



Management Memorandum Delano Trust Property-10 State Road Tisbury, Massachusetts

Intensive Archaeological Survey

September 2010

PAL No. 2465

Submitted to:

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PAL has completed the fieldwork portion of an intensive (locational) archaeological survey of the proposed new construction project area at 10 State Road (Assessor's Parcel Map 9A, Lot 5) in Tisbury, Massachusetts (Figure 1). The owner is planning the construction of two structures and associated infrastructure, including parking areas, in the southern portion of the lot (Figure 2). The northern portion of the lot has been previously developed.

The survey was conducted under State Archaeologist's Permit #3169 issued by the Massachusetts Historical Commission (MHC). Fieldwork was conducted in April 2010, utilizing the methodology outlined in the technical proposal for this project. Randy Jardin and Jonathan Perry, Cultural Resource Monitors representing the Wampanoag Tribe of Gay Head/Aquinnah Tribal Historic Preservation Office (WTGH/A THPO) were on-site during the fieldwork portion of the survey.

The goal of the intensive archaeological survey was to determine the extent of disturbance to that portion of the Vincent Site located within the project area, to locate and identify any significant archaeological deposits that may be present within the proposed impact areas, and to make recommendations regarding the need for additional archaeological testing, if necessary. This memorandum presents the results and management recommendations of the intensive survey.

Project Area Background

The archaeological sensitivity of the Delano Trust Property project area was defined primarily by the presence of the previously identified Vincent Site (19-DK-21) within and/or immediately adjacent to the property. The Vincent Site has been determined eligible for listing in the National Register of Historic Places. Based on his published site report, William Ritchie's 1966 fieldwork included the excavation of approximately 450 sq ft (42 sq m) of the site located primarily within the property to the west of the Delano Trust property. PAL completed an archaeological survey within this western parcel in 2007 and collected additional information about the Vincent Site (Herbster 2007). Limited areas of undisturbed soil/intact archaeological deposits were identified and the project was redesigned to avoid these areas.

In addition to mapping and collecting archaeological data from his gridded excavation area, Ritchie also mapped two areas to the west and east that had been the focus of earlier avocational collection activities (Ritchie 1969:126). The eastern excavation area (labeled in Ritchie's report as "dug by others") covers an approximately 900 sq ft area that, based on a comparison of mapping data, is located within the Delano Trust Property. The physical extent and degree of disturbance to the site area caused by this previous "digging" is unknown. In addition, local informants and the proponent indicated that unauthorized excavation and looting has occurred at the site over much of the more than 40 year period since Ritchie's fieldwork. The most recent activity within the project area included the removal and on-site stockpiling of topsoil across much of the parcel followed by the placement of fill soils over the exposed ground surface.

Results of the Fieldwork

Prior to the start of fieldwork, the proponent indicated that approximately one to two feet of sand fill had been placed over the natural ground surface in portions of the project area. This material replaced the original topsoil that was previously stripped from the project parcel and that is currently stockpiled in the southwestern corner of the project area (see Figure 2).

In order to identify intact, undisturbed archaeological deposits, the first step in the fieldwork consisted of the machine-assisted removal of the sand fill from the vicinity of each test pit area. Test pit locations were marked in a gridded pattern across the proposed project impact area, with test pits spaced 5 meters (m) apart. The overburden/fill soils within an approximately 2 m radius of each test pit were removed with the assistance of a Bobcat excavator, guided by the PAL archaeologists. Natural/non-fill soils were clearly visible below the sand; as soon as these dark/organic soils were identified the machine excavation was halted.

Following the machine-assisted removal of the sand fill, hand testing was conducted within the cleared test pit area. Although 12 test pit locations were identified; a total of 10 test pits were excavated by hand. Two of the proposed test pit areas contained fill deposits that were too deep to allow safe entry into the exposed test pit location, or contained loose sand fill that was too unstable to safely work by hand (see Figure 2, and discussion below). The depth of overburden was noted for each of these locations, digital photographs were taken, and the test area backfilled by machine following the completion archaeological documentation.

In general, the overburden soils were much deeper than initially expected. Generally speaking, the fill deposits were deepest along the northern and eastern edges of the project area, which are also situated at the highest elevation. Fill soils were generally shallowest in the southwestern portion of the project area, and no fill was noted in JTP-1, located at the southwestern corner of the property (Table 1; see Figure 2). Most test pits contained a clean sand fill lens which capped a layer of crushed shell and modern and historic debris mixed with heavily mottled black and yellow brown soils. Intact/natural B subsoils and/or what is interpreted as the undisturbed Vincent Site shell midden were identified in most test pits below the mottled shell lens. Intact Native American midden deposits were distinguished from the disturbed midden by their uniformity in soil color (almost purely black organic soil versus mottled black and yellow brown soil), by generally less fragmented shell, and by the lack of historic and modern period artifacts mixed with pre-Contact period materials. These midden soils contained chipping debris and chipped stone tool fragments, as well as native-made ceramic fragments, bird and animal bone, and burnt rock fragments that

typically are identified in pre-Contact/Contact period Native American shell middens (see Appendix A).

Table 1. Depths of Fill Soils within Delano Trust project area, intensive survey

Test Pit	Depth at which hand-excavation initiated, in centimeters below ground surface (cmbs) and feet	Depth to Natural/Feature Soil in centimeters below ground surface (cmbs)
N00/E00	60 cmbs/ 1.9 ft	135 cmbs (shell midden)
N00/E05	110 cmbs/ 3.6 ft	120 cmbs (shell midden)
N00/E10	130 cmbs/ 4.2 ft	195 cmbs (B1 subsoil)
S05/E00	80 cmbs/ 2.6 ft	152 cmbs (shell midden)
S05/E05	130 cmbs/ 4.2 ft	160 cmbs (shell midden)
S10/E05	110 cmbs/ 3.6 ft	No natural/feature soil to limit of excavation at 220 cmbs
S10/E10	190 cmbs/ 6.2 ft (no hand testing)	n/a
S15/E00	40 cmbs/ 1.3 ft	80 cmbs (shell midden)
S15/E05	85 cmbs/ 2.7 ft	85 cmbs (shell midden)
S15/E10	100 cmbs/ 3.2 ft (no hand testing)	n/a
S20/E10	50 cmbs/ 1.6 ft	58 cmbs (shell midden)
JTP-1	Begun at ground surface	30 cmbs (shell midden)

Once overburden soils were removed, hand testing in arbitrary 10 cm levels was completed. All measurements within test pits were recorded relative to the surface exposed by the machine, not to the original ground surface. As a result, the catalog of cultural materials lists depths that being at 0 cmbs, even though the actual depth below the existing ground surface was deeper (see Table 1).

Testing along the northern limit of the impact area was completed with the N00 transect containing three test pits (N00/E00, N00/E05, N00/E10). The depth of fill increased from west to east; the shallowest deposit extended to 60 cmbs in the N00/E00 test pit and extending to 130 cmbs in the N00/E10 test pit. The N00/E00 and N00/E05 test pits contained similar profiles; once the overburden/clean fill was removed, the heavily disturbed and mottled shell/historic/modern lens was present in both pits to depths of 135 cmbs and 120 cmbs, respectively. Intact midden deposits were documented in the N00/E00 test pit between 135 and 150 cmbs, which was the limit of excavation. The bottom of the midden was not reached in this test pit and no sterile B subsoils were identified. The intact shell midden lens was identified in the N00/E05 test pit at 120 cmbs and extended for approximately 20 cm. Natural B₁ subsoil was encountered in this test pit from 155 cmbs to 160 cmbs, the limit of excavation.

The N00/E10 test pit was more heavily disturbed than the other two N0 test pits, possibly due to its location at the edge of the previously developed portion of the lot. Machine excavation was halted at 130 cmbs in this test pit and hand excavation extended through heavily mottled fill soils to 200 cmbs. This fill contained the shell and chipping debris that characterized the undisturbed midden, but it also contained large quantities of cut animal bone, bottle and window glass, ceramics, and nails that taken together appeared to date predominately to the nineteenth century. It appears possible that this deposit was created by occupants of the historic buildings along State Road, or



that these materials were deposited as part of a historic filling episode and were mixed the previously deposited Native American midden.

The S05 line of test pits included two hand excavated test pits (S05/E0 and S05/E05). These test pits contained overburden soils to depths of 80 and 130 cmbs, respectively, indicating the trend towards shallow fill along the western side of the project area and deeper fill in the central and eastern portions. Mottled/disturbed shell midden soils were encountered in the S05/E0 test pit between 92 and 152 cmbs, and intact midden soils were encountered below this depth to 180 cmbs; the limit of excavation. No subsoils were exposed. The S05/E05 test pit contained disturbed midden soils between 130 and 160 cmbs; intact midden soils between 160 and 199 cmbs, and natural B₁ and B₂ subsoils between 199 and 229 cmbs.

One hand excavated test pit was located on the S10 grid line. The S10/E05 test pit contained overburden soils to 110 cmbs, overlying a heavily disturbed and mottled midden lens that extended to 190 cmbs. This disturbed soil contained the same mix of Native American and nineteenth century materials noted in the N0/E10 test pit. At 190 cmbs, an approximately 20 cm lens of compacted soda and beer cans and bottles was exposed. Based on the advertising labels and the presence of pull tab cans, these materials appeared to date to a period within the last 25 years. Excavation was halted at 210 cmbs in this test pit without reaching any intact Native American midden or natural subsoils. The S10/E10 test pit contained deep overburden soils to a depth that exceeded 190 cmbs. Due to the loose nature of the soils in this area, hand excavation was not completed.

Two test pits were placed along the S15 grid line and a third test location was partially excavated by machine. The S15/E00 test pit contained a relatively shallow overburden deposit to 40 cmbs. Mottled/disturbed midden soils were encountered between 40 and 80 cmbs. Intact shell midden soils were present between 80 and 129 cmbs, and natural B₁ soils were exposed below the midden to the limit of excavation at 137 cmbs. The S15/E05 test pit contained overburden soil to 85 cmbs, and a mottled/disturbed midden lens to 145 cmbs. Natural B₁ subsoil was encountered between 145 and 175 cmbs, the limit of excavation. No intact Native American midden deposits were encountered in this test pit.

The S20/E10 test pit was located in the southeastern portion of the project area where the terrain is relatively level. Overburden soils extended to 50 cmbs, and a very shallow disturbed midden lens was encountered between 50 and 58 cmbs. The shallower intact shell midden extended from 58 to 64 cmbs, and natural B₁, B₂, and C subsoils were encountered between 64 and 129 cmbs.

JTP-1 was placed near the southwestern corner of the project area in the area adjacent to the existing backdirt pile. This was the only test pit to be completely excavated by hand; no overburden soils were present in this area. The mottled/disturbed shell layer was noted between 0 and 40 cmbs in this test pit, overlying intact shell midden deposits between 40 and 89 cmbs. B₁ subsoil was encountered between 89 and 97 cmbs, the limit of excavation.

Preliminary Interpretations and Recommendations

The intensive survey was designed to assess the extent of previous disturbance within the Delano Property project area and to identify, if present, areas where intact/undisturbed archaeological deposits associated with the Vincent Site were present.

The results of the testing indicate that overburden/fill soils were much deeper across some portions of the project area than were initially expected. In general, these fill soils were shallowest along the western edge of the project area and deeper in the central, northeastern and eastern portions of the project area. No fill was present in the southwestern corner of the parcel, and shallow fill was encountered in the southeastern portion of the project area.

In addition to this overburden, most testing locations contained a layer of heavily disturbed materials that included both Native American shell midden deposits and historic and modern artifacts. It is not known when the mixing of materials occurred; whether it was part of recent land clearing/site prep activities or if mixing of these soils has occurred over a long period of historic and modern occupation and land use. It seems likely that the "pot hunting" noted by Ritchie in the 1960s and reported from that time to the present accounted for at least some of the disturbance to the Vincent midden within the project area. Despite the presence of Native American and historic artifacts in these soils, they do not represent intact archaeological deposits.

Intact/undisturbed midden soils and/or natural subsoils were encountered in 9 testing locations at depths ranging from 30 cmbs (in JTP-1) to 195 cmbs (in N00/E10). Intact shell midden deposits were identified at 8 of these locations. These deposits do represent potentially significant archaeological resources that are associated with the Vincent Site.

The proponent has prepared a series of construction plans that call for the deepest excavation in the northern portion of the project area, at grade construction in the central portion of the project area, and no excavation/filling in the southern portion of the project area (see Figure 2). The majority of the construction will not extend below the level of the overburden/fill layers and will not directly impact the intact/undisturbed archaeological deposits below the overburden and mottled/disturbed midden soils. If any construction-related impacts are proposed below the level of the overburden/mottled/disturbed midden soils and these areas cannot be avoided, then additional archaeological excavation may be necessary in these targeted areas. For example, the proposed small building at the southwestern project area corner will be built on piers. PAL recommends that prior to construction; the area of disturbance for each pier should be investigated with a 50-x50-cm test pit or larger unit (if the impact area is greater than 50-x-50 cm).

PAL recommends that the proponent develop an archaeological monitoring plan that will correspond to various construction related activities, and that a professional archaeologist be present when ground disturbance/excavation occurs to ensure that no intact archaeological deposits are inadvertently affected. The PAL intensive survey did not include machine stripping of overburden soils across the entire project area, but rather targeted testing at select locations across the parcel. The testing determined that while there are patterns in the depth of overburden, there is also some variation and intact archaeological deposits may be shallower (or deeper) in some untested areas that the pattern suggests. Based on previous research, there is also the possibility that the site area could contain evidence of human burials, including but not limited to skeletal remains and grave goods. Archaeological monitoring would also be designed to identify any evidence of human burials that are exposed during the construction process, and to halt construction if human remains are exposed so that consultation in accordance with the Massachusetts Unmarked Burial Law can be initiated.



References Cited

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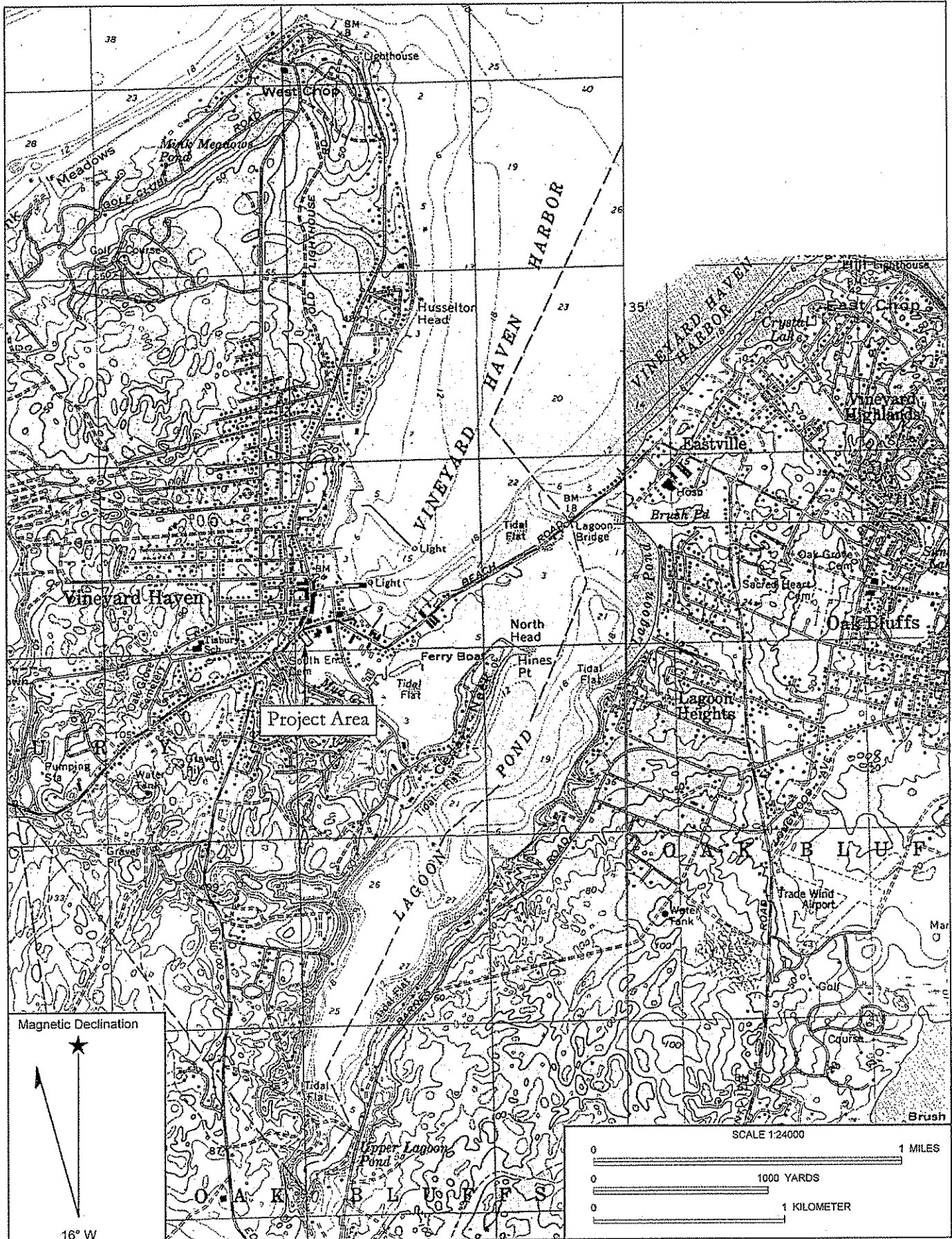


Figure 1. Location of the Delano Trust Property project area on the Vineyard Haven, MA, USGS topographic quadrangle, 7.5 minute series.

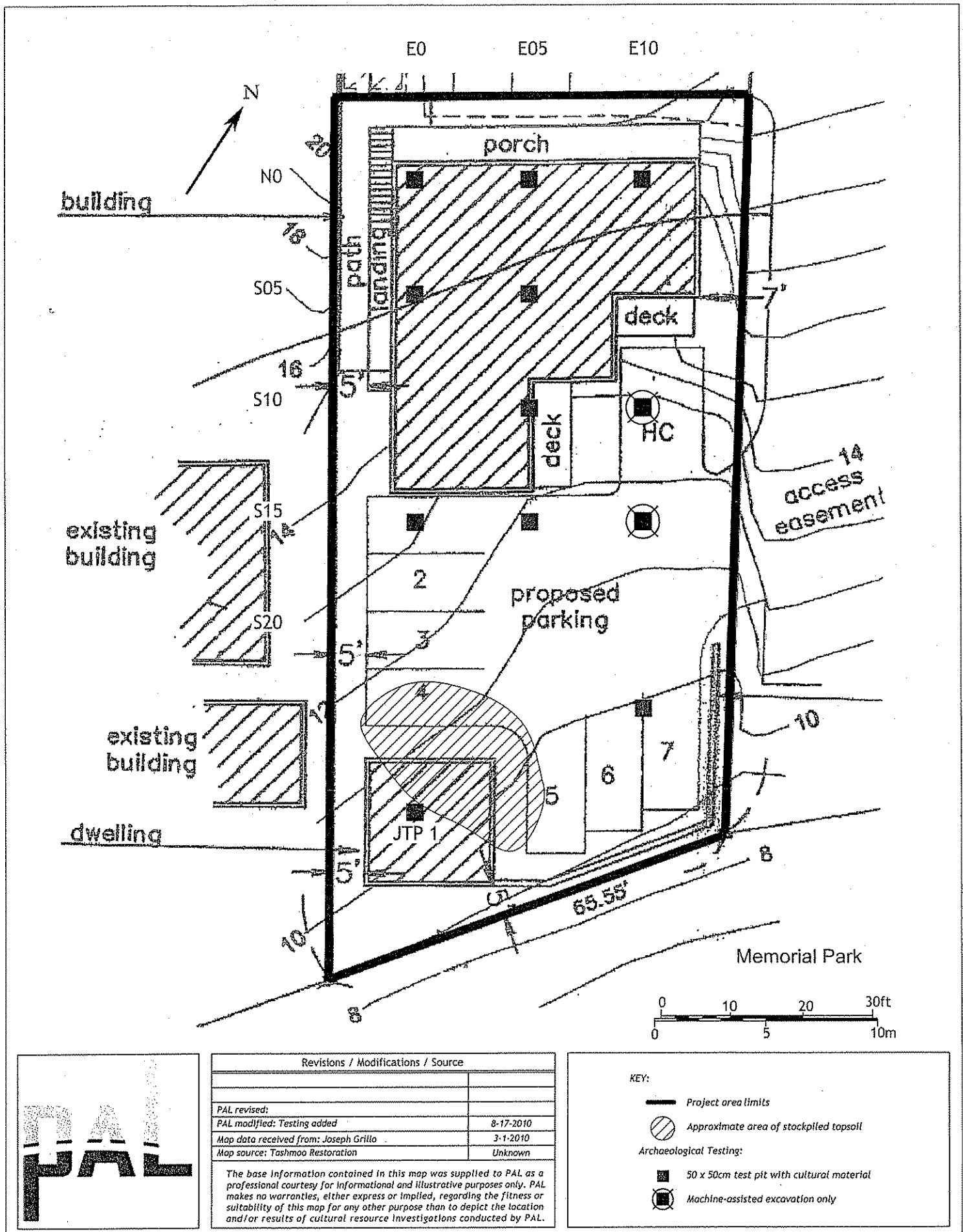


Figure 2. Plan of Delano Trust project area showing proposed construction and all intensive survey testing locations.