



Heritage Value Statement
Poonamalie - Lock 32, Rideau Canal NHS
DRAFT July 14, 2017

Context

What is a Statement of Heritage Value?

A Statement of Heritage Value is a record that confirms that a Parks Canada asset, or collection of assets, meets the Agency's requirements to be a cultural resource. It provides a summary history of the cultural resource, its heritage value (why it is important), and its character-defining elements (aspects of the resource that express its heritage value).

Approvals

The statement of heritage value requires approval by the Field Unit Superintendent and the Director of Cultural Heritage Policies and is designed to support decision-making about management of a cultural resource.

Interpretation

Assistance to interpret the Statement of Heritage Value can be sought from a Cultural Resource Management (CRM) Advisor or a CRM specialist.

Assessments of Impacts

When changes or interventions are proposed to cultural resources, the proposed changes and interventions are subject to an assessment of impacts using the *Standards and Guidelines for the Conservation of Historic Places in Canada*. This is not to preclude changes or interventions, but rather to reduce possible negative impacts to the heritage value of the cultural resources.

Flexibility of Implementation of Changes and Interventions

Sustainable conservation calls for a flexible and integrated approach that balances CRM with other Agency objectives. If negative impacts are expected to the heritage value of a cultural resource, these can often be reduced or eliminated through mitigations developed in consultation with the CRM Advisor. If mitigation is not possible, alternate approaches to certain aspects of a project, or alternative means of preserving heritage value, can be recommended (for example, preservation through heritage recording and subsequent interpretation).

Responsibility for Decision-Making

Decision-making about an intervention on the cultural resource remains with the Field Unit Superintendent.



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Description

Landscape

Poonamalie lockstation is located on a canal off of the Rideau Canal. The site is located 2.3 kilometres west of the outskirts of Smiths Falls. Poonamalie is situated in a forested rural area, and is accessed at the very end of Poonamalie Road, at 1 Poonamalie Road. The site sits on a canal cut between the lower Rideau Lake and the Rideau River. The road approaches the lock station from the southwest. The lock station geographic coordinates are 44°53'34.6"N 76°03'19.9"W. The site was constructed in 1830, and contains a clay earthen dam that extends westward towards the mouth of the canal. The dam runs along the north side of the site for 670 meters. This segment is a part of the original canal construction of the site, and was completed in 1832. Running along the north side of the Clay Dam is a waste weir, which is located 375 meters from the lock station. A defensible stone lockmaster's house was built in 1838-1842. Sometime later in the 19th century, a framed second storey was added. The lockstation shores are lined by a dense growth of cedar trees, which remain today.

This location had the first set of rapids at the head of the Rideau River. The rapids were 240 yards (220 m) in length, descending in that distance 8 feet, 5 inches (2.6 m), and with a depth of water over the site where it was proposed to construct a dam of 1 foot, 3 inches (0.4 m). The lock was



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known interchangeably as First Rapids and Poonamalie until the late 1850s, when Poonamalie became more common.

In 1865, the weir was raised by 2 feet (0.6 m) in order to allow more water to be retained in Big Rideau Lake. In May 1869, the dam was breached by the spring flood and low lying lands as far as Smiths Falls were flooded. In April 1904, a sheet of ice 300 feet (91 m) long and 70 feet (21 m) wide struck the weir, causing a breach 75 feet (23 m) wide. By the fall of 1904 a new concrete weir had replaced the old timber weir. The elevation of this dam was 1.5 feet (0.5 m) lower than the 1865 level, taking it down to only 0.5 feet (0.1 m) higher than the original 1832 weir height. In 1910, with a hot dry summer, the water level in the upper canal cut dropped to 4 feet 6 inches (1.4 m). To allow more water to be retained in Lower Rideau Lake, work was done in 1911 to raise the banks of the cut and add brackets on the weir, allowing 10 inch (0.25 m) flashboards to be installed. In 1971 a new weir was constructed in concrete, essentially the same height as the 1911 weir. This new weir incorporated a large hydraulic water control gate and also included brackets for 10 inch (0.25 m) flashboards.

The Minnow Creek Waste Weir Earth Dam is located about half way along the clay earth dam. This small stop log dam provides the ability to drain the canal cut once stop logs have been placed in the Canal Cut Inlet Dam. This dam is not operated during the navigation season but is required to pass flows associated with summer flood events. The dam has 8 timber stop logs at 15'6" x 12" x 12".

The lay-by on the south side of the upper canal cut slowly filled in over the years, and is now a marsh.

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Lock #32

The lock was built in a section with stiff clay and boulders. The sills and part of the breastwork were made of cement, but the floor was made of wood, hemlock planks placed upon large sleepers, also made of hemlock. The lock's construction is typical of the Rideau Canal; the walls, wing walls, upper and lower gate monoliths and coping are made of masonry. The lock walls are made up of sandstone. The top of the lock stood 4 feet, 8 inches (1.4 m) above the normal water level to guard against spring flooding. The lock was built with a lift of 6 feet, 4 inches (1.9 m). The lock underwent extensive repairs in 1907-08 and in 1913 the wooden floor of the lock was redone in concrete.

There have been a number of repairs done on the lock site, but there is a concerted effort to maintain the appearance of the materials used in the construction of the lock. In 1973, the timber wharf on the upper south side was replaced with a reinforced concrete wharf of 76 meters. In 1974, there was a lock restoration project carried out during the fall and winter, due to deterioration of the masonry at and below the waterline. Since this period, there have been only



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minor preventative repairs. Between 1984 and 1985, the wharf on the lower north side was replaced with a 40 meter timber crib wharf.

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Defensible Lockmaster's House

The Defensible Lockmaster's House overlooks the Rideau Canal and stands close to the lock at Poonamalie Lockstation. It is a two-storey, cube-shaped building with a hipped roof and symmetrical façades, both front and rear. The darker, limestone walls of the first-storey contrast with the painted clapboard exterior of the second-floor. An open porch protects the main entrance.

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Clay/Earth Dam

The clay earth dam was constructed as part of the original construction of the Rideau Canal in 1832. The dam runs along the north side of the canal cut. This historic earthen dam consists of homogeneous fill and was constructed to an average crest elevation of approximately 124.4m where warranted by topography in order to retain water in the canal. The canal cut earth dam runs from the main dam south concrete cut off wall and terminates between the waste weir and the lock station where the natural ground elevation increases. The length of the dam is approximately 543m corresponding to the actual length of the dam as constructed. The dam height varies along its length. The maximum height measure from crest toe is approximately 2.0m. The dam has been subject to leaks and occasional sinkhole development along its length. Past projects to mitigate these leaks were implemented in 1981 and 2014 with construction of a clay core at various sections and installation of sheet pile cut-off in 2007 at various sections. These measures were not entirely successful to stop the leaks. The dam does not have a conventional toe drainage system. Limestone bedrock elevation varies 121.5-122.5m along dam (depth 2-3m below crest). The crest of the dam features maintained grass with a variety of natural vegetation to the north, including mature trees.

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Heritage Value

Landscape

The lockstation landscapes of the Rideau Canal are fundamental resources of the canal system and integral to the Rideau's unique historical environment. The Canal landscapes were evaluated in terms of the retention of historic circulation patterns, the spatial inter-relationships of buildings, engineering works, open spaces and other landscape features, plus the overall impact of new features on or near the stations.



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The lockstation landscapes of national significance are valued for their:

- associative and physical connection with the construction and early operation of the canal;
- contribution to the unique historical environment of the canal system;
- visual and historic associations with heritage communities along the canal system such as Chaffeys Locks, Newboro, Merrickville, Burritts Rapids, and Ottawa;
- role as landmarks and providing a sense of continuity along the canal system;
- surviving historic layout and configuration including their open spaces and circulation patterns;
- surviving historic views both within and beyond the station boundaries;
- contextual and heritage settings for the stations' buildings and engineering works.

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Lock and Channel (Canal Cut)

Engineering works of national significance on the Rideau Canal are valued for their:

- direct relationship to the original construction achievement;
- contribution to the unique historical environment of the canal system;
- integral role in the continuing operation of the navigation system;
- surviving physical attributes of form, material and function;
- manual mode of operation; and
- contribution to knowledge relating to early 19th century engineering and construction techniques.

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Defensible Lockmaster's House

The Poonamalie Defensible Lockmaster's House is considered a cultural resource of national historic significance identified by the Historic Sites and Monuments Board of Canada (HSMBC) valued for its:

- direct association with the construction, operation and maintenance of the canal during the military period;
- direct association with the defence of colonial Canada;
- physical evidence of the original purpose of the canal;
- functional design qualities;
- surviving physical attributes of form and material;
- contribution to the unique historical environment of the canal system;
- contribution to the historic character of the lockstation.

The Defensible Lockmaster's House is also a Recognized Federal Heritage Building because of its historical associations, and its architectural and environmental values. The designation is confined to the footprint of the building:



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Historical Value: The Defensible Lockmaster's House is a good example of a building associated with the construction and operation of the Rideau Canal. The house illustrates the theme of military defence for Upper and Lower Canada in the 19th century, and the evolution and transformation of the waterway as a federal public work. This building is the only surviving residence among those constructed on the site during the military era, and hence is an important representative example of that period in the community's development.

Architectural Value: The Defensible Lockmaster's House is valued for its good aesthetic design. Its appearance is characteristic of a late 19th-century and early 20th-century residence. The second-storey addition, summer kitchen and the interior layout reflect an increased emphasis on residential design, which resulted from a change in the function of the canal by the 20th century from defence to recreation and commerce and as such, combines both its original military form as well as added residential features. Very good functional design is evidenced in the interior layout. Very good craftsmanship can be seen in the ground floor stonework. The regularly coursed stone masonry of the lower storey and defensible porch represent the craftsmanship of the Royal Engineers.

Environmental Value: The Defensible Lockmaster's House reinforces the historic character of its park-like setting at Poonamalie Lockstation and is a familiar landmark to local residents and to visitors.

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Clay/Earth Dam

The Clay Dam is identified by the Historic Sites and Monuments Board of Canada (HSMBC) as a *cultural resource of national historic significance*.

This engineering work is valued for its:

- direct relationship to the original construction achievement;
- contribution to the unique historical environment of the canal system;
- integral role in the continuing operation of the navigation system;
- surviving physical attributes of form, material and function; and
- contribution to knowledge relating to early 19th century engineering and construction techniques.

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Character-Defining Elements

Landscape

The elements of the cultural landscape at Smiths Falls, comprising the areas surrounding the Combine and Detached Locks, that contribute to its heritage value are its:

- Current historic layout and circulation pattern, including open spaces and circulation routes and pathways, such as;
 - The crest of the earth dam, covered in small vegetation and maintained grass, serves as an informal walking trail from the lock to the top of the canal cut to the west, and
 - The sidewalk leading from the canal cut to the guage house.
- Functional arrangement, and the relationships and views between lockstation components;
- Landforms in the landscape, such as the marsh lay-by;
- Design, dimensions, materials, architectural features, and finishes of the lockstation buildings and engineering works, and their footprints and profiles in the landscape, for example, the:
 - Clay Dam
 - Lock office, shed, and lockmaster buildings and outbuildings (garage)
 - Locks
 - Channel
 - Waster Weir and Dam
 - Stoplog Bay
 - Gauge House
- Historic views within the lockstation grounds;
- Known and potential terrestrial and submerged archaeological resources pertaining to both indigenous and historical occupations, and evidence of construction and early operation of the canal, such as:
 - Middens (2 known),
 - Remains of 2 dams previous to the current weir,
 - Any remaining evidence of canal construction dwellings and supporting buildings such as barns, stable, cookhouses, store, contractor's quarters.

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Lock and Channel (Canal Cut)

Key elements contributing to the heritage value of the Smiths Falls Locks include:

- their contribution to the integrity of the landscape and the unique historical environment of the canal system;
- their manual mode of operation; and
- the form, dimensions, design and functional qualities and materials of the lock components, for example:
 - its masonry construction;
 - its overall arrangement, including angles and connections;
 - the wooden lock gates and assemblies, including the type of timber as evolved over time to address the operational and durability needs of the Canal;



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- the valves and opening mechanisms;
- the architectural signature and architectonic details, including but not limited to:
 - coursing patterns;
 - joints and their profiles; and
 - iron works.

Key elements contributing to the heritage value of the Canal Cut include its:

- form;
- massing;
- composition;
- finish;
- in-situ location on the Rideau Canal;
- continued functional use; and
- contribution to the integrity of the cultural landscape, for example:
 - circulation and land patterns related to this portion of the canal, such as its alignment and access points, and banks at the time of designation; and
 - its profile in the landscape.

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Defensible Lockmaster's House

The elements of the Defensible Lockmaster's House that contribute to its heritage value are:

- Its excellent aesthetic, good functional design and excellent materials and craftsmanship, for example:
 - the two-storey massing with hipped roof, and a chimney;
 - the exterior walls, the thick ground floor wall constructed of limestone masonry and the frame second floor clad in clapboard;
 - the symmetrical front and back façades with regular placement of the windows and doors;
 - the enclosed east porch and the summer kitchen at the rear; and
 - the interior configuration with its centre hall plan, the central staircase, and the base of the original hearth.
 - The manner in which the Defensible Lockmaster's House reinforces the historic character of its park-like setting at Poonamalie Lockstation and is a familiar local landmark, as evidenced by:
 - its overall scale, design and materials, that harmonize with the green spaces around the lock station;
 - its visibility due to its prominent location adjacent to the canal, which makes it a local landmark; and
 - its role as an historic museum, which makes it well known in the area.

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Clay/Earth Dam

Key character-defining elements contributing to the heritage value of the Clay Dam include its:

- location;
- relationship to the lock and channel as part of north wall of the canal cut;
- function for flood control;
- surviving physical attributes of scale, design and materials, such as;
 - general shape and profile as embankment dam with a flat top
 - surviving homogeneous fill, including loose to compact sandy silt, silty sand, local clay, boulders' nests and lenses of fine sand, as well as "non-impervious material" (1981 geotechnical survey); and
- contribution to the integrity of the landscape and the unique historical environment of the canal system.

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Appendix A - Photos

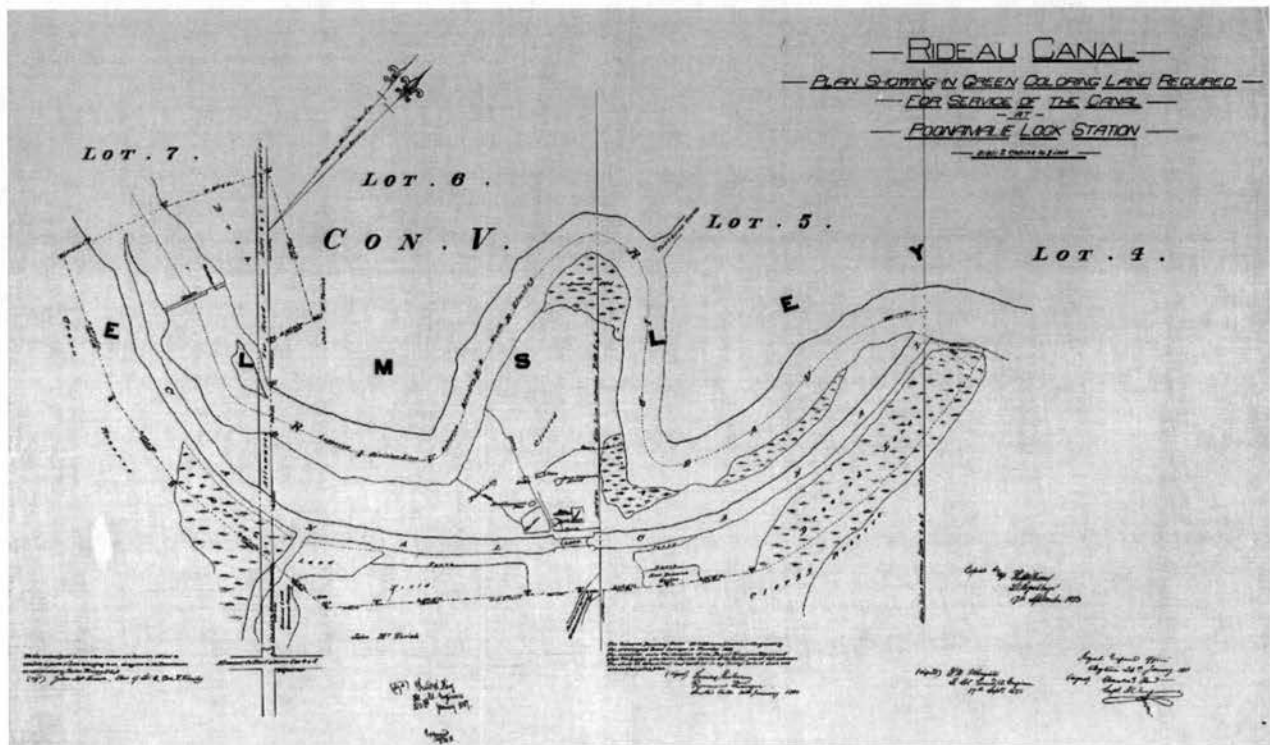
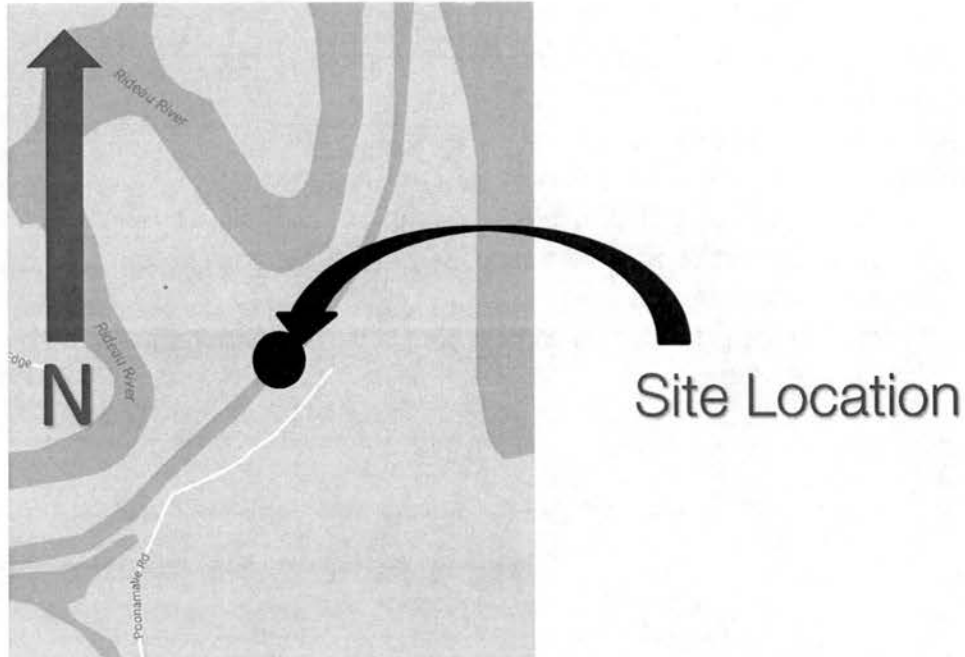


Figure 1 - Poonamalie Lockstation 1880



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Figure 2 - Date unknown



Figure 3 - Clay Earth Dam Crest



Figure 4 - 2015: View of Poonamalie Locks from upstream

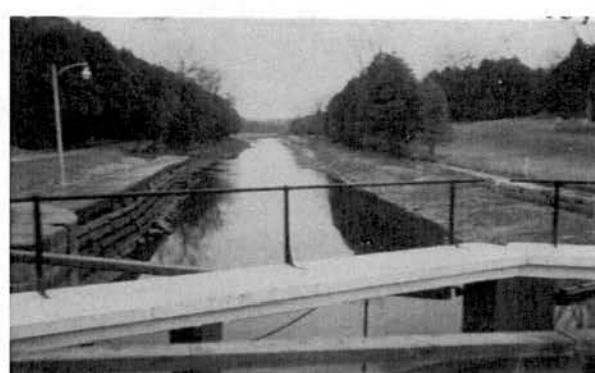


Figure 5 - 1969: View of lock looking upstream



Figure 7 - Minnow Creek Waste Weir

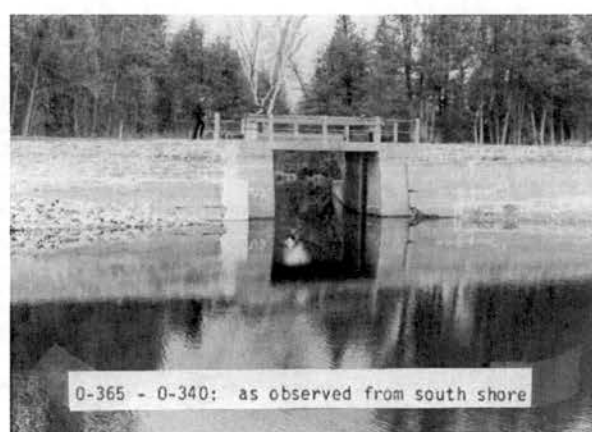


Figure 6 - Date unknown



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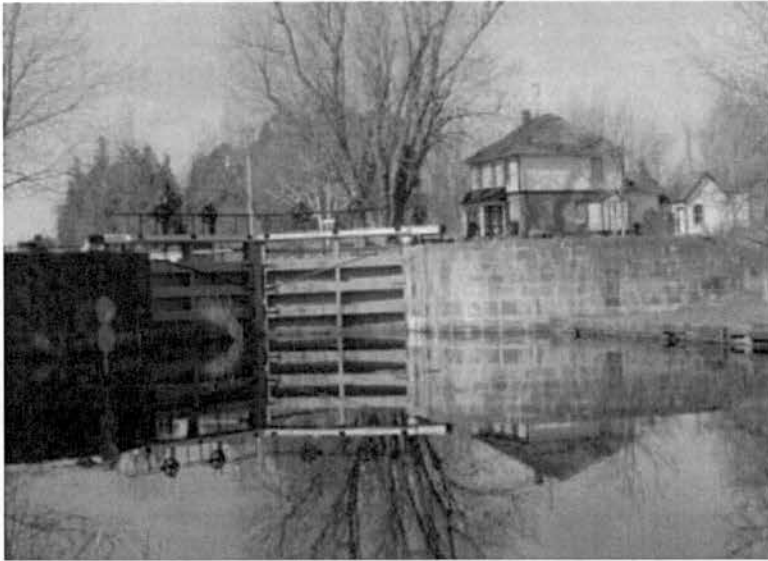


Figure 8 - Lockmaster's House and Lock



Figure 9 - Downstream from lock

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