



Phase II and Phase III Archaeological Database and Inventory

Site Number: 18AN1271

Site Name: OTC-C1

Prehistoric

Other name(s) Odenton Town Center, Area 1, Locus 1

Historic

Brief Description:

At least 12 19th-century charcoal kilns related to fuel production for Patuxent Furnace

Unknown

Site Location and Environmental Data:

Maryland Archaeological Research Unit No. 7

SCS soil & sediment code

Latitude 39.0909

Longitude -76.7040

Physiographic province Western Shore Coastal

Terrestrial site

Underwater site

Elevation m

Site slope 0-5%

Ethnobotany profile available

Maritime site

Site setting

-Site Setting restricted

-Lat/Long accurate to within 1 sq. mile, user may need to make slight adjustments in mapping to account for sites near state/county lines or streams

Topography

- Floodplain
- Hilltop/bluff
- Interior flat
- Upland flat
- Ridgetop
- Terrace
- Low terrace
- High terrace
- Rockshelter/cave
- Hillslope
- Unknown
- Other

Ownership

- Private
- Federal
- State of MD
- Regional/county/city
- Unknown

Nearest Surface Water

Name (if any) Unnamed tributary of Sever

- | Saltwater | | Freshwater | |
|--|--|--|---|
| Ocean <input type="checkbox"/> | Estuary/tidal river <input type="checkbox"/> | Stream/river <input checked="" type="checkbox"/> | Swamp <input checked="" type="checkbox"/> |
| Tidewater/marsh <input type="checkbox"/> | Lake or pond <input type="checkbox"/> | Spring <input type="checkbox"/> | |
- Minimum distance to water is 10 m

Temporal & Ethnic Contextual Data:

- Paleoindian site
- Archaic site
- Early archaic
- Middle archaic
- Late archaic
- Woodland site
- MD Adena
- Early woodland
- Mid. woodland
- Late woodland
- Unknown prehistoric context

- Contact period site
- ca. 1820 - 1860
- ca. 1630 - 1675
- ca. 1675 - 1720
- ca. 1720 - 1780
- ca. 1780 - 1820
- Unknown historic context
- Unknown context

Ethnic Associations (historic only)

- Native American
- African American
- Anglo-American
- Hispanic
- Asian American
- Unknown
- Other

Y=Confirmed, P=Possible

Site Function Contextual Data:

- ### Prehistoric
- Multi-component
 - Village
 - Hamlet
 - Base camp
 - Rockshelter/cave
 - Earthen mound
 - Cairn
 - Burial area
 - Misc. ceremonial
 - Rock art
 - Shell midden
 - STU/lithic scatter
 - Quarry/extraction
 - Fish weir
 - Production area
 - Unknown
 - Other context

- ### Historic
- Urban/Rural? Rural
- Furnace/forge
 - Other charcoal kiln
 - Domestic
 - Homestead
 - Farmstead
 - Mansion
 - Plantation
 - Row/townhome
 - Cellar
 - Privy
 - Industrial
 - Mining-related
 - Quarry-related
 - Mill
 - Black/metalsmith
 - Military
 - Battlefield
 - Fortification
 - Encampment
 - Townsite
 - Religious
 - Church/mtg house
 - Ch support bldg
 - Burial area
 - Cemetery
 - Sepulchre
 - Isolated burial
 - Bldg or foundation
 - Possible Structure
 - Post-in-ground
 - Frame-built
 - Masonry
 - Other structure
 - Slave related
 - Non-domestic agri
 - Recreational
 - Midden/dump
 - Artifact scatter
 - Spring or well
 - Unknown
 - Other context

Interpretive Sampling Data:

Prehistoric context samples Soil samples taken

Flotation samples taken Other samples taken

Historic context samples Soil samples taken

Flotation samples taken Other samples taken



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Diagnostic Artifact Data:

Projectile Point Types		Koens-Crispin	
Clovis	<input type="checkbox"/>	Perkiomen	<input type="checkbox"/>
Hardaway-Dalton	<input type="checkbox"/>	Susquehana	<input type="checkbox"/>
Palmer	<input type="checkbox"/>	Vernon	<input type="checkbox"/>
Kirk (notch)	<input type="checkbox"/>	Piscataway	<input type="checkbox"/>
Kirk (stem)	<input type="checkbox"/>	Calvert	<input type="checkbox"/>
Le Croy	<input type="checkbox"/>	Selby Bay	<input type="checkbox"/>
Morrow Mntn	<input type="checkbox"/>	Jacks Rf (notch)	<input type="checkbox"/>
Guilford	<input type="checkbox"/>	Jacks Rf (pent)	<input type="checkbox"/>
Brewerton	<input type="checkbox"/>	Madison/Potomac	<input type="checkbox"/>
Otter Creek	<input type="checkbox"/>	Levanna	<input type="checkbox"/>

Prehistoric Sherd Types			
Marcey Creek	<input type="checkbox"/>	Popes Creek	<input type="checkbox"/>
Dames Qtr	<input type="checkbox"/>	Coulbourn	<input type="checkbox"/>
Selden Island	<input type="checkbox"/>	Watson	<input type="checkbox"/>
Accokeek	<input type="checkbox"/>	Mockley	<input type="checkbox"/>
Wolfe Neck	<input type="checkbox"/>	Clemson Island	<input type="checkbox"/>
Vinette	<input type="checkbox"/>	Page	<input type="checkbox"/>
Shepard	<input type="checkbox"/>	Townsend	<input type="checkbox"/>
Minguannan	<input type="checkbox"/>	Sullivan Cove	<input type="checkbox"/>
Shenks Ferry	<input type="checkbox"/>	Moyaone	<input type="checkbox"/>
Potomac Crk	<input type="checkbox"/>	Yeocomico	<input type="checkbox"/>
Monongahela	<input type="checkbox"/>	Susquehannock	<input type="checkbox"/>

Historic Sherd Types		Ironstone		Staffordshire		Stoneware	
Earthenware		Jackfield	<input type="checkbox"/>	Tin Glazed	<input type="checkbox"/>	English Brown	<input type="checkbox"/>
Astbury	<input type="checkbox"/>	Mn Mottled	<input type="checkbox"/>	Whiteware	<input type="checkbox"/>	Eng Dry-bodied	<input type="checkbox"/>
Borderware	<input type="checkbox"/>	North Devon	<input type="checkbox"/>	Porcelain	<input type="checkbox"/>	Nottingham	<input type="checkbox"/>
Buckley	<input type="checkbox"/>	Pearlware	<input type="checkbox"/>	Rhenish	<input type="checkbox"/>	Wt Salt-glazed	<input type="checkbox"/>
Creamware	<input type="checkbox"/>						

All quantities exact or estimated minimal counts

Other Artifact & Feature Types:

Prehistoric Artifacts		Other fired clay	
Flaked stone	<input type="checkbox"/>	Human remain(s)	<input type="checkbox"/>
Ground stone	<input type="checkbox"/>	Modified faunal	<input type="checkbox"/>
Stone bowls	<input type="checkbox"/>	Unmod faunal	<input type="checkbox"/>
Fire-cracked rock	<input type="checkbox"/>	Oyster shell	<input type="checkbox"/>
Other lithics (all)	<input type="checkbox"/>	Floral material	<input type="checkbox"/>
Ceramics (all)	<input type="checkbox"/>	Uncommon Obj.	<input type="checkbox"/>
Rimsherds	<input type="checkbox"/>	Other	<input type="checkbox"/>

Prehistoric Features	
Mound(s)	<input type="checkbox"/>
Midden	<input type="checkbox"/>
Shell midden	<input type="checkbox"/>
Postholes/molds	<input type="checkbox"/>
House pattern(s)	<input type="checkbox"/>
Palisade(s)	<input type="checkbox"/>
Hearth(s)	<input type="checkbox"/>
Lithic reduc area	<input type="checkbox"/>
Storage/trash pit	<input type="checkbox"/>
Burial(s)	<input type="checkbox"/>
Ossuary	<input type="checkbox"/>
Unknown	<input type="checkbox"/>
Other	<input type="checkbox"/>

Lithic Material		Fer quartzite		Sil sandstone	
Jasper	<input type="checkbox"/>	Chalcedony	<input type="checkbox"/>	European flint	<input type="checkbox"/>
Chert	<input type="checkbox"/>	Ironstone	<input type="checkbox"/>	Basalt	<input type="checkbox"/>
Rhyolite	<input type="checkbox"/>	Argilite	<input type="checkbox"/>	Unknown	<input type="checkbox"/>
Quartz	<input type="checkbox"/>	Steatite	<input type="checkbox"/>	Other	<input type="checkbox"/>
Quartzite	<input type="checkbox"/>	Sandstone	<input type="checkbox"/>		<input type="checkbox"/>

Dated features present at site

Historic Artifacts		Tobacco related	
Pottery (all)	<input type="checkbox"/>	Activity item(s)	<input type="checkbox"/>
Glass (all)	<input type="checkbox"/>	Human remain(s)	<input type="checkbox"/>
Architectural	<input type="checkbox"/>	Faunal material	<input type="checkbox"/>
Furniture	<input type="checkbox"/>	Misc. kitchen	<input type="checkbox"/>
Arms	<input type="checkbox"/>	Floral material	<input type="checkbox"/>
Clothing	<input type="checkbox"/>	Misc.	<input type="checkbox"/>
Personal items	<input type="checkbox"/>	Other	<input type="checkbox"/>

Historic Features		Privy/outhouse		Depression/mound		Unknown	
Const feature	<input type="checkbox"/>	Well/cistern	<input type="checkbox"/>	Burial(s)	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>
Foundation	<input type="checkbox"/>	Trash pit/dump	<input type="checkbox"/>	Railroad bed	<input type="checkbox"/>	charcoal kiln mounds	
Cellar hole/cellar	<input type="checkbox"/>	Sheet midden	<input type="checkbox"/>	Earthworks	<input type="checkbox"/>		
Hearth/chimney	<input type="checkbox"/>	Planting feature	<input type="checkbox"/>	Mill raceway	<input type="checkbox"/>		
Postholes/molds	<input type="checkbox"/>	Road/walkway	<input type="checkbox"/>	Wheel pit	<input type="checkbox"/>		
Paling ditch/fence	<input type="checkbox"/>						

All quantities exact or estimated minimal counts

Radiocarbon Data:

Sample 1: +/- years BP Reliability Sample 2: +/- years BP Reliability Sample 3: +/- years BP Reliability

Sample 4: +/- years BP Reliability Sample 5: +/- years BP Reliability Sample 6: +/- years BP Reliability

Sample 7: +/- years BP Reliability Sample 8: +/- years BP Reliability Sample 9: +/- years BP Reliability

Additional radiocarbon results available



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External Samples/Data:

Collection curated at

Additional raw data may be available online

Summary Description:

Site 18AN1271, also known as OTC-C1 or Odenton Town Center Area 1 Locus 1, consists of a series of 19th century charcoal kilns associated with Patuxent Furnace located near Odenton in central Anne Arundel County. The site is situated on a gently rolling upland terrace, dissected by several diffuse wetlands that flow into unnamed tributaries of the Severn and Patapsco Rivers. At the time of the site's first investigation in 2005, the entire area was a woodlot. The presence of intrusive tree species suggests that the property likely was clear-cut for timber at least once within the past 50 to 75 years. The site is several miles from the Patuxent Furnace, although relatively easily accessible via railroad. Much of the surrounding area is swampland for the better part of the year. Soils at the site are primarily Christiana silt loams and Sassafras sandy loams.

Iron manufacturing was a crucial industry throughout the colonial and antebellum periods. In the Middle Atlantic region, iron forges and furnaces could be found in nearly every colony, including Pennsylvania, New Jersey, and Virginia. In Maryland, ironworks could be found in all of physiographic provinces across the colony/state. In addition to two historic iron furnaces in the present day boundaries of Anne Arundel County (the Curtis Creek Furnace operating 1759-1851, and the Muirkirk Furnace operating from 1847 to ca. 1900), the Snowden Furnace or "Patuxent Ironworks" began production ca. 1734 and continued operations until 1856.

During the 18th and early 19th centuries, the system typically utilized by Maryland entrepreneurs to produce iron was the so-called "English or "indirect" system. This system required the completion of two separate operations called "furnace" and "forge". The early operations of the Patuxent Furnace included both activities, but it is unclear whether the final operations included the forge. Successful operation of forges and furnaces depended upon acquiring and maintaining a vast array of resources, all of which worked in concert to support the furnace. Land was a prime requirement for successfully operating iron furnaces of forges. In addition, operating charcoal-fired blast furnaces was labor-intensive and required large forces of both skilled and unskilled workers.

The typical labor force was composed of a combination of free whites and free and enslaved blacks. Slaves often were rented out. In less isolated and more densely-populated areas near urban centers, such as Anne Arundel County, access to immigrant workers may have made obtaining an adequate labor force less of a problem. Whether slave or free, workers at furnace and forge sites lived in small, often self-contained, communities. The arrangement of buildings at Patuxent Forge on at 1860 Atlas of Anne Arundel County suggests that the forge was the center of a community.

As for the raw materials needed to manufacture iron, three basic components were required: the ore itself, flux to remove the impurities from the metal, and a source of fuel capable of producing high heat. During the colonial era, charcoal was used for this final ingredient. Timber was felled and given time to dry. It was cut into standard length cords and stacked into a mound around a central wooden chimney. Dirt was heaped on top of the mound to completely cover the wood and create a reduction-burn environment. After several days of tending to the fire, the charcoal was raked out of the mound and loaded onto wagons or rail cars.

The earliest colonial ironmasters purchased thousands of acres of wooded land immediately adjacent to their forges or furnaces, and employed their own large force of woodcutters and colliers. However, as original old growth forests were removed and land use in an area turned towards agriculture, obtaining a steady supply of wood became more difficult. In some instances, ironmasters turned to surrounding farmers in the neighborhood to furnish a continuous supply. Locally, such a system was used to supply at least part of the fuel needs for Patuxent Furnace in the mid 19th century. In 1848, Patuxent contracted Owen Cecil to supply wood/charcoal for the mill. Cecil's 400 acre farm abutted the north side of the Annapolis and Elkridge Railroad near Millersville, and may have included the general vicinity of the site. Thus, charcoal hearths probably dotted the landscape, indicating the probable origin, association and date for the hearth features that comprise 18AN1271.

The site was first identified in April of 2005 during the course of a Phase I survey. The site was surveyed as part of a larger area included in the (then) planned Odenton Town Center development. Development of the property would require approval of a US Army Corps of Engineers permit triggering compliance with a number of pieces of legislation. The 2005 survey and subsequent Phase II investigations at 18AN1271 were undertaken in compliance with applicable federal, state, and local regulations, including Section 106 of the National Historic Preservation Act of 1966, the Maryland Historical Trust Act of 1985, State Finance and Procurement Article 5A-325 and 5A-326 of the Annotated Code of Maryland, and Title 2-109 of the Anne Arundel County Subdivision regulations.

The site area and surrounding lands were surveyed with systematic shovel test pits (STPs) placed at 20 m intervals. Though none of the shovel tests identified artifacts, some fell atop of charcoal kiln features. Visual reconnaissance of the surrounding area identified no less than ten of these features. Judgmental retesting with STPs also failed to identify cultural materials. Charcoal kiln features were mapped on a scaled drawing of the area and photographed. Based on these findings, the site was determined to represent the remains of 19th century charcoal production activities to fuel the fires of the local iron furnaces.

As the charcoal mounds at 18AN1271 were raked out and their contents loaded into wagons and rail cars, some charcoal fragments invariably fell by the wayside or were left behind. This remnant charcoal is part of the stratum identified during the shovel testing of the site. Burn sites (kilns) were often re-used to cut down on preparation time. The charcoal kilns now appear as little more than low earthen mounds. The mounds were relatively uniform and measured 6 to 10 m in diameter and were typically no more than 1 m in relief from the surrounding landscape. A shallow trench ran around the outside of each mound. This was likely the result of leveling the ground surface to prepare for the burn and stockpiling the dirt to be heaped on top of the wood. Sources suggest that colliers, or charcoal makers, would camp with the kilns to supervise the burn, but in this case no archeological evidence of a campsite was identified. Based on these findings, Phase II testing was recommended.

Phase II evaluation of the site was completed in October of 2005, and consisted of a combination of close-interval shovel testing and test unit excavation within the charcoal mounds. A total of 176 shovel tests were excavated at 10 m intervals across the 10.28 acre site. Shovel tests measured approximately 40 cm in diameter and were excavated to a minimum depth of 40 cm below surface, or 10 cm into sterile subsoil. Soils were excavated according to natural stratigraphy and were screened through hardware cloth. Each shovel test was recorded on standardized forms that noted location, soil stratigraphy, the presence or absence of cultural materials or features, disturbance and surrounding vegetation. All soil characteristics including color and texture were recorded using standard soil nomenclature and methods.

In addition, pedestrian reconnaissance survey was conducted to relocate the 10 documented charcoal kiln features. During reconnaissance, four additional



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charcoal kiln features were found. These newly identified features were nearly identical to the previously identified charcoal kilns, but were located north of the previously identified site boundary. The site boundary then was amended to include those newly identified features.

Finally, a total of twenty 50 cm X 1 m test units were placed to investigate four individual charcoal kiln features. The targeted features were chosen to provide a sample of features from across the site. A bisecting line was placed across the center of the kiln features, oriented along the STP grid axis. Five of these test units were placed on this orientation at each of the four targeted kilns. The kiln features typically ranged from 10 to 12 m in diameter, and test unit placement was designed to provide a sample cross-section profile of the feature. Soils were excavated following natural stratigraphy, and were screened through hardware cloth. Each level of excavation was recorded in the field on standardized forms that noted location, soil stratigraphy, the presence or absence of cultural materials or features, and disturbance. All soil characteristics including color and texture were recorded using standard soil nomenclature and methods.

Despite this extensive testing, no cultural materials were recovered. Phase II evaluation of the site indicated that although historic charcoal kilns/hearths were present, few associated cultural materials, features or deposits were present in the site area. Although the large number of charcoal kilns at 18AN1271 is anomalous in the region, due to a lack of additional features or deposits, or associated artifacts that would provide information concerning domestic, landscape, industrial, or other activity, the site cannot provide significant new information regarding collier activity in Maryland.

Examination of the signatures of the charcoal kilns failed to identify substantial or significant resources related to either to the production of charcoal or to historic domestic or industrial activity at 18AN1271. Aside from 15 charcoal hearths, no additional landscape or structural features, cultural materials or deposits were present in the tested area. The isolated kiln features do not exhibit those qualities of significance as defined by the NRHP Criteria for Evaluation. It was determined that the Odenton Town Center development project would have no effect on significant archeological or historic properties and no additional investigations were recommended.

External Reference Codes (Library ID Numbers):

97002563, Site Files