

SECTION 5.0 ARCHAEOLOGICAL SURVEY

5.1 Assessment of Archaeological Resources Sensitivity

The assessment of archaeological resources sensitivity is based on two allied concepts: the potential for archaeological sites to exist in a given area, and the sensitivity of that area to contain intact cultural resources. In areas where no sites are documented, the potential presence of prehistoric resources is based primarily on environmental setting: topography, proximity to water, and soil quality. The potential presence of historic resources is usually determined through analysis of historic sources and historic cartographic materials. The presence of historic roads documented on historic maps also increases the potential for historic sites.

Prehistoric Archaeological Sensitivity

Archaeological evidence indicates that the Piedmont was occupied from the Paleo-Indian period to the present (Custer 1984, 1996; Custer and Wallace 1983). The densest period of occupation may have been the Woodland I period, but sites are known from the Paleo-Indian, Archaic and Woodland II periods. Available data suggests that the majority of prehistoric sites in the Piedmont consist of temporary seasonal procurement sites usually situated in close proximity to water with larger sites found near the confluences of higher order streams especially in zones with multiple resources readily available.

Background research indicates that one prehistoric site, the Lincoln A site (CRS # N-12097, 7NC-B-21), is located approximately 1000 feet southeast of the APE, in a similar upland setting. That site consists of an undated procurement site containing a quartzite biface and quartz and jasper debitage. Portions of the APE are situated on upland, relatively well-drained landforms near the unnamed tributary of the Red Clay Creek. Some disturbances associated with road construction, utilities and other development were noted. Based on the presence of a known site nearby, the topographic setting, and distance to a watercourse, the undisturbed relatively level portions of the APE have a high sensitivity for prehistoric resources, particularly small seasonal procurement sites.

Historic Archaeological Sensitivity

During the later nineteenth to twentieth centuries, as reflected by historic maps (see Figures 4.1-4.3, see Richard Grubb & Associates, Inc. 2009), structures attributed to "M.Cain (Kane)" (Beers 1868, see Figure 4.1), "C. Cooney", J. Bugle" (Hopkins 1881, see Figure 4.2), and "J. Budge[sic]" and "M. Lyons" (Baist 1893, see Figure 4.3) were built near the APE. The area remained rural until the present day. During the early twentieth century, Foxhill and the Ives-du Pont House were built (DGS 1937, see Richard Grubb & Associates 2009: Figures 3.8, 3.9, 3.10).

Historic archaeological resources that would contribute to the significance of Foxhill or the Ives-du Pont House Complex could be present within the APE (Richard Grubb & Associates, Inc. 2009).

5.2 Research Design

A historic architectural survey, including historical and deed research, was completed in May 2009 (see Richard Grubb & Associates, Inc. 2009). Prior to the initiation of archaeological fieldwork, background research, consisting of an examination of archaeological site files, cultural resources surveys, and relevant state-wide historic contexts, was conducted at the DESHPO. Archaeological site files of the Pennsylvania Historical and Museum Commission, Bureau of Historic Preservation (PHMC, BHP) were also examined to identify archaeological sites within a two-mile radius of the APE. In addition, property owners Janine and Stephen Marrone and Lisa Mosley, along with Mrs. Mosley's caretaker, Merle Doughten, were consulted about potential archaeological sites within the APE.

Archaeological fieldwork consisted of a visual reconnaissance of the APE, subsurface testing, and the removal of concrete fragments from a concrete pad to sample the underlying soils. Subsurface archaeological testing consisted of the excavation of 31 STPs including 24 STPs spaced at 15-meter (49.2 feet) intervals, four STPs within and adjacent to a concrete pad located near Snuff Mill Road, and two brackets placed 1.5-meters north and south of an STP containing a rock fill.

Shovel test pits measured 50 cm (19.7 inches) in diameter and were hand excavated using round nosed shovels. The STPs were excavated in natural strata to a minimum of 20 cm (0.66-foot) into culturally sterile subsoil. In fill soils, STPs were extended to 100 cm where possible or to natural soil horizons. All STP locations were plotted on project base maps. Archaeological testing was not conducted in disturbed or excessively sloped areas.

Descriptions of each stratum, including Munsell color, texture, thickness, sediments, and presence or absence of cultural material, was recorded on standardized RGA STP forms that are summarized in Appendix B. Removed soil was separated by stratum and screened through 0.64 cm (0.25-inch) wire mesh hardware cloth to recover artifacts. Following the completion of excavation, each STP was re-filled with soil and the ground returned to its original contours. The concrete pad was removed by hand using prybars and shovels. The concrete pad fragments were returned to their original locations and the ground restored to its original contours. Daily field notes were maintained by the field supervisor and crew. Representative photographs of all field activities were taken (see Figure 5.1). The location of the concrete pad was recorded using a Nikon DTM-302 Total Station.

Two planned five-foot square excavation units were not excavated after consulting with DelDOT archaeologist, David Clarke (personal communication, July 1, 2009) when the feature was determined to be a concrete pad rather than a foundation.

Recovered artifacts were bagged separately by provenience and placed in re-sealable polyethylene bags with an accompanying tag that lists the appropriate provenience information. All artifacts were retained with the exception of modern plastic that was noted in the field and discarded. Artifacts were taken to an off-site laboratory for cleaning and analysis. Artifacts were sorted by material/artifact type and placed into a clean 4 mm-thick re-sealable polyethylene bag. Artifacts were cataloged according to provenience and functional group, material, class, and type. The artifact catalogue is included as Appendix C.

All artifacts recovered and project documents are temporarily stored at the office of RGA in Cranbury, New Jersey. The field strategy for the Phase I archaeological survey consisted of shovel testing (see Appendix C). Shovel test pit locations, the location of the concrete pad, and photo locations were plotted on a map of existing conditions (see Figure 5.1). Due to the identification of an archaeological site, DESHPO cultural resource survey (CRS) property identification (CRS-1), archaeological site (CRS-4) and map forms (CRS-9) have been prepared. CRS and archaeological site numbers have been assigned to the resource (see Appendix D).

The research design was considered sufficient to determine if any potentially significant archaeological resources were present in the APE. No constraints were encountered in meeting research objectives. Further, no resources were identified that would necessitate changes to historic contexts, planning goals and research priorities (see Ames et al. 1989; Bedell 2002; DeCunzo and Catts 1990; Herman 1987; Herman et al. 1989).

5.3 Results

Archaeological fieldwork was conducted on June 29, 30, July 1, and 14, 2009 and consisted of a visual reconnaissance of the APE, the excavation of 31 STPs, and the detailed examination of a concrete pad. For ease of discussion, the APE is divided into the four quadrants and archaeological fieldwork is described in detail for each quadrant (see Figure 5.1).

Northwest Quadrant

The northwest quadrant extends approximately 450 feet west of the unnamed tributary as well as northeast along the tributary for approximately 100 feet. The width of the LOC ranges from approximately five to approximately 30 feet. The area is heavily wooded with secondary growth

woods and weedy undergrowth and is steeply sloped from the road down to the ground surface and then is gently sloped to the stream (Plates 5.1-5.2). Ten STPs excavated at 15-meter intervals were placed at or close to the toe of the slope within the LOC (STPs 1-10, see Appendix B). Soil profiles were natural and contained dark grayish brown silt loam organic A-horizon (Ao) approximately 10 cm thick, overlying a brown silt loam A-horizon approximately 30 cm thick, and one to two subsoil horizons of yellowish brown or mottled silty clay loam (see Appendix B).

Artifacts in the northwest quadrant (n=6) were recovered from STPs 2, 5, 6, and 7 (see Figure 5.1) and consisted of modern colorless vessel glass, a fragment of plastic, a metal pull-tab can top, and a fragment of red earthenware from STP 5 (see Appendix C).

Northeast Quadrant

The northeast quadrant extends approximately 400 feet east of the unnamed tributary and along the tributary for approximately 100 feet. The width of the LOC ranges from approximately five to approximately 40 feet (see Figure 5.1). As in the previous quadrant, the area is heavily wooded with secondary growth woods and weedy undergrowth and is steeply sloped from the road down to the ground surface and then is gently sloped to the stream. In much of the quadrant, the LOC is very narrow and a fence extends nearly to the road, limiting testing in this area to two STPs excavated along the stream margin at 15-meter intervals (Plates 5.3-5.4). Soil profiles in the two STPs, 11 and 12 (see Appendix B), were natural and similar to those previously described. A fragment of modern vessel glass was recovered from STP 12 (see Figure 5.1; see Appendix C).

Southeast Quadrant

The southeast quadrant extends approximately 370 feet east of the unnamed tributary and south along the tributary for approximately 50 feet. The width of the LOC ranges from approximately two to approximately 30 feet (see Figure 5.1). This quadrant includes an area just west of the landscaped driveway to the Foxhill estate (Plate 5.5), is heavily wooded with secondary growth woods and weedy undergrowth, and is steeply sloped from the ground surface down to the road and to the stream. The STPs (13-18) were placed at the top of the slope at 15-meter intervals. A steeply sloped area between STPs 16 and 17 was not tested (Plates 5.6-5.7). Soil profiles in STPs 13-16 were a mixture of multi-colored rocky fills; STPs 17 and 18 contained natural soils similar to those described above (see Appendix B). Fill soils were excavated to 100 cm below the ground surface. Filling in this area is considered the result of road grading and maintenance.

Artifacts (n=22) from the southeast quadrant were recovered from fill horizons in STPs 13 and 14. Fill horizons in STP 13 contained the largest artifact frequency (n=19) including a fragment of

whiteware, a cut nail, bottle and window glass fragments, fragments of brick, and a strip of copper alloy sheet metal. Artifacts from STP 14 consisted of coal and nail fragments, and a wire staple (see Appendix C). These STPs were located on top of a steeply sloped and cut embankment down to Old Kennett Road that is on the edge of a gently rolling grassy manicured field and landscaped gardens to the west of a driveway to the Foxhill estate. Old Kennett Road is cut through this bank. The artifacts may have been deposited by past agricultural or gardening practices or possibly deposited during past efforts to stabilize this bank or filling efforts. They could not be clearly linked to a specific occupation or time period but no feature or structure was identified in this area or adjacent to this area outside the limits of construction (LOC) for this project.

Southwest Quadrant

The southwest quadrant extends approximately 450 feet west of the unnamed tributary, south along the tributary for approximately 50 feet, and south along Snuff Mill Road for approximately 170 feet. The width of the LOC ranges from approximately two to approximately 40 feet (see Figure 5.1). West of Snuff Mill Road, due to the narrow LOC, limited impacts, and presence of low walls close to the road fronting the Ives-du Pont Estate, no testing was conducted (Plate 5.8). The remainder of the quadrant east of Snuff Mill Road is heavily vegetated with secondary growth forest and weedy undergrowth and is steeply sloped from the road to the ground surface along Snuff Mill Road and gently sloped or level along Old Kennett Road (Plates 5.9-5.11). In this area, STPs 19-25 were excavated at 15-meter intervals. Closer interval testing included STPs 19a and 19b, placed north and south of STP 19 (Plate 5.10). Shovel test pits 26-29 were placed within or adjacent to a concrete pad (Plate 5.12).

In this quadrant, DelDOT archaeologists observed a potential foundation. During the initial reconnaissance, a concrete pad that measured 10.6 feet by 14.4 feet was observed by RGA archaeologists. The concrete pad was located at the base of a steep road bank to the east of Snuff Mill Road. It was heavily overgrown and the sides of the bank contained roadside debris and asphalt pieces (Plates 5.13 and 5.14, see Figure 5.1). The caretaker for the Ives-du Pont estate indicated that this was a modern concrete cap to a well or spring (Merle Doughten, personal communication, July 7, 2009). Further interviews with property owners Lisa Mosley (personal communication, July 8, 2009) and Stephen Marrone (personal communication, July 9, 2009) indicated that they were unaware of a well in this spot. Mrs. Mosley, a lifelong resident of the area, considered it unlikely that there had been a well in this location. In consultation with DelDOT archaeologist David Clarke, investigations of the pad included clearing, cleaning, mapping, and lifting the fragments of concrete for further investigation. Subsurface testing in the form of two STPs within the footprint of the pad (STPs 28, 29). The first of these STPs, 28, was excavated into soft decayed portions of the pad,

while the pad was in place. The second, STP 29 was excavated into the underlying soils once the pad had been removed. Two STPs (STPs 26, 27) were excavated in locations adjacent to the pad; STP 26 was placed to the southeast and STP 27 to the southwest.

The removal of the concrete fragments of the pad indicated that it was not the cover of a well since there was no indication of a well, springhouse, or any other feature in this location. In STPs 28 and 29, within the concrete pad, soil fill was considered modern and related to the installation of the concrete pad. In both of these STPs, natural soils were encountered below the fill levels. However, STPs 26 and 27, which were located adjacent to the pad to the southeast and southwest, contained natural soils. To the south and east of the pad, the ground surface was increasingly wet and STP 29 in the center of the pad was stopped by water at 50 cm below the ground surface. Natural soils, generally similar to those described above, consisted of a "modern" A-horizon (Am) of very dark grayish brown sandy or silt loam approximately 8 cm thick overlying a brown silt loam A-horizon approximately 25 cm thick, and yellowish brown to brown sandy clay loam B-horizon (see Appendix B).

Six (6) artifacts were found in two STPs (28 and 29) excavated in association with the concrete pad. Artifacts from STP 28, located in the soft, decayed portion of the concrete pad, consisted of fragments of window glass (n=4) and coal, similar to those found in STPs outside of the pad and elsewhere in the APE. Fragments of broken glass and other debris were also noted on the steep embankment next to the pad. Within STP 29, excavated after the concrete pad was removed, contained only a fragment of mid-twentieth century colorless plastic (STP 29) that was located directly beneath the pad and most closely associated with it. The presence of this plastic, directly beneath and in association with the pad, strongly argues for a mid-twentieth century origin for the pad as well. The window glass was of a type made from the late nineteenth century on, could not be specifically dated, and could have been made and used in the twentieth century. It is possible that the window glass could have resulted from light secondary deposition or even windows present on the temporary building.

Another 26 artifacts were located in two STPs (26 and 27) adjacent to the concrete pad. Artifacts from STP 26, located southeast of the concrete pad, included 18 fragments of window glass and a fragment of coal. Artifacts from STP 27, southwest of the concrete pad, included a wire nail fragment, one fragment of window glass, two fragments of bottle glass, and three fragments of coal. The window glass was of a type made from the late nineteenth century on and could not be specifically dated. The wire nail similarly is from the late nineteenth century on. In STP 27, one fragment of bottle glass dated to post-1938 (Miller 2000: 8) another to 1875-1930 (Lockhart 2006: 54). These artifacts may represent light secondary deposition or could have been associated with a

temporary building in this location.

The pad may represent the base of a temporary building related to road maintenance or flood control constructed during the latter half of the twentieth century. The pad was registered as an historic site with DESHPO and given the site numbers: CRS# N14483; Site # 7NC-B-66 (see Appendix D).

Soil profiles in the remainder of STPs in this quadrant varied. Fill soils were encountered in STPs 19, 19A, 19B, 22, 28, and 29 (see Appendix B). Fill soils in STPs 19, 19A, and 19B, located near the stream, consisted of increasing amounts of large rocks in a very dark brown to yellow silt loam or silty clay matrix until the STPs were stopped by impassable rocks, approximately 90 cm below the ground surface. Bracket STPs were placed at 1.5-meters north and south of STP 19 since it was unclear if the rocky fill represented a cultural feature. However, no sign of a foundation or feature was located and it was concluded that the rocky fill may have been placed there for flood control or was the result of prior flooding. Fill soils in STP 22, near the corner of Snuff Mill and Old Kennett Roads, also contained large rocks and was stopped by rock.

Artifacts (n=31) from the remainder of the southwest quadrant STPs (19, 20, 21, and 22) consisted of a fragment of coal, two twentieth century silver plate cups, window, canning jar lid, and bottle glass, a nail fragment, wire fragment, plastic and mammal bone (see Appendix C).

Summary

The excavation of 31 STPs yielded 92 historic artifacts from 15 STPs. The artifacts are temporally mixed from the nineteenth and twentieth centuries and were found in fill and A-horizon strata. Their origins are generally unknown but could include agricultural practices or roadside stabilization practices.

A concrete pad found to the east of Snuff Mill Road is considered modern and of unknown origin, possibly a base of a temporary building related to road maintenance or flood control. No structures are depicted on historic maps or U.S.G.S. quadrangle maps at the location of the pad. It is considered likely to date to the mid-twentieth century. Artifacts found in association with the concrete pad dated from the late nineteenth to middle twentieth century in temporally mixed contexts, including a fragment of plastic directly below the pad. The pad could not be tied to activities related to either Foxhill or the Ives-du Pont House complex and seems unlikely to provide information that would contribute to the significance of either historic property. The pad was registered as an unknown historic site with DESHPO and given the site numbers: CRS# N14483; Site # 7NC-B-66.