

Baseline Assessment

Carlisle Town Forest/Heidke Lot



April 27, 2009

**Prepared by the
Land Stewardship Committee**

**A subcommittee of the
Carlisle Conservation Commission**

Foreword

This Baseline Assessment has been prepared by the Land Stewardship Committee (LSC), a subcommittee of the Carlisle Conservation Commission (CCC). The LSC, which was formed in January 2006, has a number of core tasks. Two key core tasks are to:

1. Conduct Baseline Assessments of Town-owned conservation properties; and
2. Develop a Management Plan for each of these properties.

The Baseline Assessment involves the collection, evaluation, and presentation of the following information:

- Acquisition of the property, including reasons for purchase, costs, funding sources, and associated land use restrictions;
- A detailed description of the property (using maps and figures, where appropriate) covering such topics as: boundaries (and abutters), major features (e.g., fields, woods, ponds, wetlands), topography, agricultural use and soil quality, trails, parking, and signs and displays;
- Historic and current uses of the property;
- A description of previous planning documents or other studies of the property;
- Maintenance activities and current condition of the property; and
- A list of issues to be addressed in the formulation of a Management Plan.

The Baseline Assessment is considered a working document and not a final published report. It is primarily designed to organize important information on a Town-owned conservation parcel in preparation for the writing of a Management Plan. It is expected that most of the information in the Baseline Assessment will eventually be used in the Management Plan which – after appropriate review – will be published in both hard copy and electronically (e.g., on the Town's web site). The Baseline Assessment itself, after review and approval by the CCC, will be made available in electronic format to Town committees, boards, property user groups, and the public.

Because the Baseline Assessment is a working document, no attempt has been made to make it look like a formal publication. In addition, there may be a number of errors of fact, or omission, or emphasis which we hope the review process will correct prior to the writing of the more formal Management Plan.

If you have any comments on the content of this document, please send them to Liz Carpenter (ejcarpenter@earthlink.net).

(Cover photograph by Elizabeth Loutrel)

Table of Contents

1. General Description of the Property	1
1.1 Introduction.....	1
1.2 Location and Bordering Properties	1
1.3 Major Features	4
2. Town Forest Purchase and Acquisition	8
3. Town Forest History and Current Uses	12
3.1 History of the Town Forest	12
3.2 Current Uses of the Town Forest	21
4. Previous Planning or Other Study Documents	22
4.1 Town Forest Committee Report (2003).....	22
4.2 Open Space and Recreation Plan (2006)	23
4.3 NHESP Priority Habitat.....	26
5. Maintenance and Current Condition of the Property	28
5.1 Signs.....	28
5.2 Trails	28
5.3 Forests	30
5.4 Streams, Wetlands, and Vernal Pools	31
5.5 Stone Walls and Other Human Artifacts	33
6. Issues to be addressed in Management Planning.....	35

List of Tables and Figures

Tables

2-1 Summary of Town Forest Acquisition History	8
--	---

Figures

1-1 Locus Map	2
---------------------	---

1-2 Assessors Map for the Town Forest and Heidke Lot	3
1-3 Town Forest and Heidke Lot Topography	4
1-4 Aerial Photo, 1995	5
1-5 Aerial Photo, 2001	6
1-6 Town Forest Trails Map	7
2-1 Approximate Boundaries of 1852 Poor Farm	9
3-1 Carlisle Poor House in the Early 1900's	13
3-2 745 East St. in 2001	13
3-3 Aerial Photo, 1937	19
3-4 Town Forest Map, 1937	20
4-1 Nearby Conservation Parcels	25
4-2 2008 Priority Habitat and Estimated Habitat – Town Forest	26
5-1 Entrance Sign for Town Forest	28
5-2 Footbridges Needing Repair in Town Forest	30
5-3 Storm Damage (April 2003)	31
5-4 Town Forest Water Features and Vegetation, 1995	32
5-5 Spotted Turtle Found Near Town Forest	33
5-6 Interior Stone Walls – Town Forest	34

APPENDICES

- A. Original Town Forest Deed
- B. Town Forest Plant List
- C. Town Forest Bird List
- D. Town Forest Soils
- E. Photos of Town Forest/Heidke Lot

1. General Description of the Property

1.1 Introduction

This Baseline Assessment describes two contiguous town-owned conservation parcels located in east-central Carlisle: the Town Forest on East Street and the adjoining Heidke lot. Both parcels are under the management of the Carlisle Conservation Commission.

The Town Forest (Map 23, Lot 66 on the Town Assessor's map) is approximately 67 acres in size, according to the 2006 edition of the Town of Carlisle Assessors Map. However, acreage estimates for Lot 66 and its historic component parcels have varied considerably in documentation over the past years, from a low of 67 to a high of 78 acres. The adjoining Heidke parcel (Map 24, Lot 28) is approximately 8.19 acres.

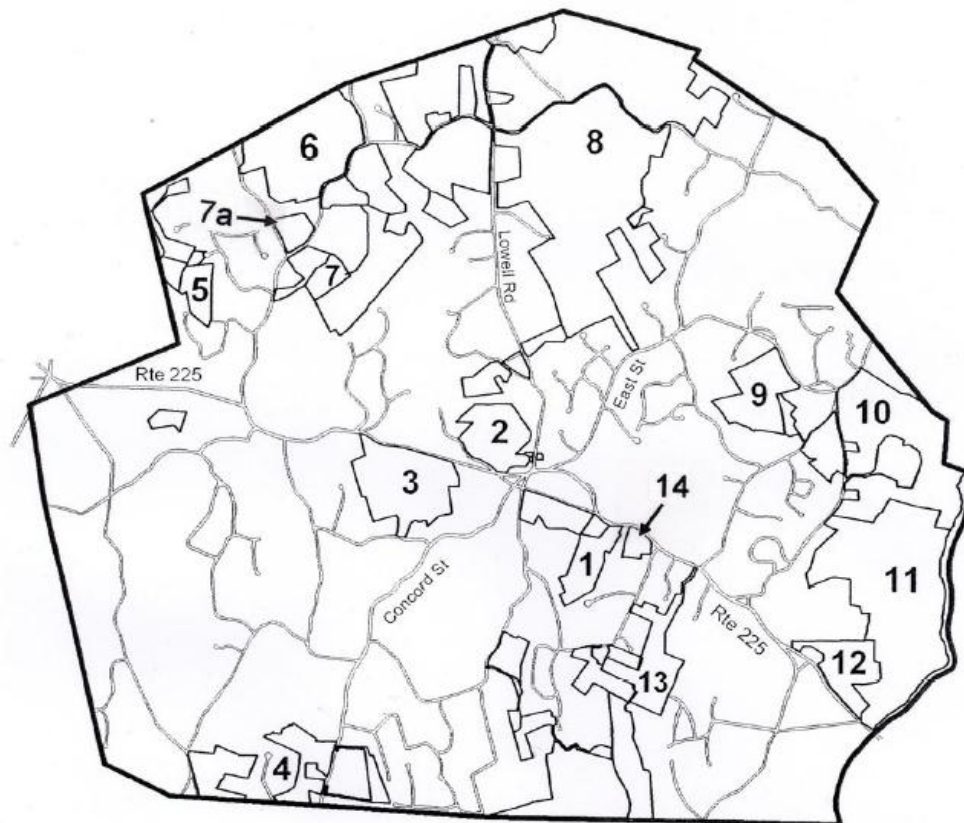
The Town Forest was originally part of Carlisle's Town Farm, established in the latter part of the 19th century to provide work, food, and lodging for the town's poor. In subsequent years portions of the property were sold, with the Town Forest assuming its approximate present shape and size in 1925. The Heidke lot was given to the town as a gift in 1978, linking the Town Forest parcel to Brook Street.

The Town Forest was used a source of cordwood after its establishment and was extensively planted in commercial timber in the 1930s; however, firewood cutting and any formal attempt at forest management effectively ceased after the 1940s. In 2001, the Town Forest was subject to intense scrutiny as a possible site for affordable housing, but due to the difficulty of establishing the internal boundaries of the property's component parcels, the effort was abandoned in 2003. Today, the Town Forest is a mix of dense planted mature red and white pine forests with understory vegetation, interspersed wetlands, and several streams. An extensive trail network and footbridges allow the residents of Carlisle to enjoy this peaceful and secluded property.

1.2 Location and Bordering Properties

The property is located in the eastern part of Carlisle, bounded mostly by private landowners (see number 9 on Figure 1-1). As shown on the assessors map (Figure 1-2), the Town Forest has frontage along its northeastern border on East Street from approximately opposite the east end of Old East Street to almost opposite the west end of Milne Cove Road. On the north, west, and south sides, the property is bordered by private abutters on East Meadow Lane, Carroll Drive, East Riding Drive, and Brook Street. Frontage of the Heidke lot is approximately 40 feet on Brook Street, centered on the stream entering a culvert under Brook Street. Across Brook Street is a trailhead on the Greenough conservation land. Abutting residences to the Heidke lot are on East Street and Brook Street.

There are approximately 48 private land parcels abutting (or nearby) the Town Forest/Heidke parcels.



- | | |
|---|----------------------------------|
| 1 Banta Davis | 7a Hutchins Field |
| 2 Conant Land | 8 Great Brook State Park |
| 3 Towle Land | 9 Town Forest |
| 4 Bisbee and Benfield Lands,
& Spencer Brook Reservation | 10 Greenough Land |
| 5 Carlisle Pines State Forest | 11 Great Meadows NWR |
| 6 Cranberry Bog | 12 Foss Farm |
| 7 Curve St. Conservation Lands | 13 Davis Corridor & Malcolm Land |
| | 14 Fox Hill |

Source: Modified from Carlisle's 2005 Open Space and Recreation Report

Figure 1-1. Locus Map for Selected Conservation and Recreation Properties in Carlisle

Figure 1-1. Locus Map

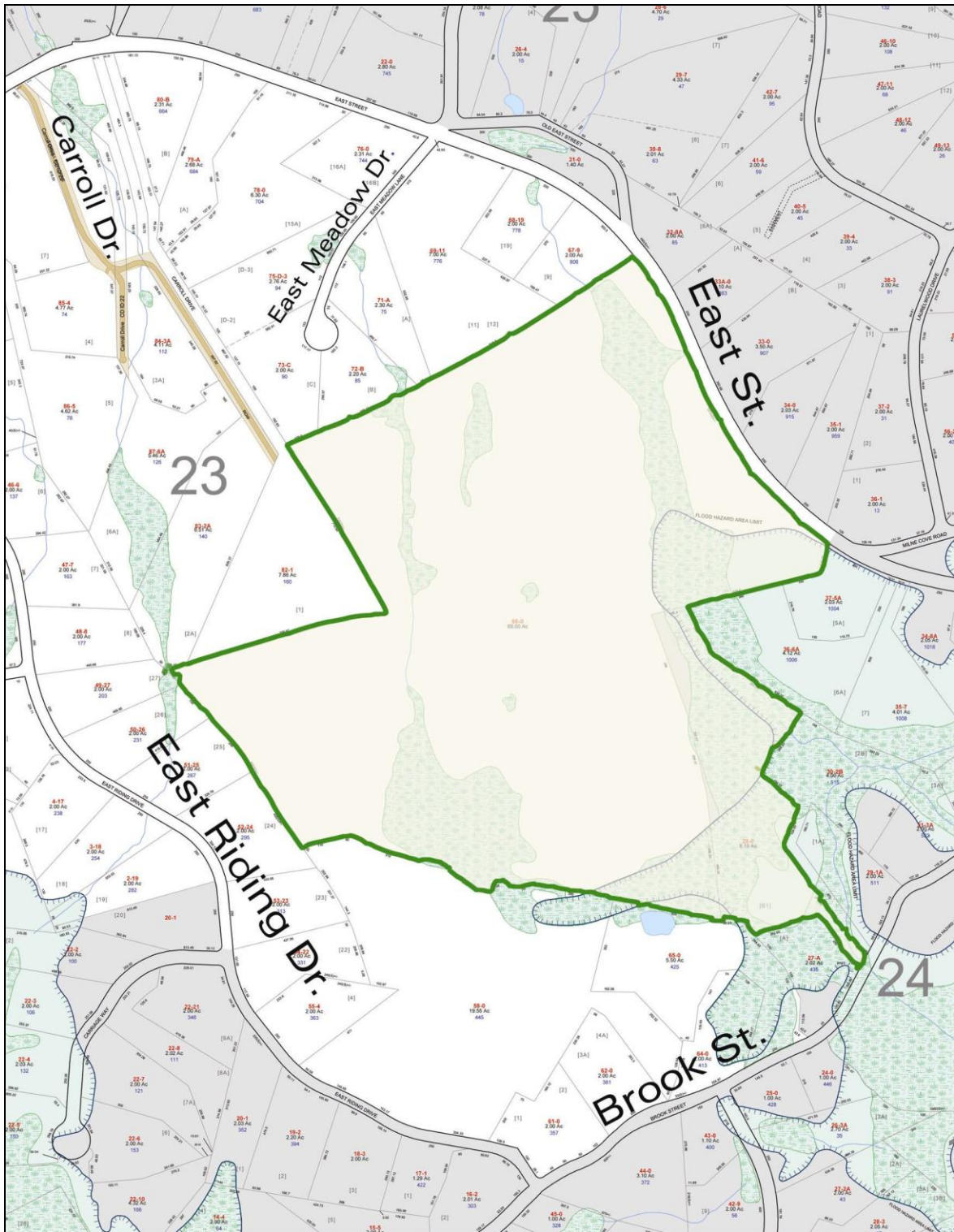


Figure 1-2. Assessors Map for the Town Forest and Heidke Lot

Nearby conservation land includes the Greenough land, just across Brook Street from the Heidke frontage (see Figure 4-1 in Section 4).

The only dry public access to the Town Forest is from its frontage on East Street, where there is a sign and a trailhead. There is no parking lot, but there is room for several cars on the sides of the road, which has painted bike lanes, or across the road on Old East Street. The Heidke Lot frontage on Brook Street is unmarked and there is no trail through the wetland.

1.3 Major Features

Figure 1-3 shows the topographic contours of the property, along with vernal pool locations. The Town Forest is primarily coniferous forested upland with areas of wetland, a few rock outcroppings, and several streams.

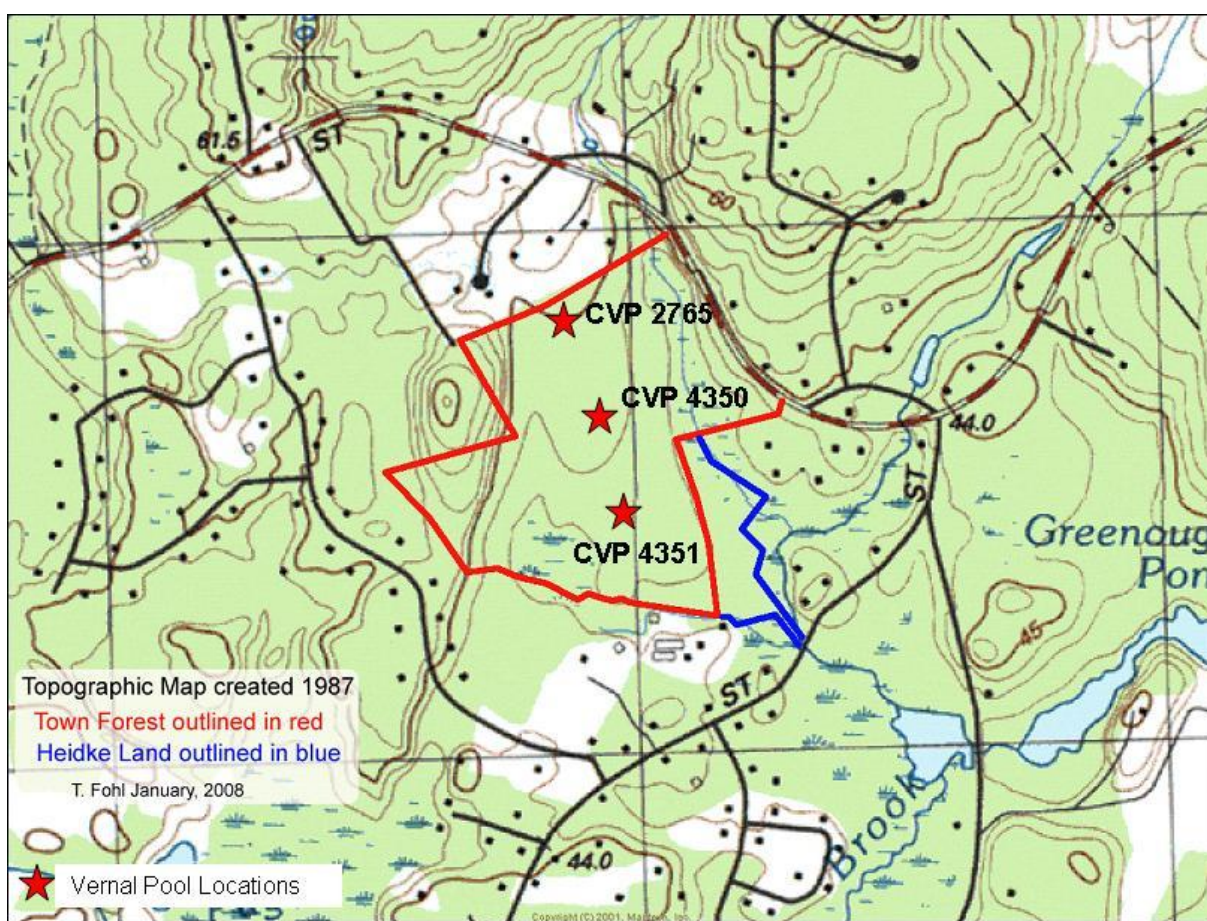


Figure 1-3. Town Forest and Heidke Land Topography

Two aerial views (Figure 1-4, dating from 1995, and Figure 1-5, dating from 2001) clearly show the heavily wooded character of the Town Forest. Man-made features include mature planted red and white pine forests, Norway spruce plantings, a trail system based partially on the historic woodlot dirt roads, wooden bridges, an entrance sign, a few interior stone walls, and possible

quarry, borrow pit, man-made pond, or cellar sites. The Heidke parcel is almost entirely wetland. The major features of the Town Forest can be summarized as follows:

- Forests and woodlands, both planted and successional, with associated understory species
- Streams (including a perennial stream), wetlands, and vernal pools
- A network of trails
- Stone walls and other human artifacts

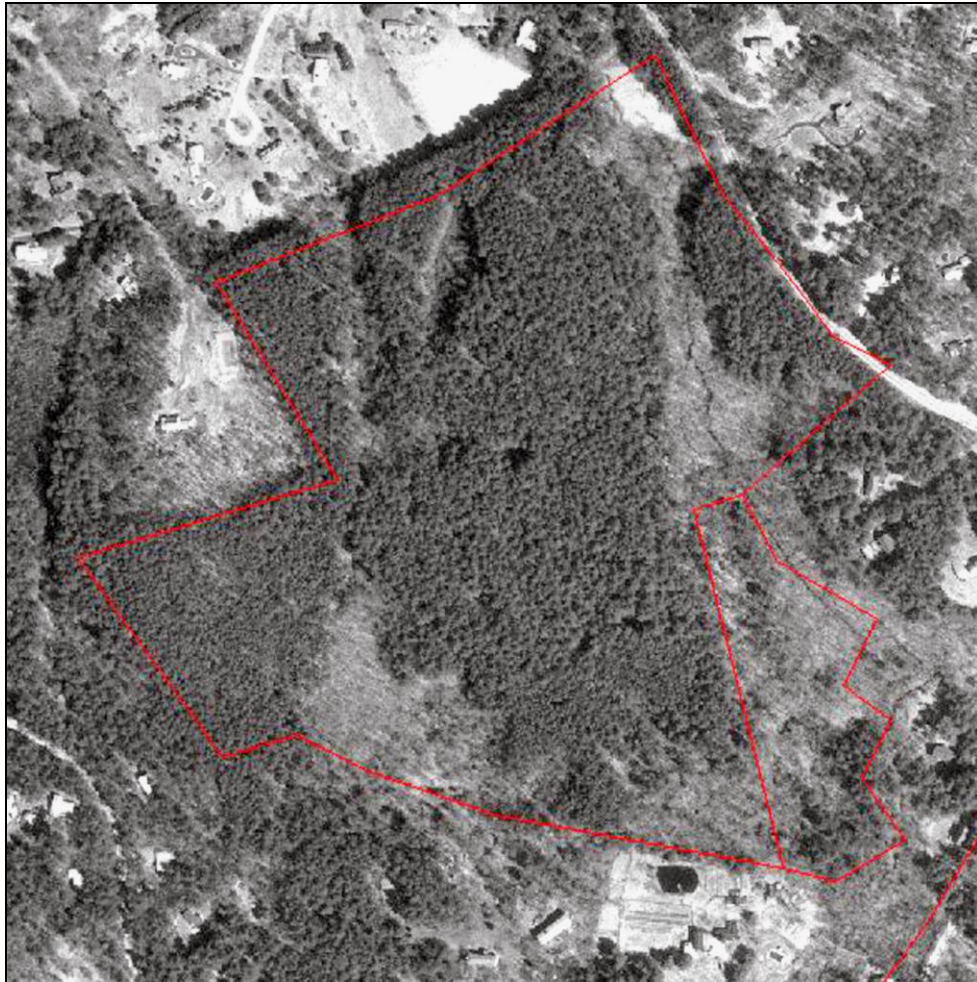


Figure 1-4. Aerial Photo of Town Forest and Heidke Land (1995)¹

Forests/Woodlands

The forests and woodlands of the Town Forest (mostly conifer plantations planted in the first half of the 20th century) occupy most of the higher ground on the property. The lower-elevation

¹ From Town Forest Committee Report, 2003

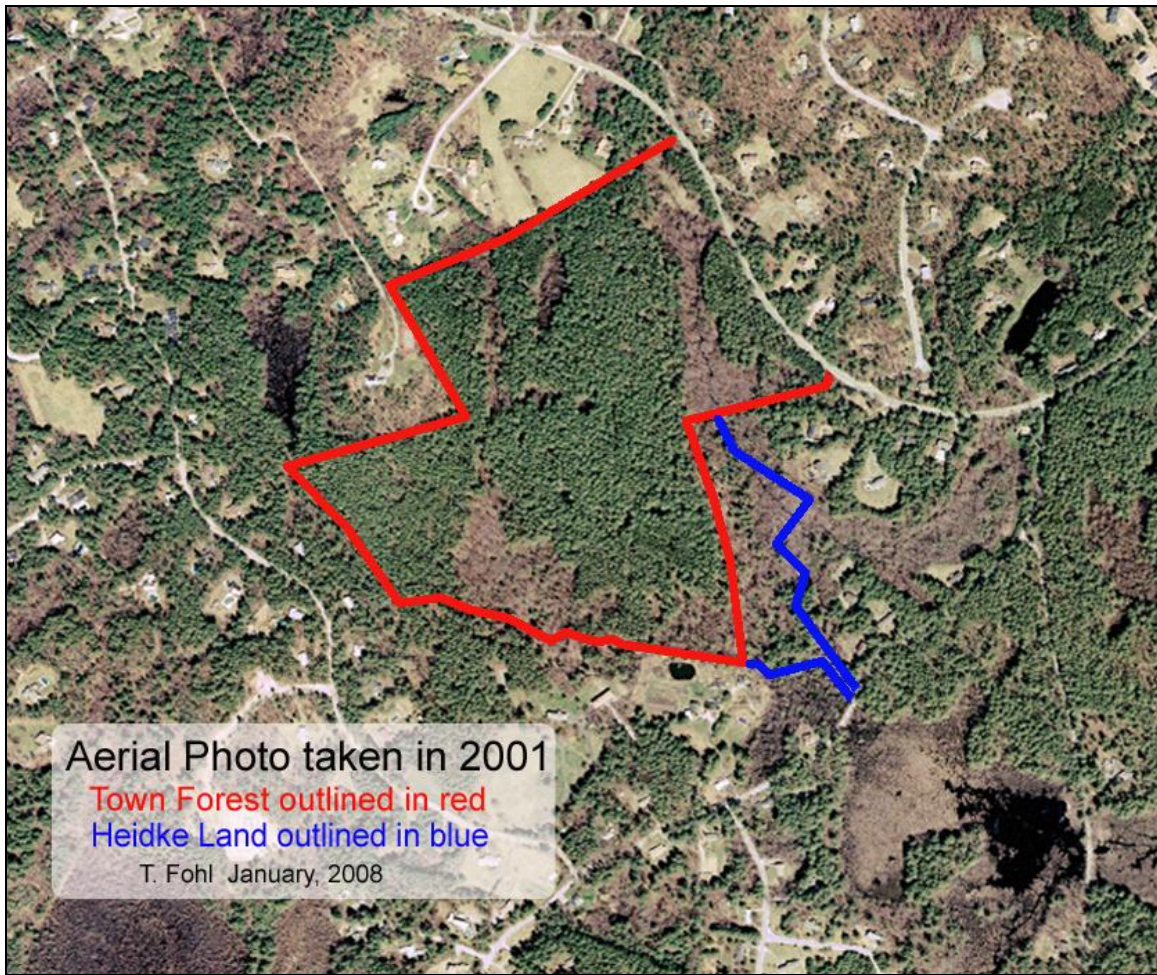


Figure 1-5. Aerial Photo of Town Forest and Heidke Land (2001)

areas are primarily wetland. According to an informal survey completed in September 2002, there are 3 separate wooded areas in the Town Forest, totaling about 58.8 acres of the ~67-78 acre Town Forest property.²

Streams, Wetlands, and Vernal Pools

The two aerial photos show the prominence of wetlands in the two parcels. A stream is clearly visible in the wetland in the northeastern part of the property. A perennial stream courses through the western part of the parcel. There are three certified vernal pools on the property.

Trails

Figure 1-6 shows the Town Forest trails. Some are old logging roads, as is testified by their width. Some of these trails are wide and gentle enough to be mowed by the abutting neighbors. There are several informal wooden footbridges over the streams. There is one public access

² Town Forest Committee Report files

trailhead from the East Street entrance. Some of the trails have informal spurs leading to abutting private property.

Stone Walls and Other Human Artifacts

There are several internal stone walls and other human structures on the property, possibly cellar holes or pond retaining walls. Two of the vernal pools have small man-made rock-lined pools connected to them. There are some waste piles (mostly cut logs, branches, and leaf debris piles) near the southern boundary of the property.

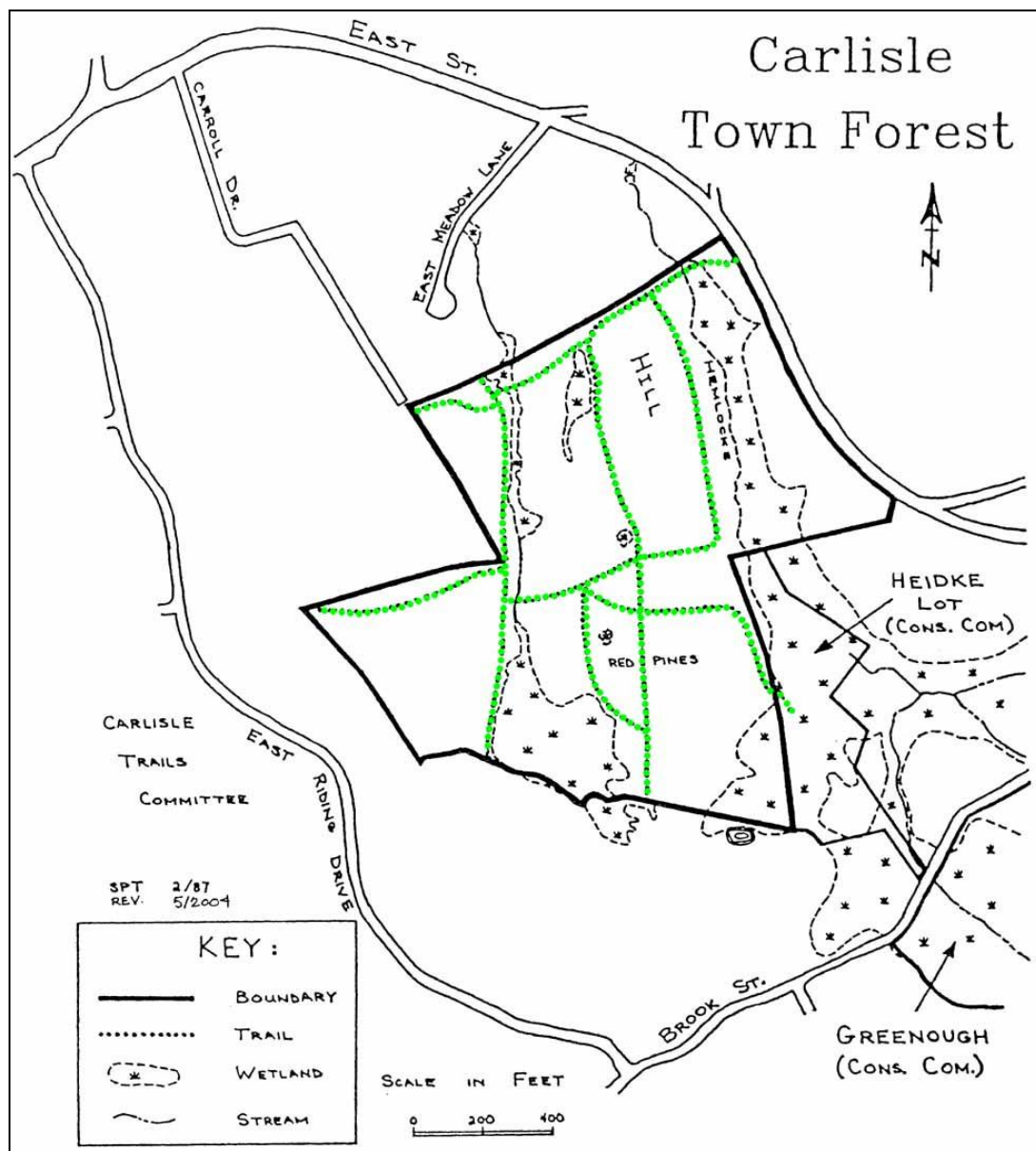


Figure 1-6. Town Forest Trails (Carlisle Trails Committee, 2005)

2. Town Forest Purchase and Acquisition

The land that includes what is now the Town Forest was purchased by the town in 1852 for the purpose of providing care for the town's poor. The adjoining Heidke parcel was acquired by the town in 1978 as a gift for conservation purposes and watershed resources protection. No state or Federal funds were used to acquire this land. Table 2-1 summarizes the acquisition history of the Town Forest and Heidke parcels.

Table 2-1. Summary of Town Forest/Heidke Lot Purchase and Acquisition

Date	Action	Acquisition Cost³
1852	Approximately 158 acres were purchased for Town (Poor) Farm (includes the current ~ 67 - 78 acre Town Forest land)	\$2900
1923	2 parcels (totaling about 46 acres) of the original 158 acres were set aside for a Town Forest	0
1924	2 parcels totaling 46 acres listed in Assessor's records as "Carlisle Reservation" ⁴	0
1925	An additional 25-acre parcel was added to the two parcels; all three were listed under "Carlisle Reservation" in town records	0
1925	Remainder of the Poor Farm (about 100 acres) sold to private party	0
1960	The 3 parcels were combined into one woodland listing of 71 acres in the Assessors Records	0
1978	Heidke gift of adjoining land (8.19 acres)	0
1994	The Town Forest comes under Conservation Commission management via Town Meeting vote	0

In 1852, the town purchased a 158-acre lot (known as the George Nickles farm from the previous owner) from John W. Holland of Lowell. This land was purchased upon recommendation of a town committee chosen to investigate the purchase of suitable land for maintenance of the town's poor. At the November 3, 1852 Town Meeting, the committee reported they had purchased this property for \$2900, of which they had paid down \$900 and given a note on demand at 6% interest for the balance of \$2000 to Mr. Holland. The original deed (transcribed) is in Appendix A.

Copies of the deed describing the boundaries and area of the 1852 purchase are in the Town Office files. No map or plan accompanied the deed.⁵ Figure 2-1 shows the approximate

³ This column refers to acquisition (purchase) cost only. There were other periodic costs associated with maintenance and management of the property.

⁴ The terms "Town Forest" and "Carlisle Reservation" refer to the same parcels

⁵ Middlesex Registry of Deeds, Book 629, pages 268-270

boundary of the Poor Farm purchase, reconstructed from the deed for the Town Forest Committee in 2003. The lower portion labeled “Town Forest” is today’s Town Forest.

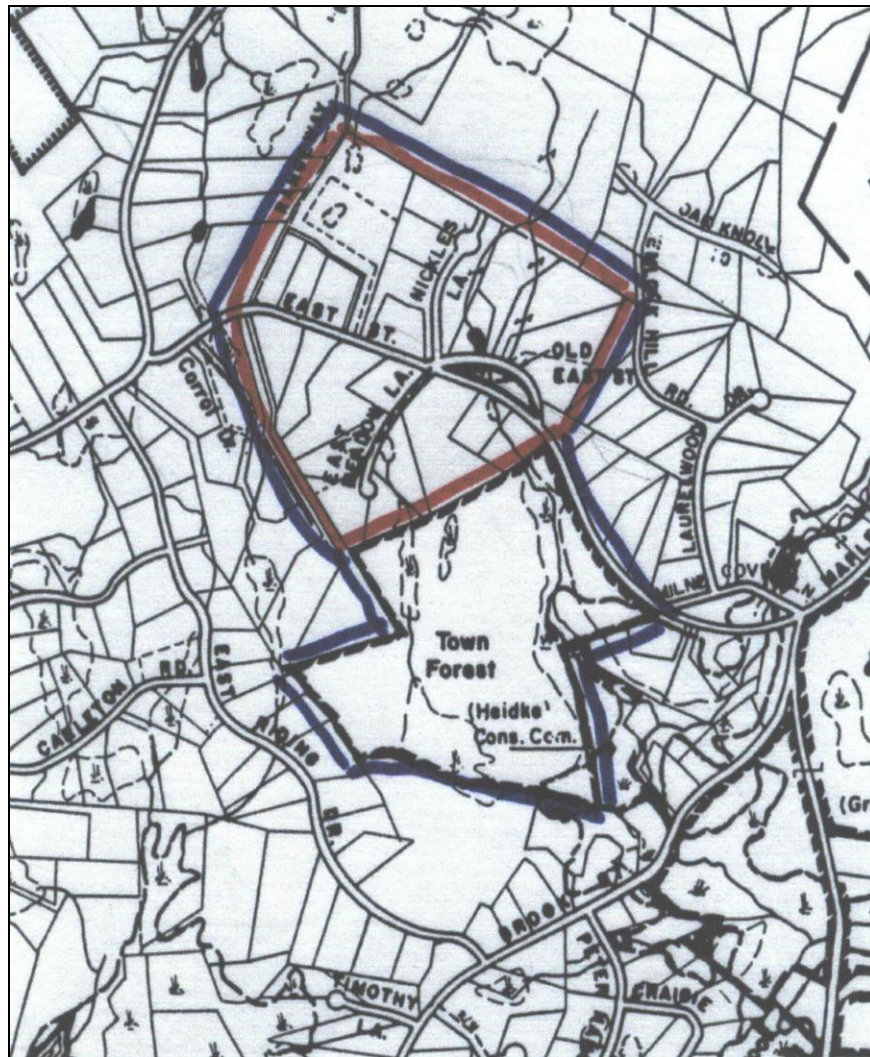


Figure 2-1. Approximate Boundaries of Original 1852 Poor Farm⁶

In 1922, the Town formed a committee to study the advisability of establishing a Town Forest in Carlisle. Following is an excerpt from the minutes of Town Meeting, February 12, 1923:

“Article 16. The committee recommended that 46 acres of the Poor Farm be reserved as it is now, for a Town Forest, and let nature take care of it. The advisability of this was discussed and it was voted to accept the report of the committee as stated, and to set aside the 46 acres for a Town Forest.”

⁶ Approximately 158 Acres Overlaid on 1977 Assessors Map, drawn by D. Stephanik, Middlesex Registry of Deeds, for the Carlisle Town Forest Committee report, 2003.

“Article 17. It was voted that the sum of \$100 be appropriated for the purpose of establishing and maintaining the Forest for the year 1923. Mr. Wilkins suggested that a committee of three be appointed to establish this Forest and care for it for 1923, and it was so voted. The Chair appointed D.C. Whittemore, James H. Wilkins, and Franklin Lovering to serve on such committee.”⁷

A review of the assessor’s records for 1924 show that the Town Forest (then listed as “Carlisle Reservation”) consisted of two parcels: the “Wood and Meadow” of 20 acres, and the “East Pasture” of 26 acres, for a combined total of 46 acres. Directly above this entry in the records is the Assessor’s listing for the “Carlisle Poor Farm”, consisting of several parcels, one of which is the “South Wood Lot” of 25 acres.

In 1925, the Assessor’s records show that Carlisle Reservation now consisted of 71 acres, the 25-acre “South Wood Lot” having been moved from the Poor Farm to the Carlisle Reservation. An exhaustive search of Town records failed to locate any other records or minutes from Board of Selectmen meetings from that time period; in other words, there is no record of a vote on the additional parcel. It could be speculated that this additional 25-acre lot was retained by the Town and excluded from the ultimate sale of the rest of the Poor Farm.⁸ In any case, by 1960, the “Town Forest” was considered as one piece of property as it currently is today.

The Heidke parcel was given to the town in 1978 by Phillip K. Heidke for conservation purposes.⁹ This gift was voted to be accepted by the town upon motion by George H. Bishop under Article 29 of the Annual Town Meeting warrant for April 4, 1978.

The Town Forest was created by the town in the 1920s, well before the passage of the Conservation Commission Act in the 1960s which created Conservation Commissions, Conservation Funds, and Conservation Lands. At some point following the Conservation Commission Act, a Massachusetts law was enacted allowing town forests to be transferred to Conservation Commissions. Accordingly, after some deliberation by the Selectmen, the Town Forest was placed under the care and management of the Carlisle Conservation Commission at the 1994 Town Meeting:

“On motion of Mrs. Milik it was voted that the Town vote under the revisions of M.G.L. Chapter 45, Section 21 to designate the Conservation Commission of the town to manage and take care of the town forest”.¹⁰

The Town Forest has remained under Conservation Commission stewardship to this day.

⁷ Minutes of Town Meeting, Articles 16 and 17, February 12, 1923

⁸ Watson, Roy, “Town Forest Committee”, September 24, 2002.

⁹ Middlesex North District Registry of Deeds, Book 2305, Page 434.

¹⁰ Minutes of Town Meeting, Article 27, 1994. Chapter 45, Section 21 of Massachusetts General Laws allows towns to designate conservation commissions to manage town forests.

Section 2 General References

1. Carlisle Open Space and Recreation [OS&R] Report, Carlisle, Massachusetts, January 2000.
2. Town Forest file, Town Hall
3. Watson, Roy (Cons Com member), “Town Forest Committee”, September 24, 2002.
4. Town Forest Committee Report, 2003 (in Town Forest files)

3. Town Forest History and Current Uses

3.1 History of the Town Forest

The earliest reference to the land which eventually became the Town Farm and Town Forest comes from Donald Lapham's book (see references), where it is indicated that James Nickles built his house on East Street around 1754 and established a farm. James Nickles was the son of Francis Nickles of Andover and had previously been living in Billerica. He built his house on the current site of 745 East Street (on the north side of East Street). His sons, James Jr. (born in 1739 and married in 1766 to Sarah Spaulding) and John served as Minutemen in 1775. James Jr. built a home very near his father's home on East St.; the cellar hole has been filled in.

This land stayed in the Nickles family until purchased by John Holland of Lowell sometime prior to 1852. In 1852, the town purchased the Holland land (still known as the Nickles farm) on East St. for \$2900 for use as the Town Farm to house and care for the town's poor. (see Section 2 for details on purchase and acquisition). In 1923, the town voted to use part of the land to establish the Town Forest, and for a number of years the wood from the land was sold to pay off town debts.

Town Farm/Poor Farm

Before the advent of public welfare agencies, each town in New England had an obligation to care for the poor. Cost to the town was relatively low, as the indigent were usually taken in and housed by individual families in return for a small remuneration toward the individual's upkeep. Usually, the paupers were "vendued" (auctioned off) to parties who would care for them for the least compensation. (There were 5 paupers in 1796). They were usually put out for periods varying from 3 months to one year, with the norm being about 6 months. Apparently these "vendues" were social occasions; until about the year 1830, the town paid for the liquor consumed at these vendues. The town also paid for the paupers' coffins.

In 1852, a committee of 5 was chosen to gather information and report on the feasibility of establishing a poor farm. The resulting report must have been rather lengthy – the committee had considered 7 farms. This report could not be found in any of the Town files, but it would certainly make interesting reading.

After purchase of the Town Farm in 1852 (as described in Section 2), the town's poor were housed and cared for there in charge of a Superintendent and his wife. An additional \$1500 was voted by the town to be used for furnishing the farm and supporting the poor. The Town Farm was administered by a special committee (the Overseers of the Poor) whose members were elected by voters at Town Meeting. In the year 1858 Capt. Thomas Green, Cyrus Heald, and William Green 2nd were chosen to appraise property at the Town Farm; they were the first holders of this office.

As time went on, extensive repairs and rebuilding became necessary on the property. At town meeting held Nov. 3, 1868, the town voted to authorize the overseers of the poor to procure

material sufficient to repair the barn at the town farm; very little was done until 1870, when the barn was enlarged and repaired at an expense to the town of \$1124.24. At town meeting on March 21, 1881, the town voted to build a new house (745 East St.) on the town farm. The contract was subsequently given to Frank S. Bartlett for \$225 to build the cellar and to H.W. Wilson for \$1975 to build the house. The complete cost of the house was eventually \$2592.32. Figure 3-1 shows the Poor House just after the turn of the century; Figure 3-2 shows the house as it essentially is today.



Figure 3-1. Carlisle Poor House in the Early 1900's ¹¹



Figure 3-2. 745 East Street in 2001 (Town Hall files)

¹¹ From Bull, Sydney A., History of the Town of Carlisle, Massachusetts. 1754-1920, The Murray Printing Company, Cambridge, MA, 1920.

On November 2, 1880 or 1881 (depending on the reference), the Town voted to allow the Overseers of the Poor to sell wood from the Town Farm and use the proceeds to help pay off the Town debt. This was done within the year, with the sum of \$2025.00 realized.

As the turn of the century approached, a new type of poor person appeared in Carlisle with increasing frequency. Although established to help the town's poor, itinerant "tramps" wandering through Carlisle sometimes stayed at the Town Farm. These tramps would enter the town near nighttime and ask for authorization to stay overnight at the Town Farm. If approved, they could stay at the "tramp house" on the property (a tiny building that was formerly the very first schoolhouse in that part of town) and receive food as well. In 1880, 510 tramps and 6 paupers were cared for at the Town Farm.

By 1900, the number of people being cared for at the Town Farm had become so small that the idea of leasing or selling the Farm appeared repeatedly at Town Meeting over the next 20 or so years. In 1904, there were only two resident inmates of the Farm, although there had been 121 tramps the previous season. The Overseers of the Poor had found the farm in poor condition that year and no wood had been cut for the summer, so the town had to buy wood for the farm.

By 1913, the number of residents had increased to five. In early 1914, repairs were needed in the house and barn; the small tramp house was considered beyond repair. It was increasingly difficult to get help at the farm and the wages of the staff had to be increased. In 1921, the Town voted to sell the farm at a minimum price of \$10,000. The Farm was not sold that year, but some personal property was sold at auction for \$797.57. The remainder of the personal property was sold at auction in the following year for \$1139.90, and the remaining residents were taken to the State Infirmary in Tewksbury. It should be noted that in 1922 "support of the poor" was the second-highest item in the town budget (\$2500), exceeded only by the schools (\$11,000).

In 1922, a Town Farm Fund was established as an investment fund to contain the proceeds of the rental and sale of the Town Farm, the sale of personal property, and interest. This fund was used over the year to allay various town expenses, most related to the fire department, highways, and dump. By 1924, the farm had not sold, but was leased at a rental of \$500/year. During the 1923-1925 time frame, 3 parcels of this property were set aside as a Town Forest; see details in the following section. In 1925 the remaining approximately 100 acres in the Town Farm (apart from the Town Forest) were sold to Fred and Clayton Philbrick, who continued to farm the land, and the house became a private residence. The Philbricks sold their farm in 1957 to David Sigourney, who sold to builder Engelmann Nielsen in 1966. The house at 745 East St. was subsequently owned by Curt Benedict for many years. The house is currently owned by John and Patricia Koenitzer.

Carlisle Town Forest

Some background on forests and timber usage in New England is useful in understanding the evolution of the Carlisle Town Forest.¹² The European colonists in our local area encountered

¹² Sources for this information include: Cronon, William, *Changes in the Land: Indians, Colonists, and the Ecology of New England*. Hill and Wang, New York, 1983; and Foster, David R., *Thoreau's Country: Journey through a Transformed Landscape*. Harvard University Press, Cambridge, MA, 1999.

immense forests, which had not been seen in most of Europe for centuries. These forests required great effort to clear the land for farming. The initial abundance of wood, compared to the diminished forests left in Europe, led to some wastefulness in its use. Examples include full timbering instead of half timbering; wood roof shingles instead of thatch or slate; increase of house size, requiring not only more wood for construction but more firewood to heat; and fences made of wood (unlike Europe).

Settlers sought different species of trees for different purposes. Hardwoods were generally preferred for fuel, although the great demand for firewood led to this use for many species. The white pine (*Pinus strobus*) was a good source for ship's masts, due to its size and height. White pine was used extensively for building, and was considered the premium wood for this use at the time. Lumber from the best and straightest trees were used for frames of new houses. Shingles were made of the clearest pine. Tables were made from a single board. White pine tended to disappear first, due to the quality of its wood and the fact that the species was never abundant in New England to begin with. White pine had disappeared from some areas in New England by 1750.

By far the greatest use of New England forests was for fuel. New Englanders loved large fires and warm houses, burning wood in open fireplaces, which were inefficient compared to, say, the cast-iron wood-burning stoves of the Pennsylvania Germans. (More efficient wood-burning stoves started to be used around the mid-19th century). European travelers were astonished at the large quantity of fuel wood consumed, noting that day and night, all winter, fires burned in almost all rooms in the house. A typical New England household consumed between ten and forty cords of firewood per year. In 1800, the region burned perhaps 18 times more wood for fuel than it cut for lumber.

A farmer usually tried to maintain a woodlot on a hillside above his house so fuel could be easily dragged downhill for burning. Preferred hardwoods such as hickory and oak were depleted first, followed by other species. Local firewood scarcity often became a concern within 10 or 15 years of a town's establishment. Boston, which gathered its fuel from Massachusetts Bay islands, experienced shortages as early as 1638. Private cutting of wood on common lands became a perennial source of dispute, and towns attempted to regulate it to prevent deforestation. Great forests still existed in remote areas, but transportation costs were high over the dirt and mud roads, resulting in rising prices for fuel wood. New England towns required a regular supply of wood long after their fields were cleared. Sawmills frequently became the focus of new settlements in wooded areas, furnishing lumber for ships, churches, houses, barns, and other outbuildings.

The removal of the forests possibly altered the climate itself. By 1790, most New England naturalists agree that deforestation and agricultural conversion had the effect of warming and drying the soil, making the land surface hotter in summer and colder in winter. As early as the 1750's, proposals began to be aired suggesting that forest preserves be created to protect the timber. By 1800, New England's forests near settled areas had been significantly reduced and altered by burning, cutting, and grazing. Beaver, deer, bear, turkey, wolf, and other forest animals had vanished.

In the short period since European settlement, the landscape had been transformed. By the early 1800's almost 60% of the landscape was in open fields, interspersed with small woodlots and crisscrossed with a dense network of roads. The human population was dispersed relatively evenly across this landscape in small agricultural and commercial townships of perhaps 500 to a few thousand individuals. People lived primarily off the land and its products.

“To Thoreau, it seemed that every forest of consequence was being felled and that every large tree he admired was eventually located, culled, and carted to the mill. By the 1850's...the slopes above Walden Pond, originally thick with lofty pines and oaks...had been reduced to sproutland and the field openings in which Thoreau planted his beans. Large areas had been clear-felled, leaving pine, oak, and chestnut stumps. Thoreau's written images of winter came to be dominated by woodchoppers, blazing fires of logging slash, teams of oxen waiting for their wooden loads, and long logs of white pine being sledged to the mill.” (Foster, 1999)

In 1846, George Emerson, in his “Report on the Trees and Shrubs of Massachusetts”, identified the shortage of forests, large trees, and fuelwood as an area of critical concern for Massachusetts. From 1850 through the early 1900's, when the first state foresters were appointed in New England, wood was increasingly viewed as a natural resource that was in short supply and requiring careful management.

By the mid-19th-century New England was more than half in open agricultural land. The residual forest was primarily woodlots providing building material and fuel. Wood scraps of every kind were hoarded and collected. The wealthy had their firewood chopped and delivered. Thoreau noted that Emerson's house in Concord required 25 cords of wood and 14 tons of coal annually.

Changes were starting to appear by the 1830's, however, due to expansion of the large linen mills in Lowell and the railroads. This led to social and industrial transformations that changed the relationship between people and the land. Farms and rural lifestyles were abandoned as people moved to the burgeoning industrial New England cities, more productive farmlands of the Midwest, California and Oregon. After the turn of the century much of New England began reverting back to forest; agriculture was confined to fertile river bottoms and gently rolling terrain. By the time Thoreau died in 1862, reclamation of open land by the forest had started, but scarcity of wood was still considered a problem well into the first part of the 20th century.

Gradual abandonment of agriculture resulted in the natural invasion of old fields by native trees, shrubs, and understory plants. This was not an abrupt process. The farmer's custom was to abandon the land gradually and let the cows and the invading young pines coexist in the pasture. Pines can propagate well in these circumstances. At the turn of the century, a new logging industry developed, based on harvesting the white pines that had grown up on the old abandoned farms. In addition to structural uses, white pine wood was especially suitable for constructing containers (boxes, barrels, etc.) that were part of everyday life in the era before cardboard and plastic.

Today, the New England timber industry is centered on oak, ash, maple, and other hardwood species that grew up on the cut-over pinelands and other second-growth forests. New England

generally grows more timber than is cut; forests are getting older and individual trees are getting larger. New England today is 60-90% forest.

Thus, at the turn of the 20th century, there was an overlap of wood scarcity (due to depletion of old-growth stands) and natural reforestation as a result of field abandonment. In 1922, Carlisle established a committee to look into the advisability of establishing a Town Forest, a concept well established in Germany and Switzerland and becoming more common in New England at this time. One of the committee members, Mr. James H. Wilkins, who had served in the State Legislature in 1919 and 1920 as Secretary of the Committee on Agriculture and then as its Chairman, was very interested in the issue of forest conservation. He believed that Carlisle had an ideal area for a Town Forest on some of the Town Farm land. It would be advantageous for the town to have a “wild park area” that could possibly be made self-supporting and even return an annual profit to the town, in addition to conserving the water supply and providing bird and game sanctuaries.

In 1923, the town forest committee recommended that 46 acres of the Town Farm be set aside for a Town Forest; this was approved by voters at town meeting (see Section 2). In addition, \$100 was appropriated for establishing and maintaining the Town Forest for the year 1923. In 1925, an additional 25-acre parcel was added to the original 46 acres of the Town Forest, bringing the total acreage to approximately 71 acres.

After the Town Forest was established, its management was taken over by a committee appointed by the Selectmen. At Annual Town Meeting on February 8, 1926, the town voted that the \$450 already received for any lumber, and any revenue received from this source in the future, would be put into a “Town Forest Fund” to be used in the future for Town Forest needs.

By 1928, the Middlesex County Forestry Program Committee (established to investigate the forestry requirements of the county) named Carlisle in their report as one of the ten towns in the County that had already established a town forest. This committee recommended that the Town Forest be expanded to encompass 10% of the forest land within Carlisle, and that the town provide forest patrolmen during dangerous fire weather.

Town records for the year 1929 indicate the following activities in the Town Forest:

- The town forest committee reported \$20 received from the sale of wood, \$35 received from the sale of moss, and a number of cords awaiting sale.
- 4,000 white pine and 2,000 red pine seedlings received from the State were planted in open areas. Apparently 90% of the seedlings survived, even though planted in a dry season.
- A substantial fence was built adjoining a neighboring (Philbrick) pasture.
- A large area was cleared of weed trees and brush
- Hundreds of the small trees were pruned.
- \$199.47 of a \$200 appropriation was spent
- “A large area has been cleared of weed trees and brush, and hundreds of small trees pruned. This work is very important and should be continued as rapidly as possible. It not only increases the rate of growth but it greatly reduces the fire hazard. The

committee feels that any money expended in this work cannot fail to yield the town a high interest in this investment.”

A short digression is useful here to discuss why these particular trees were planted.¹³ White pine, native to the eastern U.S. and Canada, was the foundation of the eastern U.S. lumber industry. By 1840 the original growth of white pine in the Northeast was essentially gone; what exists today is mostly a result of planting and successional natural re-establishment. The wood has exceptional all-around usefulness. It can be used for building any part of a house. Today most of the white pine lumber goes into boxes; the highest quality wood goes into patterns for casting.

Red pine (*Pinus resinosa*), native to eastern U.S. and Canada, is stronger and heavier than white pine but more prone to warping and tends to shrink more than white pine. It is easily worked with hand tools. It is primarily used for structural purposes, outdoor furniture, and paper pulp. The American bald eagle often builds its nests in large old-growth red pines, although wildlife values of red pine are generally considered low. Carlisle is on the southern fringe of its natural distribution but extensive planting has extended its range.

Town records for 1932 indicate the following from the report of the Town Forest Committee:

- 60 cords of hardwood from the southwest corner of the lot were sold to Guy Clark for \$4.75/cord.
- A temporary road was made across a narrow meadow so that the wood could be yarded without trespassing on nearby land.
- The young pine seedlings were noted as making good growth. In a section where lumber was cut at the time the Forest was established, the young pines are very thick and should be thinned.

In 1934-1935, the U.S. Congress authorized the Works Progress Administration (WPA) to appropriate funds for relief of various hardships resulting from the Great Depression. A WPA project was carried out on the Town Forest in 1933-1934, for three men with an allotment of \$472.50. The work consisted of cutting hard (red) pine and birch, thinning and trimming the white pines, setting out 5,000 small pine trees, and cutting and selling about 40 cords of birch and hard pine. The Town Forest Committee reported that during winter and spring of 1934-1935 almost \$2000 of Federal money was spent in the Town Forest. Birch and hard pine were cut, small sprouts grubbed out, pine trimmed, accumulated brush burned, and seedlings set out.

In 1936, the Town Forest Committee reported more cutting, trimming, and thinning, and 5000 more pine and spruce seedlings were set out. Some birch and hard pine were cut and the wood turned over to the Board of Welfare for use as needed. (This was done with WPA funding as well). It was reported that the forest was in very good condition and no appropriation was needed that year.

¹³ Sources: USDA Forest Service Publication FS-255, “Red Pine”; USDA Forest Service, “Eastern White Pine”, February 1954; www.woodweb.com.

The hurricane of 1938 caused some damage to the trees in the Town Forest. (In New England, it was estimated that about one-third of the stands of eastern white pine in New England was blown down or damaged.) In 1939, with WPA funding, some cleanup was done of the tops of pine trees that had blown down. The Town Forest Committee decided that no additional money could be spent to advantage in the Town Forest that year. It was decided to leave the trees downed by the hurricane as they were not large enough to be profitably turned into lumber.

Figures 3-3 and 3-4 show an aerial view and boundaries of the Town Forest as it was in 1937.



Figure 3-3. Town Forest as Shown in 1937 Washburn Aerial Photo (from Town Forest Committee Report, 2003)

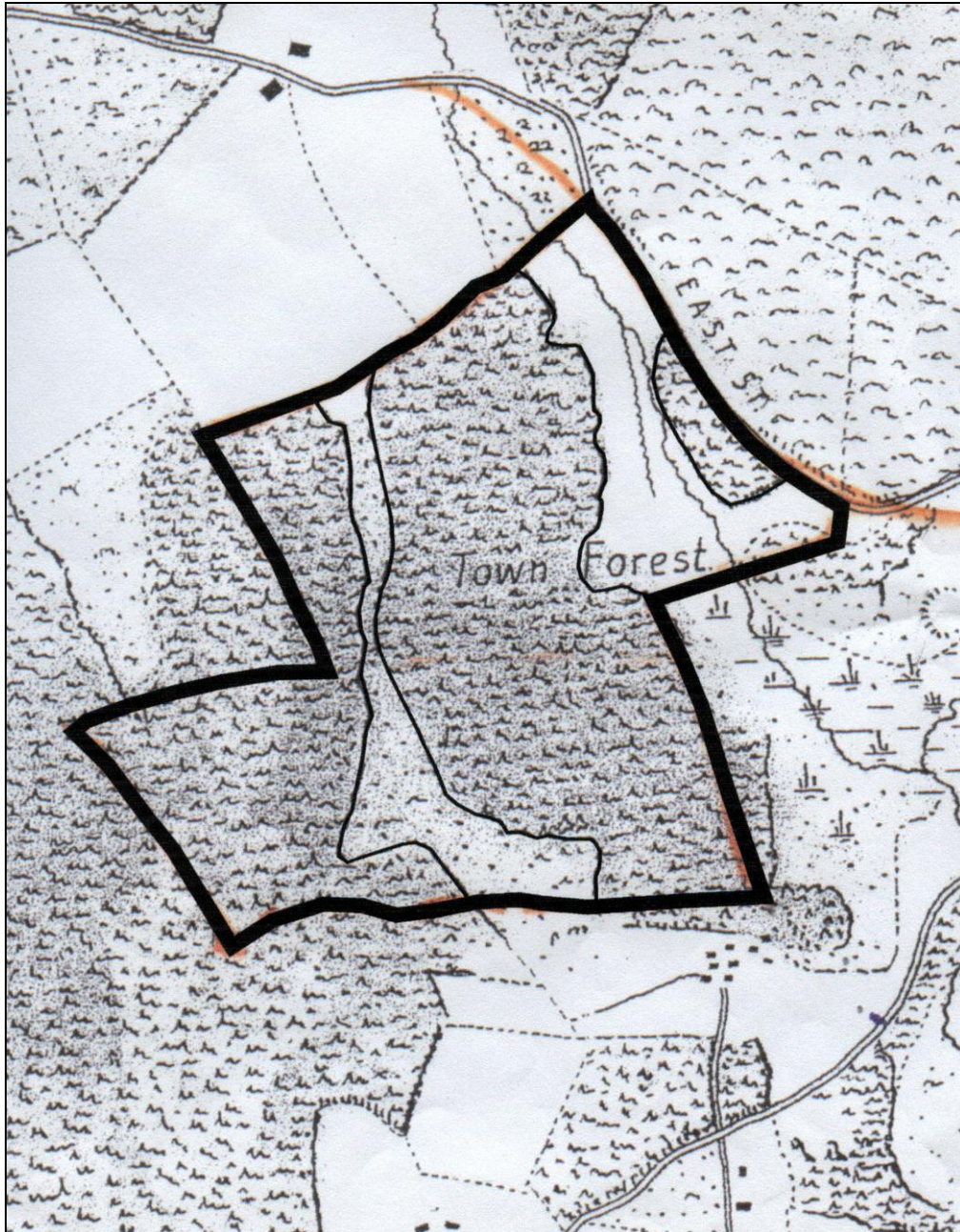


Figure 3-4. Town Forest as Shown on Map of Carlisle, Compiled from 1937 Washburn Aerial Photos (from Town Forest Committee Report, 2003)

By the 1940's, active management of the Town Forest had apparently ceased. There is little information on the Town Forest in Town or library files until the 1990's. Carlisle resident Tom Rourke stated that in the early 1960s, the then- Recreation Commission (his father was a member) investigated siting a town swimming hole on the Town Forest, just to the left of the East St. entrance in the wetland area. The proposal was never implemented.

Town records have very little additional information on this parcel until 1993, when the Board of Selectmen initiated discussions on who should manage the forest. There was concern that the parcel had no management plan. At the time, the Carlisle Conservation Commission was preparing a management plan for the Greenough land and offered to include the Town Forest as well. As detailed in Section 2, the Town Forest was placed under the care and management of the Carlisle Conservation Commission at the 1994 Town Meeting. It is not known if ConsCom ever produced this initial management plan for the Town Forest.

By 2001, the Carlisle Housing Authority (CHA) was considering the Town Forest as a potential site for affordable housing and endeavored to enlist ConsCom support for this project. Questions were raised about the legal status of the property; in particular, the original 46-acre town forest (and maybe the entire property) might be protected from development according to Article 97 of the Massachusetts Constitution. The Selectmen formed an ad hoc committee in 2001 to determine the accurate size and boundaries of the forest and to locate the original 46 acres. None of the data gathered enabled the committee to unquestionably determine the location and boundaries of the original 46-acre town forest. The Town Forest Committee produced a report of their findings in 2003 (this report is summarized in Section 4). Consequently, the effort to site affordable housing in the Town Forest was abandoned.

3.2 Current Uses of the Town Forest

Recent uses of the Town Forest include the following activities:

- Walking, jogging, and dog walking on the trails
- Cross country skiing
- Bicycling (a few local children use mountain bikes on the trails)
- Horseback riding (only one horse seen by abutters/walkers in 8 or so years. It was assumed this must be a neighbor as there is no room to park a horse trailer).
- Bird watching
- Camping (Boy Scouts)
- Trails Committee walks

The land is used primarily by nearby residents, and by Carlisle residents who have actively sought to know about this property. Usage is relatively light by other residents, probably due to the lack of general knowledge of this parcel and lack of a parking lot.

Section 3 General References

1. Humm, Edward, "Carlisle's First Conservation Land? History of the Carlisle Town Forest", undated manuscript from Town Office files.
2. Lapham, Donald A., Carlisle, Composite Community (undated).
3. Bull, Sydney A., History of the Town of Carlisle, Massachusetts. 1754-1920, The Murray Printing Company, Cambridge, MA, 1920.
4. Ruth Wilkins, Carlisle, Its History and Heritage, Carlisle Historical Society, 1976.
5. Carlisle Historical Society, Images of America: Carlisle, Arcadia Publishing, 2005.
6. Town Forest Committee Report, 2003.