

Chapter 3

METHODS OF ARCHAEOLOGICAL INVESTIGATION

Archaeological evidence for Ayers Town was initially revealed in 2008 by Legacy Research archaeologists during survey along a 48-m (150-ft) corridor flanking the north side of the SC Highway 5 right-of-way (Legacy 2009:32–33). This survey consisted of surface reconnaissance and systematic subsurface testing along transects at 30-m intervals. Eight potsherds and an English kaolin pipe fragment associated with the historic Catawba occupation of Ayers Town were recovered from three adjacent shovel test pits (Transect 20, Shovel Tests 23–25). Eleven lithic artifacts attributable to earlier cultural components were recovered from three adjacent shovel test pits in Transects 20 (Shovel Test 24) and 21 (Shovel Tests 24 and 25), and from the exposed ground surface flanking the south edge of the site (Legacy 2009:65).

Initial site discovery was followed up with a program of more intensive shovel testing to delimit the site and assess site content (Figure 3.1) (Legacy 2009:65). One hundred thirty-seven shovel test were excavated at five-meter intervals; of these, 62 yielded cultural material and defined a site area measuring approximately 60 m east-west by 65-m north-south. Almost three-fourths of the 219 total artifacts found (including those collected during initial site discovery) were fragments of Catawba-made coarse earthenware attributable to the historic occupation at Ayers Town. Other artifacts associated with this occupation included two fragments of English ceramics, a piece of a kaolin pipe, and five bottle glass fragments. The remaining artifacts were stone tool fragments and debitage associated with earlier site components.

The University of North Carolina's archaeological investigations at Ayers Town were undertaken in two phases. The initial phase, which began April 20, 2010 and concluded July 1, 2010, coincided with the university's summer archaeological field school and involved comprehensive topographic mapping of the site surface and surrounding area, sampling the site through systematic metal detection survey, remote sensing, systematic soil auger testing, test and block excavations, partial stripping of the site with a mini-excavator to identify archaeological features, and hand excavation of exposed archaeological features. Seventy-eight features, including 19 graves, were identified. During the second phase of investigations, which began on November 19, 2010 and concluded on January 6, 2011, the remainder of the site was stripped with a mini-excavator and 113 additional archaeological features were identified.

Relocating the Site and Establishing the Grid

The discovery in 2008 of site 38YK534 by Legacy Research Associates and the delineation of its approximate boundaries were based on a combination of surface survey of exposed ground along the gas pipeline right-of-way which runs parallel to SC Highway 5 and systematic shovel testing at approximately 5-m intervals within the adjacent wooded area to the north. Based on these investigations, which included 69 positive shovel tests and 137 total shovel tests, a site

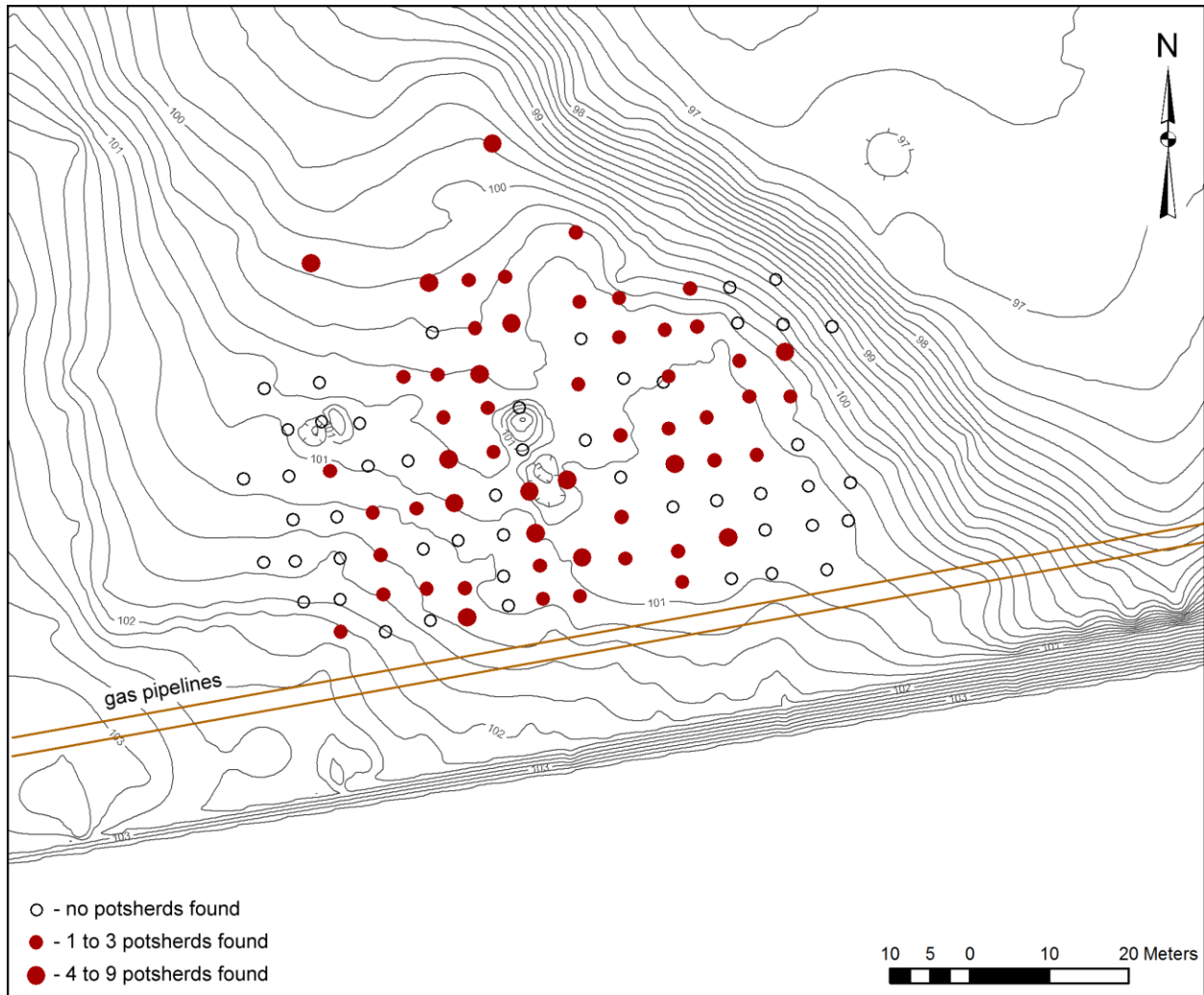


Figure 3.1. Legacy shovel test pits that were identified and re-mapped during 2010 fieldwork. Symbols represent the following: open circle – no Catawba potsherds found; small dot – 1 to 3 potsherds found; and large dot – 4 to 9 potsherds found. Contour interval = 20 cm (elevations reference an arbitrary datum).

boundary approximately 65 m (north–south) by 60 m (east–west) was defined (Legacy Research Associates 2009:65–70). When RLA investigations began in spring 2010, some of the surveyor’s flagging marking the site boundaries was still intact, many of the shovel test pits still contained pin flags, and some of those pin flags had Legacy grid coordinates marked on them (Figure 3.1). In the absence of permanent grid markers to provide precise spatial control for the earlier site investigations, our first task was to establish a new site grid and then record all visible evidence of the earlier work relative to that grid.

Because we planned to work simultaneously at both sites 38YK533 and 38YK534, we decided to use a single grid and to tie that grid into the South Carolina State Plane reference points that had been placed in the vicinities of both sites by surveyors working for Mulkey Engineering and Consultants. The initial grid datum point was established at Mulkey’s iron reference point marked CP13, located at 38YK533. This point, designated RLA Station #1, was assigned a coordinate of 860.000 m east and 860.000 m north, and an arbitrary elevation of 100.000 m (actual elevation is approximately 144.06 m AMSL). With a total station set up atop

this pin, a north–south baseline was established using a compass, and a steel spike was driven into the base of a pine tree along the line north of the pin. With the north–south axis of the grid established, a second Mulkey reference point, marked CP12 and located approximately 75 m southeast of CP13, was located with the total station as having a coordinate of 928.865 m east and 826.492 m north. (The standard nomenclature used for grid coordinates throughout this report is 826.492R928.865, with the first value representing the north or “y” value, “R” indicating right of the zero north–south baseline, and the second value representing the east or “x” value.)

Once the grid had been established for site 38YK533, grid coordinates and elevations were determined for two additional Mulkey reference points in the vicinity of site 38YK534. An iron pin marked CP17, located just southeast of the site and within the natural gas pipeline right-of-way that flanked the north side of the existing SC Highway 5 right-of-way, was determined to be 857.721R224.464 (100.700 m elevation). Another iron pin, marked CP18 and located about 170 m southwest of CP17 between the pipeline right-of-way and SC Highway 5, was determined to be 818.477R58.879 (104.370 m elevation).

With spatial controls having been established, all extant site boundary flags and pin flags marking earlier shovel test pits were mapped with a total station; other visible shovel test pits without markers also were mapped. Then, surface elevations were recorded at approximately 5-m intervals across the entire site area in order to construct an accurate topographic map. This required substantial clearing of the site due to existing vegetation, as well as fallen trees and limbs.

Metal Detection Survey

The first site investigation at Ayers Town was to conduct a comprehensive metal detection survey in order to gauge site extent, artifact density, spatial artifact patterning, and by extension, site structure. Previous research at the Catawba village sites of Nassaw (ca. 1750–1759), Old Town (ca. 1763–1790), and New Town (ca. 1790–1820) has demonstrated that metal artifacts are ubiquitous in later historic-era Catawba contexts and can serve as accurate proxy measures for the distributions of other artifact classes and for the location of discrete deposits such as archaeological features (e.g., Davis and Riggs 2004; Fitts et al. 2007).

The procedure for the metal detection survey was as follows. First, the suspected site area was uniformly and completely swept with a Fisher Model 1270 metal detector, and all metal locations were marked with pin flags. Metal detecting usually was conducted in small, contiguous blocks about 10 m on a side; this insured that no area was inadvertently missed. Second, each flagged location was carefully excavated with a shovel to retrieve the detected artifact or artifacts. The excavated fill from each shovel test was carefully examined, but not screened, to find other, non-metallic artifacts such as potsherds, and the bottom of each shovel test also was examined for the presence of intact archaeological deposits. Finally, the excavated shovel test was backfilled and its location was recorded with a total station. In instances where only modern artifacts (e.g., barbed-wire fencing, fence staples, bottlecaps, etc.) were recovered, those finds were discarded and their locations were not recorded.

The metal detection survey at Ayers Town covered 4,631 sq meters and yielded 417 artifacts from 367 positive shovel tests (designated FS#1 to FS#386) (Figure 3.2). An additional 19 shovel tests yielded artifacts which, upon further inspection in the lab, were determined to be

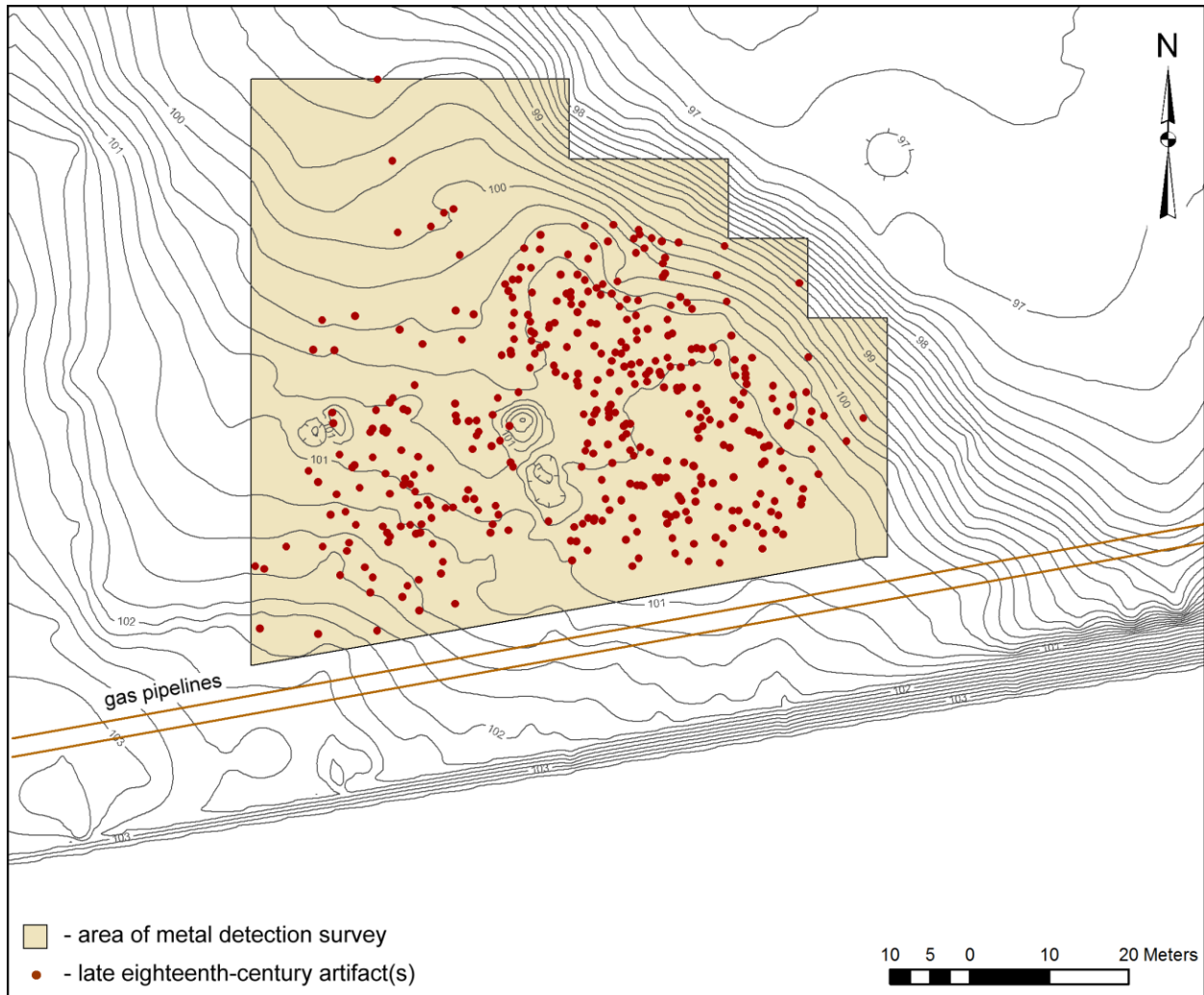


Figure 3.2. Map showing the area covered by the metal detection survey and the locations of recovered late-eighteenth-century artifacts (red dots). Contour interval = 20 cm (elevations reference an arbitrary datum).

modern, and those artifacts were discarded. Most categories of brass, copper, iron, lead, nickel, pewter, and silver artifacts are represented in the sample of metal-detected artifacts; non-metallic artifacts such as pottery and chipped stone also were recovered. The most common artifacts were hand-wrought nails and nail fragments ($n=173$), Catawba potsherds ($n=48$), cast iron kettle and Dutch oven fragments ($n=36$), unidentified iron objects ($n=24$), cut nails ($n=19$), pieces of lead shot ($n=16$), Jew's harps ($n=6$), and buttons ($n=5$). Other artifacts include coins, horse tack and harness hardware, and gun parts. These artifacts are discussed further in Chapter 6.

Once the metal detection survey was completed, the spatial density and distribution of metal artifacts was compared to the results of the shovel testing program reported by Legacy Research Associates. As can be seen in Figures 3.3 and 3.4, both methods of site sampling provide generally consistent artifact distribution data for defining the eastern, southern, and western edges of the site; however, they provide conflicting evidence for defining the northern (particularly northwestern) edge. While shovel testing recovered several fragments of pottery in this area, very few metal artifacts were detected. As will be seen later, the two 1x1-m test

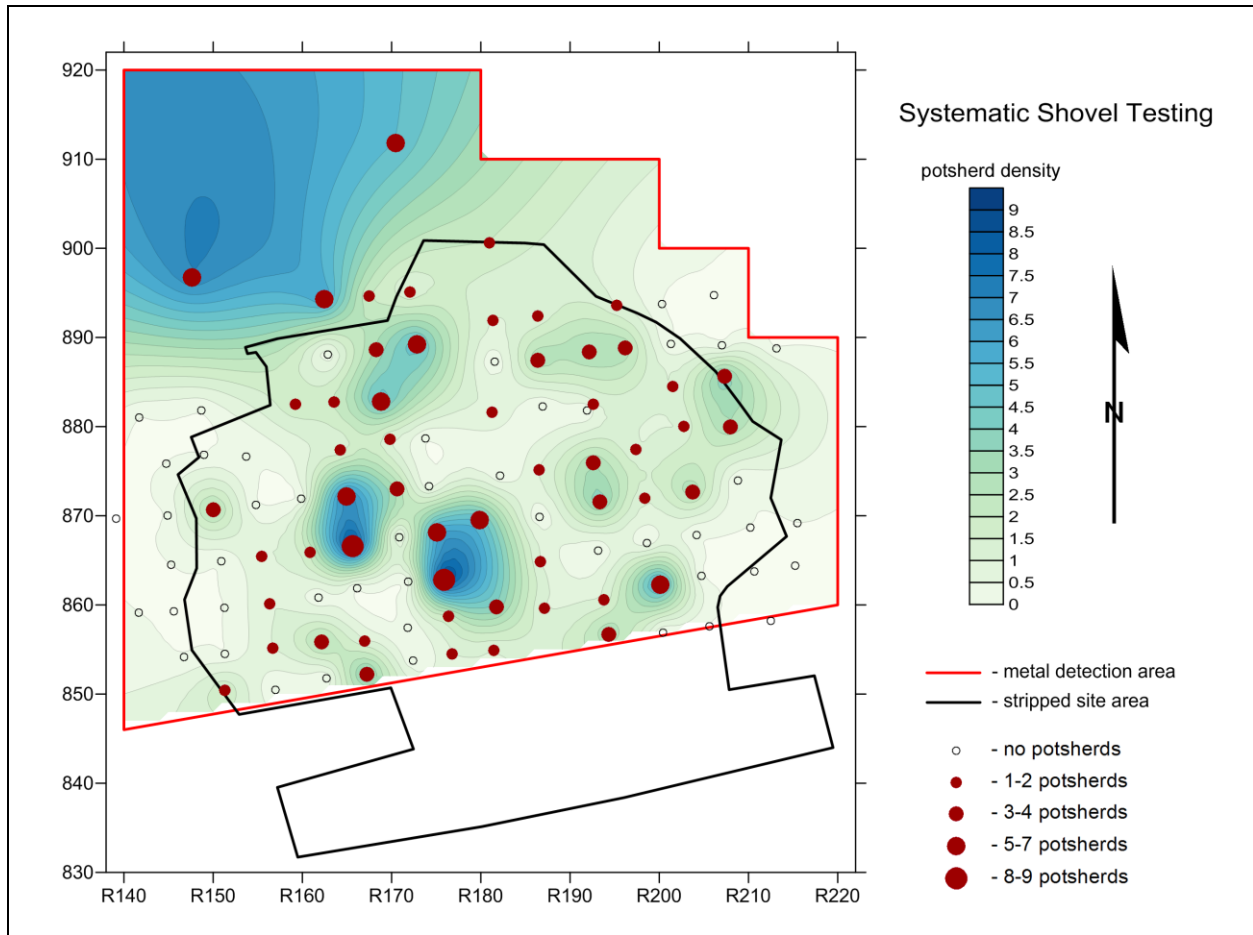


Figure 3.3. Density map of potsherds recovered by systematic shovel testing with superimposed map of test pit locations and potsherd counts per shovel test pit. The density contour plot was generated using Surfer 9 with data gridded at one-meter intervals.

units dug in this part of the site revealed thick, re-deposited sediments containing numerous small fragments of pottery. These sediments represent sheet wash derived from the adjacent site surface; because of this, the artifacts contained within them do not provide meaningful spatial evidence of cultural behavior while the site was occupied. The more robust spatial pattern exhibited by recovered metal artifacts suggests these artifacts were less susceptible to lateral migration from soil erosion. Later in this chapter, we will consider the relationship of artifacts recovered by systematic shovel testing and metal detection survey to the spatial distribution of archaeological features and interpreted community structure.

Remote Sensing and Systematic Soil Auger Testing

Given previous field experience at other Catawba sites such as Nassaw and Old Town, it was anticipated that archaeological features would be encountered during the metal detection survey, as metal objects would be detected in the tops of refuse-filled pits. It was hoped that the detection of features in this way would provide clues about settlement structure that could guide more intensive investigation of household areas within the site. However, this was not the case. While several archaeological features contained metal artifacts, these artifacts mostly occurred in

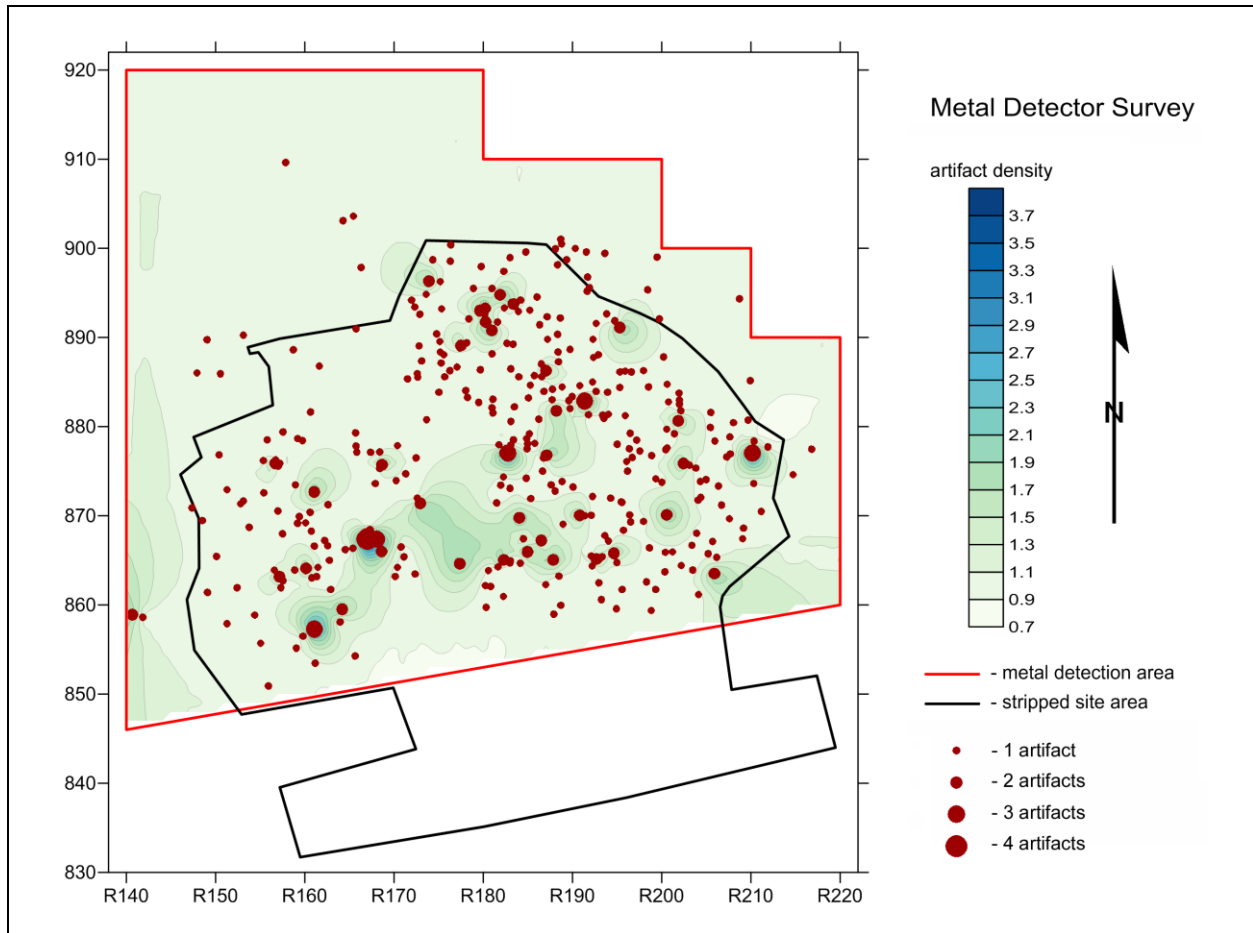


Figure 3.4. Density map of artifacts recovered by metal detecting with superimposed map of piece-plotted artifacts. The density contour plot was generated using Surfer 9 with data gridded at one-meter intervals.

lower fill zones beyond the range of the metal detector, and no features were identified by metal detecting. In the absence of such evidence, two additional search strategies were employed with the expectation of identifying features.

The first was to employ remote sensing to identify subsurface soil anomalies that might be attributable to cultural activity. Using a GeoScan FM36 Fluxgate gradiometer, Gerald Schroedl and Stephen Yerka of the University of Tennessee conducted a survey of the site area to detect magnetic anomalies in the soil that might be produced by subsurface archaeological features (e.g., pits, hearths, etc.). Unfortunately, and for reasons not fully understood, the gradiometer survey failed to reveal any anomalies suggestive of archaeological features. However, they did identify the progressively deeper, redeposited topsoil along the north edge of the site—a finding that was confirmed later by 1x1-m test units and mechanical stripping of topsoil.

Shortly after the gradiometer survey, a weather system brought heavy rains to the Catawba valley, and this had a very positive effect for our archaeological fieldwork. With substantially increased soil moisture following a relatively dry spring, it became possible for a period of about two weeks to probe beneath the plow zone using soil augers. Accordingly, auger testing was initiated within a 40 m by 50 m block in the center of the site. This work, as with the latter

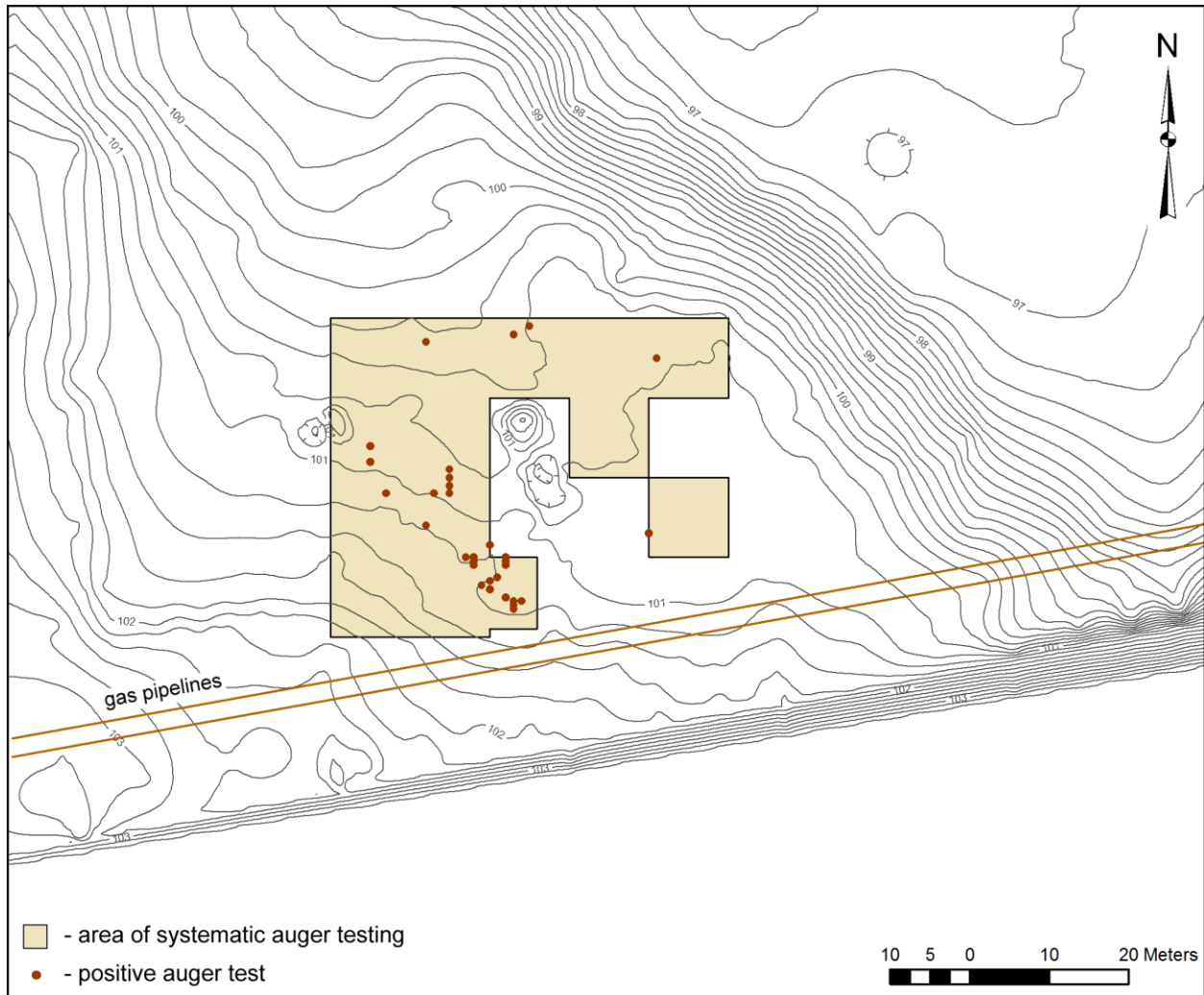


Figure 3.5. Map showing the area covered by systematic soil auger testing and the locations of positive auger tests (red dots). Contour interval = 20 cm (elevations reference an arbitrary datum).

phases of the metal detection survey, continued concurrently with the hand excavation of 1x1-m test units across the site.

The auger survey was conducted with an Oakfield soil sampling tube, which is pushed vertically into the ground to extract a 35-cm soil core measuring 18 mm in diameter (Figures 3.5 and 3.6). In most instances, the plow zone and top of subsoil could be penetrated in a single pass. Using measuring tapes to lay out the augering grid, probes were made at one-meter intervals. In all, approximately 1,300 auger tests were made within an area covering 1,354 sq meters. While most auger tests encountered sterile red clay beneath plow zone, 31 tests revealed mottled clay fill or midden-like soil with fragments of fired clay, charcoal, and occasional artifacts. These “positive” tests located 14 graves, four cellars or storage pits, three borrow pits, and two other pits. Most of these archaeological features were found in the southwest quarter of the site. A comparison of the auger testing results with the map of archaeological features identified by complete stripping of the site shows that, while some features were missed by augering (e.g., none of the numerous small, charcoal-filled smudge pits were identified), most substantial features were found. Moreover, the results of the auger testing permitted an accurate



Figure 3.6. Pairs of soil cores showing positive and negative results. In the upper pair, the top core shows undisturbed red clay beneath the brown topsoil while the bottom core shows mottled, midden-like pit fill beneath the topsoil. In the lower pair, the top core shows brightly mottled clay grave fill beneath topsoil while the bottom core shows undisturbed yellowish red subsoil beneath topsoil.

portrayal of site structure within the area that was sampled. These results, coupled with the discovery of several archaeological features in the 1x1-m test units, guided the investigations at the site during the remainder of the 2010 summer field season.

Test and Block Excavations

Once the center of the site had been systematically sampled by metal detection, 24 1x1-m test units were laid out across the site at 10-m intervals (Figures 3.7 and 3.8). The goals for digging these initial units were: (1) to assess site stratigraphy across the site; and (2) to provide additional assessment of potential site structure as represented by spatial variation in artifact density. The method for excavating these and 87 other 1x1-m units dug at the site was as follows. First, unit corners were established with a total station, with the unit being designated by the coordinate of its southeast corner (e.g., Square 860R200 designated a unit with corners at 860R200, 860R190, 870R200, and 870R190). Galvanized pins were placed at each corner, and a string was pulled between the corners to define the unit edges. After removing leaf litter from the top of the unit, the topsoil (or plowed soil) was hand excavated with shovels and trowels. All excavated soil was dry-screened through 1/4-inch hardware mesh, and objects caught in the screen were placed in a paper bag and returned to the lab for cleaning. In most instances, the plow zone was removed in two levels: an upper level of loosely-compacted soil, and a more compact lower level. Traces of plow scars were observed at the base of several units. Once an

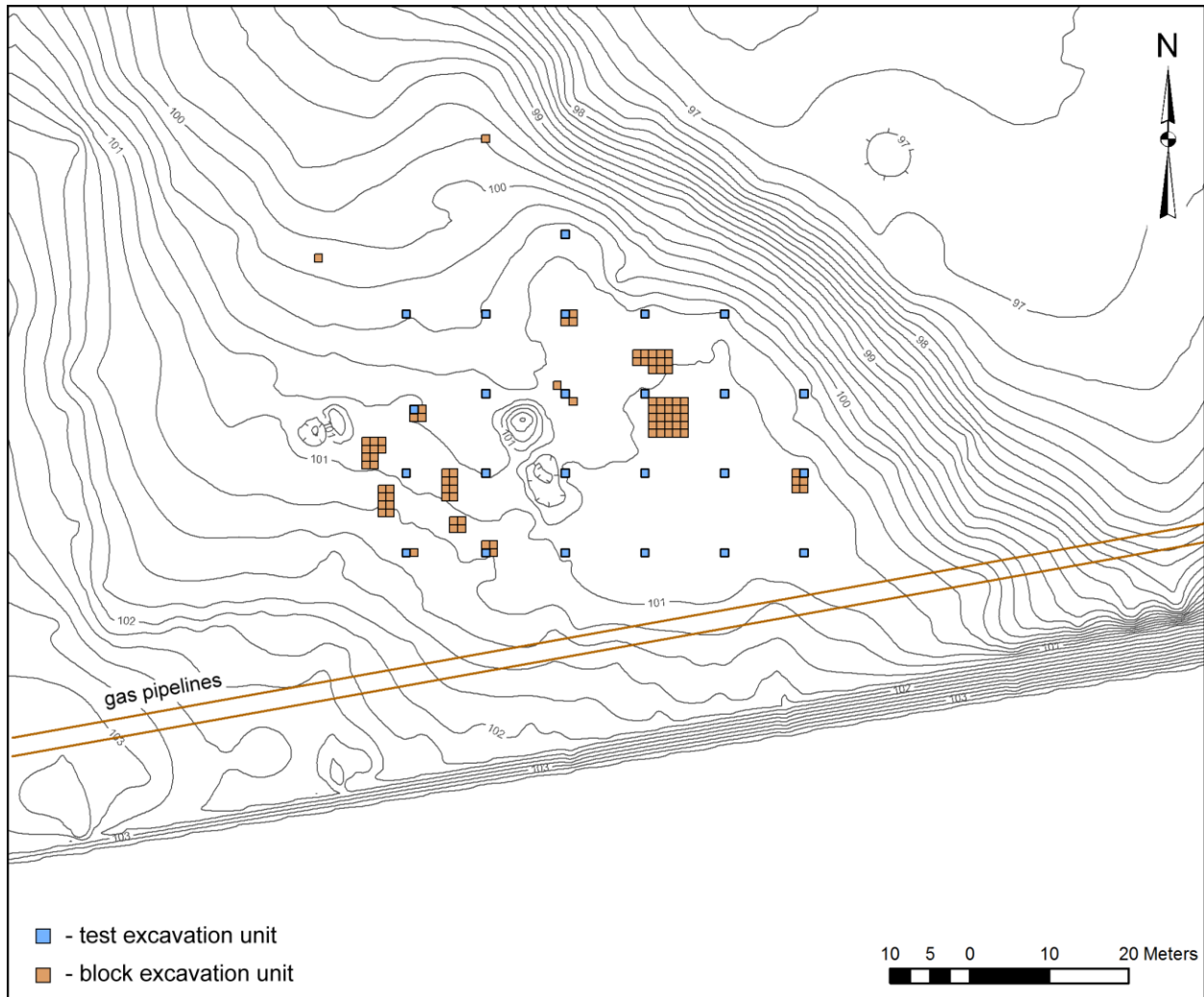


Figure 3.7. Map showing the 1x1-m hand-excavated units at Ayers Town. Twenty-four test units placed at 10-m intervals are shown in blue; the remaining 87 units are shown in brown. Contour interval = 20 cm (elevations reference an arbitrary datum).

excavation level was completed, its depth at each corner was measured both with a total station and with measuring tapes (or folding rule). Soil texture, soil color, and artifact content also were noted, and this information was placed on a separate form for each unit excavation level. Finally, each excavated unit was carefully cleaned with trowels and photographed. Any archaeological features or other disturbances observed at the base of an excavation unit were drawn by hand and also mapped with a total station.

More than 2,200 artifacts were recovered from the 24 systematically-placed test units; of these, about 85% (n=1,900) were potsherds. Two additional units dug at the northwest edge of the site contained 59 potsherds. The spatial pattern of potsherd density revealed by these excavations generally corresponds to the pattern identified by systematic shovel testing, except that densities were much lower at the northwest edge of the site than was suggested by shovel testing. Greater numbers of potsherds were recovered from units on the west side of the site where soils were thicker (Figure 3.9). This pattern only roughly corresponds to the distribution of archaeological features attributed to the historic occupation of Ayers Town.



Figure 3.8. Students excavating 1x1-m units placed at 10-m intervals across Ayers Town. View to northeast.

Five of the initial test units revealed the tops of archaeological features, which included two refuse-filled storage pits (Features 4 and 5), a small pit (Feature 27), and a grave (Feature 7). Fourteen additional 1x1-m units were excavated around these test units to fully expose the features, whereby four additional features — a posthole, two smudge pits, and a storage pit (Features 2, 1, 6, and 3, respectively) — were also uncovered.

During metal detecting and topographic survey of the site, it was observed that an area near the center of the site, about seven meters in diameter, was slightly depressed and devoid of metal artifacts. Suspecting that these characteristics might indicate the location of a house seat, a 5x5-m block containing 25 1x1-m units (Squares 875–879R191–195) was excavated with the expectation of finding one or more sub-floor storage pits or cellars (Figure 3.10). While no features were found in this block, later mechanical stripping of the adjacent area revealed a large rectangular cellar pit (Feature 55) just beyond the west edge of the block, thus validating our initial suspicion.

Based on the results of systematic soil auger testing, five additional blocks containing a total of 43 1x1-m units were excavated. Two of these blocks (Squares 865–868R157–158 and Squares 871–874R155–157), located near the west edge of the site, contained two large storage pits (Features 33 and 69), a clay borrow pit (Feature 61), and two other pits (Features 62 and 68). Just east of these blocks, a third block (Squares 867–870R165–166) was excavated that revealed four overlapping graves (Features 36, 37, 38, and 39). Four units excavated just south of these graves revealed a large tree disturbance but no cultural features. Finally, a block of 13 units was excavated just north of the large 5x5-m block. It contained two large clay borrow pits (Features 72 and 73) and two small, sub-rectangular storage pits (Features 73 and 74).

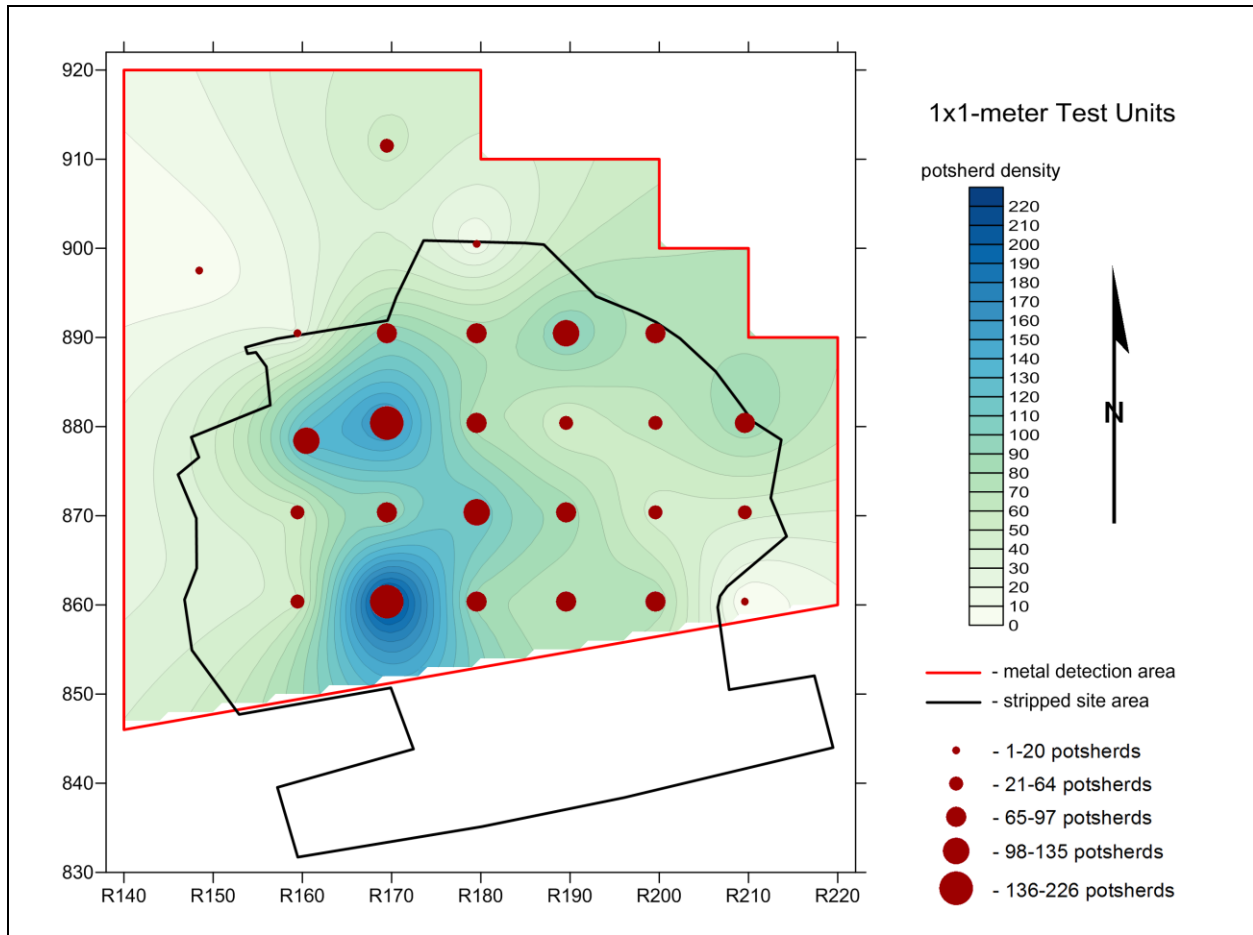


Figure 3.9. Density map of potsherds recovered from 26 1x1-meter test units with superimposed map of test unit locations and potsherd counts per test unit.

Of the five remaining 1x1-m units, three were dug adjacent to two of the initial test units, and they did not reveal any cultural features. The other two were excavated north of the main site in order to investigate the more deeply buried soils in that area. These units (Squares 897R149 and 912R170) revealed stratified deposits of plow-disturbed soils to depths of 50 cm and 60 cm, respectively.

Mechanical Stripping of Topsoil

Once the comprehensive metal detection survey and excavation of test units were completed, the remainder of Ayers Town was mechanically stripped with a mini-excavator, or trackhoe, in order to expose the tops of archaeological features at the base of disturbed plowed soil (Figure 3.11). This approach was justified by four factors. First, the topsoil to be stripped had been systematically sampled by shovel testing, comprehensive metal detecting, and test excavations. Second, the testing of the site with 1x1-m units demonstrated that, because of severe disturbance by plowing and soil erosion, more extensive hand excavation of the site was not likely to yield fine-scale artifact distribution data that could be used to determine settlement structure at the site. Third, the discovery of preserved pit features through initial test excavations and auger testing indicated that the large-scale exposure and sampling of these contexts provided



Figure 3.10. Students recording elevations in Squares 875–879R191–195 following excavation. Feature 55, a large rectangular cellar pit, is located just beyond the west profile (near total station). SC Highway 5 is in the background. View to southwest.

the best means for assessing village pattern and identifying individual household areas. Fourth, the demonstrated presence of multiple graves necessitated a comprehensive approach to the site whereby all such archaeological features could be identified. Consequently, it was decided to strip the disturbed plowed soil from the remainder of the site in order to identify, map, and excavate archaeological features.

The procedure used in stripping topsoil from the site was as follows. From a stationary position the mini-excavator, using a toothless bucket, gradually removed topsoil from an area roughly 4 m x 5 m until the top of subsoil was reached. At this point, workers with sharpened shovels shaved the top-of-subsoil surface until a clean surface was achieved. All soil anomalies (i.e., tops of potential features) were marked with pin flags. These were then trowelled and examined more closely to determine if they warranted excavation. This process was repeated as the mini-excavator expanded the exposure.

The depth from ground surface to top of subsoil varied across the site. At the eastern edge, only about 10 cm of soil needed to be removed; at the western edge, the topsoil was about 30 cm thick. Topsoil was more than 50 cm thick at the northwest edge of the site, and near the edge of the highway, where fill dirt had been deposited during road construction in the late 1950s, subsoil was capped by as much as 1.5 m of soil.

Mechanical stripping was undertaken in two phases, and a total of 3,400 sq m was exposed. This comprised the entire site area as defined by the occurrence of subsurface archaeological

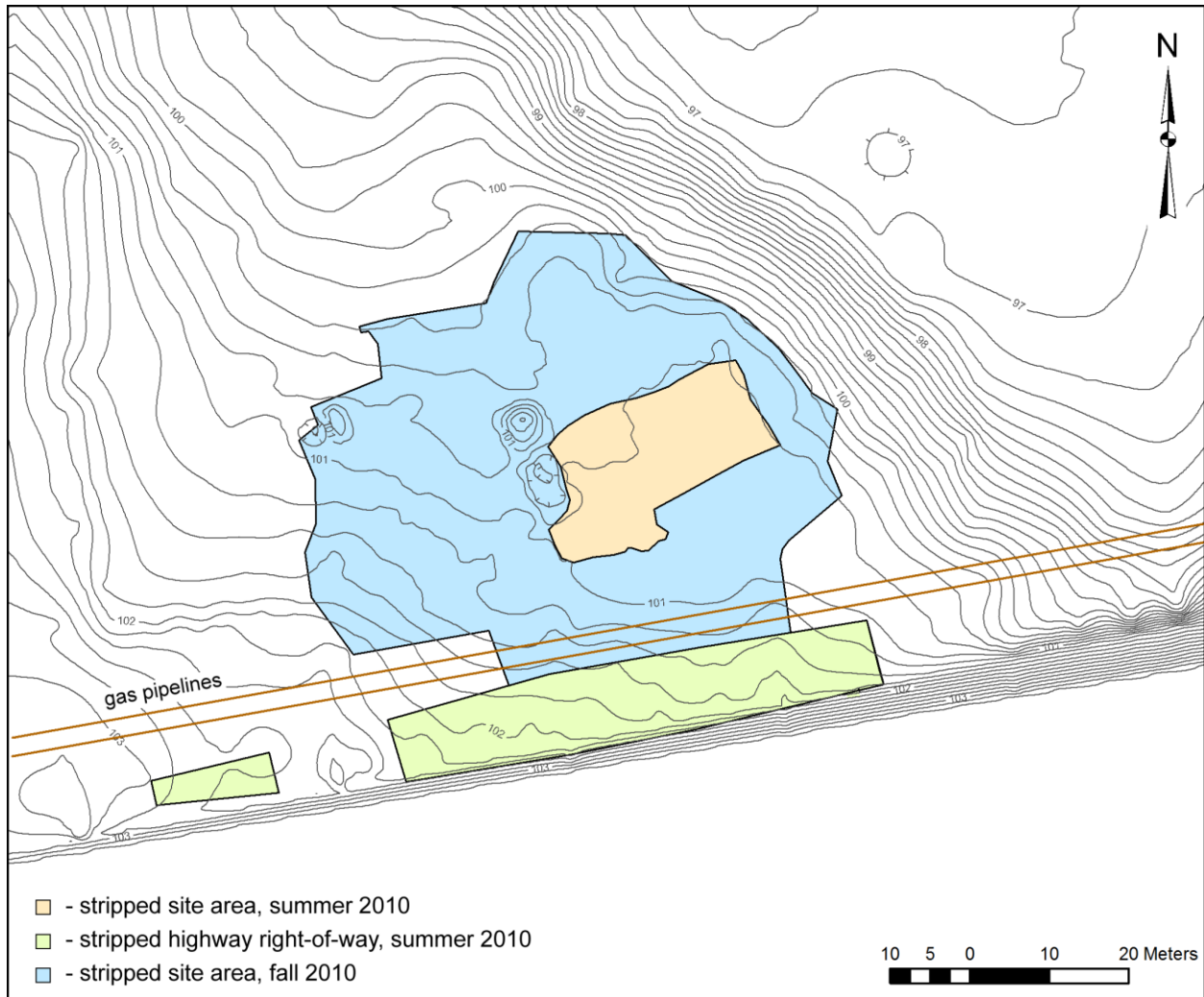


Figure 3.11. Map showing areas of mechanical stripping. The area depicted in beige near the site center and the areas depicted in green along SC Highway 5 were stripped during summer 2010; the remaining site area, shown in blue, was stripped during late fall, 2010. Contour interval = 20 cm (elevations reference an arbitrary datum).

features. During the summer field season, an area comprising about 410 sq m was exposed in the eastern and central portions of the site (Figures 3.12 and 3.13). This area also encompassed the 5x5-m excavation block discussed earlier. Several features were uncovered, including a large rectangular cellar pit (Feature 55) just west of the 5x5-m block, several small cylindrical pits (postholes) and charred corncob-filled pits (smudge pits), a refuse-filled stump hole (Feature 67), two probable Archaic hearths (Features 31 and 60), and 14 graves comprising part of a historic Catawba cemetery (Features 41 to 54).

With the discovery of the cemetery, mechanical stripping within the village area was temporarily halted, and attention was re-directed to the proposed highway construction zone between the north edge of SC Highway 5 and the high-pressure gas pipelines at the south edge of the site (Figure 3.14). Specifically, we were directed to determine if the cemetery extended into the construction zone. Because we were already near the end of the summer 2010 field season, a second, larger mini-excavator was also used to remove the thick, heavily compacted overburden adjacent to the highway. With the exception of a 15-m gap to allow vehicular access to the site



Figure 3.12. Stripping topsoil from Ayers Town with a mini-excavator during the summer 2010 field season. View to southeast.

from the highway, all of the area between the high-pressure gas pipeline corridor and the edge of the highway embankment was excavated. This excavation exposed about 445 sq m and extended both east and west beyond the suspected edges of the site.

At the western edge of the excavation, subsoil was encountered about 20 cm below surface; however, the layers of fill dirt were substantially thicker at the eastern and southern edges, being as much as 1.5 m thick. Although no graves or other large archaeological pit features were encountered, four small, cob-filled smudge pits (Features 40, 57, 58, and 65) were uncovered near the north edge of the excavation. The presence of these typically shallow features indicates that little of the subsoil was cut away along the south edge of the site when the highway was built.

The remainder of the site, including the gas pipeline corridor, was mechanically stripped during the fall 2010 field season (Figure 3.15). This area encompassed about 2,545 sq m and contained the remaining archaeological features associated with Ayers Town. During the 5.5-week fall field season, 100 archaeological features were identified, mapped, and excavated, and 12 additional graves were identified and mapped.

Mapping and Excavation of Archaeological Features

One hundred and ninety-one archaeological features were recorded at Ayers Town (Figure 3.16). Of these, 167 were determined upon excavation to represent cultural activities at the site.



Figure 3.13. Mapping the outlines of graves revealed by mechanical stripping of Ayers Town during the summer 2010 field season. View to southeast.

They represent 22 cellar pits and storage pits, 16 clay borrow pits, 45 smudge pits, 40 postholes, 31 graves, five refuse-filled stump holes, two probable Archaic hearths, and five other small pits, and an erosional gully (Feature 102) with refuse deposits. The remaining 24 features were determined to be stump holes or other disturbances of natural origin. All of the non-cultural features were excavated during the summer 2010 field season; during the fall 2010 season these disturbances were investigated to determine their probable origin, but they were not recorded as archaeological features (Figure 3.17). Feature 102, a buried erosional gully sampled during the fall season, provided important information about the erosional history of the site (see Appendix A).

All archaeological features were initially encountered at the base of plow zone. Prior to excavation, each feature was trowelled, photographed, and mapped with a total station. After describing the fill characteristics (i.e., color, texture, content) at the top of the pit, it was excavated in one of two ways. Small pits interpreted as possible postholes (including those later determined to be stump holes based on fill content and basal profile characteristics) and most charcoal-filled pits (i.e., smudge pits) were excavated as a single zone and were not bisected. The fill was scooped out with a trowel or spoon, and placed in a plastic trash bag. All fill from postholes was waterscreened through 1/16-inch window screen; fill from smudge pits was processed by flotation to recover botanical materials.

Other features were bisected and excavated by halves in order to expose and document the fill structure in profile (Figure 3.18). While some of these features contained a single fill zone,



Figure 3.14. Exposing the top of subsoil surface near the SC Highway 5 embankment. View to west.



Figure 3.15. Mechanically stripping topsoil to expose the top of subsoil surface near Feature 102 at the northwest edge of the site. View to northwest.

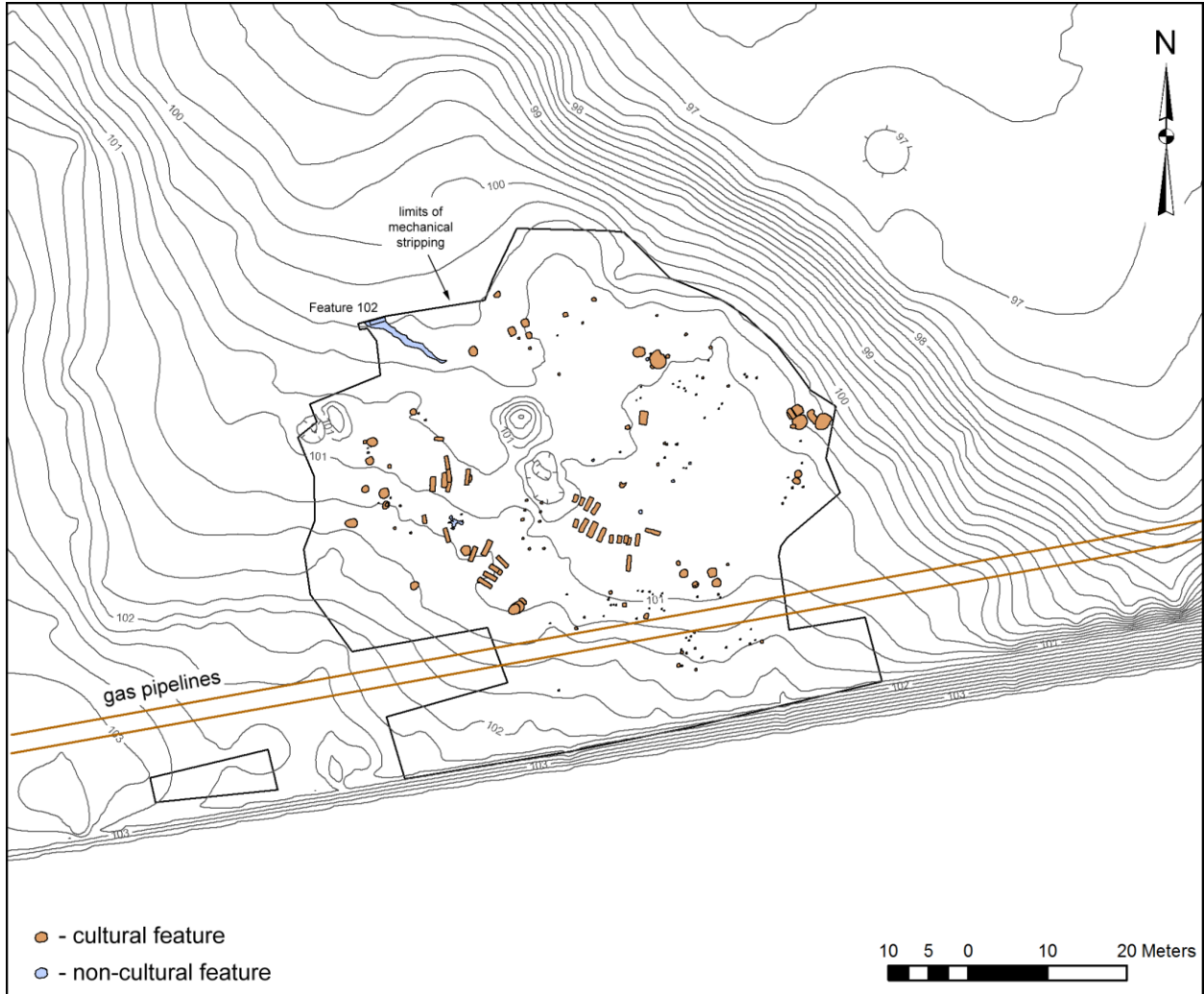


Figure 3.16. Map showing both cultural (in brown) and non-cultural (in blue) archaeological features recorded at Ayers Town by hand excavation and mechanical stripping. The anomalies at the center and northwest edge of the stripped area are modern bulldozer cuts and adjacent spoil piles. Contour interval = 20 cm (elevations reference an arbitrary datum).

many (cellars and storage pits in particular) had complex fill structures and contained multiple zones of contrasting fill. Fill from each zone (in each half) was excavated and processed separately. Artifacts encountered during excavation of a feature zone usually were removed and bagged separately, and a sample of fill dirt, usually 10-liters in volume, also was taken for later processing by flotation. The remaining fill was bagged and waterscreened through 1/16-inch window screen (Figure 3.19). Unusually rich fill zones in some features were processed entirely by flotation. Once the first half of a feature was completed, the exposed fill profile was trowelled, photographed, and mapped both by hand using a line level and folding rulers, and with a total station. Afterwards, the remaining half was excavated in similar fashion. Upon completion, the entire feature was again trowelled, photographed, and mapped.



Figure 3.17. Excavating features and stripping topsoil along the high-pressure gas pipeline corridor. View to east.

Spatial Relationship Between Plow Zone Artifacts and Archaeological Features

Artifacts contained within the plowed soil at Ayers Town are derived from two probable sources: (1) discarded refuse that accumulated, either intentionally or unintentionally, on the ground surface while the town was occupied; and (2) discarded refuse what was used by the town's occupants to fill in pits once they had served their usefulness. With the initiation of agricultural plowing, artifacts from the surface and the tops of pit features would have been incorporated into the now-disturbed topsoil, and the integrity of their spatial relationship to their original points of origin would have diminished with subsequent plowing episodes and also with other post-depositional processes such as soil erosion. The documentation of laminated sediments within Feature 102, indicating sheet wash, and the accumulation of thick, artifact-bearing deposits of topsoil at the northern periphery of Ayers Town both suggest that extensive soil erosion occurred after the site's abandonment and that this erosion resulted in substantial lateral movement and removal of artifacts from the site's surface.

In order to examine the degree to which the spatial distribution of surviving artifacts within the topsoil corresponds to the site's structure as defined by the spatial configuration of cultural features, artifact density maps derived from shovel testing, metal detecting, and systematic test excavations were superimposed on the plan of mapped features. Figure 3.20 shows the density of pottery recovered from feature fill. The greatest quantities of pottery were recovered from



Figure 3.18. Excavating the northwest half of Feature 69, a storage pit with multiple fill zones. View to southeast.



Figure 3.19. Waterscreening soil from excavated features through 1/16-inch window screen.

three features—Feature 73 (n=573) and Feature 107 (n=858) along the northern edge of the site and Feature 140 (n=715) at the southwestern edge. Lesser quantities were recovered from Feature 123 (n=314) at the western edge and Feature 163 (n=423) at the southeastern site edge. If the surviving artifacts within the topsoil derive in part from plowed out feature fill and have not been substantially displaced by plowing or erosion, then their spatial distributions should show some correspondence to the locations of these “high potsherd density” features. Figures 3.21 and 3.22, which indicate potsherd density based on shovel testing and test unit excavation, respectively, show no correspondence between the two. Furthermore, block excavations placed over or adjacent to archaeological features did not yield substantially more or larger fragments of pottery than excavations in other areas of the site. The results of metal detecting, shown in Figure 3.23, likewise show little to no spatial relationship between recovered metal artifacts and feature location.

There also does not appear to be a particularly strong relationship between potsherd and metal artifact distributions and the larger feature areas that are interpreted as domestic or household areas—areas centered upon clusters of presumed sub-floor storage facilities (see Chapter 5 for a more in depth examination of site structure). In fact, potsherd densities indicated by shovel testing and unit excavations are highest in areas where the cemeteries and hypothesized road through the center of the site are located (see Figures 3.21 and 3.22; also see Chapter 5). These are not areas where refuse disposal might be expected or predicted. Shovel testing does indicate lesser pottery concentrations adjacent to several feature clusters, and it is possible that these are residual signatures of peripheral cabin middens.

In conclusion, the distribution of pottery and metal artifacts within the disturbed topsoil does not correspond particularly well with the distribution of cultural features at the site, and this lack of correspondence is best explained by the lateral displacement of both artifacts and soil by processes of erosion. For this reason, comparative analysis of households identified at Ayers Town focused on the contents of pit features rather than the artifact samples retrieved from testing and block excavations.

[Section Removed]

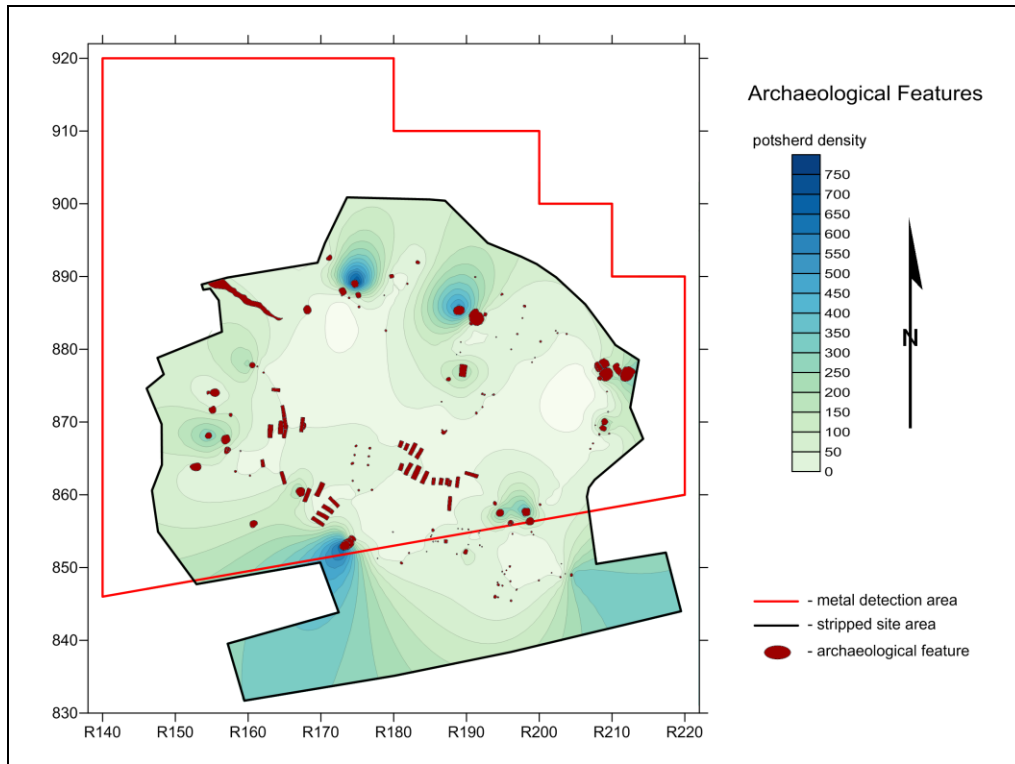


Figure 3.20. Density map of artifacts recovered from archaeological features with superimposed map of features.

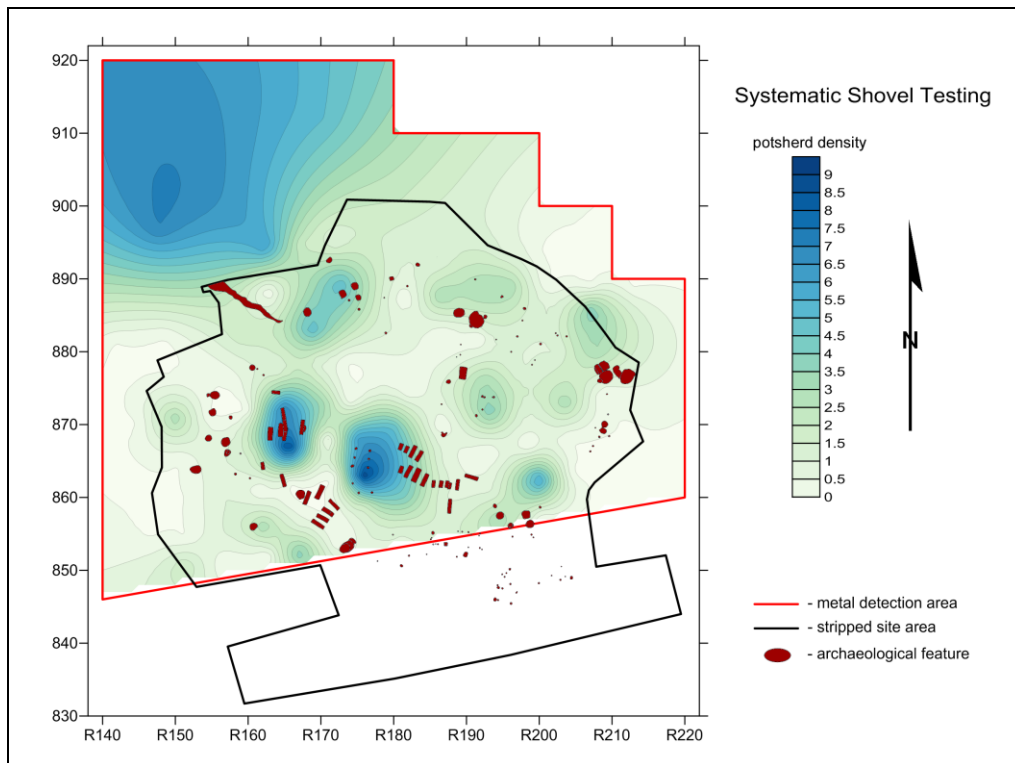


Figure 3.21. Density map of artifacts recovered by systematic shovel testing with superimposed map of archaeological features.

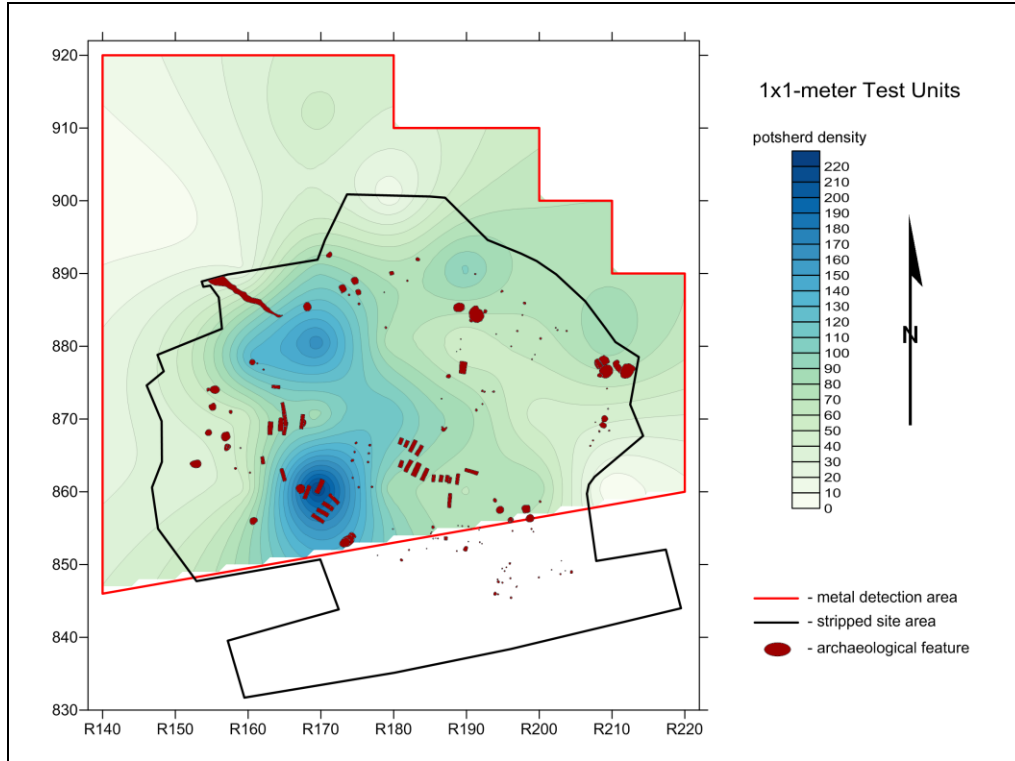


Figure 3.22. Density map of artifacts recovered from 1x1-meter test units with superimposed map of archaeological features.

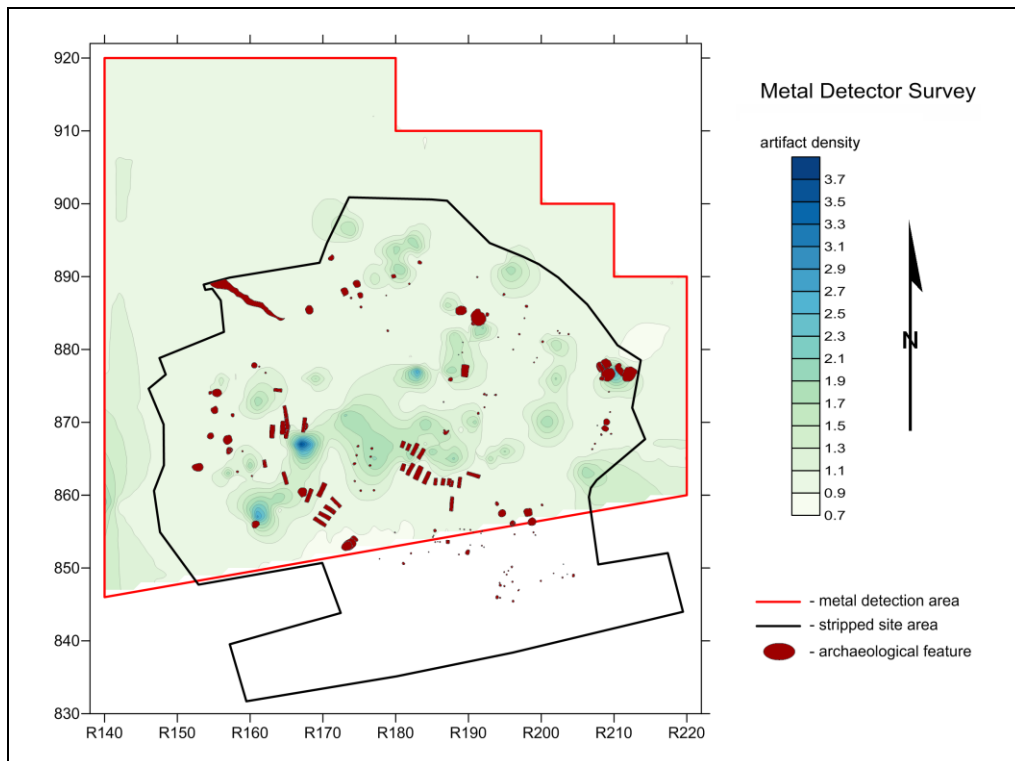


Figure 3.23. Density map of artifacts recovered by metal detecting with superimposed map of archaeological features.

Conclusion

Archaeological investigations at Ayers Town between April 20, 2010 and January 6, 2011 consisted of comprehensive exploration of the site using metal detectors and soil augers, systematic sampling of plow zone deposits through the hand excavation of 110 1x1-meter units, and the removal of topsoil from the remainder of the site using heavy machinery. This resulted in the complete exposure of the site at the top-of-subsoil level, the identification of 191 archaeological features, and the recovery of more than 20,000 artifacts. One hundred and seventy of the features were determined to be of cultural origin, and all but two are attributed to Catawba occupation of the site in the late eighteenth century. These archaeological remains represent sporadic site use during the Archaic and Woodland periods, and a more substantial Catawba town that was occupied between 1781 and about 1800. The spatial arrangement of features suggests that Ayers Town consisted of at least a dozen structures within five residential complexes and that the community was oriented along a road that ran along the terrace crest. Additional houses likely were scattered along this road both north and south of the excavation area.