

# Bolton Preservation Plan

## 1. Context of Historic Preservation in Bolton

### 1.1 Geologic History of Bolton

The geologic history of Bolton has been a major determinant of how the town has developed over time; therefore, it is important to understand how geology has shaped the land and how the form of the physical landscape has influenced the history of the town.

Bolton's landscape was most recently formed by the action of glaciers as they first advanced, then retreated, during the 100,000 years of the last ice age. The major soil types left by this glacial action can be classified as (1) till soils, (2) outwash soils and (3) lake bottom soils.

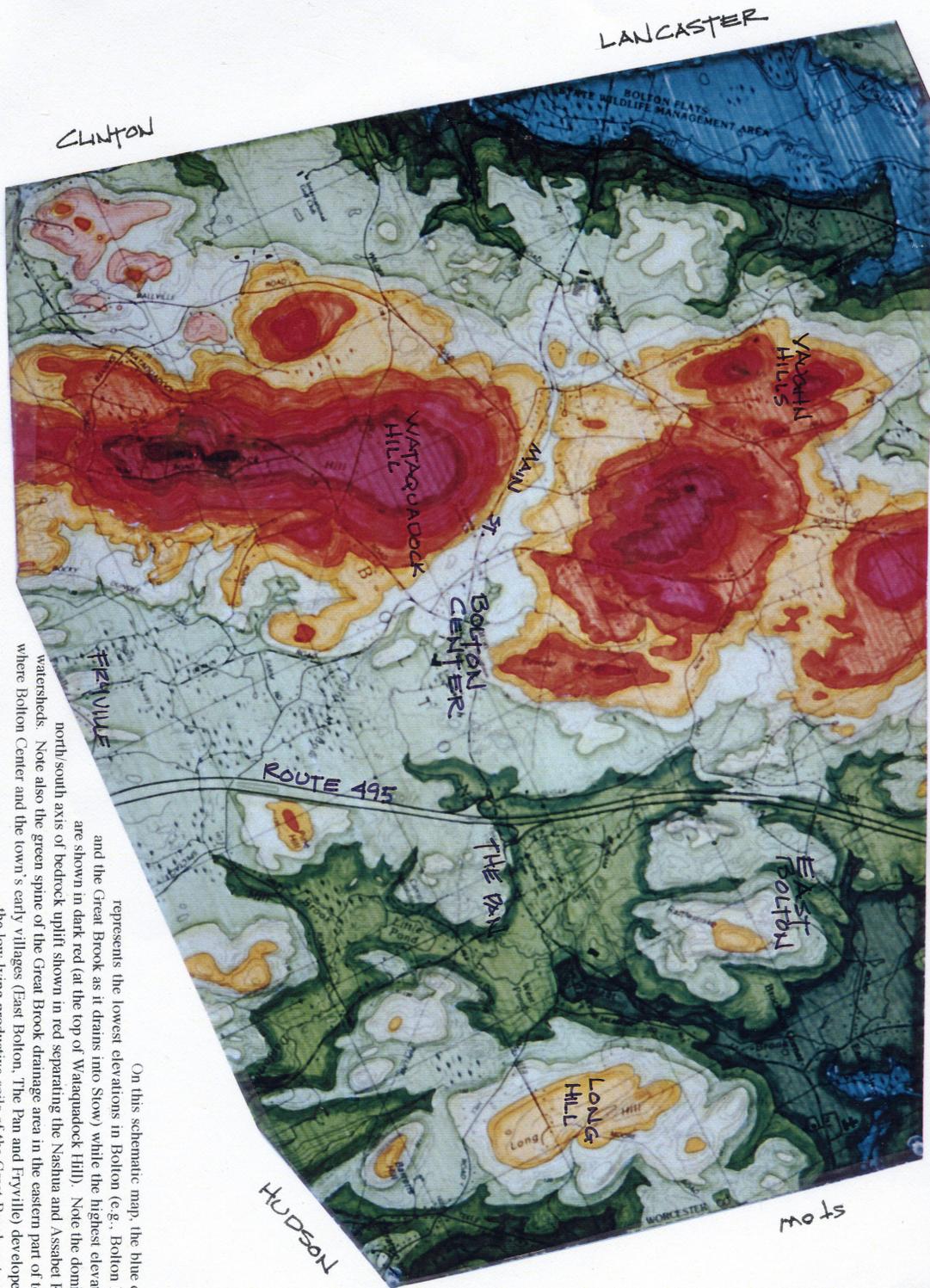
#### **Glacial Till Soils**

Glacial till soils are derived from unsorted material---from fine clay to large boulders---that were deposited directly over bedrock by glacial action. As the glaciers, estimated to be one mile in thickness, moved across the underlying bedrock, they picked up preexisting soil and loosened rock and, as they retreated, deposited this material in new configurations over the bedrock. This material ranges in thickness from 0 inches (where bedrock is exposed from the scouring of the glaciers) to more than 100 feet thick in drumlin formations.

The topography of the glacial till landscape closely reflects the underlying profile of the underlying bedrock (see Map 1: Topography of Bolton). In Bolton, there exists a major bedrock uplift that runs in a north/south direction, whose highest point is at the top of Wadaquadock\* Hill. The rolling, often rocky, landscape common to Bolton reflects this till history. The steepness of the bedrock topography and the thickness of the till soils left by the glaciers were to be important determinants of historical land use.

As the glaciers retreated in a northwesterly direction, they scoured the southeastern faces of many bedrock formations. The result has been a series of hills in Bolton that have exposed bedrock profiles on their southeastern face and more gently sloping topography on their northwestern side (see Illustration 1 in Appendix A). One of the most dramatic and accessible of these scoured hill faces can be seen behind Town Hall on the southeastern face of Powder House Hill. In addition to Powder House Hill, the twin hills that comprise Vaughn Hills also have the profile shown in Illustration 1, as

\* The word Wataquadock has been spelled in various ways throughout the history of the town. The spelling used here is that found on current official town maps and on United States Geologic Survey (USGS) maps.



## Map 1: Topography of Bolton

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On this schematic map, the blue color represents the lowest elevations in Bolton (e.g., Bolton Flats and the Great Brook as it drains into Stow) while the highest elevations are shown in dark red (at the top of Watagadock Hill). Note the dominant north/south axis of bedrock uplift shown in red separating the Nashua and Assabet River watersheds. Note also the green spine of the Great Brook drainage area in the eastern part of town, where Bolton Center and the town's early villages (East Bolton, The Pan and Fryville) developed on the low-lying productive soils of the Great Brook watershed.

does Rattlesnake Hill, Pine Hill and other hills in town.

The till deposits over bedrock generally follow the contours of the underlying rock, and the hills that have resulted are called ground moraines. The smooth contours of these hills are most dramatically shown on the cleared fields on Wataquadock Hill and on the apple orchards that ascend Wataquadock and other hills in Bolton.

Another land formation created directly by glacial action are drumlins, which are composed of unsorted glacial till and which typically have an oval or rounded profile. Bedrock is commonly not at the surface of these formations. Examples of drumlins in Bolton, which occur principally in the southeastern corner of town near Hudson and Stow, include Spectacle Hill, Barretts Hill, Stratton Hill and a few other unnamed hills. Map 2 shows the extent of Glacial Till deposits in Bolton and the location of drumlins. Note that the long axis of the drumlins parallels the NE/SE movement of the glaciers.

### **Glacial Outwash Soils**

Glacial outwash soils were formed by the washing out of sand and gravel from glacial ice blocks and the deposition of the material in stratified layers in glacial lakes. As the glacial lakes drained away at intervals, they left behind flat terrace formations characterized by steep slopes at the edge of the terraces where the outwashed material was deposited up against glacial ice blocks. In Bolton, this glacial outwash action took place in the western section of town, where Glacial Lake Nashua once existed. Glacial Lake Nashua also covered extensive areas of what are now the Towns of Lancaster, Clinton and, to a lesser extent, Harvard. This flat landscape characterized by steep, sandy slopes at the edge of terrace formations can be found in the area of Still River Road (see Illustration 2 in Appendix A) and Forbush Mill Road (see Map 3 in Appendix A).

On Still River Road, there can be observed three distinct terrace levels of outwash soils: the highest is Clinton Stage deposits (380 feet above sea level); next lowest is the Ayer Stage deposits (280 feet above sea level); and the lowest, Groton Stage deposits (260 feet above sea level).

Another location where glacial outwash soils exist is in the low-lying areas in the eastern part of town shown on Map 4 in Appendix A. This area, characterized generally by glacial till soils, nevertheless has an extensive landscape of kame terraces and outwash soils within the drainage watershed of Great Brook, which includes Mill Brook. These outwash deposits were left at the bottom of a glacial lake much smaller than Glacial Lake Nashua that once extended into what is now the Towns of Stow and Harvard. The soils in this area are generally less sandy than the very sandy soils on the western edge of Bolton and much thinner in profile. They have historically been productive agricultural soils.

Glacial outwash soils are characterized by many interesting land formations of historical interest. In addition to kame terraces---with their flat tops and steep ice contact slopes---outwash soils include formations such as eskers and kettle holes. Eskers are elongated, serpentine hills of about 30 feet in height that were formed when



fissures in glacial ice blocks allowed underground streams to course through the glaciers over thousands of years, depositing layers of gravel and boulders . When the glaciers melted, esker formations resulted (see Illustration 3 in Appendix A). A spectacular esker in Bolton, that proceeded north above Main Street parallel to Sugar Road for almost a mile, was destroyed by the construction of Route 495. Smaller eskers still existing in Bolton include the short formation at Main Street and Sugar Road and the esker on which a section of South Bolton Road was built (on that portion of the road between Century Mill Road and Spectacle Hill Road) . South Bolton Road sits on top of the esker and provides an excellent vantage point for viewing the formation.

Another landscape formation created by the action of outwash deposits includes kettle holes. These are circular holes, either dry or with year-round standing water, that are characterized by steep ice contact slopes. Kettle holes were formed when isolated smaller ice blocks were stranded within glacial lakes. Sand and gravel deposits continued to be deposited around the stranded ice block and, when the lake drained away, the isolated ice block melted, allowing the face abutting the ice block to collapse and leaving the kettle hole (see Illustration 4 in Appendix A). See Map 5 for locations of eskers and kettle holes in Bolton.

### **Glacial Lake Bottom Deposits**

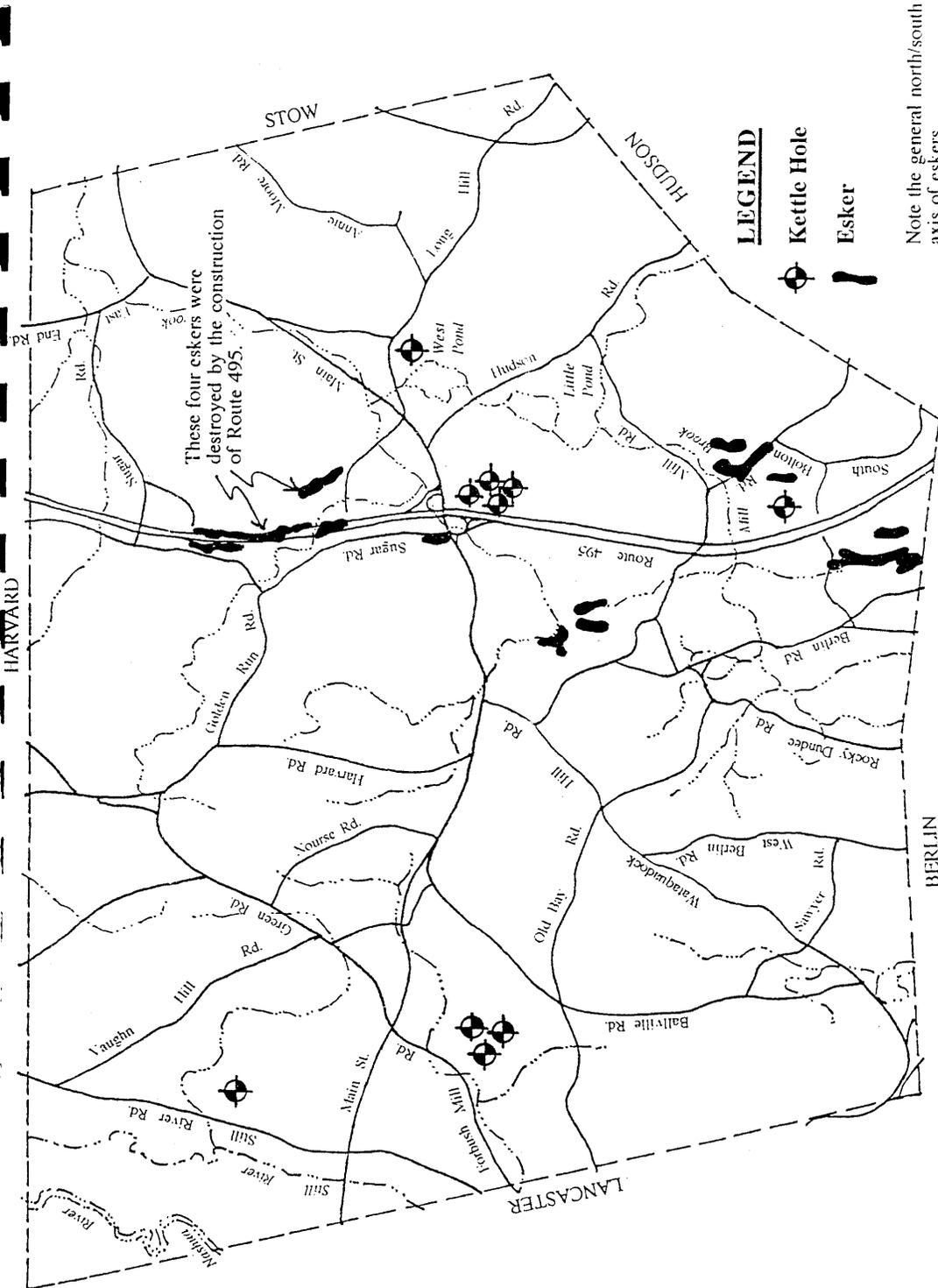
These deposits were formed during the final stages of glacial lakes and are characterized by low-lying flat topography with fine, silty and muck soils that are wet year-round. The most prominent of glacial lake bottom deposits in Bolton are the Bolton Flats, with its extensive fresh water meadows, which represent the end point of Glacial Lake Nashua. These meadows were important in the early cultural development of Bolton. Smaller-scale examples of lake bottom deposits include the larger wetlands found in Bolton along Great Brook, Mill Brook and Hog Brook. These streams---including the Nashua River---represent the final drainage ways for the glacial lakes.

## **1.2 Cultural History of Bolton**

### **Native American Populations**

Bolton's cultural history is closely tied to its geologic history. Approximately 10,000 years ago, following the revegetation of the area once the glaciers receded, nomadic tribes of hunter/gatherers migrated into the New England area. In Northern New England, these tribes continued to be hunter/gatherers; however, in Southern New England, the hunter/gatherer tribes also adopted, about 1,000 to 2,000 years ago, the cultivation of fields to supplement their food supply.

In Southern New England, local tribes did not passively live off of the land but actively managed the land for their purposes and to maximize its productivity. These tribes practiced both an extensive and an intensive form of husbandry. The extensive form of land management involved the yearly burning of woodland understory growth to accomplish several purposes: it provided easier travel, more efficient hunting, lush grass growth that supported larger wildlife populations, and the reduction of diseases



**Map 5: Locations of Eskers and Kettle Holes in Bolton**

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and pests. The fresh water marshes, including what is now known as Bolton Flats, were also burned by the Nashaway's, the local Native American population and a subgroup of the Nipmuck tribe, to maximize meadow grass growth and wildfowl productivity.

Because of the primitive nature of their stone tools, the predecessor tribes of the Nashaways in Bolton avoided the dense, silty clay soils of glacial lake bottoms because they were more difficult to work and because they tended to remain wet longer into the Spring season. They also avoided the higher, dryer outwash soils (in Bolton, the Clinton stage soils of Glacial Lake Nashua) because of their dryness and because of their thin layer of topsoil. The ideal soils for cultivation with their available tools were the soils deposited during the low stages of glacial lakes; in Bolton, the low stage soils left by Glacial Lake Nashua are the Groton and Ayer stage deposits. These soils were neither too wet nor too dry, easily workable and with adequate topsoil. The most valuable and commonly-used agricultural fields were those near streams with adequate fish populations for direct consumption and for use as fertilizer and that were easily caught through fish weirs. In Bolton, this stream was the Still River.

Available archeological data suggests that the Nashaways in Bolton appear to have lived for extensive periods (beginning approximately 10,000 years ago) in the environment around what is now Still River Road (see Map 6). The combination of workable soils, approximation to a productive fishing stream, the availability of freshwater meadow for hunting waterfowl, and the proximity of woodland for hunting and firewood, would have made this an ideal location for a settlement.

Possible other settlements might have occurred at West and Little Ponds, where the kame terrace soils were of a similar workability and fertility as the soils of the low stage deposits of Glacial Lake Nashua above the Still River.

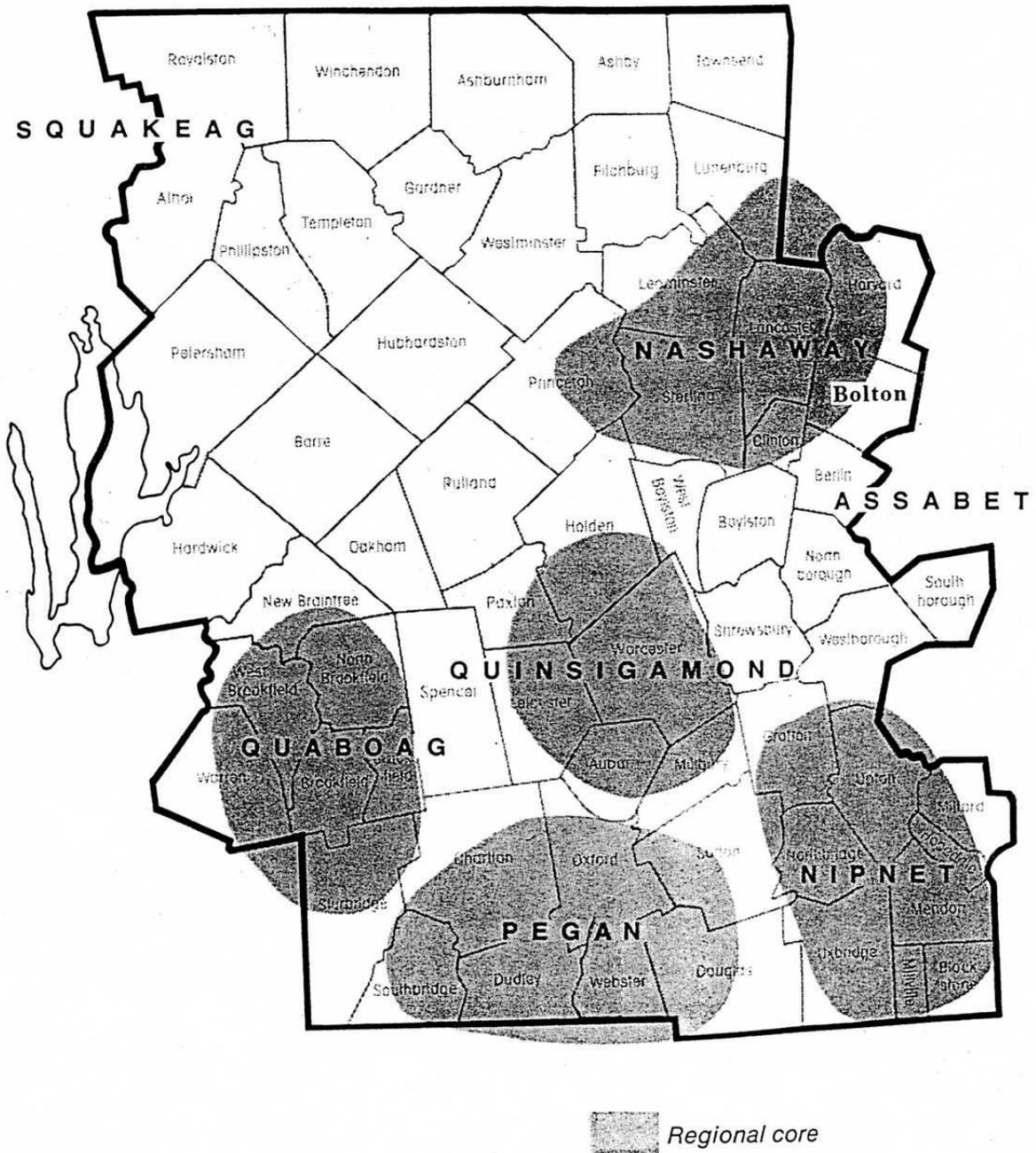
In 1617, an epidemic brought from Europe by explorers or trappers caused a massive loss of life among the Nashaways and other Southern New England tribes, with as much as 90% of the population lost to the disease.

When the first European settlers arrived, they found a land not so much virgin but widowed, a land that had been used for ten centuries but was now virtually empty.

## **European Settlement**

From 1630 to 1641, during the "Eleven Years Tyranny" when Charles I ruled England without a parliament, approximately 20,000 Puritans emigrated to the Massachusetts Bay Colony. The Puritans came to the New World to found model Christian communities, and each settlement, therefore, had to support a minister. A certain number of families were necessary to adequately support a minister for spiritual guidance, and the Puritans were determined that settlements would be located in natural environments that would be productive enough to support these families. At first, they settled in coastal locations where the landscape was suitable for growing livestock: abundant cleared pasture land for grazing during the growing season and extensive salt marshes to provide hay for winter fodder.

# Contact and Plantation Period Core Areas



**Map 6: Nashaway Core Settlement Areas**

Source: Central Massachusetts Regional Planning Agency

As all of the choice locations on the coast became settled, the Puritans began to seek inland sites of a similar nature, except that fresh water marshes in the inland locations would replace the coastal salt water marshes . The only inland sites that had extensive fresh water marshes were the flat, low environments of former glacial lake beds: Concord (Glacial Lake Concord); Sudbury (Glacial Lake Sudbury); Dedham and Medfield on the Charles River; and Lancaster (Glacial Lake Nashua).

The early settlers in Bolton (which separated from Lancaster in 1738) desired homestead locations where the soils were easily tilled and productive and where water power could be harnessed by dams for various tasks. The best locations were along Great Brook and Mill Brook, where the kame terrace deposits provided easily-worked soils for cultivation and the gently falling gradient of the two brooks provided adequate power to harness early grist mills, saw mills, and a fulling mill, a mill where home-spun and woven woolen cloth was processed to produce a finer fabric.

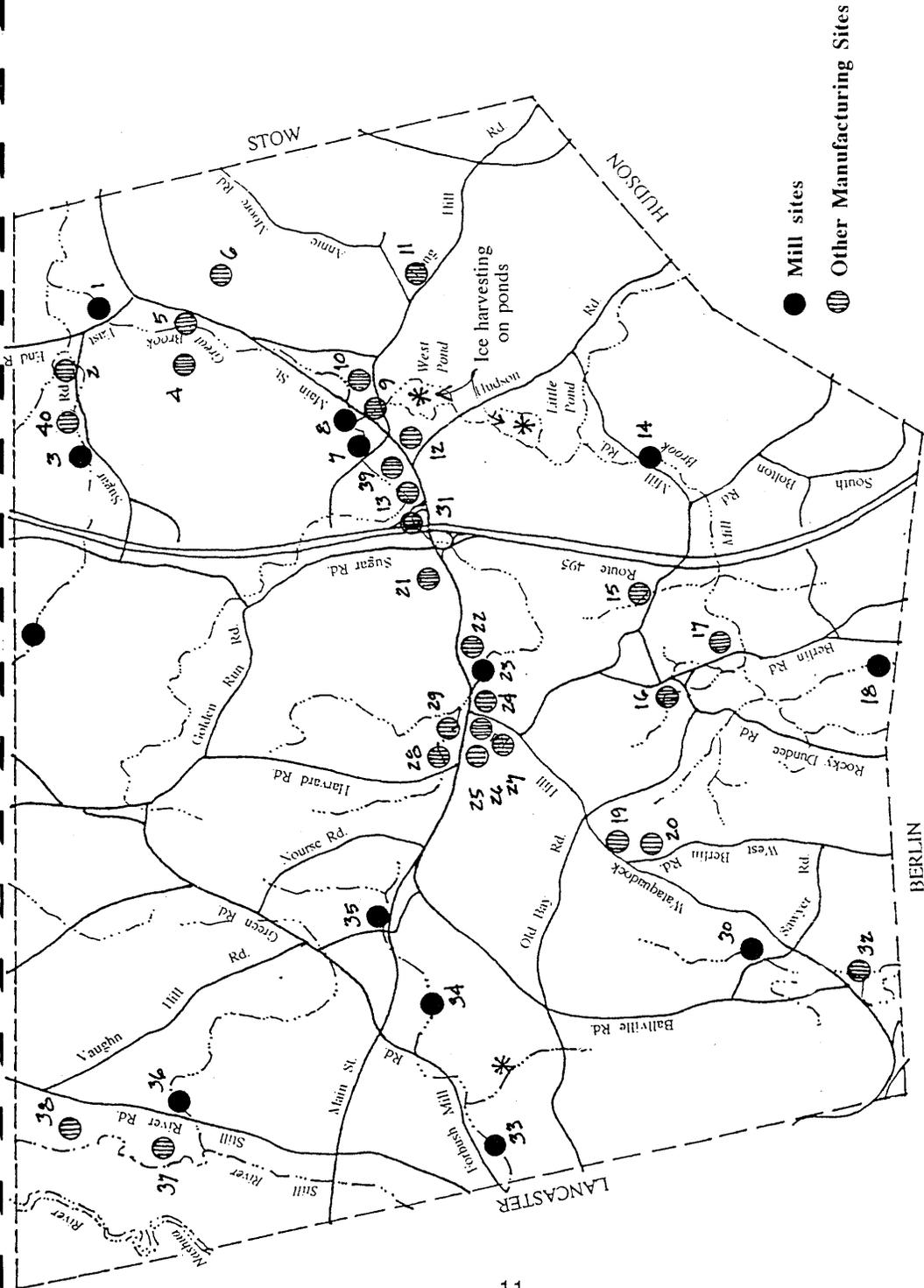
The Puritan settlers avoided the same soils shunned by the Nashaways: the dry soils of the high stage of Glacial Lake Nashua (the Clinton deposits) in the western part of town and till soils where bedrock was at or near the surface. In higher hills where bedrock was not at the surface and where topography was not too steep---for example on the northern reaches of Wataquadock Hill---soils were quite adequate for agriculture. Map 7 shows generally how much of Bolton was cleared of vegetation by 1831 and where dry soils and soils where bedrock was at or near the surface on the higher hills continued to remain forested.

Early transportation routes avoided the town's steep hills, with roads generally following the low-lying kame terrace formations.

During the 18th Century, Bolton's thriving agricultural and manufacturing economy resulted in the accumulation of wealth that is evident in the Federal style houses in the center of town and elsewhere on farms. This manufacturing activity began considerably before the Industrial Revolution and was significantly organic and local in nature. Manufacturing used raw materials that were either taken locally from the earth (wood for saw mills, furniture, barrels, trunks, water pumps, plows, shoe boxes and cards used in textile manufacturing; corn and grain for grist mills; clay from glacial lake bottom soils for bricks; lime from bedrock; potash from wood ash, straw for hats; and tobacco for snuff and cigars) or they were taken from animals that were sustained by the earth (salted beef for the West Indies; skins for tanneries from which shoes, boots, saddles and harnesses were made; animal horns for combs; beaver skins for hats; bone and horn for buttons). Map 8 shows the location of early water-powered mill sites and manufacturing locations in Bolton.

Some of these manufacturing activities were quite productive. The lime quarry, in use by 1740 on the northeasterly side of Rattlesnake Hill, at one time produced 15,000 to 20,000 bushels of lime annually. The two brick yards on Still River Road produced 200,000 bricks annually in 1793. In 1865, approximately one-half million board feet of lumber was cut by the town's four saw mills. By 1847, 40 employees manufactured almost 21,000 pairs of shoes and boots annually in Bolton.





**Map 8: Locations of Early Mill and Manufacturing Sites in Bolton**

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## Index to Map 8: Locations of Early Mill and Manufacturing Sites in Bolton

Index #	Name	Address
1	Whitcomb fulling mill	East End Road at Great Brook
2	Col. Robert Longley brickyard	610 Sugar Roac
3	David/Abel Whitcomb saw & gristmill	496 Sugar Road
4	Whitcomb lime quarry	189 Main Street
5	Moses Wilder blacksmith shop	183 Main Street
6	Potash works	East of Main Street
7	Baker/Sawyer sawmill	Main Street at Great Brook
8	Benjamin Sawyer gristmill	Burnham Road at Great Brook
9	Capt. Samuel Baker tannery	392 Main Street
10	Barrett brickyard	Off Long Hill Road
11	Noah Bacon blacksmith/wheel shop	154 Long Hill Road
12	Reuben Newton shoe shop	442 Main Street
13	Noah Bacon blacksmith shop.	Main St., west of Pan Burying Gr.
14	Century Mills saw and gristmill.	Century Mill Rd. at Great Brook
15	David and Joseph Holder tannery and shoe shop.	96 South Bolton Road
16	Babcock tannery.	Berlin Road at Old Bay Road
17	Amos Evans furniture-making shop.	228 Berlin Road
18	John Fry textile card shop.	Off Berlin Rd. at Berlin town line
19	Asa Holman comb shop.	200 Wataquaddock Road
20	Pollard wheel and whip shop	22 West Berlin Road
21	Capt. Samuel Blood hat shop	579 Main Street
22	Bolton Shoe Company	664 main Street
23	Joel Sawyer sawmill and mechanics' shops.	Main Street at Pond Park
24	Joel and Nathan Sawyer jewelry and watchmaking.	694 Main Street
25	Holman blacksmith shop.	Main Street
26	Samuel and Rodney Gutterson. harness shop.	714 Main Street
27	Potash works.	Wataquaddock and Manor Roads
28	Simeon Cunningham tannery.	777 Main Street (at Harvard Rd.)
29	Holman harness shop.	727 Main Street
30	Josiah Sawyer gristmill and comb shop.	116 Sawyer Road
31	Ichabod Smith cooper shop	Main Street on The Pan (at 495)
32	Fyfe comb and button shop	Wataquaddock and Ballville Rds.
33	Benjamin Morse gristmill/sawmill	Opposite 131 Forbush Mill Road
34	SVS Wilder sawmill/shingle/sash and blind shop mill	Saw Mill Brook below Wilder Rd.
35	Joel and Joab Barnard lath/coffins	Opposite 962 Main Street
36	Haynes comb shop	298 Still River Road
37	Haynes brickyard	298 Still River Road
38	Job Howard brickyard.	396 Still River Road
39	Miles/Caswell shoe/comb/wheel shop	443 Main Street
40	Joshua Sawyer carpenter/bellows shop	536 Sugar Road

While there existed manufacturing shops in Bolton, manufacturing activity in the town was also very home-based. For example, the many comb shops in town often consisted of one room of a house. Manufacturing activity also tended to be seasonal, with home-based manufacturing occurring in the winter when farming activity was low.

An interesting example of the interrelationship of economic activity and its seasonal nature can be seen in the operation of the Sawyer saw mill, located on The Pan where the Great Brook crosses Burnham Road, north of Main Street. In order to obtain a reliable and steady flow of water for the mill, Sawyer was allowed to “flow the meadows” for six months in the winter and spring, from November 10th to May 10th. This flooding not only provided water power for the mill but also protected the cranberry bog above the mill from frost damage. In addition, it also provided an ice pond for neighborhood skating parties. In the summer and fall months, from May 10th to November 10th, when water levels would be seasonally low, cranberry growing occurred on the meadow and Sawyer let the mill lay idle while he grew and harvested crops on his farm. The same arrangement may have occurred with other meadows, except that the fall fresh meadow harvest would usually be hay for winter animal fodder. The cranberry bog continued in operation until about 1940. Part of this former cranberry bog is now the Cranberry Meadow Conservation Area.

As the Industrial Revolution emerged in the early years of the 19th Century, Bolton gradually lost its manufacturing base to urban centers with large water power privileges on the Assabet and Nashua Rivers and which also had rail service. However, Bolton’s farms received a revitalization from these new urban markets and increased their output of such items as milk, vegetables and apples. Farming in Bolton, as elsewhere in New England, gradually evolved from subsistence agriculture to cash crops.

In modern times, the location of land uses has been dictated by landscape forms. The flat kame terrace deposits above lower Wilder Road became an excellent site for the Bolton Airport, later to become the International Golf Course. This flat terrace landscape also made an appropriate site for the Nashoba Regional High School, which required a flat site for its many playing fields. Because of their rich, thick deposits of sand and gravel, these terraces also became sites of major gravel removal operations to the east of Still River Road and Forbush Mill Road. One of these former gravel removal sites on Forbush Mill Road became the Town Landfill, which benefited from the large amounts of gravel fill available on-site to cover trash.

The flat landscape of kame terrace deposits made an easy and less expensive path for the construction of Route 495. Map 4 in Appendix A shows how the highway followed the valley formed by the glacial outwash soils, which saved considerable expense in blasting through rock that would have been required if the highway was routed through till soils, with its underlying bedrock. The combination of Route 495 and the flat landscape provided by outwash soils in the Pan and in East Bolton has resulted in the location of modern manufacturing facilities and office parks in the area. These uses prefer flat sites with easily worked soils located in proximity to highway interchanges.

### 1.3 Lost Bolton

Bolton's historic properties are a limited and scarce resource; as the planning for the protection of these remaining resources progresses, it is appropriate to reflect on how much of Bolton's architectural history and its historic landscapes have been lost over time. Such a review is sobering because the loss of historic structures occurs slowly---one building and site at a time---and it is only by looking backward that we see how much has been lost.

Mr. and Mrs. John Powers have prepared a listing of some of the known historic properties that have been destroyed in town. That listing is included as Appendix B in this plan.

Some of the historic structures in Bolton have been "lost" to other communities because they were considered very significant. Examples of these properties include the second Friends Meetinghouse that once stood at the intersection of Frye and Berlin Roads and the double forge blacksmith shop once located between the houses of Moses Wilder and his son, Abraham between 185 and 179 Main Street. Both of these significant structures have been restored and have found a new home at Sturbridge Village.

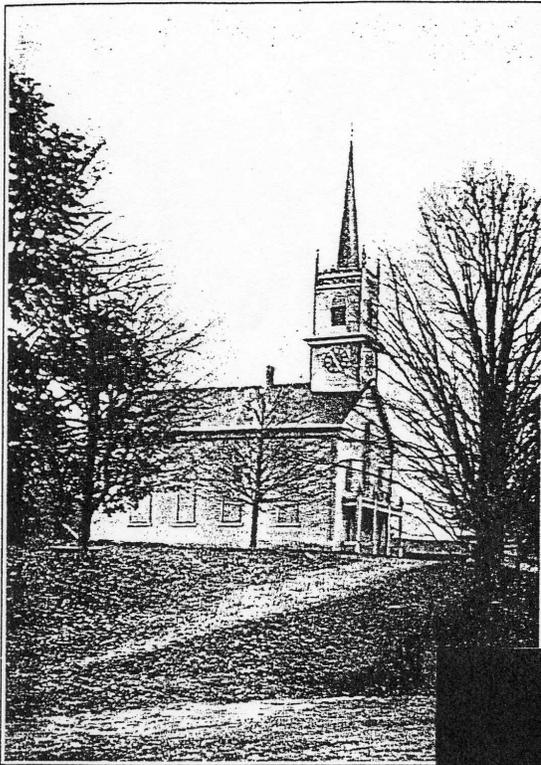
However, the remainder of lost Bolton is gone forever. Preservation consultant Anne Forbes has identified some of the more important residences and barns lost through the years. These have included:

- Benjamin Atherton House (1726) at 50 Bare Hill Road. Demolished in April, 1998 after the expiration of the demolition delay period.
- Townsend House (1700's). At 295 Wilder Road. Perhaps the only station on the Underground Railroad in Bolton. Demolished in the 1990's and replaced with a building that resembles the original.
- Calvin Gates House (1810). A Cape Cod Cottage at 276 Berlin Road. Demolished in the mid-1990's to make way for a subdivision.
- Gen. John Whitcomb Homestead (1710). Burned in 1936. Was on the site of 149 Main Street.
- Goss-Grassie House (ca. 1830). Burned in the 1890's. Great temple front Greek Revival residence on Old Bay Road.

Some of the more significant barns lost in town include:

- The Wilder mansion barn, the largest in town. Burned in 1954.
- The Col. Asa Whitcomb barn at 591 Sugar Road.

Ms. Forbes notes that every farm house could be expected to have had at least

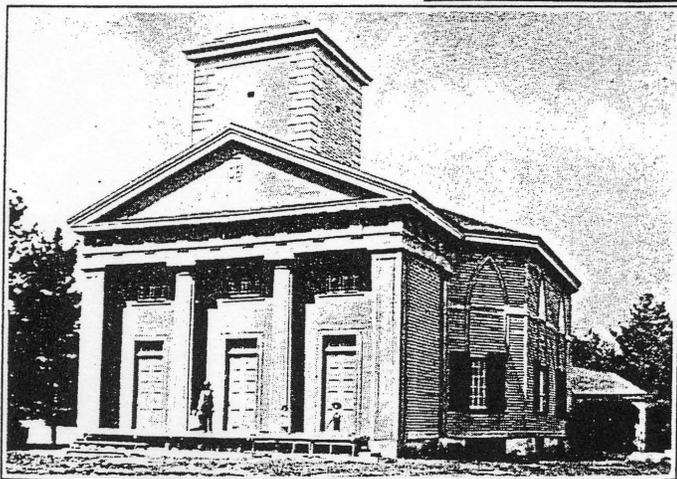
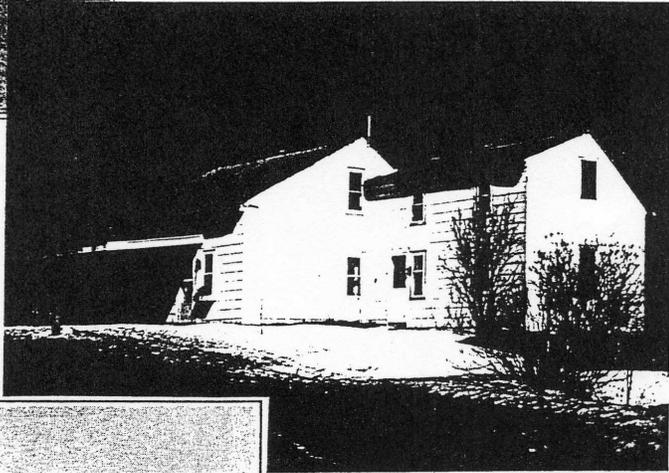


**First Parish Church (1793)**

This building was destroyed by fire in 1926.

**Calvin Gates House (1810)**

This Cape Cod cottage on Berlin Road was demolished in the mid-1990's to make way for a subdivision.

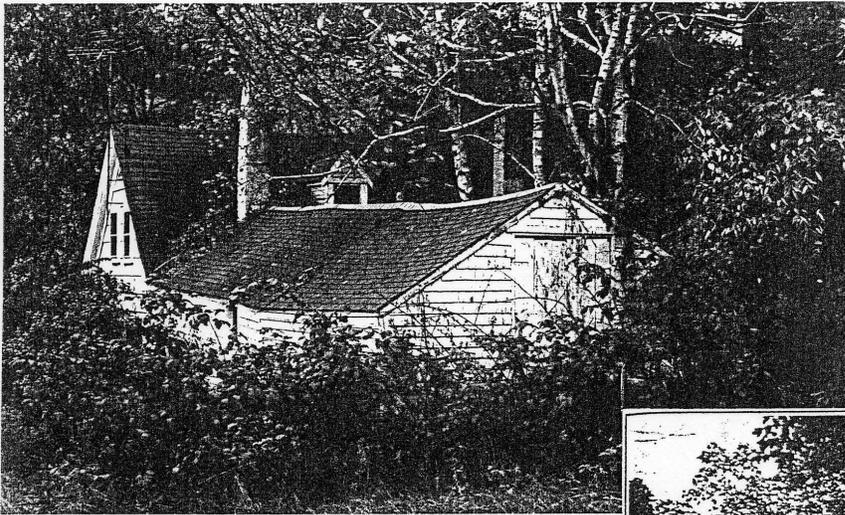
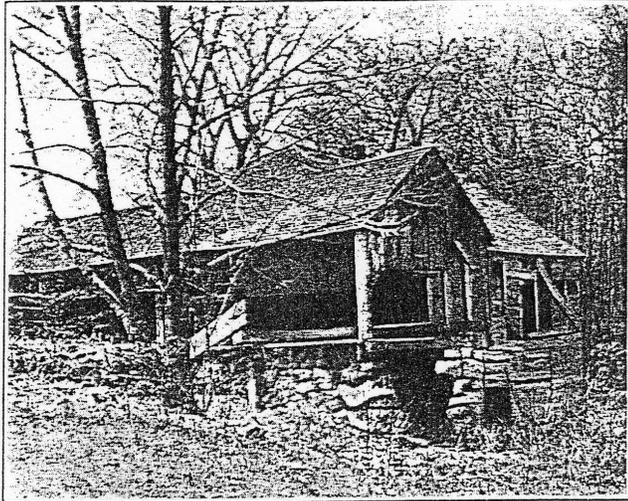


**The Hillside Church (1828)**

This octagonal church on Wilder Road was organized by SVS Wilder as an alternative to the Unitarianism of the First Parish. Its last service was in 1859. It was subsequently remodeled and converted to a cider mill. It was destroyed by fire in 1900.

**Sawyers Mill**  
(as early as 1765)

A saw mill was built on the Great Brook in The Pan by Captain Samuel Baker. Benjamin Sawyer, a miller, purchased the property in 1791 and added a grist mill to the site. The mill is still shown on the maps of 1870. See page 6 of the preservation plan for an interesting story about the seasonal nature of agriculture and mill operation related to this site. Like all of the mill sites in Bolton, only the remains of the stone foundation of this mill are visible today.

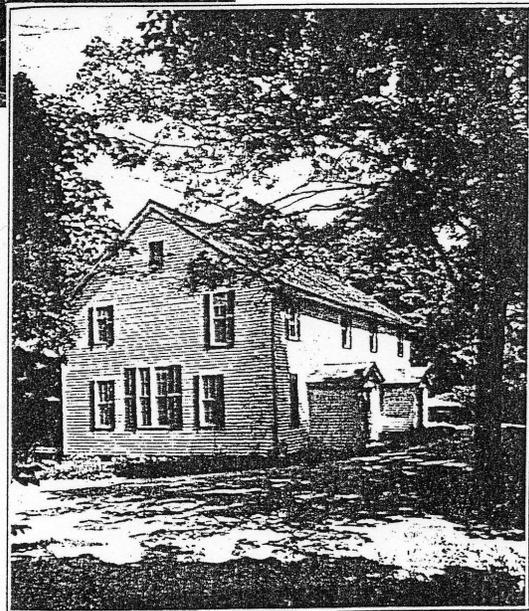


**Lemke Farm**

This farmstead was located on Main Street east of the intersection of Route 110. The farmhouse and barns were demolished in 1996 to make way for a subdivision.

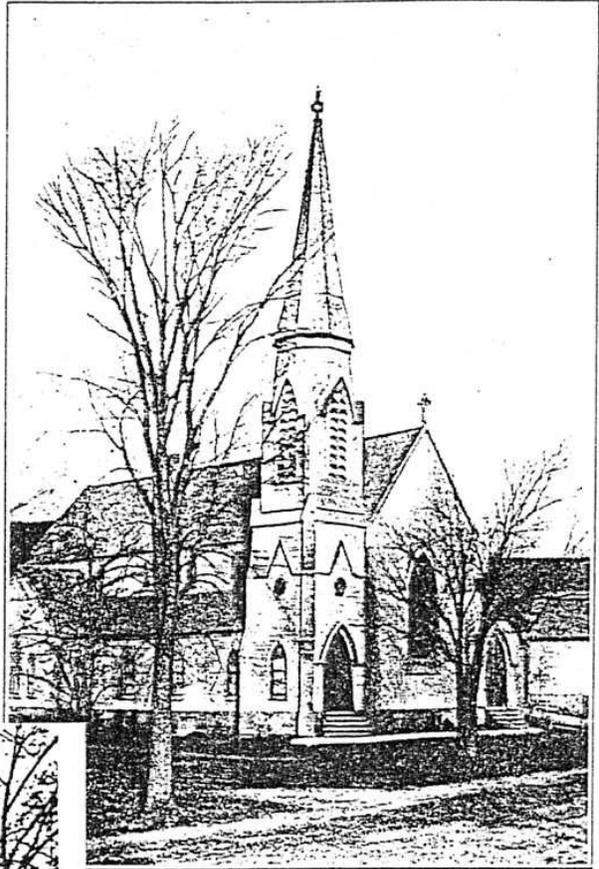
**Friends' Meetinghouse**  
(1795)

This 1938 photograph shows how the meetinghouse looked when it was located in Bolton near the intersection of Berlin and Fry Roads. It was disassembled in 1954, moved to Old Sturbridge Village, and restored to its 1795 appearance.



**First Baptist Church (1866)**

This church, shown at its Main Street location in the center of town, was damaged by the 1938 hurricane and subsequently demolished.



**Moses Wilder Blacksmith Shop (ca. 1810)**

Located east of the Moses Wilder House at 185 Main Street, this double forge blacksmith shop was moved to Old Sturbridge Village in 1957, where it was restored and where it continues in its original use.

one barn, as did many dwellings not on farms. The number of barns lost in town is perhaps too numerous to enumerate.

In addition, all of the Poor Farm buildings on Farm Road have been demolished.

With the exception of the Bolton Shoe Company building at 664 Main Street (later converted to a residence), the rich local industrial history of Bolton has virtually no visible presence in the town. What remains are foundations of old mill sites and dam structures. Among the more significant structures that have been lost include all of the saw and grist mills in town, the fulling mill, ice houses, the brick yards on Still River Road, all but one of the comb factories and the Whitcomb lime kiln house.

The religious history of Bolton is less apparent today because of the loss of the Baptist Church, which once stood across from the Mill Pond on Main Street, the second Friends Meetinghouse mentioned earlier, and the "Hillside Church" on Wilder Road.

In a community that is defined by its farms, one of the major losses for Bolton has been the destruction of its once-numerous barns. Tragically, this is a loss that is continuing to occur as these barns age and as they lose their economic reason for being and become too costly to maintain. These barns are victims of their size, which are often considerably larger than the size of their farm dwellings. Some of the more significant barns that have been lost to the town are included in Appendix B.

In some instances, what has been lost has been a significant site where no apparent building ever took place. Although settlement sites of the Nashaway tribe of Native Americans have not been mapped in Bolton, artifacts found on Still River Road signify that some of the new residential development in this area has destroyed some of these sites.

Significant geologic sites have also fallen prey to modern development, often without the slightest indication that what was lost was significant. An example is the long esker that extended from Main Street north parallel to Sugar Road for almost a mile that was destroyed by the construction of Route 495. The remains of an esker at Sugar Road and Main Street may be destroyed if Sugar Road is realigned to align with the southbound exit ramp from Route 495. The significant glacial outwash deposits in the form of kame terraces left by Glacial Lake Nashua on and above Still River Road have been defiled throughout modern times and mined for their gravel deposits.

If no intervention occurs, the current unprecedented development pressures will only accelerate the destruction of Bolton's history.

#### **1.4 Why Bolton is Worth Preserving: A Summary of its Historic Resources**

Bolton's historic resources need to be recognized as spanning three time periods: (1) the unique land forms left by glacial action during the 100,000 years of the Ice Age; (2) the landscapes used by the Native American Nashaways and their antecedent tribes during the 10,000 years of their existence in Bolton; and (3) the sites and structures remaining from the 350 years of European settlement.

## **Historic resources remaining from the Ice Age**

The land forms left by glacial action are rarely described as “historic” in preservation plans, yet they remain by far the oldest of artifacts and have dictated to a great extent the way that human settlement patterns evolved and how the land has been used. This is true for both native tribes and European settlers. There are therefore two histories of Bolton to be told, one geologic and the other cultural.

Perhaps the most interesting of the historic geologic land forms that remain from the Ice Age are the formations that developed in glacial lakes. These include the kame terraces that were formed as the result of Glacial Lake Nashua in the western section of town. The flat terraces with their steep ice contact slopes are dramatic forms that tell a remarkable story of how the landscape was created (see Illustration 2 and Map 3 in Appendix A). In addition, eskers and kettle holes are unique natural artifacts of significant importance that should be preserved whenever possible.

Bolton is fortunate to have such a range of geologic features that describe the full range of glacial action that formed the landscape of North America. These features provide the opportunity to tell the history of Bolton not just in terms of its short period of European habitation but a much longer expanse of historic time.

## **Historic resources remaining from the Nashaway settlement era.**

No visible traces remain of the 10,000 year habitation of indigenous tribes in the Bolton area except stone artifacts found in the ground where long-term Nashaway encampments once existed. These encampment and agricultural sites were probably located principally along what is now Still River Road on the Groton and Ayer low stage deposits of Glacial Lake Nashua.

The existence and significance of preserving these sites intact is important because they provide an opportunity to tell a part of Bolton’s history that has not been adequately explored. The history of these early Americans provides an opportunity to study a wide range of interrelated topics, including geology, anthropology and all facets of ecology.

## **Historic resources remaining from the era of European settlement.**

remains, Bolton’s historic resources provide an excellent opportunity to tell the adventure that is the history of the United States of America. Bolton provides illustrations and examples from the landscape and the built environment of how the new nation developed and the drama of its formation and growth.

The landscape of fresh water marshes and nearby fields helps to illustrate why the Puritans settled in Lancaster and how they organized themselves to survive in this new environment. These landscapes provide an opportunity to discover the ideals that were to be embodied in the utopian model Christian communities envisioned by John

Winthrop, where the Christian ideals of community and caring would have an opportunity to be put into practice, untainted by the old world. While no known traces of this Lancaster settlement the landscape provides a setting for becoming reacquainted with the noble ideals which motivated the Puritan emigration to what they envisioned would become a model for a “new England”.

The inevitable conflict and vanquishing of the native populations, exemplified in King Philips War and the French and Indian Wars, is a tragic and troubling saga which occurred in Bolton and elsewhere. One of the very few sites in Bolton where this history can be illuminated includes the site of the Josiah Whitcomb garrison house, built about 1681.

The enterprise, courage and vision that resulted in the formation of a new nation is reflected in many of the remarkably preserved Colonial Era structures and farms in Bolton. While there were no Revolutionary War battles fought in Bolton, the story of the revolution can be illustrated in human terms through the stories of the Bolton families that sent soldiers into the war. On April 19, 1775, a total of 127 men from Bolton responded to the alarm from Lexington and Concord. The homesteads of Deacon David and Abel Whitcomb at 496 Sugar Road (ca. 1730) and Colonel Robert Longley at 610 Sugar Road (1756) are only two examples of how the story of the Colonial era and the Revolutionary War can be told through the families that lived in these still-existing homes.

The evolution of the local Bolton economy during the time before the Industrial Revolution is a fascinating story that parallels the evolution of the economy of New England and of the nation during the Colonial era and after. Only the dam sites of this industrial activity remain but they provide an excellent context for exploring the evolution of manufacturing activity from early grist mills, saw mills and fulling mills to the more complex activities that followed.

The history of ideas that shaped the new nation are strongly represented in Bolton. For example, the ideals of tolerance, religious freedom, the separation of church and state, and movements for social justice and social improvement are exemplified in the history of local Quaker and Baptist settlements and of the Unitarian movement. The Quaker settlement at Fryville is a reminder of the varieties of model Christian communities that continued to exist in New England following the early Puritan era and of the power of ideals that have continued to be at the heart of the American experience.

The historic sites of the era of European settlement in Bolton are important because *they represent something*. They have special significance and meaning for us today because of what they represent and for how they were used. The Greek Revival residences in Bolton Center remind us of the early nation’s ideal to become a new Athens, a model of republican virtue and democratic ideals.

The significance of Bolton’s individual historic resources has to be seen within the context of the larger “story” that they have to tell. It is one thing to relate the history of Bolton in the abstract; however, that story has far more power when it is connected to real sites that are still intact today. For both children and adults, history should have a “realness” to it, and that quality of realness is enhanced when local history is illuminated by the existence of places where history actually occurred.

Historic maps of Bolton at various points in its history are included in Appendix C. A more detailed description of the town's historic properties is included in the recently-completed Bolton Survey of Historic, Architectural and Cultural Resources.

## **1.5 Nature of the Threat to Bolton's Historic Resources**

From approximately the mid-19th Century and continuing for about 100 years, Bolton experienced little new construction. The Industrial Revolution transferred manufacturing activity to the centers in Clinton and Hudson, which had larger water privileges and railroad service, and to the cities in the region. Bolton was to be passed over and preserved in time.

However, the modern era has brought with it all of the threats associated with what has come to be known as urban sprawl. Not the least of these threats are the socioeconomic factors that are putting stress on the local traditional agricultural economy.

### **Modern era development pressures**

The suburbanization that followed WW II brought with it the first inkling of what was to follow. However, not until the opening of Route 495 did Bolton begin to experience sustained growth that was new to the town (see Illustration 5). The housing boom that accelerated in the 1980's and has continued into the 1990's, however, is bringing with it sustained development pressures and the consumption of land for new housing that is unprecedented in the town's history. Approximately 50 single family houses a year are currently being built in Bolton.

The impact of this development on historic resources has been particularly evident with the most recent wave of new construction. New development has resulted in the demolition of three historic structures within the last few years. However, the impact of housing development has been particularly evident on presumed Native American settlement sites and on significant geologic formations in the area of Still River Road.

### **Economic viability of agriculture**

In the past, the preservation of Bolton's historic resources outside of town center relied on the continuing viability of local agriculture. A variety of negative economic pressures in recent years has made agriculture less economically viable. Escalating land values resulting from housing construction has created enormous incentives for farmers to sell to developers.

Adding to the attractiveness of agricultural land to developers is its ease of development. The sandy, loamy soils that made for productive crops also make for ideal conditions for septic systems and domestic water well development on house lots.

However, the prospects for farming in Bolton are not all negative. The apple growing economy of Bolton farms is strong, with the stability of apple growing a result in part of growers developing local markets for their produce through their own outlets in town. The Nashoba Winery is the best-known example, as are the Bolton Orchards and the Bolton Spring Farms.

The economic viability of farming, however, is always subject to the vicissitudes of weather. For example, the heavy rains in June, 1998 resulted in reduced bee activity and therefore a lower rate of pollination of apple trees. In addition, hail storms later damaged the crop. As a result, apple production may be only 25% of what it would be in a normal year and prices may be affected because of the impact on grade from the hail storm. However, the full economic impact of these weather conditions on the apple crop may be mitigated to some extent by farm insurance programs administered by the Massachusetts Department of Food and Agriculture.

One of the approaches to preserving the economic viability of agriculture in Bolton is for the Commonwealth to purchase the development rights to farms in the town through the Agricultural Preservation Restriction Program. This program provides an infusion of capital into farming operations, thereby helping to preserve agricultural operations. Two farms on Sawyer Road, the Schartner and Nicewicz farms, wish to take advantage of the APR Program but have not yet been able to get preliminary approval from the Department of Food and Agriculture. The Bolton Conservation Trust is working with the owners of these farms to obtain DFA approval for the purchase of development rights to these farms. If historic farms are to be preserved in Bolton, access to APR funding must be made more readily available.

Some of the most important agricultural land in Bolton is in Chapter 61 and 61A, authorized by the Farmland Assessment Act. This law allows municipalities to assess agricultural and forest land at their agricultural, rather than market, value. However, in return, if an owner enters into an agreement to sell their property for another use, the town must be given 120 days to match the offer. This provides at least some opportunity for the Town to purchase and protect sites that citizens deem significant. Approximately 1,800 acres in Bolton are placed under the provisions of Chapter 61, 61A or 61B. Properties in Bolton subject to Chapter 61 (forest) and 61A (cultivated land) are shown on Map 9.

The preservation of Bolton's historic resources and the preservation of its town character will depend on how effective the community is in protecting its remaining farms. The town's character is dependent on the sweeping views provided by open fields, by the clusters of attractive farm buildings, and by the agricultural activity that roots the town in its past and that gives substance and meaning to the land.

### **“Rehabilitation” of historic structures**

As development pressures increase on both undeveloped and developed lots, historic structures are becoming increasingly subject to major rehabilitation that renders



**Map 9: Lands in Bolton Under Chapter 61 and 61A**

Bolton Preservation Plan • Bolton Historical Commission • Alfred J. Lima, Planning Consultant

the structure unrecognizable as an historic structure. Within the last several years, Bolton has lost three historic residences, one as recently as April, 1998 (the Benjamin Atherton House, built in 1726, at 50 Bare Hill Road). The owner chose the option of waiting out the Town's Demolition Delay Bylaw. Another structure was demolished to make room for a subdivision (the Calvin Gates House, built in 1810, at 276 Berlin Road). The third structure demolished was the Townsend House (ca. 1700's) at 295 Wilder Road, that was rebuilt on-site and replaced with a building that resembles the original.

However, complete demolitions are not the only threat to historic structures in Bolton. Some alterations to historic properties are occurring without a degree of sensitivity to the historic integrity of the structures. Some alterations are so extensive as to make the historic structure unrecognizable.

One of the main sources of this problem is that new owners are purchasing parcels where the land is worth considerably more than the historic building that sits on the property. In some instances, the residence does not meet the needs of the new owner in terms of space availability and amenities. The result is that a new owner will improve a structure to the point where the historic integrity of the exterior is imperiled or obliterated. An historic structure can be improved or enlarged while retaining its historic character.

Addressing the problem of threats to private historic residences is challenging, given the market forces and lifestyle preferences that fuel demolition and major alteration. This issue must be addressed from two directions: first, by educating local realtors about the significance of historic properties in Bolton and the need to match these properties with buyers whose needs match the property, who appreciate historic preservation and who will preserve the integrity of these structures. Secondly, new owners of historic properties must be educated about the significance of the property that they have purchased and, if demolition or major alteration is a threat, to work with the Town to seek realistic alternatives. These efforts must be implemented in tandem with educational programs on historic preservation directed at the larger population of Bolton, with the aim of creating a widespread ethic of preservation in the town.

## **Public projects**

Public construction projects often have unintended negative consequences on historic resources. For example, the construction of Route 495 resulted in the complete destruction of a unique esker in Bolton that extended almost a mile long. Recent controversy has also surrounded the placement of metal guard rails on scenic Vaughn Hill Road. This controversy has increased the awareness of the public to the issue of scenic roads and how to protect them as the town develops. The Bolton landfill is located in an area of town that was once considered ideal for such a public use: a location with unlimited sand and gravel on-site. However, that location has destroyed part of a major geologic formation, the Clinton stage kame terrace deposit.

One current controversy related to a public project is the planned realignment of Sugar Road at Main Street (Route 117) to align opposite a Route 495 access ramp. This will necessitate destroying an esker that parallels Sugar Road at Main Street.

The issue of Town road improvements and their impact on scenic roads has been an acute one for residents of the town. In addition to the issue of guard rails, the treatment of road edges and the preservation of street trees have been dealt with on an ad hoc basis. The Department of Public Works schedules meetings with neighbors of projected road improvement projects, and it would be productive if this procedure were extended to relevant Town boards as well.

Because Bolton does not have any public water or sewer service, the impact of extending these services is not a factor in the town, at least for the time being. However, the Selectmen have appointed a committee to study water resource issues for the town.

The Town of Bolton is the owner and therefore steward of many historic properties. These include the Town Hall, the Library, the Houghton and Emerson School buildings, the former Baptist meeting house, the Powder House, and the Old South, Pan, West, Friends and Fry Burying Grounds.

### **Historic dam sites.**

Old dam sites in Bolton are especially vulnerable to being destroyed by neglect and by the natural process of deterioration. Most of these dam sites are in private ownership and the liability and cost involved in repairing and maintaining these structures weighs against their remaining in existence in the future. This issue needs to be researched and a program developed to address the problem before all of the dams are breached. Once the dams are breached, restoring the ponds to their former levels may be difficult under current wetlands regulations.

### **Lack of awareness concerning historic sites.**

Much of the threat to Bolton's historic resources originates with a lack of knowledge about the value of those resources. This is particularly true of Nashaway settlement sites and sites of geologic interest. The Nashaway locations in Bolton have never been identified. Should the Planning Board wish to protect Native American settlement sites on a property being proposed for subdivision, they do not have the information that would alert them to the existence of such prehistoric resources.

The same situation exists for unique geologic formations; however, the situation here is even worse, since the value of saving such formations has not yet been recognized.

In rural communities such as Bolton, historic sites encompass places that may not be considered "historic" in common usage. This would include farms, landscapes of historical significance, scenic vistas, and trails. They would also include areas developed in the early 20th Century. Farms and neighborhoods developed in the early part of this century were surveyed as part of the historic properties survey work conducted for the Town in 1998.

The less that is known about the history of a site, the more vulnerable it becomes to being inadvertently destroyed through development. This is particularly true of those sites where no apparent structures remain and where only stone foundations may still be visible.

Knowledge about an historic structure---by the owner of the property, by Town boards and by the general public---tends to provide an invisible protective mantle over such properties. The more that is known about the history of a structure or site, the less likely that something negative will tend to happen to the property. This is not true in all instances, but knowledge of a property's history generally tends to have a preventive effect.



### **View West From Wilder Road**

This is one of the beautiful views from Wataquadock Hill that is so characteristic of Bolton. These fields, in cultivation for over 300 years, are part of Bolton's vernacular historic agricultural resources. A strategy for protecting this view---including historic sites that are located within it in the vicinity of Forbush Mill Road---is described in the Nashaway Historic Landscapes Preservation Strategy, beginning on page 91.