

Executive Summary

Former Scovil Hoe Mill, Higganum

March 19, 2018

Background

Fuss & O'Neill was retained by the Town of Haddam Buildings Committee through a State of Connecticut Department of Economic and Community Development (DECD) Historic Brownfields Revitalization Grant to provide professional services associated with the former Scovil Hoe Mill located at 11 Candlewood Hill Road in the Village of Higganum, Connecticut. The objective of the study was to complete an engineering and reuse assessment of the site to assist the Town with identification of a potential reuse option such that an order-of-magnitude opinion of development cost could be prepared. The components evaluated for the assessment consisted of: environmental site assessment (Phase I & Phase II/Limited III ESA), structural assessment of the buildings, a hazardous material survey of the buildings, wastewater and water supply assessment, architectural assessment, market study, and the development of a concept reuse plan for the sole purpose of cost estimating site and building improvements.

Objectives

The team comprised of Crosskey Architects, Camoin Associates, Fuss & O'Neill EnviroScience, and Fuss & O'Neill, Inc. focused on two primary objectives. The first objective was to provide the Town with building and site rehabilitation data to be used by a party interested in acquiring the Site from the State of Connecticut. This was achieved through implementation of site environmental characterization, a hazardous building material due diligence study, and a building structural condition evaluation assessment. The second objective was to develop a preliminary reuse plan for the Site to provide a framework for which an order-of-magnitude opinion of probable cost estimate for remediation and site development could be based.

Preliminary ReUse Option

A reuse option was prepared using information obtained from a Village of Higganum *Real Estate Market Opportunities for the Scovil Hoe Building Complex* dated December 2017 by Camoin Associates. The market analysis incorporated in-depth real estate and economic information for the Town of Haddam and Middlesex County and phone interview information provided by key stakeholders. Based on evaluation of the data, the greatest market-demand for reuse of the Scovil Hoe parcel was determined to be market rate or luxury residential apartments or condominiums, quality full or limited service restaurant, low cost office/artist/flex space, and specialty shop.

The reuse option also incorporated information from a *Village of Higganum Preliminary Study of Opportunities and Constraints* PowerPoint presentation dated March 2018. The opportunities and constraints evaluation was performed to establish Village context features such as access and connectivity. Common themes that define the downtown character such as open space were used to develop recommendations for development opportunities and infill. Challenges to development in the Village were identified as topography, demographics, and blighted properties. The greatest challenge was lack of water and sewer infrastructure.

It is important to note that the concept reuse option developed as a result of this effort should not be viewed as “the recommended option” or “the only option”, but simply an option developed based on the known information. In light of the above information, a preliminary redevelopment option for the Site was developed. The reuse option consists of reuse of both mill buildings for an approximate 5,000 square foot 70 seat restaurant and 13,500 square foot mixed use office, artist, flex space, and specialty shops. A proposed new three (3) story 14,400 square foot building would be used for first floor mixed use commercial space and second/third floor residential units. Concept *Architectural Floor Plans and Renderings* were prepared by Crosskey Architects. The concept design includes associated parking, pedestrian, and landscaped options.

Study Results

The results of the engineering studies lead to the following observations:

1. **Structural Survey:** The existing buildings consist of two single-story, gable roofed manufacturing buildings with mezzanines and roof monitors constructed between the late 1800's and early 1900's. The buildings were in use until approximately 2014, most recently as a storage and maintenance facility for the State of Connecticut Department of Transportation (DOT). They have been abandoned since that time, but have generally been secured and protected from the elements and vandalism. Both building structures are generally in sound condition, although there is some evidence of past and present water infiltration and degradation of timber structures and mortar loss at exterior walls. Intermediate and short-term recommendations for repair are provided in the *Structural Condition Report* dated December 13, 2017.
2. **Conceptual Septic System for Site:** An analysis for waste disposal based on the preliminary reuse plan was performed assuming an estimated total site wastewater flow of 7,080 gallons per day. The Site and several nearby properties were evaluated as potential locations for subsurface disposal. The Site was excluded as a viable location due to the presence of polluted and unsuitable urban fill, total available land area, and separation distances including property lines, buildings, water courses, drinking water wells, and underground utilities. The Town Green was determined to be the most suitable property for wastewater disposal for the preliminary reuse concept due to the close proximity to the Site, relatively deep groundwater depth, and high percolation rate soils. Information regarding the methods, process, and assumptions for the wastewater evaluation are provided in the technical memorandum *Conceptual Septic System for the Scovil Hoe Site* dated February 22, 2018.
3. **Phase I Environmental Site Assessment:** Previous environmental investigations on the Site date back several decades. Review of historical data along with implementation of a Phase I Environmental Site Assessment reveal the existence of 19 Recognized Environmental Conditions (REC) under the definition of ASTM E1527-13. The RECs include polluted fill based on past site use as a mill, former underground storage tanks, and activities by DOT involving the use of petroleum hydrocarbons and other potentially hazardous substances. Off-site considerations that were identified that have the potential to affect groundwater quality on the Site include pesticides associated with former agricultural operations and the chlorinated solvent trichloroethylene (TCE) associated with surrounding former commercial/industrial

operations. Activities that would qualify the Site as an “establishment” under Connecticut’s Property Transfer Law have been identified based on the existence of hazardous waste manifests demonstrating generation of more than one hundred kilograms in any one month. Information pertaining to the identification of RECs at the Site is provided in the *Phase I Environmental Site Assessment Report* dated February 2018.

4. **Phase II & Limited III Environmental Site Assessment:** Environmental characterization of the RECs occurred to determine if a release of petroleum hydrocarbons or other potentially hazardous substances has occurred. For select RECs limited characterization was performed to determine the degree and extent of the release area. The data was evaluated relative to the State of Connecticut Remediation Standard Regulations (RSRs). Releases with constituent of concern (COC) concentrations above the RSR baseline criteria were identified at eight (8) RECs including polluted fill, a former pump fueling dispensing island, former underground storage tanks, a former hydraulic vehicle lift, and former building interior floor trenches. The COCs consist primarily of petroleum hydrocarbons along with areas containing volatile organic compounds and lead. Groundwater at the Site in the vicinity of the buildings is polluted with petroleum hydrocarbons and pesticides. The results of the assessment are provided in the *Phase II & Limited III Environmental Site Assessment Report* dated March 2018.
5. **Hazardous Building Material Survey:** A hazardous building material survey was performed comprised of inspection for asbestos-containing material (ACM), lead-based paint (LBP) determination, stack ash characterization, polychlorinated biphenyls (PCB) bulk sampling of window caulking and glazing materials, and inventory of PCB-containing light ballasts and mercury-containing equipment. A detailed summary of the results are provided in the *Hazardous Building Materials Inspection Report* dated December 29, 2017. The brief summary of results indicate:
 - a. ACM were identified in roofing cement & flashing paper, roof tile, window & door frame caulking compound, boiler inspection door rope, flashing cement, and boiler materials. Prior to disturbance, ACM-containing materials impacted by renovation or demolition activities must first be abated by a state-licensed asbestos abatement contractor.
 - b. Several components of the building materials contained LBP including stair, door, window and window components, select building walls shelving, and work areas. If disturbed by renovation or demolition activities LBP-coated building components should be segregated from the general waste stream for proper off-site waste disposal.
 - c. A sample of stack ash was analyzed for Resource Conservation Recovery Act (RCRA) metals after extraction by toxicity characteristic leaching procedure to determine if the ash would be classified as a characteristically hazardous waste for disposal. The concentrations of metals detected in the sample were below the threshold for classification as a characteristically hazardous waste.
 - d. The analytical results for bulk PCB analysis indicated that the tan interior window glazing compound contains regulated concentrations of PCBs at >1 ppm but <50 ppm (1.2 ppm). The entire window system should be specified for removal and disposal as ACM and PCB >1 ppm but <50 ppm material.
 - e. An inventory of potentially mercury-containing equipment revealed an estimated quantity of 353 light tubes.

- f. An inventory of potentially diethylhexyl phthalate-containing equipment revealed an estimated 162 light ballasts.

- 6. Order-of-Magnitude Opinion of Probable Cost for Preliminary ReUse Plan:** Fuss & O'Neill and Crosskey Associates estimated the total cost of renovation and new construction associated with the reuse plan to be approximately \$11,500,000 using a 20 percent contingency. Costs estimated on an order-of-magnitude basis are generally accurate to within a range of -30% to +50% of the final project cost, which for this example would be \$8,037,000 (-30%) to \$17,225,000 (+50%) or \$280 to \$590 per square foot. The cost estimate for new construction of the three (3) story 14,400 square foot building was estimated to be \$2,556,000.

Category	Final Project Cost Subtotal	Final Project Cost Subtotal Plus 20% Contingency	-30% of Final Project Cost Subtotal with 20% Contingency	+50% of Final Project Cost Subtotal with 20% Contingency
Site	\$727,000	\$872,400	\$611,000	\$1,309,000
Septic Leach Field	\$436,000	\$523,200	\$366,000	\$785,000
Water Supply	\$391,000	\$469,200	\$328,000	\$704,000
Architectural/MEP Existing Buildings	\$3,411,000	\$4,093,200	\$2,865,000	\$6,140,000
Architectural/MEP New Buildings	\$2,130,000	\$2,556,000	\$1,789,000	\$3,834,000
Haz Mat Abatement	\$170,000	\$204,000	\$143,000	\$306,000
Environmental Remediation & Post Remediation Obligations	\$2,304,000	\$2,764,800	\$1,935,000	\$4,147,000
General Cost Breakdown Summary Total (rounded)	\$9,569,000	\$11,482,800	\$8,037,000	\$17,225,000

Recommended Next Steps

We recommend continuing several ongoing initiatives as part of the next steps in the process.

- **Public Outreach:** The information presented herein was compiled as a step in the process of evaluating the reuse potential of the Site for the purpose of estimating site redevelopment costs and issues. The engineering data should be used as a “building block” on which future concepts can be vetted and refined. Public comment on the documents in the context of the Town’s recently updated *Plan of Conservation and Development* is a key step to engage community stakeholders.
- **Village Infrastructure Water & Waste Disposal:** Resolution of Village waste disposal and water supply issues is vital in order for the Town to capitalize on opportunities for economic

enhancement. The preliminary reuse option described herein was predicated on a future owner of the Site being able to access the adjacent Town Green for septic disposal. A Village-wide solution incorporating waste disposal from the Scovil Hoe property would make the property, and downtown Higganum as a whole, more attractive to development. If a holistic solution is established for the Village, a developer seeking to redevelop Scovil would save the costs of permitting and constructing a new septic leach field. In addition, the seating capacity of the restaurant and occupancy of other uses could be increased allowing for additional revenue generation, which in turn will improve the project Pro Forma analysis.

- **Research & Apply for Public Financing:** The total cost to renovate, construct, and remediate the Site may initially outweigh the ability of a developer to achieve a financially acceptable and sustainable business model. Initiatives and mechanisms must be included which address the disparity between redevelopment costs and profitable operations. This will likely include public assistance in one or more forms such as Brownfield Remediation Grant or Loans and Historic Tax Credit Programs. A proforma establishing this anticipated financial gap is recommended.
- **Perform Remedial & Abatement Planning:** Development of the Site will require remediation of polluted soil and groundwater through a formal state cleanup program to achieve compliance with State cleanup standards. Preparation of a Remedial Action Plan by integrating the remedial alternatives into the final site design is the recommended approach to cost-effectively achieving cleanup objectives. Renovations to the existing building will need to incorporate abatement of identified potentially hazardous building materials.