Chapter 2

GEOGRAPHICAL SETTING, PREHISTORY AND HISTORY

A. INTRODUCTION

A research project such as this one needs to be placed in a wider geographic, chronological and cultural context. This chapter and the ones which follow move progressively from the wide perspective to a more specific one. Human beings have lived in the Delaware area for a very considerable span of time. People may have entered the Delaware Piedmont as early as 12,000 years ago, during the Late Glacial climatic episode. Human history in the region has been a continuous chronicle from then until now, although populations have increased and diversified during the past twelve millennia, not always at a uniform rate.

As archaeologists have been discovering the distant prehistoric past, historians have reformulated the outlines of history as it has occurred since colonization. New ways of looking at history have integrated evidence from sociology, demographic statistics, economics, and geography. The "old" history, of great events, great leaders, and great movements has given way to an appreciation of large scale change and intricate interactions among social forces. Just as an ecological model describes the broad patterns of prehistory, economic models conveniently describe changes that have occurred during the past four centuries, particularly when the subjects of research are industrial sites and farmsteads such as those investigated here. Nevertheless, the role of individuals, such as Oliver Evans, who revolutionized grist milling technology, cannot be overlooked and is increasingly being recognized in historical studies once again.

This overview starts with the prehistoric inhabitants, although this specific project did not encounter any evidence for prehistoric usages of the areas investigated.

B. PREHISTORY AND THE NATURAL LANDSCAPE

1. Paleo-Indian Background (12,000 to about 8,000 years ago)

The nomadic hunters of this Paleo Indian period were among the most skilled makers of stone tools in the world. They would travel great distances to quarry the best flinty stones from which they made exquisite spearpoints, knives, and small tools. Archaeological evidence suggests that they traveled to Piedmont quarry sites near the project area for occasional resupply. Archaeologists in the Delmarva Peninsula have been very interested in establishing the locations of stone raw material quarry sites and the mechanisms by which these materials were obtained and reached the locations where we now find them. At least four phases of Paleo Indian culture have been identified here, in spite of the paucity of artifacts (Meyer and Kingsley 1990:9).

These people, moving in small family size bands with the animal resources they relied on, probably hunted the remaining Pleistocene fauna, which included musk oxen, mammoth, fish, horses, caribou, and walrus (Catts, Custer and Hoseth 1991:11). As the climate moderated as the glacial period came to an end, the fauna, groundcover, and

sea levels changed. These changes, in turn, forced changes in people's subsistence strategies, family structure, and social organization

2. Archaic Period Background (about 8000 to 3000 years ago)

The Archaic cultural period began about the same time as the Atlantic environmental episode. Withdrawal of the glaciers prompted the development of marked seasonal variation, while the rising sea level caused the development of tidal marshes, increasing the variety of environmental settings available for exploitation.

Paralleling this increased environmental and seasonal diversity, the Archaic cultural period is marked by an increase in the number and variety of tools in use. Of particular interest during this period is the introduction of ground stone tools, including axes, gouges, grinding stones, and other implements for exploiting the much more varied plant resources now available (Catts, Custer and Hoseth 1991:14).

Archaic people built houses, some of which have been detected archaeologically through postmold patterns. A house at the Hockessin Valley Site in New Castle County, not far from the project area, was built five millennia ago around a central hearth; it is the second oldest human habitation reported from the region. The Hockessin Valley house was built on flat ground, but semi subterranean pit houses are also known from throughout the area. Pit houses in Delaware are known from the period circa 2000 B.C., to circa 1400 A.D., with most postdating 1000 A.D. (Custer and Hodny 1989:57).

During the Archaic period, lithic preference shifted. An increasing number of artifacts were made of quartz and quartzite, which can easily be obtained from the cobble beds found throughout Delmarva. Settlement systems of the Archaic were less likely than those of the preceding period to be centered around visits to upland sources of cryptocrystalline silicates such as jasper and chert (Custer 1986:64).

3. Woodland I Background (about 3000 to 1000 years ago)

The beginning of the Woodland I cultural period coincides with the beginning of the Sub Boreal episode, a period when environmental conditions were generally drier than during the preceding Atlantic episode. There was also considerably more variation in climatic patterns than during previous periods.

Large settlements, termed base camps, developed in the floodplains of major streams and adjacent to major swamps, where the food supply was more reliable because of the variety of resources available. Small procurement sites also were established along streams. In general, the focus appears to have been upon the utilization of a wide variety of resources. This is reflected in the introduction of specialized tools and in the introduction of stone bowls, and later, of ceramic vessels.

During this period, trade is evident in the archaeological record, apparently for the first time on any scale. Exotic artifacts and evidence of introduced religious practices indicate that people traded both goods and ideas over a wide territory. The Island Field Site, near the mouth of Murderkill River in lower Delaware, became a focus of trade around the end of the Woodland I period (Thomas and Warren 1970).

4. Woodland II Background (about 1000 years ago to European Contact)

The beginning of the Woodland II period was marked by a change in emphasis, rather than by any dramatic change in cultural patterns. Base camps continued to grow in size, but procurement sites were smaller and fewer in number. The tool kit left by these people is less varied than it was during the Woodland I period, but the frequency of storage features increased, even on smaller sites. It is likely that the project area in the Piedmont was used during the Woodland only for small-scale hunting forays. Small procurement sites can be expected, particularly in the wooded upland bluffs overlooking the stream valleys.

5. Contact Period (early 1600's to about 1740)
The contact period was the time of initial interaction between European colonists and Native American groups. It began with the first, indirect, experience of Delaware Native Americans with European trade goods and diseases and ended with the disappearance from Delaware of recognizable organized tribal groups after 1742. Native people did not "disappear" or "fade away," however. Only the distinctive physical evidence of their original culture disappeared or became difficult to recognize. The people remained on the land and became part of a multi racial, multi cultural society. At some yet undefined time during the seventeenth or eighteenth century, each local Native American group gradually passed from a "contact" mode on the perimeter of European society into a state of acculturation, during which the introduced alien culture from Europe began to dominate every aspect of life.

Today's Native American descendants are ministers, journalists, government officials, or businesspersons, who occupy every niche in a homogenized society. While recent generations have consciously sought to restore and preserve their heritage, few actual cultural survivals have passed through the acculturation process from the pre contact society.

C. EUROPEANIZATION

First the Swedes and then the Dutch established quasi military trading outposts on the shores of the present New Castle County in the early 17th century. When the Duke of York took possession of the Delaware drainage for the English in 1664, he confirmed the Dutch and Swedish settlers in their land titles and their customs. William Penn's accession to proprietorship on the Delaware in 1682 sparked a new land rush, as his Quaker associates moved into the Delaware Valley in large numbers. Since the establishment of Philadelphia in 1682, Delaware has been part of that city's commercial hinterland.

As more settlers came, they dispersed into the countryside, to raise subsistence crops for their families and tobacco for export. During the seventeenth century, the middle colonies including Delaware used the tobacco trade to build wealth and stabilize their economic position. After it left the farm, tobacco was shipped overseas in its raw state, to be converted into a consumer product in England or the Netherlands. Delaware's first industrial plant to actually process tobacco (on Red Clay Creek) was a snuff mill opened long after the crop had vanished from the local economy.

A shift from tobacco to grain agriculture around the beginning of the eighteenth century provided an incentive to settle upland sites that were convenient to water powered mill seats: an important change for these investigations. The first half of the eighteenth century was marked by impoundment at virtually every useful head of water in the colony, and

water power remained extremely important for the economy until well after the Civil War, as further discussed in Chapter 3.

The historical development of Delaware is commonly framed within a number of chronologically based “contexts”, and these are used here to summarize the main trends which influenced the project area.

1. Exploration and Frontier Settlement

The Delaware Piedmont frontier rolled back quickly. By the first decade of the eighteenth century, land in northern New Castle County was fully taken up. The well drained rolling farm lands of the Christina and Brandywine drainages attracted settlers of British origin, but the Dutch and Swedish families remained.

Drawn by the availability of water power, industrial entrepreneurs transformed the region. Flour from northern Delaware's mills fed workers in the sugar colonies of the Caribbean. Leather tanning, using the abundant bark resources of the oak forests, became a major industry in Wilmington. The wood itself provided ample employment for numerous water powered sawmills.

2. Intensified and Durable Occupation, 1730-1770

Around 1730, scattered market towns began to appear on the Delaware countryside. Farmers began building their houses along roads, rather than beside waterways as they had initially done, and internal road networks took shape. Wilmington is the best known of the towns established during this period, but it was not initially the largest or most prosperous market town in the valley. Delawareans looked toward Philadelphia as their central place for commercial and government business, and each town acted as a collection point, funneling traffic toward the metropolis.

D. THE INDUSTRIAL ERA

1. Early Industrialization, 1770-1830

Even after Delaware broke away from Pennsylvania politically in 1776, local commerce continued to flow into the Pennsylvania economy. When steam navigation and railroads were introduced during the nineteenth century, Delaware's farmers turned to Philadelphia rail terminals for access to the continental markets beyond. Industrialization was a rural, not an urban, phenomenon. As long as they were dependent upon water power and (almost as important) hay farms, large industries were forced to locate where they could turn their machines and feed their animals.

The American countryside of the federal period was dotted with mill towns located at Piedmont falls. Up and down this Fall Line, factories created industrial clusters, similar to the mills in the project area.

Wilmington, a commercial satellite of Philadelphia, was a market center for Delaware and Pennsylvania hinterlands to the west and northwest, up the Christina and Brandywine Valleys. Elsewhere in Delaware, Wilmington played no role whatever in the economic system. In terms of regional commerce, the city looked entirely to the westward and northwestward.

To tap the Pennsylvania market, Wilmington interests built turnpikes, railroads, and local roads radiating out from the city. Several of these roads traverse Mill Creek Hundred, notably the Newport Gap Turnpike. This was the first of Delaware's nine

turnpikes, started between 1808 and 1815. Built at a cost of just over $3,000 a mile, the toll roads gave the fall line millers access to the grain farms of the Chester County hinterland (Gray 1961:311).

2. Industrialization and Early Urbanization, 1830-1880

Steam power and railroads had the effect of concentrating industry into urban areas with good transportation connections. The modern industrial city was a product of this power shift, which occurred around the time of the Civil War. Migration of industry into urban centers contributed to the onset of suburbanization. As cities became more crowded and less attractive dwelling sites, people moved to the edges, creating suburban neighborhoods. This process of suburbanization was encouraged by developers who built first horse railways and then electric trolley lines to provide transportation to the urban cores.

The industrial city of this period, exemplified by Wilmington, was a place of considerable change and ferment. New power sources, notably steam, allowed industries to be concentrated near the new rail transportation arteries. Industrial plants could become larger, because they were no longer limited by local raw materials and fixed power sources. Wilmington became the nation's foremost shipbuilding center during the critical years surrounding the Civil War, at about the same time as it became part of the nationwide rail network (Louise Heite 1987).

The Wilmington and Northern Railroad, which penetrated the Pennsylvania hinterland as far as Reading, was an attempt to siphon off some of Philadelphia's natural trade into the secondary market in Wilmington. Instead of becoming a hub, Wilmington became a corridor, through which rail traffic passed en route to somewhere else.

While workers moved into the cities to take jobs in the new industries, the nature of the countryside changed. Farms began producing vegetables for canneries that provided preserved food for the new urban populations. Fresh fruit could be shipped from rural rail stations to urban markets hundreds of miles away. Electrical telegraphy allowed a Delaware farmer to consign a shipment while it was en route to market, thus procuring the best price in rapidly fluctuating market conditions.

3. Urbanization and Early Suburbanization, 1880-1940

After the Civil War, horse drawn streetcars enabled the physical distance between home and workplace to increase, and the social or psychological distance increased as well. Since that time, American urban history has been an ongoing chronicle of physical segregation of the home from the rest of society. This increased distance between home and work caused deep changes in society, not the least of which was the relocation of the midday meal from the home to a neighborhood surrounding a faraway workplace.

Freed from dependence on animal motive power, industrial concerns no longer needed to maintain hay farms as vital adjuncts to their factories. Motor vehicles eliminated the need for industrial hay farms, and then encouraged new land uses that replaced them. Most significant of those new land uses is the automobile based suburb. When streetcar lines were electrified, later in the century, their range increased. Electric interurban passenger railways linked cities and the intervening suburbs throughout the East.

This first episode of urban sprawl clustered along the electric railways, radiating out from urban centers. Generally Wilmington's electric railways followed the old turnpikes, which had fallen on hard times. By the end of the nineteenth century, roads outside major centers were becoming impassable, since most inter city commerce had been usurped by steam or electric railroads and steamboats. Automobiles changed the pattern of development. As automobiles increased, the "good roads" movement grew into the highway lobby that demanded and obtained a wholesale rebuilding of the nation's road network. Sprawl accelerated, as amorphous urban growth flowed over the countryside wherever a road could be built. Center cities declined.

Railroads and steamboat lines, which had fed the urban centers, lost business to the highways. Finally, the Interstate highway system moved freight traffic from the railroads to trucks and freed even the heaviest commerce from the need to cluster around rail hubs. Urban blight ensued, and the exodus to suburbs reached a fever pitch. Americans embraced a new concept that home ownership was a "right" and individual detached houses with yards replaced the traditional close packed urban dwelling types.

Wilmington's economic and political isolation from the rest of Delaware was broken with the construction of paved highways around the time of World War I. For the first time, downstate markets opened for upstate businesses through the highway system. The entire traffic pattern of the eastern seaboard was changed by the new roads, beginning with Coleman DuPont's privately funded north south road of 1916.

New through-roads financed by public agencies, including the Capitol Trail, moved the burden of traffic from railroads to motor vehicles. The new roads opened still newer areas to suburbanization. When the Robert Kirkwood Highway was built to replace the Capitol Trail, it was perceived as a bypass around heavily settled areas along the Christina valley. Within a few years, it had become the urban commercial strip that exists today. Wilmington's brief period of statewide economic dominance may prove to have been fleeting, as the state's centers of population and influence moved again to the southward.

Having completed this necessarily generalized overview of the agricultural and industrial development of the region, the historic preservation context of industrial archaeology in this area will be reviewed in Chapter 3.