2. PROJECT AREA LOCATION AND DESCRIPTION

THE PROJECT AREA Lies astride the main head stream of St. Jones River, which flows through a wooded freshwater swamp at this point (FIGURE 2). It lies on the eastern perimeter of the Mid-Peninsular Drainage Zone identified by Custer and Galasso (1983:5) in their prehistoric survey of the valley.

SOILS

Soil type analysis is an important tool for archæologists working in the prehistoric period. Prehistoric people did not classify soils, but they were drawn to places with certain cover and drainage conditions that today's soil scientists have quantified. Archæologists can use these scientifically-described soil types to identify those places that would have provided suitable ground cover for prehistoric people.

Soils belong to the Sassafras-Fallsington Association, "dominantly level to gently sloping, well-drained and poorly drained soils that have a moderately permeable subsoil of sandy loam to sandy clay loam; on uplands" (USDA SCS 1971). Most of the soils in the project area are mapped as Sassafras or Fallsington. Evesboro soils occur as a minority member of the association (FIGURE 3, PAGE 6).

Sassafras soils are historically considered prime agricultural land, although the portion northeast of Fork Branch has not been farmed since the college and technical high school were built, nearly twenty years ago. Open ground in the southern alternative was in soybeans at the time of the survey. On the Geiser Farm, the northern alternative route, two industrial sites have reduced the farmland, which has not been cultivated for a few years. Some topsoil was removed in 1989, before the survey began.

Evesboro soils are loamy sands, and may be of æolian origin. Their native vegetation consists primarily of hardwoods. Unless they are treated with lime, Evesboro soils are considered extremely acid for agricultural purposes

ENVIRONMENT AND SITE LOCATION

Several natural and manmade features of the environment are culturally significant. Typically for this region, the most significant features relate to drainage or the lack thereof.

The right-of-way crosses through or near several low, wet depressions called "bay-basin" features that have been identified as culturally significant. Several of these features are still perennially inundated. Immediately northwest of the north end of the proposed road is a drained swamp known in Colonial times as "Simon's Savannah" after Simon Hirons, the first settler and patentee. The savannah, or bog, has been drained by a substantial ditch that currently separates the main DelTech campus from the athletic field. Cultural implications of Simon's Savannah include possible association with a tannery, and a possible prehistoric procurement site.

On the northeast bank of Fork Branch, the southern alternative right-of-way crosses the mouth of White Marsh Branch, which was converted into a drainage ditch during the nineteenth century. At the mouth of this ditch, on the southern alignment, is a high-probability area for prehistoric occupation.

The southernmost part of the southern alternative, next to McKee Road, is a low-lying poorly-drained woodland that has never been completely cleared. It is unlikely that prehistoric settlement occurred in this area. Remains of a sawmill and of roads and boundary ditches are, however, visible in the woods. Fallsington soil dominates.

The north alternative crosses a known site, 7K-C-107, Blueberry Hill, just below the confluence of the two main branches of St. Jones River. This site met the criteria for a probable procurement site, but had not been analysed.

Custer (1984:52) has stated that prehistoric people of all periods located hunting stands at junctions of large and small stream terraces and near game-attractive areas

such as bogs and swamps that characterize the project area.

Upper drainage areas, such as this, were exploited by prehistoric people primarily as places for food-gathering. As larger and more permanent settlements began to develop, later in the prehistoric period, they were located downstream, near the edge of the tidal marshes and the saltwater fisheries.

Historic farmers valued high, well-drained fields of sandy soil, which are abundant in the project area.

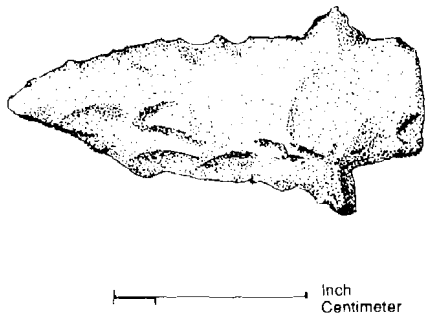


Figure 4

Heavily resharpened grey rhyolite broadspear, found on the surface near Simon's Savannah and loaned by the discoverer. Such casual discoveries are common in and near the project area, indicating extensive prehistoric occupation.

PREVIOUS INVESTIGATION IN THE VICINITY

Few prehistoric sites in the uppermost part of the St. Jones drainage have been excavated. Louise Heite found some scattered prehistoric remains at 7K-C-111, a short distance upstream on Maidstone Branch, including some pottery indicating woodland-period occupation (Heite 1984). At 7K-C-113, she excavated a ridge along the edge of a swamp, where points, chips, and flakes were found (Heite and Heite 1985).

On the present site of the Kent Vocational-Technical School, the former Delaware Section of Archæology found a site, 7K-C-81, identified as a probable procurement site. This site has been destroyed by construction of the school.

Of the two known sites on the Geiser farm, one is in the right-of-way. The other is on a ridge along Maidstone Branch.

Site 7K-C-107, Blueberry Hill, on the Geiser farm, was identified during a stratified sampling survey conducted by the University of Delaware Center for Archæological Research (Custer and Galasso 1983). No diagnostic artifacts were recovered during that survey, and the site was classified as a possible procurement site. This site has been damaged by dirt bikes and sand removal, but a small portion of the critical riverfront terrace survived more or less intact.

Historic-period house sites, both mansion houses and tenant houses, in the project area have been continuously documented since the eighteenth century. Known tofts are shown on the soil map (FIGURE 3). Previous investigations in the area demonstrated a relationship between toft locations and house sites, which are further explored in this report.

PREHISTORIC ENVIRONMENTS

People arrived in the Delaware Valley near the end of the last (Wisconsin) glaciation (Kraft 1986:31). Glaciers entrapped so much water that the ocean lay fifty miles east of the present Sandy Hook, New Jersey. As the glaciers retreated and the ocean advanced, the project area's ecology changed.

During the ten millenia before European settlement, Delaware's climate evolved from glacial tundra to temperate hardwood forest.

These changes in climate have forced changes in man's subsistence strategies, family structure, and social organization through time.

Man's adaptation to the changing climate was marked by gradual cultural

evolution. Custer and DeSantis (1986) have provided a useful table that correlates human and climatic change:

Dates	*Environmental Episode*	*Cultural Period*
8080 BC	Late Glacial	Paleo-Indian
6540 BC	Pre-Boreal/Boreal	
	Atlantic	Archaic
3110 BC	Sub-Boreal	
810 BC	Sub-Atlantic	Woodland I
AD 1000		
AD 1600		Woodland II

PREHISTORIC BACKGROUND

At the beginning of human occupation on Delmarva, mammoths, musk ox, horses, caribou, and walrus provided food for dire wolf, short-faced bear, and other predators. Man was among the smaller competitors in the tundra food chain, but his skills compensated for his physical shortcomings. Nomadic people 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 cobbles from which they made exquisite spearpoints, knives, and small tools.

Within the Denney's Road project area, there is limited potential for sites occupied during the Paleo-Indian Period, according to accepted models.

There is potential for outlying hunting sites southeast of the project area, where the floodplain of Fork Branch widens into a swamp, and to the west at the confluence of Fork Branch and a tributary. Based on existing information, one can expect sites from the Paleo-Indian period will most likely occur west of the project area nearer the peninsular drainage divide.

Paleo - Indian hunting - gathering society lasted in the coastal plain until about 6,500 BC, when the Atlantic climate episode and the Archaic period of prehistory began (Custer 1984:31). Northern hardwood forests had replaced the tundra, the ocean was rising as the glaciers receded, and the climate was warmer. Pleistocene megafauna were replaced by smaller game, which required different hunting techniques and tools.

Archaic people fashioned tools of a variety of lithic materials, including quartz, a material that is less tractable than the flinty cryptocrystalline silicate materials that Paleo-Indian people had favored. Ground stone axes and other heavy tools appear during this period. Many of these tools suggest a greater reliance on nuts, seeds, and other plant foods than indicated by Paleo-Indian tool assemblages.

Comparatively little is known about Archaic settlements. Archaeologists suspect that larger settlements may have been located along the ancestral Delaware River. These sites were later inundated as sea level rose and the river valley was invaded by the Delaware Bay estuary. Within the project area, micro-band base camps can be expected in sheltered locations along Fork Branch, while procurement sites are likely to be found in association with bay/basin features like Simon's Savannah.

By 3,000 BC, prehistoric society was decidedly different. Because people had stopped moving around so much, regional cultural differences began to appear in the artifact assemblages. Sedentary lifestyles ultimately led to horticulture, complex religious practices, and the accumulation of more, less portable, material goods. The last prehistoric period, the Woodland, is characterized by larger groups of people living together in villages, using pottery and other heavy or fragile goods that would have been difficult to move frequently from place to place. Woodland people tended to concentrate in more or less permanent settlements at places with abundant multiple resources, such as sites adjacent to shellfish beds on the edges of salt marshes. They sent out hunting parties, but they seldom dispersed whole populations to live off the land in the manner of their hunter-gatherer ancestors.

COLONIAL BACKGROUND

Kent County was first settled by Europeans during the last third of the seventeenth century, long after the adjoining baliwicks of Lewes and New Castle. The earliest grants to settlers between Duck Creek and Mispillion Creek were made in 1671,

seven years after the English took possession of the Delaware Valley (Jackson 1983).

Kent County therefore lacks the Dutch and Swedish components that characterize New Castle and Sussex. In particular, Kent County does not have "long-lot" settlements that distinguish Dutch colonization tracts in the upper and lower counties (Heite 1973:5,4).

COMMERCIAL BACKGROUND

From the establishment of Philadelphia in 1682, central Kent County and most of downstate Delaware was part of the Philadelphia commercial sphere. The only convenient way for a Delawarean to reach a market was by water to the metropolis.

Even after Delaware broke away from Pennsylvania politically in 1776, the Bay's local commerce flowed into the Pennsylvania economy. Western Kent County and western Sussex were part of the Baltimore trade region for many of the same reasons. This dependence upon the shallop trade to Philadelphia focussed Kent County's development at landings, where the high ground came down to the tidal rivers. Such places included Leipsic [Fast Landing] on Little Duck Creek [Leipsic River], Little Creek Landing on Little Creek, and Forest Landing at the head of navigation on St. Jones.

Inland from the landings, farmers depended upon roads that ran along the spines of the necks between the rivers. These roads often served also as portages across to the Chesapeake drainage, and as arteries for local traffic within each community. Where the east-west landing roads met the north-south King's road to Philadelphia, towns would eventually be established.

When steam navigation and railroads were introduced during the nineteenth century, Delaware's farmers were afforded better access to Philadelphia and the markets beyond. As the Pennsylvania Railroad opened Chicago and the West, Delaware farmers enjoyed prosperity they had never known before.

During the twentieth century, automobiles, trucks, and paved highways changed the commercial patterns in Delaware. With the building of Route 13, which passes the site, Wilmington began to loosen Philadelphia's grip on the business life of lower Delaware.

Wilmington's dominance may prove to have been fleeting, as Dover has come into its own as Delaware's second city and as a commercial center in its own right, which in turn generated the traffic that led to the project that prompted the present study.

RURAL INDUSTRIAL BACKGROUND

Timber has been important in the project area since Colonial times. One of the first resident landowners powered his sawmill by damming the main branch just below the project area. Just above the project area, Maidstone Branch powered a sawmill during the nineteenth century. Remains of a motor-driven sawmill still stand in the project area. Since the project area is dotted with patches of agriculturally unattractive boggy ground, much of it has remained in timber until the current generation, when developers have begun building with little regard for the pre-existing environment.

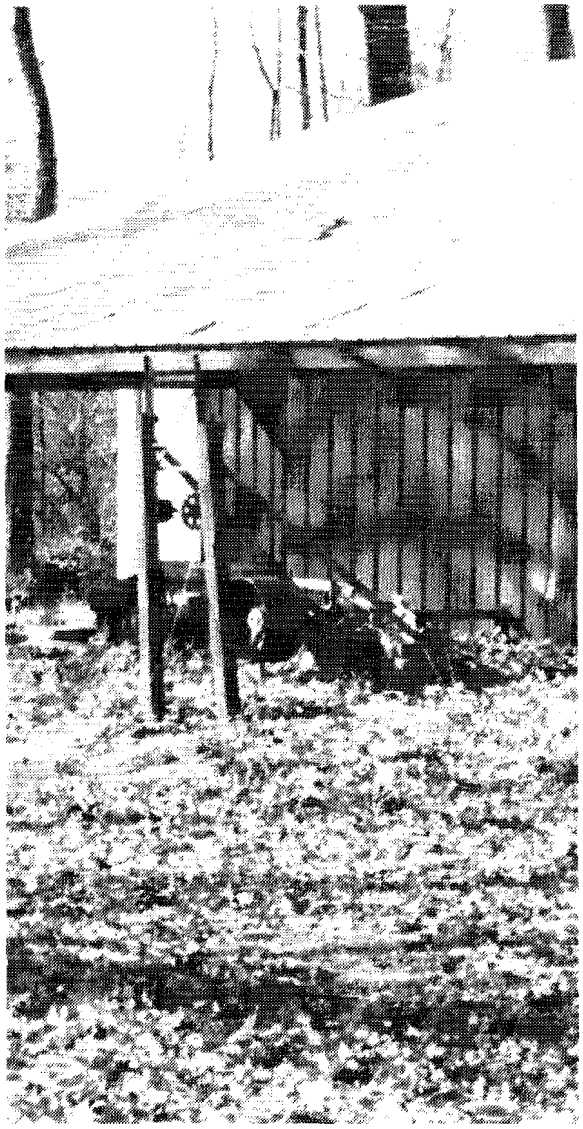
Environmental insensitivity is a new phenomenon in the local land-use picture. Until the project area began to urbanize, most human activities could be predicted by reference to environmental factors, such as natural drainage, soil suitability, and water`.

The drift away from environmental responsiveness in land use began during the nineteenth century, when new machines allowed the farmer to locate his house without regard for certain natural features, and to cultivate larger fields with less human effort. Today's inhabitants, thanks to technological advances, appear to be almost independent of the natural environments that shaped every decision of their predecessors.

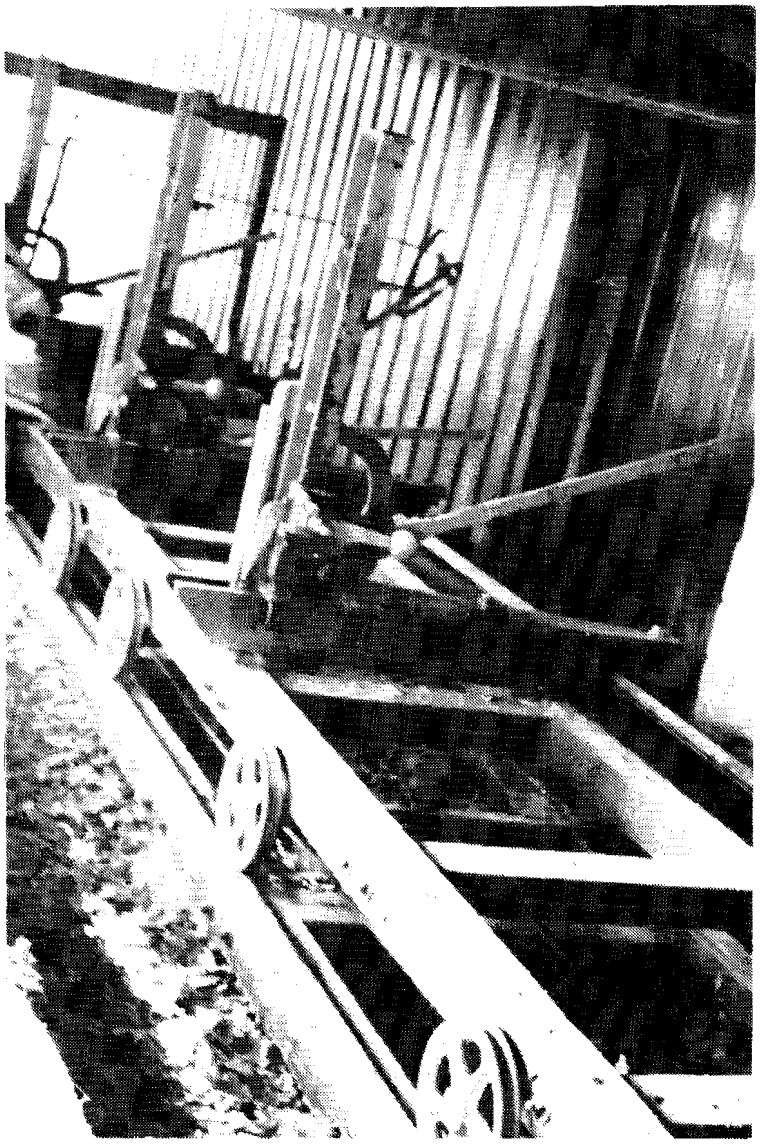
Only hunters, of all modern land users, continue the ten-thousand-year tradition of conforming to nature. In and around the project area, modern deer hunters' treetop perches can be seen adjacent to some of the most productive prehistoric sites, where ancient hunters waited in the same

fashion by the deer trails and sharpened their weapons, leaving little piles of retouching flakes for the archæologist to find.

These same sites, on bluffs beyond the edges of the fields, have been favored in recent years for another kind of human activity: dumping. Every sort of modern trash can be found in woods along the perimeters of the high ground, and some of it is old enough (greater than 50 years) to qualify for consideration in cultural resource surveys.



Exterior of the building, with the pulley



Interior, showing mill machinery

Plate 2

A "portable" sawmill near the project area

This portable sawmill stands in a permanent structure near the project area on the outskirts of Cheswold. Motive power is provided by a tractor, through a belt drive. The sawmill on the Ford Farm was similar to this mill, which was owned by a relative of the Ford family.