HOUSE AND HOME: SCOTTISH DOMESTIC ARCHITECTURE IN NOVA SCOTIA AND THE REV. NORMAN McLEOD HOMESTEAD

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House and Home:

Scottish Domestic Architecture in Nova Scotia and the Rev. Norman McLeod Homestead

by

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ABSTRACT

This thesis is a study of the vernacular architecture and material culture of early nineteenth-century Scottish immigrants to Nova Scotia through the excavation and analysis of an early domestic site in Cape Breton. The built environment of the Norman McLeod homestead is interpreted from a social and political standpoint to demonstrate the position the house occupied in relation to the rest of the site and the community in general. The physical manifestation of the house is interpreted through the excavation of architectural remains and spatial patterning of artifacts, and shows that the McLeod house was likely an early Cape Breton example of a style adapted from the New England states.

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CHAPTER 1

INTRODUCTION

This thesis is dedicated to a further understanding of the early architecture and material culture of Scottish immigrants in nineteenth century Cape Breton through the excavation, analysis, and interpretation of an early domestic site in St. Ann's. The house in question was built in 1830 by a group of Scottish settlers for the Reverend Norman McLeod and abandoned in the late nineteenth century, after at least three periods of occupation. Prior to excavation in the spring and summer of 2002, the McLeod site lay relatively undisturbed for a century and a half. Several objectives were addressed during the research of this site and will be discussed in this paper. The first objective was to locate, identify, test, and record associated archaeological features within the study area which included approximately one-half km^2 on the Munro Point peninsula in Victoria County. This resulted in the recording of seven archaeological features, although not all are associated (Figure 1.1). The archaeological remains of the McLeod site were recorded and reported to the Nova Scotia Museum in August 2001 by the author and excavation and was conducted the following spring and summer under the direction of the author and co-supervised by Dr. Stephen Davis of Saint Mary's University, Halifax, Nova Scotia. Because the research objectives were concerned only with domestic aspects of Scottish immigrant life, only three of the seven identified features were tested. These included the McLeod house, an associated outbuilding, and what was likely the privy. The other features included a later nineteenth-century house and associated barn owned by one John Robertson, the barely distinguishable remains of the Presbyterian church at

which Reverend Norman McLeod preached, and the graves of Robertson and his two wives.

The second objective was to determine the internal and external structure of the McLeod house through subsurface testing and through historical documentation and existence of Scottish houses of similar age in Nova Scotia. Very little has been published regarding the vernacular architecture of nineteenth-century Scottish immigrants in Nova Scotia. What little is written must be extracted from secondary sources dealing with broader issues. Furthermore, very few primary references to architecture exist, save for a few brief mentions of log, frame, and stone houses in Pictou and Victoria Counties (Haliburton 1829:53; MacDonald 1876:16; Patterson 1972:155; and Patterson 1978:81). Most nineteenth-century authors have given more consideration to the temporary log home than to the more durable frame house. This is probably because the frame house was a common form taken for granted at the time of writing and the poor standard of log houses was likely more appalling and, therefore, more worthy of mention.

Studies of architectural forms and styles in eastern Canada are scant but the few existing examples are invaluable resources to the student of nineteenth-century vernacular architecture. Ennals and Holdsworth (1985) have made important headway in the regional study of architectural forms in the Maritime provinces. In studying the dominant architectural forms among the cultural groups present in the Maritimes before 1900, Ennals and Holdsworth have recognized and highlighted the importance of economic influences and cultural interaction on regional and temporal architectural traditions. The other invaluable source on architectural tradition takes a more narrow

approach. Beaton-Planetta's survey of early stone houses in Cape Breton touches on a building tradition not often explored in Nova Scotia. Most students and scholars of architecture in the province tend to focus architectural studies in the province on dwellings built of wood, since they are the most common. Few realize and most fail to explore the fact that stone construction was transferred to Nova Scotia on a lesser scale than wood construction. This issue will be explored further below. Several histories of individual architectural examples have been published, although few of them are Scottish examples and most are studies of polite forms which are not treated in this thesis.[1] Similarly, several pictorial and artistic books have been published illustrating individual examples of architecture in Nova Scotia (McNabb and Parker 1987; Pictou Heritage Society 1974; MacLeod and St. Clair 1994; and Penney 1989). While individual histories are narrow in scope and do not generally examine the house in the broader context of regional, cultural, or temporal traditions, their value should not be overlooked. They are useful in adding to an inventory of architectural forms and in pursuing the archaeology of the individual which is, on some small scale, the subject of this thesis.

We are fortunate to have our disposal living history museums such as the Lone Shieling on the Cabot Trail and the Highland Village at Iona. The Village commemorates the architecture, pioneering, and material culture of the Scottish immigrants to Cape Breton. Several houses have been excavated and numerous material culture collections lay stored away in museums. However, they have been afforded little

[1] The best known example of a Scottish immigrant house subjected to individual study is the McCulloch house or Sherbrooke Cottage built in 1806 by Dr. Thomas McCulloch in Pictou (Sykes 1972).

more than the basic recording and cataloguing. No comprehensive analyses of the results of excavation of domestic vernacular buildings in Nova Scotia have been published. Most of the Scottish vernacular houses recorded in the province have been recorded as a result of archaeological resource impact assessment and, for that reason, have been subjected to little more than salvage operations or representative testing. Many have been destroyed to make way for construction, transportation, industry, and so on.

Aside from studying the architectural form of the McLeod house, the mental reconstruction of the building is analysed to attempt a social interpretation of the house as an aspect of the built environment. In other words, what does the architectural form communicate about the social behaviour within a Scottish immigrant group? This requires not only a study of the domestic architecture of Scots in Nova Scotia, but also an examination of Scottish architecture prior to emigration. Before we can attempt a social interpretation of the household, we must understand the nature of the cultural environment which we are studying and what is acceptable and appropriate within that environment. In historical archaeology, this is achieved through ethnography and comparison (Beaudry 1984:29-31). A series of other questions are also posed: What architectural traits were transferred during migration? Did this imply a transfer of function or of social meaning? Were there elements of cultural change and adaptation in the new environment that required changes to the built environment? If so, what were they and how were they manifested?

The final major objective of the research was to reconstruct the material culture assemblage of an early Scottish immigrant family and to determine what the assemblage

suggests about the consumer behaviour of the occupants. This was achieved primarily through ceramic analysis, although smaller assemblages of bottle glass, clay pipes and faunal remains were also considered.

Finally, as a minor component of the research objectives, I hoped to use the results of the excavation of the house in to determine when the site was abandoned and what happened to the house after abandonment, or to result in its abandonment. This information was supplemented by a very incomplete historical record.

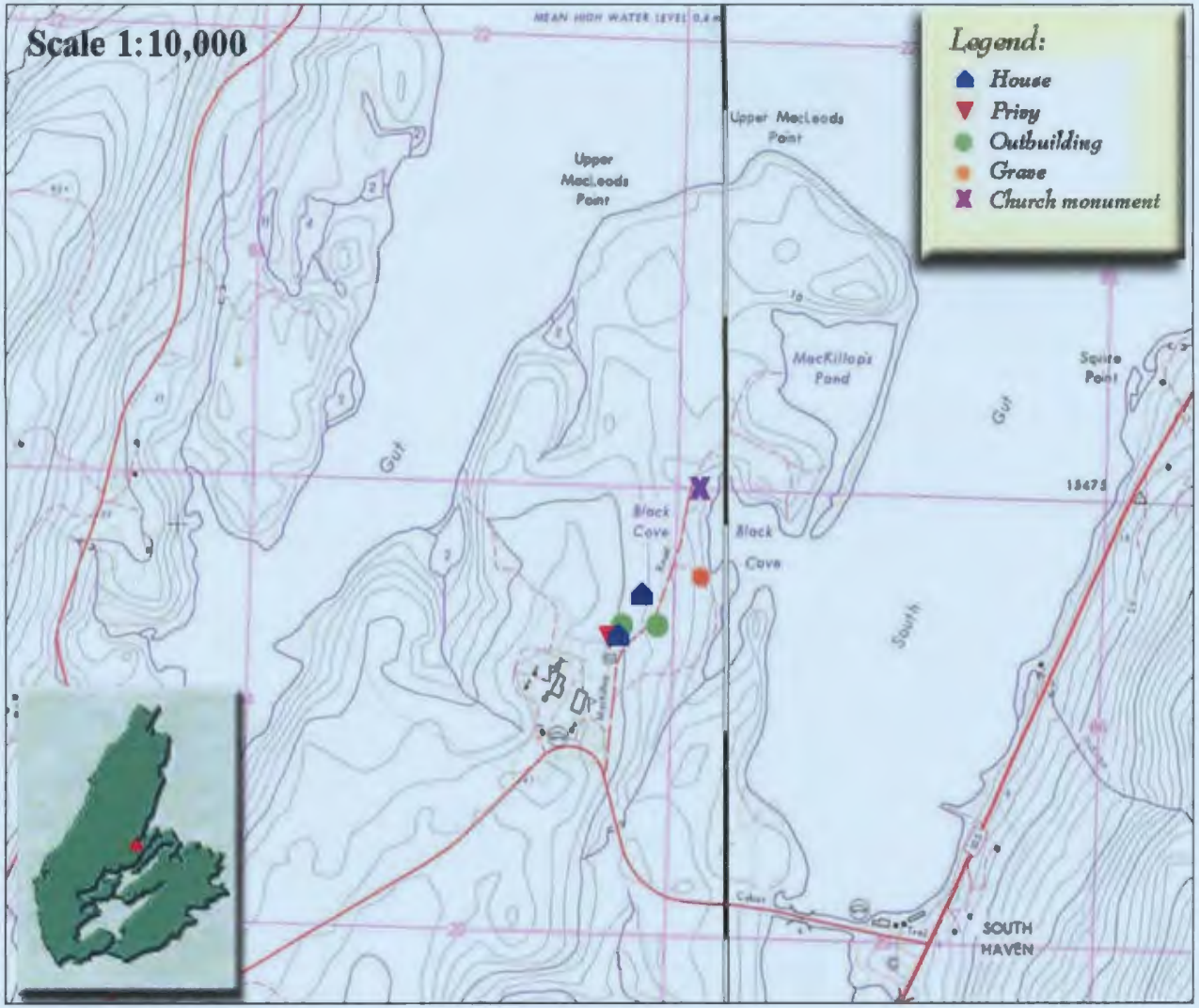

Figure 1.1: Upper McLeod's Point Peninsula showing location of seven archaeological features, inset showing location of St. Ann's on Cape Breton Island (Nova Scotia Housing and Municipal Affairs 1992).

CHAPTER 2

SCOTTISH DOMESTIC ARCHITECTURE AT HOME AND ABROAD

2.1 Introduction

Studies of vernacular architecture in Atlantic Canada have commonly dealt with the origin of architectural forms among early immigrants. Architectural origins have generally been attributed to three modes of cultural diffusion:

(a) traditional transference (cultural traits transmitted from the homeland to the new frontier during migration),

(b) cultural borrowing (cultural traits influenced by nearby groups in the new settlement), and

(c) independent invention (cultural traits created by the group or members of the group in response to new conditions) (Ennals and Holdsworth 1985; Gowans 1962; Mannion 1974; Davis 1985).

These principles have most often been applied singularly to the study of architectural adoption/adaptation among the Nova Scotia Scots. Because the traditional forms of Scottish dwellings such as the blackhouse and sheiling are not believed to have been recreated in Nova Scotia, traditional transference is most often dismissed as a source of architectural form. Particularly in the case of the nineteenth-century Cape Breton Scots, it is often believed that the hostile and unfamiliar environment they were faced with left them ill-prepared to provide suitable shelters. At the same time, their intellectual and physical pursuits were so bound up in clearing the land and providing subsistence during

the first winters that they had little time to independently design dwellings that were suitable to the cold, damp climate with the resources available (wood). It is often assumed, then, that cultural borrowing was their only means of adjusting to the new environment. Credit is often given to the most populous and widespread settlers of Nova Scotia at the time of Scottish immigration – the displaced New England Loyalists – for having shown the Scots how to build on the new frontier.

An examination of the domestic architecture of the Highland Scots both in Scotland and in Nova Scotia will show that, in fact, several factors played a role in the architectural tradition of these settlers. Architectural traits were transferred, modified, abandoned, and adopted on the new frontier.

2.2 Architecture At Home

The principal form of dwelling in the Highlands and Islands of Scotland throughout the eighteenth century was the *an tigh dubh* or blackhouse – a long, narrow building constructed of double-thick stone walls, the roof covered in thatch or straw. Blackhouse architecture varied throughout the mainland and islands of Scotland, the most significant variations being in the thickness and construction technique of the walls and the roof overhang, or lack thereof. A number of Hebridean blackhouses have been studied and investigated archaeologically by Symonds (1999), Grant (1961), Fenton (1978), and Sinclair (1953), among others. In the typical Hebridean blackhouse, the roofing material was secured by ropes which were fastened to poles protruding through the roof. The ropes were anchored to the roof by stones which the ropes wrapped around

and hung along the base of the roof. The roof was most often hipped at the gable ends and, in many cases, the exterior corners of the walls were rounded to deflect the harsh winds of the North Sea (Figure 2.1). The absence of a hole in the roof to allow the smoke from the fire to escape meant that the smoke penetrated the thatching on the roof, which was stripped and spread on the fields as a source of fertilizer when the roof needed replacement. A stone ladder on the exterior of one gable end wall allowed access to the roof for repairs and replacement. The double-thick wall was filled with smaller rubble or, more efficiently, peat-mould and earth which allowed water shed from the roof to percolate down between the inner and outer skins of the wall insulating the house. The blackhouse had no windows. Instead, light was let in through a few small square openings in the walls (Grant 1961:142-143; Fenton 1978:5-15, 35; Symonds 1999:78). Inside the blackhouse, the floor was earthen and an open hearth burned in the center of the main room, usually the kitchen. The family congregated around the hearth to eat, do chores, sleep, and just about anything else that was done indoors. On one end of the house, the animals were kept in a byre that was accessed directly from inside the dwelling (Grant 1961:145-146). The smallest blackhouses had only one door which opened next to the byre and onto the kitchen. Larger blackhouses were an agglomeration of several units, each having a specialized function. These houses usually had box beds along one wall in a room designated for sleeping. Furniture throughout the house was arranged against the walls so as to maximize living and working space. Although the numbers of people occupying individual blackhouses varied, the size of the dwelling was not necessarily proportional to its number of occupants. Blackhouses ranged in size from

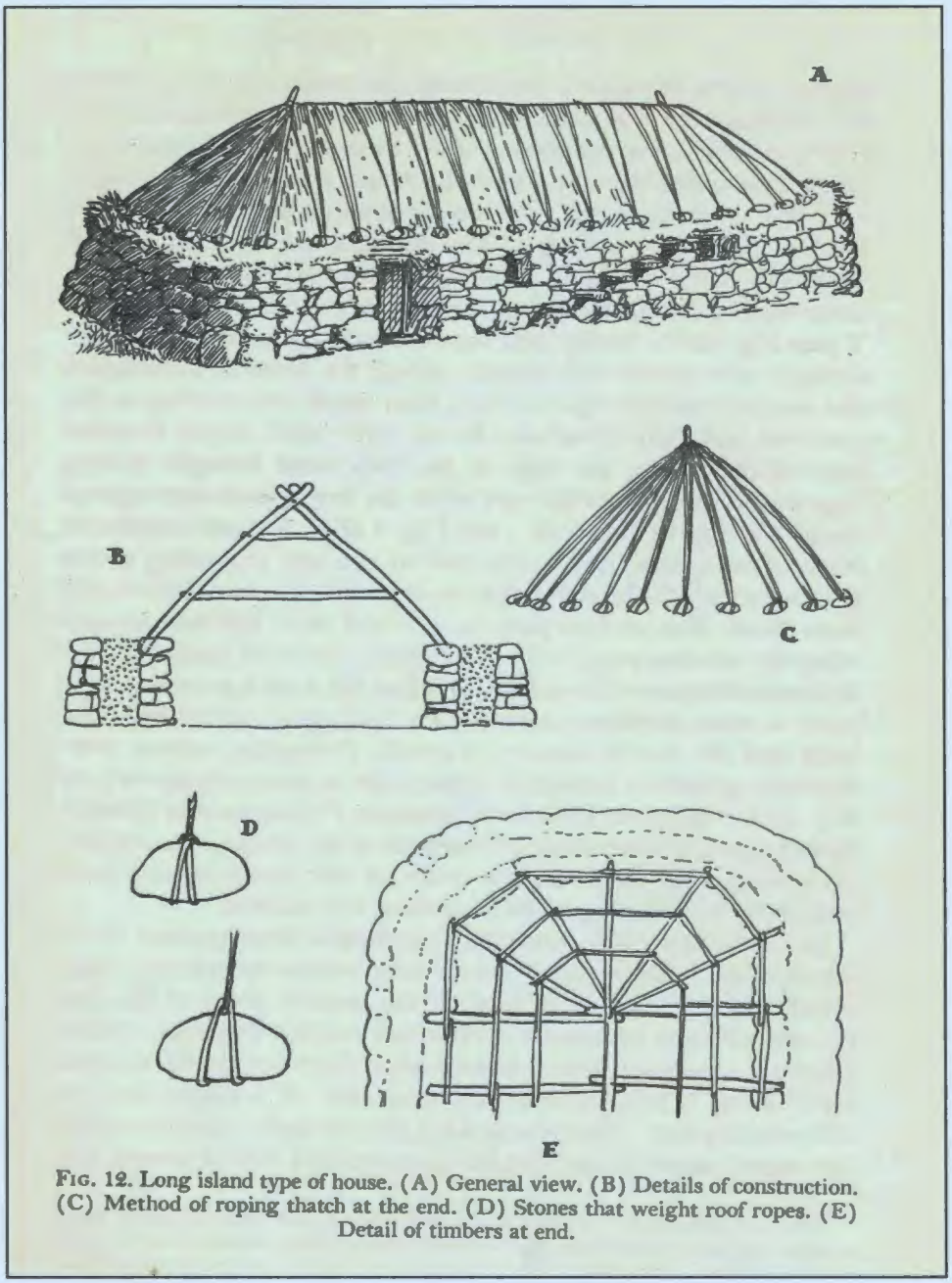

FIG. 12. Long island type of house. (A) General view. (B) Details of construction. (C) Method of roping thatch at the end. (D) Stones that weight roof ropes. (E) Detail of timbers at end.

Figure 2.1: Typical Hebridean blackhouse construction of the eighteenth and nineteenth centuries (Grant 1961:143).

one- or two-room houses to multiple rooms. The recently excavated blackhouse at Allt Chrisal on the Isle of Barra measured fourteen meters by seven meters. People lived in blackhouses well into the twentieth century. The Arnol no. 42 blackhouse was still occupied in 1964, when it was visited by an architectural historian and it had been given many modern updates including covered floors and wallpaper (Grant 1961:145-146; Branigan 1999: 130; Jones 1996:44-47).

The tradition of blackhouse architecture, apparently, was abandoned when the Scots left Europe. No documentary evidence of Scottish blackhouse construction exists in Nova Scotia. However, a peculiar early nineteenth-century house on the Shubenacadie Canal raised eyebrows among archaeologists when it was discovered in 1984 (Figure 2.2). In the 1820s, labourers, stone masons, contractors, and engineers were brought to Nova Scotia from Scotland and Ireland to be employed in the construction of the Shubenacadie Canal from Dartmouth Cove to the Bay of Fundy. Particular features of the structure discovered in 1984 suggest that the stone-walled house may have had a thatched roof and are reminiscent of the blackhouses of Scotland and Ireland. The double-skinned walls were of dry stone construction and the absence of nails suggested the structure had no upper story or roof of wooden construction. The absence of a drip line outside the walls suggests that the roof did not extend past the walls of the house and that the water, instead, filtered down through the walls. Two other similar structures were discovered along the canal in 1984 but were not excavated (Davis 1992:728-229; Davis 1985:95-101; Willett 1985).

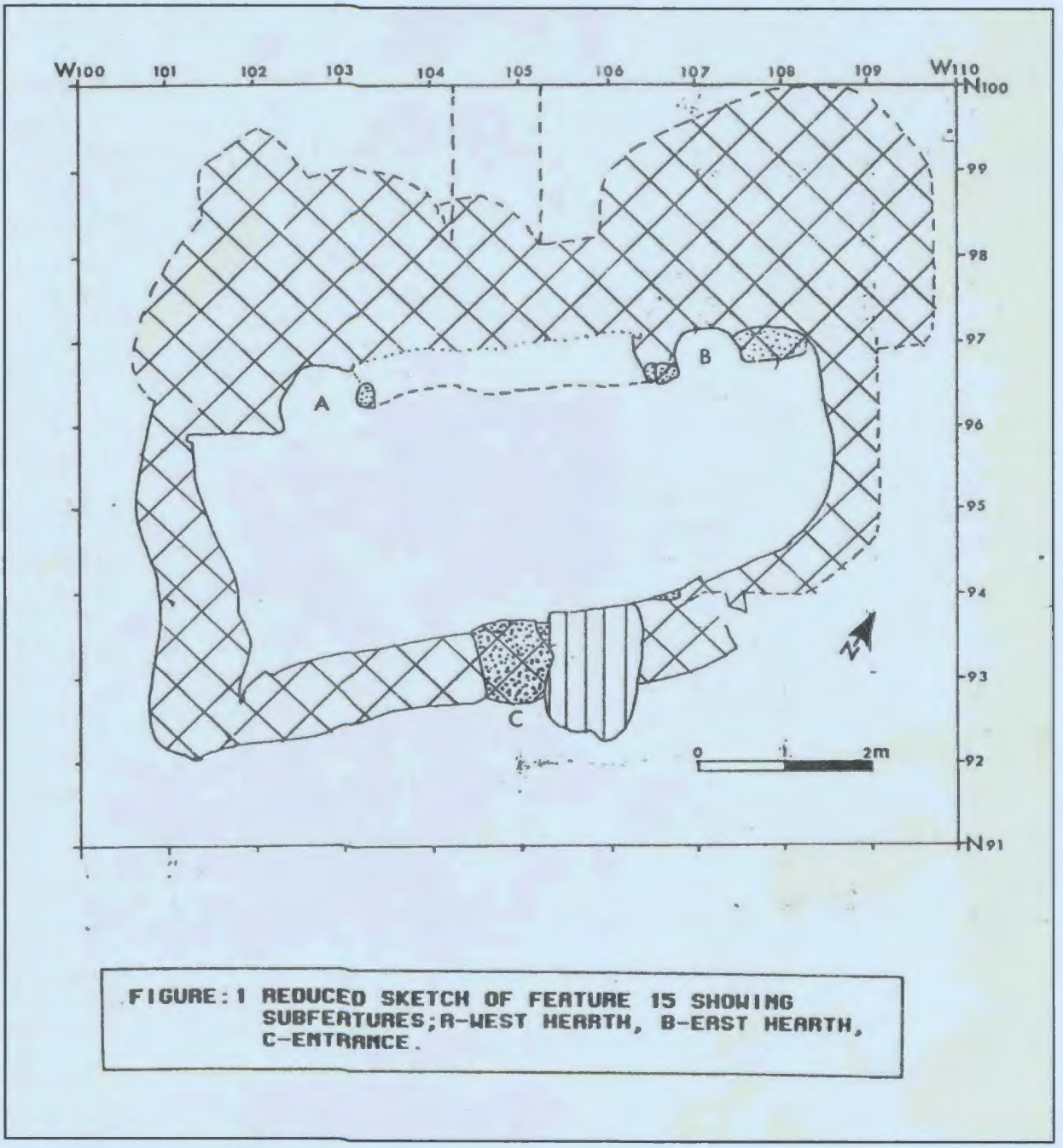

Figure 2.2: House excavated along the Shubenacadie Canal in Dartmouth. Many elements of the house are reminiscent of Celtic (Scottish and Irish) blackhouses of the eighteenth and nineteenth centuries (Davis 1985:96).

Wood was not used as a principal building material in Scotland because centuries of lumbering left timber scarce by the late eighteenth century. However, it had been used for cruck truss framing in rural areas throughout the eighteenth and early nineteenth centuries. Furniture was constructed of wood and it was not uncommon to line the interior walls of blackhouses with wood boards. Where lumber was particularly scarce, it was imported, mainly from Norway. However, the added expense of importing materials meant that where lairds owned the farmhouses, they were reluctant to make repairs or replace timbers – a situation which lead to poor standards of housing (Fenton and Walker 1981:44-54; Sinclair 1953:36-37).

Most farm cottages were one or two rooms. In the eighteenth century, the timber-framed house most commonly had a cruck truss roof in which the lower ends of the timbers rested on the ground or on a stone footing and the top ends arched, forming a point at the peak of the roof. Cruck truss construction was scarce in the mid to late nineteenth century when the heavy framed house common throughout North America was predominant. Although various forms of impermeable thatch continued to be used for roofing, slate tiles were used on eighteenth-century houses larger than one story and on most nineteenth-century houses, regardless of size. Alternative walling materials including clay, brick, lime, and turf were used less commonly throughout the period (Fenton and Walker 1981:59-69, Jones 1996:52).

The early nineteenth century farmhouses which were rented out by lairds were an improvement on those of the previous century. They were typically two stories high with a hall-and-parlour arrangement on the ground floor flanking a central passage which lead

to a kitchen at the back of the house. Upstairs were two to four bedrooms and a servant's quarters above the kitchen. The rear of the house often had a lean-to which housed a scullery, milk house, and wash house (Fenton and Walker 1981:103). In the kitchen, the floor was covered with flagstones. The hearth was still open and placed centrally and the smoke escaped through a hole in the roof. In the main end of the house, however, the fire was contained in a chimney. Windows were more common and were glazed, replacing the small open light slots of the eighteenth-century blackhouse. The byre was still attached to the house and was accessible through the kitchen (Fenton and Walker 1981:112-129).

Crofter houses of the tenantry class were smaller and made use of less specialized spaces. The house was typically one-and-a-half stories high with a narrow stairway or ladder leading to the half-story storage attic. The ground floor typically had two rooms – a kitchen and parlour, both of which were used for sleeping. Most activities were carried out in the kitchen. The floor in the kitchen was of bare earth while the floor in the parlour was covered. Outside, the door was placed centrally with a single window on either side (Figure 2.3) (Fenton and Walker 1981:130).

The size of houses in the late eighteenth and early nineteenth centuries varied considerably according to wealth, status, and location. The modest tenant houses could be a small as four meters by ten meters while the more substantial houses of wealthy farmers could be as large as six meters by fourteen meters and could cost up to £800 to build. In Scotland in the eighteenth and nineteenth centuries, privacy was a matter dictated by socioeconomic status rather than by necessity. Lairds typically lived in

houses in which use of space was more specialized and bedrooms were separated from the main living quarters on the ground level. Crofters and tenants, on the other hand, performed the majority of household duties and accepted guests in the same rooms in which they slept, bathed and dressed. Regardless of social status, however, the hearth remained at the center of the house not only as a functional aspect of heating many rooms with one chimney but also as a symbolic gathering place (Fenton and Walker 1981:107,130-132).

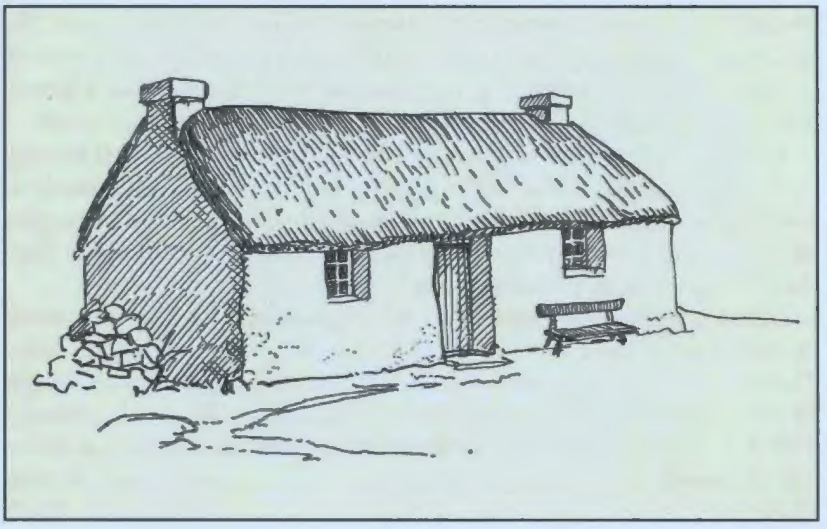

Figure 2.3: Nineteenth-century Scottish crofter's house (Grant 1961:153).

2.3 Architecture Abroad

It is generally accepted that the earliest form of shelter built by Scottish immigrants to Nova Scotia was the horizontal log house (Preston 1994:268; Hornsby 1992:24, 70-71; Patterson 1978:81; MacDonald 1876:16). In fact, it is believed to have

been so widely used by the immigrants that it has come to be referred to as the Scottish log house. However, architectural historians have come to realize that the log house was not a Scotch invention. The origin of the log house in North America has long been speculated upon. It originated in Denmark, Sweden, and northern Germany during the Mesolithic Age and appears to have persisted in these areas (MacKinnon 2002:39). It is most often recognized as an early form of dwelling among the eighteenth-century German settlers in Pennsylvania, although the log house made its earliest appearance in North America in Delaware among the seventeenth-century Swedish immigrants (Stotz 1966:12; Rempel 1967:14; Herman 1987:83-84; Montell and Morse 1976:8). The log house was widely adopted by English settlers in North America and New Englanders had an extensive tradition of log building in the seventeenth century (Pocius, pers. comm.) but it is unlikely that they brought this tradition with them at such a late date. It may have been transferred to the Scots through German settlers who had moved into Lunenburg in the eighteenth century and quickly dispersed throughout the neighbouring settlements. Acadians are also known to have built horizontal log houses in the Maritimes in the eighteenth century. A one-room log house in Cheticamp on Cape Breton's northwest shore stood into the mid-twentieth century and was very similar in plan to later log houses documented and attributed to the early Scots (MacKinnon 1992:5; 2002:42-43).

The size and construction of log houses varied regionally as well as culturally. Among the German population in Pennsylvania, round or squared logs were used and were most commonly dovetailed at the corners. It was once generally accepted that the

Scots built with round logs as this was the most expediently built form of log house. However, there are several examples of historically documented square hewn log houses in Nova Scotia which have been attributed to the Scots. These houses exhibited various forms of corner-notching including V-notched and dovetailed (MacKinnon 1992:4-7, 2002:37-39; Hornsby 1992:70-71). The houses were typically very small one or two room structures. The hearth may have been enclosed in a stone chimney or open as in the blackhouses of the homeland. Patterson, writing in 1885, described houses in Victoria County:

> made of logs in their round state, laid upon one another with moss stuffed between them. The roof was formed of the bark of trees, cut in pieces of equal length, disposed in regular tiers, the ends and edges overlapping and kept in their places by poles running the whole length of the building, placed on the edge of each range of bark, and fastened at the ends of the building by withes (Patterson 1885:81).

Three log houses have been documented and studied in Inverness County by MacKinnon. One of these houses in Alba on the Bras D'or Lakes dates to the first generation of Scottish settlement in the area and was constructed of round logs V-notched at the corners. Although the house has seen significant modification since its construction in the early nineteenth century, the original house measured 12 feet (3.7 m) by 18 feet (5.5 m) and consisted of one room with an end chimney. Sleeping quarters in the loft were accessed by way of a ladder in one corner of the house. It is likely that the exterior of the house was originally sheathed, as it was when recorded by MacKinnon, with laths and several layers of shingles as the spaces between the logs were not chinked. A later, mid- to late-nineteenth century log house in Marble Mountain, Inverness County

had a more complex floor plan of five rooms. This included a kitchen at the front of the house which comprised the largest portion of floor space, a double pantry adjacent to the kitchen on one end, and two bedrooms at the back of the house. Again, this was a one-and-a-half story house with loft accessed by a ladder in one corner of the kitchen. A hatch in the kitchen floor lead to a root cellar beneath the house. Like the house in Alba, the logs were V-notched at the corners and the exterior was likely covered with clapboard. However, in this later house, the logs were hewn square. These forms are very similar to that used in the reconstruction of a log house at Highland Village in Iona and is also seen in the Codroy Valley where many people from Inverness County moved (Plate 2) (MacKinnon 1992:9-11; 2002:39-40). Presumably, then, this was not an uncommon form in Inverness County in the nineteenth century.

Log houses were a convenient means of shelter in an environment that had to be cleared of forests before crops could be planted and livestock and farm implements could be housed. Although the first log houses must have been overcrowded, dark, cold, and damp they made efficient use of a surplus material. It has been a general conception until recently that the log house was built as a temporary dwelling to be replaced with more substantial housing when land could be cleared and planted and financial resources could be secured. Yet settlers in Antigonish County continued to live in log houses some forty to fifty years after initial settlement, into the late 1820s (Preston 1994:275). Among the examples cited in Cape Breton, log architecture appears to have some permanence. Extant log houses on the island may have largely eluded historians throughout the twentieth century because they were clapboarded over, hiding the tell-tale logs beneath.

In at least one example, the log house in Alba was substantially modified in order to be accommodating with the passage of time (MacKinnon 1992:6-7).

By the third or fourth decade of the nineteenth century, a tradition of timber-framed architecture was emerging in the province. Some chose to build stone houses – of which at least twelve examples still exist in Cape Breton (Beaton-Planetta 1983). Regional and cultural variations among the settlers across Nova Scotia were more widespread than ever before, and would continue to become so. Probably the most discussed examples of architecture in the province are the houses of Pictou, the area first settled by Scottish immigrants, in 1773. Historic accounts and surviving examples of architecture in this coastal town on the Northumberland Strait give us probably the most complete and extensive view of vernacular architectural heritage in the province. First-hand descriptions of architecture and housing standards by such nineteenth-century historians as Thomas Haliburton and George Geddie Patterson, as well as illustrative collections, such as those by L. B. Jenson and the Pictou Heritage Society, are invaluable resources available to the architectural historian. From historic documents, photographs, drawings and standing houses of the first half of the nineteenth century, a general trench of architectural style and form emerges.

The Scottish house of nineteenth-century Nova Scotia was typically a one-and-a-half story wood planked structure, set on a fieldstone foundation. The dominant architectural type for this period was the Scottish crofter type – a one-and-a-half story hall-and-parlour house with a central chimney. Similar to this type was the Maritime vernacular, believed to have evolved in the Maritimes as a regional type not attributed to

one particular immigrant group (Figure 2.4). The typical Maritime vernacular house of the period had a central passageway flanked by one or two rooms on either side. It was a four-chambered double-pile layout in which the rooms at the front of the house served as two formal parlours while the rooms at the back functioned as the kitchen and a bedroom or dining room. Upstairs, the space was divided into two or four bedrooms. In order to facilitate the central passage through the ground floor, chimneys were placed at or near the gable ends of the house. Another common feature of this house type was the presence of dormers, usually triangular or five-sided. This appears to be a characteristic confined to houses in Pictou County, however. The predominant differences between the crofter and Maritime vernacular houses were the placement of the chimney and the increased privacy and specialization of space in the Maritime vernacular. Several other wood-framed architectural types were built by Scottish immigrants and other cultural groups alike in the first half of the nineteenth century including the simple asymmetrical hall-and-parlour house, the Georgian or Loyalist house (so named because it was believed to have been brought to Nova Scotia by New England Loyalists), and the Cape Cod (an earlier form of the Maritime vernacular with a steeper pitched roof, lower profile, and central chimney) (Ennals and Holdsworth 1985; Ennals and Holdsworth 1998; Glassie 1975; MacRae and Adamson 1963; Coffey 1984).

Another architectural style which emerged in Nova Scotia in the 1830s but did not become widespread until the second half of the century was the temple house (Figure 2.5). This style was believed to have been adopted from the northern New England states sometime after 1820 when the Greek Revival movement was in vogue in the United

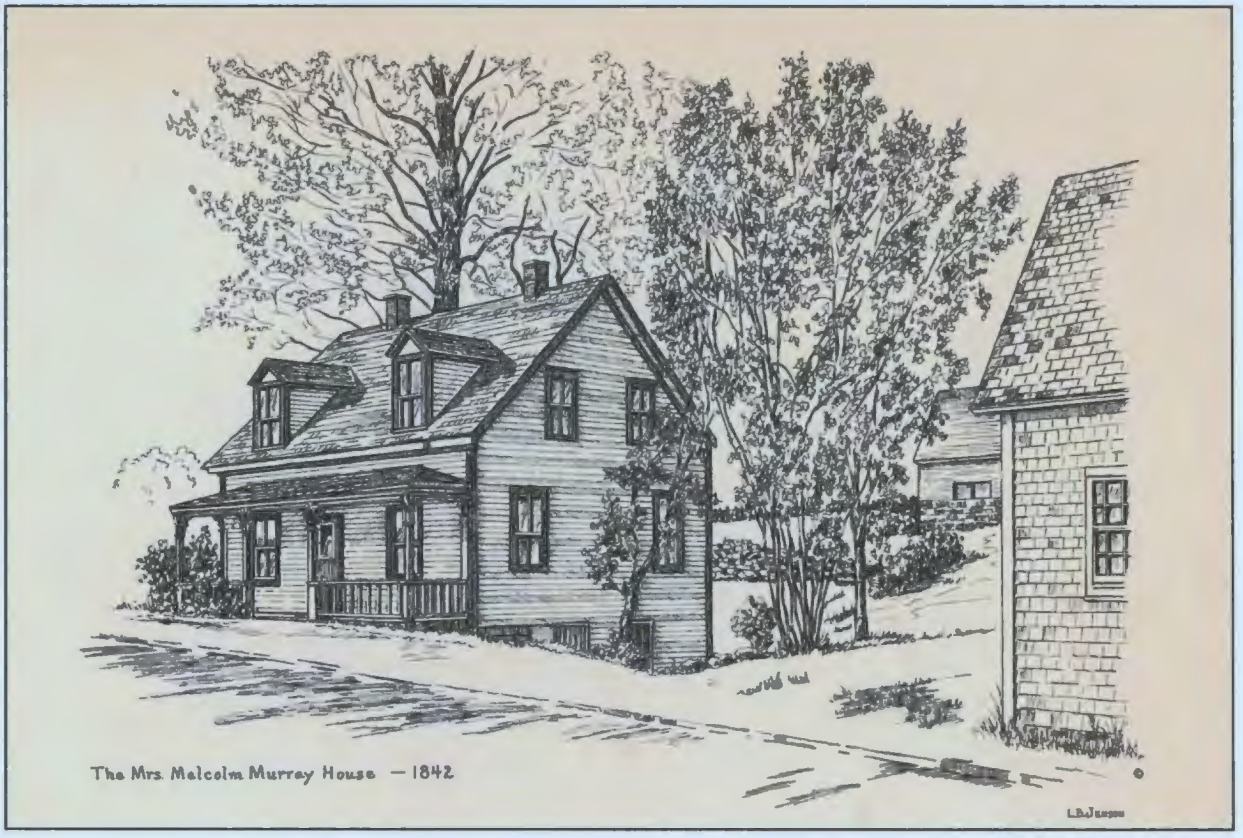

Figure 2.4: Typical Maritime vernacular house built in 1842 in Pictou, Nova Scotia (Pictou Heritage Society 1972:n.p.).

States (Ennals and Holdsworth 1985: 343-349). The main façade of the temple house was at the gable end and the entrance was positioned here, usually off-set near the corner of the house. The temple house of the northern United States was complete with portico and columns. The modest Maritime version of the temple house was one-and-a-half to two-and-a-half stories high and void of high-style trimmings. The doorway on the front of the house opened onto a hallway that ran along one end wall on the long axis of the house. To the side of the passageway at the front of the house was the parlour. At the back of the house the hall opened into another room, usually the kitchen or dining room

(Ennals and Holdsworth 1985:345). A bedroom also may have been placed back here off the kitchen. The upstairs was divided into bedrooms but may have included a nursery, spinning room, or servant's quarters.

Figure 2.5: Greek Revival temple house in Pictou, Nova Scotia. Built in 1862, this style of house was likely brought to the Maritimes by New England Loyalists in the 1820s but it did not gain popularity until late 1830s (Pictou Heritage Society 1972:n.p.).

These architectural types occurred in wood as well as stone. However, the construction elements of stone houses deserve some consideration. As in the Scottish blackhouses of the eighteenth and nineteenth centuries, double-walling was common in the stone houses of Nova Scotia, that is, the space between the interior and exterior wall surfaces was filled with stone rubble. In foundations, double-walling was a common principle used to allow water to drain through the footing to prevent water from accumulating in the cellar and, most likely, to prevent rot by keeping water away from the wooden sills that sat on top of the footing. In wall construction, it served a similar purpose but it also functioned to increase insulation of the house (Fenton 1978:15; Beaton-Planetta 1983:5). The fieldstone foundations may or may not have been mortared. Mortaring becomes more common after about 1830. A common method of stabilizing and filling in spaces between the stones of both walls and foundations, whether mortared or not, was to chink, usually with stone.

2.4 The Diffusion of Architectural Trends

In analyzing the architectural trends of the Scottish homeland and the Nova Scotia frontier, it has become evident that individual traditional elements were transferred across the Atlantic. Many of these elements persisted throughout the pioneering period and were abandoned soon after. Others were carried over and endured throughout the nineteenth century or were modified to suit the social, cultural, and physical environments. Still other elements were adopted from other cultures but may have been expressed in modified ways. Rounded logs were a novel building material to the Scottish

immigrants but the form in which they built was familiar. The internal arrangement was the same as that of the Highland blackhouses and tenants' cottages. Methods of roofing were also borrowed from the homeland. When the Scots began building permanent frame houses to replace their log cottages, they were inspired by architectural trends in New England, and by the nineteenth-century farmhouses of the Highlands. Architectural elements of both were used independently or amalgamated to produce a sort of hybrid such as the Maritime vernacular house. Although this style cannot be attributed to a singular cultural group and its appearance is a regional rather than a cultural trend, a Scottish influence is evident (as is a New England influence). Other forms such as the Cape Cod and temple houses appear to have been strictly borrowed from other regions or cultural groups. This is not to say that these types were exact replicas of their original source.

The reason for the transition from the traditional stone construction of the homeland to a relatively novel timber-framed building tradition in Nova Scotia is not known. It is ironic that the forests that must have initially overwhelmed a group accustomed to the relatively barren pasture of the Highlands would become the primary source on which they relied for basic survival. In part, it may be due to the abundance of wood which needed to be cleared that the Scots took up a tradition of wood construction immediately upon arrival. It may also be attributable to cultural borrowing of a tradition of architecture from New Englanders, the French and Acadians, and the British already settled throughout the province. Perhaps it was Scotland's economic relationship with Norway, which had an extensive tradition of building with wood since the Middle Ages,

that introduced the Scots to the technology. This familiarity with a wood-building technology may have been strengthened by the introduction of architectural pattern books in the mid eighteenth century (Kavli 1958:9-10; Holan 1990:15-16).

CHAPTER 3

HISTORICAL BACKGROUND OF ST. ANN'S AND THE REVEREND NORMAN MCLEOD HOMESTEAD

St. Ann's is located on the northeast side of Cape Breton Island in the County of Victoria approximately 25 kilometres west of the entrance to the Bras D'or Lakes at St. Andrew's Channel (Figure 1.1, inset). Victoria County has a long history of settlement beginning, of course, with the Mi'kmaq Natives who settled the St. Ann's shoreline, taking advantage of the good harbour. When the Mi'kmaq first settled this area is unknown but Europeans have recorded at least four hundred years of Native presence in the area. It is likely that the First Nations people settled here much earlier than the nineteenth century since they were known to have settled across the harbour in Englishtown at least as early as the seventeenth century. The first Europeans settled this area in 1629 when Captain Charles Daniel began construction of Forte Sainte Anne at Englishtown to protect the flourishing French fishery in Cape Breton as well as the route through the Gulf of St. Lawrence (Figure 3.1). The fort was abandoned in 1641 and the garrison was later re-established in Placentia, Newfoundland. The Treaty of Utrecht in 1713 ceded the island to the French who began plans to fortify the colony (then Isle Royale). Two prospective sites were chosen for a garrison – Louisbourg and Englishtown. Englishtown was chosen as the better of the two harbours not just for the waters but for the surrounding land. Fort Dauphin was built and the settlement flourished until 1719 when the problems of an ice-bound harbour likely influenced the decision to move the garrison to Louisbourg (Figure 3.1). A few remained behind at Englishtown,

tending to farms they had worked hard to establish. In 1755, the English conquered the French at Fort Beausejour, New Brunswick, transferring power over the Maritime colony to the British. In the mid-eighteenth century (1755-1763), the British government expelled thousands of French-speaking Acadians from the Maritime provinces. British troops occupied Louisbourg and the fort at Englishtown was abandoned for good (Brown 1979:274-277). By the nineteenth century, when shiploads of Scottish settlers began to arrive, all that remained of Fort Dauphin were ruins (Lamb 2000:4-29; Patterson 1978:11, 19-22, 29-32).

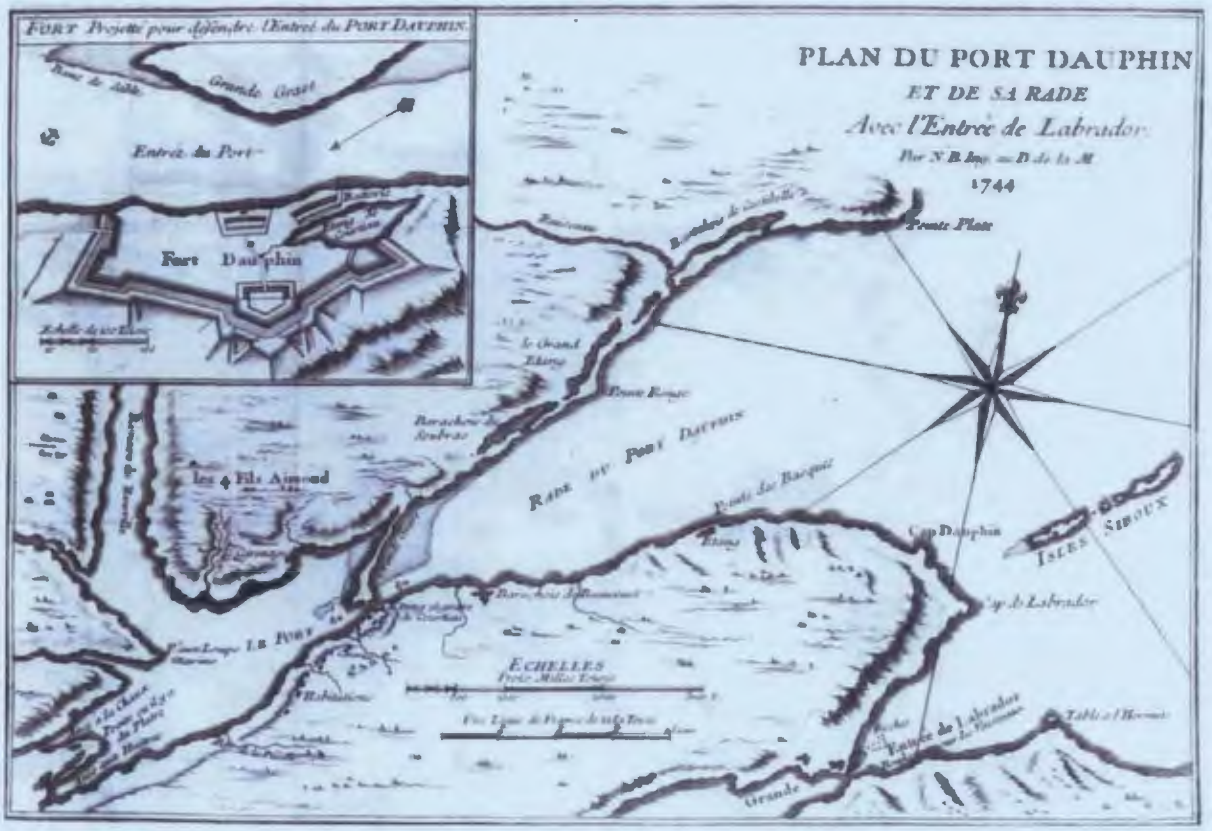

Figure 3.1: St. Ann's Bay showing the location and plans for Fort Dauphin (1713-1778). This was also the site of Fort Sainte Anne (1629-1641). ***(iquebec.ifrance.com/).***

Cape Breton became a haven for Scottish immigrants in the nineteenth century. After having been stripped of their land in Scotland during the Clearances, the immigrants were enticed by the opportunity to own land in Nova Scotia. Prior to 1827, the governments of Nova Scotia and Cape Breton granted land free to anyone who was willing to improve it. After 1827, a small fee of £5 per 200 acres was applied to land deeds (Brown 1979:392-404; Hornsby 1992:51). Because Cape Breton had been emptied of sedentary agricultural populations after the Acadian expulsion, newcomers had access to prime farmland on the coasts. Land lots here were larger and more fertile, allowing greater support for large livestock herds and agricultural produce which meant more surplus and revenue. Access to coastal land also left early settlers in a better physical position for trade and travel via shipping lanes, leaving commodities more accessible to these settlements (Hornsby 1989:417-420).

The first permanent settlers to St. Ann's arrived in 1820 via Pictou County, lead by Reverend Norman McLeod (Figure 3.2). Norman and his family had previously emigrated from Assynt, Scotland in 1817 (Figure 3.3). The reasons for McLeod's departure from Scotland have often been speculated upon. Scotland had been in the throes of restructuring since the mid-eighteenth century. Lairds were forcing tenants and crofters off their lands to make room for herds of sheep and there had been a long-lived religious upheaval in the country. It was likely McLeod's religious position that forced him from his homeland. He had been educated at Edinburgh University where he studied in the ministry but he soon developed strong reservations about the Church of Scotland and its ministers and left the University unordained. He turned, instead, to the flourishing

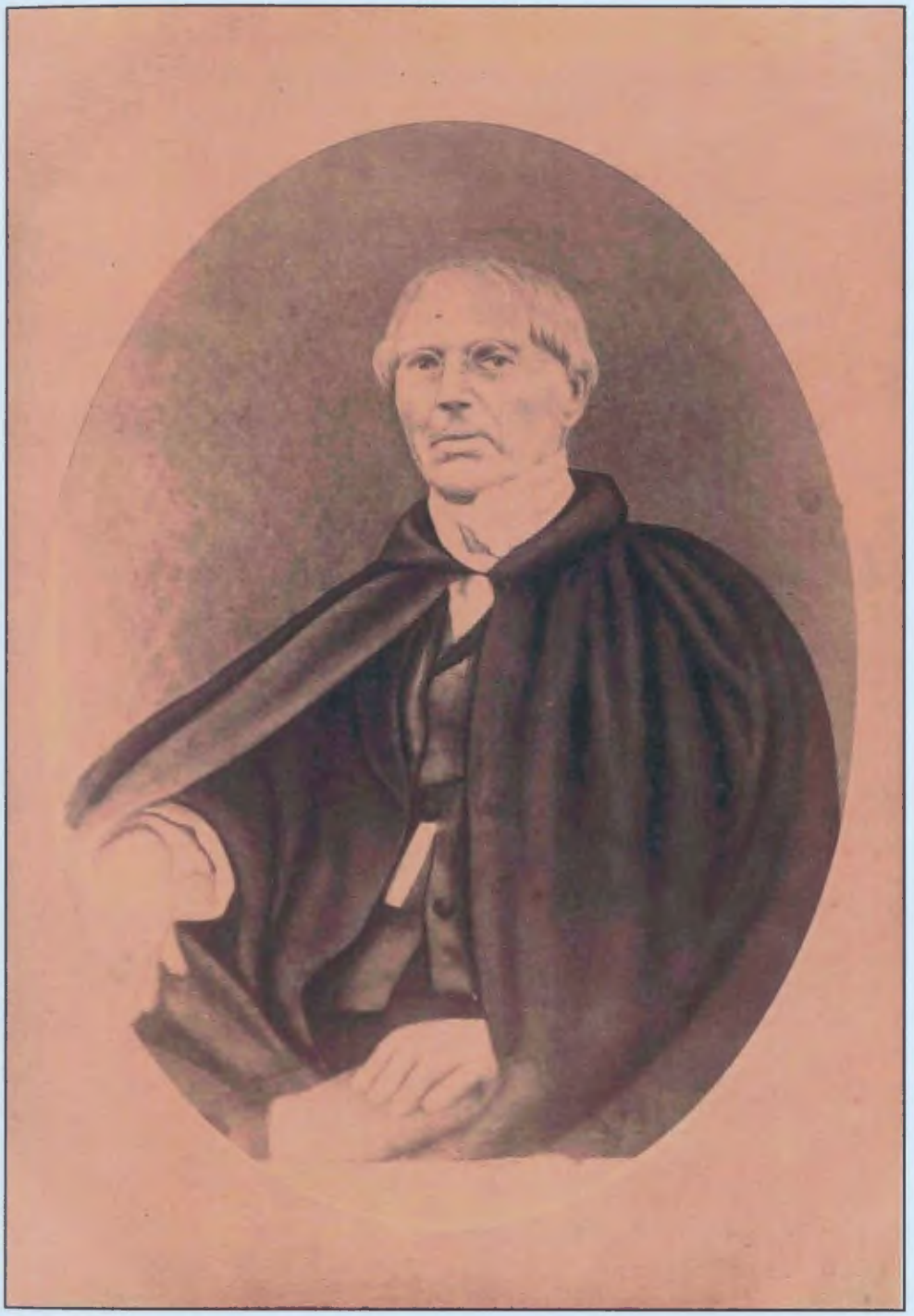

Figure 3.2: Reverend Norman McLeod c. 1845 (Beaton Institute Photo Collection Accession #77-829-963).

Figure 3.3: Map of Scotland highlighting Stoer Point, Assynt, the native homeland of the Reverend Norman McLeod and many of the "Normanites" (Oxford University 1978:28).

evangelical ministry that was sweeping across Scotland. The evangelists, too, were dissatisfied with the Church (Molloy 1991:9; Lamb 2000:40-43; Murray 1921:24). McLeod became a leader in the evangelist church and quickly procured himself a large following. In 1817, at the age of 37, he left Scotland and its Church behind him, bound for Nova Scotia with several followers in tow. The "Normanites", as they became known, settled in Pictou. For two years, McLeod preached to a growing congregation, still unordained. However, he lost popularity in the community when he refused to baptize his followers' children. To further compound the situation, he had upset the courts and a fellow minister when he published a story criticizing the conduct of Reverend D. A. Fraser. Fraser charged McLeod with libel in the amount of £200. McLeod refused to pay the fine and he was jailed and his assets sold. McLeod was so infuriated with these actions against him that he convinced some of his most devout followers to emigrate with him. This decision was facilitated by a calling to McLeod to serve in a parish in Ohio which was without a preacher. Six ships were built to make the journey to Ohio and they embarked in 1820 (Patterson 1978:99; Lamb 2000:46; Murray 1921:26; Molloy 1991:9; and Lotz and Lotz 1974:56). They were not far out to sea when a storm struck on the northeast side of Cape Breton and the small fleet was blown ashore in St. Ann's Harbour. It was said that the crew were so taken with the beauty of the land, that they immediately decided to go no further (Patterson 1978:77). So began the epic of the Cape Breton Scots.

Upon arrival in St. Ann's, McLeod took up land on the point between the North and South guts of St. Ann's Harbour. He was not officially granted this land until 1828,

when he was awarded 400 acres on the peninsula and 400 acres on the southeast side of South Gut, presumably for his followers (Department of Natural Resources 1964). The settlers set about building a modest log cabin for McLeod at the head of the peninsula. By about 1830, his wife Mary had borne 10 children although one died in infancy and another, Bunyan, would die in 1838 at the age of 21. They had quickly outgrown their log cabin at the head of St. Ann's Harbour and so McLeod's followers set about building a second, timber-framed house further south on the peninsula. In 1821 or 1822, a church had been built near the log house as well as a schoolhouse at which McLeod taught 18 children. By 1835, 110 children were enrolled at the school (Molloy 1991:32; PANS MS File). In 1846, the church was replaced by a larger one which was able to accommodate McLeod's large parish of 1,200 (Lamb 2000:59). This church stood at Black Cove until 1893 when it was moved to a location more convenient for its parishioners (Anonymous 1922:14).

McLeod was finally ordained in 1827 by the presbytery of Genesee in New York. He had an annual salary of £60 to £80 from the province for his services as schoolmaster. Those who could not pay for their children to attend his school offered their services on McLeod's farm or in the house by helping out Mary. As McLeod did not accept cash for his services as preacher, all parishioners were expected to help on the homestead (McPherson and Stanley in Molloy 1991:32; Lot and Lotz 1974:57; PANS MS File). Once the second house was built, McLeod also took in a housekeeper, although it is unknown whether or not she was a tenant (McPherson 1993:83).

John Munro was the first merchant in St. Ann's. He set up store in 1825 and began a thriving shipbuilding venture a year later (McPherson 1993:125). Munro shipped lumber from Pictou and St. Ann's to Europe and traded the cargo for goods he later sold at his store. By the 1830s, many of the items the St. Ann's settlers previously made at home were available at Munro's store, grist mill and lumber mill. He sold various colors and prints of cloth at 5 pence per yard, boots at £1 a pair, and tea at 2 shillings 8 pence per pound. The tea was quite pricey and new to the settlers, making it an ill-afforded luxury (McPherson 1993:120-126).

In 1848, potato blight and wheat rust destroyed the crops and some of the settlers were reduced to starvation. At this time, coincidentally, McLeod received a letter from his son, Donald, in Australia who spoke highly of the conditions there. The letter evoked interest by the hungry and downtrodden settlers and it was decided to relocate to Australia. Settlers began leaving St. Ann's in 1851. McLeod, then 71 years of age, was one of the first to leave. In total, 883 people left the community in a mass exodus between 1851 and 1859 bound for Australia (Murray 19221:31-32; Lamb 2000:63-80; and McLeod in Harvey 1939:21-23). McLeod sold his land and home to John Robertson for "a sum equal to three thousand dollars in cash" (McPherson 1993:141). Robertson and his wife, along with their six children, lived in the house for approximately ten years when he built a second home about one hundred yards north which became known as the "Big Red House". Sources suggest that Robertson built the second house because his family had outgrown the McLeod house but it is clear that the McLeod house was the larger of the two houses. Robertson's first wife died sometime in the 1860s. It is said

that Robertson then rented the McLeod house to his brother, A. Robertson although no record of this exists in census returns for that period (Lamb 2000:127). Census records for 1871 do indicate that the McLeod house was rented out by Robertson to one Duncan McLeod and his wife Isabella along with their five children. Isabella was likely a relative, possibly a sister, of Robertson's second wife, Mary (1871 Census for Victoria County).[2] There is no record of anyone occupying Norman McLeod's house after the 1871 census. The 1875 property assessment roll for Victoria County does not list Duncan McLeod as a property owner. Nor does it list Robertson as an owner or landlord (Victoria County 1875). McLeod's house is last seen on the 1884 Geological Survey Map although no associated buildings are shown (Geological Survey of Canada 1884). The Robertson house was torn down in 1973 but the foundation remains in pristine condition (Lamb 2000:116).

There is a great deal of myth and speculation surrounding the McLeod site. During the 2002 field season, it became clear that the most problematic issue was the location of the McLeod house and its confusion with the Robertson house. Because the McLeod foundation is obscured by trees and the Robertson foundation is clearly visible from several hundred meters away, the presence of the McLeod foundation has been ignored, even by those who have worked at the *Gaelic College* for many years. It has often been assumed that the later Robertson foundation is the McLeod foundation. Settling this issue quickly became our first research priority.

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[2] According to the 1871 census, the Robertsons and McLeods (Duncan and Isabella) were of the same family but occupied different dwellings. Both Mary Robertson and Isabella McLeod were born in Nova Scotia two years apart.

Although the Big Red House stood until fairly recently, few photographs of it survive in public collections. I was, however, repeatedly shown the same photograph and a similar post-card of the Robertson house by local residents. The postcard reads "St. Ann's Harbour; Black Cove and The 'Norman MacLeod' Cottage – The Gaelic College" (Figure 3.4). Many local residents also assume this to be the McLeod house. Residents claim that the photograph (and likely the picture postcard) were taken in the mid-twentieth century (around 1945-1950) (MacDonald, pers. comm.). The McLeod house was not standing at this time, for it was likely dismantled late in the nineteenth century. The photograph and post-card speak for themselves. The house in the post-card is much closer to the shore of Black Cove than McLeod's house was and it is situated below the swamp on low ground. The photograph was likely taken from the northeast side of the McLeod house, tens of meters away from the subject.

Figure 3.4: Mid-twentieth century post-card showing the John Robertson house, mislabelled the McLeod cottage (Photogelatine Engraving co. Limited).

CHAPTER 4

EXCAVATIONS AT THE REVEREND NORMAN MCLEOD HOMESTEAD

4.1 Introduction

Upper McLeod's Point peninsula is approximately 2 km^2 in area and was occupied from 1820 until 1852 solely by Reverend Norman McLeod. His house was located 1.2 km south southwest of the northernmost tip of the peninsula. During McLeod's occupation, this land was said to have been cleared from the house to the tip of the peninsula, although today it is heavily forested. The remains of the house sit on the highest point of land on the peninsula, about 50 m above sea level. Approximately 12 m north of the house is a dried creek bed which may have been the source of water for the McLeod residence. This creek leads into a swamp 150 m northeast of the house.

The Reverend Norman McLeod homestead (CbCd-2) was first recorded in August 2001 by the author. Prior to this, very little was known about the site, the only reference to the archaeological remains being by local historian James Lamb (2000:127-128). During the recording phase, several archaeological features were identified including the McLeod house, an associated outbuilding and privy, a late nineteenth century house and associated outbuilding as well as the occupants' graves, and the site of the Presbyterian church at which McLeod preached. Excavations during the 2002 field season focussed on the McLeod house with secondary attention being paid to the associated outbuilding and the privy. The surface of the site revealed considerable post-abandonment cultural and natural disturbance, although this disturbance did not descend into the cultural deposition. Prior to excavation, several small trees needed to be removed from the interior of the

foundation. A count of tree rings revealed that many of these small trees were as old as 70 years. A considerably larger pine tree left standing in the center of the foundation is likely much older.

Due to constraints of time and of the landscape, including large trees and boulder-sized stones, the foundation could not be fully excavated. Twenty-eight percent of the interior and threshold of the foundation was excavated along with 10 m^2 of the associated outbuilding and 10 m^2 of the privy. Unfortunately, neither the privy nor the outbuilding could be excavated to sterile soil due to time constraints and concerns for unnecessary destruction of those features.

4.2 Excavation Methodology

The site was excavated stratigraphically according to a correlational approach in which strata with the same physical characteristics are assumed to be associated with the same event, although they are contained within separate excavation units (Harris 1979:81-86). A datum point was chosen and marked on a tree near the southwest corner of the foundation from which all vertical points on the site could be measured. East-west and north-south baselines were set up on the exterior of the house on the north and west sides from which all horizontal points on the site could be measured and stakes were placed every 2 m along the baseline. Each unit was designated by the coordinates of the northwest corner of the square (e.g. N35 W25). Initially, twenty-four units were set up and excavated in one m^2 units along two lines running north-south and east-west intersecting at the center of the house atop the chimney mound. It was expected that the

results of this phase of the excavation would reveal subsequent features which would help us to determine where to begin excavating next. Excavation expanded to the northwest, northeast and southeast quadrants of the interior of the house (Figure 4.1). The stratigraphy within these units was fairly straightforward, descending through the surface organic decay (lot 1) into post-abandonment and post-collapse/dismantlement strata (lots 2 and 3), occupation strata (lots 4, 6, 8, and 9), construction period strata (lot 7), and sterile soil (lot 5) (Table 4.1). Most units were excavated to sterile soil, although excavation on the chimney mound proved difficult due to the presence of large boulders, tree stumps and roots. Sections and plans were recorded by crew members for all strata in each unit and corresponding lot record forms were completed by the author (Appendix A). The vertical and horizontal position of each artifact was measured from the datum and baseline and recorded on stratigraphic plans as well as on the artifact bag, along with the unit and lot numbers. This information was then transferred to the Nova Scotia Museum artifact database, in the artifact catalogue.

The excavation strategy soon became influenced by new information provided by a scaled model of the McLeod house we were previously unaware of (Plate 3).[3] The model shows that the house was 2 ½ stories high with an addition on one side along the long axis of the house. The front door is positioned on the short axis of the house and is off-center. There is a second door on the ell facing the same direction as the front door.

[3] This model was built by Captain J. S. Arsenault of Big Harbour, Nova Scotia about 50 years ago and is in the *Hall of the Clans* at the *Gaelic College of Arts and Crafts*. No one at the college knew anything about the model, Arsenault's age when he built it, or where his information came from.

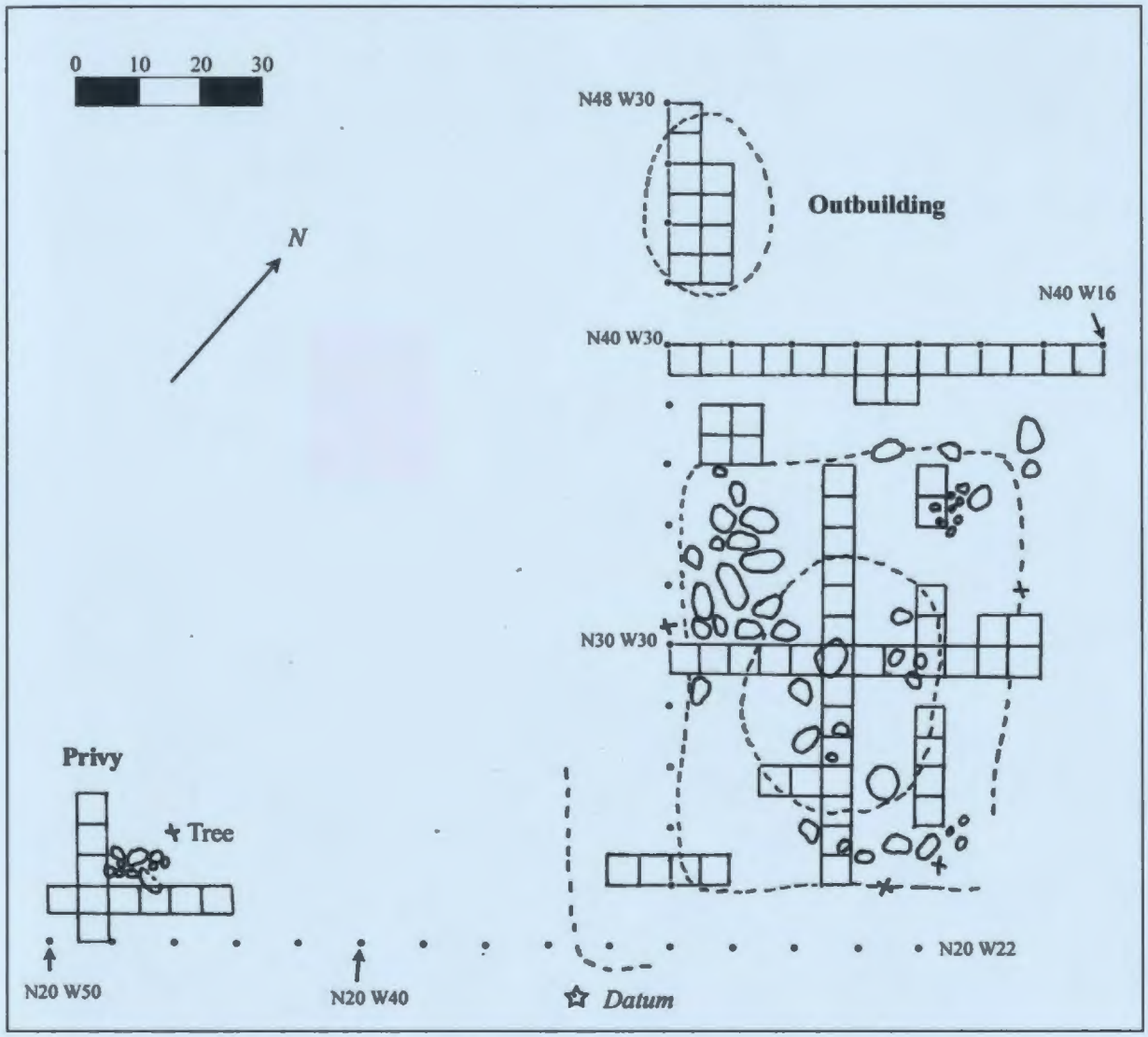

Figure 4.1: Site excavation plan.

Table 4.1: Soil Stratigraphy

Lot	*Soil Description*	*Association*
1	Dark brown to black organic loam. Sod, pine needles and cones, leaf decay.	Post-abandonment
2	Medium brown sandy loam.	Post-collapse, post-abandonment. Initial soil and stone deposition.
3	Medium to dark brown sandy loam mixed with limestone mortar.	Post-abandonment. Collapse of north foundation wall and chimney.
4	Orange and black mottled silty clay.	Redeposited soil. Represents living surface of house after construction.
5	Medium brown natural clay.	Sterile.
6	Medium reddish brown natural, hard-packed clay.	Occupation of house.
7	Sandy loam (mix of orange sterile and medium brown cultural soil).	Builder's trench on house foundation wall.
8	Reddish-brown fine grained (less than 1 mm) beach sand and pebbles.	Occupation level. Sand likely associated with floor and/or fireplace cleaning.
9	Wood.	Occupation level. Possibly represents wood platform in cellar.
10	Black silty clay/organic decay.	Night soil near privy.
11	Burned wood.	Burning of outbuilding.
12	Decaying undressed wood.	Abandonment or post-abandonment. Likely represents collapse of walls or roof of outbuilding.
13	Medium orange-brown beach sand and loam.	Occupation period. Primary midden north of foundation.

There is a central chimney in the main part of the house as well as a second central chimney in the ell. In order to test the validity of this model, an area near the southwest corner of the house on the exterior of the foundation wall was tested for evidence of the addition to the house as exhibited by the model. At the same time, crew members were assigned excavation units at the north end of the house outside the foundation wall and in the outbuilding and privy features. Unfortunately, time did not allow a complete excavation of the outbuilding and privy.

During the excavation phase, stones were separated from the soil during dumping for ease of backfilling. The spoil heap was located northeast of the foundation, well away from any archaeological features. During backfilling, where wood was encountered, a layer of landscaping fabric was laid down in order to preserve the wood and indicate the level of excavation for future researchers. Stones were placed around the perimeter of the fabric and soil was placed on top. Twentieth-century artifacts collected from the surface and in lots 1 and 2 were recorded and collected but later discarded after analysis.

4.2.1 Feature 1: The McLeod House

The McLeod house foundation measures 14.4 m by 9.8 m and is situated on the highest point of land on the peninsula, at 37 m above sea level. In the center of the foundation is a large mound measuring four meters in diameter representing the remains of a central chimney. Although the house is oriented northwest –southeast by southwest – northeast, its longitudinal axis will be described hereon in as north-south for

convenience. The stones of the foundation and central chimney were concealed by a thick overgrowth of sod and moss. Particularly on the north end of the east wall and on the chimney mound, excavation was greatly hindered by tree growth. To further compound the problem, several large granite boulders had been deposited inside the foundation after abandonment. A local resident in her seventies visited the site during excavation and told the author that she grew up on a farm down the road from the McLeod house and, as a young girl, passed the site everyday on her way to school (in the late 1930s and 1940s). She was familiar with the site but recalls little if any tree growth inside the foundation walls or the large boulders inside the foundation, confirming that the stones were placed there post-abandonment, sometime during or after the 1940s. In addition, artifacts discovered just beneath these stones on the soil surface dated to the first 30 years of the twentieth century, revealing that the stones were placed there after that time. Although McKillop's Road to the southeast of the house is the original road that ran through the site, twentieth century maintenance of the roadway and the parallel ditch on the north side of the road have caused considerable damage and possibly obliteration of the southeast corner of the foundation and its exterior. Fortunately, aside from this disturbance, there had been no subsurface destruction of the site prior to excavation.

Excavation of the McLeod house revealed the remains of a mortared limestone central chimney, a mortared field stone foundation on the north wall, and the collapse of free stone walls on the west, east, and south sides of the feature. The chimney remains radiated out from the center of the house suggesting the chimney collapsed rather than

being dismantled. The chimney collapse was confined to lots 1 and 3, the latter of which is directly associated with the chimney collapse. The large granite field stones on the chimney mound descended into lot 3 and are likely from the chimney base. About half a dozen coarse bricks were found on the north and south sides of the chimney in lots 1, 2, and 3 but do not suggest anything structural and may be post-abandonment debris from another location, perhaps from the Robertson house which had a brick chimney. On the north and east sides of the chimney, directly below the collapse in lot 3, is a layer of beach sand (lot 8) which is likely associated with cleaning the hearth and/or the wooden floors of the ground level of the house (Figures 4.2 and 4.3).

The house foundation was constructed of mortared granite field stones and was built into the natural slope of the land so that the walls of the foundation would have had to be levelled during construction. On the east wall of the foundation at the center of the wall was an anomalous, flat mortared limestone. Time did not allow further excavation of the east wall and the significance of this stone in relation to the rest of the wall is not known. However, further excavation of units to the north and west of this unit did suggest that the east wall, or at least this portion of it, was *double-skinned* meaning that the space between two parallel walls of larger stones placed approximately one-half meter apart was in-filled with smaller stones (Figure 4.4, Plate 4). Extensive stone rubble at the northwest corner of the house suggests that this area of the wall may also have been double-skinned but not mortared (Figure 4.5, Plates 5 and 6). However, excavation at the center of the north wall revealed an intact mortared wall (Plate 7). The west and south walls suffered too much collapse to discern any structure although the soil stratigraphy

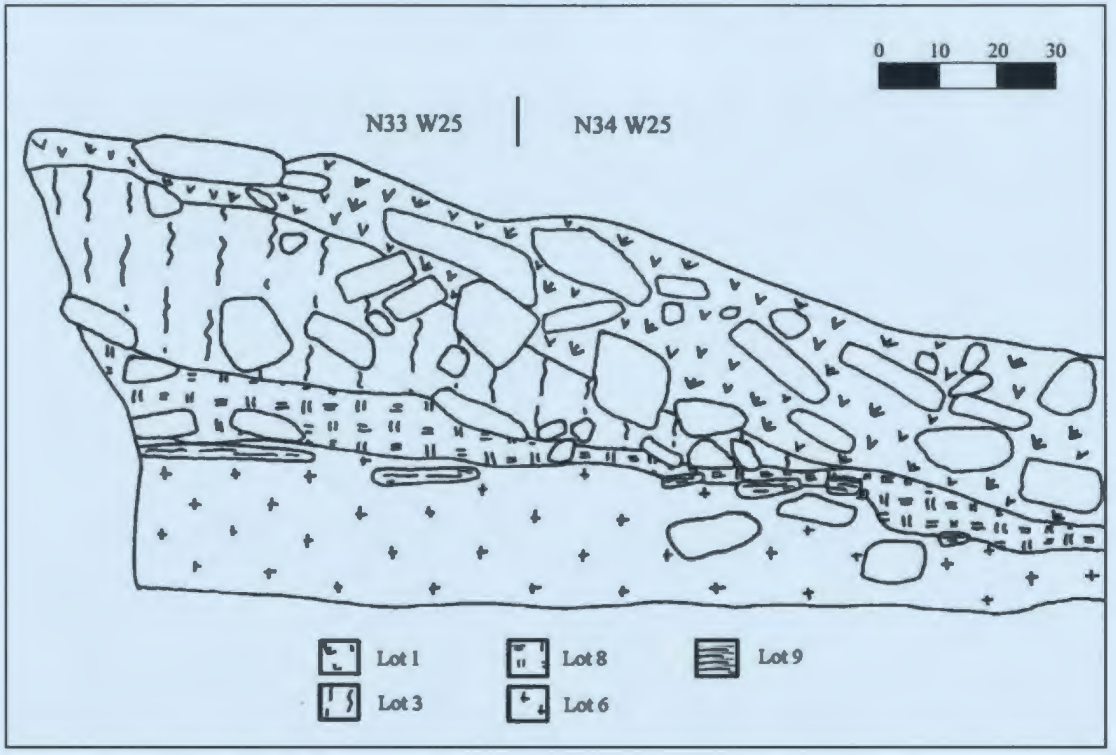

Figure 4.2: Units N32-34 W25 soil profile.

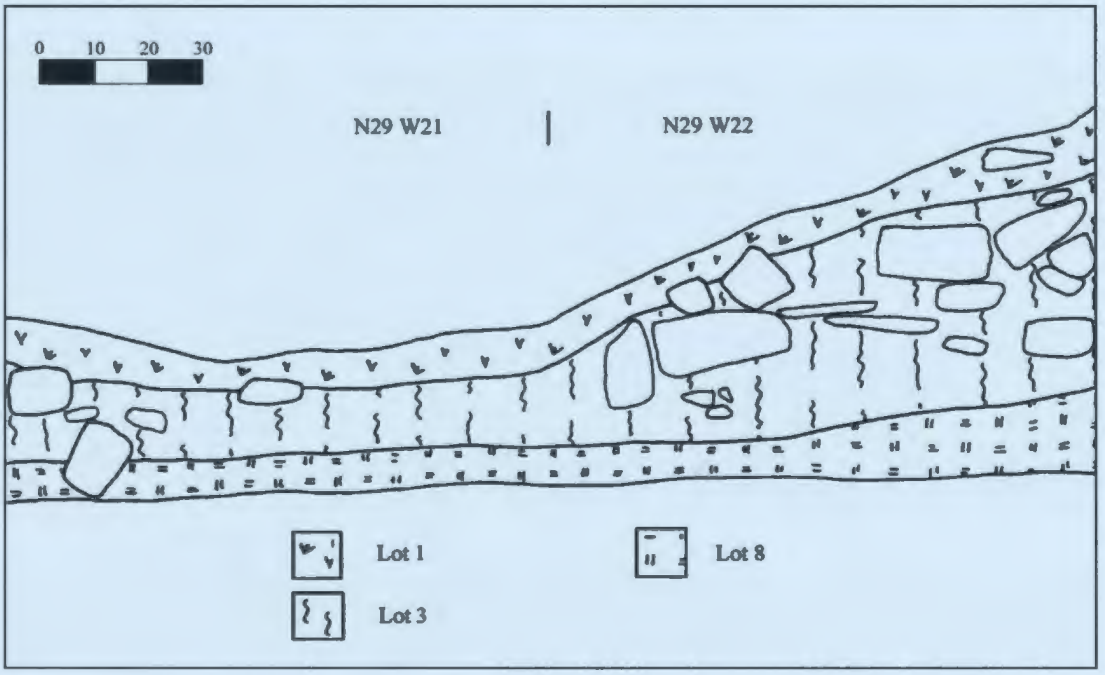

Figure 4.3: Units N29 W20-22 soil profile.

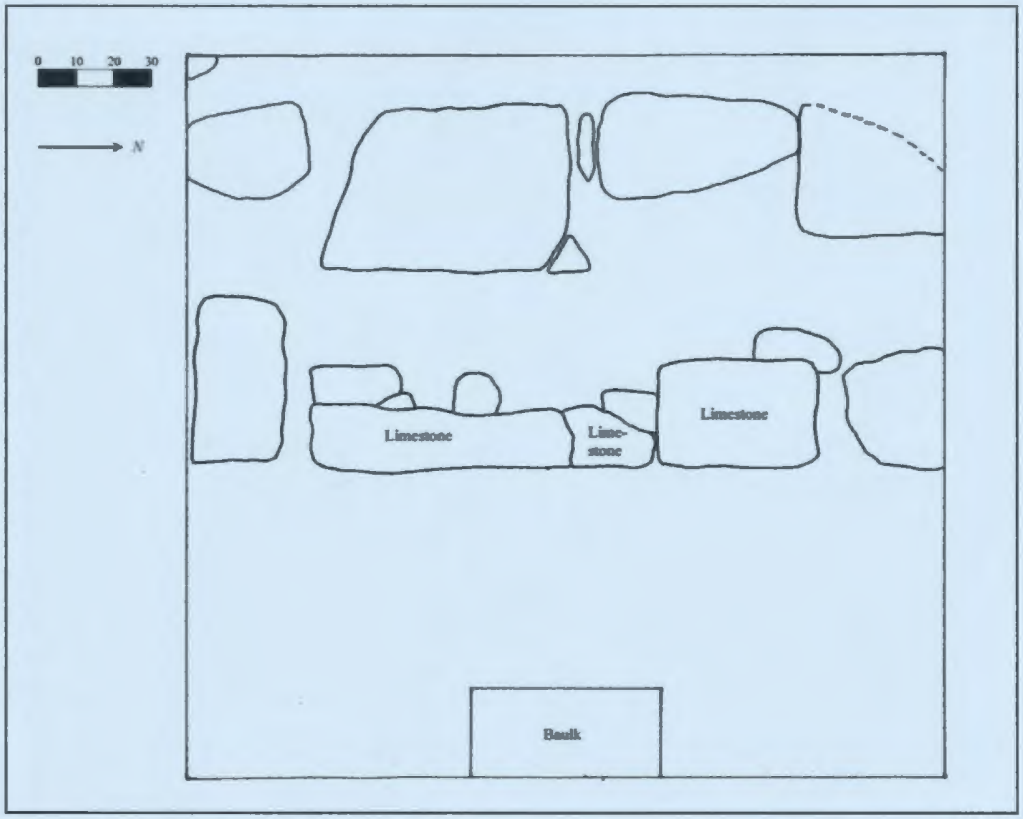

Figure 4.4: Plan of center of east wall (N30-31 W19-20).

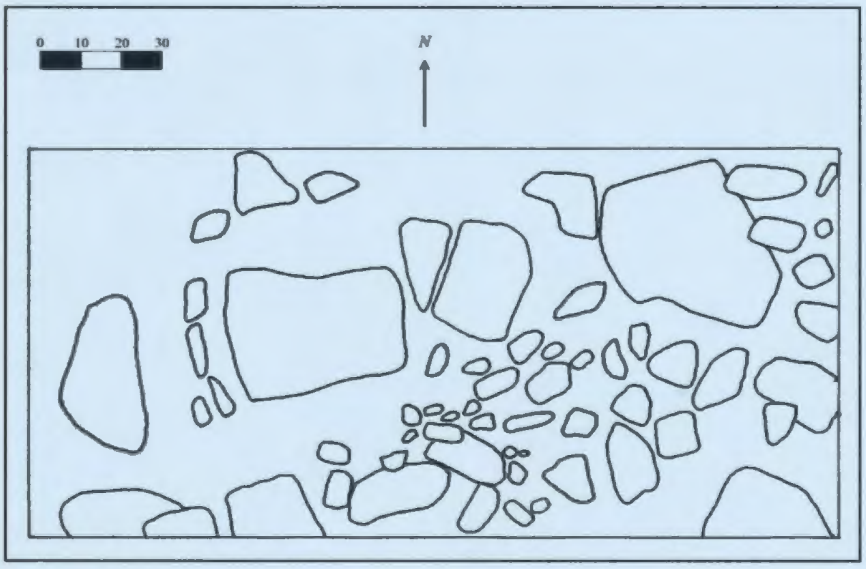

Figure 4.5: Plan of northwest corner of house (N37 W28-29).

directly inside the foundation did not suggest that these walls were mortared. Approximately 1 m outside the west foundation wall, near the wall's center, was a narrow band of hard clay nodules about 0.5 m long running parallel to the longitudinal axis of the foundation. This appears to have been a drip line, likely from the roof of the house suggesting that the peak of the roof ran parallel with the longitudinal axis of the house (north-south). This would then suggest that there was no addition to the house in this area, as the model suggests. To test the validity of this aspect of the model, four units of 1 m^2 were excavated on the west wall near the south end of the foundation. The units were excavated to sterile soil which was very shallow (less than 4 cm). The natural and cultural soils (lots 1 and 2) in the four units were very thin and only one unit (N23 W31) contained any artifacts - ten ceramic sherds and a fragment of dark green bottle glass dating to the late nineteenth century. No stone structures were encountered in this area and there was no anomalous landscape that would suggest a chimney (Plate 8).

The most interesting aspect of the feature was the exquisite preservation of wooden structural remains. In the south end of the house, units were excavated down to a layer of thick mottled clay which surrounded a central support beam near the center of the house (Figure 4.6, Plate 9). Adjacent units to the west revealed perpendicular secondary support beams. It was decided not to extend excavation past these wood beams in order to preserve their integrity for possible future research. In the southeast quadrant of the house, units were excavated down to a uniform layer of dressed wood planks (Figure 4.7, Plate 10). This layer appeared too contrived to be the remains of collapse from upper floors. Instead, this area of the foundation may have been a cellar with a wooden

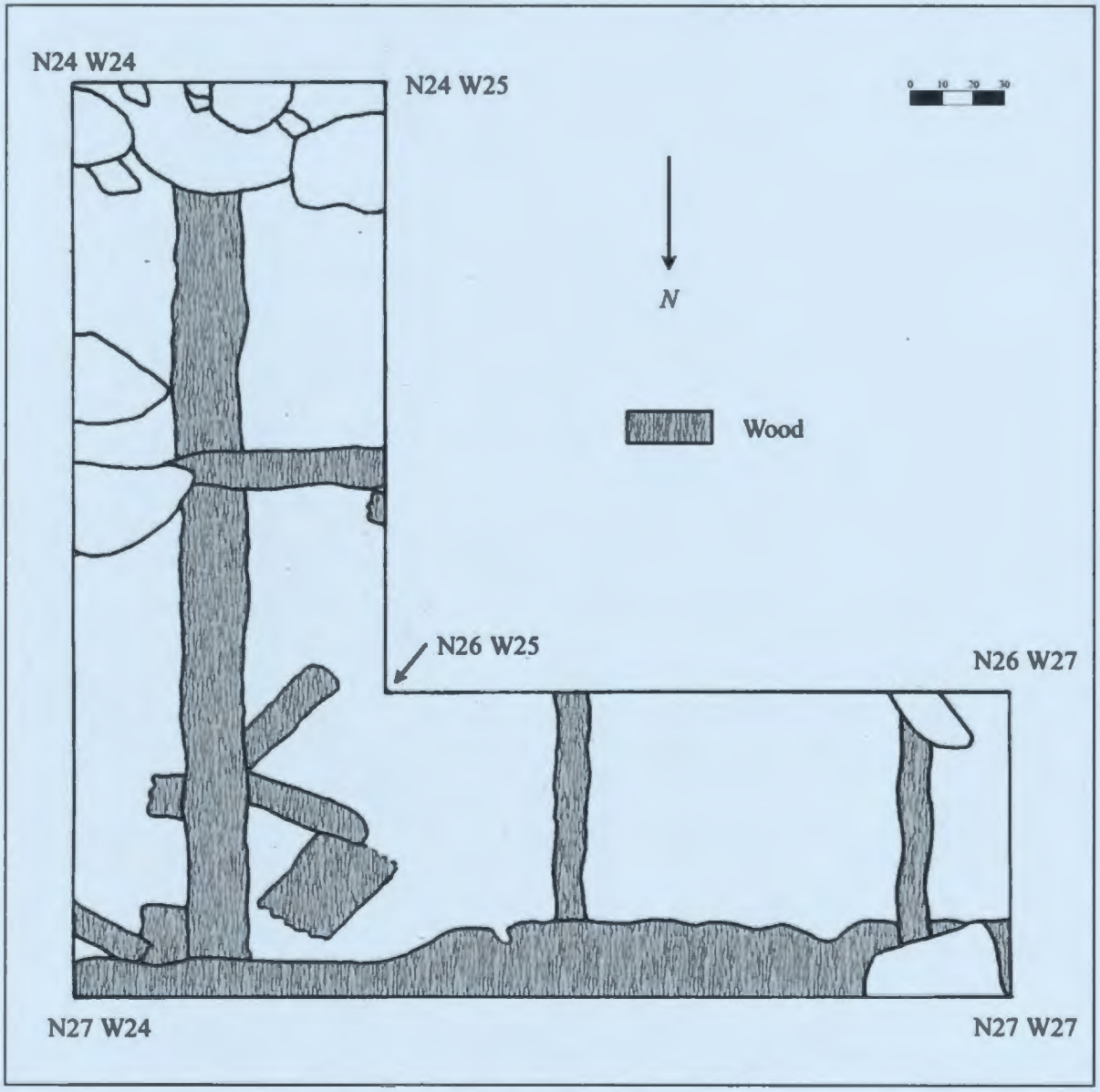

Figure 4.6: Buried wood beams in south end of house.

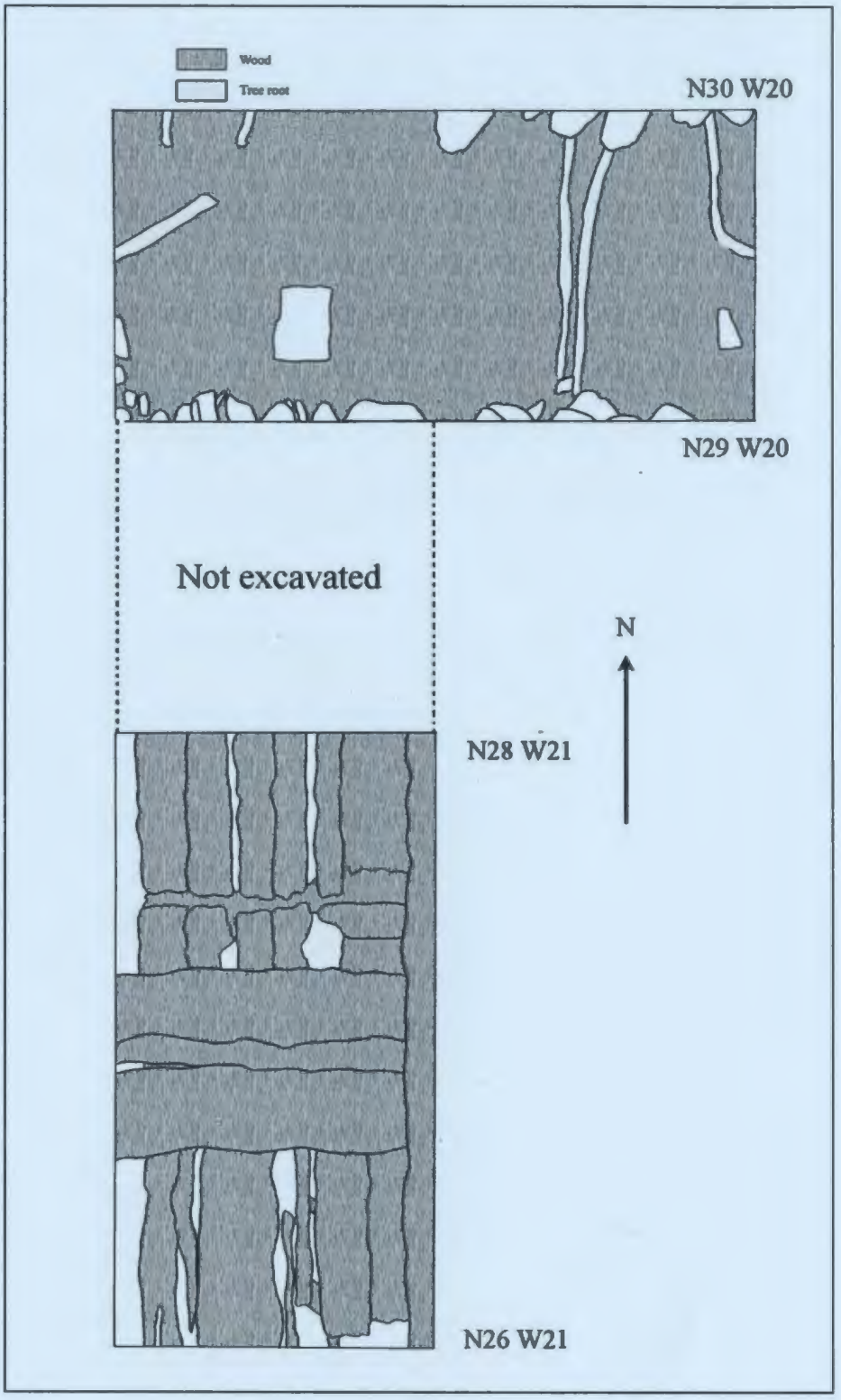

Figure 4.7: Wood platform in southeast quadrant of house.

platform for storage. Wood remains in the north end of the house were not as well preserved as those in the south end of the house. The wood here does not exist as a uniform layer and it appears that the wood has been broken and its arrangement is more random with pieces running at oblique angles to one another (Figure 4.8).

Artifacts inside the house dated from the early part of the nineteenth century up to the early twentieth century.

Outside the house, a 14 m-long trench was excavated in 1 m^2 units approximately 2 m north of the foundation. This trench revealed midden materials, likely dropped en route to another location, possibly downslope of the house to the north. Artifacts here dated to the early to late nineteenth century and were of various artifact classes including food preparation/consumption, architectural, personal, medicinal/hygiene, and faunal. The trench also revealed a stone-lined posthole which contained early nineteenth-century artifacts including four complete or near-complete vessels (Figure 4.9, Plate 11). The discovery of this posthole lead to excavation of four units adjacent to the trench on the south side. It was thought that this posthole may be related to a door step, as suggested by the model, and that another posthole would be found near the north wall of the foundation. This was not the case, although a second stone-lined post hole was excavated near the northwest corner of the house, approximately 1 m north of the corner and 2 m southwest of the first post hole (Plate 12).

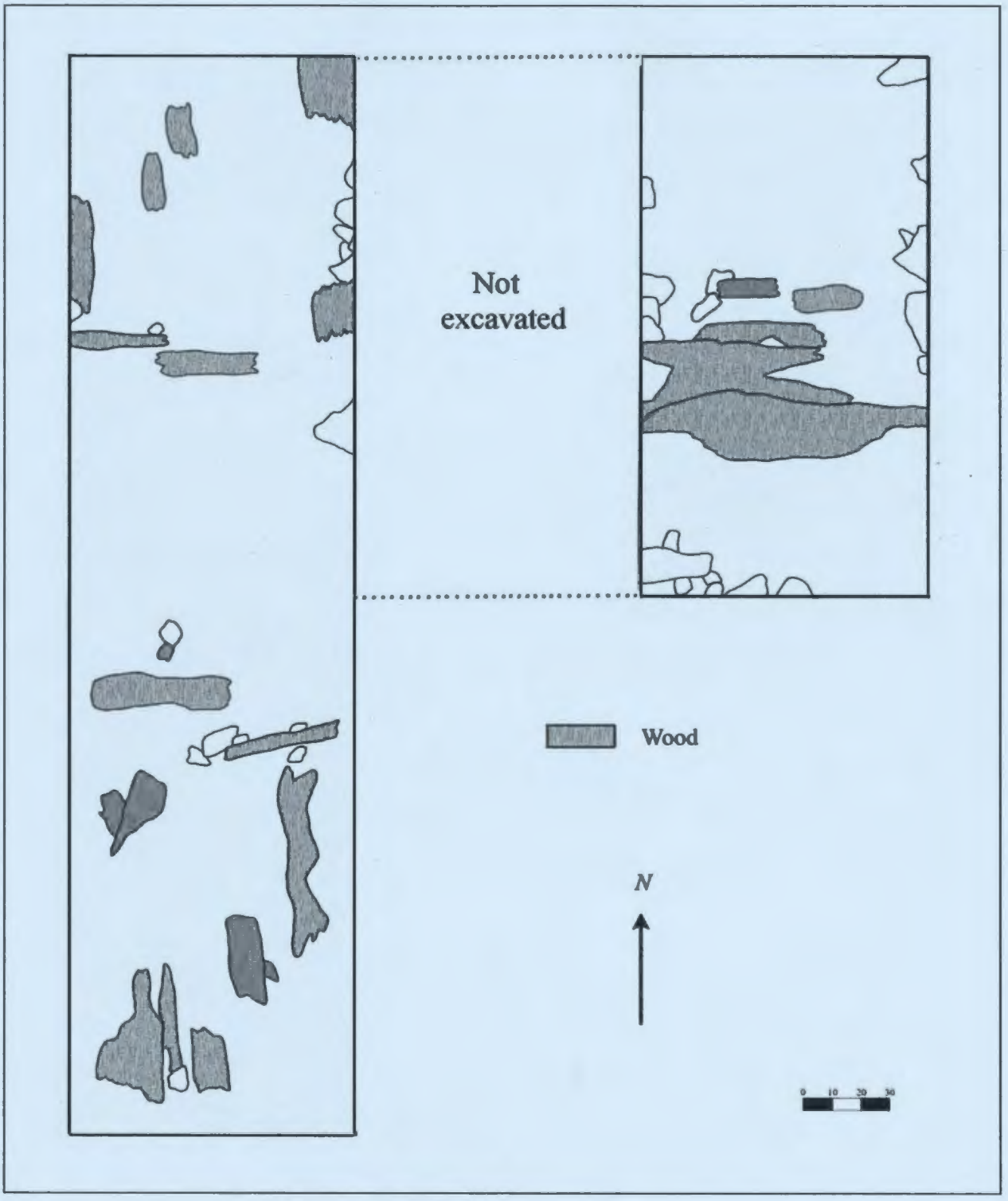

Figure 4.8: Wood in north end of foundation.

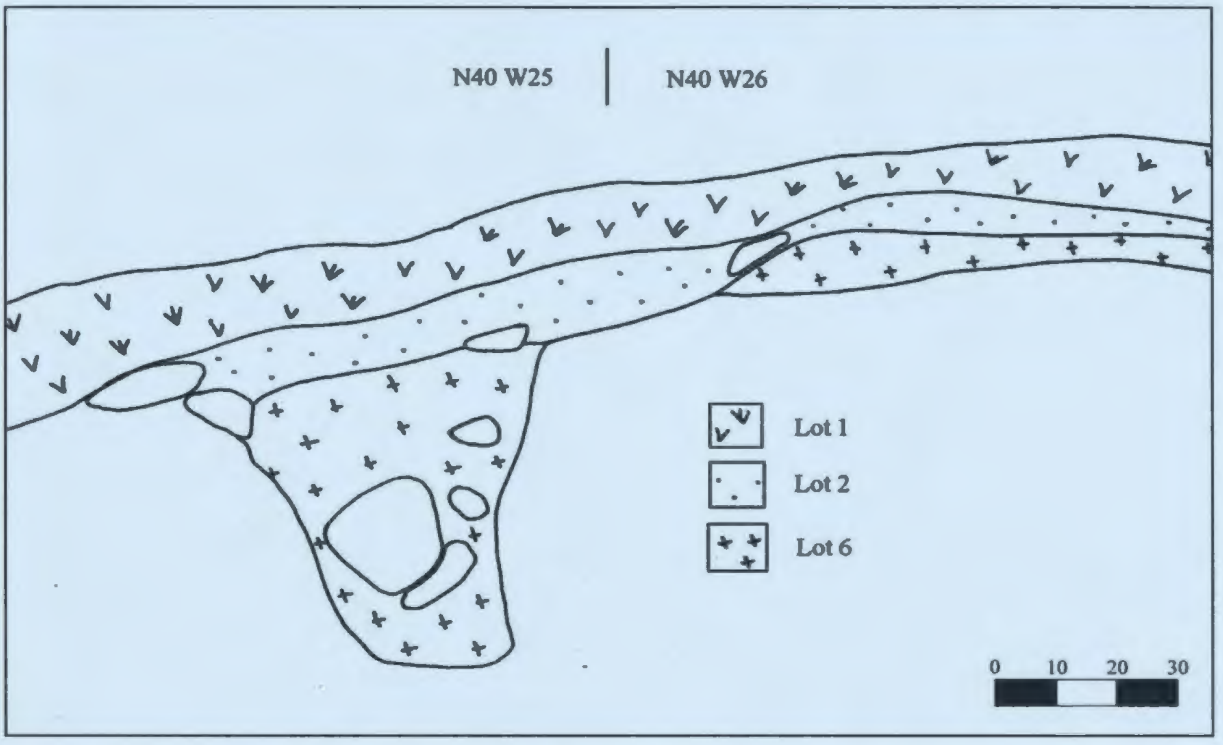

Figure 4.9: South wall section (N40 W24-26) showing stone-lined posthole.

A total of 720 nails were collected from inside the house and around its periphery. Of that number, 461 nails were recovered from the trench excavated to the north of the house and are likely associated with the construction of the house and/or the door step or were discarded. Inside the house and in the builders' trench, 259 nails were excavated from total excavated area of 42 m^2. The average number of nails excavated from this area was 6.2 nails per square metre. Given that the house was of frame construction and was built on site rather than being moved from a secondary location, one would expect a greater quantity of nails than that which was recovered. The amount of window glass excavated from the same area is also unexpectedly low – only 203.13 grams (less than 0.5 pound). Very few other architectural artifacts were recovered. Although the wood

inside the house was exceptionally-well preserved it, too, was scarce. This evidence suggests that the house was dismantled and the materials removed from the site, possibly to be reused. However, it must be noted that the entire interior and periphery of the house was not excavated and it cannot be known how the testing strategy might affect the proportion of architectural elements present per square metre over the entire feature.

4.2.2 Feature 2: Outbuilding

An associated outbuilding was identified 6 m north of the foundation and measured approximately 7 m in diameter. Ten m^2 of this structure were excavated down to a layer of wood logs (Plate 13). It was unclear whether this represented a wood-lined bottom or post-abandonment collapse. Little structural information was obtained from future investigation and excavation of the structure was abandoned. However, burned wood and charcoal was found throughout the feature in lot 2 and on top of the logs, although the logs themselves were not burned suggesting that burned refuse was deposited here. In addition, a red ochre-like substance was found in the north end of the feature and may have been used to paint the outbuilding. Artifacts in this structure included ceramics, window glass, nails, and unidentified iron, dating mostly to the late nineteenth century. It is possible that the outbuilding was constructed of logs removed from McLeod's original log cabin at the head of the peninsula.

4.2.3 Feature 3: The Privy

Finally, a privy was discovered 17.5 m west of the foundation and revealed early to mid-nineteenth century artifacts including a Nova Scotia Penny Token dating to 1843 and a creamware chamber pot. The privy was filled in with large boulders and again, due to time constraints, it could not be excavated in its entirety and it was decided to preserve the integrity of this feature for future research (Plate 14). The boundaries of this feature were not reached and no structural information was obtained through excavation.

CHAPTER 5

ARTIFACT ANALYSIS

5.1 Introduction

Artifacts from the McLeod homestead were separated into object classes according to the Nova Scotia Museum archaeological artifact database. The Nova Scotia Museum object classification scheme is based primarily on artifact function which proves convenient to this research design as it is concerned with the function of space within the house which is addressed in the next chapter. This chapter is dedicated to the analysis and discussion of those artifact classes.

5.2 Food Preparation/Consumption Artifacts

5.2.1 *Ceramics*

The first step in analyzing the ceramics recovered was to sort sherds first by ware type including creamwares, pearlwares, white refined earthenwares, vitrified wares, ironstones, yellow wares, redwares, and stonewares. The ware types were separated by decoration and finally by vessel. Next sherds were mended within units and then catalogued so as not to lose provenience. Afterwards, sherds were cross-mended among units and a minimum vessel count was calculated for each decorative group (Table 5.1). There were no mends across features. The minimum vessel count was calculated by counting mended vessels and by separating single sherds of each decorative type into diagnostic portions and vessel types such as cup bases, plate rims, and jug handles and then into matching patterns. Much of the ceramic assemblage was very fragmented and,

Table 5.1: Minimum Vessel Counts by Feature (sherd count in brackets)

Ceramic Type	Feature 1	Feature 2	Feature 3	Total Count
1. Undecorated creamware	2 (9)		1 (28)*	**3 (37)**
2. Annular creamware	1 (9)			**1 (9)**
3. Undecorated pearlware	5 (104)	2 (26)		**7 (130)**
4. Annular pearlware	15 (41)	1 (1)		**16 (42)**
5. Sponged ware	2 (13)	1 (9)		**3 (22)**
6. Blue painted pearlware	1 (4)	1 (5)		**2 (9)**
7. Polychrome pearlware	2 (4)	1 (4)	1 (28)	**4 (36)**
8. Polychrome whiteware	5 (8)			**5 (8)**
9. Blue shell-edged:				
type a	3 (31)			**3 (31)**
type b	2 (8)			**2 (8)**
type c	2 (4)			**2 (4)**
type d	2 (3)	1 (1)		**3 (4)**
10. Transfer printed pearlware:				
a. blue	13 (293)	2 (10)		**15 (303)**
b. brown	2 (29)		1 (5)	**3 (34)**
c. black	1 (1)			**1 (1)**
d. red		1 (1)		**1 (1)**
11. Transfer printed whiteware:				
a. blue	1 (6)			**1 (6)**
b. black	1 (3)			**1 (3)**
c. green	1 (2)			**1 (2)**
12. Flowing color ironstone	3 (35)	1 (7)		**4 (42)**
13. Moulded relief ironstone	2 (6)	1 (4)		**3 (10)**
14. Vitrified earthenware	1 (6)	1 (3)		**2 (9)**
15. Yellow ware	1 (19)	1 (31)		**2 (50)**
16. Redware	2 (5)			**2 (5)**
17. Stoneware	3 (16)			**3 (16)**
Total Count	**73 (659)**	**14 (102)**	**3 (61)**	**90 (822)**

*This particular vessel is a chamber pot and obviously is not classified as a food preparation/consumption artifact.

in many cases, vessel type was not distinguishable. A minimum of 90 vessels was collected across all three features, although the majority of vessels were from Feature 1 as would be expected given the relative extent of excavation as compared to the outbuilding and privy.

The ceramics collected ranged in date from the late eighteenth century up to the early twentieth century and are represented by a wide variety of wares and decorations. For ease of discussion and visual representation of the data, the ceramics have been separated into 17 types which have each been assigned a date range (Table 5.1, Appendix B).

Type 1: Undecorated creamware

The undecorated creamwares in the McLeod collection represent one plate with a plain rim and a mug, both found in Feature 1. The undecorated creamwares date between 1762 and 1820 (South 1977:212; Noël Hume 1982:125-128; Miller 2000b:12). These wares were likely curated and were among the cheapest wares available in the late eighteenth and early nineteenth centuries.

Type 2: Annular creamware (Plate 15)

One annular orange and brown creamware bowl is present in the collection and was recovered from the posthole in the trench north of the house, which was a midden context. The bowl was mended prior to its discard, evident by a mend hole just beneath the rim of the vessel. Its date is much narrower than that of undecorated creamware as

annular creamware was not produced until the very late eighteenth century and ceased to be produced after 1815 (South 1977: 212; Miller 2000b:12).

Type 3: Undecorated pearlware

This group of ceramics has been assigned such a broad date range (1780-1830) (South 1977:212; Noël Hume 1982:128-129) because it includes not only those vessels which are undecorated but also any sherds that are too small to have any decoration. This also accounts for the large quantity of sherds present.

Type 4: Annular pearlware (Plate 16)

Annular pearlwares represent the largest quantity of vessels in the assemblage, likely due their market price. Like annular creamware, the later annular pearlwares were among the cheapest wares on the market in the early nineteenth century. They were produced from 1790 to 1820 and were available in a wide variety of colors and motifs (South 1977:212; Miller 2000b:12; Noël Hume 1982:131). The McLeod collection includes the common blue annular pearlware as well as varieties and combinations of green, brown, blue, and orange linear annular wares and the popular marbled wares.

Type 5: Sponged ware (Plate 17)

Sponged ware is typically quite common on nineteenth century sites of Scottish heritage as the majority of the early sponged wares were produced in Scotland. However, there are surprisingly few sponged vessels in the McLeod collection – two blue sponged

pearlware bowls found in feature 1 and a red and green sponged dish recovered from feature 2. The production dates for sponged pearlware are difficult to pinpoint from the literature. The earliest sponged decoration was on late pearlware but it continued to be applied to whiteware. They were produced primarily for the North American market and were produced between 1820 and1860 (Lockett).

Type 6: Blue painted pearlware (Plates 18 - 20)

Type 6 ceramics are sparsely represented in the McLeod collection. Only two vessels are present and divided equally between features 1 and 2. Blue painted pearlwares were very common in the late eighteenth century and evolved in polychrome wares in the early nineteenth century (Miller 2000a:92-93; Miller 2000b:1213; South 1977:212).

Types 7 and 8: Polychrome wares (Plate 21)

Types 7 and 8 include polychrome pearlwares and whitewares, respectively. While the pearlware and whiteware versions were similarly produced and applied to the same vessels, the colors applied to both varied. The earlier painted pearlwares were decorated with pastel colors such as brown, dark blue, green, yellow, and orange. The later whitewares were typically decorated with chrome colors in lighter shades of blue and green, black, and red. Polychrome pearlwares were produced between 1795 and 1830 while polychrome whitewares were at their height of production between 1830 and 1840 (Miller 2000b:12-13; Miller 2000a:92-93; South 1977:212).

Type 9: Blue shell-edged wares (Plates 22 and 23)

Blue shell-edged wares enjoyed a long period of production beginning in the eighteenth century when the decoration was first applied to creamware. It was applied to pearlwares in 1780 and continued to be produced well into the mid to late nineteenth century. Because shell-edged wares were manufactured for such a long period, their styles changed several times over the century and different colors were applied including blue, green, and red. For this reason, shell-edged wares have been subdivided into four groups which all enjoyed separate periods of popularity:

(a) even scalloped edge with impressed curved lines below the rim, blue decoration (1780-1815)
(b) even scalloped edge with impressed curved lines below the rim and an impressed bud motif, blue decoration (1800-1835)
(c) even scalloped edge with impressed straight lines below the rim, blue or red decoration (1809-1831)
(d) unscalloped edge with repetitive patterns below the rim, blue or green decoration (1840-1860) (Miller 2000b:3).

Types 10 and 11: Transfer printed wares (Plates 24 - 29)

Ceramic types 10 and 11 include transfer-printed pearlwares and whitewares. Like the polychrome pearlwares and whitewares, the major differences in transfer printed wares through time were the colors that were used and the motifs that were applied. Blue was the first color introduced on printed wares and continued to be the most common color throughout the period of printing technology but other colors were introduced throughout time. The McLeod collection includes blue, brown, black, and red printed pearlwares as well as blue, black, and green printed whitewares. The former were produced from 1780 until 1830 and the latter from 1820 up to the present (Miller

2000b:13-14; Miller 2000a:94; Samford 2000:56-85; South 1977:212). One plate sherd of black transfer-printed pearlware exhibits a mend hole just below the rim.

Type 12: Flowing color ironstone (Plate 30)

Flow wares are basically transfer printed wares in which the color has been allowed to bleed onto the surface of the vessel so that the edges of the pattern appear blurred. Flow wares were produced from 1844 to 1870 and were produced in a variety of print colors (Collard 1984:17). The McLeod collection includes one flow black plate and at least three flow blue vessels.

Type 13: Moulded relief ironstone (Plate 31)

Type 13 ceramics date from the last half of the nineteenth century and are represented in the McLeod assemblage by three vessels (Saint Mary's University Archaeology Lab Online Ceramics Database). Moulded ironstones tend to be quite common on nineteenth century sites in Nova Scotia. "Wheat pattern" ironstones are typically the most popular ironstones on nineteenth-century sites in Nova Scotia although, surprisingly, there are no wheat pattern ironstones in the McLeod collection.

Type 14: Vitrified earthenware

Only two vitrified earthenwares exist in the assemblage including a jug (represented by a handle) and a tea cup. Vitrified wares are difficult to date because the boundary between ironstones and vitrified wares is somewhat subjective and because

various names have been applied to this ware, many of which are inaccurate. Miller has dated these wares between 1842 and 1930 (Miller 2000b:13).

Type 15: Yellow ware (Plate 32)

Yellow wares are among the most difficult ceramics to date. These wares were in production from 1795 until 1890 and saw little change through time. The majority of yellow wares are undecorated and are often utilitarian vessels or bowls and mugs. Until 1840, a decorated yellow ware known as mocha ware was manufactured. However, some material culture researchers refer to all yellow ware as mocha ware which further complicates the issue of dating (Noël Hume 1982:131).[4] The McLeod collection includes several sherds of mocha and undecorated yellow ware.

Type 16: Redware (Plate 33)

The redwares in the McLeod ceramic assemblage are all American redwares and represent two unidentified vessels. American redwares were produced from the early 1600s and continued in production into the twentieth century (Davis, et. al. 1987:23).

Type 17: Stoneware (Plate 34)

The last ceramic type, stoneware, includes three unidentified storage vessels dating between 1820 and 1900 (South 1977:210).

[4] South 1977:211 refers to all yellow ware as mocha ware.

The primary goals of ceramic analysis were to determine ceramic date ranges for each feature in order to determine occupation and utilization periods, and to determine economic values for the ceramic assemblage. South's method for determining ceramic date ranges was applied to Feature 1 (McLeod house) and Feature 2 (the outbuilding) (Figures 5.1 and 5.2). In order to validate the results of the ceramic date range analysis, South's formula for calculating the mean ceramic date was also applied to the ceramic assemblages of both features (Appendix D) (South 1977:217-218). The assemblage in Feature 3 was so small that the accuracy of results would be questionable.

South's method of visual bracketing in Figures 5.1 and 5.2 shows that Features 1 and 2 are contemporaneous and were most likely occupied sometime between 1800 and 1860. Several hypotheses were considered to account for the early beginning date of occupation:

(a) the low frequency of late wares in the assemblage

(b) curation of earlier wares such as creamware and blue painted pearlware

(c) second-hand purchasing of such early wares

(d) market availability of contemporary wares.

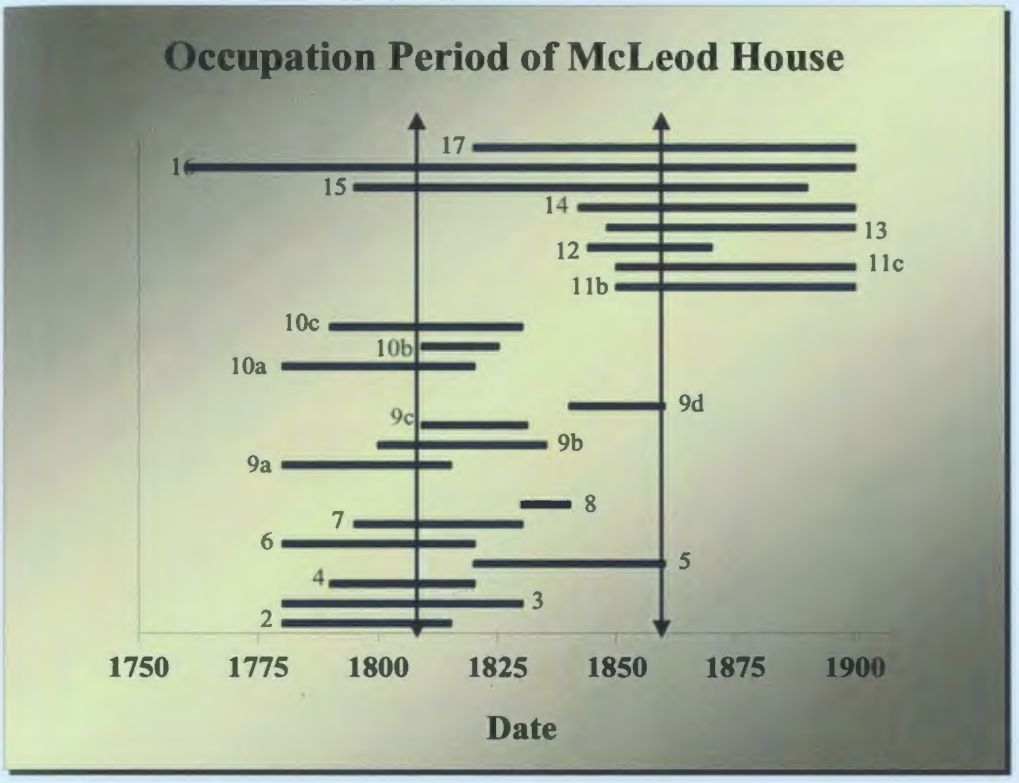

Figure 5.1: Ceramic Date Range for Feature 1 (after South 1977:214-217).

* Numbers refer to ceramic types, see legend below.

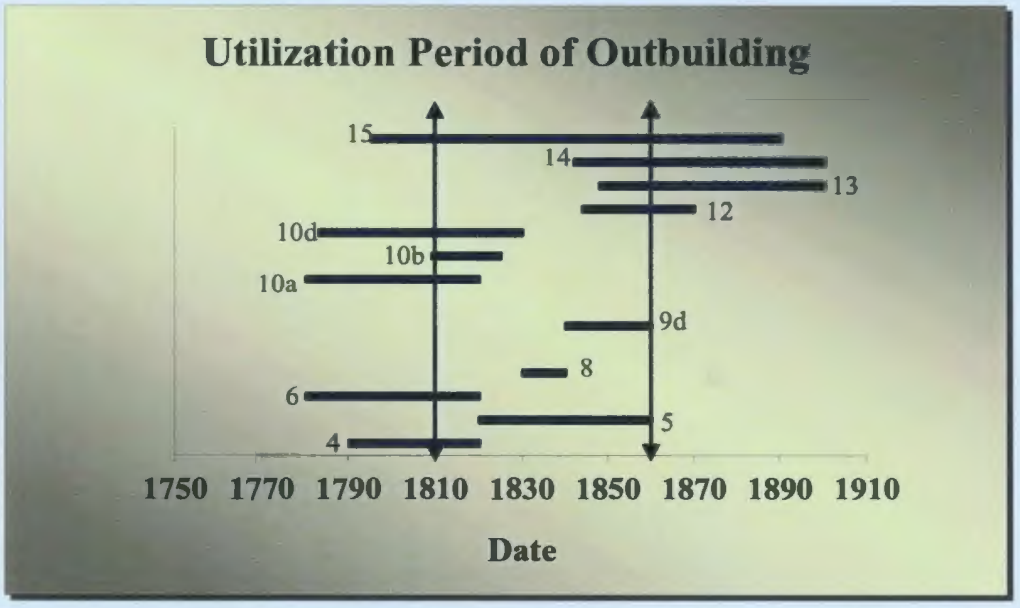

Figure 5.2: Ceramic Date Range for Feature 2 (after South 1977:214-217).

Legend:

1. Undecorated creamware
2. Annular creamware
3. Undecorated pearlware
4. Annular pearlware
5. Sponged ware
6. Blue painted pearlware
7. Polychrome pearlware
8. Polychrome whiteware
9. Blue shell-edged (types a - d)
10. Transfer printed pearlware (a. blue, b. brown, c. black, d. red)
11. Transfer printed whiteware (a. blue, b. black, c. green)
12. Flowing color ironstone
13. Moulded relief ironstone
14. Vitrified earthenware
15. Yellow ware
16. Redware
17. Stoneware

Measuring market availability from domestic ceramic assemblages is difficult without historical or archaeological evidence from market contexts since consumer behaviour can be attributed to a variety of factors not excluding availability. An inventory analysis of the ceramic assemblage shows that, in terms of vessel counts, early ceramic types predating the construction of the house such as creamware, blue painted pearlware, annular pearlware, and *type a* blue shell-edge wares occur relatively as frequently as later wares (Table 5.1). However, there is no sure way to tell if these wares were curated, purchased second-hand, or bought new. We can only rely on the historical record (and on structural remains, addressed later) to show that the house was not in existence any earlier than 1822. The presence of two early mended vessels (an annular creamware bowl, and a brown transfer-printed muffin or twiffler) suggests that curation most likely accounts for the early beginning date of occupation.

Another difficulty with applying South's ceramic date method is in determining *the end of occupation* date. It is difficult to assign a bracket to the latest occupation date of the house since the latest ware types present may have been deposited some time before the house was abandoned and many of the ceramic types continued to be produced for some time after the house was abandoned. At best, South's method should be combined with the information from the historical record and from additional archaeological evidence to provide a date range for the occupation of the house. The use of sherd counts rather than vessel counts also implies that South's mean ceramic date formula applied to the house assemblage provides a misleading date as well because it is applied.[5] The 659 sherds that were used to compute the mean ceramic date (1792) were predominantly manufactured before or during the early 1820s. Although the ceramic date range and mean ceramic date are not very useful for indicating the occupation period of the McLeod house, they may be useful in discussing the economic status of its occupants.

The consumer behaviour of the occupants of the McLeod house was a major facet of the research proposal. Initially, the research aim was to apply Miller's CC Index scaling method to the ceramics collected from the site (Miller 2000a). Unfortunately, because of the fragmentary nature of the ceramics in the assemblage, in many cases it was difficult to determine vessel type. Since Miller's index values are assigned by vessel type, another avenue for analyzing ceramic *sherds* was needed. Although somewhat

[5] The ceramics from feature 1 are highly fragmented and their proportions overrepresent the number of vessels present. When applied to vessel counts, South's formula produces a mean ceramic date of 1823.

general in its application and slightly skewed in its accuracy, Lauren Cook's adaptation of Miller's index for ceramic sherds was applied to the McLeod collection (Cook 1982:139-146). Cook adapted Miller's method for determining relative economic values for nineteenth century ceramics to his own research on highly fragmented ceramics at the Jere Tabor House Site in Tiverton, Rhode Island. Cook simply averaged the index values for each ceramic type, regardless of vessel form. Furthermore, he did this for each decade during the nineteenth century by averaging the values for each ten year increment as provided in Miller's tables. To test the validity of this method, Cook applied it to the Tiverton site as well as to sites for which the CC index value had already been calculated using Miller's method (Spencer-Wood 1984:87-110).[6] By comparing his results to those previously calculated, he found that the mean index values were relatively consistent across methods, with less than half an index point of difference between his averaged results and the previously calculated results. Where vessel form was distinguishable in the McLeod assemblage, Miller's index values were used. In some cases, where it was difficult to narrow down the production date to a single year, the average values for the production span were used. However, where sherds were too fragmentary to determine vessel form, Cook's values were used. Finally, in order to validate the relevance of these results, the index values for the McLeod site were compared to those for sites in Quebec and the northeastern United States (Figure 5.3). The sixteen sites used for comparison were all located in areas where there was ready access to markets so the difference in

[6] Cook applied his adapted method to the Cannon's Point Overseer's house, Planter's house and Slave Cabin in Georgia.

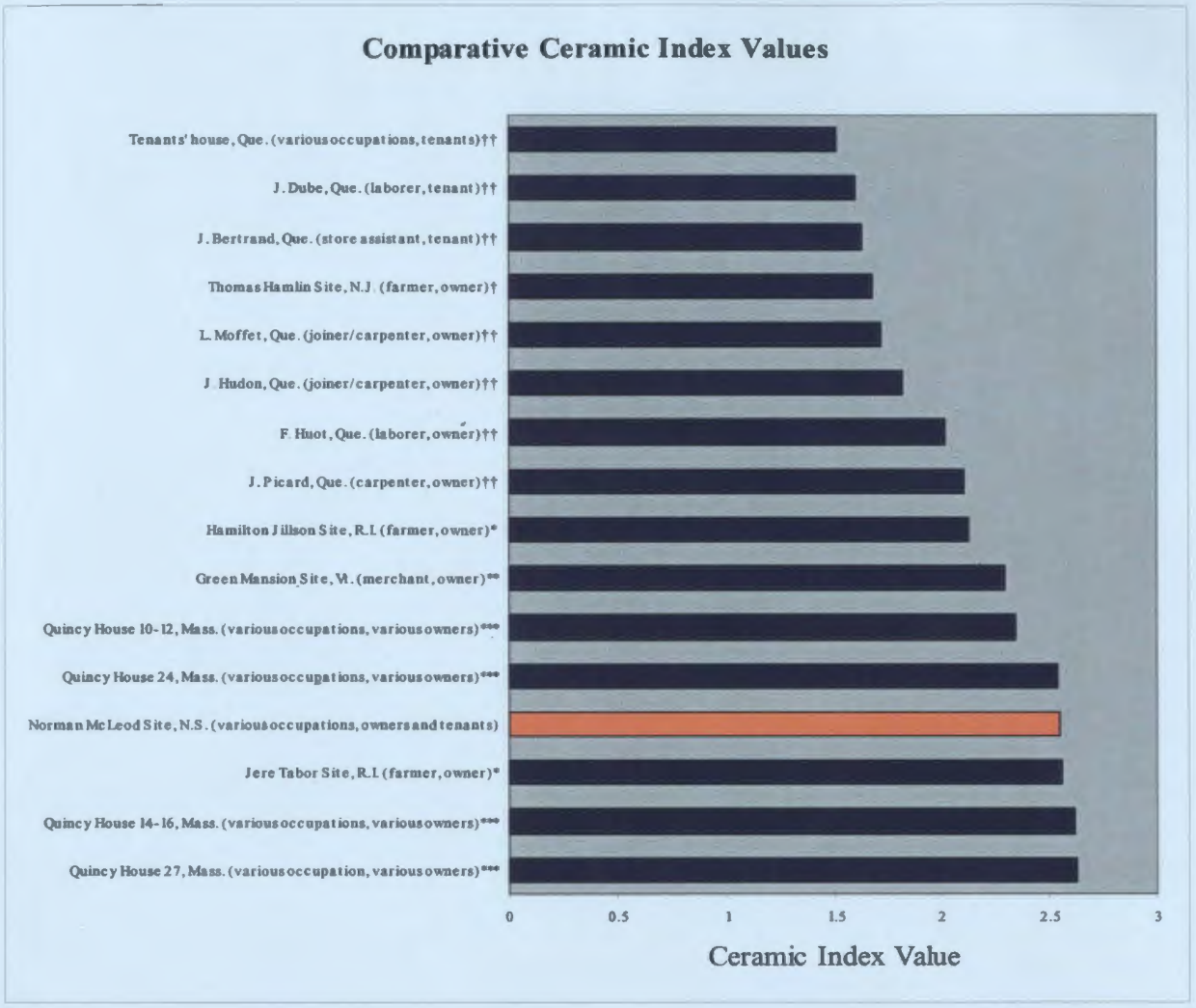

Figure 5.3: Comparative CC Index Values from Sites in Canada and the Northeastern United States. Sources: Hamilton Jillson Site, Jere Tabor Site (Cook 1982:144-145); Green Mansion Site (Spencer-Wood and Heberling 1987:62-72); Quincy House 10-12, Quincy House 14-16, Quincy House 24, Quincy House 27 (Spencer-Wood 1984:96); Thomas Hamlin Site (Klein 1991:82); Tenants' house, J. Dube, J. Bertrand, L. Moffet, J. Hudon, F. Huot, J. Picard (Cloutier 2001:116-126).

index values cannot be attributed primarily to this variable. A mean index value of 2.55 was calculated for the McLeod site. Compared with the other fifteen sites, the McLeod site ceramic index is right where it could be expected. Those sites with lower index values than the McLeod site were occupied by carpenters and joiners, labourers, and farmers, some of whom were tenants but many of whom were homeowners. It is not surprising that the McLeod house would rank fourth-highest among the sixteen sites. Norman was not only a large farm owner but also minister, teacher, and administrator for the settlement in St. Ann's. Although we do not know the value of his estate, we do know that he earned an annual income of at least £60 and that his property sold for approximately $3000 in 1851 when he left Cape Breton. These are high figures for rural Cape Breton in the first part of the nineteenth century when many of the surrounding farm owners could ill afford the basic necessities (Bitterman 1990:70-87).[7] In addition to the income factor, Norman and the later occupants had ready access to national markets through Munro's store.

5.2.2 Liquor Bottles

A minimum of five dark green bottles were collected from the McLeod homestead and have been classified as liquor bottles. The majority of the liquor bottle glass was found in lot 2 in the trench to the north of the house suggesting that it had originated inside the house and was discarded as refuse. Lot 2 is believed to have been

[7] 200 acres of frontland in Middle River sold for £200 in 1840 while a lot of similar size sold for £160 a year earlier. These prices are much lower than the $3,000 fetched for McLeod's 400 acres.

associated with the latest occupation of the house and its subsequent abandonment. With the exception of two decorative moulded glass body fragments, none of the 26 fragments include any distinguishable anatomical elements such as bases or finishes. All of the fragments are of mould blown vessels and at least one vessel represented by nine body fragments is a straight-sided vessel. Mould blown bottles were in production from about 1820 until 1880 when automatic and semi-automatic machines for container manufacture were patented (Jones 1986:86-90; Jones and Sullivan 1989:26-39).

5.2.3 Containers

Fragments of four moulded glass containers are present in the collection as well as one blue-green blown bottle finish. The latter is a two-part finish meaning it includes a lip as well as a string rim. It appears that the lip and string rim were added after the neck was finished. Following the terminology of the *Parks Canada Glass Glossary*, the finish has a "flat top" lip and a "V-shaped" string rim with a "cracked off" rim (Jones and Sullivan 1989:40, 80, 82). This vessel is possibly French and dates to the late eighteenth to early nineteenth century. It has not been classified here as a liquor bottle solely because of its color although it may have been shipped from St. Pierre and Miquelon as smuggled liquor.

5.2.4 Tableware (Plate 35)

Tablewares include glass tablewares as well as cutlery. The McLeod collection includes one undecorated moulded glass tumbler and various pieces of cutlery. Two

bone-handled knives, a bone-handled fork, one unidentified bone-handled cutlery item and one pewter spoon bowl were recovered. The two knife handles are narrow and wedge-shaped with a straight-across butt and iron tang which is riveted to, and sandwiched between, the two handle pieces. The handles are decorated with scored cross-hatched scales. Both specimens date between 1760 and 1800 (Dunning 2000:36-38). The fork handle is wedge-shaped with two pin rivets and a rounded butt. The rat-tail tang is made of iron. This specimen dates sometime in the late eighteenth to mid-nineteenth century (Dunning 2000:33-38). Finally, the unidentified bone cutlery handle is rectangular with a bevelled edge but is in poorer and less complete condition than the other three handles making the artifact difficult to date. Very little can be said of the pewter soup spoon other than that the bowl was oval shaped. None of the handle is present and the bowl had been flattened.

5.2.5 Kitchenware

The rims and lid of two cast iron pots are included in this category. Although the function of these pots is unknown due to their incomplete nature, the presence of a lid and feet suggests they were likely used to contain food items and could be placed over a fire.

5.3 Architectural Artifacts

5.3.1 Nails and Spikes

A total of 774 nails and nail fragments were recovered and catalogued from Features 1 through 3. The earliest hand-wrought nails and nail fragments, of which there are 263, pre-date the construction of the house and associated features by at least ten years. The remainder of the 156 cut nails date from the first decade of the nineteenth century up to the last decade of the century (Wells 2000:321-334). One wire nail dating from the very late nineteenth century into the twentieth century was found at the top of feature 3. Unfortunately 354 nails were so poorly preserved that no diagnostic features were available to determine manufacturing technique. The majority of the cut nails have machine-applied square heads although some hand-applied rose heads are also present. Fourteen iron spikes were also collected from the house and outbuilding.

5.3.2 Window Glass

An inventory of window glass was produced by weighing the glass rather than by counting fragments since weight is a more reliable indicator of proportion than quantity of fragments when considering flat window glass. Only Feature 1 was analysed, in order to determine possible window placement in the house (discussed below). Analysis was not necessary for Features 2 and 3, since privies do not typically have windows for obvious reasons of privacy and because it is not the intent of this research to explore the architecture of the other features. Appendix E shows the inventoried weight of window glass by unit.

5.3.3 Miscellaneous Architectural Artifacts

Various other architectural artifacts were collected including roofing slate, clay and plaster walling, mortar, and ochre-based paint nodules. A large amount of wood in the form of floor support beams and platforms was excavated, as already mentioned, although it was not collected.

5.4 Faunal Remains

The faunal remains from the McLeod site include 5 bird bone elements, 58 mammalian bone elements, 19 teeth, three oyster shell fragments, and 32 unidentifiable bone elements, all of which were collected from Features 1 and 2. With the exception of 29 calcined elements, the post-depositional preservation of faunal materials from both features was excellent. This leaves the apparent absence of fish skeletal remains unexplained, particularly since both Norman and Duncan McLeod were fishermen and lived in an active fishing community.[8] It is possible that fish skeletal elements were overlooked during the excavation process and a flotation method was not used to recover organic remains. Alteration to bone includes damage caused by scavengers as well as human alteration in the form of butchering and breakage from deposition and subsequent effects such as trampling.

The minimum number of individuals represented by the assemblage was six, represented by 58 identified specimens (NISP). Because of the low quantity of faunal specimens, any analysis would be unproductive. However, it is worth noting that among

the animals exploited were cow, sheep/goat, pig, deer, and turkey. Obviously, the small sample size is not representative of the full range of faunal elements that would have supported the diet of such large families as Norman or Duncan McLeod's.

Seventy-six percent of the faunal remains from Feature 2 are calcined. Combined with the burned wood and charcoal smears in the soil in this feature, this confirms that the outbuilding was most likely used as a secondary refuse pit, after abandonment.

5.5 Clothing

Three clothing artifacts were collected, including a four-holed white glass button and a copper alloy button with a plastic or, more likely, celluloid reverse as well as a piece of leather, most likely from a shoe sole. The two buttons date to the late nineteenth century. Because of the poor preservation of the leather piece, no distinguishable characteristics remain on which to base a date for the shoe.

5.6 Personal Artifacts

Personal artifacts in the collection include a fragment of a mirror as well as a token and a possible bale seal. The 1843 Nova Scotia one penny token was found near the top of the privy (Courteau 1982:20; Reinfeld and Hobson 1985:413). A round flat decorative lead object was found inside the north end of the house associated with lot 8. The object exhibits an eight-pointed compass wheel and was likely a bale seal.

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[8] The only evidence that any of the occupants fished is a single fish hook found outside the house in the north trench.

5.7 Smoking Artifacts

The artifact assemblage includes six smoking pipe stems, all likely from separate pipes as their bore hole diameters and positions within the stem vary. None of the six stems have any decoration or manufacturer's marks. Only one of the pipe stems is hand worked meaning the clay was sheared off and shaped by using some sort of blade instrument. The rest appear to have been manufactured in a two-piece mold and the mold lines then smoothed to some extent. The hand-worked pipe appears never to have been smoked as there is no burning inside the stem, and the stem is broken off just above the spur, which is flat. At least three of the remaining five stems also appear not to have been used. The other two stems are burned on the interior and exterior, suggesting they were likely burned refuse.

There are also six smoking pipe bowl fragments in the assemblage representing five separate pipes. Two of the bowls are undecorated and molded. The other three bowls are decorated with indistinguishable relief motifs. The most interesting specimen is a male effigy bowl. Unfortunately, most of the effigy face is missing but the rim of the bowl is comprised of a military hat. The gentleman sports a moustache and beard and a high military collar at the junction of the bowl and elbow. As would be expected, the specimen was manufactured in a two-piece mold. This pipe likely dates to the mid-nineteenth century and was smoked (Bradley 2000:110). Only one of the other five pipes had been smoked. All pipe elements with the exception of one bowl were found in Feature 1.

5.8 Medicinal/Hygiene Artifacts

Among the medicinal/hygiene artifacts are a blue-green moulded glass medicinal bottle base and a creamware chamber pot found in the privy. The medicinal bottle has a rounded push-up on the base with a pontil mark and was produced sometime between 1821 and 1875. The chamber pot is difficult to date since creamware was used for the production of chamber pots for some time after its demise as a popular ware for kitchen and table articles (Niven, pers. comm.). It is not surprising to find so few medicinal bottles, since medicines in the nineteenth century commonly contained alcohol which was forbidden in the McLeod residence.

5.9 Domestic Activities

A pair of wrought-iron fire tongs, two large pieces of cast iron likely from a kitchen stove, and a hot iron, were all found in Feature 1.

5.10 Miscellaneous Activities

Two iron fish hooks, a saw file, a skate blade, a piece of slate writing board and an iron axe head were recovered. Unfortunately, none of these artifacts can be dated with any certainty, since they changed very little through time.

5.11 Miscellaneous Artifacts

This group of artifacts includes items whose functions vary or are undetermined.[9] This subassemblage consists of several ceramic sherds including yellow ware, pearlware, white refined earthenware, creamware, ironstone, vitrified earthenware, and stoneware. It also includes non-diagnostic glass and iron fragments as well as other metallic fragments. Three pieces of grey flint are also included among the miscellaneous artifact group and although their function is unknown, it is possible that they were collected from the shore nearby where they may have been shipped as ballast and deposited.

[9] This group includes artifacts catalogued under the class "unspecified" as well as those classified as "miscellaneous".

CHAPTER 6

THE PHYSICAL MANIFESTATION AND SOCIAL INTERPRETATION OF THE REV. NORMAN MCLEOD HOUSE

All evidence suggests that the Norman McLeod house was built in the temple style, making it likely one of the earliest examples of this architectural form in Nova Scotia. Although brought to Nova Scotia by New England Loyalists in the 1820s, the temple style did not gain popularity in the province until the late 1840s. However, it is not surprising that McLeod would have chosen this style as it is reminiscent not only of the Greek religious temples of classical times but also of nineteenth-century Presbyterian churches in Nova Scotia. The high concentration of artifacts on the north side of the house near the west end suggests that this was a high-activity area and the post holes here suggest that there was a step attached to the house under which refuse was discarded. An equally-high concentration of artifacts near the center of the west wall indicates a second doorway that lead toward the privy. The shallow depression on the southwest end of the house may have been an addition but it appears to have been temporary as there were very few artifacts discovered here and the cultural soil deposits were uncomplicated and shallow. The entrance on the north gable of the house indicates that the house faced the church and the harbour. The distribution of artifacts inside the house were subjected to a statistical test known as correspondence analysis. Correspondence analysis can applied to frequency or presence/absence data to produce a scatterplot display of relationships between units; in this case archaeological excavation units, and types; in this instance artifact classes (Shennan 1997:308; Clouse 1999:97). The interesting and most useful

aspect of CA is that it plots both the cases and types on one graph in which physical proximity of plotted points implies close association (Greenacre 1993:1; Clouse 1999:98). Correspondence analysis can be easily performed using a statistical software package. In this case, *WinBASP 5.2* (*Bonn Archaeological Statistical Package*) was chosen (Figure 6.1). This test, however, was not indicative of the internal arrangement of space. Associations between artifact classes and excavation units appear weak at best. The problem is likely due to the fragmentary nature of the artifacts. Although object counts were used in the analysis rather than fragment or sherd counts, many of the objects could not be identified and, therefore, were attributed to a class of "unspecified" artifacts. There does appear to be some association between the food consumption/preparation artifacts and the south end of the house. Faunal elements, as well, occur most frequently in the southeast quadrant of the house.

It is reasonable to assume, given the internal arrangement of the typical temple house and the external positioning of the McLeod house as well as the results of correspondence analysis, that the kitchen was located in the south end of the house. This can be supported by the discovery of cast iron stove and pot fragments in the southeast quadrant of the house. Given the positioning of the front door on the north gable and central location of the chimney, rooms would have been accessed from a hallway running north-south along the west wall of the house. The parlour, typically located at the front of the house in most, if not all, eighteenth- and nineteenth-century houses, would have been situated east of the hallway with a view of the church and harbour to the north and the roadway to the east.

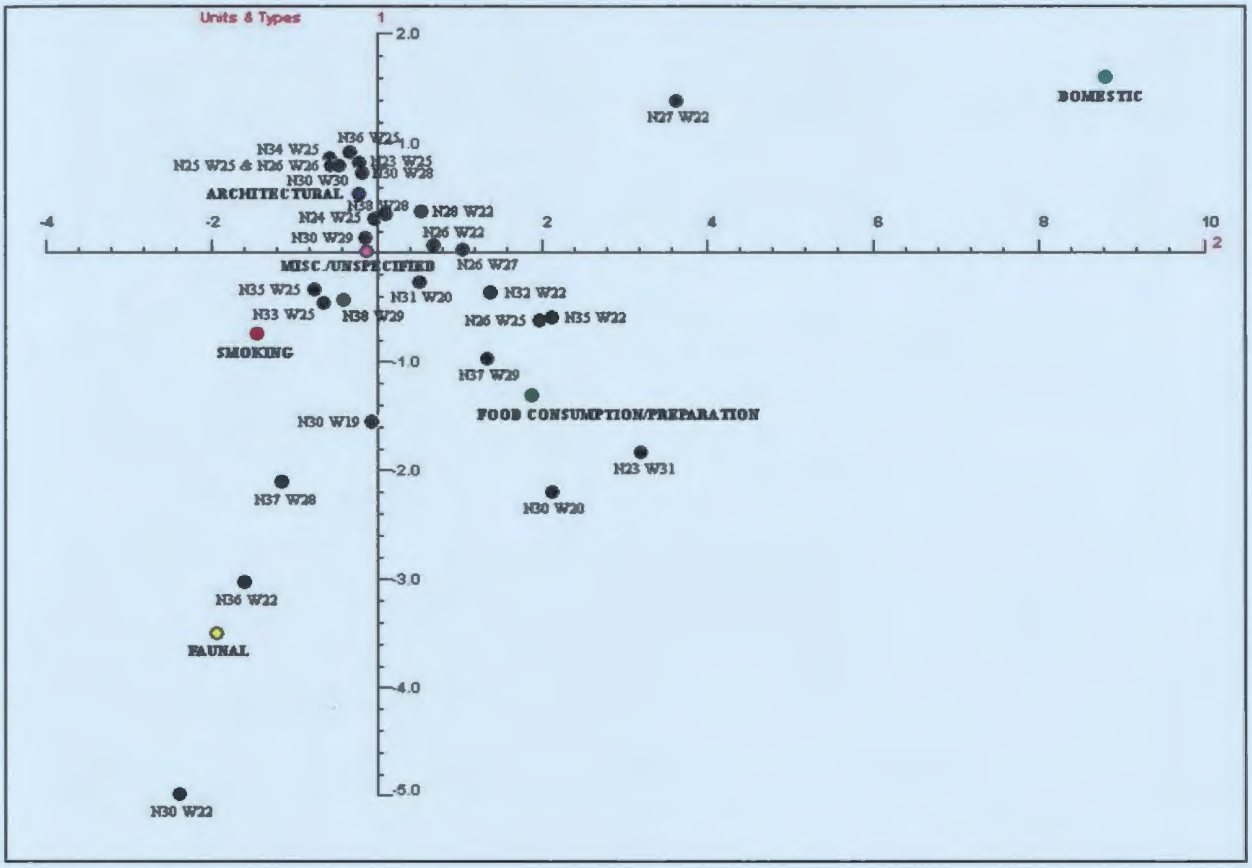

Figure 6.1: Correspondence analysis showing association of artifact classes and excavation units. A relationship between food consumption/preparation artifacts and the south end of the house is apparent as well as between faunal remains and the southeast quadrant of the house.

The explicit physical manifestation of the McLeod house is one small objective of this research, however. More central to this effort is the analysis of implicit social meaning inherent in the architectural form. This is done by treating the elements of form as a system of symbols or codes which guide social behaviour and vice versa. Architecture, like material culture, is more than a reflection of social status and economic wealth. It is a theatre for social play-out. Each person within the house, whether as an individual or as part of the larger family group, assumes a role which is reflected by the

costumes they wear, the place that they occupy on the stage, as well as by the props that surround them. Likewise, the audience has a specific role to play. They observe the actors, their attire, the physical environment, and so on, and respond appropriately to them. In that sense, architecture carries with it an implicit system of symbols which reflect, define, and change according to, the social system of which it is a part. Moreover, that system of symbols is deliberately created and conformed to, or deviated from, by the social system of which it is a part. This socially-interpretive approach to the built environment is taken by scholars of archaeology, anthropology, architecture, folk history, material culture, social and behavioural science, environmental psychology, and human ecology and is typically defined as a human-environment relationship study. That is, it addresses the mutual interaction between humans and the environment to produce a system which is both socially and functionally viable. Significant strides on this front have been made by Rapoport (1976, 1980, 1982), Lawrence and Low (1990), Hillier and Hanson (1984), Glassie (2000), and Johnson (1996). The built environment includes "any physical alteration of the natural environment through construction by humans…to shelter, define, and protect activity" (Lawrence and Low 1990:454). It follows, then, that the built environment is a system of latent, nonverbal cues used to "organize social relations" and guide social behaviour through the interpretation of the meaning of material culture (Rapoport 1982:177). These cues, when expressed, produces an expected physical manifestation which reminds those present of the acceptable use and behaviour within that physical environment. In other words:

> Its [the household's] façades, and its internal divisions, serve as shields of social conformity behind which the traditions and patterns of human interrelationships are formulated and enacted. Dwellings serve both 'to reveal and display' and 'to hide and protect'" (Allison 1999:1).

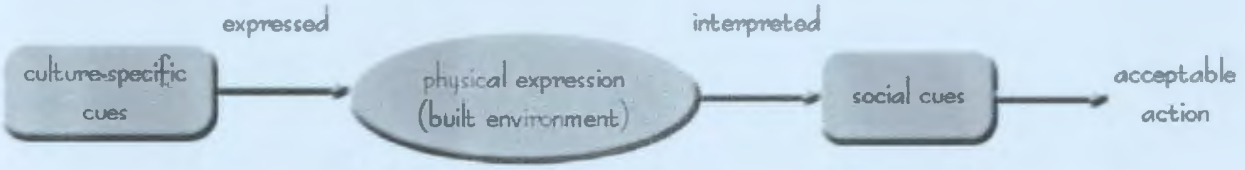

Figure 6.2: The built environment gives physical expression to culturally-accepted nonverbal cues. The built environment is then "read" and guides social behaviour (Rapoport 1980:289 and 1982:82).

The social interpretation of the built environment is a useful framework for studying the McLeod house in that it allows us to address the questions: How is it the dwelling defined within the settlement? How important is the dwelling relative to other parts of the settlement? What is the intended message being reflected by the dwelling and is the message being received? Furthermore, this theoretical framework can be applied to whole cultures as well as to individual groups within the culture and, more importantly, interplay between smaller groups - such as households - and the overall culture or community of which it is a part is a significant part of what the framework addresses. In other words, when we socially interpret the meaning of the McLeod house, we not only discover what that built environment meant to McLeod's household, but also how it was interpreted as well as what meaning was projected onto it by the members of

the surrounding community.

The most striking aspect of McLeod's house is its hilltop placement on the peninsula overlooking the church. Although there is no known doctrine in the Presbyterian church which mandated that the church be built higher than the manse and the rest of the community, it is a traditionally accepted standard that it be so.[10] What is more interesting is that McLeod's successor did not occupy the manse when McLeod left in 1851, although it was the most convenient location for a new minister as it was the closest house to the church. Perhaps the new minister viewed the placement of the manse as an ideological conflict. It is difficult to know why McLeod would have chosen such locations for the church and the manse. Perhaps the church was placed where it was because it marked the spot where the settlers first came ashore and, although not foreseeable, it would also mark the place from which they would embark thirty years later. More simply, perhaps, as it has been repeatedly suggested by many throughout the duration of this research, the placement of the manse was McLeod's perception of being above the rest of the members of the community and attaining a closeness to God. McLeod viewed himself as being of higher spiritual substance than the ministers of any church and on one occasion during a sermon proclaimed while attempting to close his frock "I am so full of the Holy Ghost that my coat will not button on me." (Patterson 1972:318).

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[10] According to Dr. Terence Murphy (pers. comm.), former head of the Religious Studies department at Saint Mary's University, and Ms. Elizabeth Chard (pers. comm.), amateur historian of the Presbyterian church. Neither Dr. Murphy nor Ms. Chard knew of any cases in which the manse was elevated above the church.

It may be more reasonable, however, to suggest that McLeod placed his house strategically so as to have a commanding view of the harbour and the community over which he presided. After all, he was the community's magistrate as well as its spiritual leader. From his hilltop estate, McLeod could look out over his school and his church and the ships coming to and going from his community via the harbour. Furthermore, it was not the church presbytery which governed the community but the minister himself who enforced moral and social conduct. McLeod segregated himself from the presbytery and was ordained by the New York Genesee Presbytery who did not, even once, send a representative to oversee McLeod's conduct. McLeod ran the church and the community according to his own principles. Hence, the manse – and not the church – could be seen as the center of community and church guidance and, hence, its placement on the hilltop overlooking the church and community. For members of the community and the congregation, however, the message was likely well-received. Typically, when a church was built overlooking the community, through its height and physical dominance (physical expression), it assumed a position of authority and moral guidance (nonverbal cue). It commanded a level of reverence and respect and imposed a quality of subordinance over the congregation (social cue and behaviour). From the viewpoint of the St. Ann's settlers, it was the manse rather than the church that assumed dominance over the community because it was McLeod, rather than the church, that they revered.

The perception of privacy is also an overstated aspect of the placement of the house. Like most Western cultures, the Scots at home and in Nova Scotia built their houses with doors facing the roadway, making the house accessible and inviting to

visitors. The front door welcomed formal visitors and opened onto a hallway or formal parlour. A second door at the rear or on one side was more often used by residents and informal guests and opened onto the kitchen where most gatherings took place. The positioning of the McLeod house, then, is somewhat of an anomaly. It would have appeared inaccessible to travelers on the roadway. No door faces the road. Instead, the front door (from the architectural point of view) opens to a view of McLeod's expansive estate. From his front porch, McLeod had a commanding view of the community over which he presided but the house was not forthcoming or hospitable to passersby. Nor did the artifacts recovered from the site indicate that hospitality was a concern for its residents. There were no fine chinas, teawares, or serving vessels – an absence that may be thought unusual for a person of such elevated social status. Perhaps it was due to the house's lack of hospitality and not its size that John Robertson, the second occupant of the house, chose to build a new home in the 1860s. After all, the McLeod house was substantially bigger than the "Big Red House".

The McLeod house was built as a centre of power and authority and was the closest proximity to God in the community. Moreover, through his humble possessions, McLeod believed his was at a moral high-ground that would not be jeopardized by over-indulgence. McLeod's final words come not as a surprise given his self-proclaimed singularity in life: "Children, children, look to yourselves; the world is mad" (McPherson 1993:178).

CHAPTER 7

CONCLUSION AND DIRECTIONS FOR FUTURE RESEARCH

Although the house and the church were once the most important buildings in the tiny community of St. Ann's, posterity has known or understood little about them. The church still remains an enigma and the schoolhouse and original log cabin remain to be found. Much has been published regarding McLeod as a public figure but his private life has remained a closed book until now.

Although the McLeod house may have occupied a special place within the community it was, nevertheless, a product of the Scottish immigrant culture as a whole. It was built by the community according to the standards of ability, knowledge, materials, style, and ideology that the settlers had available to them. Put quite simply, because the house was built by the community rather than by an individual or according to an architect's specifications, the house reflects the experiences and understandings of the common people. Moreover, the artifacts recovered from the site reflect nothing extraordinary. Although the items are of relatively equal economic value to those of the middle class farmers and merchants with which they were compared, they are still of relatively low value for a household of such unusually high status and there is evidence that some items of very low value were being mended.

What is extraordinary about the McLeod site is that we have unexpectedly encountered one of the earliest prototypes of the temple house in the Maritimes. The house form and building technique were very much adopted from a New World architectural tradition. Traditional building techniques were not completely abandoned,

though. Instead, they were incorporated into the new style so as to retain some of the customs of the homeland. Most significantly, the position of the chimney was maintained so that there remained a central gathering place where most activities were carried out (Symonds 1999:85). This was certainly not a trait exclusive to the Scottish home, although it was an attribute quite familiar to the Scots. It persisted throughout much of North America in the seventeenth through twentieth centuries (Pocius, pers. comm.). Today, in Cape Breton, although the placement of the chimney may vary, the kitchen remains the central gathering place and, for instance, kitchen parties have evolved out of the *ceilidh*. A survey of standing houses in Victoria County would be valuable in determining if this was a form commonly built among the early settlers and how closely traditional building techniques such as double-walling and central heating were conformed to and when they may have been abandoned.

As this thesis was completed, archaeologists were excavating houses in Waipu, New Zealand built by the Nova Scotia Scots upon their arrival there in the 1850s, in particular, the site of Norman McLeod's house there. Unfortunately, the results of that research are not yet published but a comparison of the results of this research and the New Zealand research would be valuable. This might reveal patterns of conformity, cultural borrowing, and invention in the architecture of the Scotian-Nova Scotian emigrants to New Zealand. In this instance, a man-environment relationship study would be quite applicable to determining how the drastic change in the physical environment affected the built environment and how emigrants adapted to change.

The McLeod house disappears from historic documents and maps by the mid-1880s. The ceramic date range for occupation of the house supports the documentary evidence. Because the entire interior and periphery of the house was not excavated, determining the fate of the house in the late nineteenth century is more difficult. The lack of structural remains in the portion of the house that was excavated suggests that the house was likely dismantled after abandonment and the materials removed. Much is left unexplored on the peninsula between North and South Guts in St. Ann's and on the lands surrounding it. The possibilities for research are varied and expressions of interest have already been raised among local groups, institutions, historians and archaeologists.

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PLATES

Plate 1: Blackhouse at Arnol No. 42, Scottish Hebrides (Fenton 1978:13).

Plate 2: Reconstructed log house at Iona Highland Village, Cape Breton.

Plate 3: Front view of the McLeod house model.

Plate 4: Plan of center of east wall (N30-31 W19-20).

Plate 5: Plan of northwest corner of house foundation.

Plate 6: Profile of north wall near west corner (N37 W28-29).

Plate 7: Profile of north wall of house foundation.

Plate 8: Ridge on southwest end of foundation, tested for evidence of addition to house.

Plate 9: Central support beam in south end of house (N24-26 W25).

A

B

Plate 10: Wood platform in southeast quadrant of cellar (a) N27-28 W22, (b) N30 W21-22.

Plate 11: Stone-lined posthole in trench to north of foundation.

Plate 12: Stone-lined posthole near northwest corner of foundation.

Plate 13: Layer of wood logs in outbuilding.

Plate 14: Boulder fill in privy (lot 1).

Plate 15: Type 2 Ceramics; annular creamware bowl (CbCd-2: 1124-1125, 1326), c. 1780-1815.

Plate 16: Type 4 Ceramics; annular pearlware sherds (clockwise from top CbCd-2: 1126, 1160, 1286, 1307, 255 and 1287).

Plate 17: Type 5 Ceramics; sponged ware (CbCd-2: 1221-1226).

Plate 18: Type 6 Ceramics; blue hand-painted pearlware sherds (CbCd-2: 328 and 1215).

Plate 19: Type 6 Ceramics; blue hand-painted pearlware bowl (CbCd-2:1123).

Plate 20: Type 6 Ceramics; blue hand-painted pearlware bowl interior (CbCd-2: 1123).

Plate 21: Types 7 & 8 Ceramics; polychrome painted (CbCd-2: 973-974).

Plate 22: Type 9a Ceramics; blue shell-edged pearlware plate (CbCd-2: 595).

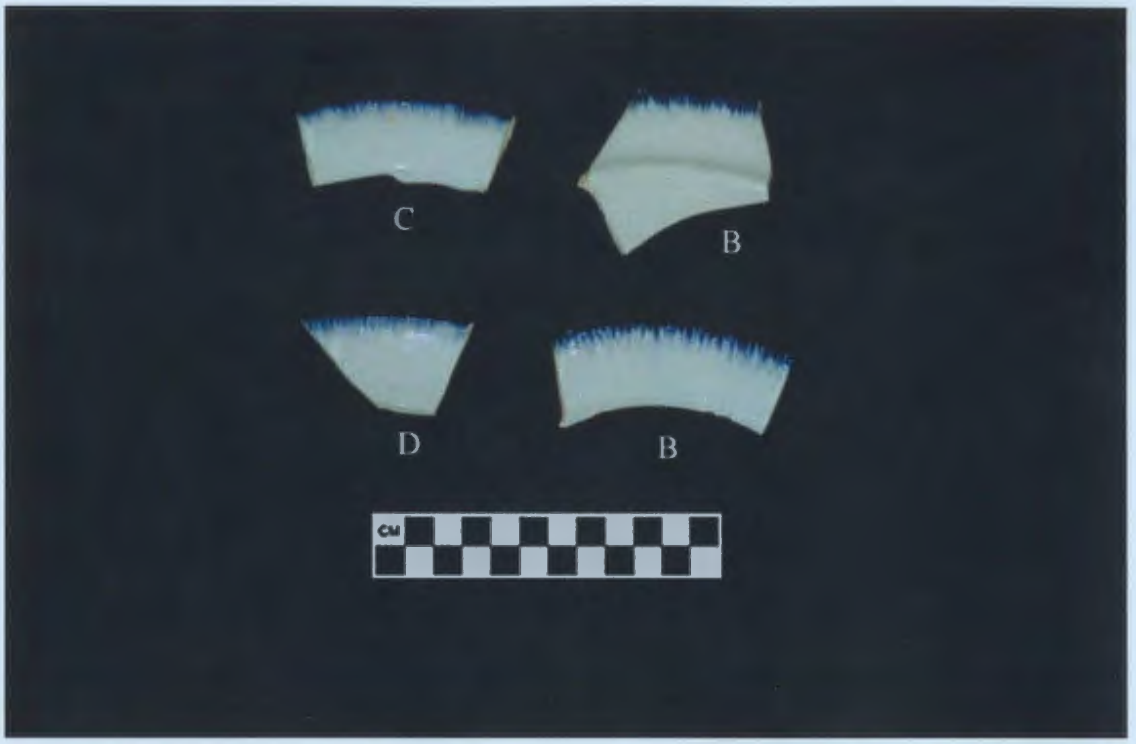

Plate 23: Type 9 Ceramics; blue shell-edged rims (clockwise from top CbCd-2: 1159, 1117, 1315 and 1328).

Plate 24: Type10a Ceramics; blue transfer-printed pearlware creamer (CbCd-2: 485).

Plate 25: Type 10a Ceramics; blue transfer-printed pearlware bowl (CbCd-2: 645).

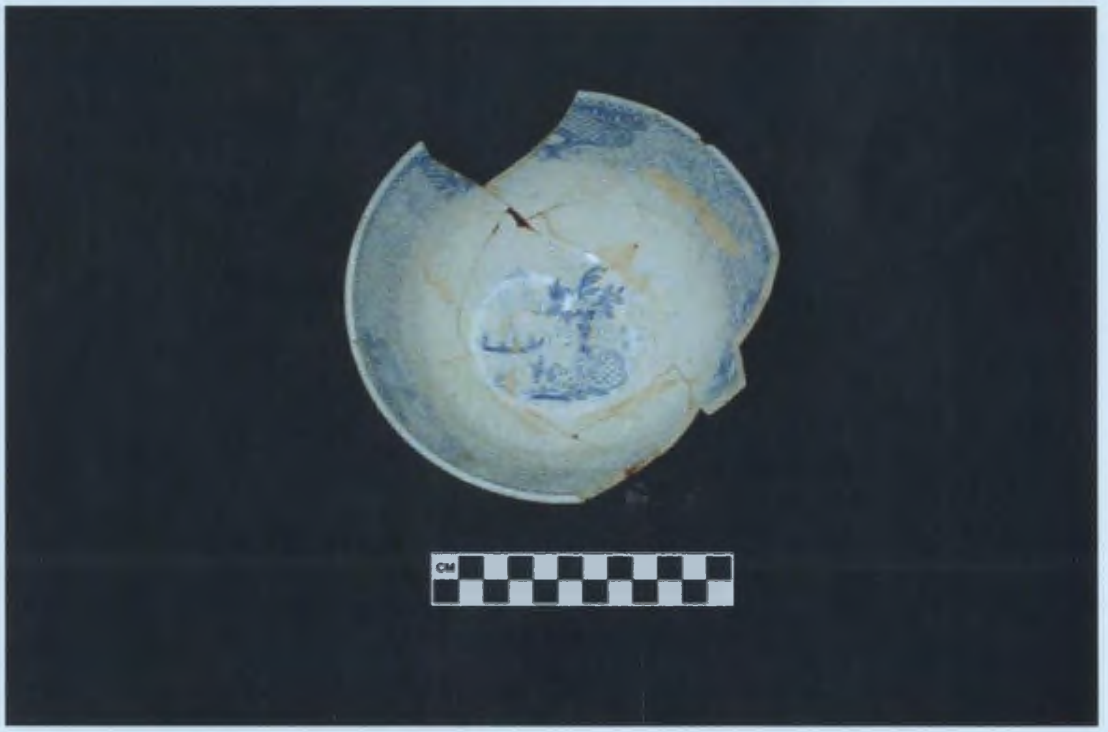

Plate 26: Type 10a Ceramics; CbCd-2: 645, interior of bowl.

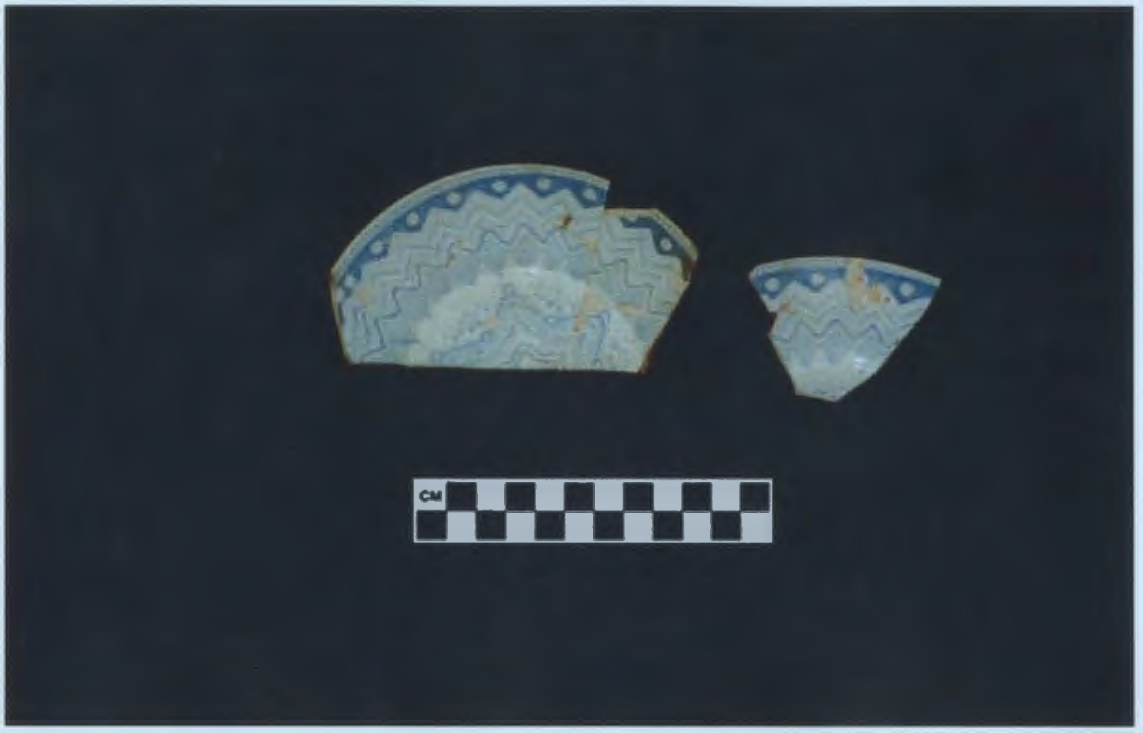

Plate 27: Type 10a Ceramics; blue transfer-printed pearlware dish (CbCd-2: 1170).

Plate 28: Type 10b Ceramics; brown transfer-printed pearlware cup (CbCd-2: 666).

Plate 29: Type 10b Ceramics, brown transfer-printed pearlware plate rim (CbCd-2: 22-23).

Plate 30: Type 12 Ceramics; flowing color (black) ironstone plate rim sherd (CbCd-2: 171).

Plate 31: Type 13 Ceramics; moulded relief ironstone side plate (CbCd-2: 99).

Plate 32: Type 15 Ceramics, yellow ware sherds (clockwise from top CbCd-2: 61, 29-30, 1066, and 245 and 264).

Plate 33: Type 16 Ceramics; glazed redware body sherd (CbCd-2: 51).

Plate 34: Type 17 Ceramics; glazed stoneware storage vessels sherds (various catalogue numbers).

Plate 35: Bone knife handles. Top: CbCd-2: 490. Bottom: CbCd-2: 491.

APPENDICES

APPENDIX A:
Sample Lot Summary Form

Lot Summary Record

Borden No.:

Date:	**Feature:**
Unit(s):	**Lot:**
Physically Under: ☐☐☐☐☐ **Physically Above:** ☐☐☐☐☐ **Correlated With:** ☐☐☐☐☐ **Stratigraphic Sequence:**	
Depth Below Datum (top): **(bottom):**	
Excavator(s):	
Soil Type/Deposit:	
Soil Color:	
Soil Composition/Inclusions:	
Artifacts:	
Relation to Feature:	

APPENDIX B:
Ceramic Date Ranges

Ceramic Type	Beginning of production	End of production
1. Undecorated creamware	1762	1820
2. Annular creamware	1780	1815
3. Undecorated pearlware	1780	1830
4. Annular pearlware	1790	1820
5. Sponged ware	1820	1860
6. Blue painted pearlware	1780	1820
7. Polychrome pearlware	1795	1830
8. Polychrome whiteware	1830	1840
9. Blue shell-edged:		
type a	1780	1815
type b	1800	1835
type c	1809	1831
type d	1840	1860
10. Transfer printed pearlware:		
a. blue	1780	1820
b. brown	1809	1825
c. black	1790	1830
d. red	1783	1830
11. Transfer printed whiteware:		
a. blue	1820	1900+
b. black	1850	1900+
c. green	1850	1900+
12. Flowing color ironstone	1844	1870
13. Moulded relief ironstone	1848	1900
14. Vitrified earthenware	1842	1900+
15. Yellow ware	1795	1890
16. Redware	1760	1900+
17. Stoneware	1820	1900+

Sources: Collard 1984:17; Davis, et. al. 1987:23; Lockett; Miller 2000a:92-94; Miller 2000b:12-14; Noel Hume 1982:125-131; Saint Mary's University Archaeology Lab Online Ceramics Database; Samford 2000:56-85; South 1977:210-212.

APPENDIX C:
Averaged CC Index Values for Nineteenth Century Sites*

WARE TYPE	AVERAGE CC INDEX VALUES BY DECADE										
	1780	*1790*	*1800*	*1810*	*1820*	*1830*	*1840*	*1850*	*1860*	*1870*	*1880*
Shell-edged	1.88	1.42	1.44	1.39	1.40	1.40	1.31	1.17	1.13	1.12	0.91
Underglaze lined				1.74	1.72	1.83					
Band-and-line										1.28	1.19
Enamelled-upon-glaze lined				2.30							
Painted	2.36	2.92	2.01	1.96	1.88	1.86	1.48	1.80	1.73	1.68	
Enamelled			3.32	4.40	3.57	2.66				3.50	
Sponged							1.84	1.35		1.40	
ABC and motto (t.p.)										7.53	
ABC and motto (painted)							1.73		1.23	1.74	
Willow (t.p.) flatware		4.50		3.30	3.40	2.61		1.51		1.33	
Transfer-printed		5.06	4.00	3.51	3.58	3.13	2.90	1.94		2.00	
Dark blue t.p.						3.00	2.91				
Flowing colors							3.45	2.82		2.25	
Decorated stone china						3.42					
Ironstone							2.44	2.63	2.10	2.13	1.85
Gold-banded earthenware										3.22	
English porcelain					14.50	5.30				3.88	

Source: Cook 1982.

Mean CC Index Value of Ceramics from McLeod Site

Ceramic Type	Sherd Count (unidentified vessel)*	Vessel Count**	CC Index Value	Product
Shell-edged	4		1.40	5.60
twifflers		3	1.32	3.96
		2	1.31	2.62
plates		1	1.33	1.33
		1	1.17	1.17
		2	1.35	2.70
		1	1.09	1.09
Underglaze lined	2		1.72	3.44
	1		1.83	1.83
Painted	9		1.88	16.92
	26		1.86	48.36
bowls		2	1.67	3.34
		1	1.60	1.60
Sponged	7		1.53	10.71
bowls		2	1.11	2.22
Willow (t.p.) flatware	1		3.40	3.40
	5		1.94	9.70
Transfer-printed	70		2.71	189.70
	36		4.04	145.44
	17		3.54	60.18
	2		1.97	3.94
	1		3.36	3.36
twifflers		1	3.31	3.31
plates		1	3.13	3.13
cups		2	2.63	5.26
		1	3.09	3.09
bowls		3	2.80	8.40
Dark blue transfer printed	1		3.00	3.00
Flowing colors	38		2.84	107.92
plates		1	2.52	2.52
Decorated stone china	6		3.42	20.52
Ironstone	21		2.23	46.83
muffins		1	2.05	2.05
Annular	18		1.20	21.60
bowls		8	1.20	9.60
Total	**298**			**760**

Mean CC Index Value = Product ÷ Count = 2.55

Sources: Miller 2000; Cook 1982.

APPENDIX D:
Feature 1 Mean Ceramic Date (after South 1977:217-218)

Ceramic Type	Sherd Count	Median Date	Product (median date x sherd count)
1. Undecorated creamware	9	1791	16,119
2. Annular creamware	9	1798	16,182
3. Undecorated pearlware	104	1805	187,720
4. Annular pearlware	41	1805	74,005
5. Sponged ware	13	1840	23,920
6. Blue painted pearlware	4	1800	7,200
7. Polychrome pearlware	4	1813	7,252
8. Polychrome whiteware	8	1835	14,680
9. Blue shell-edged:			
type a	31	1798	55,738
type b	8	1818	14,544
type c	4	1830	7,320
type d	3	1850	5,550
10. Transfer printed pearlware:			
a. blue	293	1800	527,400
b. brown	29	1817	52,693
c. black	1	1810	1,810
11. Transfer printed whiteware:			
a. blue	6	1860	11,160
b. black	3	1875	5,625
c. green	2	1875	3,750
12. Flowing color ironstone	35	1857	64,995
13. Moulded relief ironstone	6	1874	11,244
14. Vitrified earthenware	6	1871	11,226
15. Yellow ware	19	1843	35,017
16. Redware	5	1830	9,150
17. Stoneware	16	1860	29,760
	659		1,194,060

MCD = Product ÷ Sherd Count = 1792

Feature 2 Mean Ceramic Date (after South 1977:217-218)

Ceramic Type	Sherd Count	Median Date	Product (median date x sherd count)
3. Undecorated pearlware	26	1805	46,930
4. Annular pearlware	1	1805	1,805
5. Sponged ware	9	1840	16,560
6. Blue painted pearlware	5	1800	9,000
7. Polychrome pearlware	4	1813	7,252
9. Blue shell-edged:			
type d	1	1850	1,850
10. Transfer printed pearlware:			
a. blue	10	1800	18,000
d. red	1	1807	1,807
12. Flowing color ironstone	7	1857	12,999
13. Moulded relief ironstone	4	1874	7,496
14. Vitrified earthenware	3	1871	5,613
15. Yellow ware	31	1843	57,133
	102		186,445

MCD = Product ÷ Sherd Count = 1828

APPENDIX E:
Window Glass Weight by Excavated Unit

Unit	Total weight of window glass (g)
N24 W25	5.3
N24 W49	0.8
N25 W22	2.2
N25 W25	13.8
N26 W22	3.9
N26 W26	2.2
N26 W27	7.2
N27 W22	2.7
N30 W19	0.6
N30 W20	0.6
N30 W21	0.8
N30 W27	0.7
N30 W28	6.4
N30 W29	52.1
N30 W30	1.2
N31 W22	4.5
N31 W29	16.7
N32 W20	1.0
N33 W25	2.6
N35 W22	2.2
N35 W25	0.2
N36 W22	1.5
N36 W25	0.6
N37 W28	0.8
N37 W29	2.6
N38 W28	8.3
N38 W29	9.8
N39 W23	20.4
N39 W24	5.9
N39 W25	7.5
N39 W26	0.7
N40 W17	1.2
N40 W18	0.2
N40 W19	1.0
N40 W21	0.6
N40 W23	0.5
N40 W24	2.0
N40 W25	8.4
N40 W26	0.3
N40 W29	3.0
N40 W30	0.4