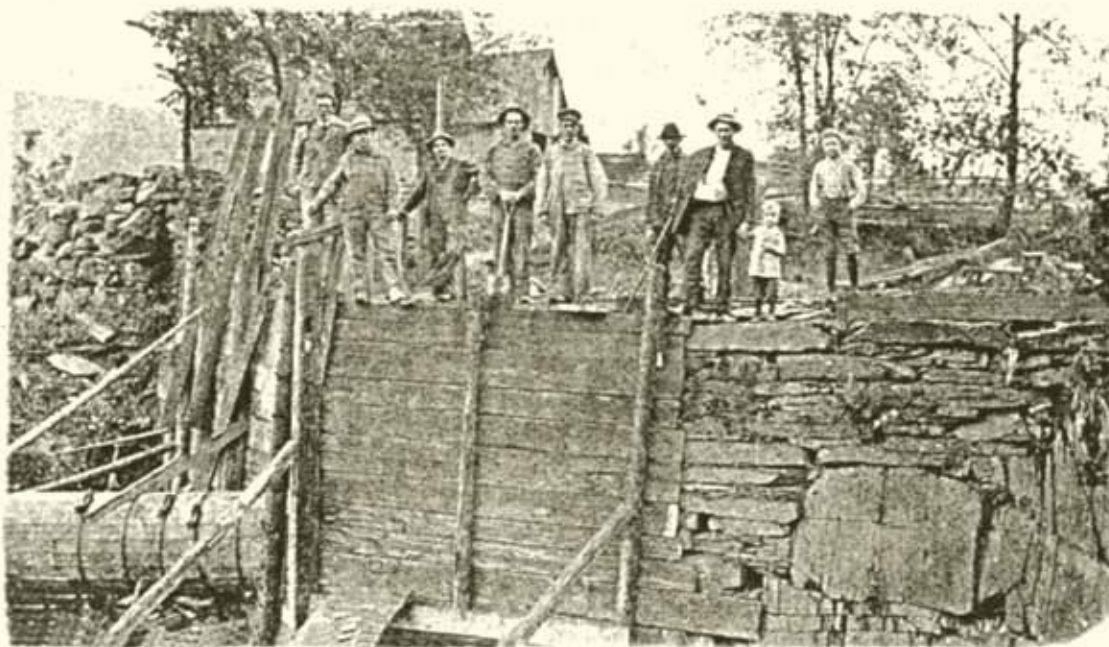


The Powell Brook Mills

in Austin's Pre-industrial Era

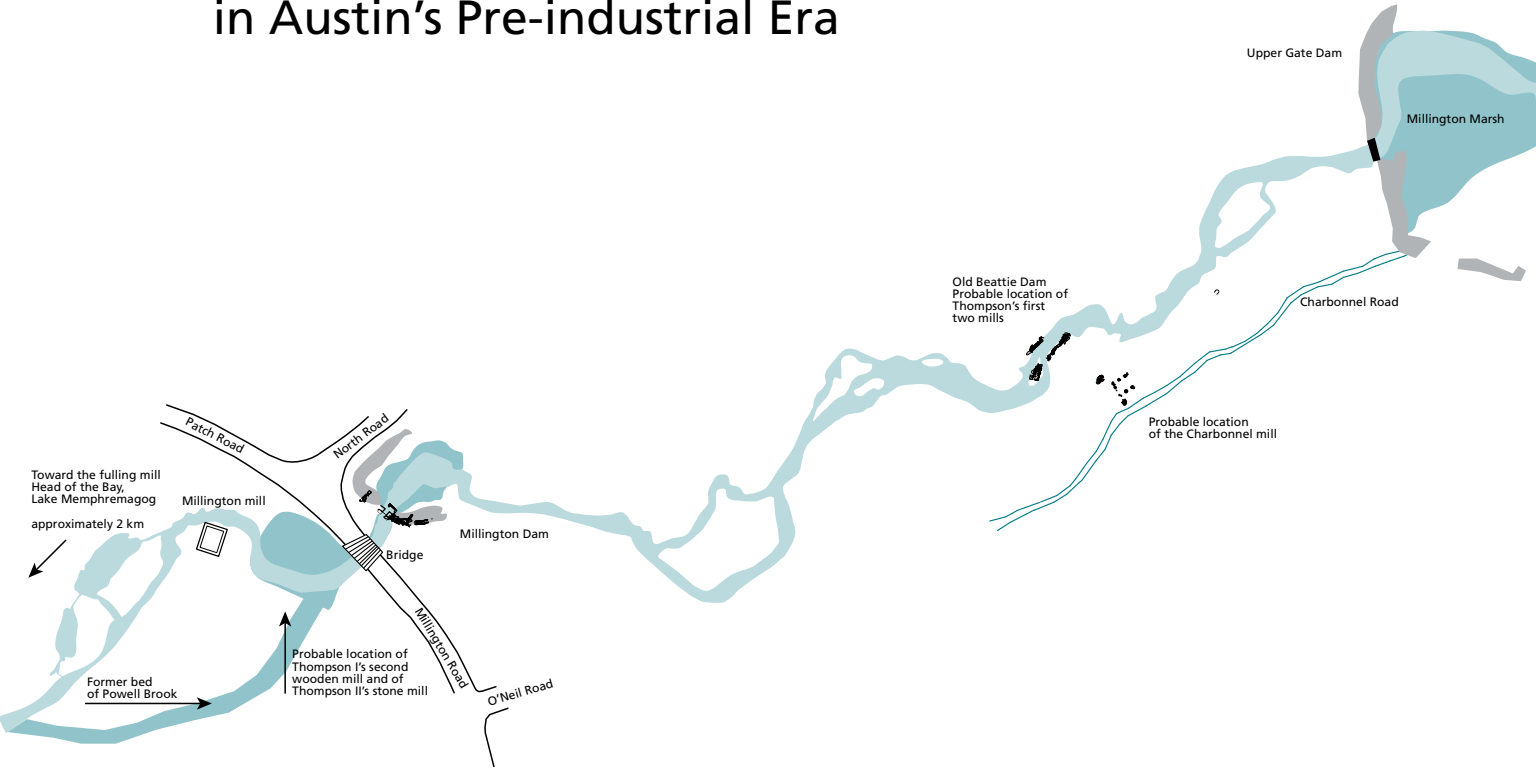


Workers rebuilding Millington dam on Powell Brook (circa 1910).



The Powell Brook Mills

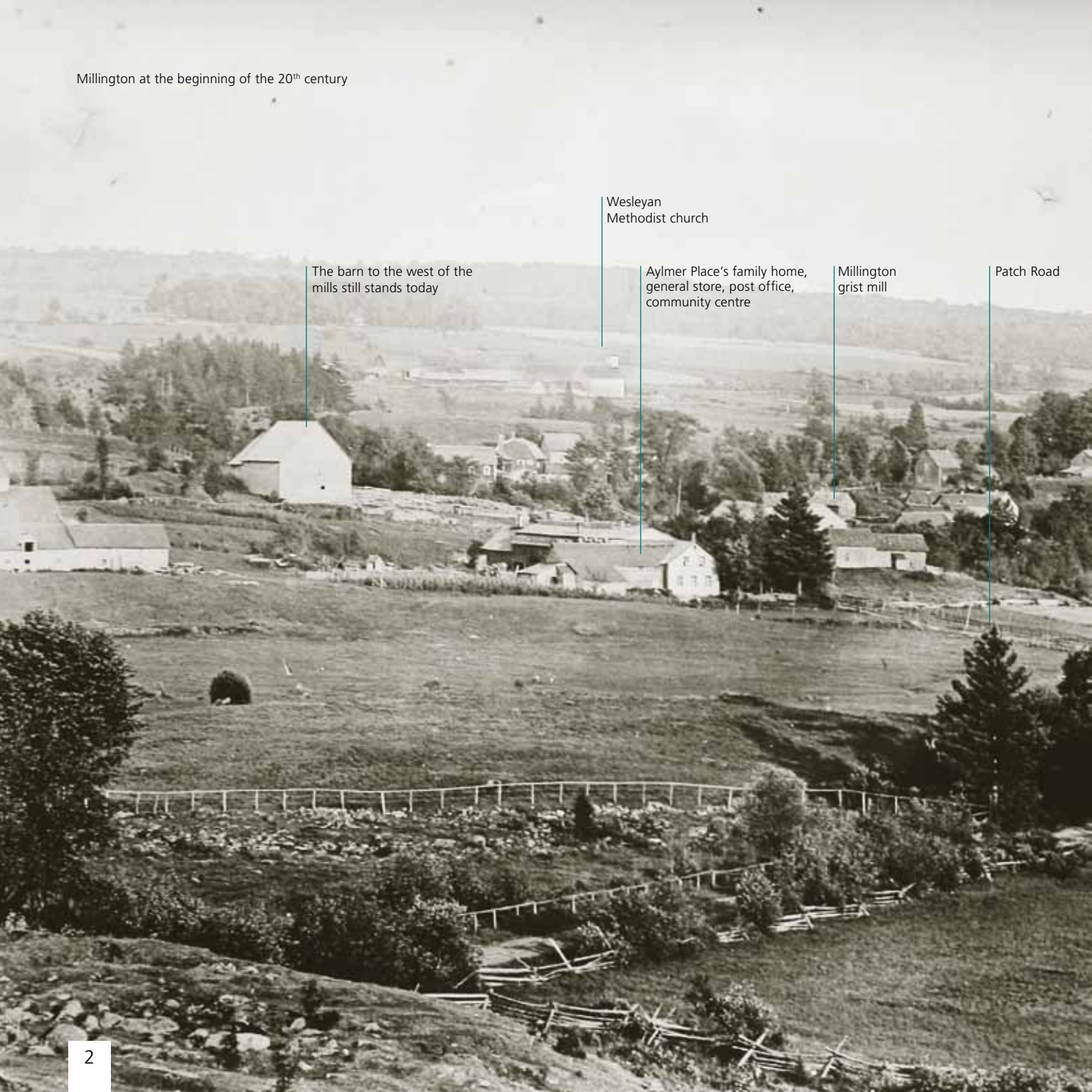
in Austin's Pre-industrial Era



A brook draining the chain of lakes and ponds that run along the present-day North Road emptied into a bay on Lake Memphremagog. There, in the early years, dams were built, along with mills for grinding grain, sawing wood and processing wool...

This is the history of this brook.

Millington at the beginning of the 20th century



The barn to the west of the
mills still stands today

Wesleyan
Methodist church

Aylmer Place's family home,
general store, post office,
community centre

Millington
grist mill

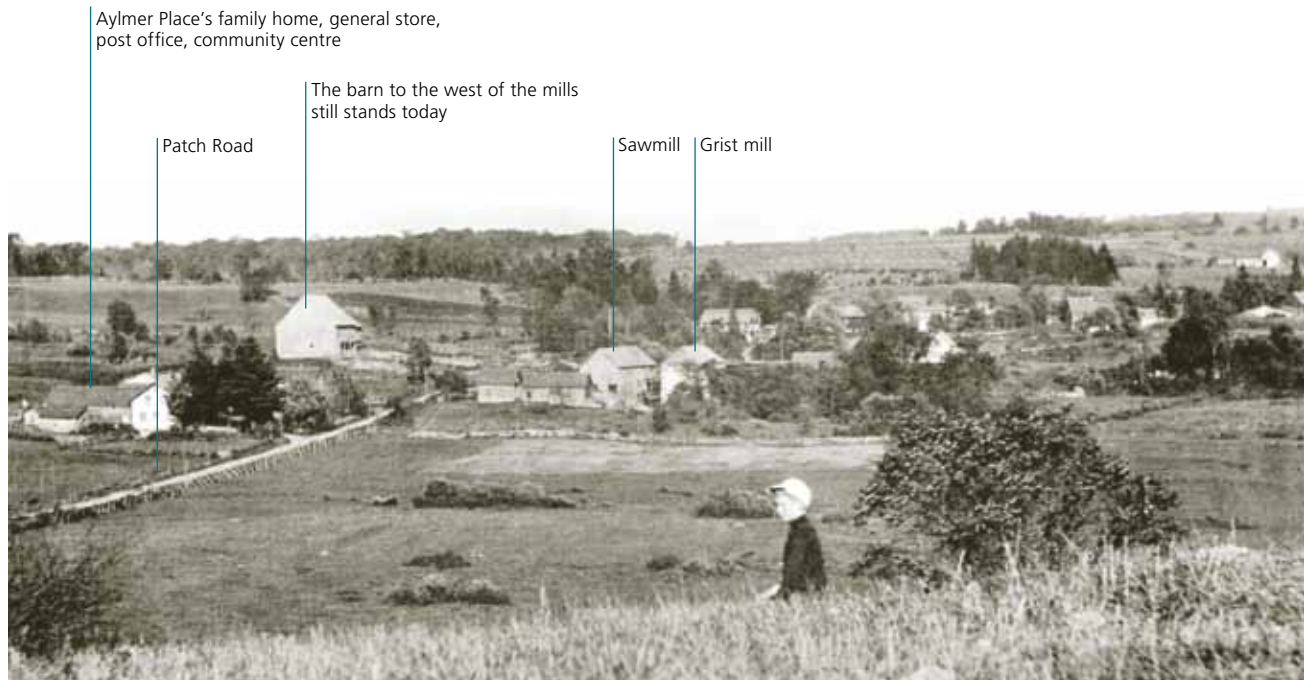
Patch Road

Background

In 2009, at the request of Austin's Cultural Committee, Archéotec Inc. carried out archeological research which made it possible to identify three important historical sites along Powell Brook. In the upper portion of the brook, the first site includes the Upper Gate and Old Beattie dams, as well as the probable location of Thompson's first two wooden mills and the Charbonnel sawmill. The second site, in the central portion of the brook, includes the Millington dam, the existing Millington mill and the purported location of Thompson the father's third mill and Thompson the son's stone mill. In the lower portion of the brook, the third site includes the fulling mill. In accordance with the *Cultural Property Act*, the three archeological

sites have been assigned a Borden Code by the Ministry of Culture and Communications. They have also received a municipal designation which endows them with protection in perpetuity.

In 2011, Archéotec conducted supplemental research in archives and notarial acts. This complemented and enhanced the data collected during their first investigation, and shone light on past economic activity in both Millington (originally Thompson's Mills) and Head of the Bay (at the mouth of the Brook). This publication covers the highlights of these investigations.



Millington at the beginning of the 20th century



The mills at the heart of the pioneers' life

Mills have long been important to Quebec's industry and traditional crafts. Their invaluable contribution throughout the years has made them the partners of social evolution and, as such, they provide a testimonial to the economic growth of communities. Soon after the arrival of European pioneers on Quebec soil in the 17th century, thousands of mills were built to ensure the social and economic development of the populations that lived in the shadow of these imposing structures. Without mills, flour for bread and lumber for buildings would have had to be imported, at considerable expense.

Mill operation requires either a strong wind or a strong flow of water. There were no windmills built in the Township of Bolton, probably because of forest density. Hydraulic power, on the other hand, was readily available and Powell Brook, with its considerable drop of 35 metres, provided a strong flow, at least in past centuries. Its waters were to be harnessed for power over several decades.

Powell Brook downstream
from the Upper Gate dam

Aboriginal presence

It is almost certain that in prehistoric times, aboriginals occupied the shores at the mouth of Powell Brook, at least sporadically. Nearby, at Ritchie's Point in Sargent's Bay, there is an Amerindian archeological site that is dated 5,500 to 4,200 BCE. When the Europeans arrived, the region was occupied by the Abenaki.

The arrival of Nicholas Austin

Nicholas Austin and his Associates settled in the Township of Bolton around 1793, but it was only in 1797 that the 87,670 acre (354 km²) township was granted to him by the government of Lower Canada. Of this, 62,621 acres were earmarked for development, 12,400 for the Protestant clergy and a further 12,190 acres for the Crown. Lots of 1,200 acres each were distributed among Leader Nicholas Austin and his 53 Associates, but the latter had to deed back 1,000 acres to Austin in compensation for expenses undertaken by him to register titles, survey the land, lay roads, etc. According to certain authors of the time, the township showed great promise, but several lawsuits delayed its development. Indeed, inaccuracies and shortfalls in lot allocation caused certain Associates to settle on the wrong lot, while others sold their land titles to speculators and failed to honour their commitment to the Leader. It was in the 1860s that the ownership of the lots by specific proprietors was finally established, thanks to the work of the *Bolton Land Commission* and the land survey realized by Felix Farnan.



Ruins of the Upper Gate dam which held the waters of the Millington Marsh



Remains of the Millington Dam

The Thompson mills, a family affair

Three generations of millers

Alexander Thompson I 1750 – 1835

Alexander Thompson II 1787 – 1845

Alexander Thompson III 1817 – 1895

Three generations of Thompsons, headed by the pioneer, his son and his grandson, played a central role in the life of the Millington area during the first half of the 19th century. For simplification, these men are referred to below as Thompson I, II and III.

According to the land patent issued to Nicholas Austin in 1797, Thompson I owned 500 acres comprised of lot 19 on the 10th and 11th ranges and the southern half of lot 18 on the 11th range. He also acquired mill privileges on Powell Brook. (See map on page 11.)

On April 10th 1810, Thompson I deeded to his son James a 75-acre tract of land from lot 19 on the 11th range (south of Taylor Road which extends westward as Millington Road). Thompson I kept the house and two barns.

On July 11th 1818, Thompson II purchased from Nicholas Austin's nephew 100 acres of the western part of lot 18 on the 11th range, including the existing buildings. We may presume that he had the intention of utilizing the brook and may have built the Upper Gate dam at that time.

Aiming to establish a commercial hub around his mills, Thompson II bought and sold several tracts of land between August 10th and October 11th 1824. In 1832, he built a new grist mill, this time of stone, in the central portion of the brook by Millington Road.

At his death in 1845, Thompson II bequeathed the mill to his son Alexander, age 28, and his grandson Alexander Dailey, age 8. His son-in-law, John Dailey, took over the operations. The notarial acts mention two dams, Upper Gate and Millington, both of them in bad condition at that time.

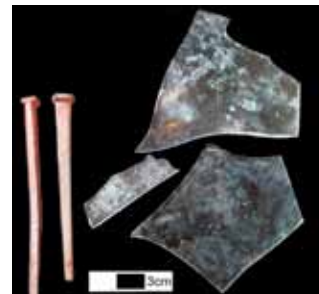
Between 1854 and 1858, Thompson III sold all the properties connected to the mills and their operation to Joseph P. Allen, thereby putting an end to the Thompson millers' fifty year reign.

The upper portion of Powell Brook

It is in this sector traversed by Powell Brook, first named *Thompson's Mills* and then, from 1877, *Millington*, that one of Nicholas Austin's first Associates, Alexander Thompson, settled with his family. He became a significant contributor to the economic growth of the township, building at least two wooden mills, one for flour and one for lumber, over a waterfall (at the site later known as *Old Beattie Dam*) and downstream from what is now known as Millington Marsh. A few well-preserved sections of the foundations assessed by the archeologists show that these mills, which rested upon structures made of local stone, spanned the brook. The water wheel was probably set in the middle of the stream. These mills were destroyed by fire soon after their construction and rebuilt, some time later, south of the present-day Millington Dam.



Fragment of a pipe used in the 19th century, found in the probable remains of the Charbonnel mill.



Objects found in the foundations of the Thompson mill. The burnt glass confirms the mill's destruction by fire.

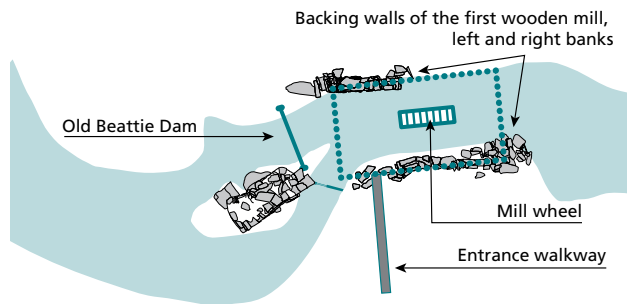


Backing wall of the first Thompson mill, on the right bank.

His son, Alexander Thompson, later created a millpond by building, at the effluent of the marsh, a dam usually referred to in notarial acts as *Upper Gate*. A moon-shaped, dry masonry structure, the dam was made of large stones held in place solely by their weight. A simple sliding door, which no longer exists, must have been used to control the flow of water and to retain it in times of drought. Many segments of the dam can still be seen today.

The Charbonnel sawmill

While the purchase of a parcel of land and the construction of a sawmill by Reverend Charbonnel are confirmed, there are no documents attesting to its exact location along Powell Brook. In operation from 1865 to 1892, this mill left few traces on the ground. The archeologists excavated several trial trenches near the Charbonnel Road in an attempt to locate the remains of the mill or the house, but their efforts were unsuccessful.



Thompson's first mill



Ruins of the Old Beattie Dam. Location of the lock regulating the flow of water.



Built along a due north-south axis, the wall of an unidentified building which could have been a house or a mill. The Charbonnel mill?

Legal considerations when building or purchasing a mill

The operation of a mill requires a right of way on both banks of the stream where the mill is located, whether for the placement of a dam, the construction of a coffer dam or the creation of a millpond. The storage of water inevitably alters the flow downstream and may sometimes cause adjacent lands to flood. The owner of a mill must therefore obtain a *Mill Privilege* or *Water Power* from the owners of waterside properties.

The central portion of Powell Brook

Between 1824 and 1845, more grain could be processed in the Millington sector, thanks to the construction of a stone mill by Thompson II. From 1857, other owners contributed to the changing configuration of this pre-industrial core. The land was transferred successively from one person to another: N. Beattie, E. Knowlton, M.B. Randall and T. Charbonnel. In 1865, brothers Pierre and Napoléon Racicot, carpenters, were contracted by Beattie to renovate Thompson II's stone mill and install three sets of granite and flint millstones with which a variety of grains could be ground, depending on whether the flour was to be used for bread, pastry or cereal. The operation was obviously successful, for in 1874, the brothers acquired a parcel of land with a house and barn. At the same time, a parcel of land on which there stood a forge was sold by N. Beattie to Michaël Sénécal, a carriage manufacturer.



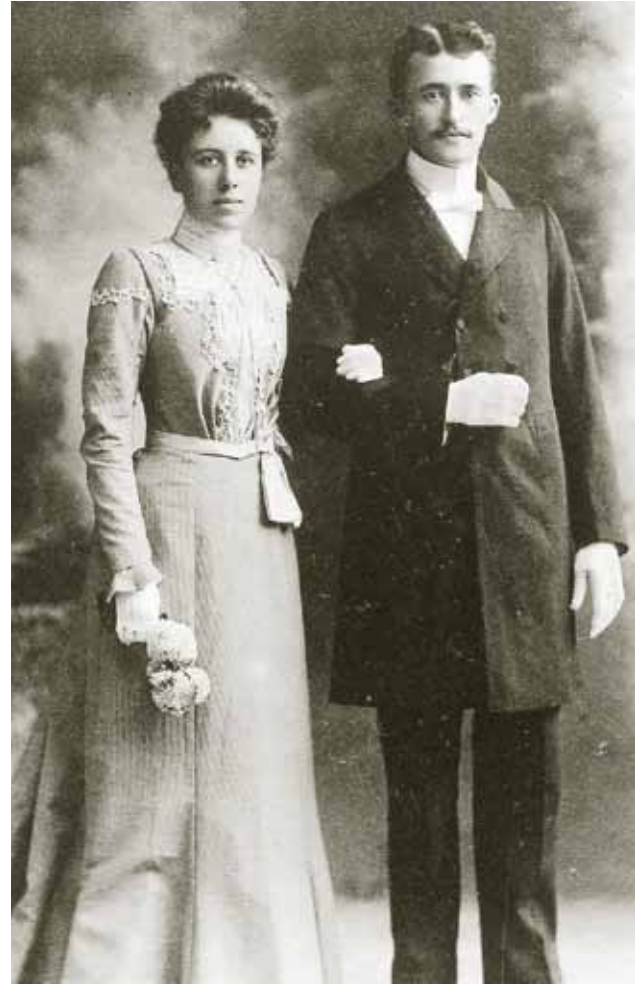
The Millington Mill and Powell Brook in the 20th century.
In the background: the forge.

Remains of the Millington Mill
before its collapse in 2011.

Improved roads also contributed to the development of Millington. Its industry expanded outwards and in addition to the grist mill, a new house was erected in the northwest corner of the land where several buildings and a stock yard already stood.

In the 1880s, a new grist mill, the Millington mill, powered by a high speed turbine, was constructed, purportedly by T. Rider. This mill was later acquired by the Methodist pastor Ephraim J. Patch, who also purchased the general store. After his death in 1910, his son Stillman, the postmaster, took over his father's businesses, which included a sugar bush, an orchard, a large stable, a carriage house, and sleighs to transport goods from Millington to Bolton Centre. He had a new dam built and diverted the brook to better power the mills, which shared certain hydraulic equipment. The sawmill was also outfitted with a new kiln and a shingling machine.

Stillman died in April 1917 in the aftermath of an accident at the sawmill. Tragically, his widow Nancy Anne, daughter of pastor Brill, buried her husband and her father on the same day. She carried on in spite of it all, operating the mills and collecting payments, until the following year when a fire destroyed her home and the general store below it. The wooden sawmill was a total loss while the stone grist mill sustained considerable damage. Discouraged and lacking resources, Nancy Anne emigrated to the United States with her young children.



Stillman G. Patch and Nancy A. Brill, the last millers of Millington, on their wedding day.

The Millington mill

Soon after the fire that destroyed his first two mills at Old Beattie Dam, Thompson I erected a wooden mill directly downstream from the Millington dam, south of present-day Millington Road. It has not been possible to conduct archeological research to confirm the mill's location. His son, Thompson II, would build a stone mill at that same location circa 1832.

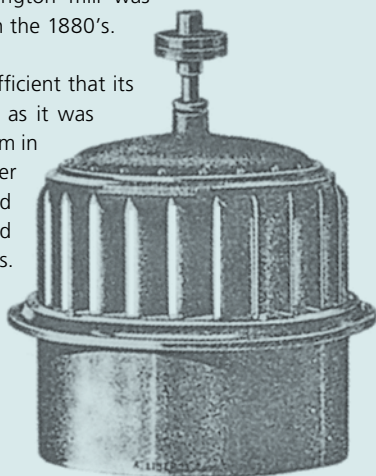
Notarial acts show that the mill whose ruins are still visible today at the intersection of North and Patch Roads is not the one Thompson II built, but another whose construction, at the end of the 19th century, had required diverting the brook into its present-day configuration. This mill is credited to Timothy Byron Rider, even though supporting documentary evidence has not been found. It is this second stone mill that we call "the Millington mill".

Built on the left bank of Powell Brook, the mill was rectangular and measured 9.80 by 8.10 metres. The remains measure 8.94 m in height. The limestone masonry is bound with mortar, which in places has all but disappeared. At the base of this massive structure, the walls are one metre thick. The base presents a slight batter and rests upon existing rock. Two offsets can be observed inside, one 4.4 m from the ground, the other at 6.3 m.

The high speed turbine

In the middle of the 19th century, the high speed turbine was introduced in America, where its use spread gradually, reaching Quebec circa 1860. The Millington mill was outfitted with such a turbine in the 1880's.

This turbine was much more efficient than its predecessor, the water wheel, as it was much smaller (approximately 2 m in diameter) and could make better use of flowing water. Linked directly to the shaft, it could power both saw and millstones. Mill production increased significantly as a result.



Millstones remaining on the ground near the Millington mill.

The millstones

The archeological team found three millstones on the site of the mill. They are of a type similar to the "French burrstone", which consists of an assemblage of flint blocks bound with mortar and secured by a metal hoop. This type of millstone was widespread in Quebec as it was nearly impossible to transport monolithic millstones by boat.

Two of the millstones are 1.3 m in diameter and 30 cm thick, with an eye (the opening at the centre) measuring 30 cm in diameter. The third millstone is smaller: 90 cm in diameter and 20 cm thick, with a 25 cm eye. It is surrounded by two iron hoops. Because we know that the mill contained two grist mills (that is to say, four millstones), there should be a fourth millstone; it is missing.

Millington's heyday

The pre-industrial complex that grew around the grist and saw mills in the 19th century conferred a certain prosperity to the area. A hamlet was established, first named Thompson's Mills and then, from 1877, Millington.

Originally populated by Nicholas Austin's Associates, the hamlet grew as children were born and, in turn, settled there with their families.

A church

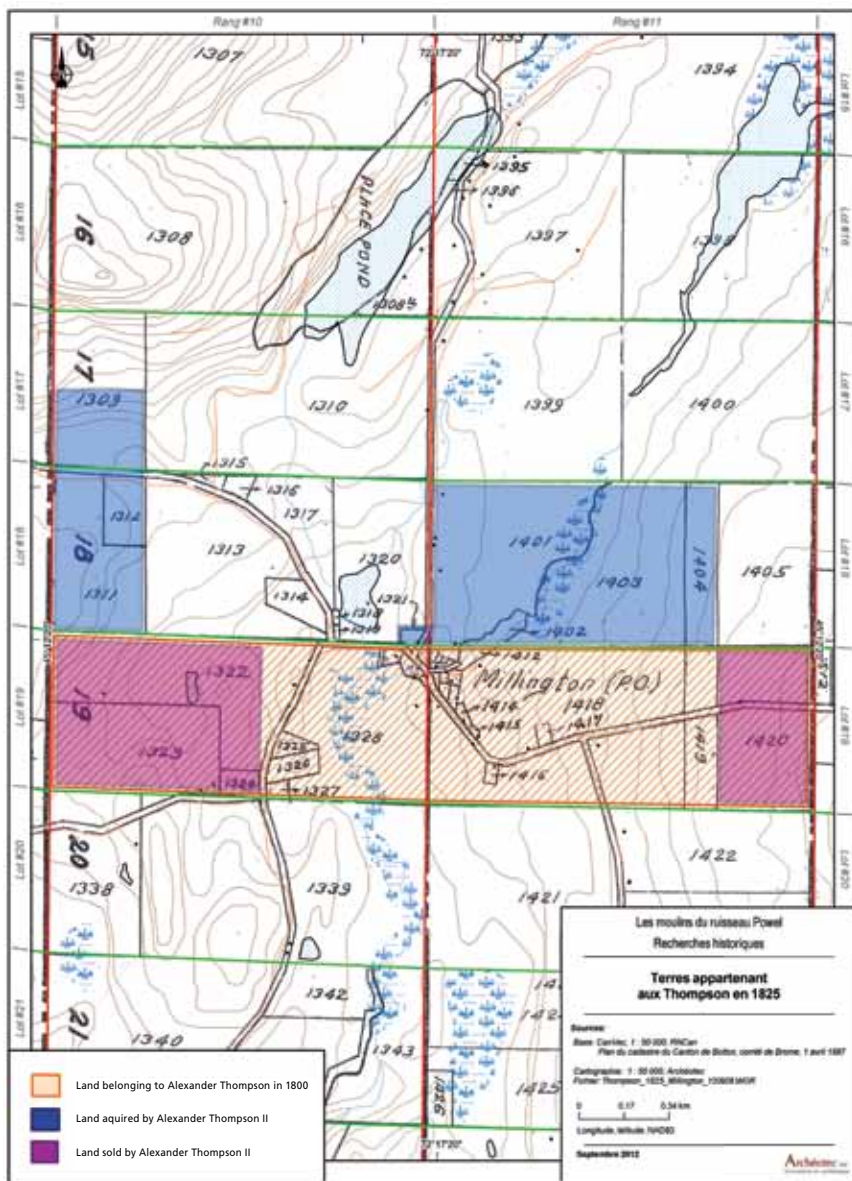
As early as 1825, the first church in Bolton Township, of the Wesleyan Methodist faith, was built on the Millington Road, on a plateau overlooking the Powell Brook valley. A commemorative cairn now marks the spot.

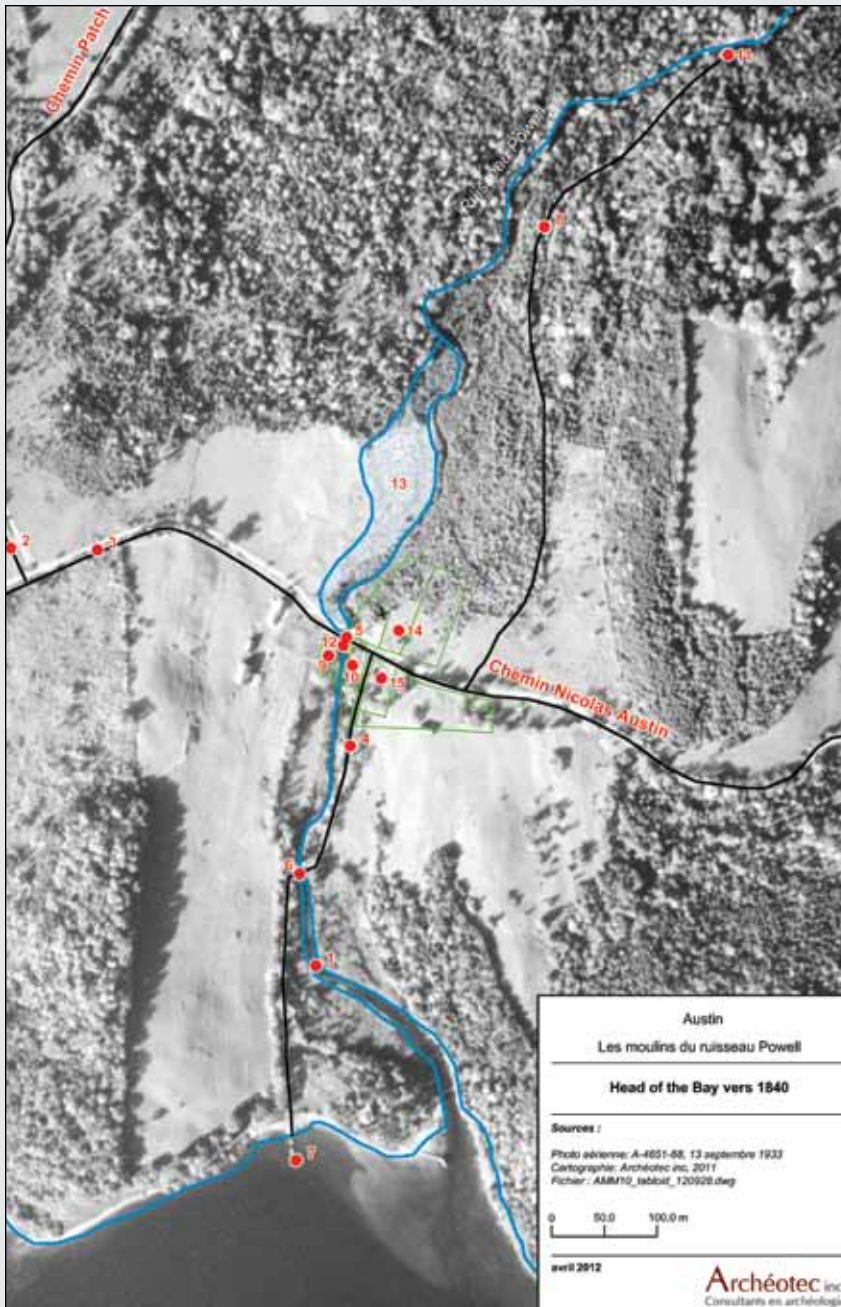
A school

A year later, a school was built nearby. The children of the mill workers accounted for most of its pupils.

A post office, a general store and a community hall

In 1877, the post office opened in a large house owned by Aylmer Place. Also housed under the same roof were a general store and a community hall. The building was located close to the saw and grist mills and with them formed the core of Millington. (See back cover.)





Lake Memphremagog

Head of the Bay area circa 1840

1. Mill Brook (Powell Brook)
2. Road connecting Millington and Head of the Bay (Patch Road)
3. East-west Road (Nicholas Austin Road)
4. Road to the wharf (Millbrook Road)
5. Road bridge over the millpond
6. Stone bridge crossing the brook
7. Stone wharf
8. Road connecting the fulling mill (11) to the East-west Road (3) (hypothesis)
9. Carding mill, cloth dressing mill, hangar
10. Sawmill, forge
11. Carding mill, eventually converted into a fulling mill
12. Dam
13. Millpond
14. Store, hangar and probable location of the potashery
15. House, hangar

The lower portion of Powell Brook

Beyond the dams and mills located in the upper and central portions of Powell Brook in Millington, at approximately 1.8 km downstream as the crow flies were built three wool mills: a fulling mill, a carding mill and a cloth dressing mill.



General view of the remains of the fulling mill, lower portion of Powell Brook. Nicholas Austin *the Nephew* built a carding mill, probably in the 1830s and undoubtedly at the same location as this building, identified in 1864 as a fulling mill.

The ruins of the fulling mill, still visible today, reveal a square structure whose four walls each measure 7.7 m in length and approximately 85 cm in thickness. The base consists of a few large rocks upon which sat massive walls made of coursed flagstones.

Head of the Bay: another family history

Nicholas Austin <i>the Leader</i>	1736 – 1821
Nicholas Austin <i>the Nephew</i>	1768 – 1853
Nicholas Austin <i>the Son</i>	1782 – 1867

The importance of the Austin family in the Head of the Bay area is such that it is necessary to define the three families who contributed to much of its development. Three men named Nicholas Austin would play leading roles: **Nicholas Austin *the Leader***, leader of the Associates who founded the township; **Nicholas Austin *the Nephew***, nephew and Associate of Nicholas Austin *the Leader*; and **Nicholas Austin *the Son***, son of Nicholas Austin *the Leader*.

The most important figure in the area was Nicholas Austin *the Nephew*. Like the other Associates, he had received 1,159 acres, of which 959 were deeded back to his uncle, Nicholas Austin *the Leader*. On April 2nd 1806, he bought 3,000 acres from him. He sired eleven children, including Amos (1807-1865), who of all the children would reside the longest in the township.

It was Nicholas Austin *the Nephew* who acquired the parcels of land on lot 22, where, aiming to harness the hydraulic power of the brook, he built wool mills in 1824. He also built a carding mill on lot 21, which he sold in 1842. For several years his son Amos, a blacksmith, operated a forge near the sawmill.

Processing wool

Wool processing at Head of the Bay required activities both at the farm and at the mills, and involved transporting the various stages back and forth between the two.

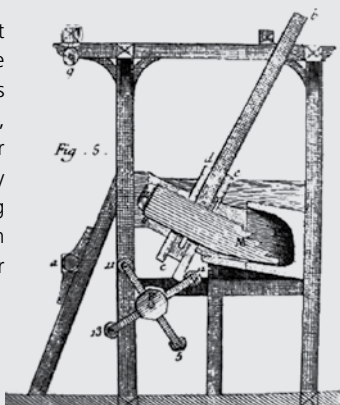
At the farm (May): The sheep were sheared and the fleece given its first scouring to remove the “suint”, a naturally occurring grease.

At the carding mill (June-July): The wool is first combed to remove impurities and to separate and stretch the fibres, than greased or oiled. Carding then stretches and aligns the fibres. The resulting ribbons of wool, or “rovings”, are more or less supple.

At the farm (in the fall and winter, after haying and harvesting): The wool is spun on spinning wheels. The resulting yarn is wound on spools, and then unwound onto a manual loom where it is woven into cloth. In the case of flannel, the sequence ends here.

At the fulling mill (usually the following spring): The loosely woven cloth, or “mat”, is washed with soap, pounded with fulling hammers, attached by tenterhooks to frames for stretching, and teased to raise the nap, which is then sheared. This results in a sturdy cloth, which is more or less waterproof.

Dyeing is done either at the farm at the start of the process (using natural dyes made from native plants), or at the mill, either after carding or at the very end of the process (using imported dyes set with mordants such as vitriol or iron sulphate [copperas]).



Source: Jean-Pierre Kesteman, historian

Fulling mill using hammers
(Diderot-D'Alembert online Encyclopedia)

The place named Head of the Bay

The Head of the Bay mills are not well documented, which limits our ability to reconstruct their evolution. The historian C. Thomas mentions the existence of three mills in Head of the Bay in the years 1820 and 1830, while E. Taylor reports the existence of two carding mills: one owned by Huntley, the other by Austin *the Nephew* and Phelps. The notarial acts mention carding, fulling, shearing and cloth dressing operations.

Between 1824 and 1834, a road, which corresponds in part to the current Nicholas Austin Road, was built, as well as a bridge, a sawmill and a dam (the resulting reservoir flooded lands upstream). The mills (carding, cloth dressing and shearing) were constructed nearby.

On April 14th 1842, Austin *the Nephew* transferred to William Greene* parcels of land (lots 21 and 22 on the 10th range) on which a carding mill already stood. It appears likely that this mill was later converted into a fulling mill.

On March 13th 1855, Greene purchased from Amos Austin a small parcel of land on the left bank of Powell Brook, directly south of the road. He also acquired the space between the two banks of the brook, close to the old dam which had powered the mills. The sawmill no longer existed.

The Head of the Bay potashery

Other commercial activity developed around these mills and included a store and a potashery.

Because potash had a high monetary value, farmers would turn part of the trees on their land into ashes, which they then sold to a local potashery. There, the potash was refined into a purer product called “pearl ash” and sold to wholesalers. They in turn exported it – to Europe and elsewhere – or transformed it into products such as soap.

*Greene would become, in 1845, the first mayor of the Municipality of Bolton Township.

In a local setting, the combination of a store and potashery was an obvious advantage, for farmers could sell their ashes and then purchase goods of all sorts (tools, machinery, food products, etc.).

The transformation of ashes into potash required a significant amount of water as well as installations to house and protect several vats. The store and buildings, property of John Austin Junior, were built near the millpond created by the dam. However, very little information on these establishments has survived.

The existence of a road and a wharf also contributed to the commercial expansion spurred by the mills. We know that Moses Copp, one of Austin's Associates, operated a horse-powered ferry between Copp's Ferry (now Georgeville) on the east side of Lake Memphremagog, and the wharf located near the mouth of Powell Brook.

Growth and decline of Head of the Bay and of Millington

The development and operation of mills on Powell Brook contributed to Bolton Township's growth by providing services to local families. The evolution of mill activity can be categorized into four distinct periods:

During the period from 1794 to 1823, the area was settled by the pioneer families, who had to be completely self-sufficient. The products generated by the first mills were determined by the immediate needs of the people who settled in an area where roads were yet to be laid, houses and farm buildings built, land cleared before it could be cultivated, and where farm harvests were used, first and foremost, to feed family and livestock.

During the period from 1824 to 1845, production became increasingly more centralized, thanks to the construction of a larger grist mill and the presence of a forge in Thompson's Mills. This era also witnessed the construction of wool-processing mills, a sawmill and a forge in Head of the Bay, as well as the establishment of a nearby general store and potashery.

During the period from 1846 to 1870, mill activity decreased in both areas: in Head of the Bay, commercial activity was declining while in Millington, new technologies enabled the sawmill and the grist mill to stay in operation. External factors started to exert a significant influence upon the future of the mills: the arrival of new farmers who preferred raising cattle for milk and meat than raising sheep for wool, continual improvement of the road network as well as increased access to manufactured goods, which allowed people to purchase market goods rather than make use of local mills. Moreover, the flow rate of Powell Brook was not adequate to power the new larger mills.

During the period from 1871 to 1925, Millington prospered greatly. An imposing new turbine-operated grist mill was built circa 1884, and the Millington dam was rebuilt. The presence of several sawmills is also noted. Spurred by this activity, other businesses appeared. In 1877, the Millington hamlet was officially created; it thrived for some 30 years. At Head of the Bay, commercial activity all but ceased to the profit of nearby Peasley's Corner (the village of Austin as it is known today), which was attracting a growing population.



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Mills have long been important to Quebec's industry and traditional crafts. Their invaluable contribution throughout the years has made them the partners of social evolution and, as such, they provide a testimonial to the economic growth of communities. Such is the case of the mills on Powell Brook.



Aylmer Place house, Millington, circa 1900. The Place family occupied the three stories on the left. On the right, there was a post office and general store on the ground floor and a dance hall on the second floor.