



Environmental Assessment, Remediation and Compliance Solutions

September 12, 2024

David P. Martland Esq.
Silva, Thomas, Martland & Offenberg, Ltd.
1100 Aquidneck Avenue
Middletown, RI 02842

RE: 1107 Special Use Permit Information
160 East Main Road
Middletown, RI 02842
LSE Project No. 22093A10

Dear Mr. Martland:

In accordance with your request, Lake Shore Environmental (LSE) is pleased to provide the following information pertaining to the requested 1107 Special Use Permit for the above-referenced 0.62-acre Property.

The subject Site is currently a vacant lot improved with pavement across most of the Site, with the exception of a centrally located gravel area measuring approximately 4,500 square feet that was the prior location of a former restaurant building. The property is in a commercial area of Middletown, labeled in municipal records as GBA. A Site Locus map based on a USGS Quadrangle map is presented herein as Figure 1. Although this lot has had multiple historic owners prior to the current owner, the only known use of oil or hazardous materials (OHM) on the Site is associated with a former auto repair garage that operated at the southern end of the Property.

As part of environmental due diligence investigations completed at the above-referenced Site in 2002 by others, it was determined that the southern portion of the Property was historically occupied by a former automotive repair garage from approximately 1960 through 1970. As part of prior subsurface testing of environmental media in the summer of 2022, the presence total petroleum hydrocarbons (TPH) was detected in one soil sample at the southern end of the Property adjacent to East Main Road in exceedance of Rhode Island Department of Environmental Management (RIDEM) Direct Exposure Criteria (DEC) and GA Leachability Criteria (GA-LC). Two polycyclic aromatic hydrocarbon (PAH) constituents (typically related to coal/wood ash) were also detected in one nearby soil sample above RIDEM soil standards. No volatile organic compounds (VOCs) were detected in Site groundwater. The consultant's report inferred that the TPH contamination in soil stemmed from historic activities associated with an auto repair garage that was present at the southern end of the Site in the late 1950s until circa 1968.

On behalf of the new Property owner (160 East Main Road, LLC), LSE submitted a release notification to RIDEM on January 12, 2023. At the request of RIDEM, LSE completed a Site

Investigation Report in accordance with Section 1.8 of RIDEM's Remediation Regulations¹. LSE submitted a Remedial Action Work Plan dated April 10, 2023 to RIDEM describing the plan to excavate the TPH impacted soil from the southern end of the Property where the former automotive garage was located. On May 1, 2023, RIDEM approved the work in the form of a Short Terms Response Action. In the course of identifying/notifyng abutting property owners, it was discovered that the RI Department of Transportation had taken/acquired the southern-most 1,727 square foot portion of the subject Property adjacent to East Main Road which coincidentally included the entire area of TPH-impacted soil associated with the former automotive garage footprint. Based on this information, the new owner of 160 East Main Road is not responsible for response actions associated with the TPH-impacted soil on the DOT parcel.

The following is a condensed summary of the SIR findings as they pertain to the 1107 Submission for the 160 East Main Road Property:

- Historically, automotive fluids were stored and used at the southern end of the Property where the automotive garage was located. The proposed development includes construction of a bank branch and therefore, there is no anticipated future use of oil or hazardous materials (OHM) at the Property.
- Previous investigations by others included the advancement of two borings that were converted to monitoring wells. LSE subsequently advanced seven additional direct-push borings under the direction of a licensed Professional Geologist; two of the borings were converted to monitoring wells. Soils in the top five feet consisted of dark brown, dry, well graded, gravelly sands, with little or no fines. Deeper soils consisted of light grey/grey green, sand-silt mixtures with iron oxidized lenses noted near 10 feet below grade.

Groundwater table depths gauged in December 2022 ranged from 3.95 ft-bg in the northeast of the Site to 5.09 ft-bg in the southwest of the Site. During the prior depth to groundwater gauging in September 2022, groundwater was gauged at a depth of approximately 10 ft-bg.

The location of soil borings and monitoring wells is shown in attached Figure 2

- The USGS topographic map illustrates the regional topography of the area indicating the Site is located in a relatively flat area, sloping moderately upward to the east, north, and northwest and sloping gradually downward to the south southwest towards and along Bailey Brook. Based on the regional topography and monitoring well data, groundwater in the vicinity of the Site flows to the west and southwest where it discharges to Bailey Brook. The USGS map shows the elevation at the Site to be approximately 40-50 feet above mean sea level.

¹ Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, 1/4/2022.

- Two monitoring wells were installed and sampled as part of the previous Site investigation that were proximate to the historic auto repair garage. All groundwater samples have been collected using dedicated polyethylene tubing and a peristaltic pump at low purge rates. The samples were analyzed for dissolved VOCs using EPA Method 8260. Testing for VOCs was applicable considering the historic use of the Property and the solubility of VOCs relative to other possible contaminants of concern (COCs). Based on analytical results, no VOCs were detected in any groundwater sample. Two additional monitoring wells were installed by LSE in other areas of the Site to supplement the previous data and to identify possible COCs in areas unrelated to the former auto garage. In all groundwater samples, no sheen or physical evidence of COC was observed and VOCs were detected by laboratory analysis at concentrations greater than method reporting limits, indicating that no adverse impact to groundwater or nearby surface water has occurred at the Site. The quality of groundwater beneath the subject Site is classified by RIDEM as GA.
- Bailey Brook is the nearest surface water body to the Site. The Brook flows south through the abutting property to the west of the subject Site. Bailey Brook is classified by RIDEM as Class AA surface water (RIDEM, 2010), defined in section 2.10 below. Considering that the surface water quality of Bailey Brook is mostly impacted by upstream discharges (stormwater and other), and no VOCs were detected in Site groundwater, surface water was not sampled as part of the SIR.
- LSE surveyed the measuring point elevations of the four monitoring wells and groundwater was gauged on December 13, 2022. Groundwater contours shown on Figure 2 (attached) show groundwater flowing to the west and southwest toward Bailey Brook. This groundwater flow direction is consistent with local and regional topography, and the presence of nearby surface water bodies.

Hydrogeologist's Opinion

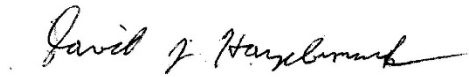
Based on LSE's findings, TPH was detected at a maximum concentration of 1,080 milligrams/kilogram (mg/kg) in boring SB5 at a depth of 4-5 ft-bg, exceeding the residential (R) DEC and GA-LC of 500 mg/kg but not the Industrial/Commercial (I/C) DEC (2,500 mg/kg). Both borings where TPH exceeded RIDEM soil standards were collected within the footprint of the former automotive garage. No other soil sample on the Site has been found to contain TPH at concentrations greater than applicable RIDEM soil standards. Two PAH analytes, were detected in boring SB4 (at the former automotive garage) at a depth of 5-6 ft-bg, at concentrations exceeding R-DEC, but not I/C-DEC. All detected metals were below applicable industrial/commercial and residential DEC. Although six weathered gasoline VOC constituents were detected in soil in boring SB5 at a depth of 4-5 ft-bg, none exceeded applicable RIDEM soil standards. Where present in soil, COC are located above the saturated zone and therefore do not pose a threat of impact to groundwater quality. No VOCs were detected in groundwater at any monitoring wells.

Bailey Brook flows south and parallel to the Site's western property line. Bailey Brook passes approximately 90 feet west from the northwest corner of the Site and approximately 150 feet west from the southwest corner of the Site. Although Bailey Brook is in close proximity to the Site, there have been no impacts to groundwater and therefore, there is no potential for adverse impacts to the surface water body. There are no other known environmentally sensitive areas in close proximity to the Site.

Until such time that RIDOT implements response actions relative to the TPH and PAH soil impacts at the southern end of the Property, LSE recommends that the bituminous pavement located at the RIDOT parcel near the current and future entrance to the Property remain paved as shown in the proposed development design.

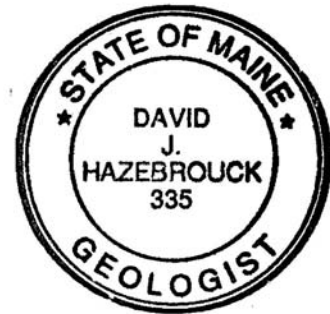
If you have any questions regarding this Site Investigation Report or the project in general, please feel free to contact the undersigned.

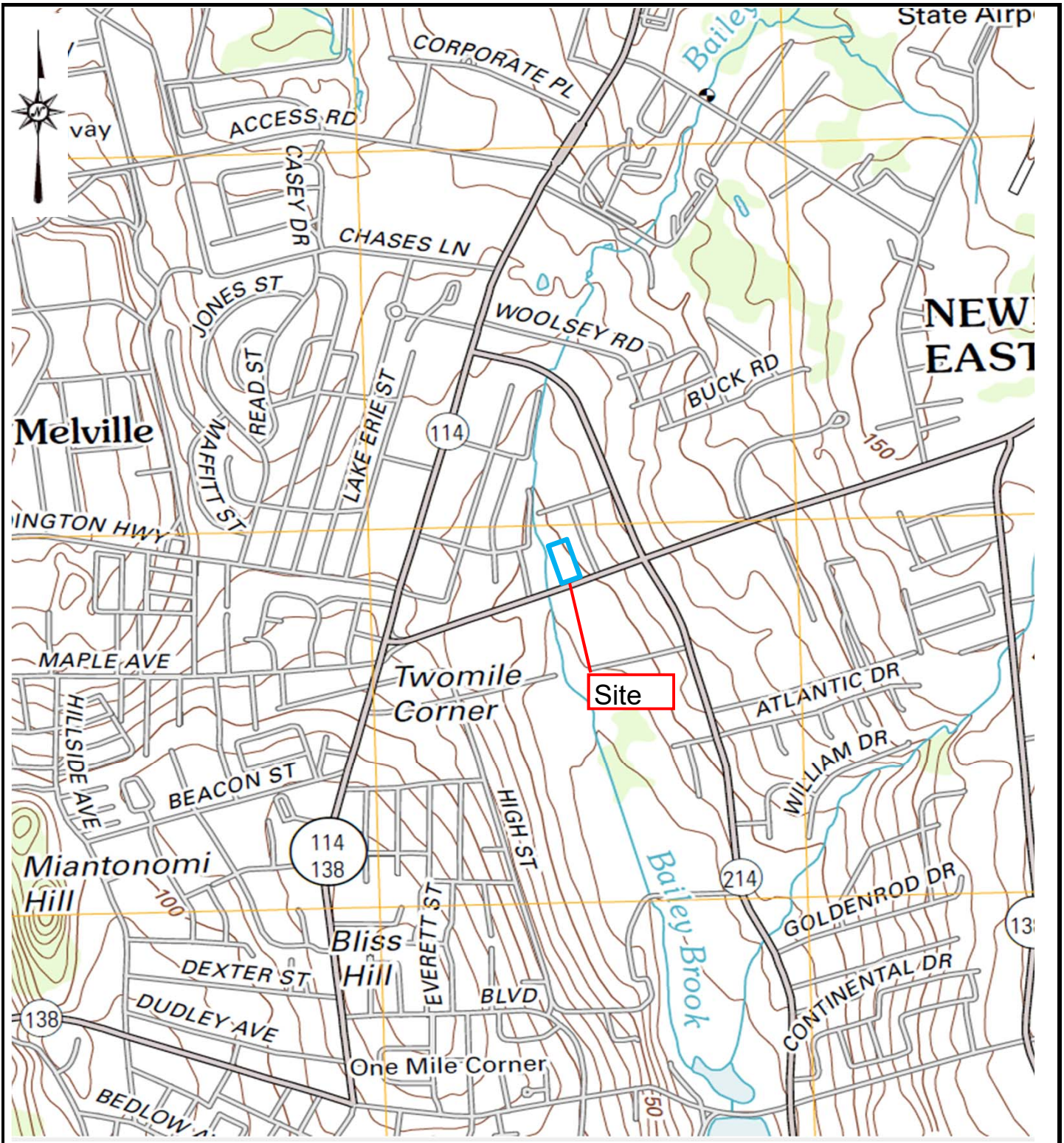
Sincerely,



David J. Hazebrouck, P.G., LSP, LEP
Principal

Attachments

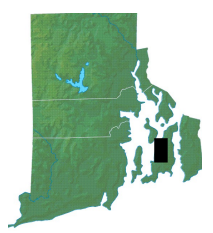
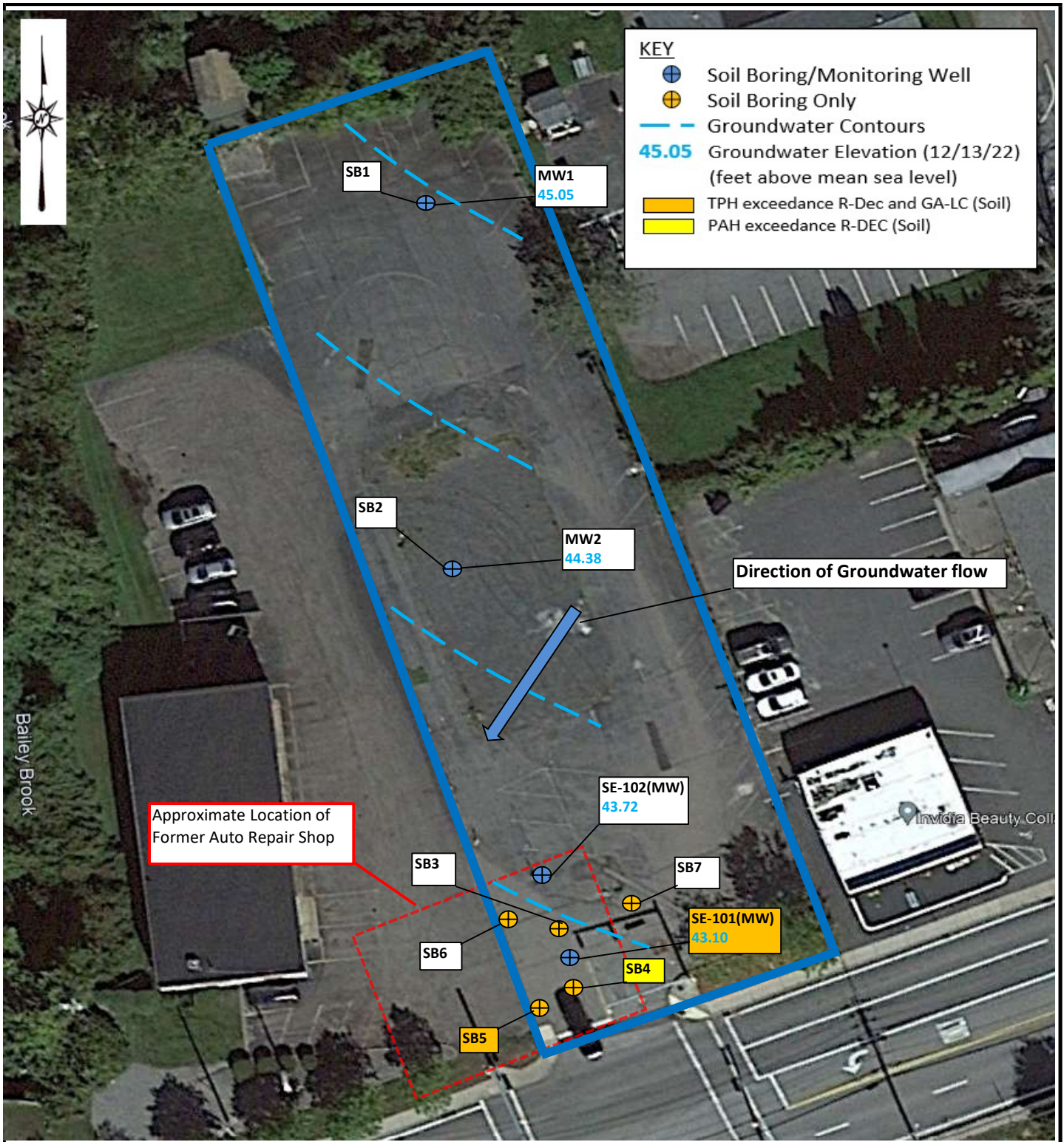




QUADRANGLE LOCATION

Figure No.	1
Drawing Title:	Site Locus Map 160 East Main Road Middletown, RI
Date Prepared:	12/20/22
Prepared By:	BFH
Approximate Scale:	NTS
LSE Proj. No.	22093A10

Source: Map taken from USGS 7.5 minute topographic Prudence Island Quad



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Figure No.	2	
Drawing Title:	Site Plan with Monitoring Well and Soil Boring Locations 160 East Main Road Middletown, RI	
Date Prepared:	1/16/23	Prepared By: BFH
Approximate Scale:	NTS	
LSE Proj. No.	22093A10	Lot Lines

Source: Map Dimensions taken from Middletown GIS Mapping