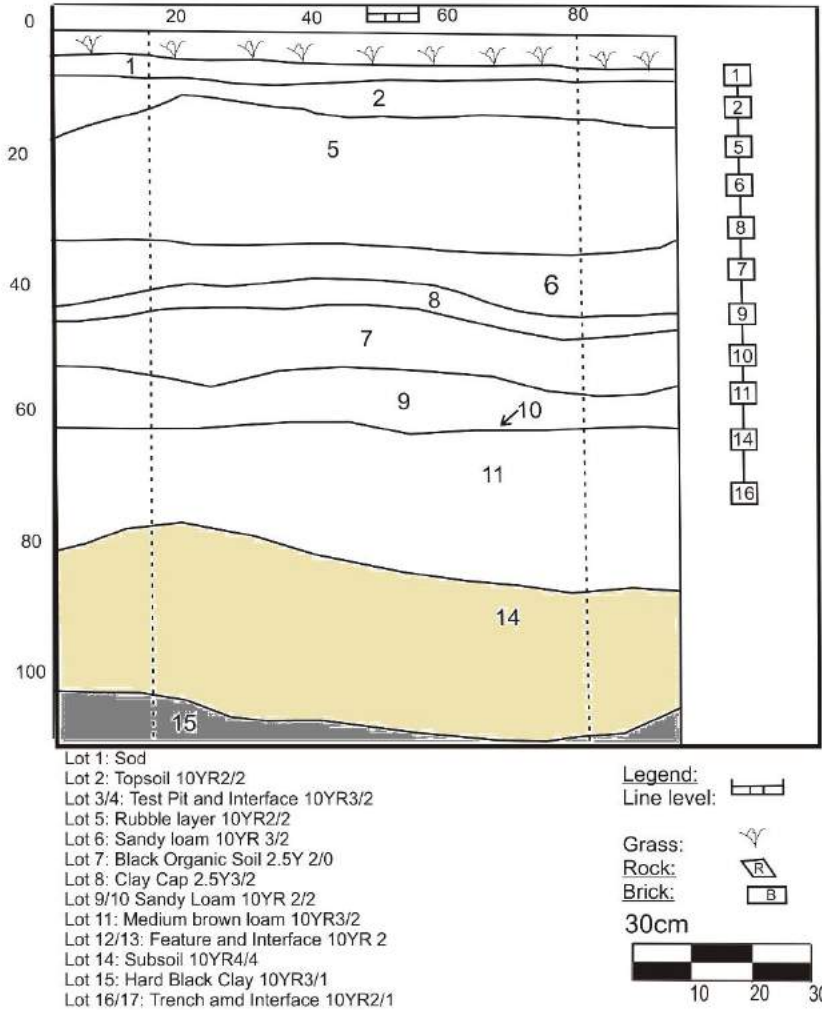
Description		Phase	Unit S - Tyler	Unit T - James	Unit U - Robyn	Unit V - Max	Unit W - Katie
Test pit fill		40		3		3	3
Test pit interface		39		4		4	4
Sod		38	1	1	1	1	1
Tent peg		37		5			
Tent peg interface		36		6			
Fire pit (re-enactor)		35		7			
Interface for above	Modern	34		8			
Brown sandy loam topsoil	Period VI Post-Siege – 1930s	33	2	2	2	2	2
Large pieces of rubble, brick and mortar - feature fill		32			5		
Interface for above	Destruction of All Existing Buildings – Pre-1805	31			6		
Pebbly brown sandy loam with high density brick rubble, mortar inclusions and some limestone rubble - destruction horizon	Period IV	30	3=4	9,10	3	5	5
Dense orange clay - redeposited subsoil lens		29				10	
Posts		28		19	8c		
Interface for above		27		20	9c		
Fill of pit and post features intrusive into above (dark brown fill with brick and other historic artifacts)		26		17	10	11	16
Interfaces for above		25		18	11	12	17

Description		Phase	Unit S - Tyler	Unit T - James	Unit U - Robyn	Unit V - Max	Unit W - Katie
Early trench - dark brown sandy loam trench fill (under brick concentration)	Palisade Re-Built and Other Building Features	24	7	12			
Interface for above	Period III	23	9	15			
Historic ground surface - dark brown 10YR2/2 - Some lighter sandy patches and clay mottling within (redeposited subsoil)	Period II - Newly formed ground surface from re-deposited subsoil	22	5	11	4	6	6
Reddish brown clay - displaced from post-holes?		21					8
Pre-contact - small posts - fill	Period II - Palisade	18	17a,17b, 17c	21,21a			
Interface for above	Period II	17	18a,18b, 18c	22,21b			
Rodent burrow fill and tree roots		20	8		8a		
Interface for above		19	10		9a		
Black organic sandy loam		16					7
Pre-contact - intrusive features - posts (Units S and U), pit (Unit T), pit (V)		15	11	13	8b	7	

Description		Phase	Unit S - Tyler	Unit T - James	Unit U - Robyn	Unit V - Max	Unit W - Katie
Interfaces for above		14	12	16	9b	8	
Large, shallow pit - Pre-contact?		13	6b			13	
Interface		12	6d			14	
Re-deposited sandy subsoil - 10YR6/6, 10Y/R 2/2		11	6a	14	7	9	9, 10
Re-deposited brown loam over pit feature		10					11
Large pit feature		9					12
Interface for above		8					13
Shallow pit with fire-reddened sand	Period Ia - Habitation?	7	13				
Interface		6	14				
Small posts		5				15, 17	
Interfaces for above		4				16, 18	
Pre-contact pit feature		3	6c=15		8d		
Interface for pre-contact feature	Period Ia Pre-Contact	2	6e		9d		
Subsoil	Period I Geological	1	16	23	12	19	14, 15

Period I Geological

Old Fort Erie
Unit W
East Wall Profile
June 5, 2015
Excavator: Katie Oosterhof



The earliest event in Area 3 (Phase [1]) is represented by the natural subsoil. Subsoil was reached in all five units as each unit was completed during the field season. In Unit W the lowest level of subsoil reached was a dense dark grey clay underlying the usual yellowish brown sand subsoil found in all units in all excavation Areas (Figure 103). In Area 3 the average depth of subsoil below the present ground surface ranges from about 55 – 75 centimetres. Excavation was slightly deeper in Unit W due to a pit feature that was intrusive into the sandy soil. No artifacts were recovered from the subsoil in any unit.

Figure 103 The east wall profile of Unit W shows the lower layer of clay subsoil below the sandy soil.

Period Ia Pre-Contact Features

Unlike Areas 1 and 2, Area 3 yields the only evidence of *in situ* pre-contact features. More than 11,300 lithics were found in Area 3 compared to about 2200 in Area 2 and fewer than 700 in Area 1. In Area 3 these and other pre-contact artifacts are found in layers which are associated with settlement features such as posts and pits. The earliest evidence is found in Phases [2] and [3] in Units S and U. During

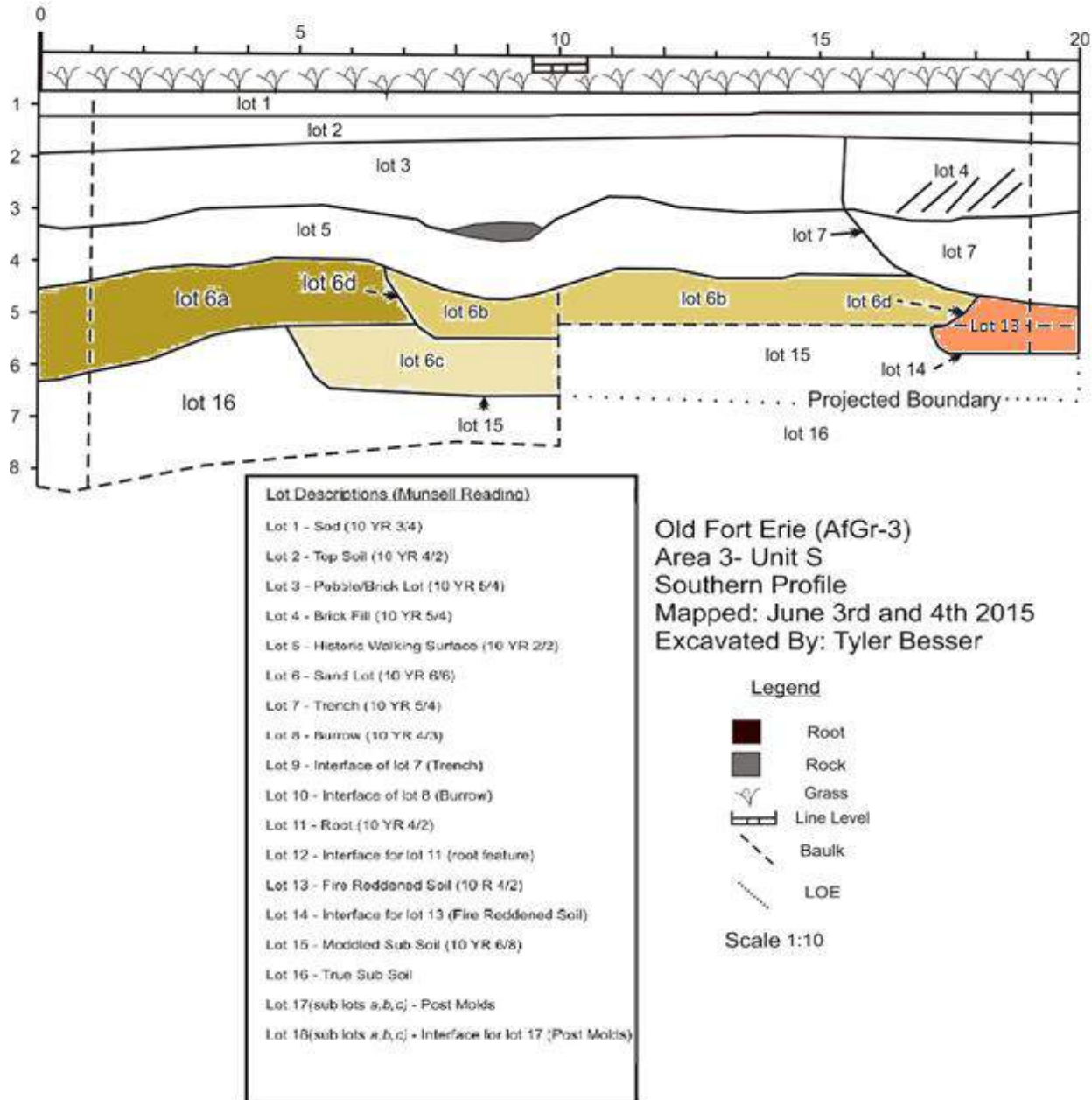


Figure 104 The south wall profile of Unit S showing the various pits intrusive into the sandy subsoil.

excavation of Unit S a layer of re-deposited/disturbed sandy subsoil was designated as lot 6. The layer contained 2854 lithic objects, and two ceramic sherds, and clearly represented a pre-contact deposit. Following excavation, when drawing the profile of the south wall of the Unit (Figure 104) it became clear

that several pits were actually represented and distinguishable by slight differences in texture and colour that were not evident during excavation. The artifacts are therefore unable to be attributed to a specific feature, although all material recovered from lot 6 can be associated with all pits in general. No



Figure 105 Unit V, showing post features in Phases [4]/[5]. Arrow points to lot 15/16 and circle indicates lot 17/18.

spatial or concentrations of material, for example, were noted during excavation. The vast majority of the material consists of lithic flakes and debitage representing all stages of lithic reduction from largest to smallest pieces - cores, primary, secondary, various types of tertiary flakes - some with evidence of heat treatment, all of which are made from local Onondaga chert. Five tools, biface fragments and preforms, were also recovered.

Additionally, two sherds of cord-wrapped stick-impressed ceramics were also found in the same layer. Although the biface fragments are non-diagnostic, the ceramic sherds are probably datable to the Middle Woodland period, ca. 500 B.C. to 300 A.D., based on the decorative/manufacture technique. The superposition of pits indicates that the layer contains evidence of several periods of occupation and it is possible that the lithics date to an even earlier cultural period; i.e., the Archaic, as is suggested

from other finds discussed below.

Phases [4] and [5] represent the only posts found in this pre-contact Period context (Figure 105). Both were identified in Unit V, excavated into the sand subsoil. The larger post and interface (lot 15/16), was 20 centimetres in diameter, and located in the southwest corner of the Unit. Lot 17/18, post and interface, was about 10 cm. in diameter and located about 60 centimetres to the east. Both posts were in-filled with a dark brown sandy loam. No artifacts were recovered from the posts.

Phases [6] and [7] designate a shallow pit and interface found in the southwest corner of Unit S. The fire-reddened sand in the pit (Figure 106) identifies it as a possible hearth, although no charcoal or ash was found. About 36 chert pieces were found in the pit. Half of the material was identified as tertiary thinning flakes and the remainder as debitage/shatter. The quantity of material suggests an activity area where the final stages of tool manufacture were carried out.



Figure 106 Unit S, showing small pit with fire-reddened soil, Phases [6]/[7].



Figure 107 Unit W, showing large pit, intrusive into subsoil, after pit fill excavated, Phases [8] and [9], interface and fill.

A large pit in Unit W defines Phases [8] and [9], interface and fill. The pit was filled with loosely compacted blackish brown sand (Figure 107). Artifacts found were burnt bone, and lithics predominantly.

The size of the pit suggests storage as the initial function of the pit although the fill, deposited after the pit was no longer in use, contained a high quantity of lithic debitage.

Overlying, and completely covering the pit fill was a 20 centimetre thick layer of sandy loam (Figure 108, lot 11), (Phase [10]). Artifacts found in the layer consist entirely of lithics. Of the 534 pieces found, the majority are tertiary thinning flakes although all stages of manufacture are present and include primary, secondary, other tertiary, cores, shatter and two undiagnostic bifaces. The assemblage is similar to that described for Phases [2] and [3] in that all stages of lithic reduction/manufacture are represented, and as such it should be regarded as an activity area used quite extensively by the people who occupied the site.



Figure 108 Unit W, showing lot 11, Phase [10] covering the pit from Phase [8]/[9].

Phase [11] is a horizon of re-deposited sandy subsoil, about 20 cm. thick that extends across the entire Area 3 excavation site (Figure 109). Although the layer resembles subsoil evidence of re-deposition was present in all Units where patches of dark brown soil – presumably the original A-horizon – and lighter patches of sand were found throughout. Following excavation of this layer it became clear that the original subsoil below was much more homogeneous. Considering the number of pits in the area



Figure 109 Unit T showing Lot 14, Phase [11] re-deposited sand subsoil on true subsoil below.

from earlier phases the displacement of previously undisturbed subsoil is not too surprising. The presence of the layer across the site in Area 3 suggests that it formed a new ground surface where all previous traces of pits and posts were filled in. Artifacts found in the layer are predominantly lithic material and food bone – mammal and fish. One piece of window glass, 3 nails, and a small brick fragment found in the deposit almost certainly are intrusive from upper layers. The

lithic assemblage includes more than 3000 flakes and debitage, found in all Units but higher numbers on the west (Units V and W) and east (Units S and T) sides of Area 3 with a smaller number in Unit U in the middle of Area 3. The uneven distribution suggests activity areas, perhaps associated with habitations, and not simply a random distribution. Tools found include at least 6 net sinkers made from large flat, water-worn cobbles with notches on opposing sides, non-diagnostic bifaces, projectile point tips and fragments (Appendix A, and F). The flakes and debitage indicate all stages of lithic tool manufacture and include cores, hammerstones, primary, secondary, tertiary (initial, thinning, trimming), and shatter. As with earlier Phases the evidence suggests an intensive occupation, perhaps over a long duration, with a subsistence based on hunting, and perhaps primarily upon fishing.

Phases [12], [13], [14], and [15] are shallow pits found in Units S, T, and V. In Unit S, a sand-filled pit, excavated as lot 6, (see above discussion for Phases [2] and [3]), and shown on the south profile (Figure 104) as lots 6b and 6d, is defined as Phase [12]/[13]. The pit measures about 1.15 metres in largest dimension and is at approximately 20 cm. deep. In Unit V, another pit was found and attributed to the same phase. This pit was filled with a dark brown sandy loam and although truncated by a later historic period feature, it was about 20 cm. in depth and at least 90 cm. in largest dimension (Figure 110). Artifacts found in the pit in Unit V include a relatively large quantity of lithics, considering the small volume of soil removed, and a few animal bone pieces. The lithic assemblage is comprised of 96 flakes,



Figure 110 Unit V showing Lot 13/14, Phases [12]/[13] partially excavated.

only 6 of which are secondary flakes and 50 of which are all types of tertiary flakes, together with assorted debitage. The assemblage represents the final stages of lithic tool manufacture and indicates an activity area, although the function of the pit itself is unknown.

Phases [14] and [15] define two small posts, and two more pits in Units S, U, T and V, respectively (Figures 111-113). Based on stratigraphic position, all features could be contemporary with features defined in Phases [12]/[13]. Both the posts in Units S and U are 10 cm. in diameter and are isolated features. The post in Unit U contained no artifacts, and 30 small fragments of mammal bone were found in Unit S. The faunal material has yet to be analysed although the bones do suggest specialised activity, perhaps cooking.

A pit measuring 80 cm. largest dimension, and as much as 50 cm. deep, was found in Unit T. The depth of the pit is greater than other pits assigned to earlier phases. Artifacts found in the pit fill include mostly lithics, one fragment of mammal bone, and a



Figure 111 Unit T, showing pit fill (Phase [14]).



Figure 112 Unit T, showing pit fill removed and interface exposed (Phase [15]).

single historic period stoneware ceramic sherd, that is presumably intrusive. The 70 pieces of chert include a core, secondary and tertiary flakes, and a single diagnostic projectile point identified as a Crawford Knoll type. Five Crawford Knoll points were found at the Peace Bridge site between 1997 and 2000 (Williamson et al. 2006). The type is dated elsewhere to 1500 – 500 B.C. and attributed to the Late Archaic Smallpoint complex cultural period in southern Ontario. The assemblage indicates the later stages of tool manufacture.

In Unit V another pit/post was found. The feature measures more than 1.00 metres largest dimension and is 50 cm. deep at the greatest extent. The pit resembles the one found in Unit T in size and depth. As in Unit T this pit has also been truncated by a later historic period pit. A small post appears in the base of the pit as shown in Figure 114, north profile. Artifacts found include more than 700 pieces of chert, and a single historic period pearlware sherd which is intrusive from a later feature. The lithic assemblage includes predominantly tertiary flakes with less than 20 secondary and primary flakes

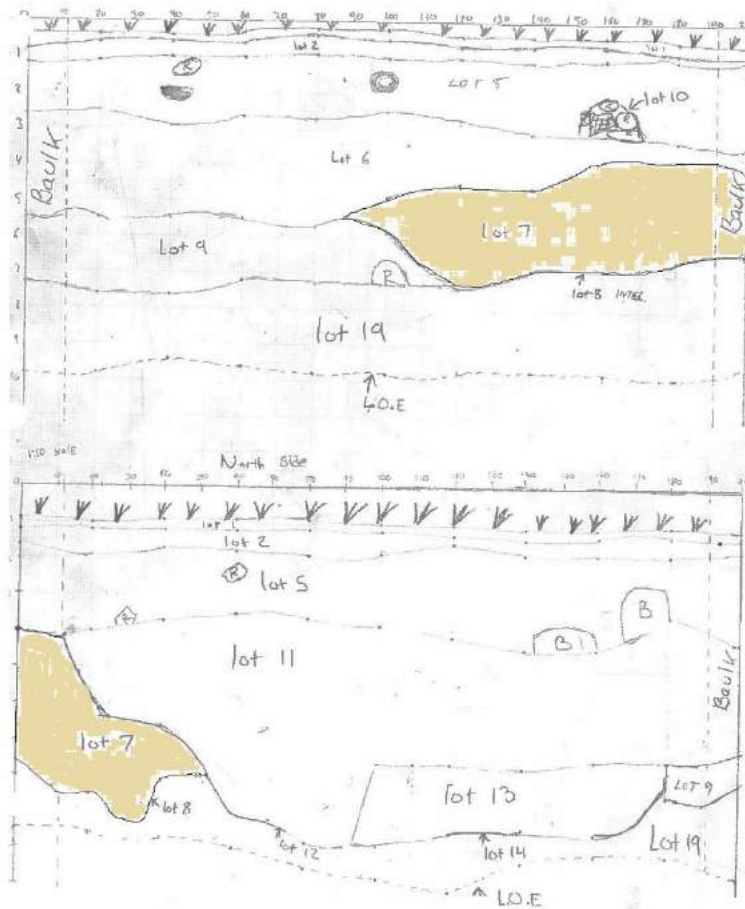


Figure 113 Unit V, south profile (top) and north profile (bottom) showing pit fill and possible post, lots 7/8 (Phases [14]/[15]). The feature has been truncated by the later intrusive pit, lot 11.

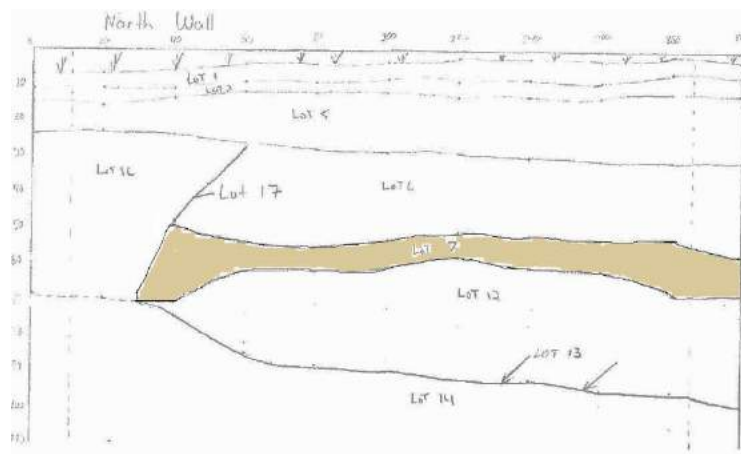


Figure 114 Unit W, north profile showing organic layer, Phase [16]. The layer has been truncated at the western end of the Unit by a later intrusion, lot 16.

indicating that the final stages of tool manufacture are represented as in the pit from Unit T. Two biface preforms were also recovered which support this observation.

Phase [16] in the pre-contact Period Ia is an isolated layer of dark loamy, organic sediment in Unit W (Figure 114). The layer is only found in this Unit and is adjacent to the large pit feature in Phase 9 in this Unit, although later in time based on the stratigraphy. Only chert lithics were recovered from the layer. Of the 355 pieces primary and secondary flakes are present in greater proportions than in other features from this Period and only initial and thinning flakes. The absence of tertiary flakes indicating trimming marks this assemblage as being representative of a different type of activity than in other features. This, together with the organic content of the soil, suggests some type of activity associated with animal processing, perhaps hide-working, rather than butchering as no faunal material was recovered.

The final Phases ([19]/[20] are natural features: a rodent burrow in Unit S and tree roots in Unit U. Based on the superpositional stratigraphic relationships these could be assigned to the next Period however, considering the time depth that may have elapsed between the end of the pre-contact settlement and the beginning of the historic period, they have been placed in Period Ia. A forested environment with wildlife could have been characteristic of each period until forest clearing began in the 1760s.

Period II Palisade Enclosure

Period II Four phases are assigned to this period which defined by the earliest historic period occupation on the site. The earliest phases in the period ([17]/[18]) are found in Units S and T. Here a row of posts was found in the west end of Unit S and the east end of the adjacent Unit T. The posts are aligned in a grid north-south direction and parallel the excavation Unit boundaries. At least three posts and a trench are visible in the profiles of the Units (Figures 115, 116). Fill within the posts consists of a



Figure 115 Unit S, west wall profile, showing posts excavated into the sandy subsoil (Phases [17]/[18]), but truncated by a later trench. Only the tips or distal ends of the post moulds remain to be seen in the subsoil.



Figure 116 Unit T, east wall profile, showing post and trench excavated into the sandy subsoil (Phases [17]/[18]), but truncated by a later trench above.

mottled brown sand with lighter sand inclusions that is quite distinct from the overlying sediment. Each post is about 20 cm. in diameter and has a rounded or even pointed base such as would be formed by cutting with an iron (perhaps with steel edge) felling axe. The posts were not noticed until profile cleaning after excavation in Unit S and as such any artifacts that were in the actual posts were not recorded but were instead included in the layer above. However, in Unit T, the posts and trench were distinguished during excavation and an artifact assemblage was catalogued for that feature. Artifacts found include more than 550 chert lithic pieces, which include all types of flakes – primary, secondary, and predominantly tertiary (initial, thinning, and trimming). No diagnostic points or tools were recovered.

Despite the recovery of only chert artifacts, it is thought that the posts and trench date to the historic period and that the lithics are displaced from earlier layers, deposited into the trench when the posts were removed and infilled. The reasoning for this is both the large size of the posts, and the alignment of the posts within a later trench. This later trench (see Period III below) runs in the same north-south orientation and in fact the posts are found within this same trench. The orientation of the trench is such that this section of the palisade would have been perpendicular to the lakeshore. The interpretation is that the posts were part of an earlier construction which was later rebuilt in the same location. Different phases of building construction are in evidence elsewhere on the site in Areas 1 & 2, and it is not surprising that the same type of activity took place in Area 3. Owing to the absence of datable

artifacts, such as ceramics, dating of the palisade is not possible. However, the artifactual evidence discussed in Period III for the later construction events in Period III points to a late-18th century date.



Figure 117 A manuscript map of Fort Erie attributed to Francis Pfister and dated 1764 in Hulbert (1907).

The posts may be associated with a building. This style of construction, known as en pilier - vertical post construction - can be found in French contexts. Archaeological examples have been noted at 18th century Louisbourg and also at 17th century Sainte Marie among-the-Hurons (Triggs 2001). It is also possible that the line of posts represents a palisade which may have surrounded a yard or property. The latter explanation seems more plausible. Considering that the posts are significant in size, at least 20 cm diameter and much larger than any post described for the pre-contact features in Period Ia, it is not difficult to envision a

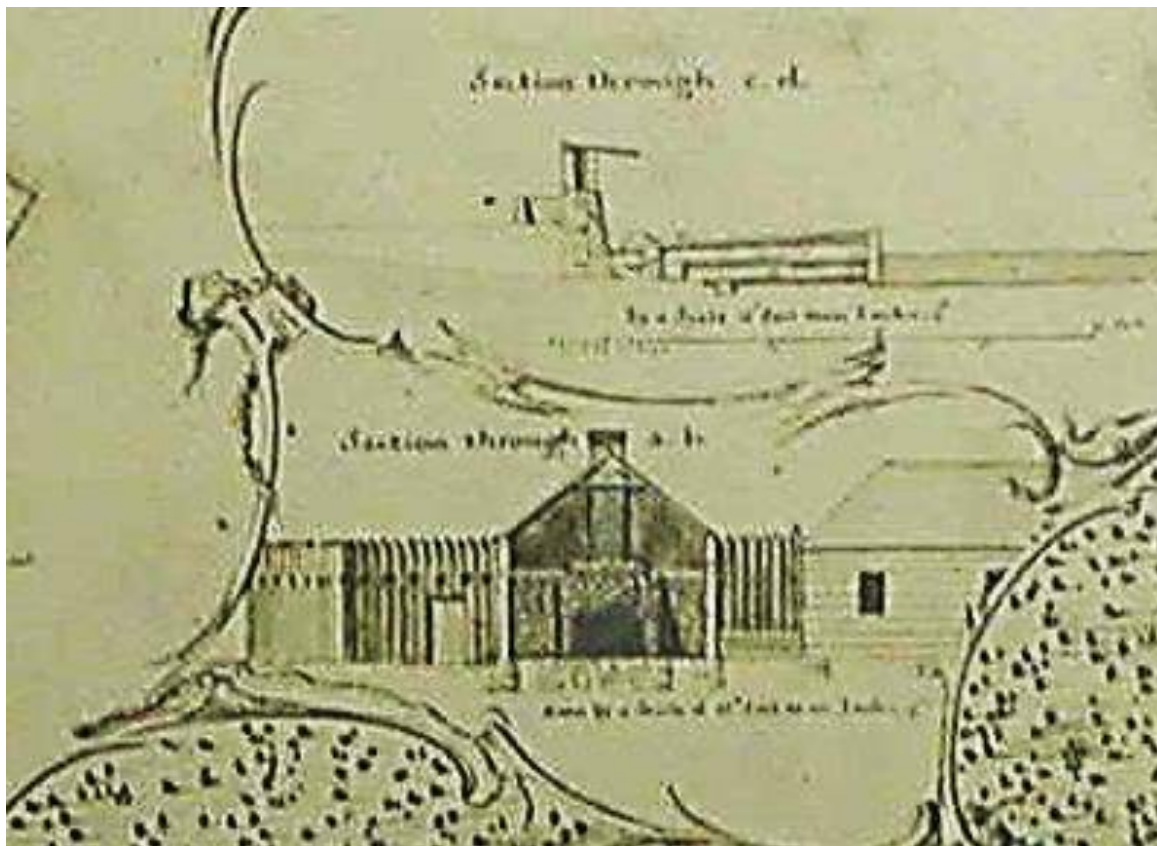


Figure 118 Detail of manuscript map of Fort Erie showing the fort built by Montresor and attributed to Francis Pfister, dated 1764. The original fort clearly had palisaded elements in addition to masonry and the style of construction may be the same as seen in Area 3.

surrounding fence/palisade set into the ground falling into disrepair and another being erected in its

place. Archaeological excavations by Archaeological Services Inc. between 1997 and 2000 at the nearby Peace Bridge Site found charcoal indicating that the area was dominated by ash, elm and oak, and lesser quantities of maple, beech, ironwood, white pine and larch (MacDonald and Cooper 2006: 22). Additionally, food species in the southeastern Niagara Region, available to aboriginal populations and also during early settlement, included nut trees such as black walnut, butternut, hickory, oak, beech, and chestnut. The lifespan of any hardwood set in the ground is estimated at between 15- and 20 years, and lesser time for softwood such as pine, before rot would require replacement. (No charcoal was recovered from the feature in Area 3, but future excavations may reveal this type of evidence.)

The palisade construction technique, whereby posts are set closely together to form an enclosure, was commonly employed on frontier fortifications. This technique is in fact indicated on the earliest known plan of Fort Erie, dated 1764, by Pfister (Figures 117, 118). Construction of the original Fort Erie was undertaken in the summer of that year by John Montrossor, a captain in the Royal Engineers, who oversaw more than 500 men (a mix of British regular troops and colonial volunteer Units, including two battalions of Connecticut and New Jersey Provincial forces) engaged in the work. This fort was built of stone and timber as indicated on the 1764 plan and as shown also on later maps from the 18th to the early 19th century. It is unknown whether the post features found in Area 3 in Period III are datable to this period but as mentioned above, artifacts found in later deposits date the features to the 1780s, about two decades after a palisade would have been erected if done in the earliest years of settlement.

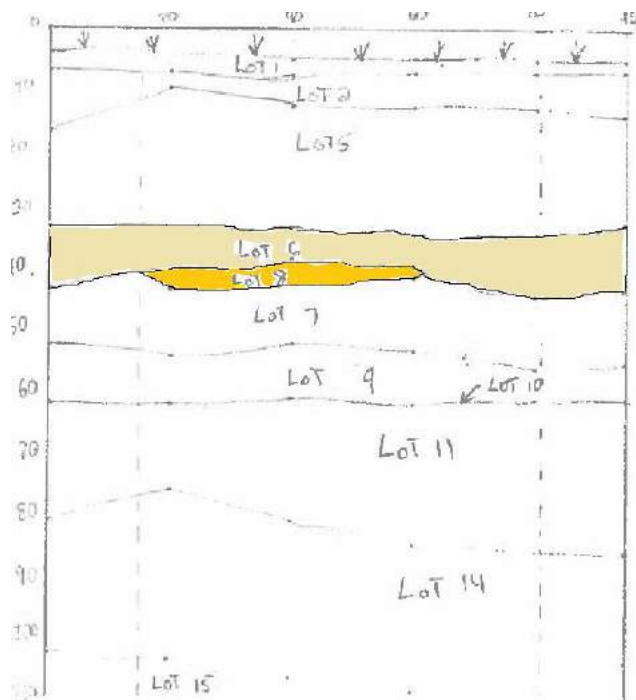


Figure 119 East wall profile, Unit W, showing clay deposit, lot 8, Phase [21] underlying the soil horizon, lot 6, Phase [22].

The next phase [21] in Period II is an isolated clay patch in Unit W (Figure 119) which underlies a dark brown loamy sand soil horizon, 10-20 cm thick, found across Area 3 and present in each unit [22] (Figures 120, 121). The deposit is composed of the displaced sandy subsoil and A-horizon and appears mottled in appearance. The new layer would have covered all previous features and layers in Area 3 and formed a new ground surface. The depth of the layer suggests a considerable degree of excavation took place to result in the creation of such a widespread and substantial layer, and it is presumed that this took place during the excavation related to building construction in this Period (e.g., cellars, foundation trenches) that were not identified in any of the 5 units. Artifacts found in the layer, however, suggest a residential occupation in the latter decades of the 18th century, prior to the construction of the second Fort Erie in 1805.

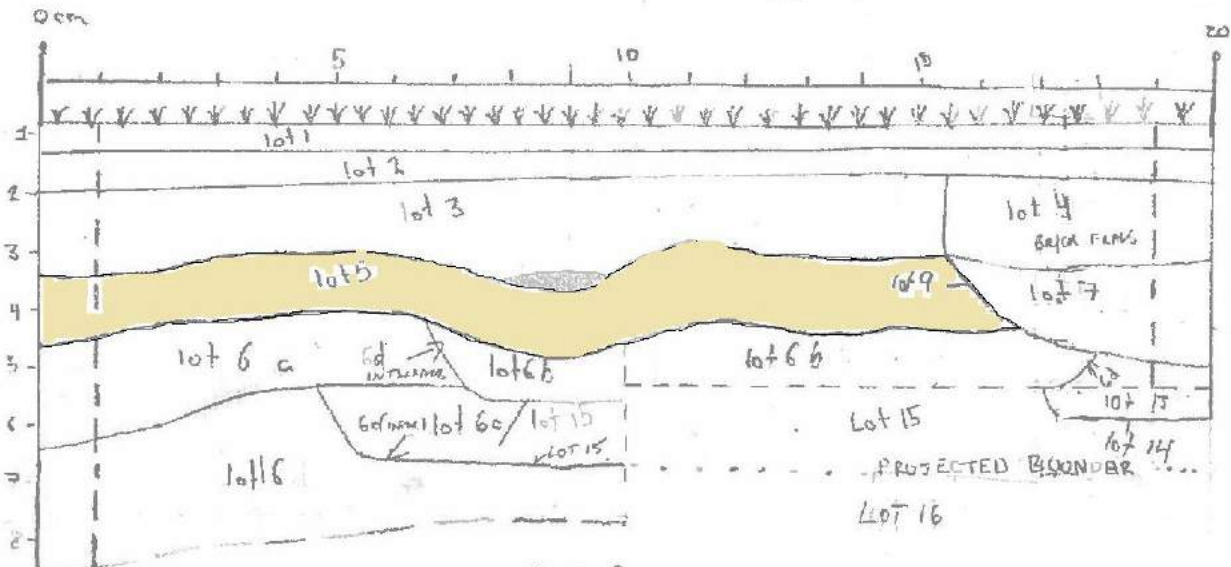


Figure 120 South wall profile, Unit S, showing the soil horizon, lot 5, Phase [22].



Figure 121 North wall profile, Unit U, showing the 20 cm. deep soil horizon, lot 4, Phase [22].

Artifacts recovered from this Phase [22] layer include the first appearance of historic period artifacts in sufficient quantity to indicate they are found in context. Destruction debris such as wrought iron nails, window glass, mortar and brick fragments point to a building in the vicinity but not yet identified. Slightly more architectural items are found towards to west end of the site. Domestic items found were ceramics (pearlware, creamware, and porcelain), container glass, smoking pipes and a brass tack. Chert is still found but this is presumed to be from the displaced subsoil. While other units have only dozens of pieces of chert, Unit W, in this phase, has more than 900 pieces representing all stages in the manufacture process. Also found were a netsinker and a probable Lamoka projectile point. The point is attributable to the Late Archaic Period and is dated to 3500-2500 B.C. A similar point was found on the Peace Bridge Site and identified as such (Williamson et al 2006). The point is also similar to the Genesee Point, an example of which was found at the nearby Surma Site in Fort Erie. The type generally is dated to 2500-1000 B.C. In either case, the point found in Unit W in this Phase [22] is clearly out of context

and is a further indication of the disturbance to earlier layers, possibly through construction-related excavations at this time.

Period III Palisade Re-Built and Other Structural Features

Phases [23] to [29] represent various structural features - pits and posts – assigned to Period III. The first of these is the trench found in Units S and T [23] in the same location as the palisade posts described for Period II (Figures 122, 123). As mentioned above, the alignment of the trench with the posts is evidence that the two phases are related, but two separate events. The fill within trench is a



Figure 122 Plan of Unit S showing trench, lot 7/9, Phase [23], fill/interface, after excavation. The posts from Phases [17]/[18] were not noticed until the profile was drawn.



Figure 123 West profile of Unit S. Arrow points to trench, lot 7/9, Phase [23], fill/interface, covering the posts from Phases [17]/[18].

may have been for a fenced enclosure such as the many that are depicted Edward Walsh watercolour and the Sempronius Stretton views from 1804 and 1805, respectively (Figures 124, 125). These are pickets, smaller in size than the earlier palisade, and quite ubiquitous on the 1804/1805 views, that enclose gardens and yards.

Artifacts found in the trench fill from Units S includes a couple of fish and mammal bone and fewer than 20 chert lithics. No artifacts were found in the trench in Unit T. The paucity of material is consistent with the chert artifacts found in the earlier trench, which were displaced from pre-contact layers.



Figure 124 *Old Fort Erie With the Migration of Wild Pigeons*, dated 1804; by Edward Walsh, Sigmund Samuel Collection, 952.218, ROM2006_7733_1. Fence-lines are common on the watercolour and appear to be constructed of small pickets set into the ground. The arrow indicates a building with chimney in the approximate location of the Area 3 excavation, suggesting it was a residence. Buildings in the foreground are the presumed Area 2 structure (long building), and the smaller building (Area 1), the presumed blacksmith building.

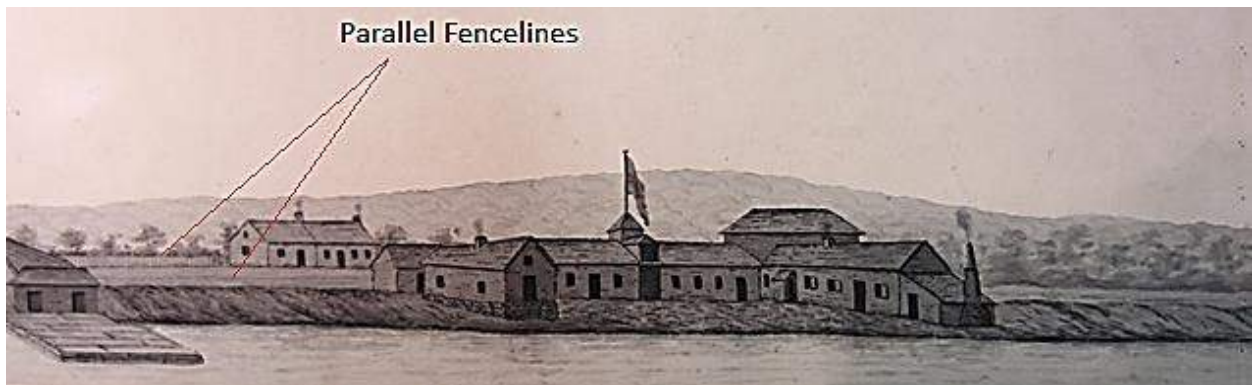


Figure 125 Sempronius Stretton (1781-1842). *Fort Erie and the Town* (ROM Cat.no. 1593; acc.no. 951.117.1) Black and brown washes, pen and ink. 162 x 692 mm. Inscribed lower corner: View of Fort Erie & the Town, at the mouth of Laker Erie Upper Canada / March 28, 1805. There is no clear depiction of the structure represented in Area 3, however, comparing this view with the Walsh watercolour it appears that all fence-lines are short pickets, and not the larger (20 cm diameter) palisade posts seen in the earlier Period.

Four pits and posts and their associated interfaces define phases [25]/[26]. These are found in every



Figure 126 Unit T showing post-hole interface after fill removed, lot 17/18, Phase [25]/[26].



Figure 127 Unit V showing post-hole fill before excavation, lot 11/12, Phase [25]/[26].

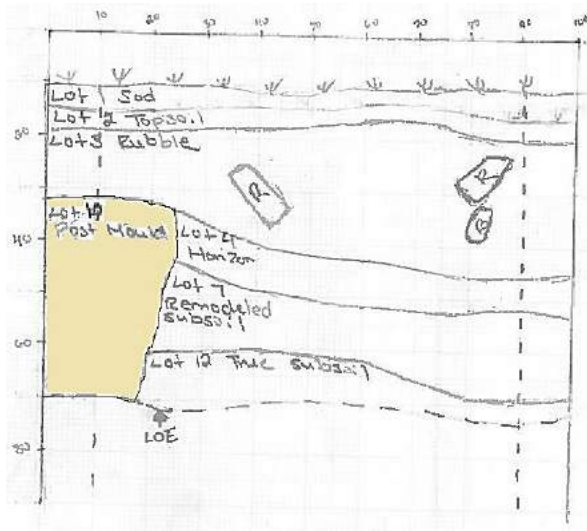


Figure 128 Unit U showing post-hole, lot 10/11, Phase [25]/[26].

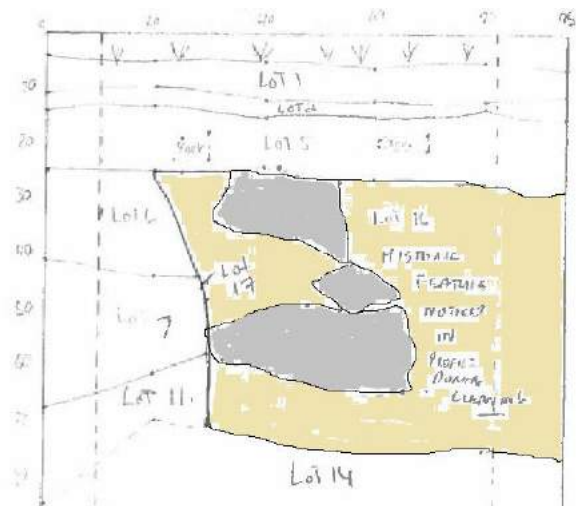


Figure 129 Unit W showing pit with stone rubble, lot 16/17, Phase [25]/[26], drawn in profile after excavation.

unit excepting Unit S. In Unit T a large post-hole measuring 30 cm. diameter and 35 cm. deep was found in the north edge of the excavation area where it truncated earlier features (Figure 126). Only a single wine bottle fragment was found in the fill. Brick and charcoal were also noted. In Unit U another post of similar size and 40 cm. deep was found in the northeast corner (Figure 128). The post resembles that found in adjacent Unit T in size and shape with near-vertical sides and flat bases. Artifacts found in the Unit U post-hole fill were similarly meager and included only 4 brick pieces and a single chert flake.

In Unit V a large pit was found measuring 1.90 m. largest dimension and 60 cm. greatest depth (Figure 127). The pit intersected several earlier features and layers from Period Ia but it is clearly stratigraphically higher than the earlier features/layers and is contemporary with the features in this phase. Artifacts found were brick pieces in the sediment together with more than 200 chert flakes and 16 pieces of food bone. Clearly, the artifacts are out of context and point to disturbance to earlier layers. Excavation in Unit V appears to have exposed only a portion of a larger pit to the north. The size suggests this may be a cellar pit, a common feature for houses of the period. A similar cellar pit was found in 2013 associated with one of the late 18th century structures thought to have been occupied by an officer (Triggs 2013).

Another pit, about 80 largest dimension and filled with stone rubble, was found in the northwestern corner of Unit W (Figure 129). The pit was noticed after excavation during profile drawing. It is at least 50 cm. deep with straight sides. Dating of the pit is based on stratigraphic position. No artifacts were recovered which can be specifically associated with the pit fill, but the presence of rubble suggests a demolition episode of some masonry structure.



Figure 130 Unit W showing pit, lot 19, excavated with interface lot 20 exposed, Phases [27]/[28].

Another pit, different in size and shape to the above pits was found in Unit T, lot 19/20. The pit fill contained 19 wrought nails, brick fragments and about 30 lithic flakes and a small number of animal bone. The evidence suggests demolition activity such as that seen in the pit from Unit W.

Yet another feature in this phase is found in Unit U where a 20 cm. square post was found in isolation (Figure 131). Similar to the feature in Unit T, artifacts found in the post fill include 10 pieces of brick suggesting demolition activity and 5 chert flakes.



Figure 131 Unit U showing square post, lot 8c/9c, before excavation, Phases [27]/[28].



The final phase in Period III is a small, isolated deposit of stone, brick and mortar found in the south side of Unit V (Figure 132). No artifacts were found associated with the rubble although the evidence points to demolition activity as with other phases in this Period.

To summarize, Period III is defined by a repair, construction and destruction events. With the exception of a wine bottle

Figure 132 Unit V, south profile, showing rubble deposit, lot 10, Phase [29].

fragment, and possibly some food bone, there is meagre evidence of a domestic occupation. Instead, the evidence is in the form of features such as trenches, pits and posts that indicate an enclosed space or yard, although the building itself has yet to be located. Additional testing is necessary to locate the structure and investigate further.

Period IV Destruction of Buildings – Pre-1805

This Period is defined by a destruction horizon that covers all previous features and layers. The event is thought to represent the demolition of all existing buildings prior to the construction of the new fort in summer 1805. The last depiction of the landscape before this destruction occurred is the Sempronius Stretton watercolour of the Town of Fort Erie in March 1805 (Figure 133). Several structures are shown in the space between the old fort on the lakeshore, and the higher ground that would become the site of the new Fort Erie. Although no specific buildings can be identified for Area 3, given the problems with perspective, it is clear that the landscape was populated with several residences with chimneys, larger utilitarian buildings, fence-lines, roads and pathways. With the exception of the lakeshore road, which is consistently shown on most 18th and early 19th century plans and other watercolours, the Town of Fort Erie as depicted by Stretton was eradicated during the construction of the fort or shortly afterwards to create a cleared ground, devoid of obstacles, in front between the fort and the lakeshore. Maps dating to the siege, for example, do not show structures in this space (Figure 134), although some structures may have been left standing in the area outside the cleared area – e.g., structures on left side of painting.



Figure 133 Sempronius Stretton (1781-1842). Fort Erie and the Town (ROM Cat.no. 1593; acc.no. 951.117.1) Black and brown washes, pen and ink. 162 x 692 mm. Inscribed lower corner: View of Fort Erie & the Town, at the mouth of Laker Erie Upper Canada / March 28, 1805. All structures in the ground in front of the new Fort Erie, constructed summer 1805, were demolished to provide an unobstructed view to the lakefront. Buildings on the left may have been left standing since these are outside the cleared area in front of the fort.

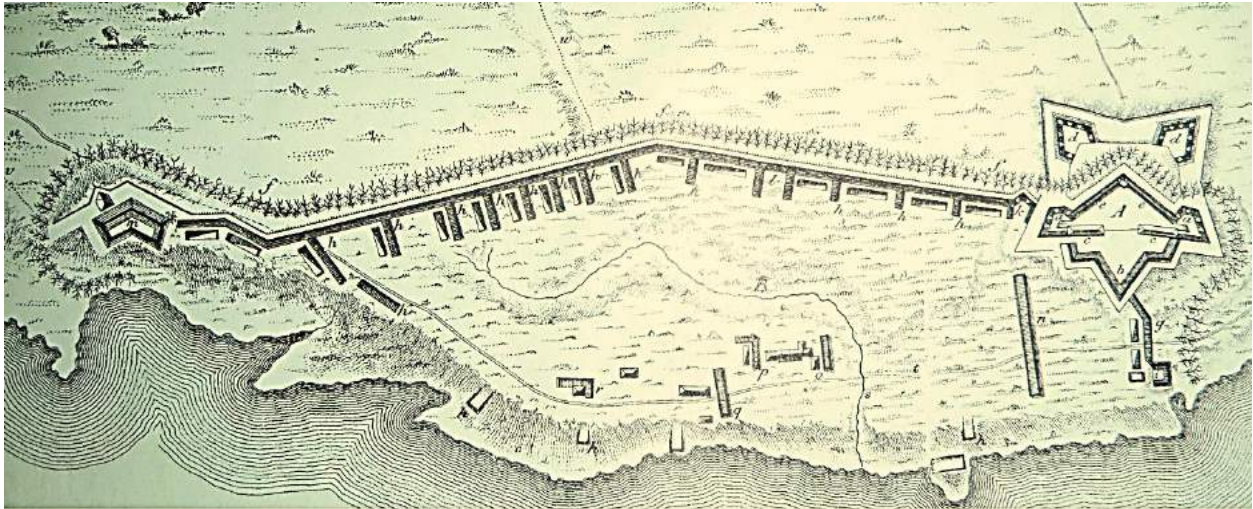


Figure 134 The Douglass plan from 1816, is the best view of the American encampment after the siege. Buildings shown in the centre of the plan may be the structures shown on the Stretton watercolour, although well outside the clear field of view required for defensive purposes.



Figure 135 West profile of Unit S showing brick rubble, Phase [30] on top of trench fill from Period III.

Phase [30] is a layer that covers the entire Area 3 excavation area in this Period. Brick and limestones rubble, varying in size from 5 to 20 centimetres on average was found in each Unit in this layer. A concentration of brick rubble was also found in Units S and T, overlying the palisade/fence-line trench fill described in Periods II and III (Figures 135-137). The bricks are larger in this context, some are almost complete. The presence of so much brick rubble in this trench suggests that a nearby chimney may have been demolished and the brick rubble deposited into the void left after the fence-line was removed.



Figure 136 Plan view of Unit T showing brick rubble Phase [30] on top of trench fill from Period III.

The highest quantity of artifacts for any context in Area 3 is found in this Period. Artifacts recovered from the layer include a relatively high frequency of nails and window glass, together with container glass, a variety of late 18th /early 19th century tableware ceramics (pearlware, feather-edge Creamware,



Figure 137 East profile of Unit U showing brick and stone rubble, Phase [30].

is no definite structural evidence, excepting a possible cellar pit from Period III, the quantity of material is consistent with a long-term, and apparently early occupation, contemporaneous with the entire span of the first Fort Erie (1764-1805) based on the high quantities of mid-18th century ceramics found.

Jackfield, porcelain, canaryware), and some types which date to the mid-18th century; e.g., delftware, tin-glazed, rosso antico, black basalt, and white salt-glazed stoneware. Other items that indicate a domestic military period occupation include musket balls, furniture tacks, smoking pipes, clothing and shoe buckles, cufflinks, pins, buttons, and high quantities of food bone. Also found were the ubiquitous chert flakes, debitage and a sherd of Middle Woodland ceramic with cross-hatched decoration.

The presence of so much refuse indicative of a domestic occupation is strong evidence of a residential structure in close proximity to Area 3. As mentioned above, although there



Figure 138 Plan view of Unit U showing lot 5/6,a rubble filled pit, Phases [31] and [32].

The final Phases in Period IV, are a rubble-filled pit and interface in Unit U (Figure 138). The pit measured about 80 cm. largest dimension and about 10 cm. deep. Only a single bone fragment and some brick inclusions were found in the pit. The function is unknown. The contained building debris suggests that it may belong to Period IV although, as an intrusive feature devoid of datable artifacts, it is possibly a much later feature.

Period VI Post-Siege – 20th Century Fort

The only phase in this period is another soil horizon, found in all Units, which forms a new ground surface on the site over the 1805 destruction deposit. This is the topsoil below the modern sod layer. Although only a few centimetres thick, artifacts found in the Phase [33] topsoil date to the early period of the first Fort Erie, and after. As described above for Area 2, the topsoil layer is the result of massive earthmoving activities that took place after the siege, throughout the 19th century and up to the re-construction of the fort in the 1930s.

Artifacts found in the layer date to all periods in the historic occupation of Fort Erie from 1764 to the 19th century. A variety of ceramics found include mid-18th century types such as tin-glazed and black basalt, as well as late 18th/early 19th century types such as Creamware, pearlware, porcelain, yellowware, and coarse red earthenware. Container glass, smoking pipes, buttons, gunflints, nails, window glass, brick fragments, musket balls, food bone, an American 1925 penny, a modern musket tool used by the re-enactors, modern container glass and aluminum cans are all found in the deposit. Although the material is out of context, it is indicative of the archaeological resources that are found in the historic park and in a context vulnerable to activities such as metal detecting. All artifacts in this layer have a direct connection with the history of occupation at Fort Erie and should continue to be protected as heritage resources.

Period VII Modern

The final Period is defined by phases [34] to [40]. These are modern features and events that date to the 1990s and up to the 2015 field school. Included here are re-enactor fire pits [34]/[35] and tent pegs [36]/[37], described earlier in Area 2, which date to the 1980s and continued for about 30 years when such events were held on the grounds (Jim Hill, pers. comm., Dec. 2016). The sod layer, Phase [38] is the latest horizon across the entire site, within which a piece of 18th century pearlware was recovered. The final two events in the stratigraphic history of Area 3 are the test pits and associated interfaces excavated in May 2015 and which is described above for Area 2.

8.0 Artifact Analysis

AREA	Frequency	Percentage
1	15299	19.5
2	31000	39.5
3	27063	34.4
TP	5214	6.6
TOTAL	78576	100.0

Period	Frequency	Percentage
I	1111	1.4
Ia	9536	12.1
II	3797	4.8
III	584	0.7
IIIa	2778	3.5
IIIb	931	1.2
IIIb/IV	166	0.2
IIIc	3510	4.5
IIIc/IIId	201	0.3
IIId	1642	2.1
IV	17816	22.7
n/a	6956	8.9
V	18356	23.4
VI	5143	6.5
VII	6043	7.7
Total	78570	100.0

TABLE 8.3		
AREA/UNIT	Frequency	Percentage
AREA 1		
A	949	6.2
B	2773	18.1
C	1354	8.9
D	5581	36.5
E	4637	30.3
1 TOTAL	15294	100.0
AREA 2		
F	841	2.5
G	2688	8.1
H	2956	9.0
J	2987	9.0
K	1359	4.1
M	3370	10.2
N	3469	10.5
P	6537	19.8
Q	2011	6.1
R	2508	7.6
X	2273	6.9
Y	2012	6.1
2 TOTAL	33011	100.0
AREA 3		
S	5322	21.2
T	2434	9.7
U	1371	5.5
V	6971	27.8
W	8953	35.7
3 TOTAL	25051	100.0
TOTAL	73356	

9.0 Summary and Conclusions

AREA 2 In summary, the evidence for demolition of a structure in Period IIIc is incontrovertible. The destruction event is represented by artifacts such as nails and window glass, along with building debris such as stone, mortar, and brick. There is no evidence to suggest that the building was burnt as opposed to simply being dismantled in place and the debris covered over with a thin layer of sediment. The destruction of the building, first an Officers' Quarters (Period IIIa) and then an extension onto this building (Period IIIb), was probably occasioned by the construction of the next phase of Fort Erie, the second (or even third) fort constructed on the higher ground to the north of the buildings described in Period III. A map dated 1803 (Figure), by Gother Mann, shows the proposed fort located to the north of the old fort on the lakeshore. This map is interesting as it shows the landscape from a military perspective only. Buildings which were known to be in the foreground of the proposed fort – the 'landfront' in fortification terminology – are not depicted. Yet we know from the Edward Walsh watercolour of 1804, and the Sempronius Stretton sketch of March 1805, that several structures were present in the landfront of the proposed fort between the old fort on the lakeshore – in ruins according to Gother Mann's map notation – and the heights upon which the new fort would soon be constructed. In fortification design the landfront would have to be clear of any obstacles that would obstruct a clear line of sight for gunnery. In other words, the structures which are known to have existed based on documentary evidence, and for which archaeological evidence was found in Areas 1, 2 and 3 (to be discussed below), would have been required to be pulled down to provide this line of sight. The construction of the proposed fort began shortly after Stretton's drawing was made in the spring of 1805 and continued until 1807/1808. It is during this time that the buildings described in Periods IIIa and IIIb were demolished in Period IIIc. Artifacts found in the layers associated with the demolition are consistent with a domestic occupation of the building, during the late 18th century. Ceramics such as pearlware and creamware are more common than in Period II when several varieties of mid-18th century ceramics were recovered. These are still found in Period III but in smaller numbers and their presence in deposits dating to this time indicates deposition of older artifacts and disturbance from excavation into earlier layers. Military insignia from the siege period is absent in deposits attributed to Period III and are in evidence from the next period dated to the summer of 1814.

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2015b Wilfrid Laurier Archaeological Field School at Old Fort Erie: 2013 Investigations. License report

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Appendix A

Artifact Photographs

Unit N, lot 6 - Creamware with beaded edge

Unit P, lot 8 - White salt-glaze stoneware,
scratch blue

Unit P, lot 8 – blue shell-edged pearlware

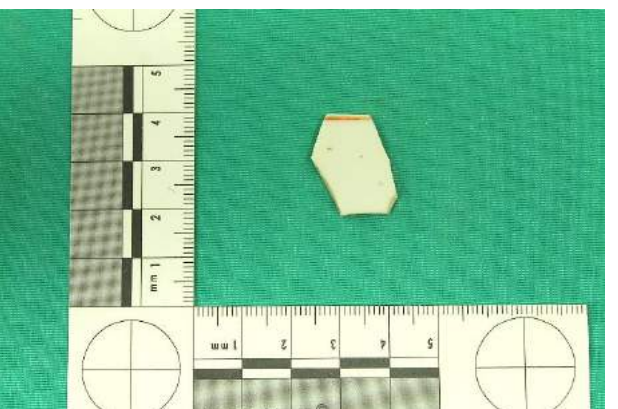
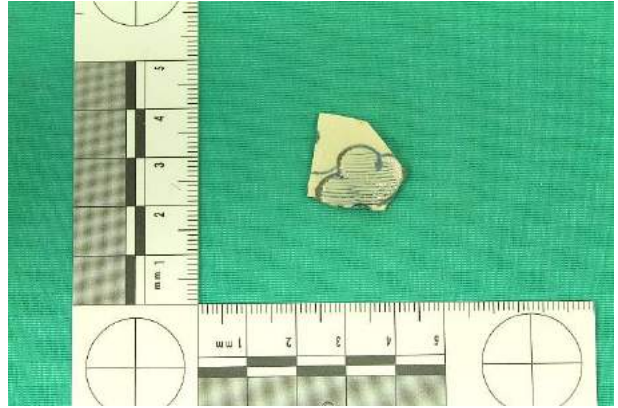
Unit P, lot 8 – green shell-edged pearlware

Unit P, lot 7 – Staffordshire slipware

Unit P, lot 7 – Staffordshire slipware – base
exterior

Unit N, lot 6 – painted porcelain

Unit P, lot 7 –red edge-lined bone china



Unit P, lot 7 - White salt-glaze stoneware,
barley pattern

Unit M, lot 3 – Creamware, royal pattern

Unit P, lot 8 – Polychrome painted pearlware
(early palette), teacup

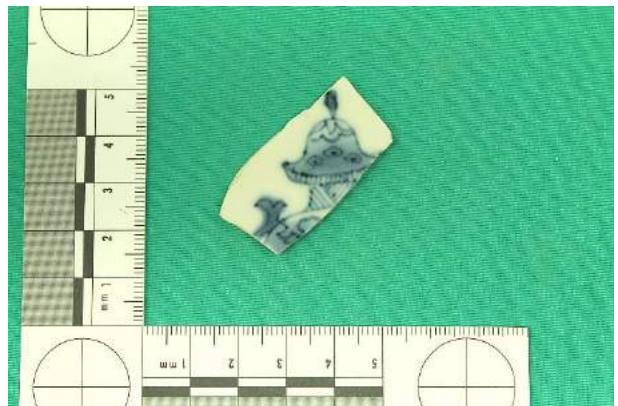
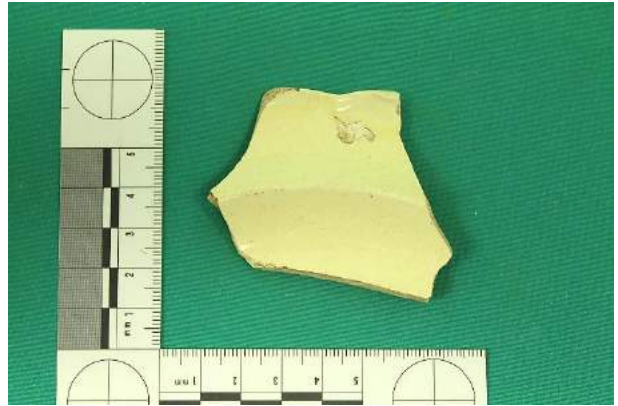
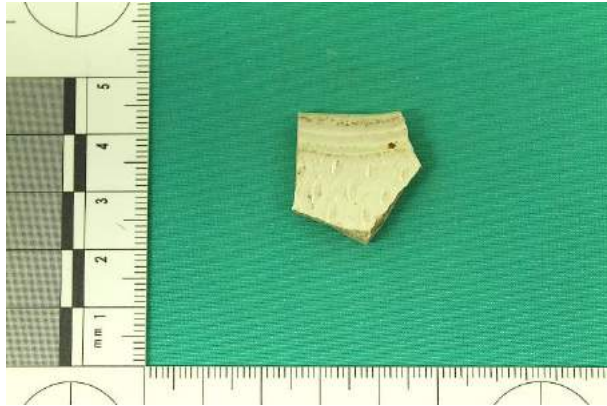
Unit P, lot 7 – painted porcelain

Unit P, lot 8 - Blue painted English soft-paste
porcelain, orange edge

Unit M, lot 3 – blue transfer-printed pearlware

Unit M, lot 4 – Brown transfer printed creamware,
Overglaze, 'bat' printed

Unit M, lot 4 – Annular banded mocha
(probably pearlware), burnt



Unit R, lot 5 – 2.5 inch wrought nails, one bent 90°

Unit R, lot 5 – Iron tacks, wrought, dome heads

Unit M, lot 4 – fish hook

Unit P, lot 10 – two-tined fork with bone handle

Unit P, lot 7 – pewter spoon – hand-made

Unit M, lot 3 – iron clasp knife without handle

Unit N, lot 5 – large strap hinge

Unit G, lot 5 – women's sewing scissors, 2 pieces



Unit N, lot 5 – trapezoidal gun flint - top

Unit N, lot 5 – trapezoidal gun flint – bottom

Unit H, lot 6 – musket repair piece – side plate?
lead

Unit H, lot 6 – musket repair piece – side plate?

Unit N, lot 5 – whetstone?

Unit N, lot 5 – whetstone?

Unit N, lot 7 – spall gunflint - top

Unit N, lot 7 – spall gunflint - bottom



Unit T, lot 3 – decorated smoking pipe bowl

Unit H, lot 7/8 - spout from stoneware jug

Unit M, lot 4 – canister shot – exploded fragment

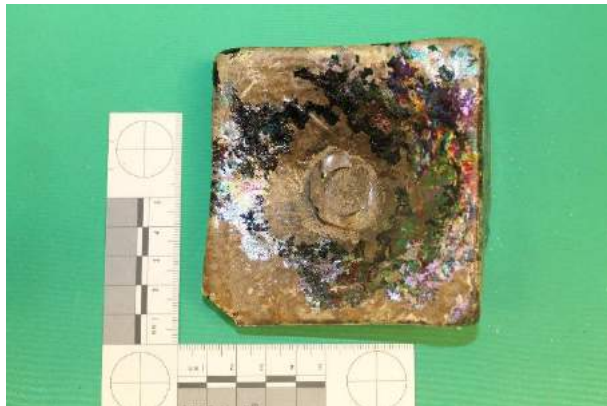
Unit M, lot 4 – canister shot – exploded fragment

Unit N, lot 6 – case bottle base with pontil mark

Unit G, lot 8/9 – hand-tooled bottle finish

Unit G, lot 6 – pharmaceutical bottle with lettering on all sides

Unit S, lot 2 - canaryware



Unit G, wall scrapings – rosso antico stoneware
teapot lid

Unit G, wall scrapings - rosso antico stoneware
(same piece)

Unit E, lot 14 – blue painted tin glazed

Unit G, lot 8/9 – scratch-blue stoneware

Unit R, lot 10 – painted creamware

Unit G, lot 6 – clouded ware

Unit S, lot 2 – black basalt stoneware

Unit G, lot 2 – Staffordshire slipware



Unit F, lot 7 - polished copper/brass sleeve/ornamnet Unit R, lot 16 - handle from iron kettle

Unit E, lot 6 - swivel buckle for musket

Unit D, lot 8 - bayonet socket

Unit G, lot 8/9 - musket frizzen – side view

Unit G, lot 9 - musket frizzen – back view

Unit E, lot 8 - modified barrel hoop – open hinge?

Unit D, lot 8 - shovel handle



Unit D, lot 8 – large piece of scrap iron with hole and chisel mark

Unit E, lot 5 - strap hinge

Unit D, lot 7 - horseshoe

Unit D, lot 7 - various fragments of scrap iron – blacksmithing debris

Unit T, lot 11 -biface preform – broken base

Unit W, lot 9 - projectile point – broken tip

Unit W, lot 6 - stemmed projectile point

Unit P, lot 10 - projectile point – Ace of Spades type



Unit T, lot 13 – corner-notched projectile point

Unit T, lot 10 – side-notched point

Unit V, lot 7 – biface with broken tip

Unit U, lot 6 – side-notched projectile point

Unit R, lot 11/12 – modified gunflint fragment

Unit W, lot 9 - netsinker

Unit W, lot 6 - netsinker

Unit J, lot 10/11 - netsinker



Unit G, lot 12/13 - ceramic – cord-roughened surface Unit V, lot 11 - ceramic rim sherd – cord-roughened stick-impressed

Unit E, lot 14 – ceramic body sherd – cord-roughened stick impressed Unit S, lot 3 – ceramic body sherd - cord-roughened stick impressed

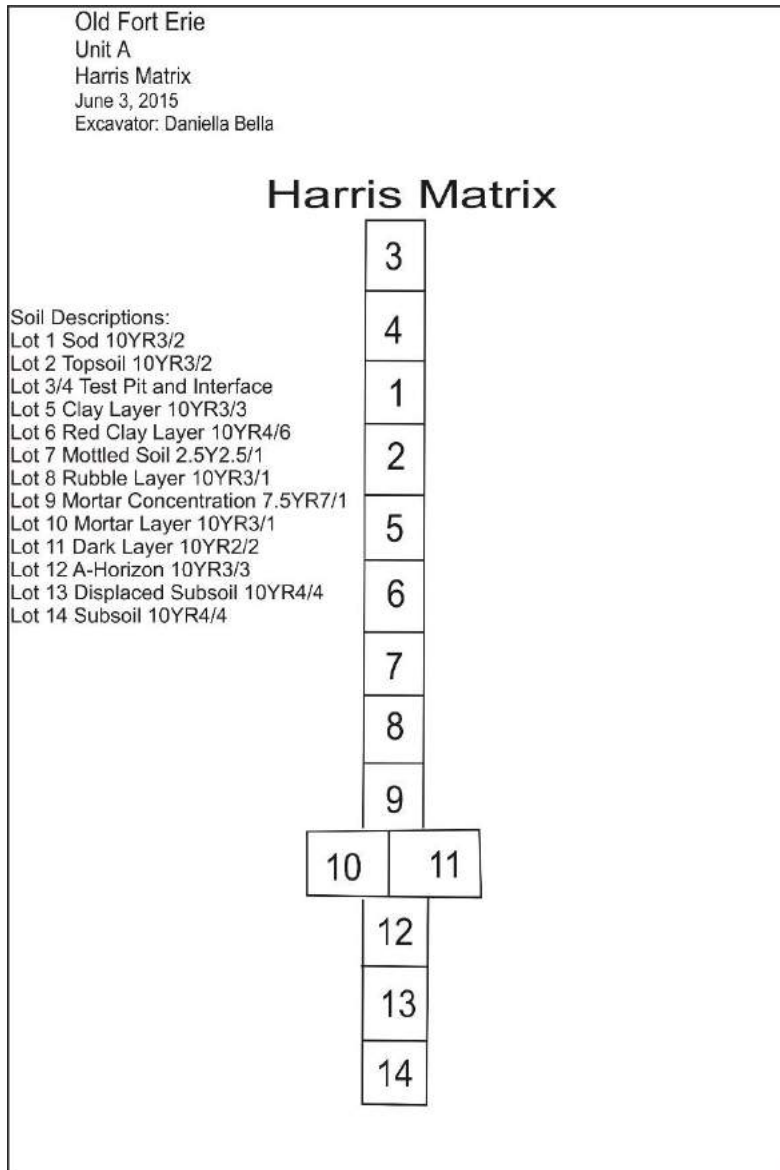
Unit E, lot 14 – ceramic rim sherd – cord impressed oblique lines

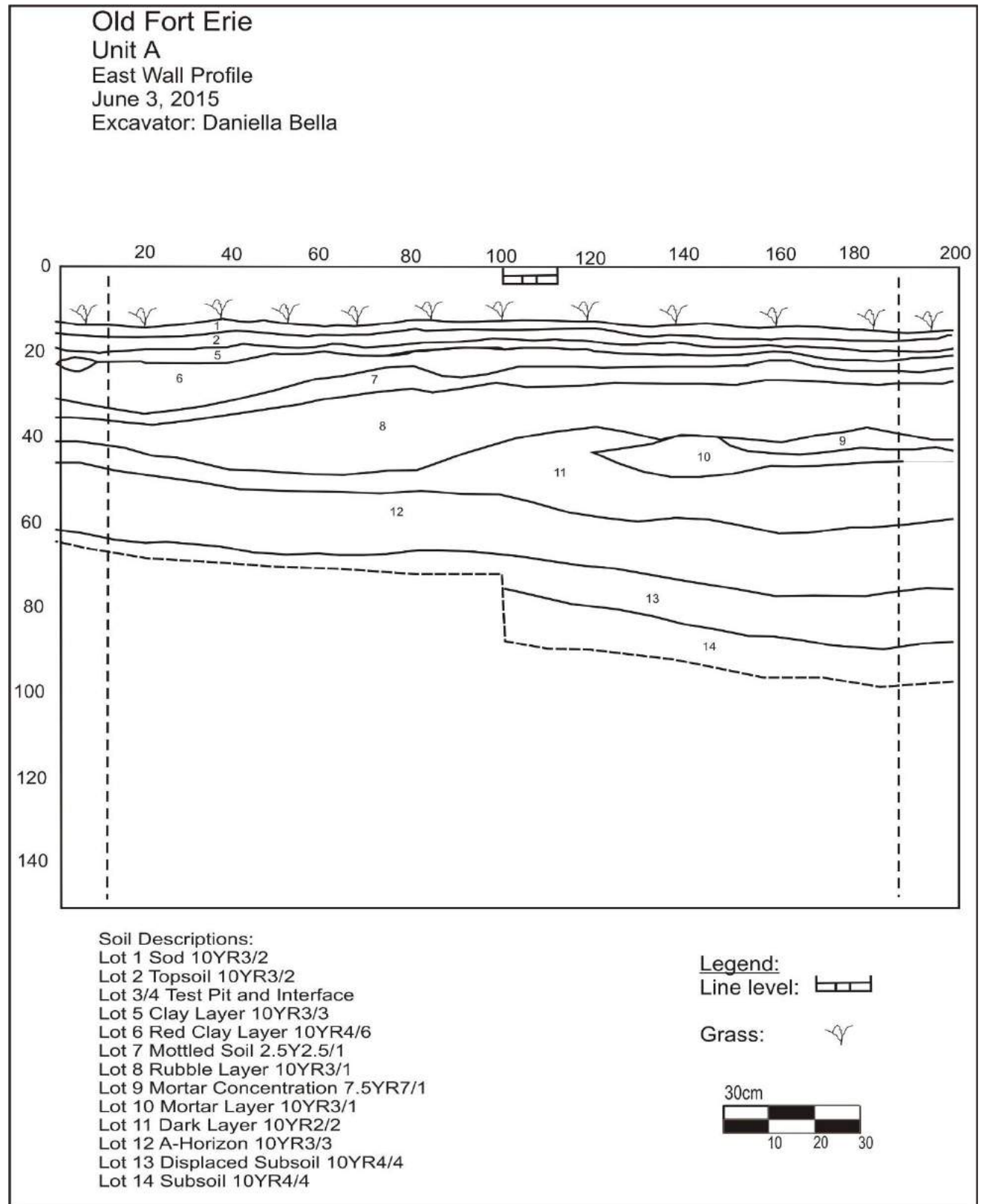


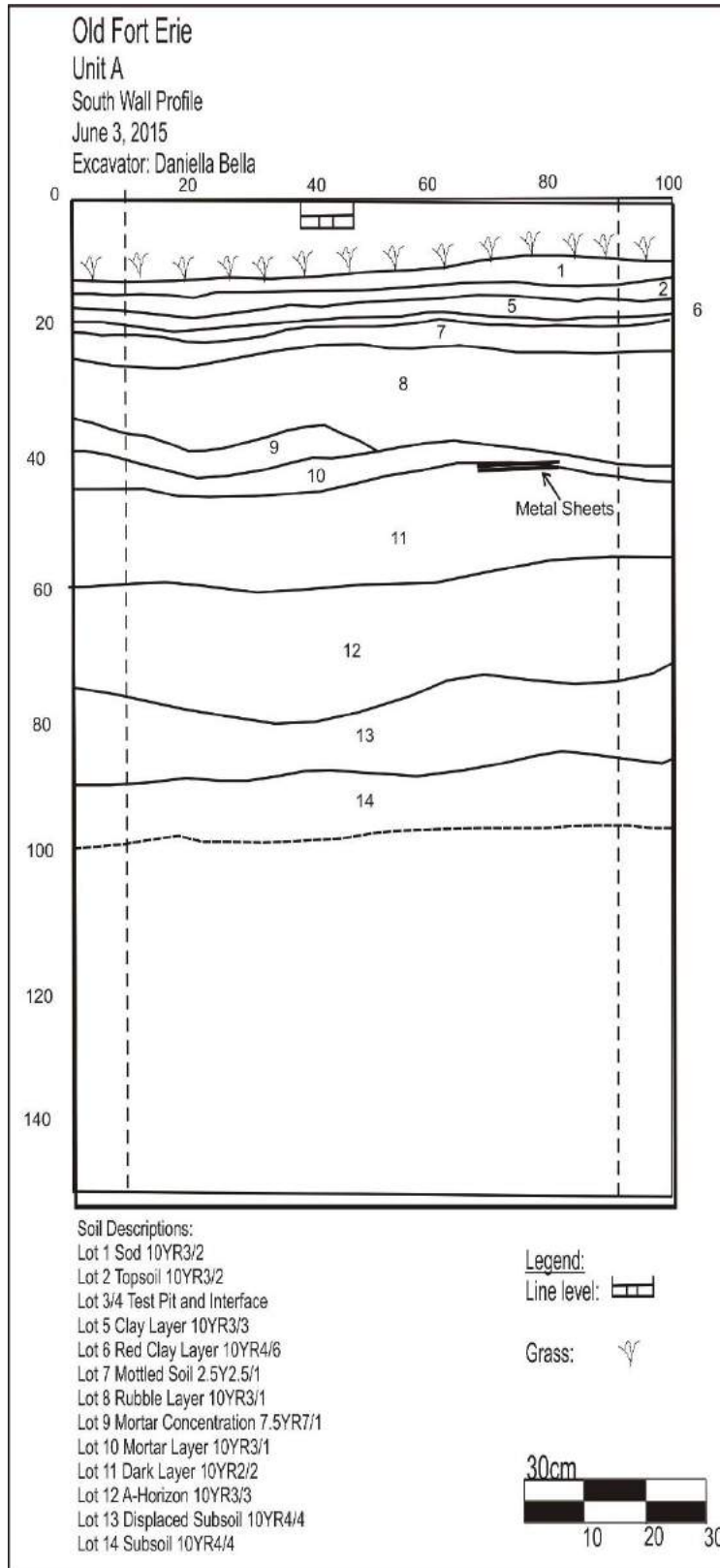
Appendix B

Technical Drawings – Stratigraphic Profiles and Matrix Diagrams

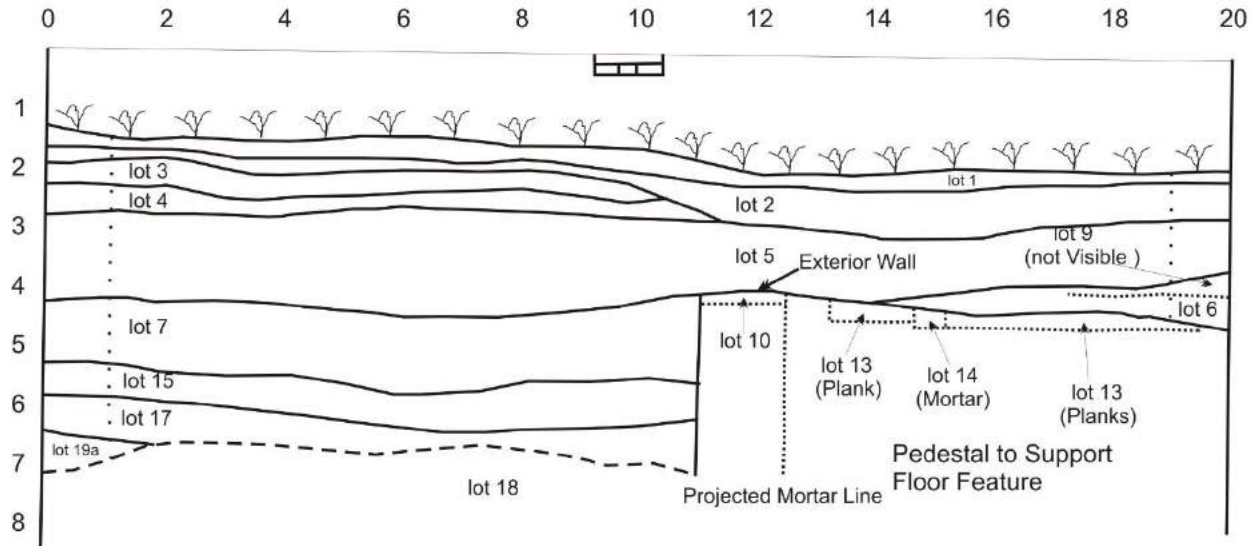
Area 1







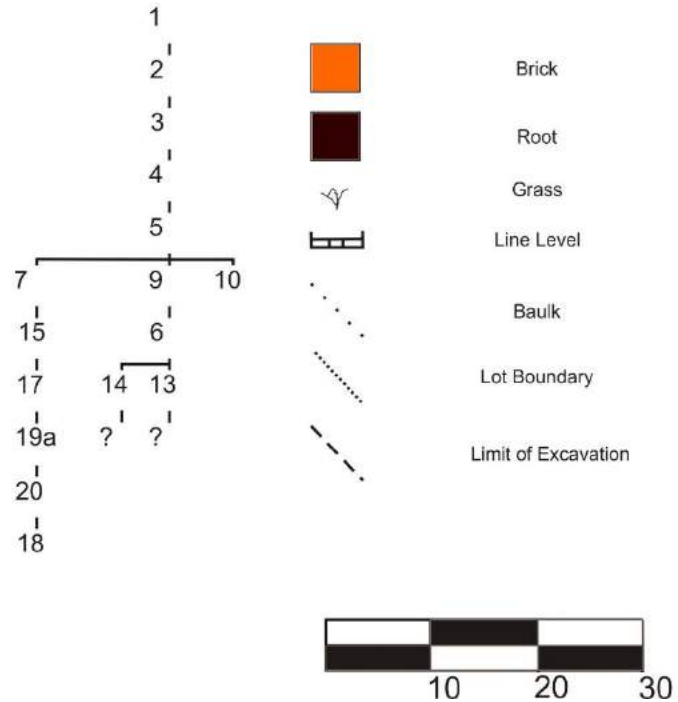
Old Fort Erie
Area 1 - Unit B
Eastern Profile



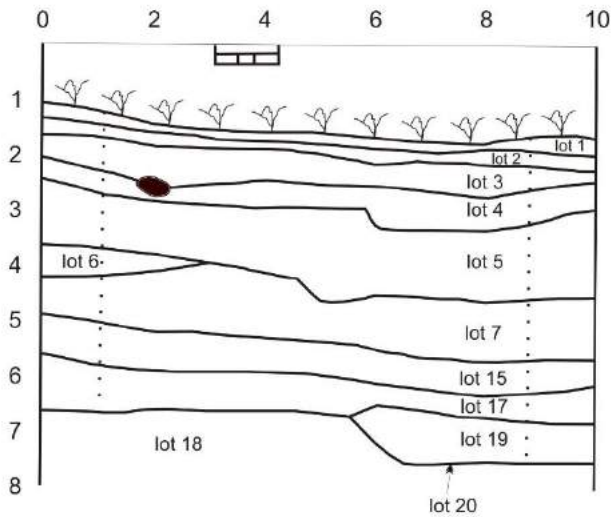
Soil Descriptions

- Lot 1: Sod
- Lot 2: Topsoil (7.5YR 2.5/1)
- Lot 3: Clay (10YR 6/2)
- Lot 4: Mottled Layered 10YR 3/3)
- Lot 5: Rubble Layer (10YR 3/1)
- Lot 6: Mortar (10YR 8/1)
- lot 7: Dark Surface (10YR 2/1)
- Lot 8: Mortar Line N (10YR 7/4)
- Lot 9: Brick Area (10YR 3/1)
- Lot 10: Mortar Line M (10YR 7/4)
- Lot 11: Mortar Feature (10YR 8/1)
- Lot 12: Interface for lot 11
- Lot 13: Wooden Planks
- Lot 14: Mortar Line S (10YR 7/4)
- Lot 15: A Horizon (10YR 3/3)
- Lot 16: Dark, Sub-Flooring Layer (10 YR 2/2)
- Lot 17: Displaced Subsoil (10YR 2/2)
- Lot 18: Sub Soil (10YR 3/6)
- Lot 19 a/b: Dark Soiled Feature (10YR 2/2)
- Lot 20 a/b: Interface for lot 19 (a/b)

Legend



Old Fort Erie
 Area 1 - Unit B
 Northern Profile
 Mapped June 4th 2015



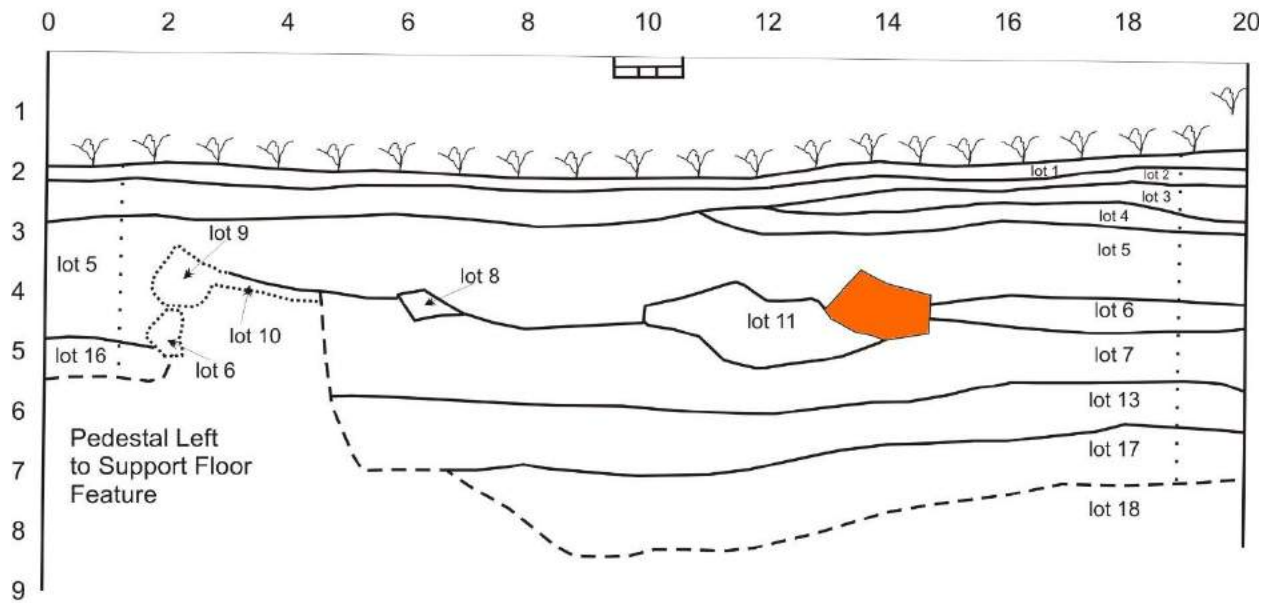
Soil Descriptions

- Lot 1: Sod
- Lot 2: Topsoil (7.5YR 2.5/1)
- Lot 3: Clay (10YR 6/2)
- Lot 4: Mottled Layered 10YR 3/3)
- Lot 5: Rubble Layer (10YR 3/1)
- Lot 6: Mortar (10YR 8/1)
- lot 7: Dark Surface (10YR 2/1)
- Lot 8: Mortar Line N (10YR 7/4)
- Lot 9: Brick Area (10YR 3/1)
- Lot 10: Mortar Line M (10YR 7/4)
- Lot 11: Mortar Feature (10YR 8/1)
- Lot 12: Interface for lot 11
- Lot 13: Wooden Planks
- Lot 14: Mortar Line S (10YR 7/4)
- Lot 15: A Horizon (10YR 3/3)
- Lot 16: Dark, Sub-Flooring Layer (10 YR 2/2)
- Lot 17: Displaced Subsoil (10YR 2/2)
- Lot 18: Sub Soil (10YR 3/6)
- Lot 19 a/b: Dark Soiled Feature (10YR 2/2)
- Lot 20 a/b: Interface for lot 19 (a/b)

Legend

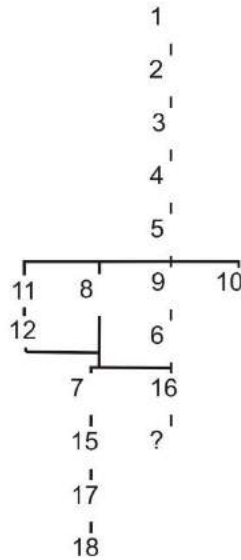
1		
2		Brick
3		Root
4		Grass
5		Line Level
6		Baulk
7		Lot Boundary
15		Limit of Excavation
17		
19a		
20		
18		

Old Fort Erie
Area 1 - Unit B
Western Profile



Soil Descriptions

- Lot 1: Sod
- Lot 2: Topsoil (7.5YR 2.5/1)
- Lot 3: Clay (10YR 6/2)
- Lot 4: Mottled Layed 10YR 3/3)
- Lot 5: Rubble Layer (10YR 3/1)
- Lot 6: Mortar (10YR 8/1)
- lot 7: Dark Surface (10YR 2/1)
- Lot 8: Mortar Line N (10YR 7/4)
- Lot 9: Brick Area (10YR 3/1)
- Lot 10: Mortar Line M (10YR 7/4)
- Lot 11: Mortar Feature (10YR 8/1)
- Lot 12: Interface for lot 11
- Lot 13: Wooden Planks
- Lot 14: Mortar Line S (10YR 7/4)
- Lot 15: A Horizon (10YR 3/3)
- Lot 16: Dark, Sub-Flooring Layer (10 YR 2/2)
- Lot 17: Displaced Subsoil (10YR 2/2)
- Lot 18: Sub Soil (10YR 3/6)
- Lot 19 a/b: Dark Soiled Feature (10YR 2/2)
- Lot 20 a/b: Interface for lot 19 (a/b)

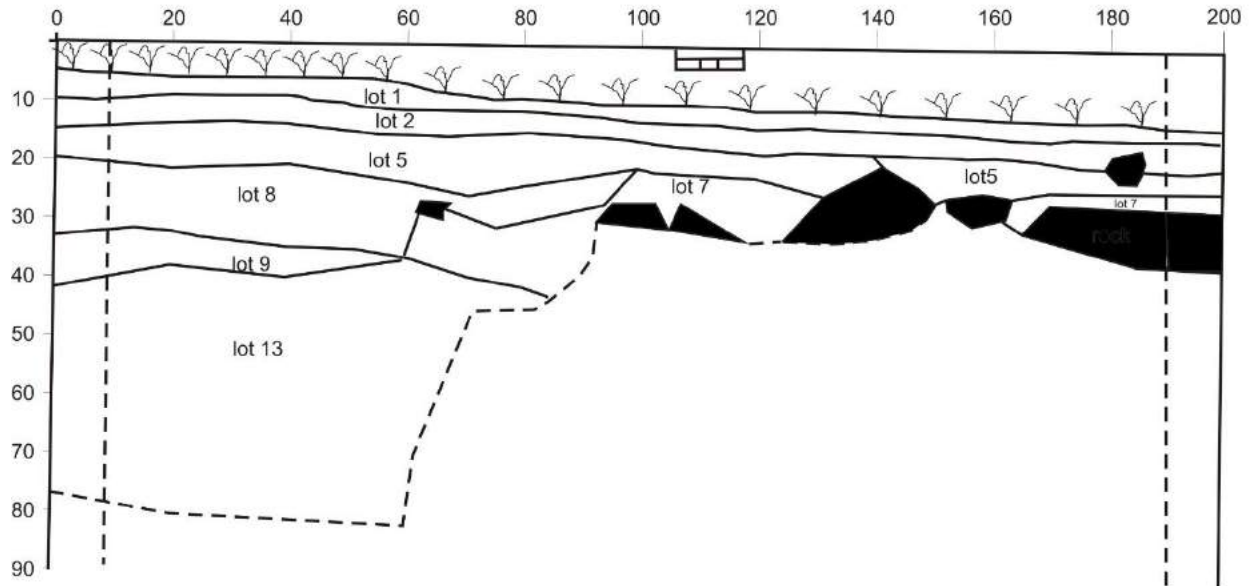


Legend

- Brick
- Root
- Grass
- Line Level
- Baulk
- Lot Boundary
- Limit of Excavation



Old Fort Erie (AfGr-3)
 Area 1 - Unit C
 Northern Profiles
 Mapped: June 4th + 5th, 2015
 Excavated By: Owen Harvey



lot Descriptions

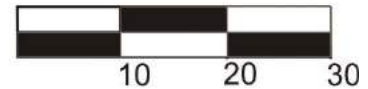
- lot 1: Sod
- lot 2 - Top Soil (10 YR N/1)
- lot 3 - Test Pit (not visible in the interface)
- Lot 4 - Interface for lot 3
- lot 5 - Rubble Layer (7.5 YR 2/4)
- Lot 6 - Clay (7.5 YR 3/1)
- Lot 7 - Large Rubble Layer (10 YR 2/2)
- Lot 8 - Dark Surface Corner Feature (10 YR 3/2)
- lot 9 - Lighter Brown Mottled Layer - North of the lot 10 (7.5 YR 3/2)
- lot 10 - Mortar Line (7.5 YR N/1 and 10 YR 5/4)
- Lot 11 - Grey Mottled Interface (10 YR 7/3)
- lot 12 - Mortar over the wood, synonymous with lot 15 and not seen in profile (7.5 YR 4/3)
- Lot 13 - Outside Ground Surface North West (10 YR 2/2)
- Lot 14 - Wood(not in Profile)
- Lot 15 - Mortar over the wood (7.5 YR 4/3)
- Lot 16 Hardened Light Brown Sediment, synonymous with lot 12 (10 YR 5/6)
- Lot 17 - Dark Soil - South East (10 YR 3/2)
- Lot 18 - Light Grey Mortar Patch (7.5 YR 7/2)
- Lot 19 - Sub Soil
- Lot 20 - In Situ Stone feature- Forge?



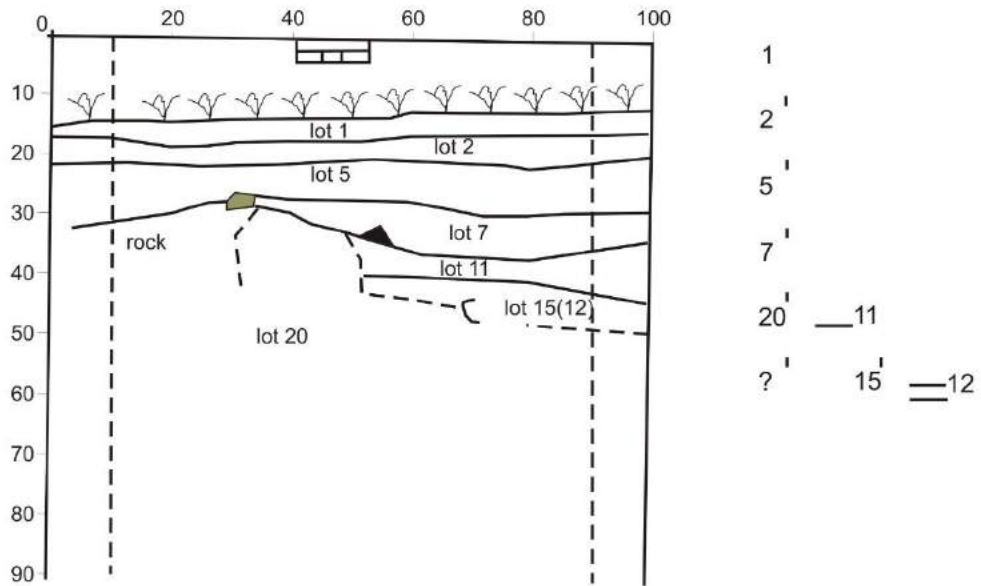
Legend

- rock
- fossil
- line level
- grass

Scale = 1:10 (CM)



Old Fort Erie (AfGr-3)
 Area 1 - Unit C
 Eastern Profiles
 Mapped: June 4th + 5th, 2015
 Excavated By: Owen Harvey



lot Descriptions

- lot 1: Sod
- lot 2 - Top Soil (10 YR N/1)
- lot 3 - Test Pit (not visible in the interface)
- Lot 4 - Interface for lot 3
- lot 5 - Rubble Layer (7.5 YR 2/4)
- Lot 6 - Clay (7.5 YR 3/1)
- Lot 7 - Large Rubble Layer (10 YR 2/2)
- Lot 8 - Dark Surface Corner Feature (10 YR 3/2)
- lot 9 - Lighter Brown Mottled Layer - North of the lot 10 (7.5 YR 3/2)
- lot 10 - Mortar Line (7.5 YR N/1 and 10 YR 5/4)
- Lot 11 - Grey Mottled Interface (10 YR 7/3)
- lot 12 - Mortar over the mood, synonymous with lot 15 and not seen in profile (7.5 YR 4/3)
- Lot 13 - Outside Ground Surface North West (10 YR 2/2)
- Lot 14 - Wood(not in Profile)
- Lot 15 - Mortar over the wood (7.5 YR 4/3)
- Lot 16 Hardened Light Brown Sediment, synonymous with lot 12 (10 YR 5/6)
- Lot 17 - Dark Soil - South East (10 YR 3/2)
- Lot 18 - Light Grey Mortar Patch (7.5 YR 7/2)
- Lot 19 - Sub Soil
- Lot 20 - In Situ Stone feature- Forge?

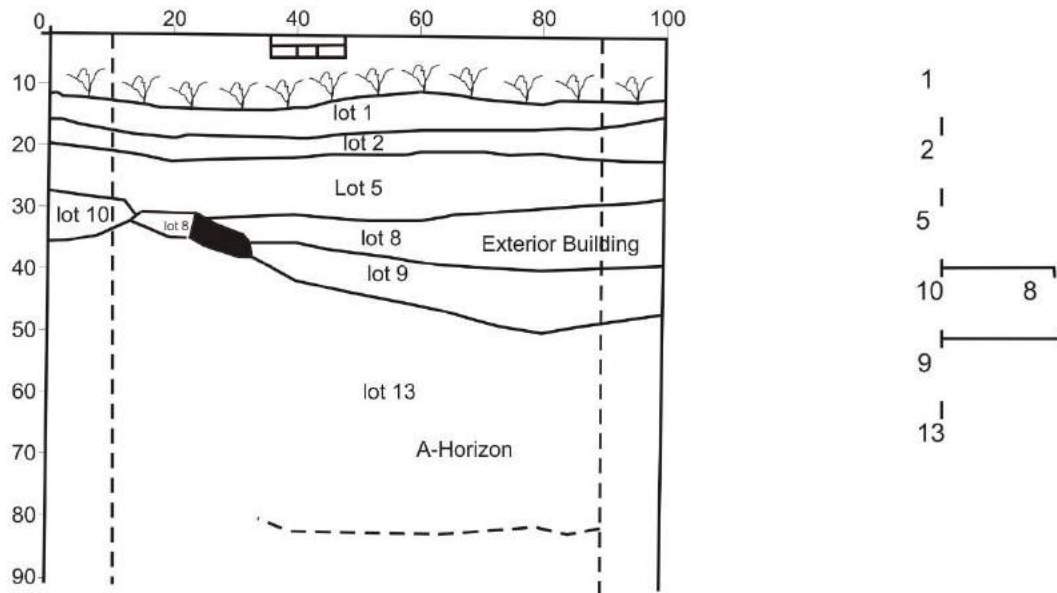
Legend

- rock
- fossil
- line level
- grass

Scale = 1:10 (CM)



Old Fort Erie (AfGr-3)
 Area 1 - Unit C
 Western Profiles
 Mapped: June 4th + 5th, 2015
 Excavated By: Owen Harvey



lot Descriptions

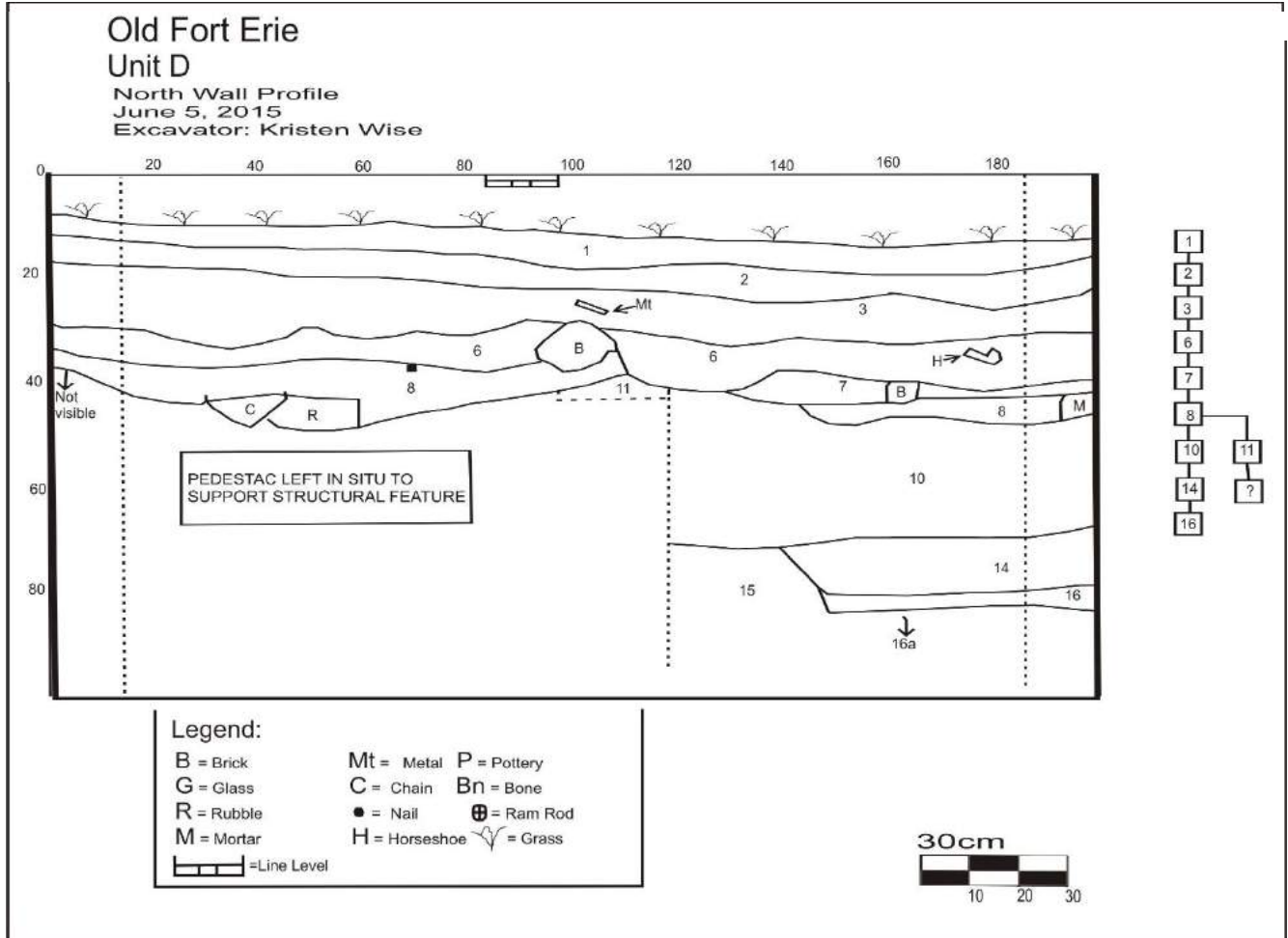
- lot 1: Sod
- lot 2 - Top Soil (10 YR N/1)
- lot 3 - Test Pit (not visible in the interface)
- Lot 4 - Interface for lot 3
- lot 5 - Rubble Layer (7.5 YR 2/4)
- Lot 6 - Clay (7.5 YR 3/1)
- Lot 7 - Large Rubble Layer (10 YR 2/2)
- Lot 8 - Dark Surface Corner Feature (10 YR 3/2)
- lot 9 - Lighter Brown Mottled Layer - North of the lot 10 (7.5 YR 3/2)
- lot 10 - Mortar Line (7.5 YR N/1 and 10 YR 5/4)
- Lot 11 - Grey Mottled Interface (10 YR 7/3)
- lot 12 - Mortar over the mood, synonymous with lot 15 and not seen in profile (7.5 YR 4/3)
- Lot 13 - Outside Ground Surface North West (10 YR 2/2)
- Lot 14 - Wood(not in Profile)
- Lot 15 - Mortar over the wood (7.5 YR 4/3)
- Lot 16 Hardened Light Brown Sediment, synonymous with lot 12 (10 YR 5/6)
- Lot 17 - Dark Soil - South East (10 YR 3/2)
- Lot 18 - Light Grey Mortar Patch (7.5 YR 7/2)
- Lot 19 - Sub Soil
- Lot 20 - In Situ Stone feature- Forge?

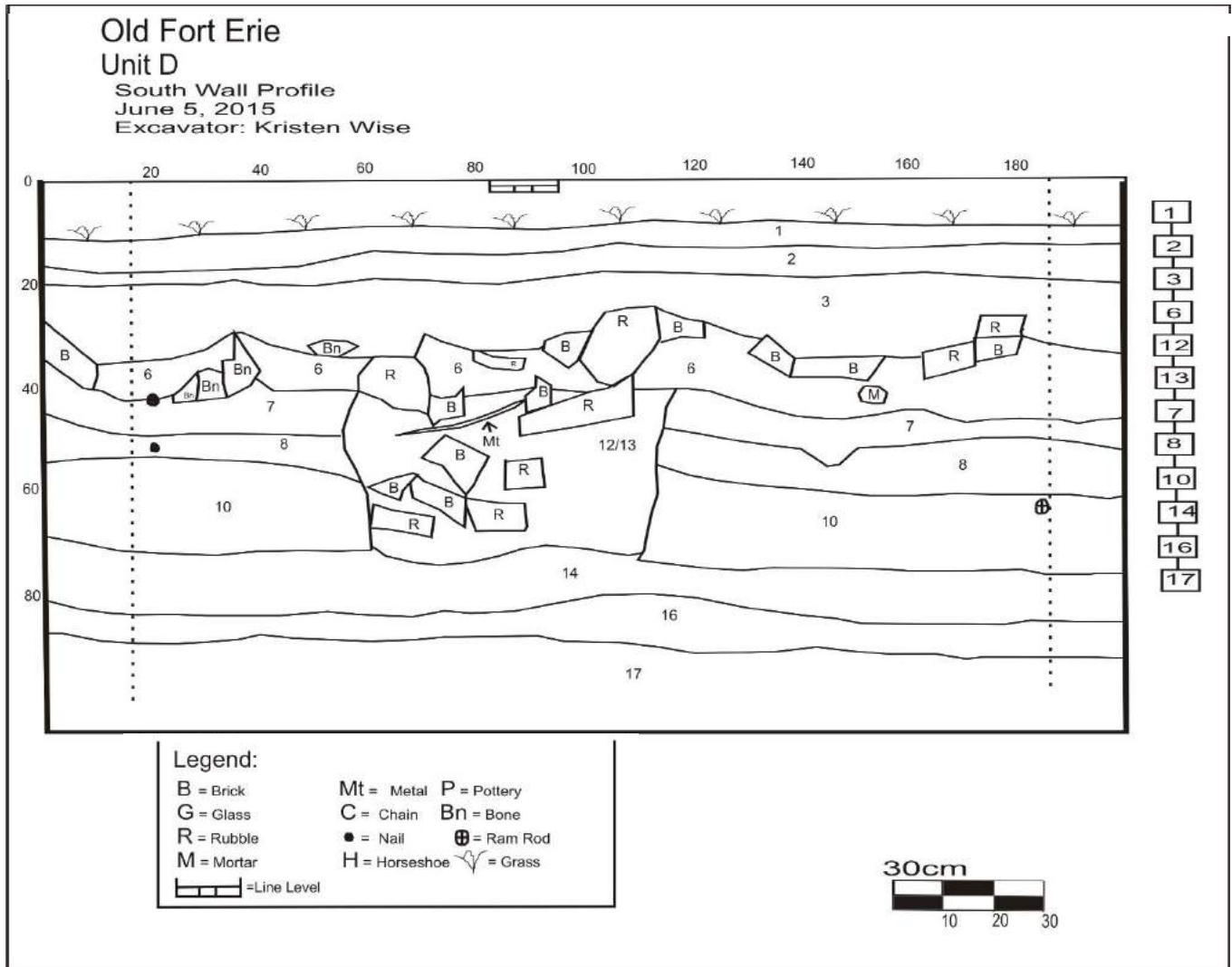
Legend

- rock
- fossil
- line level
- grass

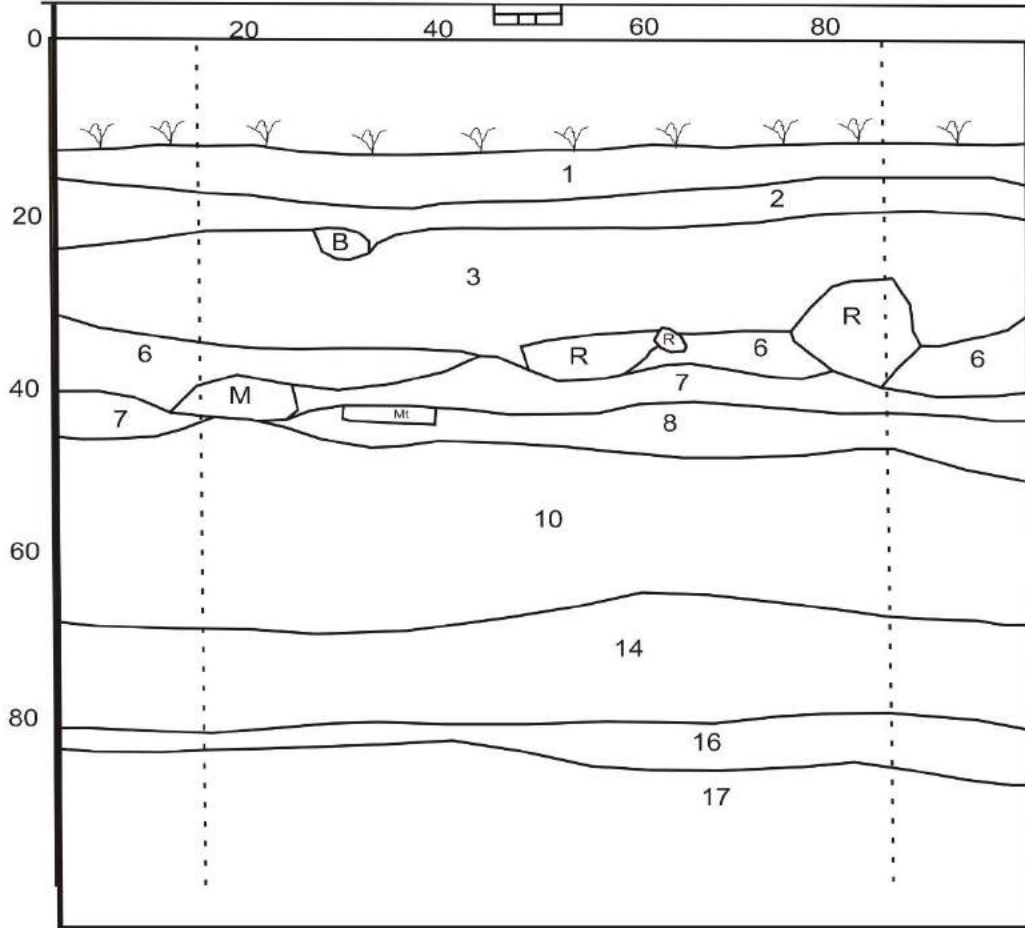
Scale = 1:10 (CM)





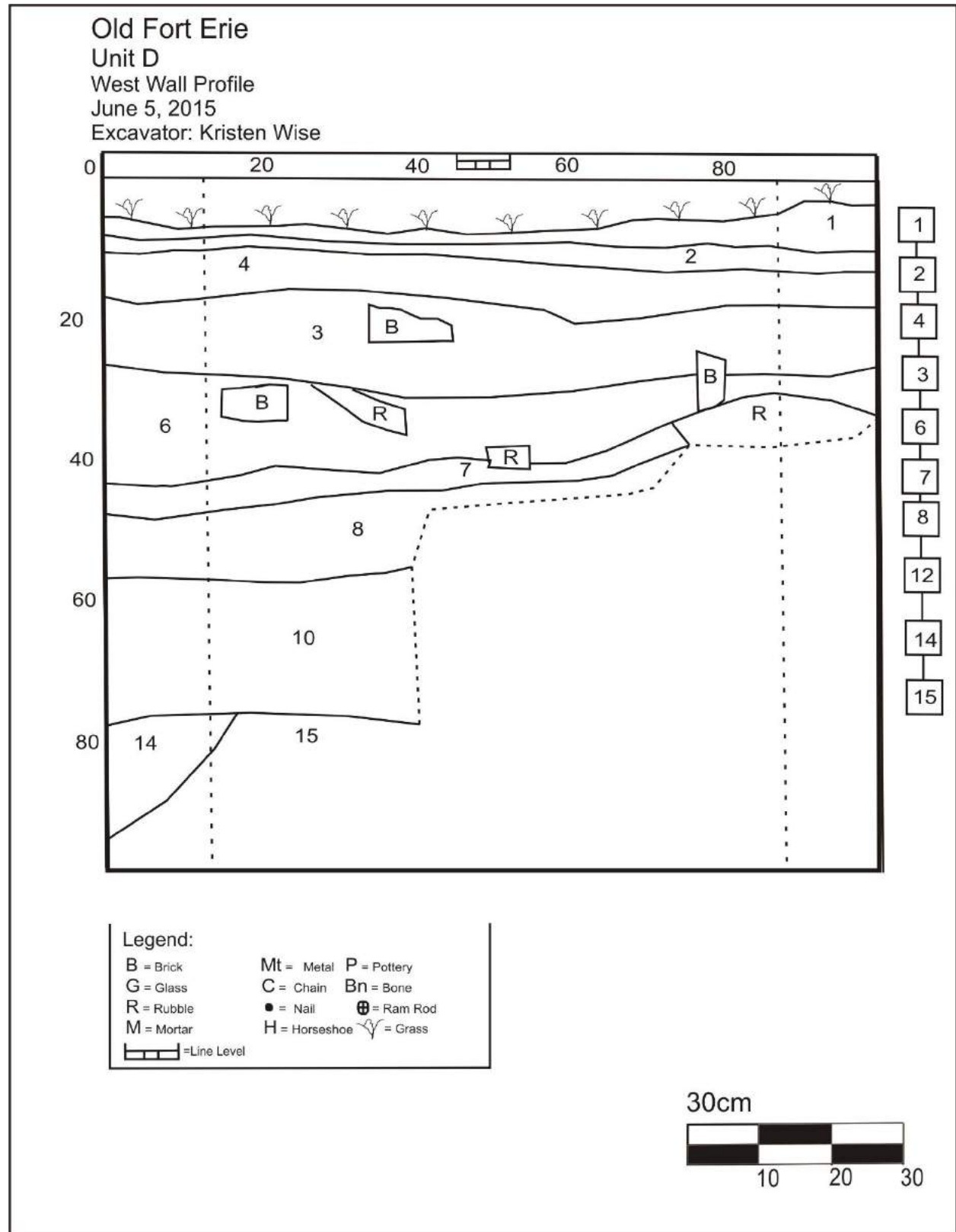


Old Fort Erie
Unit D
East Wall Profile
June 5, 2015
Excavator: Kristen Wise

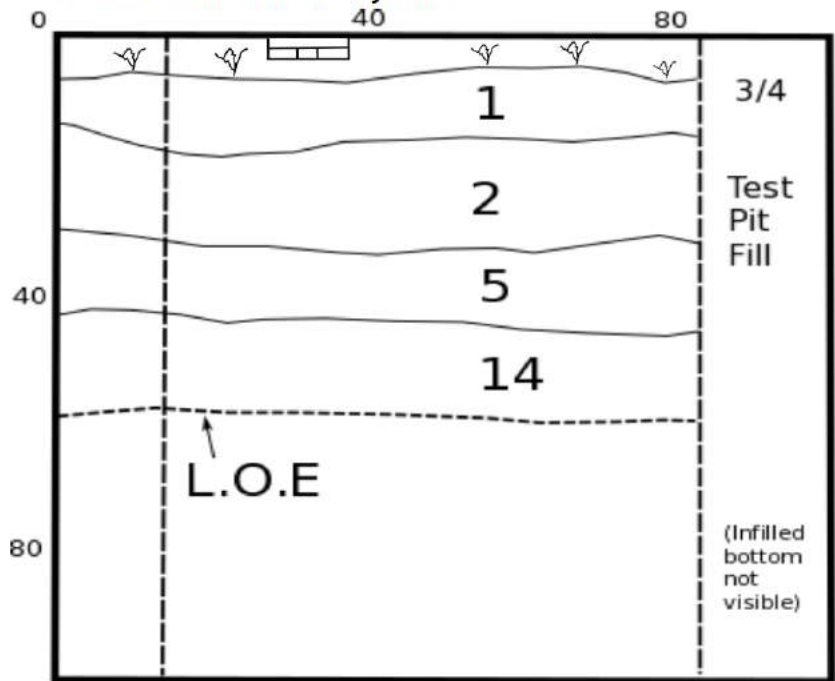


Legend:
B = Brick
G = Glass
R = Rubble
M = Mortar
Mt = Metal
C = Chain
H = Horseshoe
P = Pottery
Bn = Bone
• = Nail
⊕ = Ram Rod
☙ = Grass
=Line Level





Old Fort Erie
Unit E
East Wall Profile
June 2, 2015
Excavator: Noah Prymak

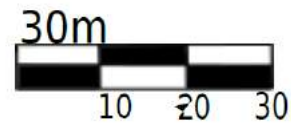


Soil Descriptions:
Lot 1 Sod 10YR2/1
Lot 2 Topsoil 10YR2/1
Lot 5 Destruction Horizon 10YR3/2
Lot 6/7 Mortar Layer 10YR3/3
Lot 14 Subsoil 10YR3/4

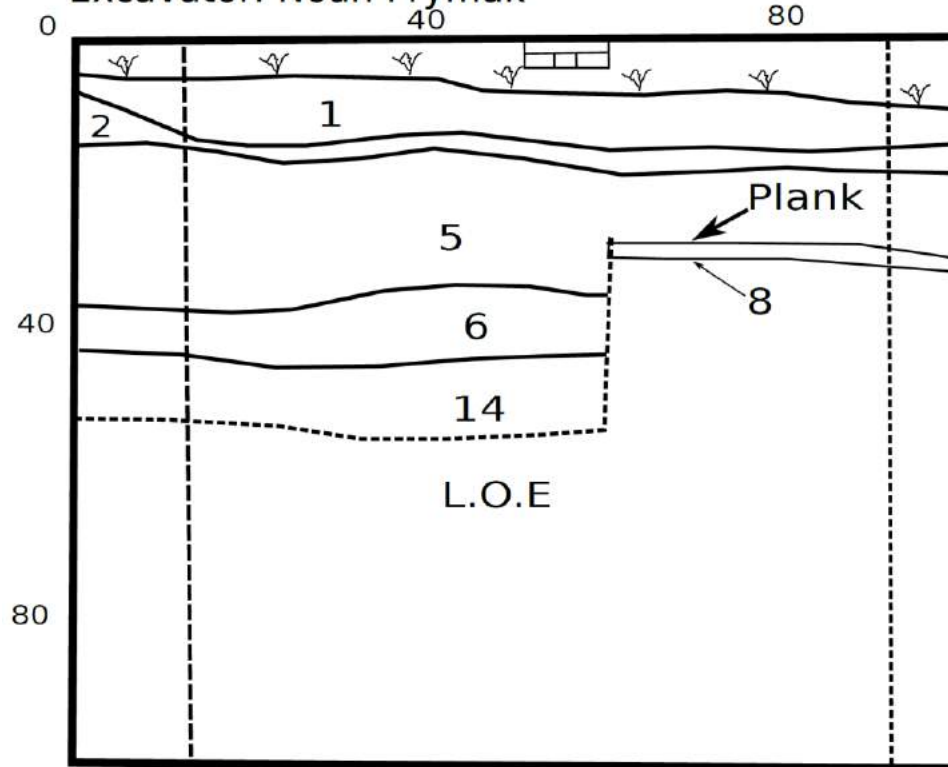
Legend:

Line Level

Grass



Old Fort Erie
Unit E
West Wall Profile
June 2, 2015
Excavator: Noah Prymak

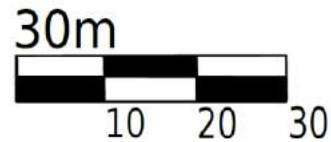


Soil Descriptions:
Lot 1 Sod 10YR2/1
Lot 2 Topsoil 10YR2/1
Lot 5 Destruction Horizon 10YR3/2
Lot 6/7 Mortar Layer 10YR3/3
Lot 14 Subsoil 10YR3/4

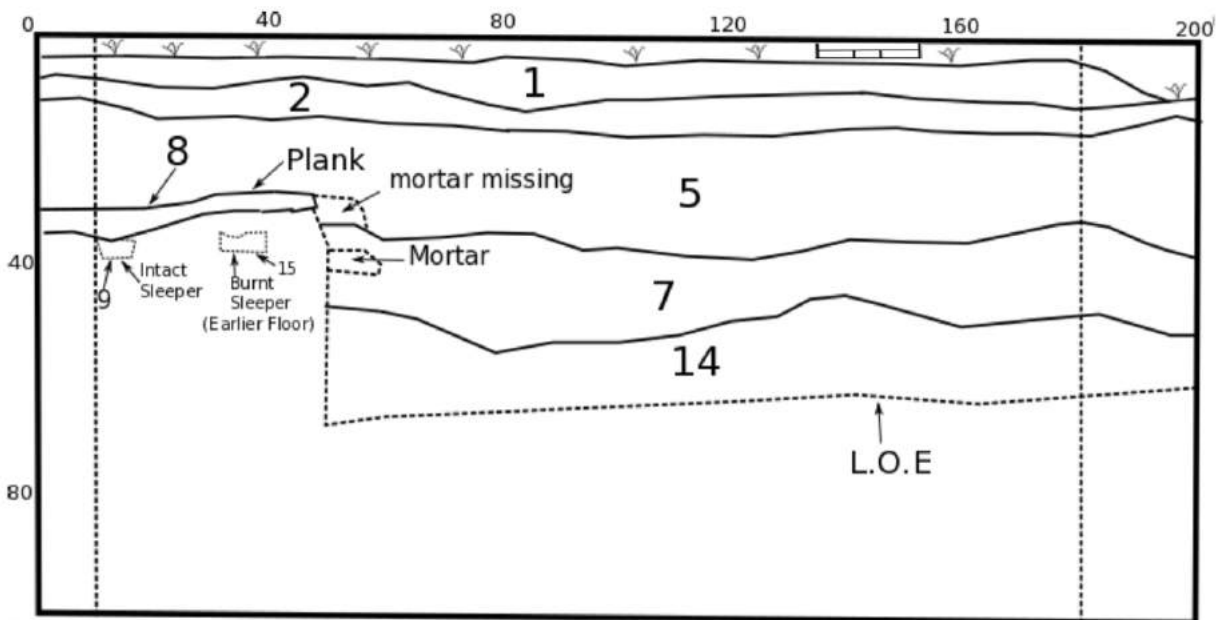
Legend:

Line Level

Grass



Old Fort Erie
Unit E
North Wall Profile
June 2, 2015
Excavator: Noah Prymak



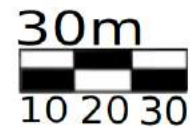
Soil Descriptions:

- Lot 1 Sod 10YR2/1
- Lot 2 Topsoil 10YR2/1
- Lot 5 Destruction Horizon 10YR3/2
- Lot 6/7 Mortar Layer 10YR3/3
- Lot 14 Subsoil 10YR3/4

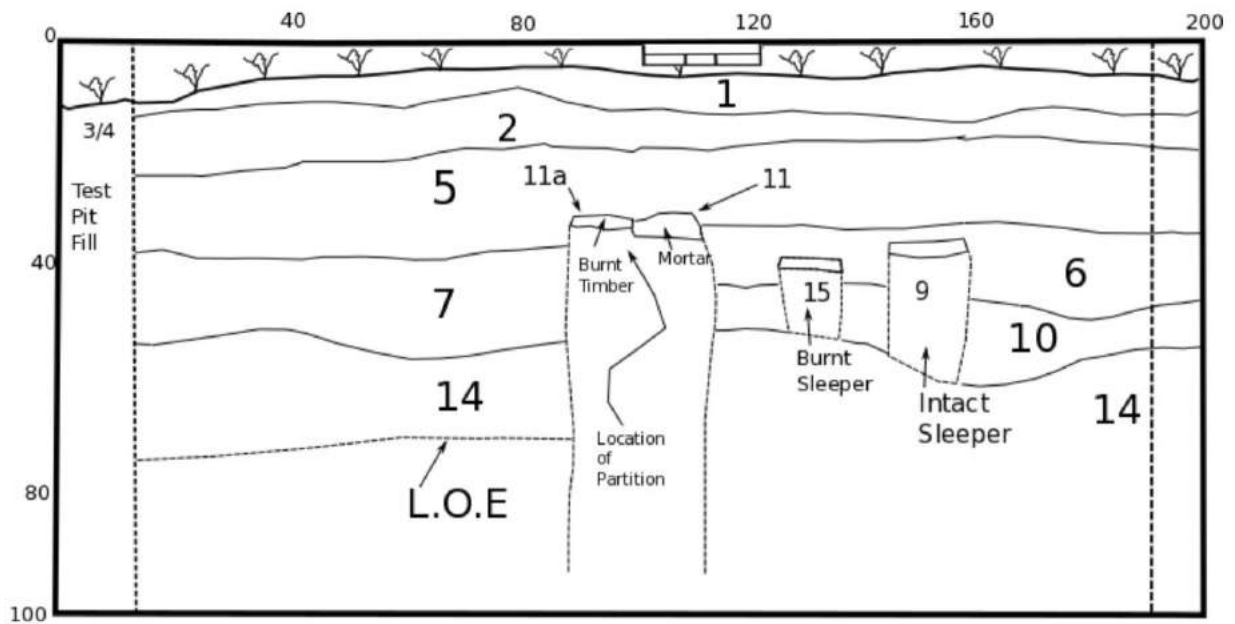
Legend:

Line Level

Grass



Old Fort Erie
 Unit E
 South Wall Profile
 June 2, 2015
 Excavator: Noah Prymak




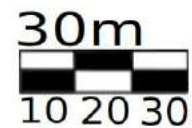
Soil Descriptions:

- Lot 1 Sod 10YR2/1
- Lot 2 Topsoil 10YR2/1
- Lot 5 Destruction Horizon 10YR3/2
- Lot 6/7 Mortar Layer 10YR3/3
- Lot 14 Subsoil 10YR3/4

Legend:

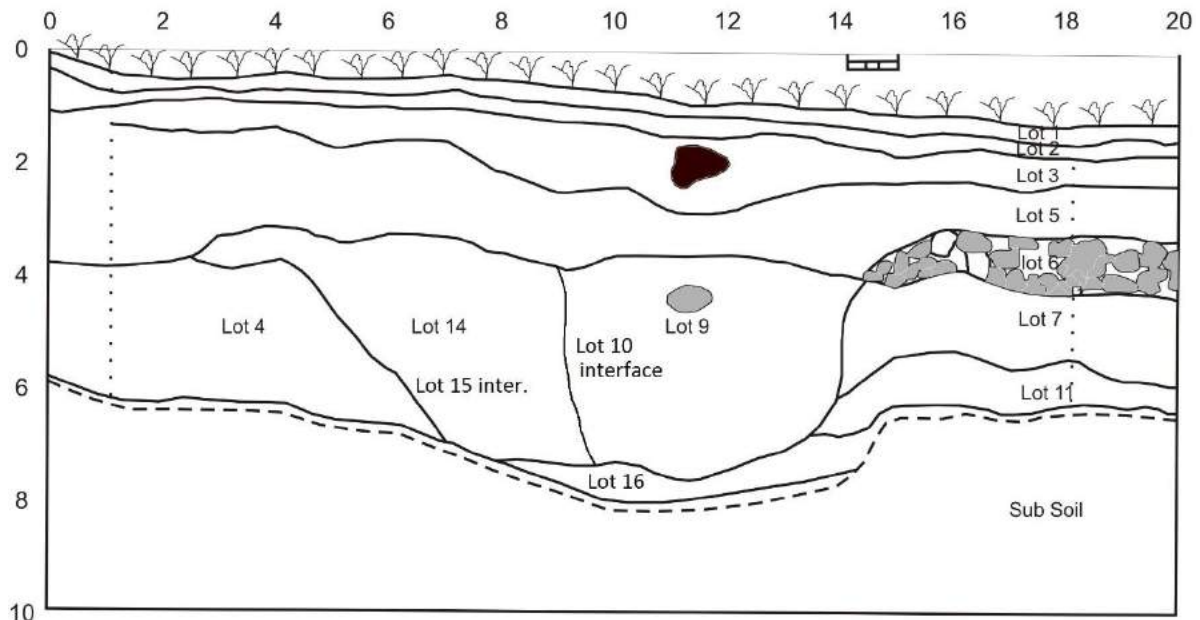
Line Level 

Grass 









Area 2

Old Fort Erie (AfGr-3)
Area 2 - Unit F
Northern Profile
Mapped: June 3rd 2015
Excavated by Aaron Fehir

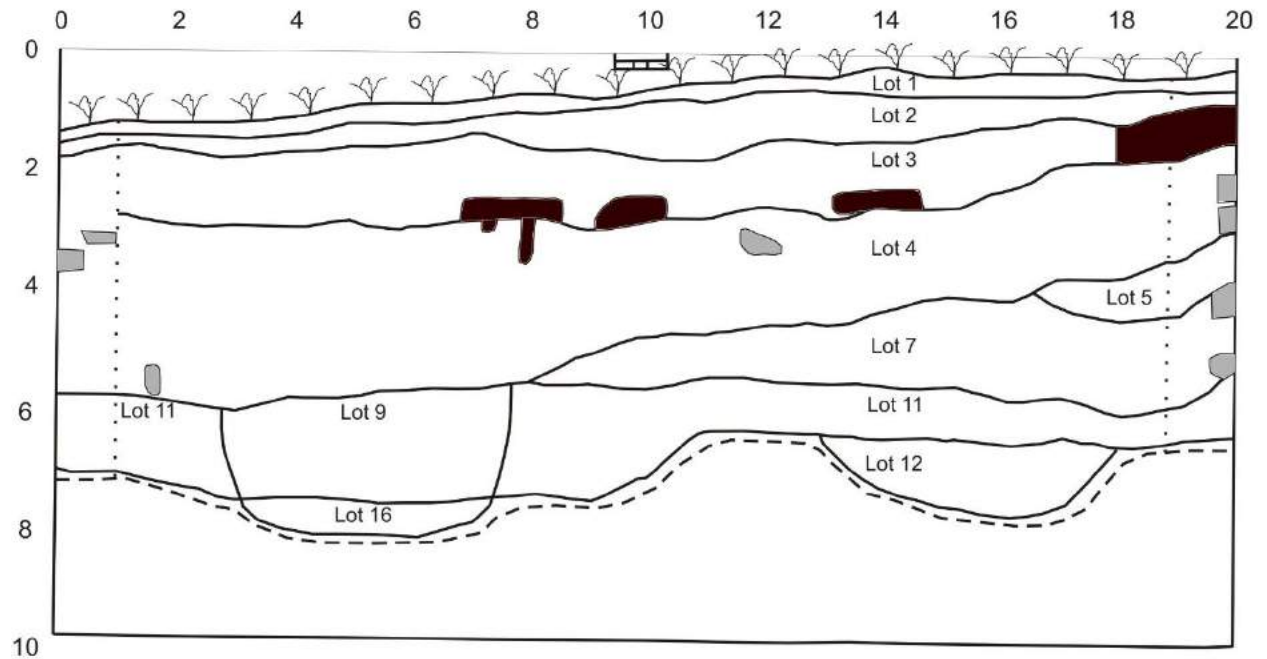


Legend







-  Root
-  Rock
-  Grass
-  Limit of Excavation
-  Baulk
-  Line Level

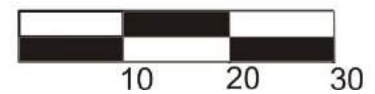


Old Fort Erie (AfGr-3)
Area 2 - Unit F
Southern Profile
Mapped: June 3rd 2015
Excavated by Aaron Fehir

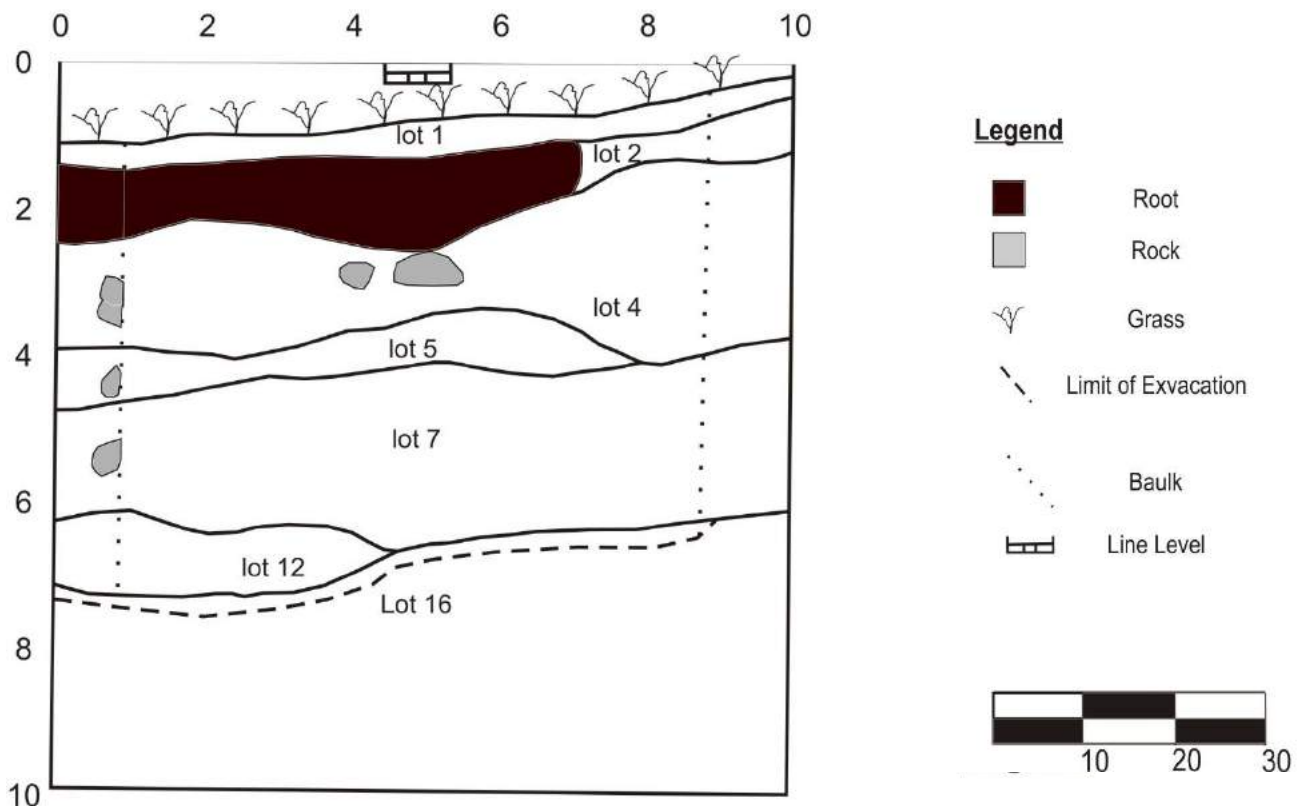


Legend

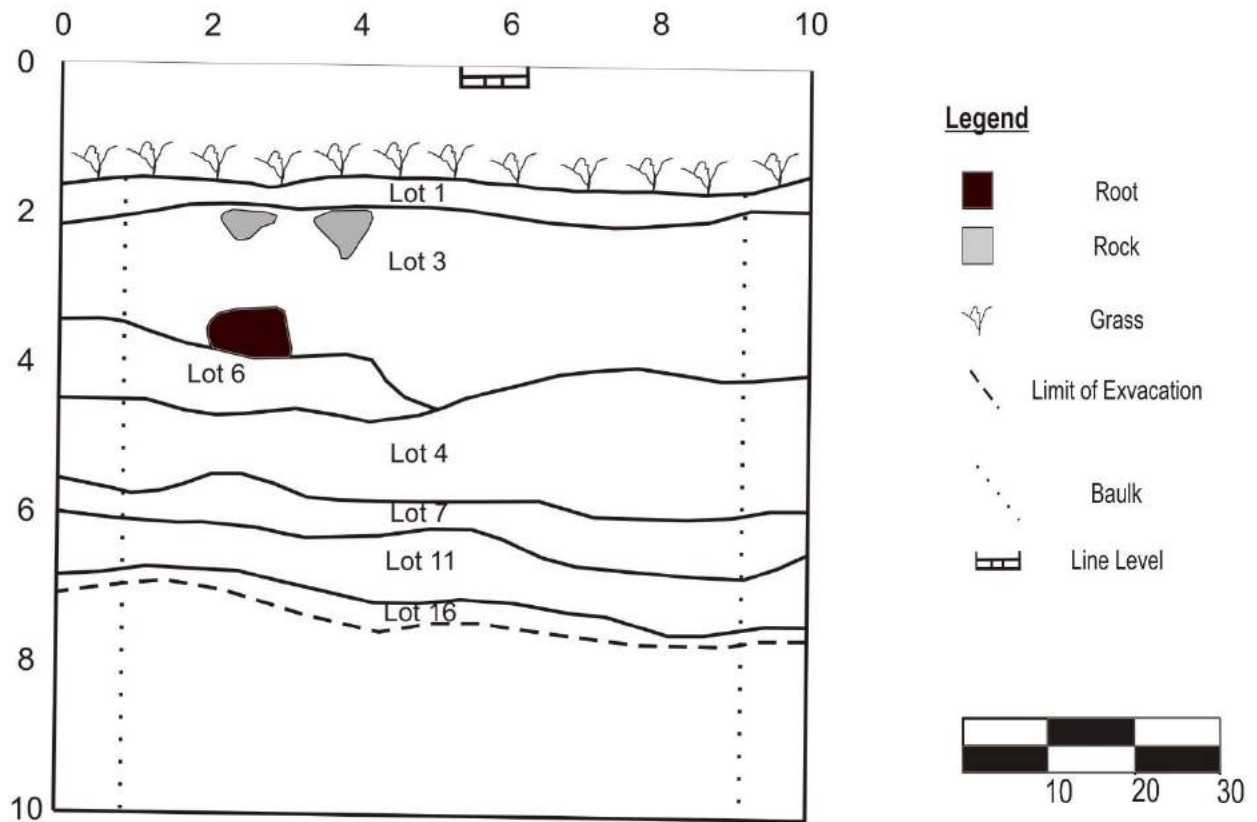
-  Root
-  Rock
-  Grass
-  Limit of Excavation
-  Baulk
-  Line Level



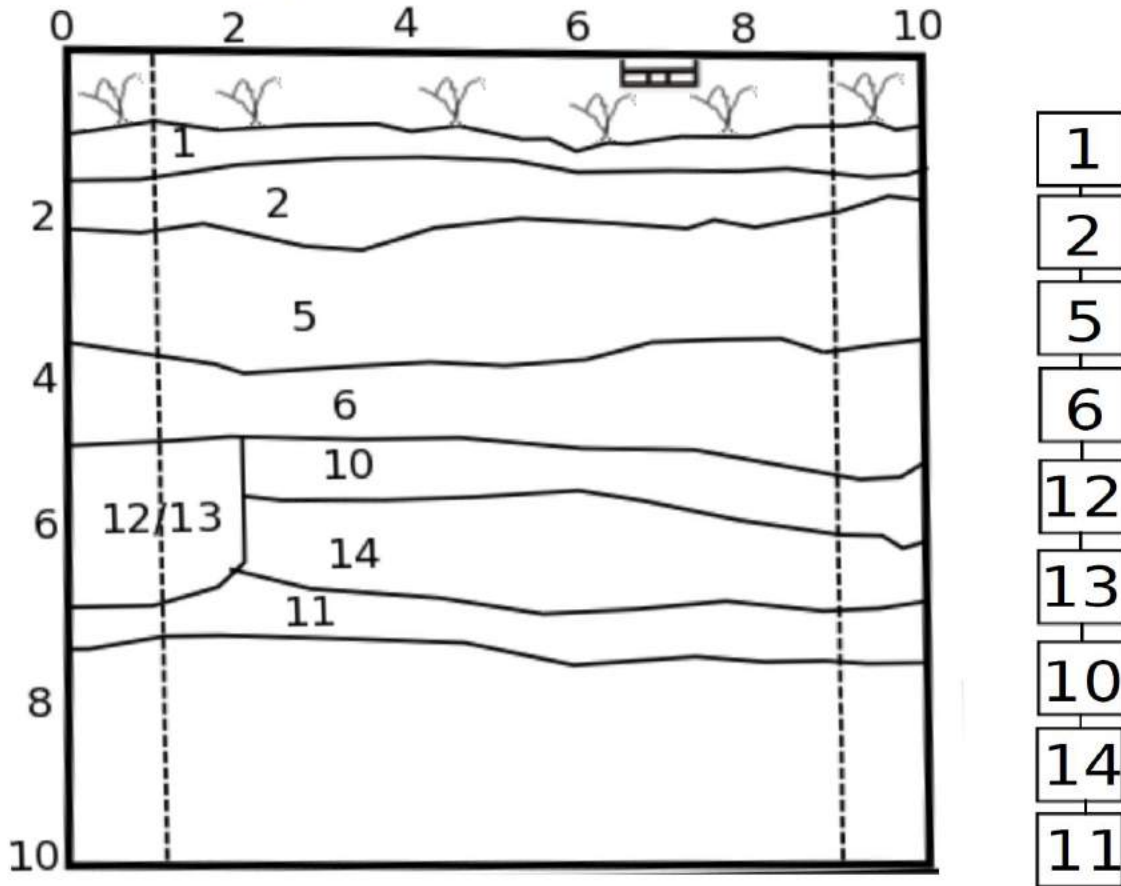
Old Fort Erie (AfGr-3) Area 2 - Unit F Eastern Profile Mapped: June 3rd 2015 Excavated by Aaron Fehir



Old Fort Erie (AfGr-3) Area 2 - Unit F Western Profile Mapped: June 3rd 2015 Excavated by Aaron Fehir



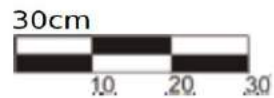
Old Fort Erie
 Area 2 - Unit G
 Eastern Profile
 June 4, 2015
 Iain Clemett



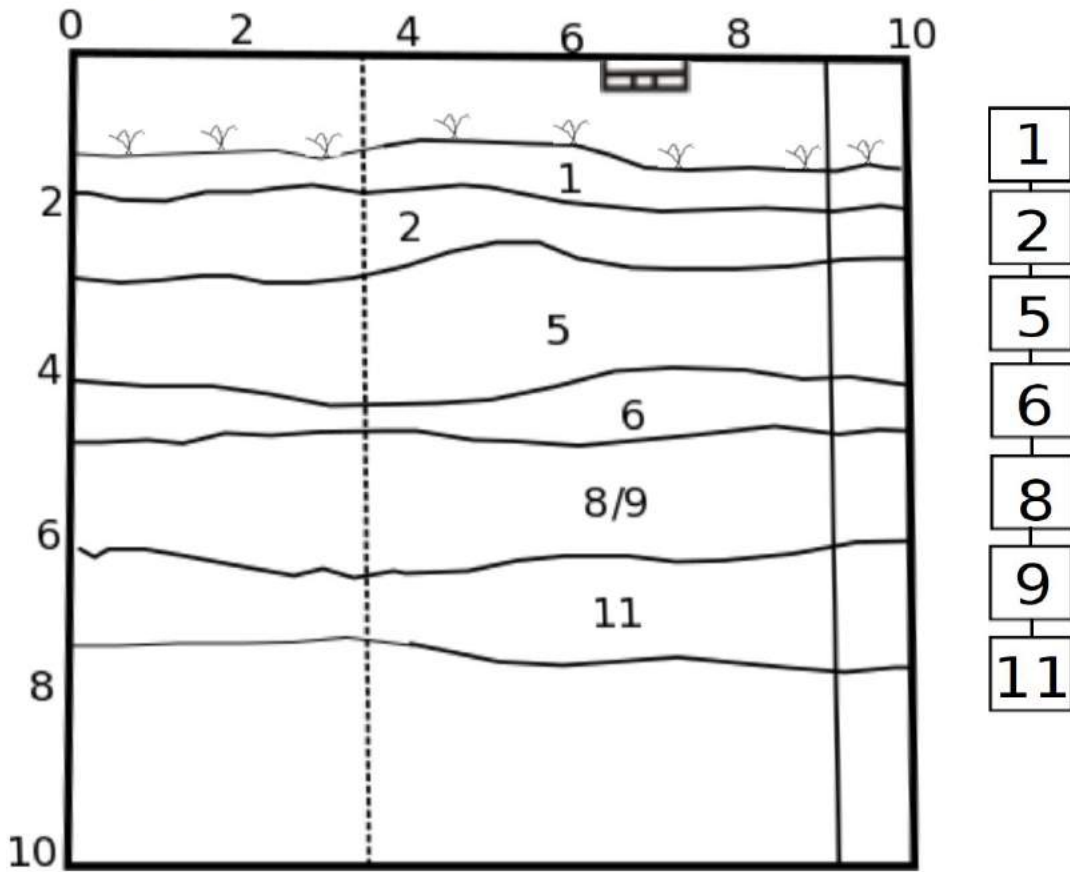
- Lot 3/4: Test Pit
- Lot 1: Sod
- Lot 2: Top Soil
- Lot 5: Rubble Layer (sandy loam)
- Lot 6: Sandy Loam (charcoal flecked)
- Lot 7: Mottled Layer (loam)
- Lot 8/9: Feature (loam)
- Lot 10: Clay
- Lot 12/13: Feature (loam)
- Lot 14: Loam
- Lot 15: Feature (subsoil)
- Lot 11: Subsoil

Legend:

-  - Line Level
-  - Grass



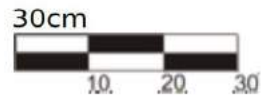
Old Fort Erie
 Area 2 - Unit G
 Western Profile
 June 4, 2015
 Iain Clemett



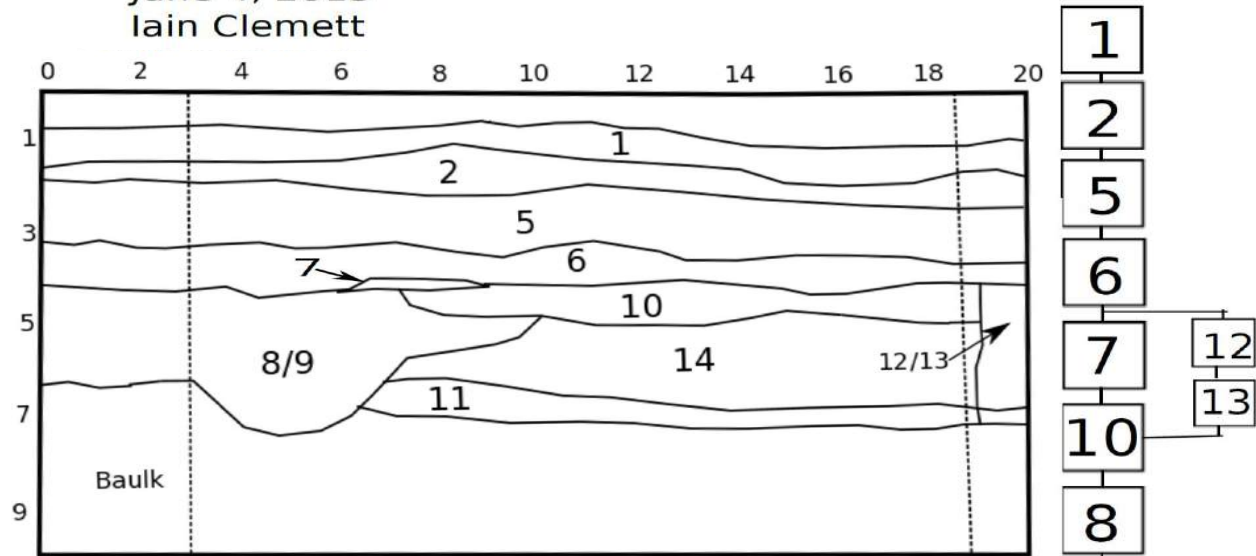
- Lot 3/4: Test Pit
- Lot 1: Sod
- Lot 2: Top Soil
- Lot 5: Rubble Layer (sandy loam)
- Lot 6: Sandy Loam (charcoal flecked)
- Lot 7: Mottled Layer (loam)
- Lot 8/9: Feature (loam)
- Lot 10: Clay
- Lot 12/13: Feature (loam)
- Lot 14: Loam
- Lot 15: Feature (subsoil)
- Lot 11: Subsoil

Legend:

-  - Line Level
-  - Grass



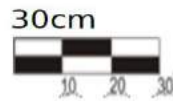
Old Fort Erie
 Area 2 - Unit G
 Northern Profile
 June 4, 2015
 Iain Clemett



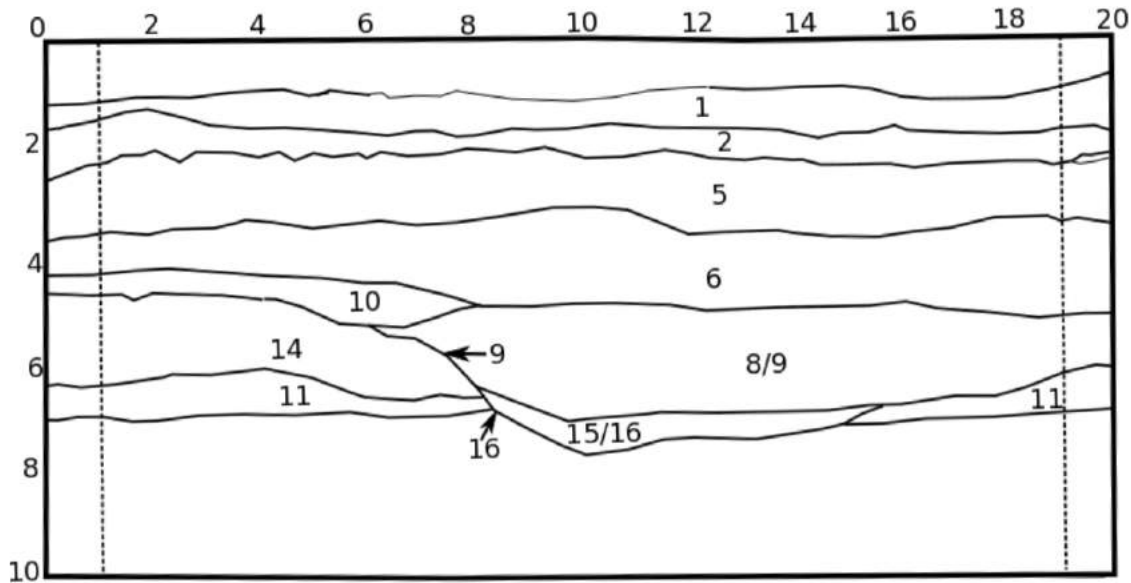
- Lot 3/4: Test Pit
- Lot 1: Sod
- Lot 2: Top Soil
- Lot 5: Rubble Layer (sandy loam)
- Lot 6: Sandy Loam (charcoal flecked)
- Lot 7: Mottled Layer (loam)
- Lot 8/9: Feature (loam)
- Lot 10: Clay
- Lot 12/13: Feature (loam)
- Lot 14: Loam
- Lot 15: Feature (subsoil)
- Lot 11: Subsoil

Legend:

-  - Line Level
-  - Grass



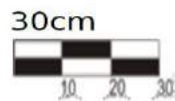
Old Fort Erie
 Area 2 - Unit G
 Southern Profile
 June 4, 2015
 Iain Clemett



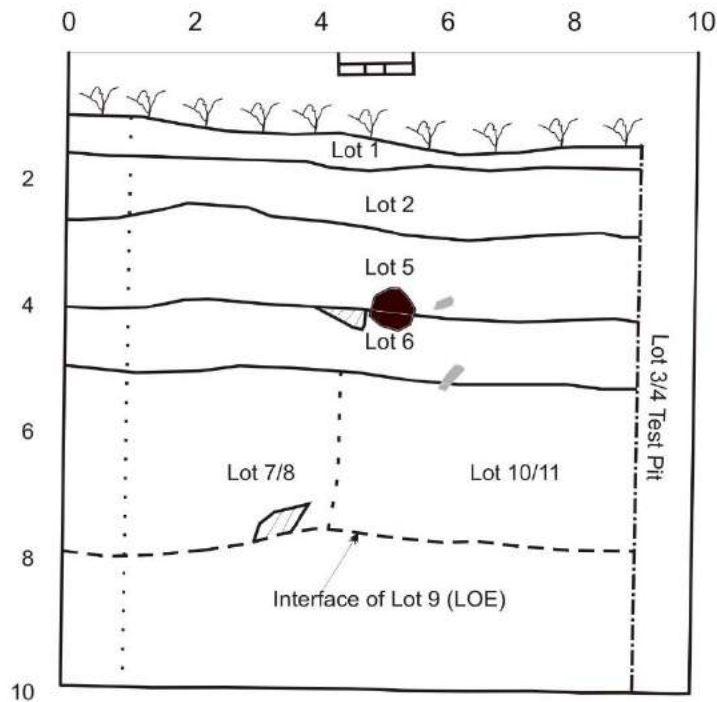
- Lot 3/4: Test Pit
- Lot 1: Sod
- Lot 2: Top Soil
- Lot 5: Rubble Layer (sandy loam)
- Lot 6: Sandy Loam (charcoal flecked)
- Lot 7: Mottled Layer (loam)
- Lot 8/9: Feature (loam)
- Lot 10: Clay
- Lot 12/13: Feature (loam)
- Lot 14: Loam
- Lot 15: Feature (subsoil)
- Lot 11: Subsoil

Legend:

- Line Level
- Grass



Old Fort Erie (AfGr-3)
 Area 2 - Unit H
 Eastern Profile
 Mapped June 5th
 Excavated by Logan Terron



Lot Descriptions

- lot 1 - 10YR 3/2 Very Dark Greyish Brown - Sandy Loam ("Top Soil")
- lot 2 - 10YR 3/2 Very Dark Greyish Brown - Sandy Loam ("Top Soil")
- lot 3 - Test Pit 93 Fill
- lot 4 - Interface for lot 3
- lot 5 - 2.5Y 2.5/1- Black Sandy Loam ("rubble layer")
- lot 6 - 10 YR 2/2 Very Dark Brown Loam
- lot 7 - 10 YR 3/2 Very Dark Greyish Brown clay Loam ("Sleeper Trench Fill")
- lot 8 - interface for lot 7
- lot 9 - 2.5Y 4/4 Olive Brown Sand ("Subsoil")
- lot 10 - 5Y 2.5/2 Black Loam ("Feature Fill")
- lot 11 - Interface for lot 10
- lot 12 - 10 YR 2/2 Black Sandy Loam

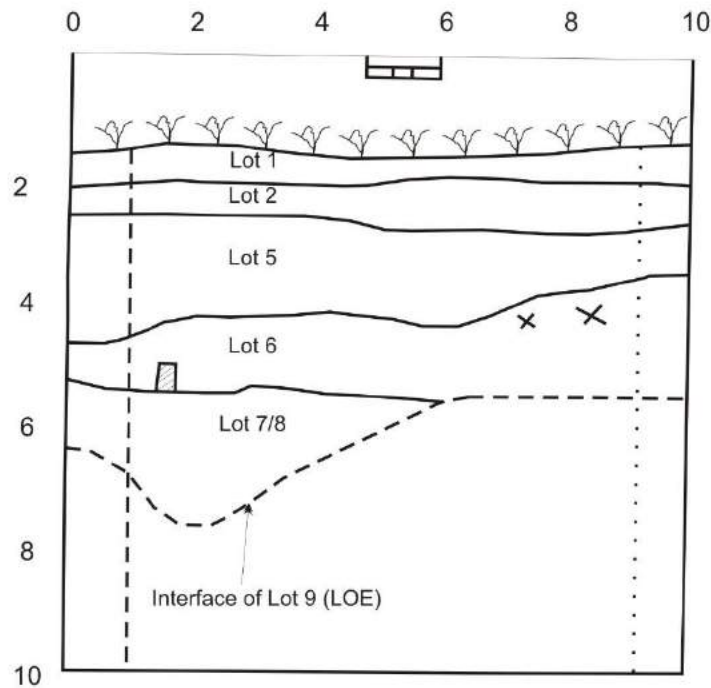


Legend

- Root
- Brick
- Rock
- Nails
- Unknown (refer to notes)
- Bone
- Baulk
- Limit of Excavation (LOE)
- Test Pit Boundary



Old Fort Erie (AfGr-3)
 Area 2 - Unit H
 Western Profile
 Mapped June 5th
 Excavated by Logan Terron



Lot Descriptions

- lot 1 - 10YR 3/2 Very Dark Greyish Brown - Sandy Loam ("Top Soil")
- lot 2 - 10YR 3/2 Very Dark Greyish Brown - Sandy Loam ("Top Soil")
- lot 3 - Test Pit 93 Fill
- lot 4 - Interface for lot 3
- lot 5 - 2.5Y 2.5/1- Black Sandy Loam ("rubble layer")
- lot 6 - 10 YR 2/2 Very Dark Brown Loam
- lot 7 - 10 YR 3/2 Very Dark Greyish Brown clay Loam ("Sleeper Trench Fill")
- lot 8 - interface for lot 7
- lot 9 - 2.5Y 4/4 Olive Brown Sand ("Subsoil")
- lot 10 - 5Y 2.5/2 Black Loam ("Feature Fill")
- lot 11 - Interface for lot 10
- lot 12 - 10 YR 2/2 Black Sandy Loam

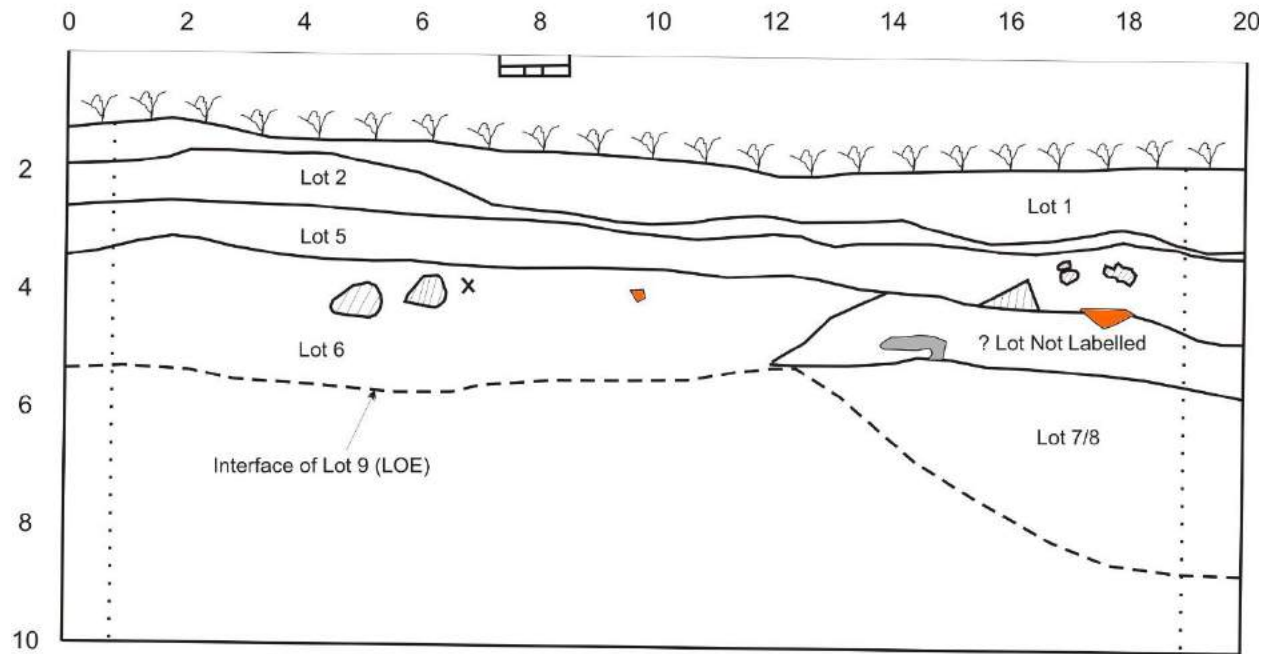
- 1
- 2
- 5
- 6
- 7
- 8
- 9

Legend

- Root
- Brick
- Rock
- Nails
- Unknown (refer to notes)
- Bone Baulk
- Limit of Excavation (LOE)
- Test Pit Boundary



Old Fort Erie (AfGr-3)
 Area 2 - Unit H
 Northern Profile
 Mapped June 5th
 Excavated by Logan Terron

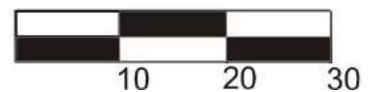


Lot Descriptions

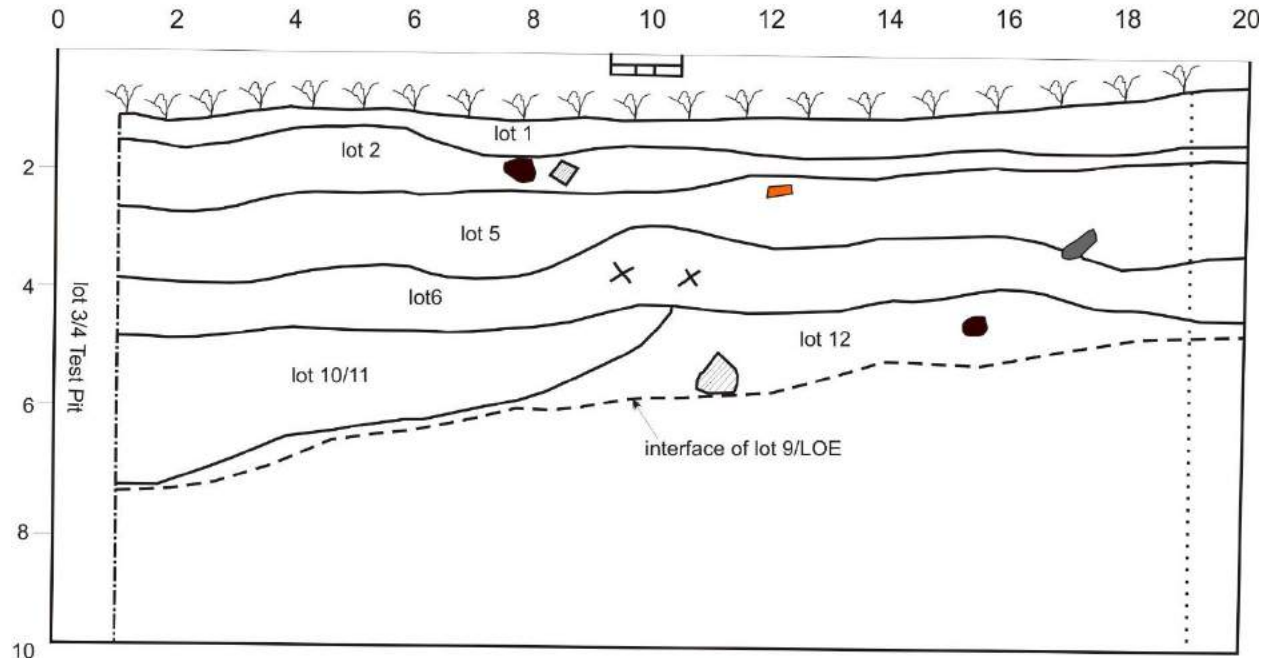
- lot 1 - 10YR 3/2 Very Dark Greyish Brown - Sandy Loam ("Top Soil")
- lot 2 - 10YR 3/2 Very Dark Greyish Brown - Sandy Loam ("Top Soil")
- lot 3 - Test Pit 93 Fill
- lot 4 - Interface for lot 3
- lot 5 - 2.5Y 2.5/1- Black Sandy Loam ("rubble layer")
- lot 6 - 10 YR 2/2 Very Dark Brown Loam
- lot 7 - 10 YR 3/2 Very Dark Greyish Brown clay Loam ("Sleeper Trench Fill")
- lot 8 - interface for lot 7
- lot 9 - 2.5Y 4/4 Olive Brown Sand ("Subsoil")
- lot 10 - 5Y 2.5/2 Black Loam ("Feature Fill")
- lot 11 - Interface for lot 10
- lot 12 - 10 YR 2/2 Black Sandy Loam

Legend

- 1 | ■ Root
- 2 | ■ Brick
- 3 | ■ Rock
- 4 | x Nails
- 5 | ■ Unknown (refer to notes)
- 6 | ■ Bone
- 7 | ■ Balk
- 8 | - - - Limit of Excavation (LOE)
- 9 | - - - Test Pit Boundary



Old Fort Erie (AfGr-3)
 Area 2 - Unit H
 Southern Profile
 Mapped June 5th
 Excavated by Logan Terron



Lot Descriptions

- lot 1 - 10YR 3/2 Very Dark Greyish Brown - Sandy Loam ("Top Soil")
- lot 2 - 10YR 3/2 Very Dark Greyish Brown - Sandy Loam ("Top Soil")
- lot 3 - Test Pit 93 Fill
- lot 4 - Interface for lot 3
- lot 5 - 2.5Y 2.5/1- Black Sandy Loam ("rubble layer")
- lot 6 - 10 YR 2/2 Very Dark Brown Loam
- lot 7 - 10 YR 3/2 Very Dark Greyish Brown clay Loam ("Sleeper Trench Fill")
- lot 8 - interface for lot 7
- lot 9 - 2.5Y 4/4 Olive Brown Sand ("Subsoil")
- lot 10 - 5Y 2.5/2 Black Loam ("Feature Fill")
- lot 11 - Interface for lot 10
- lot 12 - 10 YR 2/2 Black Sandy Loam

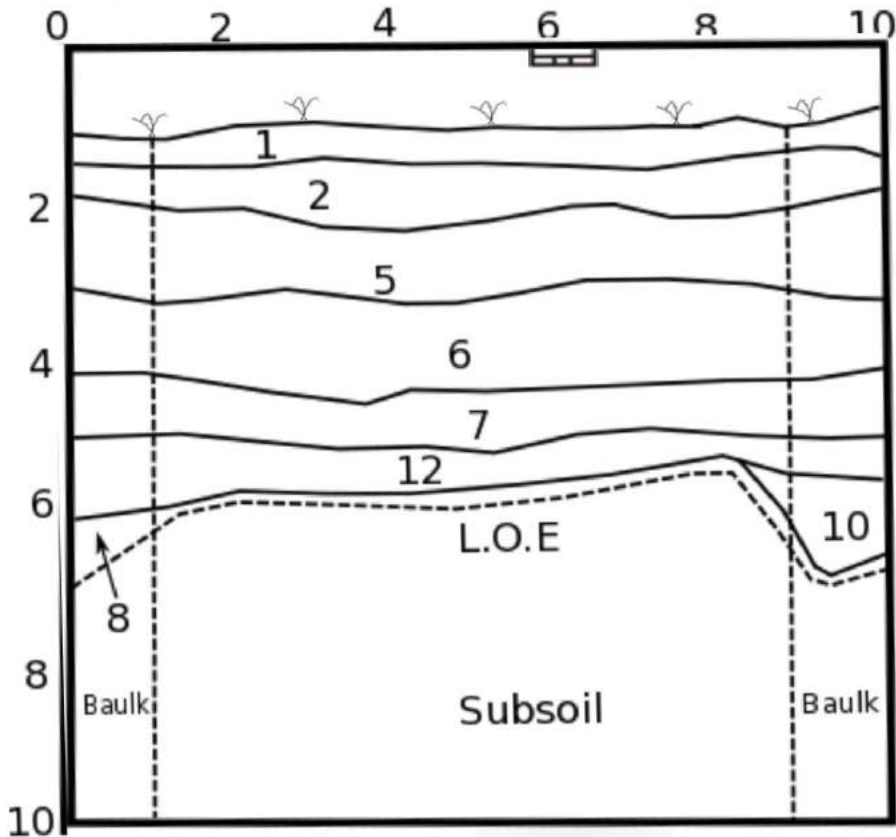
- 3
- 4
- 1
- 2
- 5
- 6
- 10
- 11
- 12
- 9

Legend

- Root
- Brick
- Rock
- x Nails
- Unknown (refer to notes)
- Bone
- Bulk
- - - - - Limit of Excavation (LOE)
- - - - - Test Pit Boundary



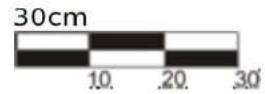
Old Fort Erie
 Unit J
 East Wall Profile
 June 3, 2015
 Kim Tobin



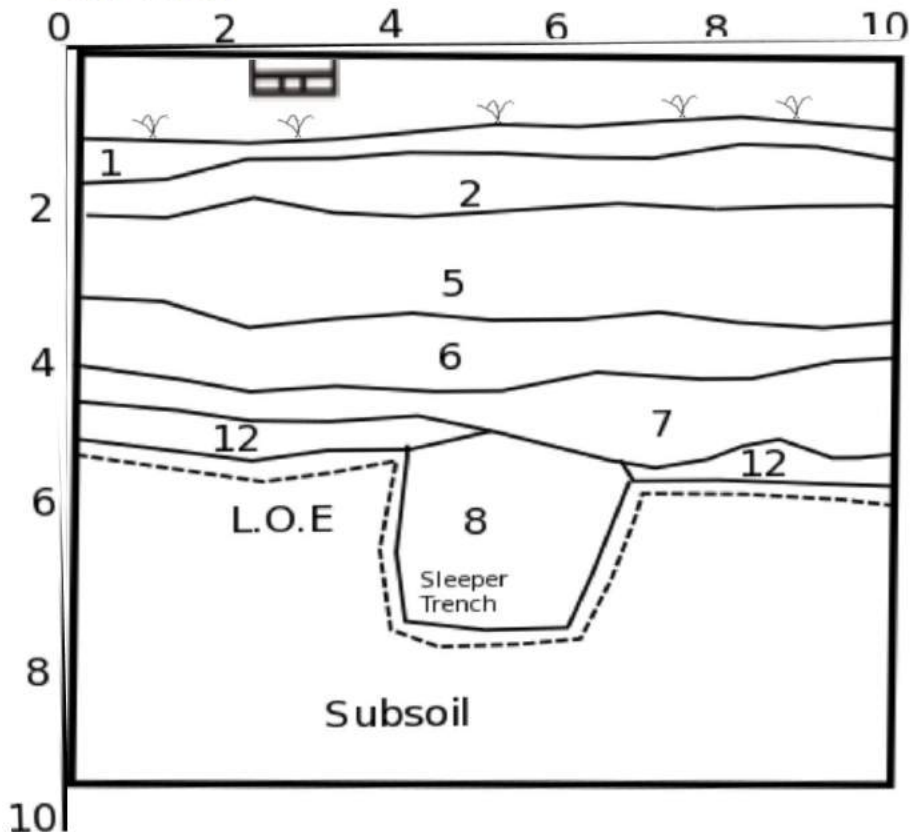
- Lot 1: Sod
- Lot 3: Light Sand 10YR 3/4
- Lot 4: Light Sand 10YR 3/4
- Lot 2: Top Soil 10YR 2/1
- Lot 5: Dark Sandy Loam 10YR 2/2
- Lot 6: Dark Sandy Loam with pebbles 10YR 3/2
- Lot 7: Dark Sandy Loam 10YR 3/3
- Lot 8: Dark Clay 7.5YR 3/2
- Lot 9: Trench Interface
- Lot 10: Dark Loam 10YR 2/2
- Lot 11: Interface
- Lot 12: Subsoil 10YR 4/5

Legend:

-  - Line Level
-  - Grass



Old Fort Erie
 Unit J
 West Wall Profile
 June 3, 2015
 Kim Tobin



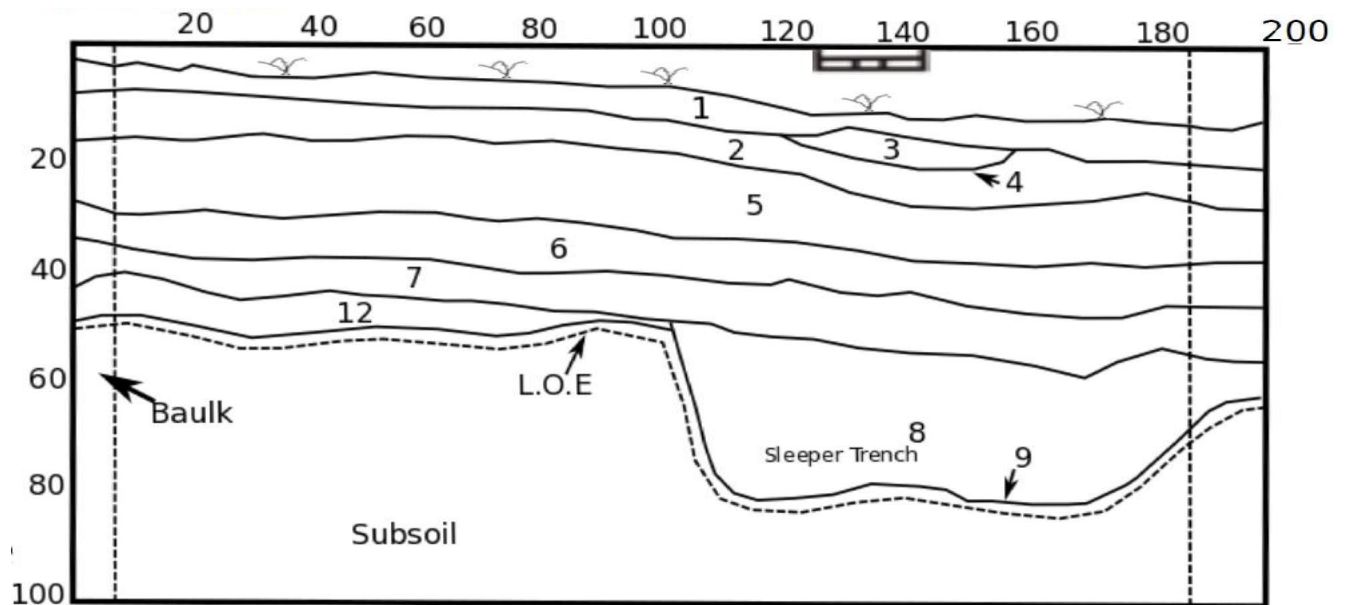
- Lot 1: Sod
- Lot 3: Light Sand 10YR 3/4
- Lot 4: Light Sand 10YR 3/4
- Lot 2: Top Soil 10YR 2/1
- Lot 5: Dark Sandy Loam 10YR 2/2
- Lot 6: Dark Sandy Loam with pebbles 10YR 3/2
- Lot 7: Dark Sandy Loam 10YR 3/3
- Lot 8: Dark Clay 7.5YR 3/2
- Lot 9: Trench Interface
- Lot 10: Dark Loam 10YR 2/2
- Lot 11: Interface
- Lot 12: Subsoil 10YR 4/5

LEGEND:

-  - Line Level
-  - Grass



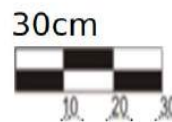
Old Fort Erie
 Unit J
 North Wall Profile
 June 3, 2015
 Kim Tobin



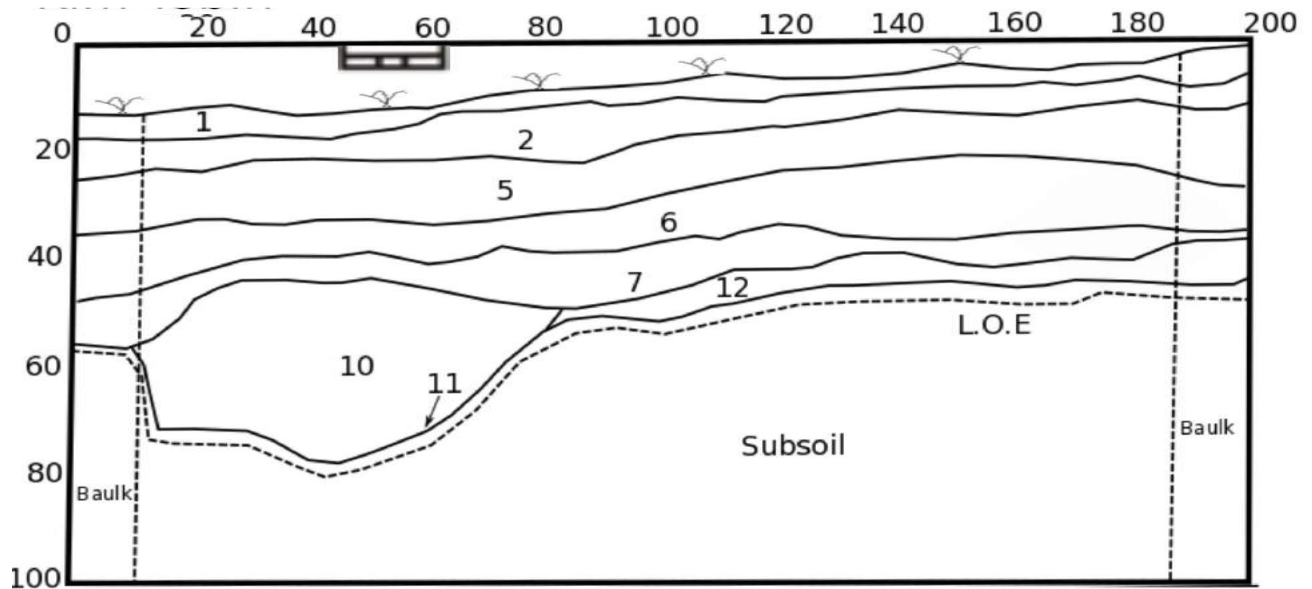
- Lot 1: Sod
- Lot 3: Light Sand 10YR 3/4
- Lot 4: Light Sand 10YR 3/4
- Lot 2: Top Soil 10YR 2/1
- Lot 5: Dark Sandy Loam 10YR 2/2
- Lot 6: Dark Sandy Loam with pebbles 10YR 3/2
- Lot 7: Dark Sandy Loam 10YR 3/3
- Lot 8: Dark Clay 7.5YR 3/2
- Lot 9: Trench Interface
- Lot 10: Dark Loam 10YR 2/2
- Lot 11: Interface
- Lot 12: Subsoil 10YR 4/5

Legend:

-  - Line Level
-  - Grass



Old Fort Erie
 Unit J
 South Wall Profile
 June 3, 2015
 Kim Tobin



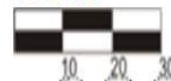
- Lot 1: Sod
- Lot 3: Light Sand 10YR 3/4
- Lot 4: Light Sand 10YR 3/4
- Lot 2: Top Soil 10YR 2/1
- Lot 5: Dark Sandy Loam 10YR 2/2
- Lot 6: Dark Sandy Loam with pebbles 10YR 3/2
- Lot 7: Dark Sandy Loam 10YR 3/3
- Lot 8: Dark Clay 7.5YR 3/2
- Lot 9: Trench Interface
- Lot 10: Dark Loam 10YR 2/2
- Lot 11: Interface
- Lot 12: Subsoil 10YR 4/5

Legend:

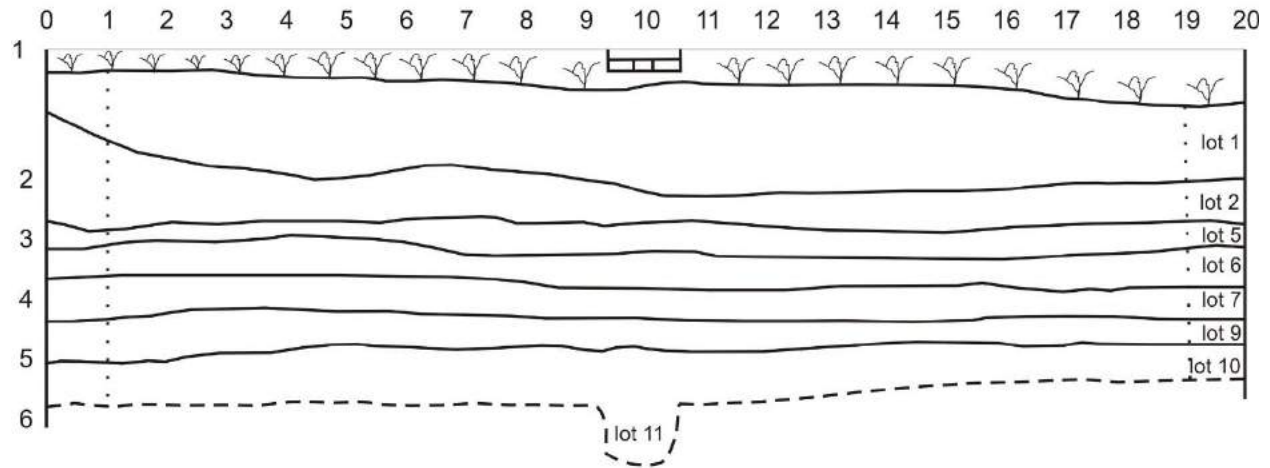
 - Line Level

 - Grass

30cm








Old Fort Erie (AfGr-3)
 Area 2 - Unit K
 Northern Profile Drawing
 Mapped: June 1st 2015
 Excavated by Mitch Wilson

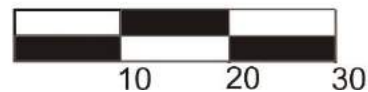


Soil Descriptions

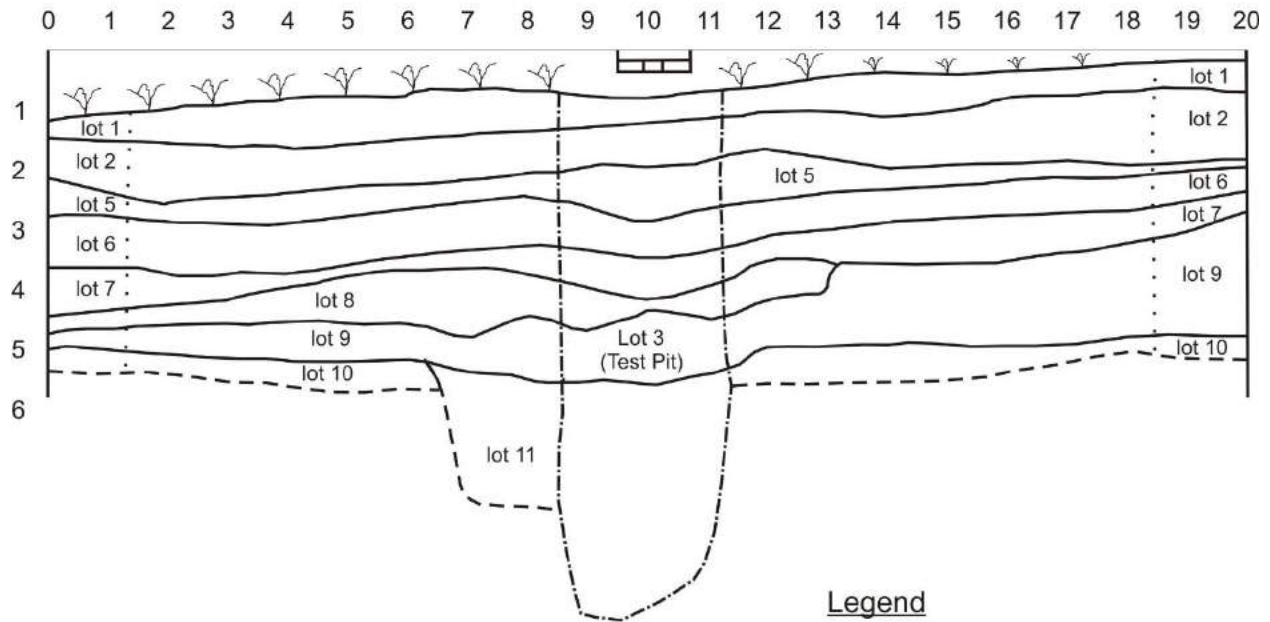
- Lot 1 - Sod (10YR 3/1)
- Lot 2 - Top Soil (10YR 3/1)
- Lot 3 - Dark Sandy Loam with Brick (10YR 3/1)
- Lot 4 - Dark Sandy Loam with Brick and Stone (10 YR 5/1)
- Lot 5 - Dark Sandy Loam with Brick and Stone (10YR 3/1)
- Lot 6 - Dark Sandy Loam with Stones (10YR 3/1)
- Lot 7 - Dark Sandy Loam with Brick and Stone (10 YR 3/1)
- Lot 8 - Clay with Stones (10YR 6/6)
- Lot 9 - Dark Sandy Loam (10 YR 3/1)
- Lot 10 - SubSoil (10YR 5/6)
- Lot 11 - Trench - Very Sandy Loam ((10YR 5/6)
- Lot 12 - Trench Fill (10YR 5/6)

Legend

-  Grass
-  Line Level
-  Baulk
-  Limits of Excavation
-  Boundary of Test Pit #?



Old Fort Erie (AfGr-3)
 Area 2 - Unit K
 Southern Profile Drawing
 Mapped: June 1st 2015
 Excavated by Mitch Wilson



Soil Descriptions

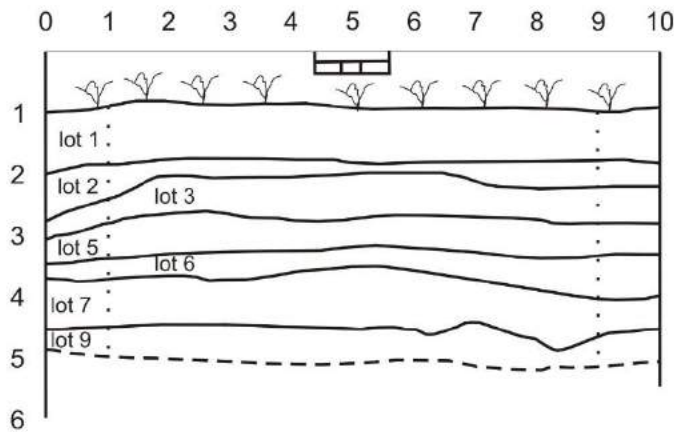
- Lot 1 - Sod (10YR 3/1)
- Lot 2 - Top Soil (10YR 3/1)
- Lot 3 - Dark Sandy Loam with Brick (10YR 3/1)
- Lot 4 - Dark Sandy Loam with Brick and Stone (10 YR5/1)
- Lot 5 - Dark Sandy Loam with Brick and Stone (10YR3/1)
- Lot 6 - Dark Sandy Loam with Stones (10YR 3/1)
- Lot 7 - Dark Sandy Loam with Brick and Stone (10 YR 3/1)
- Lot 8 - Clay with Stones (10YR 6/6)
- Lot 9 - Dark Sandy Loam (10 YR 3/1)
- Lot 10 - SubSoil (10YR 5/6)
- Lot 11- Trench - Very Sandy Loam ((10YR 5/6)
- Lot 12 - Trench Fill (10YR 5/6)

Legend

- Grass
- Line Level
- Baulk
- Limits of Excavation
- Boundary of Test Pit #?








Old Fort Erie (AfGr-3)
 Area 2 - Unit K
 Western Profile Drawing
 Mapped: June 1st 2015
 Excavated by Mitch Wilson



Soil Descriptions

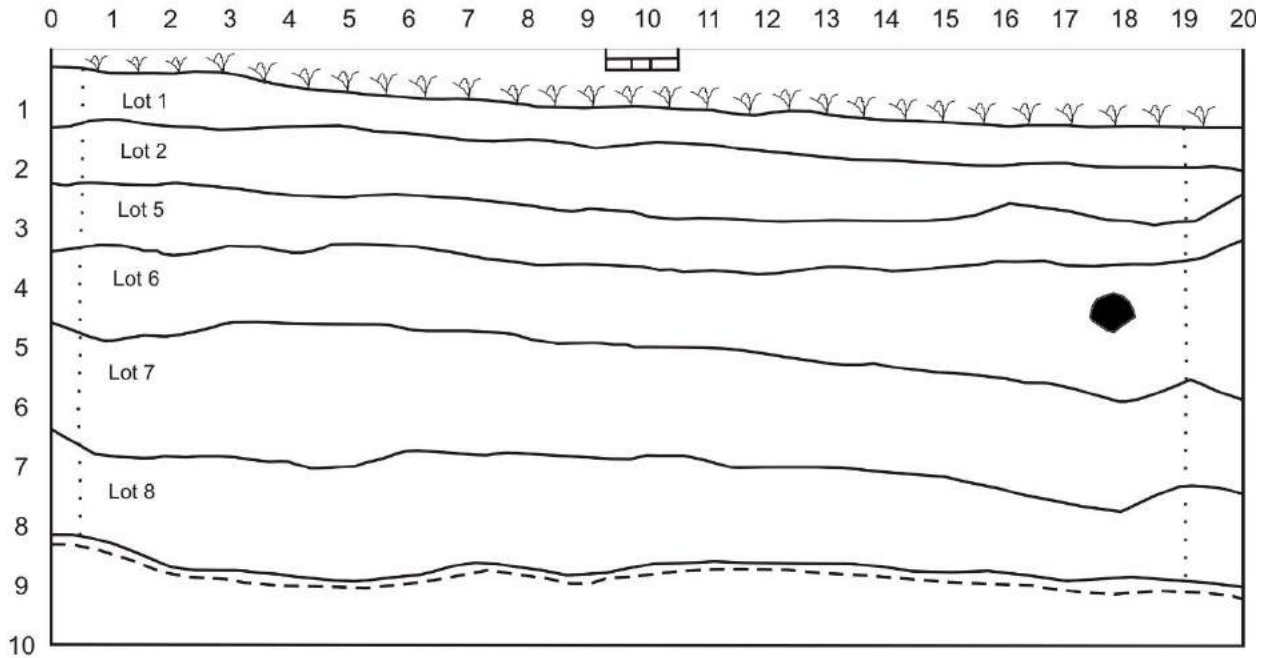
- Lot 1 - Sod (10YR 3/1)
- Lot 2 - Top Soil (10YR 3/1)
- Lot 3 - Dark Sandy Loam with Brick (10YR 3/1)
- Lot 4 - Dark Sandy Loam with Brick and Stone (10 YR 5/1)
- Lot 5 - Dark Sandy Loam with Brick and Stone (10YR 3/1)
- Lot 6 - Dark Sandy Loam with Stones (10YR 3/1)
- Lot 7 - Dark Sandy Loam with Brick and Stone (10 YR 3/1)
- Lot 8 - Clay with Stones (10YR 6/6)
- Lot 9 - Dark Sandy Loam (10 YR 3/1)
- Lot 10 - SubSoil (10YR 5/6)
- Lot 11- Trench - Very Sandy Loam ((10YR 5/6)
- Lot 12 - Trench Fill (10YR 5/6)

Legend

-  Grass
-  Line Level
-  Baulk
-  Limits of Excavation
-  Boundary of Test Pit #?










Old Fort Erie (AfGr- 3)
 Are 2 - Unit N
 Eastern Profile
 Mapped: June 3rd 2015
 Excavated by Nikki Fraser



Soil Description

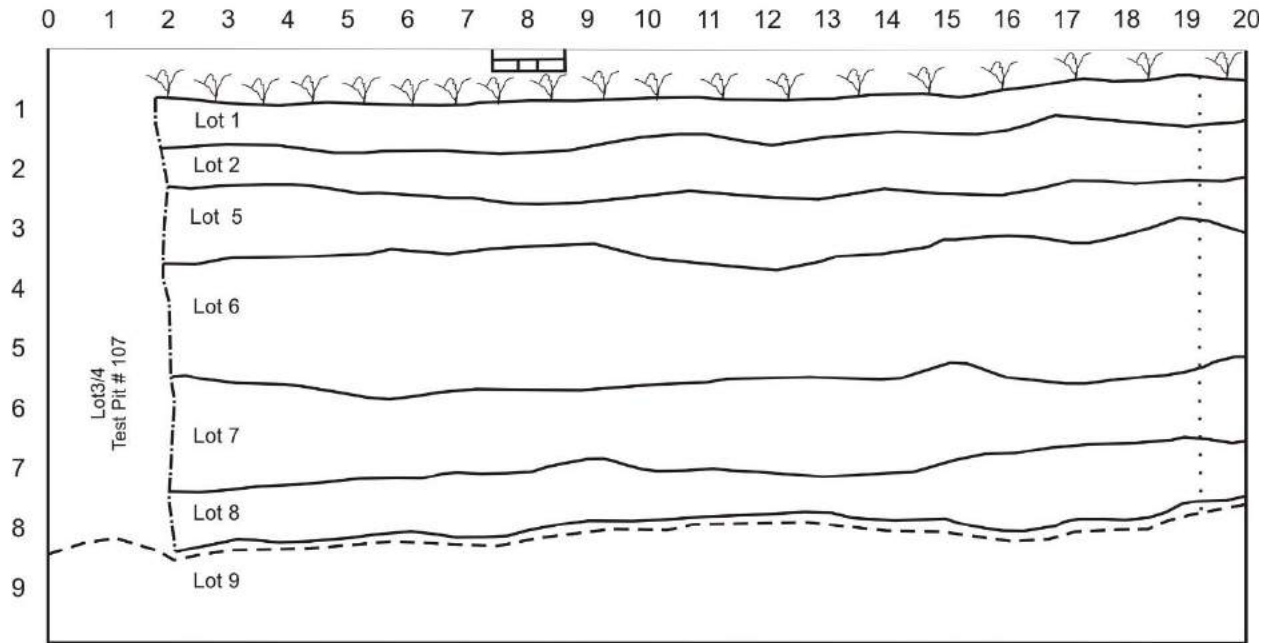
- Lot 1: Sod 10YR 4/1
- Lot 2: Top Soil 10YR 3/2
- Lot 5: Sandy Loam 10YR 3/1
- Lot 6: Loamy Sand with charcoal inclusions 10YR 3/3
- Lot 7: CLay Loam 10YR 4/4
- Lot 8: Sand Sub Soil 10YR 3/4 (A - Horizon)
- Lot 9: Sub Soil (Sand) 10YR 5/4

Legend

-  Artifact
-  Stone
-  Grass
-  Line Level
-  Baulk
-  Limit of Excavation
-  Limit of Test Pit 107










Old Fort Erie (AfGr- 3)
 Are 2 - Unit N
 Western Profile
 Mapped: June 3rd 2015
 Excavated by Nikki Fraser



Soil Description

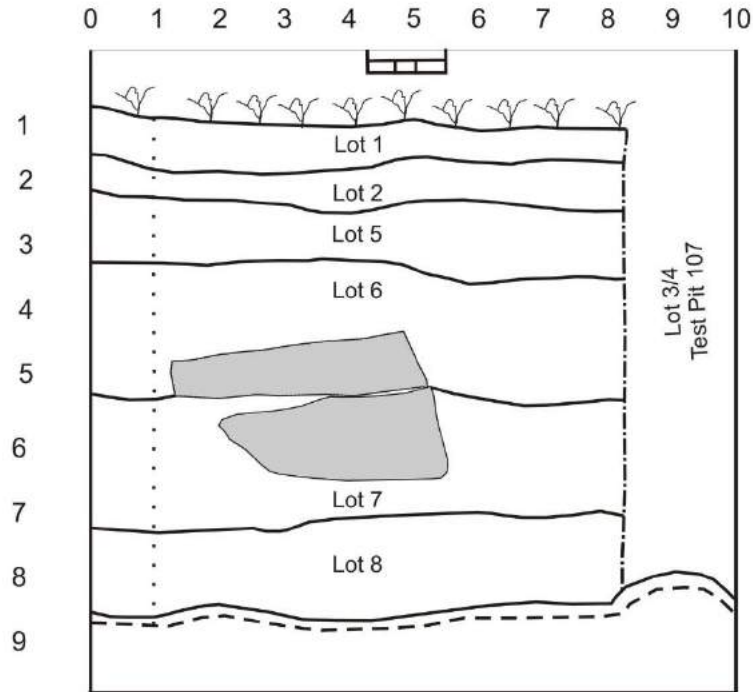
- Lot 1: Sod 10YR 4/1
- Lot 2: Top Soil 10YR 3/2
- Lot 5: Sandy Loam 10YR 3/1
- Lot 6: Loamy Sand with charcoal inclusions 10YR 3/3
- Lot 7: Clay Loam 10YR 4/4
- Lot 8: Sand Sub Soil 10YR 3/4 (A - Horizon)
- Lot 9: Sub Soil (Sand) 10YR 5/4

Legend

-  Artifact
-  Stone
-  Grass
-  Line Level
-  Baulk
-  Limit of Excavation
-  Limit of Test Pit 107










Old Fort Erie (AfGr- 3)
 Are 2 - Unit N
 Southern Profile
 Mapped: June 3rd 2015
 Excavated by Nikki Fraser



Soil Description

- Lot 1: Sod 10YR 4/1
- Lot 2: Top Soil 10YR 3/2
- Lot 5: Sandy Loam 10YR 3/1
- Lot 6: Loamy Sand with charcoal inclusions 10YR 3/3
- Lot 7: CLay Loam 10YR 4/4
- Lot 8: Sand Sub Soil 10YR 3/4 (A - Horizon)
- Lot 9: Sub Soil (Sand) 10YR 5/4

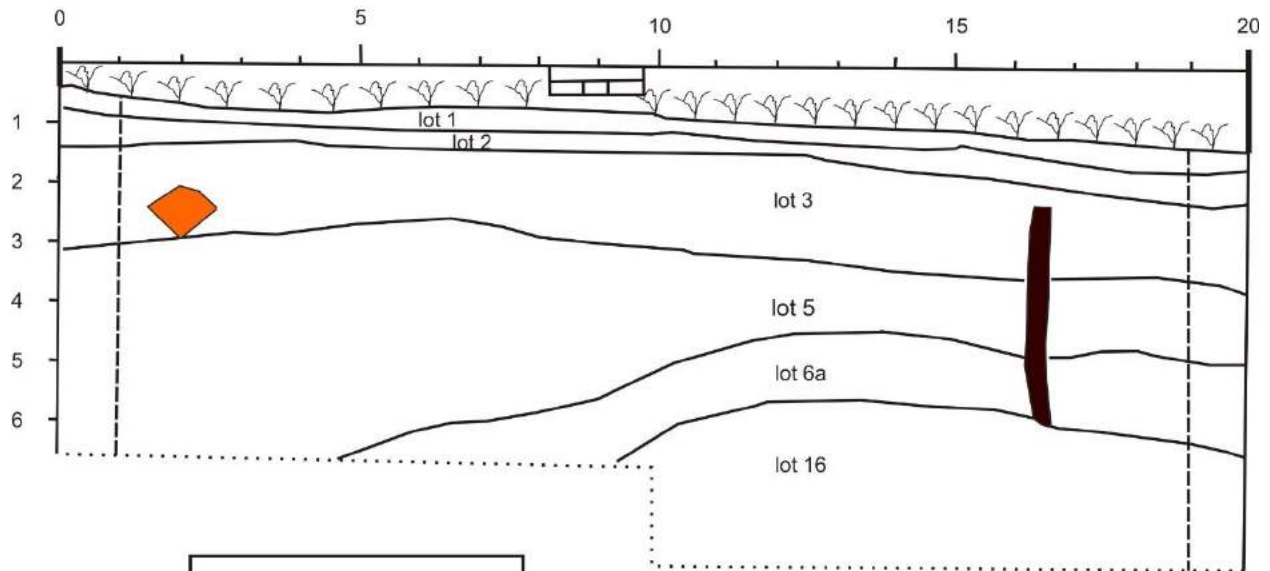
Legend

-  Artifact
-  Stone
-  Grass
-  Line Level
-  Baulk
-  Limit of Excavation
-  Limit of Test Pit 107



Area 3

Old Fort Erie (AfGr-3)
 Area 3- Unit S-
 Northern Profile
 Mapped: June 3rd and 4th 2015
 Excavated By: Tyler Besser



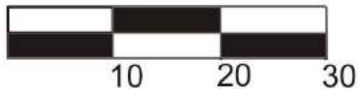
- Lot Descriptions (Munsell Reading)
- Lot 1 - Sod (10 YR 3/4)
 - Lot 2 - Top Soil (10 YR 4/2)
 - Lot 3 - Pebble/Brick Lot (10 YR 5/4)
 - Lot 4 - Brick Fill (10 YR 5/4)
 - Lot 5 - Historic Walking Surface (10 YR 2/2)
 - Lot 6 - Sand Lot (10 YR 6/6)
 - Lot 7 - Trench (10 YR 5/4)
 - Lot 8 - Burrow (10 YR 4/3)
 - Lot 9 - Interface of lot 7 (Trench)
 - Lot 10 - Interface of lot 8 (Burrow)
 - Lot 11 - Root (10 YR 4/2)
 - Lot 12 - Interface for lot 11 (root feature)
 - Lot 13 - Fire Reddened Soil (10 R 4/2)
 - Lot 14 - Interface for lot 13 (Fire Reddened Soil)
 - Lot 15 - Mottled Sub Soil (10 YR 6/8)
 - Lot 16 - True Sub Soil
 - Lot 17(sub lots a,b,c) - Post Molds
 - Lot 18(sub lots a,b,c) - Interface for lot 17 (Post Molds)

1
2
3
5
6a
16

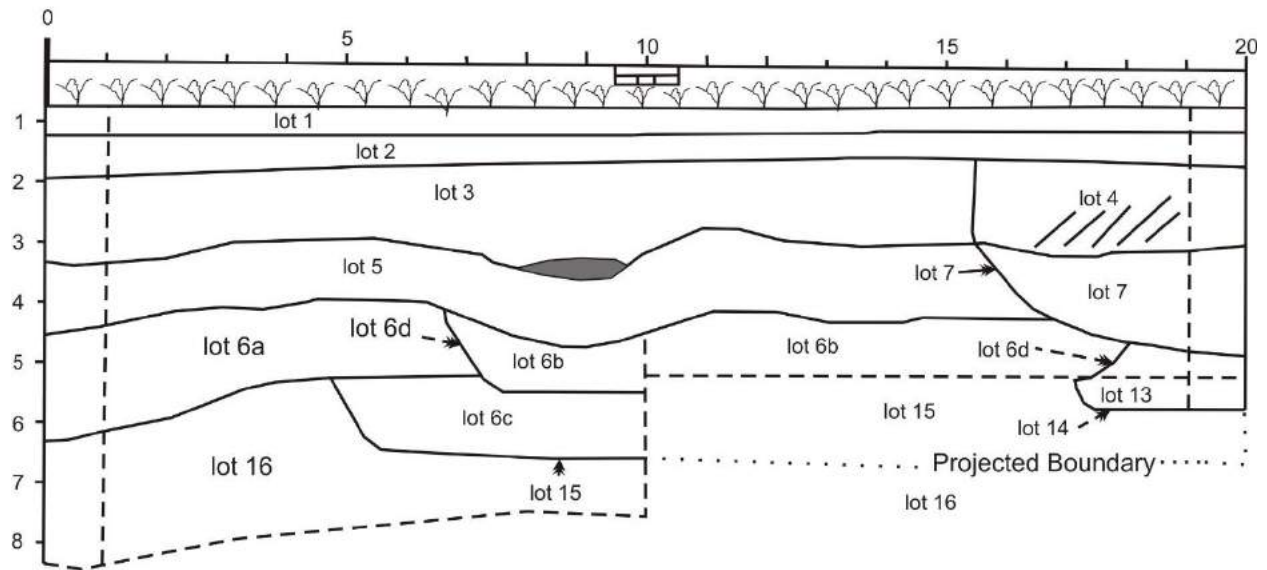
Legend

- Brick
- Root
- Rock
- Grass
- Line Level
- Baulk
- LOE

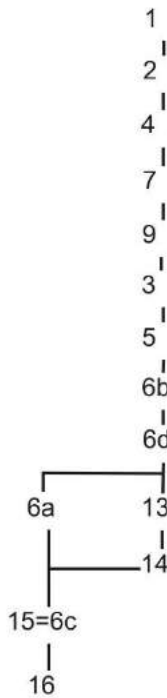
Scale 1:10



Old Fort Erie (AfGr-3)
 Area 3- Unit S
 Southern Profile
 Mapped: June 3rd and 4th 2015
 Excavated By: Tyler Besser



Lot Descriptions (Munsell Reading)
Lot 1 - Sod (10 YR 3/4)
Lot 2 - Top Soil (10 YR 4/2)
Lot 3 - Pebble/Brick Lot (10 YR 5/4)
Lot 4 - Brick Fill (10 YR 5/4)
Lot 5 - Historic Walking Surface (10 YR 2/2)
Lot 6 - Sand Lot (10 YR 6/6)
Lot 7 - Trench (10 YR 5/4)
Lot 8 - Burrow (10 YR 4/3)
Lot 9 - Interface of lot 7 (Trench)
Lot 10 - Interface of lot 8 (Burrow)
Lot 11 - Root (10 YR 4/2)
Lot 12 - Interface for lot 11 (root feature)
Lot 13 - Fire Reddened Soil (10 R 4/2)
Lot 14 - Interface for lot 13 (Fire Reddened Soil)
Lot 15 - Modified Sub Soil (10 YR 6/8)
Lot 16 - True Sub Soil
Lot 17(sub lots a,b,c) - Post Molds
Lot 18(sub lots a,b,c) - Interface for lot 17 (Post Molds)



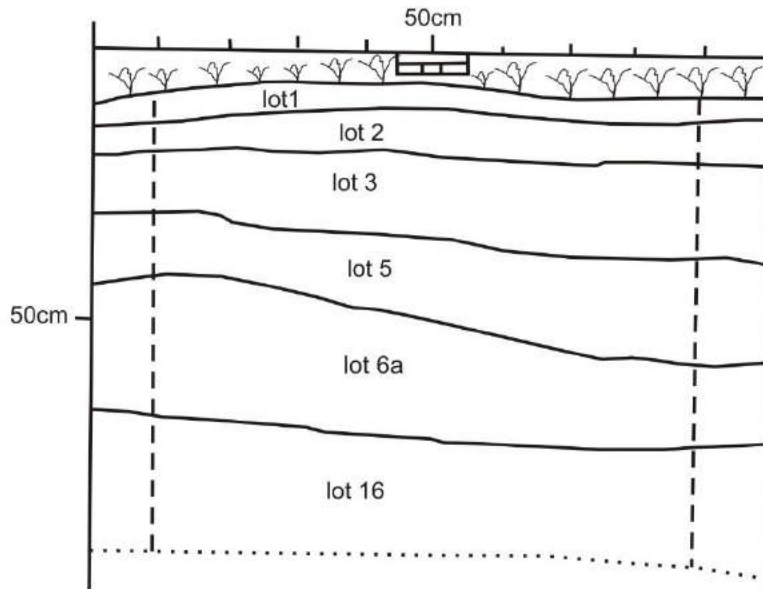
Legend

- Brick
- Root
- Rock
- Grass
- Line Level
- Baulk
- LOE

Scale 1:10



Old Fort Erie (AfGr-3)
 Area 3- Unit S
 Eastern Profile
 Mapped: June 3rd and 4th 2015
 Excavated By: Tyler Besser



Lot Descriptions (Munsell Reading)

- Lot 1 - Sod (10 YR 3/4)
- Lot 2 - Top Soil (10 YR 4/2)
- Lot 3 - Pebble/Brick Lot (10 YR 5/4)
- Lot 4 - Brick Fill (10 YR 5/4)
- Lot 5 - Historic Walking Surface (10 YR 2/2)
- Lot 6 - Sand Lot (10 YR 6/6)
- Lot 7 - Trench (10 YR 5/4)
- Lot 8 - Burrow (10 YR 4/3)
- Lot 9 - Interface of lot 7 (Trench)
- Lot 10 - Interface of lot 8 (Burrow)
- Lot 11 - Root (10 YR 4/2)
- Lot 12 - Interface for lot 11 (root feature)
- Lot 13 - Fire Reddened Soil (10 R 4/2)
- Lot 14 - Interface for lot 13 (Fire Reddened Soil)
- Lot 15 - Moddled Sub Soil (10 YR 6/8)
- Lot 16 - True Sub Soil
- Lot 17(sub lots a,b,c) - Post Molds
- Lot 18(sub lots a,b,c) - Interface for lot 17 (Post Molds)

1
2
3
5
6a
16

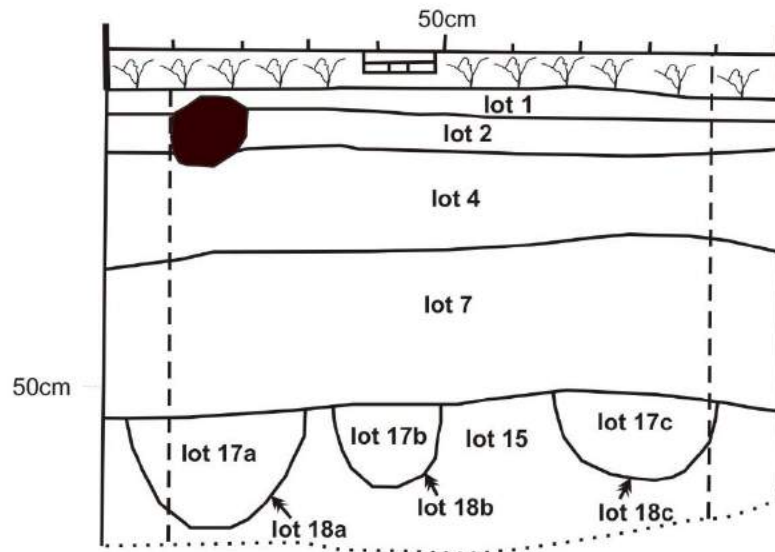
Legend

- Brick
- Root
- Rock
- Grass
- Line Level
- Baulk
- LOE

Scale 1:10

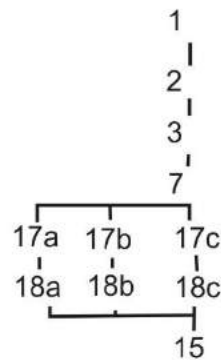


Old Fort Erie (AfGr-3)
 Area 3- Unit S
 Western Profile
 Mapped: June 3rd and 4th 2015
 Excavated By: Tyler Besser



Lot Descriptions (Munsell Reading)

- Lot 1 - Sod (10 YR 3/4)
- Lot 2 - Top Soil (10 YR 4/2)
- Lot 3 - Pebble/Brick Lot (10 YR 5/4)
- Lot 4 - Brick Fill (10 YR 5/4)
- Lot 5 - Historic Walking Surface (10 YR 2/2)
- Lot 6 - Sand Lot (10 YR 6/6)
- Lot 7 - Trench (10 YR 5/4)
- Lot 8 - Burrow (10 YR 4/3)
- Lot 9 - Interface of lot 7 (Trench)
- Lot 10 - Interface of lot 8 (Burrow)
- Lot 11 - Root (10 YR 4/2)
- Lot 12 - Interface for lot 11 (root feature)
- Lot 13 - Fire Reddened Soil (10 R 4/2)
- Lot 14 - Interface for lot 13 (Fire Reddened Soil)
- Lot 15 - Moddled Sub Soil (10 YR 6/8)
- Lot 16 - True Sub Soil
- Lot 17(sub lots a,b,c) - Post Molds
- Lot 18(sub lots a,b,c) - Interface for lot 17 (Post Molds)



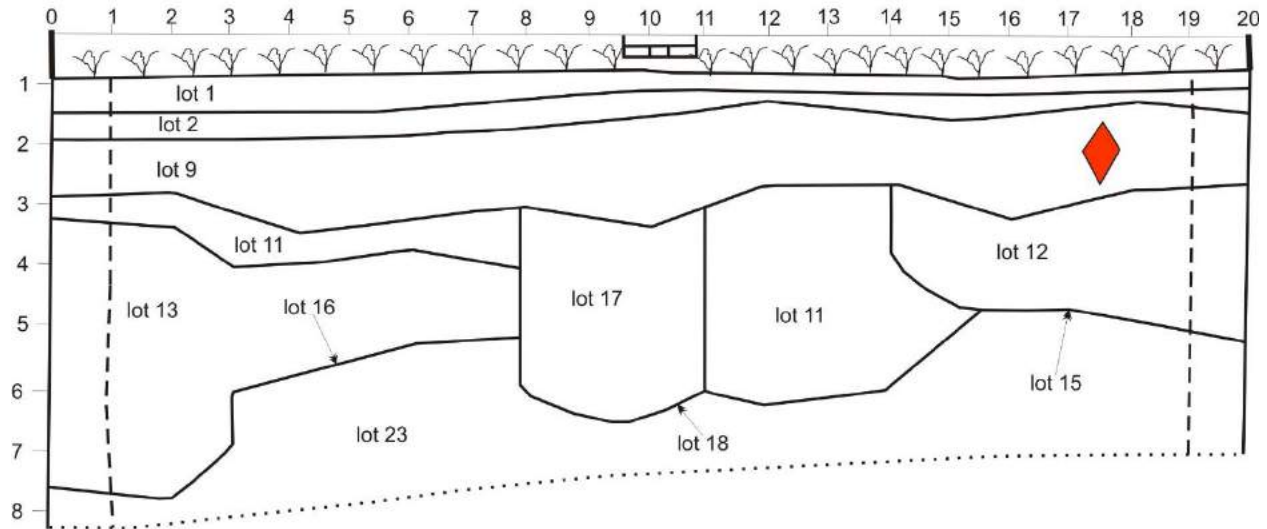
Legend

- Brick
- Root
- Rock
- Grass
- Line Level
- Baulk
- LOE

Scale 1:10

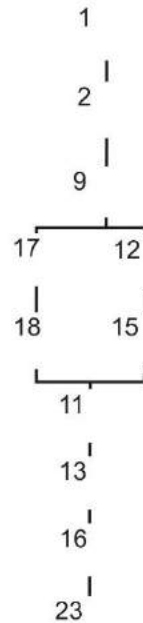


Old Fort Erie (AfGr-3)
 Area 3 - Unit T
 North Profile
 Mapped: June 2nd and 3rd
 Excavated By: James Nuhn



Soil Description

- lot 1 - 10 YR 3/1
- lot 2 - 10 YR 2/1 Black
- lot 3 - 10 YR 3/2 Very Dark Greyish Brown
- Lot 4 -
- Lot 5 -
- Lot 6 -
- lot 7 - 10 YR 3/2
- lot 8 - Interface for lot 7
- lot 9 - 10 YR 2/1, Black
- Lot 10 - Brick/Stone (Refer to Notes)
- lot 11 - 10 YR 2/2 Very Dark Brown ("Pre-Contact")
- lot 12 - 10 YR 3/2 (Historic Trench Fill)
- lot 13 - 5 YR 2.5/1 Pre Contact Feature
- lot 14 - 10 YR 4/3
- lot 15 - interface for lot 12
- lot 16 - Interface for lot 13
- lot 17 - 10 YR 3/2 - Very Dark Greyish Brown (Historic Post Mould)
- lot 18 - Interface for lot 17
- lot 19 - 5 YR 2.5/2 Dark Reddish Brown
- Lot 20 -
- lot 21 - 5 YR 3/1 Very Dark Greyish Brown (Post? possibly associated with lot 17)
- lot 22 - interface for lot 21
- lot 23 - 10 YR 6/4 Yellowish Brown (Sandy Sub Soil)

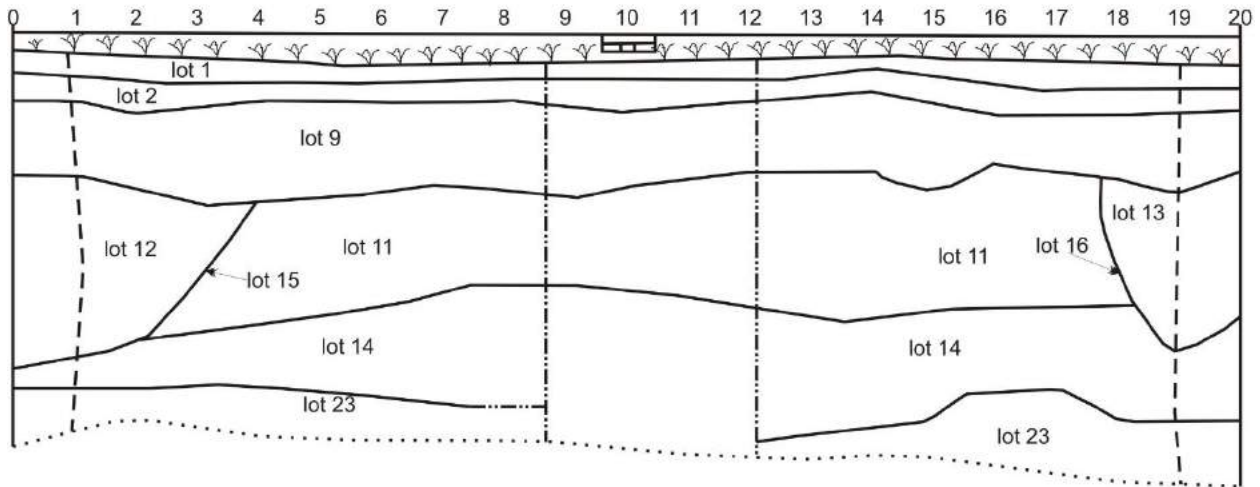


legend

- Line Level
- Grass
- Brick
- lot 10 (Stone)
- lot 10 (Brick)
- Baulk
- test pit boundaries
- LOE

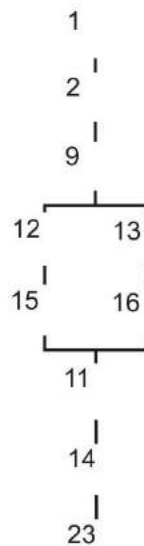


Old Fort Erie (AfGr-3)
 Area 3 - Unit T
 South Profile
 Mapped: June 2nd and 3rd
 Excavated By: James Nuhn



Soil Description

- lot 1 - 10 YR 3/1
- lot 2 - 10 YR 2/1 Black
- lot 3 - 10 YR 3/2 Very Dark Greyish Brown
- Lot 4 -
- Lot 5 -
- Lot 6 -
- lot 7 - 10 YR 3/2
- lot 8 - Interface for lot 7
- lot 9 - 10 YR 2/1, Black
- Lot 10 - Brick/Stone (Refer to Notes)
- lot 11 - 10 YR 2/2 Very Dark Brown ("Pre-Contact")
- lot 12 - 10 YR 3/2 (Historic Trench Fill)
- lot 13 - 5 YR 2.5/1 Pre Contact Feature
- lot 14 - 10 YR 4/3
- lot 15 - interface for lot 12
- lot 16 - Interface for lot 13
- lot 17 - 10 YR 3/2 - Very Dark Greyish Brown (Historic Post Mould)
- lot 18 - Interface for lot 17
- lot 19 - 5 YR 2.5/2 Dark Reddish Brown
- Lot 20 -
- lot 21 - 5 YR 3/1 Very Dark Greyish Brown (Post? possibly associated with lot 17)
- lot 22 - interface for lot 21
- lot 23 - 10 YR 6/4 Yellowish Brown (Sandy Sub Soil)

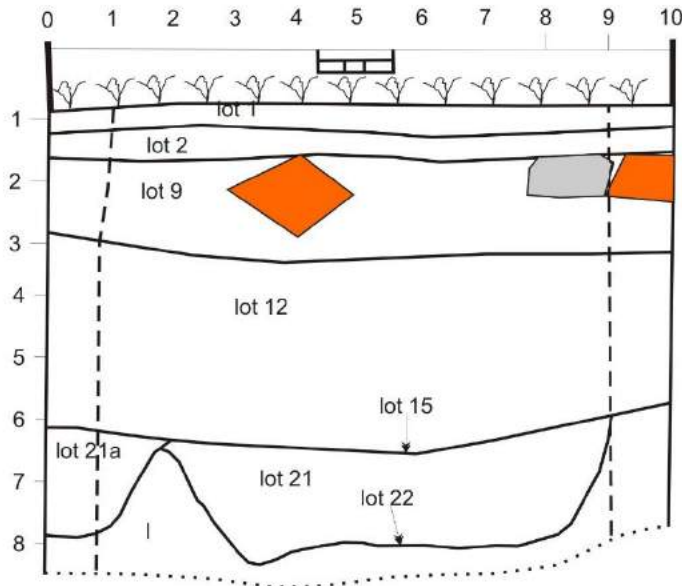


legend

- Line Level
- Grass
- Brick
- lot 10 (Stone)
- lot 10 (Brick)
- Baulk
- test pit boundaries
- LOE

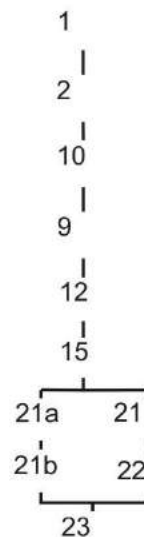


Old Fort Erie (AfGr-3)
 Area 3 - Unit T
 East Profile
 Mapped: June 2nd and 3rd
 Excavated By: James Nuhn



Soil Description

- lot 1 - 10 YR 3/1
- lot 2 - 10 YR 2/1Black
- lot 3 - 10 YR 3/2 Very Dark Greyish Brown
- Lot 4 -
- Lot 5 -
- Lot 6 -
- lot 7 - 10 YR 3/2
- lot 8 - Interface for lot 7
- lot 9 - 10 YR 2/1, Black
- Lot 10 - Brick/Stone (Refer to Notes)
- lot 11 - 10 YR 2/2 Very Dark Brown ("Pre-Contact")
- lot 12 - 10 YR 3/2 (Historic Trench Fill)
- lot 13 - 5 YR 2.5/1Pre Contact Feature
- lot 14 - 10 YR 4/3
- lot 15 -interface for lot 12
- lot 16 - Interface for lot 13
- lot 17 - 10 YR 3/2 - Very Dark Greyish Brown(Historic Post Mould)
- lot 18 - Interface for lot 17
- lot 19 - 5 YR 2.5/2 Dark Reddish Brown
- Lot 20 -
- lot 21 - 5 YR 3/1 Very Dark Greyish Brown (Post? possibly associated with lot 17)
- lot 22 - interface for lot 21
- lot 23 - 10 YR 6/4 Yellowish Brown (Sandy Sub Soil)

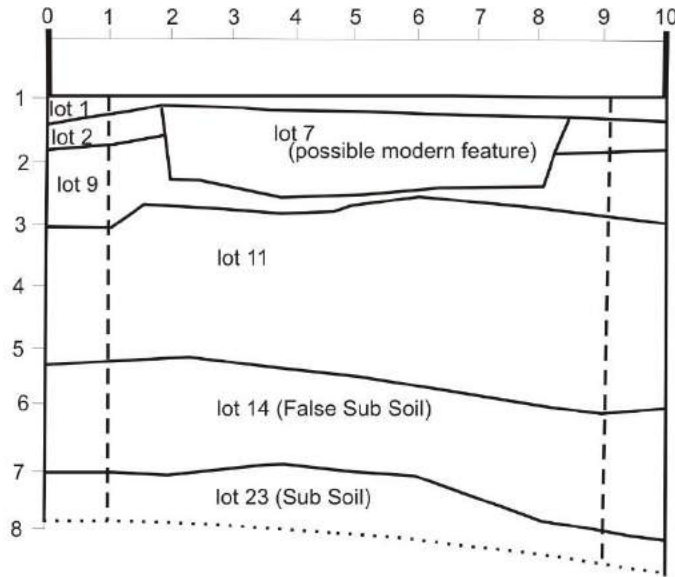


legend

- Line Level
- Grass
- Brick
- lot 10 (Stone)
- lot 10 (Brick)
- Baulk
- test pit boundaries
- LOE



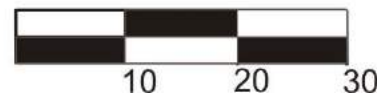
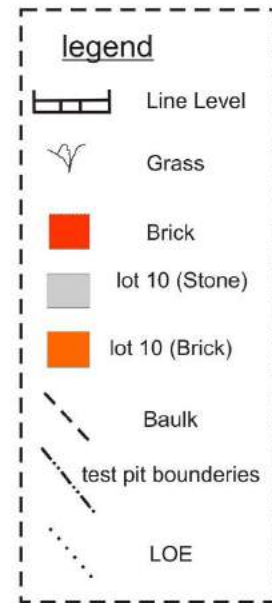
Old Fort Erie (AfGr-3)
 Area 3 - Unit T
 West Profile
 Mapped: June 2nd and 3rd
 Excavated By: James Nuhn



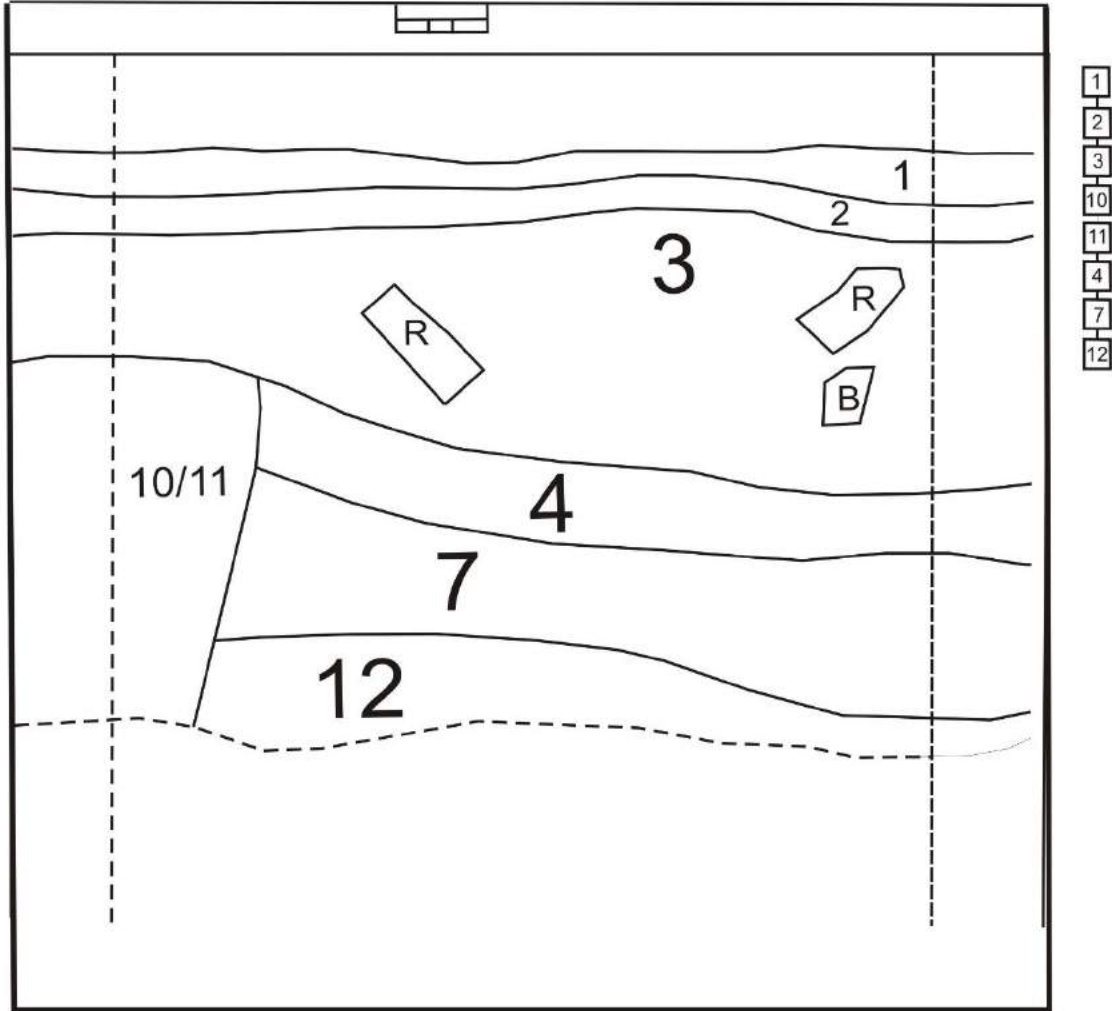
Soil Description

- lot 1 - 10 YR 3/1
- lot 2 - 10 YR 2/1Black
- lot 3 - 10 YR 3/2 Very Dark Greyish Brown
- Lot 4 -
- Lot 5 -
- Lot 6 -
- lot 7 - 10 YR 3/2
- lot 8 - Interface for lot 7
- lot 9 - 10 YR 2/1, Black
- Lot 10 - Brick/Stone (Refer to Notes)
- lot 11 - 10 YR 2/2 Very Dark Brown ("Pre-Contact")
- lot 12 - 10 YR 3/2 (Historic Trench Fill)
- lot 13 - 5 YR 2.5/1Pre Contact Feature
- lot 14 - 10 YR 4/3
- lot 15 -interface for lot 12
- lot 16 - Interface for lot 13
- lot 17 - 10 YR 3/2 - Very Dark Greyish Brown(Historic Post Mould)
- lot 18 - Interface for lot 17
- lot 19 - 5 YR 2.5/2 Dark Reddish Brown
- Lot 20 -
- lot 21 - 5 YR 3/1 Very Dark Greyish Brown (Post? possibly associated with lot 17)
- lot 22 - interface for lot 21
- lot 23 - 10 YR 6/4 Yellowish Brown (Sandy Sub Soil)

- 1
- 7
- 8
- 2
- 9
- 11
- 14
- 23



Old Fort Erie
 Unit U
 East Wall Profile
 June 3, 2015
 Excavator: Robyn Pegg



Soil Descriptions:

- Lot 1 = Sod 10YR 3/1
- Lot 2 = Topsoil 10YR 3/2
- Lot 3 = Rubble 10YR 2/2
- Lot 4 = Horizon 10YR 3/3
- Lot 7 = Remodeled subsoil 10YR 4/3
- Lot 8 = Tree Root 10YR 2/2
- Lot 10 = Post Mould 10YR 2/2
- Lot 12 = True Subsoil 10YR 5/3

Legend:

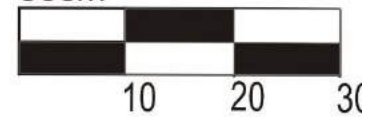
Line level:

Grass:

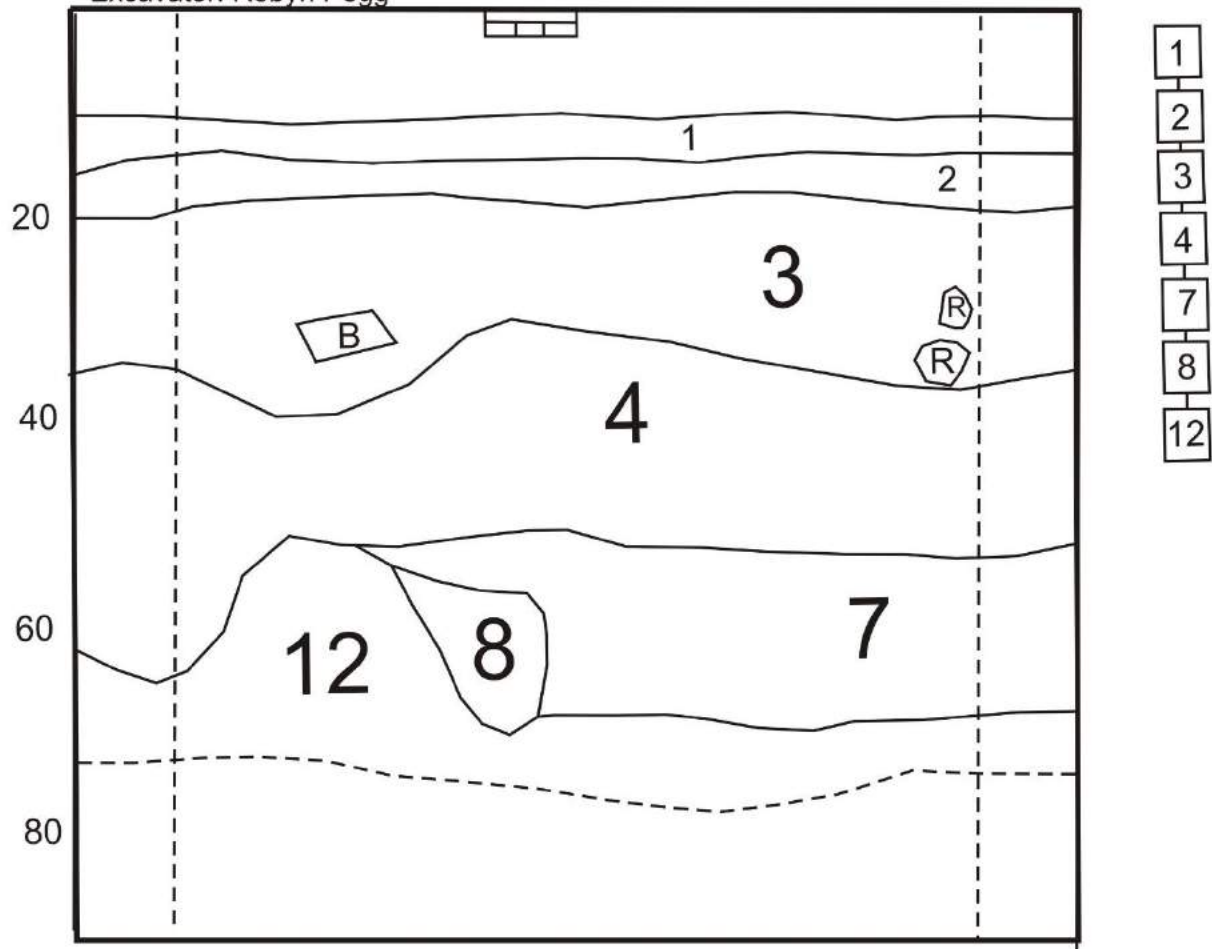
Rock:

Brick:

30cm



Old Fort Erie
 Unit U
 West Wall Profile
 June 3, 2015
 Excavator: Robyn Pegg



Soil Descriptions:

- Lot 1 = Sod 10YR 3/1
- Lot 2 = Topsoil 10YR 3/2
- Lot 3 = Rubble 10YR 2/2
- Lot 4 = Horizon 10YR 3/3
- Lot 7 = Remodeled subsoil 10YR 4/3
- Lot 8 = Tree Root 10YR 2/2
- Lot 10 = Post Mould 10YR 2/2
- Lot 12 = True Subsoil 10YR 5/3

Legend:

Line level:

Grass:

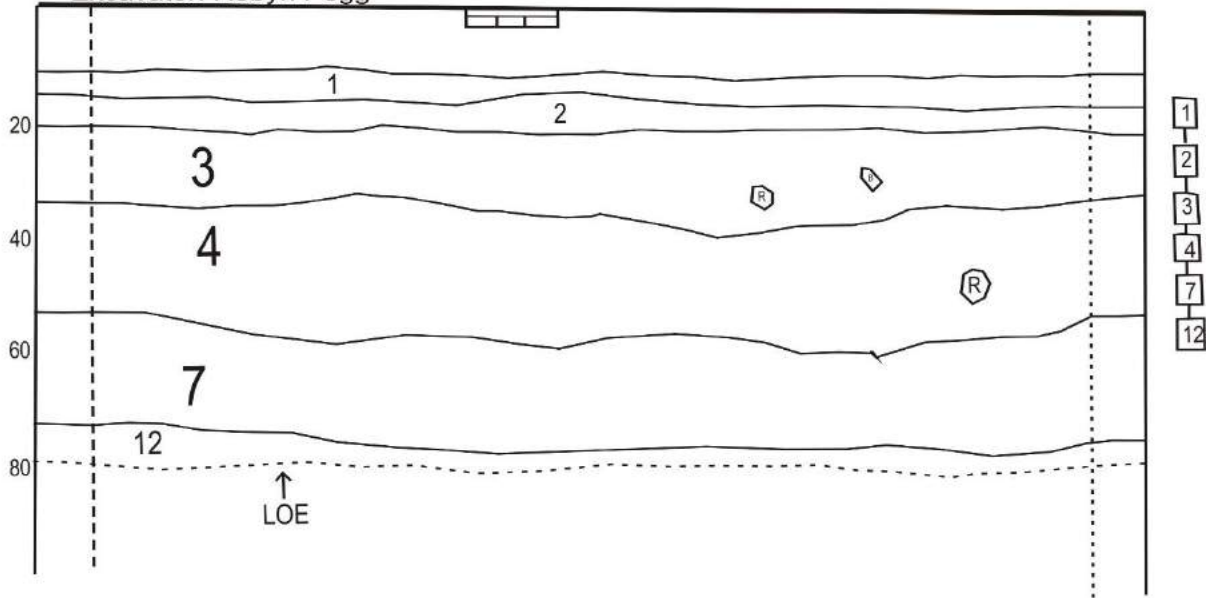
Rock:

Brick:

30cm



Old Fort Erie
 Unit U
 North Wall Profile
 June 3, 2015
 Excavator: Robyn Pegg



Soil Descriptions:

- Lot 1 = Sod 10YR 3/1
- Lot 2 = Topsoil 10YR 3/2
- Lot 3 = Rubble 10YR 2/2
- Lot 4 = Horizon 10YR 3/3
- Lot 7 = Remodeled subsoil 10YR 4/3
- Lot 8 = Tree Root 10YR 2/2
- Lot 10 = Post Mould 10YR 2/2
- Lot 12 = True Subsoil 10YR 5/3

Legend:

Line level:

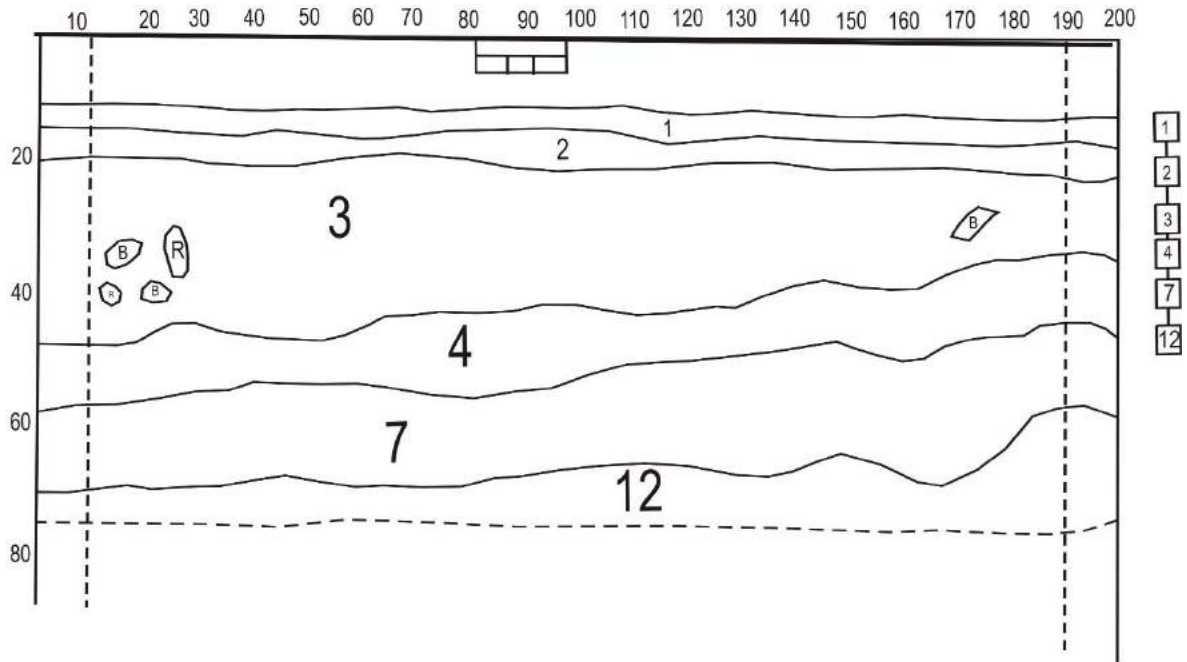
Grass:

Rock:

Brick:

30cm

Old Fort Erie
 Unit U
 North Wall Profile
 June 3, 2015
 Excavator: Robyn Pegg



Soil Descriptions:

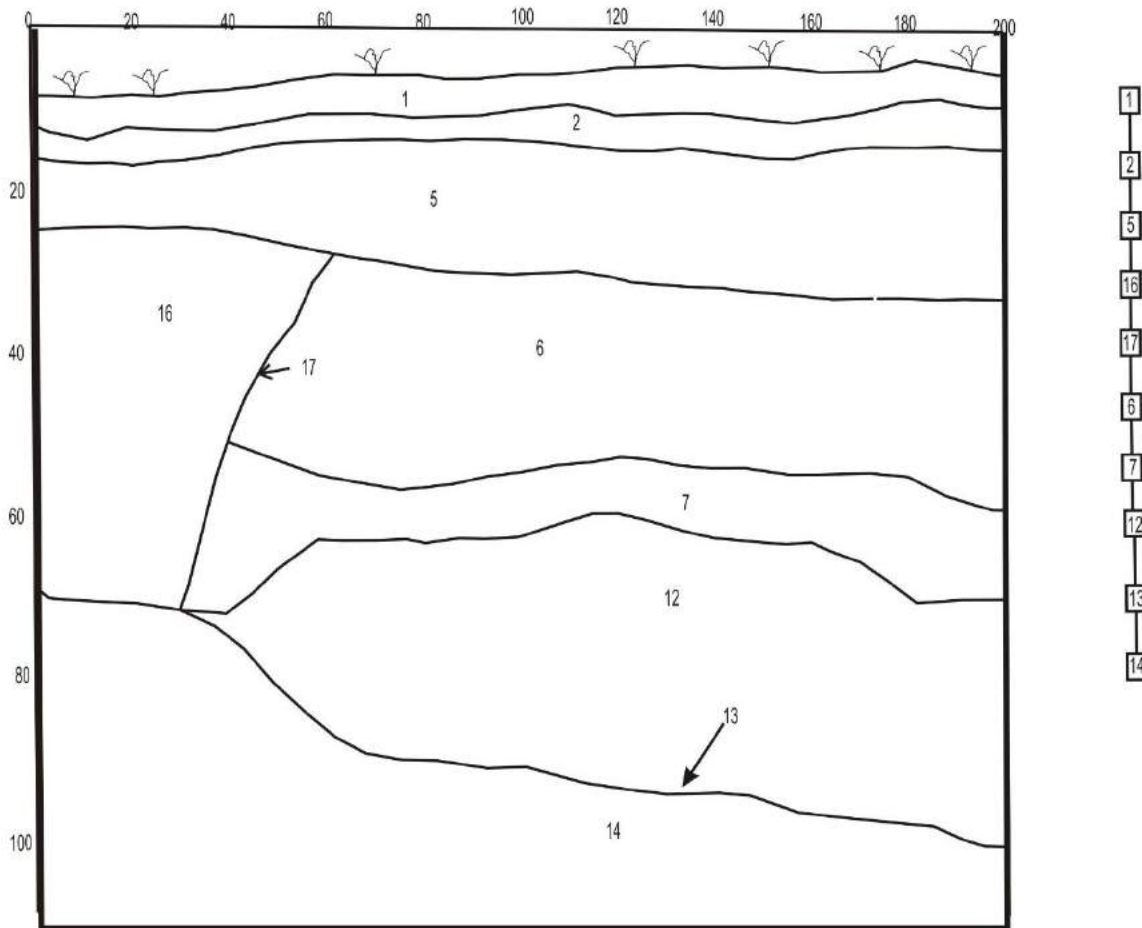
- Lot 1 = Sod 10YR 3/1
- Lot 2 = Topsoil 10YR 3/2
- Lot 3 = Rubble 10YR 2/2
- Lot 4 = Horizon 10YR 3/3
- Lot 7 = Remodeled subsoil 10YR 4/3
- Lot 8 = Tree Root 10YR 2/2
- Lot 10 = Post Mould 10YR 2/2
- Lot 12 = True Subsoil 10YR 5/3

Legend:

- Line level:
- Grass:
- Rock:
- Brick:

30cm

Old Fort Erie
 Unit W
 South Wall Profile
 June 5, 2015
 Excavator: Katie Oosterhof



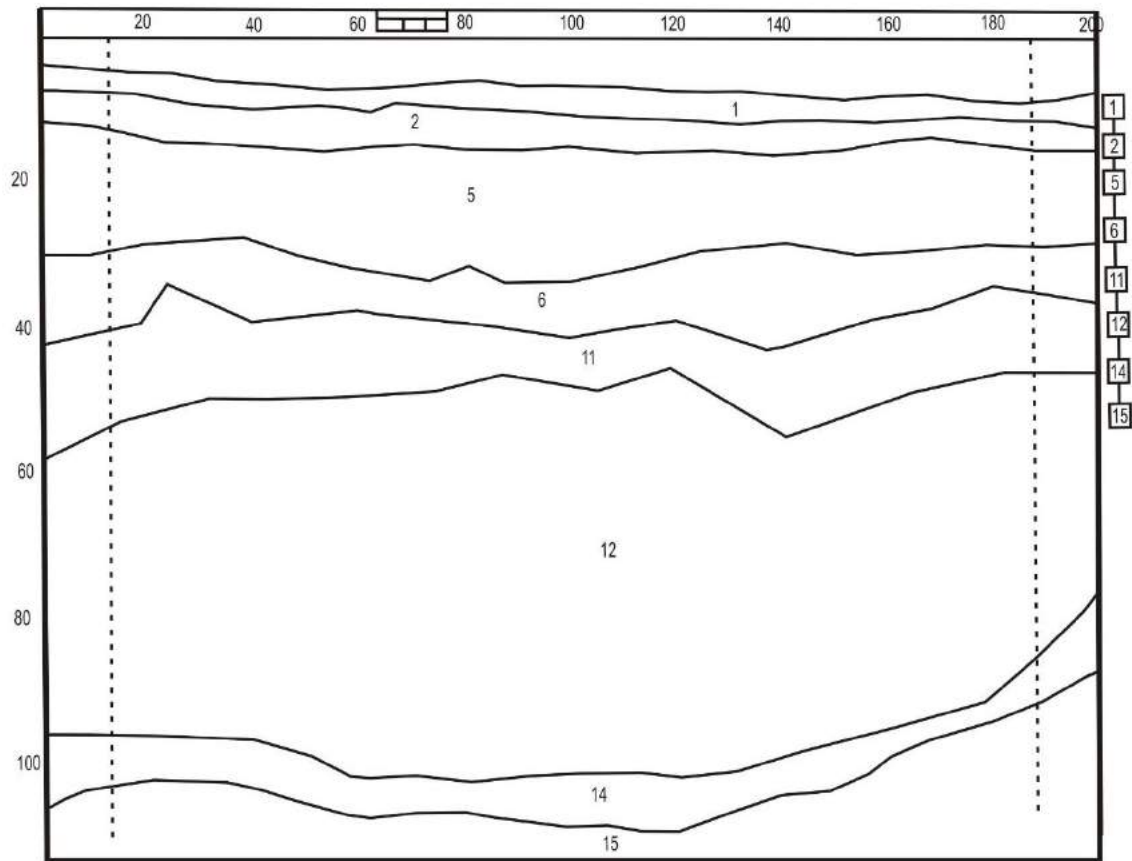
- Lot 1: Sod
- Lot 2: Topsoil 10YR2/2
- Lot 3/4: Test Pit and Interface 10YR3/2
- Lot 5: Rubble layer 10YR2/2
- Lot 6: Sandy loam 10YR 3/2
- Lot 7: Black Organic Soil 2.5Y 2/0
- Lot 8: Clay Cap 2.5Y3/2
- Lot 9/10 Sandy Loam 10YR 2/2
- Lot 11: Medium brown loam 10YR3/2
- Lot 12/13: Feature and Interface 10YR 2
- Lot 14: Subsoil 10YR4/4
- Lot 15: Hard Black Clay 10YR3/1
- Lot 16/17: Trench and Interface 10YR2/1

Legend:

- Line level:
- Grass:
- Rock:
- Brick:

30cm

Old Fort Erie
 Unit W
 Northern Profile
 June 5, 2015
 Excavator: Katie Oosterhof



- Lot 1: Sod
- Lot 2: Topsoil 10YR2/2
- Lot 3/4: Test Pit and Interface 10YR3/2
- Lot 5: Rubble layer 10YR2/2
- Lot 6: Sandy loam 10YR 3/2
- Lot 7: Black Organic Soil 2.5Y 2/0
- Lot 8: Clay Cap 2.5Y3/2
- Lot 9/10 Sandy Loam 10YR 2/2
- Lot 11: Medium brown loam 10YR3/2
- Lot 12/13: Feature and Interface 10YR 2
- Lot 14: Subsoil 10YR4/4
- Lot 15: Hard Black Clay 10YR3/1
- Lot 16/17: Trench and Interface 10YR2/1

Legend:

Line level:

Grass:

Rock:

Brick:

30cm

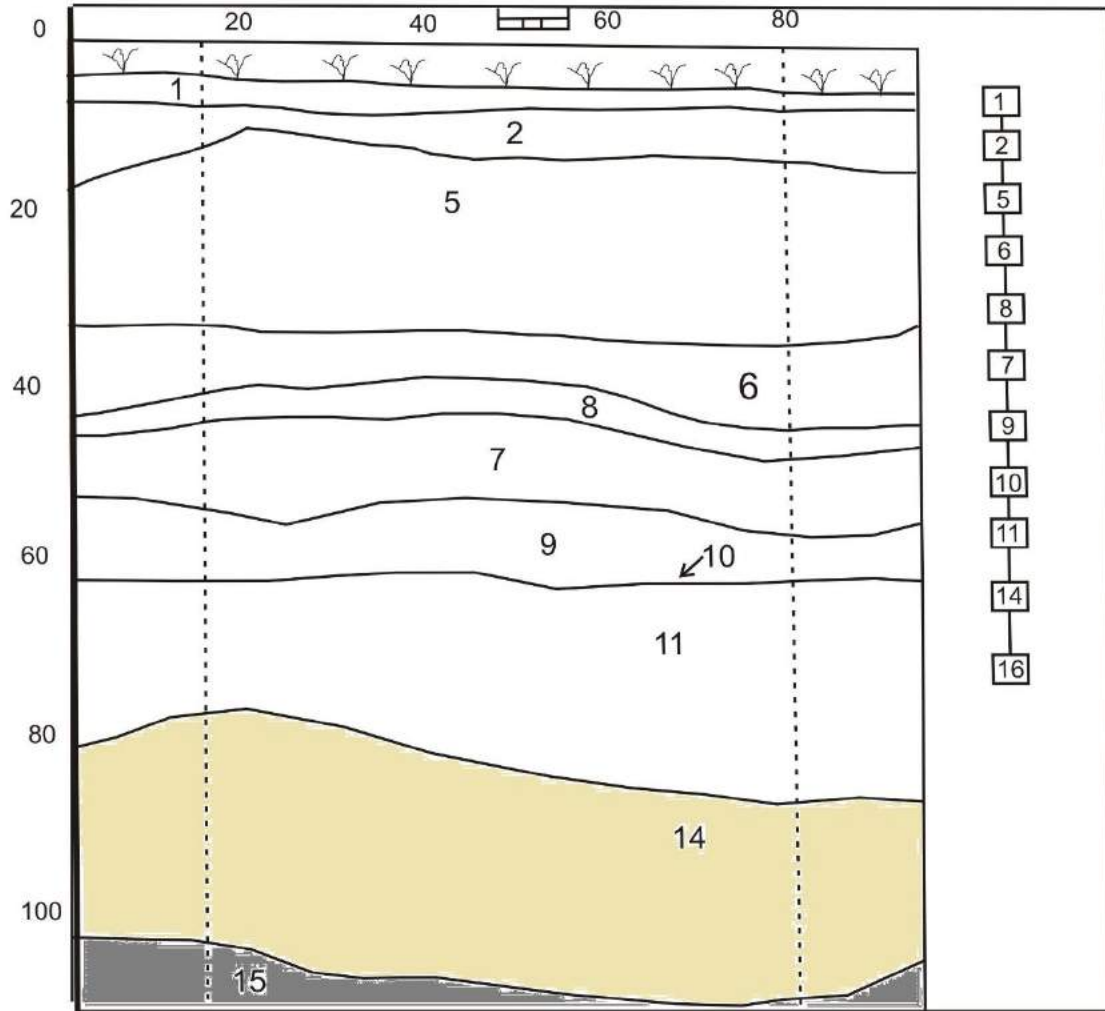
Old Fort Erie

Unit W

East Wall Profile

June 5, 2015

Excavator: Katie Oosterhof



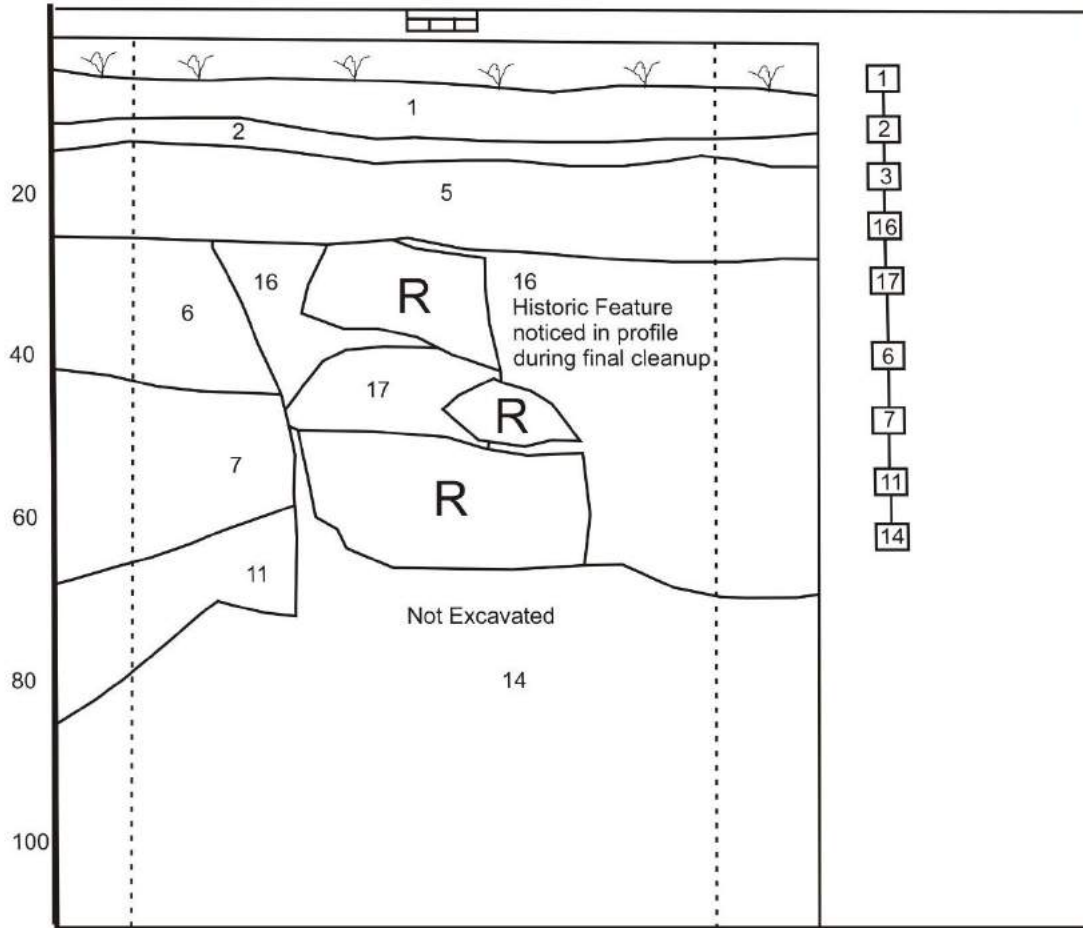
- Lot 1: Sod
- Lot 2: Topsoil 10YR2/2
- Lot 3/4: Test Pit and Interface 10YR3/2
- Lot 5: Rubble layer 10YR2/2
- Lot 6: Sandy loam 10YR 3/2
- Lot 7: Black Organic Soil 2.5Y 2/0
- Lot 8: Clay Cap 2.5Y3/2
- Lot 9/10 Sandy Loam 10YR 2/2
- Lot 11: Medium brown loam 10YR3/2
- Lot 12/13: Feature and Interface 10YR 2
- Lot 14: Subsoil 10YR4/4
- Lot 15: Hard Black Clay 10YR3/1
- Lot 16/17: Trench and Interface 10YR2/1

Legend:



- Line level:
- Grass:
- Rock:
- Brick:




30cm

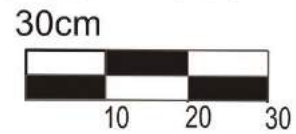
Old Fort Erie
 Unit W
 West Wall Profile
 June 5, 2015
 Excavator: Katie Oosterhof



- Lot 1: Sod
- Lot 2: Topsoil 10YR2/2
- Lot 3/4: Test Pit and Interface 10YR3/2
- Lot 5: Rubble layer 10YR2/2
- Lot 6: Sandy loam 10YR 3/2
- Lot 7: Black Organic Soil 2.5Y 2/0
- Lot 8: Clay Cap 2.5Y3/2
- Lot 9/10 Sandy Loam 10YR 2/2
- Lot 11: Medium brown loam 10YR3/2
- Lot 12/13: Feature and Interface 10YR 2
- Lot 14: Subsoil 10YR4/4
- Lot 15: Hard Black Clay 10YR3/1
- Lot 16/17: Trench and Interface 10YR2/1

Legend: 
 Line level: 

Grass: 
 Rock: 
 Brick: 



Appendix C

Maps and Images of Old Fort Erie

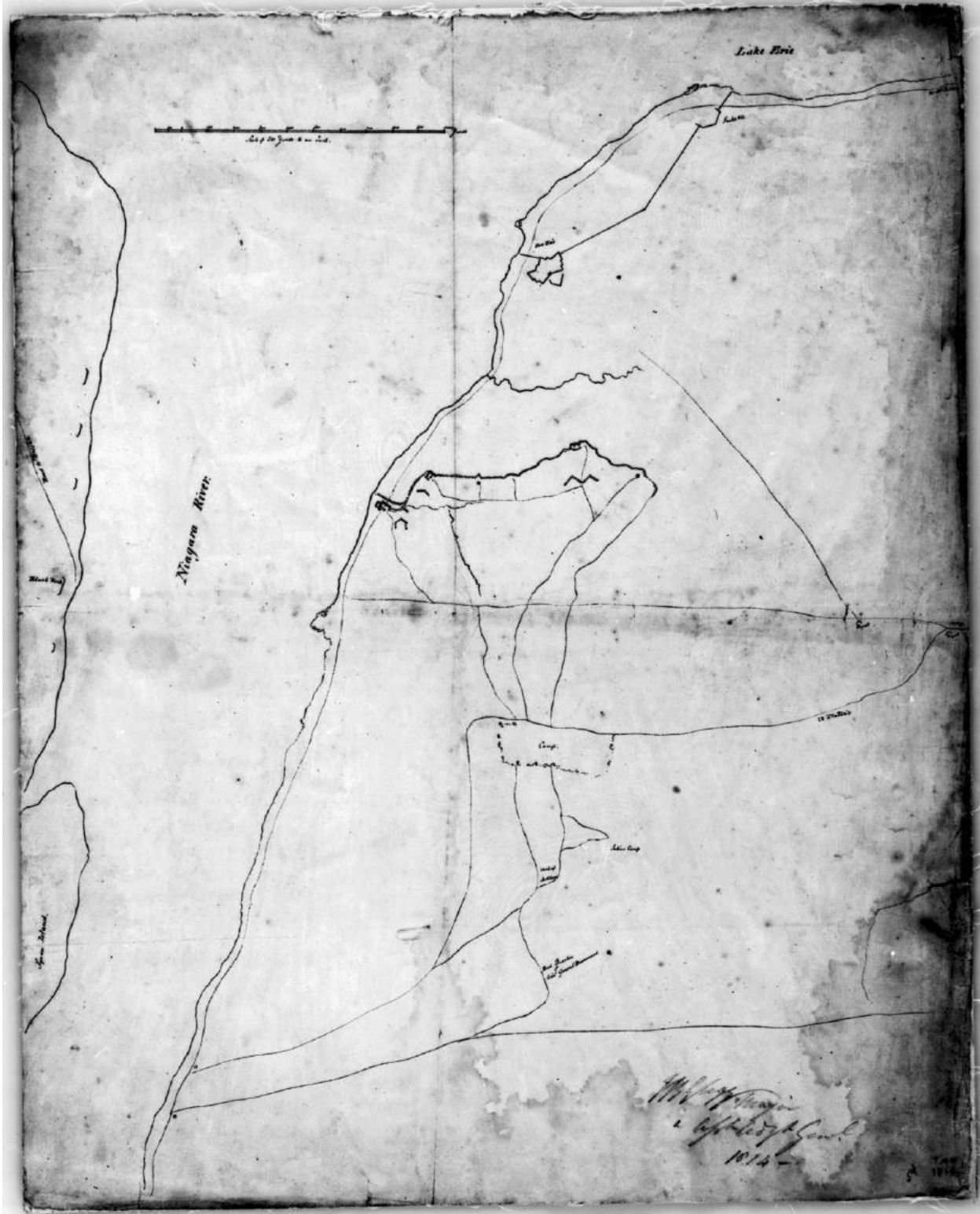


Figure 1 [1814] Sketch showing the situation of Fort Erie and position of forces for the attack by the British [Sgd] J.B. Glegg Major & Asst Adjt Genl 1814 Library and Archives Canada, NMC 4857.

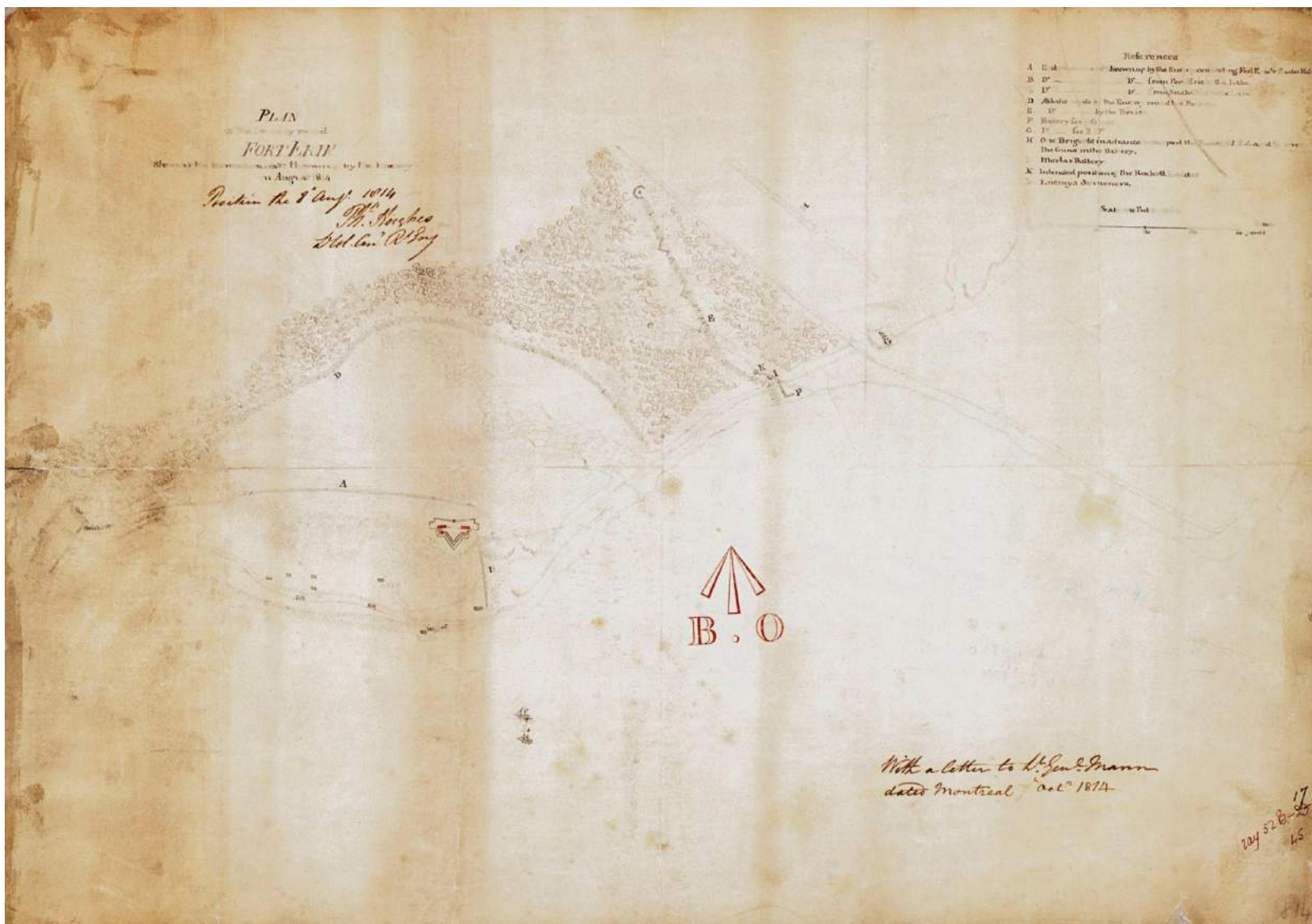


Figure 2 August 8, 1814 plan by Ph (Philip) Hughes, Library and Archives Canada NMC 3803.

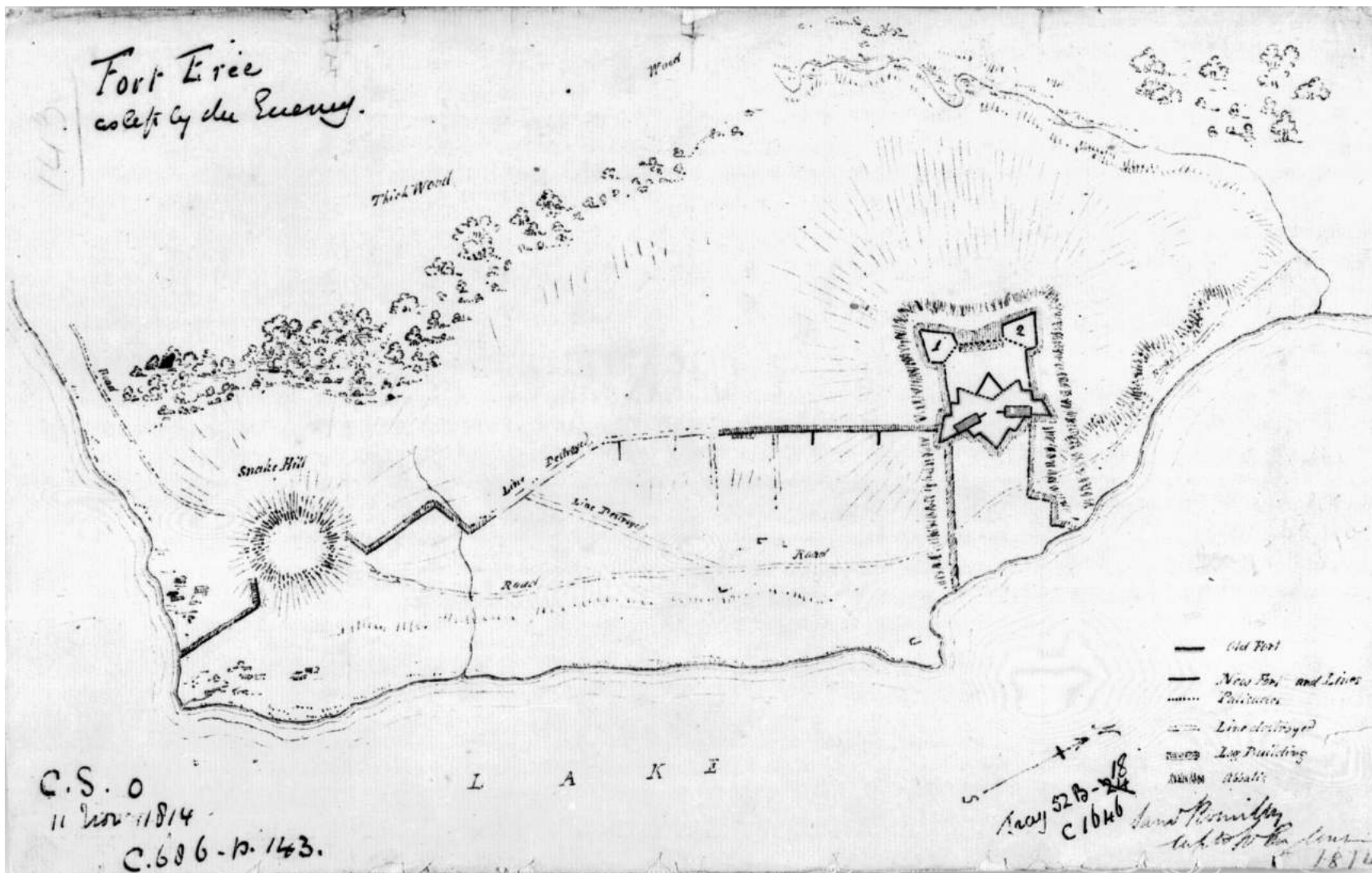


Figure 3 [1814] [Endorsed title]: 'Fort Erie as left by the Enemy.' [Sgd] Sam Romilly Lieut R1 Engineers. Library and Archives Canada, NMC 70956.



Figure 5 [1815] Plan of the Attack made upon Fort Erie (Upper Canada) by the Right Division of the British Army, under the Command of Lt Genl Drummond in August and Sepr 1814 [Sgd] George Philpotts Lieut Royl Engineers, Capt Romilly Comg R1 Engineers Niagara Frontier. G. Nicolls Lt. Col. Cg R1 Engineers in Canada Quebec 27th July 1815, Library and Archives Canada, NMC 22340.

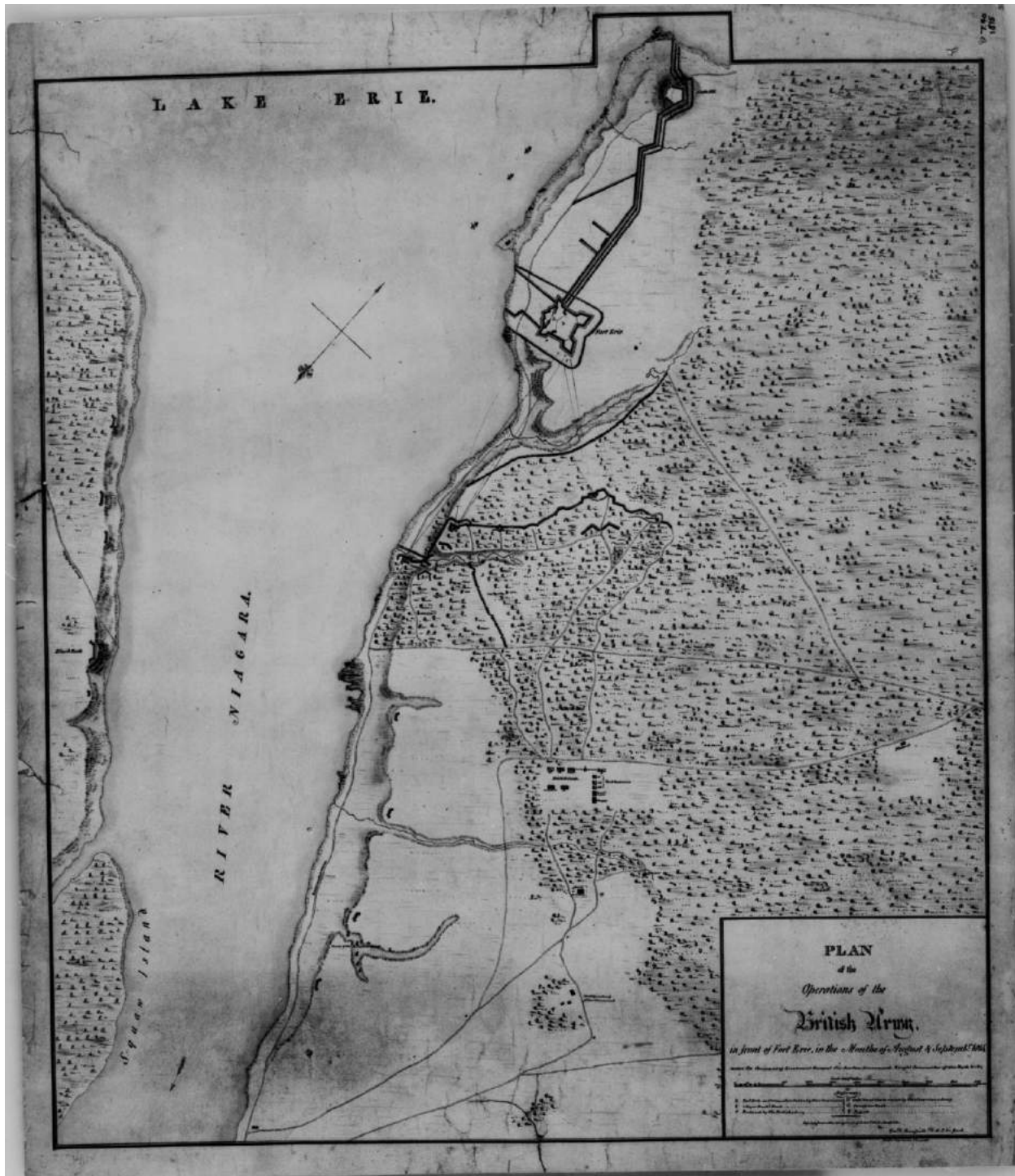


Figure 6 [1815] Plan of the Operations of the British Army, in front of Fort Erie, in the Months of August & September 1814 under the Command of Lieutenant General Sir Gordon Drummond, Knight Commander of the Bath &c. &c. Copied from the Original of Lieut [W.A.] Nesfield by Geo. D. Cranfield D.A.Q.M. Genl. Kingston. Upper Canada. 3d May 1815, NMC 22341.

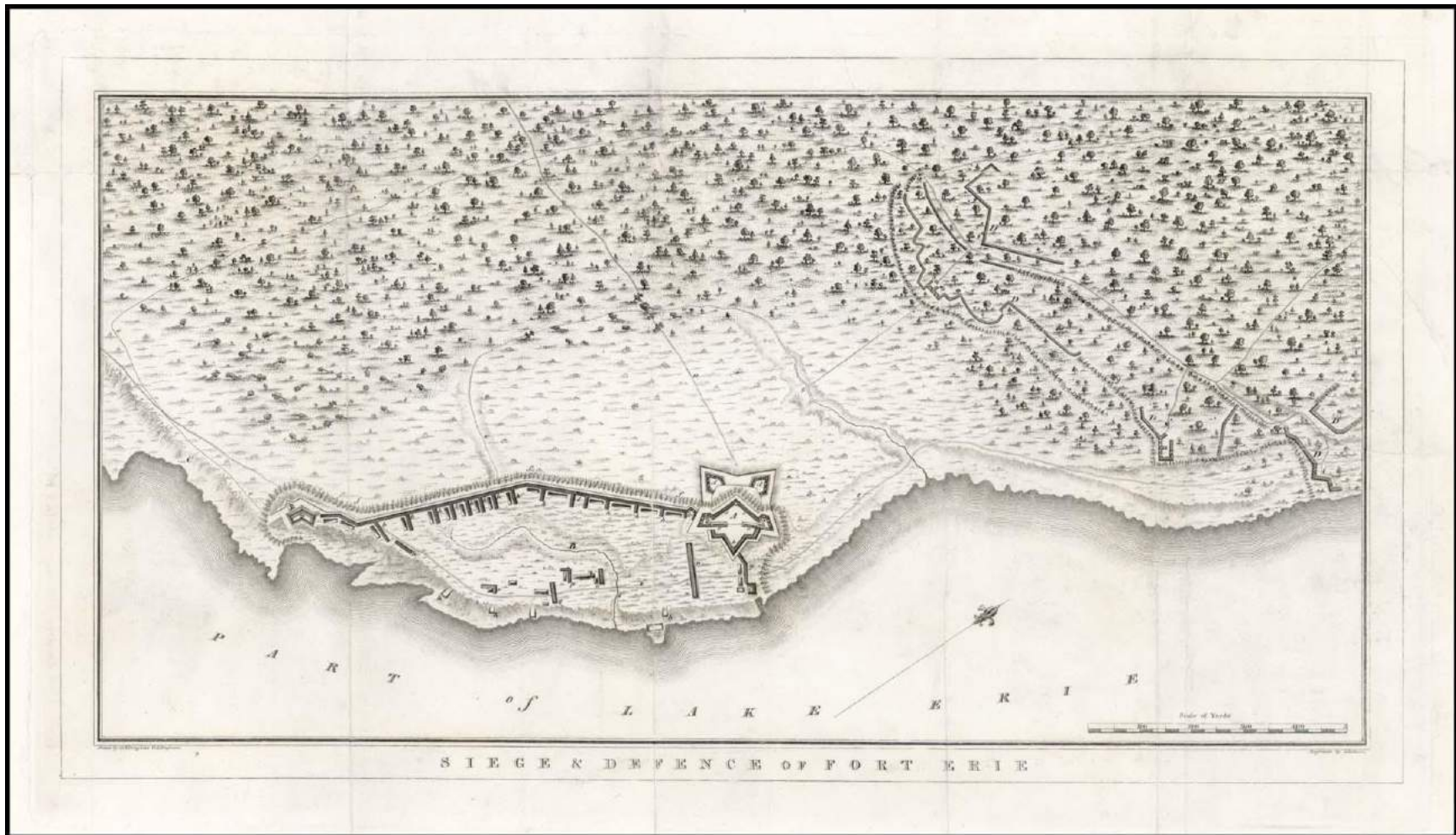


Figure 7 1816 Siege and Defense of Fort Erie, by D.B. Douglass and John Vallance, in Dennie, Joseph 1816 *Attack on Fort Erie*. Portfolio Magazine, Philadelphia.

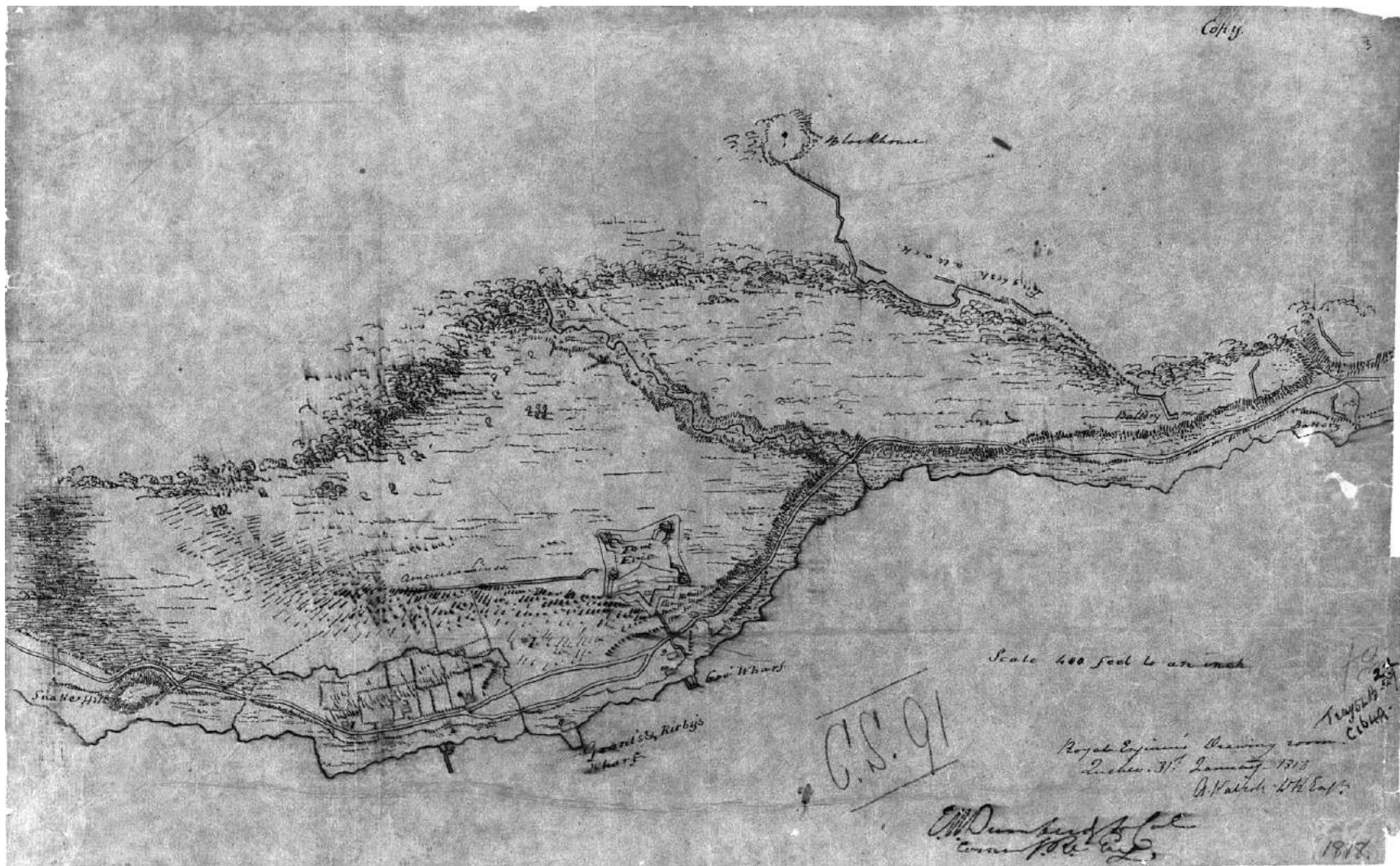


Figure 8 1818 Royal Engineers plan of Fort Erie by A. Walpole and E.W. Durnford. Library and Archives Canada, NMC 3804.



Figure 9 1818 Chart Illustrative of the Siege and Defense of Fort Erie.

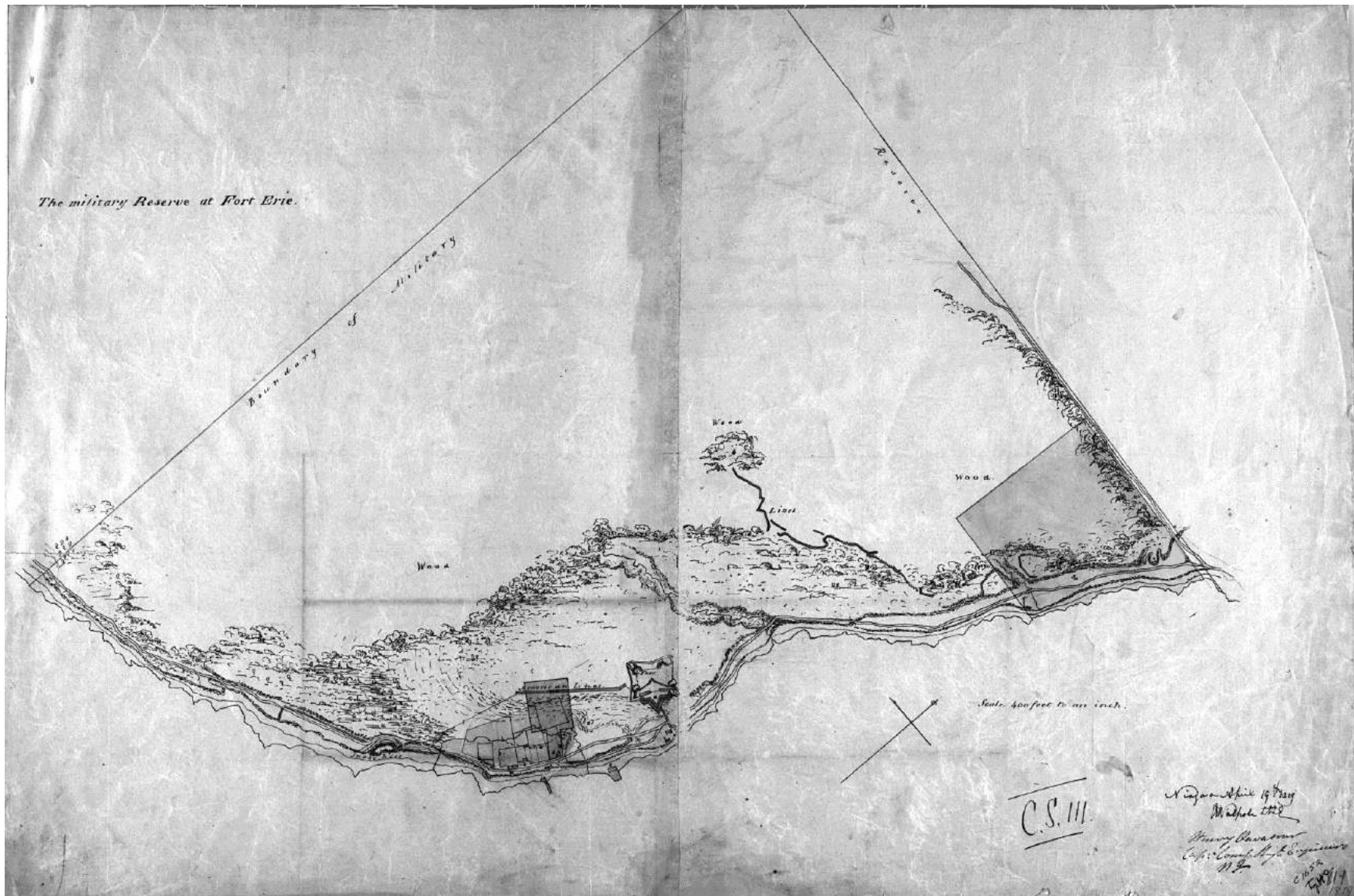


Figure 10 1819 plan of Fort Erie and Military Reserve, by A. Walpole and Captn. Henry Vavasour, Royal Engineers Library and Archives Canada, NMC 22342.

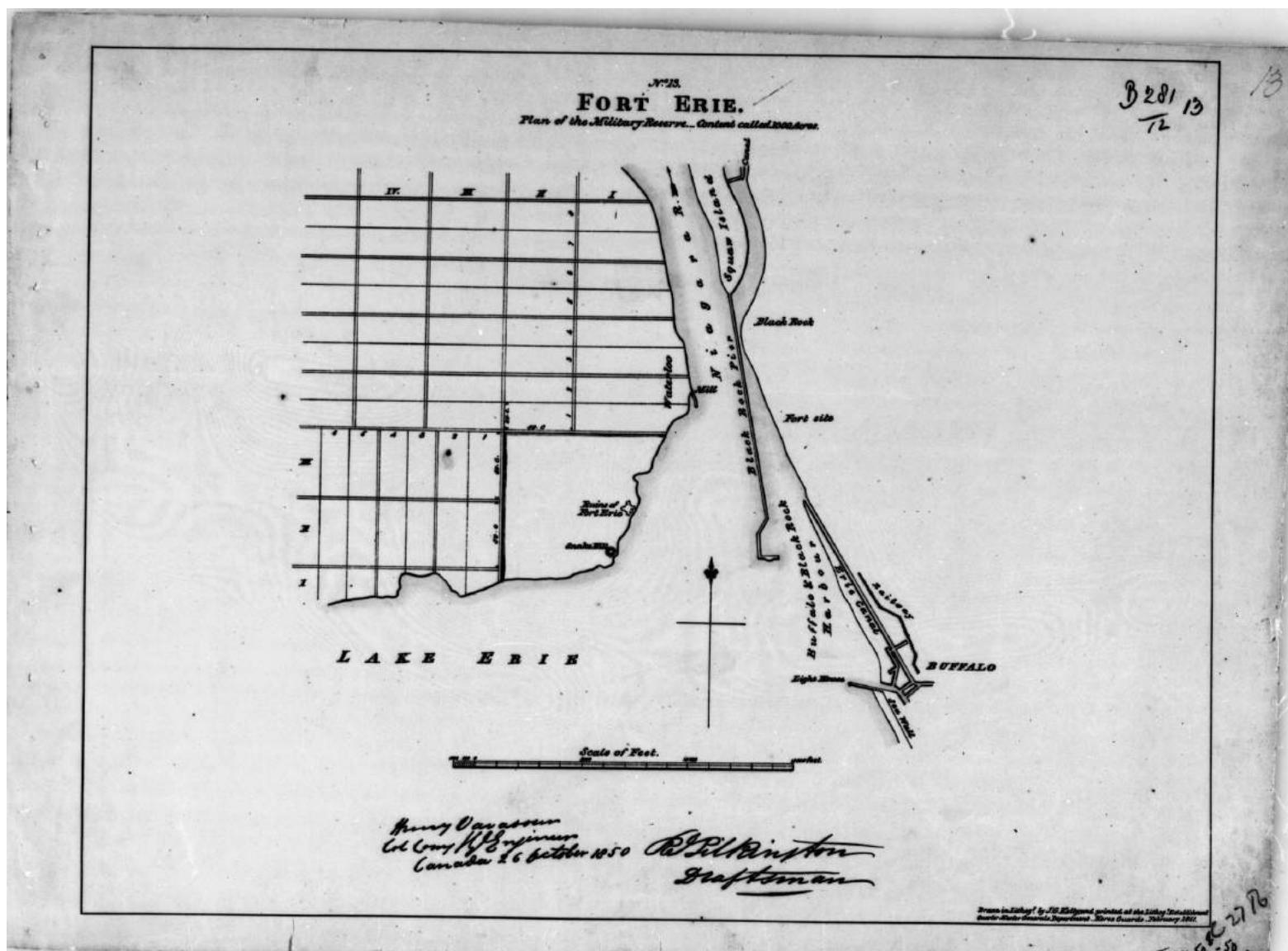


Figure 11 [1851] No. 13 Fort Erie, Plan of the Military Reserve by Henry Vavasour, Royal Engineer showing 'Ruins of Fort Erie'. Library and Archives Canada, NMC 3811.

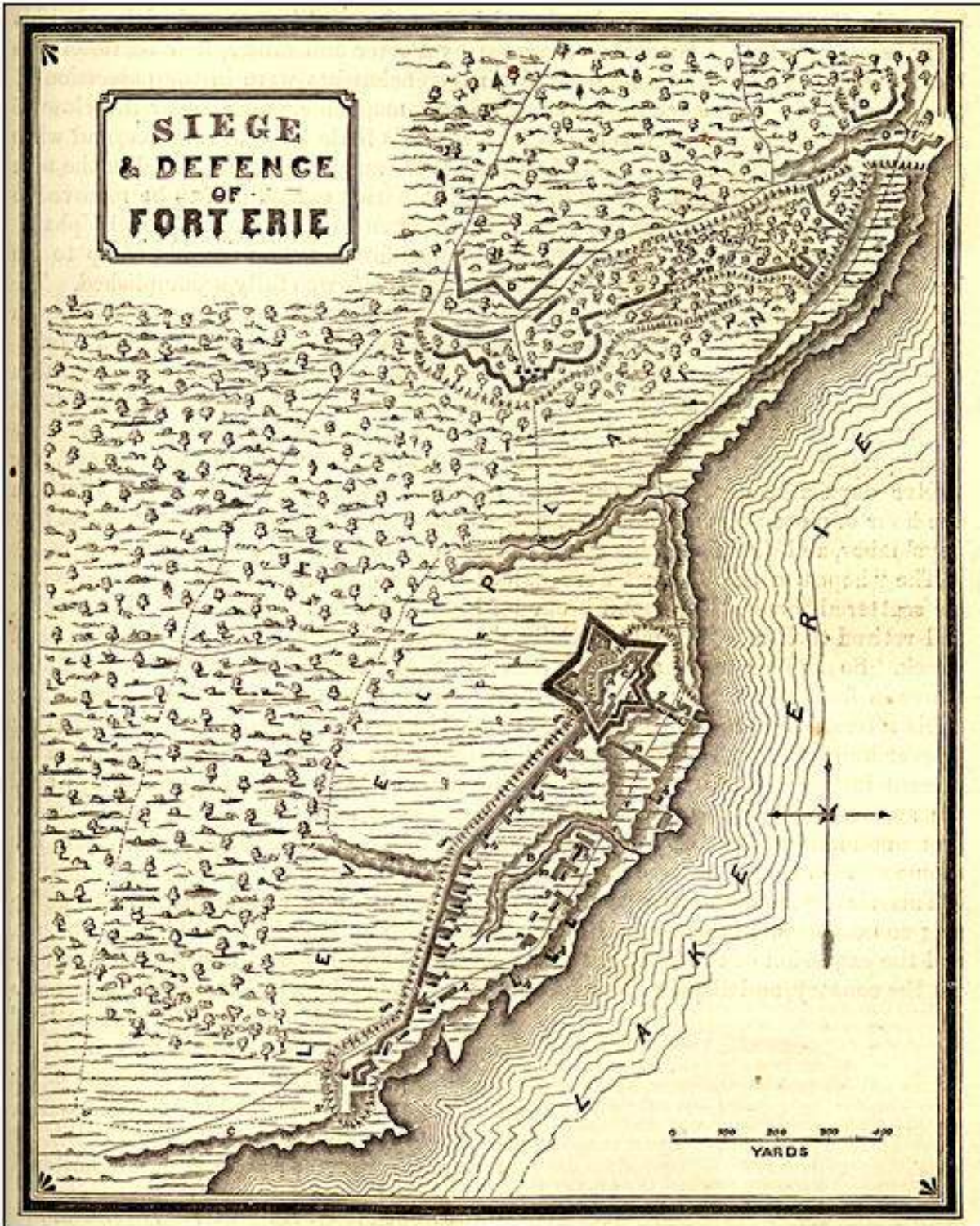


Figure 12 Plan of Fort Erie from *Pictorial Field-book of the War of 1812*, by Benson J. Lossing, 1869. Illustration. Reference Code: 971 .034 LOS, page 839 Archives of Ontario Library.

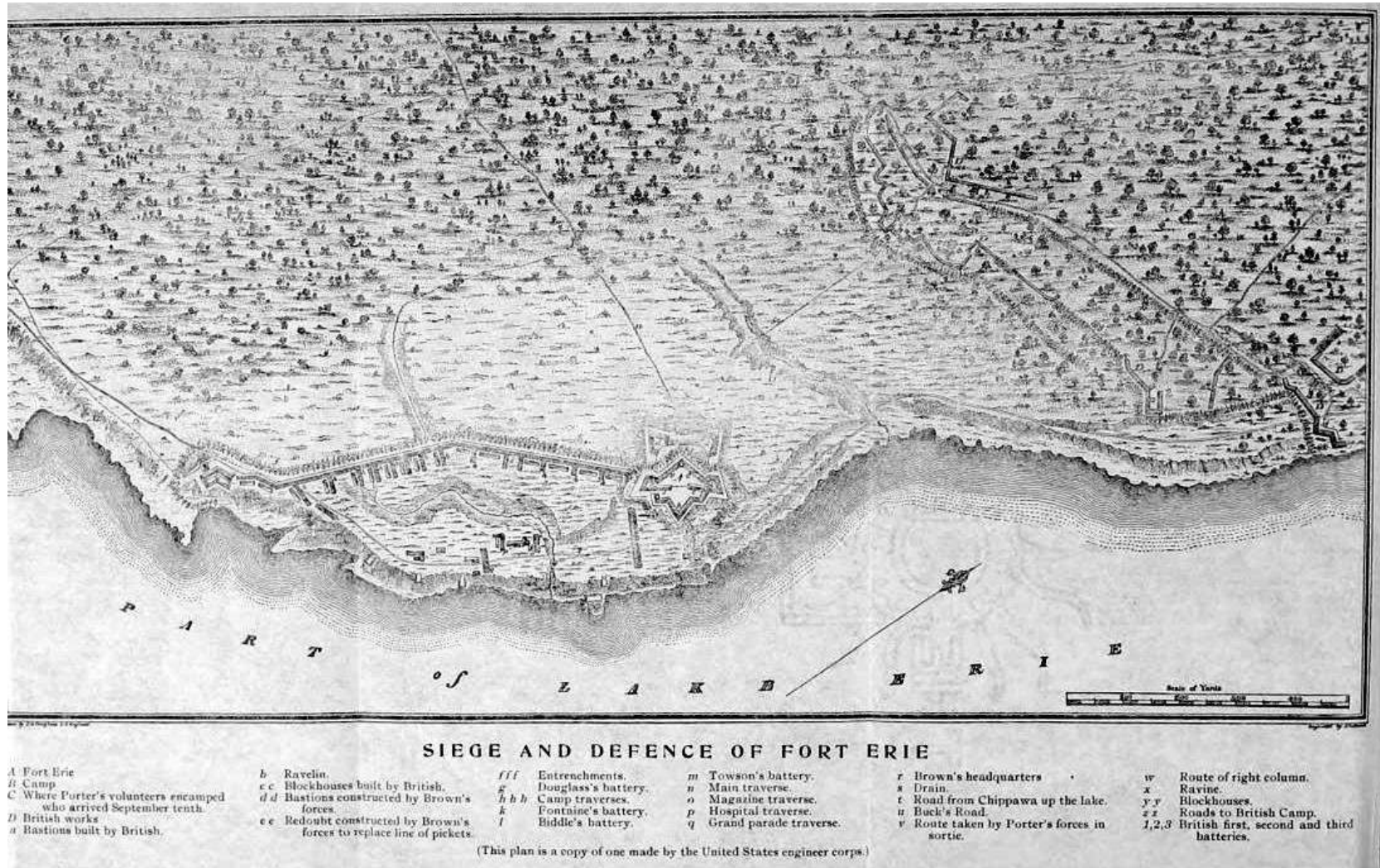


Figure 13 1905 Cruickshank (copy of Douglass 1816 plan).



Figure 14 1934 Aerial photograph showing Fort Erie grounds with detail below.





Figure 15 2010 Satellite image of Old Fort Erie National Historic Site.



Figure 16 View of entrenchments at Old Fort Erie, undated photograph on file at Old Fort Erie, NHS.



Figure 17 View of ruins of bastion at Old Fort Erie showing inundated defensive ditch. Undated photograph on file at Old Fort Erie, NHS.



Figure 18 Ruins of Fort Erie, 1920, M. O. Hammond, M. O. Hammond fonds, Black and white photograph, Reference Code: F 1075-9-0-22, Archives of Ontario.

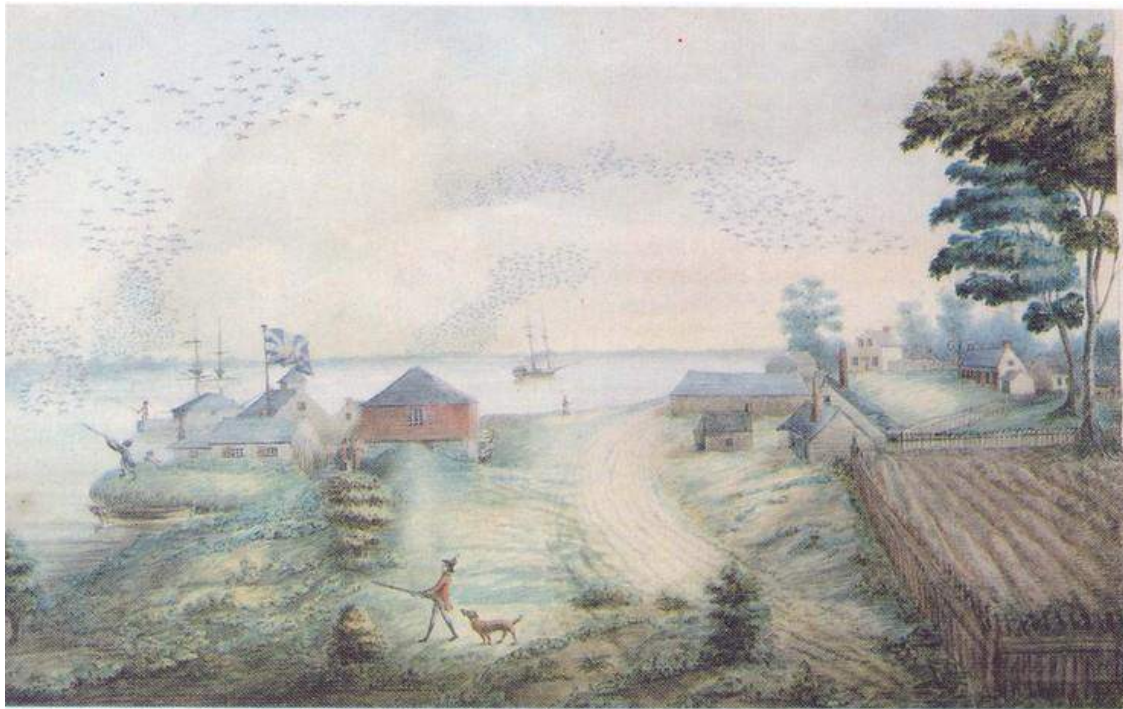


Figure 19 Old Fort Erie With the Migration of Wild Pigeons, dated 1804; by Edward Walsh, Sigmund Samuel Collection, 952.218, ROM2006_7733_1.



Figure20 Fort Erie Park - Old Fort Erie Francis J. Petrie Collection, September 5, 1930. Niagara Falls Public Library Digital Collections, Record ID 94893.



Figure 21 Official guide to Niagara - The ruins of old Fort Erie, Scan from the book *Official Guide Niagara Falls, River. Electric, Historic, Geologic, Hydraulic* by Peter A. Porter with illustrations by Charles D Arnold published 1901, Niagara Falls Public Library Local History Collection, Record ID 91253.

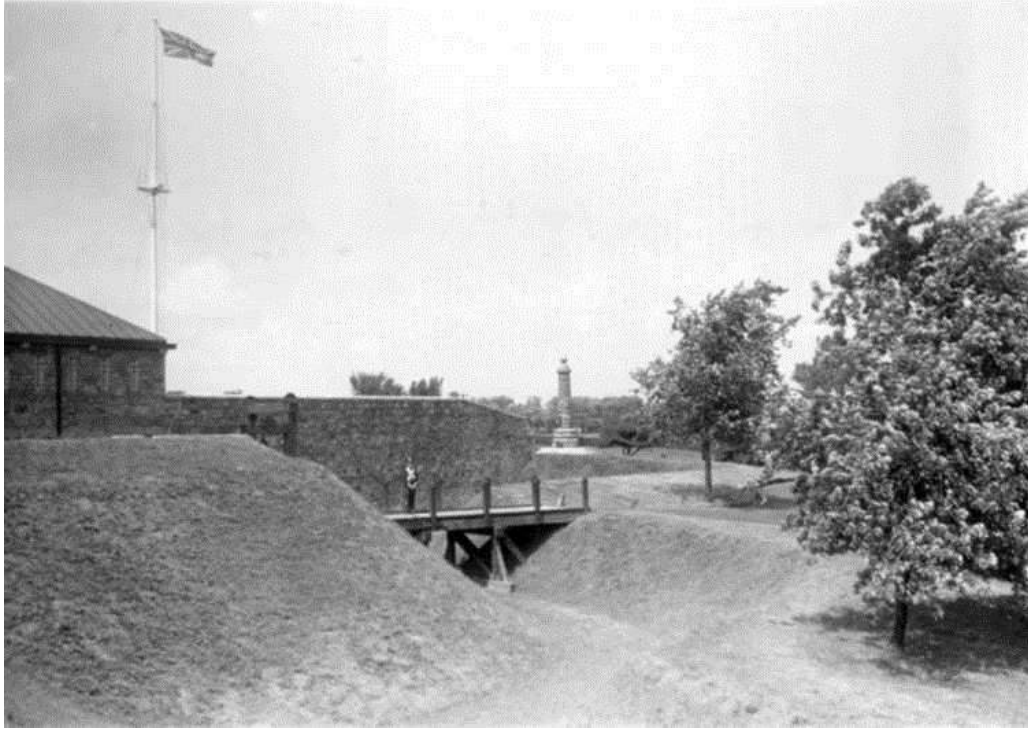


Figure 22 Title The Old Fort Erie – 1939, Francis J. Petrie Collection, July 30, 1939. Niagara Falls Public Library Digital Collections, Record ID 94943.



Figure 23 Old Fort Erie during its reconstruction (1937-1939), Francis J. Petrie Collection. Niagara Falls Public Library Digital Collections, Record ID 94886.

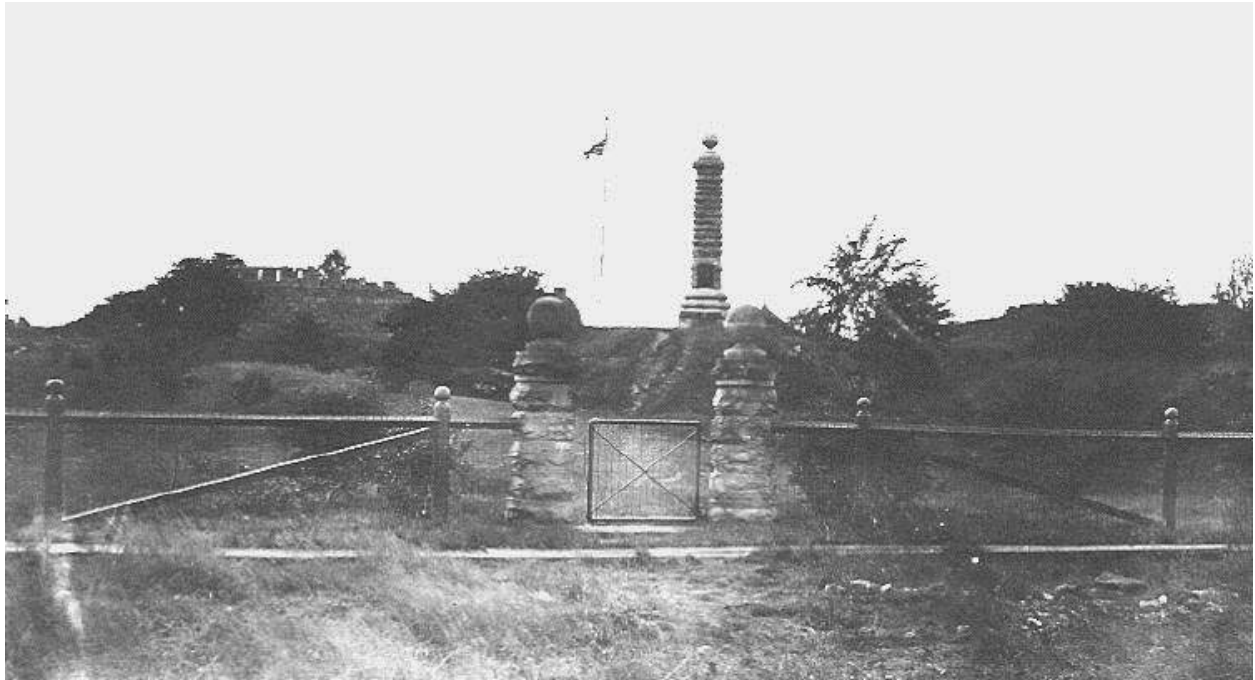


Figure 24 Old Fort Erie Park Ruins, Francis J. Petrie Collection, Date 1910. General Photograph Collection, Niagara Falls Public Library, Record ID 94822.



Figure 25 The Old Fort at Fort Erie, Canada, Photographer Unknown, General Photograph Collection, postcard. The Petrie Collection, Niagara Falls (Ont.) Public Library, Record ID 362530. Probable date – ca. 1910.



Figure 26 Park scene showing the Old Fort at Fort Erie, Canada, Postcard, date Unknown, General Photograph Collection, Fort Erie (Ont.), Niagara Falls (Ont.) Public Library, Record ID 362528.

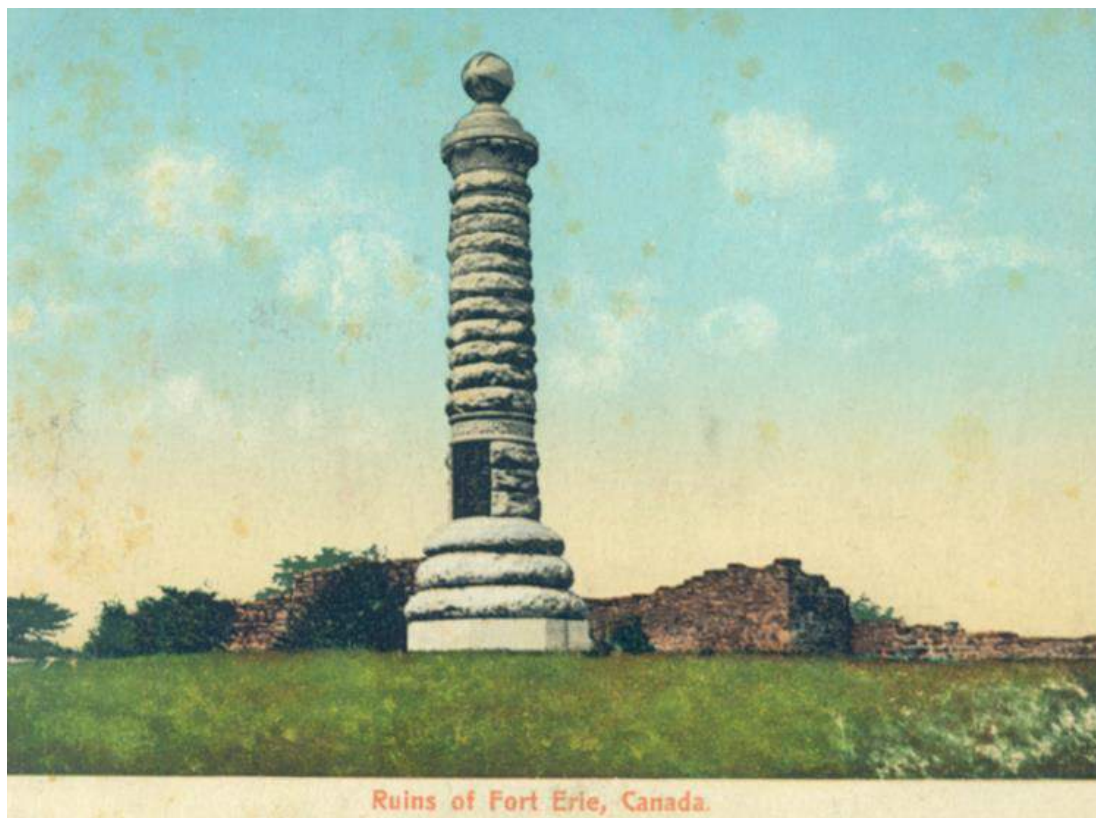


Figure 27 Ruins of Fort Erie Canada, Postcard Collection, Also available as a black and white postcard which was mailed in Fort Erie on July 23 1906. Niagara Falls (Ont.) Public Library, Record ID 294583.



Figure 28 Ruins of Old Fort Erie, Fort Erie, Ont., Postcard, Niagara Falls (Ont.) Public Library, Record ID 369909. Probable date – ca. 1910.

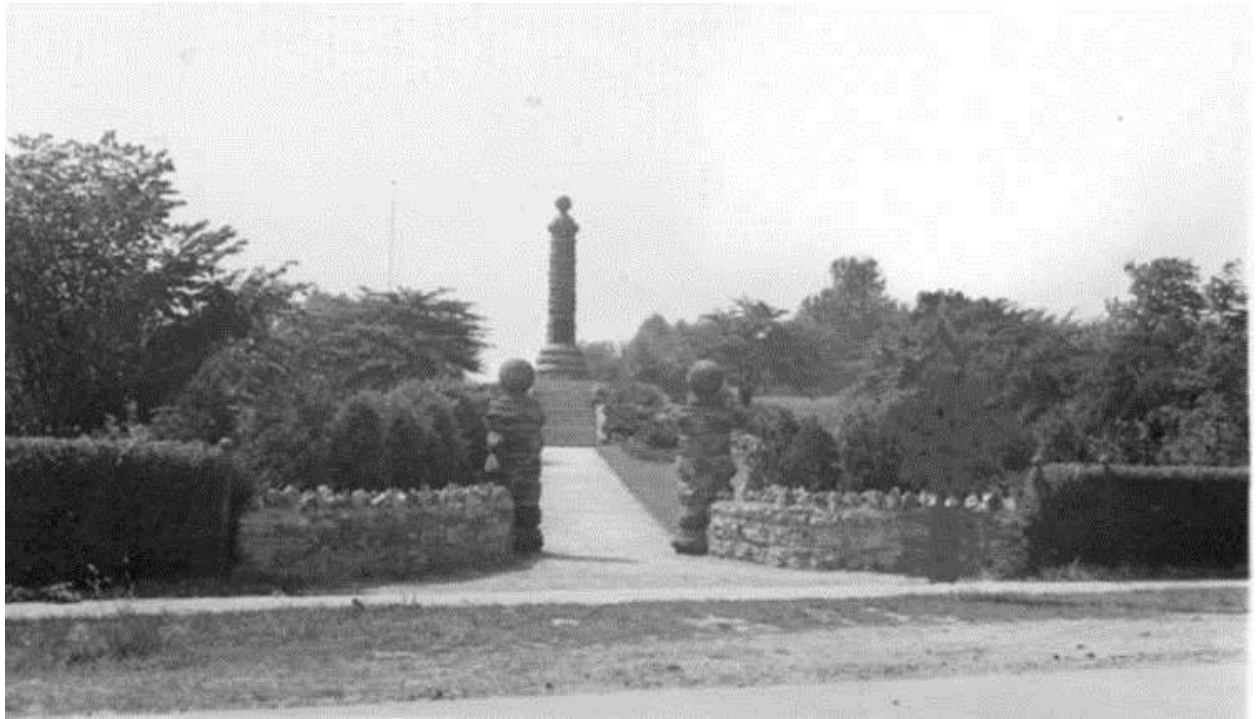


Figure The Entrance to the Old Fort Erie, [Francis J. Petrie Collection](#), [Niagara Falls Public Library Digital Collections](#), Record ID 94932, probable date, post-1939.



Figure 30 Photograph dated 1939 showing lakeside entrance to fort. The drain found in Unit B can be seen in the mid-foreground draining the ditch surrounding the ravelin.

Appendix D

Artifact Tables by Unit

Area 1

Table 8.4			
Unit A - Group and Class	Frequency	Class %	Group %
Architectural			
Construction Material	43	17.2	
Nails	82	32.8	
Window Glass	125	50.0	
Architectural Total	250	100.0	26.3
Arms and Military			
AmmUnition/Artillery	1	50.0	
Gunflint	1	50.0	
Arms and Military Total	2	100.0	0.2
Commercial/Industrial Activities			
Blacksmithing	7	87.5	
Currency	1	12.5	
Commercial/Industrial Activities Total	8	100.0	0.8
Faunal/Floral			
Bone	326	100.0	
Faunal/Floral Total	326	100.0	34.4
Food Preparation and Consumption			
Ceramic Cooking/Storage	1	0.6	
Ceramic Tableware	97	59.1	
Glass Beverage Containers	2	1.2	
Unspecified Glass Container	64	39.0	
Food Preparation/Consumption Total	164	100.0	17.3
Fuel			
Cooking/Heating	16	100.0	
Fuel Total	16	100.0	1.7
Native			
Historic Period Artifacts	1	0.8	
Lithic	123	99.2	
Native Total	124	100.0	13.1
Smoking			
Pipes	6	100.0	
Smoking Total	6	100.0	0.6
Unassigned Material			
Miscellaneous Material	53	100.0	
Unassigned Material Total	53	100.0	5.6
A Grand Total	949		100.0

A	
Food Preparation and Consumption	
Ceramic Tableware	
Banded	1
Blue Transfer	2
Creamware, Feather Edge	2
Plain	91
Porcelain	1
Ceramic Tableware Total	97
A Total	97
Grand Total	97

Table 8.5			
Unit B - Group and Class	Frequency	Class %	Group %
Architectural			
Construction Material	415	33.6	
Door and Window Hardware	2	0.2	
Nails	346	28.0	
Window Glass	471	38.2	
Architectural Total	1234	100.0	44.5
Arms and Military			
AmmUnition/Artillery	14	100.0	
Arms and Military Total	14	100.0	0.5
Clothing			
Fasteners	12	100.0	
Clothing Total	12	100.0	0.4
Commercial/Industrial Activities			
Blacksmithing	17	81.0	
Currency	4	19.0	
Commercial/Industrial Activities Total	21	100.0	0.8
Domestic Activities			
General Storage	6	100.0	
Domestic Activities Total	6	100.0	0.2
Faunal/Floral			
Bone	953	100.0	
Faunal/Floral Total	953	100.0	34.4
Food Preparation and Consumption			
Ceramic Tableware	263	78.3	
Glass Beverage Containers	23	6.8	
Glass Tableware	45	13.4	
Utensils	5	1.5	
Food Preparation/Consumption Total	336	100.0	12.1
Fuel			
Cooking/Heating	13	100.0	
Fuel Total	13	100.0	0.5
Native			
Ceramics	2	3.2	
Lithic	61	96.8	
Native Total	63	100.0	2.3
Smoking			
Pipes	2	100.0	
Smoking Total	2	100.0	0.1

Unassigned Material			
Miscellaneous Material	119	100.0	
Unassigned Material Total	119	100.0	4.3
A Grand Total	2773		100.0

B	
Food Preparation and Consumption	
Ceramic Tableware	
Creamware, Feather Edge	2
Edged	2
Hard Paste Porcelain Painted	4
Painted	7
Painted, Unknown Palette	2
Pearlware	4
Plain	230
Porcelain	6
Soft Paste Painted	2
White Salt-Glazed	4
Ceramic Tableware Total	263
B Total	263
Grand Total	263

Table 8.6			
Unit C - Group and Class	Frequency	Class %	Group %
Architectural			
Construction Material	594	82.7	
Door and Window Hardware	1	0.1	
Fasteners	3	0.4	
Nails	88	12.3	
Window Glass	32	4.5	
Architectural Total	718	100.0	53.0
Arms and Military			
AmmUnition/Artillery	9	90.0	
Musket and Rifle	1	10.0	
Arms and Military Total	10	100.0	0.7
Commercial/Industrial Activities			
Blacksmithing	251	99.6	
Currency	1	0.4	
Commercial/Industrial Activities Total	252	100.0	18.6
Domestic Activities			
Sewing	2	100.0	
Domestic Activities Total	2	100.0	0.1
Faunal/Floral			
Bone	122	97.6	
Other Organic - Fish Scale	2	1.6	
Shell	1	0.8	
Faunal/Floral Total	125	100.0	9.2
Food Preparation and Consumption			
Ceramic Tableware	27	61.4	
Glass Tableware	16	36.4	
Other Containers	1	2.3	

Food Preparation/Consumption Total	44	100.0	3.2
Fuel			
Cooking/Heating	101	100.0	
Fuel Total	101	100.0	7.5
Native			
Lithic	93	100.0	
Native Total	93	100.0	6.9
Smoking			
Pipes	4	100.0	
Smoking Total	4	100.0	0.3
Unassigned Material			
Miscellaneous Hardware	2	40.0	
Miscellaneous Material	3	60.0	
Unassigned Material Total	5	100.0	0.4
C Grand Total	1354		100.0

C	
Food Preparation and Consumption	
Ceramic Tableware	
Creamware - Plain	1
Painted	2
Painted, Unknown Palette	1
Plain	19
Soft Paste Painted	1
(blank)	3
Ceramic Tableware Total	27
C Total	27
Grand Total	27

Table 8.7			
Unit D - Group and Class	Frequency	Class %	Group %
Activities			
Hand/Maintenance Tools	6	6.1	
Stable/Barn	93	93.9	
Activities Total	99	100.0	1.8
Architectural			
Construction Material	2781	91.1	
Fasteners	2	0.1	
Nails	198	6.5	
Window Glass	72	2.4	
Architectural Total	3053	100.0	54.7
Arms and Military			
AmmUnition/Artillery	28	68.3	
Musket and Rifle	5	12.2	
Uniform Insignia	8	19.5	
Arms and Military Total	41	100.0	0.7
Clothing			
Fasteners	3	100.0	
Clothing Total	3	100.0	0.1
Commercial/Industrial Activities			
Blacksmithing	282	99.3	
Miscellaneous Material	2	0.7	
Commercial/Industrial Activities Total	284	100.0	5.1
Faunal/Floral			
Bone	197	92.1	
Other Organic - Fish Scale	12	5.6	
Shell	5	2.3	
Faunal/Floral Total	214	100.0	3.8

Food Preparation and Consumption			
Ceramic Cooking/Storage	9	5.5	
Ceramic Tableware	141	86.5	
Glass Beverage Containers	12	7.4	
Metal Cooking Ware	1	0.6	
Food Preparation/Consumption Total	163	100.0	2.9
Fuel			
Cooking/Heating	1414	100.0	
Fuel Total	1414	100.0	25.3
Furniture			
Hardware	1	100.0	
Furniture Total	1	100.0	0.0
Native			
Ceramics	2	1.0	
Jewellery/Ornamentation	1	0.5	
Lithic	195	98.5	
Native Total	198	100.0	3.5
Smoking			
Pipes	7	100.0	
Smoking Total	7	100.0	0.1
Unassigned Material			
Miscellaneous Hardware	3	2.9	
Miscellaneous Material	101	97.1	
Unassigned Material Total	104	100.0	1.9
D Grand Total	5581		100.0

D	
Food Preparation and Consumption	
Ceramic Tableware	
Banded	2
Blue Transfer	6
Creamware, Feather Edge	1
Creamware, Other Decor	1
Edged	4
Fine Earthenware Jackfield	1
Hard Paste Porcelain Other Décor	2
Jasperware	1
Painted, Early Palette	1
Painted, Unknown Palette	1
Pearlware	1
Plain	105
Soft Paste Painted	1
Soft Paste Porcelain, Plain	2
Tin Glazed Blue on White, England and Holland	2
White Salt-Glazed	1
(blank)	9
Ceramic Tableware Total	141
D Total	141
Grand Total	141

Table 8.8			
Unit E - Group and Class	Frequency	Class %	Group %
Activities			
Hand/Maintenance Tools	1	33.3	
Stable/Barn	2	66.7	
Activities Total	3	100.0	0.1
Architectural			
Construction Material	2708	76.1	
Door and Window Hardware	1	0.0	
Fasteners	11	0.3	
Nails	218	6.1	
Other Hardware	541	15.2	
Window Glass	78	2.2	
Architectural Total	3557	100.0	76.7
Arms and Military			
AmmUnition/Artillery	10	76.9	
Musket and Rifle	3	23.1	
Arms and Military Total	13	100.0	0.3
Clothing			
Fasteners	1	100.0	
Clothing Total	1	100.0	0.0
Commercial/Industrial Activities			
Blacksmithing	51	100.0	
Commercial/Industrial Activities Total	51	100.0	1.1
Domestic Activities			
General Storage	2	22.2	
Sewing	7	77.8	
Domestic Activities Total	9	100.0	0.2

Faunal/Floral			
Bone	746	100.0	
Faunal/Floral Total	746	100.0	16.1
Food Preparation and Consumption			
Ceramic Cooking/Storage	9	5.0	
Ceramic Tableware	104	57.5	
Glass Beverage Containers	68	37.6	
Food Preparation/Consumption Total	181	100.0	3.9
Fuel			
Cooking/Heating	38	100.0	
Fuel Total	38	100.0	0.8
Native			
Ceramics	7	38.9	
Lithic	11	61.1	
Native Total	18	100.0	0.4
Smoking			
Pipes	12	100.0	
Smoking Total	12	100.0	0.3
Unassigned Material			
Miscellaneous Hardware	3	37.5	
Miscellaneous Material	3	37.5	
Musket and Rifle	2	25.0	
Unassigned Material Total	8	100.0	0.2
E Grand Total	4637		

E	
Food Preparation and Consumption	
Ceramic Tableware	
Blue Transfer	5
Delftware, Tin Glazed, Faience	2
Edged	1
Fine Earthenware	1
Other Décor	1
Other Transfer	1
Painted	5
Plain	84
Soft Paste Painted	1
Tin Glazed Blue on White, England and Holland	2
(blank)	1
Ceramic Tableware Total	104
E Total	104
Grand Total	104

Area 2

Table 8.9			
Unit F - Group and Class	Frequency	Class %	Group %
Activities			
Fishing	1	100.0	
Activities Total	1	100.0	0.1
Architectural			
Construction Material	80	19.4	
Fasteners	2	0.5	
Nails	266	64.6	
Window Glass	64	15.5	
Architectural Total	412	100.0	49.0
Arms and Military			
AmmUnition/Artillery	2	40.0	
Gunflint	1	20.0	
Uniform Insignia	2	40.0	
Arms and Military Total	5	100.0	0.6
Clothing			
Fasteners	8	100.0	
Clothing Total	8	100.0	1.0
Commercial/Industrial Activities			
Blacksmithing	12	100.0	
Commercial/Industrial Activities Total	12	100.0	1.4
Domestic Activities			
Sewing	1	100.0	
Domestic Activities Total	1	100.0	0.1
Faunal/Floral			
Bone	34	97.1	
Shell	1	2.9	

Faunal/Floral Total	35	100.0	4.2
Food Preparation and Consumption			
Ceramic Cooking/Storage	5	2.2	
Ceramic Tableware	169	74.4	
Glass Beverage Containers	53	23.3	
Food Preparation/Consumption Total	227	100.0	27.0
Fuel			
Cooking/Heating	33	100.0	
Fuel Total	33	100.0	3.9
Native			
Historic Period Artifacts	1	1.1	
Lithic	93	98.9	
Native Total	94	100.0	11.2
Smoking			
Pipes	10	100.0	
Smoking Total	10	100.0	1.2
Unassigned Material			
Miscellaneous Hardware	1	33.3	
Miscellaneous Material	2	66.7	
Unassigned Material Total	3	100.0	0.4
F Grand Total	841		100.0

F	
Food Preparation and Consumption	
Ceramic Tableware	
Banded	1
Blue Transfer	12
Creamware, Moulded (No Colour)	31
Edged	2
Fine Earthenware	3
Painted, Unknown Palette	8
Plain	99
Soft Paste Painted	6
Soft Paste Porcelain, Plain	7
Ceramic Tableware Total	169
Food Preparation and Consumption Total	169
F Total	169
Grand Total	169

Table 8.10			
Unit G - Group and Class	Frequency	Class %	Group %
Activities			
Fishing	1	100.0	
Activities Total	1	100.0	0.04
Architectural			
Construction Material	872	68.8	
Glass Tableware	1	0.1	
Nails	309	24.4	
Window Glass	85	6.7	
Architectural Total	1267	100.0	47.1
Arms and Military			
AmmUniton/Artillery	2	33.3	
Gunflint	1	16.7	
Musket and Rifle	1	16.7	
Uniform Insignia	2	33.3	
Arms and Military Total	6	100.0	0.2
Clothing			
Fasteners	8	100.0	
Clothing Total	8	100.0	0.3
Commercial/Industrial Activities			
Blacksmithing	37	100.0	
Commercial/Industrial Activities Total	37	100.0	1.4
Domestic Activities			
Sewing	4	100.0	
Domestic Activities Total	4	100.0	0.1
Faunal/Floral			
Bone	245	100.0	
Faunal/Floral Total	245	100.0	9.1

Food Preparation and Consumption			
Ceramic Cooking/Storage	33	6.6	
Ceramic Tableware	400	80.5	
Glass Beverage Containers	36	7.2	
Glass Tableware	25	5.0	
Unspecified Glass Container	3	0.6	
Food Preparation/Consumption Total	497	100.0	18.5
Fuel			
Cooking/Heating	39	100.0	
Fuel Total	39	100.0	1.5
Native			
Ceramics	1	0.2	
Lithic	552	99.8	
Native Total	553	100.0	20.6
Smoking			
Pipes	11	100.0	
Smoking Total	11	100.0	0.4
Unassigned Material			
Miscellaneous Material	19	95.0	
(blank)	1	5.0	
Unassigned Material Total	20	100.0	0.7
G Grand Total	2688		

G	
Food Preparation and Consumption	
Ceramic Tableware	
Banded	1
Banded Mocha	2
Bat Printed (Stipple Overglaze 1800-1820)	1
Blue Transfer	19
Bone China Plain	1
Creamware, Moulded (No Colour)	17
Creamware, Other Decor	5
Edged	1
Fine Earthenware	2
Hard Paste Porcelain Other Décor	4
Hard Paste Porcelain Painted	3
Hard Paste Porcelain Plain	1
Other Décor	1
Other Transfer	6
Painted	3
Painted, Unknown Palette	9
Pearlware, Early Palette	1
Plain	294
Rosso Antico	5
Royal Pattern	9
Soft Paste Painted	8
Soft Paste Porcelain, Other Decor	1
Tin Glazed Blue on White, England and Holland	1
Transfer Print	1
White Salt-Glazed Scratch Blue	3
(blank)	1
Ceramic Tableware Total	400
G Total	400

Table 8.11			
Unit H - Group and Class	Frequency	Class %	Group %
Architectural			
Construction Material	52	7.6	
Nails	542	79.7	
Window Glass	86	12.6	
Architectural Total	680	100.0	23.0
Arms and Military			
AmmUnition/Artillery	2	25.0	
Gunflint	1	12.5	
Musket and Rifle	2	25.0	
Uniform Insignia	3	37.5	
Arms and Military Total	8	100.0	0.3
Clothing			
Fasteners	24	100.0	
Clothing Total	24	100.0	0.8
Commercial/Industrial Activities			
Blacksmithing	5	100.0	
Commercial/Industrial Activities Total	5	100.0	0.2
Domestic Activities			
General Storage	2	66.7	
Sewing	1	33.3	
Domestic Activities Total	3	100.0	0.1
Faunal/Floral			
Bone	788	98.9	
Shell	9	1.1	
Faunal/Floral Total	797	100.0	27.0
Food Preparation and Consumption			

Ceramic Cooking/Storage	15	2.3	
Ceramic Tableware	541	82.7	
Unspecified Glass Container	98	15.0	
Food Preparation/Consumption Total	654	100.0	22.1
Fuel			
Cooking/Heating	704	100.0	
Fuel Total	704	100.0	23.8
Native			
Ceramics	3	9.4	
Jewellery/Ornamentation	1	3.1	
Lithic	27	84.4	
Toys and Leisure	1	3.1	
Native Total	32	100.0	1.1
Smoking			
Pipes	17	100.0	
Smoking Total	17	100.0	0.6
Unassigned Material			
Miscellaneous Hardware	2	6.3	
Miscellaneous Material	30	93.8	
Unassigned Material Total	32	100.0	1.1
H Grand Total	2956		

H	
Food Preparation and Consumption	
Ceramic Tableware	
Banded	4
Blue Transfer	13
Creamware, Moulded (No Colour)	18
Edged	3
Fine Earthenware	31
Moulded	10
Other Décor	1
Other Transfer	1
Painted	1
Painted, Unknown Palette	6
Pearlware, Early Palette	10
Plain	415
Soft Paste Painted	10
Soft Paste Porcelain	10
Soft Paste Porcelain, Other Decor	2
Transfer Print	5
White Salt-Glazed	1
Ceramic Tableware Total	541
H Total	541
Grand Total	541

Table 8.12			
Unit J - Group and Class	Frequency	Class %	Group %
Activities			
Fishing	2	100.0	
Hand/Maintenance Tools	0	0.0	
Activities Total	2	100.0	0.1
Architectural			
Construction Material	274	29.8	
Door and Window Hardware	2	0.2	
Fasteners	2	0.2	
Nails	503	54.8	
Window Glass	137	14.9	
Architectural Total	918	100.0	30.7
Arms and Military			
Gunflint	1	20.0	
Uniform Insignia	4	80.0	
Arms and Military Total	5	100.0	0.2
Clothing			
Fasteners	10	100.0	
Clothing Total	10	100.0	0.3
Commercial/Industrial Activities			
Blacksmithing	6	85.7	
Currency	1	14.3	
Commercial/Industrial Activities Total	7	100.0	0.2
Domestic Activities			
General Storage	1	14.3	
Sewing	6	85.7	
Domestic Activities Total	7	100.0	0.2
Faunal/Floral			

Bone	796	96.4	
Other Organic - Fish Scale	2	0.2	
Shell	28	3.4	
Faunal/Floral Total	826	100.0	27.7
Food Preparation and Consumption			
Ceramic Cooking/Storage	6	0.7	
Ceramic Tableware	769	83.9	
Glass Beverage Containers	35	3.8	
Glass Tableware	57	6.2	
Metal Cooking Ware	1	0.1	
Unspecified Glass Container	49	5.3	
Food Preparation/Consumption Total	917	100.0	30.7
Fuel			
Cooking/Heating	62	100.0	
Fuel Total	62	100.0	2.1
Furniture			
Hardware	2	100.0	
Furniture Total	2	100.0	0.1
Medical/Hygiene			
Grooming and Hygiene	2	100.0	
Medical/Hygiene Total	2	100.0	0.1
Native			
Ceramics	5	4.7	
Lithic	100	93.5	
Pipes	2	1.9	
Native Total	107	100.0	3.6
Smoking			
Pipes	38	100.0	
Smoking Total	38	100.0	1.3

Unassigned Material			
Miscellaneous Hardware	4	4.8	
Miscellaneous Material	80	95.2	
Unassigned Material Total	84	100.0	2.8
J Grand Total	2987		

J	
Food Preparation and Consumption	
Ceramic Tableware	
Banded	11
Blue Transfer	25
Creamware, Other Decor	45
Edged	12
Fine Earthenware	40
Fine Earthenware Jackfield	3
Fine Earthenware Slip-Banded	3
Hard Paste Porcelain	3
Jasperware	3
Other Décor	1
Painted	3
Painted, Unknown Palette	14
Pearlware	43
Pearlware, Late Palette	4
Plain	483
Porcelain	22
Soft Paste Painted	12
Soft Paste Porcelain	12
Soft Paste Porcelain, Plain	1
Transfer Print	6
Vitrified White Earthenware	5
White Salt-Glazed	12
Yellowware, Plain	1
(blank)	5
Ceramic Tableware Total	769
J Total	769
Grand Total	769

Table 8.13			
Unit K - Group and Class	Frequency	Class %	Group %
Architectural			
Construction Material	902	83.8	
Door and Window Hardware	13	1.2	
Nails	141	13.1	
Window Glass	21	1.9	
Architectural Total	1077	100.0	79.2
Arms and Military			
AmmUnition/Artillery	1	100.0	
Arms and Military Total	1	100.0	0.1
Clothing			
Fasteners	2	100.0	
Clothing Total	2	100.0	0.1
Commercial/Industrial Activities			
Blacksmithing	1	100.0	
Commercial/Industrial Activities Total	1	100.0	0.1
Faunal/Floral			
Bone	79	100.0	
Faunal/Floral Total	79	100.0	5.8
Food Preparation and Consumption			
Ceramic Cooking/Storage	6	3.2	
Ceramic Tableware	171	92.4	
Glass Beverage Containers	8	4.3	
Food Preparation/Consumption Total	185	100.0	13.6
Native			
Ceramics	4	100.0	
Native Total	4	100.0	0.3
Smoking			

Pipes	5	100.0	
Smoking Total	5	100.0	0.4
Unassigned Material			
Miscellaneous Material	5	100.0	
Unassigned Material Total	5	100.0	0.4
K Grand Total	1359		

K	
Food Preparation and Consumption	
Ceramic Tableware	
Banded	1
Blue Transfer	7
Creamware, Other Decor	88
Edged	3
Painted, Unknown Palette	7
Pearlware	1
Plain	54
Porcelain	9
(blank)	1
Ceramic Tableware Total	171
K Total	171
Grand Total	171

Table 8.14			
Unit M - Group and Class	Frequency	Class %	Group %
Activities			
Fishing	2	100.0	
Activities Total	2	100.0	0.1
Architectural			
Construction Material	812	57.0	
Nails	482	33.8	
Window Glass	131	9.2	
Architectural Total	1425	100.0	42.3
Arms and Military			
AmmUnition/Artillery	1	20.0	
Uniform Insignia	4	80.0	
Arms and Military Total	5	100.0	0.1
Clothing			
Fasteners	10	100.0	
Clothing Total	10	100.0	0.3
Commercial/Industrial Activities			
Blacksmithing	1	50.0	
Pottery Manufacture Coarse Red Earthenware	1	50.0	
Commercial/Industrial Activities Total	2	100.0	0.1
Domestic Activities			
Cleaning	1	8.3	
Sewing	11	91.7	
Domestic Activities Total	12	100.0	0.4
Faunal/Floral			
Bone	478	99.0	
Other Organic - Fish Scale	4	0.8	

Shell	1	0.2	
Faunal/Floral Total	483	100.0	14.3
Food Preparation and Consumption			
Ceramic Cooking/Storage	46	5.0	
Ceramic Tableware	783	84.9	
Glass Beverage Containers	51	5.5	
Glass Tableware	32	3.5	
Unspecified Glass Container	9	1.0	
Utensils	1	0.1	
Food Preparation/Consumption Total	922	100.0	27.4
Fuel			
Cooking/Heating	113	100.0	
Fuel Total	113	100.0	3.4
Furniture			
Hardware	3	33.3	
Lighting Devices	6	66.7	
Furniture Total	9	100.0	0.3
Medical/Hygiene			
Pharmaceutical Containers	2	100.0	
Medical/Hygiene Total	2	100.0	0.1
Native			
Ceramics	8	2.5	
Lithic	308	96.9	
Personal Items	2	0.6	
Native Total	318	100.0	9.4
Smoking			
Pipes	18	100.0	
Smoking Total	18	100.0	0.5
Unassigned Material			

Miscellaneous Material	49	100.0	
Unassigned Material Total	49	100.0	1.5
M Grand Total	3370		

M	
Food Preparation and Consumption	
Ceramic Tableware	
Banded	4
Blue Transfer	65
Creamware - Plain	1
Creamware, Other Decor	1
Edged	6
Fine Earthenware	1
Hard Paste Porcelain	1
n/a	2
Other Décor	4
Other Transfer	9
Painted	4
Painted, Unknown Palette	7
Pearlware	35
Pearlware, Early Palette	5
Pearlware, Late Palette	6
Plain	423
Royal Pattern	138
Soft Paste Painted	13
Soft Paste Porcelain	3
Soft Paste Porcelain, Other Decor	13
Soft Paste Porcelain, Plain	6
Staffordshire-type	4
Tin Glazed Polychrome	5
Transfer Print	6
White Salt-Glazed	4
White Salt-Glazed Scratch Blue	1
Yellowware, Plain	2
(blank)	14
Ceramic Tableware Total	783
M Total	783
Grand Total	783

Table 8.15			
Unit N - Group and Class	Frequency	Class %	Group %
Activities			
Hand/Maintenance Tools	1	100.0	
Activities Total	1	100.0	0.0
Architectural			
Construction Material	1090	70.2	
Nails	312	20.1	
Window Glass	150	9.7	
Architectural Total	1552	100.0	44.7
Arms and Military			
AmmUnition/Artillery	1	50.0	
Gunflint	1	50.0	
Arms and Military Total	2	100.0	0.1
Clothing			
Fasteners	14	93.3	
Jewellery/Ornamentation	1	6.7	
Clothing Total	15	100.0	0.4
Commercial/Industrial Activities			
Blacksmithing	2	66.7	
Currency	1	33.3	
Commercial/Industrial Activities Total	3	100.0	0.1
Domestic Activities			
General Storage	1	11.1	
Sewing	8	88.9	
Domestic Activities Total	9	100.0	0.3
Food Preparation and Consumption			
Ceramic Cooking/Storage	38	4.4	
Ceramic Tableware	691	79.4	

Glass Beverage Containers	104	12.0	
Glass Tableware	1	0.1	
Unspecified Glass Container	34	3.9	
Utensils	2	0.2	
Food Preparation/Consumption Total	870	100.0	25.1
Fuel			
Cooking/Heating	407	100.0	
Fuel Total	407	100.0	11.7
Medical/Hygiene			
Grooming and Hygiene	1	100.0	
Medical/Hygiene Total	1	100.0	0.0
Native			
Lithic	543	99.8	
Toys and Leisure	1	0.2	
Native Total	544	100.0	15.7
Smoking			
Pipes	11	100.0	
Smoking Total	11	100.0	0.3
Unassigned Material			
Miscellaneous Material	54	100.0	
Unassigned Material Total	54	100.0	1.6
N Total	3469		100.0
Grand Total	3469		

N	
Food Preparation and Consumption	
Ceramic Tableware	
Banded	4
Blue Transfer	93
Blue Transfer Pearlware	1
Bone China Painted	3
Bone China Plain	7
Creamware - Plain	18
Edged	26
Fine Earthenware	7
Other Transfer	3
Painted	7
Painted, Unknown Palette	26
Pearlware	1
Pearlware (Other)	1
Pearlware, Sponge/Spatter	2
Plain	476
Polychrome	1
Porcelain	5
Royal Pattern	1
Royal Pattern Creamware	3
Slip-Trailed Redware	1
Soft Paste Porcelain	1
Sponged/Stamped	1
White - Plain	2
(blank)	1
Ceramic Tableware Total	691
N Total	691
Grand Total	691

Table 8.16			
Unit P - Group and Class	Frequency	Class %	Group %
Activities			
Hand/Maintenance Tools	1	100.0	
Activities Total	1	100.0	0.02
Architectural			
Construction Material	432	18.5	
Door and Window Hardware	1	0.0	
Fasteners	6	0.3	
Nails	1684	72.0	
Window Glass	215	9.2	
Architectural Total	2338	100.0	35.8
Arms and Military			
Musket and Rifle	1	50.0	
Uniform Insignia	1	50.0	
Arms and Military Total	2	100.0	0.03
Clothing			
Fasteners	26	96.3	
Jewellery/Ornamentation	1	3.7	
Clothing Total	27	100.0	0.4
Commercial/Industrial Activities			
Blacksmithing	5	83.3	
Currency	1	16.7	
Commercial/Industrial Activities Total	6	100.0	0.1
Domestic Activities			
General Storage	1	1.2	
Sewing	84	100.0	
Domestic Activities Total	85	101.2	1.3
Faunal/Floral			

Bone	2176	99.3	
Other Organic - Fish Scale	2	0.1	
Shell	14	0.6	
Faunal/Floral Total	2192	100.0	33.5
Food Preparation and Consumption			
Ceramic Cooking/Storage	89	6.7	
Ceramic Tableware	1045	79.0	
Glass Beverage Containers	85	6.4	
Glass Tableware	7	0.5	
Metal Cooking Ware	2	0.2	
Unspecified Glass Container	92	7.0	
Utensils	2	0.2	
Food Preparation/Consumption Total	1322	100.0	20.2
Fuel			
Cooking/Heating	298	100.0	
Fuel Total	298	100.0	4.6
Furniture			
Hardware	5	100.0	
Furniture Total	5	100.0	0.1
Medical/Hygiene			
Pharmaceutical Containers	15	100.0	
Medical/Hygiene Total	15	100.0	0.2
Native			
Historic Period Artifacts	2	1.4	
Lithic	135	97.8	
Toys and Leisure	1	0.7	
Native Total	138	100.0	2.1
Smoking			
Pipes	16	100.0	

Smoking Total	16	100.0	0.2
Unassigned Material			
Miscellaneous Material	92	100.0	
Unassigned Material Total	92	100.0	1.4
P Grand Total	6537		

P	
Food Preparation and Consumption	
Ceramic Tableware	
Banded	9
Blue Transfer	17
Cream Colour/Ivory ware	22
Edged	49
Hard Paste Porcelain Painted	2
Industrial Slip	4
Moulded	1
Other Transfer	2
Painted	20
Painted, Unknown Palette	20
Pearlware	146
Pearlware, Late Palette	2
Plain	686
Polychrome	2
Soft Paste Painted	12
Soft Paste Porcelain	4
Soft Paste Porcelain, Other Decor	11
Soft Paste Porcelain, Plain	2
Transfer Print	9
White Salt-Glazed	1
Yellowware, Plain	6
(blank)	18
Ceramic Tableware Total	1045
P Total	1045
Grand Total	1045

Table 8.17			
Unit Q - Group and Class	Frequency	Class %	Group %
Activities			
Hand/Maintenance Tools	1	100.0	
Activities Total	1	100.0	0.05
Architectural			
Construction Material	316	41.0	
Nails	369	47.9	
Other Hardware	7	0.9	
Window Glass	79	10.2	
Architectural Total	771	100.0	38.3
Clothing			
Fasteners	5	100.0	
Clothing Total	5	100.0	0.2
Commercial/Industrial Activities			
Blacksmithing	1	100.0	
Commercial/Industrial Activities Total	1	100.0	0.05
Domestic Activities			
Cleaning	2	11.1	
Sewing	16	88.9	
Domestic Activities Total	18	100.0	0.9
Faunal/Floral			
Bone	337	100.0	
Faunal/Floral Total	337	100.0	16.8
Food Preparation and Consumption			
Ceramic Cooking/Storage	27	4.1	
Ceramic Tableware	557	85.4	
Glass Beverage Containers	14	2.1	
Glass Tableware	53	8.1	

Metal Cooking Ware	1	0.2	
Food Preparation/Consumption Total	652	100.0	32.4
Fuel			
Cooking/Heating	155	100.0	
Fuel Total	155	100.0	7.7
Furniture			
Hardware	1	100.0	
Furniture Total	1	100.0	0.05
Native			
Historic Period Artifacts	19	43.2	
Lithic	24	54.5	
Personal Items	1	2.3	
Native Total	44	100.0	2.2
Smoking			
Pipes	8	100.0	
Smoking Total	8	100.0	0.4
Unassigned Material			
Miscellaneous Material	18	100.0	
Unassigned Material Total	18	100.0	0.90
Q Grand Total	2011		

Q	
Food Preparation and Consumption	
Ceramic Tableware	
Banded	4
Blue Transfer	28
Creamware, Feather Edge	1
Edged	31
Fine Earthenware	1
Hard Paste Porcelain	1
Hard Paste Porcelain Painted	16
Industrial Slip	1
Painted	7
Painted, Unknown Palette	1
Plain	455
Porcelain	3
Slip Banded	1
Slipware	1
Soft Paste Painted	2
Transfer Print	1
Yellowware, Plain	3
Ceramic Tableware Total	557
Q Total	557
Grand Total	557

Table 8.18			
Unit R - Group and Class	Frequency	Class %	Group %
Architectural			
Construction Material	361	28.7	
Door and Window Hardware	2	0.2	
Fasteners	1	0.1	
Nails	479	38.1	
Window Glass	415	33.0	
Architectural Total	1258	100.0	50.2
Arms and Military			
AmmUnition/Artillery	2	50.0	
Gunflint	1	25.0	
Uniform Insignia	1	25.0	
Arms and Military Total	4	100.0	0.2
Clothing			
Fasteners	9	90.0	
Jewellery/Ornamentation	1	10.0	
Clothing Total	10	100.0	0.4
Commercial/Industrial Activities			
Blacksmithing	17	85.0	
Currency	1	5.0	
Miscellaneous Material	2	10.0	
Commercial/Industrial Activities Total	20	100.0	0.8
Faunal/Floral			
Bone	178	98.3	
Shell	3	1.7	
Faunal/Floral Total	181	100.0	7.2
Food Preparation and Consumption			
Ceramic Cooking/Storage	17	2.1	

Ceramic Tableware	688	83.6	
Glass Beverage Containers	114	13.9	
Metal Cooking Ware	1	0.1	
Unspecified Glass Container	1	0.1	
Utensils	2	0.2	
Food Preparation/Consumption Total	823	100.0	32.8
Fuel			
Cooking/Heating	45	100.0	
Fuel Total	45	100.0	1.8
Furniture			
Hardware	3	100.0	
Furniture Total	3	100.0	0.1
Medical/Hygiene			
Pharmaceutical Containers	23	100.0	
Medical/Hygiene Total	23	100.0	0.9
Native			
Historic Period Artifacts	1	1.0	
Lithic	96	99.0	
Native Total	97	100.0	3.9
Smoking			
Pipes	16	100.0	
Smoking Total	16	100.0	0.6
Unassigned Material			
Miscellaneous Material	28	96.4	
Unassigned Material Total	28	100.0	1.1
R Grand Total	2508		

R	
Food Preparation and Consumption	
Ceramic Tableware	
Banded	3
Blue Transfer	17
Edged	12
Fine Earthenware	4
Fulham/Lambeth	1
Hard Paste Porcelain Other Décor	2
Painted	23
Painted, Unknown Palette	17
Pearlware	6
Pearlware, Early Palette	4
Plain	491
Porcelain	1
Refined White Earthenware	6
Salt-Glazed	35
Soft Paste Painted	2
Soft Paste Porcelain	2
Soft Paste Porcelain, Other Decor	8
Soft Paste Porcelain, Plain	9
Tin Glazed Sponged	3
Transfer Print	5
White Salt-Glazed Barley	1
(blank)	36
Ceramic Tableware Total	688
Grand Total	688

Table 8.19			
Unit X - Group and Class	Frequency	Class %	Group %
Architectural			
Construction Material	1288	88.9	
Cooking/Heating	49	3.4	
Nails	33	2.3	
Wall Finishing	4	0.3	
Window Glass	75	5.2	
Architectural Total	1449	100.0	63.7
Arms and Military			
AmmUnition/Artillery	1	100.0	
Arms and Military Total	1	100.0	0.04
Clothing			
Fasteners	2	100.0	
Clothing Total	2	100.0	0.1
Faunal/Floral			
Bone	243	97.6	
Other Organic - wood	6	2.4	
Faunal/Floral Total	249	100.0	11.0
Food Preparation and Consumption			
Ceramic Cooking/Storage	25	4.9	
Ceramic Tableware	399	78.2	
Glass Storage Containers	84	16.5	
Glass Tableware	2	0.4	
Food Preparation and Consumption Total	510	100.0	22.4
Fuel			
Cooking/Heating	20	100.0	
Fuel Total	20	100.0	0.9
Smoking			

Pipes	10	100.0	
Smoking Total	10	100.0	0.4
Unassigned Material			
Miscellaneous Hardware	3	9.7	
Miscellaneous Material	28	90.3	
Unassigned Material Total	31	100.0	1.4
(blank)	1	100.0	
(blank) Total	1	100.0	0.04
X Grand Total	2273		

X	
Food Preparation and Consumption	
Ceramic Tableware	
Blue Transfer	2
Creamware, Plain	131
Creamware, Transfer Print	1
n/a	1
Painted	3
Painted, Unknown Palette	2
Pearlware	20
Pearlware - Blue Transfer	10
Pearlware - Edged	16
Pearlware - Transfer Printed	4
Pearlware, Plain	16
Plain	62
Porcelain	5
Refined White Earthenware - blue transfer print	11
Refined White Earthenware - edged	7
Refined White Earthenware - moulded	2
Refined White Earthenware - other transfer	1
Refined White Earthenware - plain	95
Refined White Earthenware, Unknown Palette	4
Slipware	1
Unidentifiable	1
Yellowware, Plain	1
(blank)	3
Ceramic Tableware Total	399
X Total	399
Grand Total	399

Table 8.20			
Unit Y - Group and Class	Frequency	Class %	Group %
Architectural			
Construction Material	1068	79.8	
Nails	173	12.9	
Window Glass	97	7.2	
Architectural Total	1338	100.0	66.5
Arms and Military			
AmmUnition/Artillery	1	100.0	
Arms and Military Total	1	100.0	0.05
Commercial/Industrial Activities			
Railroad	3	100.0	
Commercial/Industrial Activities Total	3	100.0	0.1
Faunal/Floral			
Bone	157	98.1	
Other Organic - Coral	2	1.3	
Other Organic - Fish Scale	1	0.6	
Faunal/Floral Total	160	100.0	8.0
Food Preparation and Consumption			
Ceramic Cooking/Storage	62	13.9	
Ceramic Tableware	336	75.2	
Glass Storage Containers	26	5.8	
Glass Tableware	20	4.5	
n/a	1	0.2	
Unspecified Glass Container	2	0.4	
Food Preparation/Consumption Total	447	100.0	22.2
Fuel			
Cooking/Heating	40	100.0	
Fuel Total	40	100.0	2.0

Native			
Jewellery/Ornamentation	1	50.0	
Lithic	1	50.0	
Native Total	2	100.0	0.1
Organic			
Other Organic, non man made	1	100.0	
Organic Total	1	100.0	0.05
Personal			
Toys and Leisure	1	100.0	
Personal Total	1	100.0	0.05
Smoking			
Pipes	5	100.0	
Smoking Total	5	100.0	0.2
Unassigned Material			
Miscellaneous Material	14	100.0	
Unassigned Material Total	14	100.0	0.7
Y Grand Total	2012		

Y	
Food Preparation and Consumption	
Ceramic Tableware	
Banded Whiteware	1
Blue Transfer	7
Creamware - blue transfer	3
Creamware - painted	1
Creamware - Plain	140
Creamware, Transfer Print	6
Edged	1
Fine Earthenware	2
Ironstone- plain	8
n/a	12
Other Transfer	1
Pearlware - Blue Transfer	8
Pearlware - Edged	6
Pearlware, Plain	24
Pearlware/Refined Earthenware White Earthenware - Transitional	23
Plain	58
Plain ironstone	3
Porcelain	7
Refined White Earthenware - blue transfer	1
Refined White Earthenware - other transfer	1
Refined White Earthenware - plain	14
White Salt Glazed	3
Yellowware, Plain	6
Ceramic Tableware Total	336
Y Total	336
Grand Total	336

Area 3

Table 8.21			
Unit S - Group and Class	Frequency	Class %	Group %
Architectural			
Construction Material	2151	90.6	
Nails	128	5.4	
Window Glass	96	4.0	
Architectural Total	2375	100.0	44.6
Arms and Military			
AmmUnition/Artillery	2	66.7	
Gunflint	1	33.3	
Arms and Military Total	3	100.0	0.1
Clothing			
Fasteners	3	100.0	
Clothing Total	3	100.0	0.1
Domestic Activities			
Sewing	1	100.0	
Domestic Activities Total	1	100.0	0.02
Faunal/Floral			
Bone	167	99.4	
Other Organic - Fish Scale	1	0.6	
Faunal/Floral Total	168	100.0	3.2
Food Preparation and Consumption			
Ceramic Cooking/Storage	24	11.5	
Ceramic Tableware	156	75.0	
Glass Beverage Containers	24	11.5	
Glass Tableware	3	1.4	
Utensils	1	0.5	
Food Preparation/Consumption Total	208	100.0	3.9

Fuel			
Cooking/Heating	29	100.0	
Fuel Total	29	100.0	0.5
Furniture			
Hardware	1	100.0	
Furniture Total	1	100.0	0.0
Native			
Ceramics	6	0.2	
Lithic	2509	99.7	
Personal Items	1	0.0	
Native Total	2516	100.0	47.3
Smoking			
Pipes	12	100.0	
Smoking Total	12	100.0	0.2
Unassigned Material			
Miscellaneous Material	6	100.0	
Unassigned Material Total	6	100.0	0.1
S Grand Total	5322		

S	
Food Preparation and Consumption	
Ceramic Tableware	
Banded Mocha	1
Black Basalt	2
Blue Transfer	11
Creamware, Feather Edge	2
Delftware, Tin Glazed, Faience	3
Fine Earthenware	5
Fine Earthenware Jackfield	7
Moulded	1
Other Transfer	5
Painted	5
Painted, Unknown Palette	6
Pearlware	1
Plain	91
Polychrome Transfer	1
Soft Paste Painted	1
Soft Paste Porcelain, Other Decor	1
Tin Glazed Blue on White, England and Holland	1
Tin Glazed Sponged	2
Transfer Print	7
Yellowware, Plain	3
Ceramic Tableware Total	156
S Total	156
Grand Total	156

Table 8.22			
Unit T - Group and Class	Frequency	Class %	Group %
Architectural			
Construction Material	884	78.5	
Nails	101	9.0	
Window Glass	141	12.5	
Architectural Total	1126	100.0	46.3
Arms and Military			
AmmUnition/Artillery	2	50.0	
Uniform Insignia	2	50.0	
Arms and Military Total	4	100.0	0.2
Clothing			
Fasteners	1	100.0	
Clothing Total	1	100.0	0.04
Commercial/Industrial Activities			
Miscellaneous Material	2	100.0	
Commercial/Industrial Activities Total	2	100.0	0.1
Faunal/Floral			
Bone	124	96.9	
Shell	4	3.1	
Faunal/Floral Total	128	100.0	5.3
Food Preparation and Consumption			
Ceramic Cooking/Storage	7	5.6	
Ceramic Tableware	90	71.4	
Glass Beverage Containers	29	23.0	
Food Preparation/Consumption Total	126	100.0	5.2
Fuel			
Cooking/Heating	360	100.0	
Fuel Total	360	100.0	14.8

Native			
Lithic	677	0.0	
Native Total	677	0.0	27.8
Smoking			
Pipes	9	100.0	
Smoking Total	9	100.0	0.4
Unassigned Material			
Miscellaneous Material	1	100.0	
Unassigned Material Total	1	100.0	0.04
T Grand Total	2434		

T	
Food Preparation and Consumption	
Ceramic Tableware	
Banded	1
Blue Transfer	11
Creamware, Feather Edge	1
Hard Paste Porcelain Painted	1
Other Transfer	2
Pearlware	2
Plain	34
Porcelain	4
Rosso Antico	4
Soft Paste Painted	3
(blank)	27
Ceramic Tableware Total	90
T Total	90
Grand Total	90

Table 8.23			
Unit U - Group and Class	Frequency	Class %	Group %
Architectural			
Construction Material	370	71.2	
Nails	77	14.8	
Window Glass	73	14.0	
Architectural Total	520	100.0	37.9
Arms and Military			
Musket and Rifle	2	100.0	
Arms and Military Total	2	100.0	0.1
Clothing			
Fasteners	2	100.0	
Clothing Total	2	100.0	0.1
Commercial/Industrial Activities			
Currency	1	100.0	
Commercial/Industrial Activities Total	1	100.0	0.1
Domestic Activities			
Sewing	1	100.0	
Domestic Activities Total	1	100.0	0.1
Faunal/Floral			
Bone	117	100.0	
Faunal/Floral Total	117	100.0	8.5
Food Preparation and Consumption			
Ceramic Tableware	136	91.3	
Glass Beverage Containers	13	8.7	
Food Preparation/Consumption Total	149	100.0	10.9
Furniture			
Lighting Devices	2	100.0	

Furniture Total	2	100.0	0.1
Medical/Hygiene			
Pharmaceutical Containers	3	100.0	
Medical/Hygiene Total	3	100.0	0.2
Native			
Ceramics	1	0.2	
Lithic	565	99.6	
Toys and Leisure	1	0.2	
Native Total	567	100.0	41.4
Smoking			
Pipes	1	100.0	
Smoking Total	1	100.0	0.1
Unassigned Material			
Miscellaneous Hardware	1	16.7	
Miscellaneous Material	5	83.3	
Unassigned Material Total	6	100.0	0.4
U Grand Total	1371		

U	
Food Preparation and Consumption	
Ceramic Tableware	
Blue Transfer	12
Edged	3
Fine Earthenware Jackfield	3
Hard Paste Porcelain Plain	1
Other Transfer	1
Painted	35
Painted, Unknown Palette	2
Plain	76
Soft Paste Painted	1
Soft Paste Porcelain, Other Decor	1
Yellowware, Plain	1
Ceramic Tableware Total	136
Grand Total	136

Table 8.24			
Unit V - Group and Class	Frequency	Class %	Group %
Architectural			
Construction Material	1422	46.9	
Nails	97	3.2	
Window Glass	1515	49.9	
Architectural Total	3034	100.0	43.5
Arms and Military			
AmmUnition/Artillery	3	75.0	
Musket and Rifle	1	25.0	
Arms and Military Total	4	100.0	0.1
Faunal/Floral			
Bone	349	99.4	
Shell	2	0.6	
Faunal/Floral Total	351	100.0	5.0
Food Preparation and Consumption			
Ceramic Cooking/Storage	4	0.9	
Ceramic Tableware	435	95.4	
Glass Beverage Containers	17	3.7	
Food Preparation/Consumption Total	456	100.0	6.5
Fuel			
Cooking/Heating	14	100.0	
Fuel Total	14	100.0	0.2
Native			
Lithic	3083	100.0	
Native Total	3083	100.0	44.2
Shell			
Other Organic - shell	1	100.0	
Shell Total	1	100.0	0.0

Smoking			
Pipes	17	100.0	
Smoking Total	17	100.0	0.2
Unassigned Material			
Miscellaneous Material	11	100.0	
Unassigned Material Total	11	100.0	0.2
V Grand Total	6971		

V	
Food Preparation and Consumption	
Ceramic Tableware	
Black Basalt	12
Blue Transfer	24
Edged	18
Other Transfer	8
Painted, Unknown Palette	10
Pearlware	202
Plain	152
Soft Paste Porcelain	2
White Salt-Glazed	6
(blank)	1
Ceramic Tableware Total	435
V Total	435
Grand Total	435

Table 8.25			
Unit W - Group and Class	Frequency	Class %	Group %
Architectural			
Construction Material	1334	72.0	
Nails	139	7.5	
Window Glass	380	20.5	
Architectural Total	1853	100.0	20.7
Arms and Military			
AmmUnition/Artillery	3	75.0	
Uniform Insignia	1	25.0	
Arms and Military Total	4	100.0	0.04
Clothing			
Fasteners	2	100.0	
Clothing Total	2	100.0	0.02
Faunal/Floral			
Bone	228	100.0	
Faunal/Floral Total	228	100.0	2.5
Food Preparation and Consumption			
Ceramic Cooking/Storage	9	6.0	
Ceramic Tableware	126	84.0	
Glass Beverage Containers	7	4.7	
Metal Containers	4	2.7	
Unspecified Glass Container	4	2.7	
Food Preparation/Consumption Total	150	100.0	1.7
Fuel			
Cooking/Heating	10	100.0	
Fuel Total	10	100.0	0.1
Furniture			

Decorative Furnishings	1	100.0	
Furniture Total	1	100.0	0.01
Native			
Historic Period Artifacts	3	0.0	
Lithic	6666	99.9	
Pipes	3	0.0	
Native Total	6672	100.0	74.5
Smoking			
Pipes	10	100.0	
Smoking Total	10	100.0	0.1
Unassigned Material			
Miscellaneous Material	23	100.0	
Unassigned Material Total	23	100.0	0.3
W Grand Total	8953		

W	
Food Preparation and Consumption	
Ceramic Tableware	
Banded	3
Blue Transfer	28
Canary ware	1
Moulded	1
Other Transfer	4
Painted	7
Plain	79
Soft Paste Painted	1
Transfer Print	2
Ceramic Tableware Total	126
W Total	126
Grand Total	126

Appendix E

Button and Small Find Analysis

by Owen Harvey (AR440)

Buttons, Buckles, and Blanks:
An Analysis of the Assemblages from Fort Erie

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ABSTRACT

This investigation began with a focus on the buttons recovered from the 2015 WLU Field School at the site of Fort Erie. Looking at these buttons with the intention of discerning their function and stratigraphic relationship, the investigation branched out to include other clothing-related items, such as buckles, coins, and button blanks (as evidence for on-site bone button manufacture). What followed was a thorough catalogue of all the artifacts, focused on recording their stylistic, physical, and metric characteristics, as well as creating a complete photograph image bank of all the buttons and other important artifacts. A stratigraphic representation of the excavation was created in the form of a Harris Matrix, following the principles of archaeological stratigraphy put forth by Dr. Edward Harris. Placing those artifacts with known datable attributes within the stratigraphic context of the site revealed a visible temporal pattern which followed the historic record of the fort, specifically those pertaining to the phases of construction at the site, the British garrisons, and the events of the 1814 Siege of Fort Erie during the War of 1812. The combination of historic events, artifact analysis, and visualizing stratigraphy with a Harris Matrix is an effective and worthwhile approach for the interpretation of individual artifacts, and small-scale to potentially site-wide stratigraphic relationships.

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1.0 INTRODUCTION

During the 2015 Fort Erie Wilfrid Laurier University summer field school led by Dr. John Triggs, a number of artifacts directly relating to clothing worn by past peoples at the site were recovered. The purpose of this paper is an analysis of these artifact assemblages in their historic, archaeological, and stratigraphic contexts. The study of buttons in these contexts is a viable endeavour because it is often possible to identify a button's use, time period, and associated cultural or professional group through the analysis and interpretation of the physical attributes which have survived through the archaeological record.

From this analysis, it is hoped to gain a greater understanding of what the buttons reveal about the occupants of the site in terms of their nationality, profession, and garments. The application of a stratigraphic analysis to the assemblages will be done to add a temporal dimension to the button distribution throughout the site. This will aid in the interpretation of the different strata by their connection to identifiable groups of occupants.

This paper, as the title would suggest, places an emphasis on buttons, which is not an undue approach. Of the roughly three-hundred and forty artifacts that were studied, nearly three-hundred of them were either buttons themselves, or the by-products of button manufacture. The remaining artifacts consisted of those that related to clothing in some other way, or were other important non-clothing items that were of sufficient archaeological uniqueness and significance (i.e. coins). As such, the different categories of artifacts that will be approached are as follows: buttons (including cufflinks and eyes), button blanks, buckles, military uniform artifacts, miscellaneous other artifacts, and coins.

In order to apply this analysis in the context of Fort Erie, an overview of the occupational history of the fort will be addressed. This will begin before the actual construction of the fort, looking at the evidence for pre-contact occupation of the site. For the first fort, this will begin with its construction in the aftermath of the French and Indian War, and its role in the subsequent American Revolutionary War. The timeline of the second fort will then begin with its construction in the early 1800's, its role in the War of 1812 (with emphasis given to the 1814 Niagara Campaign with the American occupation and subsequent siege), and end with its post-war British reoccupation and abandonment. Finally, the fort will be looked at in terms of its reconstruction in the 1930's and its life as a Parks Canada National Historic Site into the modern day.

Next will come the archaeological history of the site, beginning with an overview of the 2012, 2013, and 2015 excavations of Fort Erie, including their structure and general findings. The 1987 Snake Hill excavation will also be considered, especially due to its partial focus on button analysis.

Before the analysis of the artifacts begins, a brief section will be devoted to the definitions and terminology pertinent to this paper, as well as any other notes or important points that need to be made will be addressed. This will also include the methodology used for the analysis of the buttons and other artifacts.

At last, the artifacts themselves will be looked at, beginning with the buttons. This will take a broad approach, considering many of their aspects. The physical characteristics – namely material, size, shape, shank style, and designs – will be used in order to interpret these buttons. These interpretations will consist of what is indicated about what they were used for (i.e. clothing piece, location, etc.), who used them (e.g. military vs. civilian, American vs. British), their means of manufacture, and what these then indicate by their presence at the site.

Suggested conservation measures for the buttons will be addressed, as well as the parameters for the basis of suggesting conservation be undertaken.

There is also evidence specific to the manufacture of bone buttons found at the site, which will then be addressed. This takes the form of bone button “blanks”, which is the portions of bone discarded after the production of bone buttons. The size, number, manufacture style, and manufacture location indicated by the presence of these blanks will be addressed.

Next, the buckles will be similarly analysed. This will begin with their physical analysis, then continue with an interpretation of their use, and what (if anything) can be learned about who used them.

The next section will approach the remaining clothing-related artifacts. This consists of a buttonstick, shako plate fragments, epaulette wire, foil, pins and needles, links and rings, and thimbles. A brief look at the materials, general characteristics, and interpretations will follow.

Lastly in terms of artifact-specific analyses, the historic coins will be looked at. This consists of the means of identifying the coin and its date, and how this adds to the interpretation of the site. An additional avenue of interpretation that will be made here is the possibility of identifying counterfeit

coins, which here is based on certain stylistic differences, and a scientific approach of identifying coin purity based on volume and elemental weight of the coin materials.

Following the analysis of the classes of artifacts will come a look into the stratigraphy of the 2015 excavations. This section will explore the importance of establishing a correct stratigraphic sequence and the value of expressing it in the form of a Harris Matrix. With this, certain artifacts excavated in the field will be connected to their corresponding lots within the Harris Matrix. The patterns of temporal artifact distribution will then be addressed and compared with the established historical record of the occupation of the site. The same will be done for spatial distribution as well, dividing it among the three different areas of excavation in the 2015 field school, and among the units within these areas if at all possible. The objective of this process is to determine patterns of occupation and activity, as expressed temporally and spatially throughout the archaeological record. An artifact from a test pit will also be looked at in this section

Any concluding thoughts and interpretations will then be addressed, including suggestions for the potential use of this method of analysis on future and past assemblages at Fort Erie, and other sites where this would be a viable approach.

Finally, there will be two appendices following the conclusion of the main body of the paper. Appendix 1 will consist of the artifact catalogues, and Appendix 2 will consist of the photographs of the artifacts.

2.0 HISTORICAL CONTEXT:

2.1 PRE-CONTACT HISTORY

While Fort Erie is perhaps best known for its role in the War of 1812, there is evidence that the area of what would become known as Fort Erie was occupied by First Nations peoples before the arrival of Europeans to the area. The most recent archaeological evidence for this comes from the 2012, 2013, and 2015 Fort Erie excavations. In 2012, some pre-contact artifacts were discovered in the vicinity of Fanning's Battery (Triggs 2015a: 37), while in 2013 at Douglass Battery East, a piece of pre-contact ceramic was found, and what has been interpreted as a disturbed pre-contact feature was also uncovered (Triggs 2015b: 40, 47). The 2015 excavation has provided a much larger assemblage of pre-contact artifacts and features, all of which were from Area 3 of the excavation. This primarily consists of

modified chert fragments and other lithics. There are also features, such as trenches, from this context that are thought to be pre-contact features.

Other excavations in the vicinity of Fort Erie – albeit not at the fort itself – have also found evidence of a pre-contact native presence. In the 1964 excavations at the nearby Orchid Site, such evidence was found. An analysis of the grave goods associated with six burial features provides a range of dates from the Late Woodland Period to the Historic Iroquois Period (700 to 1700 CE), while the analysis of all the artifacts found gives evidence of a native presence from the Archaic Period to the Historic Iroquois Period (2000 BCE to 1700 CE) (Granger 1976: 35-36). Granger also suggests that the benefits the bottleneck caused by Lake Erie joining the Niagara River provided for fishing is what drew the pre-contact peoples to this area, and the presence of netsinkers and fish bone among the artifacts would seem to support this hypothesis (Granger 1976: 35-37).

2.2 THE FIRST FORT

Following the conclusion of the French and Indian War (the North American theatre of the global Seven Years War) in 1763, and with the ongoing conflict known as Pontiac's War, the British realized the need for strategic military encampments to help maintain control over their new territorial acquisitions, and to control the fur trade in the Great Lakes area (Shoalts 2015: 18).

Beginning in 1764, the British commissioned the construction of a fort at the confluence of the Niagara River and Lake Erie, located along the northern bank rather than the south due to the sand bar unsuitable for shipping along the southern bank (Owen 1986: 20). Two battalions of colonial troops from Connecticut and New Jersey were appropriated for the construction, later joined by the light company and grenadiers of the 55th Regiment of Foot, parts of the 46th Foot, and naval carpenters (Owen 1986: 20-21).

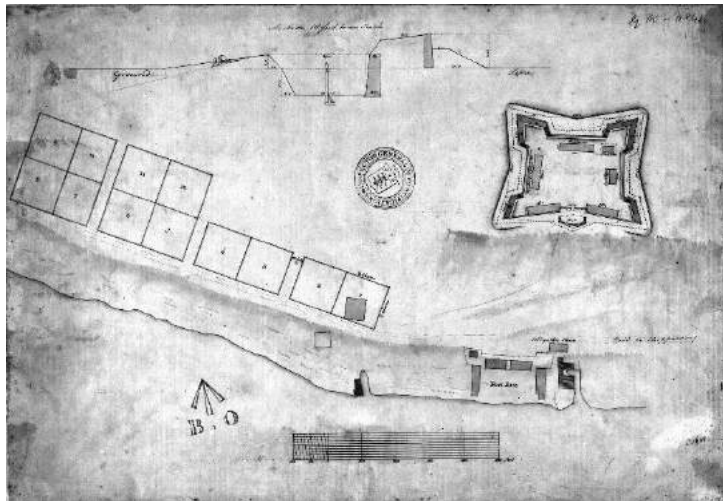


Fig. 1: The First Fort by the river, showing merchant's lots.

Fort Erie also functioned as a storage depot at this time, with multiple structures being built to that purpose. As it was first built, there were structures for storage, and traders received permission to construct their own storehouse at the site in 1771 (Owen 1986: 21, 24). Maps, paintings, and drawings of the fort all show additional structures near the fort, likely for this purpose, among others (Fig. 1)⁴⁷. In 1795, Fort Erie stored a large number of artillery pieces and equipment (Owen 1986: 39). Two wharfs, important for shipping, were also found nearby the fort, one of which (identified as “Grant’s & Kirby’s wharf”) is still visible today in the current landscape (Shoalts 2015: 19-20). As such, Fort Erie functioned as both a civilian and military storage depot during this time.

Placed directly adjacent to the shores of Lake Erie, the first fort struggled with the seasonal ice flows and storms destroying the structures along the shoreline, such as the officers’ quarters in 1803, sending their furniture into Lake Erie (Owen 1986: 40). It was also in otherwise poor condition, having issues with the supply of timber for rebuilding the palisades, which were rotten and in dire need of repair, even from as early as 1770 (Owen 1986: 24). In 1805, after 40 years of occupation, the construction of a second fort was authorized, located further back from the shore where the current reconstruction stands today (Owen 1986: 42).

A large number of regiments (or at least, elements thereof) were garrisoned at Fort Erie and the other Niagara forts during this time. Beginning in 1764, the 46th Foot was stationed here, while during the American Revolutionary War (1775 to 1783), the 8th (King’s) Foot was here (Owen 1986: 23-26). After the war, the fort was garrisoned by a rotating series of regiments. In sequential order, these were: the 34th Foot, 53rd Foot, 65th Foot, 26th Foot, 5th Foot, the Queens Rangers and Royal Canadian Volunteers (two regiments of locally-raised fencibles), and the 49th Foot (Owen 1986: 31-40). During this period, the fort also briefly hosted other units, namely the Royal Artillery (1792), local militia troops (September/October 1794), and a group of Six Nations warriors (August 1795) (Owen 1986: 34, 38).

2.3 THE SECOND FORT

Although construction of the second fort began in 1805, it was dependent on funding (a lower priority for this part of the empire), and was largely halted in 1807. Rising tensions and impending war with the Americans stressed the need for Fort Erie to remain functional and defensible, and by 1812

⁴⁷ <https://brocku.ca/maplibrary/digital/MAPzoom/MAPimages/WEBjpgs/NMC-5258.jpg>

most of the built fortifications (essentially a few bastions and ravelins, as well as some buildings) were focused on defending against the American side of the river (Owen 1986: 42-43).

Before the War of 1812 began, the only unit to be stationed here was the 41st Regiment of Foot, although they would be joined by many other regiments throughout the course of the war (Owen 1986: 42).

2.4 THE WAR OF 1812

Following the American declaration of war on June 18, 1812, Fort Erie was used as a storage depot and gathering point for the Upper Canada militias, and was further reinforced with artillery, although little more construction was carried out (Owen 1986: 43-45). In 1812, the British fought artillery duels with the Americans across the river from Fort Erie in Black Rock, and defeated American troops who attempted to capture the fort in November (Owen 1986: 45-46).

Through 1813, the artillery duels across the river continued. In May, the Americans successfully captured Fort George further up the Niagara Peninsula, prompting the British to withdraw from Fort Erie the next day. The buildings at the fort were either blown up or burned in order to deny the Americans their use, who began their occupation of the fort on May 28 (Owen 1986: 45-46). The American occupation was short-lived, however, as they retreated back across to American territory on June 9, following the American defeat at Stoney Creek on the 5th. The British then beat back the American troops and launched a counterattack across the river, and reoccupied and repaired Fort Erie on December 12 (Whitehorne 1992: 9-12).

In 1814, both sides prepared for action in the Niagara Peninsula. General Gordon Drummond was being reinforced with troops being shipped in from Europe, and appointed Brigadier General Phileas Riall in charge of the defense of these forts. Across the river, General Winfield Scott trained his men in preparation for another invasion. Finally, on July 2, the American forces moved out under the command of Generals Jacob Brown, Eleazer Wheelock Ripley, and Scott, beginning the 1814 Niagara Campaign (Whitehorne 1992: 18-28).

Throughout the War of 1812 leading up to the 1814 siege, the following British units were present at the fort: the 3rd Regular Lincoln Militia (including the Lincoln Artillery), the flank companies of the Royal Newfoundland Regiment, the Norfolk Militia, gunners from the Royal Artillery, and men of the

41st and 49th Regiments of Foot (Owen 1986: 44-45). The 9th U.S. Infantry was also present during their brief occupation of the fort in 1813 (Whitehorne 1992: 9).

2.5 THE NIAGARA CAMPAIGN OF 1814 AND THE SIEGE OF FORT ERIE

The Americans captured Fort Erie on July 3 with little resistance, and began the construction of earthwork defences to supplement the fort itself. Riall was defeated two days later at the Battle of Chippewa, forcing a retreat up the Peninsula, allowing the Americans to advance and capture Queenston Heights. The British retreated to Fort George and the Americans advanced, until a lack of naval support and supply issues forced them to withdraw back down the Peninsula. Drummond arrived to reinforce Riall, and the combined forces pursued the Americans, winning a bloody victory on July 25 at the Battle of Lundy's Lane. The Americans withdrew back to Fort Erie, while Drummond, overly cautious, delayed his pursuit (Whitehorne 1992: 28-38).

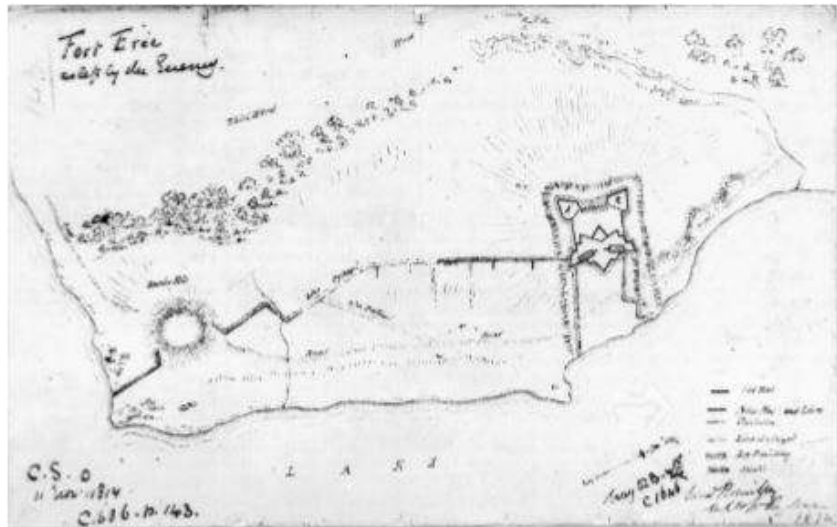


Fig. 2: “[1814] [Endorsed title]: ‘Fort Erie as left by the Enemy.’ [Sgd] Sam Romilly Lieut R1 Engineers. Library and Archives Canada, NMC 70956” (Triggs 2015b: 9).

On August 2, the British began the Siege of Fort Erie, establishing a camp two miles from the fort, and beginning construction of siege works and batteries on the 5th. The Americans had reinforced their position with earthwork defences, consisting of the Douglass Battery to the right of the fort, and a long parapet wall coming down from the fort's left side until it met up with the defenses of Snake Hill. Despite the actions of the Royal Navy, the Americans were able to maintain supply routes back across to Black Rock and Buffalo (Whitehorne 1992: 41-49).

The British opened fire from their first battery on August 12, and began preparations to storm the fort. The attack would take place at 2:00 a.m. on August 15, consisting of three columns attacking Snake Hill, the Douglass Battery, and Fort Erie simultaneously. Under cover of darkness on the 15th, the

British artillery ceased, and the columns advanced. Snake Hill was the first to be attacked, with Fort Erie shortly thereafter. The Douglass Battery was not attacked until 3:00 a.m., and the British were beaten back by canister fire. The British briefly captured the northeast bastion of the fort, but then an explosion in the powder magazine destroyed the bastion, killing or wounding over 400 British soldiers in moments. The assault ended in an utter failure (Whitehorne 1992: 57-64).

The British intensified their artillery fire, constructing two new batteries on August 29 and September 3, achieving enfilade fire over the parapet wall (Whitehorne 1992: 66-67). In response, the Americans launched a sortie on the morning of September 17, capturing Batteries 2 and 3 before returning to the fort. Drummond, defeated, withdrew on September 21. Eventually, on November 5, the Americans fully withdrew from Fort Erie, but made sure to destroy it before they left. Fort Erie would play no more role in the war (Whitehorne 1992: 79-81, 89).

During the American occupation and subsequent Siege of Fort Erie, the following regiments were present among the American forces: the Light Dragoons, the Corps of Artillery, the 1st and 4th Rifles, and the 1st, 9th, 11th, 17th, 19th, 21st, 22nd, 23rd, 25th, and 26th Infantry (Chartrand 2011a: 183-184). Specific to the Douglass Battery (i.e. the area closest to the area of the 2015 excavations), the following units were stationed: the 9th, 11th, and 22nd Infantry, the 5th Pennsylvania Volunteer Regiment, the New York Militia (dismounted cavalry), and Douglass' Company (Whitehorne 1992: 59), which was a specialist unit from the Corps of Engineers, known as the Company of Bombardiers, Sappers, and Miners (Fredriksen 2009: 190).

Among the British besieging forces were the following regiments: the 19th Light Dragoons, the Royal Artillery, the Royal Sappers and Miners, the 1st, 6th, 8th, 41st, 82nd, 89th, 97th, 100th, 103rd, 104th Regiments of Foot, the Glengarry Light Infantry, the Upper Canada Incorporated Militia, and native allies (Chartrand 2011b: 212).

2.6 POST-WAR OCCUPATION AND ABANDONMENT

Following the destruction of the fort by the Americans, it was reoccupied by the British. After the war, there was some debate over whether to destroy the fort or rebuild it, with several proposals in favour of either option. Several temporary structures were built for the soldiers by 1817, but it ended its use as a British garrison in 1823, and was largely abandoned for the remainder of the 19th century and early 20th century (Owen 1986: 55-57).

Despite the sporadic garrisoning of the fort following the War of 1812, several different units garrisoned in the area. The only definite regiment to be at Fort Erie was the 70th Foot, although the 69th and 76th Foot were in the Niagara Peninsula after the 70th, and may have stayed at the fort as well (Owen 1986: 56-57).

As for its role in the 19th century, some stones were salvaged for use in constructing the nearby St. Paul's Anglican Church, the area played a role in the Underground Railroad, freeing runaway slaves from the United States, and a town began to emerge in the mid-19th century (NPC n.d.). The fort's ruins were also briefly used as a base of operations for Fenian raiders in 1866 (NPC n.d.).

2.7 FORT ERIE IN THE 20TH AND 21ST CENTURIES

After its existence as a ruin for over a century, the fort was rebuilt in the 1937 by the Niagara Parks Commission in cooperation with the provincial and federal governments. Today, it is a National Historic Site, and is operated and maintained by the Niagara Parks Commission (NPC n.d.).

No longer in use as a military outpost, Fort Erie is now garrisoned by employees of the Niagara Parks Commission in the role of historical interpreters. Doubtless, these fine individuals will be the first line of defense should the Americans decide to invade.

2.8 AN OCCUPATIONAL TIMELINE

Given the wide variety of military units present at the fort throughout its history, and the importance of identifying them for comparison with the material remains, it is a necessity to have such a complete list. While they were included in the assorted historical sections above, they have also been gathered together for ease of reference. What follows is a list of the military units present at the fort throughout its history, as well as their dates of occupation.

First Fort Period (1764-1805)			
Unit	Dates	Notes	Source
Connecticut Provincials	1764	Construction of fort	(Owen 1986: 20-21)
New Jersey Provincials	1764	Construction of fort	(Owen 1986: 20-21)
55th Reg. of Foot	1764	Light Co. and Grenadiers; Construction of fort	(Owen 1986: 21)
Royal Navy	1764	Naval Carpenters; Construction of fort	(Owen 1986: 21)
46th Reg. of Foot	1764-?	Construction of fort and later garrison	(Owen 1986: 21, 23)
8th Reg. of Foot	1775-1783	During American Revolutionary War	(Owen 1986: 26)
34th Reg. of Foot	1783-1786		(Owen 1986: 31)
53rd Reg. of Foot	1786-1789		(Owen 1986: 32)
65th Reg. of Foot	1787-1790		(Owen 1986: 32)
26th Reg. of Foot	1790-1792		(Owen 1986: 33)
5th Reg. of Foot	1792-1796		(Owen 1986: 34)
Royal Artillery	1792		(Owen 1986: 34)
Queen's Rangers	1796-1802	Fencibles; only troops in	(Owen 1986: 36)
Royal Canadian Volunteers	1796-1802	Upper Canada at the time	(Owen 1986: 36)
49th Reg. of Foot	1802-1805	Final garrison in first fort	(Owen 1986: 40)

Second Fort Period, excluding the 1814 Niagara Campaign and Siege (1805-1823)			
Unit	Dates	Notes	Source
41st Reg. of Foot	1805-1812		(Owen 1986: 42)
3rd Reg. Lincoln Militia	1812	Included artillery	(Owen 1986: 44)
Royal Newfoundland Regiment	1812	F flank Companies (Light and Grenadiers)	(Owen 1986: 45)
Norfolk Militia	1812		(Owen 1986: 45)
Royal Artillery	1812		(Owen 1986: 45)
49th Reg. of Foot	1812		(Owen 1986: 45)
9th U.S. Infantry	1813	American; briefly occupied Fort Erie	(Whitehorn 1992: 9)
70th Reg. of Foot	1817-1819		(Owen 1986: 56)
69th Reg. of Foot	1819-1822	Uncertain if garrisoned	(Owen 1986: 57)
76th Reg. of Foot	1822-1826	Uncertain if garrisoned	(Owen 1986: 57)

American Occupation and Siege of Fort Erie (Summer 1814): American Regiments			
Unit	Dates	Regiment No.	Source
Light Dragoons	Summer, 1814		(Chartrand 2011a: 183-184)
Corps of Artillery			
Rifles		1st and 4th	
Infantry		1st, 9th, 11th, 17th, 19th, 21st, 22nd, 23rd, 25th, and 26th	

American Occupation and Siege of Fort Erie (Summer 1814): British Regiments			
Unit	Dates	Regiment No.	Source
Light Dragoons	Summer, 1814	19th	(Chartrand 2011b: 212)
Royal Artillery			
Royal Sappers and Miners			
Reg. of Foot		1st, 6th, 8th, 41st, 82nd, 89th, 97th, 100th, 103rd, 104th	
Glengarry Light Infantry			
Upper Canada Incorporated Militia			

3.0 FORT ERIE ARCHAEOLOGICAL HISTORY

The only archaeological excavations at Fort Erie have all been within recent memory. The only research-driven excavations have been those led by Dr. Triggs, conducted in the 2012, 2013, and 2015 field seasons, while the other excavation was conducted in 1986 at Snake Hill. This section will provide a quick overview of these excavations, as well as some general findings.

The 2012 dig sought to address the research question of if the earthwork defensive fortifications built in the summer of 1814 by the American occupiers were identifiable within the landscape (Triggs 2015a: 4). Using period maps of the fort as a reference point, excavations were conducted in Fanning's Battery and the Western Redoubt (later identified as Biddle's Battery) (Triggs 2015a: 4, 11-14). Fanning's Battery (divided into East and West) had 21 units while the Western Redoubt had 13, totalling 34 units (Triggs 2015a: 11-14).

Of the nearly 11,000 artifacts recovered, 31 of them were buttons (see Triggs 2015a: Appendix F). This number consisted of six American military buttons, one British, three other military buttons, and twenty-one non-military buttons.

The purpose of the 2013 dig was much the same as in 2012, although the focus was shifted to the Douglass Battery, again using the analysis of period maps as a guide (Triggs 2015b: 4, 7). 29 units were excavated, divided among Douglass Battery East and West, being the exterior and interior sides of the American defences, respectively (Triggs 2015b: 39).

Of the over 10,000 artifacts, 34 of them were buttons (see Triggs 2015b: Appendix J). Of these, four were American military buttons, six were British, eleven were other military buttons, and thirteen were non-military.

The 2015 excavation was conducted nearby to the 2013 excavations, being located nearest to Douglass Battery East. Divided into three areas (Areas 1 through 3), a total of 22 units were excavated (lettered A through Y, excluding I, L, and O). From east to west, Area 1 had five units (Units A through E), Area 2 had eleven (Units F through R, plus X and Y), and Area 3 had five (Units S through W). Additionally, a number of test pits were excavated through Areas 1 and 2, as well as to the north, in order to place the units. The purpose of this dig was to locate the buildings depicted in an 1804 watercolour painting of the first fort (Fig. 3).⁴⁸

The specifics of the buttons and other studied artifacts will be gone into later in this paper, but some other general findings can be stated. Areas 1 and 2 both each identified structural foundations and rubble consistent with the buildings identified in the painting. Enough of the walls of the structure in Area 2 were excavated in order to estimate its extent,



Old Fort Erie and the Migrations of the Wild Pidgeon in the Spring. Watercolour by Edward Walsh, 1804.

Fig. 3: Old Fort Erie and the Migrations of the Wild Pidgeon in the Spring. Watercolour by Edward Walsh, 1804.

⁴⁸ <http://www.nflibrary.ca/nfplindex/show.asp?id=362527&b=1>

although the amount in Area 1 was insufficient to do the same. It is believed that the structure in Area 1 was a blacksmith's shop, while the one in Area 2 was a storehouse.

Lastly, there was the 1987 Snake Hill excavations of 28 American war dead from the 1814 siege, led by Ron Williamson with Archaeological Services Incorporated. The study of the remains included a look at the buttons found among the burials, looking at their type and location on the remains in order to identify what part of the uniform they belonged to, and what that revealed about the regimental affiliation of the soldier in question (Litt et al. 1993: 124-125, 129). This was important, as identifying the nationality of the exhumed was crucial for the subsequent repatriation of the remains of their fallen soldiers to the United States (Williamson 1991: 22). Other avenues of analysis were pursued with these remains (skeletal analyses to identify health and disease, for instance), but they will not be explored since they are largely unrelated to this discussion.

4.0 METHODOLOGY

A standardized method of analysis was used to catalogue the artifacts, and to ensure that they were all analysed according to a uniform, repeatable standard. This section largely explains the catalogue (i.e. Appendix 1) and what the criteria by which these artifacts were analysed mean, as well as how they were recorded. As the primary focus of this investigation was the buttons, the methodology was developed with these in mind, and then modified as needed for the other artifacts in this collection.

Most of the units of measurement followed the metric system, using millimeters and grams for length and weight, respectively. The only exception was the use of the *ligne* (or 'line') for the diameter of button face, in addition to the standard metric measurement. This was done because this was the unit of measurement that would have been used for button sizes when these were manufactured. A *ligne* is equivalent to 1/40th of an inch, or 0.635 mm (Davis 1984: n.p.). The millimetres were thereby converted to *lignes* by multiplying the value by 0.635. In this paper, *lignes* will generally be used when referring to the historic use of a button of that size, while millimetres will be used in all other cases.

A series of metric measurements were taken for the artifacts. In all cases, a set of digital calipers were used to measure the criteria relating to length (e.g. diameter, thickness, etc.). A digital scale (accurate down to 1 gram) was used to measure the weight of the artifacts. In many cases, the artifact was too light to be registered by the scale, which showed a weight of 0 grams. In these cases, the catalogue has "IND" in the weight column (standing for "Indeterminate"). Where this occurs, it was

assumed that the object weighed less than 1 gram rather than having no weight, as it is impossible for a physical object to have no mass. Each object was measured individually with the exception of the button blanks where all buttons were weighed together in order to get a total weight of all blanks.

The material of the artifact was determined by sight, as were any stylistic qualities, such as motifs, and some possible interpretations. As such, this part of the analysis was somewhat more subjective, rather than the objective metric measurements. These were recorded in the “Material” and/or “Characteristics” / “Notes” columns when applicable.

Given that these were all universal parts of the analysis, they were applied to all the artifacts, and should be assumed to have been part of the methodology for analysis even when this may not be stated explicitly below.

4.1 BUTTONS, CUFFLINKS, AND BLANKS

For buttons and cufflinks, when at least 50% of the button face remained (i.e. when the complete diameter remained), the calipers were used to measure its diameter. In the event that not enough of the face remained to get an accurate reading, but at least a section of the edge remained, a button diameter chart was used to estimate the diameter. This chart had intervals of 2 *lignes* (roughly 1.3 mm), and the most accurate diameter was chosen by matching the curve of the edge with that of the chart. Thickness was measured at one edge of the button where the button face was curved, bent, or otherwise not flat, and across the face when it was flat. This is a measure of the thickness of the material, and does not take into account the degree of curvature of the face, such as with a dome button. In the case of oval-shaped cufflinks, the length and width of the face was measured with the calipers instead.

Button shanks were measured according to the diameter of the loop at its widest point, and the thickness of the loop where the diameter measurement was taken. In the cases where the button had no shank, either through intentional manufacture (e.g. bone buttons), or where the shank had broken, these measurements were not taken.

The likely means of manufacture for the button (as indicated by certain physical characteristics and the material type) was also included. Lastly, the buttons were assessed on the basis of if

conservation was a viable option. These were given a simple Yes/No (Y/N) designation, with a reason for this response. This will be looked at in its own section later on.

For button blanks, the diameter board was used to estimate the size of the button manufactured by measuring the size of the hole left behind. The number of each blank size was then calculated and recorded.

4.2 COINS

The same process for measuring the diameter and thickness of the button face was used for coins, due to the same general circular shape.

A rough calculation of volume was also made, using the formula for the volume of a cylinder, $V = \pi r^2 h$, where r is the radius and h is the height (or here, the thickness). This was done in order to try and calculate the purity of a coin based on the weight-to-volume relationship, although a measurement of volume through water displacement would be more accurate. This will be gone into in more depth in the Identifying Counterfeits section.

4.3 BUCKLES

For buckles, the length and width were measured according to the different buckle components that were present. These consisted of the frame, bar, prong, and chape, with comment sections for each part individually, and for the buckle as a whole. The measurement of a buckle component was not made where that component was not present. In the case where the bar of the buckle was a part of the frame, the section of the frame that functioned as the bar was recorded.

4.4 OTHER ARTIFACTS

The other artifacts had less in-depth measurements made, and have been included here all together. Pins and needles had the overall length measured, as well as the diameter of the head. The length and width of the shako fragments were measured, although these are not indicative of the overall shape or size of the shako plate. The epaulette wire was too coiled to measure length, so just the thickness of the wire was taken instead. The few oval-shaped links and circular native rings were

measured according to length and width and diameter, respectively. The thimbles had their diameters measured at the top and bottom, as well as an overall height measurement. Lastly, the possible buttonstick was measured according to length and width.

4.5 ARTIFACT PHOTOGRAPHY

Photographs (Appendix 2) were taken of the artifacts using a fixed camera at an elevation of roughly 30 cm above the artifact, and used a 5 cm scale bar in every case. Overhead lighting was used to eliminate any potential shadows, and to further illuminate the artifact and its visible details. The photographs were later edited to remove the background behind the artifact, to replace the physical scale with a computer-generated one, and to enhance any details on the artifact.

Each button and cufflink was photographed twice, once for the face and once for the back. Several select buttons were also photographed a third time in a side view in order to represent the types of shanks present. Coins were also photographed twice, showing the obverse and reverse views. The thimbles were photographed twice as well, once from above, and once from the side. Buckles, shako plate fragments, epaulette wire, foil, and possible buttonstick were all photographed once to show its general appearance. Select artifacts from the pins and needles, and the button blanks were chosen to be photographed based on being representative of the other artifacts of its type. For the button blanks, the most assembled button blank from the fragments was photographed. As such, not all of these artifacts have a corresponding photograph.

4.6 A NOTE ON CATALOGUE NUMBERS

For these artifacts, two catalogue numbers were created and included in the relevant catalogues: the Photograph Catalogue Number, and the Button Catalogue Number. The Photograph Catalogue Number consists of a simple number (e.g. 117), and was given to every artifact. This serves to identify which artifact is being shown in any photograph, which can then be compared to its catalogue entry.

The button catalogue number is somewhat more complex. This consist of up to four characters, including two numbers and two letters. The number 2H-3 will be used as an example. The first number and letter combination indicates that this button was from Area 2, Unit H. The second number (3)

indicates that this is the third button from this unit to be catalogued. In the event that a specific photograph is being referred to rather than the button as a whole, a second letter will be added as a suffix to the second number. An “a” indicates that this is the front of the button, a “b” indicates the back, and a “c” indicates that this is a photograph of the shank (although only a small number will have the “c” suffix). Therefore, within the context of this paper, this button may be referred to as 2H-3, or a specific photograph may be referred to as 2H-3a (or 3b/3c). Additionally, in the event where the first number has been replaced with the letters TP, this means that the button was from a test pit rather than a unit (e.g. TP86-1).

While complex, there is a rationale behind it. Each of the buttons was assigned a number in sequential order of the lot it comes from, and the date on which it was excavated. This results in an order to the buttons from most recent to oldest, and can allow for an easier recognition of the stratigraphic relationship of the buttons within a unit (e.g. button 1B-1 was from Lot 5 of Unit B, while 1B-6 was much lower, from Lot 16). Since buttons are generally datable, and were to be looked at in a stratigraphic context, this seemed like a logical method.

As the name would suggest, the Button Catalogue Number was applied only to buttons within the button catalogue. This includes individual buttons and button-like objects (i.e. cufflinks, shanks, eyes, and insets). Button blanks are not given this number as they are more indicative of the absence of buttons, rather than being a button themselves.

5.0 BUTTONS:

By far, the largest portion of this investigation was dedicated to the buttons recovered through the 2015 excavation. Due to the wide range of units present at some point during the history of Fort Erie, to go into the minutia of the exact variations between nations, regiments, models and regulations of uniforms, and these changes through time would simply take too long.⁴⁹ Instead, a general profile of what a soldier of the time would be expected to wear will be created, with explanations as to where these variations would lie. This profile will be constructed, outlining the standards for British (Fig. 4) and American (Fig. 5) soldiers.

⁴⁹ Indeed, this is largely the domain of the entirety of Chartrand’s two books, “A Most Warlike Appearance” and “A Scarlet Coat.”

5.1 PROFILE OF A STANDARD SOLDIER'S UNIFORM

Due to the greater level of information available for British uniforms of the period (e.g. trousers, gaiters, shirts, etc.), this section will focus on differentiating between the jackets of the American and British forces, and will create a single profile for the other parts of the uniform, primarily based off of the British examples. Some examples will be given for variations among the officers compared to the enlisted soldiers, as this would have been a visible and substantial difference. This section will be based on information gathered from Chartrand (2011a and 2011b), Henderson (1998 and 2008), Thomas and Williamson (1991), and Katcher (1990). This overview will focus on buttons and regimental insignia, while buckles will be talked about in the Buckles section of this paper.

To begin, a standard uniform would consist of a jacket/coat, shirt, trousers or breeches, gaiters, shoes, and headgear. A British infantryman's coat would have a single line of nine or ten regimental buttons down the front of the chest, with three buttons per cuff, two buttons along the lower back, four buttons on each side for each of the two pockets, and one button per epaulette (when present). In total, for the jacket alone, a British soldier could have from 27 to 30 buttons.

An American soldier's coat would have ten buttons down the front of the chest, three buttons per cuff, two buttons along the lower back, three or four buttons per pocket, one button per epaulette (when present), and, unlike the British, two buttons per side of the



Fig. 4: A British Officer (left) and Private (right) c. 1814 (Chartrand 2011b: 145).



Fig. 5: Two American Privates (Chartrand 2011a: 30).

collar. In total, this is between 28 and 32 buttons. While roughly similar in number, the Americans tended to have standard infantry button styles rather than regimental variations.

While these buttons would have been made of cheaper metals for the enlisted men (such as pewter or brass), officers would have had silver plated or gilt buttons. Other common variations (for both sides) includes having double (or even triple) lines of buttons down the chest, more buttons along the cuff, or wearing cufflinks. This results in a much more numerous and different assemblage for officers.

Conversely, shirts would have had very few buttons. There would be one at each cuff, and one at each collar. Instead of a collar button on the shirt, some British troops were issued with removable dickeys (or false collars), which would have had the button instead.

Breeches would have had four or five buttons down the leg, three buttons at the front flap, and several more around the waist. Trousers would not have had those down the leg, but those at the front and around the waist would have been present. These could be either bone or metal, and the Americans seemed to use pewter buttons with a U.S. motif for this purpose. Garters, worn over the calves, would have a varied number of buttons, dependent on the height of the soldier. This number would range between 10 and 15 buttons, and would be metal with no designs. Shoes would not have had any buttons, but rather a buckle.

In the War of 1812, the standard headgear was a shako for enlisted men, while officers wore either a bicorn hat or a shako. A shako would generally have one button on the front or side for the attachment of a plume or cockade, while a bicorn would have also have a button for the same purpose.

Regimental insignia could also be found on shako plates, located at the front of a shako, or on belt plates, worn on the cross belts across the chest. Additionally, officers would have a metal ornamentation worn around the neck, known as a gorget.

5.2 BRITISH MILITARY BUTTONS

With the knowledge of button placement, motifs, and materials, the process of classifying the military buttons in this collection can begin. Of the 162 buttons catalogued, 13 have been identified as American, 19 as British, 12 as unknown military, and 24 as gaiter buttons. Other buttons may have been military as well (and likely are in some cases), but are not definitively identifiable as such.

To begin, the British buttons will be analysed. Given the tradition of each regiment having its own button motifs beginning in 1767 (Calver and Bolton 1950: 96), the British military buttons can be more easily correlated to a specific regiment than their American counterparts. The regimental affiliations are as follows: seven buttons of the 5th Regiment of Foot (three officers, denoted by the



Fig. 6: 5th Foot Officer's Button (2F-1a).



Fig. 7: 5th Foot Enlisted Button (2H-1a).



Fig. 8: 34th Foot Button (2P-9a).



Fig. 9: 53rd Foot Button (2X-4a).

letter "V", and four enlisted, denoted by the numeral ("5"),⁵⁰ one of the 29th,⁵¹ two of the 34th,⁵² one of the 53rd,⁵³ two of the 65th,⁵⁴ four of the Royal Canadian Volunteers,⁵⁵ one of the Royal Artillery,⁵⁶ and one of the Royal Navy or Royal Marines⁵⁷ (Figs. 6-13).

⁵⁰ Catalogue Nos. 2F-1, 2P-7, and TP86-1 (officers), and 2H-1, 2H-20, 2M-7, and 2M-8 (enlisted)

⁵¹ Catalogue No. 2J-3

⁵² Catalogue Nos. 2P-9 and 2P-16

⁵³ Catalogue No. 2X-4

⁵⁴ Catalogue Nos. 2M-12 and 2M-13

⁵⁵ Catalogue Nos. 2F-5, 2M-1, 2P-12, 2Q-4

⁵⁶ Catalogue No. 2H-15

⁵⁷ Catalogue No. 2X-5

The 5th Regiment of Foot buttons can be traced to their garrisoning of the fort from 1792 to 1796. One of the officers' buttons consists of a gilt copper face over a bone backing, while the other



Fig. 10: 29th Foot Button (2J-3a).



Fig. 11: Royal Canadian Volunteers Button (2Q-4a).



Fig. 12: Royal Regiment of Artillery Button (2H-15a).



Fig. 13: Royal Marine Cufflinks (2X-5a).

two are, interestingly enough, pewter. This is odd due to the officers having silver or gilt buttons (Calver and Bolton 1950: 103). Perhaps this may be indicative of supply issues, less affluent officers not being able to afford precious metals, or the use of V-buttons for enlisted troops.

The 29th Regiment of Foot button is interesting, as this unit was never part of the garrison at Fort Erie. They were, however, deployed in Ontario and Quebec between 1776 and 1787 ([CMHG 2011: 538](#)). The appearance of this button also matches the design of other buttons of the 29th from this period. Therefore, this button likely indicates either the presence of soldiers from the 29th, or at least their equipment, during this period. Given the use of Fort Erie as a military storage depot, either case is certainly plausible.

The 34th Regiment of Foot was in Fort Erie from 1783 to 1786, the 53rd from 1786 to 1789, and the 65th from 1787 to 1790. The Royal Canadian Volunteers were stationed at the fort between 1796 and 1802. With the 1st battalion being stationed in Ontario and the 2nd in Quebec, these buttons can be linked to a single battalion (CMHG 2011: 538). Considering that the Royal Canadian Volunteers and the Queen's Rangers were the only troops in Ontario (and both garrisoned Fort Erie), it is slightly odd that no distinctive Queen's Rangers buttons were found, while four of the Royal Canadian Volunteers were.

The Royal Regiment of Artillery was at Fort Erie numerous times though its existence, but it does narrow down to a few date ranges in that period. This flat button has a shield with three dots (cannonballs) under the top edge, with three cannons facing left over a field of curved, parallel lines. Looking at these stylistic elements (namely, the angle of the cannons and the curvature of the top edge of the shield) links it closest to a Royal Artillery button from the American Revolutionary War (Calver and Bolton 1950: 98). This may be indicative of the Royal Artillery presence in 1792, or of an earlier presence that was not part of the garrison.

All of these buttons were between 26 and 36 *lignes*, which means they were likely used as coat or jacket buttons (Davis 1984: n.p.). This would fit in well with the fact that, as these are all regimental, it is likely they would have been part of the coat.

Lastly, the cufflinks have been connected to the Royal Navy or the Royal Marines due to the anchor motif they bear. An exact comparison has not been made, as there are a great many variations. The cufflinks are oval-shaped, and were previously gilt (as indicated by a small remaining portion), indicating an officer. Here, the anchor has a large ring connected to the top of the shank, with the stock angled downwards to the left, and triangular flukes. A rope is linked to the right part of the ring and is entwined around the anchor, going beneath the stock on the right, over the shank to the left, back under the shank to the right, under the right arm of the anchor, and curves, stopping below the anchor's crown. The shank, crown, and flukes have horizontal striations, while the stock has slightly angled striations (vertical, in relation to the angle that it is at). These small details may seem to be overly specific, but these small variations are what differentiate the many different forms of this motif. The closest comparison is with that of a Royal Marine button from the Revolutionary War (Calver and Bolton 1950: 56), which bears an identical motif, but is a circular button rather than an oval-shaped cufflink. Therefore, the best guess is that of an officer of the Royal Marines.

5.3 AMERICAN MILITARY BUTTONS

The American buttons were less prone to regimental variations, so identifying specific units is less likely. For instance, the Script “I” motif buttons stamped in 1812 would have the regiment number in a cartouche beneath the I (Maguire 2014: 87), although the examples from this sample are too far worn to read. Still, four basic motifs can be identified: U.S. (n=4), Eagle (n=1, likely 3), Script “I” (n=3), and Artillery (n=1) (Figs. 14-17). Two other buttons are too degraded to identify a motif, but they have been listed as American due to their association with American buttons.

Of the U.S. motif buttons, three of them were pewter⁵⁸ while the fourth was silver.⁵⁹ This suggests a difference between enlisted men and officers, as reflected in the assemblage. Given that the three pewter buttons were all from the same unit and approximate area (i.e. two from one lot and the third from the surface of the lot immediately below it), this may even represent a single individual rather than a group. Additionally, the analysis of the Snake Hill burials and the button placements that this type of U.S. motif buttons were commonly used as trouser buttons (Thomas and Williamson 1991: 72), which is likely what these were for.

Eagle motif buttons⁶⁰ are pewter infantry buttons. The definite example has an eagle perched above a cartouche with “IRT” within it (presumably, “Infantry Regiment”). The other two are likely with this motif because although the face is too worn to identify the eagle, the cartouche with “IRT” is visible in both cases, suggesting this to be true. The size of these buttons (between 33 and 34 *lignes*) corresponds to a coat or jacket (Davis 1984: n.p.). Therefore, this was their likely use, probably down the uniform’s



Fig. 14: Silver U.S. Motif Button (2R-1a).



Fig. 15: Pewter Eagle Motif Button (1C-2a).

⁵⁸ Catalogue Nos. 1C-4, 1C-6, and 1C-7

⁵⁹ Catalogue No. 2R-1

⁶⁰ Catalogue Nos. 1C-2, and likely 1C-3, and 1C-5

face. Also, given the close spatial association of these buttons, they could also represent a single individual, likely the same one as with the pewter U.S. motif buttons.

The Script “I” buttons⁶¹ are all pewter, and would have been solely used by the infantry. These buttons produced in 1812 would have had the regimental number within the cartouche, but those produced in 1813 and afterwards would have had a blank cartouche, a star, or a mullet fish (Maguire 2014: 87). No discernible regimental number could indicate that these were printed in 1813 or 1814 after this change, although it could just be wear that has made it illegible instead.

The size of these buttons (between 31 and 32 *lignes*) corresponds to a coat or jacket (Davis 1984: n.p.). Like the Eagle motif buttons, they were probably worn down the face of an infantryman’s coat.

The two unidentified buttons⁶² may be from either the Eagle or Script “I” motifs given their sizes (34 and 29 *lignes*), meaning they could be coat or jacket buttons (Davis 1984: n.p.). Since they are from Unit C, they are likely from the same individual as the U.S. and Eagle motif buttons. If this is the case, these would be more likely to be with the Eagle motif rather than Script “I”, just based on the nearest samples.

The odd button out, as it were, is the American Regiment of Artillery button.⁶³ This has an eagle over a cannon, adjacent to a stack of cannonballs. Underneath this is the inscription “1 REGT”, identifying this button’s owner as part of the 1st Regiment of Artillery. Made of copper or brass, this would be from an enlisted soldier rather than an officer. The



Fig. 16: Pewter Script “I” Motif Button (1D-1a).



Fig. 17: Copper 1st Regiment of Artillery Button (1D-2a).

⁶¹ Catalogue Nos. 1D-1, 2G-3, 2H-3

⁶² Catalogue Nos. 1C-1 and 1C-8

⁶³ Catalogue No. 1D-2

size (34 *lignes*) would make it a coat or jacket button (Davis 1984: n.p.).

Unlike Area 2's total monopoly on British regimental buttons, ten of the thirteen American military buttons were from Area 1, with Area 2 having the other three. Given Area 1's proximity to the Douglass Battery, this could indicate that soldiers were trying to remain closer to the defences of the battery. This would be in line with the thought that the Americans encampment was as close to the defences as possible, so as to have maximum protection from the besieging British artillery (John Triggs, personal communication).

Lastly, while the non-artillery buttons do not indicate a specific regiment, the fact that they are all infantry buttons can help narrow it down to a few regiments, based on those stationed at the Douglass Battery. The most likely candidates, therefore, are the 9th, 11th, and 22nd Infantry, and also the 5th Pennsylvania Volunteer Regiment, who was stated to be equipped with regular infantry uniforms (Chartrand 2011a: 114).

5.4 GAITER BUTTONS

The gaiter buttons were identified based on a few characteristics, namely being flat, circular, and without any designs on the face. These buttons could vary between 11 and 30 *lignes* in size, according to Davis (1984: n.p.), although four others above this have been included here (measuring 33, 34, 38, and 41 *lignes*) due to the stylistic similarities. It is possible that these were instead jacket buttons similar in style to gaiter buttons, but they have still been included here. Conversely, the smallest example of a gaiter button is 21 *lignes*, which is roughly midway through this range.

Looking at these 24 buttons, several patterns quickly emerge. Exactly half of the buttons are silver, while another two are gilt copper. One is pewter, and the rest are either copper/brass or a black-coloured alloy (probably just a form of unidentified copper alloy). The shanks are largely either alpha or cone with wire styles. Both the silver nor copper/brass buttons are divided between these styles, which indicates that the style of shank was not dependent on material. Perhaps, this is instead indicative of different times of manufacture based on changes in style. The fact that alpha shanks were used from about 1770 to 1800, while the cone with wire shanks were used from the 18th to early 19th centuries (Aultman and Grillo 2012: 8). There is a fair bit of overlap, but this could explain it. Another possibility is that this could indicate different manufacturers, with each using a different style of shank.

It is somewhat strange that such a high proportion of them are officers' buttons, identified as either silver or gilt copper. It would make sense that the ratio of officer to enlisted buttons in the archaeological record would be relatively proportional to the ratio of officers to enlisted soldiers that would have been at the site (i.e. many more enlisted than officers). As such, the majority of officer buttons goes against this. Trying to explain this discrepancy now becomes a speculative endeavour. Perhaps officers were in this general area more frequently, thereby depositing more of their buttons. Maybe it was random chance that saw more officer buttons being excavated, as much of the area still remains undisturbed. Another possibility is that, due to the wide range of gaiter button sizes and overlap with other button types, is that many of these have been falsely identified as gaiter buttons. This one is less likely, as if it is the case, as the materials are in roughly equal proportions regardless of size, meaning that most or all of them would have to have been misidentified.

These have no indication as to a regimental or national affiliation, given that both American and British soldiers wore gaiters. Instead, any such affiliation would have to be inferred through the button's position in the stratigraphy of the site. Perhaps higher-ranking officers rank can be identified through the two gilt gaiter buttons. It would make sense that a higher-ranking officer could afford gold rather than silver, which these buttons could represent.

5.5 POTENTIAL MILITARY BUTTONS

There are twelve buttons which have been labelled as "Likely Military," which have not been able to be connected to a specific regiment or nationality, but may be military based off of certain physical characteristics. In most of these cases, it is the fact that they are simply far too corroded to identify any designs, but the fact that they are pewter (as are many of the other military examples) suggests that they are military.

Three of these have some visible details which can offer up some suggestions as to their affiliation. Button 1B-3 (which is also the only copper/brass button in this category) has some dotting around the edge and a protruding boss at its centre, as well as some other potential designs. This dotting is somewhat similar to examples of British Regimental buttons from the Revolutionary War (Calver and Bolton 1950: 118-119), although the central elements are still obscured. Button 1E-1 has a very rough face, which may potentially be caused by some designs, but nothing can be identified. Button 2H-21 might have a circular design around the edge, which could again be indicative of a British

regimental button. Lastly, button 3W-1 has what appears to be a “7” on its face, though it is likely just a pattern in the corrosion rather than evidence of a regiment.

Without more in depth conservation measures, this is the greatest degree to which these buttons can be classified. When more of the features have become visible, then perhaps a more accurate assessment can be made.

5.6 BONE BUTTONS

A total of 34 bone buttons were found, although this number includes buttons 2F-1 and 2M-13, both of which were included with the British military buttons (buttons of the 5th and 65th Regiments of Foot, respectively). As such, the number of buttons that were listed as “Bone” in the catalogue numbers 32. As such, this consists of bone buttons that cannot be definitively stated to be military, although it is likely that most – if not all – of these were used by soldiers.

Additionally, all of these buttons were manufactured using a button blank, which will be looked at more thoroughly in the Button Blanks section. In fact, many of the buttons actually have concentric circles around the central hole, likely the result of the rotational movement of the drill as it carved out the button.

In military contexts, bone buttons were used largely for undergarments, shirts, trousers, and breeches. The positioning of bone buttons in the Snake Hill burials indicate that they were used for undershirts and trousers (Thomas and Williamson 1991: 72), and looking at images of breeches from the Royal Navy (Henderson 2008: n.p.) and trousers worn by the Deputy Assistant Commissary General⁶⁴ (Chartrand 2011b: 192) show bone buttons being worn around the waist, likely for attachment to a shirt



Fig. 18: Bone single hole button with possible letters (PIG/P.G) (2H-8a).

⁶⁴ A member of the Commissariat, a British civil department associated with the Treasury (Chartrand 2011b: 191).

or suspenders. There are even records of bone buttons being used on a wool gaiter (Davis 1984: n.p.), although this may be more of a civilian, rather than military, practice.

The greatest number of bone buttons (n=27) had a single, central hole (Fig. 18), while the other five had a raised edge and depressed face, with four holes in the centre. The first of these⁶⁵ has a curved shape and measures 34 *lignes* (likely a jacket button). The other four⁶⁶ have a relatively flat face, of which three are 26 *lignes*, while one is 28 *lignes*, and are possibly examples of a shirt or suspender button (Davis 1984: n.d.). The shape of these three (i.e. having a flat, sunken face) does correspond to examples of bone suspender buttons (Davis 1984: n.p.), as do the examples around the waist from the two aforementioned British examples. Therefore, button 1B-4 was likely a jacket button, potentially a civilian's, while the other three were likely suspender buttons from trousers or breeches.

The bone buttons with a single, central hole ranged from 19 to 34 *lignes*, indicating a wide variety of potential uses. Most of these could have been used for shirts, trousers, breeches, or undergarments, with perhaps some of the larger ones being used for jackets. This type of bone button is commonly found at fort sites, and was used for trousers regularly (Olsen 1963: 552). It's also possible that they were made as replacements for other buttons that had been broken or lost. For instance, mismatched buttons were common among American troops during the Niagara Campaign and 1814 Siege where maintaining proper supplies was an issue (Litt et al. 1993: 129).

One of these buttons⁶⁷ is unique from the others, as it looks as though it might have some writing carved into it. The face has what looks like either "P.G" or "PIG". Someone may have been bored and carved these letters into it, possibly even their initials. Evidence working against this is the fact it is a small button (d = 13.09 mm) with very small writing, which would have been difficult, unless they were using a sharp pin or some such. Also, the writing appears to go in the direction of the grain of the bone, which may mean it is a coincidence that it takes on the appearance of recognizable letters.

There are a few minor variations common enough to the buttons to deserve a mention. About half of these buttons have a thickness range, rather than a single, uniform thickness across the button. This is probably due to the natural curvature of the bone's marrow channel, as the button faces remain

⁶⁵ Catalogue No. 1B-4

⁶⁶ Catalogue Nos. 2F-9, 2P-2, 3U-1, and 3U-2

⁶⁷ Catalogue No. 2H-8

flat, rather than curving themselves. Additionally, two buttons are white⁶⁸ while one is black⁶⁹, as opposed to all the others, which are varied shades of brown. This may be indicative of burning, although it is possible that the white colour could be shell rather than bone.

Practically all of the bone buttons were found in Area 2, and although a few buttons dated back to the first fort period, most of them were found in the rubble/destruction layers that have been connected to the 1805 destruction. This lots generally correlate to the lots from which the button blanks originate, which suggests two things. Firstly, that the correlating bone buttons found here are the result of this on-site manufacture, and secondly, that bone buttons were not really manufactured on-site after roughly 1805, or at least not in the areas which have been currently investigated.

5.7 PLAIN BUTTONS

Another major category of buttons was “Plain,” which encompassed 15 buttons that had no real design on the face. Most were either copper/brass or the unknown black-coloured metal, although two were pewter, one was iron, and one was silver. This category served as somewhat of a catch-all for buttons without designs, although some may instead belong to other classifications in some cases. This is because plain buttons are not as easily identifiable as ones with more elaborate designs, such as a regimental button.

Many of the smaller copper/brass or black alloy buttons were smaller, and thought to maybe be cuff buttons. These may instead be gaiter buttons which have been misclassified, and instead belong in that category. If this is the case, it would help mitigate the overabundance of precious metal gaiter buttons that currently exists.

5.8 CUFFLINKS AND INSETS

Excluding the Royal Marine cufflinks listed above, a total of 8 separate sets of cufflinks and insets were found. Three were copper/brass (one of which had a cut glass inset), two of the black alloy,

⁶⁸ Catalogue Nos. 2M-14 and 2P-2

⁶⁹ Catalogue No. 2P-11

one each of silver and gilt copper, and one separate glass inset. Unlike the Royal marine cufflinks, none of these have designs identifying them as military, but they may indeed be officers' cufflinks.

The first example⁷⁰ was missing the backing of the cufflink, being just the face, and had the top quarter or so broken off. It has a floral design, with the stem, leaves, and several petals remaining. While the flower remains unidentified, it was determined not to be a thistle, which would have linked it to the insignia of the Glengarry Light Infantry (Calver and Bolton 1950: 201).

Conversely, the second⁷¹ just has the backing of a cufflink and the joining link, with the inset missing. It is circular with a visible lip which would have held whatever the inset was.

The third cufflink⁷² is silver, oval-shaped, and has a central cameo with a floral motif, which is then surrounded by straight lines going outwards (Fig. 19). This is unique as the flower is actually coloured, being red and blue. It looks like it might be a very fine thread which has been used, though it may be paints/dyes instead.



The fourth⁷³ is also oval-shaped, but is instead gilt copper. It has a series of oval-shaped, concentric lines on its face.

Fig. 19: Silver Cufflink with coloured floral design (2K-1a).

The fifth and sixth examples⁷⁴ are both complete pairs of cufflinks. The first may have a potential design, but its face is broken and corroded, which obscures it. The second is plain, with no design on its face, but its link is unique in that it is not an oval loop like the others, but rather in the design of a set of three conjoined squares.

The seventh⁷⁵ has both cufflinks, although only one has the glass inset still present. The back of the cufflinks has a sort of curved line or floral design, while the glass inset is white. The white colour is probably due to the glass being scratched or scuffed.

⁷⁰ Catalogue No. 2F-10

⁷¹ Catalogue No. 2G-1

⁷² Catalogue No. 2K-1

⁷³ Catalogue No. 3U-3

⁷⁴ Catalogue Nos. 2H-2 and 2M-2, respectively

⁷⁵ Catalogue No. 3S-2

The eighth and final example⁷⁶ is the glass inset, which is particularly interesting. It has a design of two interlocked C's in a dotted circle (Fig. 20). While this is very similar to the modern-day Chanel logo (which is also two interlocked C's in a circle), its position in the lower part of the 1805 destruction layer suggests that it dates to several-hundred years ago. The two C's could potentially be a maker's mark, or even the owner's initials.



Fig. 20: Glass inset with double C design (2N-6b).

Other examples of designs consisting of two interlocked C's from the 18th or early 19th centuries have been found, albeit on metal rather than glass. Button 3T-1 (Fig. 21) from this collection has two interlocked C's on its face, while a pair of British officer's cufflinks from the American Revolution also have two interlocked C's (Calver and Bolton 1950: 226). While this does not definitively say what time frame this is from, it instead shows that this general design was in use in the 18th and 19th centuries, it was used by at least one British officer, and that it was even present elsewhere on the site. As such, it is not beyond the realm of possibility that this is in its original stratigraphic context, rather than being a later inclusion.



Fig. 21: Octagonal button with double C design (3T-1a).

5.9 CIVILIAN BUTTONS

Civilian buttons were those thought not to be military due to some unique design, and there are 13 in total. These include: a flat button with a plain face, but a backmark of stars and a wreath⁷⁷ (1D-6), a gilt dome button with a scalloped edge and concentric circles on the face (2M-4), a button with a central, circular face with a linear design, and multiple smaller circles attached to the edge, somewhat like petals on a flower (2P-13), a gilt copper button with the design of two stars, one within the other,

⁷⁶ Catalogue No. 2N-6

⁷⁷ This may be a maker's mark, but if so, has not been identified.

surrounded by a wreath of flowers (2Q-3), two buttons with a raised, central boss on the face (2R-3 and 2R-5), an octagonal button with two interlocked C's as a design, as mentioned previously (3T-1), and a gilt button face with a woven design (3T-2). Two other buttons are a pewter backing with a copper face (1E-5 and 1E-6), with a raised, central boss design.

There are also three large buttons which are thought to be made of tombac (a copper and zinc alloy) (Davis 1984: n.p.), two of which have designs on the face. One is plain (2R-4), another has a dotted circle with small, scalloped designs emerging from either side of it (2R-8), while the last has a central dotted circle with sun rays coming out from it, with another dotted circle followed by a series of Germanic or Maltese crosses around the edge (2R-6) (Fig. 22). Evidence for the nature of this type of button has come from online metal detecting forums,⁷⁸ where they are largely referred to as colonial flat buttons. There appears to be much variability in design styles, which could these examples could easily be a part of.

2R-6 is in the same stratigraphic layer as an American U.S. motif button (2R-1), suggesting a connection to the 1814 siege. At Snake Hill, one burial identified as a militiaman had buttons from a variety of different sources, suggesting that he scrounged them (Thomas and Williamson 1991: 79). Perhaps that is the case here, where an American soldier has repaired his uniform jacket using older civilian buttons.



Fig. 22: Colonial flat button with sun motif (2R-6a).

5.10 OTHER BUTTONS

Many of the other button categories are too few in number to warrant their own section, so they will be covered in this section collectively. This consists of those listed as Dome (n=5), Back Plate (n=1), Unknown (n=5), and Possible Tacks (n=4).

Dome buttons have a curved face, and were not included in any previous section. One is gilt copper, two are copper/brass, one is iron, and one is pewter. One of the copper/brass buttons (2P-14)

⁷⁸ These have only been consulted due to a lack of academic sources, and only for the comparison of images. <http://www.treasurenet.com/forums/what/149054-largest-colonial-flat-button-i-ve-ever-seen.html>

is shallow, and has a crosshatching on the face. This is similar to the tops of the two examples of thimbles excavated, which may mean that this is part of a thimble rather than a button.

The back plate button (2M-9) has a concave face with two holes in it. It looks like it would have held some sort of inset, although at 34 *lignes*, it is much larger than other examples that would have had an inset (i.e. the cufflinks). This is also the only example of a button with a shank through back plate style shank.

The unknown buttons are, simply put, just that. Due to heavy corrosion or breakage, they simply cannot be identified. Two are iron, one is the black alloy, while two are of an unknown metal.

Lastly, there are four buttons which are possibly tacks. They are small, have a curved face, and a single bar in the place of the shank. It's likely these were miscataloged.

5.11 SHANKS AND EYES

Multiple different shank styles were used in the manufacture of buttons, seven styles of which are represented here. The shanks have broken off of many of these buttons, so not all have an associated shank, while eight shanks were also found independent of their buttons.

Each type will be given a brief description, as well as the general associated timeframe, with the information having been acquired from Olsen (1963: 552-553) and Aultman and Grillo (2012: 8-9).

Alpha shanks (Fig. 23) were generally used for copper alloy buttons, and dated between 1770 to 1800. They took the shape of a circular eye with two straight legs, then soldered to the back of the button. Omega shanks (Fig. 24) were much the same as alphas, except that they had two feet protruding from the sides of the legs (looking like the Greek letter omega), and dated after 1800. Cast eye shanks (Fig. 25) were manufactured as part of the button during the casting process, and are found in pewter buttons. These date from roughly 1750 to 1812. Cone with wire eye shanks (Fig. 26) consist of a wire eye that was soldered to the back of the button, overtop of which a blob of cast metal was placed and smoothed into a cone. These are usually with copper alloy buttons, and date from the 18th to early 19th centuries. A wire in boss shank (Fig. 27) was similar, except it had a metal boss instead of a cone, and was used between 1760 and 1790. Lastly, drilled eye shanks (Fig. 28) were manufactured

alongside the button without a hole, which was then drilled in through it. These were used with pewter and copper alloy buttons, and date from the 18th to mid 19th centuries.



Fig. 23: Alpha Shank (1E-4c).



Fig. 24: Omega Shank (2G-6c).



Fig. 25: Cast Eye Shank (1D-1c).



Fig. 26: Cone in Wire Shank (2X-2c).



Fig. 27: Wire in Boss Shank (2M-1c).



Fig. 28: Drilled Eye Shank (2H-2c).

Hook and eye fasteners are an alternative to buttons, where the hook will hook (for lack of a better word) over the eye, holding together two different pieces of fabric. Two examples of eyes have been found,⁷⁹ but no hooks. An example of a use for hook and eye fasteners would be for waistcoats (White 2005: 74-5), although buttons were also used as well (Davis 1984: n.p.).

5.12 METAL BUTTON MANUFACTURE

As bone button manufacture will be covered in the Button Blanks section, this will only concern metal buttons. In Britain, the main centre of Button manufacture was in Birmingham (Davis 1984: n.p.), although London also manufactured many of the military buttons in the 19th century (Nayler 1993: 8). This will look at the processes behind stamping and casting buttons, and the materials for which it was used, which were the two types evident here. All of this information comes from Davis (1984).

Stamped buttons were cut out of flattened sheets of metal. They would then be stamped with any designs and made either concave or convex (if desired). The edges would be smoothed and rounded, the shank would be attached, and the button would be burnished. Copper alloy buttons would be dipped in a nitric acid solution before burnishing, gilt buttons would be gilt with a solution of mercury, nitric acid, and gold amalgam, and silver buttons would be coated with silver, dipped in acid, and boiled in a silver and cream of tartar solution.

Cast manufacture was commonly used for pewter buttons. Here, the metal was poured into a mould and cast by hand. The shank would either be a part of the mould, or a wire would be placed in the mould beforehand. Due to the softness of pewter relative to other metals, these buttons were not really polished afterwards. From this process, a seam is sometimes visible on the back of the button face, indicative of the mould.

There were other types of button manufacture (e.g. cloth-covered buttons and japanning), but they were not found here and will not be explained.

⁷⁹ Catalogue Nos. 2J-7 and TP63-1

6.0 SUGGESTED CONSERVATION MEASURES

As mentioned in the Methodology section, all buttons were given a Yes/No designation as to whether conservation would be a viable option. This choice was based on three main factors: a) is the artifact of sufficient archaeological significance, b) is the artifact in any need of conservation, and c) is the artifact too badly corroded for conservation measures to make any difference? In total, out of 162 artifacts, 98 were given a Yes, while 64 were given a No. What follows will be an explanation of the rationale behind this choice, as well as some suggestions for possible conservation measures. This designation was fairly subjective, and is intended to be more of a preliminary suggestion for future conservators that will deal with these artifacts.

Any button that was a regimental military button was given a Yes based on their rarity and archaeological value (with a few exceptions that were extremely corroded), as was any button with an unique or otherwise interesting design on the face. The other reason for giving a Yes was if the conservation methods needed were of a low enough intensity that it would be relatively simple to take care of, which was either dirt or some low-level corrosion.

A No designation was given for several reasons, the most common being that no conservation was required. This reason encompassed the entirety of the bone buttons, all of which had survived extremely well, as well as some copper/brass buttons that had also done very well. If the object was of low value, such as a lone shank, or a severely bent/otherwise damaged button with no markings whatsoever, or if it was a possible tack, no conservation was recommended. Lastly, if the button was past the point where conservation measures could restore it to a valuable state, as was the case for several buttons which were far too corroded.

For many of the dirt/light corrosion buttons, a more thorough brushing will likely be sufficient. It would just have to be done with care, so that the artifacts would not be in danger. Conservation measures that have already been applied have been fairly basic. This consisted of cleaning away most of the dirt through washing and dry-brushing, both shortly after excavation during the field school, and over the course of the last year in the lab. This cleaning was only done to the extent where it was confident that no damage would be done to the artifacts. It was then halted where this potential was present, such as through scratching the artifacts. As such, some cleaning by a more skilled individual would be recommended.

Different metals corrode differently, which means different methods of treatment and conservation are required for each type of metal. Pewter should not really be cleaned apart from dirt removal, and should be kept away from organic acids, and stored at temperatures above 13°C in order to prevent further degradation (Cronyn 1990: 212-213). Copper alloys should generally not be cleaned by chemical solutions, but rather by mechanical methods, such as brushing or carefully picking away pieces of corrosion if they are in substantial enough pieces (Cronyn 1990: 224). This is probably unnecessary, due to lower levels of corrosion. If silver is to be cleaned, it can be done so either mechanically or, if extreme care is taken, chemically. It should then be stored in a sulphur-free environment, so as to prevent tarnish from developing (Cronyn 1990: 233-234). Gold should not be cleaned without using a microscope (Cronyn 1990: 236), so it may be better to leave these artifacts alone. Lastly, iron objects are best cleaned mechanically (Cronyn 1990: 191), although all the iron artifacts are either too corroded or of too low value to warrant further conservation. Likewise, other objects not in need of conservation, like bone, should probably just be kept in a dry environment.

As previously stated, this is just a brief overview into what conservation measures could be taken, if it is determined to be necessary. If this is decided upon in the future, this would be more of a basis upon which a more in-depth course of action can be established.

7.0 BUTTON BLANKS: EVIDENCE FOR BUTTON MANUFACTURE

As previously stated, button blanks are the fragments of bone which have been used to manufacture bone buttons (Fig. 29). These are animal bones, generally from something large like cattle, and can be from either the ribs which have been split (John Triggs, personal communication) or from long bones (e.g. a femur) which have been cut into sections (Davis 1984: n.p.). These long sections of bone would have been drilled through with a purpose-built blade attached



Fig. 29: Assembled Button Blanks.

to a lathe. The button would be drilled out, leaving a circular gap inside the bone strip (Davis 1984: n.p.).

From the 2015 excavation, a total of 129 button blanks fragments were found. These were concentrated along the south side of Area 2 in Units M, N, P, Q, R, and X. The presence of buttons in such a concentrated area, and only in this specific area, suggests that this location was used for on-site bone button manufacture, or at least it was a disposal site of the refuse from this process.

The number of holes in these fragments were counted in order to determine a number that could be assigned to the amount of buttons represented here. The fragments were joined together with other pieces from the same blank where possible in order to help avoid over-counting the number of buttons indicated. In total, a maximum estimate of the manufactured bone buttons, as indicated by the currently recovered blank fragments, numbers 272. The use of a maximum value is more accurate than a minimum, as it is likely that blank fragments that were not grouped together could actually represent the same buttons, which were then counted twice through this method.

The holes on these fragments were then compared with a diameter board for buttons which had intervals of 1.25 mm, or 2 *lignes*. Through this, the sizes of the manufactured buttons were determined. The groupings were as follows, from most to least numerous: 26 *lignes* (n=97), 20 *lignes* (n=97), 22 *lignes* (n=55), 24 *lignes* (n=15), 28 *lignes* (n=2), and 18 *lignes* (n=2). From this, it is apparent that 20, 22, and 26 *ligne* buttons were being manufactured most frequently. Since the size of button would be dependent on the drill bit used, the presence of these drill bits at the site (though not necessarily in the archaeological record) can be inferred from this. Due to the low numbers of the 18, 28, and perhaps 24 *ligne* blanks, it could be that these were mislabelled with their size classification, and instead belong to the 20, 26, and 22 or 26 *ligne* sizes, respectively.

Comparing this to the assemblages recovered reveals some crossover. Of the 30 bone buttons, 20 of them fall between the range of 18 to 29 *lignes*, which roughly corresponds to the sizes indicated here.⁸⁰ The majority of the recovered bone buttons do correspond to the manufactured sizes, which may indicate that they were some of the buttons produced on-site.

Looking at the size of buttons and their intended use, as recorded in “An Introduction to 19th-century Civilian Buttons” (Davis 1984) reveals some possible uses. Most of the manufactured buttons

⁸⁰ Given the 0.625 mm difference between *lignes*, it's possible that the high and low outliers fall within the margin of error, both of the archaeological interpretation and the manufacture process.

would have fallen into the size ranges for vests, shirts, dresses, gaiters, and dresses, except for those greater than 25 *lignes*, which could have been jacket buttons. This can provide an insight into the types of garments worn, and which of them may have used bone buttons instead of metal (or other materials).

8.0 BUCKLES

While buckles are not quite as diagnostic as buttons when it comes to the identification of specific groups of people, their form can be used to interpret their function, and their interpretation is therefore a worthwhile endeavour. The buckles recovered in 2015 number 18 in total, and were found in all three areas of excavation, although Area 2 had the greatest amount. Buckles were used for a variety of functions on numerous pieces of clothing during this time, which the buckles in this collection do represent, to a degree.

A buckle consists of four basic parts, which were used in the analysis of this assemblage: the frame, bar, prong, and chape (Fig. 30).⁸¹ The frame is the outermost portion of the buckle, sort of like its



Fig. 30: Knee Buckle. (A) Frame, (B) Bar, (C) Prongs, (D) Chape.

⁸¹ These terms are used in White (2005), while Grillo et al. (2014) use a different set of terms.

boundary. The bar often crosses the frame, and acts as an attachment point for the prong. The prong is the thin piece of metal that fits into a hole in the belt or strap, and there may be multiple prongs on a single buckle. The chape is a piece of metal on the opposite side of the prong, used to help hold the belt or strap in position (Grillo et al. 2014: 9-14).

Images of British buckles from the American Revolutionary War can help to identify some of the examples in this assemblage (Calver and Bolton 1950: 166, 221, 222).⁸² While there are no direct correlations between these images and the artifacts, certain patterns can be identified and applied to determine the function. Shoe buckles (Calver and Bolton 1950: 221, 222) consist only of a frame, are rectangular or oval-shaped, and can be intricately designed, with floral motifs being relatively common. Knee buckles (Calver and Bolton 1950: 221) are smaller than shoe buckles, are rectangular with straight or curved corners, and commonly have a bar, chape, and twin prongs (either straight or curved), although an example of just a frame is also shown. These would have been worn on the back of breeches, and used for adjusting its fit (White 2005: 57). Belt buckles (Calver and Bolton 1950: 166) were rectangular with straight or curved corners, had a bar that attached directly to the frame, and a separate piece of brass or iron for the prong, which wrapped around the bar. Stock buckles (Calver and Bolton 1950: 221) worn by officers were the most unique, being oval-shaped, with a triple prong and three distinctive fixed buttons coming off the frame on one side, where they would attach to holes in the stock (White 2005: 47). Stock clasps, identical in purpose to stock buckles, would have been rectangular, brass, with three fixed buttons and a clasp, and slots to put over it (Chartrand 2011b: 214). For the record, there are no examples of stock buckles or clasps in this collection.

Working from this, it is possible to identify the use of some of these buckles. Three of them are likely shoe buckles. The first is only partial, but is thin, rectangular, and likely brass. It has striations at the corners and along the midpoint of the frame edge, and no evidence of a bar attachment. The second, while also partial, is more elaborately designed, with the frame consisting of a rope woven around a circular portion with a wavy surface, and striations on the surface between the rope and circle. This gives it an overall rectangular design. The third is complete, albeit bent in half. It is oval-shaped or a curved rectangle, and features a leaf-like floral design and gaps in the frame, similar to an example from Calver and Bolton (1950: 222). This buckle also has evidence for a bar attachment which has since broken off (i.e. two holes along the interior of the frame apart from one another, one of which has part

⁸² Note that the samples consulted (i.e. British) could bias the interpretation of the assemblage.

of the bar still in it). If this is still a shoe buckle, this may just be a variation, and given the varied designs on shoe buckles, not entirely impossible.

Identifying anything for the shoe buckles beyond their use (e.g. military or national affiliation) would largely be conjecture. For instance, the 'rope buckle' may indicate a naval affiliation due to the use of ropes in other naval motifs, such as anchors or rigging (cf. Fig. 13). The connection of these to British soldiers in the American Revolution could also be biased because the examples compared to are all from such a context.

An example of a knee buckle is also present (Fig. 30). A curved square or rectangle, this buckle has twin curved prongs, and provides the only example of a chape in this assemblage. Structurally, it is very similar to the examples provided of knee buckles, which is the basis of its identification here. This would have been worn with a pair of breeches rather than trousers, which can actually help provide a general date for it within this context. Breeches were phased out in the British Army beginning in the 1790's, with a later 1807 order that mandated a pair of trousers were to be part of all soldiers' possessions (Henderson 2008: n.p.). In fact, the 5th Regiment of Foot is recorded as wearing trousers as early as 1793, which is precisely when they would have been stationed at Fort Erie (Henderson 2008: n.p.). As such, this buckle likely dates to the 1790's or earlier, and is therefore indicative of the garrison of the first fort, rather than the second.

A silver buckle is unique in this collection, both in material and form. Its frame is thin and rectangular with curved corners, while the bar has twin straight prongs. Its closest comparison is to an example of garter buckle (White 2005: 43), which would have been worn over a boot. The material indicated this likely an officer's buckle.

Two buckles are likely belt buckles. One is missing its prong, but the frame with attached bar is otherwise indicative of this function. Its frame is rectangular overall, but has a curved and sloped design to the shape of the edge. The other is missing roughly half its frame and bar, but still has the prong wrapped around it. While the frame is brass, the prong is iron, and it appears to have been made by flattening the end of the prong and folding it into a circle, which then affixes to the bar of the buckle.

Three of the buckles are small, square, and made of iron, ranging from roughly 19 to 27 mm². These appear to be fairly common design, and may be from a variety of different objects. A drawing of an 1808 knapsack patent used by American soldiers during the war (Chartrand 2011a: 159) has four small square buckles used to fasten the top flap of the pack to its main body, while sketches of British

models (Chartrand 2011b: 171) show them in similar uses, and also for the shoulder straps. Granted, the buckles in the drawing appear to have the prong joined to a central bar rather than part of the frame, as opposed to the examples in this collection which have the prong joined directly to the frame. This discrepancy does not necessarily preclude these buckle's proposed function, as there are potential explanations for this difference. Supply issues or non-standard manufacture could have resulted in a slightly different form of buckle being used. Additionally, these may have been from a different model of knapsack, either American or British, which may have used a slightly different buckle style. They also appear similar to gaiter buckles worn on the boots (Katcher 1990: 27), which is another possibility.

Given this supposition as to variability, it is possible to group a fourth buckle in with these three. Again, made of iron, and approximately the same size and style (i.e. the prong attaches to part of the frame), the main difference is that it has a curved end, creating a D-shape. Given the stylistic, rather than functional, difference, it is again possible that this is just a variation, meaning it could have shared a similar use. Alternatively, this could be an example of a belt buckle, as it could have functioned the same as the other belt buckle examples shown here. The only main difference here is that the bar is part of the frame rather than a separate piece, but this could have again just been a stylistic, rather than functional, difference.

There are also two buckles which have been identified as homemade buckles (Fig. 31). Flat, and likely made of lead due to their appearance and weight, the complete example is roughly figure-eight shaped with a rectangular slot in the middle, and no evidence for a prong, bar, or chape. The other is only partial, but appears to also follow this figure-eight shape as well. Given the structure, it is likely that a strap would have passed through it.

Two other buckles, while technically not clothing articles, have also been included here, which are two examples of musket straps. They are made of iron, and would have served to affix the fabric strap of the musket to loops on the body of the musket, in front of the trigger guard and midway down the barrel (Reid 1997: 36).

Lastly, there are several buckle pieces which are too fragmentary or degraded to confidently infer their use. One is a thin, straight piece of what is likely whitemetal, possibly part of a frame.



Fig. 31: Homemade Buckle.

Another is an iron bar with twin, straight prongs. The best option for this would be a knee buckle, although it seems a little too large for that purpose. Lastly is a large, brass piece, with the design of arches atop a flat metal base. If this is a buckle, it would most likely be a shoe buckle, given the larger size and more elaborate designs, but this piece may also be too large for this type, and may instead be a decorative piece of hardware.

9.0 CLOTHING-RELATED MISCELLANY:

9.1 BUTTONSTICK

A buttonstick (otherwise known as a button brass) was a device used for cleaning buttons, and would have been a part of a soldier's kit. It was a thin piece of wood or metal (generally brass) that had a slot running through it. It would be placed underneath the button faces, over the uniform beneath, so that the buttons could be brushed without damage to the uniform (Leclair 1990; Richard Gerrard, personal communication).

One of the artifacts here could serve such a purpose, although its form is not typical of buttonsticks (Fig. 32). While it is brass, it is much thicker and narrower than the regular examples, but it would have functioned as a buttonstick if it had been used as such. Therefore, until more evidence comes along, this is the suspected use. The difference in form from the standard examples could perhaps be a homemade or makeshift version created for a soldier stationed at the fort.



Fig. 32: Possible Buttonstick.

9.2 THIMBLES Included here are also two thimbles, due to their role in sewing, which is to say either clothing manufacture or repair. The two examples, from Unit P and Test Pit 86 (Fig. 33), are both Lofting style thimbles. This style was developed by John Lofting, a Dutch immigrant to England, who established a factory in Islington in 1695, later moving to Marlow, Buckinghamshire in 1697 (Trentman 2012: 77). This type would have dated to the late 18th century (UKDFD 2005).



Fig. 33: Lofting style thimble.

Apart from some discoloration, the test pit thimble is in near-perfect condition, while the other has been compressed or flattened on its sides. They have a crosshatching pattern on the top, a dotted pattern along the side, and a ring along the bottom.

9.3 OTHER MILITARY ARTIFACTS

Also included in this assemblage are three shako fragments and several pieces of epaulette wire. All of the shako fragments are of insufficient size to be attributed to a specific regiment, but some inferences can be made. The first fragment is the most different from the others. It is a blackish-silver colour, with a hole punched through it, and a triple-line design on the exterior edge, followed by a series of roughly S-shaped designs that have been etched into it. Looking at the hole, it is likely that the hole was made from the exterior, in towards the interior.

This artifact has been interpreted as shako fragment modified into a native ‘jangler,’ which would have been worn as part of a necklace (John Triggs, personal communication). Comparisons with other shako plates have not revealed any correlations.

The second is brass, has a curved, raised edge, and a swirl and dot design on the face. It was likely stamped due to the negative impression of the design on the other side of the fragment. While a specific regiment cannot yet be assigned to it, the swirl design is nearly identical to the stylized “GR” found on many British shako plates. With the curved edge, it looks like it may be part of the interior circle from the shako plates of the Model 1800 British stovepipe shako plates, such as the example from the 41st Regiment of Foot (Chartrand 2011b: 217, 219; Triggs 2015b: 54).

The third has a folded edge, and some type of curved line design on the face. Made of brass, its affiliation has not been identified.

Lastly, the epaulette wire is likely that used by an officer. It appears to be silver, which would have been indicative of an officer rather than enlisted. For instance, British major generals wore gold epaulette wire, while the lower ranking adjutant generals and quartermaster generals both had silver epaulette wire (Chartrand 2011b: 18-19). All British field officers wore two epaulettes (Fosten 1981: 21), and drawings of soldiers (Katcher 1990: 24-25), both American and British, show sergeants, musicians, and even some privates with epaulettes. Still, the silver material likely points towards an officer instead of an enlisted soldier.

9.4 FOIL

A piece of gilt foil, folded in half, has also been recovered. It may belong to a button, as gilt foil was used for some officer's buttons, but it may also belong to another artifact type. It does appear to be circular.

9.5 LINKS AND RINGS

Two metal, oval-shaped links were found. These are thin, possibly wire, and folded in at the end rather than soldered. Nothing definite can be said for their use, although they may be similar to the links used to join cufflinks, so that is a possibility for their interpretation. Conversely, they may have been used for other things.

Two copper, circular rings have been recovered. Unlike the links, the ends are fixed together rather than merely folded. They have been identified as native rings by others, which could be indicative of their use, possibly as jewelry or some such. Still, like the two links, they could have still functioned as something else, and may then not belong to this classification.

9.6 PINS AND NEEDLES

A total of 19 pins and one needle were found as well. Like the thimbles, these are probably evidence of clothing repair or production.

The pins consist of a spherical head attached to the shaft, which narrows down to a point. Most were made of copper, except for two iron and three steel examples, though it is possible that the steel ones might be silver instead. One of the iron pins had a flattened head, and may instead have been a thin nail rather than a pin. 18 of the pins fell between 23 and 33 mm, with one notable exception measuring 121 mm. Its larger size suggests a different application than the others, maybe for use with larger or coarser pieces of fabric.

The needle is also made of iron, with an eye attached to a shaft. Like the one iron pin, this may be a nail instead, with one end having been curved into the shape of an eye. This is supported by the body appearing to be somewhat thicker than may be expected, although it still could have functioned as a needle.

10.0 COINS:

The four coins, while not elements of clothing, were included here due to their archaeological significance and low numbers. Of particular value is their use at solidly establishing a *terminus post quem* when they appear in the archaeological record. For instance, a coin dating to 1787 could not have been placed there before that date. Therefore, the stratigraphic layer/feature to which it belongs (and any others that are established to be more recent than it in the stratigraphic profile) could not date to before 1787 either. This will be discussed in more depth and applied in the Stratigraphy section.

The first coin recovered was found in Area 1, Unit A, and is a William III copper halfpenny (Fig. 34). This coin is extremely worn on both sides, making it difficult to discern all the features. The obverse shows the portrait of an individual (the specifics of which will be discussed momentarily), while the reverse depicts Britannia (although only parts of her general outline are visible).



Fig. 34: William III halfpenny, obverse.

While difficult to read, enough features were visible in order to accurately identify this coin. This copper halfpenny was originally thought to be a George III coin, but it was later determined to depict William III. This determination was based off of

multiple differences between the designs of William III and George III copper halfpennies. First off, the coin bears a partial inscription – “GV” “TE” (obverse) and “A” (reverse) – which corresponded to the William III examples in both content and placement – “**GV**LIELMUS **TERTIUS**” (obverse) and “BRITANNIA” (reverse) – rather than the George III inscription.⁸³ Also, the portrait bust’s base was convex in its overall shape rather than concave, again characteristic of William III. The hair ribbons at the back of the head were also much thicker and shorter than the ones George III wears, as well as flowing differently. Lastly, the nose was visibly more hooked than George III’s, which is instead almost turned upwards. All together, these features were enough to confidently identify this as a William III halfpenny.

While this coin’s date is worn away and indecipherable, comparisons with examples of these coins would have placed it on the reverse underneath the depiction of Britannia. William III, however, reigned from 1688 to 1701, so the coin would have been minted during this time. In fact, a more accurate date range can be obtained because before Queen Mary’s death in 1694, the copper halfpennies would have had both William’s and Mary’s faces on the obverse. After her death, the coins showed only William (Jordan 1997). Given that only William appears here, this coin must date from between 1694 and 1701.

This has some large possible implications, as this coin dates to around 70 years before the construction of the first fort, and over a century before the construction of the second.

The second coin, from Area 2, Unit J, was a George III copper halfpenny (Fig. 35). The obverse depicts his portrait, facing right, surrounded by a partial inscription “(GE)ORGIVS (III RE)X”, while the reverse shows Britannia, facing left, with the partial inscription “B(RI)T(ANN)I(A)”.⁸⁴ The obverse also bears some dotting around the edge. On the obverse, approximately in the middle of George III’s head, there is a small depression which has been identified as a counterstriking mark. This would have been used to indicate that this coin was a legitimate issue rather than a

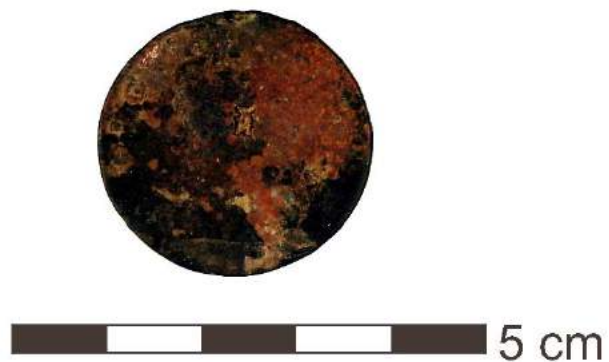


Fig. 35: George III halfpenny, obverse.

⁸³ Emphasis added.

⁸⁴ Bracketed letters indicate that they were not visible on the coin, but would have been part of the inscription.

counterfeit (John Triggs, personal communication). This will be looked into more thoroughly in the next section, specific to the identification of counterfeit coins.

The date of this coin, much like the William III coin, has been worn away, but would have been located underneath Britannia on the reverse. This coin does match the 1770-1775 issues, so a date of this timeframe is likely (Cross 1997: 12).

The third coin, excavated in Area 2, Unit P, is an American copper (Fig. 36). The obverse bears the inscription “NOVA CAESAREA” around the edge, as well as the image of a horse’s head in profile, facing right, over a plow, and dotting around the edge. Below this is a partial date “(17)87.” The reverse bears the inscription “E PLUR(I)BUS UNUM” around the edge, which surrounds a kite shield featuring linear designs (horizontal at its top, and vertical at the bottom). One of the edges of the coin also bears a linear puncture mark, located above where the “17” of the date would have been located. This appears on both sides of the coin, indicating the force was applied from both directions, and may be an example of a counterstriking mark.



Fig. 36: New Jersey copper, obverse.

The horse and plow design and the name “Nova Caesarea” are both indicative of New Jersey, being symbols included in the state’s coat of arms, and a term for New Jersey, respectively (Jordan 1997).

The legible date makes it easier to date this coin, except for the fact that there is evidence that the dates on this style of coin are not necessarily indicative of when it was minted. It appears that a common practice with the minting of this issue of coins was to exchange the obverse and reverse dies between coins, mixing up 1786 and 1787 dies. It is possible that some 1787 coins were minted in 1786, and vice versa, and that the date on the coin could possibly be indicative of when the die was manufactured instead (Jordan 1997). Given the small difference between the possibilities, it is likely that this variance has little to no significant impact on the archaeological record at Fort Erie.

The fourth and final coin, excavated in Area 2, Unit R, is a Spanish-American colonial silver 2 *reales* coin (Fig. 37). The obverse has the inscription “CAROLUS III DEI GRATIA” and the date “1781” around the edges, surrounding a portrait of Charles III in profile, facing right. The reverse is more obscured, but most of it can still be made out. Around the edges is the inscription “HISPAN ET IND REX Mo 2R (?)F.”⁸⁵ The central image is that of a coat of arms (quartered with lions and towers), flanked by pillars, and topped with a crown. Both the obverse and reverse have dotting around the edges.



Fig. 37: Charles III 2 *reales* silver coin, obverse.

The reverse of this coin, particularly the inscription, can provide for some interesting interpretations. To begin, the coat of arms is that of Leon and Castile, and the two columns are the Pillars of Hercules (i.e. the two promontories flanking the Strait of Gibraltar). The “2R” indicates the denomination of 2 *reales*, while the “Mo” indicates that this coin was minted in the mints at Mexico City. The “(?)F” is likely the initials of the assayer (i.e. the person who was responsible for ensuring the quality of the coin). Spanish coins were used in the British colonies, so it is not overly abnormal to find one so far away from the Spanish holdings in the Americas (Jordan 1997).

10.1 IDENTIFYING COUNTERFEITS

Through the course of this study, there emerged the possibility of identifying counterfeit coins in this assemblage. Rather than being a minority, counterfeit coins were much more common than genuine issues in the Americas in the 18th century, so the presence of a counterfeit would not be abnormal (Jordan 1997). This section will primarily focus on the George III halfpenny, which is the best possibility for a counterfeit coin in the collection. In fact, the majority of George III halfpennies in the Americas were counterfeits (Cross 1997: 12).

⁸⁵ The “Mo” is actually a capital “M” with a small “o” placed above it, rather than adjacent, and the (?) is an unknown, indecipherable symbol.

The Charlton Standard Catalogue of Canadian Coins, 51st Edition has images of both a genuine issue and counterfeit of the George III 1770-1775 issue halfpennies (Cross 1997: 12). When comparing the features of the two images with the coin in the collection, more similarities were found between it and the counterfeit, rather than the genuine issue. On the obverse, the segments on the shoulder pads were larger, less detailed, and lacked what appeared to be an undergarment; the hair was shaggier and more poorly-defined; and the brow appeared somewhat more pronounced. On the reverse, Britannia's arms appeared smoother and less well-defined, and the flowers/olive branch she is holding was more like the counterfeit's. Combined, these minor details make an argument for this being a false issue. Also, the fact that it is worn could be attributed to counterfeiters, as some would intentionally make their coins appear to be worn in order to obscure the differences and make it appear more accepted (Jordan 1997:).

There is still the matter of the counterstrike mark on the obverse, which would seem to indicate that it is genuine. While this is the strongest evidence in favour of a genuine issue, it could theoretically be attributed to a counterfeiter either mimicking a counterstrike or acquiring a genuine one. If this is the case, it would make the coin appear more authentic, and would therefore be a better counterfeit.

Another way of potentially identifying counterfeits is through some simple mathematics. One would have to know the percentage of material in a genuine coin issue (the fineness), the elemental weight of that material, and the weight and volume of the coin in question. With that information, one could calculate the actual density of the coin⁸⁶ and the theoretical density of a genuine issue of that same volume,⁸⁷ and then compare the two. If the two numbers are identical (or within a reasonable margin of error), it is likely that the coin is of genuine issue, but a marked difference would likely be indicative of a counterfeit. Since coins have designs on their face (and are not flat, by extension) the most accurate way of measuring volume would be through the measured displacement of water by the coin.

The best candidate for this type of analysis is the Charles III 2 *reales* coin. This is because the fineness of this type of coin is known, as in 1772, the fineness of Spanish silver *reales* was reduced to 0.90278, meaning that they were 90.278 percent pure silver. This value can therefore be calculated and compared to the actual volume.⁸⁸

⁸⁶ Weight of the coin divided by the volume.

⁸⁷ Elemental weight multiplied by the fineness, divided by the volume of the actual coin.

⁸⁸ These values will be calculated once the appropriate apparatus is obtained.

11.0 STRATIGRAPHY AND HARRIS MATRICES:

Developed in 1973 by Dr. Edward Harris, the Harris Matrix is a valuable tool for expressing the stratigraphic relationships between lot levels in a site (Brown and Harris 1993: 7). Rather than a means of analysis in of itself, a Harris Matrix is a visual representation of the sequence of strata in a site. Using a series of boxes connected by lines, a Harris Matrix shows each lot as being above/below another (superposition), having no connection between lots, or being parts of the same lot (correlation) (Harris 1989: 34-36). As such, it adheres to the laws which govern archaeological stratigraphy.

As brief overview, these principles are collectively the Laws of Superposition, Original Horizontality, Original Continuity, and Stratigraphical Succession. The Law of Superposition states that a layer is younger than any layer that is lies over, and older than any layer that it lies beneath (Harris 1989: 30-31). The Law of Original Horizontality states that a layer is naturally deposited horizontally, and if it is not (e.g. at an angle or in a depression), it was caused by the interference of a force or feature, either natural or manmade (Harris 1989: 31-32). The Law of Original Continuity states that a layer, when deposited, will either taper off into a feather-edge or will abut against an object, and when this is not the case (i.e. a gap/break), it is the result of either natural or manmade removal of the sediment, such as through digging or erosion. When this is discovered, the identical lots that are separated by this disruption can be correlated, and assumed to have been continuous where the break now occurs (Harris 1989: 32-33). Lastly, Harris explains the Law of Stratigraphical Succession as “(a) unit of archaeological stratification takes its place in the stratigraphic sequence of a site from its position between the undermost (or earliest) of the units which lie above it and the uppermost (or latest) of all the units which lie below it and with which the unit has a physical contact, all other superpositional relationships being redundant” (Harris 1989: 34).

11.1 AREA 1 STRATIGRAPHY

These principles upon which Harris Matrices are based governed the interpretation of the stratigraphic relationships at Fort Erie, both within the lots inside each individual unit, and between the units in each area of excavation. The Harris Matrix for Area 1⁸⁹ has since been created and is included here (Fig. 38). Divided into different periods (dating from the geological history to the 20th century), and different phases (correlated lots between the units in

⁸⁹ This consists of Units A, B, C, D, and E.

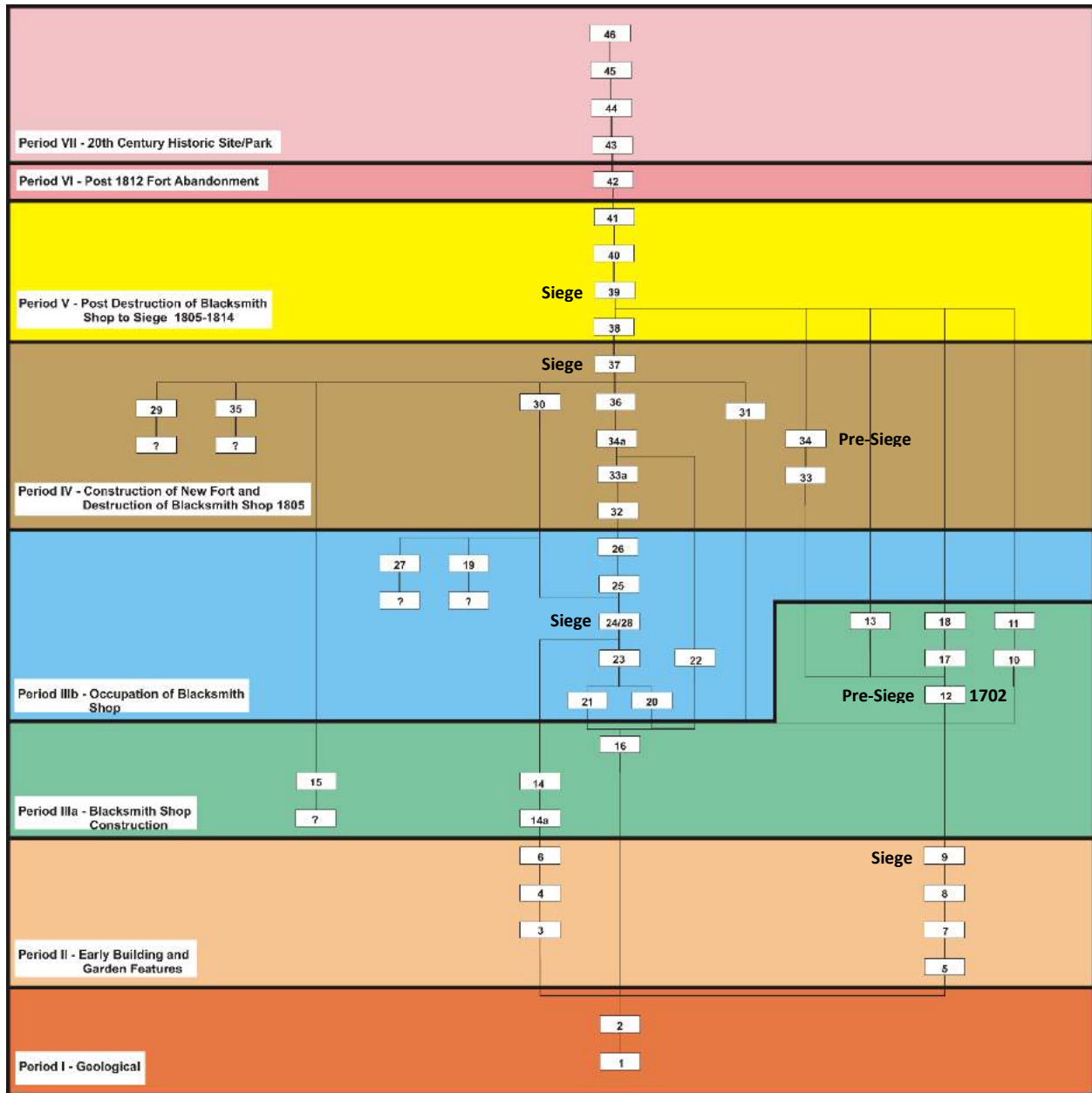


Fig. 38: Area 1 Harris Matrix with Periods and identified button dates

this area), this image provides a succinct and easily-decipherable overview of this section of the excavation.⁹⁰

⁹⁰ For a complete list of unit lot correlations within each area, see Appendix 2.

To begin, selected artifacts from the Area 1 units (namely buttons and the coin) will be added to it to help aid in the interpretation. The William III coin (Unit A, Lot 11) corresponds to Phase 12 of Period IIIa – Blacksmith Shop Construction, giving this a *terminus post quem* of 1701 at the latest. Considering the early date of the coin (i.e. predating the British occupation), this does not provide a revolutionary insight into the timeframe of the site, but still helps prove the validity of this application.

Next, select buttons from this area will be applied to the Harris Matrix. Considering the well documented military history of the site, military buttons provide the most valuable information in terms of dating. Within this assemblage, the ones that can be identified with the most certainty are the American military buttons (assumed to date to the 1814 occupation), while other military buttons that cannot be definitively attributed to either the British or Americans (i.e. gaiter buttons and those too corroded or worn down to discern any regimental or national associations) are less valuable, but still useful. The American buttons⁹¹ are identified in the Harris Matrix with the word “**Siege**” next to their respective phase, while pre-siege military buttons⁹² (assumed to be British) are identified by “**Pre-Siege.**”

While this at first appears to be contradictory, some explanation helps identify the patterns. The largest concentrations of American military buttons are found in Phases 39 and 37 (7 and 6 buttons, respectively). Phase 39 corresponds to the presumed stratigraphy of the siege perfectly, while Phase 37 is grouped with the previous period. This could suggest that Phase 37 truly belongs in the period of the siege (or at least the corresponding unit lot – C7), or perhaps that errors in excavation accidentally resulted in part of the superior lots (C5 and C8) being grouped in with this one.

Excavation errors best explain the presence of American buttons in Phases 9 and 24/28. Each phase only has one American button, and both of them were from lots in Unit C that were beneath C7 (C12 and C13). With these, it is likely that they were holdovers from C7 that mistakenly ended up with lower lots.

The rest of the temporal spacing of the military buttons works out well, with pre-siege buttons in Phases 12 and 34, both of which predate the siege. None of these buttons can be positively identified as either British or American, so their temporal spacing supports the “British” classification in this

⁹¹ Catalogue Nos. 1A-1, 2; 1C-1, 2, 3, 4, 5, 6, 7, 8; 1D-1, 2, 3, 4; 1E-1

⁹² Catalogue Nos. 1B-3, 5; 1E-2, 3, 4

analysis. The buttons in Phase 12 even correspond with the excavated William III coin, suggesting a connection between them.

Other buttons not identified as necessarily military in nature (e.g. bone buttons), but rather either military or civilian can perhaps also be attributed to military groups if they occur within the same phase as military buttons. Button 1B-1 (an unidentified metallic button) can be connected with the siege, and button 1B-4 (a bone button) can then be connected with the pre-siege garrison.

11.2 AREA 2 STRATIGRAPHY

Continuing this process for Area 2 offers a greater opportunity for temporal seriation than Area 1 due to the greater number of British regimental buttons from this area. This is true because of the greater timespan that the British occupied the fort compared to the Americans, and because of the well-documented records of which regiments were stationed at Fort Erie during this period. The greater number of coins also helps with this. One issue with this area is that the Harris Matrix has not yet been created, so the buttons are instead being linked directly to the correlation chart, although this is mitigated due to most buttons coming from several layers that are fairly ubiquitous through all the units.

Most regimental buttons came from what has been termed the Upper Destruction Layer (UDL), and the Lower Destruction Layer (LDL). Comparing the inclusions, namely rubble, between Areas 1 and 2, it appears that the UDL is likely equivalent to Phase 37 from the Area 1 Harris Matrix, while the LDL is equivalent to Phases 34 and 33. Similarities between the assemblages from the two areas readily become apparent with this correlation, with the timeframes matching up rather well.

Two buttons were found in the topsoil, one of which was the gilt 5th Regiment of Foot button with bone backing, while the other was an unidentified pewter button that was likely military, possibly British.⁹³ These two buttons are clearly out of sequence (especially considering the 1792-1796 date range for the 5th Foot button), and were likely brought up to the surface through either human, animal, or natural processes. Therefore, these should not be taken as an indicator for dating this stratigraphic layer.

⁹³ Catalogue Nos. 2F-3 and 2X-1, respectively.

Moving downwards, the next button is the 29th Regiment of Foot button,⁹⁴ and can be found in the first of two destruction layers unique to Units J and M, which are directly over UDL.⁹⁵ These lots are probably just an extension of the UDL, and so the explanation for this button's presence here will be the same as for the British buttons in the UDL, of which there are many examples. This button would likely date from 1776 to 1787.

In the UDL, there are the only three American buttons from Area 2, two of which are Script "I" motif, and the third being the silver U.S. motif button.⁹⁶ There were also five British regimental buttons, four of which were from the 5th Regiment of Foot, with the other being a Royal Canadian Volunteer button,⁹⁷ as well as one other unidentified likely military button.⁹⁸ This provides a combined date range of 1792 to 1802.

The presence of both American buttons from the War of 1812, and British pre-1812 buttons in the UDL suggests that this was the ground surface at the time of the siege. With the destruction of the building (approximately 1805), it is likely that whatever British buttons were present became jumbled together, and that American buttons were deposited on this ground surface during the course of the siege. This is supported by the fact that no American buttons were found in any layers below the UDL in Area 2 (and that the lower American buttons from Area 1 were likely due to excavation errors).

The UDL also has the New Jersey copper from 1787. This provides a *terminus post quem* for this layer, which is supported by all the buttons, both American and British. Considering the history of the fort, it is likely that this coin was brought here by the occupying American soldiers in 1814, and was deposited during that time, rather than an earlier point after 1787.

Below this is the LDL, which has eight British regimental buttons, and three unknown likely military buttons⁹⁹ (which are thought to be British due to the associated buttons). Of the identifiable buttons, there are two from the 34th Regiment of Foot (1783-1786), two (technically one, due to facing and backing being separated) from the 65th Foot (1787-1790), one from the Royal Regiment of Artillery

⁹⁴ Catalogue No. 2J-3

⁹⁵ These were differentiated from the UDL based on a higher elevation.

⁹⁶ Catalogue Nos. 2G-3, 2H-3, and 2R-1, respectively.

⁹⁷ Catalogue Nos. 2H-1, 2M-7, 2M-8, 2P-7, and 2M-1, respectively.

⁹⁸ Catalogue No. 2N-1

⁹⁹ Catalogue Nos. 2H-21, 22, and 23

(1792), one from the 5th Foot (1792-1796), and two from the Royal Canadian Volunteers (1796 to 1802).¹⁰⁰

This layer has been attributed to 1805, providing a *terminus ante quem* for the deposition of the assemblages it contains (and those below it), which is supported by these buttons, considering none of them date to after 1802. Additionally, it is somewhat interesting that this represents an almost unbroken chain of the garrison troops for approximately 20 years following the American Revolution (with the exception of the 26th Foot from 1790 to 1792).

Also underneath the UDL are two buttons, one from the 53rd Regiment of Foot (1786-1789), and the other being the Royal Marine cufflinks.¹⁰¹ These were from Unit X, which does not have a lot corresponding to the LDL. Being below the UDL, these fit in very nicely with the button sequence in the LDL. The non-specific date for the Royal Marine cufflinks should not be an issue, considering the regular presence of the Royal Navy.

The final three buttons are associated with the lots from the occupation of the fort from the 1780's to 1805, one of which is a Royal Canadian Volunteer's button, with two other unidentified military buttons¹⁰² (assumed to be British). The identifiable button fits in with this timeframe. Specifically, this lot is the floor layer of the structure, which can be dated by means of the two coins found beneath it in lower layers.

The first of these coins, the Spanish-American Charles III 2 *reales* silver coin was found in a lot directly beneath the floor layer. If this was on the ground surface before the building was constructed, it would provide a *terminus post quem* for the construction of the building. If so, this building would likely have been in existence no earlier than 1781, but no later than 1805. Another possibility is if this coin was dropped and fell through the floorboards, settling underneath the house. Since it was made of silver (and therefore, was more valuable), it is likely that it was unintentionally lost, but the question is if it was before or after the construction of the building.

The second coin was the George III copper halfpenny, and this was found in a trench feature dug for the sleepers that would have been beneath the floorboards. Being from the 1770 to 1775 issue style, this provides an earlier *terminus post quem* for the structure. Interpreting the presence of this

¹⁰⁰ Catalogue Nos. 2P-9, 2P-16, 2M-12, 2M-13, 2H-15, 2H-20, 2F-5, and 2P-12, respectively.

¹⁰¹ Catalogue No. 2X-4 and 2X-5, respectively.

¹⁰² Catalogue Nos. 2Q-4, 2N-9, and 2R-1, respectively.

coin opens up some very interesting possibilities. Firstly, this coin may have been intentionally deposited to commemorate the construction of the date of construction for this building by its builders. This is based off of the coin's position at what would have been one of the lowest points within the structure (underneath the supports for the floorboards), and the low value of the coin, which would have made it an inexpensive way to commemorate the construction. If this is the case, the building would have been built after 1770 at the earliest, and likely between 1770 and 1775. What is interesting here is that a storage building was constructed at Fort Erie in that time, with traders being given permission to build a storehouse in 1771 (Owen 1986: 24). Given this interpretation, it is a very real possibility that this building may even be identified as the structure built by these traders in or after 1771.

As for the button blanks found in Area 2, practically all of them came from the UDL and LDL, with only one found in the topsoil of Unit N, and two from lower levels in Unit X. This indicates that the period of button manufacture falls around the 1805 date, perhaps ranging from the late 1700's to before 1814 at its widest point. While the blanks from the UDL could be connected to the Americans (as some of the buttons were), it is more likely that they date to the earlier manufacture evidenced by the blanks in the LDL.

Lastly, the evidence for the glass inset with the double C design¹⁰³ being from its actual stratigraphic context comes from its presence in the LDL. This is likely sufficiently far down in the strata that this artifact is not a modern inclusion.

11.3 AREA 3 STRATIGRAPHY

Unlike Areas 1 and 2, Area 3 had very few buttons, and no building foundations. This results in a somewhat different stratigraphic profile, as it does not have the easily identifiable rubble/destruction layers to correlate between areas. The only two artifacts of note for this analysis is the octagonal button with a double C design, and the button that possibly has a 7 on its face (although, this is likely just corrosion rather than an intentional design).¹⁰⁴

¹⁰³ Catalogue No. 2N-6

¹⁰⁴ Catalogue Nos. 3T-1 and 3W-1, respectively.

The double C button was found in the test pit fill layer for Unit T, meaning that this artifact had not been found during the test pit excavation, but was found later during the unit excavation. Due to the nature of this lot, it has lost all of its vertical stratigraphic information, meaning it is useless for dating purposes. Here, it just serves to reinforce the possibility that the glass inset from Area 2 could be from the past.

For the other button, a comparison of the sediment characteristics of the lot in which it was found with the lots in Area 2 suggest that it corresponds to the occupation period of the site between the 1780's and 1805. This early date supports the idea that this is not a regimental button because the only units to be stationed at Fort Erie that had a 7 in their number (i.e. the 70th and 76th Regiments of Foot) were not present until after the War of 1812.

11.4 TEST PIT STRATIGRAPHY

As was the case for button 3T-1 in Area 3, the test pits do not record the stratigraphic layer, thereby losing the temporal location of any artifacts unearthed. However, one of the artifacts found through test pitting was a pewter 5th Regiment of Foot button¹⁰⁵ with a V instead of a 5. This is identical to button 2P-7, which was found in the Upper Destruction Layer of Area 2. Since this is the only stratigraphic layer in which this type of button is found, it is possible that this button also dated to that period (i.e. from 1805 to 1814).

12.0 CONCLUSIONS AND FUTURE APPROACHES

This investigation into the nature of the excavated artifacts and their stratigraphic context has been a worthwhile endeavour. The analysis of both American and British material culture pertaining to military uniforms has revealed much about the function of the military buttons, from their location on the uniform, what the characteristics indicated about their who wore them, and what that says about the stratigraphy of the site.

For future work to be done, the first thing would have to be the completion of Harris Matrices for Areas 2 and 3, and then one for the site as a whole. This would allow comparisons of the temporal

¹⁰⁵ Catalogue No. TP86-1

distribution of the artifacts in a single representation. Also, conducting the experiment to test the purity of the coinage would also be a good use of time. Lastly, given the effective results of discerning the temporal distribution of buttons in this investigation, it would be effective to do this for the assemblages from the 2012 and 2013 excavations, as well as from any future excavations at Fort Erie.

In conclusion, buttons provide a valuable window into past human activity, due to their direct usage as personal artifacts, their ubiquity across many different groups, clothing, and times, and through their identifiable temporal associations. Connecting this into their stratigraphic context, and representing that by means of a Harris Matrix, allows for this interpretation to be connected to other aspects of the site, increasing the available knowledge and potential for effective interpretations.

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ARTIFACT CATALOGUE – SEE APPENDIX E, VOLUME II

BRITISH MILITARY BUTTONS

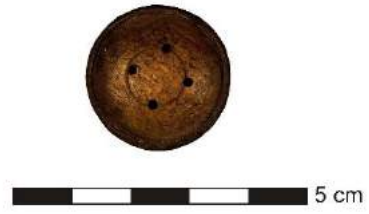
5th Regiment of Foot, Officer – Area 2 Unit F, lot 3 (front); 5th Regiment of Foot, Officer – Area 2 Unit F, lot 3 (back)

Royal Canadian Volunteers – Area 2 Unit F, lot 5 (front); Royal Canadian Volunteers – Area 2 Unit F, lot 5 (back)

5th Regiment of Foot, – Area 2 Unit H, lot 5 (front); 5th Regiment of Foot – Area 2 Unit H, lot 5 (back)

Royal Regiment of Artillery, Officer – Area 2 Unit H, lot 6 (front); Royal Regiment of Artillery, Officer – Area 2 Unit H, lot 6 (back)

5th Regiment of Foot, – Area 2 Unit H, lot 6 (front); 5th Regiment of Foot – Area 2 Unit H, lot 6 (back)



BRITISH MILITARY BUTTONS (CONT.)

29th Regiment of Foot – Area 2 Unit J, lot 5 (front); 29th Regiment of Foot – Area 2 Unit J, lot 5 (back)

Royal Canadian Volunteers – Area 2 Unit M, lot 3 (front); Royal Canadian Volunteers – Area 2 Unit M, lot 3 (back)

5th Regiment of Foot, – Area 2 Unit M, lot 3 (front); 5th Regiment of Foot – Area 2 Unit M, lot 3 (back)

5th Regiment of Foot, – Area 2 Unit M, lot 3 (front); 5th Regiment of Foot – Area 2 Unit M, lot 3 (back)

65th Regiment of Foot (pewter)– Area 2 Unit M, lot 4 (front); 65th Regiment of Foot (bone) – Area 2 Unit M, lot 4 (back)



5 cm



5 cm



5 cm



5 cm



5 cm



5 cm



5 cm



5 cm



5 cm



5 cm

BRITISH MILITARY BUTTONS (CONT.)

5th Regiment of Foot, Officer – Area 2 Unit P, lot 7 (front); 5th Regiment of Foot, Officer – Area 2 Unit P, lot 7 (back)

34th Regiment of Foot – Area 2 Unit P, lot 8 (front); 34th Regiment of Foot – Area 2 Unit P, lot 8 (back)

Royal Canadian Volunteers – Area 2 Unit P, lot 8 (front); Royal Canadian Volunteers – Area 2 Unit P, lot 8 (back)

34th Regiment of Foot – Area 2 Unit P, lot 8 (front); 34th Regiment of Foot – Area 2 Unit P, lot 8 (back)

Royal Canadian Volunteers – Area 2 Unit Q, lot 9 (front); Royal Canadian Volunteers – Area 2 Unit Q, lot 9 (back)



5 cm



5 cm



5 cm



5 cm



5 cm



5 cm



5 cm



5 cm



5 cm



5 cm

BRITISH MILITARY BUTTONS (CONT.)

53rd Regiment of Foot – Area 2 Unit X, lot 5 (front); 53rd Regiment of Foot – Area 2 Unit X, lot 5 (back)

5th Regiment of Foot, – Area 2 TP 86 (front); 5th Regiment of Foot – Area 2 Unit TP 86 (back)



AMERICAN MILITARY BUTTONS

US Regimental (pewter) – Area 1, Unit C, lot 7 (front); US Regimental (pewter) – Area 1, Unit C, lot 7 (back)

US Infantry regiment 'IRT' (pewter) – Area 1, Unit C, lot 7 (front); US Infantry regiment 'IRT' (pewter) – Area 1, Unit C, lot 7 (back)

US Infantry regiment 'IRT' (pewter) – Area 1, Unit C, lot 7 (front); US Infantry regiment 'IRT' (pewter) – Area 1, Unit C, lot 7 (back)

'US' design (pewter) – Area 1, Unit C, lot 7 (front); 'US' design (pewter) – Area 1, Unit C, lot 7 (back)

US Infantry regiment 'IRT' (pewter) – Area 1, Unit C, lot 7 (front); US Infantry regiment 'IRT' (pewter) – Area 1, Unit C, lot 7 (back)



AMERICAN MILITARY BUTTONS (CONT.)

'US' design (pewter) – Area 1, Unit C, lot 7 (front); 'US' design (pewter) – Area 1, Unit C, lot 7 (back)

'US' design (pewter) – Area 1, Unit C, lot 12 (front); 'US' design (pewter) – Area 1, Unit C, lot 12 (back)

Eagle or script 'I' design (pewter) – Area 1, Unit C, lot 13 (front); Eagle or script 'I' design (pewter) – Area 1, Unit C, lot 13 (back)

Script 'I' design (pewter) – Area 1, Unit D, lot 3 (front); Script 'I' design (pewter) – Area 1, Unit D, lot 3 (back)

US Artillery 1st Regiment (copper/brass) – Area 1, Unit D, lot 3 (front); US Artillery 1st Regiment (pewter) – Area 1, Unit D, lot 3 (back)



AMERICAN MILITARY BUTTONS (CONT.)

Script 'I' design (pewter) – Area 1, Unit G, lot 5 (front); Script 'I' design (pewter) – Area 1, Unit G, lot 5 (back)

Script 'I' design (pewter) – Area 1, Unit H, lot 5 (front); Script 'I' design (pewter) – Area 1, Unit H, lot 5 (back)

'US' design (plated) – Area 1, Unit R, lot 5 (front); 'US' design (plated) – Area 1, Unit R, lot 5 (back)



GAITER BUTTONS

Gaiter button – Area 1, Unit A, lot 8 (front); Gaiter button – Area 1, Unit A, lot 8 (back)

Gaiter button – Area 1, Unit B, lot 7 (front); Gaiter button – Area 1, Unit B, lot 7 (back)

Gaiter button – Area 1, Unit D, lot 3 (front); Gaiter button – Area 1, Unit D, lot 3 (back)

Gaiter button – Area 1, Unit E, lot 6 (front); Gaiter button – Area 1, Unit E, lot 6 (back)

Gaiter button – Area 1, Unit E, lot 6 (front); Gaiter button – Area 1, Unit E, lot 6 (back)



GAITER BUTTONS (CONT.)

Gaiter button – Area 2, Unit F, lot 4 (front); Gaiter button – Area 2, Unit F, lot 4 (back)

Gaiter button – Area 2, Unit F, lot 5 (front); Gaiter button – Area 2, Unit F, lot 5 (back)

Gaiter button – Area 2, Unit F, lot 5 (front); Gaiter button – Area 2, Unit F, lot 5 (back)

Gaiter button – Area 2, Unit H, lot 5 (front); Gaiter button – Area 2, Unit H, lot 5 (back)

Gaiter button – Area 2, Unit H, lot 6 (front); Gaiter button – Area 2, Unit H, lot 6 (back)



GAITER BUTTONS (CONT.)

Gaiter button – Area 2, Unit J, lot 5 (front); Gaiter button – Area 2, Unit J, lot 5 (back)

Gaiter button – Area 2, Unit J, lot 5 (front); Gaiter button – Area 2, Unit J, lot 5 (back)

Gaiter button – Area 2, Unit J, lot 5 (front); Gaiter button – Area 2, Unit J, lot 5 (back)

Gaiter button – Area 2, Unit J, lot 8/9 (front); Gaiter button – Area 2, Unit J, lot 8/9 (back)

Gaiter button – Area 2, Unit N, lot 5 (front); Gaiter button – Area 2, Unit N, lot 5 (back)



GAITER BUTTONS (CONT.)

Gaiter button – Area 2, Unit N, wall cleaning (front); Gaiter button – Area 2, Unit N, wall cleaning (back)

Gaiter button – Area 2 ,Unit P, lot 7 (front); Gaiter button – Area 2, Unit P, lot 7 (back)

Gaiter button – Area 2, Unit Q, lot 5 (front); Gaiter button – Area 2, Unit Q, lot 5 (back)

Gaiter button – Area 2, Unit Q, lot 5 (front); Gaiter button – Area 2, Unit Q, lot 5 (back)

Gaiter button – Area 2, Unit Q, lot 10/11 (front); Gaiter button – Area 2, Unit Q, lot 10/11 (back)



GAITER BUTTONS (CONT.)

Gaiter button – Area 2, Unit X, lot 3 (front); Gaiter button – Area 2, Unit X, lot 3 (back)

Gaiter button – Area 2, Unit X, lot 4 (front); Gaiter button – Area 2, Unit X, lot 4 (back)

Gaiter button – Area 2, Unit Y, lot 4 (front); Gaiter button – Area 2, Unit Y, lot 4 (back)

Gaiter button – Area 3, Unit W, lot 5 (front); Gaiter button – Area 3, Unit W, lot 5 (back)



CIVILIAN BUTTONS

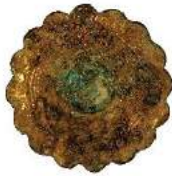
Wreath and Stars motif in garland (copper/brass) – Area 1, Unit D, lot 7 (front); Wreath and Stars motif in garland (copper/brass) – Area 1, Unit D, lot 7 (back)

Concentric circles with central stone inset, scalloped edge (copper with gilt plating) – Area 2, Unit M, lot 3 (front); Concentric circles with central stone inset, scalloped edge (copper with gilt plating) – Area 2, Unit M, lot 3 (back)

Lined circle with 13 green stones on outer edge, (copper/brass) – Area 2, Unit P, lot 8 (front); Lined circle with 13 green stones on outer edge, (copper/brass) – Area 2, Unit P, lot 8 (back)

Star in star with floral border (copper with gilt plating) – Area 2, Unit Q, lot 8 (front); Star in star with floral border (copper with gilt plating) – Area 2, Unit Q, lot 8 (back)

Design indecipherable (pewter) – Area 2, Unit R, lot 5 (front); Design indecipherable (pewter) – Area 2, Unit R, lot 5 (back)



CIVILIAN BUTTONS (CONT.)

Plain, flat, black colour (tombac - brass alloy with zinc) – Area 2, Unit R, lot 5 (front); Plain, flat, black colour (tombac - brass alloy with zinc) – Area 2, Unit R, lot 5 (back)

Design indecipherable (pewter) – Area 2, Unit R, lot 5 (similar to preceding in Unit R5) (front); Design indecipherable (pewter) – Area 2, Unit R, lot 5

Colonial Flat Button, central sun bordered with Maltese crosses (tombac) – Area 2, Unit R, lot 5 (front); Colonial Flat Button, central sun bordered with Maltese crosses (tombac) – Area 2, Unit R, lot 5 (back)

Colonial Flat Button, dotted circle design and "scalloping" around middle (copper alloy) – Area 2, Unit R, lot 10 (front); Colonial Flat Button, dotted circle design and "scalloping" around middle (copper alloy) – Area 2, Unit R, lot 10 (back)

Octagonal with double "C" design (tombac?) – Area 3, Unit T, lot 3 (front) Octagonal with double "C" design (tombac?) – Area 3, Unit T, lot 3 (back)



CIVILIAN BUTTONS (CONT.)

Woven pattern (copper with gilt plating) – Area 3, Unit T, lot 10 (front); Woven pattern (copper with gilt plating) – Area 3, Unit T, lot 10 (back)



UNIDENTIFIABLE MILITARY BUTTONS

Pewter button, very corroded – Area 1, Unit A, lot 8 (front); Pewter button, very corroded – Area 1, Unit A, lot 8 (back)

Button face has central boss surrounded by unidentifiable design with circle pattern around edges (copper/brass) Area 1, Unit B, lot 7 (front); Same button, Area 1, Unit B, lot 7 (back)

Button is slightly convex, corroded, possible design on face - unknown (pewter) Area 1, Unit E, lot 5 (front); Same button, Area 1, Unit E, lot 5 (back)

Button is flat, corroded, possible circular design (pewter) Area 2, Unit H, lot 6 (front); Same button, Area 2, Unit H, lot 6 (back)

Small button fragment with shank, (pewter) Area 2, Unit H, lot 6 (front); Same button, Area 2, Unit H, lot 6 (back)



UNIDENTIFIABLE MILITARY BUTTONS (CONT.)

Small button flat, very corroded, partial, (pewter) Area 2, Unit H, lot 6 (front); Same button, Area 2, Unit H, lot 6 (back)

Corroded, shank base present, two broken edges (pewter) Area 2, Unit N, lot 5 (front); Same button, Area 2, Unit N, lot 5 (back)

Very corroded, broken edges, shank base present, unknown design (pewter) Area 2, Unit N, lot 7 (front); Same button, Area 2, Unit N, lot 7 (back)

Very corroded, chipped edges, dotted border on perimeter (pewter) Area 2, Unit R, lot 9,10,12 wall cleaning (front); Same button, Area 2, Unit R, lot 9,10,12 wall cleaning (back)

Corroded, bent and broken edges, shank base present, border around face (pewter) Area 2, Unit X, lot 2 (front); Same button, Area 2, Unit X, lot 2 (back)



UNIDENTIFIABLE MILITARY BUTTONS (CONT.)

Corroded, shank base present, possible "7" design (pewter) Area 3, Unit W, lot 6 (front); Same button, Area 3, Unit W, lot 6 (back)

Corroded, shank base present (pewter) Area 3, TP80 (front); Same button, Area 3, TP80 (back)



CUFFLINKS

Cufflink face with floral motif, missing top, rust on back (tombac?) Area 2, Unit F, lot 8 (front);
Same item, Area 2, Unit F, lot 8 (back)

Cufflink missing decorative element, has metal link (tombac?) Area 2, Unit G, lot 2 (front); Same item,
Area 2, Unit G, lot 2 (back)

Two cufflinks, joined by link, face has indecipherable design (copper alloy) Area 2, Unit H, lot 5 (front);
Same item, Area 2, Unit H, lot 5 (back)

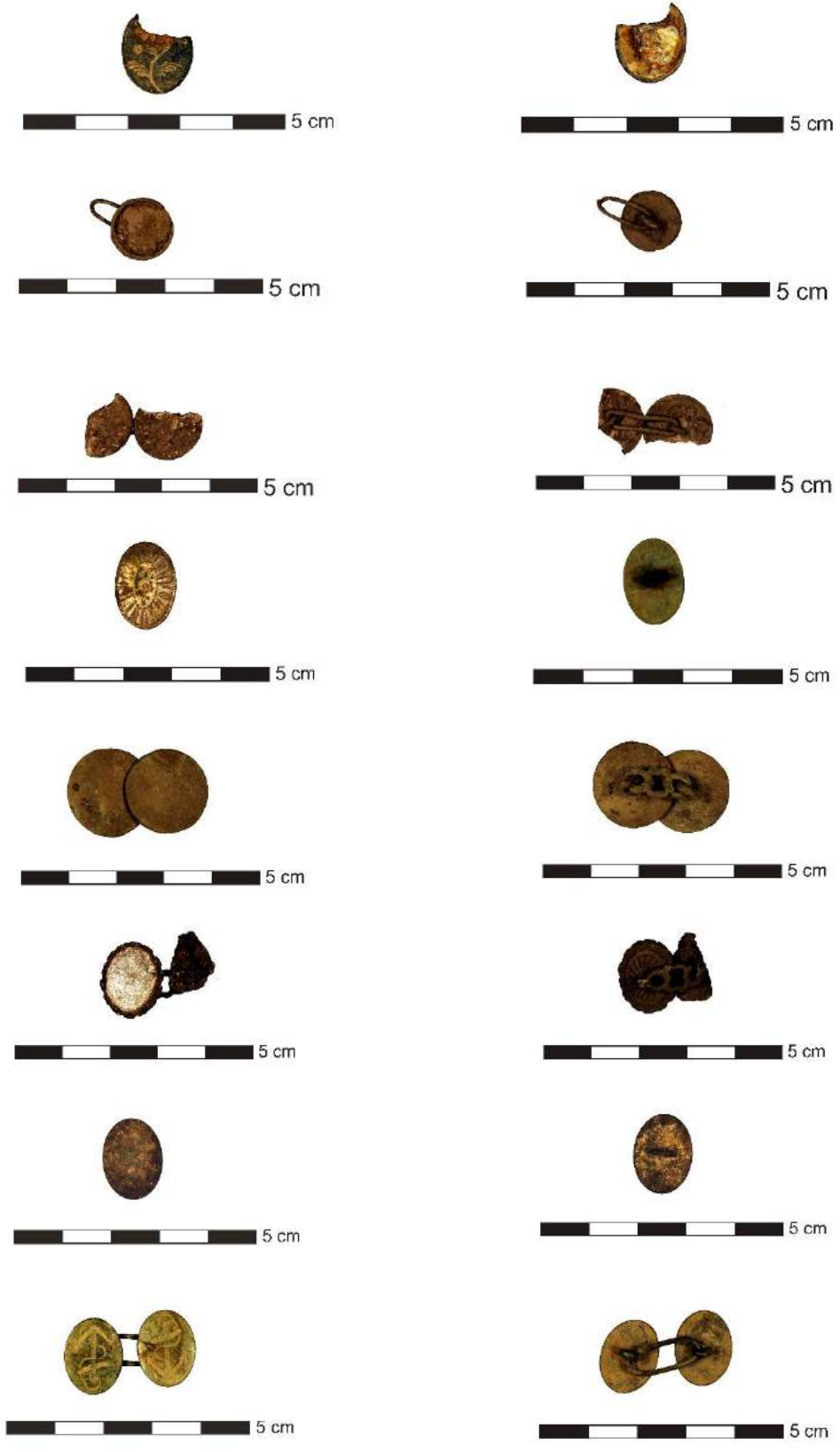
Oval silver cufflink with lines and coloured floral design (silver plated) Area 2, Unit K, lot 6 (front); Same
item, Area 2, Unit K, lot 6 (back)

Plain, flat, joined by partitioned link (copper alloy) Area 2, Unit M, lot 3 (front); Same item, Area 2, Unit
M, lot 3 (back)

Shank missing, clear stone inset (gilt plated copper) Area 3, Unit T, lot 10 (front); Same item, Area 3, Unit
T, lot 10 (back)

Oval, concentric oval design on face, bent shank (gilt plated copper) Area 3, Unit U, lot 3 (front); Same
item, Area 3, Unit U, lot 3 (back)

Flat, oval, anchor design, Royal Navy (gilt plated copper) Area 2, Unit X, lot 5 (front); Same item, Area 2,
Unit X, lot 5 (back)



MISCELLANEOUS BUTTONS

Corroded and bent, has a central hole rather than a shank (pewter) Area 1, Unit B, lot 5 (front); Same item, Area 1, Unit B, lot 5 (back)

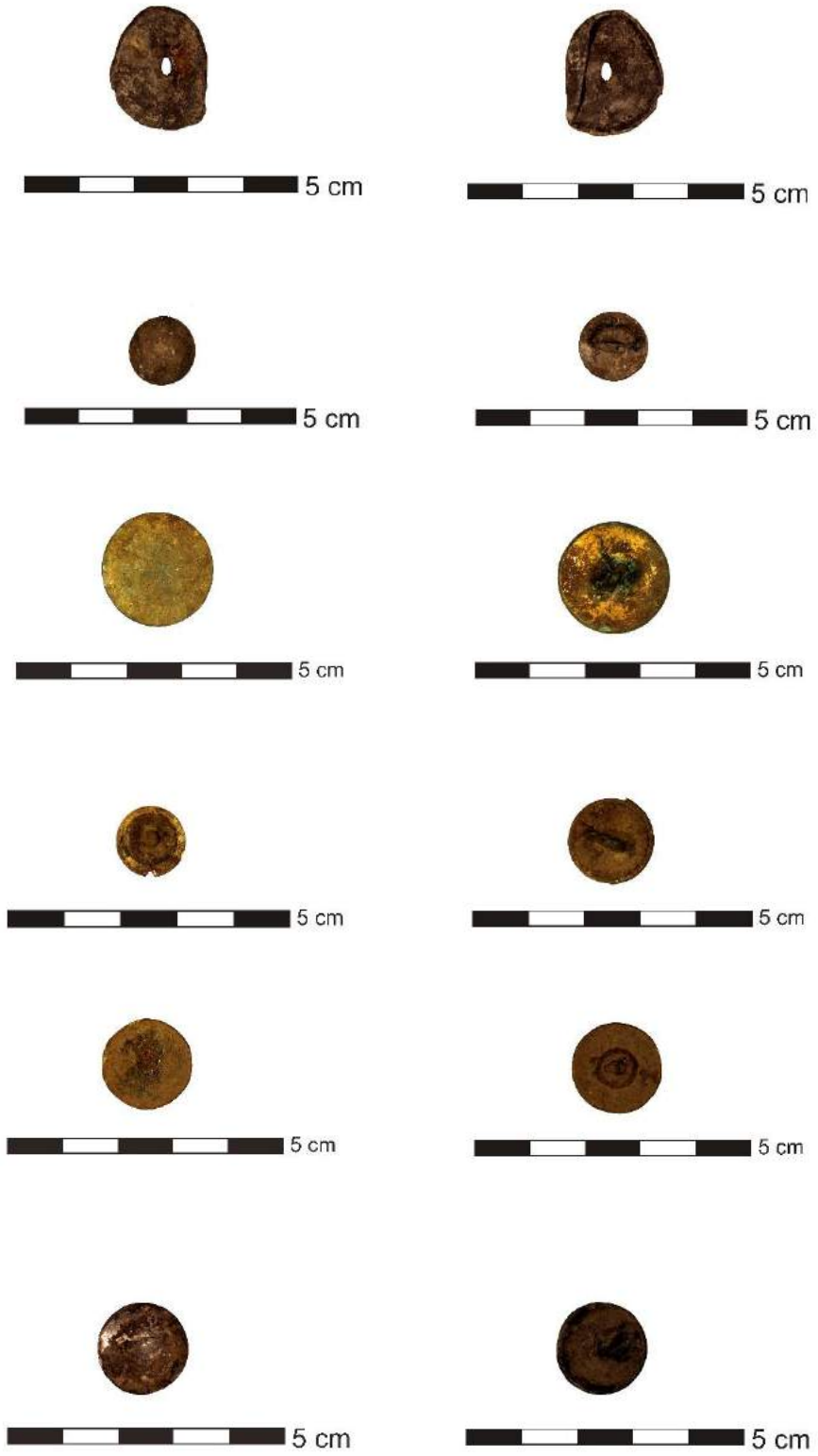
Plain, dome-type, bent shank (pewter) Area 1, Unit D, lot 3 (front); Same item, Area 1, Unit D, lot 3 (back)

Plain, dome-type (gilt plated copper) Area 1, Unit E, lot 6 (front); Same item, Area 1, Unit E, lot 6 (back)

Flat button, back separate from face (gilt plated copper) Area 1, Unit E, lot 7 (front); Same item, Area 1, Unit E, lot 7 (back)

Plain, flat, shank base present but shank missing (copper/brass alloy) Area 2, Unit F, lot 5 (front); Same item, Area 2, Unit F, lot 5 (back)

Plain dome-type, shank broken but present (silver plated) Area 2, Unit G, lot 5 (front); Same item, Area 2, Unit G, lot 5 (back)



MISCELLANEOUS BUTTONS (CONT.)

Flat, plain, possible cuff button (silver plated copper alloy) Area 2, Unit G, lot 5 (front); Same item, Area 2, Unit G, lot 5 (back)

Plain, slight dome, shank broken but still present (copper alloy, blackened) Area 2, Unit G, lot 6 (front); Same item, Area 2, Unit G, lot 6 (back)

Flat, plain, heavily rusted shank (black-coloured alloy) Area 2, Unit G, lot 6 (front); Same item, Area 2, Unit G, lot 6 (back)

Flat, plain, shank broken but present (black-coloured alloy) Area 2, Unit G, lot 8/9 (front); Same item, Area 2, Unit G, lot 8/9 (back)

Flat, plain, possible cuff button (black-coloured alloy) Area 2, Unit H, lot 5 (front); Same item, Area 2, Unit H, lot 5 (back)

Flat, plain, possible cuff button (copper alloy) Area 2, Unit H, lot 5 (front); Same item, Area 2, Unit H, lot 5 (back)



MISCELLANEOUS BUTTONS (CONT.)

Flat, plain, possible cuff button (copper alloy, blackened) Area 2, Unit H, lot 6 (front); Same item, Area 2, Unit H, lot 6 (back)

Flat, plain, possible cuff button (copper alloy) Area 2, Unit H, lot 6 (front); Same item, Area 2, Unit H, lot 6 (back)

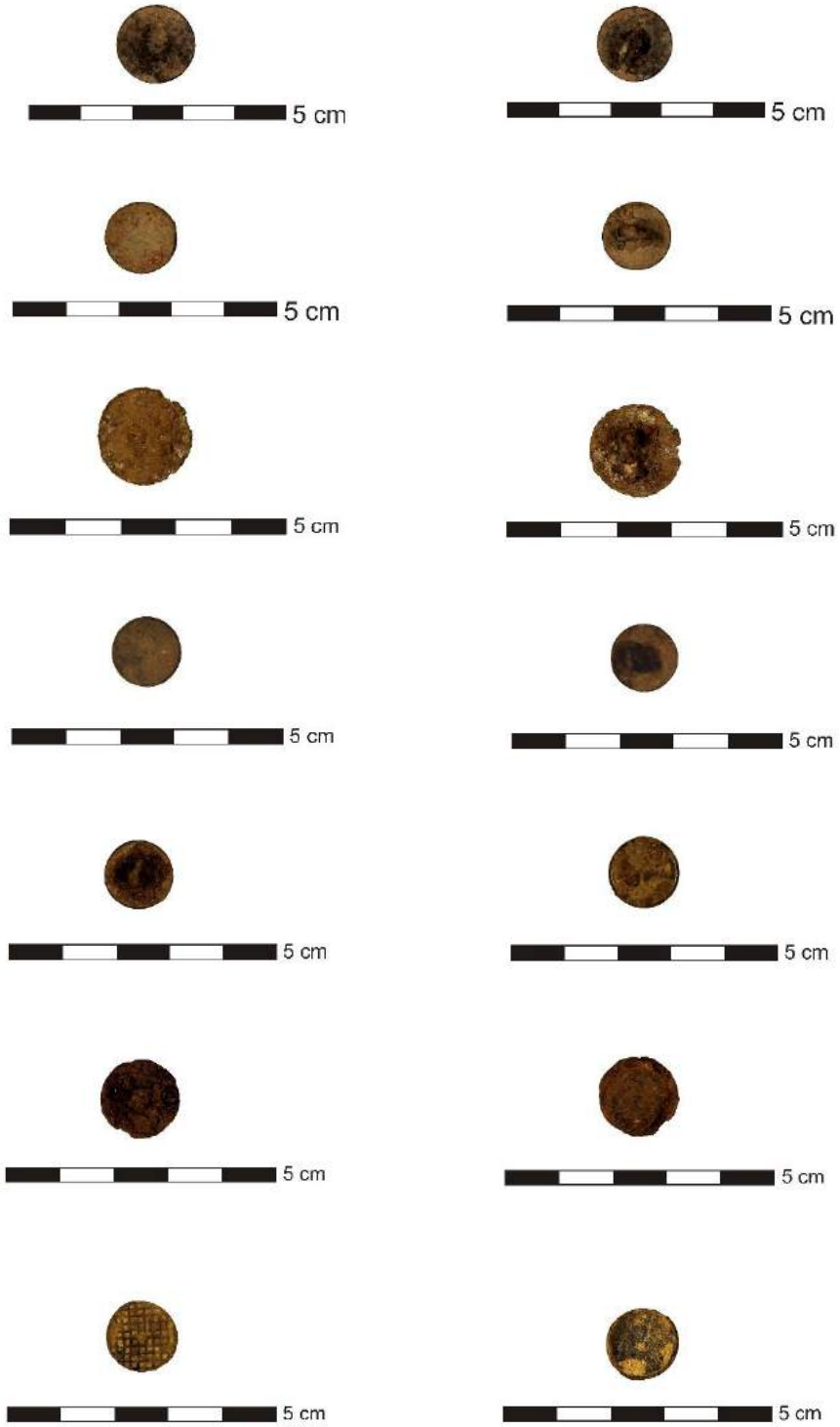
Plain, corroded, shank base present (pewter) Area 2, Unit J, lot 6 (front); Same item, Area 2, Unit J, lot 6 (back)

Flat, plain, bent shank (black-coloured alloy) Area 2, Unit M, lot 4 (front); Same item, Area 2, Unit M, lot 4 (back)

Flat, plain, small (black-coloured alloy) Area 2, Unit N, lot 5 (front); Same item, Area 2, Unit N, lot 5 (back)

Very corroded, dome, shank missing (ferrous) Area 2, Unit P, lot 7 (front); Same item, Area 2, Unit P, lot 7 (back)

Dome-type, crosshatching on face, shank missing, possible part of thimble (copper alloy) Area 2, Unit P, lot 8 (front); Same item, Area 2, Unit P, lot 8 (back)



BONE BUTTONS

Dome button back for military button, polished bone with incised perimeter – 4 holes Area 1, Unit B, lot 7 (front); Same item, (back)

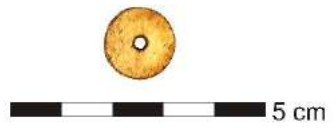
Bone button, central hole – 1 hole Area 1, Unit B, lot 16 (front); Same item, (back)

Bone button, central hole – 1 hole Area 2, Unit F, lot 5 (front); Same item, (back)

Suspender button, polished bone with incised perimeter – 4 holes Area 2, Unit F, lot 9 (front); Same item, (back)

Bone button, central hole – 1 hole Area 2, Unit G, lots 8 and 9 (front); Same item, (back)

Bone button, central hole, possible letters on front: "PIG" or P.G" – 1 hole Area 2, Unit H, lot 5 (front); Same item, (back)



BONE BUTTONS (CONT.)

Bone button, central hole – 1 hole Area 2, Unit H, lot 5 (front); Same item, (back)

Bone button, central hole – 1 hole Area 2, Unit H, lot 6 (front); Same item, (back)

Bone button, central hole – 1 hole Area 2, Unit M, lot 3 (front); Same item, (back)

Bone button, central hole – 1 hole Area 2, Unit M, lot 4 (front); Same item, (back)

Bone button, central hole, possibly burnt – 1 hole Area 2, Unit M, wall cleaning (front); Same item,
(back)

Bone button, central hole – 1 hole Area 2, Unit N, lot 6 (front); Same item, (back)



BONE BUTTONS (CONT.)

Suspender button, polished burnt bone or shell with incised perimeter – 4 holes Area 2, Unit P, lot 7 (front); Same item, (back)

Bone button, central hole – 1 hole Area 2, Unit P, lot 7 (front); Same item, (back)

Bone button, central hole – 1 hole Area 2, Unit P, lot 8 (front); Same item, (back)

Bone button, central hole, possibly burnt – 1 hole Area 2, Unit P, lot 8 (front); Same item, (back)

Bone button, central hole – 1 hole Area 2, Unit P, lot 8 (front); Same item, (back)

Bone button, central hole – 1 hole Area 2, Unit R, lot 9 (front); Same item, (back)



BONE BUTTONS (CONT.)

Suspender button, polished bone with incised perimeter – 4 holes Area 3, Unit U, lot 3 (front); Same item, (back)

Suspender button, polished bone with incised perimeter – 4 holes Area 3, Unit U, lot 3 (front); Same item, (back)



BUTTON SHANKS

Cast eye shank (pewter) – Area 1, Unit D, lot 3 (left); Alpha shank (copper with gilt plating) – Area 1, Unit E, lot 6 (right)

Omega shank (copper alloy, blackened) – Area 2, Unit G, lot 6 (left); Drilled eye shank (copper alloy) – Area 2, Unit H, lot 5 (right)

Wire in boss shank (iron wire in pewter button) – Area 2, Unit M, lot 3 (left); Cone with wire shank (silver) – Area 2, Unit X, lot 3 (right)

Shank through back plate (copper alloy, blackened) – Area 2, Unit M, lot 3 (left); Same item, above view (right)



BUCKLES

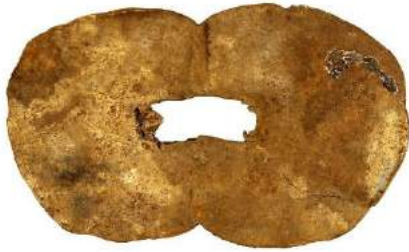
Musket strap (iron) – Area 1, Unit C, lot 6 (left); Homemade buckle, partial (lead) – Area 1, Unit D, lot 7 (right)

Homemade buckle (lead) – Area 1, Unit D, lots 12 and 13 (left); Shoe buckle, partial, etching at corners and midpoint (copper/brass) – Area 1, Unit E, lot 7 (right)

Possible part of buckle frame (lead/whitemetal) – Area 1, Unit E, lot 14 (left); Buckle bar with twin prongs (iron) – Area 2, Unit G, lot 5 (right)

Possible part of buckle frame or decoration, bar with arches (brass) – Area 2, Unit H, lot 5 (left); Shoe buckle braided cord design (lead) – Area 2, Unit J, lots 8 and 9 (right)

Square buckle, possible belt or knapsack buckle, prong is rusted onto the frame and curved at end (iron) – Area 2, Unit K, lot 6 (above); Same item (below)



BUCKLES (CONT.)

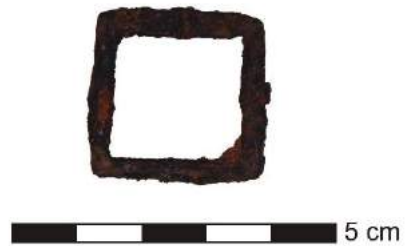
Garter buckle, Officer's (silver) – Area 2, Unit P, lot 8 (left); Belt buckle, curved and incised edges (brass)
– Area 2, Unit P, lot 7 (right)

D-shaped buckle, possible belt or knapsack buckle (iron) – Area 2, Unit R, lot 2 (left); Square buckle,
possible belt or knapsack buckle – Area 2, Unit R, lot 3 (right)

Musket strap (iron) – Area 2, Unit X, lot 3 (left); Knee buckle, forked prong, chape present, incised frame
(copper/lead) – Area 2, Unit X, lot 14 (right)

Belt buckle, partial (lead frame, iron prong) – Area 2, Unit Y, lot 2 (left); Square buckle, possible belt or
knapsack buckle (iron) – Area 3, Unit S, lot 3 (right)

Shoe buckle, floral/vegetative designs, bent in half (brass) – Area 3, Unit W, lot 5



COINS

British William III Copper Halfpenny, 1694-1701 Issue – Area 1, Unit A, lot 11

Obverse (left) – William III in profile, 'GV(LIELMUS) TE(RTIVS)'; Reverse (right) – Britannia enthroned, date illegible, '(BRITANNI)A'

British George III Copper Halfpenny, 1770-1775 Issue, possible counterfeit – Area 2, Unit J, lots 8 and 9

Obverse (left) – George III in profile, countermark image, '(GE)ORGIVS (III RE)X'; Reverse (right) – Britannia enthroned, date illegible, 'B(RI)T(ANN)I(A)'

American New Jersey Copper, 1787 – Area 2, Unit P, lot 7

Obverse (left) – Horse head in profile over a field and above a plow, partial date '(17)87', 'NOVA CAESAREA'; Reverse (right) – Kite shield with dotting, horizontal and vertical lines, '* E * PLUR(I)BUS * UNUM (*)'

Spanish-American Charles III 2 *Reales* Silver Coin, 1781, minted in Mexico City – Area 2, Unit R, lot 14

Obverse (left) – Charles III in profile, date '1781', 'CAROLUS III DEI GRATIA'; Reverse (right) – Coat of arms of Leon and Castile, mint mark 'Mo', denomination '2R', assayer's initials '(?)F', 'HISPAN ET IND REX'



MISCELLANEOUS ARTIFACTS

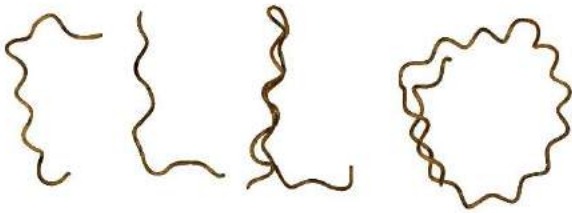
Bone button blanks (n = 7) – Button diameter of 12.7 mm (20 *lignes*), evidence for 9 buttons – Area 2, Unit X, lot 4

Pins, steel (above) and copper (below) – Area 2, Unit P, lot 8; Modified shako fragment and Native jangler, incised designs (steel/copper) – Area 2, Unit P, lot 7

Epaulette wire, four fragments (silver) – Area 2, Unit P, lot 3; Shako fragment, stamped designs (copper) – Area 2, Unit X, lot 3

Shako fragment, stamped designs (copper) – Area 2, Unit X, lot 3; Gilt foil, dotted surface, possibly part of an officer's button (gilt plated copper) – Area 2, Unit M, lot s 7 and 8

Lofting style thimble, dotted sides, crosshatched top (brass) – Area 2, TP 86 (side view); Same item (above)



MISCELLANEOUS ARTIFACTS (CONT.)

Homemade buttonstick, possible buckle, cut marks on underside, saw marks on sides (brass) – Area 1,
Unit A, lot 9 (above); Same item (below); Same item (side view)



Appendix F

Lithic Analysis

– by Tyler Bessor (AR440)

Research and Analysis of the Pre-Contact Assemblage from
Old Fort Erie (AfGr-3) 2015
- With a Focus on Lithic Debitage -

Author: Tyler Besser

Project Supervisor: Dr. John Triggs

Institution: Wilfrid Laurier University

Date: April 1st, 2016

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1. HISTORY

The term history, archaeologically speaking, is applied strictly to the use of written documentation and various forms of records that were constructed in everyday life. We use these documents to read into different aspects and biases of the past that reveal conflicting views, which are tried against one another, and their validities tested. These documents are recorded in various mediums, including written journals, newspapers, pamphlets, notes, and even abstract forms of documentation such as cartographic maps and paintings that can convey numerous amounts of information to the right interpreter. We use these proxies to construct our views of the past, but when we lack these documents, we enter the realm of pre-history in which the fabrication of the past relies on inferences drawn from physical clues and behavioral patterns or sociologic and anthropologic models that are constructed using modern populations as their subjects. This can be difficult for building an accurate view of the past, however. As more information is gathered, patterns are formed and used to infer notions of the past. By exploring the broader patterns and cultural trends that dominated the northeastern coast of North America (specifically Ontario) as well as the traits specific to our study area, we can gain insight into what can be expected of our assemblage; which can then be used in future interpretations of the excavation area and Fort Erie in general.

2. METHODOLOGY

Initially, the biggest issue with this project lay in my lack of experience and academic training in the field of lithic analysis. Thus, I had no foundations from which to start the basis of research. Initially, I was left with a large amount of lithic debitage and native tools that needed to be analyzed in some manner and the question became “how do I study such a large quantity of seemingly meaningless by-product?”

3. METHOD OF DEBITAGE ANALYSIS

Many academics attribute lithic flakes as the refuse or by-product of lithic-tool production and regard it as holding little research value, while others look at debitage as a valuable tool in analyzing site distribution and function (Andrefsky 2003, 2006; Odell 2003; Sullivan and Rozen 1989). There are a multitude of processes one could use to study lithics both on the microscopic and macroscopic levels, which are promptly outlined by Kooyman (2000: 40-43) in his textbook edition of lithic analysis. Given the ambiguity and general lack of consensus in the field of lithic analysis on which methods to use in analyzing a collection of this large volume, I was forced to consult separate textbooks published by

different American archaeologists (Andrefsky 2003, 2006; Kooyman 2000; Odell 2003) but chose to follow Kooyman more closely, as his work was laid out in a simple fashion, which made reference easier. There do not seem to be great differences in the ways these researchers approach the field either (generally agreeing that there are a multitude of ways to analyze lithics, each with pros and cons), which makes my consulting one source justifiable.

As stated above, there are a plethora of ways to study lithics but the general consensus that seems accepted amongst lithic analysts is that tools go through some process of manufacturing (Kooyman 2000: 45). This continuous process can be broken down step by step based off two stages referred to as the reduction sequence: i) the initial stripping of cortical surface around the perimeter of a core, and ii) the tertiary stages which are used for shaping the tool, thinning bifaces and retouching worked edges (Kooyman 2000: 45-68). This is defined by Shott (2007: 131) as “all methods applied to the inference of reduction processes from lithic data”. The reduction sequence represents different stage of tool production through debitage by defined morphological features presented on each flake that were left behind from certain manufacturing processes, which can then be used to sort the flakes and quantify the amount of a particular action that was being undertaken in particular locations on site and throughout time. As this seems to be one thing that archaeologists can agree upon (and my lack of access to microscopic tools), I chose a reductionist approach to be the foundation of my debitage analysis. I now needed to develop a taxonomy (set of groups which share similar feature) upon which to compare and analyze.

It was quickly brought to my attention the academic dichotomy of those who accept reductionist theories and those who support *la chaîne opératoire*. The difference between the two lay in their views on the process of lithic reduction: *la chaîne opératoire* stresses definitive stages to the manufacturing of stone tools (i.e. a primary reduction phase, secondary reduction phase, thinning phase, sharpening phase, etc.) while a reductionist views the process as one continual stage (e.g. like digging an archaeological Unit, one may argue that it is both a continual process and also that there are stages to its completion), arguing that the process of tool manufacturing is one step and that you cannot break the process into steps (Shott 2003). Shott (2003: 95, 99) compares the two as being the same product sold under two different names, but then continues to differentiate the two, claiming that while reductionists study the how something was reduced and is confined to the parameters of the manufacturing, *la chaîne opératoire* is “a descriptive concept for comparison, whether of cultural norms, behavior, or assemblage compositions or completeness... [*La chaîne opératoire*] emphasizes process and

thereby embraces debris and failure, as well as finished tools.” In other words, it includes stages outside the reduction sequence, such as procurement of raw material, all by-products of manufacturing (such as shatter) as well as ‘use’ and ‘sharpening’ stages that are normally considered to lay outside the parameters of initial tool manufacturing. For the purpose of this study, I have chosen to adopt *la chaîne opératoire* as the method of analysis because it encompasses stages outside the initial stages of manufacturing such as exhausted cores, reshaping flakes, procurement and experimentation with raw material, and by product that was created in the process. *La chaîne opératoire* includes all stages of an artifact’s life, from the procurement of its materials, to its eventual exhaustion and disposal into the archaeological record. I believe that the more categories one can create, the wider their scope of analysis may become, and reliability enhanced, and that the study of an artifact should not be confined strictly to its manufacture, as there are many steps that take place between, before and after the steps taken to manufacture any item.

I was fortunate enough to have been taught rudimentary techniques for dividing debitage into three type-stages by Jacquie Fisher in a university lecture at Wilfrid Laurier University. It was in this class that we, as undergraduate students, were taught how to differentiate Primary, Secondary, and Tertiary flakes based off a list of features that arise when particular means are implemented, such as striking platforms, bulbs of percussion, and the amount of cortical surface present on the dorsal side of a flake. These stages are then expanded upon in Fisher’s methodology section of her master’s dissertation, in which lithics from Adder Orchard site were analyzed in a similar reductionist fashion (Fisher 1990: 62-66). This made the Sisyphean task of sorting the overwhelming mass into something merely of Herculean proportions. However, this broad taxonomy was not comprehensive enough to make any insightful inferences, but simply provide differential information whether the primary processes on site were engaged in cortical reduction or tool shaping. Upon further readings (Kooyman 2000; Odell 2003; Prentiss 1989; Shott 2003, 2007; Sullivan and Rozen 1985), I was better able to understand the concept of lithic reduction as a method for classification and typing, rather than analysis, as well as the benefits and short comings of a typological study poses in site analysis, such as the concept of equifinality (i.e. multiple, opposing forces working in concert to produce the same affect or producing different effects in the same conditions (Kooyman 2000: 49)). Another disadvantage lies in the argument that theoretically, most flakes could be taken off in any order, flaking one side and then the next, in a Primary – Secondary – Primary – Secondary – Tertiary sequence opposed to a typical Primary – Secondary - Tertiary (Sullivan and Rozen 1985: 756).

Lithometrics is the study of fracture mechanics (i.e. how lithics break) and is often conducted around experimental archaeology and theoretical physics that are used to ascribe how certain physical features arise on debitage during the manufacturing of stone tools (Kooyman 2000: 20). The choice of technique which is used during the flaking process affects both the possibility of flake types that are produced as well as limits the outcome in the core's morphology, making this a relatively important field of study for understanding what to expect during analysis, how it happened (to make cultural inferences), and how to define them (Kooyman, 2000: 9).

When a solid is struck, an area of compressive stress is created and produces stress waves, which run through the matrix, decreasing the further from the point of impact. This is known as Hertzian Initiation (Kooyman 2000: 20). Knapping materials are classified as brittle materials, which include all members of the silica family of non-ferromagnesian cryptocrystalline silicates (Kooyman 2000: 21). Silicates are divided on their chemical composition (based on the levels of magnesium and iron) and size/organization of crystalline structure. The silica family contains low magnesium and iron compositions (non-ferromagnesian silicates) and are composed of many different families defined by the arrangement of chemicals and structural composition such as chert, chalcedony, flint, quartz, jasper, opal, and obsidian (Kooyman 2000: 26). Silicates are an archaeologically important sedimentary group, as they typically make up the minerals which are used in tool making (Kooyman 2000: 26). These materials fracture easily and in predictable ways along highly structured crystalline pathways, making them ideal sources to make tools (Kooyman 2000: 21, 26, 27). This is because brittle material tends to break across pre-existing micro-paths that run throughout, according to the Griffith Crack Theory (Griffith 1921). This act, whether created by soft percussion using a billet and hammer, or with hard percussion techniques employing strictly hammerstones, manifests itself physically in the form of a 'bulb of percussion' (a protuberance on the dorsal side, directly below the striking platform) and compression rings (concentric rings that emanate from the bulb of percussion in the direction the force moved through the medium) or, as they are referred to in this report, percussion waves (Kooyman 2000: 12-13, 23-24). Other features appear as a result of percussion flaking, such as bulbar fissures (cracks near the point of impact), hackles (cracks near termination areas), and platform crushing (Kooyman 2000: 13), but as they were not necessary for defining flake types, I simply noted them in the comment section.

There are a number of ways to flake a lithic, each with their own associated features. As noted above, percussion flaking leaves behind evidence of dynamic loading (varying amounts of pressure exerted) while, on the other hand, pressure flaking applies static loading (constant pressure exerted),

resulting in the prying of flakes and in the flake possessing a curved morphology (Kooyman 2000: 18). This type of action is completed with a billet (soft-percussion tool) made classically of antler, bone or soft stone, which also typically leaves behind an indented striking platform (Kooyman 2000: 16). An intermediate tool can be used between the objective piece and the fabricator to leverage more static pressure and take off larger flakes while pressure flakes, anvils, and sheer flakes leave behind no striking platform. This could pose a problem for this project, as with little experience, I would likely have catalogued a large piece showing no striking platform as a flake fragment, even if termination of lateral edges was defined. There are also pecking (battering/pulverizing), sawing, and grinding/abrading processes which all leave behind distinct features (Kooyman 2000: 10-11).

It should also be noted that my skills in this area of reduction analysis were limited to those features that were required for my typology during a large portion of this project, as I did not have any formalized training and learned a majority of my techniques during my research and cataloguing. As a result, my abilities in locating these features increased as the project progressed, leaving the majority of the collection (roughly $\frac{3}{4}$) not analyzed to the fullest degree. My best ability was applied all throughout the cataloguing, though a dramatic increase of features was found on later entries. This only means that the features recorded in the comment section of the catalogue should not be used for comparison either within the collection or between until they are analyzed.

My division of debitage relies upon these physical features that arise once particular actions are taken. Andrefsky (2003, 2006) refers to this as the Triple Cortex Typology, as it relies heavily upon the presence or absence of the natural cortical layer that makes up the perimeter of any core. Cortex is defined as a natural weathered surface that builds up either physically or chemically (Kooyman 2000: 15). This is the same as patination, however, the term 'patination' is used to reference the rind that accumulates after flaking has occurred (Kooyman 2000: 15). Since the goal of lithic reduction is to inevitably strip the core of its cortex and shape it into some functional form, it is safe to posit that eventually flakes will bare no cortex as reduction advances, making its use for taxonomy limited. To avert this issue, a combination of both physical features and cortex will be used to divide the debitage. The physical features are what will primarily be used to indicate the defining flakes, as they indicate both what tool was used to produce the flake, as well as the stage of reduction, while cortex points only to the stage.

It should be noted that Kooyman (2000: 51) has brought to my attention the general lack of consensus in the archaeological community, and that there is a great deal of academic liberty when it

comes to assigning typologies. For example, one analyst may categorize a tertiary thinning as a tertiary trimming, as many of the features are the same (see notes below), and what makes them belong to one category or the next lies in the hands of the person interpreting. While this is true for all the flakes being analyzed, if one flake type possessed the qualities of another, there is little to do but make assertions based from unconfident conclusions. Fisher (1989: 66) has created a category exclusively for the purpose of unknown/non-diagnostic flakes in which flakes possess some features of a flake, but were not able to be placed in a specific category. This includes full-flakes with some features, but not able to be placed, as well as flake fragments (Fisher 1989: 66). I did not want to create such a massive group, in which a professional would have to cull those which are actually full-flakes, in which I was not able to place, and fragments (see below for definitions) as my skills in differentiation are not professionally taught, but self-taught. I believe that this would skew my results more than adding one or two more indefinable flakes into a category (usually trimming or thinning) which I felt appropriate. The following categories represent my taxonomic groups and their definitions as well as references to sources that helped shape these definitions, where applicable.

4. LITHIC TAXONOMIC GROUPS

Core (X) and Core Flake (XF)

This is a self-imposed category which I used to place flakes with exactly the same dimensions, have been flaked using an anvil (most likely, for the following reason) as they possess flake scarring on the dorsal (from cortical removal) and also sheering features (which usually present themselves as generally as a lack of features) on the ventral. There were a few places in which I was able to recognize this, and therefore this makes up a very small portion of the project. The reason I chose to separate them from the collection is because they were noticeably different and deserved to be separated and given a category based on their appearance.

Primary (P)

Analysts disagree on which way to classify most flakes, but something they all agree upon is that the removal of cortical surface is required before any shaping is done. This means that flakes that represent large portions of decorticalization must have happened in earlier stages of production (although this too has been disputed). As it has already been stated, Amick and Mauldin (1989) did an experimental study and found conclusively that by halfway through a reduction sequence, most of the cortex has been removed. 'Primary flakes' are characterized on the dorsal surface by most to be purely

cortex (Kooyman 2000: 18; Fisher 1990) however, some (Andrefsky 2003, 2006; Odell 2003; Sullivan and Rozen 1985: 757) classify any flake bearing 51- 100% cortical surface to be worthy of the 'Primary' title.

Defining primary flakes as those in which were taken off first seem reasonable and thus primary flakes will be catalogued along these parameters. They must exhibit mostly cortex (51-100%) on the dorsal side because flake scars indicate working, and this indicates a secondary stage has begun. Flakes often display a large bulb of percussion appearing at an angle of 90 degrees to the striking platform, as they require more force to remove them, and are often larger than shaping flakes (Fisher 1990: 63).

Secondary (S)

Secondary flakes are defined along the same principles as primary flakes. That is, they are part of the initial decorticalization of a lithic core, and such, bare remnants of their cortex on their dorsal surface. However, they are representative of a later stage in tool formation, which is indicated by their dorsal scarring (Kooyman 2000: 18). This means that secondary flakes are defined as larger, having 90-degree unfaceted striking-platforms to a large and diffuse bulb of percussion, and 0-50% cortical coverage on the dorsal side (Fisher 1990: 63). The similarity to primary flakes is important to note because tertiary-initial flakes can look quite similar to secondary flakes.

Tertiary (Tx)

Tertiary flakes belong to what Kooyman (2000: 19) refers to as the "Secondary" stage of reduction, in which the entire cortex has been stripped, and shaping of projectiles and other tool forms. Oftentimes, flake scars present on the dorsal surface are used to differentiate between these groups, as well as a combination of other features used to reveal technical processes. Kooyman (2000: 19) outlines the number of scars present on any particular flake and attributes it to their stage in the reduction sequence: 0-1 scar = early, 2-3 = shaping and 3+ = late. It does not make sense to me, however, that sharpening flakes, or tertiary trimming as they are called in this study, could possess more than 1 or 2 scars, as by the time this process is required, the tools have already been formed, leaving complex and indifferentiable scarring. The reason I say this is because once the tool has been shaped using thinning flakes, one would expect the new working surface of the core to be relatively flat, or apparently absent of scarring as the thinning and shaping flakes that are taken off in the step prior, leaving relatively large scars. Because of my skepticism, I have also used physical features presented on each flake to help in differentiating tertiary flakes from one another.

Initial (T1)

Flake scars are the ridges left on the dorsal side of a flake after flakes have been removed. The complexity of scars indicates lots of work (Kooyman 2000: 54). There are two basic types: bifacial reduction and thinning. Reduction refers to thinning flakes specifically detached in bifacial reduction, with an acute angle of striking platform to bulb (36-65 degrees), with lipping on the platform, and are curved.

Thinning (T2)

Thinning produces a secondary flake that is thin and marked by complex scarring.

Trimming (T3)

Trimming produces a tertiary flake, which can be similar in appearance to the secondary flakes produced by thinning.

Flake Fragment (F.F)

This uses a Sullivan and Rosen type study where we use a comparison of types to try and infer the processes that happen on site. Flake fragments are used as a category, but I have gone further and added shatter and cobbles because of the unique inferences they provide. These are pieces of chert that show some features of a flake but not others, preventing me from placing them in any one category specifically. Due to the unclear differentiations between the categories, especially the tertiary stages of reduction, once all the cortical features are absent from the dorsal, I felt that it could skew the results to a greater degree. Sullivan and Rozen (1985) also made a differentiation for flake fragments saying that earlier populations were likely to utilize as much debitage as possible, and also that if one population had an abundance of local material, they may be more frivolous with their choosing (i.e. selections).

Cobbles and Shatter (C/S)

This started out being a homogenous group of both cobbles and shatter, which I saw as general waste, culturally, as they showed no features and could tell us little about the practices that went on around site. I was later told by Dr. Triggs that shatter is a by-product of knapping, and that as one would flake their pieces, tiny bits would also shatter off, which would be culturally diagnostic and could be used to infer working space.

Cobbles were differentiated from shatter by their generally rounded edges and lack of diagnostic features typical of by-products of the reduction sequence (e.g. bulb of percussion and waves). This could also include flakes or shatter that have been weathered to the point of unrecognizability. Additionally, they may or may not be cultural.

One thing is certain, they needed to undergo lots of natural weathering in order for that to happen. This is indicative of its own processes, either higher lake levels (our site indicates an ancient beach) or lots of expose to the elements (e.g. rain) may indicate a waste pile that had been abandoned. This begs the question as to why would you keep your garbage in your village if you are producing as much debitage as Peace Bridge would have been.

Later in the sorting/cataloguing process, I started breaking cobbles and shatter into separate bags, and commenting in the description on their form. Some bags are still combined, however.

Fossils and Miscellaneous Rocks

Miscellaneous Rocks (catalogued under Misc. Rock) is another all-encompassing group designed to eliminate the non-diagnostic lithics from the collection. It should be specified that some tools are made of non-silicates and that some of the misc. rocks may actually be fragmented tools or flakes. In most cases the misc. rocks were plainly not of cultural value, possessing no flake features and being too small, cobbles, or generally misshapen to be a tool. I tried to label the types of rocks present (igneous, sedimentary, or metamorphic) and then the type, if available (basalt, sandstone, or granite, as these are the three most commonly found rocks in Ontario). Fossils were diagnosed in some cases, but not in others.

Tools

Tools are given their own bag and treated as being unique. Tools varied from hammerstones, non-silicates, and utilized flakes, and is a category designed to give a comparable category to flake, F.F. and T1, T2, T3. The various types of tools include hammerstones, unifacially worked flakes, bifaces, projectiles, netsinkers, and FCR (i.e. fire-cracked rock). Another category is the finished product tool in which a preform for some tools may function as a fully functional tool, or blanks may function fully without modification (Kooyman 2000: 47).

5. CATALOGUE ORGANIZATION

A cataloguing format was provided to me by Dr. Triggs, which was designed to include all the artifacts from the Old Fort Erie excavation. The pre-contact catalogue represents only a small, unforeseen, fraction of the total collection of artifacts. The artifacts were all catalogued based on Parks Canada's technique, designed to break up and divide artifacts based on similar features. Each column then represents a different attribute to be recorded, and every row in the catalogue represents a single bag of artifacts. Most of the material codes are 49/Chert, as most of the collection consists of debitage created during tool production. Some artifacts are classified as 10/Composites, however, as I could not find a suitable category for the miscellaneous rocks, pottery, and fossils in the collection. Indeed, most lithics are composed of a variety of minerals, naturally cemented or fused together. Almost all the artifacts were placed in the 23/Native grouping, as they represent our pre-contact component, however the miscellaneous rocks and fossils on site were placed in 25/Unassigned. Everything, except pottery (which was placed under 231/ceramic), was placed in the 230/Lithic class. Intuitively, this is because most artifacts dealt with in this lithic analysis are composed of stone, while native pottery is made of clay, and in a similar fashion to European ceramics, and have thus been crudely lumped.

Object names are used to differentiate between what type of lithics are present. They are limited in their differentiation to 'core', 'flake', 'modified flake', 'miscellaneous debitage', 'stemmed biface', 'non-stemmed biface', 'projectile and other' which hardly represent the multitude of different manifestations a cultural lithic can take. With this in mind, I added my own column to the catalogue entitled 'Lithic Type' which I intended to use to differentiate between flake types, in order to make comparisons with a pivot table easier. These groups bear names that contrast between those provided in Object Names. These titles are as follows: Primary (P), Secondary (S), Tertiary Initial, (T1), Tertiary, Thinning, Tertiary trimming, Cobbles/Shatter, Flake Fragment, Core, and Core Fragment. Cobbles and Shatter are combined into a single category as I believe that they are both non-diagnostic chert pieces, which either require more skilled analysis than mine or merely represent a class of artifact that possess no cultural significance and require no interpretation at all.

I should note that while examining the collection post-cataloguing, I noted specimens from the beginning of the project that I would not classify a cobble or shatter toward the end of the project, and some of which may even represent cores. I do not feel this poses a detrimental problem to my analysis, as adding diagnostics to a non-diagnostic will not skew the physical analysis of the aforementioned diagnostics, only slightly skewing the number of diagnostics present in a particular area. This sounds as if

it would be a problem, as the number of artifacts in a particular area can have great cultural significance, and if they are present ubiquitously throughout the sites and temporal lots, then they may appear in greater number in one area versus another. This may present a problem if the cores are present in every Unit/lot, though this is not something I observed.

Artifacts were collected from the excavation area in the typical archaeological fashion, digging by Unit, lot and day to help in the systematic recording and preservation of information. Back in the lab, the artifacts in question were pulled from their boxes and grouped according to material type, group, class, object name and any datable attributes that were present. For example, all the lithics from Unit A would have been taken from the collection (at the same time as all the other pre-contact items) and placed to the side, divided by lots (which was already done in the AR217 Laboratory Methods course at Wilfrid Laurier University) followed by the sorting (based on the above criterion) and cataloguing in an Excel spreadsheet. The artifacts were all pulled from the collection at one time, this was to gain a generalized understanding of the collection and to isolate the working material from any data that would complicate the analyzing process.

Frequency, Metrics and Weights, Colour, and Patination,

All Units were excavated by lot and by date, and every unique artifact pulled from the collection and given its own bag, catalogued according to Parks Canada (material name/code, group name/code and class name/code, object name/code, datable attribute name/code). Weights were taken for everything. Metrics were taken for diagnostics measuring from the striking platform (superior) to the furthest point of termination (inferior) and then the longest width, whatever direction it may be. One measurement for the smallest, one for the largest in the bag. For F.F. and C/S, I provided ranges, (e.g. >100 to <100 means that the smallest flake is smaller than 100 mm but larger than 0 and that the largest is over 100mm but smaller than 200). This is to provide us with a general idea of how big the cobbles, flake fragments and shatter are. If they are all roughly 100 – 200 mm than it could mean that the tools they were producing stayed the same size, rather than if the metrics are all over the place, or very small or very large. I did not measure fossils or misc. rocks but took their weights.

For tools (i.e. cores, bifaces, and utilized flakes), I took the weight range to show if things are relatively the same size or if they differ greatly from one another. Flakes of the same type were commented on with a description of the colour range (e.g. medium grey, dark grey, or medium grey to dark grey) while remarking on colour inclusions (such as with light or dark inclusions).

A separate category was made for patination, keeping all the flake types together and describing the overall average patination between the flakes (e.g. Y = patinated and L = most of the flakes in the bag have between 0-30% patination). Patination levels are classified as: L (0-30%), O (30-60%), and H (60-100%). In some cases, the patination levels on the flakes prevented me from taking the colour of the flake, so I omitted the description as N/A and commented on it in the comments section of the catalogue

Heat Treatment

This was another means of organizing the catalogue, based on the changes in appearance due to the different levels of heat treatment. N indicates a non-heat treated flake. C indicates a change in colour, which is a product of their source and original colour or composition of other minerals. P indicates pockmarks on the surface of the flake. W is indicative of a waxy surface that arises when the chert has been excessively heated.

Comments Section and Definitions

Comments included if a flake was evidently an “exotic” variety, and generally described flake features present on some or all of the flakes in the bag. The things commented on included: percussion waves, erailure, lipping on the striking platform, notching/serration/grinding, the type of core present, whether the C/S is a cobble or shatter, whether or not the cortex is present on any of the pieces in the bag, the types of inclusions (usually mineral, such as chalcedony or iron), imperfections in the material (such as quartz veins), exotic features and/or the type of exotic material (e.g. Lake Superior or Ancaster chert varieties), the type of misc. rock or fossil that is present, any oddities (e.g. white patination or cortex), whether a tool has been fragmented, the direction in which a fracture occurs, if the flake is larger or smaller than the average collected flake, indicating what type of flake features were present (and my confidence with that diagnosis). Additionally, comments were used to differentiate whether the flake was chert or another stone material, and differentiated between tool types as most times they are classified as ‘other’ or ‘utilized flake.’

Pottery was divided by decorated vs. undecorated and by temporal affiliation, typically determined by using decorations of the temper. Temper differentiation, colour and matrix description, and metrics were all considered. This means one lot may have 2 or 3 bags for the same type of classified material, depending on the characteristics presented on the artifact.

Data will be interpreted based on mass analysis and macroscopic techniques. The weights of each category are used to make inferences on types of production, indicated by more of one type in an area. Sizes within one category are used to infer about each type, with larger or smaller primary or secondary pieces in one area compared with another. Colour can be used to infer the outcrop. The frequency from each lot and Unit is used to infer temporal settings. Additional factors include whether it is exfoliated or not, the temper type, colour, and other general comments like organics in the matrix or matrix colour.

(For Lithic Catalogue see Volume II of Fort Erie 2015 Report)

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