Lower Churchill Hydroelectric Development Project 2016
Historic Resources Assessment and Recovery Program

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Executive Summary

Fieldwork for the 2016 Historic Resources Management Program commenced in June 2016 and was completed at the end of September 2016. The 2016 program involved excavation and recovery at two archaeological sites in the Sandy Banks area along the Churchill River, midway between Muskrat Falls and Gull Lake.

Stage 3 (SDR) recovery operations are complete at the large multi-component, multi-locus site designated FgCg-01. Recovery work at this site included limited collection activities from Locus B and Locus C but primarily focused on the excavation of Locus D, the site of the historically-documented 19th century Hudson’s Bay Company (HBC) outpost at Sandy Banks. Excavation uncovered the remains of four principal 19th century buildings. These log-built structures, embanked with earthen berms, were arrayed in a line along the banks of the Churchill River. Each of the two central structures contained evidence for deeply-excavated storage cellars. Construction attributes and artifact distributions indicate that these two central structures were the remains of two outpost dwelling houses, while the two flanking buildings served as stores. Archival evidence suggests that only two of these buildings would have been in use at any one time: one dwelling house, and one store. Additional archaeological features identified at the site included a privy, a deep storage pit, other mound and pit features, sheet middens, and several footpaths. One dwelling house and the privy appear to have been dismantled in the historic period, but the remaining three buildings appear to have burned to the ground. A small, localized precontact occupation area was also identified in the southwestern corner of the site. A large collection of historic artifacts was recovered during excavation. The collection is broadly comparable to assemblages recovered from excavation of contemporary HBC posts elsewhere in Canada, and includes many artifacts manufactured by companies known to have been suppliers of goods to the HBC.

Stage 3 (SDR) recovery operations are complete at the smaller site designated FgCg-04. FgCg-04 was situated 700 m downstream from FgCg-01. Excavations uncovered the remains of a 4 m x 4 m post-on-sill structure built of minimally-dressed horizontal logs embanked with low exterior earth berms, similar in construction to the structures excavated at FgCg-01. The artifact assemblage is also broadly comparable to that from FgCg-01 and indicates a 19th century occupation. However, there are some differences in the artifact assemblages, most notably greater evidence for later firearms technology, indicating that FgCg-04 post-dates the HBC post. FgCg-04 is interpreted as the remains of an early Settler trapping cabin, most likely constructed by Joseph Michelin in the 1890s. This site therefore appears to attest to the evolution of Settler trapping in central Labrador, as former HBC employees and their families came to operate as independent trappers.

Further work scheduled for 2017 includes the completion of recovery work at eight sites situated on Gull Lake, the last of the sites scheduled for recovery within the Muskrat Falls reservoir area.
Abbreviations

AFR Alternative Field Recording
AMS Accelerator Mass Spectrometry
asl Above sea level
BP Before present
c. Circa
cm Centimetre
CPT Cone Penetration Test
GIS Geographic Information System or Geospatial Information System
GPS Global Positioning System
HBC Hudson’s Bay Company
HVac High Voltage Alternating Current
HVdc High Voltage Direct Current
Km Kilometre
kV Kilovolt
m Metre
m² Square metre
PAO Provincial Archaeology Office of the Government of Newfoundland and Labrador
ROW Right of Way
SDR Systematic Data Recovery
SFR/SS Systematic Field Recording and Subsurface Sampling
TL Transmission Line
### Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td><strong>A or Ae Horizon</strong></td>
<td>Soil horizons are specific layers in the soil. The A Horizon is the topmost level of sediment beneath the organic (e.g., moss, leaf litter) layer. There are many variations but in northern forest soils a common type is “Ae,” a leached grey horizon. The B Horizon lies beneath the A Horizon.</td>
</tr>
<tr>
<td><strong>Aboriginal</strong></td>
<td>A broad term referring to those peoples who have inhabited North America since before European contact.</td>
</tr>
<tr>
<td><strong>Accelerator Mass Spectrometry (AMS)</strong></td>
<td>A form of radiocarbon dating that gives more precise results than conventional radiocarbon dating and can be employed using smaller samples of carbon.</td>
</tr>
<tr>
<td><strong>Adze</strong></td>
<td>A bladed woodworking tool like an axe, but with the blade edge mounted perpendicular to the handle.</td>
</tr>
<tr>
<td><strong>Alternative Field Recording (AFR)</strong></td>
<td>Detailed photographic, videographic and illustrative recording of a site, possibly also including the collection and conservation of visible artifacts. AFR is normally implemented at sites, such as historic tilts, where features and artifacts are located on the surface and excavation is not required.</td>
</tr>
<tr>
<td><strong>Amerindian</strong></td>
<td>A broad term sometimes used to refer to the aboriginal inhabitants of North America, excepting the Arctic-adapted Inuit and Palaeo-Eskimo peoples. In Newfoundland and Labrador, it may refer to the Maritime Archaic, Intermediate and Late Precontact occupations, as well as to the historic Beothuk and the historic and contemporary Innu and Mi’kmaq people.</td>
</tr>
<tr>
<td><strong>Archaeological Site</strong></td>
<td>A location which contains the material remains of human land use in the past. Technically, only those sites which date to the historic or precontact periods and which are assigned Borden numbers are true archaeological sites. Sites with more recent remains are considered ethnographic sites and are assigned Ethno numbers by the PAO.</td>
</tr>
<tr>
<td><strong>Archaic</strong></td>
<td>In Labrador, the initial period of Amerindian occupation, dating from approximately 8,000 to 3,700 BP. In Newfoundland and Labrador, generally synonymous with Maritime Archaic.</td>
</tr>
<tr>
<td><strong>Arris</strong> (pl. arrises)**</td>
<td>In precontact lithic technology, the ridge or ridges running parallel to the edges of a blade or linear flake. These ridges mark the edges of blades or linear flakes previously removed from the core.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
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</tr>
<tr>
<td>Artifact</td>
<td>A discrete object deliberately manufactured or modified by human activity.</td>
</tr>
<tr>
<td>Auger</td>
<td>A tool with a screw-like thread used for drilling.</td>
</tr>
<tr>
<td>Awl</td>
<td>A pointed instrument used to pierce cloth or leather.</td>
</tr>
<tr>
<td>Baulk</td>
<td>A strip or wall of earth left temporarily unexcavated between excavation units to study the stratigraphy across a site.</td>
</tr>
<tr>
<td>Bedrock</td>
<td>A general term for the rock, usually solid, that underlies soil or other unconsolidated superficial material.</td>
</tr>
<tr>
<td>Before Present (BP)</td>
<td>In radiocarbon dating, “Present” is arbitrarily fixed at the year 1950 AD.</td>
</tr>
<tr>
<td>Berm</td>
<td>A low raised earth ridge. In this study, the term refers to the ridge which flanks the foundation of a building.</td>
</tr>
<tr>
<td>B Horizon</td>
<td>A soil horizon is a specific layer in the soil. The B Horizon lies beneath the A Horizon and is commonly referred to as ‘subsoil’. It may be characterized by concentrations of minerals. In northern forest soils, the B Horizon is often rich in iron and is orange, red or reddish-black in colour.</td>
</tr>
<tr>
<td>Blade</td>
<td>In precontact archaeology, a type of stone tool consisting of long, narrow, parallel-sided flake deliberately detached from a prepared stone core, generally for use as an expedient disposable cutting tool. Blades exhibit one or more arrises, resulting from the repeated removal of blades from the core. See also Linear Flake.</td>
</tr>
<tr>
<td>Blank</td>
<td>A very early stage in the manufacture of a flaked stone artifact, usually a partly-worked piece of chert or other stone, made at a quarry for later use elsewhere. A blank can resemble a thick, wide biface and may serve as the basis for manufacturing almost any type of stone tool.</td>
</tr>
<tr>
<td>Block Lift</td>
<td>An archaeological excavation method in which an entire block of sediment is removed from the site, rather than individual artifacts. Generally employed when fragile artifacts are better excavated from their sediments in laboratory conditions.</td>
</tr>
<tr>
<td>Biface</td>
<td>In precontact archaeological sites, a lithic artifact chipped on both opposite sides is referred to as a biface, or bifacially-flaked tool.</td>
</tr>
<tr>
<td>Bodkin</td>
<td>A thick needle, often with a blunt tip and a large eye.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
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</tr>
<tr>
<td>Borden Number</td>
<td>Archaeological sites in Canada are registered under a nationwide site registration system known as the Borden System, which assigns each site a unique Borden number. In Newfoundland and Labrador, the PAO assigns these numbers. Only true archaeological sites (those predating the mid-20th century) receive a Borden number. More recent ethnographic sites are assigned an Ethno number.</td>
</tr>
<tr>
<td>Brimsherd</td>
<td>Fragment of a ceramic plate that includes not only the outermost lip (the rim) but also the entire perimeter surrounding the central bowl. See also Rimsherd.</td>
</tr>
<tr>
<td>Caplock Firearm</td>
<td>A muzzle-loading firearm in which the main charge is ignited by means of a percussion cap rather than a flint and steel (i.e. a flintlock).</td>
</tr>
<tr>
<td>Charles Complex</td>
<td>A culture-historical unit representing an early-middle period in the Intermediate Period of central Labrador, ca. 3000 to 2700 BP. Characterized by triangular and linear flakes, bifaces, and formal scrapers, many fashioned of banded rhyolite.</td>
</tr>
<tr>
<td>Chert</td>
<td>A fine-grained silica-rich sedimentary rock, often selected by precontact peoples for manufacturing chipped stone tools.</td>
</tr>
<tr>
<td>Circa (ca.)</td>
<td>Approximately (literally “around”).</td>
</tr>
<tr>
<td>Cladonia</td>
<td>A white, moss-like lichen which grows abundantly on sandy soils in Labrador and serves as an important winter food source for caribou. See also Lichen Woodland.</td>
</tr>
<tr>
<td>Clinker-built</td>
<td>A boat-building method in which the bottom edges of the external planking (or strakes) overlap the top edges of the planks immediately below (similar to clapboard cladding). This method of boat-building (also referred to as lapstrake) contrasts with carvel construction, whereby all the external planks butt edge to edge.</td>
</tr>
<tr>
<td>Cone Penetration Test</td>
<td>A geotechnical investigation method in which a cone-tipped probe is inserted into sediments to determine the bearing capacity or other properties of soils.</td>
</tr>
<tr>
<td>Component</td>
<td>In an archaeological site, a component is a period of occupation. A site occupied at various times, for example, once 3,000 years ago and again less than 25 years ago, may be said to have a precontact component and a contemporary component.</td>
</tr>
</tbody>
</table>
Contemporary Site  A location which contains the material remains of human land use in the recent past (by convention, post-dating the mid-20th century). As a category of land use sites, “contemporary” may be used interchangeably with “ethnographic.” Contemporary sites may be important in interpreting the history of human land use in a region, but are not considered true archaeological sites, and are not assigned Borden numbers. Contemporary/recent sites are assigned Ethno numbers by the PAO.

Core  A piece of knappable stone used as the basis for producing flakes or blades for use as tools. Cores may be deliberately prepared to produce flakes of specific types. For example, blade cores are cores specifically prepared to produce narrow, straight-sided blades.

Cortex  The naturally-weathered outer surface of a rock, particularly a beach cobble.

Cortical Flake  A flake of stone whose dorsal surface is partly or entirely cortex. See also Primary Flake and Secondary Flake.

Corner-Notched  In precontact archaeology, a descriptive term applied to bifaces modified for hafting by chipping notches into the basal comers, forming drooping shoulders and an expanding base.

Cow Head Complex  A culture-historical unit representing the first period in the Late Precontact Period on the Island of Newfoundland, ca. 2000 to 1000 BP.

Cross Mend  Joining fragments of a single artifact recovered from different soil layers or features, or even from different sites. Crossmending indicates relationships among various sites or parts of a site.

Culture-Historical Sequence  In archaeology, the human history of a region, defined as a series of culture-historical units, each characterized by distinctive artifact styles.

Culture-Historical Unit  In archaeology, a division of the human history of a region. It consists of a period defined by diagnostic artifact and feature styles that distinguish it from earlier and later periods in a culture-historical sequence. Culture-historical units are equated with past human cultures and given distinctive names. They may be broad periods of time (e.g. Intermediate Period or Late Precontact Period) or finer chronological subdivisions (e.g. Daniel Rattle Complex, North West River Phase).
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Daniel Rattle Complex</td>
<td>A culture-historical unit representing the first period in the Late Precontact Period of coastal Labrador, ca. 2000 to 1000 BP. Characterized by moderately large projectile points and large triangular-lanceolate bifaces fashioned almost exclusively of Ramah.</td>
</tr>
<tr>
<td>Dart</td>
<td>In precontact archaeology, a dart is a projectile larger and heavier than an arrow but shorter than a spear, usually projected using a spear-thrower.</td>
</tr>
<tr>
<td>Debitage</td>
<td>In precontact sites, the lithic waste flakes and shatter left over from the manufacture of stone tools.</td>
</tr>
<tr>
<td>Diagnostic Tool Type</td>
<td>A class of artifact with stylistic features that allow it to be assigned to a culture-historical unit.</td>
</tr>
<tr>
<td>Dorsal Surface</td>
<td>For precontact lithics, the “back”, generally the most convex or most flake-scarred surface, on a flake or stone tool.</td>
</tr>
<tr>
<td>Dorset</td>
<td>The final period in the Palaeo-Eskimo occupation of the Island of Newfoundland and the Labrador coast, dating approximately 2,500 to 550 BP.</td>
</tr>
<tr>
<td>Duff</td>
<td>The layer of organic, and partly-decayed organic material, on the floor of a forest, overlying the mineral sediment.</td>
</tr>
<tr>
<td>Ethnographic site</td>
<td>A location that contains the material remains of human land use in the recent past (by convention, post-dating the mid-20th century). As a category of land use sites, “ethnographic” may be used interchangeably with “contemporary.” Ethnographic sites may be important in interpreting the history of human land use in a region, but are not considered true archaeological sites, and are not assigned Borden numbers. Ethnographic sites are assigned Ethno numbers by the PAO.</td>
</tr>
<tr>
<td>Ethno Number</td>
<td>The registration number assigned to an ethnographic site by the PAO.</td>
</tr>
<tr>
<td>Event</td>
<td>In an archaeological context, an activity, action or process, whether cultural or natural, that leaves recognizable physical evidence in the archaeological record (e.g. the deposition of horizontal soil layers). Essentially, an “Event” is a cultural and or natural depositional event detectable in a stratigraphic sequence. See also Lot.</td>
</tr>
<tr>
<td>Expedient Tool</td>
<td>In precontact archaeological sites, a retouched or utilized flake, or other stone tool that has been minimally-worked. Expedient tools were often disposable implements, intended to be used for very short periods of time and then discarded.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
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</tr>
<tr>
<td>Feature</td>
<td>In archaeology, a feature is a group of related objects, which may include artifacts, and which reflect past human activity. Features differ from artifacts in that they are an assemblage of objects. As a result, while the individual objects within a feature may be collected and physically removed, the feature itself is a set of relationships between those objects, which can only be recorded in the field. An example would be a hearth, composed of interrelated rocks, artifacts, and soils.</td>
</tr>
<tr>
<td>Flake</td>
<td>In precontact archaeological sites, a flake is a sharp-edged piece of fine-grained rock left over from making stone tools. See also Debitage.</td>
</tr>
<tr>
<td>Flakepoint</td>
<td>A projectile point made from a flake, generally shaped with minimal retouch.</td>
</tr>
<tr>
<td>Friable</td>
<td>Easily crumbled or reduced to powder.</td>
</tr>
<tr>
<td>Froth</td>
<td>Method of collecting materials such as seeds and small animal remains from a soil sample. The sample is agitated in a liquid to which a frothing agent, such as a detergent, has been added and air bubbled through it, forming a froth in which lightweight materials collect.</td>
</tr>
<tr>
<td>Grit Temper</td>
<td>Coarse sand added to the paste of precontact Aboriginal ceramics in North America to strengthen clay vessels and prevent cracking during firing.</td>
</tr>
<tr>
<td>Groswater</td>
<td>A period in the Palaeo-Eskimo occupation of the Island of Newfoundland and the Labrador coast, dating approximately 2,800 to 2,100 BP.</td>
</tr>
<tr>
<td>Gunflint</td>
<td>An artifact found on historic sites. A gunflint is a prepared square or oval of flint used to strike the spark that ignites the powder in a flintlock musket. European flint is a type of chert, but is readily distinguishable from the North American cherts employed by precontact peoples in Labrador for the manufacture of stone tools.</td>
</tr>
<tr>
<td>Hearth</td>
<td>A campfire feature. In central Labrador archaeology, these generally take the form of distinct clusters of firecracked rocks and charcoal. However, sand-mound hearths and pit hearths are also known.</td>
</tr>
<tr>
<td>Historic Site</td>
<td>In Newfoundland and Labrador, an archaeological site dating between the initial period of European contact with Aboriginal peoples (approximately 500 BP) but before the mid-20th century.</td>
</tr>
</tbody>
</table>
Historic Resources

In the context of environmental assessment, these include palaeontological, architectural and archaeological resources, but may also include ethnographic sites or other material evidence of past human land use.

Ice-Push Ridge

A ridge of sediment formed along the beach of a river, lake, or bay, when ice creeps shoreward and pushes rock and sediment into linear mounds.

Illuviation

In a soil layer, this refers to the percolation of water leaching out particles from one layer (e.g. the Ae Horizon) and redepositing them in an underlying soil layer (e.g. the B Horizon).

In situ

Literally “in place”. In situ archaeological remains are those which are undisturbed and still found in the same place as when they were originally deposited through past human activities.

Intermediate Period

The middle period of the Amerindian occupation of Labrador, including the interior, from approximately 3,500 to 2,000 BP.

Kaolin

A soft, white clay employed in the manufacture of porcelain, and for the manufacture of clay tobacco pipes found on historic sites in North America.

Knapping

The chipping of fine-grained stone such as chert to fashion tools and other objects.

Labrador Trough Cherts

A group of cherts with highly variable colours and flaking properties derived from the iron-bearing sedimentary and volcanic rocks of the Labrador Trough in western Labrador.

Lanceolate

In precontact archaeology, a descriptive term applied to narrow, lance-shaped bifaces.

Late Precontact

The final precontact Amerindian occupation of Newfoundland and Labrador after the Intermediate period, beginning approximately 2,000 BP. This period is also referred to as “Recent Indian” in some archaeological literature. The Late Precontact period arbitrarily ends at the time of European contact, approximately 500 years BP, but the same people continued to inhabit Labrador and are directly ancestral to the Innu, while Late Precontact people on the Island of Newfoundland were ancestral to the Beothuk.

Ledum

The genus commonly known as “Labrador Tea.” An ericaceous shrub now classified within the genus Rhododendron.
<table>
<thead>
<tr>
<th>Term</th>
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</thead>
<tbody>
<tr>
<td>Lichen Woodland</td>
<td>An open woodland vegetation community which, in Labrador, generally consists of black spruce widely-spaced over a ground cover of Cladonia. This vegetation pattern is common in central Labrador and often associated with nutrient-poor, well-drained sandy terraces. See also Cladonia.</td>
</tr>
<tr>
<td>Line-Cutter</td>
<td>A deeply-notched cutting tool used for quickly cutting line or cordage. Deeply-notched unifacial stone tools may have been employed for this purpose.</td>
</tr>
<tr>
<td>Linear Flake</td>
<td>A flake with some attributes of a blade but lacking one or more of the attributes associated with blade technology, including evidence for the use of deliberately prepared blade cores.</td>
</tr>
<tr>
<td>Lithic</td>
<td>Literally, a term referring to stone. In the context of historic resources, lithic usually refers to stone tools and debitage found on archaeological sites once occupied by precontact peoples.</td>
</tr>
<tr>
<td>Loam</td>
<td>A soil composed of a mixture of sand and silt, possibly also containing smaller amounts of clay.</td>
</tr>
<tr>
<td>Locus (pl. Loci)</td>
<td>Literally a “place”. In archaeological literature, a locus is a discrete concentration of artifacts and features that forms one part of a larger archaeological site.</td>
</tr>
<tr>
<td>Lots</td>
<td>A Lot is the local manifestation of a stratigraphic layer (and Event) within a 2 m x 2 m excavation unit. See also Event.</td>
</tr>
<tr>
<td>Macroblade</td>
<td>In precontact lithic technology, a large blade more than 11 mm wide.</td>
</tr>
<tr>
<td>Maritime Archaic</td>
<td>The first major period in the Amerindian occupation of the province, dating approximately 8,000 to 3,700 BP in Labrador, and from ca. 6,000 to 3,200 BP on the Island.</td>
</tr>
<tr>
<td>Metal Detector</td>
<td>A portable electronic instrument which detects the magnetic field of metal objects in the vicinity.</td>
</tr>
<tr>
<td>Metamorphic</td>
<td>In geology, normally refers to recrystallized minerals; rocks which have been transformed in the past by extreme temperature and/or pressure.</td>
</tr>
<tr>
<td>Microblade</td>
<td>In precontact lithic technology, a small blade less than 11 mm wide. Normally associated with Palaeo-Eskimo archaeological sites.</td>
</tr>
<tr>
<td>Midden</td>
<td>A deliberate, often concentrated, deposit of discarded waste, which may include animal bone, plant waste, and/or shell, along with tools, clothing, containers, and other artifacts. See also Sheet Midden.</td>
</tr>
</tbody>
</table>
Mistassini Quartzite: A very fine-grained, semi-translucent, waxy-finished quartzite derived from the Colline Blanche on the Témiscamie River in Québec and widely-used for stone tool manufacture in the northern Québec interior.

Mokosha: A spiritually-important Innu communal feasting ceremony.

Mugford Chert: A semi-translucent stone from the Cape Mugford area of the north-central Labrador coast, south of Ramah Bay. Mugford, or “Cod Island Chert” often resembles Ramah but may have a greener colour. Widely used for stone tool manufacture in north-central Labrador.

North West River Phase: A culture-historical unit representing the final period in the Intermediate Period in Labrador, ca. 2000 BP. Characterized by ovate and leaf-shaped bifaces and preforms bifaces fashioned almost exclusively of local quartzite.

Ordovician Chert: On the Island of Newfoundland, Ordovician cherts are particularly abundant in the Cow Head Group of western Newfoundland. These cherts, often green, tan, or brown in colour, were widely used by precontact peoples on the island of Newfoundland for stone tool manufacture. In Labrador, Ordovician cherts from western Newfoundland were widely used in the Strait of Belle Isle in all periods, and, in sites of the Groswater Palaeo-Eskimo period are commonly found as far north as the north-central Labrador coast.

Palaeo-Eskimo: A term referring to a series of occupations of Newfoundland and Labrador by Arctic-adapted peoples arriving from the north. Although also deriving from the north, the Palaeo-Eskimo peoples were not directly ancestral to the later Inuit occupation.

Palimpsest: In archaeology, refers to a distribution of cultural materials that reflects multiple successive occupations and depositions of cultural material within a single location.

Paste: In ceramic technology, the clay mixture used to form the body of a ceramic vessel.

Planter: In 19th century historic sources, “Planter” is a term sometimes used to refer to people of European or mixed descent who came to settle permanently in central Labrador. Their modern descendants may nowadays affiliate politically with Nunatsiavut, NunatuKavut, or neither. See also Settler.
<table>
<thead>
<tr>
<th>Term</th>
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</thead>
<tbody>
<tr>
<td>Point Revenge Complex</td>
<td>A culture-historical unit representing the second and final period in the Late Precontact Period of coastal Labrador, ca. 1000 to 500 BP. Characterized by small projectile points and triangular bifaces fashioned almost exclusively of Ramah.</td>
</tr>
<tr>
<td>Podzol/Podzolic</td>
<td>Refers to the typical soil associated with coniferous forest in the subarctic, including central Labrador. Podzols are formed through the process of podzolisation, whereby organic material and soluble minerals (particularly iron) are leached from the upper levels of sediment, forming a white or grey A Horizon, and redeposited below, forming an orange, red or maroon B horizon.</td>
</tr>
<tr>
<td>Porcelain</td>
<td>In North American archaeology, a high-fired, hard, vitrified and translucent historic Chinese or European ceramic ware containing a high proportion of kaolin.</td>
</tr>
<tr>
<td>Portage</td>
<td>The practice of carrying boats or supplies around an obstacle to water travel, such as a falls or rapids. Also refers to the route or trail followed when doing so.</td>
</tr>
<tr>
<td>Precontact</td>
<td>The period of Aboriginal occupation in Newfoundland and Labrador that occurred before significant contact with Europeans, approximately 500 years BP.</td>
</tr>
<tr>
<td>Preform</td>
<td>An early stage in the reduction and manufacture of a flaked stone artifact. A preform may resemble a finished biface but will be larger, thicker and more roughly-worked.</td>
</tr>
<tr>
<td>Primary Flake</td>
<td>A flake of stone on which the dorsal surface is entirely cortex. See also Cortical Flake.</td>
</tr>
<tr>
<td>Primary Reduction</td>
<td>The initial removal of cortical flakes from a beach cobble or other cortical piece of fine-grained stone. The first stage in manufacturing stone tools.</td>
</tr>
<tr>
<td>Projectile point</td>
<td>The cutting and piercing end of a projectile, such as a spear, harpoon, dart or arrow. In precontact archaeological sites, projectile points are normally made of chert or other fine-grained stone.</td>
</tr>
<tr>
<td>Provincial Archaeology</td>
<td>The office of the Government of Newfoundland and Labrador which regulates and oversees the protection of historic resources within the province.</td>
</tr>
<tr>
<td>Quartz</td>
<td>An extremely common clear, glassy silicate occurring naturally in many forms. Both massive and crystalline varieties were used by precontact people in Labrador to make chipped stone tools.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Quartzite</td>
<td>A granular metamorphosed quartz which, despite its relatively coarse grain, is adequate for the manufacture of chipped stone tools. Quartzite is readily available in cobble form on beaches in the Muskrat Falls area.</td>
</tr>
<tr>
<td>Radiocarbon Dating</td>
<td>An absolute dating technique that dates the age of organic materials such as wood, bone, and charcoal by measuring the relative frequency of carbon isotopes present in a sample.</td>
</tr>
<tr>
<td>Ramah</td>
<td>A metamorphosed quartzite found on the Tomat coast of Labrador. Prized by precontact peoples for manufacturing chipped stone tools and widely traded across eastern North America in the precontact period.</td>
</tr>
<tr>
<td>Réappropriation du Littoral</td>
<td>A culture-historical unit in the Strait of Belle Isle, equivalent to the Intermediate Period in central Labrador, ca. 3500 to 2500 BP.</td>
</tr>
<tr>
<td>Red Ochre</td>
<td>A bright or rich red friable mineral soil composed of hematite-rich or dehydrated iron oxide. In powdered form, it has been widely used as a pigment from antiquity down to the present day. In eastern North America, red ochre pigments were used by Amerindian people in the contact period as body paints, as well as to paint clothing, canoes, and other objects.</td>
</tr>
<tr>
<td>Reduction (Lithic)</td>
<td>The process of chipping stone to produce stone tools, blanks, and preforms. Lithic reduction produces large quantities of debitage. See also Knapping.</td>
</tr>
<tr>
<td>Refined Earthenware</td>
<td>A broad category of historic ceramic wares originally developed in England in the 18th century, and including creamware, pearlware, and “whiteware”.</td>
</tr>
<tr>
<td>Reservoir</td>
<td>A body of water formed by damming a river or stream.</td>
</tr>
<tr>
<td>Retouch</td>
<td>The deliberate removal of flakes along the edge of a roughed-out stone tool or flake to produce a bifacial or unifacial working edge.</td>
</tr>
<tr>
<td>Rhyolite</td>
<td>A silicate-rich igneous rock. Fine-grained varieties are particularly suitable for manufacturing stone tools. Rhyolites visually identical to those found in central Labrador archaeological site have been identified in river cobble form on the upper-middle Churchill River upstream of Minipi Rapids, and as small cobbles in the Muskrat Falls area. Associated with sites of the Intermediate Period, in general, and the Charles Complex, in particular.</td>
</tr>
<tr>
<td>Rimsherd</td>
<td>Fragment of the outermost lip of a container or vessel, such as a plate, bowl, or drinking glass. See also Brimsherd.</td>
</tr>
<tr>
<td>Rove</td>
<td>A small metal plate through which a rivet is passed before being flattened or chlenched.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Sand</td>
<td>A granular sediment in which individual grains range from 0.0625 mm to 2 mm in size.</td>
</tr>
<tr>
<td>Saunders Complex</td>
<td>A culture-historical unit which comprises much of the Intermediate Period on the north-central Labrador coast, ca. 3500 to 2800 BP. Characterized by a wide variety of artifact types fashioned from Saunders Chert, rhyolite, and quartzite.</td>
</tr>
<tr>
<td>Saunders Chert</td>
<td>A colourful fine-grained opaque chert, generally pink, salmon-pink, red or purple in colour, derived from an as-yet unknown source, likely in the north-central Labrador interior. Widely used for stone tool manufacture in the Intermediate Period in central Labrador, but not normally common on sites of other periods.</td>
</tr>
<tr>
<td>Schist</td>
<td>A medium-grained metamorphic rock.</td>
</tr>
<tr>
<td>Scraper</td>
<td>In archaeology, a unifacially-chipped stone tool generally employed for hideworking or woodworking.</td>
</tr>
<tr>
<td>Secondary Flake</td>
<td>A flake of stone on which the dorsal surface is partly a cortical surface.</td>
</tr>
<tr>
<td>Settler</td>
<td>In 19th century historic sources, &quot;Settler,&quot; and more rarely &quot;Planter&quot; are terms used to refer to people of European or mixed descent who came to settle permanently in central Labrador. Their modern descendants may nowadays affiliate politically with Nunatsiavut, NunatuKavut, or neither. See also Planter.</td>
</tr>
<tr>
<td>Shaputuan</td>
<td>A large feasting tent erected by the Innu for performing mokoshan. Other neighbouring peoples, such as the Cree of Québec, also build Shaputuan structures.</td>
</tr>
<tr>
<td>Shatter</td>
<td>Irregular thick or blocky lithic debris produced during the making of stone tools.</td>
</tr>
<tr>
<td>Sheet Midden</td>
<td>A deliberate deposit of discarded waste which is not concentrated in a precise location, but spread thinly across the surface of the ground. See also Midden.</td>
</tr>
<tr>
<td>Side-Notched</td>
<td>In precontact archaeology, a descriptive term applied to bifaces modified for hafting by chipping notches into both sides near the base, generally forming straight shoulders and a rectangular or semi-circular base.</td>
</tr>
<tr>
<td>Silt</td>
<td>A fine granular sediment in which individual grains range from 0.0039 mm to 0.0625 mm in size.</td>
</tr>
<tr>
<td>Siltstone</td>
<td>A fine-grained sedimentary rock composed of silt-sized particles.</td>
</tr>
</tbody>
</table>
Slate
A very fine-grained metamorphosed sedimentary rock which tends to fracture into sheets. In Labrador precontact archaeology, slate was most commonly used for making ground and polished stone tools such as axeheads, and adzes.

Soil Development Horizon
A recognizable soil layer formed by one or more of the principal soil horizon development processes: addition, transformation, translocation, and removal. These may act on soils, but in typical podzolic soils the most conspicuous process is transformation, creating distinctly-coloured A and B horizons. In Labrador, these are often not separately deposited layers, but rather a single sediment column transformed differently at higher and at lower levels by chemical processes. See also Podzol/podzolic.

Sphagnum
A genus of green mosses particularly associated in Labrador with spruce-sphagnum forests and peat bogs.

Spokeshave
A concave-edged planning tool used to form and smooth wooden shafts, such as arrow or spear-shafts.

Sprue
A piece of metal that has solidified in the pouring channel for a mold. For example, a strip of lead from resulting from pouring into a mold for making shot.

Stage 1 Historic Resources Assessment
The initial step in the historic resources assessment process in Newfoundland and Labrador. Typically involves background research and may involve a preliminary field study. The Stage 1 Assessment is intended to serve as the basis for determining if any additional research is required.

Stage 2 Historic Resources Assessment
The second stage in the historic resources assessment process in Newfoundland and Labrador, following the Stage 1 Assessment. Stage 2 Assessment involves a more detailed and extensive field study to gain a thorough understanding of the historic resources within a defined study area and any interactions that may result from any proposed development.

Stage 3 Historic Resources Assessment
Stage 3 Assessment follows directly from previous assessment studies and may include a broad range of activities and mitigation measures, including site avoidance, or scientific recovery (excavation) of archaeological sites. Stage 3 Assessment constitutes the management of any historic resources that may be present within a Project Area and its objectives are to protect resources and mitigate potentially adverse effects to sites of cultural and/or spiritual importance.

Stoneware
In North American archaeology, a high-fired, hard and vitrified historic European ceramic ware type.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stratigraphy</td>
<td>In archaeology, the study of soil layers undertaken to understand the processes by which archaeological sites are formed and transformed over time.</td>
</tr>
<tr>
<td>Stream Swamp</td>
<td>Periodically-flooded terrain on the margins of a waterway, generally characterized in Labrador by reworked unstable sediments and dense alder growth.</td>
</tr>
<tr>
<td>Systematic Data Recovery</td>
<td>The scientific and systematic excavation and recording of historic resources using accepted data recovery techniques. Generally synonymous with archaeological excavation.</td>
</tr>
<tr>
<td>Systematic Field Recording</td>
<td>Assessment of a known historic site by means of visual inspection of surface-visible cultural materials and subsurface sampling to determine whether the site contains additional evidence for undetermined historic or older occupation(s).</td>
</tr>
<tr>
<td>Terrace</td>
<td>An area of level terrain bordered by a slope, in Labrador generally formed by riverine erosion or by falling sea levels.</td>
</tr>
<tr>
<td>Tertiary Flake</td>
<td>A flake of stone on which the dorsal surface exhibits no cortex.</td>
</tr>
<tr>
<td>Testpit</td>
<td>In archaeological assessment, a testpit is usually a small pit excavated by shovel and hand tools. Large number of testpits may be excavated within a single testing location. Testpitting is usually the only way to locate those archaeological sites which are not visible on the surface.</td>
</tr>
<tr>
<td>Tilt</td>
<td>A small, single-roomed, log-built hut employed by trappers as temporary accommodation while trapping. Tilts may include “main cabins” used throughout the trapping season, and “line tilts” used for overnight stays along trap lines.</td>
</tr>
<tr>
<td>Total Station</td>
<td>An electronic/optical survey instrument comprising an electronic theodolite (transit) integrated with an electronic distance meter to read slope distances from the instrument to a particular point.</td>
</tr>
<tr>
<td>Treethrow</td>
<td>The depression, often flanked by a mound, that results when a tree falls and its root mass and associated soils are pulled from the ground, generally because of wind action.</td>
</tr>
<tr>
<td>Uniface</td>
<td>In precontact archaeological sites, a lithic artifact chipped on a single side is referred to as a uniface, or unifacially-flaked tool. Unifaces are often assumed to have served as scraping or planning tools.</td>
</tr>
<tr>
<td>Usewear</td>
<td>Flaking scars, often quite small, that are not produced by deliberate retouch but represent wear damage resulting from the use of an unmodified flake as a cutting or scraping tool.</td>
</tr>
</tbody>
</table>
Utilized Flake
A flake which has not been retouched or otherwise deliberately shaped, but which has been used as a scraping or cutting tool, leaving minute flake scars as evidence of usewear.

Ventral Surface
For precontact lithics, the “bottom,” generally the flattest and/or smoothest surface, on a flake or stone tool.

Whiteware
Refined earthenware of European origin with a white paste and clear lead glaze, dating primarily after the 1820s.

Zone
In the context of this study, a zone is a landform with particular slope, vegetation and drainage features, and specifically one that has been identified and mapped within the Survey Area. The characteristic features will determine which zone type a zone belongs to and this will determine its archaeological potential rating. These will also determine whether testing locations will be chosen within that zone as part of the archaeological assessment.

Zone Type
All the zones which share certain characteristics of slope, or drainage, or vegetation, are assigned to a particular zone type. Zone types are assigned archaeological potential ratings, based on the probability of finding archaeological sites within zones of that zone type.
1.0 INTRODUCTION

1.1 Project Works in Labrador

Nalcor Energy (Nalcor) is constructing extensive infrastructure at Muskrat Falls, central Labrador, as part of the development of the lower Churchill River for hydroelectric power. The principal works in Labrador required for the development (hereinafter referred to as the “Lower Churchill Project” or “LCP”), include: extensive tree and brush clearing at Muskrat Falls and within the upstream reservoir; stabilization of the North Spur; bulk excavation of earth and rock from the south side of Churchill River; and construction of the dam itself, as well as, access roads, accommodations camp and office complex. Key LCP components required for transmission of power include construction of a high voltage alternating current (HVac) transmission line (TL) from Muskrat Falls to Churchill Falls, a high voltage direct current (HVdc) transmission line from Muskrat Falls to Forteau Point on the Strait of Belle Isle, southern Labrador, a switchyard and associated cable infrastructure at Forteau Point, and an electrode site at l’Anse au Diable (Figure 1-1). Pre-flooding of the Muskrat Falls reservoir commenced in October 2016, and flooding to the full supply level is scheduled to occur after 2017. The 2016 Historic Resources Management Program, undertaken by Stassinu Stantec in support of the Lower Churchill Project, is the subject of this report.
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Figure 1-1 Lower Churchill Project components in Labrador
1.2 Historic Resources Assessment and Management

The overall goals of the Historic Resources Management Program are to identify and manage the impact of the development on any archaeological or cultural resources located within the LCP area to achieve a mutually acceptable balance between the development and the provincial historic resource legislation and management requirements. Regarding the latter, emphasis is usually directed toward efforts to conserve and protect the resource. In accordance with these regulations (Government of Newfoundland and Labrador 1992), historic resources assessment and management for the Project required one or more of three stages.

1.2.1 Stage 1 Historic Resources Overview Assessment

A Stage 1 Historic Resources Overview Assessment (Stage 1 Assessment) is normally the initial step in the provincial historic resources assessment process and typically involves background research and, frequently, a preliminary field study. The Stage 1 Assessment is intended to serve as the basis for determining if any additional research is required under the Historic Resources Act (1985).

1.2.2 Stage 2 Detailed Impact Assessment

For many development projects, Stage 2 Assessment is the standard procedure following the Stage 1 Assessment and, in most cases, involves a more detailed and extensive field study to gain a thorough understanding of the historic resources within a defined study area and any interactions that may result from the proposed development. Stage 2 assessment may include a combination of visual surface inspection and subsurface testing (shovel testing).

1.2.3 Stage 3 Recovery (Mitigation)

Stage 3 Assessment follows directly from previous assessment studies and may include a broad range of activities and mitigation measures, including site avoidance, capping (i.e. securing materials and features in such a way as to ensure their long-term integrity) or systematic data recovery/excavation. By acting upon results and recommendations of the previous stages of assessment, Stage 3 Assessment involves the effective, professional management of any historic resources that may be affected within the LCP area. In sum, the priority of historic resources management is to protect resources and mitigate potentially adverse effects to reduce loss or disturbance of sites, objects or materials, and places of cultural and/or spiritual importance.

1.2.3.1 Mitigation

In the context of the Labrador component of the LCP, where a broad range of archaeological sites of varying ages, functions and differing cultural origins have been identified and registered, three principal types of mitigation have been defined and approved by the Provincial Archaeology Office (PAO) to ensure the necessary and appropriate degree of site information is recovered. The mitigation measures are summarized as:
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- Systematic Data Recovery (SDR) involves the scientific and systematic excavation and recording of unavoidable historic resource losses using accepted data recovery techniques;
- Alternative Field Recording (AFR) involves photographic, video and illustrative coverage and, where indicated, collection, documentation and conservation of relevant site materials; and,
- Systematic Field Recording and Subsurface Sampling (SFR and SS) involves photographic, video and illustrative coverage of visible surface remains, excavation of testpits, collection, documentation and conservation of relevant site materials, and, where indicated, additional AFR or SDR.

Only Systematic Data Recovery (SDR) was employed during the 2016 field season.

1.3 2016 Historic Resources Assessment and Recovery Program

1.3.1 Permitting and Study Area

The 2016 Historic Resources Management Program for the Lower Churchill Project was undertaken under Archaeological Investigation Permit #16.09 issued to Dr. Fred Schwarz by the PAO. This permit encompassed Stage 1, Stage 2, and Stage 3 Historic Resources Management activities within the Muskrat Falls reservoir area of the Churchill Valley, central Labrador (Figure 1-2). This Draft report summarizes the methods and results of the 2016 historic resources assessment and recovery program conducted in relation to reservoir preparation in the Churchill Valley.

1.3.2 2016 Study Objectives

Previous archaeological work at the Muskrat Falls dam site was completed in 2012-2013, and involved the recovery of 32 archaeological sites at Muskrat Falls (Stantec 2014a, 2014b). Subsequent recovery work beginning in 2014 has focused on the proposed Muskrat Falls Reservoir area between Lower Brook and Gull Rapids, where Stage 1 and Stage 2 assessments had identified 23 registered archaeological sites (Stantec 2015; 2016). Although preparation activities (mechanical tree-felling) commenced within the Muskrat Falls Reservoir area in 2013 - 2014, 50 m buffer zones were defined around these known sites and, within these buffers the natural vegetation was left standing.

Stage 3 mitigation is required at these sites before creation of the Reservoir. Required mitigation varies according to site type: precontact and historic sites with subsurface remains require Systematic Data Recovery (SDR), consisting of conventional archaeological excavation, while historic sites composed of surface-visible remains and/or standing structures require Alternative Field Recording (AFR) by other means such as surface feature inventory, photography, and videography.

Stage 3 mitigation in the Muskrat Falls Reservoir area first commenced in 2014. The objective of the 2016 historic resources management program was to complete the Stage 3 mitigation of
remaining archaeological sites in the reservoir area situated at or below 25m asl, prior to pre-flooding of the reservoir in October 2016.

The work required in 2016 to achieve the objectives therefore focused on the completion of Stage 3 mitigation at two archaeological sites, both situated in the Sandy Banks area, midway between Muskrat Falls and Gull Lake, and both situated at elevations at or below 25m asl:

- FgCg-01, a large multi-component site at which mitigation work commenced in 2014; and
- FgCg-04, a small historic site at which mitigation work also first commenced in 2014.
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2.0 Approach, Methods, and Personnel

A program of this nature follows a logical assessment sequence. The approach and methods employed for each assessment stage are summarized in Sections 2.1 through 2.5 and the personnel makeup and training are discussed in Sections 2.6 and 2.7.

2.1 Stage 1 Background Research

Extensive background research has been conducted for the entire LCP area, including the Churchill River Valley in central Labrador, the central interior south of Muskrat Falls, and the Strait of Belle Isle region in southern Labrador (see Thurlow et al. 1974; Tuck 1981; IED/JWEL 2000; JWEL/IELP 2001a; JWEL/IELP 2001b; JWEL/IELP 2001c; Minaskuat 2008; Stantec 2014a; 2014b; 2015).

The background research methodology employed in the present study closely followed that employed for the overall LCP assessment and involved the review of previous archaeological research undertaken within and adjacent to the Study Areas, and included publicly-available historic, ethnohistoric and ethnographic literature.

Background research for the 2016 Stage 3 recovery program included further review of records relating to previous archaeological assessment work at FgCg-01 and FgCg-04 (Stantec 2015).

Further background research involved review of published literature bearing on specific research questions arising out of the 2014-2016 recovery results. This included review of literature bearing on the architecture, archaeology, and material culture of Hudson’s Bay Company posts across Canada (e.g. Losey 1977a, 1977b; Moat 1979; Karklins 1979; Forsman 1985), and specific sources on 19th century material culture (e.g. Walker 1971; Weiland 2009).

In addition, documentary sources from the HBC archives were further reviewed, including HBC journals and correspondence. Although there are no journals for the Sandy Banks outpost or Gull Island depot, journals are available for the principal post at North West River, as well as the outposts of Fort Nascopie, Michikamau House, and Winokapau House. These journals were reviewed with emphasis on determining methods of building construction. For North West River post, this included review of journals from 1836 to 1879 (H.B.C.A B.153/a/1 to 26; Reels 1M105, 1M106, 1M1013), as well as review of building inventories completed in the early 1900s (H.B.C.A. G.7/13/ (7) folio 203 1920-192) to determine the dates and methods of construction of post buildings extant at that time.

Post journals for Fort Nascopie cover the period 1842 to 1845 (H.B.C.A. B.139/a/1 to 4; Reel 1M96); journals for Michikamau House cover the period from 1846 to 1849 (H.B.C.A. B.128/a/1 to 3; Reel 1M79); post journals for Winokapau House cover the period from 1863 to 1869 (H.B.C.A. B.237/a/4; Reel 1M154 B.128/a/1 to 3; Reel 1M79).
Stage 2 Field Assessment Methodology

Stage 2 Field Assessment was focused primarily on delineating the distribution of cultural materials at sites during Stage 3 Recovery (see below) to facilitate comprehensive recovery from these sites. Assessment methods employed during the recovery process included visual inspection for surface-visible remains, inspection of treethrows, subsurface shovel testing around the margins of excavated areas, and at FgCg-01 a series of larger, deeper 1 m x 1 m test excavation units to clarify the stratigraphy. In addition, at FgCg-01, a metal detector was employed to clarify the extent of detectable metallic cultural materials at the site. The locations of positive readings were flagged and plotted in relation to the site grid using a total station survey.

Stage 3 Recovery Program Methodology

The Stage 3 Systematic Data Recovery (SDR) of subsurface precontact and historic archaeological remains was completed by teams of field technicians supervised by Team Leads and by the permit holder. Excavations consisted of 2 m x 2 m units, separated by 20 cm-wide baulks, and excavated by natural and, where indicated, cultural layers. This grid pattern of excavation allows sufficient areas to be uncovered in order that spatial patterns of archaeological features and cultural debris may be easily discerned, while the continuous baulks enable stratigraphic control to be maintained at all times. This method is preferred over trenching or checkerboard excavation, since site significance depends in part on the presence or absence of significant archaeological features (such as hearths), and broad simultaneous areal exposure is the most effective way of identifying and recording these in deposits anticipated to have relatively simple soil stratigraphy.

Excavation activities at each site began with woodcutting using chainsaws to remove trees, debris, and brush (battery-powered reciprocating saws, as well as hand saws and shears were employed during the excavation process to remove roots and stumps). This was followed by laying out the site grids. At the sites recovered in 2016, georeferenced points were available, established by professional surveyors using high-precision GPS with < 5 cm accuracy in 2014 and 2015. Intervening grid corners were plotted using total stations. All units were excavated by trowel and all soils gathered from excavation units were screened using 1/4" mesh screens.

Point provenience was recorded in three dimensions for historic and lithic artifacts, including debitage, bone, and soil and charcoal samples, using total stations. Total stations were also employed to map timbers and features, and to develop local contour mapping for each recovered site.

Artifact collection methods varied according to material, although all objects were tagged with labels recording three-point provenience in the form of total station point numbers. Stable objects (e.g. lithic, glass, ceramic) were collected dry in zip-closure bags. Metals (e.g. iron, steel, lead, copper and brass) were collected in water in zip-closure bags or were wrapped in wet fabric and collected in rigid plastic containers; when larger metal objects had to remain in place prior to
collection they were kept wet with coverings of wet towel. Fragile organic materials were packaged with sphagnum moss and collected in rigid plastic containers.

Soil samples were treated as artifacts and collected in large zip-closure bags with provenience labels. The five Optically-Stimulated Luminescence (OSL) samples collected from FgCg-01 Locus B were collected by driving opaque plastic pipe couplings into profile sidewalls and sealing the ends with duct tape. In one case (Feature 6, the privy at FgCg-01 Locus D) it proved necessary to recover fragile materials (textiles embedded in a clay matrix) by means of a block-lifts. In this instance, the clay deposit was pedestalled and isolated, then undercut with sheet metal and stabilized with cling-wrap. The stabilized block was put inside a helicopter and flown to Goose Bay, then to St. John’s for controlled excavation. In St. John’s, the delicate textiles were removed from the clay matrix, and in addition, the clay matrix was subjected to froth flotation for recovery of palaeo-botanical and micro-faunal remains.

At Locus D of FgCg-01, a second metal-detector assessment (a metal-detector survey had also previously been conducted in 2015: Stantec 2016) was completed across the outlying areas (i.e., away from the identified Structures and Features) to help establish the physical distribution and extent of metals and metal debris. Once an anomaly was identified, the location was marked with surveyor’s flagging tape and the site grid expanded to encompass the anomaly.

Vertical provenience of artifacts within the large, complex deposits at FgCg-01 Locus D was recorded by “Event.” Essentially, an “Event” is a cultural and or natural depositional event detectable in a stratigraphic sequence. Some “Events” were highly localized, others extended across large portions of the site. In addition to the provenience assignment to “Event,” artifacts were also assigned to sub-Events, or “Lots.” Essentially, a “Lot” was the local manifestation of an Event within a 2 m x 2 m excavation unit. Vertical provenience within the smaller, less complex deposits at FgCg-04 was recorded to a simple sequence of natural and cultural stratigraphic levels.

Recording methods included field notes and a digital photographic and video record of the excavation and features. Representative baulks and sidewalls were manually profiled at a scale of 1:10. Points delineating cultural and structural features within the excavation areas were mapped using the total stations, and the data collected with the total station were later downloaded and converted into detailed site plans by Stantec GIS personnel. Sites and cultural materials were catalogued on PAO-compliant digital site and artifact record forms.

Progress reports summarizing key findings were submitted to Nalcor and the PAO on a weekly basis over the course of the 2016 Historic and Heritage Resources Assessment and Recovery Field Program.
2.4 Stage 3 Alternative Field Recording Methodology

Alternative Field Recording approaches applicable to sites that have no or few subsurface remains include photographic and video recording, as well as documentation of surface-visible site artifacts and limited collection of significant objects. No sites were mitigated by means of Alternative Field Recording in 2016.

2.5 Artifact Processing and Conservation Methodology

As in the previous 2015 season, procedural guidelines were followed for artifact recovery, processing, and stabilization as designed by the Project Conservator. These outlined a clear division of processing activities, required preparatory work and coordination of cataloging activities between Happy Valley - Goose Bay and St. John’s, and saw the implementation of conservation techniques both in the field, in the Happy Valley - Goose Bay office, and in the laboratory. In addition to these activities, the 2016 season saw a significant increase in treatment-specific activities, particularly the stabilization and remedial treatment of historic materials (various metals and their alloys), and involved specialized techniques for the recovery of complex organic material and faunal evidence. This year also saw an increase in information management, conducted by the St. John’s cataloguer, prior to, during, and following analysis week.

As in the previous year, the division of processing activities between Happy Valley - Goose Bay and St. John’s was a result of several challenges: the large volume of material that was recovered and that required catalogue processing and stabilization. Additionally, aspects of the collection required dedicated spaces to process in a timely manner while also meeting Health and Safety measures, for example: the Feature 6 privy block-lift (heavy and large) and large numbers of artifacts requiring labelling. Finally, the 2016 season yielded a substantially high percentage of recovered material that required extensive and varied conservation treatment, the processes for which impacted both the analysis timelines and the final transfer of the collection. These challenges were addressed at the same time by sending all metals and organics to St. John’s where cataloging and conservation activities were performed simultaneously at the Rooms Museum Conservation Lab. The availability of this laboratory space, and access to specialized equipment and supplies via Memorial University’s Archaeology Conservation Lab, greatly enabled conservation and cataloging to be achieved efficiently and safely.

2.5.1 Artifact Processing and Collections Management

The division of artifact processing activities between two locations necessitated the clear delineation of procedures, coordinating regular checks, and the prearrangement of spreadsheets to eliminate the risk of information loss and/or error.

In Happy Valley - Goose Bay, the cataloging team members’ responsibilities included sorting all artifacts by material type (e.g. glass, ceramics/pottery, bone, kaolin, lithic, metals, organics) while maintaining intellectual control of field information (excavation field tags). All metal and organic
material was packaged according to the requirements of the Project Conservator and shipped to St. John's where the St. John's cataloguer began the process of cataloging those materials.

All material in both locations were each measured, weighed, identified at the basic level, assigned an identifier (catalogue number), and entered into the designated site-specific spreadsheet (Specimen Record Form). Further field-specific information unique to each artifact and provided separately by the Archaeology Leads, total station coordinates, were then matched to their corresponding artifact and entered into the record.

The potential doubling of catalog numbers within a site and/or locus due to concurrent cataloging between Happy Valley - Goose Bay and St. John's was addressed by designating blocks of numbers as required with periodic checks via conference call or email/text between all cataloging personnel. Conversely, backfilling of unused numbers was required on occasion and flagged as such, pending the results of the analysis period. Data entry, including the assigning and coordinating of catalogue numbers and identification of Total Station information, was the responsibility of the cataloging team lead in Happy Valley - Goose Bay and the cataloguer in St. John's with oversight by the Project Conservator.

The cataloging, packing, and shipment of the Happy Valley - Goose Bay component of the 2016 collection was completed on February 19th and received in St. John's on February 22nd, where the Project Conservator took custody of and arranged the collection according to report analysis assignments as outlined by the Principal Investigator, Dr. Fred Schwarz. The St. John's cataloguer incorporated all spreadsheets created between Happy Valley - Goose Bay and St. John's, identifying for the archaeology team any anomalous total station or other data. These final two databases were then distributed to the archaeologists a week in advance to assist in analysis preparations.

2.5.2 Conservation Methodology

The 2016 field season included conservation activities implemented throughout the full duration of the field season, both on the excavation site, and, in the laboratory. Conservation activities in the field are focused on stabilization of the artifacts at the moment of their exposure, actions aimed at slowing deterioration of the artifacts before they were received at the HVGB Office and/or in the interim period until they could be fully treated in the laboratory. Conservation activities include preventive actions such as observing procedures governing safe handling, packing, transport, and use practices. Remedial conservation, actions directly applied to an item or a group of items typically involving chemical applications aimed at arresting current damaging processes or reinforcing their structure, were executed by the Project Conservator in the laboratory. Preventive, stabilization, and remedial activities are discussed below. Key roles and responsibilities for personnel involved are summarized in Table 2.1. The important period associated with these activities were loosely grouped into at time of excavation, recovery, shipment, stabilization, conservation, analysis week, and reporting.
## Table 2.1 Conservation roles and responsibilities

<table>
<thead>
<tr>
<th>Key Role</th>
<th>Responsibilities</th>
<th>Location</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservator</td>
<td>• Develop procedural guidelines for artifact recovery, processing, stabilization, packing, transport for field and catalogue teams</td>
<td>Field, Laboratory</td>
<td>Pre-excavation planning</td>
</tr>
<tr>
<td></td>
<td>• Coordinate cataloging activities between Happy Valley-Goose Bay and St. John’s teams</td>
<td>HVGB Office and Lab</td>
<td>Recovery to Analysis week</td>
</tr>
<tr>
<td></td>
<td>• Prioritize and conduct remedial treatment and/or recovery of: metals, organics, and faunal evidence</td>
<td>Lab</td>
<td>Recovery to post-analysis week</td>
</tr>
<tr>
<td></td>
<td>• Design and develop protective enclosures and mounts for transport, handling, and presentation of identified artifacts</td>
<td>Lab</td>
<td>Analysis week, Post-analysis week</td>
</tr>
<tr>
<td></td>
<td>• Direct and assist in specialized recovery techniques as needed (block-lifting, forced-air flotation)</td>
<td>Field and Lab</td>
<td>Excavation, Recovery, Treatment</td>
</tr>
<tr>
<td></td>
<td>• Arrange collection according to report analysis assignments as outlined by the Head Archaeologist</td>
<td>Lab</td>
<td>Analysis week</td>
</tr>
<tr>
<td></td>
<td>• Provide immediate and item-level remedial treatment and other support for Archaeology Leads</td>
<td>Lab</td>
<td>Analysis week</td>
</tr>
<tr>
<td></td>
<td>• Pack, arrange, and facilitate final transfer of data and collections to PAO/The Rooms Corporation</td>
<td>Lab</td>
<td>Post report submission and approval</td>
</tr>
</tbody>
</table>
**Lower Churchill Hydroelectric Development Project 2016 Historic Resources Assessment and Recovery Program**

**Approach, Methods, and Personnel**

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<table>
<thead>
<tr>
<th>Key Role</th>
<th>Responsibilities</th>
<th>Location</th>
<th>Period</th>
</tr>
</thead>
</table>
| Happy Valley - Goose Bay Senior Cataloger | Direct the HVGB team to:  
- Identify and organize artifacts by material types within their site/borden  
- Pack and transfer to St. John’s High Priority artifacts (all metals and organics) according to stabilization requirements (e.g. metals shipped wet, extra support for organics, etc.)  
- For all secondary Priority material (ceramic, glass, lithic, and kaolin) measure, weigh, identify each artifact  
- Assign an identifier (catalogue number) to each artifact and enter the above information and its corresponding field tag information into the designated site-specific spreadsheet (Specimen Record Form)  
- Merge each artifact record to its Total Station coordinates, as provided by the Arch Leads  
- Maintain intellectual control of field information with the artifact and its corresponding Total Station Coordinate file  
- Pack artifacts for safe transport to St. John’s | Happy Valley - Goose Bay | Recovery to analysis week |
| St. John’s Cataloguer | Measure, weigh, identify each artifact; prioritization on ferrous metals first, followed by lead, organics, white metals, and copper alloys.  
- Assign an identifier (catalogue number) to each artifact and enter the above information and its corresponding field tag information into the designated site-specific spreadsheet (Specimen Record Form)  
- Merge each artifact record to its Total Station coordinates, as provided by the Arch Leads  
- Maintain intellectual control of field information with the artifact and its corresponding Total Station Coordinate file | St. John’s |
### Key Role and Responsibilities

<table>
<thead>
<tr>
<th>Key Role</th>
<th>Responsibilities</th>
<th>Location</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label all lithic, ceramic, and glass material with their identifier</td>
<td>Incorporate all spreadsheets created between HVGB and SJ. Identify for the archaeology team any anomalous Total Station or other data. Distribute the final two databases prior to analysis week to assist in analysis preparations.</td>
<td></td>
<td>Analysis week</td>
</tr>
<tr>
<td>Provide immediate and item-level support to Archaeology Leads during analysis week</td>
<td>Incorporate each Archaeology Lead’s spreadsheet with their edits/comments into one final copy for each site.</td>
<td></td>
<td>Post-Analysis week</td>
</tr>
<tr>
<td>Recognize and provide assistance in lifting/blocking techniques</td>
<td>Field Excavation, recovery</td>
<td>Field</td>
<td>Field Excavation, recovery</td>
</tr>
<tr>
<td>Adhere to safe handling, use, and photography practices during analysis</td>
<td>Archaeology Lead</td>
<td>Laboratory</td>
<td>Laboratory analysis week, reporting</td>
</tr>
<tr>
<td>Adhere to safe removal and handling procedures</td>
<td>Ensure field data accompanies each bagged artifact. Ensure wet materials are kept wet, damp materials damp, etc. from period of exposure to receipt by HVGB cataloging lead.</td>
<td></td>
<td>Field Excavation, recovery</td>
</tr>
</tbody>
</table>

### Field

In the field, the large number of metals recovered throughout the season required ongoing temporary stabilization for the interim period between their initial exposure and final receipt in St. John’s. This required keeping each metal artifact damp or wet through the application of damp sheets or towels during photographic and total station documentation in the field, transport to the Happy Valley - Goose Bay office in containers or bags containing water, and finally timely shipping to St. John’s with damp absorbent materials and a minimal amount of water in waterproof containers.
containers. The same procedures were applied to wood, leather, cork, and other organic artifacts with additional attention given to providing each physical support and protection for handling, packing, and transport. A summary of materials requiring conservation is presented in Table 2.2.

Additional conservation-related action in the field was the implementation of the block-lift technique to remove the basal deposit of the Feature 6 privy, for which recovery of faunal, organic, and other unknown embedded materials was not possible on-site.

**Laboratory:** Textile, faunal material, wood fragments, fragments of a glass tumbler, and any other visible material was manually extracted from the block-lifted sediments by the Project Conservator. All surrounding soil matter was retained for further processing through a Forced-Air Flotation Device generously provided by and operated by the MUN Palaeoethnobotany class led by Dr. Michael Deal. This process resulted in the extraction, sorting, and identification of fine material such as fibers, seeds and insect casings, hair, and fur by members of the class (see Section 4.7.8.2). Finally, all faunal materials were provided rudimentary cataloging before packing, and all textile pieces were cleaned, control dried, and mounted for eventual transfer.

**Priorities:** Treatment priorities and approaches by material type were decided based on a combination of addressing those artifact types which required lengthy and/or complex treatment with timelines for catalogue processing and subsequent report analysis. For example, ferrous materials were determined to be of high priority due to the factors mentioned earlier, and the large quantity of these materials – over 10,000 pieces. Therefore, catalogue processing and treatment preparations were conducted simultaneously and first for all ferrous materials. Also, organic materials were addressed as they were received to begin their lengthy treatment process. Following this, lead and lead-alloy artifacts were treated after all ferrous material was put into solution as they could be treated in bulk and in a relatively prompt manner. Finally, as prioritized, copper and copper alloys were treated last. One reason for this decision was to ensure the safe handling for, and eliminate chemical exposure to, the Archaeology Leads should treatment processes and times encroach upon the catalogue analysis and review period. In total, more than 12,000 individual pieces required remedial conservation treatment for the 2016 field season.

**Analysis:** During the week of review and analysis of catalogued artifacts by the Archaeology Leads, the cataloguer and conservator were charged with supporting the Archaeology Leads in immediate and item-level cataloging and treatment. Further, editing or updating any immediate changes, as identified by the Archaeology Leads, were made in the Masterspreadsheets by the cataloguer so that all changes and edits could be finalized as soon as possible for the report writing. These activities were supplemented with labelling activities also performed by the St. John’s cataloguer.

Post analysis activities included incorporating each Archaeology Lead’s spreadsheet with their edits and comments into one final copy for each site. Conservation treatment for the remaining 2016 artifacts, particularly copper/copper alloy, lead slag, mounting/packing of textiles, and changeover of the remaining ferrous materials in solution continued during the catalogue analysis.
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and review period. To date, final 2016 conservation activities in addition to 2015 treatment requirements and the labeling of all ceramic, glass, and lithic materials by the St. John’s cataloguer are being performed.

The entire 2016 collection is currently located at the Rooms Museum Conservation Lab for final treatment, labeling, and report preparations. Following the submission of the report, all material will be submitted with the final Specimen Record Form spreadsheets to the Provincial Archaeology Office.

Subsequent analysis by archaeologists included reviewing both the collection and the catalogue to:

- ensure correct attribution of raw material types;
- correct any Type 1 errors (debitage incorrectly identified as tools);
- correct any Type 2 errors (tools incorrectly identified as debitage);
- correct any provenience errors;
- write detailed artifact descriptions for finished artifacts; and
- photograph artifacts for the final report (this document).

Table 2.2 Artifacts by Type Requiring Conservation

<table>
<thead>
<tr>
<th>Year</th>
<th>Borden</th>
<th>FgCg-01</th>
<th>FfCi-02</th>
<th>FfCi-04</th>
<th>Total by Material Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Cat# count</td>
<td>Piece Count</td>
<td>Cat# count</td>
<td>Piece Count</td>
</tr>
<tr>
<td>Fe (nail)</td>
<td>1247</td>
<td>1652</td>
<td>9</td>
<td>10</td>
<td>3076</td>
</tr>
<tr>
<td>Fe (cast)</td>
<td>24</td>
<td>27</td>
<td></td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>Fe (other)</td>
<td>146</td>
<td>262</td>
<td>2</td>
<td>2</td>
<td>175</td>
</tr>
<tr>
<td>Pb/Pb alloy</td>
<td>104</td>
<td>114</td>
<td>7</td>
<td>9</td>
<td>382</td>
</tr>
<tr>
<td>Cu/Cu alloy</td>
<td>13</td>
<td>26</td>
<td>14</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td>Tin</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>16</td>
<td>123</td>
</tr>
<tr>
<td>Textile</td>
<td>3</td>
<td>3</td>
<td>43</td>
<td>43</td>
<td>46</td>
</tr>
<tr>
<td>Wood</td>
<td>1</td>
<td>1</td>
<td>15</td>
<td>122</td>
<td>16</td>
</tr>
<tr>
<td>Leather</td>
<td>2</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Composite</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total by Site</td>
<td>1510</td>
<td>2054</td>
<td>36</td>
<td>41</td>
<td>4492</td>
</tr>
<tr>
<td>Total Cat Count by Year</td>
<td>1546</td>
<td>5230</td>
<td>6776</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Piece Count by Year</td>
<td>2095</td>
<td>12145</td>
<td>14240</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2.6 Project Personnel

The 2016 historic resources assessment and recovery program was conducted by Stassinu Stantec. Project personnel included Project Managers, Technical and Field Leads, Field Technicians, Data Analysts and Report Writers, and GIS Specialists. All principal project personnel have in-depth knowledge and experience in their fields of expertise and a broad general knowledge of the work conducted by other experts in related areas of the program.

Brief biographical statements for the principal archaeological team members are provided below.

Fred Schwarz, PhD (Senior Archaeologist and permit holder) holds a BA in Anthropology from Memorial University, an M.A. in Archaeology from the University of Calgary and a PhD in Archaeology from the University of Cambridge. He specializes in the archaeology and pre-history of the Newfoundland and Labrador interior. His research interests include predictive modelling and field investigation of precontact interior settlement in Newfoundland and Labrador, settlement patterns and the interpretation of interior adaptations and culture history in the region. Dr. Schwarz has been directing field research projects in Newfoundland and Labrador, Nova Scotia, and Latin America for 31 years. His work in Labrador has included scientific management of the Stage 1 Historic Resources Overview Assessment of the Churchill River Power Project from 1998 to 2006, which included a series of three training programs for Innu researchers. In addition, he has worked on numerous projects with and for Innu organizations and companies. In 1996, he directed the Regional Context Component of the Voisey’s Bay Historic Resources Impact Assessment for the Mushuau Innu Band Council (in conjunction with the Labrador Inuit Association and Jacques Whitford). In 1997, he served as field consultant to the Innu History Commemoration Project for the Department of Canadian Heritage and directed the Archaeological Resource Inventory of Akamiuapiskt Proposed National Park for Innu Nation and Parks Canada, eventually preparing the Human History Study of the proposed park in 2001. Since that time, he has also completed major assessments for IELP, including the Historic Resources Study of Phase III of the Trans Labrador Highway, as well as assessments and research in the town of Sheshatshiu for the Sheshatshiu Innu Band Council. More recently, since 2006 he has undertaken several projects with Minaskuat Limited Partnership and Stantec, including archaeological potential mapping and field assessment of the LabMag Iron Ore project in western Labrador, and scientific management of historic resources assessment of the Lower Churchill Hydroelectric Generation Project and the Labrador – Island Transmission Link. Dr. Schwarz held the Archaeological Investigation Permit issued by the Provincial Archaeology Office (PAO) for the Lower Churchill Project Historic Resources Management programs in 2016. Dr. Schwarz co-directed the background and field research programs, and co-authored this report.

Corey Hutchings, BA, MA (Archaeologist), has worked in cultural resource management for the past five years and participated in additional archaeological and heritage research since 2002. Mr. Hutchings holds a B.A. in anthropology and a Master’s degree in archaeology from Memorial University. His research interests have primarily been the archaeology of the Arctic’s prehistoric
people with a focus on the Labrador Archaic. He has participated in various cultural resource management and academic research projects on the Island of Newfoundland, Labrador, Baffin Island, and Aleutian Islands. Mr. Hutchings’ work in Labrador has included multiple years as a field supervisor for the Porcupine Strand Archaeology Project based in Cartwright Labrador. Over 2011 and 2012 he worked with local people in assessment and mitigation for the Baffinland Iron Ore Company. This work consisted of assessments and excavation of sites that fell in the footprint of the ore loading area as well as the route of a 150-km railway. He has had multiple archaeology reports approved by the Newfoundland Provincial Archaeology office, the Alaskan Department of the Interior and most recently an ethnographic report approved by the Nunatsiavut Government. Mr. Hutchings co-directed the background and field research for the 2016 Historic Resources Management Program, and co-authored this report.

Sara Beanlands, BA, MA (Archaeologist), has worked in cultural resource management for the past 12 years and has been involved in archaeological and heritage research since 1994. Ms. Beanlands holds a BA in History and Social Anthropology from Dalhousie University and a Master’s degree in History from Saint Mary’s University. Combining her formal training in history and anthropology with over a decade of practical experience in cultural resource management, she has undertaken a wide range of archaeological projects for both private and public sector clients in Nova Scotia, Newfoundland and Labrador, and Ontario. She has coordinated and conducted over 40 archaeological assessments, including large-scale utility, wind power, hydroelectric, mining and linear developments, as Principal Investigator. As a project manager, Ms. Beanlands has served as project manager on a wide range of projects, including archaeological assessment of various components of the Maritime Link Project and the Mersey River Hydro system. She is currently an Adjunct Professor in the Department of Anthropology at Saint Mary’s University. Ms. Beanlands co-directed the field research for the 2016 Historic Resources Management Program, and co-authored this report.

K. David McLeod, MA (Archaeologist) has over 40 years of archaeological experience, including environmental impact assessments and mitigation, site excavation, site monitoring, site remediation, site survey, geophysical surveying, and report writing. He has participated in, and conducted, heritage resource and environmental studies throughout British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, and Labrador. David has extensive knowledge of designing field objectives, implementing field reconnaissance, and reporting requirements that are necessary for environmental assessment projects including hydro generating stations and transmission lines; fibreoptic cable installation; highway development; recreational, residential, and commercial subdivisions, heritage site interpretation; and soil remediation. David has analyzed fur trade era artifacts from along the Missinaibi River in northern Ontario, excavated several Hudson’s Bay Company wintering sites in northern Manitoba, has completed archaeological assessments at the former location of Upper Fort Garry in Winnipeg, Manitoba, and has conducted numerous hours of archival research examining trade post journals at the Hudson’s Bay Company Archives in Winnipeg. David has also completed archaeological excavation at Métis homestead sites along the Red and Assiniboine rivers in the former Red River Settlement in present-day Winnipeg. David has participated in several oral history projects for First
Nation land entitlements, site protection, cemetery restoration and Traditional Land Use and Occupancy studies for environmental assessments. He has prior experience in public consultation and presentation, and has participated in designing and developing interpretive displays for cultural centres. David has also developed geophysical survey techniques to locate buried features such as unmarked burials, former building foundations, activity areas within archaeological sites, underground utility conduits, and underground storage tanks. The non-intrusive nature of geophysical surveying provides data for areas that require remediation, avoidance, geotechnical drilling locates, and/or mitigation. Mr. McLeod co-directed the field research for the 2016 Historic Resources Management Program, and co-authored this report.

Vincent Bourgeois, MA, (Archaeologist) has 25 years’ experience in archaeology and cultural resource management in both public and private sector capacities. He completed a Master’s degree in Anthropology from the University of New Brunswick with a focus on the study of precontact Aboriginal ceramics in the Northeast. He has participated in numerous field projects in New Brunswick, Nova Scotia, Prince Edward Island, Labrador, Ontario, and New Jersey. His primary areas of expertise include historical and pre-contact archaeology, and archaeological impact assessments including shovel testing, excavation, mitigation, and historical research. He also has practical laboratory experience that includes both historic and precontact artifact analysis and cataloguing. During this time, he has had the opportunity to excavate numerous First Nations Pre-contact archaeological sites from the Paleo-Indian, Archaic and Woodland Periods as well as Euro-Canadian archaeological sites dating to the protohistoric, early French, Acadian, Scottish, Loyalist, and 19th century industrial periods. Mr. Bourgeois is bilingual. Mr. Bourgeois co-directed the field research for the 2016 Historic Resources Management Program, and co-authored this report.

Miki Lee, (Conservator) is an associate of Stantec Consulting Ltd. with over 15 years’ experience in conservation treatment and preservation consulting for an extensive range of municipal, provincial, and federal institutions. Ms. Lee has trained and directed teams in both archaeological and historical conservation treatment, collections management, and preventive conservation. Accredited through the Canadian Association of Professional Conservators (CAPC) in 2007, Ms. Lee’s areas of specialty include preventive conservation, archaeology, archives, mixed collections, collections management, and education. Ms. Lee served as Project Conservator, designing the artifact processing, shipping, and conservation procedures, and establishing the artifact processing facilities for the Project. Ms. Lee also prepared the description of conservation methodology for this report.

Table 2.3 lists the complete historic resources team as well as their identified roles.
Table 2.3  2016 Historic Resources Assessment and Recovery Personnel

<table>
<thead>
<tr>
<th>Role</th>
<th>Personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Management</strong></td>
<td>Diane Ingraham (Senior Project Manager), Wayne Tucker (Project Manager)</td>
</tr>
<tr>
<td><strong>Technical and Field Archaeology Leads</strong></td>
<td>Fred Schwarz, Corey Hutchings, Sara Beanlands, David McLeod, Vincent Bourgeois, Tony Parr, Stacey Camus</td>
</tr>
<tr>
<td><strong>Project Conservator</strong></td>
<td>Miki Lee</td>
</tr>
<tr>
<td><strong>Team Leads and Wilderness First-Aiders</strong></td>
<td>Corey Hutchings, Stacey Camus, Caroline Hong, Tony Parr, Randy Best, Chris White, David Sheppard</td>
</tr>
<tr>
<td><strong>Data Analysis and Report Preparation</strong></td>
<td>Fred Schwarz, Corey Hutchings, Sara Beanlands, David McLeod, Vincent Bourgeois</td>
</tr>
<tr>
<td><strong>Senior Technical Review</strong></td>
<td>Chris Blair</td>
</tr>
<tr>
<td><strong>Field Technicians</strong></td>
<td>Jonathan Allen, Mary Ann Aylward, Brittany Barrett, Randy Best, Ken Blackmore, Doman Campbell, Marjorie Campbell, Margie Clarke, Marjorie Flowers, Amy Goodyear, Savin Gregoire, Bradley Guy, Judy Guy, Jean Luc Hervieux, Robyn Hillier, Jonathan Holley, Robert Holwell, Stephen Holwell, Roslyn Hunter, Scott Kautjasak, Mary Charlotte Michel, Maggie Neilsen, Jeremy Nuna, Caitlin Pardy, Lewis Penney, Taylor Pilgrim, Tony Pilgrim, Hannah Robia-Rich, Jamie Rose, David Sheppard, Rachel Snelgrove, Bernice Tracey, Darren Ward, Chris White, Daniel Windeler</td>
</tr>
<tr>
<td><strong>Health, Safety, Security &amp; Environment</strong></td>
<td>Caroline Hong, Doug Schaefer, Kyle Ferguson</td>
</tr>
<tr>
<td><strong>Artifact Cataloging Packaging and Shipping</strong></td>
<td>Charlene Clark, Margie Clarke, Mary Ann Aylward, June Flowers, Chris White, Barry Keough, Robyn Hillier, Jessica Steffler, Amy Goodyear, Judy Guy, Corey Hutchings, Fred Schwarz, Patrick Oliver</td>
</tr>
<tr>
<td><strong>GIS</strong></td>
<td>Chris Shupe, Heather Ward, Ryan Melanson, Neil Mackey, Miranda Huskins-Shupe, Kasia Rozalska, Kelly Taylor</td>
</tr>
<tr>
<td><strong>Project Support and Controls</strong></td>
<td>Mary Ann Aylward, Victoria Greeley, Barry Keough, Wayne Tucker, Lois Strangemore, Patrick Oliver, Robin Power</td>
</tr>
</tbody>
</table>

2.7 Field Team Training Program

Relevant training for field work is important to the success of the program. The field team (noted in Table 2.3) consisted of some personnel who have acquired training and experience in efficient and effective archaeological excavation and cataloguing over multiple field seasons. Each person received one day of refresher training. One artifact processing specialist (along with two Field Team Leads) had previously (in 2014) received a two-day training course in field stabilization, block-lifting, and conservation of artifacts delivered by the Canadian Conservation Institute, and an artifact processing orientation delivered by the Project Conservator. In addition, several local persons with experience in environmental science were selected to participate in fieldwork, and were given a one-day course, as well on the job instruction under the supervision of the Team Leads and were mentored by those with prior field experience.
3.0 STAGE 1 BACKGROUND RESEARCH RESULTS

During Stage 2 assessment of the LCP in 1998 and 1999, the North West River HBC post records in the HBC archives in Winnipeg, MB were reviewed for information on the nature and location of HBC outposts on the Churchill River, principally the Sandy Banks and Fort Winokapau outposts. Little specific information on the Sandy Banks outpost was obtained during this review. The results are summarized in Section 3.1 (for more detailed reviews, see IED/JWEL 2000; JWEL/IELP 2001a).

In 2016, further research was undertaken at the HBC archives in Winnipeg, Manitoba for information on HBC construction methods in the Labrador outposts to assist interpretation of the structural remains exposed during recovery work at FgCg-01 Locus D. As noted, little information is available for the Sandy Banks outpost itself. The records for other contemporary HBC posts in central Labrador (including the North West River post, Fort Nascopie, Winokapau House, and Michikamau House), although detailing HBC sites located outside the present Study Area, proved to be extremely informative. The results of this review are summarized in Section 3.2.

3.1 Sandy Banks

3.1.1 Sandy Banks HBC Post

The HBC acquired ownership of the North West River post in 1836 and soon began to implement plans to expand operations into the Labrador interior. Sandy Banks was first mentioned in the North West River post journals in 1839. But the earliest reference to Sandy Banks is contained in an 1837 letter from H. Comeau, manager of the D.R. Stewart operations at North West River at the time of the Hudson’s Bay HBC’s arrival. Comeau’s note, written at Sandy Banks to Mr. McGillivray, the HBC Factor, registers a complaint that HBC men have “in passing demolished and burnt part of my Store at Rapid” (HBC B153/a/1/38d; Saturday, February 4, 1837). Comeau’s note suggests that Sandy Banks was in use prior to 1836.

The next documentary reference to Sandy Banks (as well as to Gull Island) occurs in the North West River Post journals of July 6, 1839 when the entry reads: “I was in the store fitting out the Indians and at night they all so cut [sic] off for the interior not to return here till next year – but to meet a trader sent by me next winter at Sandy Banks or at Gull Island” (HBC B.153/a/2/f82; Saturday, July 6, 1839). The October 8, 1839 entry for the North West River journal reads: “At 8 a.m. Mr. McKenzie left for Sandy Banks with 2 men. He will remain there 8 or 10 days at that place to direct Mr. Christie with (word illegible) to the trade” (HBC B.153/a/2/f82; Tuesday, October 8, 1839).

Thereafter, Sandy Banks Post appears to have seen two periods of intensive (construction) activity: 1841 to 1845, and 1875 to 1877 (Anick 1976:667, 675; HBC B.134/k/1, p. 58; HBC B.153/b/2, p. 83).
The Post manager for 1841 to 1842 was George McKenzie. Between 1842 and 1844 Donald Henderson ran Sandy Banks, and from 1876 to 1877, James Lawson, Apprentice Clerk from North West River, operated the post.

In 1841 and 1842, George McKenzie managed the Sandy Banks outpost (IED/JWEL 2000), where men were engaged in trapping marten as well as trading with the Montagnais. In 1841, the establishment consisted of a store and dwelling house. The former collapsed during the winter and was most likely restored in the spring. The dwelling house was reroofed, partly with boards and partly with bark, in 1842 (Anick 1976). Turnips were grown in the garden at Sandy Banks, and 36 barrels of them were harvested in the summer of 1841.

In 1842, and again in 1844, William Nourse, the factor at North West River, considered abandoning Sandy Banks (see Anick 1976), but the outpost remained in operation, at least in part as a staging area for the outfits to more remote outposts, such as Winokapau House and Michikamau House. A small outpost of Sandy Banks at Gull Island was also occasionally maintained as a depot for the annual outfits upriver.

Trade at Sandy Banks seems to have been with Innu from both the North West River area and the Lower North Shore of the St. Lawrence. George McKenzie writes to William Nourse on April 26, 1842 that:

"Except Asshinii and his two brothers, Witnaw, Antoine’s family, Espitau and young Mistantanapesh and brother, are the only natives of this place or Bay, all the others are natives either of 7 Islands, Mingan or Masquaro. Antoine was originally an interior Indian, but for many years belonged to Mingan" (HBC B.153/c/1, cited in IED/JWEL 2000).

After the early 1840s there is little reference to building or rebuilding activities at Sandy Banks, but from 1866 until March 1873, Sandy Banks was operated during the trapping season by Henry Hay and family for the HBC, and in other years by various HBC employees.

Sandy Banks was last mentioned in the Post journal in December 1875, when the Sandy Banks crew arrived back at North West River Post for four days’ holiday over the New Year. It is doubtful that the post ceased operations at that time, for in the spring of 1875 the HBC had constructed a new store at Sandy Banks and repaired the existing house, as the following North West River journal entry states: “A. Sanderson and Henri left for Sandy Banks where they are to put up a store, repair the house & afterwards go up to Gull Island to put the place in order and then bring down the flats to the Rapid. As it will be necessary in future to keep a stock of Provisions etc. to supply the Inds. to prevent them from straggling. Mr. Michaud & Wachekat’s son went with them and are to return from the Rapid” (HBC, B.153/a/24/6d, Wednesday, May 5, 1875).

The absence of regular entries referencing Gull Island and Sandy Banks after the 1875 to 1876 trapping season may be due to a change in the style of the journal entries rather than an alteration in HBC trapping locations. After August 1, 1875, with the advent of a new journal keeper,
entries become brief and lack geographic detail. For instance, on Sat. Sept. 16, 1876, the entry simply notes that Henry Hay and family left for “winter quarters”, whereas in the past, the destinations were noted of all men on HBC business departing North West River. Thus, the outposts of Gull Island and Sandy Banks still may have been in use, however, the journal entries are no longer specific. Another concurrent change was that the HBC no longer sent its own employees to the winter traplines; numerous planters trapped for the HBC and were outfitted by, and in debt to, the HBC.

In summary, Sandy Banks was operated intermittently and seasonally as an outpost of the North West River Post for a period of 39 years between the 1830s and 1870s. Records indicate that the Post was comprised of at least two (and possibly three) principal buildings, including an accommodations building and a “store” (storage building/trading room). Sandy Banks, like other outposts, was in operation during the fur trapping months, approximately September to May of each year, and served as “winter quarters” for HBC employees. Each HBC crew was responsible for maintaining a series of tilt runs at the outpost to trap fur bearers. As well, the crews at each outfit were expected to trade with and supply Innu who were loosely associated with each outpost; the Innu trapped further afield but made regular return visits to trade furs, fresh caribou meat or hides for provisions. Trade goods (blankets, cloth, flannel, ammunition, and tobacco are mentioned in the North West River Post journals) and food supplies (records exist for flour, biscuits, dried peas, corn meal and pickled pork or beef in barrels) were transported to the outposts from North West River each year with the help of Innu crews using flats (flat-bottomed river vessels), canoes, and portaging (JWEL/IELP 2001a). Sandy Bank often served as a storage depot or staging area for the annual outfits to the more remote outposts deeper in the Labrador interior.

3.1.2 Sandy Banks After the HBC

During the operation of the HBC outpost at Sandy Banks, until the last quarter of the 19th century, the fur trade in central Labrador was almost entirely conducted between the HBC and Innu hunters and trappers (although as noted, some of the HBC fur returns were trapped by HBC employees, not acquired by trade). There were also resident planters or Settlers (as they are referred to in contemporary sources; e.g., Low 1896) trapping along some of the rivers, but they were relatively few (Cotter 1922, cited in Zimmerly 1975). However, in the 1890s, this changed as permanent residents of upper Lake Melville, began to trap intensively along the Churchill River. Many of these individuals appear to have been former HBC employees, with long experience trapping for the company in “winter quarters,” or to have been the descendants of HBC employees. The trapping grounds initially exploited appear to have been those relatively close to Lake Melville on the lower reaches of the principal rivers, including the Churchill. From the very beginning, a body of customary law held that trapping grounds belonged to the Settler who first built a cabin and set out trapping paths along a stretch of the river (e.g. Groves 2013; Cotter 1922; account of John Blake in Fitzhugh 1999: 395-397).

Although several individuals were involved in expansion of the Settler trapping enterprise, one name that often appears in both documentary and oral history accounts as particularly important
in the expansion along the Churchill River is that of Joseph Michelin. (e.g., Cotter 1922; Menick 1933; Michelin 2013; account of John Blake in Fitzhugh 1999: 395-397; account of S. Michelin in Fitzhugh 1999: 399-401)

Joseph Michelin was born in 1846, the son of Mersei (variously spelled “Marseilles,” or “Mercellet,” or even “Marcel”) Michelin of Trois-Rivieres, who was an HBC employee during the zenith of the HBC outposts on the Churchill River in the 19th century. Joseph Michelin was able to take as his “place,” the abandoned HBC outpost site at Sandy Banks, the most convenient and closest trapping ground above Muskrat Falls. It is said that he purchased the site (or possibly the trapping ground) from an Innu man who owned it (account of Stewart Michelin in Fitzhugh 1999). While possibly true, this would not be the only time Joseph Michelin had taken ownership of an abandoned HBC property. His main house at Traverspine River had originally been an HBC outpost until it was abandoned in 1844 and acquired by former employee John Goudie. Goudie departed for Kaipokak Bay in 1872 and the HBC reacquired it and at some point in the next 20 years it passed into the hands of Joseph Michelin (see Zimmerly 1975).

It is not known precisely when Joseph Michelin began trapping from Sandy Banks, but as noted above, the growth of Settler trapping along the Churchill River seems to have begun in the 1890s (Cotter 1922), and it is likely that Sandy Banks was among the first of the trapping grounds to be established under Settler customary law. Nor is it clear precisely where Joseph Michelin’s establishment may have been. Joseph’s son Stewart (1894-1987) built a tilt approximately 60 m west of the old HBC post site in 1922 (Dawson 2013). This corresponds with the tilt at FgCg-01 Locus C (Stantec 2015; 2016). Sometime after the 1930s, Brian Michelin (son of Stewart, born 1917) acquired the tilt and he continued to trap the area until he retired in 1987 at the age of 70 (Michelin 2013). The location of any preceding post-HBC Sandy Banks tilt is unclear. When A.P. Low travelled through the area in 1894, he mentions no standing buildings of any sort at the site of the Sandy Banks post, noting only that “... the Hudson’s Bay Company formerly maintained a small trading Post on the North side, where the site of their clearing is marked by a new growth of birch” (Low 1896). Either Joseph Michelin had not yet built a cabin here in 1894, or his premises were located elsewhere in the area. In this regard, it is interesting that Brian Michelin’s brother Richard (born 1927) remembers staying in an “older tilt” just below the island east of Sandy Banks and returning later to a “new cabin” (presumably Stewart Michelin’s then relatively new tilt at FgCg-01 Locus C) above that site (Dawson 2013). The location of this otherwise unattested “oldertilt” would appear to correspond to the archaeological site at FgCg-04.

3.2 HBC Post Construction and Maintenance in Central Labrador

3.2.1 Introduction

The construction styles and materials, number and orientation of buildings, and extent of post fortifications varied for the HBC trade posts throughout North America. The geographical location of the post, the duration of occupation, and the type of activities conducted at the post generally dictated the nature and extent of the structures. For example, Upper Fort Garry, the HBC’s
northwest administration centre in present-day Manitoba, consisted of retail stores, and storage buildings constructed in the Red River frame style enclosed within limestone walls. The complex was designed to not only reflect its importance in the company’s administrative power in the western interior but also as a symbol of the HBC’s station in the societal framework of the interior in general and the Red River Settlement in particular (Loewen and Monks 1986:6). By contrast, wintering posts were designed to accommodate the number of HBC staff assigned to the post, to store articles of trade and provisions, and to provide a structure where trade negotiations with the local indigenous population could be conducted. Occasionally palisades surrounded these complexes to restrict entry and for protection from competing trade competitors. Trading post journals often contain information regarding construction methods, size of the structures, and interior finishing and furnishings.

The physical remnants of the fur trade structures regardless of size, location, or importance, seldom remain above ground. What remains are the buried archaeological features such as foundation mounds, sill logs, post holes, chimney hearths, collapsed structural components, the architectural hardware, window pane fragments, and any debris that remained when the site was abandoned. Archaeologists expose, record, and interpret these features to gain an understanding of the physical space the site occupants inhabited, to provide a context for the distribution of artifacts, and to contrast with other sites within a region or through time.

Because of what are assumed occupational or post-occupational events that resulted in the destruction by fire of the four structures excavated at FgCg-01 and the building remnants at FgCg-04, the structures presented an enigma regarding date and method of construction, interior finishing and, for FgCg-01, how the four buildings related functionally and chronologically.

3.2.2 Archival Sources

A variety of archival sources were examined to gain insights into the methods of trade post construction in central Labrador, as there are no journals pertaining to either Sandy Banks or Gull Island. It was assumed that if winterers were being sent from North West River into the Labrador interior, the post managers were given common instructions on the preferred construction methods for, and appropriate number of, structures that were necessary at a post. The post journals for North West River, Fort Nascopie, Michikamau House, and Winokapau House were examined.

The HBC constructed a post at North West River on Melville Bay in 1836 and the store was operated into the 1940s (Anick 1976:645). Journals from 1836 to 1879 were reviewed primarily to gain insights into the construction methods at North West River during the early years of operation and to record any information pertaining to Sandy Banks (H.B.C.A B.153/a/1 to 26; Reels 1M105, 1M106, 1M1013). Building inventories completed in the early 1900s were also examined as these listed the extant buildings at that time as well as date and method of construction (H.B.C.A. G.7/13/ (7) folio 203 1920-192).
Fort Nascopie was constructed in the Lake Petitskapau area by Erland Erlandson in June 1838 (Anick 1976:664). The post was operated intermittently until ca. 1870. Journals reviewed for Fort Nascopie cover the period 1842 to 1845 (H.B.C.A. B.139/a/1 to 4; Reel 1M96).

Michikamau House was an outpost of Fort Nascopie and was built in 1844 by George Alder on the northwest shore of Michikamau Lake (Anick 1976: 674). The lake is approximately 80 km upstream of present-day Churchill Falls. Alder was sent with three men from North West River, stopped at Sandy Bank to collect his winter supplies and trading goods, then continued up the Churchill River to establish the post. It was operated until ca. 1850. All available journals were reviewed and covered the period from 1846 to 1849 (H.B.C.A. B.128/a/1 to 3; Reel 1M79).

Winokapau House was constructed on Winokapau Lake, a widening of the Churchill River, about 80 km downstream of present-day Churchill Falls. Post records date from 1863 to 1869 and 1873 to 1874. Voorhis (1930: 180) indicates that the post was established about 1830 but abandoned in 1876 and was soon afterwards destroyed by fire. All available journals were reviewed and covered the period from 1863 to 1869 (H.B.C.A. B.237/a/4; Reel 1M154 B.128/a/1 to 3; Reel 1M79).

### 3.2.3 Preparation and Construction

Construction sequences at both Michikamau and Winokapau House were similar despite being built almost 20 years apart. As soon as the HBC winterers arrived they first constructed a temporary log tent shelter for accommodations and then a fish drying tent. The first step in construction of the post was to clear an area large enough for the structure. Generally, this took from two to three days depending on the number of staff. The men would then collect logs and begin squaring them. Once sufficient logs had been squared the building foundation and sleeper (i.e., support) logs were laid and then wall construction began. All journals examined indicate that the structure walls were constructed of squared logs. Logs were usually hauled to a sawpit where the men would cut them into appropriate lengths and then haul the finished timbers back to the construction site. No dimensions of the Nascopie buildings were reported. A 15 ft x 10 ft (4.5 m x 3.0 m) dwelling was constructed at Michikamau House in May of 1846. The log smoke house at Winokapau was 10 square feet in area, or 0.9 m².

Surveys of HBC holdings at North West River in 1917 recorded the date and method of construction of extant buildings (Table 1). More attention to detail may have been given to these structures because North West River was operated annually. Table 1 lists only the buildings constructed prior to ca. 1900.
Once the site had been cleared and the logs squared, the next step was to begin wall construction. The Winokapau journal for September 1863 summarizes how the building frame was erected. Initially four corner posts were grooved and erected. Then squared frame logs were fitted and additional posts were installed. Window frames were also installed. Gradually the walls were built up and then upper wall logs and structure beams were put in place. A ridge pole was installed once the walls had been built up and squared logs were fitted at the gable ends. This suggests that the buildings were constructed using the mortice and tenon style of construction. There is no mention if the corner posts were buried, post on beam or post on ground. The Winokapau House journal entry for September 22, 1863 stated that six posts had been “set” for a building on September 18 and a seventh was “set” on that day. Perhaps setting a post referred to burying the support post.

The next construction step was the roof. Both Michikamau and Winokapau House where roofed using roofing sticks. At Winokapau House, approximately 40 roofing sticks for the dwelling were cut from areas surrounding the building site and transported back to the house where they were squared and straightened. The sticks were then fitted to complete the roof. At Winokapau House the men then caulked the roof of the house with moss. At Michikamau House the men caulked the new house with moss then collected clay and plastered the roof. Pine bark was then collected to cover the roof.

Once the roof was complete at Michikamau House, men gathered stones and clay to construct a chimney. At Winokapau House, the chief trader sent two men with a large flat boat to Gull Island.
to collect a stove. The stove was fitted with stove pipes that were made on-site. The dwelling at Winokapau House had two windows that were glazed before installation. The structure had one doorway and the door was hand made. The structure was then completed by installing sawn and planed flooring. Construction of the Winokapau House began on October 20, 1863, and the chief trader moved into the completed structure on November 16, 1863.

Clay sources were sought out at Michikamau House as the journal entry for September 13, 1848 stated that Gibson and Louis carried some clay to the house to “make a chimney and be used for sundry purposes”. Both Michikamau and Winokapau House used clay to plaster the roof and other portions of the structures. The Nascopie journal entry for November 3, 1845 recounted that, on that day, the men were “washing the outside of the houses with clay”. Given that freeze-up had occurred in mid-October, this suggests that a stock pile of thawed clay was kept at the post.

A new dwelling was constructed by Joseph McPherson and his men at Michikamau House between August and November in 1848. While the basic construction was like that of previous dwellings, the new structure had an attached kitchen and front and back doors. Several windows were also fitted and installed.

Some construction variation was noted for the Winokapau House dwelling. The post master had staff collect brush that was used to thatch the roof. The roof was then covered with oil and bale cloths. The men the sawed roofing boards that, it is assumed, were installed on the interior portion of the roof. One of the structures at Winokapau was covered with weatherboarding, which may have been some type of horizontal siding.

Construction activity at Michikamau and Winokapau House appears to have been an ongoing activity throughout the winter and over the course of the years covered by the journals. The sequence at both locations was similar. First a temporary shelter, then a fish storage tent, then a store, followed by a dwelling for the post master and then the Men’s dwelling. The result was that each wintering post had two or three buildings that were occupied during the season. A photograph of Fort Nascopie ca. 1894 serves as a good example of how the HBC buildings may have appeared (Photo 3-1).

### 3.2.4 Interior Finishing

The amount and complexity of the interior finishing was largely dependent on the building function. At Michikamau, George Alder and James Brass spent several days fitting up the dwelling house with a table and seats. Meanwhile, John Gibson and William Linklater were cutting wood for shelving in the store. In October 1846, Alder instructed two employees to collect and saw logs for a counter that they installed in the store. Wooden drawers were then fashioned and placed in the counter. The dwellings at Winokapau House were finished with wooden beds, tables, and stools. Each structure, those being the post master’s dwelling, the Men’s dwelling and the store, had a stove.
3.2.5 Repairs and Site Maintenance

In 1848, repairs to the existing Men’s House were begun once the new dwelling had been completed. The repairs included taking window glass out of the old frames and putting them in new ones, then installing the new frames.

In June 1849, just prior to returning to North West River, McPherson had a staff member remove the old dwelling house roof and replace the roofing with new beams, green roofing sticks and fresh pine bark to cover the roof.

Repairs were infrequent at Winokapau House but a building addition was added to one of the dwellings in October of 1864.

Site maintenance generally consisted of brushing around the extant buildings, clearing stumps around the structures, and general house cleaning. Usually rubbish accumulated during the winter and was then cleared out of the structures in spring just prior to departure for North West River. An exception to this was at Winokapau House during the winter of 1868 to 1869 when a servant, identified only as Fraser, was instructed to wash the dwelling house floor every Saturday.
4.0 STAGE 3 RECOVERY RESULTS: FGCG-01 LOCUS D

The larger of the two sites recovered in 2016 was FGCG-01. At 1211 m² total excavated area, FGCG-01 was by far the largest archaeological site recovered in the Churchill Valley to date.

4.1 SITE OVERVIEW

FGCG-01 is situated on the northern side of Churchill River at Sandy Banks, approximately 20 km west of the Muskrat Falls portage and mid-way between Muskrat Falls and Gull Lake. FGCG-01 is comprised of four separate loci - Locus A, B, C and D (Figure 4-1). Recovery work at the western end of the site in 2014 and 2015 resulted in the complete recovery of cultural materials from Locus A (a series of precontact and historic-period hearths) and Locus B (consisting of precontact hearths and lithic scatters). Locus C, the remains of a 20th-century trapper's tilt and associated surface midden, was also tested in 2015. Locus D, situated northeast of Locus B, is the remains of the 19th century Sandy Banks HBC outpost. Recovery work at Locus D commenced in 2015 and was completed in 2016. Major recovery operations at FGCG-01 in 2016 were focused on completing the recovery of Locus D. However, limited recovery was also undertaken at Locus B and Locus C.
Figure 4-1  Overview of Site Loci at FgCg-01
4.1.1 Miscellaneous Investigations in FgCg-01 Locus B and Locus C

Recovery work at Locus A was completed in 2015 and no further work was required in 2016. However, limited recovery was undertaken at Locus B and Locus C.

4.1.1.1 Locus B

Locus B is situated in the centre of FgCg-01, east of Locus A, west of Locus D and southeast of Locus C. Recovery work at Locus B in 2014 and 2015 revealed a deep, complex, and unusual nature of the stratigraphy composed of multiple alternating deposits of sand and clay. Although recovery of cultural materials was completed in 2015, this Locus was revisited in 2016 to collect five samples of sand and clay deposits from the western sidewalls of the 2015 excavations. These soil samples were collected in opaque ABS tubes and the ends sealed to prevent exposure of the sediments to light (Photo 4-1; Photo 4-2). These samples (Table 4.1) have been catalogued and retained in the collection. Future Optically-Stimulated Luminescence (OSL) dating of the sediments at Locus B may assist in clarifying the nature and dating of the site formation processes at this unusual precontact site.

<table>
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<th>Northing (m)</th>
<th>Depth Below Datum (m)</th>
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</tr>
</tbody>
</table>
STAGE 3 RECOVERY RESULTS: FG CG-01 LOCUS D
September 28, 2017

Photo 4-1  Locations of OSL Samples OSL1 (Top) and OSL2 (Bottom) During Collection at FG CG-01 Locus B

Photo 4-2  Locations of OSL Samples OSL3 (Top), OSL4 (Middle) and OSL5 (Bottom) During Collection at FG CG-01 Locus B
4.1.1.2 Locus C

Locus C is situated north of, and directly adjacent to, Locus A. This Locus consists of the deteriorated remains of a 20th century trapper’s tilt and an associated midden of relatively modern debris, including metal fuel containers, glass bottles, ceramic tableware, and metal stoves and trapping equipment. Most of the surface-visible materials appear to date to the 1970s, but two artifacts were collected in 2016: a mid-20th-century marten trap, and a factory-made cylindrical sheet-metal stove with endcaps.

In all, 34 fragments of the cylindrical heating stove were recovered from the surface of FgCg-01 Locus C (Photo 4-3). The stove is a vertical-cylinder “Tortoise-style” stove with a body of rolled metal sheet that is attached to two cast iron plates with three steel rods, made by McClary Manufacturing, which was established in London, Ontario in 1871. The fragmented cylindrical body measures approximately 46 cm in length and 33 cm in diameter, while the recovered end plate measures approximately 34 cm in diameter. The inside of the plate is embossed with “Ex 21 1911”, while the outer surface is embossed with “Registered 1896” and displays a decorative design (Photo 4-3: A). The collar, which attached the rods to the plate, is embossed with the maker’s mark “McClary London Ont” (Photo 4-3: B). An oblong-shaped fuel door collar (Photo 4-3: D), which measures approximately 23 cm long and appears to have some illegible markings, and a fuel door (Photo 4-3: C), were also recovered. The stove would have been small and potable and an ideal source of heat for an early twentieth-century trapper’s tilt.
4.1.2 FgCg-01 Locus D: Site Stratigraphy and Distribution of Structures and Features

FgCg-01 Locus D is situated on the east side of a narrow gully, 28 m to the east of Locus B, and extends along a narrow and partially-deflated terrace to another gully approximately 50 m further to the east. In 2015, testing and subsequent recovery work at Locus D confirmed this as the specific location of the 19th century Sandy Banks HBC Trading Post (see Stantec 2016).

Recovery work at Locus D in 2015 led to the identification of three structures arrayed in a line (Figure 4-2), two of which (Structures 1 and 2) were characterized by well-defined earth embankments around their perimeters, especially on their northern sides; each of these structures also contained a deep interior pit interpreted as a cellar, and a second, shallower interior pit feature. Structure 3 did not initially appear to be embanked, nor was a cellar apparent. Exterior features identified in 2015 included several shallow pits, and one very deep pit, identified as the likely location of a privy.

Photo 4-3 Stove Fragments recovered from FgCg-01 Locus C

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35 File No: 121413999
Figure 4-2  Plan View of Features and Structures Recorded at FGCG-01 Locus D
Continued recovery at Locus D in 2016 (Figure 4-2) subsequently led to the identification of a fourth, subtly-embanked structure (Structure 4) situated to the east of the three previously identified, along with additional interior and exterior features described in detail below.

Evidence for a variety of site historic excavation and construction activities was encountered during recovery work. Consequently, numerous natural and cultural deposits (“Events”) were recorded, many quite localized. In all, 124 stratigraphic “Events” were identified at FgCg-01 Locus D. Many of these were manifested in multiple 2 m x 2 m excavation units, leading to the definition of 856 “Lots” in total (for a definition and description of “Lots” see Section 2.3; Appendix A, Appendix B).

Site stratigraphy at FgCg-01 Locus D was therefore complex, varied considerably across the site, and is difficult to summarize concisely. The unique stratigraphy within each Structure and Feature is therefore described in more detail below.

Broadly, the uppermost Event (Event 1) in all units was the present-day duff, mixed with quantities of mulch because of recent tree-felling activities in the vicinity. This was generally underlain by a weakly-defined A Horizon mixed with tan subsoil and organic material (Event 2), the result of light disturbance of the original ground surface in the historic period. Thin mixed layers such as this were particularly characteristic of the terrace top south of the line of buildings. Event 2 generally constituted the topmost layer of sediment, and the artifacts within it reflect deposition on the final, post-abandonment ground surface at the site. In places, generally beyond the core occupation area of the site, the duff and mulch were underlain by well-defined soil development horizons. Within embanked areas, Event 2 was underlain by a variety of events, including redeposited subsoils (the earth berms surrounding each structure, such as Events 29 and 65), these overlying preserved buried sod (the original ground surface; (e.g., Events 46 and 74) resting in turn on well-defined soil-development horizons. Within historically-scraped areas (e.g., structure interior subfloors) Event 2 overlaid an undisturbed B Horizon subsoil (sometimes an indurated hardpan) from which the A Horizon had been removed during construction. More deeply-excavated areas excavated into the subsoil were infilled with fine slopewash silt, (e.g., sumps such as Event 59, and builder’s trenches such as Event 64) or with loose, slumped re-deposited subsoils (e.g., cellar pits such as Event 61). The terrace fall in front of the site, sloping down to the river, showed considerable deliberate discard of historic artifacts and debris, and exhibited widely variable localized stratigraphies, reflecting a combination of site formation processes, including the local discard of artifacts and debris in sheet middens, sweeping or raking of debris from the terrace-top above, slopewash, and slumping of undercut terrace edges (see Sections 4.6.5.2 and 4.6.5.4).

4.2 Structure 1 and Interior Features

Prior to the commencement of recovery work in 2015, Structure 1 manifested as the most conspicuous and well-defined surface-visible feature at FgCg-01 Locus D (Photos 4-3, 4-5; Figure 4-2). Particularly prominent was a high, steep-sided earthen ridge to the north, with lower, less well-defined ridges defining the eastern, western, and southern perimeters.
These berms enclosed a 4 m x 5 m level area surrounding a deep pit feature along with a second, smaller depression. In addition, a shallow linear depression ran from northeast to southwest, north of the northern ridge.

Photo 4-4 View Looking to the Northeast across Structure 1 Exposed to Top of Event 2 (beneath mulch layer), Prior to Excavation of Berms. Note high north berm at left, deep cellar pit right of centre.
Recovery of this structure in 2016 verified the presence and composition of the berms, as well as the presence of a cellar, and structural foundation timbers (see Figure 4-2). The various elements comprising Structure 1 are described in detail below.
LEGEND

- DUFF / MULCH
- DEVELOPED A HORIZON, BURIED OR OTHERWISE WEAK A HORIZON
- COARSE GREY-TAN MOTTLE
- FINE GREY-TAN MOTTLED, UNLAMINATED
- VIOLET-GREY SAND AND PEBBLES
- ROOT / STUMP
- COARSE TAN MOTTLE WITH A HORIZON AND SOME CHARCOAL
- BURIED SOD
- FINE MOTTLE, SLIGHTLY LAMINATED, FRIABLE ORANGE SILTY SAND WITH GREY AND CHARCOAL PATCHES
- UNIFORM ORANGE SANDY SILT
- FINE GREY SILT, SPARSE CHARCOAL
- LOOSE, SANDY, HOMOGENEOUS ORANGE FRIABLE SAND, MOTTLED WITH CHARCOAL
- CHARCOAL / BURN LAYER
  - 2a. MOTTLED, WEAK A HORIZON WITH CHARCOAL STAINS
  - 2b. MID-GREY-BROWN SILT, SIMILAR TO EVENT 11

**EVENT 18; LOOSE BEACH SAND**

**EVENT 11/45**

**PROFILE LOCATION**

**STAGE 3 RECOVERY RESULTS: FGCG-01LOCUS D**

**LOWER CHURCHILL HYDROELECTRIC DEVELOPMENT PROJECT 2016 HISTORIC RESOURCES ASSESSMENT AND RECOVERY PROGRAM**

**Figure 4-3 North-South Profile Across Structure 1 and the Terrace Slope**

**NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.**
4.2.1 Berms

The perimeter of Structure 1 is most clearly-defined by the mounded earth berms that enclose the structure on the northern, southern, eastern, and western sides. The northern berm, and the northern portions of the eastern and western berms are the most prominent, rising approximately 50 cm above the structure interior (Photo 4-6). To the south, the berm deposits are subtler, rising as little as 10-20 cm. The southern berm is broken by a narrow (75 cm) central gap, which may correspond to the entrance to the building (designated Pathway 5; see Section 4.6.6.5; Figure 4-9). The widths of the berms are somewhat variable, ranging from 1.9 m on the north berm, to as little as 1.5 m wide on the south berm; These berms are interpreted as earthen embankments erected against the foundation timbers of the building to stabilize the foundations and exclude drafts and water.

Photo 4-6 Section View of Structure 1 North Berm During Excavation. Builders trench at far left, structural timbers beneath toe of berm at right. Note continuous buried sod and A Horizon beneath the berm (white arrow), and lenses of buried sod and illuviated soils (yellow arrow) within the berm deposit.

The berms are largely composed of an orange friable sand, mottled with occasional flecks of charcoal (Event 29), representing a redeposited subsoil (see Figure 4-3). These berm deposits directly overlie a buried sod and underlying A Horizon (Event 46) which represents the original ground surface on which the building was constructed. Event 46 is present only in small patches within the Structure 1 interior, and essentially remains preserved only beneath the berm. Event 46, which predates the construction of Structure 1, yielded relatively few artifacts, none dateable, the majority being sherds of un-melted window glass.
The berm deposits (Event 29) also contained 2,646 artifacts. Most artifact classes were represented, though in most cases only in trace frequencies. Most pieces (87.3%) were architectural, including 80 fragments of clay daub, 180 nails and 445 pieces of tin sheet; the most abundant artifact type was window glass, represented by 1,606 sherds (61% of the artifacts recovered from Event 29).

Neither the artifact distributions, nor the berm deposits, were uniform throughout the berms.

The southern berm and southern half of the eastern berm were relatively low, as noted, and the sediments were consistent throughout the deposit, but the artifact yield was clearly layered: the base of the berm and the underlying buried sod yielded high frequencies of un-melted window glass, as did the top of the berm. However, the interior of the berm deposit here was marked by a layer of primarily melted window glass fragments. This indicates that the southern berm was constructed in two phases: the first phase, 5-10 cm thick, overlay a scatter of shattered windowpane, the second phase, also 50-100 cm thick, incorporated or capped a layer of melted windowpane. The uppermost layer of glass along the top of the berm is interpreted to reflect the final destruction event at Structure 1.

The northeastern corner of the Structure 1 berm consisted of a unique deposit not seen elsewhere around the building’s perimeter. Here, a thin (5-15 cm) layer of redeposited subsoil orange-tan (Event 29) resting on buried sod and topped with a layer of window glass, nails, and tobacco pipe fragments, was overlain by a thick (50 cm) deposit of fine grey clay approximately 2 m in diameter which was devoid of artifacts (see Photo 4-5, Photo 4-7). It was initially hypothesized that this deposit consisted of backdirt from construction of the adjacent cellar (Feature 1; see Section 4.2.6.1); however, archaeological recovery of the cellar revealed no significant clay deposits. Consequently, this clay must have been deliberately introduced from elsewhere, presumably as raw material for chinking the building walls or mudding the roof.
The north berm of Structure 1 also exhibited evidence for two construction phases. A row of lenses of buried sod and illuviated soil (A Horizon) marks the base of the second berm construction layer and indicates that the soil for the second phase was acquired from previously-unbroken ground. It is hypothesized that the builder’s trench immediately to the north, which had been dug through the original ground surface, was the source of this second layer of fill. The structure interior may have been the source of fill for the first phase of berm construction. Unlike the southern and eastern berms, the north berm yielded little window glass, but the berm deposit contained quantities of tin sheet and clay daub fragments.

The Structure 1 berm did not extend east as far as the Structure 4 berm, and therefore no stratigraphic relationship between the two buildings could be defined. To the west, the Structure 1 west berm abutted the Structure 2 east berm, but the churned, mixed deposits along the path between the two structures (Pathway 3, see Section 4.6.6.3 below) truncated the toes of both berms, again precluding an assessment of which of the two structures was built first.
4.2.2 Builders Trench

North of the northern berm of Structure 1, there was evidence for the excavation of a 50-cm wide trench extending the length of the berm, approximately 5.5 m long. This trench had been excavated through the original ground surface and into the underlying indurated B Horizon to a depth of approximately 30 cm (Photo 4-8). This is interpreted as a builder’s trench (or more properly a borrow trench), excavated to acquire fill material for building up the north berm of Structure 1. The removal of the original ground surface from the trench (sod and A Horizon) suggests that this was the source of the buried sod and A Horizon lenses encased within the berm, and that the trench was excavated specifically to build up the second phase of berm construction at Structure 1.

Photo 4-8 Section View of Builders Trench Behind Structure 1 Berm. Note the break in the original ground surface (between the two arrows).
after its original excavation, the trench appears to have become infilled with a fine grey-tan silt washed in from higher ground to the south (the berm) and to the north (Photo 4-9). This silt deposit is partly overlain by the slumped northern flank of the berm (see Figure 4-3). The silt (Event 64) contained 192 artifacts, primarily tin sheet, clay daub and nails, and several wood fragments. The tin sheet and daub fragments likely broke away from the roof and/or the north wall of the structure. The artifact yield was otherwise sparse, indicating that this trench, which was likely a muddy ditch during the occupation of the site, was not a significant area for work or recreational activities or for artifact disposal. However, several large ceramic sherds recovered from the western end of the trench (Photo 4-12) reflect some casual discard; the size of the sherds, which were clearly untrampled, confirm that this was not a high-traffic area. The largest object recorded in the trench was a long, slender (2 m long and 3 cm in diameter) wooden stick showing several axe-cuts.

Photo 4-9  Builders Trench Behind Structure 1 Berm During Excavation, Showing East-West-Oriented Infill Line of Fine Grey-Tan Silt
4.2.3 **Structural Timbers**

In addition to scattered burnt timber fragments recorded on the top of the berms, several in situ burnt or partially-burnt timbers were encountered along the interior perimeter of Structure 1 (see Photo 4-10). These included the northern and western basal sills, resting directly on the original ground surface or on a thin veneer of silt (see Figure 4-3). Basal sills were accompanied by displaced foundation timbers exposed beneath the interior toe of the Structure 1 berm. The northern sill extended along the entirety of the northern perimeter of Structure 1, approximately 5 m long, and in fact, extended 50 cm beyond its intersection with the western sill. The junction between the two timbers was underlain by a thin deposit of soft beach sand. The junction between the southern and western sills was identifiable by crossed timbers overlying a lens of beach sand (see Figure 4-2); otherwise, the southern sill was not present. There was no evidence for the eastern sill, but the point at which the southern and eastern sills intersected was marked by another deposit of soft beach sand. Although only the western and northern foundation logs of Structure 1 were preserved, the eastern and western perimeter of the structure may be defined based on the sand deposits and the interior toe of the enclosing berm.
All foundation timbers recorded in Structure 1 were burnt or partially-burnt, and compressed by the weight of the overlying berm deposits; details of workmanship are therefore indeterminate, although the presence of a line of preserved knots recovered north of the north sill (Photo 4-11) suggests that at least one of the foundation timbers was minimally-dressed, and possibly only rinded.

Photo 4-11  Line of Preserved Wood Knots along the Northern Side of the Structure 1 North Sill

Assessment of the original corner construction method is problematic. At the northwest corner, a short timber (50 cm long) west of the western sill appears to represent an extension of the northern sill; the break in the sill at this point suggests that the sill at the corner was thinned or perforated in some fashion. A similar possible extension of the southern sill is evident at the southwestern corner (see Figure 4-2). This interrupted-overlap at the corners is potentially consistent with a mortised joint for post-on-sill construction, but is equally-consistent with saddle-notching of the corners for lapped-corner construction. Similarly, unusual sill overlaps (and unclear construction methods)
have been noted archaeologically at the Rocky Mountain House HBC post in Alberta (see Noble 1973).

It may be noted that the Structure 1 north sill is oriented approximately due southwest (225°), offset approximately 10° from the orientations of the other three structures at the site.

4.2.4 Sand Deposits

Six small deposits of soft loose beach sand were also recorded in Structure 1. These deposits were variable in size, and relatively thin (5-13 cm thick). Four of these either directly underlay, or were closely associated with, the northwestern and southwestern corners of the Structure 1 sill timbers (see Photo 4-12). The fifth is not associated with any timbers but is located at the southeastern corner of Structure 1, approximately where the southern and eastern sills would once have joined. No sand deposit was encountered at the northeastern corner of the building. Nevertheless, the association with the structure corners suggests that this sand was deliberately deposited, presumably to enhance drainage and discourage rot at the vulnerable corners of Structure 1. The presence of the sand may indicate that the corners were mortised, with the butt-ends of the corner post mortises in contact with the ground; this is perhaps more consistent with post-on-sill than with lapped-corner construction, but is not a conclusive indicator of the construction method.

The sixth sand deposit is situated outside, but immediately south, of Structure 1. The purpose of this deposit is unknown, but it may be associated with the front step to the main entrance, or may have been applied to re-surface a waiting-area adjacent to the front entrance.
4.2.5 Structure Interior

The interior of Structure 1 (see Photo 4-4, Photo 4-5) measured approximately 4.5 m by 4 m and was characterized by orange brown sandy clay (Event 52) and red-brown oxidized sandy silt, indurated in places (Event 54). Buried sod and illuviated silt (original A Horizon; Events 97 and 101) were present only in small isolated patches. The Structure 1 interior therefore appears to have been excavated and levelled during construction; the removed sediments presumably comprise the lowest and first phase of the perimeter berms. There was no evidence for sleepers or floorboards (although a deposit of charcoal fragments in the northwestern corner may possibly be burned flooring). Nevertheless, the presence of two pits within the interior (Features 1 and 2) would clearly indicate that Structure 1 was originally floored.
Artifacts were relatively sparse in the eastern half of the Structure 1 interior subfloor (119 pieces) and consisted primarily of clay daub, nails, and tin sheet. A denser scatter of 246 artifacts was recovered from the western half. These consisted primarily of clay daub, nails, and un-melted window glass, but also included four gunflints, a stove part, and three sherds of refined white earthenware. Artifacts recovered from patches of preserved A Horizon were few, but included 10 sherds of refined white earthenware (one of them pearl-glazed), nails, tobacco pipes, and a collection of 68 pieces of melted lead, presumably spoil from making shot; these last were primarily concentrated in the northwest corner of the Structure 1 interior.

Two pit features, designated Feature 1 and Feature 2, interrupted the generally level subfloor of the Structure 1 interior.

4.2.6 Internal Pit Features

4.2.6.1 Feature 1

Feature 1 was recognizable prior to excavation as a deep, broad pit, 2 m in diameter, situated in the southeast corner of the Structure 1 interior (see Figure 4-2; Photo 4-4, Photo 4-5). Excavation of the pit interior initially revealed a grey-tan loose sandy silt overburden (Event 61) that contained few artifacts (two stove parts, one piece of window glass, a nail, and a piece of scrap iron). This cellar-slump deposit was flanked on all four sides by an indurated B Horizon; the cellar pit had been excavated into this hardpan, through a narrow (2-3 cm thick) band of clay, to a depth of 1 m below the levelled interior subfloor of Structure 1. Within this pit, a “box” of burned wooden planks measuring 2.2 m east-west by 0.75 m north-south and 30 cm deep was uncovered. This box was constructed of four walls of peeled logs resting on a milled-plank bottom (Photo 4-14). The box was filled with orange sand containing charcoal and artifacts and capped by several E-W-oriented planks, interpreted as fragments of a wooden cover for the cellar box, but possibly also including burned floorboard fragments (Photo 4-13).

In all, 173 artifacts were recovered from the 30 cm-thick layer of orange sand inside this box (Event 71). These included 67 nails, some embedded in the planks and clearly part of the cellar structure, and 49 pieces of clay daub. Otherwise, the collection was small and diverse, including an iron pintle, possibly part of a hinge for the box lid, and an assortment of tobacco pipe fragments, stoneware sherds, refined white earthenware, shot, a cast-iron stove part and a gunflint. The assemblage is little different from that recovered elsewhere in the Structure 1 interior. It is likely that these pieces fell into the cellar after the building burned and was abandoned, and may not reflect the range of items originally stored there.
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Photo 4-13  Top of Feature 1, Showing Cover of Logs and Planks
4.2.6.2 Feature 2

Feature 2 was a small oval pit measuring 80 cm east-west and 50 cm north-south and situated within the western interior of Structure 1, almost immediately adjacent to the western sill of the building (see Figure 4-2, Photo 4-15). This pit was filled with a grey-brown soft silty sand (Event 59) and had been excavated into an extremely indurated B Horizon (a hardpan). Although generally shallow, it reached a maximum depth of 40 cm at the center.
Event 59 yielded a collection of 130 artifacts, a small assemblage but nevertheless a significant concentration within the generally sparse artifact distribution in the Structure 1 interior. Ninety percent of these (117 pieces) were architectural in nature, primarily un-melted window glass (87 pieces), clay daub nails, and tin sheet fragments. In addition, the deposit contained eight tobacco pipe fragments, two pieces of melted glass, and two pieces of scrap metal.

Feature 2 is interpreted as a sump excavated to collect water from the indurated subsoil of the Structure 1 interior and discourage rotting of sills and timbers. The artifact assemblage may have accumulated over time as sediments infiltrated into the pit, but it is also possible that some of this material was deliberately swept into the pit, and that it may also have served briefly as an under-floor disposal pit.
4.2.7 Structure 1 Exterior Artifact Distributions

The vast majority of artifacts recovered from within the berm deposits and the structure interior are architectural in nature (window glass, tin sheet, clay daub, nails) and appear to have either been incorporated into the deposits during construction, or to have accumulated following the destruction of the building. These materials, by their nature, are not particularly informative when it comes to assessing building function or dating.

However, a review of artifact distributions does reveal certain artifact classes that are broadly-associated with the Structure 1 exterior and which may therefore reflect the nature of the occupation of that building.

The most pronounced artifact cluster directly associated with Structure 1 is a high density of clay tobacco pipe fragments concentrated immediately south of the Structure 1 south berm, to the west of the inferred entrance (see Figure 4-34; Section 4.7.6.2). This may be interpreted as an outdoor smoking area flanking the doorway; some ceramic sherds are associated with this cluster and these consist of very small sherds, suggesting an area of trampling and high foot traffic.

Also significant is the dense cluster of cast-iron stove parts (Feature 5) situated in front of the Structure 1 entrance (see Figure 4-22; Section 4.7.2.6). This is the only notable concentration of stove parts at the site, and it may be inferred that this stove originally heated the interior of Structure 1.

Ceramics are distributed unevenly across FgCg-01 Locus D. Sherds from stoneware storage vessels are abundant in Structure 4, but largely lacking around Structure 1. On the other hand, refined white earthenware table wares are more common around Structure 1, both to the north and to the south, than they are around any other structure at the site except possibly Structure 2 (see Figure 4-12; Section 4.7.2.1). The transfer-printed patterns applied to these tablewares are also unevenly-distributed. One pattern, “Camilla,” is generally abundant at FgCg-01 Locus D, but is particularly associated with the southern exterior of Structure 1 (see Section 4.7.2.1). “Milkmaid,” on the other hand, is only associated with Structure 2 and is absent around Structure 1. Of particular interest, is one pattern, “Ruins” (see Section 4.7.2.1). This pattern is generally rare at FgCg-01 Locus D, but the few examples were primarily recovered around the exterior perimeter of Structure 1, especially to the rear (north) of the building. The “Ruins” pattern was registered in 1848 (Sussman 1979) and it is therefore the only transfer-printed pattern at the site that most clearly post-date the HBC construction phases of the early 1840s. Unfortunately, the specific contexts of these sherds do not allow us to date the construction of Structure 1. None were recovered beneath or within the berm deposits, for example, only on the top of the berm and the surrounding discard areas, especially to the north. However, the association of this pattern with Structure 1 does suggest that this structure remained in use into the 1850s and later.

In contrast with the abundance of ceramic tablewares, few artifacts of the Activities Group were associated with Structure 1, suggesting that the function of Structure 1 was primarily residential, rather than work-related.
4.2.8 Structure 1 Summary

In summary, Structure 1 is one of the best-defined structures recovered at FGCG-01 Locus D. It appears to have been a timber structure measuring 4 m x 4.5 m, erected on sills and foundation timbers laid directly, or almost-directly, on the original ground surface. The construction method is uncertain. It is likely to have been of post-on-sill construction rather than of notched lapped-corner construction; the corners were underlain with deposits of beach sand to enhance drainage. The building was extensively chinked with clay daub, more so than other structures at the site, on the walls, roof, or both. The clay for this chinking was deliberately brought on site for this purpose and stored outside the northeast corner of the building. Lacking any evidence for a chimney, Structure 1 appears to have been heated by a cast-iron stove with rolled-tin stovepipes and flashing. Fragments of the stove are concentrated outside the front door. Although there is no direct evidence for plank sleepers or floorboards, the building almost certainly had a floor, overlying a sump pit to the west, and a 1 m deep cellar-box in the southeast corner. The distribution of window glass sherds indicates that this building had windows on the south wall, flanking a central entrance, and may also have had windows facing east and west. Earth berms were banked against the foundation timbers, and these berms were accumulated in two phases. The first phase was underlain by shattered window glass and other architectural debris, and likely comprised sediment scooped out while levelling the building interior. The second phase was underlain by a layer of melted window glass and appears to have incorporated material excavated from the builders’ trench running outside the northern berm. The distinctive layer of melted glass separating the two phases indicates that the two construction phases were separated by a significant time interval, and that the second building phase followed a burning event at the site, likely one that occurred somewhere to the east of Structure 1.

The front entrance to the building appears to have been located midway along the southern wall. This entrance was flanked by an area of intensive foot traffic with a high density of tobacco-pipe fragments suggesting an exterior smoking area flanking the front door.

The distribution of ceramics indicates a domestic, residential function for Structure 1. The high frequency of clay daub fragments associated with Structure 1 appears to indicate that it was the most “finished” building at the site, consistent with its inferred function as a residence. In some respects, Structure 1 resembles Structure 2 in its general characteristics (high, well-defined berms, presence of both a cellar and a sump, the domestic character of the debris), although it differs from Structure 2 in being smaller, and in having some preserved timber sills. In addition, Structure 1 is oriented differently from Structure 2, and indeed all other structures at the site, by approximately 10° east of north.
4.3 Structure 2 and Interior Features

Structure 2 was the least well-defined of the four structures at Sandy Banks as no definitive sill timbers were exposed (see Figure 4-2). Several possible structural timbers were pedestalled along the north and south edges of the north berm but most of these were unburned and were dissimilar to the sill logs exposed in Structures 1 and 4. These may be natural wood remnants from post-occupational tree falls and therefore not necessarily structural members. Table 4.2 describes the events recorded in Structure 2 and shown in the profile (Figure 4-4).

4.3.1 Structure 2 Berm Excavation and Soils

Structure 2 excavation began along the north berm that was comprised of silty, sandy, clay similar to that exposed at Structure 1 (Photo 4-14). The north berm was unique in that the berm material rested on a deposit of grey clay mixed with charcoal that, in tum, rested on A horizon clay. The grey clay and charcoal deposit was most noticeable along the north edges of E42N28, E44N28, and E46N28 (Photo 4-16).

The north edge of the north berm was most evident in the west wall of E44N28 and the south wall of E42N28. The west end of the north berm and the junction point with the north end of the west berm was not evident but, based on alignment of the north and west berms, assumed to have been in the northeast corner of E40N26. The west berm was best evidenced in the south wall baulk of E40N24 and the corresponding north wall of E40N24. The intersection of the west and south berms was also not obvious but was assumed to be in E40N24.

The south and east berms were not as distinctly mounded as the north and consisted of tan clay fill mixed with A horizon clay and organics. The east berm was most evident in the northeast corner of Structure 2 but, in fact, could have been a portion of the west berm of Structure 1.

Table 4.2 Summary of Events Recorded in FgCg-01 Locus D Structure 2

<table>
<thead>
<tr>
<th>Event</th>
<th>Description</th>
<th>Location</th>
<th>Overlying/Adjacent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Duff and decomposed mulch</td>
<td>All Units</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>2</td>
<td>Grey-brown, somewhat coarse sand, similar in colour and texture to a typical A Horizon but browner</td>
<td>All Units</td>
<td>Below Event 1</td>
</tr>
<tr>
<td>3</td>
<td>Rich, brown and relatively coarse sand</td>
<td>Northeast corner</td>
<td>Below Event 2</td>
</tr>
<tr>
<td>8</td>
<td>Greyish clay silt with pilled clay inclusions</td>
<td>South of south berm</td>
<td>Below Event 74</td>
</tr>
<tr>
<td>9</td>
<td>Sandy, friable orange brown; resembles B horizon</td>
<td>Southwest interior</td>
<td>Below Event 65</td>
</tr>
<tr>
<td>42</td>
<td>Tan silt; redeposited mixed sediments</td>
<td>Northeast interior</td>
<td>Below Event 1 and 2</td>
</tr>
<tr>
<td>43</td>
<td>Orange sandy silty clay</td>
<td>West half interior</td>
<td>Below Event 1, above black organic lens</td>
</tr>
</tbody>
</table>
The Structure 2 berms enclose a level interior measuring approximately 4 m wide and 7.5 m long, making Structure 2 the largest of the principal buildings at FgCg-01 Locus D. A lens of black organic clay mixed with artifacts was exposed along the east side of Structure 2. The black deposit began in E50N30 and extended south to a section of pedestalled wood in E48N24 and E50N24. The deposit was also exposed west in E46N26 and E46N24. A compact lens of black organic wood, charcoal, and sandy clay was exposed beneath the dark black clay in the units east of the E46 line. The black zones may correlate with the interior of Structure 2 (Photo 4-17). As one moved west and south through the structure the soils changed to a red-brown sand with a light concentration of artifacts. The recoveries in this soil deposit consisted of predominantly nails, metal fragments and pipe stems.
DUFF / MULCH (EVENT 1)
WELL-DEFINED A HORIZON (EVENT 105 WHEN ENCOUNTERED BENEATH BURIED SOD)
WEAKLY-DEFINED A HORIZON (EVENT 2a)
ORANGE FRIABLE B HORIZON (EVENTS 3 AND 9)
GREY-TAN INDURATED AND PILLED CLAY (EVENT 8)
FINELY MOTTLED UNLAMINATED TAN SILTY SAND
COARSELY-MOTTLED GREY-TAN SILTY SAND
FINELY-MOTTLED LAMINATED ORANGE SILTY SAND
VIOLET-GREY PEBBLY SAND
ROCK
TAN SILTY SAND COARSELY MOTTLED WITH PATCHES OF ILUVIATED SILT AND CHARCOAL
SLIGHTLY LAMINATED ORANGE SILTY SAND WITH PATCHES OF ILUVIATED SOIL AND CHARCOAL
UNMOTTLED ORANGE SANDY SILT
FINE GREY SILT WITH SPARSE CHARCOAL FLECKS
GREY-TAN MOTTLED SANDY CLAY WITH MANY CHARCOAL FLECKS
LOOSE ORANGE-TAN SILTY SAND
MOTTLED ORANGE FRIABLE SAND WITH CHARCOAL (EVENT 65)
FINE SLATE-GREY CLAY (EVENT 114)
BRIGHT ORANGE SAND
CHARCOAL LAYER
CHARCOAL LAYER (LARGE PIECES)
HOMOGENEOUS GREY-TAN SANDY SILT
HOMOGENEOUS UNMOTTLED TAN FRIABLE SILTY SAND (EVENT 42)
GREY-BROWN SILT (EVENTS 2b, 11 AND 45)
ORANGE-RED HARDPAN
LOOSE BEACH SAND (EVENT 18)

Figure 4-4 North-South Profile Across Structure 2 and the Terrace Slope
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Photo 4-16  Profile View of Structure 2 north berm. Note clay and charcoal lenses at the base, resting on the original ground surface.
Exposed soils within and adjacent to Structure 2 North Wall in E44N28, looking north.
4.3.2  Structure 2 Features

4.3.2.1  Feature 4

The Structure 2 cellar, Feature 4, was distinguished by a small depression in the approximate northeast corner of the building. Excavation was initiated in the northeast corner of the feature with troweling all four walls and recovering artifacts from the upper strata. Nails and window glass fragments were the primary objects recovered. A 1 m by 1 m unit was then placed in the southeast corner of the cellar in E46N26 and subsequently expanded west. A few artifacts such as nails, window glass and pipe fragments were found in the upper levels. The matrix was a brown sand-silt-clay that related to post-occupational fill. The matrix below that was a compact brown sand. The south portion of the cellar was exposed and identified by a mottled sandy-silt A horizon mixed with artifacts and a border of brown organic, possibly wood (Photo 4-18). The north end of the cellar fill was exposed about 70 cm north of the south limit of E46N28. The north wall of the excavation showed a possible infill episode consisting of backfill placed in the cellar from the east side. A circular orange sand stain was exposed outside of the cellar fill, but no artifacts were found in association. The north end of the cellar was exposed and mapped.

As cellar excavation proceeded, a thick deposit of mottled brown organic soil was exposed at the southeast end of the feature. This deposit contained a concentration of nails of various sizes as well as chinking, burned glass and ceramics. A row of nails was exposed along the south, west, and north sides of the feature. As excavation continued, a thin layer of bark was exposed beneath the mottled organic soil (Photo 4-19). A nearly complete Copeland and Garrett “Fruit and Flowers” plate was recovered directly beneath the wood deposit (Photo 4-20), and this was underlain in turn by another bark layer. The base of the cellar was marked with a layer of thin timbers (Photo 4-21).
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Photo 4-18  Upper levels of Structure 2 Cellar in E46N26: Feature 4 showing wood outline and mottled soils, looking north

Photo 4-19  Lower levels of Structure 2 Cellar in E46N26: Feature 4 wood fragments and mottled soils, looking north
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Photo 4-20   Structure 2 Cellar in E46N26: Feature 4 “Fruit and Flowers” plate, looking north

Photo 4-21   Wood timbers at base of Structure 2 Cellar in E46N26, looking north
4.3.2.2 Depression and Burn: Feature 18

A second depression was recorded in the northeast corner of E48N24 beneath the east berm. The feature soils were like those of Feature 24 exposed in E48N24 and E48N26; however, all the artifacts in the second feature were recovered in the black organic lens. An orange stained sand lens, possibly a burned structure timber, was exposed in the northeast corner of the depression (Photo 4-22). This stain was devoid of artifacts.

Photo 4-22 Orange organic stain above small wood-lined depression in northeast corner of E48N24, looking north
4.3.2.3 Midden: Feature 21

An ash midden deposit was exposed beneath the south berm in E48N24 and E48N26 and consisted of a thin layer of fill over a thick organic stain resting on a layer of light grey ash (Photo 4-23). A concentration of artifacts was recovered from the fill layer above the black organic lens.
4.3.2.4 Post Hole: Feature 22

A square post hole was exposed in E42N26. When initially exposed, the post hole measured 26 cm by 26 cm and consisted of brown sand mottled with charcoal and surrounded by a thin lens of orange sand (Photo 4-24). The feature measured 26 cm by 26 cm and the base of the post hole was 43 cm below the ground surface. The soil altered to a black organic sandy clay at a depth of 22 cm below ground surface. A concentration of wrought nails was recovered in the post hole. The feature may be the result of a post in ground timber.

Photo 4-24 Section view of post hole in E42N26, looking north

4.3.2.5 Interior Depression: Feature 23

A shallow depression was evident in E42N24 and was thought to be a small cellar. Excavation began on the north side of the feature and several nails and window glass fragments were recovered in the upper portion of the feature. A thin organic lens was exposed on the south side of the depression and dipped as one proceeded north as evidenced by the west wall
stratigraphy. The feature seemed to be a dish-shaped depression characterized by a thin organic lens. This feature differed from those in the southeast corner of the structure in that it contained only a few artifacts. A test was placed in the centre of the feature and exposed only sterile sand. The feature was too shallow to be a second cellar and most likely served as a sump.

4.3.3 Structure 2 Summary

In some respects, Structure 2 resembles Structure 1 in its general characteristics (high, well-defined berms, presence of both a cellar and a sump, the high frequency of artifacts from the Kitchen/Domestic Group (see Section 4.7), indicating a residential function), although it differs from Structure 1 in being larger, and lacking evidence for in situ sill timbers. Like Structure 1, Structure 2 is interpreted as the remains of a residential building.

The lack of in situ sills may suggest that Structure 2 was never finished. However, the abundance of domestic artifacts, and the abundance of artifacts in the cellar, which appears to have been re-floored with bark on at least two occasions, indicates instead that the building was occupied for some period, and the lack of sills results from deliberate dismantling of the building.

Direct stratigraphic relationships between Structure 2 and its neighbours, Structure 1 and Structure 3, were obscured by other depositional events occurring between the buildings, so it is not possible to determine the sequence of construction of these three buildings. However, the Structure 2 berms were constructed atop a series of ash middens, as well as an original ground surface (Event 74) that contained both a large number, and a wide variety, of artifacts. Structure 2 therefore appears to have been built after the site had already been occupied for some time.

4.4 Structure 3 and Interior Features

Structure 3 (Figure 4-2) is the westernmost of the four principal structures at FgCg-01 Locus D. The upper layer (Event 1) from 12 units within Structure 3 was removed during the 2015 field season. These covered most of the interior and some of the berm, however, none of the structural timbers were exposed in 2015. Structure 3 is oriented in approximately the same manner as the other three structures on site and is surrounded on all four sides by a low but well-defined ridge or berm (Photo 4-25). A linear depression or trench is present along the outer edge of the northern berm, most likely the builder’s trench.

4.4.1 Berm

Like the other structures on site, the ridge surrounding Structure 3 is interpreted as a deliberate berm constructed to stabilize the foundation and minimize draft and water penetration. The exterior outline of the berm (Event 96) is contained within the N16, N28, E26 and E38 site coordinates. The Structure 3 berms are constructed of redeposited subsoil over a buried sod representing the original ground surface. At almost 3 m in width in some areas, the Structure 3 berm represents the widest (though by no means the tallest) of all structural berms encountered on-site. The Structure 3 berm, like that of Structure 2, underlies the adjacent Feature 3 mound, and
the Feature 16 ash midden (see Figure 4-5). It also overlies the deeper ash midden designated Feature 17 (see Section 4.6.4 below). Unfortunately, there is no clear stratigraphic relationship between Structure 3 and Structure 2.
PHOTO 4-25  Aerial View of Structure 3 after Exposure of Berm
4.4.2 Structural Timbers

The interior perimeter of the berm preserved structural timber sills (Photo 4-26). Almost completely intact, the sill timbers are arranged in an almost perfect square and measure approximately 3.7 m x 4.3 m. Like Structure 1, evidence of extending timbers beyond the corner joints can be seen at the northwest, southwest and southeast corners (Photo 4-27).

Photo 4-26 View Toward the Northeast Across Structure 3

As in Structures 1 and 4, the structural timbers in Structure 3 were all burnt. Unlike the other Structures at the site, however, Structure 3 did yield evidence for preserved, in situ burnt floorboards in the northwest corner of the building (Photos 4-26, 4-27).

Structure 3 also contained evidence for a pronounced central depression, initially interpreted as a possible cellar. This feature was designated Feature 13.
Feature 13 presented initially as a roughly circular stain of a dark organically enriched silt (Event 72) and transitioned into a brown sandy loam with charcoal (Event 118) (Photo 4-28). The charcoal was likely from burnt structural timbers collapsed into a depression. Because of its position within Structure 3, Feature 13 was initially thought to be a root cellar. Upon further excavation, it became clear that it was too small and shallow to be a cellar, and contained no constructed cellar box. Feature 13 is therefore interpreted as a drainage pit or sump. Feature 13 also contained very few artifacts. Its profile was captured in the east-west site baulk profile (Photo 4-29).
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Photo 4-28  Possible drainage pit or sump - Feature 13 plan view

Photo 4-29  Possible drainage pit or sump - Feature 13 profile view
4.4.4 Artifact Distribution

Structure 3 yielded relatively few artifacts, in fact, yielded the sparsest artifact assemblage of any of the principal structures at FgCg-01 Locus D (Figure 4-10). The berm deposits themselves were almost devoid of artifacts, as was the buried sod beneath, indicating that Structure 3 was constructed on a virgin site (or at least a pristine portion of the site).

The artifacts that were recovered were distributed primarily around and atop the southern berm. Many pieces were architectural, including tin sheet, window glass, and nails. Artifacts of the Kitchen/Domestic Group (see Section 4.7) were rare, indicating that Structure 3 was more likely a store than a dwelling house.

4.4.5 Summary

In summary, Structure 3 is a well-defined timber structure surrounded by shallow berms on all four sides. The well-preserved foundation timbers suggest a building measuring roughly 3.7 m by 4.3 m. Aside from the centrally located sump pit, no other features were observed within the structure. There was no evidence of a fireplace or stove, suggesting that Structure 3 may have been unheated, unless the stove was removed to be used elsewhere. A concentration of window glass inside the structure and outside the south wall suggests that the structure collapsed in a southerly direction. Structure 3 contains the least number of artifacts of all three structures, possibly suggesting late construction, and the shortest lifespan. A cluster of lead shot at the northwestern corner of the structure coinciding with a rectangular arrangement of burnt timbers may suggest the remnants of a storage bin or cabinet. An abundance of tobacco pipe fragments was recovered within the structure as well as in front (south) defining a possible central path across the southern wall of the structure, perhaps indicating a central doorway. Faunal material was scarce compared to Structures 1 and 2.

4.5 Structure 4 and Interior Features

Structure 4 was the least conspicuous surface-visible feature at FgCg-01 Locus D. Recovery work east of Structure 1 revealed evidence of burning across much of the eastern portion of the site and, as excavation progressed, burnt timbers and portions of a low earthen berm were observed. These enclosed a rectangular burn layer that defined a previously-unrecognized structure, measuring approximately 3.7 m x 4.25 m, located immediately east of Structure 1 (Figure 4-2). This new structure was designated Structure 4 and proved to contain burnt in situ sills and collapsed wall timbers, particularly along the northern, western, and eastern perimeters (Photo 4-30). Recovery of this structure in 2016 verified the presence and composition of the berms, as well as structural foundation timbers (see Figures 4-2, 4-6, 4-7). The various elements comprising Structure 4 are described in detail below.
4.5.1 Berms

The perimeter of Structure 4 is partially defined by a low earthen berm that encloses the structure on the northern, western, and, to a lesser extent, eastern and southern sides. A portion of the eastern berm appears to have been removed, along with the southeastern portion of the eastern sill. The northern and western berms are the most prominent, rising approximately 17 cm above the structure interior. To the south and east, the berm deposits are subtler, rising as little as 5-10 cm. The widths of the berms range from approximately 80 cm wide on the north berm, to approximately 1.6 m on the west and east berms, to approximately 90 cm wide on the south berm. As with the other structures, these berms are interpreted as earthen embankments erected against the foundation timbers of the building to stabilize the foundations and exclude drafts and water.

Photo 4-30 Aerial View of Structure 4 Exposed to Top of Burn Layer (Event 33)
Figure 4-6  East-West Profile of Structure 4
Figure 4-7  North-South Profile of Structure 4
The berms are largely composed of a brown silty clay, representing a mix of redeposited A and B Horizons (Events 38 and 73). Event 38 represents the western and northern berms and Event 73 represents the southern and eastern berms. Excavation revealed evidence of levelling the ground surface prior to the construction of Structure 4. The berm deposits overlie a redeposited tan clay silt, approximately 6 cm thick, that contains cultural material (Event 50), which represents the prepared ground surface on which the building was constructed. The levelling may have taken place in two phases, particularly near the southern perimeter of the structure, as indicated by the presence of an overlying deposit of light brown loamy clay (Event 73) that occurs underneath the berm (Event 38). The levelling deposits overlie a buried sod, somewhat mottled with charcoal inclusions (Event 27) and underlying a well-defined A Horizon (Event 34). It appears that the buried sod (Event 27) was exposed to some burning prior to construction of Structure 4 and contains cultural material, indicating occupation of the greater site before Structure 4 was built (Photo 4-31). It is interesting to note, however, that although charcoal is present in the buried sod, most artifacts recovered from this event do not display evidence of burning. Two distinctive deposits of soft beach sand were also identified adjacent to the western and northern sills, perhaps introduced to improve drainage.

The berm deposits themselves (Events 38 and 73) contained relatively few artifacts. Event 38 contained a total of 120 artifacts, most of which were architectural (74%), including 27 fragments of window glass, 61 nails and a single piece of brick. Other artifacts recovered from Event 38 include one barrel hoop fragment, 12 pieces of tin, three kaolin pipe fragments, six pieces of vessel/bottle glass, one glass bead, four pieces of refined white earthenware, one fragment of chimney lamp glass, one gun flint and one quartzite flake. Event 73 contained only 37 artifacts in total. Many pieces (65%) were architectural, including 16 fragments of window glass and eight nails. Other artifacts recovered from Event 73 included four kaolin pipe fragments, one piece of shot, one piece of sheet metal, two barrel hoop fragments, one button, one piece of stoneware and three unidentified iron fragments.
4.5.2 Structural Timbers

Several in situ burnt or partially-burnt timbers were encountered along the interior perimeter of Structure 4 (see Photo 4-32). These included the northern and western basal sills, resting directly on the prepared ground surface (Event 50) or, where no evidence of ground preparation was observed, on the original ground surface (Event 27). The northern sill extended along the entirety of the northern perimeter of Structure 4, approximately 4.25 m long. In fact, the northern sill is comprised of two adjacent timbers although, given that the outer timber is lying directly on the berm deposit, it is likely that the outer timber was originally placed on top of the basal sill and subsequently collapsed (Photo 4-33). The junction between the northern and western basal sills could not be determined. The western sill also extended along the entirety of the western perimeter of Structure 4, measuring approximately 3.7 m in length.
Photo 4-32  View of Structure 4 In Situ Sills, Looking South
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Photo 4-33 View of Structure 4 Northern Sill, Looking West
There was only partial evidence for the eastern sill. Evidence of the sill was observed near the northeastern corner of the structure, however the southern half of the eastern sill, as well as much of the eastern berm appear to have been removed. Remains of the southern sill were also subtle, manifesting as soil changes due to burning as opposed to intact structural remains (Photo 4-34). Although only the western and northern foundation logs of Structure 4 were preserved, the southern perimeter of the structure may be defined on the basis of soil changes due to burning and the interior toe of the enclosing berm. All foundation timbers recorded in Structure 4 were burnt or partially-burnt, and compressed. It is therefore difficult to determine how extensively the timbers were dressed prior to construction and details of workmanship are indeterminate. Assessment of the original corner construction method is also problematic, as no in situ corner junctions were observed.

Photo 4-34 Evidence of Burnt Remains of Southern Sill of Structure 4.
The remains of several burnt timbers were also observed near the central portion of the southern sill, which may indicate a collapsed door frame associated with a central entranceway.

### 4.5.3 Sand Deposits

Two small deposits of soft loose beach sand were also recorded in association with Structure 4. The first deposit, approximately 5 cm thick, was observed at the southwestern corner of Structure 4, adjacent to the western sill (Photo 3-35). As previously stated, the association with the structure corner suggests that this sand was deliberately deposited, presumably to enhance drainage at the corner of Structure 4. The second deposit is located adjacent to the northern sill, not at a corner point, but near the centre of the sill. The purpose of this deposit is unknown.

![Photo 4-35 View of Beach Sand Deposit Near Western Sill of Structure 4](image-url)
4.5.4 Structure Interior

The interior of Structure 4 is characterized by a tan clay silt (Event 50), representing the prepared ground surface on which Structure 4 was constructed, which overlies a buried sod, somewhat mottled with charcoal inclusions (Event 27) and underlying a well-defined A Horizon (Event 34). There was some evidence for sleepers or floorboards but no evidence of a chimney, nor a cellar. The burnt nature of the timbers and the presence of an interior burn layer (Event 33), as well as some evidence of a collapsed superstructure, indicate that Structure 4 was burnt. Evidence of burnt sleepers, which appeared to extend north-south, were typically observed near the perimeter of the structure and manifested as a bright orange silty loam overlain by a thin lens of charcoal (Event 48) and underlain by another thin lens of charcoal (Event 49) (Photo 4-36).
A total of 499 artifacts were recovered from Event 50, 46.7% of which were architectural, including 106 window glass fragments, 120 nails, 3 door hinge fragments and 4 pieces of clay daub. In addition, 16.6% of the assemblage related to arms and ammunition, including 2 gun flints, 76 pieces of shot and 5 musket balls. Other artifacts included 15 kaolin pipe fragments, six bottle glass fragments, 1 unidentified glass fragment, 17 ceramic vessel fragments (three of which represented refined white earthenware and the remainder of which were stoneware), 3 pieces of wood, 3 bolt, 71 pieces of tin sheet metal, 1 piece of wire, 1 iron ring, 1 staple, 1 iron chain, 1 axe, 1 piece of iron hardware, 1 piece of copper sheet, 1 barrel hoop, 2 iron concretions, 8 pieces of bone, 13 buttons and 3 quartzite flakes.

A total of 640 artifacts were recovered from the underlying Event 27, within the interior of Structure 4, 89.3% of which were related to arms and ammunition, including 571 pieces of shot and a single gun flint. Most of the shot was found in the northeastern corner of Structure 4, in an area where there was little to no evidence of ground preparation (Event 50). Shot was generally recovered in small clusters suggesting that they were derived from cloth or paper cartridges that had burned or decayed in situ. Architectural materials included 50 window glass fragments and 35 nails. Other artifacts recovered from Event 27 included 7 ceramic vessel fragments, 2 spoon fragments, 1 knife part, 12 kaolin pipe fragments, 3 glass vessel fragments, 2 chimney lantern glass fragments, 1 piece of iron rod or wire, 14 pieces of unidentified metal and 1 piece of copper, 1 iron rivet, 5 roves and 16 pieces of tin sheet metal.

A total of 907 artifacts were recovered from the burn layer (Event 33) within Structure 4, including 608 pieces of ceramic vessel fragments (583 of which were stoneware). Most of the stoneware fragments were found near the central portion of the western sill and likely represent one storage vessel that may have exploded when exposed to intense heat. Two pieces of bottle glass, a single sherd of vessel glass and eight kaolin pipe fragments were also recovered. Architectural artifacts included 189 nails, 13 pieces of daub and 32 window glass fragments. In addition, 1 brass tack, 2 iron hinge fragments, 1 piece of melted lead spoil, 45 pieces of tin sheet metal, 19 pieces of rolled and cut tin sheet, 1 gunflint, 1 axe, a single piece of bone and 2 quartzite flakes were recovered. Several hand cut wood chips were also recovered from a concentration of burnt wood chips located in the northwest corner of Structure 4 (Photo 4-37).