

9. ATTACKING DATA RECOVERY ISSUES

Methods used during data recovery are determined by research questions that might be addressed using evidence from the site. Sometimes it is difficult to guess what evidence might emerge

From the outset, it had been obvious that this site was archaeologically interesting if not unique. A “determination of eligibility” document was prepared, and a data recovery plan was formulated. The principal investigator’s proposed plan was reviewed by the State Historic Preservation Officer and the Department of Transportation; a final plan was developed for recovery of the data before the site was destroyed.

During the review process, the archaeologists conducted research into the site’s history and analysed the artifacts recovered to date. As field and library research progressed, additional unique aspects of the site emerged.

ASSESSMENT OF SIGNIFICANCE

The Bloomsbury site is significant archaeologically because it has yielded a tightly-dated collection of archaeological materials, apparently discards of a single household from a single generation, shortly after the American Revolution. Tightly-dated, short-duration, deposits are highly valued by archaeologists for their information value. Few, if any, isolated sites of this period have been located in Delaware.

The state management plans for archaeological sites, both prehistoric and historic, identify short-duration, single-component sites among the most important archaeological resources in Delaware. Few, if any, properties of this type have been identified for this period in this region.

The site has excellent integrity of location, setting, and period. DeCunzo and Catts (1990: 194-196), in the state management plan for historical archaeological resources, proposed a framework for evaluating National Register eligibility, under the five headings followed here.

DOCUMENT OR ORAL HISTORY

The Exell [Axell, etc.] family, who owned the site during much of the eighteenth century, were poor relatives of the district’s leading families. In 1771, very little of the property was cultivated, and the site was in woods. By 1812, much of the property had been put under the plow.

Part of the site’s significance derives from the fact that its tenants are well-documented (DeCunzo and Catts 1990:195). During the period immediately before 1812, the farm was cultivated by tenants who were ancestors of the “moor” group of Native American descendants now living nearby. These tenants may have been the ones who cleared the land. These Native American people, who lived on the margin of white society, are little understood by historians.

Although no map has been found to locate farm buildings that existed before 1858, the artifact assemblage is consistent with the assumption that the house site could have been established in connection with the clearing of the woodland before 1812 and after 1771.

ARCHAEOLOGICAL INTEGRITY

Archaeological evidence from the site surface included a number of well-documented high-status artifact types as well as several regional types for which dates and distribution are not well established. Because of the very tight time range, the site’s archaeological collection has a potential for expanding our knowledge of date ranges for undocumented ceramic types.

Phase II investigations produced evidence for internal distributions of surface

materials consistent with a well-organized archaeological site.

There are two subcategories for defining archaeological integrity: temporal and physical. These are temporal and spatial integrity, both of which can be assessed from controlled surface surveys at the Phase II level.

Temporal integrity of this site was extremely good. Field survey indicated that only two components existed on the site: a late-eighteenth-century occupation and a prehistoric occupation, which are easily distinguished. The prehistoric occupation is sparse, consisting of a few projectile points and (possibly) a scatter of fire-cracked rocks. The prehistoric materials are consistent with an ordinary and predictable prehistoric component on any well-drained site near a resource-rich procurement area, such as a swamp.

Because of its short occupation, researchers may be confident that any historic-period materials recovered from the surface of this site are likely associated with a single, short-term, occupation.

Spatial integrity is also excellent. A consistent pattern of artifact distribution across the site was strong evidence that a single focus exists.

Since subsequent activities have not intruded, it is certainly possible to recover untainted features, chemical residues, and other evidence that will improve our knowledge of the



Plate 18

A tent protected workers during inclement weather and facilitated winter digging under cover.

site's layout.

Land use has not changed since the land was cleared. Among the artifacts found on the site are pieces of agricultural lime. Virtually the entire original Bloomsbury tract remains under cultivation and arguably available for site survey to provide wider settlement data. Since the current project was confined to the state-owned impact area, any surveys on other parts of Bloomsbury would be coincidental.

REPRESENTATIVENESS

This site's time period and geographical zone do not rank among the priority property types in the state management plan. In the area of "Socioeconomic Differences," however, the site poses intriguing questions. The artifact assemblage is definitely high-status, and represents a very short time period. The relative absence of bricks and nails in the surface collection indicates that the tested area may not be a brick or frame dwelling, which would produce many nails and bricks. A log dwelling is therefore the most likely.

RESEARCH ISSUES AND NEEDS

This site has considerable potential for answering questions about everyday life in downstate Delaware, and the status of Native American families during a period when they are poorly documented. Gentrification, availability of fashionable goods, communication of fashion trends, and market penetration, all bear upon the ability of a coastal Delaware family to obtain, appreciate, and use such items as tea sets.

The very short date range and exceptionally high integrity of the site qualify it as an important resource from the viewpoint of material culture history research.

ASSOCIATED PERSON OR EVENT

The terminal date of the artifacts so far analysed in this assemblage is roughly coincident with the period of the American Revolution and the federal period. A "pure" or

isolated site from this turbulent era could shed considerable light on the people who survived it.

In 1812, when Francis Denney's estate was settled, the farm was occupied by Thomas Conselar, the first tenant who is described as actually living on the property. The map in Denney's estate division does not locate Conselar's house. Conselar is an important historical figure because he was one of the progenitors of the "moor" Native American remnant group in Kent County. Investigation of the site could shed light on the history of this group during a period when it is poorly understood.

PHASE III OBJECTIVES

From the first surface survey, there was never any doubt about the site core's location, extent, and significance. After the first two test squares, everything about the site's organization was obvious.

Environment dictated the location and extent of any farmstead on this property. Common sense, as well as virtually all previous experience in historical archaeology, identifies this location as the only practical site for a house during the period before artificial drainage. The site's core occupied the highest point. Detailed surface collection data merely quantified what was obvious from initial field observation.

The chore of identifying site boundaries,



Plate 20

Even a brick pier, such as this modern example supporting an 18th-century meat house at Delaware Agricultural Museum, may be shallow and archaeologically ephemeral.



Plate 19

Log structures such as this corn crib at the Delaware Agricultural Museum often were set on log blocks that could be expected to leave very slight archaeological evidence, if any.

normally a Phase II problem, was never a material consideration, since the boundaries were obvious from the outset. Within the inner "core" of the site, the house, well, and kitchen can reasonably be expected. These features define the domestic area, and should be dug by hand.

The main reason for hand-digging is to allow detailed observation of features that might be visible in the subsoil, and to recover a uniform sample of artifacts from the topsoil. Distribution of artifact classes can provide hints to locations of structures and functions that might not be obvious from structural remains.

If the house was a log affair with relatively crude appendages, evidence could be quite scanty, and shallow enough to be vulnerable to even the most careful Gradall operator. Hand-excavation would be a prudent way to ensure recognition of such features.

Outside the core, homelot features should include trash pits, post holes and post molds. These are fairly straightforward features, comparatively deep and clear. They can safely be laid bare by mechanical diggers.

The apparent boundary ditch presents a series of other questions. Because it was a property boundary for only a short time, this ditch is unique. Most boundaries, like the western line of the present property, have been constantly renewed, and their original configurations have been obscured.

This boundary was a property line for only a half century, from the time the Exell estate was divided until Abraham Allee reconsolidated the property in 1812. It needs to be placed in its context, which includes the seventeenth-century boundary to the west and the still-open boundary ditch to the south.

RESEARCH ASSUMPTIONS

This farm is unique in certain ways. Documents indicate that it was owned and occupied by some of the county's poorest citizens during most of the time before 1812. Architectural-group artifacts on the surface confirm this assumption, since there were few brick fragments and even fewer nails.

Yet the ceramic assemblage was more characteristic of people with pretensions to gentility and some resources. Ceramics included Chinese porcelain, creamware, pearlware, and white saltglaze stoneware.

A major focus of Phase III research was to identify the social, economic, and occupational position of the site's inhabitants on hierarchical systems, other than genealogy (Figure 11).

STATUS MARKERS

Because the farm clearly was unable to support expensive tastes evident from the ceramics, the site's inhabitants clearly must have had some source of nonfarm income, or at least income that was not dependent upon the richness of this particular farm.

On the other hand, high-class ceramics could have been obtained second-hand by gift or by sale. If the site occupant was not the original owner of the high-status ceramics, then the researcher needs to determine when, and under

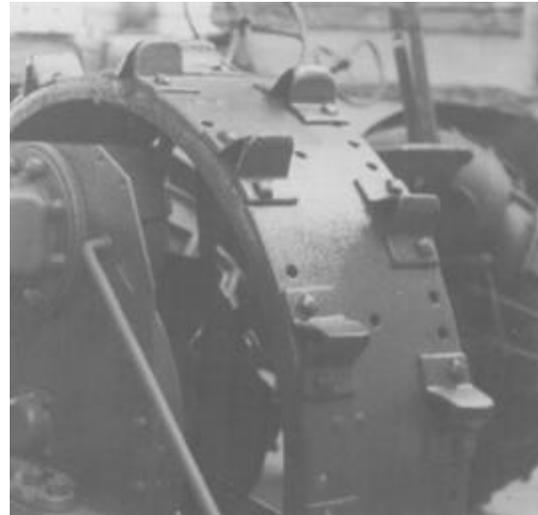


Plate 21

Cleated tractors, such as this one at the Delaware Agricultural Museum, leave distinctive tread patterns in the ground surface. At Bloomsbury, most damage was wrought by a rubber-tired Case International (Plate 21), easily identified by its presence on the site under the control of Mr. Hurd. When the tractor is not so easily identified, however, its cleat pattern should be as distinctive as a fingerprint.

what conditions, the materials reached the site.

It could be argued that the ceramics were not bought new by the people who lived on this site. They could have been discards from wealthier households, bought at estate auctions or given to poor relations. A precedent for such rich finds on low-status sites occurred at Shirley plantation in Virginia, where Chinese export porcelain was found mostly at the slave quarters.

It is possible that the presence of high-status ceramics is unrelated to apparent economic status. Status and gentrification, independent of economic scaling, have been explored in eighteenth-century Kent County by Richard Bushman (1992) and other social historians from a documentary perspective. This project offers a unique opportunity to study a household of demonstrated low economic status

whose artifact assemblage superficially indicates higher social status.

Rebecca Yamin (1989) has suggested that the penetration of stylish accoutrements is a function of an end-user's cultural distance outward along the distribution system, which may not be congruent with physical distance. At Raritan Landing, New Jersey, she demonstrated that stylishness was not a function of money wealth, but was related to social distance from the commercial and fashionable centers. People with regular connections to trend-setting port cities, she postulated, would be more likely to respond promptly to fashion innovations.

This project offers an opportunity to observe downward penetration of the Georgian worldview into a traditional social unit that could be decidedly pre-Enlightenment, even medieval, in its outlook.

Internal organization of the site, which clearly has been well-preserved, should be a useful tool in assessing the relationship of the site's occupants to larger trends in society. There is a large literature regarding the development of homelot organization through time, in Delaware, the Chesapeake, and Europe.

THE AGRICULTURE CONTEXT

While the site will be evaluated in terms of the state's historic context for agriculture in Kent and New Castle counties (DeCunzo and Garcia 1992), it offers a number of opportunities for specialized investigations of agricultural land-modification practices over three centuries.

Boundary ditches and other markers on the property can be dated precisely to exact years in the seventeenth, eighteenth, nineteenth, and twentieth centuries. Phase II research indicated that one of the eighteenth-century subdivision ditches remains intact under a cultivated field. Other boundaries are still apparent in the ground.

Changes in ditching techniques, changing attitudes toward enclosure, the use of boundary ditches for drainage, and the amount of effort allocated to ditching, are all issues that can be

explored through the ditches on this property. In order to extract maximum potential data from the various property boundary lines and drainage ditches, three techniques are indicated:

1. Cross-sectioning the ditches to determine the techniques and dimensions of the original and subsequent modifications.
2. Detailed surveying of the ditches, coordinated with the site grid, allowing precise interpretation of any drift or change through time.
3. If feasible, soil sampling to identify flora from ditch fills that existed at different periods in the site's history.

Aside from the boundary ditches, no cultural resources, eligible for the National Register, have been identified on the property outside the house site. Phase III survey project design was therefore entirely focussed on interpretation of this toft.

PHASE III FIELD STRATEGY

Because much of the work was to be performed during the inclement months of December, January, February and March, a straightforward Phase III field strategy could not be used. Ordinarily, the archaeologists would dig across the site core, from one side to the other, and then scrape the plowzone from outlying parts. Such a strategy requires long stretches of sustained good weather, which would have been most likely available in the late summer and autumn.

Instead, it was necessary to fragment the effort and conduct piecemeal investigations.

Solutions included acquisition of a large tent to cover units that could be excavated during bad weather, and to provide shelter for the crew.

The core was arbitrarily divided into work areas about thirty feet across, beginning on the west end of the core. A tent was erected over half the western area.

In good weather, units outside could be dug, while indoor units could be dug in bad weather. After most of the units were opened,

the tent would be removed and the block would be completely excavated. The block would be dressed, mapped, drawn, photographed, and interpreted, but features would not be opened at this time.

Because of the danger of frost damage from long-term exposure, the opening of pit or shaft features would be left for better weather. All discovered features eventually would be excavated, after the hand and machine stripping.

Exact definition of the core area would be an ongoing operation, with the opening of successive units during the progress to the eastward. Every archaeological unit is, by definition, a test unit that will influence the course of subsequent research. It is therefore folly to prescribe in advance the exact dimensions and location of even such a well-defined core area. Progressive excavation by block allows mid-course adjustments during a progress across the site, and helps ensure that each unit is placed for maximum effect. A useful management tool was the ongoing sketch map (as illustrated on page 132) that was kept daily by the director to provide an overview of the whole site, including features that were otherwise invisible. After opening of the core area, stripping of the homelot periphery by machine would be possible.

Defining the homelot would be a major issue. The domestic and industrial core of the site could be defined by artifact concentrations on the surface, but much of the homelot consists of animal pens and similar large open features that leave few artifacts in a surface collection.

To prepare for opening the core and homelot, it was necessary to compile the available evidence from archaeological and architectural sources. Assuming that there are culturally-defined spatial systems for farm yards, it should be possible to predict the general layout and scope of the farmyard.

Deep features, notably wells and cellars, require special techniques to counteract natural forces that tend to cause danger to the resource and to the diggers. Among these dangers are

water, both as groundwater and as surface wash.

Shaft features are most safely dug from large apertures, which minimize the danger of injury from collapsed walls. Well diggers typically begin by digging a large hole, which then becomes a staging area for digging the shaft. The standard large hole, ten feet or more across provided a workspace several feet below the surface. Using the bottom of this hole as a platform, the well-digger would excavate a lined shaft, filling its walls with lining material (brick, wood, barrels, or whatever) as he dug. In Delaware during the eighteenth century, many of the wells were lined with wood.

Archaeologists often open this larger hole while they search for the well shaft. This is a relatively safe part of the project. The shaft can be opened from the same lower platform from which it was built, if the well is intact and not very deep. Unfortunately, this is seldom the case.

Well shafts often contain irregular fills of dangerous and unstable materials. It is not unusual for the entire fill to drop, once a keystone piece is removed. Any unfortunate archaeologist standing on fill when it collapses is in very real danger.

Deteriorated brick casings have been known to collapse, even though they appeared to be strong and firm. Even if the casing is stable, the air in the shaft may not be safe to breathe.

One method of archaeologically opening a well, taking these hazards into account, is to lower a new casing into the hole as the digging proceeds. The person doing the work must be protected by safety lines and possibly by breathing apparatus, and heavy machinery may be needed to place each casing segment.

Aside from the obvious discomfort, this method has the disadvantage that it never allows a clear view of the context in which the artifacts are found. The excavator works in cramped quarters, sometimes underwater, and sometimes by feel. Well excavations down the

original shaft should be a last resort, when no other method is available.

A more economical and safe method of opening a well is to dig a very large ramped hole next to it, and then excavate the shaft from the side. This practice destroys the rest of the site, so it must be reserved for the last phase of excavation. It is not only safer, but it allows the excavator to view the side of the well shaft and its contents.

Drastic excavation alternatives can be justified only if there is promise of sizable return. Sometimes a representative sample can be obtained by lowering a bucket or grappling device into the shaft, especially if the well is relatively open and still contains water.

Well shafts may contain artifact assemblages of two classes. The first are materials lost in the bottom of the well during its active life. These generally are found in the muck at the bottom, and may include remarkably well-preserved organic specimens if the well has remained wet. These materials can be used to interpret the period when the site was in active use. Because they are wet, these materials frequently require immediate conservation measures.

The second class of artifacts are the materials dumped in the well during its closure, some of which also might have been preserved by the moisture. These materials include, frequently, components of the structure that originally covered the well, such as a windlass, buckets, a pump, or a roof. Also thrown into the well might be whatever trash the family wished to bury at that time, or whatever trash was lying about the property. The possibilities are endless, but they inevitably bear witness to the time when the well was being closed. In one grisly example, an abandoned well at a Virginia medical school was stuffed with human remains leftover from dissections.

Materials at this level may be varied and waterlogged, but they also may be large and deteriorated. A windlass or a bucket half-submerged in the muck could be well preserved on the bottom, fragile in the middle, and missing at the top. Such materials not only require

immediate first-aid attention, but demand urgent curatorial decision-making. The cost of conserving a large and fragile object may not be justified by its intellectual or decorative value.

The topmost slumped earth filling of the well shaft is a remnant of the site's topsoil as it existed at the time just after the well was filled.

As such, it may contain archaeological records of the site's cultivation. The outer fill, on the other hand, contains a record of the site at the time the well was dug, presumably much earlier. These two sealed contexts may be valuable for interpretation of phytoliths, pollen, or other floral remains.

While current local or regional research designs pose no questions that could be readily and economically answered by such soil samples, their preservation for future scholarship is indicated.

SITE LAYOUT CONSIDERATIONS

The agricultural homelot is a property type common throughout much of western civilization. Combining residential, industrial, and agricultural functions, the homelot has been shown to abide by rules of organization, which may be expected to have evolved over time (Keeler 1978).

Studies in other countries have indicated that Western European farm layouts and farm building designs have evolved since the Iron Age "long house" in a documentable series of development stages, adapted to different crops and climates over the centuries (Fridriksson 1994: 179).

Homelot organization is particularly important to the archaeologist planning an excavation, who must decide in advance which areas will be treated as core, and which areas will be treated as outlying parts unlikely to contain major features.

Such strategic decisions are not arrived at quickly or early. Indeed, every five-foot test unit is a test, coloring the decision of where the next unit will be sited.

To reduce the uncertainty, the archaeologist tries to climb inside the reasoning process of the people who created the site. A rudimentary “expert system” evolves, with certain rules:

1. The farmer’s house is best located on the edge of good agricultural soil, never in the middle of a good patch (L. Heite 1984; Heite and Heite 1985).
2. Let the livestock drink from a stream or spring if possible. It’s hard work to water the animals from a well.
3. Houses should be built on a place that drains fairly well.
4. Wells and privies should be close to the house. People eventually learned that they shouldn’t be too close to one another, but that was later, after Pasteur.
5. There is a certain size of enclosure that is most convenient for farm folks, depending upon husbandry practices.
6. Cellars and graveyards require a better quality of natural site drainage (Bachman and Catts 1990).

These rules of thumb, if they can be quantified, should save considerable time and effort. A cursory review of the archaeological literature indicates that toft layout does indeed conform to “rules” with roots deep in European tradition.

Traditional tofts conform to certain rules (table, pages 128-129) that transcend the Atlantic barrier and stretch into the mists of antiquity. In order to identify constraints and themes throughout Northern European culture, farm site characteristics were tabulated.

First, and most consistent, rule of site layout is the placement of the house at a margin of the toft, near an entrance. From eleventh-century Iceland to twentieth-century Arkansas, this rule has held consistently.

Wells are located near the house. Where wells were identified, they were found predominantly

within 20 feet of the house, often within ten feet. In fact, surviving examples indicate that it was common to locate the well near the principal door of the house. Whenever a well was found more than 30 feet from the house, some other locational influence seems to have been at work.

Privies appear to be a relatively recent innovation among lower-status rural tofts. Of the sampled sites, the only seventeenth-century privy belonged to a wealthy urban Dutch merchant. Philadelphia authorities were regulating pit toilets in 1769 (Cotter, Roberts and Parrington 1992:46), long before they were common on yeoman farms in downstate Delaware.

When privies finally arrived on the rural scene, they were relegated to a more remote location, around 50 feet away. Folklore states that privies often were situated near concealing grape vines, wisteria, or figs. One eighteenth-century privy on the Isle of Man was located behind the pigsties! In any case, the privy was farther from the house than the well.

Post-in-ground (earthfast) house construction was first recognized in the Chesapeake only 25 years ago as a major element of local vernacular architecture. Since publication of the Hallows Site (Buchanan and Heite 1971), it has become apparent that this was the dominant construction technique in tidewater Delaware and the Chesapeake colonies during the seventeenth century and much of the eighteenth century.

Earthfast house construction had a long pedigree in the English tradition (Clarke 1984: 37), but it was forgotten in America after the eighteenth century. It has been assumed, probably correctly, that Americans abandoned the method because the Chesapeake climate encourages rot and termites that were not so prevalent in England. Except for limited use in pole-built outbuildings, earthfast construction was wiped from the folk memory.

ARTIFACT EXPECTATIONS

Presence or absence of certain features or artifacts on a site may indicate status,



Plate 22

Phase II testing, at the chilly beginning of winter 1994-1995

gentrification, or modernization, of a family.

Privies do not occur on all sites in all periods. Nor do individual china dishes. Some estate inventories contain pewter or wooden dishes, while others contain no pewter but large amounts of refined earthenwares.

While some scholars, notably George Miller, have attempted to produce an economic scaling based on artifact assemblages, non-economic status markers are less simple to detect. Pewter, for example, can skew any survey of foodways-related artifacts. Pewter can be melted on a very low heat, to produce new objects, which may be why so few old pewter objects have survived, above or below ground.

Ceramics, on the other hand, do not recycle well. Wooden artifacts disappear altogether in such environments as plowzones, where ceramics survive. String, rope, and textile fabrics survive only in unusual conditions. Natural and economic forces of preservation and destruction therefore serve to skew the archaeological record in ways that need to be addressed.

An absence of ceramic dinner plates on a site may argue in favor of pewter dishes, even though no pewter is found. Absence of individual serving pieces also could indicate that people ate from a common pot, as in medieval times.

In such cases, negative evidence is unreliable at best, but sufficiently tantalizing to lead the unwary down a primrose path to fallacy. There is not yet a reliable and generally accepted measurement tool that will allow comparison of assemblages from different social and economic levels, at different times.

CHEMICAL ASSESSMENT

Closely spaced soil sampling of the site core area may provide detailed intrasite pattern data, sufficiently detailed to map very small features.

Like any survey technique, a soil chemical survey should provide more resolution as the interval between tests decreases. The interval is therefore dictated by the size of the feature being sought. A survey at 10-centimeter intervals inside a hut site at Trethallen, in Cornwall, “had more relevance to the topography of the floor of the hut than to the overall phosphate variability.” A one-meter interval has been suggested as ideal for large scale intra-site work, while 20 centimeters may be best for complex sites (Walker 1992: 70).

A combination of geophysical and chemical survey was conducted at the Revolutionary War cantonment near New Windsor, New York. Samples were evaluated for calcium, soil pH, phosphorous, and potassium. Hut sites were tested on a five-foot grid. Each tested hut showed a congruence of activities and chemical residues (Fisher 1983; Sopko 1973).

Recent research has indicated that it is not necessary to sample both the plowzone and the subsoil. Previous doctrine had held that the plowsoil might contain agricultural additives that would skew the underlying results.

Therefore, a standard sample technique called for taking duplicate samples, which was done in the original ten-foot survey.

Because the plowsoil had already been removed, it was not possible to take topsoil samples during the thirty-inch survey. There was, however, a possibility that the fill of features might influence the overall findings of the thirty-inch survey. To counter this possibility, the surveyors were instructed to skip any sampling location that fell within a feature.

COMPARABLE SITES (TABLE)

Beginning on page 128 is a table of comparable sites, in no particular order, derived from the current archaeological literature worldwide. The purpose of this compilation was to estimate the possible size of a house or homelot, based not only on local evidence, but on data from all western European society.

Interesting among the findings of this survey was the lack of privies and wells that are known from the existing archaeological literature of this region. In order to plan the hand and machine excavation, it was necessary to find out if there were any constants or trends among privy and well situations.

Documented Areas of Enclosed Yards in farmstead sites

Large enclosures

Martin's Hundred	32,000	frontier manor
King's Reach	32,000	well defined
Svartabakki	37,500	sheep farm
Væthús	40,500	sheep farm
Cliffs	60,000	wealthy owner

Small farms or small enclosures

St. John's	2,000	estimated
Caldecote	2,400	enclosed yard
Thomas Williams	3,000	tenant farm
Pettus / Littletown	10,000	gentry home
Close Farm	10,800	enclosed byre
Benjamin Wynn	14,400	tenant farm
Crammag	18,000+	modern farm

Looking at the first list, it would appear that large frontier Tidewater Chesapeake farmsteads were in the same size category with Icelandic sheep farms. This is consistent with the introduction of

cattle and sheep by the wealthier colonists, since these species require periodic enclosure close to the hay barns.

Factors other than wealth and animal husbandry must have caused the choice of a smaller homelot enclosure. The more mechanized "industrial revolution" farmstead at Crammag on the Isle of Man is the largest on the list, followed by the Wynn tenant farm. The smallest yards were occupied by the gentry.

For planning purposes, it would be safe to conclude that most farmstead sites could be encompassed by stripping less than 20,000 square feet, except where sheep or large dairy operations are found.

Privies and wells, one would expect, are necessary for any homestead, but this is not the case. Relatively few excavated sites have reported wells and privies.

Reported wells distance from house (feet)

Thomas Williams	10
Wilson-Lewis	10
Albert Temple	10
Benjamin Wynn (1)	10
Sanders Urban Farmstead (1)	10
William Strickland	20
Moore-Taylor (4)	20
Benjamin Wynn (2)	20
Sanders Urban Farmstead (2)	20
John Powell	25
Moore-Taylor (1)	25
Moore-Taylor (2)	25
Moore-Taylor (3)	25
William Strickland	30
Thompson's Loss and Gain	34
Richard Whitehart	50
Pettus Plantation at Littletown	50
Utopia Cottage	60
Moore-Taylor (5)	100

AVERAGE DISTANCE TO WELL	29
<i>Average, ignoring Moore-Taylor (5)</i>	25

Thus it appears that one should seek wells within 30 feet of the house, or, conversely, should seek the house between 10 and 30 feet from the well. On the Chesapeake, springs were the preferred water source during the seventeenth century, and water sources were an important factor in homelot site selection (Keeler 1978:135).

Reported Privies, distance from house (feet)

Thomas Williams (1)	25
Thomas Williams (2)	25
Thomas Williams (3)	25
Thomas Williams (4)	25
Thomas Williams (5)	25
Thomas Williams (6)	35
Thomas Williams (7)	35
Thomas Williams (8)	35
St. Johns Phase II	45
Pettus Plantation at Littletown	50
Allen House	50
Moore-Taylor (1)	50
Moore-Taylor (2)	50
Albert Temple Tenant (1)	50
Albert Temple Tenant (2)	50
Sanders Urban Homestead	50
Crammag Farm	60
Utopia Cottage	60

AVERAGE DISTANCE TO PRIVY 41

The Thomas Williams site, with its eight privies, skewed the data, but not enough to modify the conclusion that privies should be sought in a ring between 25 and 60 feet from the house, and that the house lies within 60 feet of the privy, should it be found first.

More significant is the conclusion that privies are not universal features. Of all the sites identified, only one privy was from the European sample, and only six of the American sites contained privies at all.

On sites without privies, one must assume that human waste was taken to some place for disposal, or deposited directly on the ground surface. This subject has been explored elsewhere in this report (page 320) but not previously in the literature of Delaware archaeology.



Plate 23

Travis Hale tests the boundary for a ditch line

A test through the west property boundary of Bloomsbury failed to show any evidence of a boundary ditch that would have divided it from the Barren Hope tract.

COMPARISON OF TOFT SITE FEATURES

Excavated rural toft sites, arranged in order of size, reported from the United States and other countries in the Northern European agricultural tradition.

Site name	Property Type (occupant)	Date range	Place or State	Water source distance	Privy to house distance	House size (in feet)	Square feet of house	Sq. ft. dug or found enclosed	Reference	Comments
John Ruth Inn	Rural tavern	c.1740-c.1780	Del.	not found	not found	18 x 15 with a 10 x 7 addition	270 +70	1,250 Phase II only	Coleman, Catts, Hoseth and Custer 1990	Log or timber house on stone footing over cellar
Thomas Williams	Tenant farm	1791-1846 1845-c.1920	Del.	1 well ten feet from the house	8 privies, 25 feet (5), and 35 feet (3) away no privy identified	22 x 14 17 x 27	308 +459	3,000 inside fence lines	Catts and Custer 1990	Log house over a stone cellar and a stone lined cellar with frame house
John Powell	Yeoman owner, then tenant	1691-1721, 1722-1735	Del.	25 feet	no privy identified	18 x 18 15 X 15	324 +225	40,000 opened but no yard defined	Grettler, Miller, Doms, Seidel, Coleman and Custer 1995	Post in ground construction and sill on ground construction
Svartibakki	Sheep farm	1104 - 1898	Iceland	river nearby	no privy identified	16 x 21	336	37,500 enclosed	Sveinbjarnardóttir 1992	Medieval Icelandic farmstead
William Strickland	Yeoman owner	c. 1726 - c. 1764	Del.	20 feet 30 feet	no privy identified	24 x 16	384	21,235	Catts, Custer, Jamison, Scholl, and Iplenski 1994	Post in ground construction
Allen House	Yeoman owner	c. 1730-c.1780	NJ	not found	50 feet away	20 x 20 with detached kitchen 20 x 20	400	about 10,000	MAAR 1988	Frame house on stone footing
Wilson-Lewis	Tenant farm	pre 1859 -1889	Del.	2 wells, 10 feet from house	No privy identified	17 x 25	400	10,000 explored of larger lot	Grettler, Miller, Catts, Doms, Guttman, Iplensi, Hoseth, Hodny and Custer 1994	Sill on ground frame house with three post-in-ground additions
Whitten Road	Yeoman owner, then tenant	c. 1770 - c. 1853	Del.	more than 100 feet	No privy identified	17 x 25	400	43,000	Shaffer, Custer, Grettler, Watson, and De Santis 1988	
Richard Whitehart	Yeoman owner	1681-1701	Del.	50 feet	no privy identified	15 x 30	450	8,118	Grettler, Miller, Doms, Seidel, Coleman and Custer 1995	Post in ground construction
Thompsons Loss and Gain	Tenant farmstead	1720-1780	Del.	34 feet	unable to dig enough to find one	18 x 24	450	35,123 unfinished	Guerrant 1988	Post in ground construction
Albert Temple	Tenant farm	1830-1955	Del.	10 feet	2 privies, both 50 feet away	26 x 20 with addition 16 x 20	520 +320	2,400	Hoseth, Leithren, Catts, Coleman and Custer 1990	Frame house on stone cellar
Hafod Y Nant Criafolen	Summer pasture farmstead	15th or 16th century	Wales	river nearby	no privy identified	Area 1: 13 x 40	520	9,150	Allen 1979	Summer farmstead in a medieval transhumance husbandry system
The Maine	Tenant farm	1618-1625	Va.	no well identified	no privy identified	22 x 24 10 x 27 15 x 18 16 x 33	528 +270 +270	32,452 defined by excavator	Outlaw 1990	Post in ground construction
Close Farm	Yeoman Farm	18th century	Isle of Man	river nearby	no privy identified		528	10,800 or more enclosed	Emery 1985	Rubble stone farmhouse with byre and barn in traditional style
Moore-Taylor	Yeoman owner	c. 1840 - c. 1931	Del.	5 wells, 3 about 25 feet, 1 at 20 feet, 1 at 100 feet	2 privies, both 50 feet away	24 x 12 with 20 x 12 rear ell	528	61,600	Grettler, Miller, Catts, Doms, Guttman, Iplensi, Hoseth, Hodny and Custer 1994	Frame house on brick piers with a porch on piers

Croft C. Caldecote	Farm	late medieval	Herts., Britain	no well noted	no privy identified	18 x 36	648	2,400 between barns	Clarke 1984	Cobbled yard includes 2 barns and dovecote
Utopia Cottage	Tenant on farm	1660-1710	Va.	60 feet	no privy identified	37 x18	666	15,000 core area	Keeler 1978; Kelso 1984	Post in ground construction
Væthús	Tenant sheep farm	before 1880	Iceland	river nearby	no privy identified	about 20 x 35	700	40,500 enclosed	Sveinbjarnardóttir 1992	Traditional Icelandic farmstead part of a transhumance husbandry system
Martin's Hundred Site A	Wealthy planter's home farm	c. 1625-c. 1645	Va.	no well identified	no privy identified	40 x 18 18 x 16	720 +288	32,000± inside inner fences	Noël Hume 1982, 1983	Post in ground construction within a two-acre ditched enclosure
Crammag Farm	Yeoman farm	18th century	Isle of Man	none noted, river nearby	60 or more feet, behind pigsties	30 x 24	720	18,000 or more enclosed in walls	Emery 1985	A prosperous farmyard reflecting the Agricultural Revolution
Benjamin Wynn	Tenant farm	c. 1765 -c. 1820	Del.	2 wells, 10 and 20 feet from house	No privy identified	24 x 30	720	14,400	Grettler, Miller, Catts, Doms, Guttman, Iplensi, Hoseth, Hodny and Custer 1994	Sill on ground frame house
King's Reach	Yeoman owner	c. 1690-1715	Md.	no well found	no privy identified	30 x 30 quarter 20 x 10	900 +200	32,000 with defined yard	Pogue 1988 Pogue 1990	Post in ground construction with a quarter adjacent
Pettus Plantation at Littleton Cliffs	Gentleman owner of farm	1640-1690	Va.	50 feet	no privy identified	50 x 18	900	About 10,000 enclosed	Keeler 1978; Kelso 1984	Post in ground construction with brick half cellar
Plantation Phase II	Wealthy owner	c. 1720	Va.	spring	no privy identified	50 x 18 with stair tower 8 x 10	900	60,000 fenced	Keeler 1978	Post in ground manor house
Wilson-Slack house	owner occupied	1850-1893	Del.			32 x 30	960		Grettler, et al., 1994	
St. John's	Urban wealthy owner	1650-1660	Md.	no well identified	45 feet, maybe not permanent	20 x 50 with detached kitchen	1000	About 2,000 enclosed	Keeler 1978	Post in ground construction
John Hallowes	Yeoman owner	c. 1675	Va.	no well identified	no privy identified	50 x 20	1000	11,250 excavated	Buchanan and Heite 1971	Post in ground construction
Nancy Belle Holley	Piedmont owner occupied small holding	1904	Miss.	23 feet		32 x 32	1024		Smith, Barton and Riordan 1982	
John Read house	owner occupied	c. 1740 - 1930	Del.			46 x 29	1334		Grettler, et al., 1994	
Billie Eaton House	Piedmont sharecropper and then widow occupied	before 1898	Miss	20 feet	no privy reported	46 x 32	1472		Smith, Barton and Riordan 1982	
Sanders urban farmstead	Urban yeoman house	c.1840 - 1960s	Ark.	3 wells, 10 to 20 feet	about 50 feet away	50 x 30	1500	35,000 city block	Stewart-Abernathy 1986	Frame house on masonry foundation occupies city block
James T. Butler	Piedmont owner occupied	1913	Miss.	4 pumps, 140 feet, 120 feet, 107 feet, and 78 feet	indoor plumbing	42 x36	1512		Smith, Barton and Riordan 1982	
Ezra Searcy	Piedmont small holder owner occupied	1906	Miss.	26 feet	73 feet	44 x 37	1628		Smith, Barton and Riordan 1982	