

MEMORANDUM

TO: Ed Olsen – Superintendent, Parks and Forestry Division, Carys Lustig – Director of Public Works, Stacey Mulroy – Director of Parks and Recreations (Town of Needham)

CC: Katie King – Assistant Town Manager / Director of Operations (Town of Needham), Gene R. Bolinger, RLA, Cass Chroust, RLA (Weston & Sampson)

FROM: Lee Koska, PE (Weston & Sampson)

DATE: September 22, 2022

SUBJECT: Claxton Field Environmental Investigation Summary and Recommendations

The Town of Needham retained Weston & Sampson to complete excavation of additional shallow test pits to better define the thickness of topsoil material at Claxton Field. Additional shallow test pits were recommended by Weston & Sampson as a part of our *Claxton Field Environmental Summary and Improvement Recommendation Memorandum* dated January 27, 2022. At the request of the Town of Needham, Weston & Sampson completed these additional shallow test pits to further define the depth of ash and various solid waste materials identified during a geotechnical investigation program.

Site Location & Description

Claxton Field is located at 1421 Central Avenue in the Town of Needham, Massachusetts, as shown in Figure 1 – Locus Map. Historically, the site was used as the Town's burn dump prior to the development of the Needham Recycling and Transfer Station in the 1950s / 1960s. The burn sump was never registered with the MassDEP Solid Waste Division either during its operation or following redevelopment as a recreational facility approximately 60 years ago. Currently, the site is the location of two (2) softball fields with an overlapping rectangular field in the eastern outfield area, sports field lighting, a playground area, a support building, and parking lot.

During a geotechnical investigation program conducted by Weston & Sampson at the site on December 7, 2021, ash and various solid waste materials (glass, metal fragments, ceramic, and wood) were observed intermixed with granular fill materials underneath topsoil. A significant increase in ash and various solid waste materials was observed at four (4) feet below ground surface (bgs).

Shallow Test Pitting Activities and Results

On March 15, 2022, Weston & Sampson mobilized to the site to conduct twenty-one (21) shallow test pits using a hand auger. A summary of shallow test pitting results are outlined below. Full test pit descriptions are provided in Table 1.

Park Test Pitting Results

Fourteen (14) test pits were conducted to two (2) feet bgs and were spread throughout the site based on a roughly 140' by 120' grid. One (1) test pit, PB-4, could not be completed due to frozen ground cover. The top 10 to 12 inches consisted of topsoil / loam which was composed of brown, fine to coarse sand with varying amount of clay, silt, and gravel. Topsoil / loam was underlain with fill material consisting of fine to coarse sand with varying amount of silt, glass, ash, metal, and porcelain. See Figure 2 – Site Plan for test pit locations.

Playground Test Pitting Results

Six (6) test pits were conducted to two (2) feet bgs or until the geotextile landscaping liner beneath the playground area, whichever was shallower. In test pits PG-3, PG-4, and PG-5 the top 10 inches consisted of topsoil / loam or sand. Topsoil / loam was composed of brown, fine to coarse sand with varying amount of clay, silt, and gravel and underlain with fill material consisting of fine to coarse sand with varying amount of silt, glass, ash, metal, and porcelain. In shallower test pits, PG-1 (0-6"), PG-2 (0-7"), and PG-6 (0-4"), topsoil / loam was underlain by a geotextile landscaping liner. See Figure 2 – Site Plan for test pit locations.

In general, topsoil / loam was at least 10 to 12 inches thick across the site except in areas where a geotextile landscaping liner was identified. In areas where the geotextile landscaping liner was identified topsoil / loam or sand was at least 4 and 7 inches thick. Ash and solid waste material was generally started around 10 or 12 inches bgs or directly below the geotextile landscaping liner (4 to 7 inches bgs).

Attachments:

Figures

Tables