

Statement of Cultural Heritage Value for the Ottawa Water Works Complex

Description of Property

The Ottawa Water Works complex is a cultural heritage landscape comprised of the Water Works Building at 10 Fleet Street, the covered aqueduct, the open aqueduct to the west including the headworks, the channeled tailrace to the north of the pumping station, and five stone bridges that cross the aqueduct. The bridges include four single-span bridges; the Canada Central Railway, Broad Street, Booth Street, and the combined Lloyd/Lett/Grand Trunk Railway bridge and the triple span Pooley's Bridge, located north of the pumping station. The complex was constructed in 1872-74, with additions to the Water Works building in 1888 and 1899. The Ottawa Water Works is located on LeBreton Flats, west of downtown Ottawa.

Heritage Value

The Ottawa Water Works has cultural heritage value for its role in the early development of municipal water works systems in Canada, its association with local engineer Thomas Coltrin Keefer, its design and physical value and its contextual value as a cultural heritage landscape and the only remaining historic structures on LeBreton Flats.

Associative or Historic Value

The Ottawa Water Works has historic value as an early example of a municipal water works systems built in the late 19th century. The Carleton County fire of 1870 and the Great Chicago fire of 1871, combined with a desire to provide clean drinking water, led Ottawa City Council to engage Thomas Coltrin Keefer to oversee the design and construction of the Water Works building and aqueduct in 1872. In 1870, there were only seven municipal water works in Canada. During the following decade, 23 systems were constructed, including the Ottawa system and by 1900 there were 235 municipal systems. The Ottawa Water Works has cultural heritage value for its continued use in the provision of clean drinking water to the city of Ottawa.

The Ottawa Water Works has historic value for its association with Thomas Coltrin Keefer, a prominent Ottawan and one of the leading civil engineers in Canada in the mid-19th century. Early in his career Keefer worked on the Welland and Erie Canals and in 1845 he was appointed engineer in charge of timber slides and river works for Bytown. Keefer settled in Ottawa but continued to be involved in large scale engineering projects elsewhere including the Montreal Water Works (1853) and Hamilton Water Works (1859). Keefer first prepared plans for the Ottawa Water Works in 1859. Keefer is commemorated for his engineering works as a National Historic Person and the plaque is located at the Water Works building.

The Water Works building also has cultural heritage value for its association with prominent Ottawa architect Edgar L. Horwood. Horwood designed the 1899 expansion to the pumping station. Horwood practiced privately in the late 19th and early 20th

centuries before being appointed Chief Dominion Architect in 1915, a post he held for two years, after which he returned to private practice for the remainder of his career. He designed several well-known buildings in Ottawa including the Britannia Yacht Club and several public schools including First Avenue and Mutchmor.

The earliest structure in the Water Works complex is Pooley's Bridge which was constructed by Alexander Sparks in 1872 to the specifications of City of Ottawa Engineer George Hugo Perry. Pooley's Bridge has associative value as the oldest remaining structure from Ottawa's municipal development program of the 1870s to establish permanent infrastructure. Other projects from this era include the first City Hall (burned 1931), the first civic park at Major's Hill, and the pumping station. Pooley's Bridge has historic value for its age and continued use as a bridge; it is the oldest bridge in Ottawa and it is considered the second oldest stone arch bridge in Ontario.

Design Value

The Water Works building has design value as a good example of late 19th century industrial building. It is a two-storey flat roofed building constructed in phases beginning in 1873-74. The original Keefer building was a one-storey structure with a mansard roof. In 1888, additional pumps were installed in a ground floor addition designed by local architect E.L. Horwood. In 1899, the mansard roof was removed and a second storey, flat-roofed addition was added. The building is well-detailed, and includes rusticated stone arches and voussoirs, pairs of segmentally arched windows on the ground floor and round arched windows on the second storey.

Pooley's Bridge has design value as a large, triple arched, closed-spandrel stone bridge. The bridge over the channeled tailrace is a good and rare example of a large stone bridge in Ottawa and is a representative example of 19th century bridge design.

The open aqueduct has design value for its industrial and intentionally rustic character. Hewn from the bedrock, it is a unique industrial structure in Ottawa. It is characterized by its uneven stone edges, gradually sloping sides with soft landscaping and limestone pitching and the four low, single span stone bridges that cross it.

The Ottawa Water Works has design value for its innovative engineering; the Water Works took advantage of a natural depression on the flats for the open aqueduct and rather than using the steam-driven pumps that were typical of the period, the pumps were hydraulic. Water was drawn in from the headworks above the Chaudière Falls and fed through the open aqueduct to waterwheels connected to two large pumps. A clear water pipe in the aqueduct provided clean drinking water to the municipal system. The pumps have been replaced over time, along with the headworks facility, while the open aqueduct remains.

Contextual Value

Contextually, the Ottawa Water Works complex has heritage value as a cultural landscape and as the last remaining set of 19th century structures on LeBreton Flats.

LeBreton Flats was a vibrant, working-class community linked to the logging industry on the Ottawa River nearby and was home to foundries and other industry. The neighbourhood was completely cleared in the 1960s as part of the NCC's Gréber Plan and the larger trend of urban renewal in the mid-20th century.

The landscape of the Water Works complex also contributes to an understanding of the former link to Ottawa's 19th century railway system, as evidenced in the arrangement of the bridges over the aqueduct which reflect the former railway and road patterns. The underground, covered aqueduct was constructed in 1912 and lies below the former Ottawa Street, which ran east-west across LeBreton Flats and its alignment is a reminder of the former road pattern.

The structures that comprise the Ottawa Water Works are linked by the open aqueduct channel, the covered aqueduct, the connection to the Ottawa River and common design elements of the bridges, creating a picturesque cultural landscape. As the only remaining historic structures, they are important in defining the character of the area and are landmarks on LeBreton Flats.

Heritage Attributes:

The following attributes of each structure contribute to the overall understanding and heritage value of the Ottawa Water Works complex.

Water Works Building

- two-storey massing with one storey, flat roofed addition at south end of building
- rusticated limestone construction, laid in even courses
- flat roof with bracketed metal cornice
- five square stone chimneys
- heavy limestone secondary cornice between the first and second storey featuring brackets and smooth stone frieze
- double doors with arched transom window on north and east sides
- smooth stone drip course between foundation and bottom of the ground floor windows
- tall segmentally-arched four-over-four sash windows arranged in pairs on the ground floor with stone voussoirs and keystones
- round arched two-over-two sash windows on the second storey
- round windows along the west façade with stone window surrounds
- rusticated stone pilasters
- date stones on the east and north facades of the building,
- decorative stone details including brackets, voussoirs, corner pilasters and keystones
- pedestrian bridge leading to second storey entrance on east side of building
- limestone retaining walls
- Interior features including:

- Original roof construction comprised of iron beams separating narrow brick segmental vaults, visible inside the ground floor, pump room
- Marble plaque commemorating the construction of the original building in 1874, inscribed with Thomas Keefer's name and the names of the chairman and members of the Ottawa Water Works Commission
- Marble plaque commemorating the expansion of the pumping station 1899-1901
- Pressure gauge with decorative iron work
- Double staircase from the ground floor that merges into a single staircase to the second storey of the building

Open Aqueduct

- narrow open channel excavated from bedrock with uneven stone edges
- soft landscaped edges including low shrubs such as sumac and honeysuckle and a deciduous trees including mature group of black willow on the west side of the headworks
- limestone pitching along the north and south sides of the bank between the Broad Street Bridge and the Central Canada Railway Bridge
- remnant limestone sluice gate abutments on the north and south side of the channel east of the Central Canada Railway Bridge
- headworks with sluice gate at the Ottawa River
- forebay at the pumping station
- channeled tailrace under Pooley's Bridge extending north

Covered Aqueduct

- historical alignment following the original route of Ottawa Street from the headworks running east to meet the open aqueduct at the Lloyd/Lett Street bridge.

Stone Bridges

- Central Canada Railway Bridge, Broad Street Bridge, Booth Street Bridge, and Lloyd/Lett Street Bridges over the open aqueduct characterized by:
 - low, single arch, closed-spandrel form
 - stone construction laid in regular courses with piers, voussoirs and keystones
- Pooley's Bridge
 - triple arched, closed-spandrel form
 - stone construction laid in random courses with parapets, voussoirs and keystones
 - metal railing with concrete base

Views

- The following views reinforce the heritage value of the Ottawa Water Works as a cultural landscape:
- the view looking east from the Central Canada Railway Bridge to the Broad Street Bridge
- the view looking west from the Broad Street Bridge to the Central Canada Railway Bridge
- the view north and south from Pooley's Bridge of the tailrace and the Water Works Building.
- the view looking northeast from the Lloyd/Lett/Grand Trunk Railway Bridge towards the forebay and Water Works Building