

Harvard College

A Forest In The City:
The Story of the Alewife Brook Reservation

John Bass Tournas

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In appreciation of 7th grade Laura Sylvan's Graham and Parks Class of 2007

And in appreciation of Friends of Alewife Reservation 2016

The Alewife Brook Reservation lies at the terminus of the Red Line MBTA rail in Cambridge Massachusetts, and occupies space in the towns of Belmont and Arlington as well. It is the biggest “urban wild” in the Boston area, and is home to many different species of flora and fauna, including coyotes, deer, and silver maple trees. Today, it is in a state of disrepair, clogged with trash and encroached upon by new developments being built on its borders. This paper will attempt to show why the park is in this shape today, and how this situation is in part caused by inequities in wealth and resulting environmental injustice.

History

It is important to paint a detailed history of the Alewife area in order for us to understand the many issues that affect it today. Before colonists in the area began industrializing the cities outside of Boston, the area between Spy Pond in Belmont and Fresh Pond in Cambridge was taken up by “The Great Marsh,” which was more than 100 acres in area, and which provided early settlers with an abundance of freshwater fish. In a 1910 article from the *Somerville Journal*, they describe the colonial-era Alewife Brook (tributary of Fresh Pond) as so plentiful with alewife fish that you “could walk across on them.”¹ However, as industrialization increased around the turn of the century, these marshes were filled in and cleared for commercial development, leaving only the larger bodies of water and some of their tributaries still in existence. Up until the early 20th century, Little River, which feeds out of Little Pond in Belmont, generally ran alongside Route 2, one of the main highway arteries to get in and out Boston and North Cambridge. It was during this time however, that the area began to take on the

¹ Holmes, J. Albert. "About Menotomy River." *Somerville Journal*. Web. 3 May 2016. <http://www.friendsofalewifereservation.org/1910_01_28_menotomyriver.pdf>.

shape it has today. In the early 1900's, Little River was channelized, drained, and filled in, as part of an attempt to cut down on the local mosquito problem and to increase the area's use as land for commercial and industrial developments.² It was also around this time that the area was officially named the Alewife Brook Reservation. This was an initiative backed by landscape architect Charles Eliot, who incorporated the area into the Metropolitan Park System, the first regional park system in the country. As part of this plan, he wished to connect the Mystic River with Fresh Pond, creating a series of parks along the connecting watershed system that would be ideal for driving and enjoying the natural landscape.³

See below a 1903 map of the Alewife Brook area. The small body of water beneath Spy Pond is Little Pond. From there, it is easy to see Little River going East towards the Alewife Area. Right at where the Alewife T stop now is, Little River and Alewife Brook connect and the Brook curves up North towards the Mystic Lakes. The map also makes clear that the Reservation area is quite swampy, even in areas that will in the future be filled in for the construction of Route 2.

Now let us compare this image to the one directly below it. The second image is a map of the Alewife area from 1946, and has several marked changes that will help to elucidate the direction of urban expansion throughout time. The addition of Route 2 in 1934 was the beginning of the urban encroachment upon this ecological area that persists to this day. As was mentioned above, this boxed in the wetland area with the additional expansion of railroads in south. Indeed, when looking at the first map, it is easy to see how Eliot envisioned connecting Fresh Pond area to the Mystic Lakes: at that point there was still a large amount of swamp area in Cambridge. A

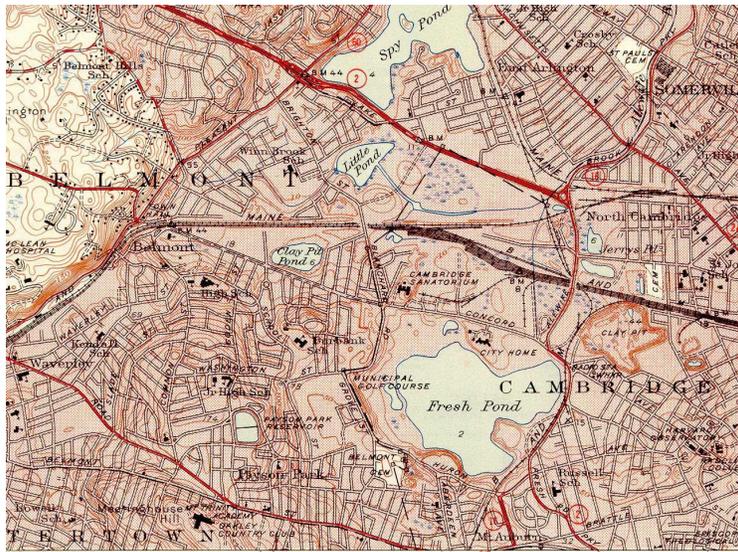
² Friends Of Alewife Reservation. *Stormwater Basin Brochure*. Friends Of Alewife Reservation. Print.

³ The Bioengineering Group. Rep. Web. 3 May 2016.

<http://friendsofalewifereservation.org/2003_06_mdc_alewifemasterplan.php>.

few decades later, those areas have dwindled to smaller pockets. Another change that is evident is the redirection and engineering of the Little River. Because of excessive dumping in the river (a slaughterhouse being one of the main offenders) and the increased spread of malaria as a result (more mosquitos), a publically-funded endeavor to increase sanitary conditions led to the movement of the river away from where Route 2 is now. Also around this time, the construction of the Craddock Dam on the Mystic River drastically changed the ecology of the Alewife area, changing its direction so that it was no longer tidally influenced. It became a static wetland, much more welcoming to mosquito populations, and much less equipped to deal with pollution. When comparing both pictures, one can see that by 1946 the river bends south in an artificially smooth curve. This project probably began shortly after the 1903 map was drawn.

Cambridge 1903



Cambridge 1946

Photos Courtesy of friendsofalewifereservation.org

The years following WWII also saw changes in the type of building initiatives that were started around the Alewife Reservation area. Directly as a product of suburbanization, Discovery Park, which until that time had been farm land on the banks of the Little River, became one of the country's first suburban office parks. When these properties were purchased by the Bulfinch developers in 2002, many of the original buildings were torn down, and much of the area was converted back into green-space, similar to how it looked in the early 1900's. Additionally,

Bulfinch added ponds, storm water treatment resources, and a green-space buffer between the existing parking lots and the river.

The Red Line extension controversy in the 1970's was a major win for those environmentalists worried about the negative effects of increasing urbanization and development around this area. This line would have continued on past Alewife into Arlington and Lexington, and surely would have done even more damage to the ecosystem of Alewife up towards Spy Pond. The Minuteman Bike Path now runs along this hypothetical route. Also around this time however, the zoning around Alewife was changed to permit high rise office and research/development buildings. Today, the same types of buildings proliferate on the shrinking borders of this reservation.⁴

As a result of this proliferation, more and more of this region has been annexed, deforested, and boxed in by new housing developments. One of the most recent iterations of this encroachment is the destruction of the Silver Maple Forest area, located directly to the East of Little Pond. After many years of litigation and protest, the AP Cambridge Partners LLC obtained the permit in March 2015 to begin development on this area.⁵ This area is home to many different species of birds and mammals that will become displaced as a result of the deforestation. Also in line with the afore-mentioned negative ecological trend, this construction effort will further damage the area's ability to perform as a watershed, which means that flooding in the surrounding areas of Arlington and Cambridge will be exacerbated.

⁴ Beinecke, Richard H. *The Mystic River: A Natural and Human History and Recreation Guide including Winchester, Arlington, Cambridge, Medford, Malden, Somerville, Charlestown & Chelsea*. United States: CreateSpace Independent Platform, 2013. Print.

⁵ "Developer Gets Approval to Build on Belmont's Silver Maple Forest - New Developments, News - Boston.com Real Estate." *Bostoncom Real Estate*. 2015. Web. 04 May 2016.

Modern Day: What Does The Park Look Like Now?

This section of the paper will not only be a physical/ecological discussion of the current state of the Alewife Brook Reservation, but will also bring the communities who engage with the space into the conversation. Throughout the historical discussion of this area, it is my hope that two sides to the issues that face Alewife become clear. In his book *Healing Natures*, Robert France puts it best:

Just as the Great Swamp is a striking lesson in ungratefulness, remorse, and shame about how we have treated the wetlands that helped shape this country, the area is now on the cusp of becoming a signature example of dedication, compensation, and hope in how to ‘restore’ natural structures and functions in dense urban cores.⁶

To simply walk along the perimeter of the reservation is to see clearly, often in the same view, these two opposing forces. The figure of unfinished buildings loom in the background as one traverses the beautiful and modern walkways suspended above the marshes. Looking out into the Little River from a clearing, signs describing local flora and fauna are in contrast with the trash strewn about its banks and clogging the water. Here, I make use of first person experience to outline specific points. I believe that my positionality as someone born and raised in the area will be useful in explaining how the park is used and how locals interact with it.

⁶ France, R. L. *Healing Natures, Repairing Relationships: New Perspectives on Restoring Ecological Spaces and Consciousness*. Sheffield, VT: Green Frigate, 2008. Print.

As a child growing up in Cambridge, there were not often reasons to go to Alewife, but I do remember the time I did quite keenly. In 7th grade, my science class was learning about taxonomy and dichotomous keys, and so our teacher brought us on a series of field trips to the Alewife reservation to document some of the species there. I remember a few things: there being a lot of trash, and evidence of a significant population of homeless people living in the area. Trash is something that continues to be an issue with Alewife, though it does seem that a concerted effort has been made to clean most of it up. I remember seeing beer cans, food wrappers, and even bigger things like appliances. There were tents put up in certain areas, or at least areas that had evidence of camping.

The Friends Of Alewife Reservation is the steward and caretaker organization for this area, and is also invested in community outreach in its many forms. This outreach is the reason why my class went to do experiments in the first place, and indeed how many children and adults throughout the Cambridge, Arlington, Belmont, and Lexington areas learn about the Reservation. For example, the FAR runs a summer camp for junior high and high school students through the Mayors Program, a summer employment program funded by the City of Cambridge. Through this program, local students are paid a stipend to take an active role in working towards the restoration of the Reservation. Many of the public resources on the FAR website were also curated or researched by these students, including significant ecological information used to argue against further encroachment by developers.

In 2013, New England's biggest storm water wetland had its grand opening in a section of the Reservation. This newly renovated area has man-made reservoirs to dampen the impact of flooding in the Alewife area, as well as walkways and an amphitheatre to allow locals to have

more access to the space. Indeed, on their website, FAR's statement of purpose includes fostering "respect for wildlife habitat with access for all to ecologically focused recreation, support for educational purposes, reduction in vandalism and waste, as well as watershed protection."⁷

As part of the research for this project, I was able to speak briefly with the head of FAR Ellen Mass, about what the Reservation was experiencing currently. For her, the future of this area does not look bright. Lately, more and more developers have been granted permits by the City of Cambridge to build apartment buildings on ecologically vital land. One of the biggest problems that she sees is the lack of investment in community. Many of the developers are internationally based, and so have little interest in making developments that are sustainable and healthy for the local ecological and urban community. An additional issue is that the City of Cambridge has not been abiding by federal environmental regulations in allowing developers to destroy this urban wild. When I had spoken to her, she had just the day before been given news about another development scheduled to begin construction on the land. As she spoke about the Alewife Brook's essential role as a floodplain, she also pointed to broader systemic issues with ecological maintenance in many of the water sources connected to Alewife and the Mystic Lake, referencing the fact that Winn Brook in Belmont recently received an "F" in water quality.

Simply by looking at a Google map of the area, it is easy to see the encroachment of developments from all sides in the modern day. As I biked along Acorn Park Dr. (the road dipping down from Route 2 in the center of this photo) I was surrounded by the shells of new buildings. Based on maps that Ellen showed me, the area to the west of Acorn Park Dr. would

⁷ Friends Alewife Reservation. Web. 05 May 2016.
<http://www.friendsofalewifereservation.org/execsummary_vision.htm>.

also soon be deforested to make way for new buildings. It seems obvious that this area's natural resources are dwindling quite rapidly.



Analysis: Urban Ecology's Role In Understanding the Alewife Reservation

In his book *Urban Ecology*, Richard Forman writes: “Urban ecology studies the interactions of organisms, built structures, and the physical environment, where people are concentrated.”⁸ His model for understanding how green space, non-human organisms, architecture, and nature affect human experience will be useful in an explanation of the current situation in the Alewife Reservation, and how decisions can be made in the future about how to work for the betterment of local ecology as well as urban design in this area.

The urban-to-rural gradient, as discussed in *Urban Ecology*, is a useful tool when dealing with questions of investment, treatment, economic stability as they relate to ecology. The Alewife Reservation is somewhere in the middle of this gradient. While it is not in the heart of any city or town, it is certainly affected by urban issues such as expansion and pollution. How

⁸ Forman, Richard T. T. *Urban Ecology: Science of Cities*. Print.

does the particular positionality of the Alewife reservation explain its current situation? In another one of his books, Robert France writes:

At one recent meeting, an outcry was raised by citizens when one of the expert panelists refused to accept the notion that the issue of watershed flooding could be discussed in isolation from broader topics such as the social issues of who it is that may be forced to have to live down in the floodplain rather than up in the hills, as well as the tricky economic question of who it is who should pay for the stormwater managements in this time of financial crisis...”

So what are the populations of people who live in this area? For one thing, this area is often occupied by homeless people. Many of the cleanup reports on the FAR website mention coming across campsites or other trash apparently left behind by homeless people. It is a near universal truth that homeless populations are kicked out of densely settled areas, especially hubs like Harvard square, and so are forced to find refuge in areas more on the fringe, a description which fits the Alewife Reservation perfectly.

Belmont, Arlington, and Cambridge are the three municipalities that have direct contact with the Reservation. Belmont, the most suburban area of the three, has the highest per-capita income, and has also allowed the most development.⁹ For example, the Belmont Upland developments that were in contention for many years in the early and mid 2000’s, and eventually were permitted, destroyed a large portion of the Silver Maple Forest. As a result, downstream

⁹ "Effects of Construction in the Silver Maple Forest Bordering Alewife Brook Reservation." *Effects of Construction in the Silver Maple Forest Bordering Alewife Brook Reservation*. Web. 05 May 2016.

communities of lower income housing (Cambridge in particular) were put at greater risk of flooding and pollution, as well as being denied one of the biggest areas of green space that is accessible by public transportation.

One of the platforms upon which the Brian O’Neill Properties Group proposed its development was that it would be made of 25% affordable housing units. Belmont was incentivized to grant this permit request as they were behind on their quota percentage of affordable units in the city.¹⁰ However, when I spoke with Ellen Mass, she talked for a few minutes about how they and many other development companies would set aside space for these units, but then sell those areas to be further developed by a different (probably international) developer. In this way, much fewer affordable housing units than originally intended would end up being constructed.

In this class we discussed at length the “Park System Form,” the idea of a curated form of nature that was there to ameliorate the harshness of living in the city. In his essay *Public Parks and the Enlargement of Towns*, Olmstead lays out his vision, of idyllic places where members of the community congregate and pass the time in the comfort of shade from tall trees.¹¹ The case of the Alewife Brook Reservation, however, offers a different perspective on how green space should be approached as an integral part of the urban landscape. This is because it is a space that is not mainly, or directly at least, designed and curated for people's’ enjoyment. It has an important role outside of mankind. Indeed, Alewife’s title as Boston’s only “urban wild,” does little to suggest that it exists for recreation of any kind. For Olmstead, and for any of his disciples, a park, or green space within a city is something to be controlled. Perhaps this feeling

¹⁰ See Footnote 9.

¹¹ Olmsted, Frederick Law. *Public Parks and the Enlargement of Towns*. New York: Arno, 1970. Print.

towards green spaces explains the ways this place has been neglected or dominated by urban forces.

It becomes increasingly obvious upon examining the beneficiaries of these new developments that the case of Alewife is indeed just as important an infringement of environmental injustice as it is of ecological decay. Using Forman's concept of the urban gradient, as one looks from Cambridge to Belmont, it is easy to see a hierarchy of access to green space. Cambridge has a few small parks, but nothing nearly large. As you move through Alewife and into Belmont area there is the Western Greenway and the Habitat Reservation just to name a few. Over the past few years, the greater Boston area has seen a significant increase in population.¹² As a result, there has been an increased interest in building in the Alewife area, as it is zoned for high rise apartment buildings. Many people in the Cambridge area are frustrated with the cities lack of a holistic planning process, claiming that they approve one development at a time rather than thinking on a large scale about what kind of neighborhood or community they would like to create.¹³ This lack of foresight is also reflected in the many issues facing the dwindling Alewife Brook Reservation.

Hopefully this paper will have been useful both as an elucidation of the area's history, and as a discussion of the unfair and socio-economically biased development decisions being made that continue to negatively impact the area's residents and fragile ecosystem.

¹² "WPR." *Boston Population 2016*. Web. 05 May 2016.
<<http://worldpopulationreview.com/us-cities/boston-population/>>.

¹³ "Alewife Building Boom Spurs Calls for Better Planning - The Boston Globe." *BostonGlobe.com*. Web. 05 May 2016.