



Cultural Resource Consultants

Memorandum

To: William Lee, Gowanus Environmental Remediation Trust #2

From: Michael Audin, RPA & Jonathan Bream

Date: January 23, 2022

RE: Memo # 39 – End of Fieldwork Results of Level 2 Cultural Resource Review
Debris Staging at Clean Earth – Claremont
RTA-1 Dredging, Level 2 Monitoring
Gowanus Canal Remediation Project
Brooklyn, Kings County, NY

This memorandum presents the findings of Archaeology & Historic Resource Services, LLC (AHRS) review of screened sediments at the Clean Earth Claremont Facility in Jersey City, New Jersey (Clean Earth) from Level 2 Monitoring. The screened sediments are from the dredging of RTA1 conducted between August 16 and December 23, 2022 at the Gowanus Canal Superfund Site in Brooklyn, New York and then reviewed by an AHRS archaeologist between August 19 and December 27 of 2022. The purpose of this memorandum is to present recommendations for the items retained from sediment screening at Clean Earth.

INTRODUCTION

Dredge material was processed according to the Level 2 Archaeological Monitoring protocol outlined in the Cultural Resource Monitoring Plan (CRMP), revised September 2020. This protocol calls for dredged soft sediments to be screened over 4" bars on a vibrating platform. Items recovered during the screening process are then sorted. Items of potential interest (possible artifacts or objects of local interest), as described in the draft CRMP, revised September 2020, were placed in a separate stockpile and photographed daily for AHRS archaeologists to review and then placed in a holding area for AHRS to inspect weekly.

RESULTS

AHRS archaeologists Jonathan Bream, Scott Warnasch, Jonathan Weiner, and Nicholas Zeitlin conducted the scheduled site visits to review the recovered items between August 19 and December 27, 2022. A Clean Earth machine and operator assisted the archaeologist with the sorting through the stockpiled items. The archaeologist took photographs of the items at Clean

Earth. Recovered items are designated as artifacts, objects of local interest or debris according to section 4.3 of the CRMP as described below.

Artifacts

Artifacts are defined as meeting all of the following criteria:

- Identifiable by type, function, material and time period;
- Has an identifiable association with a specific building, site, event, or person along the Gowanus Canal during the canal's period of significance (1853 to 1965); and
- Confirms previously unconfirmed archival information along the canal or reveals new information that changes our understanding of the history/development of the area.

Objects of Local Interest

Objects of Local Interest are defined as meeting all of the following criteria:

- Identifiable by type, function, material and/or time period;
- Has a general association with the area, but not with a specific site, event, or person along the Gowanus Canal during the canal's period of significance (1853 to 1965); and
- Does not confirm previously unconfirmed archival information along the canal or reveal new facts that changes our understanding of the history of the area.

Debris

Debris is defined as any other item recovered from excavation/dredging, including unidentifiable objects, objects with no apparent association with the local area, construction debris, objects made after 1965 and natural items (such as trees, brush, rocks, etc.).

As per section 4.10.4 of the CRMP, objects of local interest may include small, non-porous objects of local interest that can potentially be turned over to interested parties for display or for their collection, subject to cleaning/decontamination procedures to be established. A determination regarding the appropriateness of such an action must be made by the United States Environmental Protection Agency (USEPA); an agreement among all interested parties (including, at a minimum, the GCERT and the interested party) will likely be required.

A total of 3 items were retained for cleaning, research and assessment from the items retained at Clean Earth. They consist of one artifact, a blacksmith's leg vise, and two objects of local interest, an industrial-sized metal hook or rod and a bronze boat propeller. These 3 items are described below.

Items Recommended for Retention

Artifact #1 – Blacksmith's Leg Vise.

AHRS archaeologist retained one item, a blacksmith's leg vise (Photograph 1), as an artifact from the same or one of the other black smith shops identified for the metal ladle identified in Memo 20. The blacksmith leg vise or "solid box vise" was one of the most important tools in the blacksmiths shop. It firmly held hot iron while being hammered, chiseled or twisted. These were the only type of small vise designed to take this kind of daily use. A small 30-pound blacksmith's vise could survive pounding that would wreck a much heavier cast iron bench vise.
(<https://www.anvilfire.com/FAQs/blacksmith-vise.php>)

Research was conducted around the dredge area where the item was recovered. The presence of heavy industry is well documented along the Gowanus Canal in the late-19th and early-20th centuries. While not one of the primary industries, ironworking and iron casting could be found in many of the factories as workshops for machine maintenance and repair. A review of the 1886 and 1915 Sanborn maps in this area of the Gowanus Canal depict blacksmith shops connected to a number of lumber yards, brickyards and factories. In 1886, a smithy was located between the Fulton Municipal Gas Company and the Adam's Lime, Brick and Lath Yard on Sackett Street to the east of the Canal. There were another two smithies on Nevins Street between Union Street and Carroll Street east of the Kenyon and Newton's Lumber Yard. These shops allowed for in-house repairs and production of replacement parts for factory equipment. Although AHRS is unable to determine which of these locations this particular blacksmith's leg vise is associated, it is most likely associated with one of these locations, reflecting the industrial nature of the area. See Figure 1 for an example of a similar type of a blacksmith leg vise.

Measurements: Extant Length 30" Width 30"



Photograph 1 – Blacksmith's Leg Vise.



Figure 1 – Example of blacksmith's leg vise, image obtained from (<https://maestronet.com/forum/index.php?/topic/340430-17th-or18-century-wrought-iron-vise/>).

Objects of Local Interest

AHRS archaeologist retained two other items that are recommended to be retained as objects of local interest, an industrial-sized metal hook or rod and a bronze boat propeller. Both are described below.

Object of Local Interest #1 – Industrial-sized metal hook or rod

The industrial-sized metal hook or rod (Photographs 2 and 3) cannot be directly associated with a particular property or business. It, like the blacksmith leg vise, may have been used in a blacksmith's shop or in any industry that would have needed a hook to grab onto an object and pull it towards its intended goal. These hooks and rods were an extension of the human arm and were used predominately in the industries such as dyeing to move materials around in the vats to obtain optimal color. Small skeens of yarn or thread would be lowered into a vat of dye and then using the long hook or rod, the skeens would be swirled in the dye vat until optimum color saturation was obtained. The longer the skeens remained in the vat, the deeper the color result. This hook may have been used in one of the dye works in the area possibly even the same dye works that produced the balls of yarn found during the dredging of Turning Basin 4.

Measurements: Length 52"



Photograph 2 – Industrial-sized metal hook or rod.



Photograph 3 – Photo of cleaned industrial-sized metal hook or rod.

Emile Gagliostro in the November 1919 issue of *Color Trade Journal* included a woodcut of the dyeing process (Figure 2). The woodcut shows the use of similar hook or rods to move the material being dyed around in the dye vats (*Color Trade Journal*, November 1919, 123). In the July 1919 issue of the same *Journal*, J. Merritt Matthews wrote that the “obsolescence of equipment in a dye factory is very great. It may be said that during the next few years a great deal of our factory equipment will have to be rebuilt.” (*Color Trade Journal*, July 1919, 4). This industrial-sized metal hook or rod may have been discarded as a result of the refit of a dye works in the area.



Figure 2 – Woodcut of Dyeing in the Gobelin's Dye Factory in 1790. Image from *Color Trade Journal*, November 1919, page 123. Blue arrow is pointing to long hooks or rods in use

Object of Local Interest #2 – 24-inch bronze boat propeller

The bronze boat propeller (Photographs 4 and 5) cannot be directly associated with a particular boat or motorized craft that plied the waters of the Gowanus Canal. The characteristics of the propeller do give some idea of on what water craft it was used. While bronze will readily tarnish in seawater, it will keep its structural strength for a relatively long period of time. A 3-blade propeller usually offers top speed performance (<https://solaspropellers.com/index.php/about/6-basic-propeller-info>). This propeller is most likely from a recreational or transportation boat versus a pilot boat or industrial boat on the Gowanus Canal. With the closure of many of the industries along the canal in the 1970s, leisure boats and crafts have become more common.

Measurements: Diameter 24"



Photograph 4 – Bronze boat propeller. Front view.



Photograph 5 – Photo of cleaned propeller.

These undated items were typical of the 19th and early 20th centuries and represent the industrial and shipping character of the area and are associated with the commercial, industrial and transportation activities of the Gowanus Canal.

CONCLUSIONS AND RECOMMENDATIONS

AHRS concludes that one of the three items recommended to be retained during the sediment screening at Clean Earth is an artifact and the other two are objects of local interest that are generally associated with the commercial, industrial and transportation activities of the canal. The blacksmith's leg vise is an artifact associated with one of the blacksmith shops in the area of this portion of the Gowanus Canal, although which one is not clear. The industrial-sized hook or rod may have been used in one of the dye works or another industry where a long hook or rod were needed. The bronze boat propeller is more likely from a recreational or other type of transportation vessel. It could also be more representative of the up-and-coming leisure nature of the Gowanus Canal in the post-industrial era. The retention of the two objects of local interest is at the discretion of the USEPA and the willingness of any interested parties as stated in the Results section above.

The blacksmith's leg vise and industrial-sized hook or rod are fragile since being cleaned and exposed to the air. The boat propeller is less fragile. AHRS recommends a curator to review how best to store the artifact and ultimately conserve it for long term preservation.