Barns and Stone Walls Initiative

HISTORIC RESOURCE REPORT

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For Preserve Rhode Island and the Preservation Society of Newport County

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1.0 Introduction

Aquidneck Island’s historic use of land over the course of the last 350 years is intrinsically tied to early farming practices. The impact of agriculture on the landscape is today both hidden and visible; although the context for many farms has diminished over recent decades, with significant commercial and residential development, what remains is telling: an extensive network of stone walls and extant agricultural structures that provide a framework for understanding the Island’s past.

This report, researched between February-August 2018 on behalf of Preserve Rhode Island and The Preservation Society of Newport County for its collaborative Barns and Stone Walls Initiative funded by the van Beuren Charitable Foundation, is intended to provide a broad background, context, and initial observations regarding Aquidneck Island’s agricultural built environment as it relates to potential restoration work in the area. It also provides an overview archival documents and secondary sources and from local repositories that may help to inform further research. With contextual evidence collected here, Aquidneck’s stone walls and agricultural buildings will be more easily read for their historic function, significance, and meaning in relation to broader regional trends.

The report is divided into four main sections. The first section provides a technical overview of historic stone wall and farm building construction. It includes a summary of Aquidneck Island’s stone wall resources, investigation of the Island’s unique geology, and descriptions of stone wall building practice in New England. It also includes a summary of typical methods of farm building construction over the course of 300 years. The following sections provide a chronological overview of Aquidneck Island’s agricultural history, divided by century, that provides both regional and local context, and is supplemented by text that further explains the implications for stone walls and farm buildings in the area.

In addition to the main report, an annotated bibliography provides details of resources consulted and potential resources to be further investigated at local repositories. Appendix A provides a table of archival resources noted during the course of the project. Appendix B provides a visual supplement to historic photographs not included in the text of the report.

Although many primary and secondary sources were reviewed during the course of this project, and several site visits made, there were limitations to the research that could be conducted; these provide opportunities for further investigation. First, the investigation of stone walls was limited to those that are associated with farms, historic boundaries, or large estates that pursued agricultural endeavors; walls bordering Newport’s 19th century summer cottages, for example, were not included. A complete survey of extant structures was not possible in the context of this report. Local examples are given to show a particular style or historic typology, but should not be considered as a finite analysis of the many historic resources found throughout the Island. Additionally, due to the ephemeral nature of stone walls as built structures, it should be noted that any dates provided are approximations; it is nearly impossible to ascertain precise dates of construction for extant walls. This also applies to farm buildings, which could only be assessed from a distance; many farm complexes are also hidden from public viewsheds, which also makes it difficult to accurately determine the extent of historic resources.
2.0 Background and Context

2.1 Geology of Aquidneck Island

Aquidneck Island’s unique geological history both determines and defines the structure of its historic walls and stone-built structures. The shape, color, and texture of historically available stone limited the ways in which walls were built, and therefore make them locally unique. According to stone wall historian Robert Thorson, Narragansett Bay is a distinctive “…geological basin…which contains younger and softer rocks than those on either side of the bay. Most of this younger rock is composed of gray, slatelike stone with a green hue, but there is also an abundance of puddingstone, more so than anywhere else in New England.”

Generally speaking, most of Rhode Island’s stone is sedimentary in nature, containing “conglomerate, shale, and some coal.” Aquidneck Island’s soil is defined by a “rich loam,” superior to that found elsewhere in the state and historically tied to the growth of agriculture in the area.

Despite the evidence of Aquidneck’s unique geologic situation, it is important to understand its place within New England’s geology as a whole. New England’s landscape, and available stone typology, is broadly similar to that of Britain because of a shared geological timeline. Approximately 300 million years ago, the land masses that would become modern-day Britain and New England were in the midst of a long-term collision within the heart of Pangea, a supercontinent comprised of several large land masses. Eventually, Pangea separated, and the stones that had begun to form beneath its surface travelled with each resultant “broken” piece of earth’s crust.

In turn, the bedrock generated by seismic activity associated with Pangea was largely metamorphic. This type of rock, derived from elements that never completely melted during their formation, is characterized by a layered appearance (foliation) and an underlying crystalline structure. According to Robert Thorson, “Besides being fireproof, durable, and slabby, New England’s metamorphic fieldstones are usually conveniently shaped for stonework. Most often, they have straight sides, sharp angles, well-defined corners, and are large enough to build with, yet small enough to manage easily by hand.” (Figure 1). Other deposits in New England include examples of igneous rocks, which were made of elements that were fully melted; granite is one such example. Examples of sedimentary rocks, generated at low heat, are characterized by a soft and crumbly texture. Conglomerate “puddingstones,” common in the Narragansett Bay area, are made of a base stone that is mixed with pebbles, resulting in a variety of unique shapes.


4 Thorson, Stone by Stone, 29-33.
5 Thorson, Exploring Stone Walls, 37.
Allport, glaciers began to move through present-day New England about 2.5 million years ago. Their movement, and the scraping effect of rocks trapped within, caused a “...dramatic transformation of the landscape through erosion and deposition” of both landforms and soil. Approximately 12,000-14,000 years ago, these Pleistocene-era glaciers began to retreat. As the glaciers shifted back and melted, the “...hard, crystalline” bedrock generated during Pangea was violently crushed and moved anew.

The effects of this glaciation had an intrinsic impact on the stone qualities that resulted. For example, many stones found in New England fields by early European settlers were characterized by their round, smooth appearance. These qualities were a direct result of glacial manipulation, as they were “tumbled” and “rounded” by geologic pressure and stress.

Rounded boulders (usually defined by a diameter above 256mm) or cobbles (between 125-256mm in diameter), for example, can be found in many walls throughout Aquidneck Island (Figure 2).

The Rhode Island Department of Environmental Management’s geological maps, provided through the agency’s online GIS platform (RIDEM Environmental Resource Map, https://bit.ly/2QmfmNJ), provide an at-a-glance view of Aquidneck’s geological makeup (Figures 3 and 4). According to the map, Aquidneck Island’s underlying bedrock is composed of two large general masses: the Narragansett Bay Group and the Newport Group. Two smaller areas, Conanicut Group (Newport Neck) and Southeastern Rhode Island Granites (northernmost Portsmouth), are also identified. Each group is formed of complex groupings of rock types, which are more specifically defined by the United States Geological Service; examples are given as follows:

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8 Allport, 66.
Narragansett Bay Group – Rhode Island Formation: “In southern Rhode Island, consists of meta-sandstone, meta-conglomerate, schist, carbonaceous schist, and graphite. Plant fossils are common.”

Narragansett Bay Group – Purgatory Conglomerate: “Buff to pale-gray conglomerate. Clasts consist entirely of quartzite; matrix primarily quartz, plus sparse amounts of magnetite. Cobble and boulders are ubiquitously elongate, due to pressure-solution phenomena associated with deformation.”

Newport Group – Price Neck Formation: “Fine-grained graded beds of feldspathic siltstone and sandstone, interstratified with carbonate conglomerate, and ash-flow and lapilli tuff; some units may be lahars.”

Newport Group – Newport Neck Formation: “Sequences of gray, green, and maroon graded rocks, ranging from fine-grained feldspathic granule-conglomerate to maroon slate.”

Newport Group – Fort Adams Formation: “Large clasts of dolostone and quartz arenite (olistoliths) enclosed within a matrix of tuff, siltstone, slate, and conglomerate; interpreted as an olistostrome.”

Rhode Island geologist Alonzo Quinn generalized the geology of Aquidneck Island in his 1980 publication, Rhode Island Geology for the Non-Geologist. In this text, Quinn asserts that most of Aquidneck Island falls under the more broadly defined “Narragansett Basin,” which consists mainly of sedimentary, 300 million-year-old Coal-Age rocks.10 These rocks formed when mineral-laden sediment was forced underground by a mountainous rift (which would later erode to form Narragansett Bay) and were subsequently compressed and solidified. Characteristic stones include “…conglomerate, sandstone, shale, and some coal.”11

In addition, Aquidneck Island can also be defined by the nature of its glacial deposits, which lie above its bedrock. The RIDEM Environmental Resource Map characterizes Aquidneck Island by its surface composition of till and outwash (Figure 5). Till refers to a variety of stone types that were discarded in situ as glaciers melted; RI geologist Alonzo Quinn defines till as “...an unstratified mixture of boulders, sand, and clay.” Rhode Island’s landscape generally contains “...a few feet of till” that rests above bedrock.12 In contrast, outwash formed when glacial melt gradually “sorted” and sifted material “...into gravel, sand, and clay,” which can be found above till or resting on bedrock. A majority of the Island is composed of till, while only a few points (the northernmost portion of Portsmouth and an area near Purgatory/Sachuest in southernmost Middletown) contain examples of outwash.

With both bedrock typologies and glacial deposits in mind, stone walls may be identified by their local stone typology.13 For example, Quinn highlights Purgatory Chasm and its vicinity as having a unique geological composition. Within this relatively small area, a variety of stone types, including basalt, sandstone (including shale), and conglomerate (fused pebbles and boulders) can be identified. The Purgatory-area conglomerate, which according to Quinn “...is

10 Quinn, 10.
11 Quinn 10-11.
12 Quinn, 16.
13 Timothy Ives, Rhode Island State Archaeologist.
best known for [its]... flattened and elongated (‘stretched’) pebbles and boulders”, would most certainly have been readily available to early wall builders.¹⁴

In a similar manner, Newport Neck contains a variety of bedrock within a small area. Much of the western portion of the neck is comprised of Coal-Age sandstone, shale, and conglomerate, while an area north of Bailey’s Beach contains granite. Further east, along the present-day Cliff Walk, both metamorphic and sedimentary bedrock is present.¹⁵

Figures 3 and 4. Bedrock typologies found across the State of Rhode Island (left) and on Aquidneck Island (right). Note that although most of Aquidneck’s bedrock belongs to the Narragansett Bay Group, sections near Newport Neck and northern Portsmouth have additional distinct formations.


¹⁴ Quinn, 6, 53-57.
¹⁵ Quinn, 57-60.
Figure 5. Map of glacial deposits found on Aquidneck Island; note that most of the Island is till, with the exception of outwash at points along the south coast and northern Portsmouth.

2.2 Overview of Stone Wall Building

The continued existence of stone walls throughout New England is perhaps one of the most visible reminders of 18th and 19th century agricultural practices. According to contemporary wall builder Kevin Gardner, “Today, the impact of our old stone walls, as familiar framing structures for the increasingly precious rural landscape, is perhaps more profound than ever, given the erosion of so many of that landscape’s other signifying features...”16 Sometimes interchangeably called “stone fences” during the period in which they were built, stone walls were mainly constructed as barriers for livestock, in keeping with a particular mode of “mixed husbandry” developed in Britain; this type of agriculture is defined by the simultaneous and organized cultivation of both plants and animals.17 Despite variances in circumstances and geology, several basic principles hold true for effective wall construction in a variety of local settings, including the availability of a wide range of stone types and shapes, a trenched foundation, even courses (lines of stone), placement of individual stones in a “two-on-one and one-on-two” pattern, chinking or pinning (a process of using small stone pieces to hold work in place), and a general understanding of ideal spatial placement gained from experience.18

With these principles in mind, several different types of walls can be created. According to Robert Thorson, New England’s freestanding walls can be divided into five basic typologies, examples of which may be encountered throughout Aquidneck Island: stone bands, single walls, double walls, broad walls, and abutting walls. Stone bands are collections of unstacked stones that form an “elongate pile,” often formed when stones “accumulated piecemeal beneath a [timber] fence line.” Single walls are formed from one layer of stacked stones, while double walls have two faces, “often filled with rubble,” and often topped by capstones. Typical double walls are relatively low and served as “exterior boundary walls for prosperous but middle-class farms”; more elaborate double walls are “carefully laid,” are taller, and are tied to large estates. Broad walls are extremely wide, and were generally made to quickly dispose of field stone; often, stones were piled against a pre-existing double wall. Abutting walls consist of a single line of large stones which touch each other, often made of boulders or large slabs (Figures 6-8). In addition to these freestanding wall types, a variety of other stone structures were historically built with stone. These might include retaining walls, foundations, dams, cellars, and wells.19 The complexity of stone walls may also correlate to the types of fields to which they would originally have been associated. For example, tillage fields may be more likely to have wide and complex double walls, signifiers of “intense cultivation” and stone removal; pastures are more likely to include single walls.20

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17 Allport, 15-17, 25, 41.
20 Lenney, 147.
The types of walls built by early settlers on Aquidneck Island have ties to contemporary building techniques found in Britain. The most complex type of these walls, as referenced by Thorson, is the double wall (Figures 9-13). According to the Dry Stone Walling Association of Great Britain, experts in the field of traditional dry-laid wall building, the double wall system is superior because the stones “...will settle naturally instead of cracking apart...” The Association advises a multi-step process. First, the stone is sorted by size and type, and the largest stones are placed side-by-side in two rows (each stone positioned in an oblong direction) for the foundation. Strings and a frame are set in the ground to guide the slope of the wall faces and the level of the courses. Next, the courses are laid, with each row of stone being laid simultaneously on each face; stones are positioned so that all joints, or spaces, are covered.

Figure 6. (top) A potential stone band can be seen in the distant field at Simmons Farm, Middletown
Figure 7. (bottom right) An improvised wall, made of scattered stones (see area near the trees) in Portsmouth.
Figure 8. (bottom left) A cross-section of a double wall.

(i.e. a “one stone on two, two stones on one”). Hearting, or small filling stones, are utilized throughout for stability, and are added in the middle of the two wall faces as each course is being built. 22 As the wall increases in size (and above 23 inches), it becomes advisable to add regularly-placed throughstones; these long stones, which run across both wall faces, provide additional stability. 23 Finally, slab-like copestones are added across the top of the finished wall to provide a “binding” effect to the structure. 24 If not laid flat, copestones are sometimes traditionally laid upright and back-to-back, creating a jagged effect that is said to potentially deter goats, sheep, and other livestock from attempting to jump over them. 25

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22 Tufnell, 1-9.
23 Tufnell, 4, 8; Gardner, 45-6.
24 Tufnell, 9.
25 Thorson, 72; Allport, 129.
Today, the majority of walls visible along public rights-of-way on Aquidneck Island appear to be double walls (both boundary and enclosure). However, other wall types most likely exist throughout, especially in extant open fields. Some walls may no longer be readily visible, as they have been covered with vegetation, but may be located using other means (for example, LIDAR aerial views; https://bit.ly/2DJe8ee).

It is also important to consider that many of the double walls readily found on Aquidneck Island may diverge from what might now be considered “standard” building practice. First, walls may or may not have been built by farmers or laborers with a high level of expertise or experience; walling frames and string lines may have been omitted. Kevin Gardner, for example, does not consider New England’s stone walls to be particularly complicated or precious; rather, he considers them to be “remarkably runtish” when compared to the complex oeuvre of stone wall building worldwide. In his view, what remains are the most well-built examples: “Since good walls last longer than bad ones, what we see around us today, at a 175-year remove from the end of the period of their most prolific construction, is more likely than not to be among the best work ever laid down.”

Second, geology plays an intrinsic role in the types of walls that can be built. The availability of (or lack of) certain types and shapes of stone affects structural stability, wall shape, and coursing. It is clear that walls in East Greenwich and South Kingstown, for example, differ in appearance because of the locally different stone available there (Figure 14). Lastly, some details that may be prevalent in British building may or may not have been incorporated

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26 Gardner, xx-xxi.
27 Gardner, 6.
in early American design. For example, the Dry Stone Walling Association of Britain recommends potentially topping walls with upright copestones, but this appears to be relatively rare on Aquidneck Island.28

![Figure 14. Large, round, boulder-like stones characterize walls in South Kingstown, Rhode Island. Rhode](image)

2.3 Overview of Barn Construction

Barns in early America also reflect the regional variations associated with the countries from which settlers arrived; on Aquidneck Island, this means close ties to British structural techniques and material considerations.29 Perhaps the most important aspect of early barns is their individuality, as representatives of a particularly vernacular architecture. Essentially, the earlier the date of construction, and thereby prior to wide distribution of architectural plans, the more likely that individualistic markers of building will be present in higher quantity.30

The form of the so-called English barn dominated 18th century barn construction in New England (Figure 15). This type of barn has its origins in Britain, at a time when improved agricultural practice resulted in the need for better storage. However, New World barns may have differed from their British counterparts, in that British farms usually had separate buildings for cows, horses, and crop storage.31 A typical 18th-century New England barn interior was multifunctional, with areas for livestock, grain storage, and wagon storage.32 According to barn historians Eric Arthur and Dudley Witney, American barns, with their threshing space for separating grain, “...flourished during the period when cultivation dominated the agricultural economy.”33 From a construction standpoint, these early barns were derived from timber

28 Tufnell, 9.
31 Cleek and Noble, 12.
32 Klamkin, 53.
Elizabethan and medieval structures; unless a farmer was particularly skilled, many barns would have been built by master builders, timber framers, and other hired labor. They were constructed with timber posts and beams, bound together by tie beams, girts, and braces (Figure 16). Framing components were hand-hewn using a broad ax, and their surfaces were evened using adzes. Each piece was then marked and cut for mortise and tenon joints. In early practice, this meant using the medieval “scribe rule,” where individual pieces were cut to fit one another; the later “square rule,” tied to “industrial production” made framing components “interchangeable.” (Figures 17 and 18) Entire frame components, called bents, were lifted into place by teams of farmers or laborers when completed (Figure 20).

Some scholars point to the ways in which American barns’ structural components may have been modified from English examples; according to authors Arthur and Witney, for example, the availability of tall trees in the New World allowed for "uninterrupted" timber spans for barn framing. Timber shortages in Britain caused most barns to be built of brick or stone by the end of the 18th century, and timber structural members of New World magnitude would have been near impossible to procure. Eighteenth-century barns could also have regional construction variations within New England; for example, barn historian Thomas Visser suggests that eastern New England barns (before 1850) generally have vertical timber roofing planks over horizontal purlins (as opposed to western New England barns, which were the opposite).

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34 Visser, 5.
35 Cleek and Noble, 26-27.
36 Visser, 15-21.
37 Klamkin, 29-30.
38 Arthur and Witney, 63.
39 Visser, 12.
The nineteenth century was marked by an increased specialization of farm buildings.\textsuperscript{40} New technologies also impacted construction; for example, the introduction of mechanized saws for processing timber "increased productivity," decreased the cost of lumber, and regularized the size and shape of framing components.\textsuperscript{41} By mid-century, many barn builders were utilizing published plans, and were experimenting with an increasing number of designs.\textsuperscript{42} New, preferred methods of construction were introduced, including board-and-batten or clapboard siding for exterior walls. Other distinctive 19\textsuperscript{th} century features include cupolas, gambrel roofs (for greater storage), windows, and sliding barn doors resting on tracks.\textsuperscript{43} Barns of this era also have a much greater likelihood of being painted.\textsuperscript{44} By the 20\textsuperscript{th} century, many barns became significantly outmoded as they were supplanted by increased mechanization in farming practice; a new focus on efficiency, spurred by the Modern design movement, meant the “...increasing use of manufactured building components and functional standardized designs developed by agricultural engineers outside the region."\textsuperscript{45}

\textbf{Figure 17.} (top left) Examples of scribe rule marks found on barn framing timbers.

\textbf{Figure 18.} (top right) Square rule implementation in an early 19\textsuperscript{th}-century barn.

\textbf{Figure 20.} (left) Illustration of a bent being raised for a large barn.

\textsuperscript{40} Klamkin, 53, 56-57

\textsuperscript{41} Visser, 23, 26-30.


\textsuperscript{43} Klamkin, 57; Visser, 31, 34-5, 37, 45-7.

\textsuperscript{44} Klamkin, 32; Arthur and Whitney, 19.

\textsuperscript{45} Visser, 55-58.


3.0 Seventeenth and Eighteenth Centuries

3.1 Aquidneck Island’s Indigenous People and Early Land Use

It is not clear when the first humans to inhabit the area now known as Rhode Island arrived. However, archeological evidence becomes a bit clearer between 8,000 to 3,000 years ago, when, according to Native American Archaeology in Rhode Island, “…there was [most likely] a substantial increase in population…and that for the first time people settled in villages which had some permanence and stability.” However, it was not until the 1500s and 1600s that the first written records of native populations first appeared.  

Around the time of contact with Europeans in the 17th century, Aquidneck Island was inhabited by the Narragansett people; the Wampanoag tribe also inhabited areas along Rhode Island’s nearby eastern shore. Archaeological evidence suggests that these settlements were seasonal; according to Native American Archaeology in Rhode Island, “Both tribes were part of the larger Algonquin language group spread over much of northeastern North America. Their lives were characterized…by the use of stone tools and weapons, by the hunting and gathering of wild foods and the cycle of planting and harvesting, by seasonal mobility with summer locations near the coast and inland winter spots.” Through years of knowledge-gathering, native populations honed their ability to effectively recognize the seasonal variations that were inherently part of the New England landscape. This was reflected in tribal tendencies to shift food sources during different times of the year, and move their settlements where food was plentiful. Tribal location, whether on the shore or inland, further specified food consumption habits.  

In addition, historians believe that the coastal tribes of the northeast were the first to engage in agriculture while still maintaining traditional means of obtaining food. William Cronan suggests in Changes in the Land that coastal tribes’ combination of agriculture with traditional hunting and gathering increased their population and its stability. These tribes generally grew corn and several complementary vegetables within the same field. For example, climbing plants, such as beans, could easily thrive by wrapping around cornstalks, and squash could act as excellent ground cover. The overall effect of this practice inhibited weeds, promoted moisture in the soil, and contributed to "high yields per acre." Harvesting of crops was mostly done by women, and the land was often cleared over the course of several years, with tree bark burned at ground level and trees left to fall in the following season.  

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46 Rhode Island Historical Preservation & Heritage Commission, Native American Archaeology in Rhode Island (Providence, RI: RIHPHC, 2002), 5-8; 21-22.  
48 Rhode Island Historical Preservation & Heritage Commission, Native American Archaeology in Rhode Island (Providence, RI: RIHPHC, 2002), 22.  
50 Cronan, 41-3.  
51 Cronan, 43-5; 48.
often returned to “fixed village and planting sites” yearly, shifting the location of fields intermittently.  

Interestingly, although archaeologists agree that native populations began to cultivate the land through agriculture approximately 1000 years ago, local physical evidence in Rhode Island does not seem to fully support this claim. According to the RIHPHC’s Native American Archaeology in Rhode Island, there may be a number of reasons for this discrepancy; there may have been sufficient foodstuffs available in the natural environment, or perhaps the Narragansetts began to employ fixed agriculture much later than their neighbors.

The manner in which native tribes worked with their land, according to historian William Cronan, “…posed a paradox almost from the start for Europeans accustomed to other ways of working with their environment. Many European visitors were struck by what seemed to them the poverty of Indians who lived in the midst of a landscape endowed so astonishingly with abundance.” Their fields, which were comprised of multiple crops, “…was not an agriculture that looked very orderly to a European eye accustomed to monocultural fields.” European settlers also struggled to understand tribal work practices. While women engaged in “legitimate” agricultural activities, men, the settlers believed, “…idled away their time in hunting, fishing, and wantonly burning the woods.”

These conflicts precipitated the settlers’ justification for claiming land for farming. According to William Cronan, “European perceptions of what constituted a proper use of the environment thus reinforced what became a European ideology of conquest.” However, in actuality, European use of the land was still “cyclical…only simpler and more concentrated.” Europeans also differed in their interpretation of land ownership. Local Indian tribes saw the land they used as relatively transient; what they “owned” comprised actual use of the land and its available harvest for a short period of time. Other non-village members could, for example, “…[gather] nonagricultural food” on farmed land. European settlers, in contrast (as will be shown), claimed full ownership of their farmed lands in perpetuity.

The degree to which Indian labor was involved in colonial settlement-period farm construction projects has been a subject of debate. What is clear is that following conflicts during King Philip’s War, many Indians taken as prisoners “…were forced into long terms of forced labor” in Rhode Island. Many also became paid laborers, cultivating their own land while simultaneously working on hired projects. Enslaved Africans, too, were most certainly involved in early agricultural projects. According to the RIHPHC’s Historic and Architectural Resources of Portsmouth, Rhode Island, “Early stone walls still clearly mark the yards and the gardens and orchards of old farms which were brought to a ‘high state of cultivation’ by Indians.

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52 Cronan, 48, 62.  
54 Cronan, 33.  
55 Cronan, 42-4.  
56 Cronan, 52.  
57 Cronan, 53.  
58 Cronan, 62.  
59 Rhode Island Historical Preservation & Heritage Commission, Native American Archaeology in Rhode Island (Providence, RI: RIHPHC, 2002), 29, 34.
and Blacks working in the fields in the early eighteenth century.""60 This assertion is echoed by historian Christopher Lenney in *Sightseeking: Clues to the Landscape History of New England*: "The gneiss walls that so handsomely bound the old farms of Middletown, RI were built by black and Indian labor, a mute reminder of the only corner of New England where plantation slavery took hold."61 A stone wall-building tradition undoubtedly was independently maintained by the Narragansett peoples into the 19th and 20th centuries, and family-operated businesses are still thriving today.62

With this in mind, consideration of the manner in which land was settled and divided for agriculture in the 17th and 18th centuries provides insight into the customs underpinning stone wall building on the Island.

3.2 Early Settlement of Portsmouth, Newport, and Middletown

The earliest European settlers to Aquidneck Island found large areas of land that were already cleared, as many of Narragansett Bay’s islands had been used for agriculture by the Indian population over time.63 According to historian William Cronan, “When Verrazano found twenty-five to thirty leagues of treeless land in Narragansett Bay [in 1524]...[he was] observing the effects of agricultural Indians returning to fixed village sites and so consuming their forest energy supply.”64 Because of this pre-settlement clearing, as well as the presence of fertile soil and a relatively temperate maritime climate, Aquidneck Island proved to be an ideal location for farming.65 The settlers’ previous involvement in farming in Massachusetts was an asset, in the sense that they had already adapted their agricultural practices to a new climate and landscape in New England. It is also believed that Narragansett Indians residing on the Island at the time “...were hired to aid with the backbreaking toil, at least during the first year.” 66 Like their neighboring counterparts, Aquidneck’s new settlers began the labor-intensive process of “...re-creating the annual agricultural cycles which had sustained them in England.”67

The first colonial settlement on Aquidneck Island was Portsmouth, then called Pocasset by the native population; the island had been acquired by John Clarke and William Coddington via a land grant from the Narragansett sachems Canonicus and Miantonomi.68 Located on the northmost point near a small harbor with access to Mount Hope Bay, Portsmouth held its first

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61 Lenney, 149.
62 *Stories in Stone*, directed by Mark Levitt and Lilach Dekel, DVD (Levittation Production, 2006).
64 Cronan, 49.
67 Cronan, 36.
Town Meeting in 1638. Like other New England settlements, Portsmouth followed in the footsteps of its neighbors in its evaluation and division of land. The town’s proprietors, a select group of freemen, “held all land in common,” assessed the available land (i.e. by type: forest, meadow, etc.), and distributed to farmers accordingly. Local historian Walter Nebiker described the process in this way:

“Portsmouth followed the customary New England settlement pattern. The first, relatively small (three-acre) house lots were laid-out at the spring near Founder’s Brook…and the Town Pond, with larger allotments of plowing land away from the town center…Land allotments were gradually enlarged and distributed as needed, the last one being in 1713, when the entire town was resurveyed. Most of the people — of an almost entirely agricultural population — lived in the area defined by present East and West Main roads, Sprague Street and Mount Hope Bay; while a small number of farmers were developing farms in the outlying areas. A fence was built across a narrow neck of land, which served as a common pasture for cattle in the area which became known as Common Fence Point.”

The narrow allotments afforded to new settlers were drawn by local historian Edward West in a projected prototype map in 1932 (see Section 3.5). Correspondingly, some of the earliest extant records related to the settlement of Portsmouth also contain mention of fencing and its relation to land division. In the Rhode Island Historical Society’s 1901 transcription of Portsmouth’s Town Records, there are two 1648 references to appropriation of land and fencing:

[42] “m’ Boston John Roome and william Hall are apoynted to viw and apoynt ffrancis Brayten twelve acrs of land in th swompe at the hed of m’ Bostons farme so that it may not hinder the town Cattell from water”

[43] “It is granted to John briggs to Runn his fence straight at the hed of his land next the towne swompe”

By the 1730s, Portsmouth had already begun to outgrow its original settlement, and an area off of present-day East Main Road was surveyed. Although original plans never fully manifested, development centering around “Newtown,” as it was called, continued into the 19th century. Edward West’s map again shows the development of plats in this area (Section 3.5).

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70 Cronan, 72-3; John Fraser Hart, *The Rural Landscape* (Chicago: Johns Hopkins University Press, 1998), 141-2; Stensrud, 20.
The second settlement on Aquidneck Island was Newport, which consisted of a small group that defected from Portsmouth in 1639. The town’s earliest records reveal the immediate importance of fencing. In an excerpt from the Records of the Island of Rhode Island (page 18), for example, William Coddington writes:

“It is Ordered that ther shall be sufficient fences eyther hedge or post & raile made about the Corne grounds that shall be planted or sowne by the i of May next...”

Court records also indicate that disputes often arose due to destroyed crops and loose livestock, in this excerpt from Rhode Island Colonial Records (page 3) in which William Coddington seeks a settlement with Jeremy Gould:

“And whereas the sd defent is to maintayne & make good sufficient fences ab[out] the demised premises, And to beare Equall charg thereat for the preservacon & Safety of the Corne & seed sowen...”

Like Portsmouth, Newport also began a process of surveying and distributing land. One example of the manner in which land was divided dates to 1640, when Portsmouth and Newport’s governments were briefly united. According to 19th century historian Samuel Greene Arnold:

“Five men from that town [Portsmouth], and three from Newport, were selected to lay out the lands. In the original lay-out of Pocasset, six acres of land were appointed to each inhabitant, which was soon after reduced one half. At Newport, four acres were assigned to each house lot, and six acres were granted to Mr. Coddington for an orchard...”

However, despite this initial unity in the appropriation of land, Newport differed due to its situation near a more massive harbor. The RIHPC’s Historic Landscapes of Rhode Island describes Providence, Newport, and Warwick being “…arranged in a linear fashion, each with its principal street parallel to the waterfront. The narrow, deep, parallel house lots were perpendicular to the main street. Neither common, house of worship, nor cemetery was located in the compact part of the settlement. Like the Puritan colonies, however, common ground away from the compact settlement was set off for agricultural pursuits.” A map drawn by British military cartographer Charles Blaskowitz shows the extent of development by 1777. (Section 3.5).

By the mid-1600s, Newport was already beginning to realize its early economic potential as a maritime port. According to Rockwell Stensrud, “The great farming estates of the Brentons, Coddingtons, and Coggeshalls were doing exactly what the founders anticipated: yielding substantial surpluses that could be traded along the coastal routes, and more frequently, in the

74 Stensrud, 20-22.
76 Chapin, 159.
78 Historic Landscapes of Rhode Island, 8.
West Indies.” A variety of livestock imported from Britain, including “…horses, goats, sheep, pigs, and cattle…” which quickly grew in number; some were also exported. Even grass from England was imported to feed the animals. 79

Middletown was the last town to incorporate, separating from Newport in 1741 due to political disagreement. Despite this late date, however, Middletown’s land had already begun significant cultivation. The first farm in the area was developed by Nicholas Easton in the 1640s near Sachuest; increased agricultural output throughout the area began to be supported by a booming maritime economy in Newport by the 18th century. 80

A great deal of land had been previously allotted by “Proprietors” prior to 1741. According to 19th century historian Samuel Greene Arnold, early records dating between 1702-1756 indicate the division of “common lands”:

“These commons were in several parcels — the town common of one hundred and one acres on the main road, fifty-eight on the west side, and forty-three on the east, including a six-acre school lot — Lenthal’s plain common of two hundred twenty-eight and a half acres, Clarke’s common, being part of the bequest of Dr. John Clarke for charitable uses — Sachuest neck and beach and the adding rocky lands — land on the southwest neck, besides Goat and Coaster’s Harbor islands. Most of these were divided by a committee of fourteen men appointed by the Proprietors January 12th, 1701-2…” 81

Early records also noted by Greene interestingly make reference to available stone, which could have been used for any number of building projects, including stone walls:

“June 17th [1701-2], the Proprietors ‘agreed that the common adding William Barker and others there should be for the rocky land allowed to the eastward if the second ledge of rocks one half for the rocks, and the neighborhood should have liberty to dig and cart away of the stones of that common for their use if they have any occasion for them, and what rocks to the westward of the ledge the surveyors or committee to give allowance at their discretion.’ 82

3.3 Stone Walls in the 17th and 18th Centuries

Today, Aquidneck’s remaining stone walls can be viewed in a variety of ways: for their original craftsmanship (or lack thereof), initial function, materials, and representation of change over time. Most importantly, they can be seen as a reflection of the culture which precipitated their creation. According to historian Christopher J. Lenney, early settlers’ methods of land division reveal “An individualistic society based on fee-simple tenure and founded as scientific surveying came of age devoted much energy to boundary-making.” 83 The settlers’ desire to

79 Stensrud, 58.
81 Samuel Greene Arnold, 20-21.
82 Samuel Greene Arnold, 21.
divide their land according to established private property rights and agricultural practices was eventually manifested in fencing and walls, many of which are still visible.

In consideration of the history of 17th and 18th century stone walls on Aquidneck Island, it is first important to note two major differences in the perception of property between the native Narragansetts and European settlers. First was the idea of permanent settlement, which thereby affected land use and definitions of “property.” In the minds of European settlers, those who cultivated the land, created enclosures, and generally “improved” an area had a certain “civil right of ownership.” Their “subduing” of the land, which had its origins in Biblical teaching, would have included fencing and stone walls as evidence “…of man’s intention to improve his own lot.” Historian William Cronan goes on further, stating that differences in perceptions of sovereignty (“possession by communities”) and ownership (“possession by individuals”) affected land agreements and were at the root of disputes: “Indians, at least in the beginning, thought they were selling one thing [land use] and the English thought they were buying another [land ownership].”

A second significant difference related to agricultural practice was the husbandry of domesticated animals. These animals were not only a source of food for new settlers, but also expedited the process of working the land. The systematic herding of livestock was perhaps the single most important factor in altering the landscape, which ultimately necessitated the building of fences and the planting of fields for grazing. Ideas about enclosure and animal herding were derived from Britain, with modifications for the New World. Although early settlements may have practiced a more communal style of open-field farming, this quickly shifted to the enclosure of individual plots. According to Christopher Lenney:

“Amid the English cultural baggage brought over by the first settlers were two distinct traditions of agriculture: the ancient, communalistic, open-field farming of the Midlands, and a more modern one of enclosed fields from East Anglia, the very region whence perhaps one-third of the original New England Emigration was drawn. Enclosed field agriculture was both individualistic and entrepreneurial in spirit, and better suited to the expanding New England frontier.”

In Newport, Middletown, and Portsmouth, the network of stone walls that remain provides tangible evidence of the impact of imposed agricultural traditions. Common land was set aside for grazing (for example, in Portsmouth’s Common Fence Point), but settlers quickly began the practice of enclosing fields as animal populations increased. Conflict often erupted in New England’s early settlement period because freely-grazing animals destroyed crops. A lack of available labor in particular left herds of animals without the supervision they would have had in England. Because of this, crops, rather than animals, were

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84 Cronan, 53.
85 Allport, 25-6.
86 Cronan, 69-70.
87 Cronan, 51-2; 128-29.
88 Lenney, 104-105.
89 Cronan, 134-5.
required to be enclosed. In an effort to rally support with neighboring tribes, the Narragansett sachem Miantonomi reportedly stated in 1642 that “Their [the settlers’] cows and horses eat the grass and their hogs spoil our clam banks and we shall all be starved.” Settlers also fought amongst one another when loose animals wreaked havoc in planted fields.

To alleviate some of these disputes, “fence viewers” were assigned by individual towns in order to examine whether or not walls and timber fences were well-constructed (thereby determining liability in the case of an animal breaking through). The legal implications of fencing also ultimately played a role in changing the landscape; historian William Cronon states: “Through the agency of the fence viewers and the formal litigation of the courts, towns took an increasing responsibility not only for enforcing the abstract boundaries between adjacent tracts of real estate but for guaranteeing that those boundaries were marked by the physical presence of fences.”

Fence viewers sought to enforce proper fencing heights, often approximately four to five feet; town pounds were also erected, up to eight feet, to contain stray livestock (Figure 21). Knowing the extent of development over the course of one hundred years, it comes as no surprise that by the time of Middletown’s founding, its first Town Meeting (August 30, 1741) included discussion of assigning “three fence viewers” and “one pound keeper.” Meeting participants also decided on a committee to construct a new pound.

The manner in which land was divided revealed itself in “orderly” town plans, relative to many in Europe. In order to establish property boundaries a so-called “metes-and-bounds”

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90 Allport, 34-5.
92 Cronan, 134-5.
93 Thorson, Stone by Stone, 97-99.
94 Samuel Greene Arnold, 19.
95 Lenney, 90.
system was often employed by early surveyors; this involved utilizing fixed points, such as stone walls or natural features, to more accurately measure the boundaries of a specific property.\textsuperscript{96} Many tools could be used in the process of surveying, but in the case of wall measurement, the “Gunter’s chain” was particularly useful. This device, which has its origins in 17\textsuperscript{th} century England, set a standard that would be used well into the 19\textsuperscript{th} century. Each chain was 66 feet long, thereby making ten square chains equal to one acre. Chain measurements are common in primary sources, and understanding their significance may aid in further investigation of historic stone walls.\textsuperscript{97}

It is important to mention that although the shared space of animals and crops necessitated the construction of fencing on the mainland, large herds were also sent to neighboring islands, a strategy that allowed for open roaming without fear of interference with local crops. According to historian William Cronan, “Favorite swine-raising locations were coastal peninsulas and offshore islands, where the animals were free to do their worst without interfering with English crops;” indeed, Narragansett Bay was populated with several islands of livestock during the 1600s.\textsuperscript{98} Hog Island, under the jurisdiction of Portsmouth, was one such place where sheep grazed freely. A 1638 document, found at the Portsmouth Historical Society (111.15), specifically refers to “Hogg Island,” and gives a “Mr. Brenton” permission to mow the “...remainder of the hay” found on the site for his purposes (Figure 22).

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure22.png}
\caption{A 1638 document referencing hay on Hog Island.}
\end{figure}

\textsuperscript{96} Lenney, 88-93.
\textsuperscript{97} Allport, 48-49.
\textsuperscript{98} Cronan, 136.
As Aquidneck Island became increasingly developed over the course of a century, changes in fencing regulation occurred that would have been mirrored in many other settlements throughout New England. Historian Christopher Lenney succinctly sums up this evolution in fencing thus: “In colonial times field crops were fenced in while livestock roamed at large, a pragmatic reversal of English custom in a raw land. Later, in the face of increased settlement, tradition slowly reasserted itself, and livestock were penned, with swine usually the last animals suffered to range free by annual vote of the town.”

This precipitated a wall-building boom which lasted through the early- to mid-19th century, which was bolstered by the idea that enclosing animals on private land was more efficient and beneficial to individual farmers, and that small, enclosed fields for crops were also more productive. The dominance of private landholding had a lasting impact on the division of land; in terms property definition, it changed the perception of land from its use (i.e. who has rights to use land for a particular purpose; for example, a meadow for grazing) to private ownership (who “owns” land, regardless of its use). This change is reflected in period maps, which show a landscape dotted with rectilinear plots that would have once been minimally enclosed (see Section 3.5).

Simultaneous to these changes in fencing regulation and utility, the technicalities of fencing and wall building evolved during the 17th and 18th centuries, as it did in many other towns throughout New England. A hierarchy of fencing, which increased in complexity over time, developed over the course of a century or more. The demands of early settlement necessitated the building of enclosures from the most readily available materials; a lack of available stone (from limited clearing and frost heaves) and a lack of time for building made timber, stumps, and brush the preferred building materials. Robert Thorson defines this period as the “pioneering stage,” which occurred in coastal areas approximately during the late 17th century. According to Thorson, if stones were utilized, they were often simply “dumped” in piles along the edge of a field for later use.

If trees were available, simple stockade, wicket, or log fences were built; cleared brush could even be used to make temporary fences. After a number of years, stump fences (made of the decayed stumps of felled trees) were often built; zig-zag fences, characterized by their split rails laid without posts, were also a marker of more advanced settlement. According to historian Susan Allport, “…the worm [or zig-zag] fence illustrates best the key factor driving the choice of fencing in new settlements was the relationship between labor and lumber. The worm fence required a maximum of lumber – which many colonists had – and a minimum of time and labor – which they did not.”

Finally, after timber declined (or time for building increased), walls made of stone were built. According to Allport, certain settlements may have begun building walls earlier because of

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100 Lenney, 145.  
101 Allport, 89-91.  
102 Cronan, 74.  
103 Thorson, *Exploring Stone Walls*, 95-99;  
106 Allport, 35-7
the ready availability of local stone (eastern Rhode Island included). The availability of timber certainly declined after the Revolutionary War, as British forces decimated Aquidneck Island’s supply during their occupation of the island. This also marked a period of “established farms,” roughly between circa 1770-1835. During this period, as the land was more developed, more time could be dedicated to building. Stacked and laid boundary walls and animal enclosures became more prevalent. Stone walls may have also been given additional height with timber stakes and riders running above the wall’s capstones.

One of the more challenging aspects of identifying Aquidneck’s earliest walls involves the fact that so many walls were rebuilt over time. A lack of early extant mapping, “agricultural abandonment,” and general neglect also contribute to this problem. It is probable that many of the stones used to build more complicated 19th century walls originated in 17th or 18th century walls.

One way to consider the age of a particular wall, according to stone wall expert Robert Thorson, is to consider the appearance of its stones. The degree of lichen growth, discoloration (specific to different types of stones), or granular disintegration (particular to more porous stones) can help to roughly determine how long a wall has been left untouched. A second way is to investigate the level of structural degradation. Although original building quality can impact the structural integrity of a wall, thereby making it fall apart faster, signs such as foundational “sagging,” damage from tree growth, and a high degree of fallen stones are all potential markers of an untouched older wall.

3.4 Farm Buildings in the 17th and 18th Centuries

It is important to note that there are no extant 17th century farming landscapes in Rhode Island, and what remains of the 18th century is highly altered. According to Historic Landscapes of Rhode Island, “At the very most, a surviving eighteenth-century farm may retain its farmhouse, fields divided by stone wall, and – more rarely – a barn...Both rarity and changes to the farms make characterizing the appearance of an eighteenth-century farm difficult.” This is certainly the case on Aquidneck Island, where significant development after the post-Industrial era destroyed the markers of early agricultural landscapes.

According to Historic Landscapes of Rhode Island, “The state’s first farms were of small-scale subsistence-level or marginally profitable commercial farms typical across most of southern New England in the seventeenth and early eighteenth centuries. They ranged up to approximately 150 acres in size, and on average could support one or two horses and hogs, twenty head of cattle, and twenty to twenty-five sheep. Their field crops included corn, rye,

107 Allport, 34, 38, 89-91; Thorson, Stone by Stone, 99.
108 Allport 89; Stensrud, 222-23.
109 Thorson, Exploring Stone Walls, 97.
110 Allport, 41-2.
111 Lenney, 98.
112 Thorson, Exploring Stone Walls, 91-94.
113 Thorson, Exploring Stone Walls, 94-5.
114 Historic Landscapes of Rhode Island, 17.
potatoes, and hay.” Due to differences in climate as compared to England, many Aquidneck farmers may have built simple timber structures or barns to cover their livestock in the winter; larger farms would have had more complex barns. The arrangement of the farm was often determined by geography, sited on a high point with buildings scattered according to drainage and wind patterns. Barns were usually located away from the farmhouse; outbuildings, such as sheds, dairies, chicken coops, and smokehouses were located nearer to the house. The most common type of farm structure would have been a so-called “English barn” defined by New England barn expert Thomas Visser as “…a standard design inherited from England with modifications made in response to the North American climate...[they] typically measure about thirty feet by forty feet...[and] feature a simple gable roof with a pair of large hinged doors on the eaves-side wall.” These early barns were often roofed with timber shingles and were ventilated by small spaces between external sheathing boards. On the interior, they would have been typically separated into spaces for particular uses, including a threshing floor for the processing of grain (at center), stabling for livestock (on one side), and a haymow for hay stacking and storage (on the alternate side). The second floor would have functioned as additional storage for hay. In England, these barns are usually made of stone and may have regional variations.

Among these small-to-average sized farms of the 18th century, a new type of elite farm emerged, fueled by the ever-increasing wealth generated by Newport’s bustling trade. These farms, modelled after the estates of British gentry, were comprised of a mansion-house often surrounded by elaborate gardens, specimen plantings from abroad, orchards, and other trappings of conspicuous affluence. In Newport, this took shape in the form of William Brenton’s estate on Newport Neck. Located near present-day Fort Adams, Brenton’s brick house was surrounded by orchards and gardens. Brenton also managed more than five farms in this area with approximately 1100 grazing sheep. His descendants continued farming on approximately 2000 acres; a tenant farmer’s residence (Jahleel Brenton II House, before 1720) and stone barn from this period are possibly the oldest extant farm-related structures in the city (Figure 23). Other substantial farming operations were conducted by the Coddington and

118 Visser, 61; Geake, 15-20.
119 Visser, 61-66.
120 Cleek and Noble, 77.
123 Stensrud, 40.
Coggeshall families, who were the earliest to settle “...and [had] the wherewithal to hire tenant labor...”  

Coddington was known to have a large barn for both animals and corn storage.  

Newport merchant Charles Bowler built an estate on Wapping Road in Portsmouth (circa 1750) which included formal gardens, fruit trees, and a hot house.  

Beginning in 1743, Abraham Redwood developed land in western Portsmouth, and eventually cultivated exotic plants from his Antigua plantation. Remnants of his estate, including a now-demolished farmhouse, were captured in the 19th century by Newport photographer Clarence Stanhope (Figure 26). The only extant house from this period is situated in Middletown on what is now West Main Road, and was built by William Redwood circa 1745 (Figure 25). Whitehall (Middletown), occupied and enlarged by English philosopher Bishop George Berkeley between 1729-1731, is an extant example of a more formal farmhouse that is surrounded by a network of dry stone walls (Figure 24).

Figures 23-26. (clockwise from top left) Eighteenth-century estate farms included structures such as the Jahleel Brenton House (Newport), Whitehall (Middletown), the William Redwood House, and the Abraham Redwood House (Portsmouth).

127 Bridenbaugh, 38.  
128 Historic Landscapes of Rhode Island, 20.  
Windmills were also a key feature of the Aquidneck Island landscape during the 17th and 18th centuries (Figure 27). According to local historian James Garman, as early as 1665, a windmill was built on the site of what would become Butts Hill Fort. Early illustrations of the area reveal a landscape dotted with windmills, but none from this early period survive (the exception being two early 19th century mills, Boyd’s Mill and Sherman Mill, currently located in Portsmouth and Middletown, respectively; the stone base of a windmill is also located within Brenton Point State Park in Newport). Windmills would have played an important part in Aquidneck’s farming economy, as farmers would bring grain to a mill to be processed for sale.

![Figure 27. Detail from a copy of J. P. Newell’s “NEWPORT, RI IN 1730,” a lithograph published in 1884 from an original 18th-century painting. The Point neighborhood is in the foreground; note three windmills in the background on what was then farmland.](image)

It is difficult to determine exact dates for early Aquidneck Island barns or outbuildings, as most have no corresponding primary source records. In addition, many barns that appear to have been built in the 19th century may have earlier structural elements. As farm buildings were often modified, it is important to examine interior spaces for evidence of 18th century construction. An extant barn at Simmons Farm in Middletown (West Main Road, Figure 28) appears to be an example of an English-style barn, although its exact date of construction is unknown; the former Taggart family farm, also located in Middletown (corner of Vaucluse and Howland Avenues) is also thought to have potential 18th century elements. In Portsmouth, a house at the corner of West Main Road and Freebody Street is said to have elements of an 18th century barn. Additionally, the RIHPHC’s 1979 survey of Portsmouth included a barn at 2951

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133 Nebiker, Historic and Architectural Resources of Portsmouth, 8.
134 Geake, 24.
135 Cleek and Noble, 16.
East Main Road which is dated to the late 18th century, and which still survives today (see Figure 15).\(^ {138}\)

Despite the apparent lack of evidence for early barns on Aquidneck Island, the presence of certain early-period building elements, when investigated, could provide insight into a barn’s dates of construction. In the *Field Guide to New England Barns and Farm Buildings*, Thomas Visser suggests, for example, that early barns would have most likely been “…sheathed with rough-sawn wide boards installed vertically…As the fresh lumber was typically still wet, or ‘green,’ when nailed to the outside of the frame, the boards would shrink as they dried, opening large gaps between them.” Therefore, the presence of early vertical boards with wide gaps on a barn interior, which were often covered by shingles or boards in the 19th century, might indicate an earlier construction date.\(^ {139}\) Additionally, large, continuous timber framing pieces are a sign of 17th or 18th century construction, as trees of this size were no longer available later in the 19th century.\(^ {140}\) Other markers may include hand-wrought nails, wooden pins used for joinery, four pairs of rafters in the roof structure (with accompanying three or more purlins), timber markings from hand-hewing tools, and low foundations with no basements (Figure 29). Early barn builders also employed scribe rule techniques when constructing mortise and tenon joints; with this method, marks are left behind that indicate how to assemble particular frame pieces. The presence of such markings would indicate a construction date before the mid-19th century.\(^ {141}\)

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\(^ {138}\) Walter Nebiker, *Historic and Architectural Resources of Portsmouth, Rhode Island*, no page number.


\(^ {140}\) Klamkin, 30.

\(^ {141}\) Visser, 3-21; Klamkin, 31.
This map is most likely one of the earliest extant examples of an Aquidneck Island farm illustrated with a high degree of detail and clarity. The farm pictured was originally settled by a Quaker named Daniel Gould (1625-1716) when the area was still part of Newport; it continued to operate as a farm after Gould’s death. By 1748, it is clear that the land has been highly developed and reveals the manner in which an 18th century farm may have been arranged. The Post Road, now West Main Road, is noted at left; a farmhouse with neighboring "corn cribb [sic]" and orchard are found at the top left. Natural features, such as the "Widow Gould's Swamp" and "Thomas Gould's Woods," are also noted throughout, and were most likely important points of reference for the surveyor examining the property.
This survey sketch of the Brenton Farm, located off present-day Harrison Avenue near Hammersmith Farm, shows the ways in which land was systematically divided by surveyors in the 18th century. Calculations based on points of reference on the map are seen at left; a small farmhouse with a possible outbuilding and garden or orchard is noted at the bottom left. Originally owned by Newport founder William Brenton, the farm would be inherited by Jahleel Brenton and then subdivided by his heirs (contemporaneous to this survey; see Newport City Hall Land Evidence, Volume 4, Page 6).
Edward H. West, a local historian, compiled this series of maps in 1932 based on available 17th and 18th century sources, most likely Portsmouth’s early Town Records and town land evidence. West employed a color-coded system to track land divisions between 1638-1781, and although the accuracy of plots should be verified, they provide a level of detail of Portsmouth’s early settlement patterns which is not available for the remainder of Aquidneck Island.

Through the maps, general trends in early land distribution become evident. For example, the narrow lots of the early Town Pond settlement are comparable to many other contemporaneous New England towns (seen here in Section B). Although they appear to be a result of attempts to equalize access to the waterfront, some historians have suggested that narrow plots "...resulted in the desire for each family to possess various types of land, and of the town proprietors to equalize the division of lands by compensating handicaps in quality or location with quantity, and vice versa."142

“A topographical chart of the bay of Narraganset [sic] in the province of New England...”
Charles Blaskowitz
Engraved and printed for William Faden, London
1777

Cartographer Charles Blaskowitz drew this detailed map for military purposes during the British occupation of Newport during the American Revolution. His notation of both natural features and local landmarks are useful in understanding how Aquidneck Island developed, both as a commercial port (Newport) and an agricultural community. The detail view at left, for example, shows what appear to be rectilinear divisions of farm plots (noted by dotted lines); a windmill and grist mill in Portsmouth, as well as the country estates of Abraham Redwood, Metcalf Bowler, and William Redwood are also visible.
4.0 Nineteenth Century

4.1 Overview of Farming in the 19th Century

Changes wrought by the Industrial Revolution in the 19th century had a lasting impact on Aquidneck Island’s landscape. These changes followed national trends, whereby farming became increasingly specialized, the availability of farm equipment increased the rate and efficiency of production, and published research and scientific study of agricultural practice spread ideas and methods among a wider audience. These changes inevitably impacted farm layouts, stone walls, and farm buildings.

In the early 19th century, most Rhode Island residents were farmers. According to RIHPCS’s Historic Landscapes of Rhode Island, “For the first half of the nineteenth century most farms produced a variety of agricultural products. Those that produced one or two large commercial crops often also cultivated a mixture of field crops for family consumption.”143 In Middletown and Portsmouth in particular, farming continued as a primary economic driver, as neither town had a water source conducive to large-scale industry.144 Sheep farming particularly diminished in Portsmouth but was replaced by other ventures; according to Richard Bayles’ 1888 A History of Newport County, crops included “...potatoes, corn, oats, barley, hay, apples, peaches, strawberries, pears and garden vegetables.”145 In Middletown, Bayles noted: “The chief agricultural products of the town are hay, corn, potatoes and some barley. The latter staple was formerly the leading crop, and received more attention here than in any other section of New England. There are now but few native trees growing in the town, the forests all having been cleared away to make room for the work of agriculture.”146

The availability of published sources, such as The New England Farmer’s Almanac, The Boston Cultivator, and The Yankee Farmer promoted experimentation and new practice in an increasingly systematic manner. Scientific and collaborative organizations also began to evolve; the RI Society for the Encouragement of Domestic Industry (later the Department of Environmental Management), the RI Horticultural Society and Mechanics’ Association, and a variety of agricultural fairs also spread new ideas and methods.147 Even local educational institutions developed around agriculture with increased federal funding, including the University of Rhode Island (Kingston, RI) and its Rhode Island Experimental Station.148

By the end of the century, however, the effects of industrialization began to take hold. Demand grew due to increased population and new markets, but shifts to urban areas and manufacturing, competition from large western farms and the availability of freight transport by rail negatively impacted the traditionally small-scale New England farm. According to Historic Landscapes of Rhode Island, “The farms that remained into the twentieth century

143 Historic Landscapes of Rhode Island, 55-57.
144 Nebiker, Historic and Architectural Resources of Middletown, 5.
146 Bayles, 752.
147 Historic Landscapes of Rhode Island, 55-57.
148 Historic Landscapes of Rhode Island, 57.
were either large commercial farms, small-scale producers of a single crop, or small-scale family farms...Rhode Island farms, like most in New England, tended to grow in size, diminish in number, and specialize in production.” This specialization resulted in an increase in, for example, dairy farms, poultry farms, and orchards throughout the state, each with their own accompanying structures.  

The availability of improved and less expensive farm equipment also had an impact on local farming. Although positive in some instances, some new farm equipment, such as reapers and seed drills, were often difficult to maneuver in New England’s traditionally small, enclosed fields. According to historian Susan Allport, farms that remained “…found it necessary to dismantle many of the walls that divided...their fields. Sometimes the stone was sold for use in building, but other times the walls were simply buried in a deep trench...,” often building a drain in the process.

In addition to changes in agriculture, residential development began to take place on a significant scale, particularly in Middletown. In Picturesque Rhode Island, Wilfred Munro describes the arrival of a new group of summer residents in this way: “The residents of the town are awakening at last to a sense of the possibilities within their grasp, and are stretching out their hands to secure a portion of the summer throng that fills each year the cottages of the mother-town [Newport]. Broad avenues, sweeping along the shores, and winding over the hills that command a prospect over the ocean, are projected.” These lesser-scale summer cottages would begin to divide the land, and as Munro mentions, force new infrastructure development.

A second factor in the development of land in the 19th century was the proliferation of so-called “gentlemen farms,” particularly in Portsmouth and Newport, and also associated with the growth of Newport’s “Summer Colony.” Many of the structures built during this period (circa 1880-1930), had a distinctly Colonial Revival flavor. According to the RIHPHC’s 2001 Historic Landscapes of Rhode Island survey, these estates “[used] the scenic qualities of agricultural landscapes for aesthetic purposes. They usually include an old farmhouse – often enlarged and/or improved in the Colonial Revival mode – or in an architect-designed country house carefully sited in relation to – and usually somewhat removed olfactorially from – functional outbuildings.” Several estates in Portsmouth, including Glen Farm, Oakland Farm, and Sandy Point Farm followed in this manner; Paradise Farm in Middletown is another good example.

The construction of such farms was also likely an impetus for the repair of area stone walls; “romantic” ideas of what stone walls symbolically represented caused wealthy landowners to take notice and incorporate historic features into their properties. This is in keeping with contemporary trends throughout New England; according to historian Mark Lapping, “Colonial Revivalists, often summer people ‘from away,’ tidied up greens and

149 Historic Landscapes of Rhode Island, 55-58.
150 Historic Landscapes of Rhode Island, 55.
151 Allport, 142-3, 147
152 Wilfred H. Munro, Picturesque Rhode Island (Providence: J.A. & R.A. Reid, 1881).
153 Nebiker, Historic and Architectural Resources of Portsmouth, 11.
154 Historic Landscapes of Rhode Island, 60.
155 Gardner, 7.
commons, frequently creating ahistorical park-like places...” The impact of this landscape editing “...reinforced rather than challenged the dominant Pilgrim-Puritan-Yankee narrative of regional identity...” In the case of Portsmouth and Newport’s estates, it also makes it difficult to identify which walls originate in the 18th century, which were modified, and which were entirely built in the 19th century.

This is surely the case at The Glen, a farm constructed by industrialist Henry A.C. Taylor beginning in 1882. The property eventually incorporated several earlier 18th century fields and went on to become a home for renowned Clydesdales and Percherons in the early 20th century. Its distinctive stone stables were also accompanied by a myriad of outbuildings, including a pump house, icehouse, storage sheds, and a blacksmith shop (Figure 31). Entries to the property are punctuated by conical mortared stone gateposts, a distinctive feature of Portsmouth’s stone walls that is also repeated at Oakland Farm and Sandy Point (Figure 30).

At Sandy Point Farm (1902), Reginald C. Vanderbilt built horse stables and Shingle Style outbuildings; the estate’s modified house, now demolished, had a decidedly Colonial Revival appearance. Nearby Oakland Farm, purchased by Cornelius Vanderbilt II in the late 1800s and further redeveloped by his son, Alfred, between 1904-1915, also became a horse farm. The property, which had 18th century ties to the Cornell family and William Ellery Channing, included a preexisting house (modified by Vanderbilt), a large stable, an enclosed horse ring, carriage barn and several outbuildings.

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**Figure 30.** William H. Vanderbilt with the coach *Venture* near a set of gates at Oakland Farm, Portsmouth.

**Figure 31.** Barn complex at Glen Farm, circa 1910.

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157 Wilfred H. Munro, 60.


Other estates had less of a Colonial Revival flavor, but still incorporated elements of earlier farms. The Barstow (Greenvale Farm) and Brayton estates (Cory Lane) are both good examples.  

The Greenvale property, purchased by Bostonian John S. Barstow in 1864, included an elaborate main house with a “valuable herd of dairy cows.” The Brayton estate, purchased in 1872 by Thomas Brayton, included a pasture, outbuildings, and a garden, and incorporated what are most likely earlier dry stone walls along the edge of the property (Figure 32).

![Figure 32. Double stone walls surrounding the Brayton estate, Portsmouth.](image)

In Newport, Hammersmith Farm is the best example of a gentlemen’s farm in the city and remains relatively intact today. Built between 1888-89 for John Auchincloss on land once farmed by the Brentons, the property is comprised of a main house with a substantial number of shingled outbuildings for various livestock and agricultural pursuits.

4.2 Stone Walls in the 19th Century

Many of the same techniques used to construct 18th century walls also applied in the 19th century. A “new spirit of improvement,” bolstered by the wealth generated by the Industrial Revolution, encouraged stone wall repair and replacement of dilapidated timber fencing with stone. Roads in the 18th and early 19th centuries were also frequently bordered with stone walls, as is evidenced on West Main and East Main Roads (Figure 33)

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161 Nebiker, Historic and Architectural Resources of Portsmouth, 11.
162 James Garman, Gentlemen’s Farms of Portsmouth, RI, 92-93.
164 Onorato, 265.
165 Allport, 98-99.
166 Lenney, 147.
Documentary evidence of road improvement schemes at the turn of the 20th century show the ways in which walls were built, and improved, along Portsmouth and Middletown’s main public transportation corridors.\footnote{Photograph Collection of the Rhode Island Historical Society, State Highway Improvements 1904-5, Middletown.}

Publications also began to spread ideas about “proper” wall-building in agriculture; in 1822, for example, Samuel Deane’s New-England Farmer provides these recommendations:

“On a hard, sandy, or gravelly bottom, if built with good stones, a wall will stand many years without any repairing. And it will stand well on any soil, clay and mire only excepted…”

“It is true that walls will gradually settle into the ground, where the soil is at all mellow, and heaves with the frost; so that it may be necessary, in a century or two, to dig them up and rebuild them. I find some of this work has already been down in some of our oldest towns.”

“I am aware it will be objected, that stone walls are not sufficient fences against sheep. But it is easy to make them so. A row of flat stones laid on the top, and jutting over, will make a wall sufficient for this purpose: Or any wooden poles, laid on the top of the stone wall, supported by stakes will check the passage of sheep.”\footnote{Samuel Deane, \textit{New-England Farmer}, 3rd ed. (Boston: Wells and Lilly, 1822), 134-5; Allport, 99-102.}

Despite the movement to improve farms, the gradual decline of New England agriculture and old practice during this period negatively impacted wall-building as well. As larger fields became preferable (to accommodate “new, horse-powered machinery”), and the scale of Western farms increased competition, stone walls were often removed. In addition, fencing laws changed to “…make animal owners wholly responsible for controlling their
livestock,” a result of the shift towards a more "mature" and developed settlement. Farmers now had to be sure to contain animals by fencing or walls, rather than enclose their crops to prevent neighboring livestock intrusion.¹⁶⁹ New technologies eventually changed the ways in which livestock and fields were enclosed. Barbed wire, for example, which emerged in the 1870s, diminished the necessity for building complex stone walls.¹⁷⁰

Perhaps the most distinctive walls of the 19th century are associated with the gentleman’s farms of Portsmouth. These walls, while sometimes only loosely tied to agricultural pursuits, have detailed construction associated with decorative estate walls. It is possible that many may have been built by professional masons who were recent European immigrants to the area (for example, from Ireland and Italy).¹⁷¹ Several of the walls have distinguishing conical gate posts, which are still visible at Glen Farm, Sandy Point Farm, and the former Oakland Farm.¹⁷² At Glen Farm, vertical capstones are found on walls near the estate’s large stables, an unusual feature not usually seen on Aquidneck Island (see Figure 9).

One interesting element that is particularly important to consider in the construction of estate-style walls is the use of quarried stone.¹⁷³ The Peckham Quarry, located on Paradise Avenue, may have been a source for local stone (Figure 34). The area around the quarry had been a publicly-open source of local stone since the 18th century, and the Peckham Family eventually acquired the land (and a portion of a previous quarry) and began a full-scale quarry operation by the late 1800s. Italian and Portuguese immigrants were the principal workers at the site.¹⁷⁴

Figure 34. Archival photograph captioned “Cotton’s Quarry [now Peckham’s Quarry], c. 1910.”

¹⁶⁹ Allport, 141-145.
¹⁷⁰ Lenney, 146.
¹⁷¹ Allport, 155,161-3.
¹⁷² Nebiker, Historic and Architectural Resources of Portsmouth, 11.
¹⁷³ Thorson, Exploring Stone Walls, 91.
Tool marks can be important markers of age when identifying 19th century walls. Hand drilling, beginning from the late 18th century onwards, can be seen in oblong grooves on the surface of the stone. Increasing mechanization, including the introduction of steam-powered rock hammers and pneumatic drills, can also be seen in particular marks, pointing to a 19th or 20th century date (and quarrying like that seen at Peckham Quarry).175

4.3 Farm Buildings and Design in the 19th Century

At the beginning of the 19th century, most American farms more-or-less remained regional in design (for example, Dutch-influenced in New York and British-influenced in New England) and subsistence in scale.176 According to RIHPCS’s Historic Landscapes of Rhode Island, “Early nineteenth-century farms remain throughout the state [of Rhode Island]. Their most significant features include the farmhouse, a barn, occasional outbuildings that housed specific agricultural activities, and the overall organizational pattern delineated by stone walls.” Many early 19th-century farm buildings were organized in a quadrangular manner.177 “A common early nineteenth-century farm layout…consisted of a house and barn, with a walled cowlane that led from the rear of the barn between walled tillage fields to the back pastures...Those fields closest to the house and barn one expects to be smaller, more carefully planned and improved, with more walls and gates, and specialized in purpose. Typical of these were kitchen garden, orchard, cowyard, paddock or livestock pen, barnyard, tillage field, and pasture.”178

As the century moved forward, barn design changed in a number of ways. Structurally, “embellishment” became more common, as the era began to “…[favor] applied decorative elements and picturesque settings”; New England’s farms sometimes followed suit, although in

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175 Thorson, Exploring Stone Walls, 52-4, Allport, 184, 188.
177 Historic Landscapes of RI, 57.
178 Lenney, 146.
a much more “indirect and restrained” manner. These modifications can sometimes be seen as “commercial” improvements, intended to attract potential customers. Technology also affected barn building, as new tools made formerly functional spaces (for example, threshing floors) redundant. According to authors Allen Noble and Richard Cleek, “The advent of the hay baler, the thresher, and the silo clearly affected barn design, as did the invention of the overhead hay carrier and the hay fork. Steam power, the gasoline engine, and electricity also had radical implications...By the early 1900s, barn plans and even whole barns could be ordered by catalog.” Mechanized tools both added to and subtracted from previous designs. The aforementioned hay fork, for example, could be built to carry loose hay on a track along an interior roof ridge; in some instances, hay could exit the barn through the insertion of a small door on the gable end of the barn. Tall silos, built most often for dairy herds, were constructed in the late 19th century to allow for a consistent food supply as milking became a year-long industry.

During this time, new types of barns were developed, and old ones were often modified. Thomas Visser, New England barn expert, lists several types of regional barns in his *Field Guide*, many of which may appear on Aquidneck Island. The first of these barns is the extended or reconfigured English barn, which, as the name suggests, resulted from a need for increased space; this may have involved the construction of an addition, or the physical movement of barns to new locales. *Gable-front barns*, which started to appear by the 1830s; they had the advantage of being easily modified, as “…the size of the barn could be increased...by adding additional bays to the rear gable end.” These barns also marked a change for interiors, as less space was necessary for threshing floors due to the advent of mechanical threshing implements. *Side-hill or bank barns* were constructed “…into the side of a hill to provide a

**Figure 36.** Example of a side-hill barn found in an 1870 issue of the *American Agriculturist*, one of many periodicals available to farmers in the 19th century.

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179 Visser, 7.
180 Berg, 99.
181 Arthur and Witney, 11.
182 Cleek and Noble, 14.
183 Visser, 100-101; 130-31.
184 Visser, 68-9, 74.
185 Visser, 74-5.
frost-free manure storage area...[and housing for] animals...” (Figure 36). Eventually, the entrance to bank barns shifted to the gable end, which further improved productivity and made use of three levels of space.

Specialized outbuildings also began to complement larger barns on typical farm sites. For example, dairy farms often added creamery houses, icehouses, silos, and hay fields to their repertoire. Poultry farmers may have incorporated henhouses or coops, which often had south-facing windows and a small chimney or heat source (Figures 37, 38, 40). Plans for piggeries, constructed with the idea of improved cleanliness (as hogs and pigs were often given the least attention), also emerged during this period (Figure 41). Storage buildings, such as corn cribs or granaries, could be built to protect harvests from theft and rot (Figure 38).

Figures 37-40. (clockwise from top left) Designs for numerous outbuildings found in Byron D. Halsted’s *Barn Plans and Outbuildings* (1881), including a butter dairy, corn crib, hen house, and smoke house.

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186 Visser, 70-71.
187 Visser, 76-7.
188 Visser, 111-115, 165-69; *Historic Landscapes of Rhode Island*, 58.
189 Halsted, 104-127.
190 Visser, 125-130; Halsted, 128-9.
This farm specialization also had a great impact on design. According to architect Donald J. Berg, “In rural areas, where a majority of the population lived, the time marked an almost universal change from the old subsistence farm to a progressive, mixed economy of home produce, market farming and home industry.”191 Within this framework, farmers were eager to try new ideas in the name of “progress”; the old, 18th-century farm, seen as untidy and disordered, gave way to improved “order and thrift,” as seen in an 1886 print from a publication entitled The Manual of Social and Business Forms (Figure 42).192 According to Donald Berg, “New farmsteads were arranged on a rigid plan,” with consideration of the farmhouse, barn, and outbuildings and their relationship to roads and neighboring properties; new farming methods, such as crop rotation, precipitated alterations and additions to farm structures, and “ordered” farms were seen to better facilitate these modifications. 193

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191 Berg, 10.
193 Berg, 119.
The availability of manuals detailing “proper” farming practices became more widespread. In this way, the distribution of similar ideas increased, thereby increasing the likelihood that designs would be repeated. An antagonistic dialogue emerged between farmers and architects, with farmers “…[designing] buildings for themselves and…publishing their plans, in direct competition with…architects”; both would eventually draw from one another’s concepts.\textsuperscript{194} Hundred-year-old farmhouses were often modified or rebuilt, and interiors were planned “for efficient work and flexibility.”\textsuperscript{195} Farms took on a “layered” appearance, as old buildings remained while new, specialized ones were added.\textsuperscript{196}

Period texts reveal a methodical consideration of the effects of building on productivity and efficiency. In one 1881 example, \textit{Barns Plans and Outbuildings}, the author describes an ideal farm thus:

“If possible, the barn should be located upon a rise of the ground, where a cellar can be built, opening upon the lower ground to the rear. The outbuildings should not be so close to the house as to appear a part of it, nor so far distant as to be inconvenient. The old practice of scattering the buildings over the farm…has been found more inconvenient and expensive than to group them near each other.”\textsuperscript{197}

The author goes on to advocate for larger, more efficient barns rather than small, “crowded” outbuildings. An example given, “a cattle barn on Dr C.F. Heyward’s farm at Newport, R.I.,” shows the effectiveness of having a cellar level, built into a hill, for the collection of manure.\textsuperscript{198}

\textbf{Figure 43.} Design for a cattle barn found in Byron D. Halsted’s \textit{Barn Plans and Outbuildings} (1881), owned by a “Dr. C.F. Heyward…at Newport.”

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\textsuperscript{194} Donald J. Berg, 5-13, 107-8, 19, 24,34. \\
\textsuperscript{195} \textit{Historic Landscapes of Rhode Island}, 57 ; Berg, 65. \\
\textsuperscript{196} \textit{Historic Landscapes of Rhode Island}, 58, 60. \\
\textsuperscript{197} Byron D. Halsted, ed., \textit{Barns, Sheds and Outbuildings} (1881; repr., Brattleboro, VT: The Stephen Greene Press, 1977), xi. \\
\textsuperscript{198} Halsted, 43-47.
\end{flushright}
In identifying 19th century barns, it is also helpful to note several key details that are markers of industrial development. Advances in technology mean that building materials will show signs of mechanization; the presence of cut or wire nails, circular or band saw marks, board-and-batten siding (made possible by mechanized sawing), sliding barn door tracks, windows, and cupolas are all signifiers of 19th century construction (Figure 44).  

A great number of Aquidneck Island barns and outbuildings appear to date from this period. In Portsmouth, good examples include a modified 18th-century barn at 2951 East Main Road (changed to a bank-style barn), two small barns or outbuildings at 3124 East Main Road (part of a Greek Revival farmhouse complex, Figure 46), a small barn with track for a sliding door at 310 Glen Road (Figure 45), a barn-outbuilding complex at 559 Union Street, and the large, grand stables at Glen Farm and Sandy Point Farm. In Middletown, gable-end barns on Greene Lane (associated with the former 18th century Coggeshall Farm) and 708 Mitchell Lane (Figure 50), a rare gambrel-roofed barn at 664 East Main Road (Figure 49), a barn with additions at 115 Howland Avenue (Figure 48), and a barn-outbuilding complex at 1903 West Main Road (Figure 47) are excellent examples. In Newport, outbuildings and stables at Hammersmith Farm represent a unique 19th century complex of agricultural buildings; other examples include a "hennery" commissioned by Catherine Lorillard Wolfe for the Vinland Estate (Ochre Point Avenue), as well as the base of a stone windmill at Brenton Point State Park.  

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199 Visser, 24-9, 31, 34-5, 37, 45-7.  
200 Middletown Historical Society, 40; James Garman, Historic Houses of Portsmouth, 19; Ronald Onorato, 210.
Figure 46. Farmhouse and outbuildings, 2951 East Main Road, Portsmouth.

Figure 47. Farmhouse and barn, 1903 West Main Road, Middletown.

Figure 48. Barn with additions at 115 Howland Avenue, Middletown.

Figure 49. Farmhouse and gambrel-roofed barn, 664 East Main Road, Middletown.

Figure 50. Gable end barn at 708 Mitchell Lane, Middletown.
4.4 Archival Highlights

David Shearman Account Book, 1848-1865

One of the few local extant primary sources written from the perspective of a local farmer is the account book of David D. Shearman of Portsmouth. Written between 1848-1865, the book records expenses related to the upkeep and operation of an Aquidneck farm, including references to payment for building stone walls, presumably for neighboring properties. For example, several entries from October and November 1854 record Shearman’s stone wall building work over the course of fourteen days for an Oliver S. Pearce.\textsuperscript{201} Entries from October 1863 record payment owed from a Robert Hicks for “...1 day drilling rocks” (totaling $1.50) and “...2 days building Barn yard wall” (totaling $3.00).\textsuperscript{202}

The autumn dates associated with this labor are in keeping with assumptions related to the yearly ebb and flow of farm work; a significant amount of wall building would have taken place when harvesting, planting, and other essential farm activities were completed and time for other secondary tasks, such as farm repair and improvement, could be prioritized.

Entry from November 1854, detailing daily payment for shingling a barn. Portsmouth History Center Archive, Portsmouth Historical Society.


David Shearman Diary, 1859-1864

An accompaniment to David Shearman’s account book, this diary provides detailed and rare glimpses of the day-to-day activities associated with farming on Aquidneck Island in the 19th century. Within the text, there are over thirty references to stone wall building and farm-related construction and repair. Again, as seen in the account book, building projects followed a seasonal pattern and seemed to occupy time when the priorities of harvesting and planting were complete.

It is interesting to note that Shearman worked not only on his family’s farm but also within the community at large. He appears to have often sought work on repair or building projects as a supplement to his own income. Work with stone, in particular, was not always confined to fencing; Shearman also helped with projects involving cellars, wells, and even a local dam at Glen Mill. He also worked removing stone from fields (both by hand and via “blasting”). One particularly interesting anecdote from November 25, 1860 details the construction of a wall on the farm of neighbor Thomas Holden:

“Last Monday morning I went to the coalmine to see Thomas Holman about building some wall. I got a job to build a wall on the south side of the Barnyard, down on his farm. Frank Borden helped me – finished it on Friday (23rd); both of us making 8 ½ days at $1.25c a day, and board ourselves. I dug around some rocks intending to get them out, but this weather will stop me for a while.”

“June 17th. Another week has past and I have worked six days. I finished the Barn cellar [most likely of Thomas Holden] on Thursday. I worked 17 ½ days diging [sic] out cellar and building wall at $1.62 ½ c per day and board myself. The size of the barn in 35 X 26 feet; cellar 7 ½ feet high. I am now building a wall between the lane & Barnyard...”

“19th. John Roberts & David Fish began to frame the Barn.”

“24th Sunday. I have enjoyed a day of rest, which a week of hard work, makes more sweet. Thursday & Friday I built wall. Yesterday we raised the Barn (but 5 of us except Thomas) and boarded some...”

“June 30th...I have worked 6 days on Thomas Holman’s [sic] barn this week, boarding and shingling; just such work as I like...”

Shearman also helped to tear down and rebuild a barn for Holden in July of 1860:

“The first week in this month I worked 5 ½ Days for T. Holman. On Wednesday the 4th I commenced to take down T. Holmans [sic] old Barn, on the George Sisson place. The frame was oak & part of the boarding. The frame was sound except the sills. It was situated at the south of, & nearly in front of the house.”

“Mon. 9th. I worked capping some wall & laying floor in the Barn...”
“[July] 11th & 12th...Got two good loads of bits of boards & shingles that Thomas gave me.”

Other than the sale of books and publication subscriptions (apparently supplied by a publisher), repair and building work seem to be the dominant means of obtaining supplementary income for Shearman and his growing family. His work, interestingly, was not confined to Aquidneck Island; he often mentions traveling to Tiverton, for example, to seek out new opportunities. It is difficult to say for certain to what extent Shearman’s daily routines mirror the Portsmouth community’s at large; however, his frequent building work indicates a certain level of skill and knowledge developed over time, and as part of a local network of community laborers.

Entries from March 17-21, 1859, where Shearman mentions building and repairing two walls. Portsmouth History Center Archive, Portsmouth Historical Society, page 18.
United States Coast and Geodetic Survey. Coast Chart No. 13: Cuttyhunk to Block Island Including Narragansett Bay. 1876. RIHPHC.

This map, created in 1876, was part of a larger U.S. government effort to accurately record and survey the nation’s coastline. It evolved from the earlier “U.S. Coast Survey,” identified by the current National Oceanic and Atmospheric Association as “the nation’s first scientific agency.” A closer look at Aquidneck Island reveals several interesting elements that provide insight into period land division and development. Newport Harbor is clearly the most densely populated, with its tight network of streets and wharves. However, moving towards Newport Neck, both rocky topography and rectilinear divisions are visible. According to RI State Archaeologist Timothy Ives, these dividing lines most likely denote agricultural property boundaries, and thereby, stone walls. The same types of divisions can be seen in Middletown and Portsmouth, where a vast patchwork of plots provide a reference point for agriculture's dominance in the 19th century. Compared to Blaskowitz’s map of 1777 (see Section 3.5), the extent of development across a span of nearly 100 years becomes readily apparent.

A detail view showing central Aquidneck Island (note reference to The Glen at left center).

Detail of land near Brenton’s Cove and Fort Adams, Newport, where the area around Harrison Avenue still contained many agricultural elements in the 1870s.

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In keeping with the 19th century trend toward increased scientific evaluation of farming practice, Charles Jackson’s 1840 publication seeks to evaluate local geological resources and soil qualities to ascertain their impact on agricultural output. In an early attempt to quantify local trends, statistical data is collated via surveys, site visits, and interviews with local farmers. Although not all conclusions are accurate (for example, some hypotheses on Rhode Island’s rock types and formations are contrary to modern understanding of geological history), this publication provides a period glimpse into methodologies and assumptions about Rhode Island’s natural resources.

Closely related to farming on Aquidneck Island, Jackson collated a report based on data provided by Portsmouth farmer Joseph Childs; this report provides a snapshot of local agricultural life in 1839 (see excerpts below, pages 23 and 260).

### AGRICULTURAL OBSERVATIONS

**ON THE**

**ISLAND OF RHODE-ISLAND.**

The island of Rhode-Island is generally remarkable for the fertility of its soils, which are chiefly derived from the decomposition and disintegration of granite rocks, and their accompanying slates; while in a few instances we find diluvial matter mixed with them, that must have originated from rocks to the northward of Providence.

One of the most valuable properties of these soils, is their retentive power, owing to an admixture of clay derived from the slate rocks that occur abundantly in the island. At Portsmouth, much of the soil is indigenous, or was formed directly from the slate rocks below, as may be seen near the ferry, and along the whole extent of the coal basin.

The farm of Judge Childs is situated in Portsmouth, on the eastern side of the island, near the sea shore, and is cultivated in the most successful manner. I visited this farm, and was most politely received by its intelligent and hospitable proprietor, who furnished me with all the statistical information that was desired, and has since sent me a detailed account of the management of his farm.

**No. 4.**

**Farm Report of Joseph Childs, Portsmouth, 1839.**

Farm consists of ploughed land 21 acres; pasture 6; mowing 16½; orchard 2½; total 46 acres.

Crops:
- Indian corn, 300 bushels on 9½ acres.
- Rye, 32 “ 2½ “
- Peas, sold green, 100 “ 2½ “
- Potatoes, 800 “ 4 “
- Onions, 24,000 bunches, 1,440 “ 2½ “
- Mangel wurtzel, 200 “ 7 “
- French turnips, 200 “ 7 “
- Hay, 25 tons 16½ “
- Onion seed, 80 lbs. " ½ “

**Other Produce.**
- Apples, 75 bushels, 2,000 lbs. beef.
- Pumpkins, 6 tons, 2,000 lbs. pork.
- Cabbages, 200 heads, 300 lbs. butter.
- Isabells grapes, 5 bushels.

Stock, gross value, 8853; viz.: 2 horses, 2 oxen, 5 cows, 12 hogs, and 40 domestic fowls.
5.0 Twentieth Century

The 20th century saw a rapid expansion of commercial and residential development on Aquidneck Island and the decline of a significant number of farming operations. This resulted in the loss of barns, farm buildings, and sections of historic walls. It also negatively impacted the former agricultural landscape; piecemeal developments broke apart farm lots, leaving remaining extant structures isolated and disconnected from their historical settings.

In Middletown, agriculture remained an important part of the economy until mid-century. Dairy farms were successful, and the nursery industry steadily grew, primarily a result of Federal importation restrictions introduced in the early 1900s. However, World War II and the presence of the U.S. Navy in the area had a great impact on development, as the government seized control of large swaths of Middletown’s western shore. Population growth during this period is particularly staggering, increasing from 1,457 in 1900 to 3379 in 1940. After World War II, continued commercial and housing development, particularly on East and West Main Roads, impacted the agricultural landscape; the population grew to 12,675. Aerial views of the area show the extent of this development in a short period of time (Figures 51-52). A concrete farm building, built by Rhode Island Nurseries on West Main Road, is one of the few examples of circa mid-20th century new-build farm architecture in the area.

![Figure 51. Aerial view of the junction of West Main Road and East Main Road (Two Mile Corner), 1938.](image)

![Figure 52. Aerial view of the junction of West Main Road and East Main Road (Two Mile Corner), 1972.](image)

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In Portsmouth, similar changes took place; agriculture was still a part of the economy but was waning. In 1929, the Mount Hope Bridge was completed, changing traffic patterns on the Island. By mid-century, the population was 3,683; this increased to 14,000 by the late 1970s. Significant losses to historic fabric were noted, including the filling of the Town Pond (the location of Aquidneck’s first colonial settlement, located in the northernmost section of Portsmouth), the insertion of large-scale housing developments and industrial parks, and commercial development in the Newtown area. Oakland Farm was demolished in the 1990s to build a condominium complex; portions of Sandy Point Farm were also demolished, but a horse barn and several outbuildings remain extant. Most of the buildings in the Glen Farm complex remain intact, as the City of Portsmouth purchased the property in 1989; however, many of these buildings continue to have an uncertain future.

Local period atlases reveal that few farms, if any, remained in Newport by the 1920s. The only significant development related to agriculture was the construction of a new gentleman’s farm called Swiss Village on Harrison Avenue. The complex was constructed between 1920-24 as a European-style “…fantasy recreation of an alpine farm that never was…”. Comprised of a series of stone bridges, terraces, and assorted structures, the Village is today the home of heritage livestock, intended to aid in the preservation of historic breeds.

Regionally, historians and authors at the beginning of the 20th century were already beginning to recognize the loss of agricultural landscapes throughout New England, including stone walls. According to contemporary wall-builder Eric Gardner, “The long goodbye to New England’s era of small-farm dominance added a new layer of symbolism to the old stones – nostalgia…The late nineteenth and early 20th centuries saw an outpouring of emotional eulogies for the farmer-builders who had laid the walls…” Although a certain degree of mythology surrounding wall builders and their methodology was developed at this time, interest in walls as markers of regional history continued to thrive. The same can be said for barns, which were elevated the 1950s and 1960s by authors such as Eric Sloane (An Age of Barns, 1967; Our Vanishing Landscape, 1955), and continued to gain recognition as appreciation for vernacular architecture gained momentum. In a preface to Eric Arthur and Dudley Witney’s The Barn: A Vanishing Landmark in North America, Bill N. Lacy wrote in 1972: “…hardly any self-respecting history of architecture ever devotes much space to our indigenous architecture…Now I suppose it is time for barns [to be recognized]. And not too soon either, for they are, in the popular environmental jargon, an ‘endangered species’…”

Rhode Island joined in this interest; 1970s-era statewide architectural surveys include lists of potential agricultural sites in need of protection, many of which did not survive development pressures to the present. Historic districts were proposed, many of which have not yet been realized; many individual properties also sought National Register nomination.

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211 Garman, Gentlemen’s Farms of Portsmouth, RI, 34-5, 61, 65.
212 Onorato, 271.
213 Gardner, 12.
214 Gardner, 1, 9, 17.
215 Arthur and Witney, 7.
Although interest in land conservation emerged in the 1990s and early 2000s, a disconnect still remains, particularly in Middletown and Portsmouth, between each town’s identified historic resources and a long-term strategy for preservation.

**Figure 53.** Albro Farm site (Mitchell’s Lane) as photographed for the Rhode Island Historical Preservation Commission’s 1979 survey of Portsmouth.

**Figure 54.** Albro Farm site (Harvest Drive and Pilgrim Lane), as seen in 2016.
6.0 Conclusions & Further Study

Although Aquidneck Island’s stone walls and farm buildings have ties to regional trends, its agricultural built heritage diverges from other areas because of Newport, Portsmouth, and Middletown’s unique geography, geology, and settlement patterns. Early methods of land division during the colonial period set the course for the construction of stone walls; changing dynamics in agricultural economy and technology changed the types of farm buildings throughout the Island and their methods of construction. The information collected in this report reflects these systemic changes and their underpinning history; however, it is clear that many other areas of study could further contribute to a better knowledge of local farm buildings and stone walls.

One of the clearest deficits in understanding Aquidneck’s agricultural built environment is the lack of a current and comprehensive survey. The last formal surveys conducted by the Rhode Island Historic Preservation and Heritage Commission were completed in the late 1970s; many farm buildings listed in these documents have been demolished since the time of publication, symptomatic of the rate of development and lack of effective preservation policy in the late 20th century. The most recent survey conducted by Preserve Rhode Island and the Preservation Society of Newport County in 2017, which laid the foundation for this research study, focused solely on resources adjacent to open space, and only scratched the surface of the stone walls and barns still in existence on the Island.

It is also particularly difficult to fully understand Aquidneck’s extant walls and farm buildings, as many are not visible from public rights of way. A further study of the agricultural built environment, particularly with walls, might include use of the States LIDAR scans, which can see through recent vegetal growth and development to provide a better context for the Island’s stone wall network.

In terms of archival and secondary source research, there are many topics which could only be touched upon briefly in the context of this report, but which warrant further study. The influence of Narragansett Indian builders during the colonial settlement period, as well as enslaved peoples, is one area that is only briefly mentioned in secondary sources related to Aquidneck Island. A further study could delve deeper into period primary sources and account books, in hopes of finding references to wall or barn building activity.

This also applies to general primary source farm accounts, which were difficult to locate in local repositories (the Shearman account book and diary being one exception). However, this does not mean that such sources do not exist; many may be found within larger collections that have not yet been cataloged in a detailed manner, or within personal collections. Other helpful primary sources, when trying to discern a specific property, might include land evidence records (including deeds) and early survey maps (for example, drawings like the Brenton Farm map). A survey of 19th and 20th century City Directories may also be helpful in terms of quantifying data around the number of farmers and farm-related businesses in the area.

In terms of context, it would also be helpful to seek further connections between regional, national, and international contexts. A comparison of Aquidneck’s walls with those of neighboring New England states, with a particular focus on geology and settlement patterns,
might shed light on what makes walls on the Island unique (or similar). An investigation of connections to British wall and barn building practice would also be particularly interesting, as the roots of all early construction in the colonial period derived from long-standing tradition abroad.

Lastly, the dating of walls and farm buildings both pose particular challenges, particularly for those built before the 19th century. For barns and farm buildings, a more accurate analysis should include investigation of interior spaces, where (as was stated) evidence of aged timber, early construction and framing practice, and alterations may remain. For walls, this might include further analysis of 17th century settlement and land division, as well as analysis through scientific means. For example, some stone wall scholars have begun to quantify measurements of lichen growth as evidence of untouched, early walls, but these methods have yet to be perfected.217

Figure 55. View across Green End Fort and Pond, 1903.

217 Allport, 182-5.
7.0 Bibliography


Quinn, Alonzo W. *Rhode Island Geology for the Non-Geologist*. Providence: Rhode Island Department of Natural Resources, 1976.


