

June 2, 2020

**Westtown Township Historical Commission
Additional Comments regarding Response #22**

Ultimately, the historic nature of this tract (Battle of Brandywine plus proximity to the Great Minquas path) calls for a field survey of the entire 322-acre development to collect artifacts and map them with a total station. Surface collection alone will not likely produce enough spent ordnance or other artifacts to learn anything about the battle. Therefore, metal detecting would also be required as part of this process. Combined, these methods would identify all potential archaeological sites on the tract. A possible follow up survey using geophysical instruments, such as magnetometers, electrical resistance meters, and ground-penetrating radar (GPR), may be required to interpret subsurface features selectively for more detailed information. Where the survey indicates significant subsurface features, shovel test units would be used for excavation of artifacts.

Conducting an archaeological survey of the 78 acres defined by Toll's response to this item, would provide valuable information about the Battle of Brandywine. However, it is not the most urgent requirement since this area is proposed to serve as open space and could be surveyed later. Of more immediate concern is the area where development will disturb the site and prevent any future examination, resulting in the loss of artifacts that could provide knowledge of what happened at this site during the battle. This involves the area between the yellow line and the purple dashed line depicted on Toll's survey map. Along that same line of thought, the area around the tenant house located on Street Road would also be important to survey, as it was near the site of a blacksmith shop, but since this is also part of open space, it could be completed later as well.

Following is a summary of the actions we recommend:

1. Hire a military battlefield expert to conduct a KOCO analysis to analyze of the terrain and to delineate likely areas of the battlefield and identify key terrain features that would have been considered by the combatants at that time and how they may have affected the battle. Answering questions related to key terrain features, observation and fields of fire, concealment and cover, obstacles, and avenues of approach, would provide a broader context for interpreting artifacts found.
2. Conduct a field survey of the entire development area, first concentrating on the area from South New Street to the purple dashed line, especially where the ground has been plowed, using metal detectors to supplement surface collection. All finds should be mapped with a total station and cataloged. Once complete, permission should be granted to study the remainder of the tract, depending on what we find.
3. Selectively deploy geophysical instrumentation to explore subsurface features in key areas more thoroughly, as determined by an archaeologist.
4. Open shovel test units where the survey indicates a higher concentration of artifacts. All finds should be mapped with a total station and cataloged.

5. Determine any required alterations to the development plan pending results of the archaeological survey.
6. Cost for the field survey (surface collection plus metal detecting) of the 78 acres by a Registered Professional Archaeologist is estimated to be around \$10,000. Community and student volunteers participating under supervision of an archaeologist, would allow more ground to be covered. Use of geophysical instruments would add to the cost. It is my opinion that Toll should shoulder the burden of this effort as a condition of development. A more specific, detailed estimate from a CRM (Cultural Resource Management Firm) or local professional archaeologist would be required.
7. A decision as to what should happen with artifacts will need to be made. One option is to conserve them for appropriate display and interpretation either at the township building or one of the community buildings on the property.