

# Harford Furnace (18HA148)

The Harford Furnace Site (18HA148) is a 19th-century iron furnace complex located in Harford County, Maryland. There is also a small prehistoric component with diagnostics dating from the Middle Archaic to the Late Woodland periods. The Harford Furnace Store, the Charcoal Shed/Smith House and a segment of a raceway are located within the site boundaries.

Around 1830, three partners established the Harford Furnace on James Run. Between 1831 and 1833, the partners sold their shares to new partners who acquired more land. By 1834, the parcel containing the main furnace complex was acquired, so the furnace was not built until after that time. By 1857, holdings comprised more than 5000 acres. At its peak, there were 48 buildings on the property including a store, a post office, a blacksmith shop, a lime kiln, a saw mill, warehouses and worker's houses, as well as the ironworks complex. Census records for 1850-1870 revealed a primarily white male, foreign-born, transient work force. Between 1861 and 1867 the furnace changed hands twice. In 1876, when the property was auctioned off, an iron furnace and related materials were included in the sale as were materials related to a chemical works. It is unclear if the furnace was actively making iron between 1867 and 1876. The furnace stack was dismantled between 1876 and 1909. Historic maps detail the furnace decline, with 18 structures on an 1858 map, 10 structures by 1878, and only 7 by 1901. The Charcoal Shed was converted to a dwelling in 1950; the Furnace Store converted to a private dwelling prior to 1953.

Work was undertaken at the site in 1981 ahead of improvements to Maryland Route 543. Testing consisted of the excavation of approximately 18 test pits with a total of 75 historic artifacts recovered. A Phase II evaluation was undertaken in 1985 prior to a bridge replacement. Subsurface investigations included the excavation of 130 shovel tests and seventeen test units. Three machine trenches (A-C) were dug on the west side of Route 543. Thirteen test units on the west side of Route 543 resulted in the identification of a high artifact density in the southern study area, designated Area 1. Also on the west side of Route 543, surface remains of a structure were identified and a surface collection of artifacts made (Area 4). Two cultural features related to the furnace complex were identified on the east side of Route 543. Area 2 was the remnants of the former raceway and Area 3 a stone retaining wall and remains of stone steps for the Foundry Store. Area 5, on the east side of Route 543, consisted of a 20th-century trash deposit. Domestic artifacts were concentrated in Area 1 and Area 5. Domestic materials, which exhibited signs of burning, were also present in Area 4. The quantity of nails recovered from Area 1, in association with posthole features, suggested a wooden structure may have stood at that location, possibly a workers' house. A total of 8,819 historic artifacts and 15 prehistoric materials were collected during the Phase II investigations.

A Phase III project occurred in 1985, focusing around the house foundation in Area 1. Sixteen 1x1 m units were dug and once sampling was completed, larger areas were excavated using a Gradall. All cultural features were plotted and excavated. A heavily compacted slag layer tentatively identified as the access road illustrated on the 1858 map was encountered. Artifact distributions indicated the greatest densities within the house foundations. The Area 1 mortared and roughly dressed fieldstone foundation had an H-shaped central chimney and two hearths and measured approximately 16x32 ft. The structure possibly represented a two-celled industrial

workers' "duplex". Non-architectural features included planting holes or beds, lithic concentrations, postholes/molds, a privy, drainage trenches, the slag road, and a large trash-filled relict creek channel. One linear and two circular planting beds were located in the south yard. Three lithic concentrations in the south yard were interpreted as reduction areas for preparing the fieldstones used in the foundation and chimney base. Two fence lines were observed in the north yard. The privy situated north of the building, contained 3 distinct fills and no evidence of a superstructure. A complete bottle from the lowermost fill was thought to reflect infilling in the last quarter of the 19th century. Two linear drainages features merged into one linear feature and may have been spillways associated with the raceway used to power the blast furnace or they may have been drainage ditches to carry water away from the dwelling. Feature 120 represented a relict creek channel south of the building's "front" yard. Numerous large water worn cobbles were noted at the bottom of the feature. The fill in the feature was deposited over a relatively short term between 1839 and 1845, probably by the occupants of the dwelling.

A total of 8,574 historic artifacts were derived from the Phase III investigations in Area 1. A total of 30 flotation samples were examined from site features, including the privy, postholes and molds, a board mold, and planting holes. A total of 262 seeds were recovered, 27 specimens of which were charred. The floral data did not suggest that the inhabitants at Harford Furnace derived their livelihood from the land or that they devoted much time or energy to horticultural endeavors. There was some evidence of low maintenance crops such as millet and leafy green vegetables, and possibly wild fruit sources, such as blackberries and domesticated fruits, such as peaches. The tenants of the Area 1 structure may have combined limited agricultural activities with their industrial activities although they would have grown food items that required little attention. A detailed analysis of the 2,048 bone fragments was conducted.

In addition, the raceway (Area 2) was mapped, a profile cut through it and a cross-section drawn. The stone retaining wall (Area 3) was photographed. Reconstruction of the hydraulics of the raceway indicated that the water from James Run was diverted farther upstream with the race cut into the terrace, diverting the water flow into a near level channel. A sufficient head of water to fill the race was created when James Run was dammed. In all likelihood, an aqueduct carried the water across the road from the end of the race to the wheel and powered the bellows. The retaining wall (Area 3) was most likely in place by 1858. No artifacts were recovered from the excavation trench across the raceway or from the area of the stone retaining wall during the Phase III study.

The Harford Furnace Site (18HA148) is a 19th-century iron furnace complex, with five identified areas. Area 1 consisted of an artifact concentration with associated posthole/mold features representing at least two fence lines, planting features, lithic concentrations, a privy, drainage trenches, a slag road, and a trash-filled relict creek channel. The artifact assemblage from Area 1 indicated that the structure was out of use by the mid-late 1880s. Area 2 was defined by the remnants of the former raceway. Area 3 was defined by a stone retaining wall and the remains of stone steps for the Furnace Store. Area 4 was defined by surface foundation remains of a structure identified on the west side of Route 543. No Phase III work was undertaken in the area. Area 5 was identified on the east side of Route 543 and consisted of a 20th-century trash deposit.