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PHASE IA CULTURAL RESOURCES ASSESSMENT FOR THE PROPOSED GREENSKIES WINCHESTER SOLAR PROJECT AT 0 SPENCER HILL ROAD IN WINCHESTER, CONNECTICUT

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ABSTRACT

This report presents the results of a Phase IA cultural resources assessment survey for a proposed solar facility located at 0 Spencer Hill Road in Winchester, Connecticut. The parcel associated with the proposed facility encompasses approximately 20 acres of land and is located to the east of Spencer Hill Road. The current investigation consisted of: 1) preparation of an overview of the region's precontact era, post-European Contact period, and natural settings; 2) a literature search to identify and discuss previously recorded cultural resources in vicinity of the proposed facility; 3) a review of readily available maps and aerial imagery depicting the facility area to identify potential post-European Contact period resources and/or areas of past disturbance within and near them; and 4) pedestrian survey and photo-documentation of the proposed facility area to determine its archaeological sensitivity. The results of the survey indicate that the project area is located in an agricultural field characterized by variably drained soils, rolling steep hills, and some areas of nearly level topography. These areas are generally well correlated with precontact and post-European Contact period use and occupation. Pedestrian survey of the project area was completed and approximately 13 acres of the project area were classified as retaining no/low potential to yield intact archaeological deposits because they fell within areas of wet soils and steep slopes; no further archaeological investigation of the no/low potential area is recommended. Finally, the pedestrian survey determined that the remaining seven acres is characterized by level topography and well-drained soils. The area is located within the southern and central regions of the project area, and it was deemed to be archaeologically sensitive. Thus, it is recommended that the seven acres of moderate/high sensitivity be subjected to a Phase IB cultural resources reconnaissance survey prior to construction of the solar facility.

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CHAPTER I
INTRODUCTION

This report presents the results of a Phase IA cultural resources assessment survey of a proposed solar facility (the Facility) in Winchester, Connecticut (Figure 1). Vanasse Hangen Brustlin, Inc. (VHB) requested that Heritage Consultants, LLC (Heritage) complete the assessment survey as part of the planning process for the Facility, which will encompass approximately 20 acres of land located at 0 Spencer Hill Road. The project area will be accessed by Spencer Hill Road to the west. It currently lies within an agricultural field; forested areas surround the proposed Facility to the north, east, and west, and a second agricultural field is situated at along southern border. Heritage completed this investigation on behalf of VHB in January of 2023. All work associated with this project was performed in accordance with the *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987), which is promulgated by the Connecticut State Historic Preservation Office (CT-SHPO).

Project Description and Methods Overview

The proposed Facility will include photovoltaic panels, associated electrical equipment, and access roads (Figure 2). The Facility area is situated at elevations ranging from 337 to 361 meters (1,105 to 1,184 feet) NGVD. This Phase IA cultural resources assessment survey consisted of the completion of the following tasks: 1) a contextual overview of the region's precontact era, post-European Contact period, and natural settings (e.g., soils, ecology, hydrology, etc.); 2) a literature search to identify and discuss previously completed cultural resources surveys and previously recorded cultural resources in the region encompassing the Facility; 3) a review of readily available maps and aerial imagery depicting the Facility area in order to identify potential post-European Contact period resources and/or areas of past disturbance; and 4) pedestrian survey and photo-documentation of the Facility area in order to determine their archaeological sensitivity.

Project Results and Management Recommendations Overview

During the current investigation, Heritage combined data recovered from the analysis of post European Contact period maps and aerial images, as well as during pedestrian survey of Facility area, to aid in assessment of the proposed Facility. The pedestrian survey, which included photo-documentation, resulted in the reclassification of approximately 13 acres of the project area as retaining no/low potential to yield intact archaeological deposits because they fell within areas of wet soils and steep slopes. Thus, no further archaeological investigation of the no/low potential area is recommended. The pedestrian survey also determined that approximately seven acres within the southern and central regions of the project area retained a moderate/high archaeological sensitivity. These areas are characterized by level topography and well-drained soils. It is recommended that the seven acres of moderate/high sensitivity be subjected to Phase IB cultural resources reconnaissance survey prior to construction of the solar facility.

Project Personnel

Key personnel for this project included David R. George, M.A., R.P.A (Principal Investigator); Brenna Pisanelli, M.A, (Project Archaeologist); Matthew Denno, B.A. (Field Supervisor); Nita Vitaliano, M.A. (Historian); Sean Buckley, B.A. (GIS Specialist) and Susannah Goeters, B.A., (Laboratory Specialist).

CHAPTER II
NATURAL SETTING

Introduction

This chapter provides a brief overview of the natural setting of the region containing the proposed Facility. Previous archaeological research has documented that a few specific environmental factors can be associated with both precontact and post European Contact period site selection. These include general ecological conditions, as well as types of fresh water sources and soils present. The remainder of this section provides a brief overview of the ecology, hydrological resources, and soils present within the impact areas and the larger region in general.

Ecoregions of Connecticut

Throughout the Pleistocene and Holocene Periods, Connecticut has undergone numerous environmental changes. Variations in climate, geology, and physiography have led to the "regionalization" of Connecticut's modern environment. It is clear, for example, that the northwestern portion of the state has very different natural characteristics than the coastline. Recognizing this fact, Dowhan and Craig (1976), as part of their study of the distribution of rare and endangered species in Connecticut, subdivided the state into various ecoregions. Dowhan and Craig (1976:27) defined an ecoregion as:

> "an area characterized by a distinctive pattern of landscapes and regional climate as expressed by the vegetation composition and pattern, and the presence or absence of certain indicator species and species groups. Each ecoregion has a similar interrelationship between landforms, local climate, soil profiles, and plant and animal communities. Furthermore, the pattern of development of plant communities (chronosequences and toposequences) and of soil profile is similar in similar physiographic sites. Ecoregions are thus natural divisions of land, climate, and biota."

Dowhan and Craig defined nine major ecoregions for the State of Connecticut. They are based on regional diversity in plant and animal indicator species (Dowhan and Craig 1976). Only one of the ecoregions is germane to the current investigation: Northwest Uplands ecoregion. A brief summary of this ecoregion is presented below. It is followed by a discussion of the hydrology and soils found in and adjacent to the project area.

<u>Northwest Uplands Ecoregion</u>

The Northwest Uplands ecoregion consists of "a variably hilly landscape of high average elevation with local areas of considerable topographic relief and rugged hills. Elevations are generally above 1,000 feet, reaching a maximum of almost 1,500 feet in a few local areas." The region's bedrock is metamorphic, consisting of Paleozoic gneisses and schists. Soils "developed on glacial till in the uplands and on local deposits of stratified sand, gravel, and silt in the valley areas."

Hydrology in the Vicinity of the Proposed Facility

The proposed Facility is situated within a region that contains several sources of freshwater, including Indian Meadow Brook and Colebrook Brook to the west, Mad River and Highland Lake to the south, Still River and Tatro's Pond to the east, as well as several unnamed streams, ponds, and wetlands. These freshwater sources may have served as resource extraction areas for Native American and post-European Contact period populations. Previously completed archaeological investigations in Connecticut have demonstrated that streams, rivers, and wetlands were focal points for precontact occupations because

they provided access to transportation routes, sources of freshwater, and abundant faunal and floral resources.

Soils Within the Proposed Facility

Soil formation is the direct result of the interaction of many variables, including climate, vegetation, parent material, time, and organisms present (Gerrard 1981). Once archaeological deposits are buried within the soil, they are subject to various diagenic and taphonomic processes. Different classes of artifacts may be preferentially protected, or unaffected by these processes, whereas others may deteriorate rapidly. Cyclical wetting and drying, freezing, and thawing, and compression can accelerate chemically and mechanically the decay processes for animal bones, shells, lithics, ceramics, and plant remains. Lithic and ceramic artifacts are largely unaffected by soil pH, whereas animal bones and shells decay more quickly in acidic soils. In contrast, acidic soils enhance the preservation of charred plant remains.

A review of the soils within the Facility area is presented below. They are characterized by three major soil types which are Woodbridge, Charlton-Chatfield complex, and Paxton and Montauk soils (Figure 3). A review of these series shows that they are well drained soils that may be correlated with precontact and post European Contact period use and occupation. Descriptive profiles for each soil type are presented below; they were gathered from the National Resources Conservation Service (https://soilseries.sc.egov.usda.gov).

Charlton-Chatfield Soils

The Charlton series consists of very deep, well drained soils formed in loamy melt-out till. They are nearly level to very steep soils on moraines, hills, and ridges. Slope ranges from 0 to 60 percent. A typical profile associated with Charlton soils is as follows: **Oe**--0 to 4 cm; black (10YR 2/1) moderately decomposed forest plant material; **A**--4 to 10 cm; dark brown (10YR 3/3) fine sandy loam; weak fine granular structure; very friable; many fine roots; 5 percent gravel; very strongly acid; abrupt smooth boundary; **Bw1**--10 to 18 cm; brown (7.5YR 4/4) fine sandy loam; weak coarse granular structure; very friable; many fine and medium roots; 5 percent gravel; very strongly acid; clear wavy boundary. **Bw2**--18 to 48 cm; yellowish brown (10YR 5/6) fine sandy loam; weak medium subangular blocky structure; very friable; common fine and medium roots; 10 percent gravel and cobbles; very strongly acid; clear wavy boundary; **Bw3**--48 to 69 cm; light olive brown (2.5Y 5/4) gravelly fine sandy loam; massive; very friable; few medium roots; 15 percent gravel and cobbles; very strongly acid; abrupt wavy boundary; and **C**--69 to 165 cm; grayish brown (2.5Y 5/2) gravelly fine sandy loam with thin lenses of loamy sand; massive; friable, some lenses firm; few medium roots; 25 percent gravel and cobbles; strongly acid.

The Chatfield series consists of well drained soils formed in loamy melt-out till. They are moderately deep to bedrock. They are nearly level to very steep soils on bedrock-controlled hills and ridges. Slope ranges from 0 to 70 percent. A typical profile associated with Chatfield soils is as follows: **Oi**--0 to 3 cm, slightly decomposed leaf, needle, and twig litter; extremely acid, pH 4.2; **A**--3 to 5 cm, very dark gray (10YR 3/1) fine sandy loam, gray (10YR 5/1), dry; weak fine subangular blocky structure; friable; many fine and medium roots throughout; 5 percent mixed gravel and cobbles; very strongly acid, pH 4.5; abrupt smooth boundary; **Bw1**--5 to 33 cm, strong brown (7.5YR 5/6) gravelly fine sandy loam; weak fine subangular blocky structure; friable; common fine roots throughout and common medium roots throughout; 15 percent mixed gravel and cobbles; very strongly acid, pH 4.5; abrupt wavy boundary; **Bw2**--33 to 76 cm, strong brown (7.5YR 5/6) gravelly fine sandy loam; moderate medium subangular blocky structure; friable; few fine roots throughout; 20 percent mixed rock fragments; very strongly acid, pH 4.5; abrupt irregular boundary; and **2R**--76 cm; fractured slightly-weathered schist bedrock.

Paxton and Montauk Soils

The Paxton series consists of well drained loamy soils formed in lodgment till. The soils are very deep to bedrock and moderately deep to a densic contact. They are nearly level to steep soils on hills, drumlins, till plains, and ground moraines. Slope ranges from 0 to 45 percent. A typical profile associated with Paxton soils is as follows: **Ap**--0 to 20 cm; dark brown (10YR 3/3) fine sandy loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; many fine roots; 5 percent gravel; strongly acid; abrupt smooth boundary; **Bw1**--20 to 38 cm; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; 5 percent gravel; few earthworm casts; strongly acid; gradual wavy boundary; **Bw2**--38 to 66 cm; olive brown (2.5Y 4/4) fine sandy loam; weak medium subangular blocky structure; friable; few fine roots; 10 percent gravel; strongly acid; clear wavy boundary; and **Cd**--66 to 165 cm; olive (5Y 5/3) gravelly fine sandy loam; medium plate-like divisions; massive; very firm, brittle; 25 percent gravel; many dark coatings on plates; strongly acid.

The Montauk series consists of well drained soils formed in lodgment or flow till derived primarily from granitic materials with lesser amounts of gneiss and schist. The soils are very deep to bedrock and moderately deep to a densic contact. These soils are on upland hills and moraines. Slope ranges from 0 to 35 percent. A typical profile associated with Montauk soils is as follows: **Ap**--0 to 10 cm; very dark gray (10YR 3/1) loam; moderate fine granular structure; very friable; many very fine, fine, medium, and coarse roots; 2 percent gravel, 1 percent cobbles, and 1 percent stones; extremely acid (pH 4.1); clear smooth boundary; **BA**--10 to 34 cm; brown (10YR 4/3) loam; moderate medium and coarse subangular blocky structure; friable; many fine, medium, and coarse roots; many fine and medium pores; 4 percent gravel, 1 percent cobbles, and 1 percent stones; extremely acid (pH 4.3); clear wavy boundary; **Bw1**--34 to 65 cm; dark yellowish brown (10YR 4/6) loam; moderate coarse subangular blocky structure; friable; many fine, medium, and coarse roots; many fine and medium pores; 6 percent gravel, 1 percent cobbles, and 1 percent stones; extremely acid (pH 4.3); clear wavy boundary; **Bw2**--65 to 87 cm; yellowish brown (10YR 5/6) sandy loam; moderate medium and coarse subangular blocky structure; friable; many very fine, fine, and coarse roots; many fine and medium pores; 5 percent gravel and 1 percent cobbles; extremely acid (pH 4.3); clear smooth boundary; **2Cd1**--87 to 101 cm; strong brown (7.5YR 5/6) gravelly loamy sand; moderate medium plates; firm; few fine roots; many fine pores; 10 percent gravel, 5 percent cobbles, and 1 percent stones; very strongly acid (pH 4.7); clear wavy boundary; and **2Cd2**--101 to 184 cm; dark yellowish brown (10YR 4/6) gravelly loamy sand; moderate medium plates; firm; many fine pores; 10 percent gravel, 5 percent cobbles, and 1 percent stones; strongly acid (pH 5.1).

Woodbridge Soils

The Woodbridge series consists of moderately well drained loamy soils formed in lodgment till. They are very deep to bedrock and moderately deep to a densic contact. They are nearly level to moderately steep soils on hills, drumlins, till plains, and ground moraines. Slope ranges from 0 to 25 percent. A typical profile associated with Woodbridge soils is as follows: **Ap**--0 to 18 cm; very dark grayish brown (10YR 3/2) fine sandy loam, light brownish gray (10YR 6/2) dry; moderate medium granular structure; friable; many fine and medium roots; few very dark brown (10YR 2/2) earthworm casts; 5 percent gravel; moderately acid; abrupt wavy boundary; **Bw1**--18 to 46 cm; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; few very dark brown (10YR 2/2) earthworm casts; 10 percent gravel; moderately acid; gradual wavy boundary; **Bw2**--46 to 66 cm; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; few very dark brown (10YR 2/2) earthworm casts; 10 percent gravel; few medium prominent strong brown (7.5YR 5/6) masses of iron accumulation and light

brownish gray (10YR 6/2) areas of iron depletion; moderately acid; gradual wavy boundary; **Bw3**--66 to 76 cm; light olive brown (2.5Y 5/4) fine sandy loam; weak medium subangular blocky structure; friable; few fine roots; 10 percent gravel; common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation and light brownish gray (10YR 6/2) areas of iron depletion; moderately acid; clear wavy boundary; **Cd1**--76 to 109 cm; light olive brown (2.5Y 5/4) gravelly fine sandy loam; weak thick plates of geogenic origin; very firm, brittle; 20 percent gravel; many medium prominent strong brown (7.5YR 5/8) masses of iron accumulation and light brownish gray (10YR 6/2) areas of iron depletion; moderately acid; gradual wavy boundary; and **Cd2**--109 to 165 cm; light olive brown (2.5Y 5/4) gravelly fine sandy loam; weak thick plates of geogenic origin; very firm, brittle; few fine prominent very dark brown (10YR 2/2) coatings on plates; 25 percent gravel; common fine prominent strong brown (7.5YR 5/8) masses of iron accumulation; moderately acid.

Summary

The natural setting of the area containing the proposed Facility is common throughout the Northwest Uplands ecoregion. Streams and rivers of this area empty into the Housatonic Rivers, which in turn, drains into the Long Island Sound. Further, the landscape in general is dominated by loamy soil types with some wetland soils intermixed. In addition, low slopes dominate the region. Thus, in general, the project region was well suited to Native American occupation throughout the precontact era. This portion of Winchester was also used throughout the post-European Contact period, as evidenced by the presence of numerous post European Contact residences and agricultural fields throughout the region.

CHAPTER III
PRECONTACT SETTING

Introduction

Prior to the late 1970s and early 1980s, very few systematic archaeological surveys of large portions of the State of Connecticut had been undertaken. Rather, the precontact era occupation of the region was studied at the site level. Sites chosen for excavation were highly visible and they were in such areas as the coastal zone, e.g., shell middens, and Connecticut River Valley. As a result, a skewed interpretation of the precontact era occupation of Connecticut was developed. It was suggested that the upland portions of the state, i.e., the northeastern and northwestern hills ecoregions, were little used and rarely occupied by precontact era Native Americans, while the coastal zone, i.e., the eastern and western coastal and the southeastern and southwestern hills ecoregions, was the focus of settlements and exploitation. This interpretation remained unchallenged until the 1970s and 1980s when several town-wide and regional archaeological studies were completed. These investigations led to the creation of several archaeological phases that subsequently were applied to understand the precontact period of Connecticut. The remainder of this chapter provides an overview of the precontact era setting of the region encompassing the Facility.

Paleo-Indian Period (12,000 to 10,000 Before Present [B.P.])

The earliest inhabitants of the area encompassing the State of Connecticut, who have been referred to as Paleo-Indians, arrived in the area by ca., 13,000 B.P. (Gramly and Funk 1990; Snow 1980). Due to the presence of large Pleistocene mammals at that time and the ubiquity of large fluted projectile points in archaeological deposits of this age, Paleo-Indians often have been described as big-game hunters (Ritchie and Funk 1973; Snow 1980); however, as discussed below, it is more likely that they hunted a broad spectrum of animals. While there have been over 50 surface finds of Paleo-Indian projectile points throughout the State of Connecticut (Bellantoni 1995), only three sites, the Templeton Site (6-LF-21) in Washington, Connecticut, the Hidden Creek Site (72-163) in Ledyard, Connecticut, and the Brian D. Jones Site (4-10B) in Avon, Connecticut have been studied in detail and dated using the radiocarbon method (Jones 1997; Moeller 1980; Singer 2017a; Leslie et al. 2020).

The Templeton Site (6-LF-21) in Washington, Connecticut was occupied between 10,490 and 9,890 years ago (Moeller 1980). In addition to a single large and two small, fluted points, the Templeton Site produced a stone tool assemblage consisting of gravers, drills, core fragments, scrapers, and channel flakes, which indicates that the full range of stone tool production and maintenance took place at the site (Moeller 1980). Moreover, the use of both local and non-local raw materials was documented in the recovered tool assemblage, suggesting that not only did the site's occupants spend some time in the area, but they also had access to distant stone sources, the use of which likely occurred during movement from region to region. More recently, the site has undergone re-investigation by Singer (2017a and 2017b), who has determined that the overwhelming majority of tools and debitage are exotic and were quarried directly from the Hudson River Valley. Recent research has focused on task-specific loci at the Templeton Site, particularly the production of numerous Michaud-Neponset projectile points, as identified through remnant channel flakes.

The Hidden Creek Site (72-163) is situated on the southeastern margin of the Great Cedar Swamp on the Mashantucket Pequot Reservation in Ledyard, Connecticut (Jones 1997). While excavation of the Hidden Creek Site produced evidence of Terminal Archaic and Woodland Period components (see below) in the

upper soil horizons, the lower levels of the site yielded artifacts dating from the Paleo-Indian era. Recovered Paleo-Indian artifacts included broken bifaces, side-scrapers, a fluted preform, gravers, and end-scrapers. Based on the types and number of tools present, Jones (1997:77) has hypothesized that the Hidden Creek Site represented a short-term occupation, and that separate stone tool reduction and rejuvenation areas were present.

The Brian D. Jones Site (4-10B) was identified in a Pleistocene levee on the Farmington River in Avon, Connecticut; it was buried under 1.5 m (3.3 ft) of alluvium (Leslie et al. 2020). The Brian D. Jones Site was identified by Archaeological and Historical Services, Inc., in 2019 during a survey for the Connecticut Department of Transportation preceding a proposed bridge construction project. It is now the oldest known archaeological site in Connecticut at +12,500 years old. The site also provides a rare example of a Paleo-Indian site on a river rather than the more common upland areas or on the edges of wetlands. Ground-penetrating radar survey revealed overbank flooding and sedimentation that resulted in the creating of a stable ancient river levee with gentle, low-energy floods. Archaeological deposits on the levee were therefore protected.

Excavations at the Brian D. Jones Site revealed 44 soil anomalies, 27 of which were characterized as cultural features used as hearths and post holes, among other uses. Of these, one hearth has been dated thus far (10,520 ± 30 14C yr BP; charred Pinus; 2-sigma 12,568 to 12,410 CAL BP) (Leslie et al. 2020: 4). Further radiocarbon testing will be completed in the future. Artifact concentrations surrounded these features and were separated in two stratigraphic layers represented at least two temporally discrete Paleo-Indian occupations. The recovered lithic artifacts are fashioned from Normanskill chert, Hardyston jasper, Jefferson/Mount Jasper rhyolite, chalcedony, siltstone, and quartz. They include examples of a fluted point base, preforms, channel flakes, pièces esquillées, end scrapers, side scrapers, grinding stones, bifaces, utilized flakes, gravers, and drilled stone pendant fragment. Lithic tools numbered over 100, while toolmaking debris was in the thousands. The channel flakes represent the production of spear points used in hunting. Scrapers, perforators, and grinding stones indicate animal butchering, plant food grinding, the production of wood and bone tools, and the processing of animal skins for clothing and tents. Other collected cultural materials included charred botanicals and calcined bone. Botanical specimens recovered in hearth features included burned remains of cattail, pin cherry, strawberry, acorn, sumac, water lily, and dogwood. In addition, pieces of ochre were recovered during the excavations; these, in combination with the drilled pendant fragment, are the earliest evidence of personal adornment and artistic expression identified in Connecticut (Leslie et al. 2020). Approximately 15,000 artifacts were collected in total.

The scarcity of identified Paleo-Indian sites suggests a low population density during this period. The small size of most Paleo-Indian sites, their likely inundation by rising sea levels, and the high degree of landscape disturbance over the past 10,000 years likely contribute to poor site visibility, although the presence of two deeply alluvially buried Paleo-Indian sites in Connecticut suggests that other sites may be located along stable rivers (Leslie et al. 2021).

Archaic Period (10,000 to 2,700 B.P.)

The Archaic Period, which succeeded the Paleo-Indian Period, began by ca., 10,000 B.P. (Ritchie and Funk 1973; Snow 1980), and it has been divided into three subperiods: Early Archaic (10,000 to 8,000 B.P.), Middle Archaic (8,000 to 6,000 B.P.), and Late Archaic (6,000 to 3,400 B.P.). These periods were devised to describe all non-farming, non-ceramic producing populations in the area. Regional archeologists recently have recognized a final “transitional” Archaic Period, the Terminal Archaic Period (3,400-2,700 B.P.), which was meant to describe those groups that existed just prior to the onset of the

Woodland Period and the widespread adoption of ceramics into the toolkit (Snow 1980; McBride 1984; Pfeiffer 1984, 1990; Witthoft 1949, 1953).

Early Archaic Period (10,000 to 8,000 B.P.)

To date, very few Early Archaic sites have been identified in southern New England. As a result, researchers such as Fitting (1968) and Ritchie (1969), have suggested a lack of these sites likely is tied to cultural discontinuity between the Early Archaic and preceding Paleo-Indian Period, as well as a population decrease from earlier times. However, with continued identification of Early Archaic sites in the region, and the recognition of the problems of preservation, it is difficult to maintain the discontinuity hypothesis (Curran and Dincauze 1977; Snow 1980).

Like their Paleo-Indian predecessors, Early Archaic sites tend to be very small and produce few artifacts, most of which are not temporally diagnostic. While Early Archaic sites in other portions of the United States are represented by projectile points of the Kirk series (Ritchie and Funk 1973) and by Kanawha types (Coe 1964), sites of this age in southern New England are identified on the basis of a series of ill-defined bifurcate-based projectile points. These projectile points are identified by the presence of their characteristic bifurcated base, and they generally are made from high quality raw materials. Moreover, finds of these projectile points have rarely been in stratified contexts. Rather, they occur commonly either as surface expressions or intermixed with artifacts representative of later periods. Early Archaic occupations, such as the Dill Farm Site and Sites 6LF64 and 6LF70 in Litchfield County, are represented by camps that were relocated periodically to take advantage of seasonally available resources (McBride 1984; Pfeiffer 1986). In this sense, a foraging type of settlement pattern was employed during the Early Archaic Period.

Another localized cultural tradition, the Gulf of Maine Archaic, which lasted from ca. 9,500 to 6,000 14C BP, is beginning to be recognized in Southern New England (Petersen and Putnam 1992). It is distinguished by its microlithic industry, which may be associated with the production of compound tools (Robinson and Peterson 1993). Assemblages from Maine (Petersen et al. 1986; Petersen 1991; Sanger et al. 1992), Massachusetts (Strauss 2017; Leslie et al. 2022), and Connecticut (Forrest 1999) reflect the selection of local, coarse-grained stones. Large choppers and hoe-like forms from southeastern Connecticut's Sandy Hill Site likely functioned as digging implements. Woodworking tools, including adzes, celts, and gull-channeled gouges recovered at the Brigham and Sharrow sites in Maine (Robinson and Petersen 1993: 68), may have been used for dugout canoe manufacture. The deeply stratified Sandy Hill (Forrest 1999; Jones and Forrest 2003) and Sharrow sites (Petersen 1991), with their overlapping lenses of "black sand" floor deposits, suggest intensive site re-occupations according to an adaptation that relied, in part, on seasonally available wetland resources. Thus far, sites from this tradition have only been identified within coastal and near-coastal territories along the Gulf of Maine, in southeastern Connecticut, and in Massachusetts.

Middle Archaic Period (8,000 to 6,000 B.P.)

By the onset of the Middle Archaic Period modern deciduous forests had developed in the region (Davis 1969). Increased numbers and types of sites associated with this period are noted in Connecticut (McBride 1984). The most well-known Middle Archaic site in New England is the Neville Site in Manchester, New Hampshire studied by Dincauze (1976). Careful analysis of the Neville Site indicated that the Middle Archaic occupation dated from between 7,700 and 6,000 years ago. In fact, Dincauze obtained several radiocarbon dates from the Middle Archaic component of the Neville Site associated with the then-newly named Neville type projectile point, ranging from 7,740±280 and 7,015±160 B.P. (Dincauze 1976).

In addition to Neville points, Dincauze (1976) described two other projectile points styles that are attributed to the Middle Archaic Period: Stark and Merrimac projectile points. While no absolute dates were recovered from deposits that yielded Stark points, the Merrimac type dated from 5,910±180 B.P. Dincauze argued that both the Neville and later Merrimac and Stark occupations were established to take advantage of the excellent fishing that the falls situated adjacent to the site area would have afforded Native American groups. Thus, based on the available archaeological evidence, the Middle Archaic Period is characterized by continued increases in diversification of tool types and resources exploited, as well as by sophisticated changes in the settlement pattern to include different site types, including both base camps and task-specific sites (McBride 1984:96).

Late Archaic Period (6,000 to 3,700 B.P.)

The Late Archaic Period in southern New England is divided into two major cultural traditions that appear to have coexisted. They include the Laurentian and Narrow-Stemmed Traditions (Funk 1976; McBride 1984; Ritchie 1969a and b). Artifacts assigned to the Laurentian Tradition include ground stone axes, adzes, gouges, ulus (semi-lunar knives), pestles, atlatl weights, and scrapers. The diagnostic projectile point forms of this time period in southern New England include the Brewerton Eared-Notched, Brewerton Eared and Brewerton Side-Notched varieties (McBride 1984; Ritchie 1969a; Thompson 1969). In general, the stone tool assemblage of the Laurentian Tradition is characterized by flint, felsite, rhyolite, and quartzite, while quartz was largely avoided for stone tool production.

In terms of settlement and subsistence patterns, archaeological evidence in southern New England suggests that Laurentian Tradition populations consisted of groups of mobile hunter-gatherers. While a few large Laurentian Tradition occupations have been studied, sites of this age generally encompass less than 500 m^2 (5,383 ft^2). These base camps reflect frequent movements by small groups of people in search of seasonally abundant resources. The overall settlement pattern of the Laurentian Tradition was dispersed in nature, with base camps located in a wide range of microenvironments, including riverine as well as upland zones (McBride 1978, 1984:252). Finally, subsistence strategies of Laurentian Tradition focused on hunting and gathering of wild plants and animals from multiple ecozones.

The second Late Archaic tradition, known as the Narrow-Stemmed Tradition, is unlike the Laurentian Tradition, and it likely represents a different cultural adaptation. The Narrow-Stemmed Tradition is recognized by the presence of quartz and quartzite narrow stemmed projectile points, triangular quartz Squibnocket projectile points, and a bipolar lithic reduction strategy (McBride 1984). Other tools found in Narrow-Stemmed Tradition artifact assemblages include choppers, adzes, pestles, antler and bone projectile points, harpoons, awls, and notched atlatl weights. Many of these tools, notably the projectile points and pestles, indicate a subsistence pattern dominated by hunting and fishing, as well the collection of a wide range of plant foods (McBride 1984; Snow 1980:228).

Terminal Archaic Period (3,700 to 2,700 B.P.)

The Terminal Archaic, which lasted from ca., 3,700 to 2,700 BP, is perhaps the most interesting, yet confusing of the Archaic Periods in southern New England precontact period. Originally termed the "Transitional Archaic" by Witthoft (1953) and recognized by the introduction of technological innovations, e.g., broadspear projectile points and soapstone bowls, the Terminal Archaic has long posed problems for regional archeologists. While the Narrow-Stemmed Tradition persisted through the Terminal Archaic and into the Early Woodland Period, the Terminal Archaic is coeval with what appears to be a different technological adaptation, the Susquehanna Tradition (McBride 1984; Ritchie 1969b). The Susquehanna Tradition is recognized in southern New England by the presence of a new stone tool

industry that was based on the use of high-quality raw materials for stone tool production and a settlement pattern different from the "coeval" Narrow-Stemmed Tradition.

The Susquehanna Tradition is based on the classification of several Broadspear projectile point types and associated artifacts. There are several local sequences within the tradition, and they are based on projectile point type chronology. Temporally diagnostic projectile points of these sequences include the Snook Kill, Susquehanna Broadspear, Mansion Inn, and Orient Fishtail types (Lavin 1984; McBride 1984; Pfeiffer 1984). The initial portion of the Terminal Archaic Period (ca., 3,700-3,200 BP) is characterized by the presence of Snook Kill and Susquehanna Broadspear projectile points while the latter Terminal Archaic (3,200-2,700 BP) is distinguished by Orient Fishtail projectile points (McBride 1984:119; Ritchie 1971).

In addition, it was during the late Terminal Archaic that interior cord marked, grit tempered, thick-walled ceramics with conoidal (pointed) bases made their initial appearance in the Native American toolkit. These are the first ceramics in the region, and they are named Vinette I (Ritchie 1969a; Snow 1980:242); this type of ceramic vessel appears with much more frequency during the ensuing Early Woodland Period. In addition, the adoption and widespread use of soapstone bowls, as well as the implementation subterranean storage, suggests that Terminal Archaic groups were characterized by reduced mobility and longer-term use of established occupation sites (Snow 1980:250).

Finally, while settlement patterns appeared to have changed, Terminal Archaic subsistence patterns were analogous to earlier patterns. The subsistence pattern still was diffuse in nature, and it was scheduled carefully. Typical food remains recovered from sites of this period consist of fragments of white-tailed deer, beaver, turtle, fish, and various small mammals. Botanical remains recovered from the site area consisted of *Chenopodium* sp., hickory, butternut, and walnut (Pagoulatos 1988:81). Such diversity in food remains suggests at least minimal use of a wide range of microenvironments for subsistence purposes.

Woodland Period (2,700 to 350 B.P.)

Traditionally, the advent of the Woodland Period in southern New England has been associated with the introduction of pottery; however, as mentioned above, early dates associated with pottery now suggest the presence of Vinette I ceramics appeared toward the end of the preceding Terminal Archaic Period (Ritchie 1969a; McBride 1984). Like the Archaic Period, the Woodland Period has been divided into three subperiods: Early, Middle, and Late Woodland. The various subperiods are discussed below.

<u>Early Woodland Period (ca., 2,700 to 2,000 B.P.)</u>

The Early Woodland Period of the northeastern United States dates from ca., 2,700 to 2,000 B.P., and it was thought to have been characterized by the advent of farming, the initial use of ceramic vessels, and increasingly complex burial ceremonialism (Griffin 1967; Ritchie 1969a and 1969b; Snow 1980). In the Northeast, the earliest ceramics of the Early Woodland Period are thick walled, cord marked on both the interior and exterior, and possess grit temper. Archaeological investigations of Early Woodland sites in southern New England resulted in the recovery of narrow stemmed projectile points in association with ceramic sherds and subsistence remains, including specimens of White-tailed deer, soft and hard-shell clams, and oyster shells (Lavin and Salwen: 1983; McBride 1984:296-297; Pope 1952). McBride (1984) has argued that the combination of the subsistence remains and the recognition of multiple superimposed cultural features at various sites indicate that Early Woodland Period settlement patterns were characterized by multiple re-use of the same sites on a seasonal basis by small co-residential groups.

Middle Woodland Period (2,000 to 1,200 B.P.)

The Middle Woodland Period is marked by an increase in the number of ceramic types and forms utilized (Lizee 1994a), as well as an increase in the amount of exotic lithic raw material used in stone tool manufacture (McBride 1984). The latter suggests that regional exchange networks were established, and that they were used to supply local populations with necessary raw materials (McBride 1984; Snow 1980). The Middle Woodland Period is represented archaeologically by narrow stemmed and Jack's Reef projectile points; increased amounts of exotic raw materials in recovered lithic assemblages, including chert, argillite, jasper, and hornfels; and conoidal ceramic vessels decorated with dentate stamping. Ceramic types that are indicative of the Middle Woodland Period includes Linear Dentate, Rocker Dentate, Windsor Cord Marked, Windsor Brushed, Windsor Plain, and Hollister Stamped (Lizee 1994a:200).

In terms of settlement patterns, the Middle Woodland Period is characterized by the occupation of village sites by large co-residential groups that utilized native plant and animal species for food and raw materials in tool making (George 1997). These sites were the principal place of occupation, and they were positioned close to major river valleys, tidal marshes, estuaries, and the coastline, all of which would have supplied an abundance of plant and animal resources (McBride 1984:309). In addition to villages, numerous temporary and task-specific sites were utilized in the surrounding upland areas, as well as in closer ecozones such as wetlands, estuaries, and floodplains. The use of temporary and task-specific sites to support large village populations indicates that the Middle Woodland Period was characterized by a resource acquisition strategy that can best be termed as logistical collection (McBride 1984:310).

Late Woodland Period (ca., 1,200 to 350 B.P.)

The Late Woodland Period in southern New England dates from ca., 1,200 to 350 B.P., and it is characterized by the earliest evidence for the use of corn in the lower Connecticut River Valley (Bendremer 1993; Bendremer and Dewar 1993; Bendremer et al. 1991; George 1997; McBride 1984); an increase in the frequency of exchange of non-local lithics (Feder 1984; George and Tryon 1996; McBride 1984; Lavin 1984); increased variability in ceramic form, function, surface treatment, and decoration (Lavin 1980, 1986, 1987; Lizee 1994a, 1994b); and a continuation of a trend towards larger, more permanent settlements in riverine, estuarine, and coastal ecozones (Dincauze 1974; McBride 1984; Snow 1980).

Stone tool assemblages associated with Late Woodland occupations, especially village-sized sites, are functionally variable and they reflect plant and animal resource processing and consumption on a large scale. Finished stone tools recovered from Late Woodland sites include Levanna and Madison projectile points; drills; side-, end-, and thumbnail scrapers; mortars and pestles; nutting stones; netsinkers; and celts, adzes, axes, and digging tools. These tools were used in activities ranging from hide preparation to plant processing to the manufacture of canoes, bowls, and utensils, as well as other settlement and subsistence-related items (McBride 1984; Snow 1980). Finally, ceramic assemblages recovered from Late Woodland sites are as variable as the lithic assemblages. Ceramic types identified include Windsor Fabric Impressed, Windsor Brushed, Windsor Cord Marked, Windsor Plain, Clearview Stamped, Sebonac Stamped, Selden Island, Hollister Plain, Hollister Stamped, and Shantok Cove Incised (Lavin 1980, 1988a, 1988b; Lizee 1994a; Pope 1953; Rouse 1947; Salwen and Ottesen 1972; Smith 1947). These types are more stylistically diverse than their predecessors with incision, shell stamping, punctation, single point, linear dentate, rocker dentate stamping, and stamp and drag impressions common (Lizee 1994a:216).

Summary of Connecticut's Precontact Era

The precontact period of Connecticut spans from ca., 13,000 to 350 B.P., and it is characterized by numerous changes in tool types, subsistence patterns, and land use strategies. Much of this era is characterized by local Native American groups who practiced a subsistence pattern based on a mixed economy of hunting and gathering plant and animal resources. It is not until the Late Woodland Period that incontrovertible evidence for the use of domesticated species is available. Further, settlement patterns throughout the precontact period shifted from seasonal occupations of small co-residential groups to large aggregations of people in riverine, estuarine, and coastal ecozones. In terms of the region that includes the proposed project area, a variety of precontact site types may be expected, ranging from seasonal camps utilized by Paleo-Indian and Archaic populations to temporary and task-specific sites of the Woodland era.

CHAPTER IV
POST EUROPEAN CONTACT PERIOD OVERVIEW

Introduction

The proposed Greenskies Winchester solar project is located at 0 Spencer Hill Road in the town of Winchester, Litchfield County, Connecticut. For the purposes of this study, this history will provide a brief overview of Litchfield County followed by a history of Winchester, with a focus on the impact of the proposed project area. Most Connecticut towns originated as Indigenous settlements and later became English colonial villages. Originally settled in 1732 and incorporated in 1771, Winchester contains within its borders the city of Winsted which was incorporated in 1750. Winchester and Winsted experienced industrial growth throughout the nineteenth century but did not grow dramatically during the twentieth and twenty-first centuries and retain their rural character. Currently, Winsted is home to Northwest Connecticut Community College.

Litchfield County

Litchfield County was founded in 1751 with land belonging to Fairfield, New Haven, and Hartford Counties (Hoadly 1877). Located in the northwest corner of Connecticut, Litchfield County is bounded south by New Haven and Fairfield Counties, east by Hartford County, north by Berkshire and Hampden Counties, Massachusetts, and west by Dutchess County, New York. Litchfield County is the largest county in Connecticut by total area. Its landscape includes rocky hills adjacent to the Berkshire Mountains, including Bear Mountain, the highest peak in Connecticut, interspersed with flat lands and watersheds. Important bodies of water associated with Litchfield County include the Housatonic River, Naugatuck River, Candlewood Lake, Barkhamsted Reservoir, Lake Waramaug, in addition to smaller un-named streams and ponds. Torrington is the only city in Litchfield County and the most populous location in the county (Connecticut 2021).

Woodland Period to the Seventeenth Century

During the Woodland Period of northeastern North American history (ca., 3,000 to 2,500 years ago), the Indigenous peoples who resided along the shoreline in central Connecticut were part of the greater Algonquian culture of northeastern North America (Lavin 2013). They spoke local variations of Southern New England Algonquian (SNEA) languages and lived in extended kinship groups on lands they maintained for a variety of horticultural and resource extraction purposes (Goddard 1978). Indigenous people in the region practiced subsistence activities including hunting, fowling, and fishing, along with the cultivation of various crops, the most important of which were maize, squash, and beans. They supplemented these foods seasonally by collecting shellfish, fruits, and plants during warmer periods, and gathering nuts, roots, and tubers during colder times. Additionally, these communities came together in large groups to hunt deer in the fall and winter. Indigenous peoples lived with their immediate or extended families in large settlements, often concentrated along rivers and/or wetlands. Some villages were fortified by wooden palisades. Their habitation, known as a *weetu* or *wigwam,* was usually constructed of a tree-sapling frame and covered in reed matting during warm months and tree bark throughout the winter. These varied in size from a small, individual dwelling, to an expansive “long house,” which could accommodate several families. Native communities commonly traded among their immediate neighbors and often maintained long-distance networks (Lavin 2013). Information about Native Americans in Winchester is extremely scarce. While archaeological evidence indicates continuous occupation of the northwestern part of Connecticut by Native Americans from a very early date, at the time of colonization the region had become a buffer or boundary zone between the Mohawks (headquartered

in upstate New York) and the various tribes and groups along the Connecticut River and the Connecticut coast. Between periodic raids from the northwest and the catastrophic loss of the Indigenous population across the region, many sections of Litchfield County did not have Indigenous communities that were recognized by the colonial settlers and therefore were not documented in post European Contact records (Rossano 1996; Spiess 1934).

Seventeenth Century through Eighteenth Century

As Indigenous communities maintained oral traditions rather than a written record, most surviving information of the Indigenous people of present-day Connecticut was recorded by European observers who were Dutch or English colonists (Lavin 2013). The earliest Europeans known to have sailed along Long Island Sound and the Connecticut River were the Dutch around 1614 (Love 1903). The Dutch developed trade relationships with local Indigenous communities. By the early 1620s, Dutch traders entered into an agreement with the Pequot of present-day southeastern Connecticut in which the Pequot supplied wampum (polished shells) and furs in return for European goods. In 1624, the Dutch West India Company formally established New Netherland Colony centered around Manhattan and the Hudson River with its eastern bounds extending as far as Cape Cod, including much of present-day Connecticut (Jacobs 2009). Through their relationship with the Dutch, the Pequot accessed a variety of trade goods they distributed to tributaries and traded with other groups in the region. The Pequot extended their dominance over the region, bringing all the Native nations in the area into a tributary relationship under their leadership (Hauptman & Wherry 2009; McBride 2013).

In 1633, the Pequot allowed the Dutch to build a fortified trading post, the *Huys de Hoop,* on the Connecticut River at the site of present-day Hartford to further cement both parties' domination over the flow of wampum, fur, and trade goods. To break from the Pequot, several Connecticut River sachems invited the English to the valley who then settled Windsor (1633), Wethersfield (1634), and Hartford (1635), as well as Saybrook Colony (1635) at the mouth of the river (Trumbull 1886; Van Dusen 1961). Increased European interaction resulted in exposure to diseases and epidemics Indigenous people had never encountered and to which they had no natural immunity. Illnesses such as smallpox, measles, tuberculosis, and cholera devastated Native communities. In 1633, one epidemic spread from Plimoth Colony to Connecticut, impacting the Pequot and the people of the Connecticut River Valley in 1634 (Trumbull 1886). Tensions between Native and European groups in the region resulted in the death of several English traders in 1634 and 1636, which were blamed on the Pequot. In retaliation, English forces from Massachusetts Bay destroyed Pequot and Niantic villages on the Pequot (Thames) River in August of 1636, which began the Pequot War. The Pequot laid siege to Saybrook Fort at the mouth of the Connecticut River during the winter of 1636-1637 and attacked Wethersfield in April of 1637. The Connecticut Colony declared war on the Pequot and was joined by Native warriors from the Connecticut River and Mohegans under the Sachem Uncas (Oberg 2006). In May of 1637, English allied forces destroyed the fortified Pequot village at Mystic and in July they pursued Pequot refugees west. The Pequot were ultimately defeated in present-day Fairfield and the war ended (Cave 1996). Afterwards, the English considered Pequot territory, including land in the Connecticut River Valley, to be conquered lands and they were claimed by Connecticut Colony (Trumbull 1886).

From 1687, what would become present-day Winchester was known as the "Western Lands," owned by agents of the towns of Hartford and Windsor. These agents owned the land because at that time, the Colony of Connecticut feared that the new royal governor of New England and New York, Sir Edmund Andros, would take advantage of his appointment and distribute previously ungranted colony lands to persons outside the control of Connecticut. Their solution was to grant all the land lying between the east bank of the Housatonic River and west of the towns of Farmington and Simsbury to the towns of

Hartford and Windsor. The validity of this grant was never tested by Andros, as the New England colonies' continued objections to his policies led to his departure in 1689. Problems arose twenty years later when the town of Hartford began a series of attempts to cement its claim to this large area of land, even though it was well known that the 1687 measure had been an expedient action. The dispute involved half the land in the future Litchfield County; although Hartford and Windsor managed to establish the town of Litchfield between 1717 and 1719, after 1719 the colony government forbade any further laying out of land in the Western Lands. This dispute was finally settled in accord with a 1726 legislative committee proposal to divide the disputed area equally between the two towns and the colony government. A patent (a formal transfer of title) was granted to Hartford and Windsor, encompassing the eastern half of the disputed land. In 1732, the two towns divided this land between themselves. Hartford received four parcels, including what was called the "Middle West Part," named Winchester in 1733 (Crofut 1937).

The town's proprietors held their first meeting in 1744, but "none settled there, owing possibly to the mountainous and wooded character of the land" (Crofut 1937:449). It was not until 1763 that allotment of lands to proprietors within the town took place, its distance from the Farmington and the Connecticut River having been a factor in the delayed settlement in addition to its landscape (DeMars and Bronson 1972). Although the first actual colonist, Caleb Beach, built a house in the southern part of the town in 1750, it was not until 1771 that enough people lived there for the legislature to grant Winchester formal status as an incorporated town (Crofut 1937). At that time, the town included 28 families and 179 individuals; four families lived outside the Winchester society, in the northeast corner of the town (J. W. Lewis & Co. 1881). Because of the geography, the principal agricultural industry in Winchester at this time consisted of making butter and cheese rather than growing cash crops (Barber 1836). Early industrial development in the Winsted section included David Austin's gristmill, built in 1771, and John Balcom's gristmill, built in ca., 1776 (Crofut 1937). Slavery existed in the region since the seventeenth century and by the eighteenth century it was primarily practiced by wealthy families, merchants, and ministers in larger towns. The 1774 Connecticut colonial census recorded a "White" population of 327 and "Black" population of 12 in Winchester but ignored Native American inhabitants (Hoadly 1887). During the American Revolution (1775-1783), the state of Connecticut played an important role in the process of recruiting soldiers, supplying food stores, and providing a variety of military goods for the war effort. Throughout the war, Connecticut was a leader in sourcing provisions for American forces, due to a rationing system set up by individual towns, including what would become present-day Winchester (Van Dusen 1961). Following the war, in 1784 the State passed a gradual manumission law, but slavery was not fully abolished until 1848 (Normen 2013). Finally, on January 9, 1788, Connecticut ratified the U.S. Constitution to become the fifth state (Van Dusen 1961).

Nineteenth Century through the Twenty-First Century

Following the Revolutionary War, the present-day town of Winchester continued to grow as improvements in transportation facilitated movement to the town and for its residences. In 1799 the Green Woods Turnpike company began operation of a toll road, passing through what became Main Street in Winsted, and continued operation of the company for nearly 75 years. Construction of the Green Woods Turnpike allowed for mercantile businesses to thrive on Main Street in addition to taverns. However, an unintended consequence of this infrastructure was the emigration of Connecticut families from Winchester to the Connecticut Western Reserve in Ohio (DeMars and Bronson 1972).

More steady industrialization did not begin until after 1820. In Winsted, Lambert Hitchcock introduced the idea of large-scale production of furniture with his Hitchcock chairs. Building upon his early ventures of furniture production utilizing waterpower, Hitchcock in 1825 constructed a three-story factory, with

multiple extensions. His factory would come to employ nearly 100 woodworkers, finishers, and weavers in the 1820s, representing one of the largest commercial workforces in Connecticut at that time (Roth 1981). By 1836, manufacturing in Winsted and Winchester included four scythe factories, a machine shop, five forges, a clock factory, axe factory, woolen factory, and iron foundry (Barber 1836). This industrial boon helped prompt the establishment of the Naugatuck Railroad Company, chartered in 1845 to connect Winsted down through the Naugatuck Valley down to Bridgeport at Long Island Sound. Completed in 1849, the fifty-seven-mile rail line provided service for both passengers and freight (Turner and Jacobus 1989).

Like many Connecticut towns, Winchester provided men and materials to aid the Union during the Civil War. From Winchester, 394 men served in the Union army which accounted for 11 percent of the town's population (Hines 2002). In the post-war era, industry in Winchester continued to grow. The Gilbert Clock Factory was constructed in Winsted in 1871 which became one of the most successful in the country due to innovations which allowed for mass production of clocks with about 200 workers (Clouette and Roth 1984). In 1873, Strong Hardware Factory, originally located in East Hampton, constructed a mill in Winsted to produce tacks for coffins, screws, handles, and metal trimmings. Within the next two years, the New England Pin Company and New England Knitting Mills were built in Winsted along the Mad River. Winsted Hosiery Company was founded in 1882 to manufacture woolen undergarments. Additionally, the Winsted Metalliform Factory was first built in 1896 for the production of stamped metal goods (Roth 1981). Accompanying this growth in industry was a growth in population. By 1890, the population of Winchester had increased to 6,183 (Connecticut 2022a).

By 1920, Winchester had 9,019 residents (Table 1; Connecticut 2022b). In 1921, the principal industries remained the manufacture of knit goods, clocks, coffin trimmings, cutlery, spool silk and scythes (Connecticut 1921). By 1930, the population had fallen slightly from its 1920 peak, to 8,674 and continued to fall in 1940 (Table 1; Connecticut 2022b). One possible reason for this population decline was the closure of the Connecticut Western Railroad in 1900 and the abandonment of the Winsted stop on the Naugatuck Railroad in 1930 (Wathen 1989). Following the Second World War, in August 1955 the remnants of Hurricane Diane brought torrential rains to Connecticut, resulting in major flooding, particularly in Winchester and downtown Winsted. With nearly fourteen inches of rain the Mad and Still Rivers which ran through Winsted overflowed, destroying the majority of Main Street, after which a Flood Recovery Committee was convened, along with the mobilization of the Red Cross, Salvation Army, and other non-profit agencies to assist in clean up and economic recovery (Van Dusen 1961). By mid-century, suburbanization began to take hold in the state, which was bolstered by the improvements to roads like Route 8 and Route 44 which pass through Winchester (Oglesby 2020). As more people chose to live in suburban areas, many towns grew, but the Winchester population remained largely unchanged (Table 1; Connecticut 2022b-c). In 1965, Northwest Community College was privately founded and came under state jurisdiction later that year. The campus is located on nearly 16.5 acres in the Winsted portion of Winchester and offers approximately thirty degree programs and twenty certificate programs (Connecticut State Colleges & Universities 2015). As of 2021, most jobs in Winchester were in manufacturing, including ball bearings, custom cartons, and hinges, as well as local government, with Arconic Power and Propulsion and Howmet Corporation as key employers (AdvanceCT and CTData Collaborative 2021; Connecticut 2021).

Table 1: Population of Winchester, Connecticut, Litchfield County 1890-2020 (Connecticut 2022a-c; USCB 2022)

Town	1890	1900	1910	1920	1930	1940	1950
Town of Winchester, Litchfield County, Connecticut	6,183	7,763	8,679	9,019	8,674	8,482	10,535
	1960	**1970**	**1980**	**1990**	**2000**	**2010**	**2020**
	10,496	11,106	10,841	11,524	10,664	11,242	10,224

History of the Project Area

The proposed Greenskies Winchester solar project is located at 0 Spencer Hill Road in the town of Winchester, Litchfield County, Connecticut. According to Hopkins' 1859 map, the project area is located in what was a rural portion of Winchester. The nearest homes belonged to G. Sockwood and A. Pierce, a tool worker (Figure 4: 1859; 1870 USCB). The Beers' 1874 map also shows the Pierce residence and lists the project area in what was then District No. 4 in Winchester (Figure 5; 1874).

During the twentieth and early twenty-first centuries, the project area environment remained largely rural with few residential developments. As seen in 1934 aerial photography, the project area was open, agricultural space (Figure 6; 1934). One home was located to the west of the parcel on what is present-day Spencer Hill Road and another home with agricultural buildings abutted the project area directly to the north, at the northwest corner of the parcel (Figure 6; 1934). Little changed within the project area by 1970, however aerial photography shows a detention pond was constructed to the west of the proposed solar field on the west side of current-day Spencer Hill Road, and a second, larger pond was constructed north of the project area (Figure 7; 1970). While the project area remained open space, residential development occurred on the western side of Spencer Hill Road and by 2004 single family homes and a private recreational space were present (Figure 8; 2004). The buildings that abutted the parcel in the aerial photograph from 1934 were still present (Figure 8; 2004). The project area and the surrounding environment were largely unchanged from 2004 to 2019 (Figure 9; 2019).

Conclusions

The post European Contact investigation indicates that the proposed project parcel is unlikely to be associated with any significant cultural resources. Based on the past use of the land for agriculture, there is the possibility of encountering remains of outbuildings, stonewalls, or other evidence of post-European Contact period farming.

CHAPTER V
PREVIOUS INVESTIGATIONS

Introduction

This chapter presents an overview of previous archaeological research completed within the vicinity of the proposed Facility in Winchester, Connecticut. This discussion provides the comparative data necessary for assessing the results of the current Phase IA cultural resources assessment survey, and it ensures that the potential impacts to all previously recorded cultural resources located within and adjacent to the Facility are taken into consideration. Specifically, this chapter reviews previously identified archaeological sites and National/State Register of Historic Places properties situated in the project region (Figures 10 and 11). The discussions presented below are based on information currently on file at the Connecticut State Historic Preservation Office in Hartford, Connecticut, and the collection of electronic site files maintained by Heritage. Both the quantity and quality of the information contained in the original cultural resources survey reports and State of Connecticut archaeological site forms are reflected below.

Previously Recorded Archaeological Sites, National/State Register of Historic Places Properties/Districts in the Vicinity of the Facility

A review of files maintained by the Connecticut State Historic Preservation Office and Heritage revealed that there are no archaeological sites located within 1.6 km (1 mi) of the proposed Facility. While archaeological sites have not yet been recorded in the project region, this is most likely related to the fact that very few archaeological surveys have been completed in this part of Winchester. Thus, the identification of precontact or post-European Contact period occupations in the Facility area cannot be ruled out.

A single previously identified National Register of Historic Places (NRHP) (Gilbert Clock Factory) is located approximately 1,000 meters (3,281 feet) to the southeast of the project area. The late nineteenth century Gilbert Clock Factory was listed on the NRHP in December of 1984 and currently serves as an apartment building. The factory complex is located on the north side of Wallens Street. It is a well-preserved example of the town as a center for the manufacturing of low cost clocks and as an industrial complex that played an important role in the town's history. William Gilbert, who began his career in clockmaking in Bristol, Connecticut, moved to Winchester in 1840. The Gilbert Clock Factory in Winchester manufactured wall and shelf clocks for the mass market. His company grew to a total of four large buildings, and he employed more than 500 people. Currently, just two buildings remain, which are both four-story brick structures. The Clock Factory is also significant for its Italianate, Second Empire, Mansard, and nineteenth century industrial architecture. The property is located well enough away from the Facility area that it will not be impacted by the proposed construction.

Summary and Interpretations

The review of previously identified cultural resources in the vicinity of the proposed Facility indicates that the larger project region contains numerous precontact and post European Contact cultural resources related to Native American habitation and resource extraction and colonial farming activities. While only a single previously identified cultural resources sites is located within the Facility, evidence of some may be expected if the area is subjected to a professional archaeological survey.

CHAPTER VI
METHODS

Introduction

This chapter describes the research design and field methodology used to complete the Phase IA cultural resources assessment survey of the Facility area in Winchester, Connecticut. The following tasks were completed during this investigation: 1) study of the region's precontact and post European Contact periods, and natural setting, as presented in Chapters II through IV; 2) completion of a literature search to identify and discuss previously recorded cultural resources in project region; 3) completion of a review of maps, topographic quadrangles, and aerial imagery depicting the Facility in order to identify potential post-European Contact period resources and/or areas of past disturbance; and 4) pedestrian survey and photo-documentation of the Facility in order to determine its archaeological sensitivity. These methods are in keeping with those required by the Connecticut State Historic Preservation Office in the document entitled *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987).

Research Framework

The current Phase IA cultural resources assessment survey was designed to identify assess the archaeological sensitivity of the Facility, as well as to visually examine it for evidence of any previously unidentified cultural resources during pedestrian survey. The undertaking was comprehensive in nature, and project planning considered the distribution of previously recorded cultural resources located within the region, as well as a visual assessment of the Facility area. The methods used to complete this investigation were designed to provide coverage of all portions of the Facility. The fieldwork portion of this undertaking entailed pedestrian survey, photo-documentation, and mapping (see below).

Archival Research & Literature Review

Background research for this investigation included a review of a variety of post European Contact period maps depicting the proposed Facility and larger project parcel; an examination of USGS 7.5' series topographic quadrangles; an examination aerial images dating from 1934 through 2019; and a review of all archaeological sites and National and State Register of Historic Places on file with the CT-SHPO, as well as electronic cultural resources data maintained by Heritage. The intent of this review was to identify all previously recorded cultural resources situated within and immediately adjacent to the Facility area, and to provide a natural and cultural context for the project region. This information then was used to develop the archaeological context of the impact areas associated with the proposed Facility, and to assess their sensitivity with respect to the potential for producing intact cultural resources.

Background research materials, including maps, aerial imagery, and information related to previous archaeological investigations, were gathered from the CT-SHPO. Finally, electronic databases and Geographic Information System files maintained by Heritage were employed during the course of this project; they provided valuable data related to the project region, as well as data concerning previously identified archaeological sites and National and State Register of Historic Places properties within the general vicinity of the proposed Facility.

Field Methodology and Data Synthesis

Heritage also performed fieldwork for the Phase IA cultural resources assessment survey of the Facility area in Winchester, Connecticut. This included pedestrian survey, photo-documentation, and mapping of Facility area. During the completion of the pedestrian survey, representatives from Heritage photo-documented all potential areas of impact using digital media.

CHAPTER VII
RESULTS & MANAGEMENT RECOMMENDATIONS

Introduction

This chapter presents the results of the Phase IA cultural resources assessment survey of the proposed Facility in Winchester, Connecticut. As stated in the introductory section of this report, the goals of the investigation included completion of the following tasks: 1) preparation of a contextual overview of the region's precontact and post European Contact periods, and natural setting (e.g., soils, ecology, hydrology, etc.); 2) completion of a literature search to identify and discuss previously completed cultural resources surveys and previously recorded cultural resources in the project region; 3) completion of a review of readily available post European Contact maps and aerial imagery depicting the Facility in order to identify potential post-European Contact period resources and/or areas of past disturbance; and 4) pedestrian survey and photo-documentation of the Facility in order to determine its archaeological sensitivity.

Overall Sensitivity of the Proposed Facility

The field data associated with soils, slopes, aspect, distance to water, and previous disturbance collected during the pedestrian survey and presented above was used in conjunction with the analysis of post European Contact maps, aerial images, and data regarding previously identified archaeological sites and National and State Register of Historic Places properties, and inventoried post-European Contact period standing structures to stratify the Facility area into zones of no/low, moderate, and/or high archaeological sensitivity. In general, post-European Contact period archaeological sites are relatively easy to identify on the current landscape because the features associated with them tend to be relatively permanent constructions that extend above the ground surface (i.e., stone foundations, pens, wells, privies, etc.). Archaeological sites dating from the precontact era, on the other hand, are less often identified during pedestrian survey because they are buried, and predicting their locations relies more on the analysis and interpretation of environmental factors that would have informed Native American site choices.

With respect to the potential for identifying precontact era archaeological sites, the project area was divided into areas of no/low, moderate, and/or high archaeological potential by analyzing the landform types, slope, aspect, soils contained within them, and their distance to water. In general, areas located less than 300 meters (1,000 feet) from a freshwater source and that contain slopes of less than 8 percent and well-drained soils possess a high potential for producing precontact archaeological deposits. Those areas located between 300 and 600 meters (1,000 and 2,000 feet) from a freshwater source and well drained soils are considered moderate probability areas. This is in keeping with broadly based interpretations of precontact era settlement and subsistence models that are supported by decades of previous archaeological research throughout the region. It is also expected that there may be variability of precontact site types found in the moderate/high sensitivity zones. For example, large Woodland period village sites and Archaic period seasonal camps may be expected along large river floodplains and near stream/river confluences, while smaller temporary or task specific sites may be expected on level areas with well-drained soils that are situated more than 300 meters (1,000 feet) but less than 600 meters (2,000 feet) from a water source. Finally, steeply sloping areas, poorly drained soils, or areas of previous disturbance are generally deemed to retain a no/low archaeological sensitivity with respect to their potential to contain precontact archaeological sites.

In addition, the potential for a given area to yield evidence of post-European Contact period archaeological deposits is based not only on the above-defined landscape features but also on the presence or absence of previously identified post-European Contact period archaeological resources as identified during previous archaeological surveys, recorded on post-European Contact period maps, or captured in aerial images of the region under study. In this case, proposed development areas that are situated within 100 meters (328 feet) of a previously identified post-European Contact period archaeological site, a National or State Register of Historic Places district/individually listed property, or an area that contains known post-European Contact period buildings also may be deemed to retain a moderate/high archaeological sensitivity. In contrast, those areas situated over 100 meters (328 feet) from any of the above-referenced properties would be considered to retain a no/low post-European Contact period archaeological sensitivity.

Results of Phase IA Survey & Management Recommendations

Heritage personnel conducted pedestrian survey of the proposed Facility in January of 2023. Pedestrian survey was supplemented by mapping and photo-documentation (Figure 12 and Photos 1 through 7). As seen in the attached photos, the Facility area is characterized by rolling steep hills with some areas of nearly level topography. The predominant soil types located noted throughout the area are Charlton-Chatfield, Paxton and Montauk, and Woodbridge soils, which are generally correlated with precontact era site locations.

The results of the survey indicate that the project area is currently situated within an agricultural field that is characterized by well drained soils, rolling steep hills, and with some areas of nearly level topography. It was determined that approximately 13 acres of the Facility area did not retain potential to yield intact archaeological deposits because they fell within areas characterized as having wet soils and steep slopes; no further archaeological investigation of the no/low potential area is recommended.

Finally, the pedestrian survey determined that the remaining seven acres is characterized by level topography and well-drained soils. The area is located within the southern and central regions of the project area, and it was deemed to be archaeologically sensitive. Thus, it is recommended that the seven acres of moderate/high sensitivity be subjected to a Phase IB cultural resources reconnaissance survey prior to construction of the solar facility.

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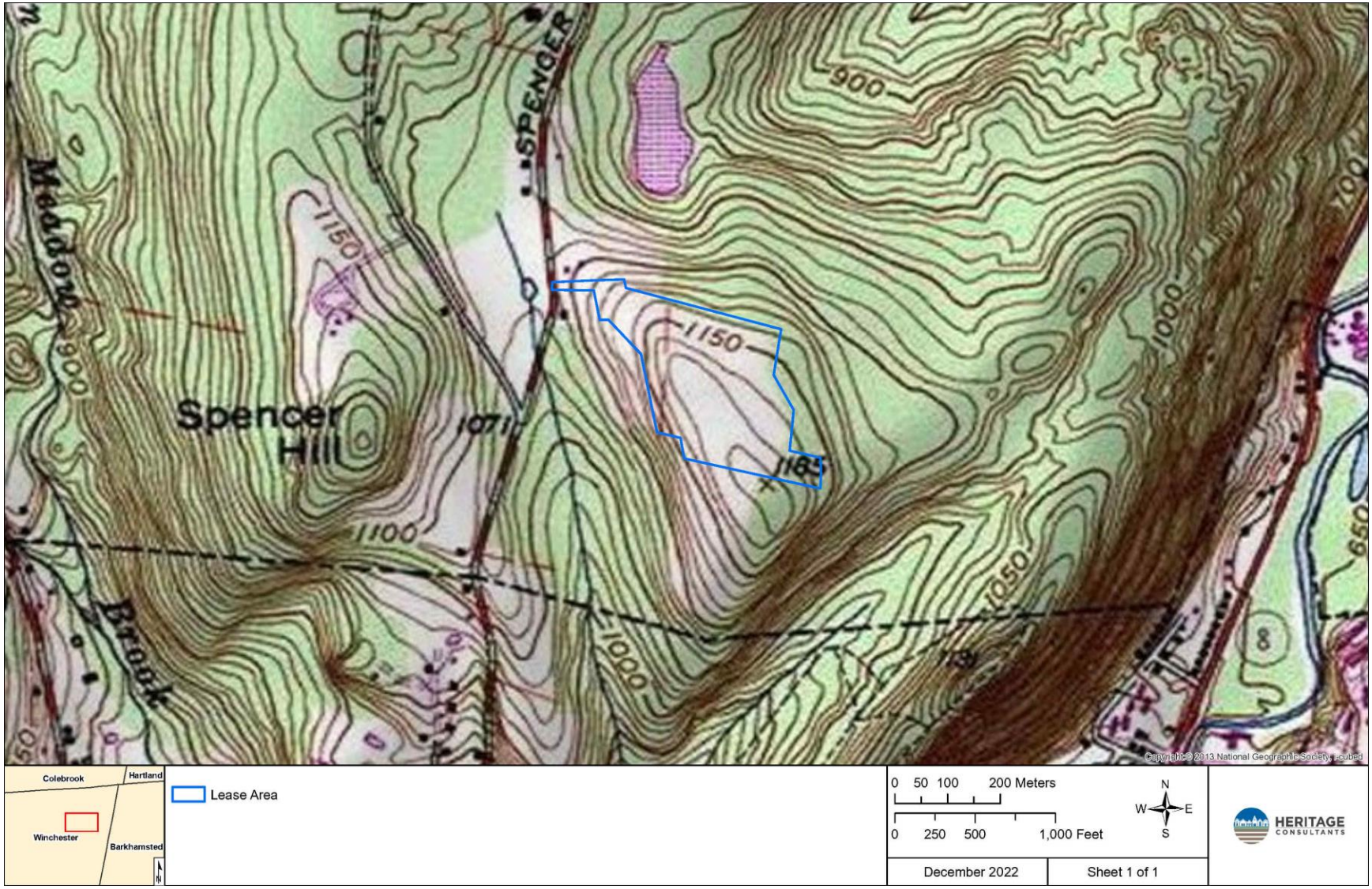
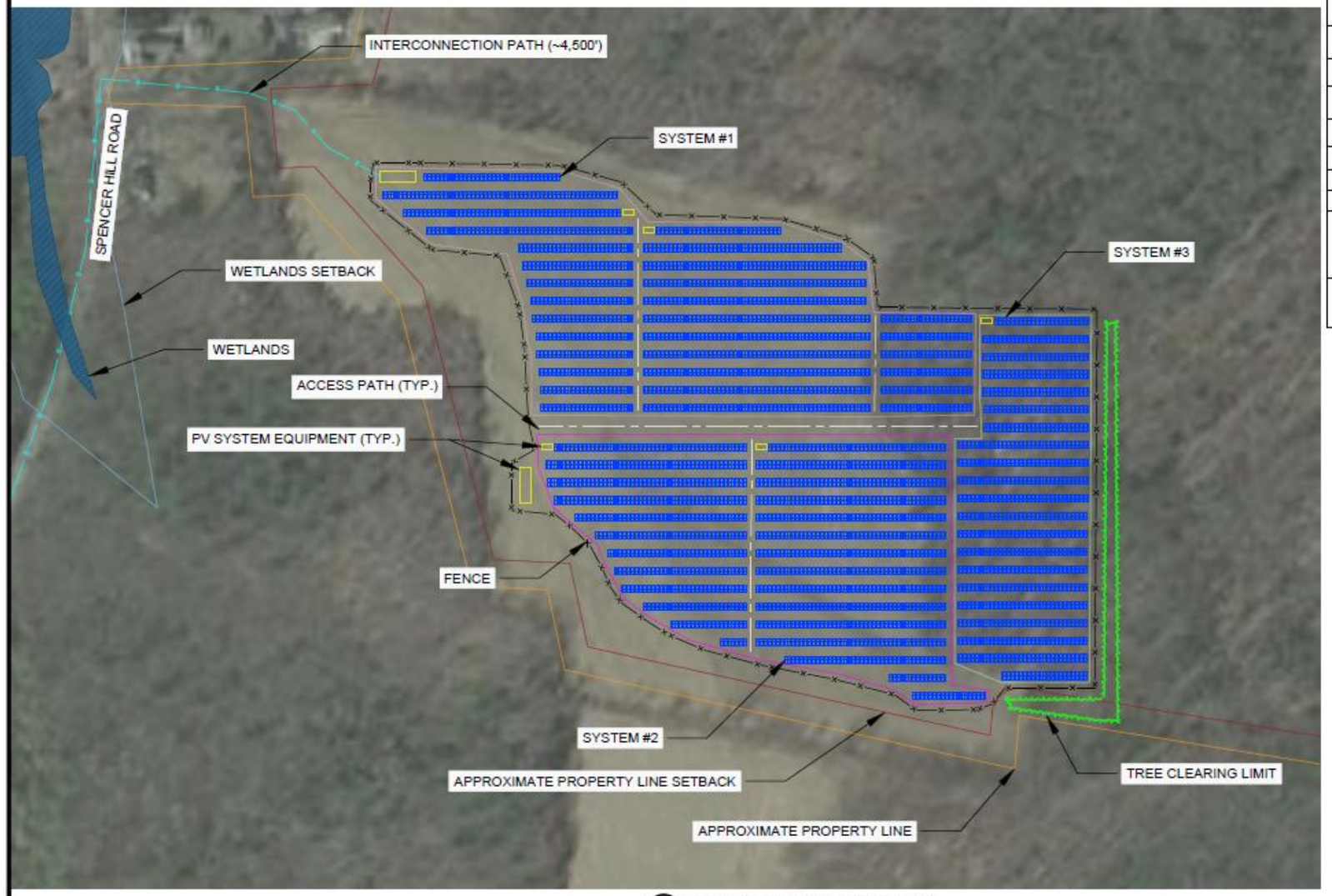


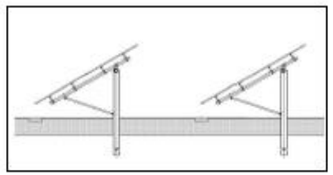
Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the proposed Greenskies Solar Facility in Winchester, Connecticut.



1 S.01 PROPOSED PV SOLAR ARRAY LAYOUT 1"=200'

SYSTEM #1/2/3 INFORMATION	
SYSTEM SIZE (DC)	2,436.48 / 2,203.2 / 1,296 kW
SYSTEM SIZE (AC)	1,990 / 1,750 / 1,000 kW
PANEL SIZE	LONGI 18X-LR5-72HBD 540W*
PANEL QUANTITY	4,512 / 4,080 / 2,400
PANEL TILT	30°
PANEL AZIMUTH	0°
ROW SPACING	19.5'
INVERTER SIZE	(32) CSI-125KTL-GS-E 125W* (4) CSI-185K-T600GL02-U 185W*
ESTIMATED ANNUAL PRODUCTION	3,208 / 2,900 / 1,699 MWh

*Preliminary equipment selection, equivalent alternative may be used in actual installation



RACKING CROSS-SECTION
(NOT TO SCALE)

PROGRESS SET
NOT FOR CONSTRUCTION

Greenskies
127 Washington Avenue
North Haven, CT 06457
PH - 860.398.5408
FAX - 860.398.5423

REVISIONS:

NO.	DATE	DESCRIPTION

PROPOSED SITE PLAN

PV SOLAR ARRAY
SPENCER HILL ROAD
WINCHESTER, CT 06098

BATCH NO.:	PROPOSAL
DRAWN BY:	ZS
SCALE:	AS NOTED
DATE:	25 AUG 2022

PV.01

Figure 2. Project plans showing the proposed Greenskies Solar Facility in Winchester, Connecticut.

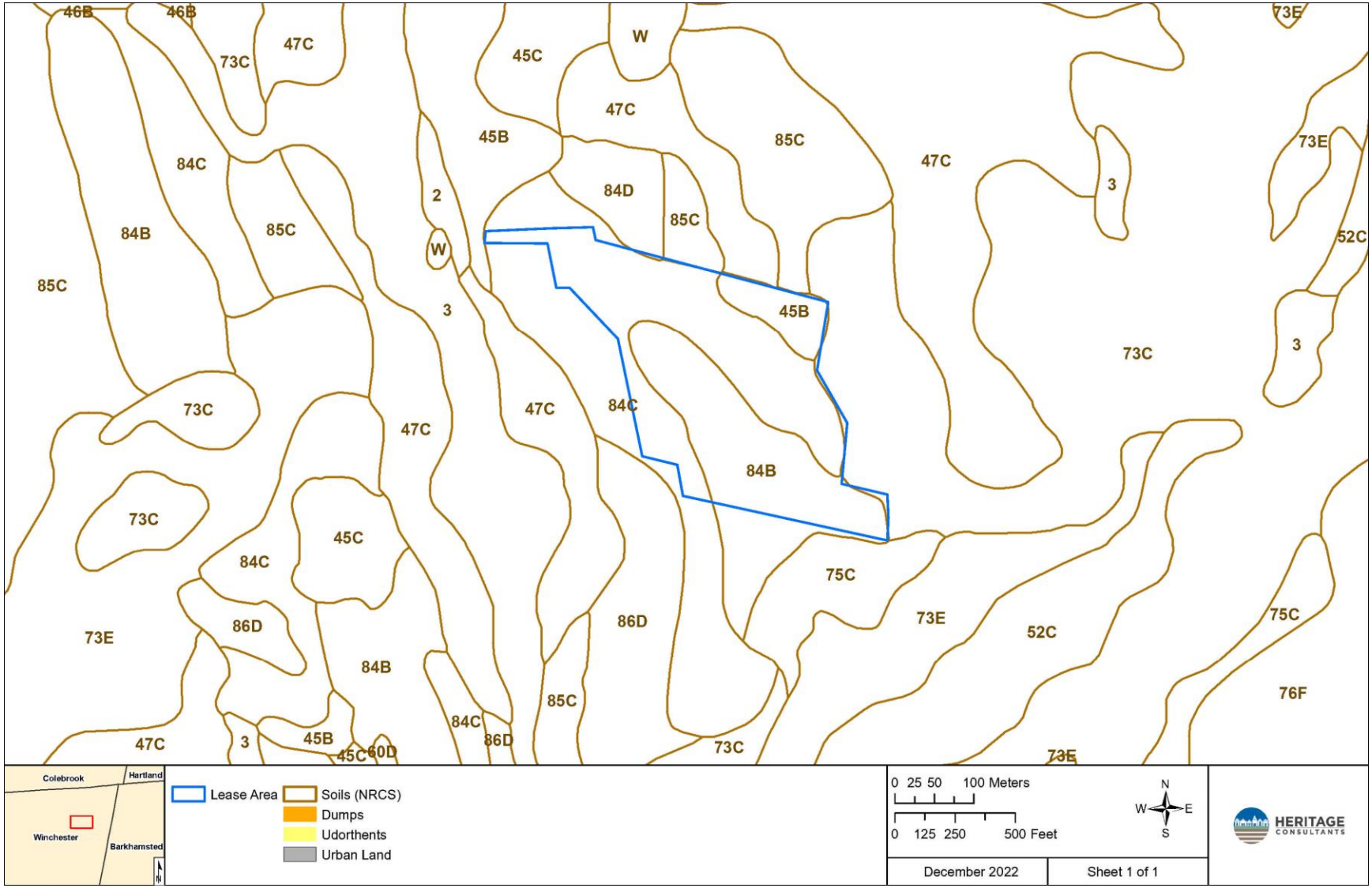


Figure 3. Map of soils showing the location of the proposed Greenskies Solar Facility in Winchester, Connecticut.

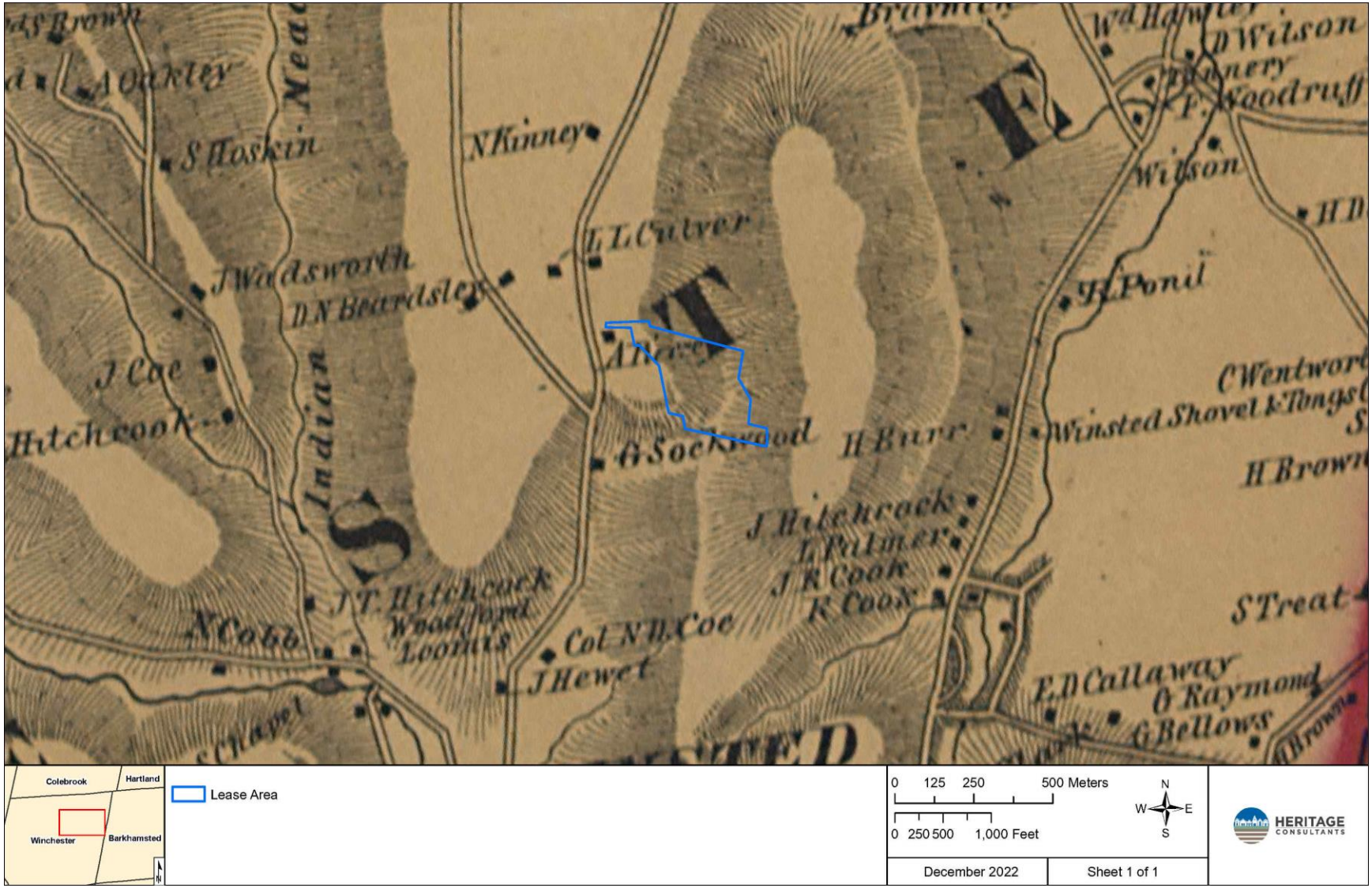


Figure 4. Excerpt from an 1859 map showing the location of the proposed Greenskies Solar Facility in Winchester, Connecticut (Clark 1859).

Figure 5. Excerpt from an 1874 historical map showing the location of the proposed Greenskies Solar Facility in Winchester, Connecticut (Beers 1874).

Figure 6. Excerpt from a 1934 aerial image showing the location of the proposed Greenskies Solar Facility in Winchester, Connecticut. (Fairchild 1934).

Figure 7. Excerpt from a 1970 aerial image showing the location of the proposed Greenskies Solar Facility in Winchester, Connecticut (Keystone 1970).

Figure 8. Excerpt from a 2004 aerial image showing the location of the proposed Greenskies Solar Facility in Winchester, Connecticut (CT-DOT 2004).

Figure 9. Excerpt from a 2019 aerial image showing the location of the proposed Greenskies Solar Facility in Winchester, Connecticut (Connecticut Environmental Conditions Online 2019).

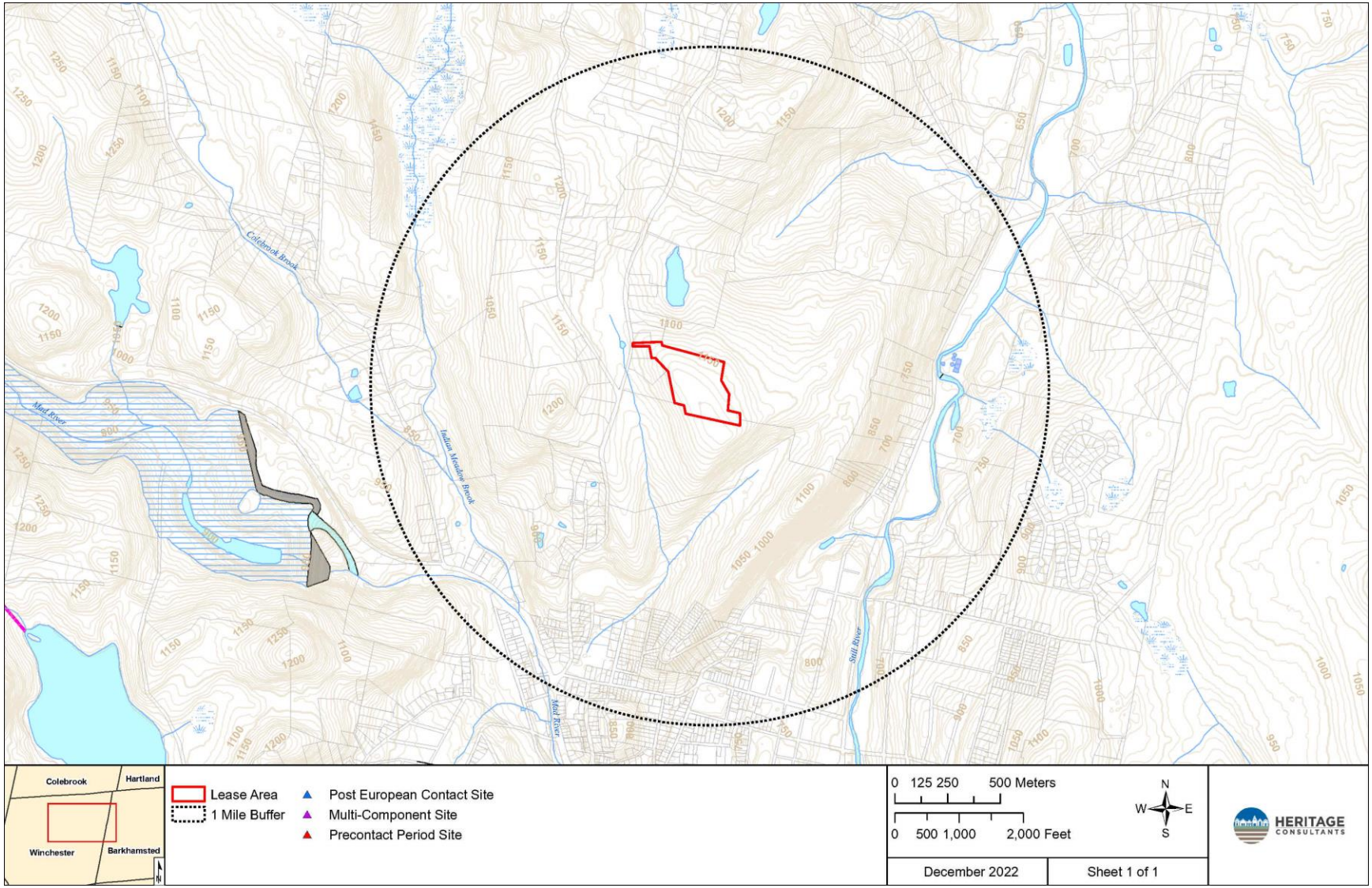


Figure 10. Digital map showing the location of previously identified archaeological sites in the vicinity of the proposed Greenskies Solar Facility in Winchester, Connecticut.

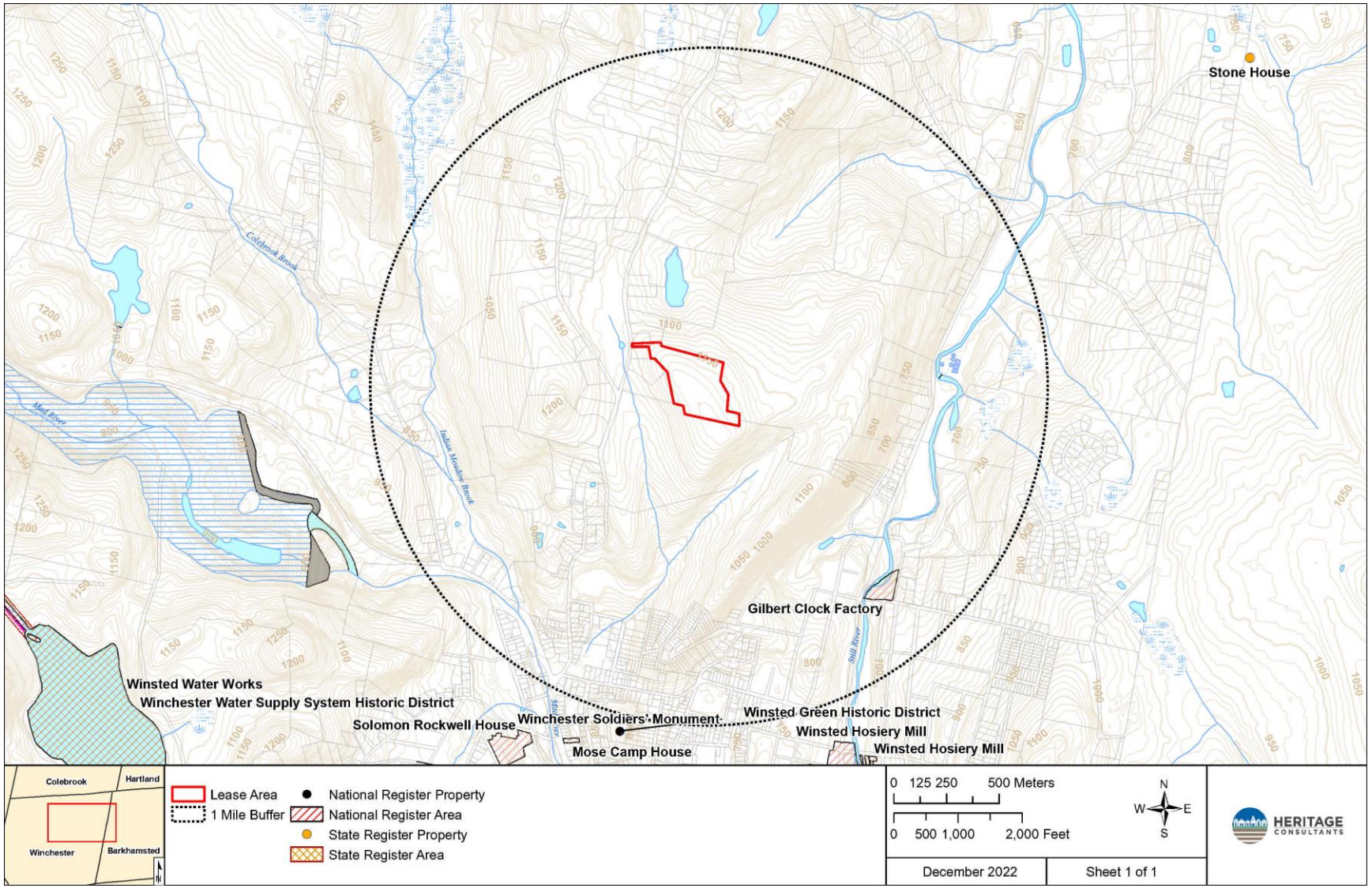


Figure 11. Digital map depicting the locations of previously identified National/State Register of Historic Places properties in the vicinity of the proposed Greenskies Solar Facility in Winchester, Connecticut.

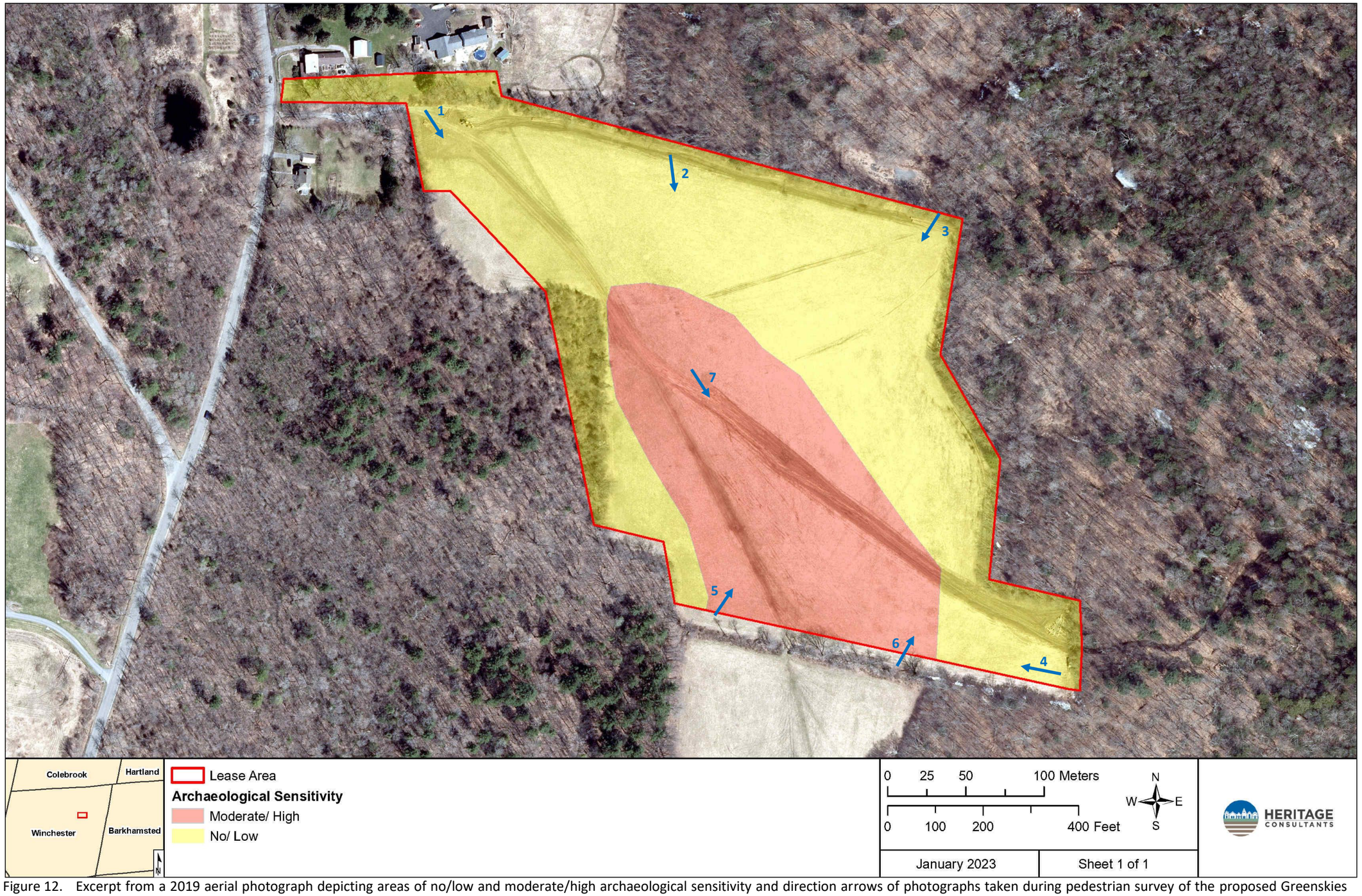


Figure 12. Excerpt from a 2019 aerial photograph depicting areas of no/low and moderate/high archaeological sensitivity and direction arrows of photographs taken during pedestrian survey of the proposed Greenskies Solar Facility in Winchester, Connecticut.

Photo 1. Overview of no/low sensitivity area from northwestern corner facing southeast.

Photo 2. Overview photo from northern boundary of no/low sensitivity area facing south.

Photo 3. Overview photo of no/low sensitivity area from northeast corner facing southwest.

Photo 4. Overview photo of no/low sensitivity area taken from southeast corner facing west.

Photo 5. Overview photo from southern portion of moderate/high sensitivity area facing northeast.

Photo 6. Overview photo from southern portion of moderate/high sensitivity area facing northeast.

Photo 7. Overview photo from northern portion of moderate/high sensitivity area facing southeast.