

US EPA – Region III Brownfields

DRAFT Analysis of Brownfields Cleanup Alternatives

Former Easton Iron & Metals

1100-1164- Bushkill Dr, Easton, PA 18042

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I. Introduction & Background

a. Site Location

The tracts located at 1100-1164 Bushkill Drive in Easton, PA referenced herein as the Site consists of two tracts of land totaling approximately 15 acres. The northern tax tract identified on the Northampton County Geographic Information System (GIS) website is approximately 10.37 acres with Tract Identification Number (PIN) L9NE1 17 10 0310 and mailing addresses of 110-1113 Bushkill Drive. Bushkill Drive separates the northern tract from the southern tract. The southern tract includes approximately 4 acres of land. Geographic coordinates at the approximate center of the northern tract of the Site are 40.700673° north latitude and -75.220648° west longitude.

The northern tract is zoned Adaptive Reuse (AR), which is a zoning district designed to promote the redevelopment and revitalization of underutilized and underperforming areas of the city, the uses of which are industrial development and residential, institutional, and commercial. The southern tract is zoned as River Corridor (RC), a zoning district designed to accommodate appropriate development while providing for adequate protection and buffering of the city's waterways and other natural resources; assisting in flood management; protecting environmentally sensitive areas; and meeting the need for local and regional greenways, open space, and recreation within the city.

Currently, the Site is vacant, and historic structures are no longer present. Most of the Site is overgrown with vegetation. Fencing encompasses some areas on the northern and southern tracts, and temporary roadways have been constructed of recycled asphalt material. Public utilities are available for the Site.

The Site is surrounded by a mix of residential, commercial, and public properties. Single family homes and apartment buildings are to the west, north, and east. Bushkill Creek, an accompanying trail, and the Easton Cemetery are to the south. Further east of the northern tract and north-northeast of the southern tract are Gil Machine & Tool Co Machine shop, WB Moore Biotechnology Company, and Pacific Pride fueling station. Abutting the east of the southern tract is Deiter Heating, the former location of Walters Tire and Oil Company and Sinclair Oil Refinery.

b. Previous Site Uses and Previous Cleanup/Remediation

The Site was the former location of a lime kiln facility operated on the Site from 1885 to approximately 1927. In 1927, the Site operated as Crew Levick Company Motor Oil Station, which included a rectangle-shaped building used to store oil barrels and four oil tanks. In 1949, the north tract of the Site was used as a scrap metal yard and filling station with three USTs along Bushkill Drive. In 1949, the southern tract was used as a junk yard west of Sinclair Oil Refinery. In 1958, both the northern tract and southern tract were developed with an auto repair garage and scrap metal yard. From 1958 to 2015, the Site operated as a scrap metal recycling business under the ownership of the Easton Iron & Metal Company.



c. Site Assessment Findings

Previous investigations include:

- Phase I ESA Report dated February 4, 2019 (HDR Engineering Inc.)
- Phase II ESA Report dated December 31, 2019 (HDR Engineering Inc.)
- Phase II ESA Report Addendum dated June 1, 2020 (HDR Engineering Inc.).
- Targeted Brownfields Assessment (TBA) – Phase II Environmental Site Assessment dated January 31, 2025 (Tetra Tech Inc.)

Findings for reports identified above are listed by area of concern below:

Quarry Fill Area

Arsenic was detected in soil samples at concentrations exceeding the Pennsylvania Department of Environmental Protection (PADEP) Medium Specific Concentrations (MSC) for direct contact (DC) in residential soil. Contaminants of concern in connection with the former Quarry Fill Area include metals (arsenic) and residual oil related compounds (benzo(a) pyrene).

Former Railroad and Railroad Spur Area

Heavy metals (lead) were detected exceeding a PADEP risk standards.

Historical Contaminated Fill Material

PCBs, heavy metals, and residual oils were detected in impacted fill material at concentrations exceeding the regulatory standards for direct contact and soil to groundwater pathways.

Former Waste Piles

Analysis of the sample was limited to PCB and hexavalent chromium. Aroclors and PCB were detected in waste piles. PCB concentrations of 100 mg/kg were detected in surface soil of the waste piles, exceeding the regulatory standards. This sample was collected from the area of the eastern former waste pile. Contaminants of concern in connection with former waste piles fill include PCB, lead, and arsenic.

Historical Storage of Oil-Barrels and Oil Tanks by Crew Levick Co.

Subsurface soil samples were collected and analyzed for petroleum products, solvents, PCBs, and metals plus mercury and were not detected at concentrations exceeding the regulatory standards.

Former Filling Station and Automotive Repair Facility

Arsenic was detected in soil at the former filling station and automotive repair facility. Groundwater samples from monitoring well MW-1 in this area were collected and analyzed for petroleum products, solvents and residual oils and dissolved metals. Contaminants of



concern in connection with the former filling station and automotive repair facility include arsenic in soil and dissolved iron, and manganese in groundwater.

Former Metal Scrap Yard Areas

The facility was historically operated as a scrap yard. Residual oils and heavy metals were detected in soil above regulatory standards.

Former Automobile Salvage Yard

Former metal scrapyards included PCBs, and the heavy metals.

Leaking Pad Mounted Transformer Containing PCB

PCBs, and residual oils, exceeded the regulatory standards in soil.

Area Of Former Potentially Leaking Drums

Two separate areas of former potentially leaking drums on northern portion of the Site are in the southwest corner of the former filling station and automotive repair facility by the road (southwest), and the other approximately 100 feet northeast of the former filling station and automotive repair facility (northeast). PCBs, and heavy metals were detected in surface soil.

Battery Components in Soil

Lead-acid battery components were identified in soil borings. Exceedances of lead were identified in the vicinity of battery components.

The northern tract contains the following areas of concern described above: historical contaminated fill material, quarry fill area, former railroad and railroad spur area, former waste piles, former filling station and automotive repair facility, former metal scrap yard areas, area of former leaking drums, and lead-acid battery pieces in soil.

The southern tract contains the following areas of concern described above: former railroad and railroad spur area, leaking pad mounted transformer containing PCB, historical contaminated fill material, former automotive salvage yard, historical storage of oil-barrels and oil tanks by Crew Levick Co., former metal scrap yard areas, and off-site Former Sinclair Refining Co. & Walters Oil.

d. Project Goal

Reuse Plan

- Called The Foundry, VM Development Group's (VMDG) plan envisions the site being transformed into a \$40M+ mixed-use community with ~20,000 square feet of commercial space and parking on the buildings' first floors, ~200 residential units on the upper floors, and unique architecture focused on the environment, science, recreation, sustainability, nature, and art.



- The City and VMDG are also excited by the synergistic relationship The Foundry will have with the nearby R&H Simon Silk Mill (which was also redeveloped by VMDG), building upon VMDG's success in attracting commercial tenants to the Bushkill Creek Corridor that create jobs and help foster new business owners and entrepreneurs.
- In addition to new businesses, the additional residential units will create indirect economic impacts in the form of disposable income being directed to local business.
- The Foundry also embraces enhanced pedestrian connectivity in the corridor by supporting the continuation of the Karl Stirner Arts Trail through the site and connecting it to improved pedestrian facilities along Bushkill Drive.

Projected Economic Benefits

- The project will create **~20,000 square feet of new commercial space** which (following the successful model of the nearby Simon Silk Mill) would allow for the location of **up to 15 businesses and approximately 40 jobs at the site.**
- VMDG estimates that the project will also create **150 temporary construction jobs.**
- The project will generate **~\$500,000 annually in real estate tax revenues and ~\$240,000 in earned income taxes.**

Project Significance

- Totaling ~15 acres with roughly 6 acres suitable for development. It is the largest vacant developable property remaining in Easton.
- At the center of Easton's "Bushkill Creek Corridor," which has been the focus of a decade-plus revitalization effort including the redevelopment of the Simon Silk Mill, the creation of the Karl Stirner Arts Trail (KSAT) regionally renowned outdoor sculpture park, and the development of Lafayette College's William Arts Campus.

Reuse plans for the site can be found as **Attachment A.**

e. Regional and Site Vulnerabilities

The Site lies along the Bushkill Creek within the Delaware River Basin in the Great Valley Section of the Ridge and Valley Province. Geology of the Subject Property is prone to Karst. Sinkholes and closed depressions, typical solution features of carbonate formations, have been mapped in the Easton area but not at or in the immediate vicinity of the Subject Property (Easton quadrangle map, in Kochanov 1987).

Local (shallow) groundwater flow is anticipated to largely follow topography and to be directed towards Bushkill Creek to the south. Regional groundwater flow is expected to be towards the Delaware River to the east. The Delaware River is the longest free flowing (undammed) river in the Eastern United States. The Delaware River Basin is a crucial source of drinking water for approximately 5% of the U.S. population, including the nation's largest, and fifth-largest cities, New York and Philadelphia respectively. The watershed drains an area of 13,539 square miles (35,070 km²) and provides drinking water for 17 million people.



According to FEMA Flood Zone Map 42095C0279E, the portions of the Site planned for development is not in a floodplain. The southeastern portion of the southern tract is listed as “Other Flood Area” on the map. This portion of the site is scheduled to be capped with clean fill and landscape material to allow for stormwater infiltration. FEMA Flood Zone Maps can be found as **Attachment B**.

Site and regional vulnerabilities include changes in precipitation patterns, and sea level rise, potentially leading to more frequent and severe flooding, and harm to ecosystems and agriculture. While plans for the site include capping and hot spot remediation the majority of the cap is planned landscaping with 2 feet of clean fill. Capping with landscape and clean fill provides for increased stormwater infiltration which will lessen the volume of runoff entering the Bushkill Creek and the Delaware River, lessening the chance of flooding in the region.



II. Applicable Regulations and Cleanup Standards

a. Cleanup Oversight Responsibility

The cleanup will be overseen by HDR Engineering Inc. (HDR) the Qualified Environmental Professional (QEP) for the City of Easton and Northampton County in consultation with the proposed developer VM Developers. All required reports and notices will be submitted to the PADEP and appropriate federal agencies.

b. Cleanup Standards for major contaminants

The City of Easton currently anticipates that the PADEP Site Specific Standard for both residential and non-residential use will be used as the cleanup standards. Risk-based cleanup standards including engineering and institutional controls will be generated for contaminants of concern, in accordance with state regulations.

c. Laws & Regulations Applicable to the Cleanup

Laws and regulations that are applicable to this cleanup include the Federal Small Business Liability Relief and Brownfields Revitalization Act, the Federal Davis-Bacon Act, the PADEP Land Recycling and Environmental Remediation Standards Act (Act 2), USEPA/Toxic Substances Control Act (TSCA) and town by-laws. Federal, state, and local laws regarding procurement of contractors to conduct the cleanup will be followed.

In addition, all appropriate permits (e.g., notify before you dig, soil transport/disposal manifests) will be obtained prior to the work commencing.

III. Evaluation of Cleanup Alternatives

a. Cleanup Alternatives Considered

Based on the remedial investigation and planned development at the Site, the following remedial alternatives are provided to address the complete exposure pathways at the Site, along with the preferred alternative.

Alternative	Pros	Cons
1. Use a combination of capping, vapor barriers, and hot spot excavation to eliminate exposure pathways.	<ul style="list-style-type: none">• Eliminates the Direct Contact and Soil to Groundwater pathways.• Most cost-effective option.	<ul style="list-style-type: none">• The cap will need regular inspections and periodic maintenance.• Any planned disturbance would need to be managed by the Soil Management Plan.• Future use of the Site will rely on Engineering controls to maintain elimination of pathway exposure.
2. Excavation of all impacted soil.	<ul style="list-style-type: none">• Removes impacted soil and eliminates the need for engineering and institution controls.• No need for cap maintenance or inspections.	<ul style="list-style-type: none">• This would be the most expensive solution. Impacted soil is estimated to span an approximately 435,600 square foot area across the two tracts.• Impacts may be in the water table and this alternative could potentially require excavation of saturated materials.



3. No Remediation on the Site and rely on natural attenuation to reduce contaminants over time.	<ul style="list-style-type: none">Least expensive but will require decades to resolve residual impacts to soil. Metals and scrap will not be removed maintaining potential source areas.	<ul style="list-style-type: none">The Site will likely sit undeveloped, and contaminants will remain for extended periods of time through natural attenuation.
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b. Cost Estimate of Cleanup Alternatives

Estimated costs for each option are provided below.

Options	Cost	Notes
1 Engineering and Institutional controls	\$2,500,000	Based on redesign using impervious cap and cover, landscaping and institutional controls.
2 Complete Excavation	\$10,000,000	Based on estimated volume to remove scrap to native soil.
3 No Remediation	\$100,000/yr	Based on maintenance and security of the properties indefinitely.

c. Recommended Cleanup Alternative

The recommended cleanup option for the Site is **Option 1** in **Section III.a** above. This is the preferred alternative as it eliminates the current exposure pathways, ensures the Site will be adequately remediated, and is the most cost effective alternative. Details of the Engineered control will be described in the Cleanup Plan for the site. If future redevelopment plans change, then the remediation alternatives will be reevaluated.