



Technical Memorandum

North Stonington Solar Project

North Stonington, CT

Archaeological Assessment

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Submitted to:

PAL Report 3299

Provost & Rovero, Inc.
57 East Main Street
P.O. Box 191
Plainfield, CT 06374

The Public Archaeology Laboratory, Inc. (PAL) has completed an archaeological sensitivity assessment of the North Stonington Solar Project (hereafter, Project) in North Stonington, Connecticut. The proposed project includes development of a new solar facility within an approximately 124-acre parcel that contains a gravel pit (Figure 1). At the request of Provost + Rovero working on behalf of Silicon Ranch Corporation, PAL conducted an archaeological assessment of the project area to evaluate the potential for significant archaeological resources to be present within the area of proposed construction with the results added to the results of the original sensitivity assessment.

Project Description

The proposed combined facility will consist of ground mounted solar arrays, a meter station and electrical interconnection, six electrical invertors, underground utilities, and security fencing. For the purposes of this assessment, PAL assumed that ground disturbance may occur anywhere within the project limits.

Project Authority

The proposed project will require a NPDES General Permit from the U.S. Department of Environmental Protection (EPA) and must therefore comply with programmatic considerations of historic properties, including archaeological resources, pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108) and the Act's implementing regulations (36 CFR 800 et seq).

This assessment is intended to assist the State Historic Preservation Office (SHPO) at the Connecticut Department of Economic and Community Development evaluate the potential for significant archaeological resources to be affected by the Project. The goal of the assessment was to collect and synthesize detailed information about the existing conditions within the project site, historic contexts of past land uses which may be associated with significant archaeological resources, and the types of archaeological or other historic properties subject to consideration under the EPA's NPDES permitting process.

The walkover and archaeological sensitivity assessment of the project area in North Stonington was conducted by PAL staff, Daniel Forrest (principal investigator) and Erin Flynn (project archaeologist) on January 12, 2017.

Research Framework

Environmental Context

The Project is located approximately 1-mile west of the Connecticut/Rhode Island state line in the Pawcatuck River drainage. Much of Eastern Connecticut is bisected by chains of north-south oriented hills and ridges. Irregular moraines consisting of east/west ridges of boulders and coarse gravels intersection the streamlined hills, marking stable positions of the retreating Wisconsin glaciers. The abundance of moraines in the area is largely responsible for the excessively rocky terrain for which Stonington and North Stonington are named. Relative to terrain to the north and west, the coastal sections of southeastern Connecticut are rich with marshes and swamps of varying size. Many of these wetlands occupy the topographic lowlands once inundated by proglacial ponds and lakes. Prominent examples in the area surrounding the Project are Bell Cedar Swamp, approximately 0.5 miles to the north-northwest, and Assekong Swamp, roughly 4 miles to the west. Approximately half of the project area coincides with a series of smaller sediment dammed pro-glacial ponds which once extended from the upper Wyassup Brook drainage southeastward to the Pawcatuck River. Higher elevations at the northeastern and north-central sections of the project area are underlain by sandy to gravelly glacial outwash and lodgment tills.

Soil associations within the western and southwestern portion of the project area consist of udorthents-urban land complex associated with a former gravel pit (NRCS 2017). This portion of the project includes several small wetlands and man-made ponds, which may have once been associated with cranberry bogs along the western boundary along Cranberry Bog Road (USGS 1943). Surface elevations within the former gravel pit are approximately 15 to 35 feet lower than adjacent sections of the landscape, suggesting that a large volume of sediment was hauled from the site. The central and northern portion of the project area consists of Canton and Charlton, and Charlton-Chatfield complex, well-drained, fine sandy loams, very stony to very rocky, with 0 to 15 percent slopes. The northeast portion consists of Woodbridge, and Paxton and Montauk, moderately to well-drained, fine sandy loams, very stony, with 0 to 8 percent slopes. In general, these soils are not considered prime farmland, although areas south of the project area may include pockets of more suitable soil for agriculture. Elevations within the project area range from approximately 50 to 140 feet above mean sea level.

Two small streams drain the eastern half of the project area. The easternmost of the two streams is spring fed and is the larger. It flows from a small rocky basin at the toe of lodgment till terrain, and drains a small north-south oriented basin extending towards the southeastern corner of the project limits. The smaller stream to the west crosses a corner of the proposed development area onto the abutting property before turning southward and re-entering the Project and draining into the former gravel pit. The lower, southern section of this drainage has been altered by the gravel mining, as has the drainage pattern within the entire western half of the project area.

Pre-Contact Period Context

Few systematic archaeological surveys in Connecticut had been conducted prior to the late 1970's and the prevailing view of many archaeologists was that Native American settlements were strongly focused on coastal areas and large rivers, where shell middens and large sites had been discovered with some frequency (see McBride 1984). Large scale surveys undertaken in the late 1970's through the late 1980's substantially expanded both the number of known pre-contact archaeological sites in Connecticut and the range of environmental settings in which those sites were found (McBride et al. 1980, McBride 1984, McBride and Soulsby 1989). Contrary to the expectations of many archaeologists, systematic surveys in northeastern Connecticut suggested year-round pre-contact occupations in what had been considered a "marginal" environment (McBride et al. 1980:21). Archaeological surveys in the Litchfield Hills conducted by the American Indian Archaeological Institute, now the Institute for American Indian Studies, in the 1970s and 1980s complimented investigations in central and eastern Connecticut. The northwestern surveys identified large numbers of pre-contact sites near large wetland basins, suggesting swamps and marshes, not just large rivers and coastal sections, supported generations of Native Americans in the region (Nicholas 1988).

The earliest archaeological evidence for human occupation in the region dates from the **PaleoIndian Period (12,500–10,000 B.P.)**, a time of dramatic climatic change in southern New England. The sharply colder conditions during the initial period of Native American settlement in the region were followed by sharp shifts in temperature and moisture regimes, each corresponding with apparent shifts in PaleoIndian settlement and subsistence patterns. In consideration of these changes, the PaleoIndian Period is divided into three distinct subperiods: the Early PaleoIndian Period (12,500 to 12,000 calendar years ago), the Middle PaleoIndian Period (12,000 to 11,000 calendar years ago), and the Late PaleoIndian Period (11,000 to 10,000 calendar years ago).

Sites from the Early and Middle PaleoIndian periods are characterized by distinctive fluted projectile points and flaked stone tool assemblages containing scrapers, graters, and drills. Late PaleoIndian Sites in the region are associated with unfluted lanceolate project points and knives (e.g. Jones 1997). Most of the large and well-documented sites from this period are located outside of Connecticut. To date, only four small, intact PaleoIndian sites have been excavated in Connecticut. They include the Templeton Site (6-LF-21) located in the Housatonic River drainage in Washington, the Great Hill Site in Seymour, the Hidden Creek Site (72-163), located on the Mashantucket-Pequot Reservation in Mashantucket, and the Baldwin Ridge Site located on a ridge overlooking the Thames River valley in Groton. The PaleoIndian component at the Templeton Site has yielded radiocarbon dates of 10,190 \pm 300 B.P. (Moeller 1980) and 10,215 \pm 90 B.P. and appears to have been the site of a small seasonal camp at which a wide range of stone tool manufacturing, tool maintenance, and domestic activities were carried out. The Great Hill Site contained quartz debitage and a complete chert fluted point dating from the Early to Middle PaleoIndian Period.

The Hidden Creek site provides evidence of yet another small, seasonal PaleoIndian camp (Jones 1997). Radiocarbon dates of 9,150 \pm 50, 9,150 \pm 40 and 10,260 \pm 70 B.P. suggest the site is associated with the later end of the PaleoIndian Period (Jones and Forrest 2003). The small site is nestled on a kame terrace within the Cedar Swamp Basin, and is characterized by chert unifaces and end scrapers with several broken lanceolate chert projectile points (Jones 1997). The small size of the site and the apparently brief period of use suggest PaleoIndian people living in southern New England remained highly mobile after 10,000 B.P. The Baldwin Ridge Site in Groton yielded the base of a fluted point, end scrapers, and a resharpening flake, a tool assemblage suggestive of a special-purpose location for

the hunting and processing of animal resources (McBride 1984; Soulsby et al. 1981). Additionally, the Allens Meadows Site in Wilton contained two fluted points and several dozen artifacts (Wiegand 2008).

The **Archaic Period (10,000–3000 B.P.)** in southern New England is associated with several important adaptations to evolving Holocene environments in the region. It is subdivided into Early, Middle, and Late periods on the basis of changes in environment, projectile point styles, and settlement patterning (Lavin and Mozzi 1996; McBride 1984; Snow 1980).

The **Early Archaic Period (10,000–8000 B.P.)** coincided with the commencement of the Holocene epoch, ca. 10,000 years ago. The early Holocene was marked by warmer and drier conditions than the preceding Pleistocene epoch. Early Archaic peoples appear to have exploited a wider variety of plants and animals relative to their PaleoIndian antecedents (Dumont 1981; Forrest 1999; Kuehn 1998; Meltzer and Smith 1986; Nicholas 1987). Identifying Early Archaic archaeological deposits in southern New England and Rhode Island has typically relied on the recovery of distinctive bifurcate-based projectile points. Concentrations of Early Archaic bifurcate-based projectiles have been identified around the perimeters of ponds, marshes, and wooded wetlands and along major rivers such as the Connecticut (Pfeiffer 1984, 1986) and the Housatonic (Moeller 1984). Early Archaic sites are more widely distributed than PaleoIndian sites within both riverine and upland zones, but still quite rare relative to sites from the following Middle and Late Archaic periods (McBride 1984; Forrest 1999). The proximity of many Early Archaic sites to marshes and swamps suggests wetland resources were important elements in Early Archaic economies. The intensive use of large wetland basins during this period may reflect the relatively low diversity of surrounding woodland environments and low densities terrestrial game species in the early Holocene (Jones and Forrest 2003; Nicholas 1988).

The most thoroughly excavated sites from this period in Connecticut are located in the Connecticut River valley and on the Mashantucket Pequot Reservation, approximately 8 mile west-northwest of the Project. Excavations at the Sandy Hill Site (72-97) at Mashantucket have uncovered a large and stratigraphically complex Early Archaic occupations manifested as a series of semi-subterranean pit structures excavated into a sandy, south-facing hillside. Hugging the edge of the Great Cedar Swamp, a former glacial lake basin of roughly 500 acres, Sandy Hill has yielded two bifurcate point bases, neither of which can be confidently associated with the pit structures (Forrest 1999). Radiocarbon analysis of charred hazelnut and cattail fragments recovered from the well-stratified living surfaces within the pit houses, however, securely dates the between 9,100 and 8,700 B.P. (Forrest 1999; Jones and Forrest 2003). Lithic analysis of the site assemblage suggests morphological affinities with the Gulf of Maine Archaic Tradition in the form of steeply retouched quartz unifaces, small oval cores, and the marked absence of formal bifaces (Forrest 1999). This assemblage profile serves to bolster the current argument that an overemphasis on projectile points as a means to temporally identify pre-contact sites has obscured a relatively rich early Holocene record less dependent on that aspect of lithic technology (e.g. Forrest 1999; Robinson et. al. 1992).

In addition to the Sandy Hill Site, two other Early Archaic sites are located in similar environmental contexts. Site 114-93, is located in Preston immediately south of Avery Pond in an open agricultural field. Excavations recovered lithic debitage and projectile points including points diagnostic to the Early and Late Archaic periods. Early Archaic materials from this site consisted of a bifurcate point. The second site (72-52) is located in Ledyard along the eastern edge of the Cedar Swamp west of Route 214. Excavations revealed a multicomponent site containing diagnostic materials from the

Early and Middle Archaic periods as well as nineteenth-century post-contact material. As with Site 114-93, the Early Archaic material from this site consisted of a bifurcate projectile point. An isolated quartzite bifurcate projectile point was recovered from the Susquetonscut Brook Pre-Contact Site 2 (71-26) in Lebanon (Gillis et al. 2014).

During the **Middle Archaic Period (8000–5000 B.P.)**, pollen evidence indicates a trend toward a generally drier, warmer climate in this period, but with numerous oscillations in moisture regimes (e.g. McWeeney 1999). New tool classes associated with the Middle Archaic Period include grooved axes and other groundstone tools, which were likely used in woodworking tasks. The presence of net sinkers and plummets indicates the growing importance of fish in Middle Archaic subsistence (Dincauze 1976; Snow 1980). Typical projectile point types include Neville, Stark, and Merrimack varieties (Dincauze 1976; Dincauze and Mulholland 1977; Jones 1999). A preference for regionally available lithic raw materials, such as quartzite and rhyolite, is reflected in the collective archaeological site database. Multiple sites with Middle Archaic components are located within Norwich, North Stonington, Preston, and Ledyard (OSA Site Files). The majority of these sites are in Ledyard concentrated near or around Great Cedar Swamp, where years of intensive archaeological survey have been undertaken (Jones 1999). Neville projectile points have been identified from sites 72-52 and 72-249 (Rapid Infiltration Beds Site). The Rapid Infiltration Beds Site, for example, yielded a Neville-variant point along with associated quartz debitage. Other sites with Middle Archaic deposits include sites 72-34 and 72-243, which contained Stark-type materials. Neville points have also been recovered from the multicomponent Harland-Cobb Farm (104-26), Lake of Isles Boy Scout Camp (102-33) sites and Site 114-06 in Norwich, North Stonington and Preston respectively. In the case of the Harland-Cobb Farm Site, the pre-contact materials were recovered from disturbed contexts (Jones and Forrest 2004).

Late Archaic Period (5000–3000 B.P.) archaeological sites are well represented in Connecticut. The period is traditionally considered to be a time of cultural florescence, as reflected in burial ritual, inferred population increases, and long-distance exchange networks (Ritchie 1969; Snow 1980). The density of Late Archaic sites and the almost exclusive reliance on locally available lithic materials for at least some Late Archaic peoples in the region suggests increased territoriality (Dincauze 1975). The climate continued to be warm and dry with expansion economically important nut-bearing trees, particularly oaks and hickories, and well as a variety of grasses and wild grains.

Three archaeological traditions, Laurentian, Narrow Stemmed, and the Susquehanna, are identifiable in the regional archaeological record between 5000 and 3000 B.P. The Laurentian Tradition is the earliest cultural expression of the Late Archaic in the Northeast, which flourished and subsequently waned prior to the end of the period. Materials associated with Laurentian occupations include woodworking tools (hones and adzes), ground slate points and knives, ulus, simple bannerstones, and broad-bladed and side-notched Vosburg, Otter Creek, and Brewerton type projectile points (Ritchie 1980:79). Lithic materials used in Laurentian tradition tool manufacture in southeastern New England include locally or regionally available quartzites, volcanics, and some argillites, commonly available from bedrock veins and outcrops, and sometimes as riverine or glacial cobbles.

Laurentian Tradition site distributions appear to suggest an interior upland settlement focus associated with a hunter-gatherer subsistence economy. This focus on the uplands led William Ritchie to suggest an essentially interior riverine adaptation for Laurentian tradition groups (Ritchie 1980). The Bashan Lake Site, a Laurentian campsite, was identified in East Haddam (Pfieffer 1983). The site yielded hunting and fishing implements, and several hearths. The Bliss-Howard Site in Old

Lyme contained at least 21 cremation burials associated with Laurentian diagnostic points and a habitation site (Pfeiffer 1984). These sites suggest that larger Laurentian groups congregated for at least a portion of the year and may have dispersed into smaller highly-mobile family groups over the winter and spring months.

Brewerton points were recovered from the Pequot Parking NNW and Museum Parking sites. A radiocarbon date of 3730 ± 70 years B.P. was also obtained from the Museum Parking Site further substantiating a Late Archaic occupation for this site. Isolated finds of Brewerton points on hills were recovered from Site 72-178 in Ledyard on Ayer Hill and from the Silex Overlook Site (102-92) on Lantern Hill in North Stonington. These sites are suggestive of the utilization of upland locations for hunting activity. The Harland-Cobb-Lazkowsky Site (104-25) in Norwich along an unnamed stream produced quartz flakes and a quartz Brewerton point. A site near Main Brook (114-92) consisted of a campsite containing argillite, chert, and quartz debitage and a Brewerton point. The remaining Late Archaic sites in the vicinity of the project area, Sites 114-93 (Preston Plains Site), 114-94 and 114-06 are situated along Avery Pond. Site 114-94 consisted of a campsite containing Brewerton and Squibnocket points along with quartz and argillite debitage. The Preston Plains Site and Site 114-06 are multicomponent sites containing Late Archaic components. The Late Archaic component of the Preston Plains Site contained Brewerton corner-notched and Squibnocket Triangle points as well as two possible large pit features (Ives 2007a).

Diagnostic elements of Narrow Stemmed Tradition occupations include Squibnocket Stemmed, Wading River, Lamoka, and a host of small or narrow, stemmed projectile points, sometimes in association with woodworking tools, plummets, or choppers (Ritchie 1971; Dincauze 1975; McBride 1984). The database of Late Archaic Narrow Stemmed tradition archaeological sites in Connecticut is quite extensive with numerous examples recorded in upland, riverine, and coastal settings across the state. Doucette (2011) recently compared the large narrow stemmed point assemblage from the Tower Hill Road Site (104-28) in Norwich with several other assemblages from eastern Connecticut, resulting in typological clarification of previously established Narrow Stemmed point types, including Burwell (Lavin and Russel 1985), Lamoka (Ritchie 1971), Squibnocket Stemmed (Ritchie 1969), and Wading River (Ritchie 1971; Dincauze 1976).

Site 114-06 in Preston yielded artifacts diagnostic to the Late Archaic including Squibnocket, Wading River and other Narrow Stemmed varieties of projectile points, as well as other varieties of tools (Ives 2007a, 2007b). Features including possible hearth/cooking features containing debitage, fire-cracked-rock (FCR) and other lithics were also encountered at Site 114-06. No radiocarbon dates from these features are yet available, though Narrow Stemmed points were recovered from one of the features.

The earliest expression of the Susquehanna Tradition in Connecticut includes the Salmon Cove Phase dated to 3900 and 2900 B.P. (McBride 1984). The tradition terminates with the Orient Phase (ca. 2600 B.P.) overlapping with the early part of the Early Woodland Period (Ritchie 1980). Susquehanna Tradition materials are characterized by broad-bladed “points” such as Susquehanna Broad and Snook Kill types, which likely were used primarily as hafted knives, and narrower, more delicate Orient Fishtail points, as well as steatite (soapstone) vessels. Previously recorded Susquehanna or Transitional Archaic sites are located in Ledyard and Norwich. The Trolley Site (72-134) in Ledyard contained diagnostic quartzite points as well as a ground-stone tool, a basalt point tip, and quartzite, quartz and chert flakes (OSA Site Files). The Transitional Archaic component of the Museum Parking Site yielded one argillite and one quartzite Mansion Inn-like bifaces. Also in

Ledyard, The Museum Survey (72-55) and Indiantown (72-265) sites both yielded Susquehanna broadspear points. Lastly, a fragment of a possible chert Orient Fishtail point was recovered from disturbed soils at the Harland-Cobb Farm Site in Norwich (Jones and Forrest 2004).

The **Woodland Period (3000–450 B.P.)** in southern New England is characterized by an increased use of ceramic vessels and the introduction of cultigens (maize, beans, and squash). Site size and complexity increased, particularly during the Middle and Late Woodland, suggesting a trend toward increased sedentism and social complexity in eastern North America (Dragoo 1976). The Woodland Period is usually subdivided into Early, Middle, and Late periods on the basis of ceramic types and political and social developments (Lavin and Mozzi 1996; Ritchie 1969; Snow 1980).

Early Woodland Period (3000–2000 B.P.) archaeological deposits in Connecticut have traditionally been identified through the presence of Meadowood, Lagoon, and Rossville type projectile points, as well as grit-tempered, cord-marked Vinette I ceramic styles. Artifacts and features ranging in date from Middle Archaic to Late Woodland were encountered at Site 72-88, including materials associated with the Early Woodland Period. The above described Pequot Parking NNW site also contained an Early Woodland component evidenced by the recovery of an Adena point and ceramics.

Middle Woodland Period (2000–1000 B.P.) site distributions suggest a continued focus on coastal or riverine ecosystems. Interior Middle Woodland sites appear to have been preferentially located on major river bends and at confluences. Small hunting camps were contrasted with larger residential habitations or hamlets. Small “nodal” sites specialized in the circulation of trade goods imported to the region through a formalized trade network (Hecker 1995).

Artifacts diagnostic of the period include Jack’s Reef Pentagonal and Corner-Notched and Fox Creek type projectile points and rocker-stamped, dentate-stamped, and net-impressed ceramics. Middle Woodland occupations in southern New England are commonly marked by a high occurrence of exotic chert and jasper. The distribution of these lithic materials from Middle Woodland sites suggests long-distance exchange networks extended from Labrador to Pennsylvania and beyond (Dragoo 1976; Fitting 1978; Snow 1980). Through established trade networks the southern New England Native American cultures remained peripheral to, though influenced by, the prominent Hopewell culture situated in the Midwest (Kostiwi 1995).

Two Middle Woodland sites are recorded in Ledyard in the Cedar Swamp area. Along with components dating to the Late and Transitional Archaic periods, material from the Museum Parking Site yielded a radiocarbon date of 1700 ± 70 providing an early Middle Woodland dated component for the site. Site 72-88 also yielded material with a Middle Woodland chronological affiliation. A Jack’s Reef Corner-Notched point manufactured from Pennsylvania jasper was recovered from the Susquehanna Brook Pre-Contact Site 12 (53-11) in Franklin (Doucette et al. 2015).

The **Late Woodland Period (1000–450 B.P.)** is associated with an improvement in ceramic technology and production. Late Woodland Period artifact assemblages include Levanna and Madison point forms and finely made brushed, stamped, incised and cord-marked ceramics (Lavin and Mozzi 1996; Ritchie 1969; Snow 1980). Although the evidence for wide-spread adoption of maize horticulture coincides with the earliest part of the Late Woodland Period in southern New England (McBride 1984), the contribution of maize and other tropical cultigens to Late Woodland economies was likely variable across the region (Chilton 1999). The distribution of Late Woodland sites appears to be a continuation of the Middle Woodland pattern, with Late Woodland

archaeological deposits common within coastal environments, around interior freshwater ponds and wetlands, and adjacent to large tributary streams and rivers (e.g. Feder 1999).

Contact and Post-Contact Period Context

At the time of the establishment of the earliest European settlements in Connecticut (ca. 1615), land use was determined by members of the Eastern Algonquian tribes inhabiting the area, and is referred to as the **Contact Period (450–300 B.P.)**. The social organization and settlement systems of these groups had been affected by contact with Europeans, although the degree of change is difficult to assess. During the late pre-contact and contact periods (prior to 1615), tribes generally were organized in groups of small households, banding together along territorial and ethnic lines in spring and summer and dispersing in other seasons. Hunting, fishing, the gathering of wild plant foods, and maize horticulture formed the basis of subsistence, with the emphasis on particular resources varying by sub-region. Interior Native American settlements were concentrated on the floodplains of the major river valleys and their tributaries, while wetlands and upland areas were used as seasonal hunting grounds and over-wintering camps for smaller family groups. Sites of seasonal aggregation were located near agricultural lands and fishing points (McBride and Soulsby 1989). Palisaded Indian villages were situated in commanding positions in present-day Montville (Fort Shantok) and Mystic, reflecting the importance of control over primary trade routes and defensibility during this tumultuous period.

Contact Period Native American sites include forts such as the Fort Shantok National Historic Landmark, occupied by Uncas and his descendants, and Monhantic Fort at Mashantucket, a contributing resource to the National Historic Landmark-listed Mashantucket Pequot Archaeological District. In Norwich, a small rise located at the Three Rivers Community College is believed by the Mohegan Tribal Nation to be the location from which Uncas instructed his followers during the 1643 battle with the Narragansetts (Harper et al. 2006). Contact period sites located within the Mashantucket Pequot Indian Reservation and elsewhere in Ledyard include campsites in rockshelters, homesteads and cemeteries (McBride 1990). The Morgan Pond Rockshelter Site, for example, contained lithics, bone fragments, shell, and pottery resembling Hackney Pond Phase vessels. This type of pottery is associated with the terminal Late Woodland and possibly contact periods. Site 72-31, a campsite within a rockshelter, also contained ceramic types associated with late sixteenth and seventeenth century sites elsewhere (McBride 1990). Another campsite, Site 72-34a consists of a seasonal camp containing lithic artifacts, European artifacts such as musket balls and glass beads, and post molds surrounding a hearth (McBride 1990). Site 72-62, associated through written sources with members of the Pequot community, yielded cultural materials including older delft ceramics and evidence of orchards and gardens within stone-walled enclosures (Grumet 1995). Site 72-200 consists of a contact period burial ground. Grave goods included brass beads, arm, wrist and head bands, textiles of Euro-American origin, scissors, bottles and other seventeenth-century objects. A number of these sites are located within the Mashantucket Pequot Reservation Archaeological District.

English colonial settlement of the Connecticut coast continued after the Pequot War (1636 to 1638). Having gained control of most coastal areas, the English incrementally settled the interior, upriver sections of southeastern Connecticut; these included lands within the Route 2 / 2A / 32 area. In 1650, trading posts were established at Mohegan (Norwich) and at Poquetanuck Cove in North Groton (Ledyard), across the Thames River from the Mohegan stronghold at Fort Shantok. The settlement of Stonington began in 1652. In the following year, the Poquetanuck Grants were apportioned in

Ledyard and a saw mill was in operation on the Oxoboxo River (Montville). English colonists began settling the area of North Stonington in the mid-seventeenth century. As early as 1649, the Colony of Connecticut granted settlement in the areas now known as Stonington and North Stonington. The first documented settlers in North Stonington (then called Southerton) were Ezekial Main and Jeremiah Burch. Settlement remained slow in the North Stonington area until the early eighteenth century (Youngken and Lutke 1997:9).

Many of these developments occurred prior to the formation of the Connecticut Colony itself. This occurred in 1662, with the granting of a charter by King Charles II. Prior to that time, issues of land title and township formation had been regulated by a General Court, guided by the Fundamental Orders of Connecticut (1639) and the 1650 Code. The establishment of the chartered Connecticut Colony led to the consolidation of New Haven and Saybrook with the greater colony. Stonington, North Stonington, and Westerly, formerly claimed by Massachusetts, also were embraced. By 1667, all the land in the project area was located within one of the newly founded Connecticut townships (Crofut 1937).

In the **Colonial Period (1675 – 1775)** because farming was pivotal to the colonial economy, local geography dictated the social and economic development of colonial townships within the North Stonington area and in its vicinity. In southeastern Connecticut in general, the first English settlements were oriented around suitable agricultural land, waterways, natural harbors, and Long Island Sound. Among the towns in the general area, Norwich, Preston and Montville saw the earliest English settlement, being located on the Thames River. Other towns, including Ledyard and North Stonington, were more remote from the primary watercourses and seaports, and contained less arable land. In general, they were not extensively settled until after the American Revolution.

The economy of the project area was based primarily upon agriculture during the Colonial Period. On large subsistence family farms, grain crops were harvested from newly cleared fields, and livestock grazed in rocky areas less suitable for farming. While the bulk of agricultural produce had been consumed locally prior to 1675, improvements in transportation routes afterward allowed farmers to move products to the growing trade centers of Norwich and New London (Spencer 1993). Mixed husbandry continued throughout the period. Some specialization did occur, however, especially where land was better suited to grazing (Spencer 1993:13, 14).

Ancient Indian trails became colonial cart paths, and with the establishment of new townships, they became main roads, linking farmsteads and mills to village centers. Throughout the period, new thoroughfares were laid out and maintained through taxes on proprietors.

As township populations increased, and generations of descendants subdivided the lots of the original proprietors, the average acreage available to each English family decreased by 1700. Consequently, agricultural activity shifted from grain production to livestock and dairy production. The preparation of goods for the West Indies trade eventually surpassed grain production for local use (Herzan 1997).

Often, younger settlers gravitated to outlying sections of the large townships in the area. Poor roads and increased distances from town centers made it difficult for some to attend Sabbath services. The General Court frequently received petitions calling for the formation of new ecclesiastical societies and local ministries. These satellite villages often evolved into new townships in their own right. The site of the present village of North Stonington was acquired by Samuel Richardson in 1682. In 1702, Richardson sold 30 acres, including what is now the center of the village to Nathaniel Ayres.

A grist mill is mentioned in the deed recording this transaction. The mill and eastern portion of the village passed through several owners until Nathan Avery purchased it in 1766. The western portion of the village was bought by Captain John Swan in 1756 and 1757, and later sold to Elias Hewitt. Following Nathan Avery's death, his sons Luther and William operated the mills and the location was known as Avery's Mills by the late eighteenth century (Plummer 1981:8/1).

In 1720, Stonington divided into two ecclesiastical societies, called the North and South Societies of Stonington (Stone 1986:6). The North Society of Stonington built its first meeting house in 1723 at Meeting House Corner in the northern portion of Stonington. The Town of Stonington first proposed to politically split from the northern portion of town as early as 1717; a border was not agreed upon until 1807 when North Stonington was incorporated (Youngken and Lutke 1997:9). Prior to the industrialization that occurred in North Stonington in the early-to-mid-nineteenth century, most of the town's built environment consisted of scattered farms. The John Randall House (NR) on Route 2 is the only building in the town that is believed to have seventeenth-century fabric, although most of the structure was built in the early eighteenth century (Youngken and Lutke 1997:13). North Stonington began to experience increased residential and civic development throughout the period. Throughout the late eighteenth century lots within the village were sold and the village soon developed its present configuration.

By the time of the American Revolution, the English people inhabiting the townships within the area had established a rural, agrarian way of life. They diversified their economy through shipbuilding and simple industries. Through improved transportation and communication routes, they were linked to the more cosmopolitan trade centers of the Connecticut and Rhode Island coastline.

Based upon a comprehensive survey of North Stonington in 1997 (Youngken and Lutke 1997), it appears that a number of eighteenth-century homes are extant within the town. Several eighteenth-century residences exist within the area, including 189 Norwich Westerly Road and 684 Norwich Westerly Road in North Stonington. Both are good representative examples of the Georgian style as applied to residential buildings.

By the **Federal Period (1775 - 1830)**, the number of new towns in eastern Connecticut proliferated after the American Revolution. North Stonington was incorporated in 1806 out of Stonington. Improvements to roads was slow throughout the eighteenth century. In 1818, the Groton and Stonington Turnpike Company built a road in North Stonington (Crofut 1937). By 1830, a network of turnpikes, ferry crossings and steamboat routes permitted comparatively speedy travel between the regional centers of New York, New Haven, Hartford, New London, Providence, and Boston (Spencer 1993).

In 1814, large mills for the production of woolen goods were built by the Mystic Manufacturing Company in nearby Stonington (Crofut 1937). The other towns maintained their agricultural orientation, generally foregoing the industrialization seen in towns to the north, even as they realized the benefits of proximity to the trade centers of Norwich and New London. The economy of the project area continued to be oriented around mixed husbandry. Marshes and tidal river peripheries were sources of fish, peat, and seaweed used for fertilizer, and marsh grasses provided feed for livestock (Herzan 1997).

Descendants of the local Native American tribes continued to occupy vestiges of their traditional homelands throughout the nineteenth century. Pequot and Mohegan tribal members were subject to

the deprivations of the landless underclass with which they were associated. Many left the area entirely. Those who remained maintained social organizations and aspects of Native culture even while participating in the economic system of white New England society. The Mashantucket Pequot and the Mohegans gained federal recognition as tribal nations in the late twentieth century.

A number of Federal-period homes exist within North Stonington, especially at North Stonington Village, which lies at the south-central portion of town, north of present-day Route 2. Buildings from this period exhibit modest classical details and proportions of the Federal period. Included within this group are 564 Norwich Westerly Road and 576 Norwich Westerly Road in North Stonington.

By the **Industrial Period (1830 - 1915)**, the agricultural economy within the area was in decline. Construction of inter-regional railroads presented Connecticut farmers with stiff competition from agricultural producers to the west, and many farmers switched over to dairy and fruit production and market gardening (Herzan 1997). Transportation was especially important in moving agricultural products to market and distributing goods to outlying farmsteads. The railroads also affected aspects of the maritime industry by providing a more efficient means of shipping goods. Many younger people moved westward out of the region, or sought employment in the emerging mill towns of northeastern Connecticut.

Industry brought pervasive change to the region. While they had often proved unsuitable for farming, the rocky hinterlands of eastern Connecticut contained numerous small rivers and watercourses that were harnessed by the new textile mills that nineteenth-century technological innovations had brought into being. Modest factories were constructed in almost every town in the region, dedicated to the production of a wide variety of goods. North Stonington Village, containing the sources of the Mystic and Shunock rivers and the western branches of the Ashaway River, provided locations for various small factories. A number of industrial concerns soon began operating along the Shunock River, which was developed with both an upper and lower canal system. The village then became known as Milltown. Concurrent with the development of North Stonington Village as a manufacturing center, the village prospered as a mercantile center. Customers of the many shops were drawn from outlying farms in North Stonington and from nearby towns such as Stonington, Preston, and Westerly, Rhode Island (Plummer 1981:8/1).

Industrial development, shipbuilding and stone quarrying led to a dramatic population increase in southeastern Connecticut. This was most notable in New London and Norwich, as waves of European immigrants found employment in local industries and established residence in the urban centers. North Stonington's nineteenth-century population peaked in 1830, when a recorded 2,840 individuals were enumerated in the U.S. Census (Youngken and Lutke 1997:15). After 1830, the town's population decreased significantly despite the town's expanded industrial activity throughout the century. This decrease is probably due to the availability of richer farmland in the western United States and the growth of steam-powered manufacturing in areas with access to coal (Plummer 1981:2). By 1850, North Stonington had a total population of 1,936. Concentrated areas of settlement had begun to appear in North Stonington especially in three active industrial villages in the town: Clark's Falls, Laurel Glen, and North Stonington Village (Youngken and Lutke 1997:15). Along with increased residential development in North Stonington Village, commercial growth continued. A number of stores were constructed near the village center, primarily along Main Street (Plummer 1981). Industrial activity also increased, especially along the watercourse of the Shunock River. Industrial pursuits along the Shunock in North Stonington included both a grist and fulling mill, a

woolen mill, a nail shop, a triphammer works, a dyehouse, and several cabinetmakers' shops which were powered by water (Plummer 1981:7/3).

By 1890, the population of North Stonington had reached 1,463, only to decline over the next two decades to 1,100 in 1910. This decline can be partially attributed to the availability of richer farmland to the west, which drew people away, and the closing of the town's major woolen factory during the 1880s (Plummer 1981:8/2).

Although industry in North Stonington Village declined in the early twentieth century, the completion of the Norwich-Westerly trolley line along the southern boundary of the village in 1906 helped revive the village. The trolley line also influenced the community to abandon the name Milltown in favor of the name of the trolley stop, North Stonington Village (Stone 1986:6). A small increase in population in the 1920s and the construction of a number of homes in this period, is indicative of the moderate success of the trolley route (Plummer 1981:8/2). The construction of the state highway (Route 2) in 1919 helped to counterbalance the trolley line abandonment in 1921.

Architectural resources from the period exhibit nineteenth-century trends in architectural taste, including the Greek Revival, Italianate, and Queen Anne styles. The influence of these styles can be seen in resources within the Route 2/ 2A/ 32 corridor. Modest examples of each can be found in North Stonington, including 569 Norwich Westerly Road (North Stonington), 150 Norwich Westerly Road (North Stonington), and 125 Main Street (North Stonington).

Results of the Background Research

PAL conducted a review of the site files and survey reports maintained by the Office of the State Archaeologist in Storrs. The file review included both archaeological resources and historic above-ground resources that are listed or evaluated as eligible for listing in the State or National Registers and surveyed properties that have not been evaluated for registration. Relevant cultural resource management (CRM) reports and town histories and historic maps held at the Thomas J. Dodd Research Center at the University of Connecticut were reviewed. Copies of pertinent documentation for properties identified were obtained.

The North Stonington Village Historic District, listed on the State Register of Historic Places, is located approximately 3-miles west of the project area. The district consists of approximately 95 above-ground structures that reflect a "well-preserved example of an early 19th century mill village once common in Southern New England" (CHC# 102-1). The former Samuel Merritt (Senior) House was located on the abutting parcel to the southeast of the project area in 1854 (Figure 2). The same property was owned by Samuel's son Isaac P. Merritt in 1868 and was listed as "Spring Farm" on the Beers New London County Atlas (Figure 3). Spring Farm may be a reference to the small stream drainage within the Project leading towards the former farm property to the southeast. No houses or other buildings are depicted within project limits. The Samuel Merritt House is not depicted on the USGS 1943 Ashaway quadrangle map (Figure 4), suggesting it had been razed by the early 20th century. The wetlands in the western section of the property and extending to the abutting parcels appear to have been cultivated for cranberries at this time, as several ditched sections within the marsh are depicted on the USGS map, and a roadway is shown traversing the southwestern corner of the Project where the gravel pit is now located.

No buildings or other structures are visible in a 1941 aerial survey showing the project area (Figure 5). Only the western fringe and the southeastern corner of the subject property were open land in the middle of the twentieth century; these sections appear to have been agricultural fields associated with the abutting properties. With the exception of a new farm pond and expansion of the agricultural fields in the western section of the project area, little changed between 1941 and 1957 (Figure 6). Interstate Route 95 was constructed south of the Project in 1964, and the section of Boom Bridge Road southeast of the project area was realigned to the west for a new overpass and approach. These changes and the first stages of gravel extraction on the property are visible in a 1970 aerial survey of the area (Figure 7). At a finer scale, a new house is visible near the former Samuel Merritt House location on the abutting parcel to the southeast of the Project and a new farm pond is visible within the project area southwest of the new house. Gravel mining had expanded significantly by 1980, encompassing much of the western half of the project area, and the former farm fields in the southeastern and western section were largely reforested or graveled out (Figure 8).

The archaeological sensitivity of the project area is defined by the presence of favorable environmental conditions and the presence of known archaeological sites in similar environmental settings. Well-drained soils near freshwater resources, particularly marshes, river terraces, and stream confluences were preferred locations for Native American settlements. Although there are no pre-contact sites within the project area, there are six archaeological sites located within a 1-mile radius of the project area focused around the Pawcatuck River flood plains. Archaeological sites in this southeastern Connecticut have been identified in similar topographic and environmental settings as the project area, particularly on the Mashantucket Pequot tribal trust lands, where intensive archaeological surveys have been conducted since the early 1990's.

Table 1. Archaeological Sites Recorded within One Mile of the Proposed North Stonington Solar Project Area.

CHC #	Site Name	Town	Site Type	Period	NR Eligibility
102-5	Beriatt Lewis Farm	North Stonington	Unknown	Unknown	Unevaluated
102-6	Beriatt Lewis Farm	North Stonington	Unknown	Unknown	Unevaluated
102-7	Beriatt Lewis Farm	North Stonington	Unknown	Unknown	Unevaluated
102-8	Lewis Farm	North Stonington	Unknown	Unknown	Unevaluated
102-9	Moran Farm	North Stonington	Camp Site	Unknown	Unevaluated
102-10	Arnold	North Stonington	Camp Site	Unknown	Unevaluated

The majority of the pre-contact sites located within a two-mile radius of the project area are located around the Pawcatuck and Shunock Rivers, Lewis Pond, and associated wetlands. The project area is adjacent to wetlands associated with a tributary of the Pawcatuck River to the south and Bell Cedar Swamp to the north. Sites within a 1-mile radius of the project area were identified by surface collection and limited site specific information. A Phase I Reconnaissance and Phase II Intensive survey was conducted approximately 1.5 miles west of the project in 2002. The survey identified two pre-contact archaeological sites (102-97, 102-98), both low density lithic scatters (Forrest et al. 2002). Three archaeological sites (102-2, 102-3, and 102-4) were identified approximately 1.5-miles northwest of the project area along the Shunock River, which were surface collected with limited site specific information. Also 1.5-miles away, north along Spaulding Pond, 102-16, a pre-contact site was identified by surface collection with limited information.

Along the Rhode Island state border, three pre-contact and two post-contact sites have been recorded at least 1.5 miles away from the project area. RI-205 was identified as an unknown pre-contact site from surface collection. RI-226, a Late Archaic to Woodland Period rockshelter, yielded diagnostic tools during an archaeological survey (Morenson 1997). Find Spot #3 (RI-2039), a quartz lithic scatter, was identified by an archaeological survey in 1992 (Rainey 1993). RI-303 consists of an 18th century saw mill that was identified from documentary research only. Old Westerly town center (RI-305), a 17th and 18th centuries habitation site, has not been surveyed.

Although very limited professional surveys have been conducted along the margins of Bell Cedar Swamp to the north-northwest of the Project, Pre-Contact Period land use patterns in the surrounding area suggest this setting would likely have been a focal area of settlement for people living in the area, particularly during the PaleoIndian through Middle Archaic periods.

Post-contact land use within or near the Project included several farmsteads to the southeast and west of the proposed development. Former farm fields once extended across portions of the Project and are still marked by stone walls. Although cranberries were likely cultivated in the marshes to the west of the Project, and perhaps within the southwestern sections of the subject property, extensive gravel mining in these sections has substantially altered the historic landscape and drainage patterns. Historic aerial surveys suggested it was highly unlikely intact structures or agricultural features would survive in these areas.

PAL also reviewed the North Stonington Plan of Conservation and Development (2013) to identify any other potentially significant historic resources or land uses within the project limits. The PCOD includes mapping of reported historic cemeteries identified within the town boundaries. One of these cemeteries is depicted near the former gravel pit in the western section of the Project (Figure 9). The small burial ground was documented in the 1930's as the Allen Cemetery (#96) in the Charles R. Hale Collection of Connecticut Cemetery Inscriptions as part of a Works Progress Administration (WPA) effort (Hale 1935). At the time of the WPA survey, the burial ground retained three carved headstones:

Allen, H. Amos – died January 12, 1831, age 35
Allen, Jonathan, died March 7, 1839, age 85
Allen, Anna, wife of Jonathan, died August 28, 1833, age 77.

Ten additional graves marked with fieldstones were also noted in Hale Collection.

Additional descriptions of the Allen Cemetery, also known as the “Old Allen Burying Ground”, were included in an Allen family history published in approximately 1942:

To reach this old cemetery one must stop on the present Route 84, the main road leading from the traffic circle on the Westerly-Norwich road, to Hopkinton City, near the Charles Brown farm. The one must strike across the field to the south of the highway, in a direction almost south, but bearing a trifle to the east, until a stone wall is reached. After going over this wall and continuing for approximately 100 yards, it is necessary to then to turn sharply to the left towards that woods that lie along the eastern hillside slope. By beating about in the woods, one may find the old gravestones, around which the trees have grown to the diameter of over a foot, overturning and tipping some of the slabs, though most are fieldstones.

Here lie buried JONATHAN ALLIN⁴ and his wife RACHEL SWEET RATHBUN ALLIN, and also JONATHAN ALLIN⁵ and his wife ANNA HALL ALLIN. Some of the children are here, as well. According to Horace Cory, who was a descendant of JOHN WRIGHT and his wife NANCY ALLEN WRIGHT, many of the Wright family lie here too.

...

Altogether, there are about a dozen or more unmarked graves, and seven or eight marked by fieldstones. From the fact that a stone for Ethan Allen was found in a wall at some distance from this cemetery, it seems probably that, at one time, several other graves were marked with good tombstones, inscribed. (Allen 1942: 217).

Results of the Walkover Survey

The walkover survey of the project area was conducted to assess the integrity of the ground surface and to collect data on current environmental settings and, together with the background research, to determine archaeological sensitivity. Although Native American sites dating to the Pre-Contact and early Contact periods in New England are most often found through subsurface testing, it is not unusual to find artifact scatters exposed on the surface because of cultural or natural processes, including road use, grading, construction activity, and erosion. Post-contact sites types that might be visible include cellar holes (depressions), wells, animal pens, agricultural landscape features, and trash deposits.

The eastern and northern portions of the project area is a mix of deciduous trees and conifers, with a mostly open understory (Figure 10). The ground surface is generally stony, with a variable density of small to medium sized boulders visible above the leaf litter. Dense brush and brambles are present in the southeastern sections. The eastern half of the Project is traversed by several dirt trails which appear to be used for ATVs and other vehicles. Stone walls correlating to the former farm fields visible on historical aerial surveys are present in many sections. Several 2-x-2-meter depressions of apparently recent origins were identified in the east-central portion of the project area near intact stonewall segments. The depressions were approximately 40 cm in depth with flat bottoms and sloped, irregular margins. The only vegetation growing within the depressions were small shrubs or immature trees (less than 3 inches in diameter), suggesting they are likely less than twenty years in age. A cart path associated with a 20th century home along the eastern edge of the project area was observed, which parallels a shallow drainage. A cobblestone causeway crosses the stream and adjacent wetlands immediately north of a small stone wall. A field stone and concrete dam associated with the farm pond first visible on the 1970 aerial survey (see Figure 7) was identified south of the small drainage; creating a small pond just southwest of the house on the abutting property (Figure 11). The dam had no water control structures, just a simple narrow overflow near the center (Figure 12). No building foundations, raceways, or other potential historic industrial features were identified near the dam and it appears unlikely the small spring-fed stream would have provided sufficient discharge to power a mill of any kind. The concrete on the dam is of coarse aggregate and appeared consistent with early to middle twentieth century construction.

Large areas of modern disturbance were noted within the project area from gravel pits along the southern, western, and central portions of the project area. This disturbance includes dug out pits, steeply sloped spoil piles/berms, and extensive wetlands within the excavated sections (Figures 13 to

15). An apparently intact section of woodland is present to the northeast of the gravel pit and is vegetated in immature White Pine and mixed hardwoods. Topography in the intact sections is generally level to gently rolling with variable densities of surficial stone visible at the ground surface (Figures 16 and 17).

PAL confirmed the location of the “Allen Cemetery” in the north-central section of the Project Area. At the time of the walkover survey, one carved headstone and a series of small, undressed fieldstone headstones and footstones were visible within the burial ground (Figures 18 to 22). The carved stone is the headstone of Amos H. Allen (d. 1831), previously documented in the 1930’s. No evidence of the Jonathan Allen or Anna Allen gravemarkers recorded in the Hale Collection and the Allen family history was observed by PAL. All visible gravemarkers are contained within an area measuring approximately 24 meters (80 ft) along the north-south axis and between 17 and 18 meters (55 and 60 ft) on the east-west axis. The western half of the burial ground is enclosed by a low and partially tumbled stonewall. No boundary wall or remnant fence was visible along the assumed eastern half of cemetery. The gravemarkers appeared to be organized in at least two north-south oriented rows with individual graves oriented east-west. PAL carefully inspected the ground surfaces within 30 meters (100 ft) of all identified gravemarkers. No outlying gravemarkers suggesting a larger cemetery footprint were observed; however the use of undressed fieldstone for both headstones and footstones and the small size of the visible markers suggests the potential for additional graves to be present along the observed cemetery limits. The risk of unmarked burials appears greatest along the eastern margins where no walls or fencing remain to demarcate the boundary.

Results of the Archaeological Sensitivity Assessment

The North Stonington Solar project area encompasses or is near several environmental settings that would have been favorable for pre-contact settlements or encampments. The once extensive wetlands present within and to the west of the Project would have provided both edible and medicinal plants, as well as supported a variety of small to medium-sized game species. These smaller marshes were also located approximately midway between the Pawcatuck River to the south and Bell Cedar Swamp to the north and would have been easily accessible to people living near both of the most favorable environmental settings in the area. Archaeological surveys of elevated, well-drained knolls and ridges overlooking similar wetlands in southeastern Connecticut have resulted in the identification of numerous Archaic and Woodland sites. It is expected that intact, level, and well-drained portions of the project area could contain assemblages of lithic debitage and stone tools associated with Native American occupations similar to those previously identified along tributaries and wetlands of the Pawcatuck and Shunock River drainages.

Archaeological evidence of intensive exploitation of the area by Pre-Contact Period Native American groups could include subsistence-related features (hearths, food storage/disposal pits, living areas including post molds), lithic workshops, and diagnostic chipped and ground stone tool assemblages. Large sites occupied for weeks or months at a time are more likely to have been located along the nearby banks of the Pawcatuck River, Long Island shoreline, or closer to Bell Cedar Swamp, which, due to their scale and nature, would have provided more reliable and diverse resources. Post-contact sensitivity is generally moderate to low. Historic uses of the property appear to have been largely confined to agricultural fields. No houses or other buildings are depicted within the proposed development on historic maps and aerial photographs reviewed by PAL and no foundations or other evidence of unrecorded buildings were identified during the pedestrian survey. The small farm pond dam located in the southeastern section of the project area does not appear eligible for listing in the

National or State Registers of Historic Places. The dam is of simple construction and appears to date to the early or middle twentieth century; it does not appear to have served as a power source, as no water controls, such as gates, penstocks, or raceways are present. The remains of barns and other agrarian structures may be present within the former fields.

The Allen Cemetery and the areas within approximately 30 meters of the mapped burial ground boundaries are sensitive. Although both the documentation of the burial ground in the early 20th century and the results of PAL's walkover survey suggest the cemetery is small and likely contains approximately 16 to 24 burials, there is a risk unmarked graves may be present outside the inferred boundaries. Any human remains that may be affected by the proposed development would require consultation with both the Connecticut State Archaeologist and SHPO under Connecticut General Statutes Section 10-388. PAL understands that no ground disturbing activities are proposed in this area and therefore no impacts to the cemetery are anticipated.

Areas assessed as having high archaeological sensitivity include areas immediately adjacent to perennial and intermittent streams and wetlands with well drained intact soils. These areas encompass approximately 25 acres in aggregate (Figure 23). Areas assessed as having moderate archaeological sensitivity include areas that are further from water but are well drained and undisturbed or are near water but include very rocky soils. These areas encompass approximately 32 acres in aggregate. Areas assessed as low archaeological sensitivity primarily includes wetlands with a portion that has been severely impacted by gravel mining within the western, southern and central portions of the project area. In total, areas of low sensitivity encompass approximately 70 acres.

Recommendations

Based on the results of the sensitivity assessment, PAL recommends consultation with the CT SHPO regarding further efforts to identify archaeological resources that may be affected by the proposed development. Subsurface testing may be warranted in areas of moderate to high archaeological sensitivity. If shallow ground disturbance (less than 30 cm maximum depth below existing grade) is anticipated during project construction within a 30 meter buffer of the mapped cemetery boundary, PAL recommends archaeological monitoring of these activities to ensure no unmarked burials are disturbed. If ground disturbance within the buffer will exceed 30 cm in maximum depth, PAL recommends the cemetery boundaries be delineated through controlled topsoil stripping under the direction of a professional archaeologist prior to project construction. Any unmarked graves which may be identified through machine-assisted stripping should be avoided.

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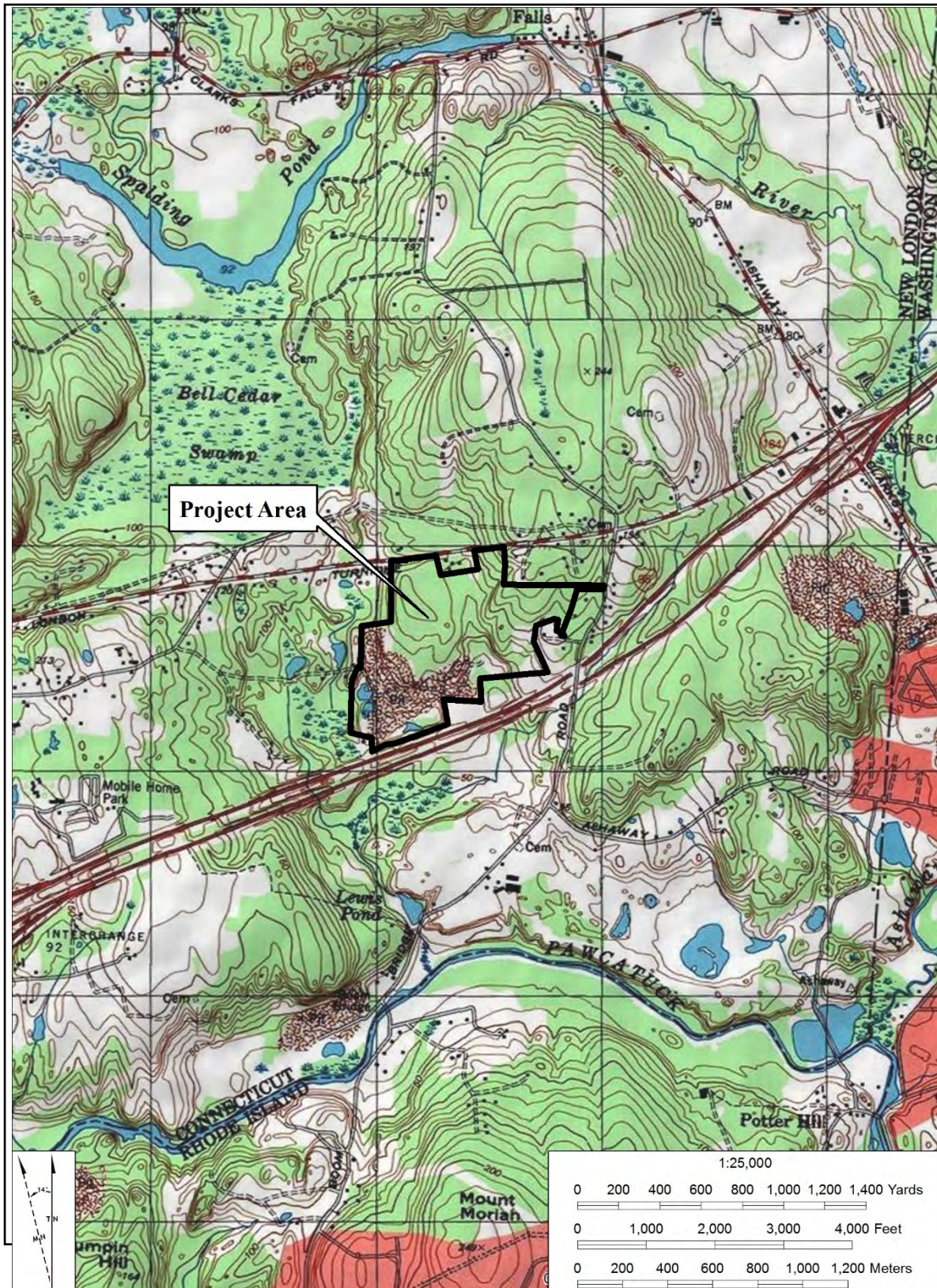


Figure 1. Location of the North Stonington Solar Project on the Ashaway USGS topographic quadrangle, 7.5 minute series.

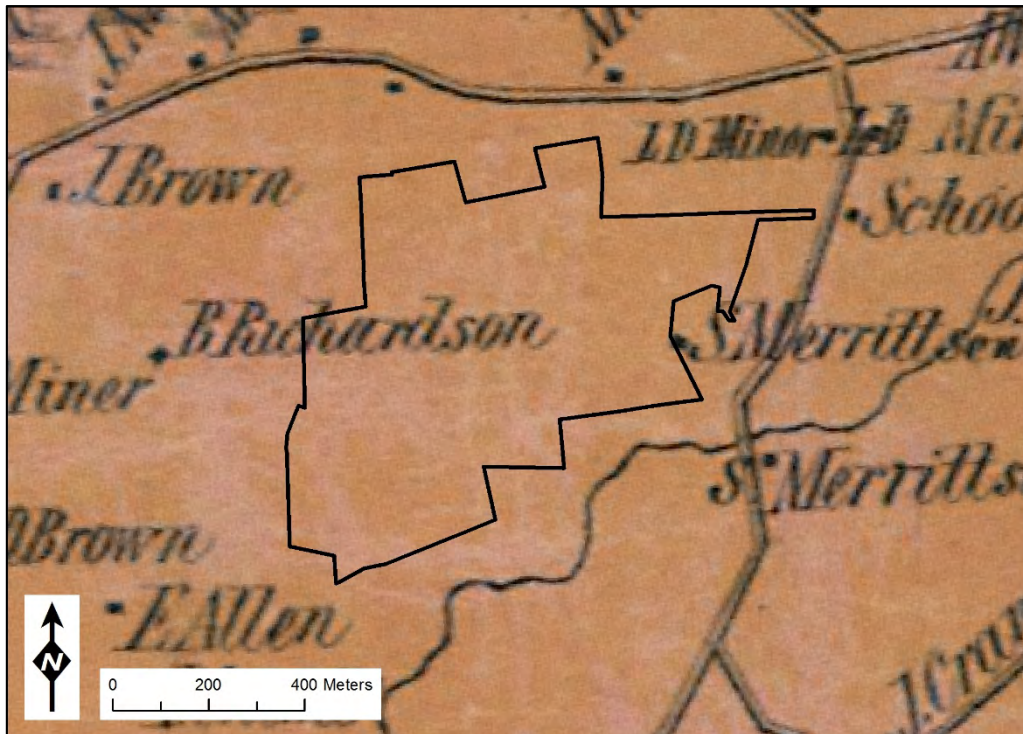


Figure 2. Approximate Location of the North Stonington Solar Project on the 1854 Baker Map of New London County.

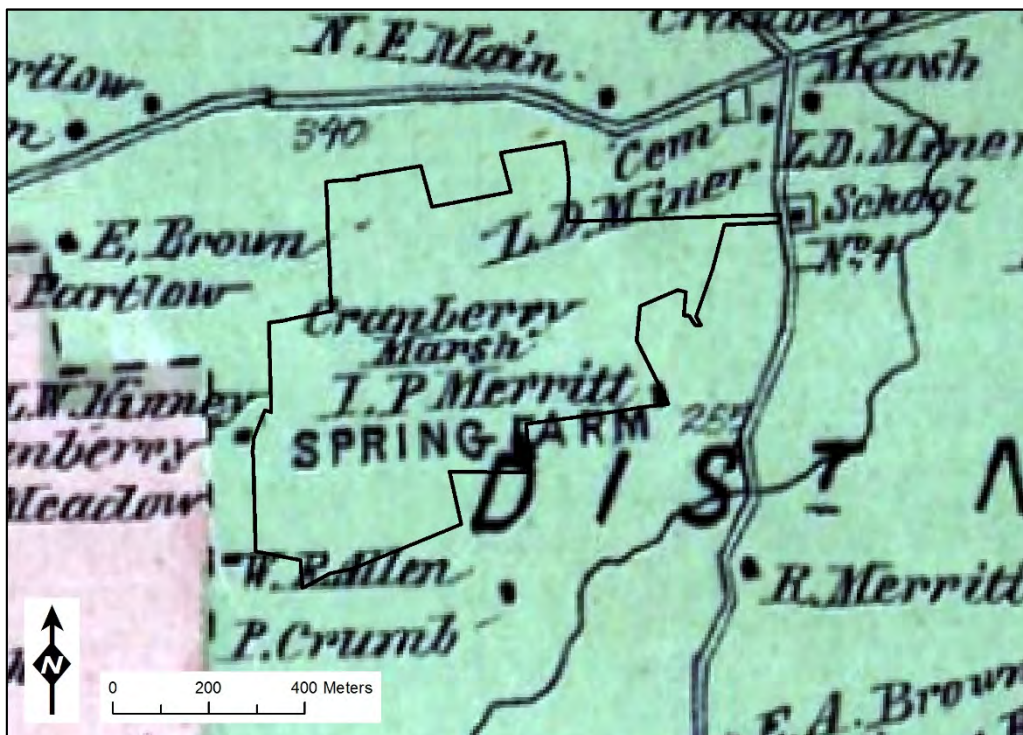


Figure 3. Approximate location of the North Stonington Solar Project on the 1868 Beers Atlas of New London County.

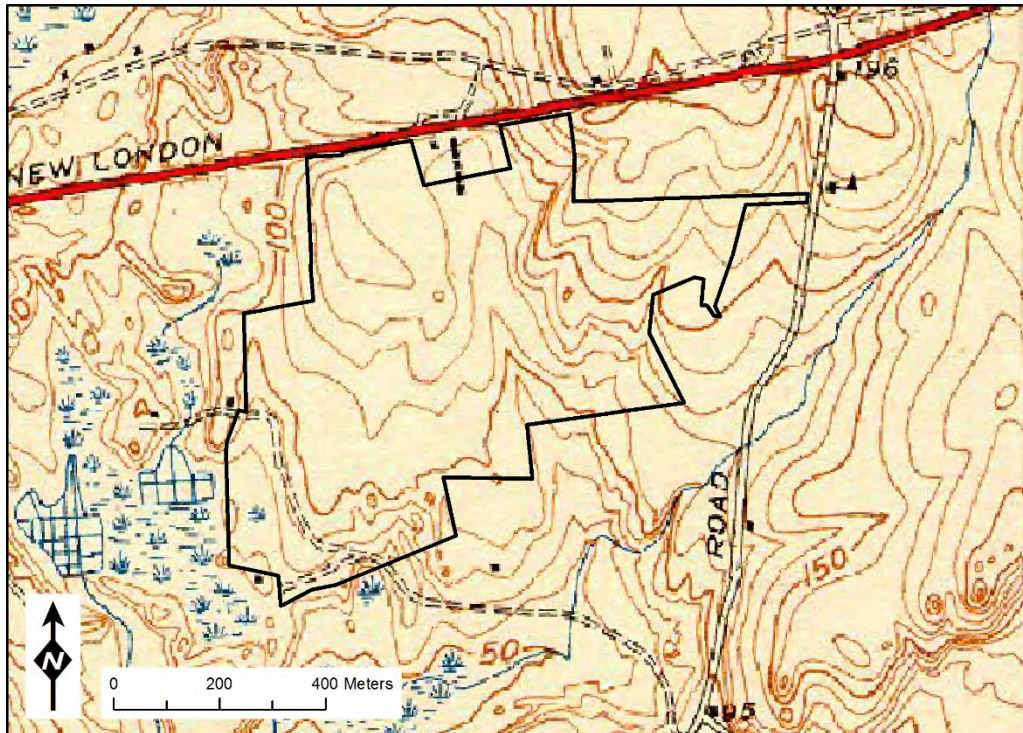


Figure 4. Approximate location of the North Stonington Solar Project on 1943 USGS Ashaway 7.5-Minute Quadrangle.

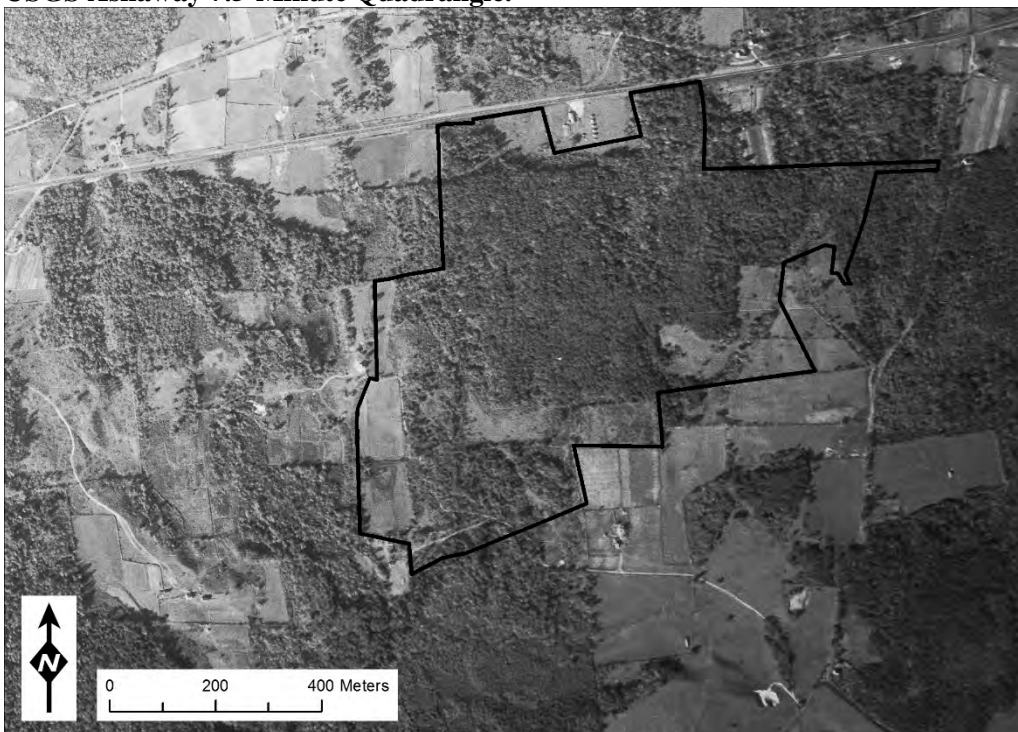


Figure 5. Approximate location of the North Stonington Solar Project on 1941 Aerial Survey.

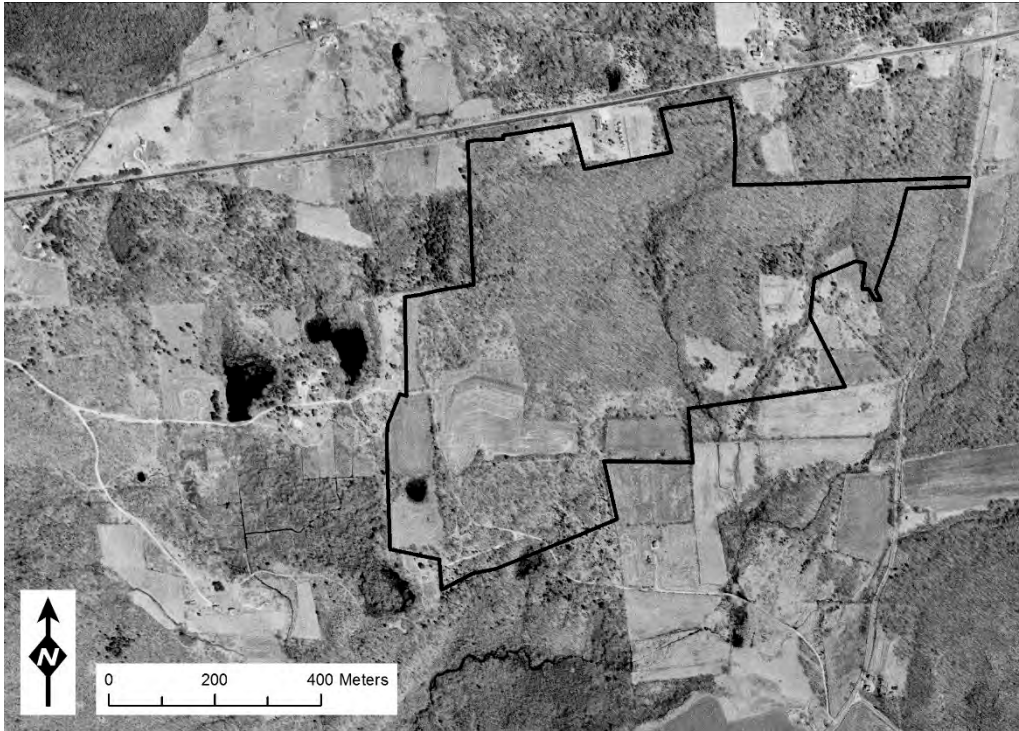


Figure 6. Approximate location of the North Stonington Solar Project on 1957 Aerial Survey.

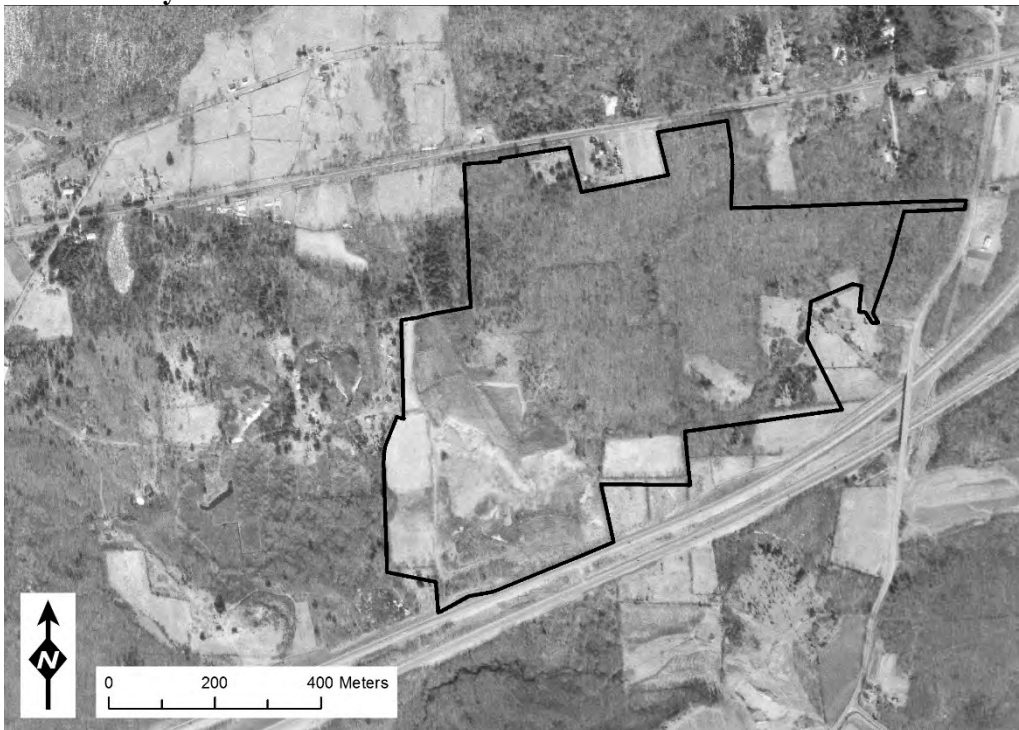


Figure 7. Approximate location of the North Stonington Solar Project on 1970 Aerial Survey.



Figure 8. Approximate location of the North Stonington Solar Project on 1980 Aerial Survey.

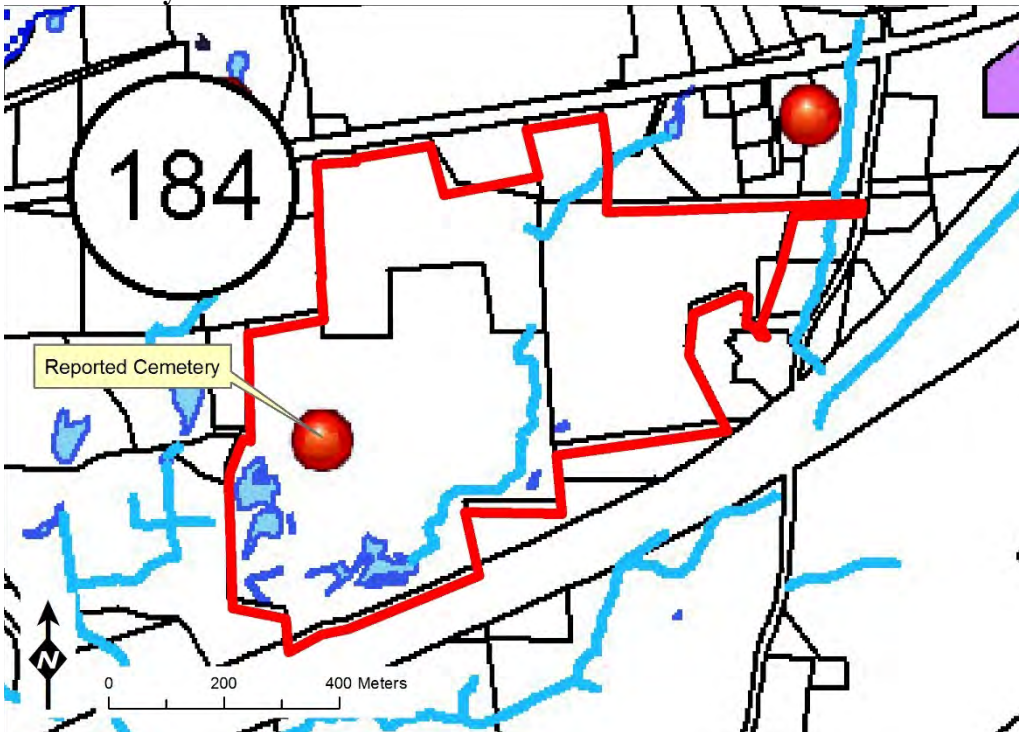


Figure 9. Approximate location of the North Stonington Solar Project shown on detail from North Stonington Plan of Conservation and Development Map.



Figure 10. Open woodlands on lodgment till in northeastern section of project area, looking towards Boom Bridge Road.



Figure 11. Small farm pond dam in southeastern section, looking east to abutting property.



Figure 12: Dam overflow, looking southeast



Figure 13: Roadway within former gravel pit in south-central section; looking southwest.



Figure 14. Northern margins of former gravel pit in north-west section; looking southwest towards former cranberry bogs.



Figure 15. Bulldozer push-piles along northern margin of former gravel pit in western section; looking north.



Figure 16. Former farm road traversing intact area northeast of gravel pit; looking northeast.



Figure 17. Interior section of intact area northeast of gravel pit; looking southwest. Former gravel pit in background on left.



Figure 18. Amos H. Allen headstone, Allen Cemetery. View to the east.



Figure 19. Western section of Allen Cemetery, view to the south, looking into burial ground from the north. Low stone wall encloses approximately half of the visible gravemarkers.



Figure 20. Examples of undressed fieldstone gravemarkers in central section of Allen Cemetery. View to the east. Yellow arrows indicate standing fieldstone headstones or footstones. Largest stone to the right of the frame is approximately 35 cm (14 in) in width.

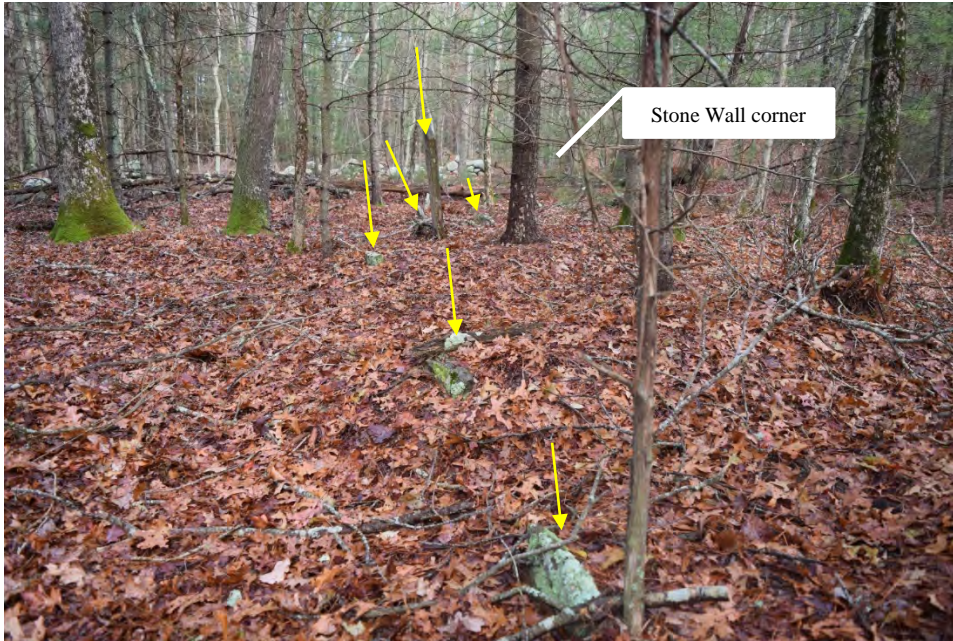


Figure 21. North-South row of gravemarkers within Allen Cemetery. View to the north. Large standing stone is the Amos H. Allen headstone.



Figure 22. Possible Headstone/Footstone pair, Allen Cemetery. Stone wall corresponds to the inferred north boundary of the cemetery. View east.

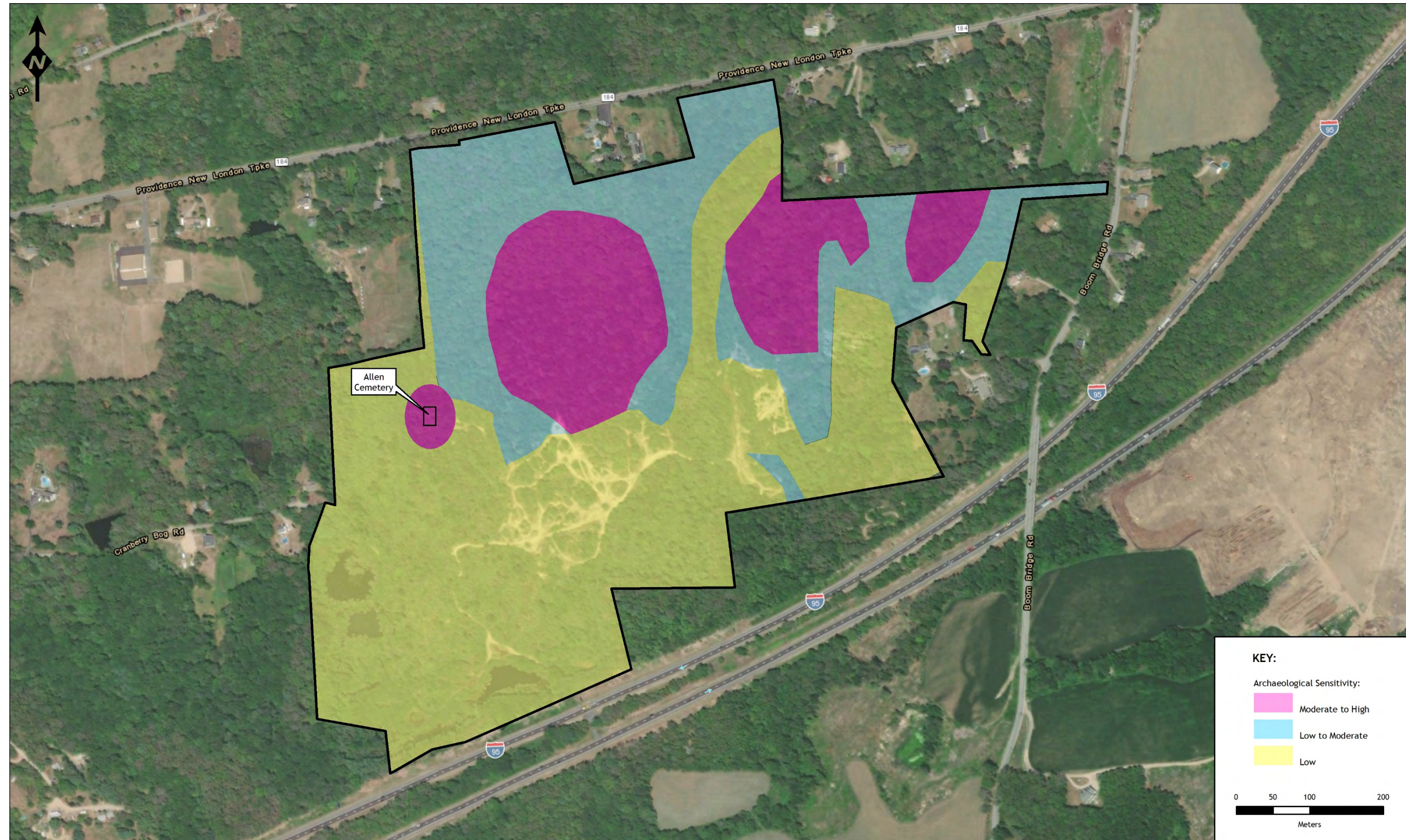


Figure 23. North Stonington Solar Project Area with PAL's Sensitivity Assessment.