

“LEFT NEWPORT...BEFORE DAYLIGHT AND MARCH’D TO CHADS FORD”

**MILITARY TERRAIN ANALYSIS FOR TWO BRANDYWINE BATTLEFIELD
STRATEGIC LANDSCAPES
CHESTER COUNTY, PENNSYLVANIA**

**AMERICAN BATTLEFIELD PROTECTION PROGRAM
GRANT # GA2287-17-002**



PREPARED FOR
THE CHESTER COUNTY PLANNING COMMISSION

by
Wade P. Catts, RPA, Robert A. Selig, Ph.D. and Sean Moir

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July 2019 -FINAL

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ABSTRACT

This report provides detailed military terrain analyses for two Brandywine Battlefield Strategic Landscapes representing the movements of both the American and Crown forces on September 9 and 10, 1777. The study builds upon the earlier Phase 2 report, and should be used in conjunction with, and as a supplement to, that previous study.

The focus of the present project is on the movements of both armies from midnight of September 8/9 to dawn of September 11, 1777. During this period, American forces seized the strategic initiative and marched their army from a defensive position along Red Clay Creek in New Castle County to the Brandywine Creek positions. In response to this American shift of position, Crown Forces maneuvered out of New Castle County and into Chester County to a position centered on Kennett Square, preparing for battle.

The analysis provides some new and/or revised interpretations for the battle. Important among these is a better understanding of the routes used by the American Army on September 9 to reach the Brandywine, the various fords used to cross the Brandywine by American forces, and the point when Washington determined to fight on the Brandywine (and Howe's response to that decision).

Recommendations are offered for future research. The project was funded by the American Battlefield Protection Program (ABPP) of the National Park Service and met the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* (see 36 CFR 61).

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1.0 INTRODUCTION

1.1 Goals of the study

This project stems from recent battlefield planning (2013 Plan, Phase 1 planning, and 2017 Phase 2 planning), which indicated uncertainties in long-held assumptions about battle events, activities, features, and locations in the southern Brandywine Battlefield. It examines large land areas related to the battle such as access routes and encampments on the days prior to the battle that have relatively little-known information that can be useful for local planning, and that have strong implications for changing the understanding of American history as related to the Battle of Brandywine. The overall goal is to verify and build upon previous battlefield planning efforts, confirming and/or updating information and adding to the understanding of the battle and its planning, education, interpretation, and preservation. For a detailed discussion of preservation efforts for Brandywine Battlefield see the 2017 Phase 2 report “*The Army March’d at Day Break in Two Columns:” Military Terrain Analysis for Two Brandywine Battlefield Strategic Landscapes, Chester County, Pennsylvania* (Catts et al. 2017). This Phase 2a report is intended to be used in conjunction with the Phase 2 report.

Strategic battlefield landscapes and their defining features are areas to focus local planning, land conservation, and historic resource protection efforts. Given the complexity of the battle and large size of the battlefield (approximately 35,000 acres, 15 municipalities and two counties), the strategic landscapes are being considered in phases. Trimble’s and Jefferis’ Fords Strategic Landscapes, along with plans for Marshallton and Sconnetstown/Strode’s Mill, represents Phase 1 (ABPP grant GA-2287-13-004) of the strategic landscapes planning and these landscapes have already been studied and reported (Catts et al. 2016a, 2016b). Phase 2 of the plans is the subject of this report. The present study is Phase 2a (ABPP grant GA-2287-17-002) and considers the Crown Forces Approach out of New Castle County, Delaware, as well as the American Encampment and Defense area along the Red Clay and Brandywine creeks, from September 8/9 through September 11. Phase 3 will examine the Core Area of the Battlefield (Figure 1).

The present technical report builds on earlier battlefield studies funded by the ABPP. The CCPC received an ABPP grant in 2010 (grant GA 2287-09-002) which resulted in the initial identification of the Battlefield Boundary (termed “Study Area” in 2010) and the Core Area for Brandywine Battlefield. The initial boundaries were based on documentation, mapping, and a windshield survey of the battlefield. The subsequent Strategic Landscape plans, as stated above, are intended to confirm and/or revise the boundaries by focusing research in specific areas of the Battlefield Boundary that are less well understood or researched. The analyses were research-based and did not require physical access to private lands or ground disturbance. The KOCO method of military terrain assessment was used, as required by ABPP grants. The project team utilized historic maps and aerials, in addition to available descriptive texts, to attempt to identify key defining features related to several strategic battlefield landscapes identified as part of an overall project directed by the CCPC related to the Brandywine Battlefield.

The area covered by this analysis is located within the Battlefield Boundary of the Brandywine Battlefield and in areas beyond the Battlefield Boundary, particularly south and west of Kennett Square and extending

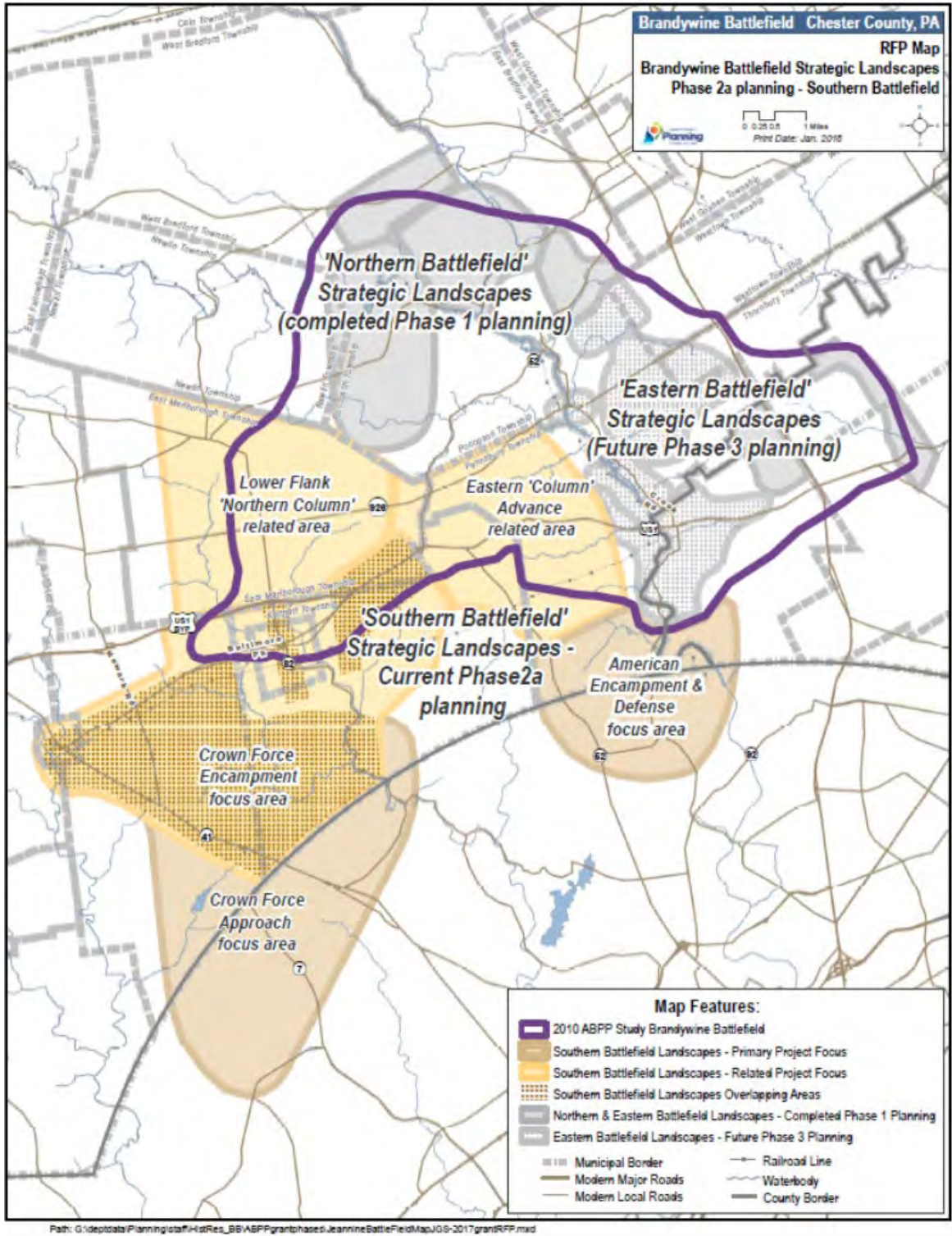


Figure 1. Locations of the previously studied Strategic Landscapes, and the two studies that are the focus of this report (“Crown Forces Approach focus area” and “American Encampment & Defense focus area” (CCPC)).

into Delaware County, Pennsylvania and New Castle County, Delaware. The area beyond the Battlefield Boundary was deemed important for study by CCPC and the local municipalities. While the 2010 Study mapped the initial Battlefield Boundary and Core Area as part of a windshield survey, the detailed Strategic Battlefield Landscape Plans that have been funded by the ABPP, undertaken since 2010, have provided or will continue to provide more detailed mapping describing important elements of the battle. The boundaries are subject to revision based on the results of the Strategic Landscape Plans, and a final Battlefield Boundary and Core Area will be a principal outcome of the various studies and addressed in a final plan.

The approach of Crown Forces movements out of New Castle County and Crown Forces encampment areas have been researched in great detail in the Phase 2 report; the Phase 2 report will be referred to when necessary in the course of this study, but its findings will not be repeated here. The focus of the present report is on the access routes and sites of the American Encampment prior to the Battle of Brandywine and the defense area along Brandywine Creek immediately prior to the battle as well as consequential defining feature refinements in related Lower Northern Flanking and Eastern Advance areas. The chronological starting point for the study is midnight September 8/9, 1777, for the Avenues of Approach. Choosing midnight of September 8/9 as a chronological starting point is defensible since the focus of this report is on American troop movements and the date marks the start of American re-deployment to the Brandywine. Nevertheless, some space has been, and had to be, dedicated to explaining how and when British and American forces reached their encampment sites for that night. This requirement necessitated an expansion of the project areas beyond the six municipalities situated in Chester County, to include one municipality in Delaware County, Pennsylvania and portions of northern New Castle County. The current mapped strategic landscapes outlines will likely change based on this project's findings. The report will identify defining features, and focus on troop positions, movements, and encampments during the course of the battle. Once completed, this report will serve to guide future preservation and interpretation efforts.

As noted above, the focus of the present project is on the movements of both armies from midnight of September 8/9 to September 11, 1777 (Figure 2). During this period, American forces seized the strategic initiative and marched their army from a defensive position along Red Clay Creek in New Castle County to the Brandywine Creek positions. In response to this American shift of position, Crown Forces maneuvered out of New Castle County and into Chester County to a position centered on Kennett Square, preparing for battle.

2.0 HISTORICAL OVERVIEW

With Sir William Howe's forces marching across New Jersey almost unopposed in the fall of 1776, it seemed as if the American rebellion was about to be crushed, but the battles of Trenton in December 1776 and Princeton in January 1777 dashed Howe's hopes for a quick end to the war. Britain needed a new strategy for 1777 to defeat the rebels. Lord Germain's planning had Sir John Burgoyne march toward Albany with the goal of separating New England from the rest of the colonies, and Sir William Howe cooperating by marching his forces north along the Hudson and eventually meet up with Burgoyne in Albany. Sir William however formulated his own plan incorporating both military and political goals: 1) militarily by a defeat, but not annihilation of the Continental Army and 2) politically by ending the war by occupying the rebel capital of Philadelphia.

Rather than move north along the Hudson to meet up with Burgoyne at Albany, Howe in the summer of 1777, took the war to the center of political power of the American rebellion. In July and August 1777, Royal Navy vessels transported Howe's army of some 15,000 men up the Chesapeake Bay, and landed at the Head of Elk on August 25 (Black 1998:124). One week after landing in Maryland, Howe's advance guard clashed with American Light Infantry at the Battle of Cooch's Bridge, Delaware, on September 3 in a short, but sharp, engagement that was a British tactical victory. The Royal Army encamped in the Cooch's Bridge area for five days while Washington's army fortified positions along the Red Clay Creek and in Wilmington in Delaware. Cooch's Bridge was the first in a series of engagements as the Royal Army moved to capture Philadelphia, which was taken on September 26 (McGuire 2006). Howe used the maneuvering room that the victory of September 3 provided to gather much-needed supplies, especially horses and draft animals, for the march on Philadelphia while Washington's army fortified positions along the Red Clay Creek and in Wilmington in Delaware (Catts et al. 2014).

Howe had always assumed that Washington for military as much as political reasons would have to make a stand to defend Philadelphia. He had no doubt in his mind that his forces would decisively defeat the Continental Army thereby opening the road to Philadelphia. As he set out from New York, Howe was convinced that the Philadelphia campaign would be won and over in time for him to come to Burgoyne's assistance if he should have to. Small engagements such as Cooch's Bridge were to be expected before the decisive battle, which Howe was determined to fight on his own terms on a location of his own choosing. For a British commander in the American theatre this excluded large, full-scale assaults and their risk of high casualties. Trained soldiers represented a significant investment and asset that was difficult to replace, especially if he was lost thousands of miles away from home. Bunker Hill, or Breed's Hill, was always on Howe's mind. One way to reduce the risk of high casualties was by outflanking an opponent, hitting him in the side rather than frontally.

As Howe disembarked at Head of Elk, Washington knew that the Continental Army was expected to defend the American capital. A look at the map showed him that the direct route to Philadelphia lead along Baltimore Pike and Wilmington. Even if Washington suspected, or feared, that Howe would once again try and turn the American right flank, he had no choice but the concentrate his forces around Newport after the Battle of Cooch's Bridge: blocking all potential route of British flanking march between Newport and Hockessin or Kennett Square was simply unrealistic. From September 7 to 9, Americans worked hard to

prepare for the expected British attack, concentrating forces, erecting defensive positions and blocking roads. Yet the attack never came; on September 8, Howe's forces moved inland almost straight north from their encampment at Aiken's Tavern. The expected flanking march had begun, but its goal, inserting British forces between the Continental Army and Philadelphia, was not achieved. In the morning of September 8, Washington reacted quickly and sent ever larger detachments of forces in-land in a north-westerly direction, so that by the late afternoon of September 8, General Maxwell's Light Infantry at Hockessin Meeting House stood north of Howe's grenadiers. Neither of these units were large enough to stop the British army if Howe had tried to turn east, but combined with the slowness of his advance, they were large enough to disrupt Howe's plans and allow Washington to re-deploy his forces along the Brandywine.

The engagement both sides had wanted, by far the largest of the battles leading up to the capture of Philadelphia both in terms of land area covered and numbers of troops involved came on September 11, 1777, when Sir William Howe's army launched a two-pronged attack on the American position along Brandywine Creek. As he had done before, Howe based his battle plan on a flanking manoeuvre, and once again it succeeded. Early in the morning of September 11, one British column commanded by Hessian General Wilhelm von Knyphausen departed Kennett Square along the Great Nottingham Road (approximately the current US Route 1) and attacked General George Washington's troops stationed at Chadds Ford. A second column, commanded by Howe and Lord Charles Cornwallis, followed a more circuitous route, travelling north from Kennett Square, and then turning east and fording the Brandywine Creek on two fords near what is now a bridge at old Jefferis Ford. The column arrived at an area near Birmingham Road in Birmingham Township, and from there they attacked Washington's northern flank from the right rear. American formations responded to this maneuver by forming a series of defensive lines but were out-manoeuvred. The final action of the day occurred along the Old Wilmington Road south of Dilworthtown when Major General Nathanael Greene positioned his brigade and the remnants of other Continental formations in a semi-circular line that was able to blunt the Royal Army's advance. As evening approached and daylight waned, Washington's Army retreated east along modern US Route 1. His forces reformed near the City of Chester in what is now Delaware County, Pennsylvania.

The Battle of Brandywine on 11 September 1777 was the longest single-day battle of the American War of Independence, with continuous fighting for 11 hours. More troops fought at Brandywine than in any other battle, and though the Continental Army had to concede the field, it had put up a courageous fight that surprised British observers. It bears witness to the failed attempts by Americans to thwart the goal of Howe's Army, the seizure of the American capital, but also to Howe's inability to realize that the American War was a different kind of war, one in which the capture of the enemy's capital might have a large psychological impact but would not be crucial for the termination of the war. In retrospect American defeats turned out hollow victories as the importance of the campaign of 1777 lies not so much in British victories or American defeats but in the increase in confidence, professionalism and endurance of the young Continental Army between Cooch's Bridge and Monmouth. The refusal of Congress to admit defeat, joined to the Continental Army's determination to fight until independence was achieved doomed Howe's plan of a political solution to the war by conquering Philadelphia.

2.1 Army Movements September 8, 1777

2.1.1 British Army movements September 8, 1777

In the evening of September 7, 1777, Sir William Howe organized his forces into four brigades: The 1st English Infantry Brigade consisted of the 4th, 23rd, 28th, and 49th Regiments of Foot. The 2nd English Infantry Brigade consisted of the 5th, 10th, 27th, 40th and 55th Regiments of Foot. The 1st and 2nd brigades stood under the command of Major General James Grant. The 3rd English Infantry Brigade consisted of the 15th, 17th, 42nd (Scottish) and 44th Regiments of Foot. The 4th English Infantry Brigade consisted of the 33rd, 37th, 46th and 64th Regiments of Foot. The 3rd and 4th brigades stood under the command of Major General Charles Grey. British infantry regiments typically only had two battalions but for the purposes of the campaign the 71st Regiment under Brigadier General Alexander Leslie, 1,200 Gaelic-speaking genuine Highlanders from the Outer Hebrides, had been divided into three battalions on August 6, 1776. Besides two artillery brigades, British forces under Lord Cornwallis also included the Brigade of Guards, two battalions of grenadiers, light troops, Ferguson's Rifles, mounted dragoons, pioneers and the Queen's Rangers. Britain's Hessian allies, incl. the *Jäger* from the Ansbach contingent, consisted of the Brigade of Major General Johann Daniel Stirn, i.e., the Fusilier Regiments Mirbach and Donop and the *Leibregiment* and the so-called "Combined Battalion," the remnants of the Hessian regiments surprised at Trenton, (the Garrison Grenadier Regiment von Rall and the Fusilier Regiments von Knyphausen and von Lossberg) (Howe 1777:488/9; Londahl-Smidt 2004/2005).

Howe's preparatory orders for the march on September 8, issued just inside Delaware at Pencader where he had established his headquarters at Aiken's Tavern in the center of modern-day Glasgow, instructed the army to "be in readiness to move at an hour's notice, and to march by the left in three Divisions" in the following order:

First Division under the Command of Lieut.-Gen. Earl Cornwallis. 1st. and 2d. Light Infantry with an Officer and 12 Mounted Yagers. 1st. and 2d. British Grenadiers. Hessian Grenadiers. Yagers Infantry. 1st. and 2d. Guards. Mounted Yagers.

Second Division under the Command of Maj.-Gen. Grant. Two Squadrons of Queen's Dragoons. 1st. Brigade of Artillery. 1st. and 2d. Brigades British. 3d. Brigade Artillery. 3d. and 4th. Brigades British. Pay Master's Waggons. General Officers' Waggons. Baggage Waggons of the Army according to the line of March. The Provision Train. The 3d. Battalion of 71st. Regiment to take the Right Flank of the Baggage. The Cattle of the Army to follow in the rear of the Waggons.

Third Division under the Command of His Excellency Lieut.-Gen. Knyphausen. Dismounted Yagers. 2d. Brigade of Artillery. Brigade of Stirn. One Squadron of Queen's Dragoons. 40th. Regiment British with two 3 pounders. 1st. and 2d. Battalions 71st. Regiment. Queen's Rangers and British Rifle Men. Lieut.-Col. Musgrave will give orders to the British of the 3d. Division during the March, under Lieut.-Gen. Knyphausen. The Corps of Pioneers to be divided into four Divisions, One Division at the head of the British Grenadiers, and One to each of the Brigades of Artillery" (Howe 1777:488/89).

The orders stipulated neither a destination nor a time for the troops' departure, which, depending on where the individual unit stood in the line of march, lay between 3 a.m. and 6 a.m. or "daybreak." Twilight in the Philadelphia-Wilmington area on September 8 occurs at 6:07 a.m., sunrise, the moment when the upper edge of the sun appears above the horizon, occurs at 6:35 a.m. Cornwallis' column, which was to march first, was "under arms by 3 o'clock" (Peebles 1998:131). When Howe's forces broke camp in the morning of September 8, their destination was not Newport, where they knew the Continental Army would be waiting for them. As he had done before, Howe planned to outflank his opponent and ordered his forces to march inland on routes that would take them north into Pennsylvania. His aide-de-camp Major Carl Leopold Baurmeister recorded that Howe "set out with the army on September 8th to march via Newark to the heights called Society Hills. These hills are situated this side of New Garden Meeting House at the intersection of the Newark-Lancaster road with the Chester road." (Baurmeister 1935:402)

Cornwallis' division began its march from its encampment around Cooch's Bridge, where Cornwallis had established his headquarters in the home of Thomas Cooch since September 3, north onto Old Cooch's Bridge Road (today cut off by I-95 and ending behind a Shell service station just south of West Chestnut Hill Road) "about 4 AM" with the Second and Third Divisions following in turn (Downman 1898:156; Muenchhausen 1974:30). Captain Montrésor, also with Cornwallis, recorded in his journal his departure at "2 hours before daylight," i.e. closer to 4:30 a.m., but this slight difference in departure times can be explained by the fact that it took a while before the thousands of men all started moving in the darkness before day-break (Montrésor 1881:414) Lieutenant Gilbert Purdy's timeline provides a clear illustration of how long it took for the army to be moving: "8th Sept. Left our Incampment About 3 oclock in the morning & took our Station with the Second Bregade of Artilery which was in the Rear of the Army under the Command of Lieut. Gl. Kniphosen and we Began our march About 8 oclock in the morning & marched About 5 miles and Came to A Small town Caulled newwort" (Purdy 1777). Archibald Robertson and other British officers recorded their movement "at Daybreak march'd with the whole Army" (approximately 6:30 a.m.) (André 1904:82; Anonymous 1777a:77; Robertson 1930:145). Continuing north into Newark on South College Avenue, Lieutenant John Peebles of the British Guards in Cornwallis' division marched through Newark three hours after departure, "about 7" (Peebles 1998:132), Captain John Montrésor with the Corps of Engineers followed close behind at "¼ past 7" (Montrésor 1881:415), i.e., also about three hours after departure. Newark, a market town about four miles from the encampment, was a "deserted and destroyed village" and "totally abandoned by the Inhabitants" (Downman 1898:156; Anonymous 1777b).

Upon reaching the center of Newark, the division under Cornwallis turned east onto today's East Main Street to South Chapel Street, where they turned north and crossed the White Clay Creek on Paper Mill Road. Across the White Clay Creek, the road "for a part of the way parallels the creek and thence up and down hill to the old Hop Yard Road that runs from Milford X Roads through Possum Park (called Bossom Park in the old atlas) to the Capitol Trail" (Cooch 1936:143). Johann Ewald describes the road just north of White Clay Creek in graphic terms. It "was surrounded on both sides by steep, rocky heights that formed a most frightful defile half an hour in length." Ewald was surprised that General John Sullivan had abandoned this extremely advantageous position, but "surmised [that] Sullivan had reasoned that General Howe would never choose this route" (Ewald 1979:79-80). Having safely passed this dangerous spot and reached the plain above Newark, Cornwallis continued to Milford Cross Roads, about two miles or 1.5 hours from crossing the White Clay Creek, around 9:00 a.m. From this intersection the troops continued on Paper Mill

Road (Route 72) toward its intersection with Polly Drummond Hill Road/Corner Ketch Road, another two miles. If these units maintained their marching speed of close to 1.5 miles per hour, they reached that intersection some time at 10:30 a.m. or later, a good three hours after Cornwallis' van had marched through Newark, and 6 ½ to 7 hours after they had broken camp, if necessary, breaks are included in this itinerary. From here Cornwallis' troops covered the remaining three miles to their campsite by continuing north to the vicinity of today's Starling Street where the old road turned north-east to Polly Drummond Hill Road. This road no longer exists; today's Route 72 runs straight into Limestone Road, but it is clearly visible in a map overlay of the 1868 Mill Creek Hundred map onto a modern road map at <https://davidrumsey.georeferencer.com/compare#> .

Major John André sketched this encampment, calling it (erroneously) the "Position at New Garden" (Figure 3). Research by local historian Walter Chiquoine has successfully identified this location and extent of this overnight camp. It is 1.5 miles from Howe's headquarters to Paper Mill Road, three miles from Howe's headquarters to Cornwallis' headquarters, and another 1/3 mile from there to the Light Infantry camps on either side of Limestone Road west of Mill Creek. These distances are based on the assumption that André's map is drawn to scale; if Cornwallis' headquarters were at the Mermaid Tavern, the map would be severely distorted. The distance from the Paper Mill Road to the tavern, almost equal on the map, is only +/- 0.8 miles on the ground, while a distance of +/- 1.4 miles places Cornwallis' headquarters somewhere between Old Linden Road and New Linden Road.

A marching speed of around 1.5 per hour for Cornwallis' units indicates an estimated time of arrival of around 1:00 p.m., which is confirmed by Montrésor's timing, who wrote that he arrived "at 1 o'clock at Nibblas's [Nichols] house which is from Aiken's Tavern to Cooch's Bridge round Iron Hill by way of Newark and so into the road from Newport to Lancaster in the way to New Garden" (Montrésor 1881:416). Montrésor's note indicates that British forces encamped that evening along Limestone Road stretching for a good three miles from north of Brackenville Road and Valley Road almost to Mill Creek. Muenchhausen confirms that Howe made his headquarters at "Nicolson's, the only house on the main road from Newport and Wilmington to Lancaster" in the triangle formed today by Limestone Road and Sheringham Drive (Muenchhausen 1974:30). The location of the Nichols House has been clearly established by local historian Walter Chiquoine's previous research (Chiquoine 2016).

The remainder of Howe's forces, slowed down by cattle and wagons, continued to arrive later in the afternoon and well into the evening and night of September 8. Major John André recorded that "The Army marched in three divisions and by the left at daybreak, passing Newark and White Clay Creek they came in a march of about ten miles to the New Garden Road, where they were encamped" (André 1904:82). Upon entering Newark, the Second and Third Divisions followed the roads taken by Cornwallis across the White Clay Creek and north on Paper Mill Road to the encampment site. General Grant with the Second Division who "was followed by all the cattle, baggage, hospital and supply wagons of the army" (Knyphausen 1777:fol. 54r), described the day's march as "a handsome Move of 14 Miles" (Grant 1777). Traveling in Grant's Second Division, Archibald Robertson of the Royal Engineer had departed the British camp at daybreak and reached Mill Creek Hundred only at "about 10 o'clock" in the dark, long after sunset shortly after 08:00 p.m. and civil twilight had ended at 8:37 p.m. (Robertson 1930:145). It would take another two hours until midnight before the last units of the Third Brigade traveling behind him would reach camp.

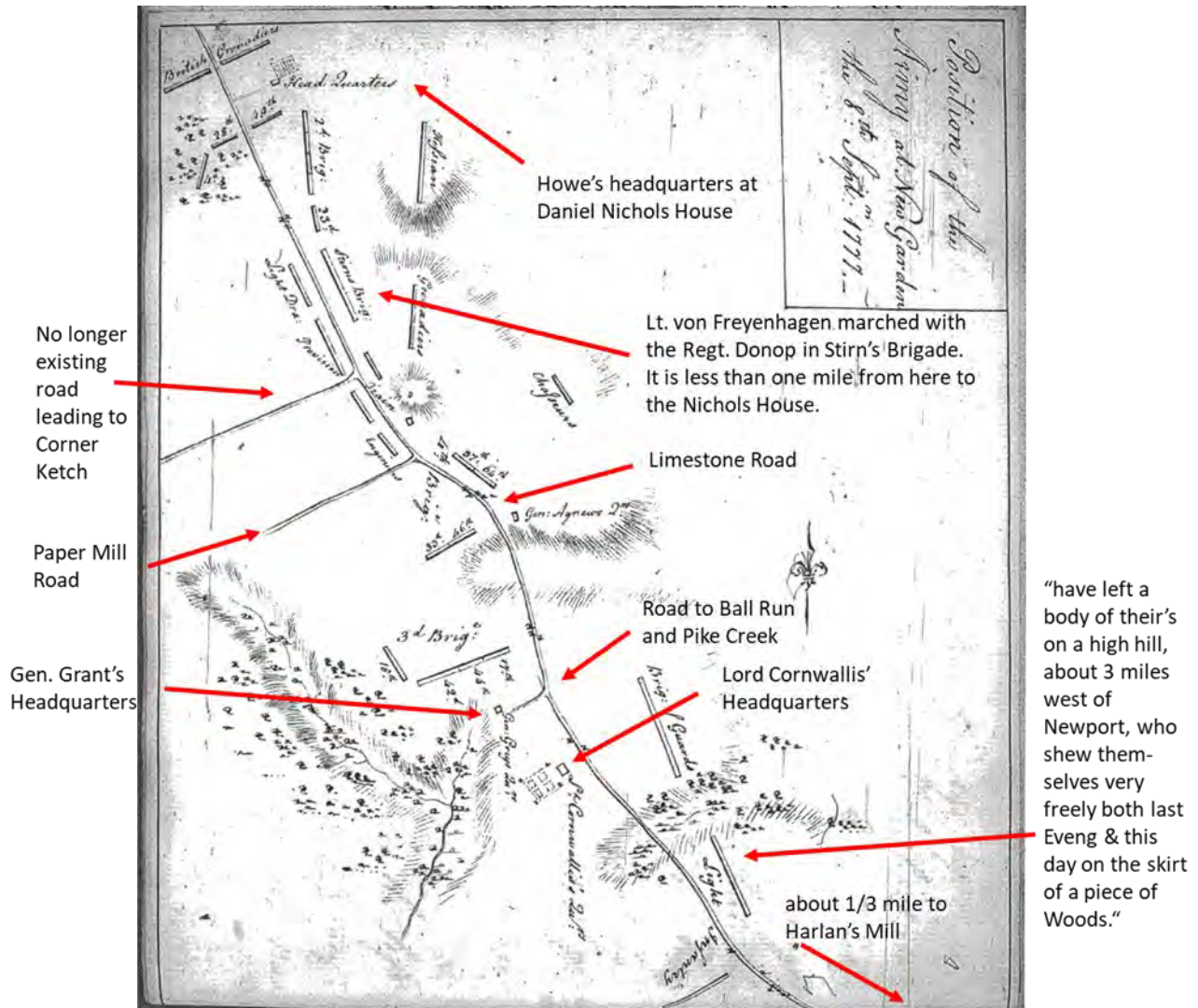


Figure 3. *Position of the Army at New Garden, the 8th September 1777* (André 1904).

Stirn's Brigade, which included the Fusilier Regiments Mirbach, Donop, the *Leibregiment* and the so-called Combined Battalion, which formed part of the Third Division under Knyphausen, "left Christian Bridge and Newport to our right, marched through Newark, passed over the White Clay Creek, and encamped on the so-called Society Hills two miles this side of New Garden Meetinghouse, where the road to Lancaster and Chester split", i.e. at the intersection of today's Limestone Road and Little Baltimore Road (Knyphausen 1777:fol. 54r; Baurmeister 1935:402). Slowed down by the hundreds of wagons, cattle and sheep ahead of him, "276 waggons loaded with rum, flour, and salt meat" (Baurmeister 1935:402), and "almost suffocated with dust, owing to the vast train of baggage wagons and cattle that were in our front", Knyphausen's units, which had already set out later in the morning, had fallen behind schedule (Downman 1898:156). Following the route of the Second Division, Ensign Wilhelm Johann Ernst von Freyenhagen of Donop's Regiment wrote that having "marched off at 5 AM, around noon passed the village of Newark"

(Freyenhagen 2011:65). A departure time of 5 a.m. means that it had taken Freyenhagen a full seven hours to move the four or five miles to Newark. Other regiments were even farther behind and marched through Newark only in “the afternoon around 2” when Cornwallis’ units were already in camp. Without noting the time, the scribe of Jung-Loßberg’s daily journal recorded that they “passed through a very pretty but uninhabited little town consisting of 60 houses called Newark” (Jung-Loßberg 1777:fol.25v). Purdy confirms this slow march which lasted 14 hours, from 8:00 a.m. to 10:00 p.m. “we Began our march About 8 oclock in the morning ... to A place Called new garden whare we got About 10 oclock at Night & Incamped” (Purdy 1777).

Delayed by the wagons and having marched around 18 hours to cover 12 to 14 miles, the first of Knyphausen’s units did not reach camp until almost midnight of September 8/9. Lieutenant Francis Downman, who marched with the Second Brigade of Artillery in the Third Division forming the “the rear guard [...], did not reach our ground until 11 o’clock at night, after a very disagreeable march of 16 hours without anything to eat” (Downman 1898:156). Right behind Downman followed the regiment Jung-Loßberg, which also arrived “In the evening at 11 o’clock ... in New Garden” (Jung-Loßberg 1777:fol 25v). Other units took even longer: “Today we passed the border between Maryland [sic] and Pennsylvania. We set up camp only at 12:00 o’clock at night” (Alt-Loßberg 1777:135). In his report to the Landgrave prepared in October 1777, General von Knyphausen noted that “Due to the constant unpleasant delays caused by the baggage ahead of me, I arrived only at night 12 o’clock with my division” (Knyphausen 1777:fol. 54r). Behind Jung-Loßberg followed the Regiment Donop, which, “Having been made the rear guard we arrived at 11 PM to camp at Nicolaus Haus [Nicholl’s House in Hockessin, Delaware] near Millbrook Hundred [Millcreek Hundred], which was also headquarters” (Freyenhagen 2011:65; Chiquoine 2016).

It was, however, not all of Howe’s army that camped along Limestone Road that evening. Howe had been determined to let Americans believe as long as possible that he was indeed planning on attacking their position later in the day. For that reason, but also to conduct reconnaissance in force in case his American opponent would move, Cornwallis sent his Light Infantry, almost 1,300 troops, as scouts and screen for Howe’s main army along the British southern flank. The major east-west roads in 1777, as well as today, are Old Baltimore Pike, Chestnut Hill Road, today’s Route 4, and the Newark-to-Christiana Road, today’s Route 273. It is likely that flanking parties traveling east toward Newport used all of these. The eastern-most advanced (known) detachment traveling on Old Baltimore Pike toward Christiana Bridge reached at least as far east as Smalleys Pond, less than a mile from Christiana, and probably entered Christiana itself before turning north-west on Main Street in the center of town, thereby approaching within less than five miles of the western-most American positions on the east bank of the Red Clay Creek along Calf Run.

In the afternoon of September 8, while Hessian Jäger Captain Johann Ewald and his men were encamped "on the wooded heights along the road from Lancaster, where it intersects the road from Newport, one of our patrols brought in a coach harnessed to six very fine horses. Found in the coach was Lady Patterson [...] their entire baggage was thoroughly searched". Lady Patterson was presumably the wife of Colonel Samuel Patterson who ran a mill at Smalleys Pond (Ewald 1979:80). The account gives the impression that Mrs. Patterson was intercepted as she was trying to escape from the British with her maid and three black servants and asked to come along rather than being picked up at her house. We do not know where Mrs. Patterson and her entourage were captured, but it is likely that it happened on Old Baltimore Pike as she

tried to reach Christiana, Stanton and ultimately Wilmington when the British Light Infantry caught up with her. This route is suggested by Gilbert Purdy, who wrote under September 8 that “we took Som wagons that Day Loded with houshd. goods that Belonging to the inhabetents of wilmington which were Running of as this part of the [faded] Rebels” (Purdy 1777). While this detachment followed Mrs. Patterson, another detachment rifled through her home. Her husband Samuel, commanding officer of the 2nd Regiment of New Castle County Militia, had “made his escape as the Light Infantry appea’d”, wrote Lieutenant Henry Stirke of the 10th Light Infantry Company in his diary (Stirke:140). Besides the Colonel’s brother, arms, swords and drums, the “Flanking Party [...] took the Horse, Arms, Colours and Drums belonging to a Rebel Colonel of the Delaware Militia” (McGuire 2006:160). The colors fell to Captain William Dansey of the 33rd Regiment.

A second detachment marched east on Chestnut Hill Road, today's Route 4, before turning north onto Old Harmony Road (exists only in sections today) to a crossing of White Clay Creek about 2.4 miles from the Hale-Byrnes House. In a letter of January 17, 1793, asking to be paid for dozens of wagons of wheat and flour the Continental Army had removed from his mill during the days before September 8, 1777, Daniel Brynes told George Washington that on September 8 “the English Army Crossed White Clay Creek 2 or 3 miles above my Mills and thy Army moved away” (Byrnes 2005:18). That opens the possibility that this unit may have marched north on Red Mill Road, one of the few crossing points of the White Clay Creek. Red Mill Road is also an eighteenth-century road but farther east than Harmony Road. Damage claims filed by the Morrison family as well as a family tradition that records something was destroyed at their house by the British indicates that this, or yet another scout, took Harmony Road, since the Morrison farm was along Harmony Road (Chiquoine 2016:12-13).

Having crossed White Clay Creek, this detachment turned north-east to Old Milltown Road, which would have taken the men to Old Limestone Road. Here just to the east of Mill Creek the various detachments of British Light Infantry patrolling eastward re-united late in the afternoon of September 8. At least one of these scouts, or a part of one, however, proceeded to the main encampment at the Nichols House. Johann Ewald recorded that it had been “one of our patrols” which had brought in the hapless Mrs. Patterson and her entourage. The exact route of that patrol is unknown, but two routes suggest themselves: Christiana Road, Old Harmony Road, Upper Pike Creek Road to Route 72, east to Limestone Road, north to Nichols House, or Route 273 to Red Mill Road straight North to Polly Drummond Hill Road to Corner Ketch Road and from there to the camp at Nichols House.

Howe’s intention had been to deceive General Washington into thinking that he would attack him in Newport while turning the American’s right flank. That deception included leaving campfires burning while his forces broke camp. On September 9, Caesar Rodney informed Washington that “Yesterday evening,” i.e. on September 8, he had “Sent a party of my Light Horse to take a View of the Enemy.” The officer in charge returned in the morning and informed Rodney “That he was in Aitkin[‘s] Tavern-House, passed Some Miles through the late Encampment of the Enemy Round about that place, Saw, and was among the fires they had left burning” (Rodney 1933:221). Howe’s move caught even some of his officers by surprise. Howe’s adjutant von Muenchhausen wrote that “To our great surprise instead of taking the road by way of Christians Bridge to Wilmington as expected, we went to our left by way of White Clay Creek and Newark” (Muenchhausen 1974:40). Captain von Dincklage of the Leibregiment in Stirn’s Brigade in the Third Division wrote that he marched to Newark and having passed through town “the army turned to the left,”

i.e. onto Paper Mill Road, “and left the enemy standing in its earthworks behind Christiana Creek” (Dincklage:78v). And in his letter to General Edward Harvey of October 20, 1777, General James Grant neatly summed up the activities of September 8 when he wrote “Not just chusing [sic] to take the Bull by the horns we disappointed Washington and turned his Right the 8th by a forced march from Pencader by Newark to New Garden [,] a handsome Move of 14 Miles which He did not think us equal to, knowing the state of our carriages & in fact was so much disconcerted upon finding that We might by a subsequent Move get possession of the Heights of Wilmington, that He quit his Camp in the night & fled with precipitation over the Brandy Wine” (Grant 1777).

Yet by the evening of September 8, Howe’s plan of turning Washington’s right flank and quietly inserting his forces between the Continental Army and Philadelphia had failed. As the last of Cornwallis’ units marched through Milford Cross Roads at around 9:00 a.m., about 2.5 miles from the center of Newark heading north, they heard American alarm guns firing about six miles to the eastward. “At ¼ past 9 three alarm guns were fired from the rebel camp, conjectured to be at Newport” (Montrésor 1881:414). Since Cornwallis’ forces were too far away to be seen someone had alerted the Americans to the British movements.

2.1.2 Continental Army Movements September 8, 1777

Beginning about September 4, Continental Army forces had “entrenched themselves very well on the Eastern bank of Red Clay creek, about a mile westward from Newport” while the western-most tip of Washington’s forces, Maxwell’s Light Infantry Corps, lay on either side of Main Street in Stanton along Calf Run between Red Clay Creek and Limestone Road (Rodney 1933:221). The Continental Army had lined up in a triangle formed by West Newport Pike, Philips Mill (where Newport Gap Pike crosses the Red Clay Creek to the north) and the Christiana River west of Newport to the south. Put differently, his forces straddled modern-day Route 4 in an east-west direction with advanced units deployed at the Red Clay Creek just north of where it flows into the Christiana River and along the Red Clay Creek and Newport Gap Pike from the Red Clay Creek to the Christiana River in a general north-south direction. Each side of this triangle was about two miles long (Figure 4).

The Continental Army was expecting and waiting for a frontal attack. Quaker Daniel Byrnes told Washington as late as 1793, that Clement Biddle had “told me that thou Said the English Army wod [sic] be quite likely to Come that way,” i.e. on Old Baltimore Pike to Christiana and then north on today’s Route 7 (the Stanton-Christiana Road) “and wod Distroy what I had.” (Byrnes 2005:14). But that does not mean that the men were idle. Joseph Clark recorded that on Sunday, September 7, “nothing was done this day but fortifying; parapet walls were thrown up to a great extent, trees felled to secure the flanks and important passes. By Monday morning everything was in readiness for an engagement” (Clark 1855:97). As his men worked at strengthening roadblocks and earthworks, Washington was watching and trying to interpret Howe’s activities, trying to anticipate, and prepare for, his opponent’s next move. From September 5 to 7, these preparations focused on the likelihood of a frontal attack on his forces. To be closer to the potential field of battle, Washington moved his headquarters from Wilmington to the home of William Marshall located on land at Route 4 and Limestone Road behind today’s Stanton Middle School. Marshall’s property within walking distance of the Hale Byrnes House on Stanton-Christiana Road, where he held a War Council on September 6, but no Minutes of that meeting are known to have survived.

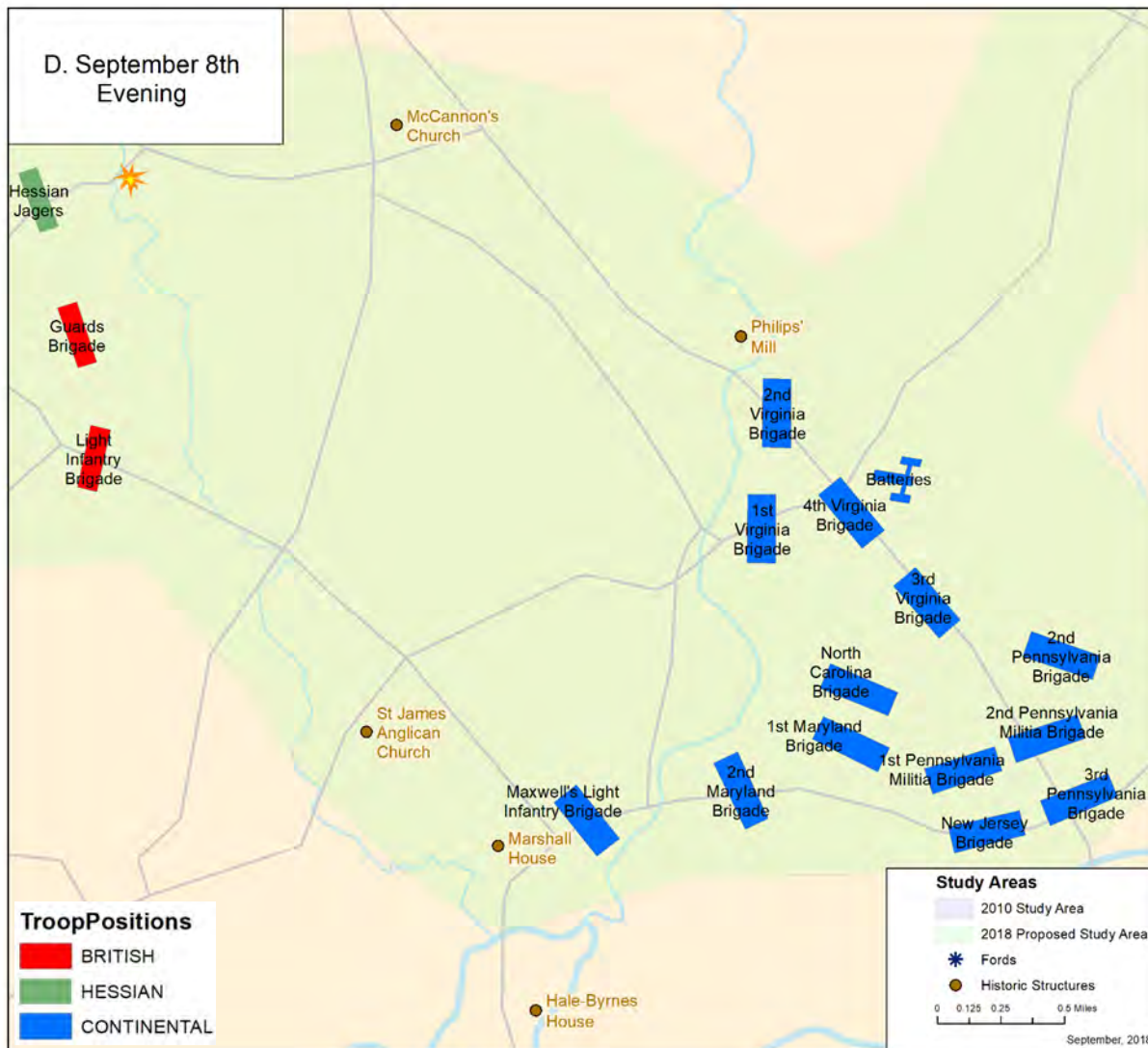


Figure 4. Arrangement of the American Army along the Red Clay Creek line, 8/9 September 1777 (Western Heritage Mapping).

On September 6, Timothy Pickering entered into his journal “Marched to Newport, three or four miles beyond Wilmington” (Pickering 1867:153). Following a Council of War with the “General officers” at the Hale-Byrnes House at “5 o’clock” that day, Washington returned to Wilmington from where he informed General William Heath that same day via his aide-de-camp Tench Tilghman that “Since General Howes debarkation in Elk River, he has moved on about seven Miles. His main Body now lays at Iron Hill and ours near a Village called Newport. In this Position the Armies are from Eight to ten Miles apart. It is yet very uncertain what Genl Howe’s plan of Op(eration)s will be” (Niels 1927:12). Later that day he joined his staff at Newport, and in “General Orders” from his new headquarters informed the Continental Army that British forces had sent their tents and all equipment deemed unnecessary and/or burdensome back to their ships: “This indicates a speedy & rapid movement, and paints out the necessity of following the

example.” The Continental Army might have to move quickly as well, therefore “officers should only retain their blankets, great coats and three or four shifts of under cloaths, and that the men should, besides what they have on, keep only a Blanket and a shirt a piece, and such as have it, a great coat. All trunks, chests, boxes, other bedding and cloaths, than these mentioned, to be sent away, till the elapsing of a few days shall determine whether the enemy mean an immediate attack, or not” (GW Papers).

The General Orders continued:

“The whole army is to draw two days provisions exclusive of to day and have it cooked, and deposited with the regimental Quarter Masters, provided salt provisions can be drawn; otherwise one day’s fresh provisions to be cooked and deposited as aforesaid, and two days hard bread, if to be had. [...] The tents of the whole army are to be struck and packed up in the wagons, to morrow morning; and hour before day and the horses tackled – All the Corps of horse are to be saddled at the same time; and the whole Army drawn up in their respective lines” (GW Papers).

As the events of September 8 showed, Howe could easily have marched the eight to ten miles from Aiken’s Tavern to Newport in a single day and engaged, and potentially defeated, the Continental Army waiting for him there. The “speedy & rapid movement” by American forces hinted at by Washington in this scenario is the opposite of waiting for an attack and can only mean re-deployment to different positions from which he would try to bring on an engagement and block Howe’s march on Philadelphia. Washington was laying the ground-work for the possibility of having to quickly re-position his forces to counter an attempt by Howe to once again try to outflank him rather than risk large losses in pitched battle.

In the morning of September 8 Washington was cognizant of Howe’s preparations for a quick march though the destination was as yet unknown. In a letter written early in the morning, certainly before 9:00 a.m., Washington informed Connecticut Governor Jonathan Trumbull from Newport that “Genl Howe’s plans are yet very mysterious, a few days ago he sent all his tents & Baggage on Board again and his Ships have fallen some distance down Chesapeak Bay. This can be for no other purpose but to go round to Delaware and meet him there, as he can easily extend himself across the Isthmus where it is narrow. This will be a strange Maneuvre indeed, as it will be exposing his Ships to some danger upon the Coast at this tempestuous Season, and should an accident to the Fleet he must be ruined. A little time must unfold his true designs, which I trust we shall be able to battle” (GW Papers). This letter indicates that Washington wondered whether the Royal Navy would backtrack its course down the Chesapeake, round the peninsula opposite Norfolk and sail up the Delaware Bay to Wilmington. From there it was but a short distance by water to Philadelphia.

Shortly after Washington wrote his letter to Trumbull, in which he made no mention of troop movements, telling Trumbull only that since debarking Howe had “only moved five or six miles from the Shore,” intelligence reached headquarters that Howe was on the move. In the morning of 8 September, a British officer reported that “the Rebels [...] fired their Alarm Guns upon discovering our unexpected Route” (Anonymous 1777b). Montrésor is more precise when he wrote that “At ¼ past 9 three alarm guns were fired from the rebel camp, conjectured to be at Newport” (Montrésor 1881:414).

The moment they stepped ashore Americans kept a close watch on British forces: “From the time the enemy landed at the head of Elk, we had our scouts out,” wrote Joseph Clark, Deputy Quartermaster in General Adam Stephens’ division (Clark 1855:98). As American resistance became better organized in early September that watch became more thorough. Caesar Rodney informed George Washington from Middletown in New Castle County on 6 September, that he had “a party of foot Just Setting out to take a View of the Enemy about Aitkin’s Tavern, where I am Informed they still Lye” (Rodney 1933:219). In the morning of September 8, Washington expected Howe to proceed east toward Wilmington and ordered his men into their defensive positions even before British forces had set out from Aiken’s Tavern. 26-year-old Joseph Clark of General William Maxwell’s Light Infantry Corps, approximately 800-1,000 light troops, recorded that “By Monday morning everything was in readiness for an engagement, the troops marched down and took post in the entrenchments and went through the exercise. The reserved corps took their station at a proper distance and performed several manoeuvres” (Clark 1855:98; McGuire 2006:171-172). That day Lieutenant James McMichael of Colonel Walter Stewart’s Pennsylvania State Regiment (13th Pennsylvania Regiment) in General Weedon’s brigade entered into his diary: “At 3 A.M. the General was beat and all tents struck. All the regiments were paraded, the men properly formed with an officer at the head of every platoon” (McMichael 1892:149).

In anticipation of Howe’s advance, American forces hovered on the front, flanks, and rear of the Crown Forces. Delaware militia under General Rodney concentrated at Middletown and Noxontown and Pennsylvania militia congregated at several taverns in western Chester County. From the main army, Washington sent out strong detachments to act as skirmishers to delay the British advance while giving him an opportunity to redeploy his forces as Howe’s plan of attack would develop. Captain Jonathan Forman of the 4th New Jersey Regiment of the First New Jersey Brigade of Lord Sterling’s division entered into his diary under the “8.th the Enemy Advancing went out with a Scout of About 120 Men Under Com.d [of] M[ajor]: [Joseph] Bloomf[iel].d” (Forman:18). According to Major Joseph Bloomfield of the Third New Jersey Regiment the scout that set out was even larger at “130 Men properly officered from the Jersey Brigade & 24 Cavalry.” Its purpose was to serve “as an advanced guard two Miles in front of our lines, with directions to skirmish with the enemy till they should drive me on the Main Army which was expected would be about day break & a general engagement ensue” (Bloomfield 1982:127). Two miles in front of Maxwell’s Light Infantry places the scout in a half circle anywhere from past the Hale-Byrnes House to the southwest, in case Howe was approaching on Old Baltimore Pike, to in the vicinity of the intersection of modern-day Kirkwood Highway (Delaware Route 2) with Wollaston Road/Old Milltown Road, in case Howe approached on a more northern route.

The firing of alarm guns apprised Continental forces that Howe’s forces were on the move. McMichael wrote that “we remained under arms until 9 o’clock. Then the alarm guns were fired and the whole army drawn up in line of battle, on the east side of Red Clay Creek, with Gen. Greene’s division to the right” (McMichael 1892:149). But how did Americans know at 9:00 a.m., or shortly thereafter, that Howe’s forces were approaching, or at least that they were on the move? Had they discovered one of Cornwallis’ Light Infantry detachments? By 9:00 a.m. or 9:15 a.m., Captain Dansey’s Light Infantry scout had marched about three hours or a good four miles on Old Baltimore Pike and was now in the vicinity of Col. Patterson’s Mill, too far to be seen from any forward American position. Even from Patterson’s Mill it is about four miles to the Hale-Byrnes House, and a scout reconnoitering east on Chestnut Hill Road would have been even farther to the west; it would have had a longer route first going north before turning east.

Continental scouts patrolling toward Newark and Howe's encampment along Old Cooch's Bridge Road and Route 896, likely observed the departure of Sir William and his forces from Aiken's Tavern and informed Washington. Discovery of British movements must have been very early in the day for news to reach Washington's headquarters by 9:00 a.m. or 9:15 a.m. It is thus likely that Americans in or around Newark, first reached by Crown Forces at 7:00 a.m. or shortly thereafter, had alerted Washington's headquarters: a rider on horseback could cover the eight miles from Newark to Newport at a trot or jog in about an hour.

When none of Howe's troops appeared - neither Forman nor Bloomfield mention any encounter with Crown Forces - Washington sent out ever larger units to locate British forces and initiate the battle. The first to be sent out was probably the Light Infantry, more than 1,000 troops, which was positioned farthest to the north and west of the American line and most likely to encounter the enemy. Joseph Clark wrote "Our troops were held in readiness and a large scout sent out under the command of Gen'l Maxwell, who in their route fired several times upon the enemy" (Clark 1855:98). Captain Charles Porterfield, attached to Maxwell's Light Corps, noted that on the day the British moved from Cooch's Bridge, the Light Corps moved "...from the Rising Sun [tavern, in today's Stanton] up the Lancashire (sic) Road...." Regarding the firing, Porterfield commented "...that we were Paraded on the Enemy's firing, that we marched up, & filed off to the right on the Discharge of all Arms; what we might have done in conjunction with [militia I know not....]" (Porterfield 1777). Another officer in the Light Corps, Lieutenant John Marshall, testified that "...The day the Enemy moved from Iron Hill we marched a considerable distance (t'was supposed that we might attack them advantageously) at the close of the evening we retired without fighting. That night in common with many other nights we lay without Blankets & without provisions, we pass'd the next day without pro[visions]...." (Marshall 1777). We do not know when or where that initial firing occurred, but Washington's next decisions suggest that Maxwell's report to headquarters had informed Washington that whoever his troops had fired at was not Howe's main army.

The selection of Maxwell's Light Infantry stationed on his right flank indicates that Washington was already suspecting that Howe was trying to turn the American right flank and to insert himself between Washington and Philadelphia. Keeping some of his forces in forward positions west of Newport, viz. the scout from the New Jersey Brigade - Bloomfield wrote that on September 8 he "was alarmed all Night with the approach of the enemy & kept my party paraded" (Bloomfield 1982:127) - Washington ordered Maxwell to the northward. Concurrently he sent off another brigade on his norther flank, which included McMichael in Weedon's Brigade, which well over 1,000 men strong, to look for Howe. Weedon's brigade lay in the northern tip of the American defensive triangle south of Philips Mill on either side of Newport Gap Pike. They had been deployed "on the east side of Red Clay Creek, with Gen. Greene's division to the right. Here we remained for some time, when Gen. Weedon's brigade (of which my regiment was a part), was detached to the front to bring on the attack" (McMichael 1892:149). McMichael's observation that he had waited "for some time" indicates that the order to advance may have come just before noon: if the alarm guns had been fired in response to news that British forces had been observed marching through Newark around 7:00 a.m., the first British units would not be reaching Mill Creek much before 11:00 a.m. By ordering these troops now to advance Washington showed that he expected Crown forces to appear on his right flank. In this scenario, the initial clash of American forces marching south-west on Milltown Road with British forces could have occurred along Milltown Road between Duncan Road and east of Limestone Road.

But Howe did not want a major engagement on September 8. Like Maxwell before him, Weedon did not encounter any British troop concentrations. Upon reaching McKennans Church Road he therefore turned north-east toward McKennans Church, today's Red Clay Creek Presbyterian Church. James McMichael was among the men who made that march and "crossed the [Red Clay] creek and marched about a league [i.e. three miles] to an eminence near Mr. McCannon's meeting house" (McMichael 1892:149). McMichael's distance is correct: it is almost exactly three miles from today's Greenbank Mills southwest on Milltown Road to McKennans Church Road and from there north to the church itself and four miles on Duncan Road from the church to the center of Newport. Weedon probably reached McKennans Church Road two miles distant at around 2:00 p.m. and the high ground near the church a good hour later.

Their movements did not go unnoticed by the British. Maintaining his pace of not quite 1.5 miles per hour for nine hours and for the whole distance of about "12 miles," Montrésor had reached his camp on the northern end of the encampment "at 1 o'clock at Nibblas's [Nichols] house which is from Aiken's Tavern to Cooch's Bridge round Iron Hill by way of Newark and so into the road from Newport to Lancaster in the way to New Garden" (Montrésor 1881:416). Howe's aide-de-camp Captain von Muenchhausen recorded in his diary that upon arrival of the British vanguard at Nichols House "it seemed that the rebels were also on the move. We were only five miles away from them and only five miles from Newport. There was much activity in front of us. We saw two regiments coming from Newport on two different roads, with their flags flying, and in very good order, as if they were heading for the road to Lancaster." (Muenchhausen 1974:30) One of these units was "probably Weedon's Brigade" on McKennans Church Road marching to McKennans Church where Weedon's brigade encamped "within half a mile of" the enemy on the east side of Mill Creek: it is less than a mile from Stoney Batter Road to Red Clay Creek Presbyterian Church. Weedon's brigade spent the night of September 8/9 there with orders to "remain under arms all night, the sentries keeping up a constant fire" (McGuire 2006:160; McMichael 1892:149). The other unit mentioned by von Muenchhausen was most likely Maxwell's Light Infantry advancing north, possibly on a no-longer existing road section of Mill Creek Road along the west side of the creek, to Hockessin Meeting House. Captain Peebles who marched with the British Guards at the very front of the British column recorded that as "we proceeded on the Lancaster road beyond Nicholl's, which was Hd.Qrs. as we came to our ground saw a Column of dust rising out of the wood over the road in our front, which being reconitred some of the Enemy were seen Horse & foot. The 44 & 42d. Comys. Were sent down on which the Enemy retired." (Peebles 1998:132) The column of dust observed by Peebles was raised by Maxwell's troops, trying to keep pace with, if not get ahead of, Howe's column. Thomas Sullivan of the 49th Regiment of Foot wrote that in the evening of September 8 "The enemy were that night in our front and rear. The two Armies in this situation, being only four miles apart" (Sullivan 1997:128). Charles Stuart wrote in a draft account of the Philadelphia Campaign that on September 8 "We had no sooner taken our ground than the Light Dragoons & some foot of the Enemy skirmish'd on our right flank but without loss on either side." (Stuart 1927: 46) As British forces departed on September 9, they marched past Hockessin Meeting, about two miles from Howe's headquarters and ten miles from the Benjamin Ring House where Washington had established his headquarters. "Here the rebels had a body of their forces, consisting (as the quakers told us) of fifty or sixty light horse and about a thousand foot. They were but just got away, for many of their fires were still burning when we arrived" (Anonymous 1777a:77).

Howe may not have been prepared for a full-scale battle on September 8, but he was not averse to skirmishing to keep the Americans at a distance. Upon noticing Continental Army forces on his right flank,

Muenchhausen “was ordered by the General to ride quickly so as to lead the Hessian jägers diagonally through the woods to cut off these troops, if possible. At the same time General Howe, with the light infantry, marched directly toward them for the same purpose. But the rebels, who had become aware of this, retreated quickly. Notwithstanding this, the jägers got close enough to send a few amulette balls at them” (Muenchhausen 1974:30). Exchange of fire continued all day and into the night. Montrésor recorded that later in the afternoon, “Three Cannon shot by us at rebel officers reconnoitering after we had Come to our Ground” (Montrésor 1881:415). Since Montrésor lay encamped along Limestone Road between Brackenville Road and Mendenhall Road, farther north from the initial encounter, the cannon shots mentioned by Montrésor at reconnoitering officers cannot refer to the amulette balls sent by the Jäger. Montrésor, and any other soldier, would have know the difference and not described amulette fire as artillery shots. Montrésor continues that there was “Some firing this evening at the rebels” from the British encampment (Montrésor 1881:415). Peebles confirms this short exchange of fire and wrote that “a few skulking rascals came down in the Eveng. & fir’d at our sentrys which was smartly return’d & we were quiet there then for the Night” (Peebles 1998:132)

Baurmeister complained to the Landgraf on September 10, that “The enemy patrols could advance further than ours because they were known and feared by the inhabitants, whereas ours risked being shot from ambush or cut off at every house, bush, woods, and fence—which has happened more than once” (Baurmeister 1935:403). Du Buy informed Lt. General Wilhelm Maximilian von Dittfurth in a letter of October 16, 1777, written in the form of a journal under the date of September 10, that since “we were always surrounded by” the enemy, “we had to take every precaution when encamping or marching, as the vanguard, side-patrols to the right and left and also the rear-guard were constantly encountering them; however, or side did not sustain any great loss” (Du Buy 1777). What is important to note in Du Buy’s letter is his statement that, even though no primary-source American account has as yet been located, “side-patrols to the ... left” of Howe’s flank were also subject to an occasional exchange of fire. The exchange of fire was not intense, but it was constant and unnerving. Montrésor recorded that on September 8 there were “but 3 or 4 shots fired during the march” (Montrésor 1974:30). Lieutenant von Feilitzsch of the Ansbach Jäger also entered into his diary that “During the entire day the flanking patrols only fired about a dozen shots” (Feilitzsch 1997:17).

These exchanges of fire represent only the best-known examples of the encounters between British and American forces on September 8 that occurred over a wide area. American pension depositions of the 1830s mention numerous exchanges of fire. Private Robert Walker of the 1st Maryland Regiment in General Smallwood’s brigade wrote that “After this engagement [Battle Cooch’s Bridge, 3 Sept. 1777] declarant remembers that there were several small skirmishes, before our troops reached Brandywine, but there was no one of them of much consequence; nor can he undertake to state the number of them, but they were frequent” (Walker 1832). Private Robert Humphrey of the Pennsylvania State Regiment under Colonel Walter Stewart attached to Weedon’s Brigade in General Greene’s division also “had several skirmishes untill the Battle of Brandywine” (Humphrey 1832). Private Robert Devin of the 14th Virginia Regiment in the same brigade fought “a number of skirmishes on previous days”, i.e. prior to September 11, 1777 (Devin 1832). Private Thomas Hardin of the 1st Continental Light Dragoons deposed how “... in the spring following [spring 1777] the regiment was marched to Philadelphia and from thence we marched with said regiment to Wilmington in Delaware and from thence to Christiana Bridge in the neighborhood of which the American troops had several skirmishes with the British troops about this time” (Hardin 1832). None

of these veterans remembered dates and/or locations, but it is important to note which units these men had served in: we know that Robert Humphrey's unit had contact with Crown forces, and the 14th Virginia had been part of Weedon's brigade as well.

An undated letter by Colonel Theodorick Bland of the 1st Continental Light Dragoons addressed to Washington provides more examples of the exchanges of fire on September 8 as well as an impression how thorough Washington's intelligence gathering was. When he wrote his letter, Bland was posted at "Charles Evans', to the right of yesterday's encampment, about 3-4th of a mile," which in the case of the Light Dragoons meant in the vicinity of Greenbank Mills. Nineteenth-century maps show members of the Evans family along Faulkland Road between Centerville Road and Red Clay Creek in Christiana Hundred, which is north of Greenbank Mills. "[T]his morning" as soon as the fog had risen," Bland had "dispatched two parties, each consisting of captain, lieutenant, cornet and 30 privates" to reconnoitre the roads and passes to his front. These and other scouts had reduced his force to "about 20 men." Throughout the morning he had heard "considerable firing toward Wilmington, as we imagine, or in the rear and rather to the left of where we are (which is on the right of where our army was posted yesterday)." Additionally, he had "sent out small parties wherever any firing has been heard but without having as yet any account of the cause, except on our left, where we took up two or three militia" (Bland 1840: 65-66). The musket fire to his left, i.e. toward the White Clay Creek, indicates a most likely date of September 8 since there were no British forces left this far south in the morning of September 9.

It is unlikely that Washington had been the target of the cannon fire in the afternoon of September 8, but we know that by late afternoon, Washington, apprised of the exchange of fire on Stoney Batter Road, was out reconnoitering, wanting to see for himself, but it is not known whether he rode that far north. In a letter to Congress written late on September 9 "6 miles from Wilmington" Washington told John Hancock that "The Enemy advanced Yesterday, [i.e. September 8] with a seeming intention of attacking us at our post near New Port. We waited for them the whole day, but in the Evening they halted at a Place called Mill Town about two Miles from us. Upon reconnoitering their Situation, it appeared probable, that they only meant to amuse us in front, while their real intend was to march by our right and by suddenly passing the Brandywine and gaining the Heights on the North side of that River, get between us and Philadelphia and cut us off from it." (GW Papers)

Who and where were British and American forces "in the Evening" of September 8 when "they halted at a Place called Mill Town about two Miles from us"? President of Delaware (the initial title of what is today the governor of the state) John McKinley wrote that the Continental Army had "entrenched themselves very well on the Eastern bank of Red Clay creek, about a mile westward from Newport" (Rodney 1933:221). If the distance to the eastern bank of the Red Clay Creek constitutes one mile from Newport, and the enemy, as McKinley continues, "have left a body of their's on a high hill, about 3 miles west of Newport, who shew themselves very freely both last Eveng & this day on the skirt of a piece of Woods. Various opinions are Entertained concerning their numbers, some alledging them to be only 150 others vastly more", the most likely location of this British detachment is in the vicinity of Old Limestone Road on the east side of Mill Creek at Milltown (GW Papers). The pension application of Private John Campbell of the Cumberland County Militia suggests that the militia was not prepared to let the challenge go unanswered: "he also thinks that he was engaged in another skirmish near Mill-town" (Campbell 1833). The most likely location of this skirmish is in the vicinity of Old Limestone Road on the east side of Mill Creek at Milltown. Washington's

letter confirms this location: Mill Town is indeed two miles from the westernmost location of Continental Army forces (Figure 5). A look at Andrés map shows that the troops Washington observed was the British Light Infantry, which had come north from Christiana and taken up a position in the rear of the British forces.

Almost exactly 80 years after the event, the *Delaware County American* reported in its issue of August 19, 1857, that “It is said that General Washington and Staff held a council of war on the evening previous to the battle of Brandywine, in the house on the old Harlan property, now belonging to Mr. Allen Ward, in the Milltown, Mill Creek Hundred” (Anonymous 1857). There is no contemporary source that confirms this meeting, and the dating is almost certainly wrong – on the evening of September Washington was at Chadd’s Ford – but a reconnaissance during along Mill Creek followed by an impromptu Council of War in the evening of September 8 in Milltown on the way back to headquarters in Newport seems credible. The decision to break camp in the early morning hours of September 9 and re-deploy the Continental Army to Chadds Ford was probably made at that meeting.



Figure 5. Detail of Samuel M. Rea and Jacob Price, *Map of New Castle County, Delaware: from original surveys* (1849), showing the location of the Harlan property at Mill Town.

Depending on which road Washington and his aides took, the distance from Harlan’s home and mill to American headquarters in and/or around Newport is between 4.5 and 5 miles (Figure 6). On horseback it would have taken less than an hour to cover that distance. If Washington did hold a council in the Harlan property, he was dangerously, if not recklessly, close to a detachment of Cornwallis’ Light Infantry. In a letter of September 9, John McKinley informed Caesar Rodney that on their way to Nichol’s house on September 8 “The Enemy I suppose by way of decoy, & to amuse our Troops from pursuits, have left a body of their’s on a high hill, about 3 miles west of Newport, who shew themselves very freely both last

Eveng & this day on the skirt of a piece of Woods. Various opinions are Entertained concerning their numbers, some alledging them to be only 150 others vastly more” (Rodney 1933:221-222).

As the last wagons of Howe’s army were struggling into camp around midnight 8/9 September, an aerial view would have shown two rows of campfires stretching across Millcreek Hundred from Newport to Hockessin. To the west lay Sir William Howe’s army along Limestone Road. Toward the east American campfires stretched from the Christiana River to Harlan’s Mill, McKennans Church to Hockessin Meeting. Behind that line of 2,500 or more American soldiers, the Continental Army was hurrying to the fords across the Brandywine. Washington had correctly guessed Howe’s “real intend,” which meant that the Continental Army had to redeploy from its positions around Newport toward the Brandywine, and that quickly.

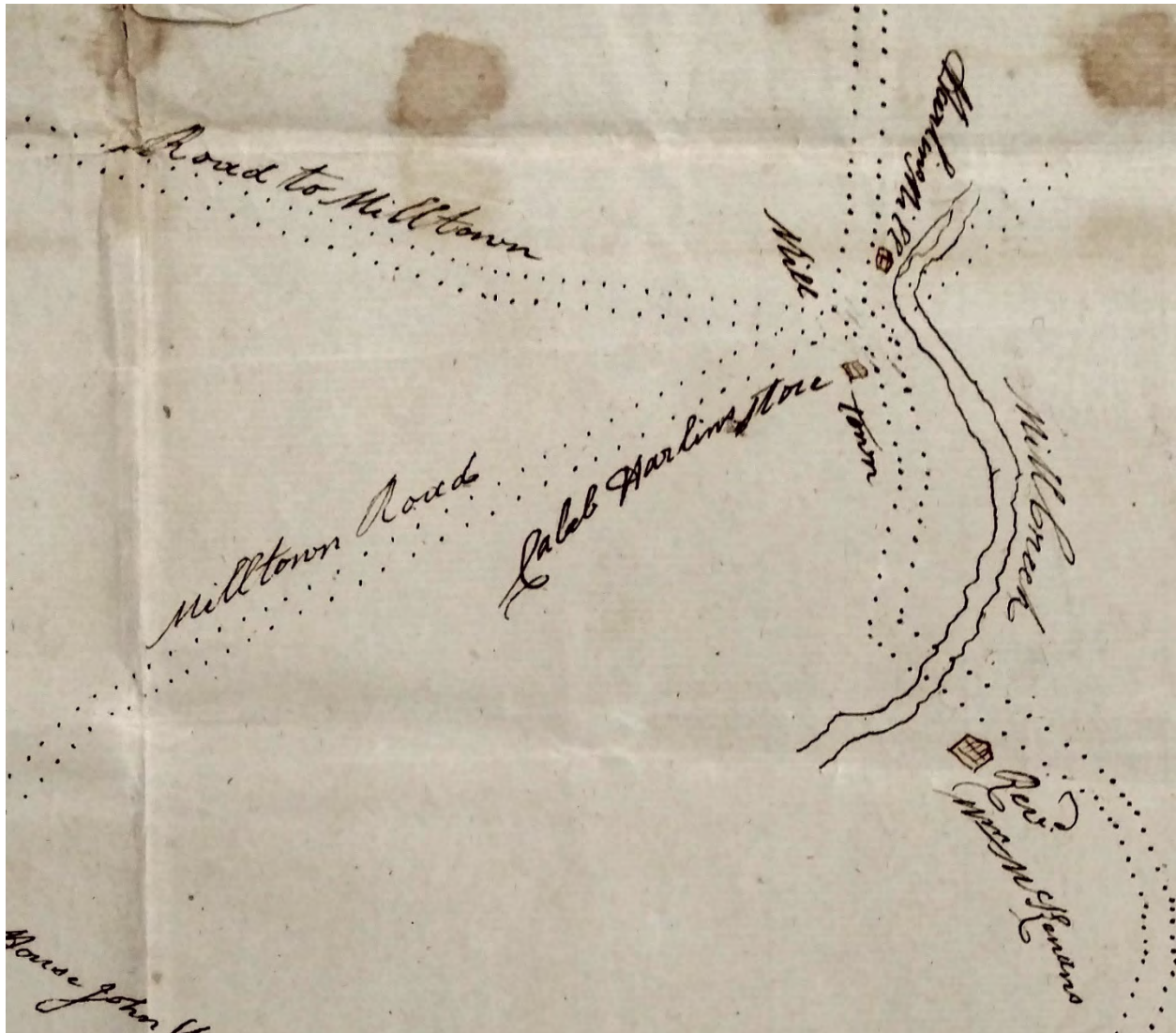


Figure 6. Detail of Return of the Limestone Road and Newport Road to the Chester County line, May 1804 (NCCRP 1804). The location of Harlan’s Mill and Store are depicted at the crossroads village of Mill Town.

2.2 Army Movements, September 9, 1777

2.2.1 British Army movements September 9, 1777

The day started late for the British army on September 9. The march the previous day, though not uncommonly long at 10 to 12 miles, had nevertheless seen the last units enter their campsites after midnight only, 20 hours after reveille on September 8. Men and beast needed rest before they could continue their march. It also had wreaked havoc with the marching order of Cornwallis' division. By sending his Light Infantry toward Newport, he had dispersed his column with the result that his grenadiers now formed the tip of Howe's column while his Light Infantry lay more than three miles away, a good two hours march, at the southern end of the column. These men, plus whatever pickets Cornwallis still had deployed along the route, needed to rejoin his division and move to the top of the camp before the march could continue. On September 10, Rodney received a note from John McKinley that "I wrote you yesterday by Express, informing of the movements of the Enemy & that a party remained behind which I was desirous should be made Prisoners by the Militia of this state under your command, since which I have had authentic intelligence, that the sd party have moved on after the main body" (Rodney 1933: 233).

In preparation for the march scouts needed to be sent out to collect information on the location of American forces either by direct observation or by picking up locals for questioning. Once Howe thought he had gathered the necessary intelligence, he issued orders for the march. For the march on September 9, Howe left the order of the march unchanged; the orders for the march itself were all give as oral commands. (Howe 1777:489-490) His Orderly Book for September 8 and 9 only reads:

Head Quarters, Nicholl's House, New Garden, 8th. Sept., 1777.

The Troops to be in readiness to move on the shortest Notice

Two Field Officers to Mount with the Pickets of the British, and One to visit the Corps on the Right of the Cross roads, the other those on the Left.

All Horses and Waggon taken up by the Troops on this March to be sent to the Quarter Master General near Head Quarters, at 8 o'Clock to-morrow morning.

A Guinea will be paid for every good Horse so delivered, and for indifferent ones in proportion.

Five Dollars for every good Waggon and Harness.

Morning Orders, 9th. Sept., 1777.

Field Officer for the Picket on the right this day, Major Yorke. For the left, Lieut. -Col. Walcott.

The scribe of the Hessian Regiment Erbprinz recorded the marching order for September 9, which moved Grant from Knyphausen's column and placed him with Howe and Cornwallis.

1. First Division under General von Knyphausen's column lined up as English Jäger Corps, Queen's Rangers, 2nd Battalion 71st Regiment of Foot, Regiment von Mirbach, Baggage, Supply wagons, cattle, Regiment von Donop, Combined Battalion, 40th Regiment of Foot [with its two 3lb Cannon?], 1 officer and 20 Dragoons as rear guard, the 1st and 3rd Battalion 71st Regiment of Foot to cover the left flank;

2. Second Division under Lord Cornwallis and General Howe in the same marching order as the day before yesterday with the only difference that the communication between the two division was maintained [line missing in text; “by the Jäger and Light Infantry” as per von Knyphausen letter] marched between them and the division of Major General Grant of the day before yesterday joined this Second Division except the 40th Regiment of Foot (Erbprinz 1777:10).

When Howe issued his orders in the morning of September 9, he was still under the impression that he had stolen a day’s march on the Continental Army. His route to Philadelphia seemed open: two more days, and he would be across the Brandywine at Chadds Ford and have Philadelphia within reach. If there were any warning signs, Howe apparently ignored them. Attached to Howe’s military family as an officer without command, Charles Stuart wrote in a draft account of the Philadelphia Campaign addressed to his father that on September 8 “We could plainly discover their fires the Eveng. & from a continued noise I conjectured that they were moving on the following evening. Deserters confirm’d our suspicions & informed us that they had crossed the Brandy Wine Creek. We marched on the Eveng. of the 9th” (Stuart 1927:46). This information does not seem to have entered Howe’s planning when “At one o’clock in the afternoon of September 9, after General Howe had obtained sufficient information about the enemy, the army set out on the march in two columns. The Commanding General remained with the first column, which was led by General Cornwallis and marched about two miles on the right of the second column led by Lieutenant General von Knyphausen. He gave such marching orders that both columns were to arrive at the place of rendezvous, namely, Welch's Tavern, at the same time” (Baurmeister 1935:403). Welch’s Tavern, or Anvil Tavern Inn, was located on Route 1 about four miles from the center of Kennett Square and only about another four miles from Chadds Ford, a march of about 12 to 14 miles, depending on where an individual unit was in the line of march in Howe’s Army on September 9. The selection of Cornwallis to arrive at Welch’s Tavern first and to spearhead the column made sense both tactically as well as logistically: if there should be some militia hovering around the fording place, they would need to be dispersed, and since the ford would likely need some improvement before the artillery and the hundreds of wagons and cattle crossed, that work needed to be completed before Knyphausen arrived there. But since it would move faster and had a shorter route, it could set off after Knyphausen’s division with the cattle and wagons. This column moved slower and could take a longer route but it had to depart first in order to arrive at the assigned location at Welch’s Tavern in time to cross the Brandywine on September 10. Marching orders expected the army to be on the march shortly after noon which assumed an estimated time of arrival around midnight. Selection of a point of rendezvous late in the evening and into the night in an unknown countryside would have been quite risky if not irresponsible if Howe had known, or assumed, that his enemy was that close. By early afternoon on September 10 at the latest, the British army would be across the Brandywine.

Almost from the beginning, however, Howe’s plan ran into problems (Figure 7). Departure of the army was delayed well into the evening: even if all went well, it would be daybreak on September 10 before it would reach Welch’s Tavern. Aide-de-camp Major André entered into his diary on September 9, 1777, that “The Army received Orders to be in readiness to march at 1 o’clock in the afternoon in two columns. The troops, however, did not move till sunset” (André 1904:82). This delay was caused in part by how the brigades had encamped on September 8: with Knyphausen in the center of the encampment, his column had to pass through more than half of Cornwallis’ brigade while the British Light Infantry had to catch up with the grenadiers before they could set out on the march. British engineer Capt. John Montresor says in his diary entry for this date: “At 2 o’clock P.M. Lt.-General Kniphuysen with the 3rd division and 2 more British

Brigades marched for Kennett’s square [Pa.] via New Garden [Pa.] and arrived at his ground at 11. At sunset this evening the 2 other divisions of this Army under Lord Cornwallis and Major-General Grant marched from Head Quarters at Nichols’s House Mill Creek Hundred by a bye road to Hokesson Meeting house [Del.]—Quaker meeting 4 miles distance and encamped” (Montrésor 1881:415).

Why would Howe encamp after having gone only four miles, and with the van of his army barely beyond the campsite? Purdy “marched from new garden Which was in New Castle County About 5 Oclock in the After noon we marched all that night & in the morning Cannon Squar About 7 oclock in the Morning which was About 10 Miles” (Purdy 1777). The Regiment von Donop in Knyphausen’s First Division did not get off until “6 PM [when] we broke camp and marched until at last arrived near Casiket [Hockessin] in New Castle County” (Freyenhagen 2011:66). That was four hours after Montrésor had recorded the departure of Knyphausen. By the time the army was finally on the move, Howe learned that he his plan of outflanking the Continental Army had failed. He had not stolen a day’s march on Washington, rather the other way

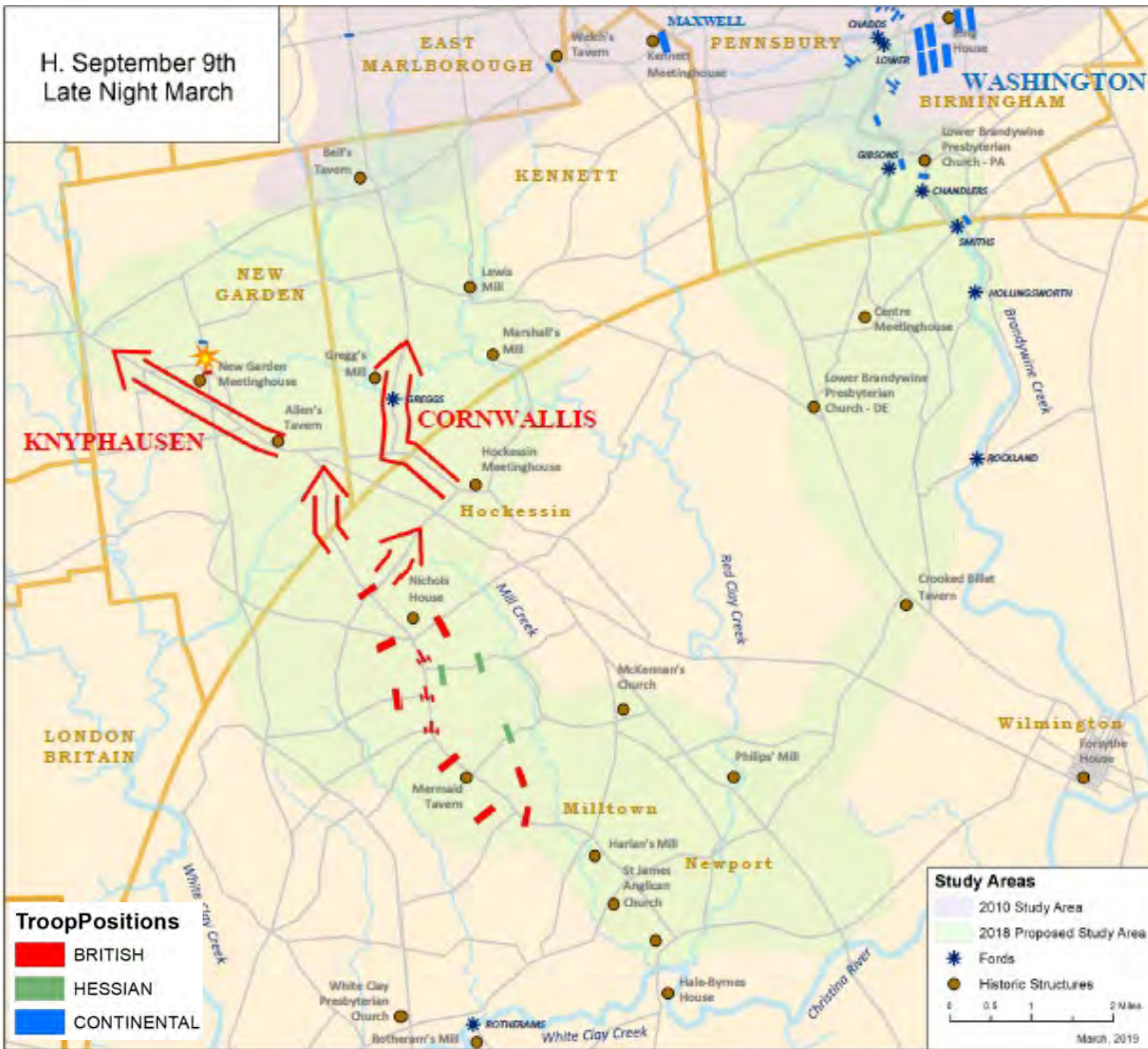


Figure 7. Movement of Crown Forces on the afternoon and evening of September 9, 1777 (Western Heritage Mapping).

around: Washington's forces lay entrenched along the Brandywine, waiting for Howe. Archibald Robertson informs us that "After marching two miles to a Place call'd Okerson Meeting", i.e. Hockessin Meeting House, Howe learned from an American prisoner that the main American army "had moved from Wilmington" (Robertson 1930:146). Concurrently an anonymous officer of the Light Infantry recorded that "The Army mov'd at four in the Afternoon. The Light Infantry covering the Rear before they were well off the Ground, a Country man was taken up by the 1st Light Infy. as a Spy, who after Examination reported the Rebel Army was in motion to cross the Brandy Wine" (Anonymous 1777b) Montrésor summed the situation up neatly when he wrote that "At ½ past 5 this afternoon the Commander in Chief received accounts of the rebel army having evacuated Newport and Wilmington and taken post at Chad's ford on the Brandywine Creek" (Montrésor 1881:414).

Not only had Howe's time-table for the arrival at Welch's Tavern become unrealistic, the tactical situation had fundamentally changed as well. Howe's aide-de-camp Baurmeister wrote that "General Howe, who with the van of the first column had arrived at the Quaker church in Marlborough Township, [Baurmeister is incorrect in his identification - this was Hockessin Meeting] did not think it advisable to proceed further and ordered the army to halt in column formation. He posted the grenadiers between the two columns and the 3rd English infantry brigade to the rear of the second column and had this column's provision train and baggage drawn up at Kennet Square. All this was accomplished in a steady downpour, and by the time it was finished, and the rear guard had finally come up, day was breaking." (Baurmeister 1935:403) As Howe decided to wait out the night near Hockessin Meeting, he knew that his time-table, destination, routes, and order of march needed to be changed. The new orders for the march, issued in the early evening at "Head Quarters, Cascot [Hockessin], Newcastle Co., 9th. Sept. 1777", read

The Order respecting the three Brigades of Artillery and Baggage given out this morning is Countermanded. It is to March as follows: The whole of the three Brigades of Artillery are to March with the Army; The First and Third Brigades of Artillery in front of the first Brigade British. Second of Artillery in Front of the 4th. Brigade British. The Baggage of the General Officers, Staff Hospital, and of the 1st. and 2d. Divisions, to follow the 4th. Brigade British, according to the line of March. The Spare Artillery, Ammunition Waggons, Provision Waggons, Waggons belonging to the 3d. Division, and Cattle of the Army, to March with the Division under the Command of Lieut.Gen. Knyphausen. The Paymaster's Waggons in front of the Baggage of the 3d. Division; two Squadrons of Queen's Dragoons to march with Lieut.-Gen. Knyphausen's Division and One Squadron with the 1st. and 2d. Division. The Quarter Master of each Battalion or Corps, and a Captain from each Brigade, to March with their Baggage, and to be answerable for the Regularity of their Men. When fresh Provision is Issued to the Army, the Commissary General is directed to Issue double Rations to the Officers" (Howe 1777:490).

Re-arranging the order of march proved impossible. Ensign Carl Friedrich Rueffer of the Mirbach Regiment recorded on September 9, that "Toward ten o'clock this night our patrols encountered parties of the enemy. However, it was an adjutant from the commander in chief with an escort of dragoons, bringing an order to General von Knyphausen to change his march route because information concerning a change in the enemy's dispositions had been received during the march" (Burgoyne 1996:172). The adjutant may have been "Captain [Duncan] Campbell of the emigts being sent from Hd.Qrs. towards Kenetts Square fell in

with some of Fergusons riflemen whom he took for Rebels in the night & advancing upon them was wounded” (Peebles 1998:132). Campbell was not the only courier looking for Knyphausen. Muenchhausen recorded that “General Howe sent me and one of my comrades, Captain Knight, together with 12 dragoons, back with orders for Knyphausen’s division to stop at New Garden Meeting, which we would have to pass” (Muenchhausen 1974:30). The prime reason for rescheduling and rerouting the columns and for ordering von Knyphausen to stop at New Garden Meeting House was to give Cornwallis’ column time to march north and reach Kennett Square ahead of von Knyphausen in the morning of September 10. Muenchhausen and Knight “rode for 10 miles in territory we did not control, and twice came upon rebel dragoons who fired at us, we luckily got through,” but by then it was close to 1 a.m. on September 10, and Knyphausen was well past New Garden Meeting House (Muenchhausen 1974:30). Baurmeister wrote that “Lieutenant General von Knyphausen's left column, in the middle of which was the entire provision train and the heavy artillery and cattle, marched along the New Garden road through continuous narrow defiles. The van reached Kennet Square several hours after nightfall” (Baurmeister 1935:403).

Besides the unwelcome information that Washington’s army was blocking the Brandywine fords, weather and road conditions provided additional reasons why the march needed to be halted and marching order changed. “The 3rd and 4th Brigades were at first in the right-hand column, but the road being found very bad, were ordered, together with a brigade of artillery and the baggage of that column, to turn back and take the road General Knyphausen had marched. This movement was attended with a great deal of trouble and protracted the march of the Brigade in the rear till near 3 o'clock the next day” (André 1904:82). “At 12 o'clock at night the General in Chief had ordered the right-hand column to halt about four miles from the old encampment” (Von Knyphausen 1777: fol.54v). It took a while until the order reached all his units. As the Light Infantry slogged on through the dark, Lieutenant Stirke recorded for September 9, that “The Army march'd at 4 O'Clock in y evening towards Lancaster and ye Light Infantry after a very disagreeable march, thro swamps, and rivers, in many places up to ye middle; and after several halts, took post on a hill, at 2 O'Clock in the morning, about three miles from ye ground we had left” (Stirke 1961:169). Ewald with Hessian Jäger similarly struggled “during a very dark night ... through impassable and marshy woods,” a remarkable statement when his commanding officer, Lieutenant-Colonel Ludwig von Wurmb could write that “In the night of the 9th to the 10th, the guide who took General Washington across the Brandywine was captured and gave us good information. The guide knew the way through an area where all houses are occupied, where there are many loyalists and there will be no shortage of news” (Ewald 1979: 80; Wurmb 1998:10).

The late start, the march through difficult, unknown territory in pouring rain during the night of September 9/10, combined with incomplete or faulty road information wrecked Howe’s attempt to re-arrange and re-direct his columns in the middle of the night. Rather than Cornwallis’ column it was Knyphausen who had reached Kennett Square first. The von Donop Regiment, “marched until six o'clock the following day, i.e. 10 September (Donop:71). Downman set out on “September 9th – About 5 o'clock this afternoon” and “made a forced march all night through bad roads. Halted in the morning about 6 at Kennett Square” after a march of 11 eleven hours (Downman 1898:156).

But Howe quickly recognized the positive aspects of the developments on September 9 and adjusted his plans. The orders issues from Hockessin Meeting House in the evening reflected his evaluation of the changed circumstances. If the quick re-deployment of the Continental Army to the Brandywine in the pre-

dawn hours of September 9 had foiled Howe's original plan of turning Washington's flank, it also meant that Washington was offering Howe the battle he had sought many times before. While there was a Continental Army and the resistance a "national" capital and seat of government, the rebellion would have a military and a political core to coalesce around. A decisive defeat of that army just a few miles from Philadelphia might achieve the dual purpose of eliminating the army and lay the foundation for occupying Philadelphia as well. Collecting his forces at Kennett Square rather than at Welch's Tavern would provide a security corridor wide enough to arrange and deploy his forces for an attack on the Continental Army. Howe's orders to Knyphausen to wait at New Garden Meeting House and the changed marching route for Grant's division were meant to bring his combat units to Kennett Square first, but weather and terrain voided his plans. Upon arrival at Kennett Square in the morning of September 10, Howe wanted to immediately initiate the attack on the Americans. His officers wisely discouraged him. The Instead of fighting the battle on September 10, the Continental Army would have to be attacked one day later, but the delay gave Howe time to move Cornwallis to his far left flank, from where it would embark on the flanking march that would decide the Battle of Brandywine.

2.2.2 Continental Army movements September 9, 1777

Upon his return from Harlan's Mill, Washington issued orders for his army to move (Figure 8). In a letter to John Hancock on September 9, written "6 Miles from Wilmington," he wrote that "it was judged expedient to change our position immediately, the Army accordingly marched at 2 O'Clock this morning and will take post this Evening on the High Grounds near Chad's Ford" (GW Papers). In the early morning hours the Continental Army, "accompanied by his excellency," began its march to the Brandywine. Just as with the British Army, it took time for the Continental Army to be on the move, but the Continentals moved much faster (McMichael 1892:149). Captain William Beatty of the 7th Maryland Regiment in Smallwood's Brigade recorded that "The 9th [Sept.] we began this March about 2 o'Clock in the morning" (Beatty 1908:109). Pickering wrote on that on September 9, "...Left Newport in the morning before daylight, and marched to Chad's Ford; crossed it, and encamped on the east side of the Brandywine, having information that the enemy had marched far to the north of Newport" (Pickering 1867:154).

Few descriptions of the roads taken during night march survive beyond a cursory sentence in the respective journals or diaries. William Long of Colonel Isaac Taylor Regiment of Chester County Militia deposed that "after some marching and being for some time stationed at Wilmington he was marched in said company and regiment up the Brandywine to Smith's ford about two miles below Chadds ford where the regiment was stationed on the day of the Battle of Brandywine to prevent from crossing at that ford" (Long 1832). Captain John Chilton of the 3d Virginia Regiment recorded in his diary that on "Tuesday 8th [9th?] at 2 in the morning we had orders to march [...] took the road from Newport to Wilmington 2 Miles then turned to almost North about 2 Ms more [...] we then marched West course 10 Miles S.W. & crossed Brandywine Creek and encamped on the heights of the Creek" (Chilton 1931:289). Captain Robert Kirkwood of the Delaware Regiment wrote in his journal that on "Monday Sepr 8th 1777 (Near Newport) Struck tents & went to work in the lines, lay there till 3 O'Clock Tuesday morning [September 9] then March'd about 10 miles to Chadds ford & forded over & there encamped" (Kirkwood 1910:167).

Fortunately, the historical research of long-time resident and Quaker Amos C. Brinton provides much of the necessary information (see page 54 for additional information about Brinton). In the mid-1890s Brinton

provided the most detailed description of the redeployment of the Continental Army. According to Brinton, Washington, in

the morning of the 9th of September Before Daylight put his army In motion for Chadds ford and the Main part of his army took the Road that crosses (sic) the Present Lancaster turnpike near Oak hill and the Kennett Pike near the old Buck Tavern three miles from Wilmington [...] Washington took his Breakfast at Brindley’s then [crossed out “Sven Sudhams”] that then lived on what I call the Brindley Farm (in pencil, added “one section only”) now owned by Mr. DuPont [...] the army croded (sic) the Brandywine at Hollingsworths Ford now known as Ealy ford and kept up the east side of the stream past William Simasons and the Presbyterian meting house now Gone to Decay but the farm belongs to Mrs. Susan Seal then Robert Muccleho and the Road pased (sic) near the Brandywine some distance above Gibsons Ford onc cald Pyles Ford [in pencil, “at that time



Figure 8. Movement of the American Army from the Red Clay Creek line to the Brandywine, September 9, 1777 (Western Heritage Mapping).

Gordons Ford”] and then passed (sic) to the north of Neal Woodwards house & tanyard, now Mrs. Barneys and on to Chadds ford [.] the old Road has gone out of use but faint marks may be seen some places.

Washington had his men placed so as to Guard the Fords and all Ready to Receive (sic) the British army the Day Before the Battle [.] was placed so as to Guard the Corner & Gibsons [Fords] the Main Body of the army was at Chadds and [...] Washingtons army started from Near Newport Delaware on Tuesday morning Sept 9th 1777 some companies went on different Roads & crossed (sic) the Brandywine at Different Fords some at Hollingsworths the main army, and some crossed (sic) at Chadds Ford but Historians seem to differ so much that it is Hard to get It Right But It Is certain that on Tuesday morning at 3 o'clock the van of the army started for Chads Ford as it was thought that Gen Howe wanted to get to Philadelphia and General Washington with the American Army had Placed his men on the Road that was most Direct From where Hows (sic) army was stationed near Elkton and the Road Across the Brandywine at Chadd (sic) ford was the Best and only Good Road that Led toward Phila at that time [.] And Howe began to move his army in a Northern Direction which Washington soon found out and started his army as before stated [.] on the 10th all the american Army had arrived (sic) and the Fords all Guarded Chad by Gen Wayne[,] Brintons by Gen Sullivan (sic)[,] Jones by Gen Stirling and Gordons [ed note – should be Wistars, not Gordons] by Col. Kirkwood while General Armstrong was placed two miles below Chads Ford on a high Ridge of Land where he could watch Corner & Gibsons fords while Green (sic) with the Reserve above Gibsons Ford on Land now owned by Amor Garrett [.] Washington had his headquarters at Benjamin Rings while Lafayette had his at Gideon Gilpins which still stands. Washington had his men placed so as to Guard the Fords and all Ready to Receive (sic) the British army the Day Before the Battle [.] (Brinton 1895/96?)

How long did it take the army to reach fords across the Brandywine? Chester County Militia Private James Clark “marched [from Wilmington] in the night to Chads Ford on the Brandywine where we arrived just about daylight” or around 7:00 a.m. after what must have been a very fast march of more than 2 miles per hour (Clark 1832). The militia formations commanded by Generals Armstrong and Potter were placed south of Chadds Ford along the high ground that extended parallel to the Brandywine, overlooking an area known as “Rocky Field” (Ashmead 1884:56). Armstrong’s positions were selected to guard Harlan/Gibson’s Ford and Corner/Chandler’s Ford.

Joseph Clark, who served as Quarter-Master in Maxwell’s Light Infantry but was in Newport on September 8 and together with one of his Brigade Majors “joined the army before day” on September 9. “We continued on the march till past noon and crossed Brandywine at Bruadgham, [Birmingham] and posted on the heights by the main road, where the enemy must advance if they come this way (Clark 1855:98).

Concurrently the units that had been shadowing Howe rejoined the main army as it moved toward the Brandywine. Lieutenant McMichael reported that Weedon’s Brigade was recalled from McKennan’s Church “At 4 a.m. [when] we received marching orders and proceeded E.N.E. to the Crooked Billet, on the great road from Wilmington to Lancaster; thence thro' Kennett township, Chester county, crossed the Brandywine and turning S.E. encamped in the township of Birmingham, being extremely fatigued for want

of rest and severe marching” (McMichael 1892:150). The last men to join the Main army were outlying units such as Bloomfield’s New Jerseymen. In the morning of September 9, “At day-break”, i.e. just before 7:00 a.m., Bloomfield “received Orders to follow our Army who had marched at two at Night for the heights of Brandewine [Brandywine] opposite Chad’s Ford, where I also arrived this evening with my party much fatigued” (Bloomfield 1982:127). This scenario is confirmed by Captain Forman who wrote: “Our Army that Night Decamping March.d to birmingham, took Possession of the heights on the North Side [of] B[ran]d.y Wine, the Ene.y on the South Side. [The] Scout Arriv.d at the Brigade [on the] 9.th [September] in the Evening” (Forman 18). Private William McNeely (Maneely) of the Chester County Militia deposed in his pension application that “Washington having got the main army across that creek having now accomplished the object he had in view it was no longer necessary to keep the troops to whom I was attached for a rear guard to obstruct the process of the enemies (sic) forces he therefore ordered us to cross the Brandywine and Join the main army-we crossed the Brandywine and joined the main army-we crossed the Brandywine I think it was on the 10th of September” (McNeely 1833).

Maxwell’s Light Infantry, which had encamped closest to Howe at Hockessin Meeting, waited until late in the afternoon of September 9, before retreating to the Main army across the Brandywine. At the Meetinghouse, one British officer observed: “Here the rebels had a body of their forces, consisting (as the Quakers told us) of fifty or sixty light horse and about a thousand foot. They were but just got away, for many of their fires were still burning when we arrived” (Anonymous 1777:77). The route taken by Maxwell’s men to the Brandywine is unknown; in 1777 as well today, there is no direct north-east route from Hockessin Meeting to any of the fords across the Brandywine.

“[P]ast noon” on September 9, just as Howe’s army was scheduled to set out for Welch’s Tavern, most of the Continental Army had, unbeknownst to Howe, already reached the Brandywine. Washington’s quick re-deployment had turned the tables. As night fell on the Brandywine, Sir William Howe’s forces were either still struggling “by County road” (Peebles 1998:132) or up to their waists in mud, “during a very dark night” (Ewald 1979:80) to find their way to Kennett Square or they lay “Encamp’d on a hill in the Dark” almost continuously at risk of harassment by local militia (Peebles 1998:132). Darkness and bad weather had not been the only reasons for Howe’s slow advance. Downman was already painting an overly rosy picture when he wrote that on September 8, he “did not meet with the smallest interruption in our march from the rebels” (Downman 1898:156). Continental Army and American militia never lost sight of the Redcoats, were in constant contact, and came ever closer. Private James Duncan of the Cumberland County Militia put it very succinctly when he wrote “We flanked them on their march, till they reached Brandywine” (Duncan 1832). Though a local and familiar with the neighborhood, Private Borick Bechtel of the Chester County Militia deposed that “After leaving Newport and passing through a number of small places the names of which he cannot possibly at this distance of time bring to his memory, they joined the regular army on the morning of the 11th of Sept.” (Bechtel 1832).

Charles Stuart wrote to his father, that in the evening of September 8 “We could plainly discover their fires.” There were pickets all around the British campsite: “We marche’d on the Eveng. of the 9th. we marched in two columns, the left under the command of Kniphausen with the baggage to Kenit’s Square, by New Gaerde, the right to the same place near Occep Meeting. A capt. of a Rebel Piquet was surprised and taken, his party escaped” (Stuart 1927:46), a feat confirmed by Sullivan who wrote that as “Lord Cornwallis, with 1st Division moved to Hokessen’s Meetinghouse... The Light Infantry on the march took

a Picquet of the enemy.... At 12 o'clock that night we halted" (Sullivan 1997:129). This may have been the skirmish referred to by New Castle County militiaman Isiah Mann in his pension application, when he deposed having been "engaged in a slight skirmish near New Garden Meeting House the day before the Battle of Brandywine" (Mann 1834).

Shortly after his arrival at his new headquarters at the Ring House in the early afternoon of September 9, Washington received intelligence that Howe might have broken camp, and instructed his aide-de-camp Tench Tilghman to contact Capt. David Hopkins of the 4th Continental Dragoons for additional intelligence: "His Excellency [GW] received your message by your Light Horseman, He begs you will enquire minutely into the report of the Enemy's having advanced towards Kennet Square, and if you find it true Send him a written account. The General desires that what accounts you Send in future may be in writing because the messengers often are confused and unintelligible." Later that afternoon Tilghman again wrote Hopkins with a time of 6:00 p.m. indicated on the letter: "Since I wrote to you a few hours ago another Horseman has come in, and Says that the Enemy are moveing up the Lancaster Road; and that when he came away their rear had pass'd Mr Kans Meeting House. His Excellency therefore desires that you would keep out, and endeavour to reconnoiter the Situation and destination of the Enemy as critically as possible. As you may not be acquainted with the Roads, and to what places they lead try to get a Country Man, who can give you information" (GW Papers).

The redeployment of his army completed, Washington issued almost explanatory General Orders from his headquarters in "Burmingham" in the afternoon of September 9. "Intelligence having been received hat the enemy, instead of advancing towards Newport, are turned another course, and appeared to have a design of marching northward – this rendered it expedient for the army to quit Newport and march northward also; which occasioned its sudden movement this morning" (GW Papers).

When Washington issued these order, Howe's army was still only "moveing up the Lancaster Road." As night fell on September 9, Washington knew that the British attempt to cross the Brandywine would most likely not come until September 11. He had gained a day to prepare for the battle that he knew he had to fight. Howe had always assumed that Washington for military as much as political reasons would have to make a stand to defend Philadelphia. Howe had wanted to fight that battle on his own terms, but Washington had discovered Howe's movements of September 8 too soon and drawn the right conclusions. "Upon reconnoitering their Situation, it appeared probable, that they only meant to amuse us in front, while their real intend was to march by our right and by suddenly passing the Brandywine and gaining the Heights on the North side of that River, get between us and Philadelphia and cut us off from it" (GW Papers). Similarly Washington's aide-de-camp Robert H. Harrison informed Israel Putnam from Chadds Ford on September 10 that "On Monday [8 September] the Enemy advanced towards our post at Newport, as if they meant to attack us, but it was thought, their then appearance was only to amuse in Front while their real object was either to pass by our right Flank or to fall upon it. In this conjecture we were right, as their subsequent conduct has proved. Accordingly we changed our Ground Yesterday morning, and advanced more into the Country to this Post. The Enemy pursuing their former plan, moved also. By Light Horsemen just come in, they are advancing upon us. We are preparing to receive them. ... Robert H. Harrison - P.S. This Letter, His Excellency intended to sign, but was prevented by a report of the Enemy's advancing which called him out" (GW Papers).

The quick re-deployment of the Continental Army in the morning hours of September 9 had placed it in Howe's way. And yet Howe had forced Washington's hand. Washington did not have a choice: he had to place his forces in Howe's way to defend Philadelphia. Howe, however, had adjusted his plans just as quickly. If Washington had (most likely) made his decision to move his army to the Brandywine at Harlan's Mill late at night of September 8, Howe made his decision to fight him there less than 24 hours later during a forced delay at Hockessin Meeting and immediately begun to re-align his forces. The Battle of Brandywine was not the result of long-range planning but the result of the quick adaptations to the changed tactical situation by the opposing generals. That the battle would be fought on September 11 and not September 10 was determined by factors uncontrollable by them: road conditions, weather, and the frustratingly slow speed with which large armies moved in pre-industrial societies.

2.3 Army Movements September 10, 1777

2.3.1 British Army movements September 10, 1777 (Figure 9)

Marching with Knyphausen, Lieutenant Purdy had reached "Cannon Squar About 7 oclock in the Morning which was About 10 Miles whare we halted" (Purdy 1777). Howe had spent the night at Hockessin Meeting while his, and Cornwallis' units, had spent the night in bivouacs wherever the order to stop marching had reached them. Marching with Cornwallis in the First Division, Thomas Sullivan of the 49th Regiments of Foot recorded in his journal that on "September 10th. -The whole joined in the morning, and marched at 8 o'clock, the army defeated the Rebel's picquets at Kennett's Square, at which place we remained that night, extending our line towards Brandywine Creek. The 1st and 2d Brigades were ordered to join Lieut. General Knyphausen's Division, and all the baggage remained with that column, except some empty waggons that were ordered to join Lord Cornwallis's Division" (Sullivan 1997:129). Peebles departed with Howe on September 10 from "Head Qrs. At Casket [Hockessin -wpc] in the mornng. & at Kenetts Square in the Eveng. - Lord Cornwallis division of the army moved about 6 this mornng. back a piece of the road we came yesterday & then turn'd to the right & march'd to Kennetts Square where we found Kniphause's Division; we Encamp'd about ½ mile to the Nod. of the Village. the whole 3 divisions collected here again - this change of our Route owing to the enemy's having retired from the heights of Newport & gone beyond the Brandywine" (Peebles 1998:131). The march through the night of September 9/10 had delayed the British advance by a good twelve hours. The troops were exhausted and in no condition to attack, but the delay gave Howe the hours he needed to deploy his forces into the jump-off positions for the attack on American positions the next day (Catts et al. 2017).

American scouts closely followed the rearrangement of British forces. Sullivan recorded that British forces had "defeated the Rebel's picquets at Kennett's Square" before they could move in. Major Patrick Ferguson remembered "The morning before Brandywine [Sept. 10] we advanced within 6 miles of the Rebels, and while the army was taking its ground Sir Wm Erskine and other General Officers came to my Post which was on the road to their Camp. In my front was an open wood along the Skirts—of which the Rebell Horse were showing themselves in different bodys. As I imagined the Generals wished to know what was in the wood I took men and advanced to it and as the Rebels immediately made way for us, we Searched it unmolested. I was desired to take a larger party but I had enough and wanted to Show how much my Lads dispised their horse. In a field beyond the wood we saw a Large body of horse and a number of Officers—I believe Mr. Washington reconoitring" (Rankin 1978:299).

Once the assault column had marched across the front of Howe's encampment and reached their positions, Knyphausen could move his forces forward as well. "September 10th – About 5 o'clock this afternoon moved forward and encamped" (Downman 1898:157). Howe was ready to issue his orders.

Head Quarters, Kennett Square, 10th. Sept., 1777.

The 1st. and 2d. Brigades British, under the Command of Maj.-Gen. Grant, are to be attached to the Corps Commanded by His Excellency, Lieut.-Gen. Knyphausen. One Squadron of Dragoons is to remain with that Corps, and two Squadrons with the Corps under the Command of Lieut.-Gen Earl Cornwallis. The whole of the Baggage, Provision train and Cattle (except One Waggon per Battalion or Corps, and ten Spare Waggon with Earl Cornwallis's Division) are to march with Lieut.-Gen. Knyphausen's Corps.

The army will March in two Columns at 4 o'Clock to-morrow morning, and receive their Orders of March from their respective Lieutenant Generals—His Excellency Lieut.-Gen. Knyphausen and Lieut.-Gen. Earl Cornwallis (Howe 1777:491).

Their destination: The Continental Army across the Brandywine.

2.3.2 *Continental Army movements September 10, 1777*

Washington spent September 10 scouting the field of battle and deploying his forces, while the Continental Army went foraging, putting up defensive works and preparing for the attack it knew would come. Joseph Clark of the Light Infantry wrote: "On the 10th, preparation was making for a stand" (Clark 1855:98). By the morning of September 10, Washington knew the general area where Howe forces lay, as Robert Harrison informed Congress from Chadds Ford. "The Enemy are now lying near Kennet's Square and in a tolerably compact body" (GW Papers). British scouts followed these preparations carefully. Harrison continued his letter that "They have parties advanced on the Lancaster Road, and on those leading over this Ford & to Wilmington. Maneuvring appears to be their Plan; I hope notwithstanding, that we shall be able to find out their real intended route, and to defeat their purposes. By Light Horsemen this instant come in, the Enemy are in motion and appear to be advancing towards us. His Excellency is giving the necessary orders & getting the Troops under Arms, which prevents him signing this himself, as was intended at first." R. H. Harrison (GW Papers).

Captain William Beatty of the 7th Maryland Regiment in Smallwood's Brigade recorded this incident when he wrote that on "Wednesday 10th Sept. the Alarm Guns were fir'd and the whole Army got Under Arms. However the Enemy did not Approach. The Army extended its Right Higher up the Brandewine [.] At the same time a Battery was begun by the Park of Artillery opposite Shad's Ford. Our Division being on the Right of the Army we extended to a large Stone Mill [Brinton's Mill] about one Mile above the Ford: in this Position we lay all Night" (Beatty 1908:109). James McMichael also recorded that on September 10 "At noon the alarm guns were fired, and the army drawn up in the usual manner, and marched to a height near the Brandywine, where we took post. The enemy not appearing we posted strong pickets and remained all night in the woods" (McMichael 150).

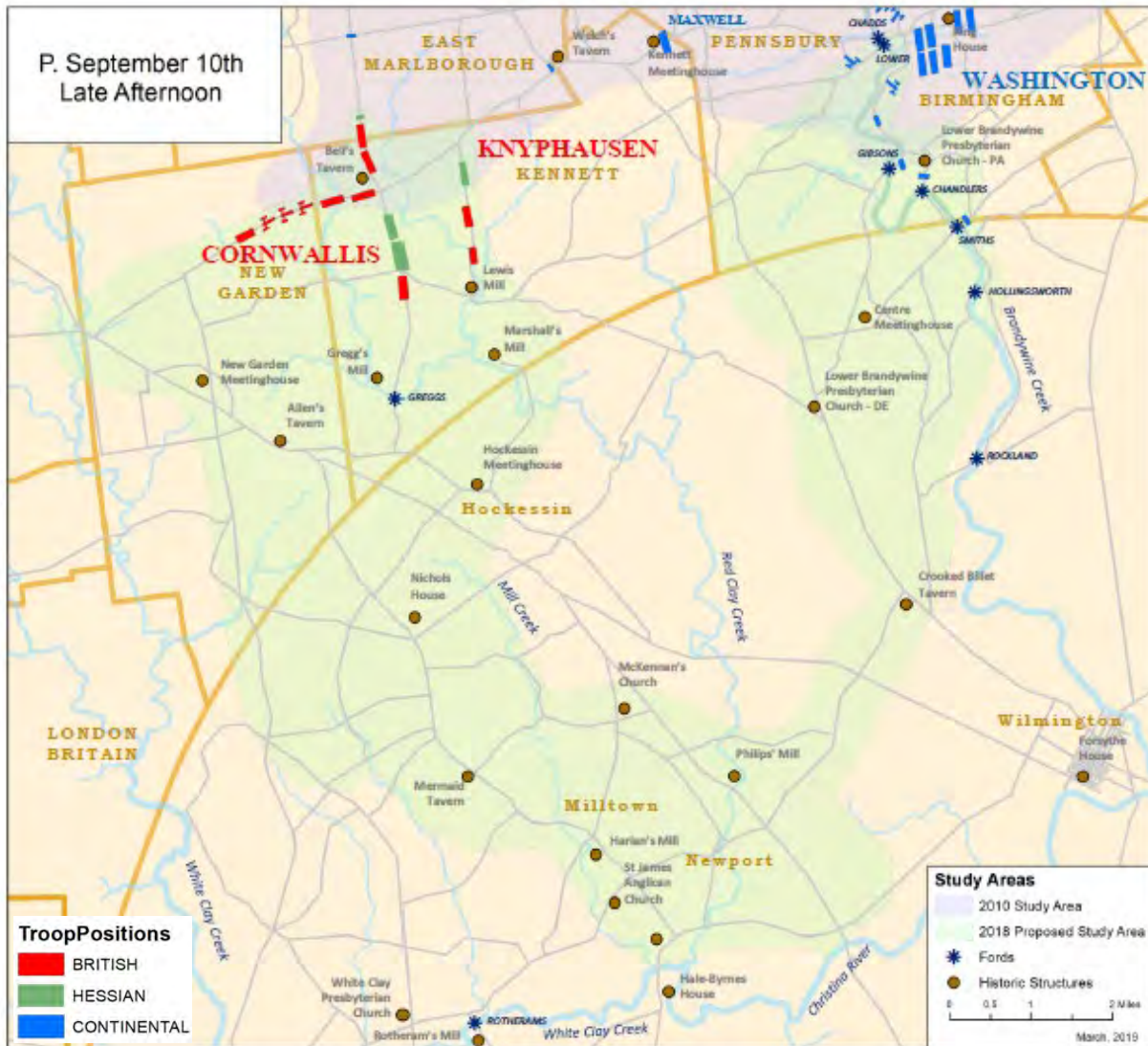


Figure 9. Position of the armies on the afternoon of September 10, 1777 (Western Heritage Mapping).

Finding out “their intended route” meant scouting and probing the positions of the opponent. In a letter to General John Sullivan dated “Jones Ford Sepr. 11th 1777,” Moses Hazen wrote that “The officer and Party which I detached to reconitre the Enemy’s Camp, returned last Evening [i.e. 10 September] at 11 O’Clock, and brought in with him Seventeen Head of Cattle, and twenty eight sheep taken from the Enemy about one mile from Welch’s Tavern and six miles from this Place” (Hazen 1889:197). Sometimes the scouts returned with more than “milch cows” as reconnoitering and probing went on throughout the day. Chester County Militiaman Private James Clark deposed that on 10 September “went across the Brandywine to reconnoitre, went up a hill, through a wood, & came into the end of a lane, where we were fired upon by the British from the Cornfields on both sides of the lane, we were ordered to charge upon them, which we did, & had five or six of our men killed, several horses & men wounded, & I received a small wound in my left leg,

supposed to be with a Buck shot, which passed through my leg. In this skirmish we took and brought in to the American Army thirty-seven prisoners” (Clark 1832).

Close contact continued into the night. Skirmishing with British patrols was reported by 1st Virginia Light Dragoon Isaac Dehaven in his pension application. “The night before the battle of Brandywine,” i.e. on September 10/11, wrote Dehaven, he “and others of the country had taken a parcel of British prisoners and the day of the battle he was guarding them, and was consequently prevented from sharing in that battle” (Dehaven 1832). Thomas Carragan, a private in the Seventh Battalion of Chester County Militia, was out on a scout during the night of September 10/11 “on a detachment which was surprised by enemies Light Horse and was miserable bruised about the body,” meaning the he “Received a wound” (Carragan 1906:557) Pickets remained out all night. “Wednesday ye 10 march’d to gordons ford being about 4 miles there lay all night” (Kirkwood 1910:167). And Lancaster County Militia, Private Andrew Cummings deposed that “the evening before the battle of Brandywine, the company to which the applicant belonged were ordered to take position, about half way between Welsh’s tavern and Chadd’s ford and the Brandywine about four miles apart, where we stood on picket guard that night, and were ordered to fire on the British flankers as they passed next morning and then to retreat across the Creek, this we did” (Cummings 1832).

The Battle of Brandywine was on.

3.0 MILITARY TERRAIN ANALYSIS

As initially established in the 2010 study funded by the ABPP, the Battlefield Boundary for Brandywine covers approximately 35,000 acres. This size is due principally to the wide flanking maneuver conducted by Cornwallis' Division. The Core Area of the battlefield is considerably smaller. The Phase 2 strategic landscapes, The Encampment Landscape and the Two Columns Landscape, are located within the currently defined Battlefield Boundary, whereas the Phase 2a strategic landscapes, termed the Crown Forces Approach Focus Area and the American Encampment and Defense Focus Area, are extending the Battlefield Boundary. Following English battlefield archeologist Glen Foard's analysis of the battlefield at Sedgemoor and adapting it for application for battlefields in North America, the primary terrain elements affecting the battlefield are physical geography, settlements, land use, and communications (Foard 2003:33-35). The following Military Terrain Analysis uses these three elements to place the landscape of the Brandywine Battlefield, particularly the area defined as the Battlefield Boundary, in a broader historical context.

The Phase 2 report summarized the elements of physical geography, settlement, land use and communication as it pertained to the Kennett Square area and the adjoining townships. The following brief discussion will widen this historical context into adjacent New Castle County.

3.1. PHYSICAL GEOGRAPHY

While the previous strategic landscapes have been wholly located within the Pennsylvania Piedmont region, the present focus areas push the geographic study towards the Fall Line located in New Castle County, Delaware. The dendritic stream pattern of the Piedmont played an important role in the ways that Sir William Howe and General George Washington maneuvered their forces in the early days of September 1777. From south to north, a series of streams flow from above the fall line into the upper coastal plain – the Christiana River, White Clay Creek, Pike Creek, Mill Creek, Red Clay Creek, and the Brandywine. Four of these are generally flowing in valleys which trend west-to-east and that create shallow obstacles or trenches. Two of these streams – the Red Clay Creek and the Brandywine – have more north-to-south orientations. Such an orientation provided a major obstacle to Crown Forces troop movements, while at the same time providing excellent water lines to use for American defensive positions.

The southern reaches of the Brandywine Creek Watershed cover 352 square miles, with 567 miles of streams. The Brandywine is fed from the north by its East and West Branches which meet in the northern part of the battlefield. Land along the West Branch tends to be more rural while the East Branch communities are more suburbanized. Prior to World War II, the entire watershed was largely agricultural and highly productive. The Brandywine Creek flows south into northern New Castle County, Delaware, where it once powered the mills along its banks – with an internationally-known grouping at Brandywine Village. South of Kennett Square, the Red Clay Creek Valley figured prominently in the movements of the Royal Army in the days leading up to the battle and in the defensive positions occupied by American forces around the Delaware village of Newport.

The geology of the Brandywine Battlefield is characterized by hard, mostly metamorphic rock formations that have resulted in a combination of flat and sloping terrains. This topography is generally flatter to the north, gradually becoming hillier to the south. There are steep hillsides and cliffs along the lower reaches of the main stem of the Brandywine Creek (CCPC 2013). Similar rolling topography is present in northern New Castle County.

3.2 SETTLEMENT AND LAND USE

In 1777 Wilmington was by far the largest “urban place” in New Castle County and adjacent southeastern Pennsylvania. Chartered in 1739, the borough's location was considered by one visitor to be “one of the pleasantest and most favorable on the whole continent” (Acomb 1958:123). Wilmington soon became a port of entry and a post town and was an important link in the regional Philadelphia trading network. Of special significance to the borough's location was its proximity to the Brandywine mills. Located one-half mile north of Wilmington, Brandywine Village was a small town “...chiefly consisting in mills and taverns, eight or ten being within 100 yards of each other” (Chilton 1931:288). Wilmington thus was a receiving center for local and regional farm produce, brought by water from Christiana, Stanton, and Newport, and shipped up the Delaware to Philadelphia (Lindstrom 1978; Walzer 1972).

Beyond the borough of Wilmington, New Castle County and Chester County lacked towns of any real size, and thus nodal places such as Kennett Square, Newport, Newark, Chadds Ford, Cuckoldstown (modern Stanton), Milltown, and Dilworthtown, developed during this period. Hamlets or villages that were present in the region were generally focused on taverns, meetinghouses, and mills (Kennedy 2000:591; Warden 1989:2).

Christiana Bridge, located at the head of sloop navigation on the Christina River, had stagnated since the 1680s, but saw growth and prosperity as a major grain transshipment port for produce coming from the upper Chesapeake Bay area. Over the next half-century, but particularly after the American Revolution, Christiana blossomed under the trading and shipping industries into a burgeoning town. By the end of the century, the town could boast a population of 289 inhabitants, ranking fourth in New Castle County in size behind Wilmington, New Castle and Newport. Located there were several large mills, between thirty and fifty houses, several taverns, and a Presbyterian Church (Acomb 1958:124; Conrad 1908 2:495; Padelford 1939:11; Rogers and Easter 1960). Christiana Bridge was also an important transshipment town in Philadelphia's economic hinterland. A bridge at the town was reputedly built by the Swedes by 1660; a second or replacement structure was contracted out in the 1750s, according to the *Pennsylvania Gazette*. Newspaper advertisements for real estate in northern New Castle County in the eighteenth century suggest the importance of the town for economic considerations, often informing potential buyers of a tract as to the distance from the property to Christiana Bridge.

Newport, established about 1735, rivaled Wilmington and Christiana Bridge as a grain-shipping and flour-milling center during the eighteenth century. Because it was cheaper to ship flour by water to Philadelphia from Newport than it was to transport the grain overland directly from Lancaster to Philadelphia, grain was transported to Newport overland from the Lancaster and York areas of Pennsylvania. Contemporary travel maps of Newport show it to have been laid out in a regular town plan, consisting of parallel streets extending from the Christina River, and intersected by others at right angles (Colles 1961:170; Moore and Jones 1804:170; Scott 1807:180). Newport was described by travelers as being the size of New Castle, with about forty well-built houses, three or four stores and as many taverns (Padelford 1939:11, Scudder 1877:264; Penn 1879:295).

The crossroads town of Newark, chartered in 1758, represented a shift from a water-oriented shipping town to an inland market town. It was located on the two major overland transportation routes, the road from Dover to southeast Pennsylvania and the road from Christiana to Nottingham. Eighteenth century maps show it to have been at the center of no fewer than six roads (Cooch 1946). Newark was established as a market town that supplied the local population with commodities brought from Philadelphia and the surrounding region. While not quite as large as Newport, it was “...the most considerable collection of houses... since Lancaster” (Penn 1879:295). Several mills for local produce were found along White Clay Creek in the town's vicinity, and the Newark Academy was established in the town by the early 1760s.

The town of Stanton, known as Cuckoldstown as early as 1746, became an important milling and grain center in the late eighteenth century. A grist mill was known to be in the vicinity of Stanton as early as 1679, and by 1800 Cuckoldstown rivaled Newport as a local grain processing center. Ships of moderate draft were able to navigate up Red Clay Creek and take on local as well as southeastern Pennsylvania farm produce. Located at the confluence of Red Clay Creek with White Clay Creek, Stanton was never a large town. A map of the New Castle County region, drawn in 1777, did not even include the location of Stanton (Cooch 1946), and a traveller's guide, published in 1789 (Colles 1961:170) shows only a mill and ten dwellings in the vicinity of the town. It was described at the end of the eighteenth century as a "...place of little note...in its vicinity were some good flour mills" (Moore and Jones 1804:6).

3.3 COMMUNICATION

Roads and road traces, as avenues of approach and retreat for military troop movements, are important KOCOA defining features for battlefield analysis. The Phase 2 report discussed much of the road system available to the combatants in Chester County. The road network in north-central New Castle County served to link southeastern Pennsylvania with the villages of Newark, Newport, Christiana Bridge, Cuckoldstown, and Wilmington for grain and other interregional trade. A road known as the "New Munster Road" passed through Newark on its way to Lancaster and was laid out in 1765. The "Limekiln Road" (present-day Limestone Road) was evidently established as early as 1726 and extended from the rich grain producing country of southeastern Pennsylvania to the mills in the vicinity of Stanton. A road from Ogletown to the Elk River was resurveyed in 1774 (Conrad 1908:2:490). From Wilmington, a nexus of roads radiated west, south, and north, connecting the Delaware River with the head of the Chesapeake Bay (Head of Elk), Kent and Sussex counties, and southeastern Pennsylvania. Christiana was a major crossroads town on the road to Head of Elk, and also on the route from Red Lion to New Castle. Newport was the terminus of the Lancaster Road, and a route from Newport westward to Newark was laid out in 1750. By mid-century, the roadbeds of many of the area's present-day state roads (Route 4, 7, and 273; Old Baltimore Pike; portions of Pennsylvania's Route 896), were already established.

The condition of roads in New Castle County and southeastern Pennsylvania varied according to location and trace. The rainy weather that overshadowed the Brandywine Campaign was a deciding factor in routes chosen, speed of march, and what river crossings (bridges and fords) were available for use. Some roads were often unsatisfactory even by contemporary standards (Munroe 1954:137; Gray 1961:309). In 1755 the road from Middletown to 'Christeen' was considered good, but from Christiana north "the roads are, in many places, extremely bad and the appearance of the country the same" (Padelford 1939:12). The road from Christiana to Philadelphia, by way of Newport, Wilmington, and Chester, was the post road, but it was described as a "hilly and rocky road; a better and more pleasant is by New Castle" (Schoepf 1911:376).

While public roads were the primary means of moving through the landscape, the records of the many of American, British and German chroniclers note that some army movements did not use principal roads. The non-public road system is difficult to identify, but local farm roads and traces may have been heavily utilized by Cornwallis' Division in its march of September 9/10 and by Washington's army on September 9.

3.4 PLUNDERING, SUFFERINGS, AND DAMAGES IN NORTHERN NEW CASTLE COUNTY

Previous strategic landscape study areas have been located within Chester and Delaware Counties in Pennsylvania. These earlier studies have benefited by the extensive historical research completed by the CCPC, the township historical commissions, and local historians into the damages caused by the Brandywine campaign. A detailed County list of depredations, the County tax rebate, and the detailed lists

of Committee of Sufferings among the Society of Friends have allowed a very detailed assessment of the types and locations of damages caused by both the Crown Forces and the American forces.

The present study is the first to cross the state line into New Castle County in Delaware. Unfortunately, in Delaware the level of detail regarding these war-related damages is lacking. As part of the present study, the project team compiled the available documentation for New Castle County. This information consists of a summary of damages arranged by political subdivisions known as Hundreds. The summary list is currently the only known list of war damages – the detailed lists like those from Chester County, have not been found.

The Friends Historical Library at Swarthmore College holds the records of the Philadelphia Yearly Meeting and Wilmington Monthly Meeting. The Committee of Sufferings records have not been previously researched by historians for the Brandywine Campaign and were examined as part of this present study.

Each source is discussed below.

3.4.1 New Castle County Summary of Damages

A list entitled “Damages To Property By the British Army” was published in the *Delaware Military Archive* volume III (Damages 1919:1194-1197). Undated but likely reporting damages from 1777/78, the list is a summary of the total cost of damages grouped under the heading of “sundry goods etc.” taken by the Crown forces. Unlike the depredation lists for Chester County, the damages are not itemized for New Castle County. Damages most generally included fencing demolished or burned, field crops trampled and grain supplies commandeered, woodlots and orchards destroyed, horses confiscated, cattle, sheep, and pigs taken for food, household furnishings of all kinds looted or destroyed, and dwellings and mills damaged. In a region where agriculture was the principal livelihood of the nearly all the inhabitants, losses of crops and livestock and destruction of fencing - a costly investment for landowners to erect and time-consuming to maintain – were serious financial burdens not easily replaced.

The passage of Howe’s army through New Castle County was something akin to the path of destruction left in the wake of a cyclone; not all portions of a hundred were equally affected but where the army passed the physical evidence was obvious. The level of destruction depended in large measure on the duration of the army’s occupation of in any given area – the longer the troops spent in a single location, the greater the damages. Foraging parties, particularly from the Crown Forces, were sent into the countryside for needed horses, cattle, and food, and plundering of personal property by both armies was strictly forbidden but widely practiced.

People unfortunate enough to be in the path of the maneuvering armies most often chose to temporarily abandon their farms, houses, and property and get out of the way. Farmers and property owners assumed the role of refugees, taking whatever they could with them. Crown Forces officers – English and German – remarked on the desolate and abandoned nature of the region. The visual effect of this evacuation was profound and perhaps somewhat disturbing to the invading army. “The Inhabitants all gone off & carried everything with them they could,” wrote grenadier officer John Peebles, and an Ansbach jaeger lieutenant lamented that the region was “desolate” and “not a soul to be seen” (Peebles 1998:128; Feilitzsch 1997:16). Major John André commented that “inhabitants on the road had all quitted their houses” near Cecil Church, and that the only citizens encountered around the Bohemia River were “...a few affrighted people who probably had not had time to make their escape...” (André 1904:41).

The fears of the citizens were not groundless, however, as looting and outright destruction of property was widespread, despite General Howe’s explicit orders against the practice. Major André remarked that “there was a good deal of plunder committed by the Troops, notwithstanding the strictest prohibitions” (André

1904:37). “General Howe has given strict orders against any kind of marauding [sic] but it is not in anyone’s power to prevent this where there is so large an army and such a mixture of troops [British, Hessian, and Loyalists]. The Hessians are famous and infamous for their plundering” (Downman 1898:154). That the Hessian troops were prone to looting was apparently well-known throughout the army. John Peebles was ashamed of the actions of his men, writing on September 1 that he witnessed “Moroding [marauding] to a shamefull [sic] degree, especially among the Hessians” (Peebles 1998:129). Restoring order was extremely important for the British and Hessian commanders. On August 27, corporal punishment was meted out among the Hessians when General Knyphausen ordered ten men in Stirn’s Brigade to run the gauntlet, an action that reportedly resulted in the restoration of “the best order and discipline” (Peebles 1998:130). Among the British troops the problem of plundering was so great that General Howe ordered two courts martial on September 2 for the trials of two marauders. One of the marauders was hung and an additional six were flogged or beaten” (Baurmeister 1937:7).

The very real fear of marauding soldiers as well as deliberately-started rumors and propaganda fueled the flight of the evacuees. The village of Head of Elk was largely deserted when the Crown Forces arrived on August 28, in large measure, asserted a British sergeant of the 49th Regiment of Foot, because the inhabitants had been “informed or rather persuaded by the *Enemy* [Americans], that our Army would kill and destroy them and their families” (Sullivan 1997:126). Lieutenant William Hale of the 45th Regiment of Foot echoed these thoughts, writing that “the country was desolate of inhabitants, the men called to strengthen Washington, the women fled to avoid barbarities, which they imagined must be the natural attendants of a British Army” (Hale 1913:21).

On September 10, during the time that Howe’s forces were assembling at Kennett Square and Washington’s forces were taking up positions along the Brandywine, General Nathanael Greene witnessed the displacement of refugees in the no-man’s land between the armies and emotionally wrote to his wife that

“here are some of the most distressing scenes imaginable. The Inhabitants generally desert their houses, furniture moveing [sic], Cattle driving and women and children traveling on foot. The country all around resounds with the cries of the people. The Enemy plunder most amazingly [sic]” (Greene 1777).

In Mill Creek Hundred, occupied by Crown Forces September 8 and 9, eight residents claimed damages and loss of property total more than £1200 (Table 1). Most of these claimants resided along Limestone Road in the general vicinity of Daniel Nichols’ property. Their farms were situated in the area occupied by Howe’s Army.

Damages reported in the summary list for White Clay Creek Hundred account for 20 percent of all damages claimed in the New Castle County. Twelve individuals submitted claims. White Clay Creek Hundred had not been as intensively occupied by the invading army and the property owners affected reflect the proximity of their land to the Crown Forces or in some cases the properties encountered in the Hundred during the march on September 8. For example, farmer Robert McIntire owned land a short distance east of Cooch’s Bridge where British light infantry were stationed for five days (September 3 to 8); he submitted a damage claim for £130. Claimant John Morrison lived along the White Clay Creek and was likely damaged by British Light infantry as they screened the Crown Forces maneuvering on September 8.

Table 1. Mill Creek Hundred Damages Reported

Name	Description	Amount
Evan Rice, Esq.	Sundry horses, sheep, etc. taken	£68-5-0
Daniel McKee	Sundry horses, sheep, etc. taken	£70-6-0
Samuel Kelly	“A Negro” taken	£200-0-0
Robert Creighton	Sundry goods taken	£24-4-6
Alexander Guthrey	Sundry horses, sheep, etc. taken	£101-10-0
Thomas Rice	Sundries taken	£177-15-3
Jane Rice	Sundry articles of furniture taken	£374-12-0
James Black, Esq.	Sundry articles taken	£190-10-0
Total		£1207-2-9

Source: “Damages to Property by the British Army.” *Delaware Archives Military and Index Volume III*. Public Archives Commission, Mercantile Printing Company, Wilmington, Delaware.3:1194-1197 (1919).

Brigadier General Samuel Patterson reported £2000 in damages – also likely associated with the light infantry detachments moving near Christiana.

Mill seats were the targets of damages. Mill owners Joseph Rotheram, William Patterson, and John Simonton were all affected. Simonton, a Newark resident, reported over £252 in damages. On September 8, the movement of the Crown Forces through Newark had been for the most part a temporary disruption to the town. Newark was largely deserted by its residents during first week of September, and Simonton’s mill seems to have sustained the most physical damage during the march through the town.

Total damages claimed in Christiana Hundred were over £4,719, slightly higher than those claimed for White Clay Creek Hundred. At this time, Wilmington was located in Christiana Hundred. All of the claimants were for properties occupied by Crown Forces following the Battle of Brandywine (September 11, 1777).

A small number of Delaware landowners claimed the loss of enslaved African Americans; whether these freedom seekers were forcibly taken or chose the opportunity offered by invasion to slip their bondage is not specified. In Mill Creek Hundred Samuel Kelly claimed that one of his enslaved laborers had been taken, and Conrad Gray of Christiana Hundred also reported one. Along with his private papers, Samuel Patterson reported the loss of two African American men, 25-year-old Richmond and 60-year old Port Royal, both taken on September 8 by Crown Forces.

3.4.2 Society of Friends Sufferings

The reported damages found in the Committee of Sufferings serve to supplement the damages summarized by the county claims outlined above. Interestingly, the damages reported to the Wilmington Monthly Meeting identify more property loss from American forces than from Crown forces.

Among the “Friends of White Clay Creek,” four Quakers, not enumerated in the County damage summary, reported property loss at the hands of American soldiers. The loss included tons of hay, oats, wheat and indian corn, burnt fence rails, damage to acres of agricultural fields, loss of sheep and pigs, and loss of a saddle. Only one claimant, Robert Philips, reported loss of property by the Crown Forces. In most instances, the claimant noted that, while he was offered money to pay for the seized property, as a Quaker they were not at liberty to accept the money (Table 2).

Table 2. Summary Committee of Sufferings for September 1777 in New Castle County (exclusive of Wilmington)

Date	Description	Amount
	“Friends at White Clay Creek”	
9-1777	Taken from Caleb Byrnes what was supposed to be Six Tons of Hay by the American Army for which he was not willing to receive pay being closely pressed thereto	£20-0-0
9-1777	Taken from Jeremiah Woolston by the American Army computed to be two ton of Hay worth three Sheep & one Hogg one saddle worth for which was not willing to receive pay	£6-0-0 £3-5-0 <u>£1-10-0</u> £10-15-0
9-1777	Taken from William Marshall by American Army supposed to be Five ton of Hay worth Six acres of Pasture worth Cedar and oak fence worth Not free to receive pay	£15-0-0 £3-0-0 <u>£2-0-0</u> £20-0-0
9-1777	Taken from Robert Philips by the American Soldiers 80 dozen of oats and about two tons of good hay destroyed for ditto about 11 acres of Indian corn Rails burnt and meadow grounds and pasture eaten up at a moderate Computation worth 4 sheep & one pig worth A mare taken by the English Army worth Taken by the Horsemen and Wagoneers 4 bushels of corn and about 500 wt of hay worth The above was chiefly taken about the 1 st of ye 9 th month 1777 For part of the above effects he was offered pay which he was not free to receive and refused.	£8-0-0 £6-0-0 £20-0-0 £30-0-0 <u>£3-10-0</u> £67-10-0 £30-0-0 <u>£1-4-0</u> £98-14-0
	[Mill Creek Hundred]	
9-1777	By the American Army, taken from Caleb Harlan Hay worth Wheat and Corn worth Burnt fence rails worth For which he was not willing to receive pay Refused pay for the above wheat & corn	£3-0-0 £1-0-0 <u>£3-0-0</u> £7-0-0

Source: Records of the Wilmington Monthly Meeting of Friends, Committee on Sufferings. Accounts of Sufferings, 1777-1814. Friends Historical Library, Swarthmore College, RG 2/Ph/w57 7.43.

4.0 KOCOA TERRAIN ASSESSEMENT

Military-historical research is integral to the battlefield interpretive process developed by the ABPP. As part of the ABPP methodology surveyors adapted the precepts of KOCOA military terrain assessment to the battlefield environment. The KOCOA acronym stands for the analytical concepts of Key Terrain/Decisive Terrain, Observation and Fields of Fire, Cover and Concealment, Obstacles, and Avenues of Approach and Withdrawal. KOCOA elements were defined using a variety of sources including historical documentation, previous battlefield surveys, maps, and the extant natural landscape. The interpretation of these features was conducted using the quantitative capabilities of the GIS in conjunction with the knowledge of team historians and other experts.

Analysis of these aspects of military movement, position, and combat – as they apply to a given battle location – combines documentary research and field survey and enables identification of the battlefield's Defining Features. Identification of a battlefield's defining features, in turn, allows for the establishment of an appropriate boundary. The research examines and analyzes primary sources for the battle (*e.g.*, participants' letters, journals, and memoirs, and early post-battle accounts based on direct experience of the terrain) to discern locational references for KOCOA elements. The KOCOA process, and the supporting research, is directly applicable to archeological investigation at battle locations, providing documentation for the military actions that took place at those locations (Lowe 2000).

The KOCOA assessment is applied to all ABPP projects (Lowe 2000). KOCOA terrain analysis is applied to the study of historic battlefields to help identify the historic battlefield in the modern landscape, to understand the course of a military engagement, and to assess how a given landscape influenced the course of a battle.

Unlike a painter or a farmer, a soldier looks at terrain for military value – how terrain integrates into offensive or defensive positions and how terrain fits into plans for offensive or defensive action. This is not only important for understanding why a commander would (or would not) position infantry, artillery, and cavalry at a certain place on the terrain at a certain point during the engagement but also helps to interpret the authenticity of battlefield maps. Evaluation of terrain from a military point of view also can help to provide reasonable explanations to fill in gaps in our knowledge of events caused by a scarcity of primary sources (*e.g.*, in the case of troop movements). Effective military usage of terrain would demand that forces be re-deployed under cover of ridges or through low-lying ravines outside the view of the enemy. Similarly, depending on the task assigned to a force during any stage of the engagement, troops might be re-deployed via a causeway or road (if speed is of the essence) or through a forest or circuitously (if the element of surprise is paramount). Terrain is an integral part of battle interpretation. For effective results, factors must be analyzed in light of the mission of the unit, the type of operation, the level of command, the composition of forces involved, and the weapons and equipment expected to be encountered.

To understand and interpret actions on a battlefield, both a detailed familiarity with the topography and conditions on the ground and a critical reading of a wide range of primary sources must be combined with a military analysis of the battlefield (Andrus 2004). We also applied the principle of "Inherent Military Probability" to the study of the Brandywine strategic landscapes (Keegan 1977:33-34). As initially developed by the German military historian Hans Delbrück and further refined by British historian Alfred H. Burne, this principle holds that when accounts of a particular battle are found to be impossible given the constraints of terrain, timing, and other factors, the researcher needs to consider what a soldier of the period was likely to have done in the circumstances (Burne 2005:xx; Foard and Morris 2012:18). It is important for the researcher to understand relevant historical military practices which were in force at the time of the engagement. As English archeologist Glenn Foard suggests, the principle should be termed Inherent

Historical Military Probability (Foard 2009:141). The manuals available at the time of the American War of Independence provide specifics regarding the spacing between and among formations, rates of marching, and the specific methods applied to deploy companies, battalions, and other maneuvering or firing formations. These manuals provide a framework of the “limits of the possible” that governed the actions of commanders in the field, keeping in mind that variations to the manuals were always possible, and most likely probable, given opportunities arising from such factors as terrain, visibility, and other battlefield conditions. As one scholar puts it, “Soldiers, not manuals, fight and win battles” (Graves 1986:51).

The KOCOAs process is founded on the principle that terrain has a direct impact on selecting objectives, the location, movement, and control of forces, on the effectiveness of weapons and other systems, and defensive measures. In the following section, each of the key defining features is presented, along with their relevance to the battle, their KOCOAs analysis, and their location/status

Table 3. KOCOAs Definitions (From McMasters 2009)

Term	Definition
Key terrain	Any local feature that dominates the immediate surrounding by relief or another quality that enhances attack of defense
Decisive terrain	Ground that must be controlled in order to successfully accomplish the mission
Observation	The ability to see friendly and enemy forces and key aspects of the terrain to allow management of the conflict
Field of fire	An area that weapons may effectively fire upon from a given position
Dead space	An area within the maximum range of a weapon or an observer, but which cannot be seen or fired upon from a given position
Cover	Protection from enemy fire
Concealment	Protection from enemy observation
Obstacles	Natural or man-made terrain features that prevent, impede, or divert military movement
Avenue of approach	Relatively unobstructed ground route that leads to an objective or key terrain
Avenue of withdrawal	Relatively unobstructed ground route that leads away from an objective or key terrain
Mobility corridor	Area or location where movement is channeled due to terrain constrictions

Battles are temporary, albeit seminal, events fought on cultural landscapes that had a variety of cultural actions – transportation routes, agricultural development, settlement patterns, population change – already occurring before the battle and that continued to exert influences on the field after the battle. Field patterns and farmsteads are changed and subsequently replaced by subdivisions or industry; road are altered, vacated, rerouted or widened; and woodlands are reduced or removed from the landscape. Natural disaster such as floods or avalanches can also change a landscape, and their impact also needs to flow into any interpretation of a battle since “[u]nderstanding the historic terrain of a battlefield as it was at the time of the action is critical to the understanding of any battle” (Foard 2009: 136).

Obstacles are defined as “natural or manmade terrain features that prevent, restrict, divert, or delay military movement. There are two categories of obstacles: existing and reinforcing. The presence and difficulty of obstacles determine whether terrain is unrestricted, restricted, or severely restricted. Examples include vegetation, topography, fences, stone walls, fortification features such as parapets and ditches, battle events, urban areas, drainage characteristics (natural and man-made), micro-relief, surface materials (wet and dry), abatis, ravines, and bluffs. The hindrance level of obstacles can be analyzed as “go,” “slow-go,” or “no-go.” Existing Obstacles are already present on the battlefield. Natural examples include swamps, woods, and rivers. Cultural examples include towns, railroads, bridges, and fences. Existing obstacles are already

present on the avenues of approach and/or battlefield. *Reinforcing Obstacles* are placed on the avenues of approach and/or the battlefield through military effort to slow, stop, or control the approach of the enemy. The KOCO parameters, however, define a battlefield more broadly as not just as the terrain where blood was shed. The parameters Obstacles, and Avenues of Approach and Withdrawal also integrate the obstacles along the way to and from the battlefield.

As stated above, these viewpoints are of particular significance for the current project since the length, state and condition of the avenues of approach and withdrawal, including the obstacles along these avenues, invariably influence the outcome of a battle, an influence that sometimes can even be decisive, both short-term (tactically), as well as long-term (strategically). An arrival on the battlefield late in the day due to the particular avenue of approach selected by the attacker, be that because the road is too long, too difficult geographically, or too easily blocked by man-made obstacles, may make it impossible for the victor to completely consummate his victory, viz. Continental Army forces at Brandywine were saved by the arrival of darkness and the exhaustion of British forces and survived to fight again three weeks later at Germantown.

The character and condition of avenues of approach, the number and severity of obstacles, strength and equipment of army using them, are mutually-reinforcing factors. A large number of troops with an extended artillery and wagon train pulled by hundreds of draft animals, a livestock herd for food, a train of bat (or baggage) horses for the officers, and a multitude of camp followers stretching for miles across the countryside, mutually hindering and delaying each other's movements on too narrow roads laid out for the occasional trip to the market or Court House by a farmer but not to lead an army to battle, can wreak havoc with the best battle plan. The clouds of dust raised by long columns on a hot, dry summer day will alert the enemy of an attacker's approach, while roads muddied by rain and made impassable by hundreds of carriage and wagon wheels and thousands of hoofs will exhaust the troops besides greatly delaying their arrival on the battlefield where they may be anxiously awaited.

While battles do indeed leave a lasting impact on the battlefield, the sheer presence and the movements of sometimes tens of thousands of men and their animals leaves a lasting impact on the entire region. Man and beast need to be fed and forage over a wide area, often indiscriminately taking from friend and foe alike. Barns and houses burnt by foraging troops leave as much an archeological footprint as buildings destroyed because they happened to stand in the line of battle. These aspects, chronologically part of the run up to the Battle of Brandywine, mutually interact and reinforce each other. They impact the course and outcome of battle.

The defining features for the movements of both armies on September 9 and 10 were developed from the historical research and onsite landscape analysis (Table 4). These defining features build on the initial list of defining features tabulated in the Phase 2 Report (Catts et al. 2017: 33-34).

Based on current research, the following resources formed the basis for defining features (Table 4). The list of defining features was refined as additional historical research was completed. Table 4 presents the defining feature and offers a level of assessment of integrity for the landscape based on the revised ABPP Survey Manual (McMasters 2016). Note that as defined in the manual, the assessment of integrity is focused on the overall condition of the battlefield and it is recognized as a subjective assessment. Qualities of integrity as defined for determinations of National Register of Historic Places eligibility include the elements of location, setting, design, feeling, association, workmanship, materials. In Table 4, the Defining Features all retain the elements of location and setting but vary in the qualities of feeling and association. Table 4 also include the defining feature's KOCO analysis, which Crown Forces Column was affected by the feature, and notes regarding the feature's historical documentation or topography.

Table 4. Defining Features for the Phase 2a Focus Area

Defining Feature/ Integrity Assessment	KOCOA Analysis	Army	Level of Integrity	Notes
Red Clay Creek Defensive Line	Key Terrain, Obstacle, Cover and Concealment, Mobility Corridor	American	Low	The area covers approximately 3 miles along eastern bank of the Creek. Modern subdivisions have compromised much of the position.
Route of the American Forces to the Brandywine (Center Road, Kennett Pike, Starve Gut Road, Cossart Road, Pyle's Ford Road, Smith's Bridge Road, Ridge Road, Ring Road)	Avenue of Approach, Mobility Corridor	American	Variable	Multiple roads were used by the American forces to move from the Red Clay Creek line to the Brandywine. The area varies from suburban to rural, with higher levels of integrity in the latter areas.
Brandywine River Fords (Lower Chadds Ford, Harlans/Gibson's Ford, Corner/Chandler's Ford, Smith's Ford, Hollinsworth's Ford)	Key Terrain, Avenues of Approach, Mobility Corridor	American	Moderate to high	Multiple fords were used by the American army to cross the Brandywine. Several of these are in an excellent state of preservation and still accessible.
Possible picket Posts along the Brandywine (at Corner Ford and Gibson's Ford)	Observation, Cover and Concealment	Pennsylvania Militia	High	Two location within the "Big Bend" of the Brandywine that might be picket posts established to defend the river crossings.
Valley Road, the headwaters of Mill Creek, and the movement of Crown forces towards Hockessin	Obstacle, Avenue of Approach	Cornwallis' Division	Moderate	The route used by the Crown Forces in the area now serviced by Valley Road was, and is, swampy. No road serviced this area until the nineteenth century. Movement here was likely through the use of farm lanes and by-roads.
The route of the Crown Forces to and across the west branch of Red Clay Creek	Obstacle, Avenue of Approach, Key Terrain, Mobility Corridor,	Cornwallis' Division	High	The route through the Red Clay valley was difficult and likely utilized farm lanes and by-roads.

4.1 Red Clay Creek, American Positions until early morning, September 9 (*Key Terrain, Obstacle, Cover and Concealment*)

Beginning on September 4, Washington's army had occupied and entrenched a strong position along the Red Clay Creek. On September 9 President of Delaware John McKinley reported to General Caesar Rodney that the American army had "...entrenched themselves very well on the Eastern bank of Red Clay creek, about a mile westward from Newport..." (Rodney 1933: 221). The Red Clay was essentially the first large stream offering defensive advantages to Washington. Streams further south, such as the Christiana River and White Clay Creek, were not conducive to establishing a defensive line. In this region, the Christiana flowed mainly through the upper Coastal Plain on a roughly east-west trending line. The most defensible ground for that stream was at Iron Hill and Chestnut Hill, and after September 3 these locations were in Crown Forces hands. The White Clay Creek was a possible defensive line, but like the Christiana River, it too flowed in an east-west line, until it abruptly turned northwards at the village of Newark. The White Clay was at the foot of the fall line, thus providing high ground along its northern bank. Other streams such as Pike Creek and Mill Creek, offered north-south lines, but these were too small to afford much of a defense. The Red Clay was the first stream, situated as close to the Crown Forces as possible, that strategically offered a good place to establish a defensive line. Behind the Red Clay was the Brandywine, and Washington was already strengthening positions on the north bank of that creek at Brandywine Village immediately north of Wilmington.

Washington's Red Clay line extended approximately three miles from the confluence with White Clay Creek in the south along the eastern side of the creek to modern Faulkland Road in the north and centered on the village of Newport situated one mile to the east. In this location, the uplands along the eastern bank of the Red Clay rose from about 20 feet above sea level (asl) where the King's Highway (Delaware Route 4) crosses the creek, to 80 feet asl in the vicinity of today's Marshallton, to more than 100 feet asl at the Newport-to-Lancaster Road (today's Newport Gap Pike) and almost 120 feet asl at Faulkland Road. Extending from the marshes surrounding the low-lying Bread and Cheese Island to the steep uplands of the Piedmont, the Red Clay defensive line was a natural, north-south trending obstacle. British officer Charles Stuart noted that the Washington's position at Newport was "...on strong ground, with his left fortified and his right covered by an impassible morass..." (Stuart 1927:46). The creek formed a trench or water obstacle, and in 1777 there were limited crossing points along the line. In the south there was a bridge over the Red Clay a short distance east of Cuckoldstown (today's Stanton). Moving north along the creek, a second crossing was at Isaac Hershey's Bridge and mill. Furthest north was a bridge on the Wilmington to Lancaster Road (the Old Wilmington Road) called Barker's Bridge (Figures 10 and 11). Between Hershey's Bridge and Barker's Bridge, a ford, known as Robinson's Ford in the middle decades of the eighteenth century, allowed the creek to be crossed by Centre Road. Road petitions in 1767 and 1774 identified Centre

Road as the road leading from the Red Clay Creek to Chandler's Ford on the Brandywine Creek, a distance of approximately 8 miles (NCCRP 1767, 1774). North of the bridges the Red Clay Valley became more rugged, with fewer roads crossing the creek, thus limiting movements of large bodies of troops, thus forming the "impassible morass" reported by Stuart.

The day after the fighting at Cooch's Bridge (September 3), Washington began to concentrate his army at the Newport position. Virginia Captain John Chilton was stationed at a bridge crossing on the Red Clay Creek during the night of September 3 and noted that early on the morning of September 4 about 600 men:

came down... bearing entrenching Tools.... they were followed by Waggon's loaded with axes with which they felled trees plashing them to form a line by. – about 2 in afternoon Majr. Genl. Sullivan's Division came down & took possession of the Lines we had been Plashing. It consists of between 2 & 3000 effective Men (Chilton 1931:289).

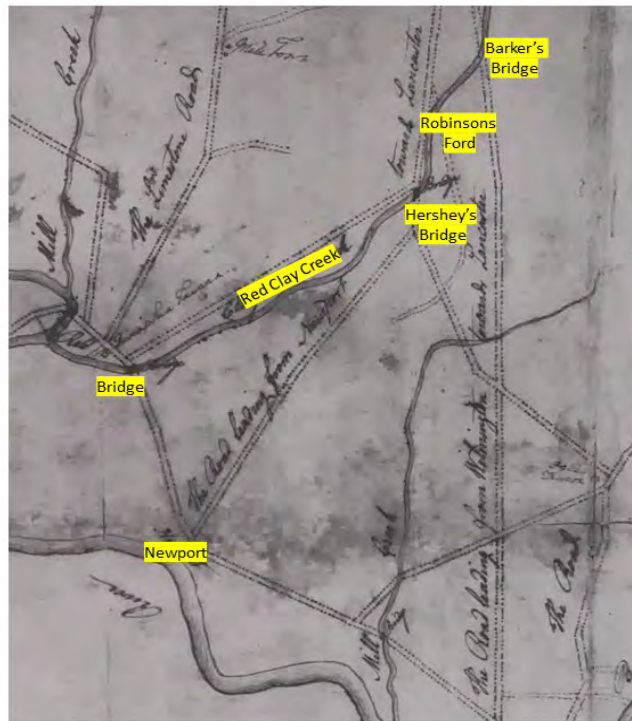


Figure 10. Detail of the Jacob Broom manuscript map drafted in August 1777, showing the location of the Red Clay Creek Defensive line, and the major creek crossings (Broom 1777). North is approximately to the top of the image.



Figure 11. Detail of Return of the Limestone Road and Newport Road to the Chester County line, May 1804 (NCCRP 1804). This map has north to the bottom. Drawn nearly thirty years after the Brandywine Campaign, it clearly shows the principal bridge crossings of the Red Clay Creek. From left to right, the “New Bridge” at Robert Philip’s Mill (today’s Greenbank Mill), the “Bridge called Hershey’s Bridge,” and “The Bridge” east of Stanton.

Numerous first-person accounts note that the American army occupied the Red Clay Creek line for several days (cf. Bechtel 1832; Ewing 1928:21; Kirkwood 1910:158; Mann 1834; McMillen 1832). The army headquarters was moved from Wilmington to Newport on September 6 (Clark 1854:97). Entrenching and strengthening this position with breastworks continued from September 4 to September 8 (Ewing 1928:21). To impede the march of the Crown Forces toward the Red Clay, Washington had bridges destroyed and roads blocked. Bucks County militiaman Robert McWhorter recalled in his pension that "...he assisted to pull up & destroy a bridge over Whitely Creek [White Clay Creek], at the time the army under Genl. Washington was encamped on the hill near the Bridge – the said bridge was destroyed for the purpose of retarding the progress of the British under Genl. Howe...." (McWhorter 1832). Chester county militia private William Hutchison deposed in his pension application that his company was "...ordered to the banks of the Red Clay Creek & were employed in cutting Timber to create all possible obstructions in the public roads and high ways for the purpose of preventing the passage of the enemy in their march to Philadelphia...." (Hutchinson 1836).

Today, the American position along Red Clay Creek has been heavily modified through suburban and commercial development. The location likely retains low integrity, but some portions of the position may still be intact. No professional archeological investigation of the area has been undertaken to discover possible military-related features or artifacts, and no amateur investigations have been reported. Remarkably, remnants of the American earthworks were still visible in the 1890s when they were photographed (Figure 12). In 1901, it was reported that

in the wooded bluff above Red Clay Creek, just opposite the Kiamensi Mill...the course of a line of earthworks can be plainly traced for at least one hundred yards. In some places their contour seems quite as pronounced as when they were first constructed. Mr. Rothwell remembers the existence of the line when it was much longer than now, but the need of the land for farming necessitated the destruction of the work (Anonymous 1901a).

By 1931 the earthworks were "rediscovered" by local researchers. By this time, the condition of the area was reported as "...thick underbrush, thorny vines and scrub trees have turned the spot...into a veritable jungle," and the remnant entrenchments were "being buried under tin cans and rubbish" (Anonymous 1931) (Figure 13). This situation was somewhat rectified a year later. As part of the Delaware Historic Marker Commission's marker program, a plaque was placed at the Red Clay crossing in Marshalltown in September 1932. The marker is no longer standing. At that time the earthwork remnants were reported as located William L. Knowles (Anonymous 1932).

Suburban development pressures in post-war New Castle County altered the former agricultural lands surrounding communities like Stanton and Newport. New subdivisions and with them new schools encroached on the 1777 American position. By 1961, newspaper reporter Kent Stoddard wrote "the Stanton area, southeast of the Mid-Way Shopping Center on the Robert Kirkwood Highway, is part of a fast growing suburbia. Houses are going up so fast it is almost impossible to keep track of them...." (Stoddard 1961) By the early 1960s, gridded streets and suburban growth had nearly obliterated the obvious evidence of the American position on the Red Clay (Figure 14).

Local history teachers at DelCastle Votech High School Donato Rufo and David Battaforano researched the Red Clay position several years ago, **This text was intentionally deleted per the requirements of the Archaeological Resource Protection Act (16 U.S.C. 470hh) and its implementing regulations (49 FR 1027, Jan. 6, 1984).** (Figure 15). If owner permission were given, geophysical survey (ground-penetrating radar) and limited archeological testing might reveal the remnants of the former earthworks.

This map was intentionally deleted per the requirements of the Archaeological Resource Protection Act (16 U.S.C. 470hh) and its implementing regulations (49 FR 1027, Jan. 6, 1984).

Figure 12. Image looking toward the Baltimore and Ohio Railroad Bridge showing the remains of Washington's entrenchments, circa 1984 (Delaware Public Archives).**[REDACTED]**

This map was intentionally deleted per the requirements of the Archaeological Resource Protection Act (16 U.S.C. 470hh) and its implementing regulations (49 FR 1027, Jan. 6, 1984).

Figure 13. **[REDACTED]**

This map was intentionally deleted per the requirements of the Archaeological Resource Protection Act (16 U.S.C. 470hh) and its implementing regulations (49 FR 1027, Jan. 6, 1984).

Figure 14. Photograph of a portion of the Red Clay Defensive line in 1960, showing the destruction of the landscape “leveled for development” *The Morning News* (Wilmington) February 22, 1960. [REDACTED]

This map was intentionally deleted per the requirements of the Archaeological Resource Protection Act (16 U.S.C. 470hh) and its implementing regulations (49 FR 1027, Jan. 6, 1984).

Figure 15. LiDAR imagery showing location potential remnant of Red Clay defensive line earthworks [REDACTED]

4.2 Route of the American Forces from the Red Clay Creek defensive line to Brandywine Creek, September 9 (*Avenue of Approach, Mobility Corridor*)

Between 1am and 4am on September 9, Washington's army moved quickly from the defensive line along the Red Clay Creek by a series of roads to reach the Brandywine Creek position. President John McKinley wrote to General Caesar Rodney on September 9 that Washington was aware that the Crown Forces were attempting to cross the Brandywine "... at a Place called Chad's Ford, about 9 or 10 miles above this place..." (Ryden 1933:221). Washington's plan was to thwart this maneuver and, as McKinley stated proudly, the Crown Forces "... were pursued, or rather attempted to be outmarched, head[ed] & interrupted, in their rout by the whole Continental Troops under Genl Washington who set off for that purpose from their lines at four o'clock this mornng accompanied by his excellency, the commander in chief, & other general officers, & hope they will accomplish their intention..." (Ryden 1933:221). Crown Forces were likely aware of the move. British officer Charles Stuart commented that "... We could plainly discover their fires this Eveng. & from a continued noise I conjectured that they were moving..." (Stuart 1927:46).

The time of departure from the Red Clay line varied over a period of several hours and provides a suggestion as to the order of march. Joseph Clarke of New Jersey reported that he was notified of the nighttime march between 1 and 2am (Clarke 1855:98). Captain John Chilton of the Third Virginia Continental Regiment also recalled marching for the Brandywine at 2am, writing that Tuesday [September 9]:

at 2 in the morning we had orders to march[.] took the road from Newport to Wilmington 2 Miles then turned to almost North about 2 M[ile]s more[.] we then marched West course 10 Miles S.W. & crossed Brandywine Creek and encamped on the heights of the Creek.

Delaware Continental Robert Kirkwood recalled that his regiment was on the road an hour later, marching for Chadds Ford at 3am (Kirkwood 1910:167). Maryland Continental Lt. James McMichael noted in his diary that:

At 4 a.m. we received marching orders and proceeded E.N.E. to the Crooked Billet, on the great road from Wilmington to Lancaster; thence thro' Kennett township, Chester county, crossed the Brandywine and turning S.E. encamped in the township of Birmingham, being extremely fatigued for want of rest and severe marching.... (McMichael 1892:149).

McMichael's reference to the Crooked Billet is to the Crooked Billet Tavern. In September 1777, the property was part of the estate of Thomas Ogle. Ogle had died the preceding February, and the estate was not settled until 1791 (Heite 1974). The Center Road (at this location called Brindley Road) in 1777 passed east of the tavern, instead of the present configuration to the west (modern Route 141).

Some American formations were still on the picket or advanced lines on 9 September, particularly those formations that had crossed to the west side of the Red Clay Creek to keep contact with the Crown Forces. New Jerseyman Joseph Bloomfield was among this number. On 8 September, Bloomfield was part of a force of approximately 150 men (infantry and cavalry) commanded by Captains Conway, Hollinghead, Gifford, and Forman that moved two miles west of the Red Clay position. This detachment was ordered to skirmish with the Crown Forces and fall back on the main body of the American army. It was anticipated on 8 September that a general engagement would occur, so Bloomfield's unit was a picket force. As Bloomfield remembered:

I was alarmed all Night with the approach of the enemy & kept my party paraded...At day-break [approximately 6am] on Tuesday I received Orders to follow our Army who had marched at two at Night for the heighth[sic]of Brandewine [Brandywine] opposite Chad's Ford, where I also arrived this evening with my party much fatigued (Bloomfield 1982:127).

The initial route used by American Forces was **Center Road** (*Avenue of Approach*) from Newport to the Wilmington to **Kennett Road** (*Avenue of Approach*). This route is essentially modern Route 141 to modern Route 52. Center Road was an important route that linked the Red Clay Creek at Robinsons Ford to the Brandywine at Chandler's Ford (NCCRP 1764). Local historians and researchers in the early twentieth century concluded that American forces moved out of Newport along Center Road to the Lancaster Pike, then continued northeast along Center Road/Brindley Road until reaching the Wilmington to Kennett Road (today's Kennett Pike or Route 52). In an undated typed manuscript intended for "Engineer of Service of Baltimore and Ohio Railroad," Edward Cooch, Sr. wrote that

Some difficulty has been experienced in locating the road taken by Washington on his march to Chadd's Ford. It is possible that more than one road was used. The weight of the evidence, however, seems to be that they took the road leading from Newport, past West Junction to Price's Corner, and from there, past the Ferris Industrial School and the duPont Flying Field, to the road from Wilmington to Kennett, and by that road to Chadd's Ford (Cooch n.d.).

In his address prepared for the 125th anniversary of the Battle of Cooch's Bridge, the Honorable Judge John P. Nields concluded

An examination of the Jacob Broom map [1777] and other early county maps has led to the conclusion that Washington led his army from Newport along the Center Road to the Lancaster Pike, thence along the Brindley Road to the Crooked Billet, thence up the Kennett Road to the foot of the hill beyond the Brick Church, and thence by the road leading to Chadd's Ford up the west bank of the Brandywine to the battle ground (Nields 1927:15).

In the second half of the nineteenth century New Castle County bailiff and law librarian Amos C. Brinton (1819-1912) extensively researched the Brandywine Campaign and regional history. Brinton was born in Birmingham Township and spent his life in southeastern Pennsylvania and New Castle County (Anonymous 1912). Brinton's historical knowledge spanned the generations of residents who had lived during the period of the Brandywine Campaign in 1777 and his position with the law library allowed him access to official records and documents. He is frequently cited as providing records to the antiquarian historians of the period in publication of the Historical Society of Delaware, and often quoted in the Wilmington newspapers for his historical knowledge. Prior to the publication of Wilmer W. MacEllree's 1909 volume on the Brandywine River, Brinton assisted in properly identifying the location of Chad's Ferry (Anonymous 1909). Brinton's handwritten manuscript notes contain important information regarding the route the American forces took. With so many formations moving at the same time, sources indicate that the army used several roads to reach the Brandywine position. Brinton interpreted that Washington

put his army In motion for Chadds ford and the Main part of his army took the Road that crosses the Present Lancaster turnpike near Oak hill and the Kennett Pike near the old Buck Tavern three miles from Wilmington [.] Washington took his Breakfast at Brindley's then [crossed out "Sven Sudhams"] that then lived on what I call the Brindley Farm (in pencil, added "one section only") now owned by Mr. DuPont [.] the army crossed the Brandywine at Hollingsworth's Ford now known as Ealy ford and kept up the east side of the stream past William Simasons and the Presbyterian meeting house now Gone to Decay but the farm belongs to Mrs. Susan Seal then Robert Mucclho and the Road passed near the Brandywine some distance above Gibsons Ford once called Pyles Ford [in pencil, "at that time Gordons Ford"] and then passed to the north of Neal Woodwards house & tanyard, now Mrs. Barneys and on to Chadds ford [.] the old Road has gone out of use but faint marks may be seen some places.

Washington had his men placed so as to Guard the Fords and all Ready to Receive the British army the Day Before the Battle (Brinton 1895/96).

Brinton's research is important because it places the events of 1777 on the 1890s landscape of northern New Castle County and the Brandywine Valley, at a time before extensive suburbanization and commercial development had altered the region's earlier road network and farm patterns. Brinton had grown up in the Brandywine Valley and knew the roads, fords, farms, and mills intimately. His work at the law library coupled with the landscape knowledge he gathered from his family and neighbors allowed him to identify the routes used by the American forces on their way to Brandywine.

Brinton drafted a manuscript map in 1895 that detailed much of what he had learned about the troop movements and positions (Figure 16). His map identified Gordon's Ford, Corner Ford, Chads Ford, Lower Ford and Hollingsworth's Ford as Brandywine Creek crossing points. He noted that on the east side of the Brandywine the army took a road leading north from Smith's Bridge in 1777 "but most of this road is now out of use" by 1895. He identified two dwellings on the east side of the creek – one called "R.M Elko 1777/ Wm Seals present" near Gordon's Ford, and one labeled "Neal Woodward house 1777/Barney's at present." West of the Brandywine, near the lower Chads Ford, he identified the road to "Hogtown" – likely Starve Gut Road – as leading to the ford. And just south Chads Ford he placed "General Greene's Reserves."

Pyle's Ford Road (*Avenue of Approach*) was one of several routes used by American forces to access the Brandywine and cross at one of several fords. Pyle's Ford road (or the road to Thomas Gibson's) was a new road in 1777, having been established only a year earlier in 1776 (NCCRP 1776). The road was petitioned for by residents in Pennsbury and Birmingham townships in Chester County as well as by residents in Christiana Hundred in New Castle County. The road extended from the Kennett Road, crossed the Center Road (today's Center Meeting Road) on Adam Kirk's land, then continued to the county line on Jesse Eldridge's property. An unpaved portion of the former Pyle's Ford Road is still extant on the Flint Woods Preserve lands. The trace runs from Center Meeting Road nearly straight downhill until it intersects with Route 100 (Montchanin Road). The Flint Wood Preserve property is jointly managed by the Delaware Nature Society and the Delaware Division of Natural Resources and Environmental Control. A portion of the former road is privately owned by the Flint family (Figures 17 and 18).

Starve Gut Road (*Avenue of Approach*) was a principle route used by American forces. Chester County archival records confirm that the road was laid out by 1725 (MacEllree says 1754) and extended across much of the lower portion of Chester County from near Hamilton's mill on the Red Clay Creek in the west to the Lower Chads Ford on the Brandywine. Starve Gut Road was the first and most direct road leading to the Brandywine defensive position which the American forces would encounter moving up the Kennett Road to the north and east. Brinton calls this road the road to Hogtown (Brinton 1895) and it was also known as the Lower Ford Road (MacElree 1909:132-134). Presently the road retains a high degree of integrity and follows for much of its length the eighteenth-century trace.

Today's **Cossart Road** (*Avenue of Approach*) was initially established by 1730. This road too, led to Harlan's/Gibson's Ford on the Brandywine and likely served as a route used by American forces. The road extended east and generally descended to the modern Route 100, which in turn led to the Harlan/Gibson's ford. This ford location is still apparent but is no longer used. A modern gas line crosses the Brandywine at this location.

Upon crossing the Brandywine at this point, Smith's Bridge Road intersects with **Ridge Road** (*Avenue of Approach*). American forces likely entered Ridge Road and march north on this road until intersecting with **Ring Road** (*Avenue of Approach*). Turning again on Ring Road, American forces used Ring Road to reach the Benjamin Ring House, used by Washington for his headquarters (Harris 2014:166-168), and the center of the American army's position on the Brandywine.

A second road on the east side of the Brandywine traced north from Corner/Chandler's Ford (*Avenue of Approach*). This road is now a private farm lane. The trace followed an unnamed stream valley and then intersected an east-west trace which linked Harlan/Gibson's Ford to the west with Ridge Road to the east. The general road system is clearly illustrated on the 1848 map of Delaware County (Smith 1848) (Figure 19).

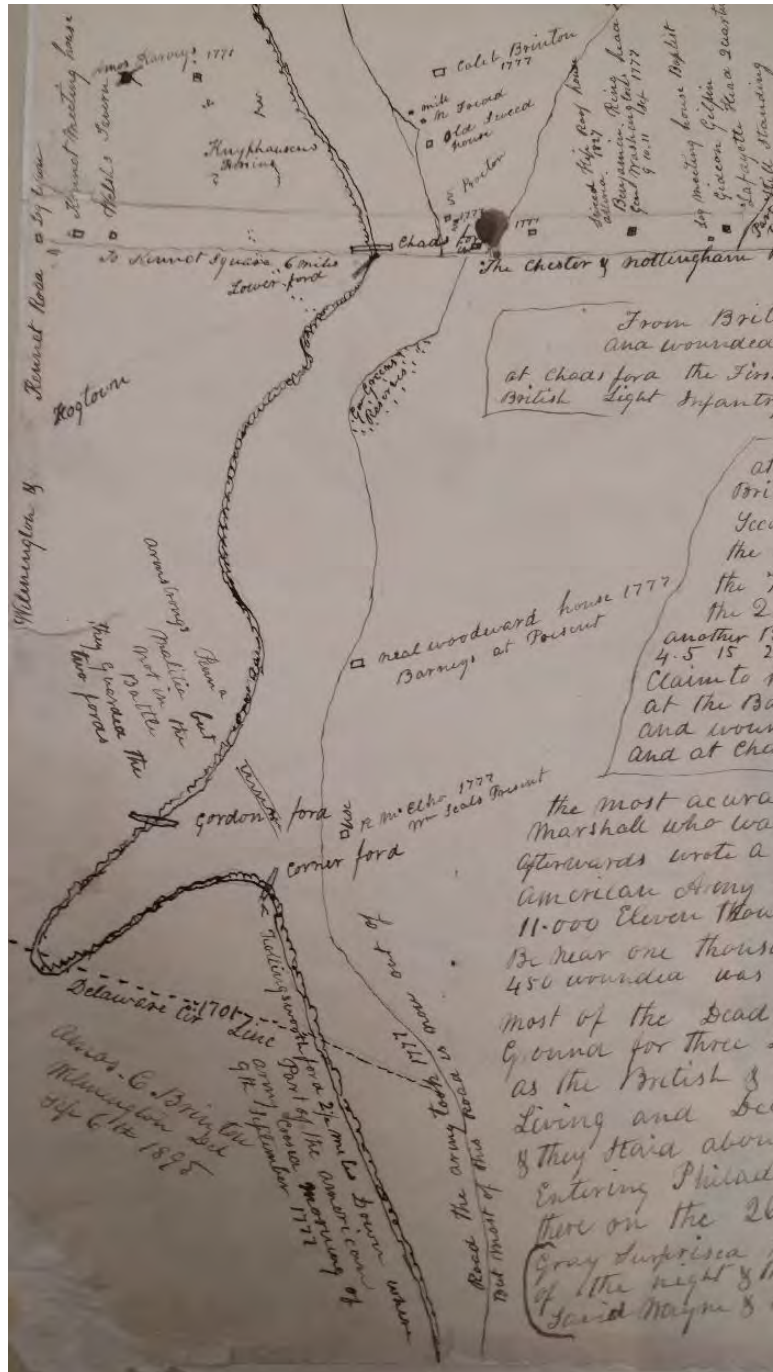


Figure 16. Detail of Amos Brinton's Manuscript map dated September 1895, showing troop movements, ford locations, house locations, roads, streams, and other battle information (Brinton 1895).



Figure 17. Trace of Pyle's Ford Road, looking south and uphill towards Center Meeting Road. Behind the photographer is modern day Route 100 (Wade P. Catts, photographer).

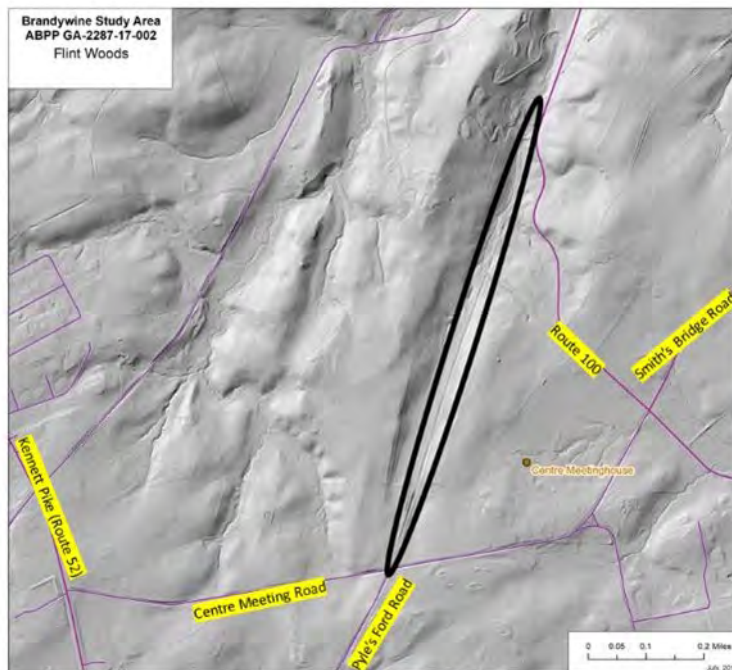


Figure 18. LiDAR image of the location of remnant of the eighteenth-century Pyle's Ford Road on the Flint Woods Preserve Property.



Figure 19. Detail of the “Big Bend” of the Brandywine, from *Map of Delaware County* (Smith 1848).

The modern **Smith’s Bridge Road** (*Avenue of Approach*) and its crossing point over the Brandywine at Smith’s Bridge was another route used by American forces. This road was accessible from Pyle’s Ford Road.

The east-west road passed the original location of the Lower Brandywine Presbyterian Church, established at that location in 1720. The original log church was on a small parcel of land at the foot of “Bald Hill” on land sold by Ralph Pyle to the congregation (Jones 1876:13-14). The church was replaced by a Lower Brandywine Presbyterian Church on the west side of the Brandywine in 1773, at the intersection of modern Route 52 and the Old Wilmington Road. At that site (in Delaware), the original log church was constructed on a plot enclosed in the present old graveyard near the southwest entrance of today’s building, just inside the stone wall and measured 30 by 35 feet (Kelly 2018). By 1777 the building on the eastern side of the Brandywine was deteriorating. While still standing with its associated burial ground in 1777 when American forces marched along the route, was likely not being used. The archeological signature of this historical resource has not been verified.

The minister of the Lower Brandywine Presbyterian Church at the time of the Revolution was a Mr. Thomas Reed (or Read). Several sources indicate that it was Reed who guided Washington’s forces from the Red Clay Creek line across the Brandywine to Chadds Ford, though precisely which church he was the minister of is not clear (Ashmead 1884:315-316; Cannon 2001:13; Conrad 1902; Hyatt 1933). Some sources suggest that Reed was the minister at Old Drawyer’s Church in Cantwell’s Bridge (modern Odessa); others suggest the Lower Presbyterian on the Brandywine. Reed is reputed to have provided Washington with detailed knowledge of the ground between Newport and the Brandywine, including knowledge of roads, crossroads, and by-roads. Given the area that the American army needed to traverse in the early morning hours of September 9, Reed’s association with the Lower Brandywine Church in the Big Bend of the Brandywine seems the most likely.

Road records for what is now Delaware County do not report a road in the location of modern Route 100 extending north along the Brandywine and eventually intersecting US Route 1 at Chadds Ford. However, farm lanes or traces were likely present that allowed movement across this space. In 1785 a formal road was established from the main road crossing at Chads Ford (modern US Route 1) and referred to on the road return as The Bottom Road) and extending south into the Big Bend of the Brandywine to the forge of William Twaddell (Figure 20). The road return shows this road as intersecting the east-west road trace noted above as leading from Harlan/Gibson’s Ford.



Figure 20. Plat of a Road leading from the Bottom Road to William Twaddell’s Forge in the Big Bend of the Brandywine, May 1785.

4.3 Brandywine River Fords (*Key Terrain, Avenues of Approach, Mobility Corridor*)

As Amos Brinton wrote in the late nineteenth century: “Washington’s army started from Near Newport Delaware on Tuesday morning Sept 9th 1777 some companies went on different Roads & crossed the Brandywine at Different Fords some at Hollingsworth’s the main army [*emphasis in the original*], and some crossed at Chadds Ford [.] but Historians seem to differ so much that it is Hard to get It Right” (Brinton 1895/96). The fords on the Brandywine have had different names assigned to them over time, and some are no longer in use. Few first-person accounts report on the actual troop movements and fords used, but the road network available in 1777, known ford locations, and later nineteenth century published maps and atlases provide some clues.

The Jacob Broom manuscript map, prepared for Washington on August 27 1777, shows a number of fords along the Brandywine (Figure 21). Moving north upstream from Wilmington is a notation – identified as written by Washington – that states “This creek except the fording places impassible” (Broom 1777; Public Archives Commission of Delaware 1932:50-52). The first ford noted above Wilmington is called “Richland fording place” with McKim’s Mill shown on a road linking the ford with Center Road. The name Richland is likely intended to be Rockland. The next ford above Richland is identified as Gibson’s Ford. A road crosses here, linked with Center Road, and a Gibson’s Mill is also shown.

Above Gibson’s Ford there is a bend in the Brandywine. Broom shows that Center Road continues into Chester County along the west bank of the creek to what is identified as “Chandler’s Ford.” The penned notation at this ford comments: “very good but very broken ground and narrow defiles on east side.” At Chandler’s Ford the road on the west side of the Brandywine crosses to the east. Above Chandler’s Ford is “Fording Place of Thomas Gibson.” This location includes an east-west road that is intersected by the Center Road. The east-west road links to Wilmington to Kennett Road (modern Route 52) to the west, and

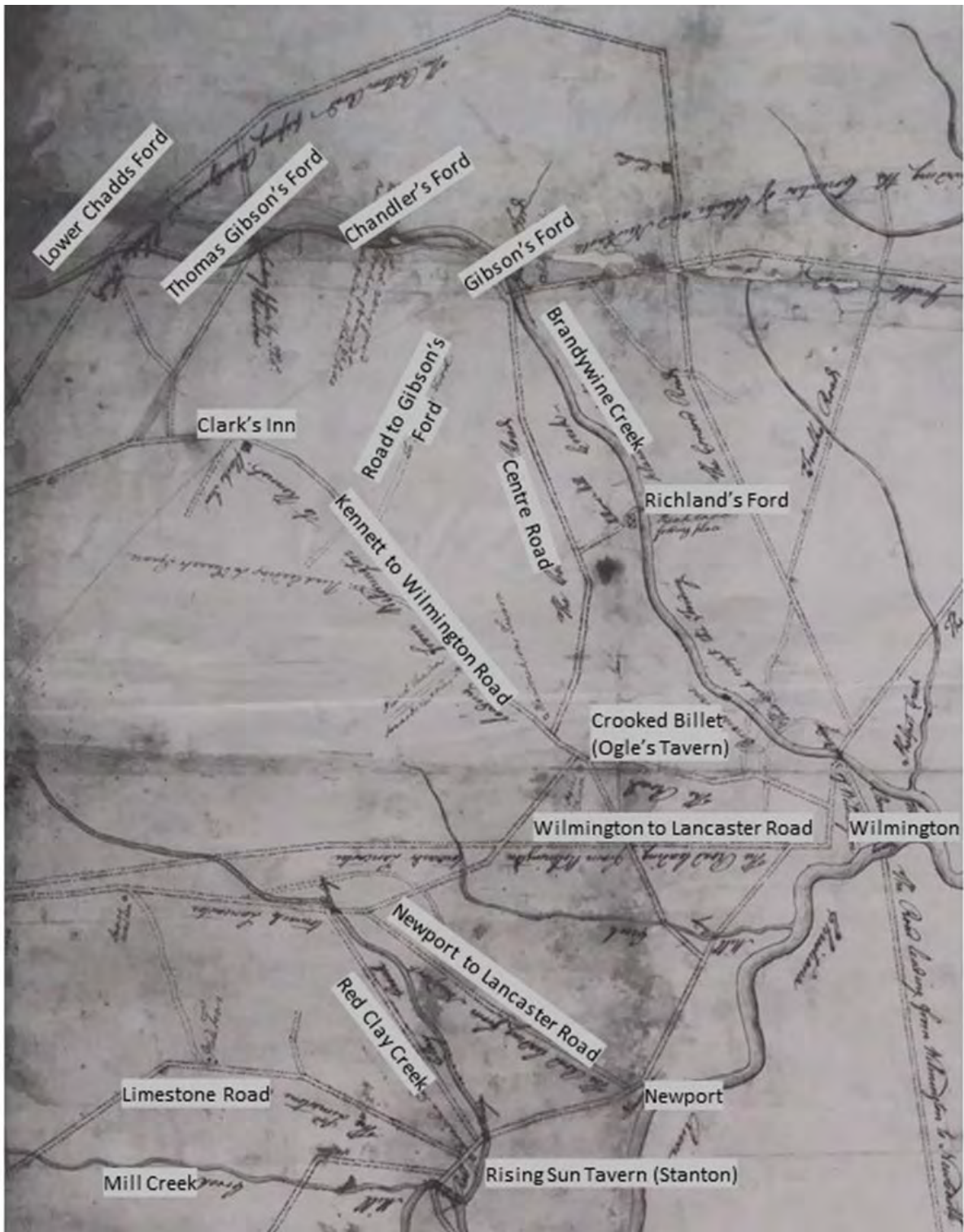


Figure 21. Detail of the Jacob Broom map, drawn August 27 1777 (Broom 1777).

to a the “the Bottom Road passing Brandywine at Chads Ford” (Broom 1777). The use of the name “Bottom Road” also appears on a 1781 road return for a road extending south from the Chads Ford area into the Big Bend of the Brandywine, where William Twaddell has established a forge (Chester County Road Papers 1781).

The extensive historical research into the Chester County road network of 1777 is indispensable in understanding the possible routes of march of both the American and Crown forces, and also in helping to decipher the different names applied to the Brandywine fords in the eighteenth century (Figure 22). Comparing the Broom map with Figure 22 it is clear that Thomas Gibson’s Mill and the modern Smith’s Ford/Bridge are identical. Chandler’s Ford is also known as Corner Ford. Gibson’s Ford was called Harlan’s Ford prior to 1733, and also as Gordon’s Ford – due to the ownership of the land in the “Big Bend” of the Brandywine by Harry Gordon, as Scottish officer in the Royal Engineers, who owned the tract between 1763-1775 (Pennsylvania Register of Historic Sites and Landmarks 1972).

Gibson’s Ford has been variously known as Harlan’s Ford, Gibson’s Ford, and Pyle’s Ford, depending on the side of the Brandywine from which it was approached and on who the landowner was at any given time. The ford is situated at a gap or low point in the east river bank (Figures 23 and 24). South of the ford on the east side, the rocky ground rises abruptly, while north of the crossing the ground is swampy with a rocky ridge extending northeast. The former road extended uphill from the ford and then turned north, winding through a “narrow defile” before descending to a more level area.

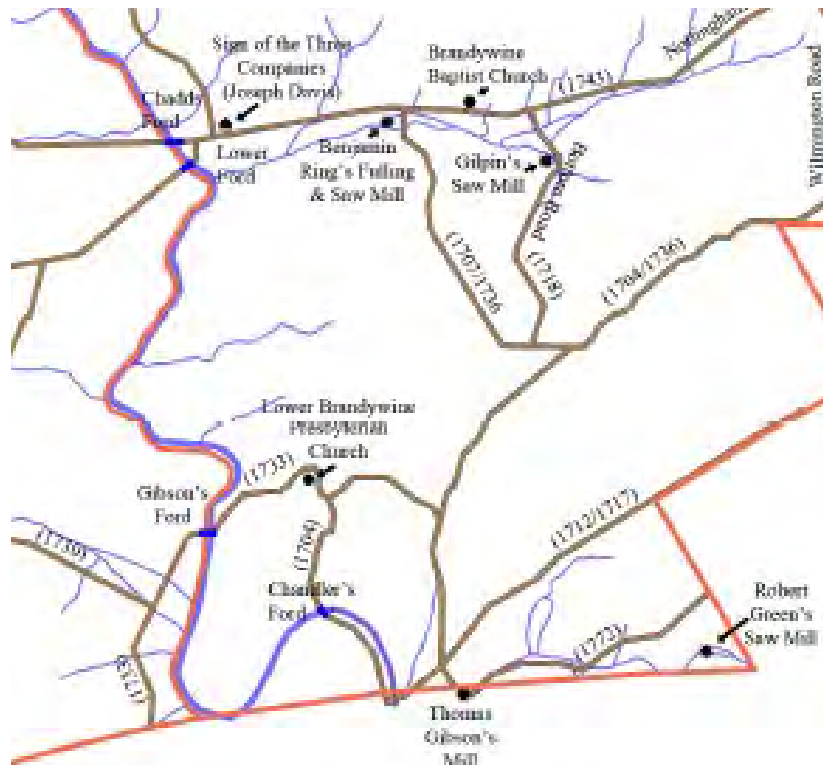


Figure 22. Detail of Chester County Road network 1777, from the Delaware state line to Chads Ford. Map prepared by Cliff Parker of the Chester County Archives.



Figure 23. View of Harlan/Gibson's Ford, from east bank of the Brandywine. Note the gas line that now crosses at the ford (middle distance) (Wade P. Catts, photographer).

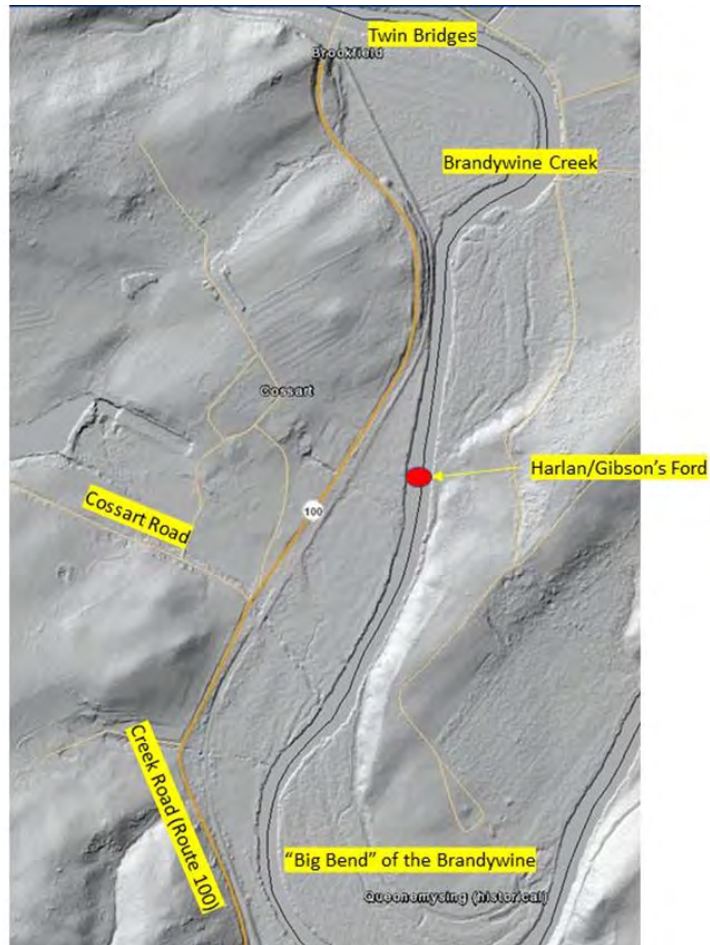


Figure 24. LiDAR imagery showing the location of Harlan/Gibson's Ford on the Brandywine.

Family tradition relates that Washington used **Smith's Ford/Bridge** to cross the Brandywine. The ford was known as Thomas Gibson's, when a road was laid out in 1773 from his house and mill on the New Castle County/Chester County line to the Wilmington Road – this is the modern Smith's Bridge Road through Delaware County. On the west side of the Brandywine, a road trace or trail linked the crossing at Smith's Ford/Bridge with the Corner/Chandler's Ford. This trace is still used today.

In 1901 a John Rumer related to *Every Evening* (Wilmington) that “the place where the army crossed was a regular ford and was known as Smith's Ford” (Anonymous 1901). Rumer knew this because his father, a long-time resident of Mill Creek Hundred who had been a Continental soldier, told him and shown him the ford. According to his father, Rumer stated that on September 9 “...The army passed the Buck tavern, just beyond the first tollgate on the Kennett pike, went along a road leading past what is now Montchanin station and upon reaching the Brandywine marched west along the south bank of the stream until it reached Smith's Ford, where the men waded across....” (Anonymous 1901).

Following up on Rumer's story, Thomas Mechem wrote to Delaware historian Henry Conrad that “Washington and some of his general officers” were entertained at the mill owner's house at Smith's Bridge. Mechem wrote:

...A Mr. [John] Rumer state in *Every Evening* of this date [September 13, 1901] he [Washington] crossed at Smith's Ford, now Smith's Bridge. He is evidently right, for my great grandfather Jacob Smith owned & operated a mill at that place at the time and it has been handed down from one generation to another that he entertained Washington and some of his general officers at that time.

The ford and mill are on Delaware soil near Penna line, the property come into the hands of Isaac Smith, a son of Jacob Smith[.] a son and daughter of Isaac Smith, survive. Edmund Harvey Smith resides in Elena [?] Pa and Mrs. George Fawcett resides near West Chester Pa. I believe Mrs. Fawcett has a record of events of the time that Washington crossed the Brandywine.... (Mechem 1901b).

The eighteenth-century miller's house is extant at Smith's Bridge (Figure 25). Family tradition holds that it was at this his house is that Washington and his officers rested. The tradition is likely accurate, since Washington's headquarters staff would likely have used the road furthest from the Crown Forces west of the Red Clay Creek. Crossing the Brandywine at Smith's Ford/Bridge, the headquarters entourage would have reached Ridge Road, then turned onto Ring Road, thus arriving at the Benjamin Ring house.

An important ford crossing on this portion of the Brandywine was **Corner Ford**. Located at the large bend in the Brandywine about 3,300 feet north of Smith's Bridge, Corner Ford was likely used by American forces. The ford is still readily apparent and used by equestrians (Figure 26). It retains a high degree of integrity. A trail on the east side of the Brandywine links Smith's Bridge with Corner Ford, as well as the trail on the west side of the river. Broom's 1777 description of the ford as “very good but very broken ground and narrow defiles on east side” is apt; a deeply incised stream valley parallels the road leading uphill and away from the ford. This lane eventually connects with Ridge Road.

The ford was alternatively known as Chandler's Ford and Corner Ford. According to local historian Amos Brinton, General Armstrong's Pennsylvania militia were placed on a “...high Ridge of Land where he could watch Corner & Gibsons fords while Greene with the Reserve above Gibsons Ford on Land now owed by Amor Garrett....” (Brinton 1895/96:90). Henry Ashmead described the position of the Pennsylvania militia this way: “The Pennsylvania militia, under Gen. Armstrong, constituted the left wing and extended through the rough ground – then known as Rocky Field – to Pyle's Ford, two miles below Chad's, and there Col. Jehu Eyre, with Capt. Massey's and McCullough's companies of artillery militia of Philadelphia, had placed



Figure 25. Miller's House at Smith's Bridge, view to east. Brandywine Creek is behind the photographer (Wade P. Catts, photographer).



Figure 26. View of Corner/Chandler's Ford from the north bank of the Brandywine (Wade P. Catts, photographer).

his cannons to prevent the crossing of the stream at the point by the enemy....”(Ashmead 1884:56). Corner Ford is approximately 2 miles below the US Route 1 bridge over the Brandywine.

Further south on the Brandywine, historian Amos Brinton identified **Hollingsworth’s Ford** as the ford used by the main American army to cross the creek (Brinton 1895/96). Hollingsworth’s Ford was known in the first half of the nineteenth century at Mendenhall’s Ford, according to the pension of Chester County militiaman Thomas Jordan. In his pension deposition, Jordan recalled that his company “...we hovered near them till orders were received by Col. Taylor for him and his men to cross the Brandywine at Mendenhalls Fording – we did so and lay there until the 11th of September or thereabouts. We were then ordered up to Gibsons Fording and lay there till the Battle of Brandywine was fought...” (Jordan 1835). Jordan’s remembrance in 1835 provides the name of the ford at that time. Further, he drew a distinction between Mendenhall’s Ford and Gibson’s Ford further north. Hollingsworth Ford was also known as Harvey’s and later as Ely’s Ford (Zebley 1940:98) Figure 27).

On his manuscript map of the Brandywine Battlefield, Brinton noted that Hollingsworth’s Ford was located “2 ½ miles down [from Corner Ford] where a part of the American Army crossed morning 9th of September 1777” (Brinton 1895). Brinton’s distance is inaccurate, as the ford is likely about 1.5 miles south of Corner Ford. The location of Hollingsworth’s Ford is within the First State National Park and is still used by horses crossing the creek and contains a high degree of integrity (Figure 28).



Figure 27. 2017 aerial image showing the approximate locations of the Brandywine fords. The red line in the upper right denotes the approximate location of the Pyle’s Ford Road trace (Wade P. Catts, photographer).



Figure 28. View of the Brandywine at Hollingsworth's Ford, looking south (Wade P. Catts, photographer).

4.4 Picket Posts on the Brandywine (*Observation, Cover and Concealment*)

This Section was intentionally deleted per the requirements of the Archaeological Resource Protection Act (16 U.S.C. 470hh) and its implementing regulations (49 FR 1027, Jan. 6, 1984).

This page/map was intentionally deleted per the requirements of the Archaeological Resource Protection Act (16 U.S.C. 470hh) and its implementing regulations (49 FR 1027, Jan. 6, 1984).

Figure 29. LiDAR imagery showing location of the possible picket post pits south of Harlan/Gibson's Ford.**[REDACTED]**

This map was intentionally deleted per the requirements of the Archaeological Resource Protection Act (16 U.S.C. 470hh) and its implementing regulations (49 FR 1027, Jan. 6, 1984).

Figure 30. The possible picket post pits associated with Harlans/Gibson's Ford. The dark lines demarcate the downhill rims of the pits. Andrew Outten is standing to the left on the edge of one of the pits. The gut or ravine is to the right of the image. The Brandywine is in the distance and downhill (Wade P. Catts, photographer). [REDACTED]

This map was intentionally deleted per the requirements of the Archaeological Resource Protection Act (16 U.S.C. 470hh) and its implementing regulations (49 FR 1027, Jan. 6, 1984).

Figure 31. LiDAR imagery showing location of possible picket post pits at Corner/Chandler's Ford. [REDACTED]

This map was intentionally deleted per the requirements of the Archaeological Resource Protection Act (16 U.S.C. 470hh) and its implementing regulations (49 FR 1027, Jan. 6, 1984).

Figure 32. View to the north from Corner/Chandler's Ford. View shows the floodplain area and then the steep slope in the distance. Andrew Outten (red shirt in the middle of the image) is walking uphill towards the location of the possible picket post pits. Ralph Denlinger is to the right (Wade P. Catts, photographer). [REDACTED]

This map was intentionally deleted per the requirements of the Archaeological Resource Protection Act (16 U.S.C. 470hh) and its implementing regulations (49 FR 1027, Jan. 6, 1984).

Figure 33. View looking downhill towards Corner/Chandler's Ford for the possible picket post pits. Andrew Outten, left, is standing in one of the pits (rim outlined in black). Ralph Denlinger is to the right (Wade P. Catts, photographer). [REDACTED]

4.5 Valley Road, the headwaters of Mill Creek, and the Crown Forces Movement from Nichols to “Occasion” Meeting House (Hockessin Meeting House) (*Obstacle, Avenue of Approach*)

Several of the British and German first-person accounts report on the difficulty Cornwallis’ Division encountered on the nighttime march of 9 September. Cornwallis was led by a knowledgeable local guide coerced into serving as such. As detailed in the Phase 2 report (Catts et al. 2017:16), the anticipated march appeared straightforward but there were too many troops for a successful march over “undefined,” “bad,” “County roads,” and by midnight Howe was forced to call a halt. What was the condition of the area through which Cornwallis’ Division marched that they encountered so much difficulty?

The route of today’s Valley Road northeast of Limestone Road to modern Hockessin is entirely situated within the Hockessin Basin, a 3.65 square mile water basin located at the headwaters of Mill Creek (Williams 1977-78). Underlying the basin is the Cockeysville Aquifer which is surrounded by a noncarbonate aquifer (Talley 1995). The soils comprising area between Limestone Road and the Newport to Lancaster Road consists of Glenville silt loam series that are occur depressions and the headlands of streams. The soils in this setting can be poorly drained and due to the underlying geology have seasonal wetness and moisture retention (Matthews and Lavoie 1970:23-24).

In 1777 there was no road where Valley Road is today, so the march from Nichol’s House was over farm lanes and traces. As English engineer Montrésor recorded “Lord Cornwallis and Major- General Grant marched from Headquarters at Nichols’s House Mill Creek Hundred by a bye road to Hockessin Meeting House – Quaker Meeting 4 miles distance and encamped” (Montrésor 1881:415). John Peebles of the Grenadiers wrote in his diary that “army order’d to move at 1 oclock but was 4 or 5 before they got in motion & march’d about 3 miles by County road” to the east (Peebles 1998:132). Friedrich von Muenchhausen wrote that “The road that we took was so bad, and it was getting so dark, that the General halted five miles from Kennett Square,” while the anonymous diarist of the Lengerke Grenadiers wrote “after having gone 6 miles a halt was made” (Muenchhausen 1974:30; Lengerke I:83). Captain Ewald recorded that the march “occurred during a very dark night” (Ewald 1979:80). Montresor recorded “The roads bad for both routes of the Army & under many halts” (Montresor 1881:515). The Minnigerode scribe noted that “after we had covered 6 miles we made a rendezvous” (Minnigerode 1777: fol.88v).

The trace of Valley Road between Limestone Road and the Lancaster Pike (approximately 1.5 miles) was not laid out until the first half of the nineteenth century. Nineteenth century atlases of the area show a sparsely settled region transected by numerous unnamed tributaries to the Mill Creek. Based on the topographic setting, the underlying geology, and the rainy weather over the preceding days, it is clear that Cornwallis’ Division became bogged down on their march toward the Occasion (or Hockessin Meeting) as they attempted to cross the multiple streamheads that fed Mill Creek.

4.6 Cornwallis’s Route to and across the west branch of Red Clay Creek, September 9 and 10 (*Obstacle, Avenue of Approach, Mobility Corridor, Key Terrain*)

The previous 2017 study attempted to identify the route followed by Cornwallis’ Division on the evening of September 9 and morning of September 10. Additional research was conducted as part of the present study to further define and/or clarify this route if possible.

Red Clay Creek and its valley posed a significant obstacle to the movement of Cornwallis’ Division on night of September 9/10. The deeply incised creek was heavily wooded, with numerous ravines. The road network in the valley was poor, and there were only fords for crossing the creek. The lack of a well-established road network may have been a result of the settlement pattern in the valley; many of the residents were tenants, not landowners. British light infantry officer Henry Stirke lamented that, after getting on the move at 4PM on September 9, the army had “a very disagreeable march, through swamps, and rivers,

in many places up to ye middle; and after several halts, took post on a hill, at 2 O'Clock in the morning” (Stirke 1961:169). The difficulty of moving in the Red Clay valley was evident, as Stirke reported that they covered only three miles in those 10 hours.

Cornwallis' Division, accompanied by Howe, did not begin its march on September 9 until early evening. The movement crossed the broad karst topography of Valley Creek and reached Hockessin Meeting house (also known as Occasion Meeting house). The road used to reach the Hockessin Meeting house was likely modern Yorklyn Road. It was while Howe's temporary, traveling headquarters was at Hockessin Meetinghouse on the night of September 9/10 that he issued the orders that prepared his army to fight Washington on the Brandywine (Figure 34).

From this point Cornwallis' Division turned to the west and followed the today's Old Wilmington Road out of New Castle County towards Chester County. The route in this section seems to have followed closely with modern Chandler's Mill Road, extending downhill towards the west branch of the Red Clay Creek. It is possible that an earlier route of Chandler's Mill Road struck almost due north at the intersection of today's Benge Road; this route is now a driveway. This route would have intersected with the current Chandler's Mill Road as it descends to the Red Clay Creek. From Hockessin Meeting to the west branch of the Red Clay Creek is approximately 1.8 miles.

The current bed of Chandler's Mill Road was not established until 1862. The road does not appear on any published maps prior to that date, so how residents traversed this valley in 1777 is not known with certainty.

Cornwallis's column crossed the Red Clay at a point very near the intersection of Chandler's Mill Road with the Kaolin Pike. Exploration by the project team identified a possible ford on the creek. According to the Blaskowitz map and other Crown Forces mapping, the road on the north side of the Red Clay Creek extended directly uphill from the ford, passing the Michael Gregg house at 103 Round Hill Road (Figures 35 and 36). The LiDAR image for this area clearly shows an incised linear feature trending north-south, which reaches the Red Clay in the south and extends north to the Kaolin Road. The Gregg House is reported to be the oldest standing structure in Kennett Township, and was built in the eighteenth century. It was thus a dwelling that was present in 1777 (Figure 37).

The possible route across the West Branch may have simply been an extension of Chandler's Mill Road as it descends north to the creek. The possible ford location lines up with Chandler's Mill Road where it intersects with the Kaolin Pike (Figure 38).

The project team conducted multiple field reconnaissance trips to confirm and identify the fording point on the Red Clay and the route used by Cornwallis' Division as it struggled to cross the valley. We utilized historical documents, aerial images, LiDAR, published historical maps, and other written sources.

Unfortunately, the precise route used by Crown Forces cannot be definitively determined with the historical documentation and topographic information currently available. Therefore, the project team is providing its most reasoned explanation – our “best guess” – as to what route was used to cross the valley of the west branch of the Red Clay (Figure 39). Perhaps in the future additional physical or documentary evidence will become available that will offer a definitive answer.



Figure 34. Hockessin Friends Meeting House, view to the north (Wade P. Catts, photographer).



Figure 35. Detail of *Progress of the Royal Army from their Landing at Elk Ferry to Philadelphia 1777....* showing the approximate route of Cornwallis' Division through the Red Clay Creek valley (Blaskowitz 1777).

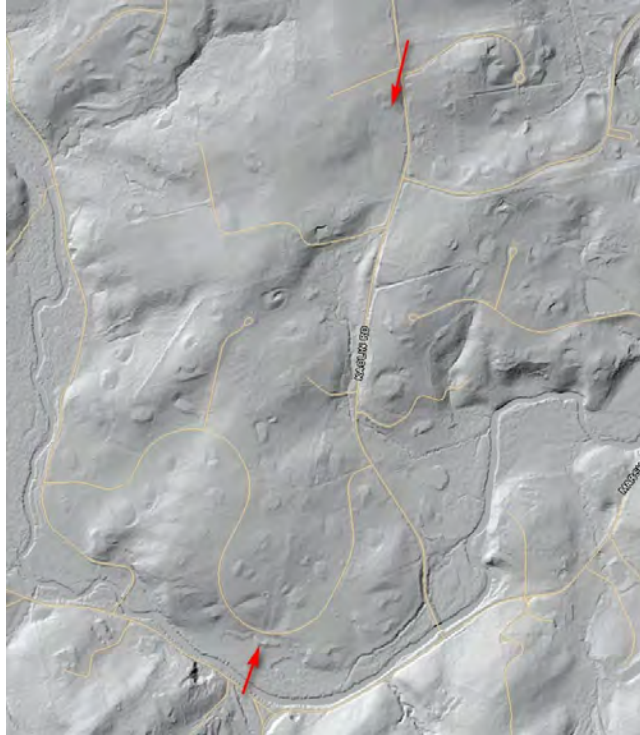


Figure 36. LiDAR imagery of the possible route across the Red Clay Creek (at bottom) and up the topographic feature called Round Hill.



Figure 37. The Michael Gregg House, 103 Round Hill Road. View to the south (Wade P. Catts, photographer).



Figure 38. Hypothesized road trace on Chandler's Mill Road and intersection of Kaolin Road, leading to ford of the west branch of the Red Clay Creek (Wade P. Catts, photographer).



Figure 39. Hypothesized road trace (in red) leading from Chandler's Mill Road north across the Red Clay Creek and Round Hill.

4.7 Marlborough Friends Meeting Research

Separate from conducting a KOCOAs terrain assessment, the project team was asked to research the Marlborough Friends Meeting. The team was asked to review the Marlborough Meetinghouse and London Grove Meetinghouse uncertainty and whether the current London Grove Meetinghouse is actually one and the same as the historically referenced Marlborough Meetinghouse. If so, this would explain the scattered cannonballs and other military artifacts that have been found over the years at the London Grove Meetinghouse.

There are several references to a “Marlboro Meeting House” in the accounts of both English-speaking as well as German-speaking soldiers in Sir William Howe’s army written during the marches prior to the Battle of Brandywine. These references are difficult to account for, since Marlborough Meeting as, and where, it exists today was not established until 22 years later in 1799, and a Marlborough Meetinghouse was built several years later still in 1804.

Moreover, the regimental journal of the Hessian Grenadier Battalion von Lengerke mentions encampments at 1) an as yet unknown location called “Margaret’s Meeting” and 2) at “Marlborough Meeting” on dates when no Hessian or British forces are known to have been at those locations.

The attempt to identify the location of the “Marlborough Meeting” of 1777 begins with a list of known references to, and information on, the location where the units mentioning Marlborough in their records camped during the nights of September 8, 9, and 10, 1777.

On September 8, the Hessian Grenadier Battalions 1st Battalion Grenadiers von Linsingen, 2nd Battalion Grenadiers von Block (later von Lengerke), and the 3rd Battalion Grenadiers von Minnigerode (later von Löwenstein) were scheduled to march with Lord Cornwallis. Of these three units only Linsingen either did not keep a regimental journal or, more likely, it did not survive.

Note: All quotes are from the regimental journals in the Universitätsbibliothek Kassel - Murhardsche Bibliothek and their call number is identified by their “Shelf Mark.” Not all units have surviving journals in Murhardsche Bibliothek but a complete series is in Hauptstaatsarchiv Marburg HStAM. The journals can all be downloaded as pdfs at:

<http://orka.bibliothek.uni-kassel.de/viewer/search/-/DEFAULT%3A%28tagebuch%29+OR+FULLTEXT%3A%28tagebuch%29+OR+NORMDATATERM S%3A%28tagebuch%29+OR+UGCTERMS%3A%28tagebuch%29/1/-/-/>

The scribe of von Lengerke entered into the regimental journal “On the 8th we marched to Margaret’s Meetinghouse in Chester County” (Lengerke 1777b). This statement poses numerous questions. First, it contradicts an entry in an account (presumably written by an anonymous member of the von Lengerke Battalion who wrote: “On September 8 we ... occupied a camp at Kessket in Newcastle County” (Lengerke 1777a)

Thomas McGuire in communication with one of the report authors states that “this appears to be written by an officer of the Lengerke Grenadier Battalion — by process of elimination, due to his mentioning of the Linsing and Minnigerode Battalions.” McGuire added that “The text of this is very similar to the von Minnigerode Journal” (McGuire, personal communication, 2018).

The scribe of the Regiment von Minnigerode wrote: “... on the 8th ... We encamped near Keskel in Newcastle County” (Minnigerode 1777).

Even though these three Grenadier Battalions formed the Hessian Grenadier Brigade under Colonel Carl Emil Kurt von Donop and were integrated into Lord Cornwallis' column, the von Lengerke Battalion is the only one of these three units that does not encamp on September 8 near Kessket/Keskel, i.e. Hockessin, but at "Margaret's Meetinghouse."

Major André's map of the encampment in the evening of September 8 shows the "Hessian Grenadiers" just southeast of Howe's headquarters at the Daniel Nichols House arranged in a north-south direction across modern Brackenville Road east of Limestone Road, and similarly across modern Mendenhall Road in Millcreek Hundred (Figure 40).

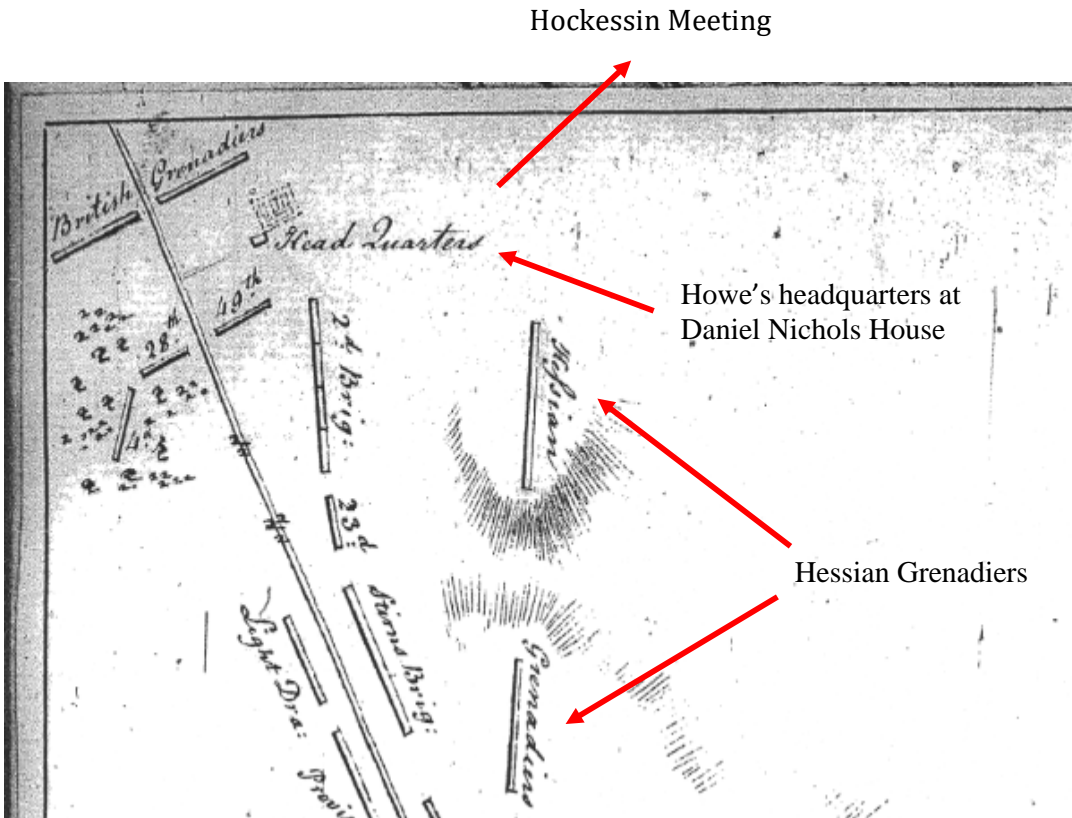


Figure 40. Detail of *Position of the Army at New Garden, September 8, 1777* (André 1904).

Secondly, in the evening of September 8, none of Howe's units is known to have already crossed into Chester County and Pennsylvania; all other known accounts place the Crown Forces still in Delaware. Finally, there is no known Quaker Meeting by the name of "Margaret's Meetinghouse" in either Delaware or Pennsylvania.

The scribe may not have known where he was in the evening of September 8, which is possible, or the grenadiers were indeed already in Delaware or Pennsylvania. Other scribes also did not know which state they were in, but some local must have told him that the unit was close to a location known to them "Margaret's Meetinghouse". There is no building or site shown on the André map that might qualify as such a meeting house. If Lengerke marched farther ahead of Howe's army, there are two routes into Pennsylvania from the campsite marked on the André map. Lengerke could either have marched on Valley Road north-east to Hockessin Meeting, the route taken by Cornwallis the next day, or west and then north

on Newark Road, which would eventually take the unit to New Garden Meeting. But there is no evidence whatsoever that this happened.

For September 9, the regimental journal of von Lengerke reads: “On the 9th to Marlboro Meetinghouse” (Lengerke 1777b). In other words, the von Lengerke Battalion marched from an unknown “Margaret’s Meetinghouse” to “Marlboro Meetinghouse.”

The anonymous member of the von Lengerke Battalion however wrote:

...The army marched in 2 columns late on the afternoon of the 9th (at 5 o’clock); we marched to the right under General Cornwallis, and General Knyphausen was in command on the left. After having gone 6 miles a halt was made, and the following morning we marched as far as Kennetsquare.... (Lengerke 1777a).

If Lengerke marched with Cornwallis as part of the Hessian Grenadier Battalion, its route would have taken it toward Hockessin Meeting, where Howe stopped and spent the night, and from there into Pennsylvania. This is the route Minnigerode took, as noted in their journal.

“...late on the 9th in the evening at 5 o’clock the army marched in 2 columns, we marched on the right under General Cornwallis, and to our left commanded General Knyphausen, after we had covered 6 miles we made a rendezvous, and the next morning we marched to Kennett’s Square.... (Minnigerode 1777).

If Lengerke marched with Minnigerode and Linsingen, a march of 6 miles from the encampment shown on André’s map would have taken it on Old Kennett Road to somewhere south of West Hillendale Road at Kennett Square, where we know Cornwallis arrived in the morning of September 10.

The scribe of Lengerke wrote this entry for September 10: “On the 10th to Kennett’s Square” (Lengerke 1777b). In other words, Lengerke joined the rest of Howe’s army at Kennett’s Square – but apparently arriving from the north, from Marlborough Meeting?

The Lengerke entry for September 10 raises the question: even if Marlborough Meeting was not officially established until 1799, did locals already refer to a Marlborough Meeting in their conversations with British and Hessian forces? The answer is: Yes. Marlborough Meeting House is mentioned in primary sources during the run-up to the Battle of Brandywine.

George Ludwig Christian Heusser, scribe of the Fusilier Regiment Alt Lossberg entered into the regimental journal that in the morning of 10 September 1777: “...both divisions encamped on the heights beyond the above-mentioned village [Kennet's Square] in uneven lines their right wing ran toward Lewis Mill and their left wing toward Marlboro Meeting House, the Jaeger however occupied the road toward Chester....” (Alt Lossberg 1777). Hessian Jäger Captain Johann Ewald doesn’t mention a Marlborough Meeting House, but was cognizant of an area known as East Marlborough. On September 10 he noted that “...we arrived on the morning of the 10th at Kennett Square, where the army brigades rested one behind the other. General Knyphausen remained here with the left column, while the column under Lord Cornwallis marched a good hour to the right as far as East Marlborough, where it camped along the highway to Philadelphia with the Jäger Corps covering the right flank (Ewald 1979:81).

In his account of the Philadelphia Campaign Lieutenant-General von Knyphausen identified a meeting house, writing that “At daybreak on the 10th the whole right-hand column [i.e. Cornwallis] marched off again and united with mine at 9 o’clock at Kennett’s Square, where the army then encamped so that the right wing rested on Lewis Mill, and the left on Marlborough Meetinghouse. The Jäger had to occupy the road to Chester” (Knyphausen 1777).

The scribe of the Regiment Erbprinz wrote in the regimental journal that Cornwallis' Division on September 9 marched to the right

...over undefined roads and made halt at midnight 4 miles from the old camp, detached Major General Grant with the artillery and the 3rd (3?) English Infantry Brigade(s?) to the division of General von Knyphausen where it arrived toward daybreak [on September 10 and resumed its march again at 5 in the morning and united with the first division near Kennet's Square at 9 in the morning. After that both divisions camped on the heights beyond the aforesaid village in uneven lines their right wing ran toward Lewis Mill and their left wing toward Marlborough Meetinghouse, the Jäger however occupied the road leading to Chester (Erbprinz 1777).

Lewis Mill ("Louis Mühl" in the original) is the Gavin Hamilton Mill on 728 Creek Road, which Hamilton, a tobacconist from Philadelphia, had purchased from the estate of Ellis Lewis in 1776.

In these accounts, Marlborough Meeting and East Marlboro/East Marlboro Township were used by the scribes and letter writers synonymously to identify the same place. These places were located geographically correct north of Kennett Square where today's Marlborough Meeting is located. These sources suggest that while no official Meeting had yet been established, locals were already referring to the locale as such.

There is also a non-military source that mentions Marlborough. The Amos Brinton Papers, Battle of Brandywine Comments, Box 3, Folder 3, Delaware Historical Society, contain this sentence:

the tract (sic) that the British army took [from Newark to the Brandywine] plainly shows that that Nottingham[,] New Garden[,] Kennett[,] Marlborough[,] Birmingham & Concord meeting houses was as mile stones to the Foes of Liberty or the Sons of Liberty (Brinton 1895/96).

While the document is undated, internal dates suggest that Brinton wrote his comments late in the nineteenth century, and the sequence of locales as he describes them form a sequential line on the ground with Marlborough Meeting north of Kennett Square where it is today.

Conclusion:

It has been suggested that the references made by soldiers marching and/or encamped south of New Garden Meetinghouse were referring to London Grove Meeting, which lay 4 miles to the north of New Garden, and that Marlborough Meetinghouse is identical with the London Grove Meeting House, a preparative meeting of New Garden Monthly Meeting. Such an explanation, however, is not convincing. London Grove is not only north of New Garden, it is also more than eight miles, almost a whole day's march, north of the British campsite of September 8/9. Any geographic reference would have been, and was, to New Garden, not to a subsidiary meeting that lay even farther away of the encampment site of September 8/9.

London Grove is four miles north of New Garden Meetinghouse on Newark Road, which was the 1710 Limestone Road in 1777. Marlboro Friends Meeting is on 361 Marlboro Road a little over five miles to the east of London Grove. Marlborough Meeting was established in 1799. The road network leading north from Kennett to the informal meeting was the same network of roads that we show General Howe's flank march on **BUT FOR THE MORNING OF SEPTEMBER 11**, with the exception that the troops continued to follow the 1728 Road to the Great Valley when the 1723 road branched to the left leading to the 1756 Road and the Barnard Farm.

None of the known Friends Meeting Houses in the area match either the name or the location information provided in the Lengerke account for Margaret's Meeting while the use of Marlborough Meeting for a later location of such a meeting has been shown for September 1777. We do not know as yet where Margaret Meeting was located, but it seems unlikely that the scribe invented a name rather than follow the examples of other scribes and write that he did not know where he was. A potential, and plausible, explanation for the two entries in the Lengerke journal for September 8 and 9 could be, that von Lengerke followed a separate route from the rest of Howe's and Cornwallis' column, approaching Kennett Square from the north while the rest of Cornwallis' forces approached Kennett Square from the south. But such an explanation – for which there is no corroborating evidence – would make sense if Lengerke formed the north-western equivalent of Cornwallis' Light Infantry and marched on a flanking route on Howe's left flank.

Such a march would have been exceedingly challenging given the distances involved and our knowledge of how many miles Howe's forces covered per day on their march to the Brandywine. It is almost 30 miles from Aiken's Tavern to Marlboro Meeting on the roads we know Howe's forces took, but certainly possible. It would explain why Lengerke approaches Kennett Square from the north, but until corroborating evidence can be located in the form of another primary source describing the march, damages claims to the west of Howe, and/or Margaret Meeting has been located, the explanation of a flanking march has to remain hypothetical. The question whether the eighteenth-century Marlborough Meeting was in the same location after 1799 is further discussed in the next chapter.

5.0 SUMMARY, INTERPRETATIONS, AND RECOMMENDATIONS

This report provides detailed military terrain analyses for two Brandywine Battlefield Strategic Landscapes representing the American Army and Royal Army's movements on September 9 and 10, 1777. The study builds upon earlier County studies and current work, particularly work focused on the settlement pattern and the road network. Extensive historical and topographical research contributes to the analyses and interpretations.

5.1 INTERPRETATIONS

The analyses in the Phase 2a report focused on a short period of time which began at midnight September 8/9, 1777. This point of beginning was chosen as it covers the time when both American forces and Crown forces were formulating their battle plans to fight on the Brandywine River. In order to understand the tactical maneuvers and actions taken on September 11, 1777, the Battlefield Boundary was expanded to include the operational maneuvers of both armies in the days preceding the Battle of Brandywine. During this period, American forces realized that Howe's Crown forces had marched beyond the American right flank and threatened to get behind the Americans, thus reaching the campaign's goal of capturing Philadelphia. Washington responded to this flanking Crown forces flanking movement, which had begun on September 8, by abandoning his Red Clay Creek defensive line and shifting his entire army northward by 10 miles to block the Crown advance at the Brandywine. Howe responded to this American movement nearly 15 hours later, thus setting the stage for the Battle of the Brandywine.

Our previous study of the battle addressed the movements of the Crown Forces to reach Kennett Square on September 9 and 10 and as they approach Brandywine on the morning of September 11 (Catts et al. 2017). This Phase 2a study builds on that work by focusing on the positions and movements of the American forces as they shifted from the Red Clay Creek in New Castle County to the Brandywine in Chester County. The present study has focused on those movements and has identified the general routes, confirmed sources or locations, refined and/or discovered new routes (Figure 41).

This military terrain analysis provides some new and/or revised interpretations for the battle. Important among these is a better understanding of the routes used by both armies on September 9 and 10, especially the American forces. Several other specific questions were also addressed that had been raised in the Phase 2 report and required additional research.

Specifically, some of the new insights and/or revised interpretations are:

- Using historical sources and contemporary mapping and building on the 1777 road network map prepared by Chester County Archives, conclude that the movement through on September 9 and 10 in the Red Clay Creek Valley and the Brandywine Valley was on "undefined, indefinite" roads – ie., farm lanes. The importance of the Red Clay Valley in Howe's and Washington's operations in the days leading to the Battle of Brandywine is significant new information.
- Identification of the approximate location of Washington's Red Clay Creek Defensive line. Washington occupied this line from September 4 to September 9. There is potential for archeological resources associated with this line to be extant. This is a significant outcome of this study, offering potential for further interpretation of the Philadelphia Campaign and Delaware's role in the American Revolution.
- Identification through the documentary record of skirmishes at various locations, including New

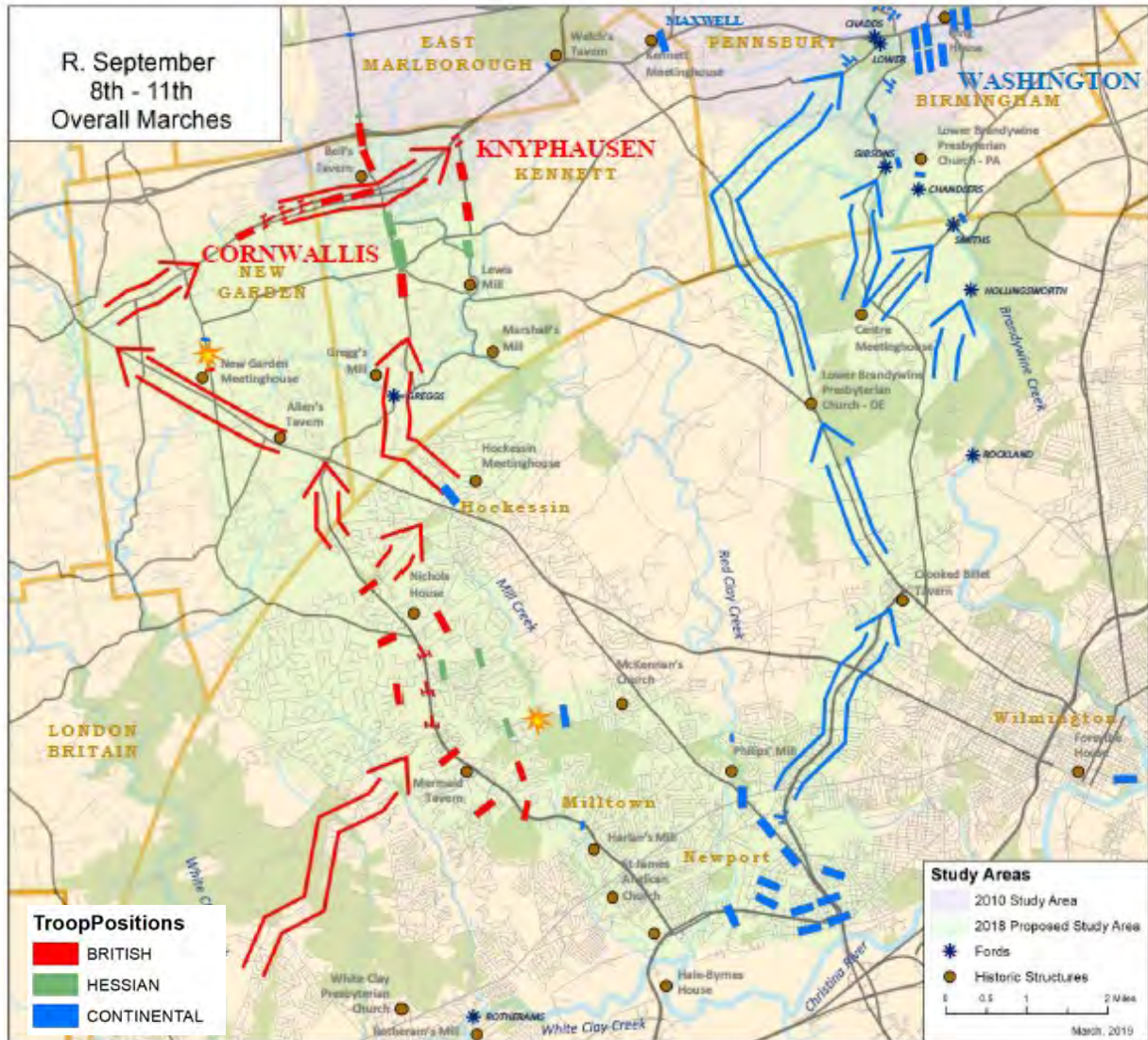


Figure 41. Overall movement of the two armies, September 8 to the morning of September 11, 1777 (Western Heritage Mapping).

Garden Meetinghouse, along the White Clay Creek, in the vicinity of Milltown (both of these in New Castle County). Other skirmishes are documented as taking place on September 10, and likely occurred in Pennsbury Township, Kennett Township, New Garden Township, and East Marlborough Township. These reported clashes indicate that American forces, militia and Continental troops, were continually hovering around the Crown forces as they moved through Delaware and southeastern Pennsylvania. These locations have limited potential for archeological extant archeological resources.

- Defined and identified the various roads used by Washington and the American army as they shifted position from the Red Clay Creek Defensive line to the Brandywine. The roads identified led to several fords on the Brandywine, including Harlans/Gibson’s, Corner/Chandler’s, Smith’s, and Hollingsworth’s. All of these are still extant and identifiable; Hollingsworth’s is located within the First State National Park. Roads used by American forces were also identified. These include Center Road, the Kennett Pike, Pyle’s Ford Road, Cossart Road, and Starve Gut Road.

- Identified a portion of a former colonial road, linking modern Pyle's Ford Road with modern Route 100. This road trace is situated on the Flint Woods Preserve lands and was used by American forces as they approached the Brandywine.
- American pension sources have been reviewed to supplement already existing American sources. The pensions and other period documents provide more detail regarding the movement of American forces on the west side of the Brandywine in the period September 10-11. Maxwell's light infantry, local militia units, and dragoon detachments were quite active west of the Brandywine in the days before the battle, hovering on the flanks of Howe's Army.
- **This text was intentionally deleted per the requirements of the Archaeological Resource Protection Act (16 U.S.C. 470hh) and its implementing regulations (49 FR 1027, Jan. 6, 1984).**
- Documentation indicating that Washington decided to fight on the Brandywine by midnight on September 9, probably at his headquarters in Newport (or earlier at the field meeting at Harlan's house and mill near Milltown). The shift of the army to the Brandywine was a deliberate American choice to offer battle at that point.
- Documentation indicating that Howe came to the same conclusion to fight on the Brandywine almost 15 hours later, about 5:30pm, while at his temporary headquarters at Hockessin (Occasion) Meetinghouse. While Howe's plan to outflank Washington on the Red Clay was thwarted, Howe responded quickly to the opportunity to potentially destroy the American army at Brandywine.

Several specific research questions were not possible to definitively answer:

- The precise location of Marlborough Meeting. A number of English and German accounts mention this meeting, but the meeting was not officially created until 1799. Our research suggests that an informally defined Marlborough Meeting may have been functioning at private homes. Secondarily, English and German first-person accounts sometimes did not know their precise location or used the correct identifier to call a geographic place, so the use of the term Marlborough Meeting may in itself have been a misnomer on the part of the contemporary writers.
- The precise route that Cornwallis' Division used to cross the West Branch of the Red Clay Creek. Historical research, field reconnaissance, topographic study, historical maps and aerials were consulted by the project team to identify this route. Our "best guess" is that Cornwallis' Division marched north and west from Hockessin Meetinghouse on the Old Wilmington Road to the approximate road bed of today's Chandler's Mill Road. This road led into the valley of the West Branch of the Red Clay and to a ford crossing approximately located where the intersection of Kaolin Pike and Chandler's Mill Road is located. The road then led north nearly straight uphill toward the Gregg house on Round Hill, before it encountered modern Hillendale Road at the current intersection of Five Points.

5.2 ARCHEOLOGICAL ASSESSMENT

Since no formal archeological survey was conducted as part of this strategic landscape study, this assessment is intended to review the potential for battle-related artifacts. Prior to the development of KOCOA assessment and the growth of the field of Conflict Archeology, the 1989 Brandywine Battlefield Preservation Plan (Webster et al. 1989:43-58) devoted a chapter to the archeological potential of the battlefield. The authors identified several categories of potential archeological resources that could be the result of a military action; arms and ordnance; personal weapons and possessions; headquarters, rear

echelon support, and camp sites; medical facilities; burials, and; prehistoric and other historic resources (Webster et al. 1989:48-50). The archeological potentials were focused principally on the portable material culture of soldiers – knapsacks, weaponry, uniforms, accoutrements, etc. – and were less concerned with the actual lead shot, iron balls, and general detritus of military action. Their conclusion was that little would remain of the portable material culture. More recent studies of battlefields using metal detection as a method of survey have revealed that considerable amounts of battlefield debris, such as lead shot, buckles, buttons, etc., do survive and can be useful in determining the course of the battle.

Fields of conflict are temporary, albeit seminal, events, superimposed on preexisting cultural landscapes. This landscape witnessed a variety of cultural actions - transportation systems, agricultural development, settlement patterns, population change – that exerted influence on the land prior to the engagement and that continue to exert influences on the field after the battle. Land use such as pasture and field patterns, farmsteads and husbandry buildings change as they give way to sub-divisions; roads are altered, vacated, rerouted or widened, woodlands are reduced or removed from the landscape. Despite these landscape alterations, the archeological evidence of conflict is often quite resilient and can be discovered through archeological investigation.

For many years the prevailing view of battlefields and archeological potential was dominated by the opinion put forward by Ivor Noël Hume that battle sites could offer little beyond metal artifacts and burials, certainly nothing archeologically or historically significant (Noël Hume 1968:188), and it was this narrow view of conflict archeology that influenced the archeological interpretations and recommendations of the Brandywine Battlefield Cultural Resources Management Study (Webster et al. 1989). In the last twenty years this view has changed dramatically, beginning with the work at the Little Big Horn National Park in the mid-1980s and now occurring with increasing regularity at Revolutionary War sites (cf. Babits 1998; Catts and Balicki 2007; Catts et al. 2014; Connor and Scott 1998; Espenshade et al. 2002; Fox 1993; Geier and Winter 1994; Geier and Potter 2000; Mancl et al. 2013; Martin and Veit 2005; Orr 1994; Scott et al. 1989; Scott and McFeaters 2011; Selig et al. 2013; Sivilich 2009).

5.2.1. *Movements of the Armies/Skirmishes*

The potential for archeological evidence of military activities is generally low for the overall march and movement of the columns. **This text was intentionally deleted per the requirements of the Archaeological Resource Protection Act (16 U.S.C. 470hh) and its implementing regulations (49 FR 1027, Jan. 6, 1984).** Such movements, while extremely impressive to witness, were likely ephemeral when considering the physical evidence (*ie.*, military artifacts) that it would leave as an archeological "footprint."

The location of the skirmishing that occurred at Mill Creek Road on September 8 at New Garden Friends Meetinghouse on September 10 retain moderate potential for archeology. These fire-fights were quick musket and rifle discharges followed by withdrawal by the Americans. These actions would have generated primarily dropped and fired lead balls (musket and rifle balls) and may exhibit an archeological signature in the location where the skirmishing occurred. The degree of subdivision development in the vicinity of Mill Creek Road is relatively high, making this location less likely to contain significant archeological resources, while the New Garden vicinity still retains a rural setting, raising the level of archeological potential.

5.2.2. *Red Clay (September 4 to 9) and Brandywine (September 10) Encampments*

The American defensive position and encampment on the Red Clay Creek was a short-term camp that was fortified along its western side, above the Creek. The camp was a tactical position with advanced pickets, key terrain, fields of fire, avenues of approach, and its layout was influenced by the limitations imposed by the local terrain (cf., slope, woods, water supply).

The Red Clay position ranged along the Creek for almost three miles and extended about a mile eastward to the village of Newport. It was occupied by several thousand men for nearly five days. During this time the American Forces built breastworks and entrenchments, and established regimental, brigade, and divisional camps (Figures 42 and 43).

Occupied for only two days, the American short-term encampment along the Brandywine – extending into the Big Bend – holds archeological potential. Amateur metal detecting has occurred in this area (with the permission of the landowners) and reports the recovery of artifacts associated with the military occupation of the area. Additionally, the identification of possible picket post pits along the Brandywine offers potential archeological resources associated with the battle.

Short-term camps occupied for several days are distinguishable by their more robust archeological signature, since large numbers of soldiers and camp occupants leave physical evidence of their passing in the form of excavated pits or kitchens, lost or discarded ammunition, lost or discarded personal items, uniform parts, and food remains, and that signature can be present for years. For example, the American camp occupied by Washington's Army for eight days (18-26 September 1777) in New Hanover Township, Montgomery County, was still marked by physical remains nearly six decades after the event. In a reminiscence of the "camp at Pottsgrove" written at the beginning of the twentieth century, the landowner recalled that in his childhood (circa 1820s) the area occupied by the American camp was characterized by "...enough leaden musket balls and grape and canister balls and pieces of shell to fill an old straw bread basket full" and that the butchering area for livestock to supply the troops was still readily apparent (Bertolet 1903:3).

Researchers conducting archeological surveys of the series of short-term camps occupied by the French Army as it marched through Connecticut in 1781-82 developed an archeological "signature" for identifying French encampments (Harper et al. 1999:135-136, 145-153). Based on field investigations and historical data, the researchers concluded that short-term camps – in this case usually about four days in duration – would contain artifacts associated with uniforms (buttons, buckles), arms and ammunition (including sword and scabbard parts), personal items (coins, knives, lead seals, eating utensils, ceramics and glass), iron animal shoes, a variety of iron hardware, and artillery parts. As the authors noted, "short-term camps had minimal impact on the landscape and their remains are ephemeral" (Harper et al.:1999:153). Given the nature of these camps, artifacts marking these places are likely to exhibit a wide distribution and a low density and to be found "quite shallow [in the ground], having been simply dropped on the ground surface" (Harper et al. 1999:136). These two examples are for camps that were occupied for several days.

While the encampment in this vicinity would have left strong physical evidence immediately after its occupation, over time the evidence of the American camps would have diminished. This is particularly true with the post-World War II suburbanization which engulfed the area between Newport and Kirkwood Highway. The ground disturbance caused by subdivision construction likely obliterated almost all of the evidence of the encampment. Physical evidence, such as regimental and/or plain buttons of various sizes, metal fixtures for polearms and flags, unfired lead shot, sword and scabbard parts, cannon balls, horse furniture (saddle or bridle parts, horseshoes), wagon furniture, and personal artifacts may be present, but due to the subsequent landuse and land alteration these sorts of artifacts or features will be a rarity, and artifacts will likely be isolated finds. With the exception of obviously military artifacts (marked regimental

buttons, accoutrement plates, etc.), it will be difficult to distinguish other types of artifacts dating from the period of the camp from local civilian artifacts of the same period such as ceramics and glass.

Taking these conditions into consideration, the archeological potential for the overnight camp at the Red Clay is likely to be low, with one possible exception. The identification of remnant earthworks in the 1930s, their formal recognition, and the informal documentation of their existence suggests that the archeological signature of these remnant earthworks may yet be extant. The topographic location of the remnant earthworks is at the top of the bluff immediately above the Red Clay Creek in privately owned lands at Washington Avenue and Lafayette Avenue. The archeological potential of these spaces could be considered at a future time.

The overnight camps occupied by the Crown Forces in Kennett Square have been previously discussed in the 2017 Phase 2 report (Catts et al. 2017:65-66). For most of the Crown Forces, since the army's heavy baggage had been sent back to the Royal Navy at the Head of Elk several days earlier, there were no tents or shelters, unless small temporary wood "bowers" were built by the men. Fires appear to have been allowed. The area along Delaware Route 7 where these camps were situated has become suburbanized and considerable ground disturbance associated with the creation of housing developments has significantly compromised the archeological potential.

The archeological potential for the American camps occupied on the night of September 10/11 is similar to the Crown Forces at Kennett Square. Both armies did not remain in their positions long enough to leave robust archeological materials behind. However, American forces did construct limited defensive works – artillery positions at Chadds Ford and west of the Brandywine. The archeological remains of these works may still be extant.

5.3 Recommendations for Future Historical and Archeological Research

1. For Chester County, the level of already existing research regarding historical structures that were present in 1777 is exemplary (see the earlier Brandywine Battlefield plans prepared by the Chester County Planning Commission). The degree of detailed information that has been compiled for the road network, locations of property owners who experienced plundering or damages, where extant buildings are, and examination of traditional or customary stories about the battle has been made possible through the work of the Chester County Archives, the Chester County Planning Commission, and the various township historical society and/or commissions. At the present time, the same level of detail does not exist for New Castle County and Delaware County. This Phase 2a report has brought some of that information to light, but further study is necessary to bring the level of historical data up to par with what is available in Chester County.
2. Historical and archeological study of the deployment of Continental Army units along the Brandywine on the evening of September 10 awaiting and preparing for the British attack Washington expected to occur on September 11. The present study traced the movements of the Americans to Chadds Ford. The Phase 3 Plan will address this topic.

The Phase 3 project examines eastern battlefield landscapes comprising areas in at least six municipalities in Chester and Delaware Counties in southeastern PA and may extend further to address the extent of battle events. The project looks to understand and clarify existing assumptions about battle history, resources, events, and locations and to provide materials that can in turn be

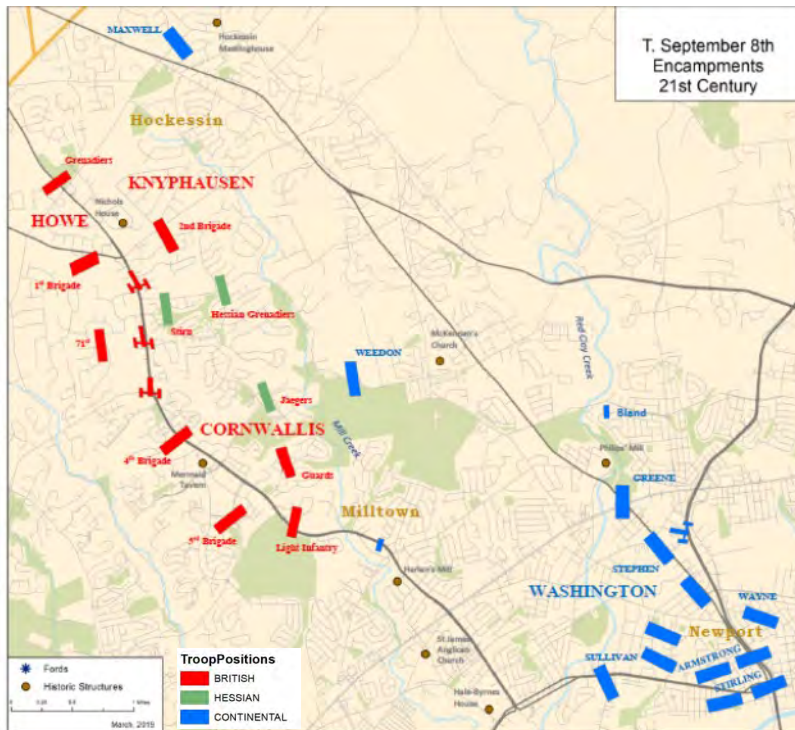


Figure 42. General location of Crown Forces overnight encampments and Red Clay Creek line, September 8/9 1777 (Western Heritage Mapping).

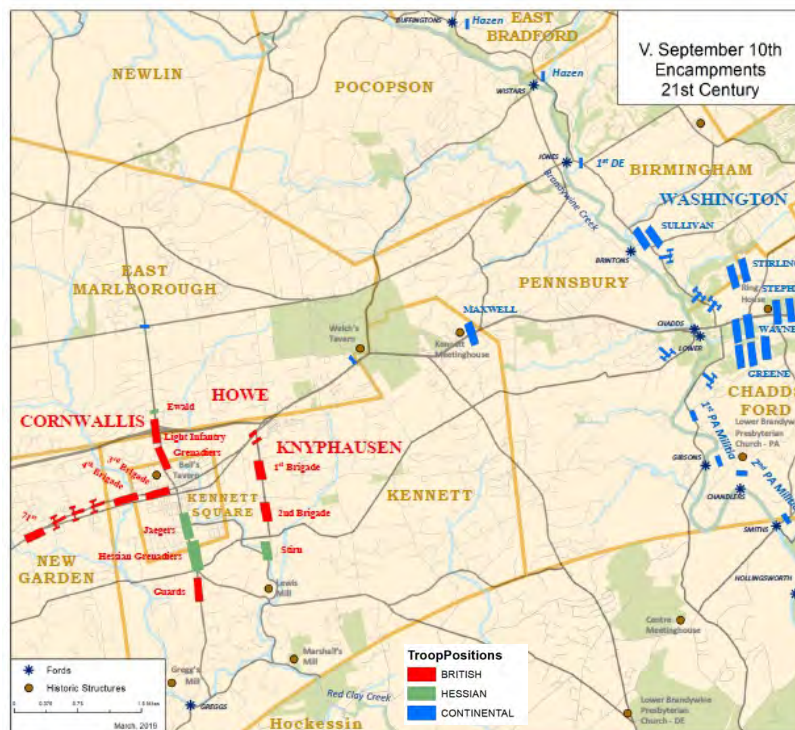


Figure 43. Locations of encampments at Kennett Square and Brandywine on September 10, 1777 (Western Heritage Mapping).

used for local municipal planning and public education purposes. The project will produce a technical report that examines American and Crown Force battle combat areas and American defense positions along Brandywine Creek, including associated lands, troop movements, roads, and sites in a 1777 and modern-day setting. The project will advance public outreach via coordination with municipalities, local entities, and the regional Brandywine Battlefield Task Force (BBTF) and will advance public education via an interactive battle mapping tool for the full battlefield. The project will provide Chester County Planning Commission (CCPC) with needed information to create user-friendly, local planning materials that provide specific planning for historic resources identification/protection, land conservation opportunities, and heritage interpretation strategies. The project will both stand on its own as an independent project and implement the 2013 ABPP-funded Battlefield Preservation Plan. Phase 3 will be the final phase of strategic landscapes planning.

3. Investigation of the American defensive position on the west side of the Brandywine. This position was the final defensive stance offered by Maxwell's Light Infantry before retiring across the Brandywine on September 11. Possible archeological survey to determine if any physical evidence of this fight is still extant. This will be addressed in the Phase 3 Plan (see above for the purpose and description of Phase 3).
4. The concern for possible battlefield burials is always present, particularly in the skirmish locations. Any ground disturbing activities at these locations should be carefully monitored.
5. In New Castle County, archeological investigation and further documentation of the American position along the Red Clay Creek is recommended. While the integrity of the potential archeological resources is currently not known, identification of the remnants of the defensive line should be undertaken to preserve/conservate what remains. The American position was still visible and known to the general public in the first half of the twentieth century. Potential archeological resources, such as remnant earthworks, are mostly situated on private land. However, given the geographic extent of the American lines and the period of time that they were occupied, survey of the area might result in the discovery of some intact resources that could assist in historical interpretation.

5.4 Recommendations for Planning

The KOCOAs assessment presented in this technical report is a valuable tool for planning and interpretation purposes, as it identifies extant features that still define the battle/battlefield. Protecting those battle-related resources is paramount among the efforts to preserve and/or interpret the battlefield, examine the battle's role in the American Revolution, and understand the battle as a foundational element of Chester County's legacy. Future actions by affecting lands within the Core Area and Battlefield Boundary of Brandywine Battlefield should be made with consideration and focus on protection of KOCOAs identified features and battle-era resources, their associated context, and historic landscapes, particularly those within the half-mile troop movement buffer as a first priority for the CCPC, the battlefield municipalities, the Brandywine Battlefield Task Force (BBTF), and the Pennsylvania Historical and Museum Commission (PHMC).

This report recommends expanding on the findings as follows:

1. Update 2013 Plan mapping to reflect the findings herein. (CCPC)
2. Update 2010 KOCOAs analysis and other battle mapping to reflect the findings herein. (CCPC)

3. Provide updated information to battlefield communities, particularly those where the Landscapes are located. This information can be used in municipal histories, for historical commission resources identification and documentation purposes, and for educational and outreach efforts. Include communities in New Castle County, Delaware and Delaware County, Pennsylvania. (CCPC)
4. Provide updated information to BBTF members, in particular its Steering Committee members who guide and lead BBTF efforts. (CCPC)
5. Provide updated information to local heritage sites (e.g. Chester County Historical Society, and Brandywine Battlefield Park, First State National Park, Brandywine Creek State Park, Delaware Historical Society, Newark Historical Society, Hockessin Historical Society, Revolutionary Round Table of Northern Delaware, DHCA) and environmental stewardship organizations (e.g., Brandywine Red Clay Alliance, Delaware Nature Society, Delaware Department of Natural Resources and Environmental Control), so they can incorporate the information into their historic interpretation, education, and stewardship outreach and efforts. (CCPC, Battlefield Historical Commissions, BBTF)
6. Provide updated information to land conservation groups (e.g., Brandywine Conservancy and Natural Lands, Delaware Nature Society, Flint Woods Preserve), Chester County Open Space Department, and appropriate Delaware County planning organizations for use in coordinating and bolstering land conservation and open space preservation to enhance quality of life, and possible public access and interpretation of historic landscapes. (CCPC, Battlefield Municipalities, BBTF)

5.5 Recommendations for Historical and Archeological Resource Protection

This report recommends expanding on the successful historical resource protection that has occurred to date. All municipalities in the Landscapes promote historical resources protection policy, and the following recommendations build upon this.

1. Develop a strategy to undertake a Thematic/Multiple Property National Register eligibility nomination for the battlefield, which could include archeological resources, historical resources, historic districts, roads, fords and other battle-related built features. The strategy should outline funding and hiring an architectural historian to assist. (BBTF, Battlefield Historical Commissions, PHMC, CCPC, Architectural Historian)
2. Research extant battlefield historic resources from the 2013 Plan and update municipal historic resource inventories to reflect these contributing battlefield resources. (Battlefield Historical Commissions)
3. Research extant battlefield historic resources in New Castle County and Delaware County. These resources should be mapped and identified. While not within the Core of the battlefield, they are significant historical markers (New Castle County Department of Land Use, Delaware County Planning Department).
4. Research 18th-century families in the Landscapes. Focus on families named in this plan to understand the dynamics between them and their motivations to support the Revolutionary War effort or live by the Quaker Testimony of Peace. (Historical Commissions working with Military historian)

5. Determine how to integrate newly attributed and/or associated resources into their respective historic districts. This could entail including them in the municipal historic resources inventory as such and designating them as locally significant resources. This could also include updating National Register documentation, whether or not the updated information is officially submitted to the National Register. (Battlefield Historical Commissions, CCPC)
6. Continue to refine 1777 property and road network mapping in New Castle County and Delaware County. (CC Archives with volunteer researchers, New Castle County Department of Land Use)
7. Update information and resources mapping from the 2013 Plan to reflect findings herein. (CCPC)
8. Work with BBTF and other battlefield municipalities to investigate the developing battlefield design guidelines. Such an effort could help provide guidance for redevelopment, rehabilitation, reuse, infill, or new construction that considers archeological resources and preserves the character and scenic values of the Landscapes and battlefield overall. (Battlefield Municipalities, BBTF)
9. Consider applying to become a Certified Local Government (CLG). The CLG program provides technical assistance and small grants to municipalities for historic resource projects. (Battlefield Municipalities, PHMC)
10. Include specific battlefield and Landscape references and protection policy during the next update to municipal Comprehensive Plans. (Battlefield Municipalities)
11. Encourage adoption of consistent or at least compatible definitions for historic resources in ordinances. This can be promoted through the municipal continued participation in BBTF and its historic resources subcommittee, and would require regulatory amendments by municipalities. (Battlefield Municipalities)
12. Consider adopting a historic battlefield protection zoning overlay. This overlay could supplement existing municipal historic resources provisions and would address protection of historic resources in the Landscapes. Consider possible land conservation options for battlefield lands via this overlay as well. Thornbury and Pennsbury Townships, Chester County have a battlefield zoning overlay, which should be consulted as a starting point. Such an overlay could be done on a municipal basis but coordinated within the area encompassed by the battlefield. (Battlefield Municipalities)
13. Include the battlefield as a key feature that is to be addressed in land development design. (CCPC, Battlefield Municipalities, New Castle County Department of Land Use)

5.6 Recommendations for Land Conservation

This report recommends expanding on the land conservation efforts that have occurred via linking existing protected lands to form an interconnected network. Many battlefield communities promote land conservation in their municipal policy. These recommendations focus on historic landscape conservation intertwined with historic resources protection.

1. Work to protect battlefield lands within the Strategic Landscapes. Tracts outlying the boundaries of the Landscapes provide a transition area between the Landscapes and possible future development and intrusion. (BBTF, CCPC, Landowners, Land Trusts, Battlefield Municipalities, CC Dept of Open Space, American Battlefield Trust, New Castle County Department of Land Use)

2. Protect smaller parcels to link larger conservation tracts. In the coming years, many larger open lands in these Landscapes may either be protected or developed, leaving smaller lots available for conservation. Such lots are already beginning to become more of a conservation priority in villages and other more established settings. While the available acreage may be relatively minimal, the value of conservation can be significant due to extant historic resources, battlefield interpretation opportunities, and/or the ability to link existing protected lands. (CCPC, Landowners, Land Trusts, Battlefield Municipalities, CC Dept of Open Space, American Battlefield Trust)
3. Work to protect lands as part of a larger open space network that extends throughout the battlefield. There are protected and unprotected lands throughout the battlefield without a specific battle-related story, but these lands serve to form a larger network to link key areas of the battlefield and display a representation of the battle-era landscape feel/setting. Southern battlefield communities with significant success and experience in land conservation would benefit this larger battlefield-wide effort. (CCPC, Landowners, Land Trusts, Battlefield Municipalities, CC Dept of Open Space, American Battlefield Trust)
4. Protect and promote agriculture as an industry and historic land use in the battlefield. (CCPC, CCADC, Landowners, Land Trusts, Battlefield Municipalities, CC Dept of Open Space, American Battlefield Trust)
5. Coordinate natural resource protection and battlefield land conservation. (CCPC, landowners, Land Trusts, Battlefield Municipalities, Chester County Department of Open Space, American Battlefield Trust)
6. Publicize and celebrate land conservation efforts at battlefield-related heritage sites to publicly display the inherent relation between battlefield protection and land conservation. (BBTF, Heritage Sites).

5.7 Recommendations for Heritage Tourism

This report recommends building on successful heritage tourism and interpretation efforts in the region. This is a tool that can provide outreach, develop a stewardship ethic, raise awareness of the role of the battle in the nation's founding, provide key economic development in appropriate public areas. BBTF's Historic Resources and Interpretation Subcommittee meets several times annually and includes members from municipal historical commissions and local historical sites within the battlefield. The key to successful implementation of interpretation is for the BBTF to identify a southern battlefield gateway Heritage Interpretation Subcommittee consisting of Historical Commissions, Historic Kennett Square, residents, and merchants. The following are ideas for such a Subcommittee to consider in developing a cohesive interpretation program for a southern Battlefield Heritage Center in Kennett Square.

1. Create a southern battlefield gateway Heritage Center in/near Kennett Square Borough. (BBTF, CCPC, Heritage Interpretation Subcommittee)
2. Identify Interpretive Sites and undertake heritage interpretation with emphasis on interpretation from public corridors and places. (BBTF, CCPC, Heritage Interpretation Subcommittee)
3. Build the historic themes for the Heritage Center into public events in the Kennett Square area. (Heritage Interpretation Subcommittee, Heritage Center)
4. Build Heritage Center themes into the menus of local restaurants. (Heritage Interpretation

Subcommittee, Heritage Center)

5. Create thematic brochures and information for a Heritage Center webpage and to be available at the Heritage Center and Interpretive Sites. This could include developing a historic walking, bicycling, and/or driving tour of the Landscapes that focuses on the battlefield Colonial landscape. (Heritage Interpretation Subcommittee, Heritage Center)
6. Work with Longwood Gardens and other major sites to include on-site battle interpretation. (BBTF, CCPC, Heritage Interpretation Subcommittee)
7. Work with the NPS to incorporate the Philadelphia Campaign and its role in the Brandywine Valley into the interpretation of the First State National Park. (BBTF, DHCA)
8. Coordinate with The Land Conservancy for Southern Chester County and like organizations to investigate options for establishing programs that protect natural features as key battlefield elements. Programs can be explored that enhance, restore, and maintain the battlefield's natural features and take into account the importance of these features in battle strategy and its outcome. For example, Brandywine Creek is a critical natural feature as an obstacle for battle troop maneuvering as well as key terrain as part of the British flank and Washington's defense. (BBTF, CCPC, Battlefield Municipalities)
9. Publicize and celebrate land conservation efforts at the Heritage Center and Interpretive Sites to publicly recognize the inherent relation between battlefield protection and land conservation. (BBTF, CCPC, Heritage Interpretation Subcommittee, Heritage Center, Interpretive Sites)
10. Coordinate with agencies in the State of Delaware and in Delaware County, Pennsylvania to recognize and interpret battle-related sites and locations (DNREC, NPS, DHCA).

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Note: The names of the regiments under General von Knyphausen are given as they appear on the cover of the journals in the Murhard Library in Kassel, which is not always identical with their name during the Philadelphia Campaign. Some of the journals are paginated by folio r and/or v, others by page numbers.

Unless otherwise indicated all translations are by Robert Selig.

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APPENDIX I.

Southern Brandywine Battlefield Strategic Landscapes Troop Position Snapshots
(by Western Heritage Mapping)

GIS Data Collection Methodology

GIS Data was collected from a variety of sources. In all cases the digital data was entered into ESRI's ArcGIS formats.

a. Municipal Borders, Historic Resources, and Road Networks

PDF versions of the Municipal boundaries, historic resources, and road networks of 1777 were developed by the Chester County Archives. These maps were scanned in, and geo-referenced to create various 1777 layers in GIS.

b. Troop Positions

Various maps were available depicting the troop positions. They are listed on the final page of the Troop Position Snapshots document and were further analyzed and interpreted by our team.

A series of troop positions were created in ArcGIS using time-stamps, which gave us reasonably accurate snapshots of the battle between September 8 and September 11. These snapshots were reviewed, altered, and ultimately approved by our team.

Most of the study area was south of the animated map, but troop positions north of Smith's Ford, were added to the animation. Since no ESRI tool allows for the creation of graphically smooth video, the snapshots were exported from ArcMap and imported into Adobe Flash CS4. We were then able to create moveable boxes in Flash from the snapshots and interpolate the movements along existing roads and/or known open fields.

Southern Brandywine Battlefield Strategic Landscapes

Troop Position Snapshots

Prepared for The Chester County Planning Commission
May 2019

September 8th

- A. Dawn
- B. Morning
- C. Afternoon
- D. Evening
- E. Late Night

September 9th

- F. Pre Dawn March
- G. Afternoon
- H. Late Night March




September 10th

- I. Midnight
- J. Wee Hours
- K. Pre Dawn March
- L. Dawn
- M. Morning March
- N. Late Morning
- O. Afternoon March
- P. Afternoon
- Q. Late Afternoon

September 8th to 11th

- R. Overall Marches
- September 8th
 - S. Encampment 1777
 - T. Encampment 21st Century
- September 10th
 - U. Encampment 1777
 - V. Encampment 21st Century
 - W. Encampment 21st Century

Troop Positions

-  BRITISH
-  HESSIAN
-  CONTINENTAL

ABPP GA-2287-17-002

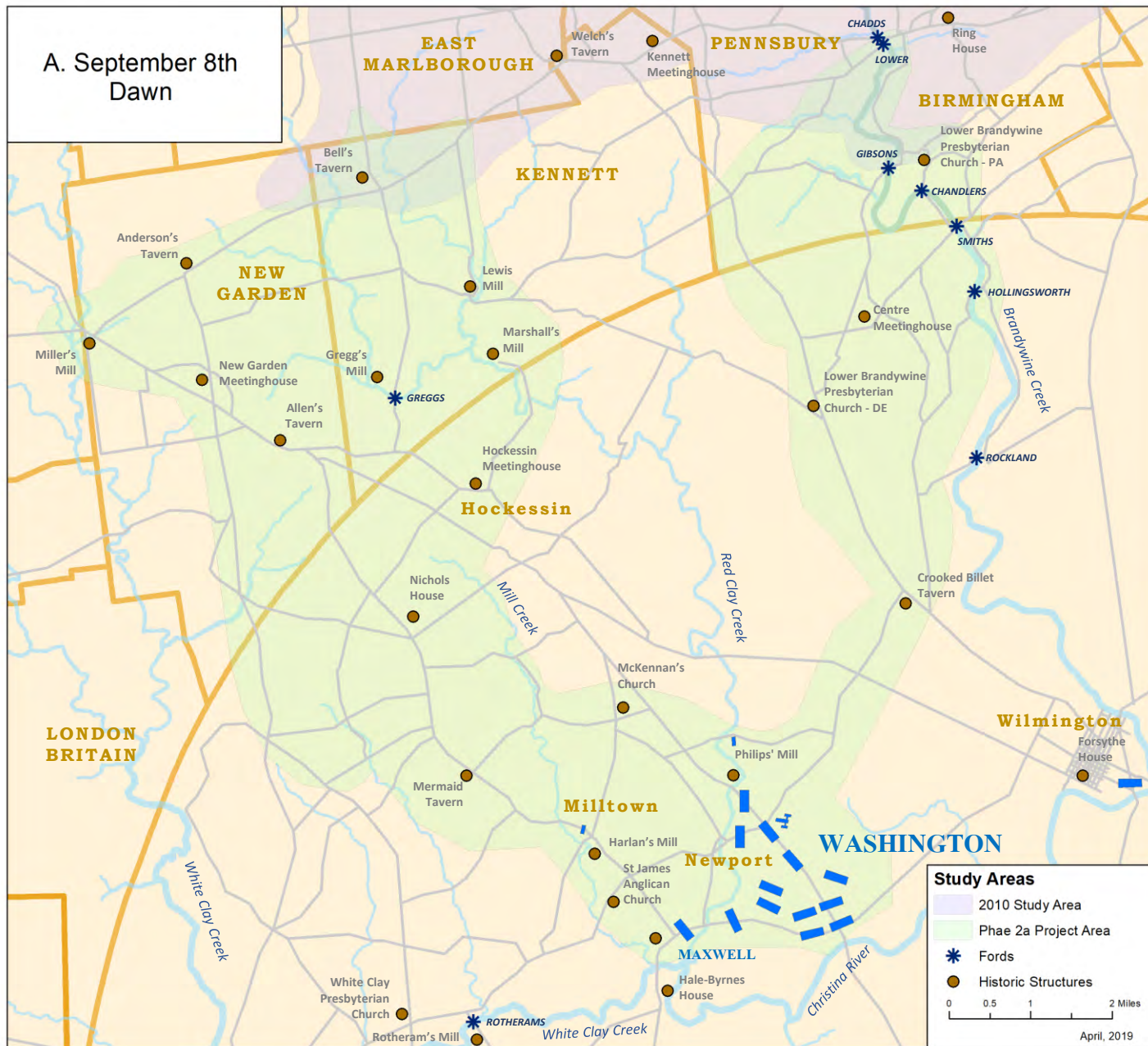
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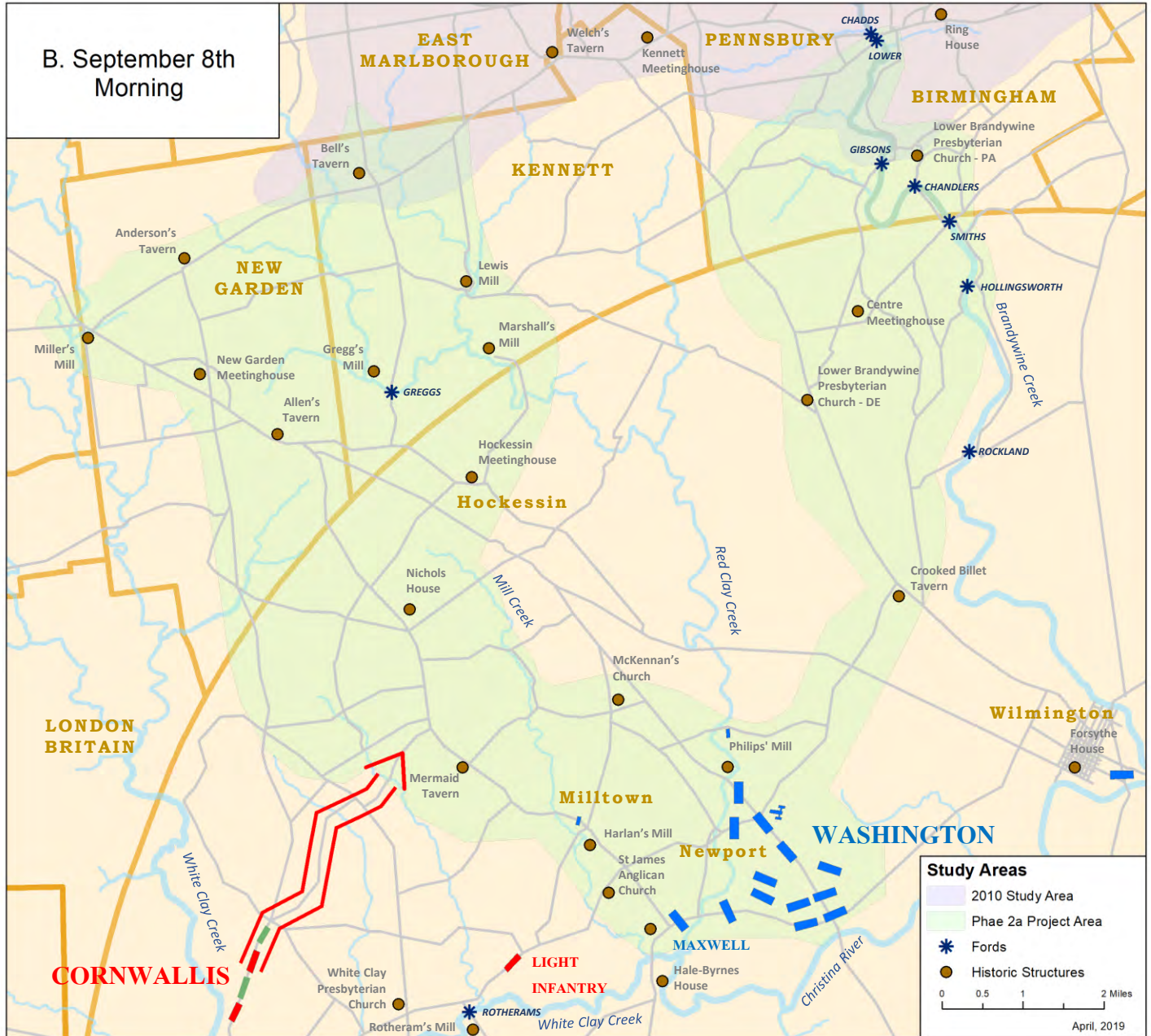
Western Heritage Mapping

WesternHeritageMapping.org

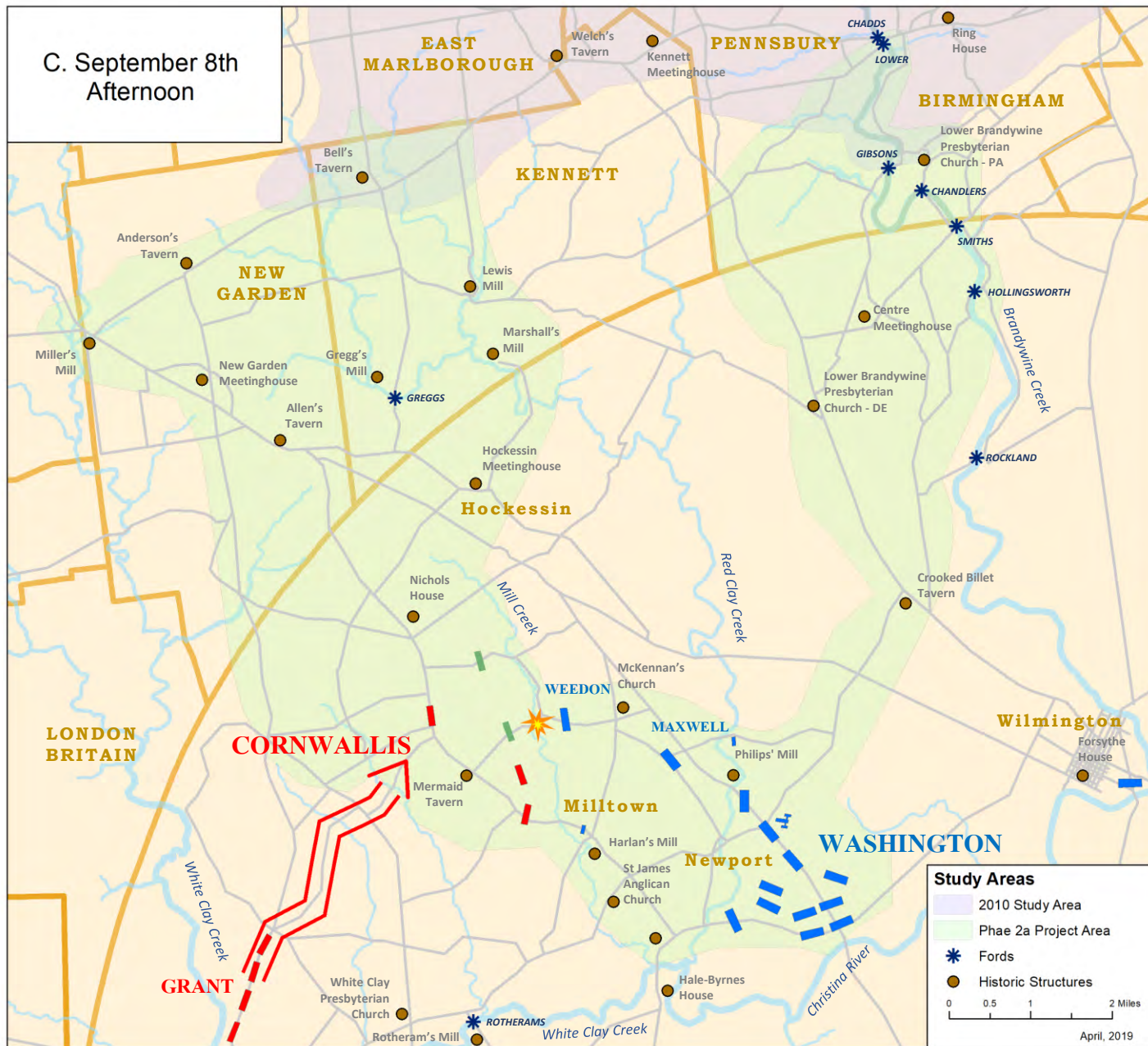
Southern Brandywine Battlefield Strategic Landscapes



Southern Brandywine Battlefield Strategic Landscapes



Southern Brandywine Battlefield Strategic Landscapes



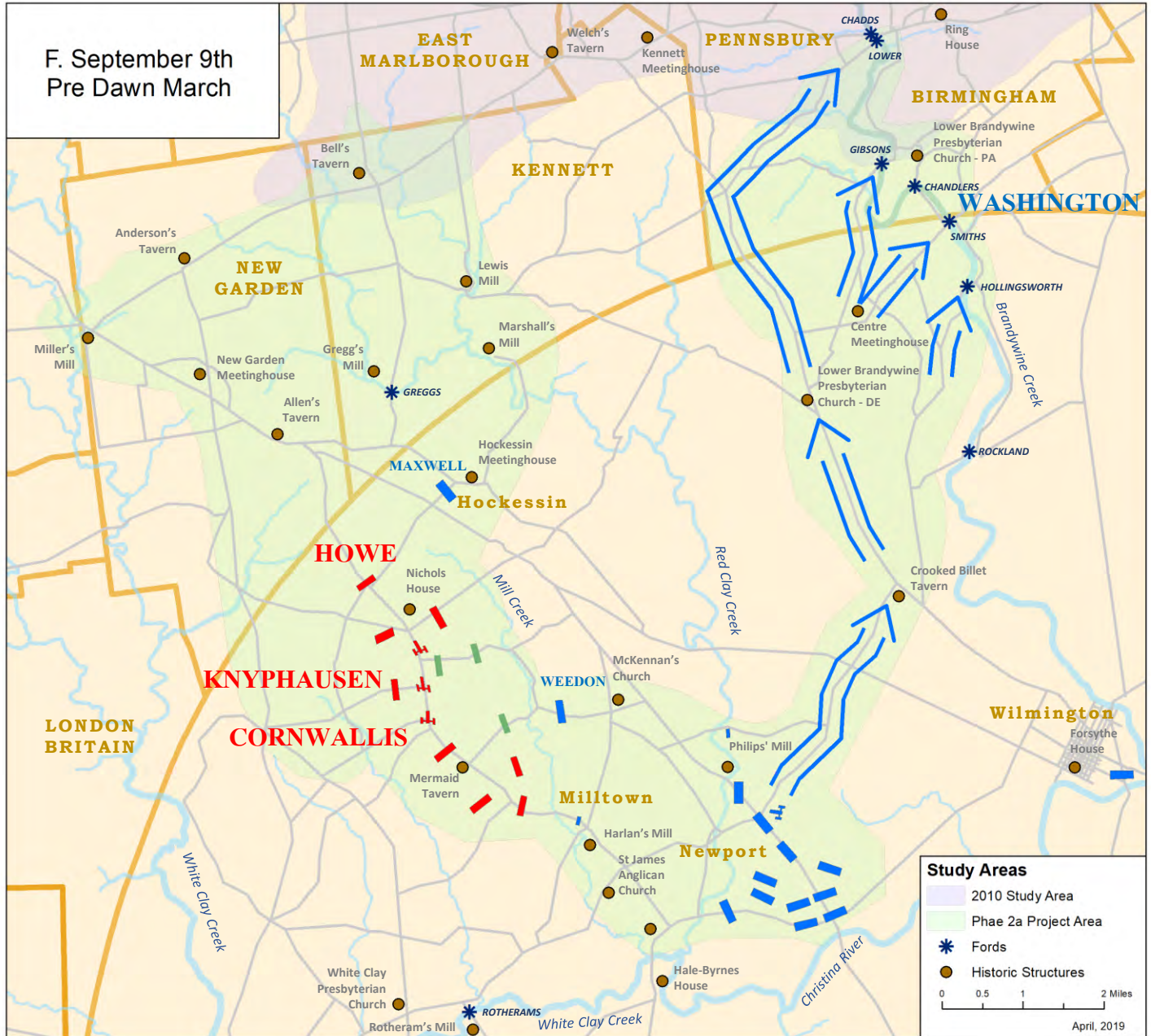
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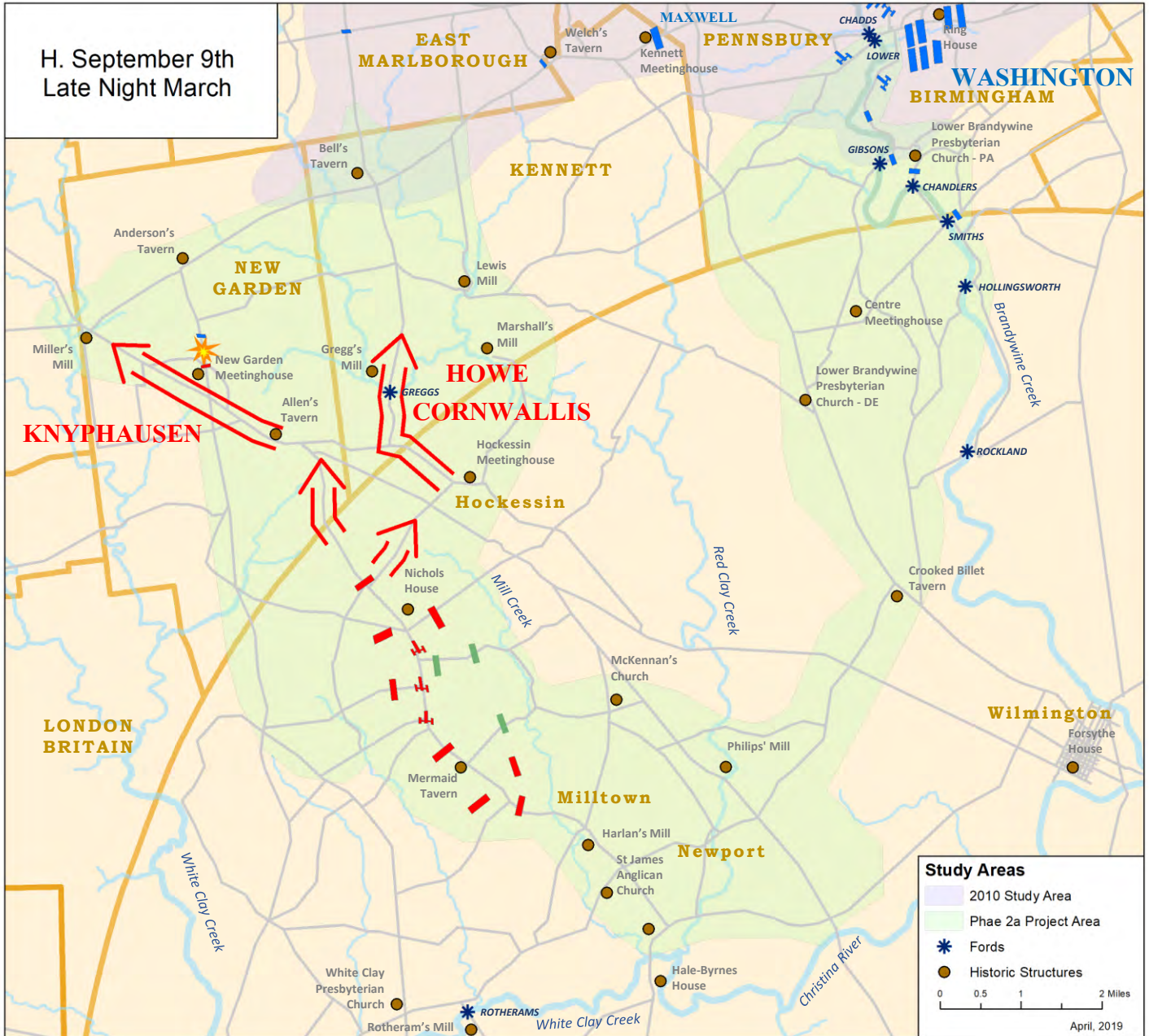
Southern Brandywine Battlefield Strategic Landscapes



Southern Brandywine Battlefield Strategic Landscapes



Southern Brandywine Battlefield Strategic Landscapes



Study Areas

- 2010 Study Area
- Phae 2a Project Area
- Fords
- Historic Structures

0 0.5 1 2 Miles

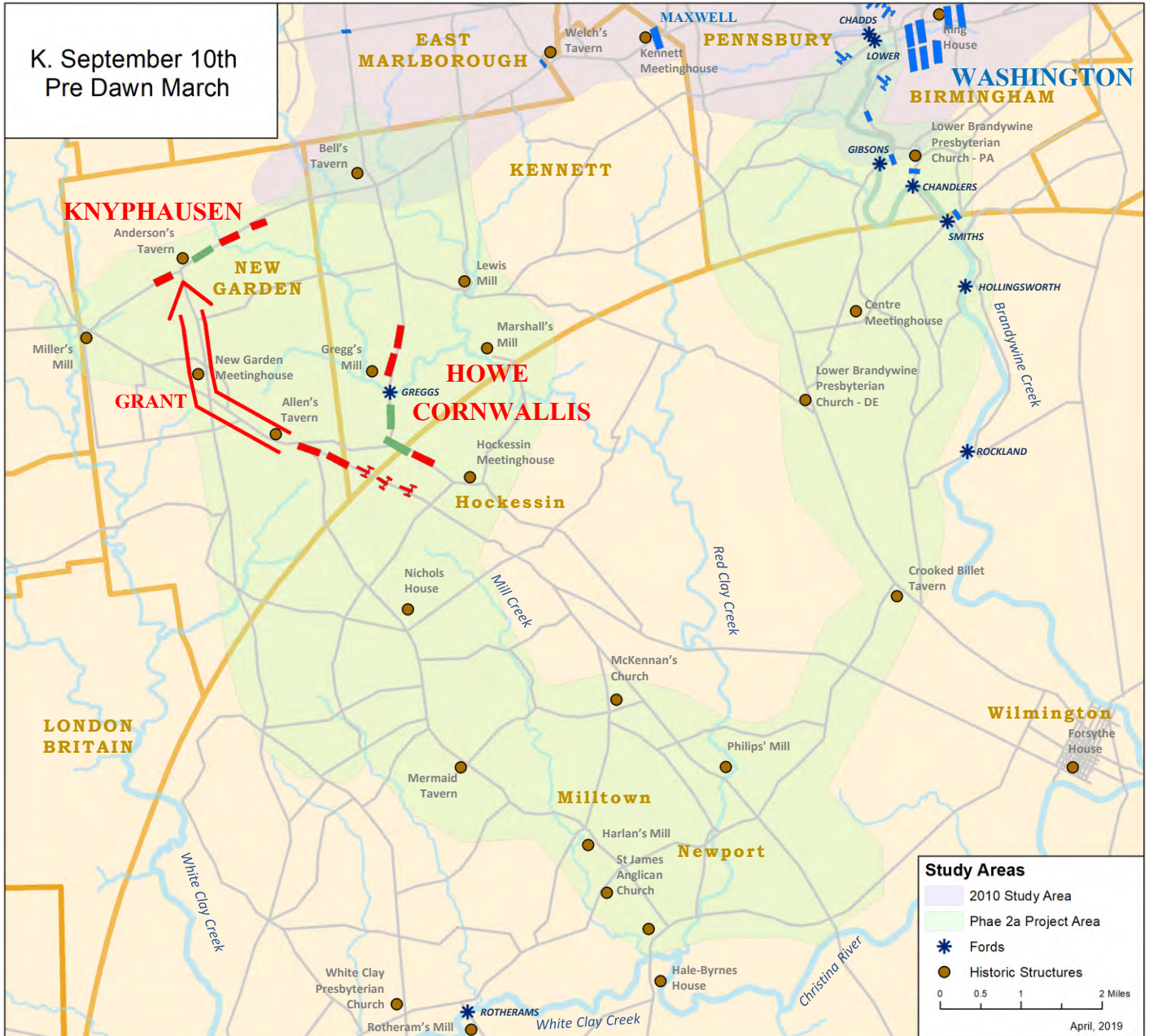
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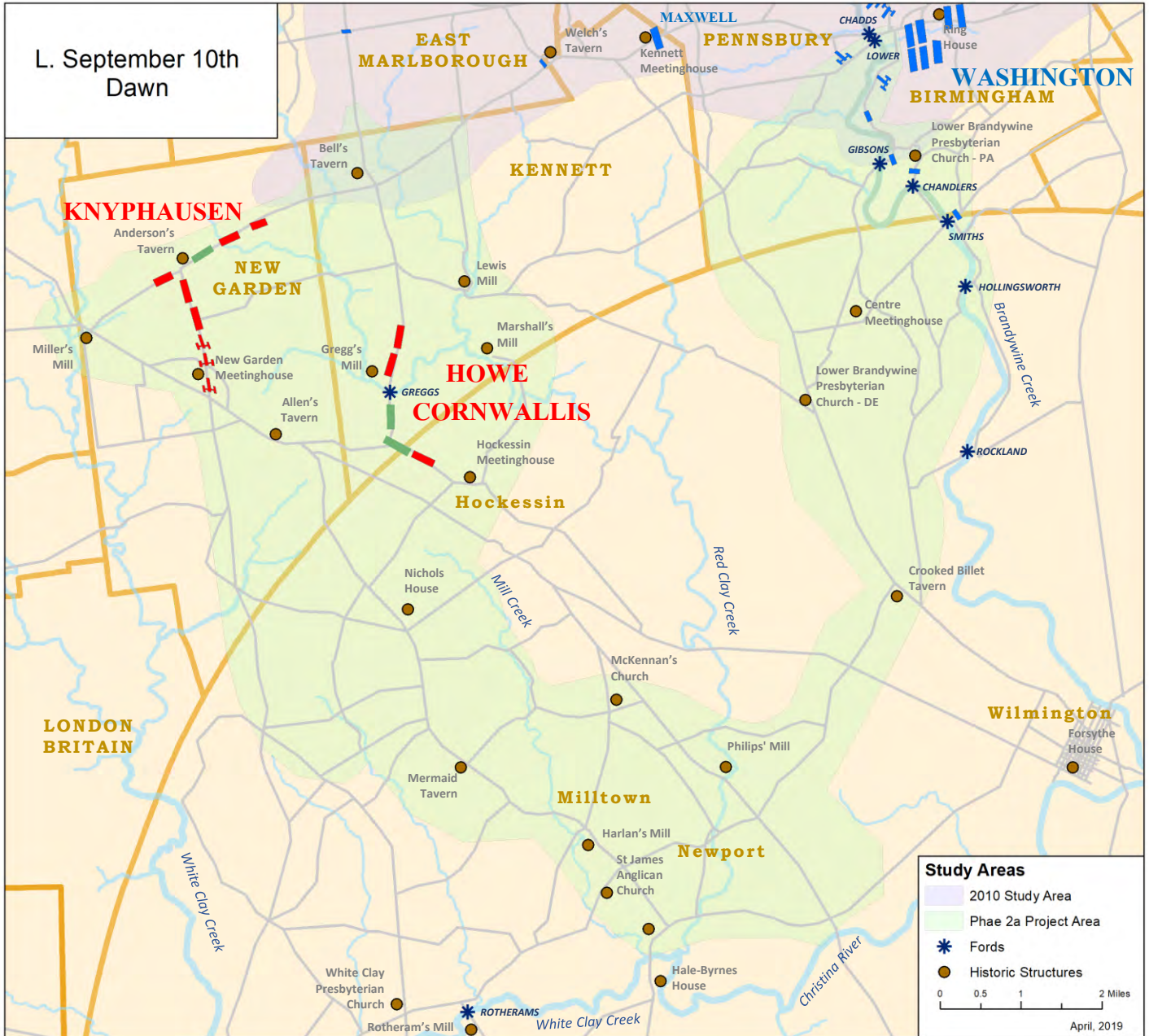
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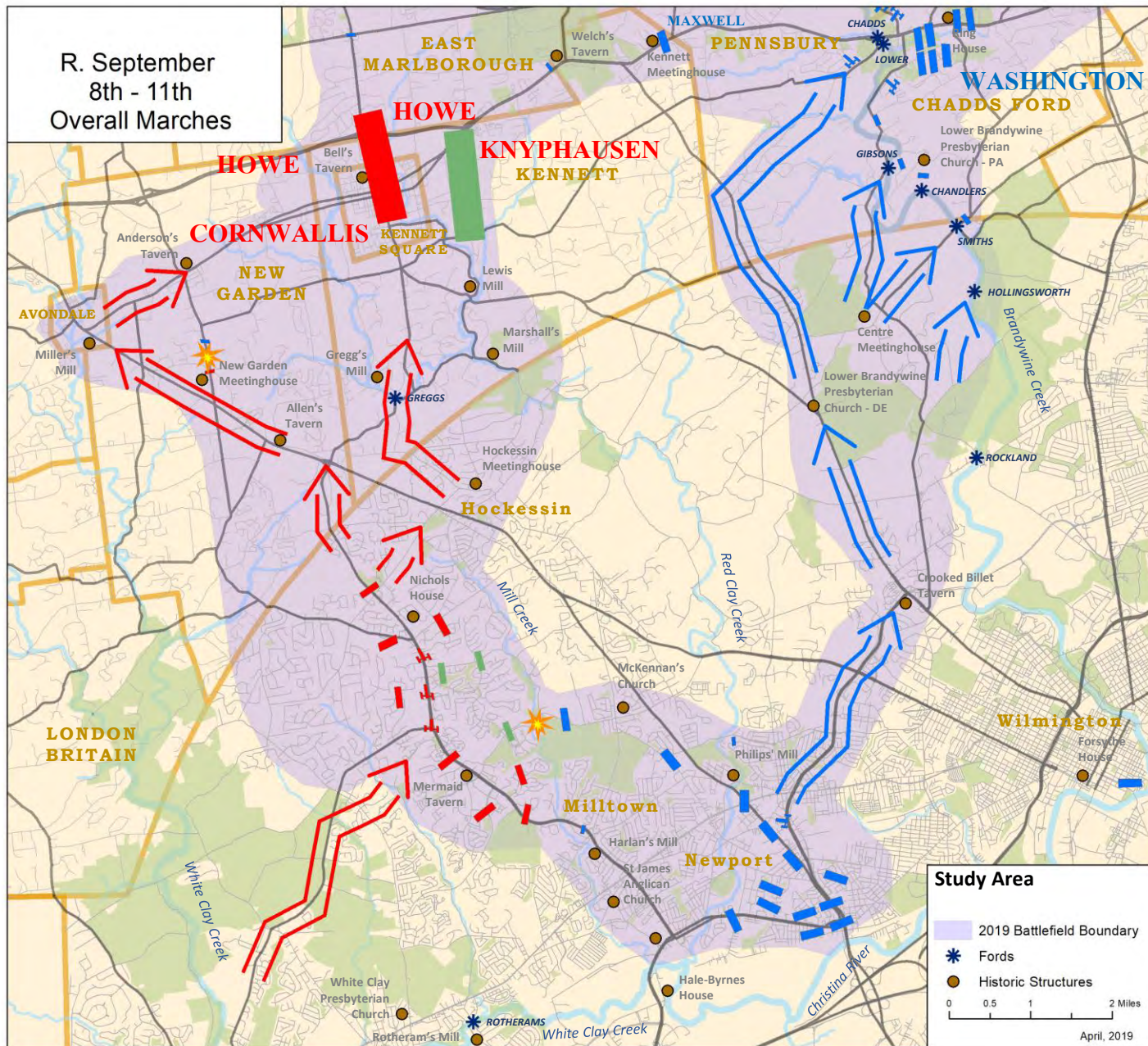
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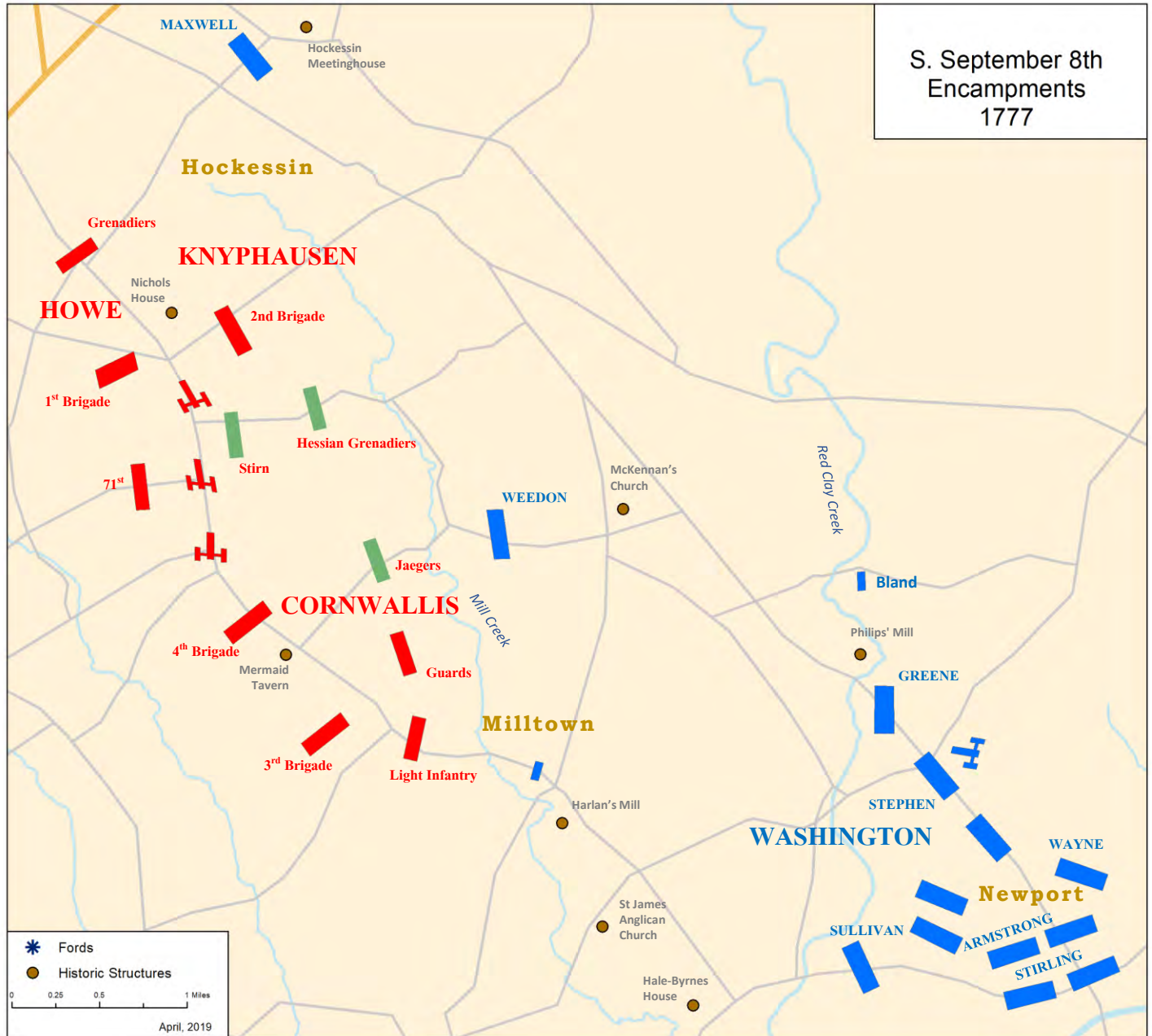
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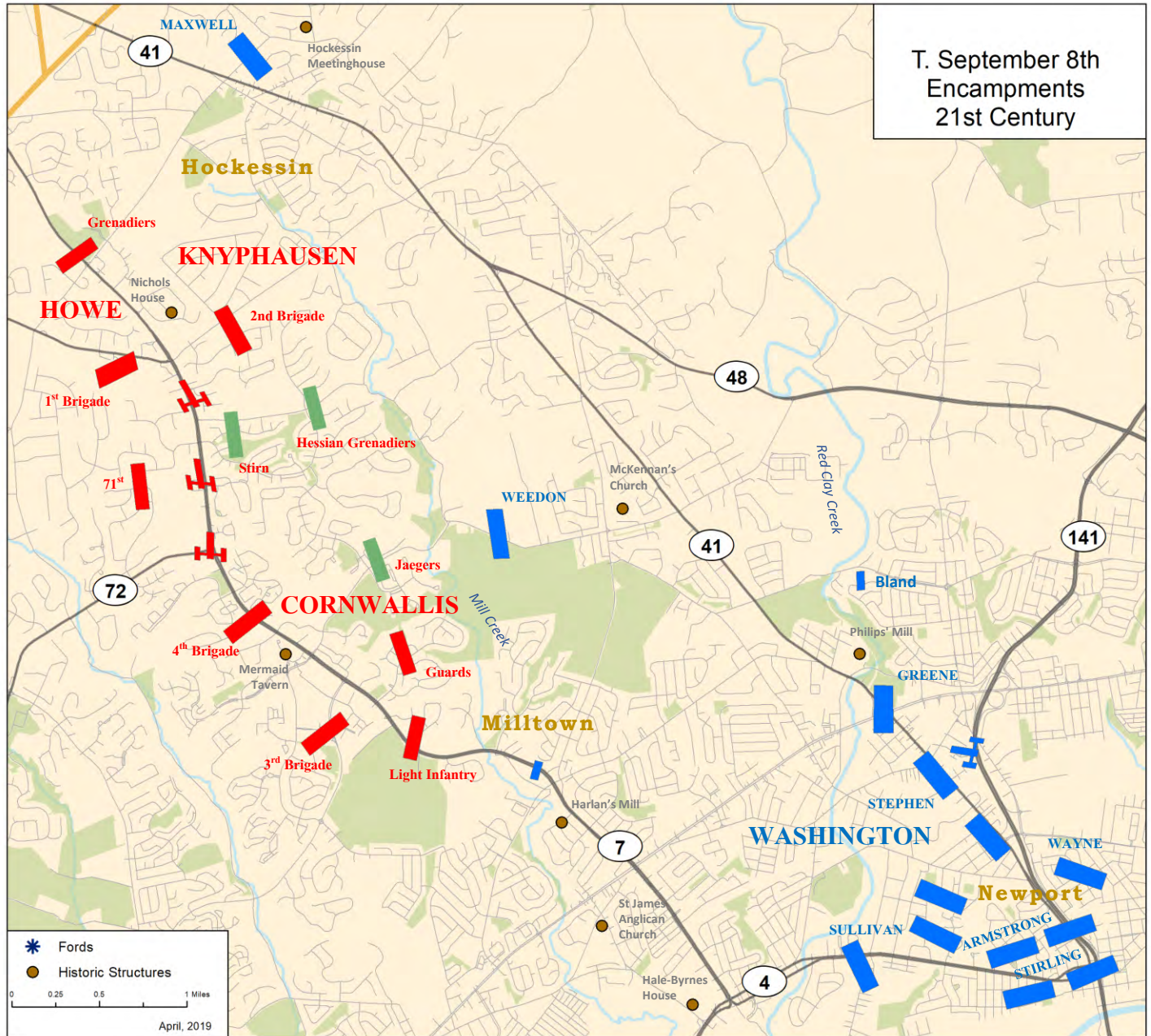
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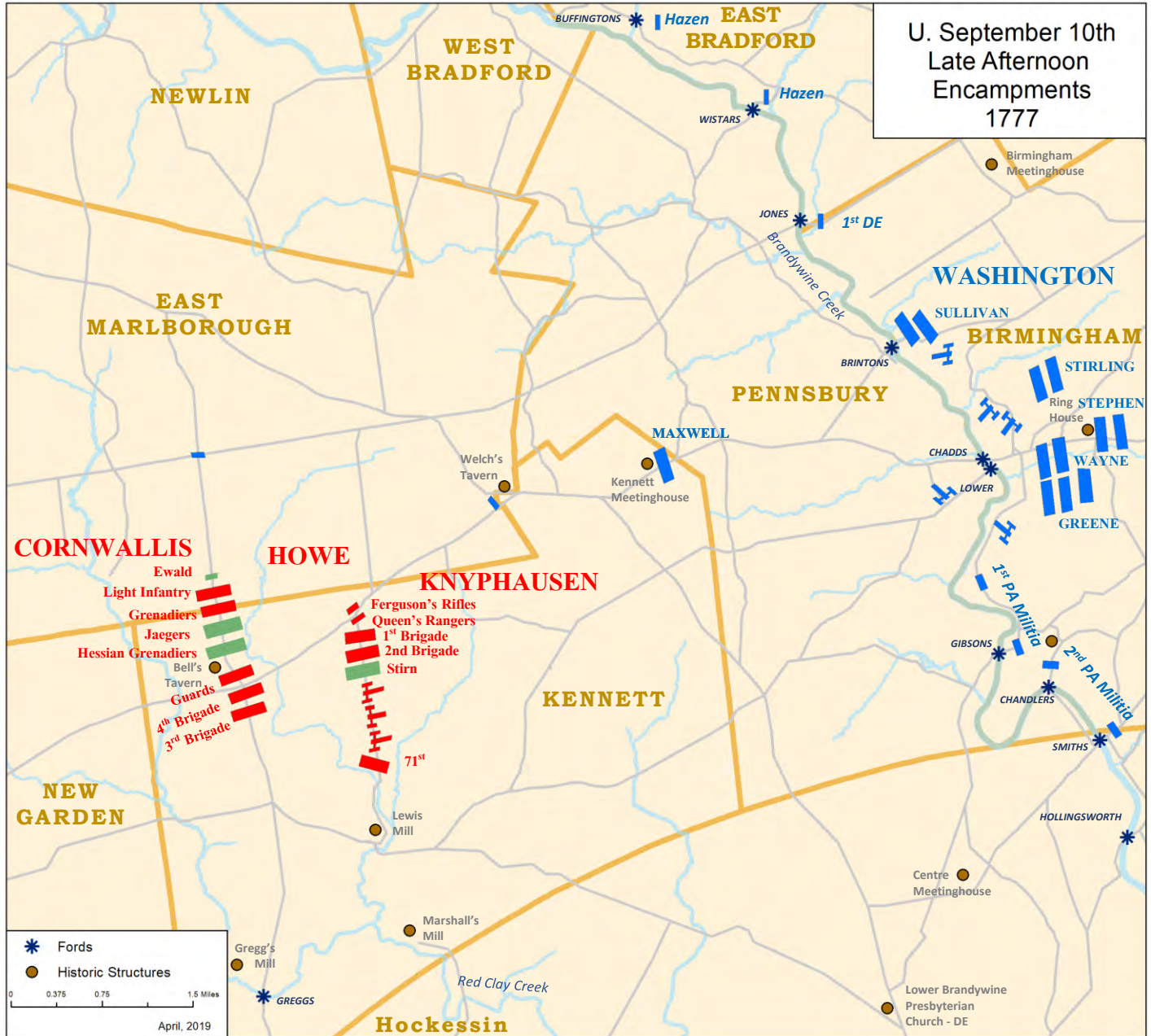
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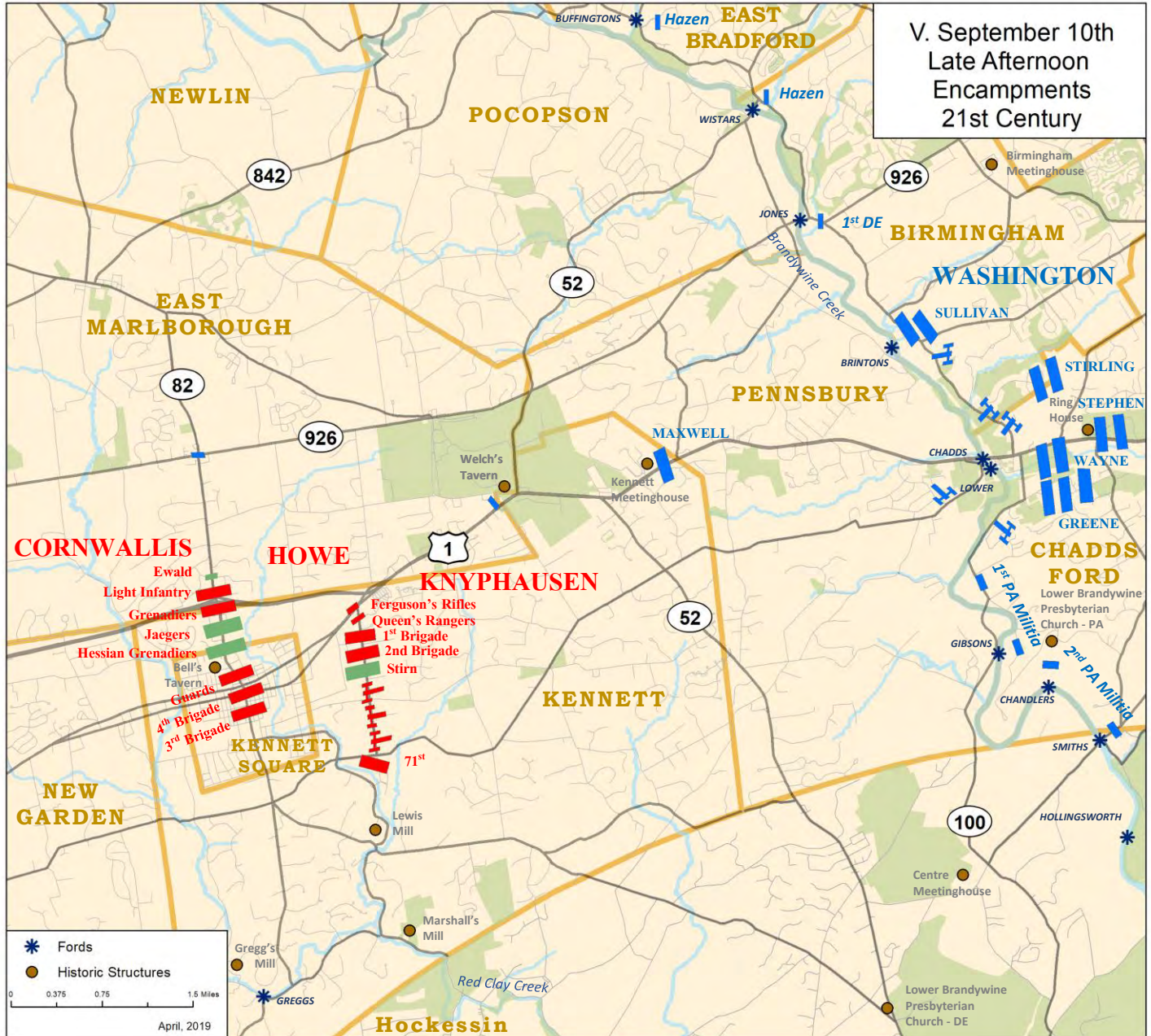
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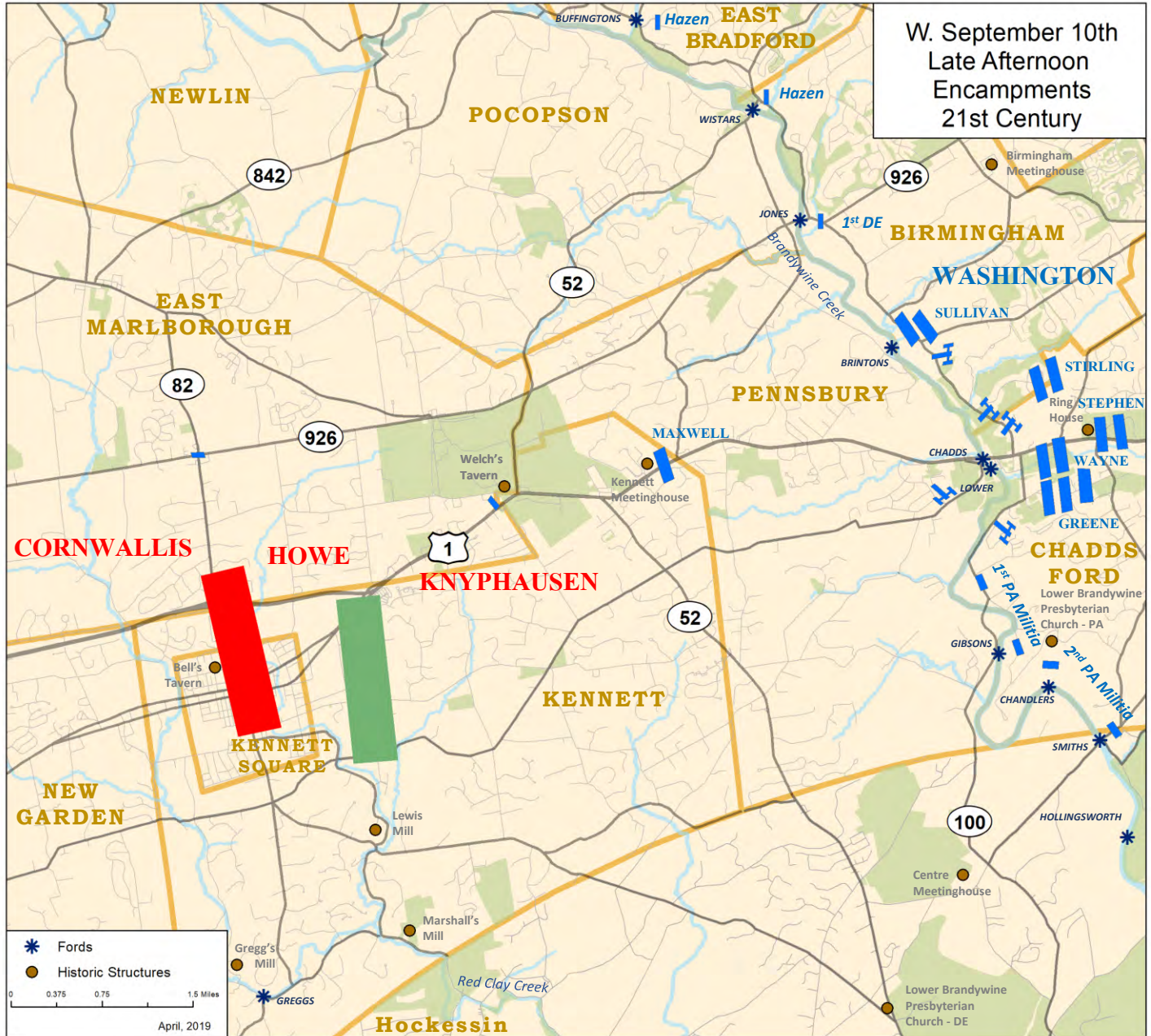
Southern Brandywine Battlefield Strategic Landscapes



Southern Brandywine Battlefield Strategic Landscapes



Southern Brandywine Battlefield Strategic Landscapes



Southern Brandywine Battlefield Strategic Landscapes

Troop Position Snapshots

Prepared for The Chester County Planning Commission
April 2019

Sources

Based on report, “Left Newport...Before Daylight and March’d to Chads Ford”, Prepared for the Chester County Planning Commission by Wade P. Catts, RPA, Robert A. Selig, PhD, and Sean Moir, 2019

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