

Historic Terrain: Applying the Techniques of Landscape Archaeology to Military History

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Introduction

Since at least the late 19th century, when Delbruck demonstrated by inspection of the terrain that many traditional accounts of military operations were nonsense, it has been recognised that the physical characteristics of the landscape have had a significant impact on operational military history at every scale, from the war theatre right down to the individual battlefield.¹ It will have influenced the composition of forces and how were employed throughout a campaign in battles, sieges and lesser actions. Most significantly it will have influenced the choice of battlefield, the way in which the forces were deployed and how effectively they were used in these major field actions. Battles, and indeed the campaigns and wars of which they were a part, cannot therefore be adequately understood without the study of the historic terrain at each scale.

For battles of the 19th and especially the 20th centuries the impact of terrain is well understood. However, before the late 18th or 19th century, when national cadastral mapping first became available in England and other European countries,² historic terrain has hardly if ever been effectively analysed. It is not that military historians have ignored the issue. In the 1950s Burne, author of the first and in many ways still the best 'modern' study of English battlefields, as a former officer paid particular attention to the landscape of the battlefield.³ The problem has been simply that, in most cases, the landscape has changed dramatically since the time of the engagement. But military historians have also faced a second problem, that these early battles have not, in many cases, even been located with sufficient accuracy to enable such analysis of the impact of terrain. What is surprising is that the techniques developed in historical geography and landscape archaeology have not been applied by military historians to resolve these problems, with the one notable exception of Newman's limited landscape work at Marston Moor.⁴

In recent years the problem of accurate location of the action has begun to be addressed through battlefield archaeology, though it could perhaps be better described as the 'archaeology of battle', for it concentrates largely upon the investigation of the physical evidence left by the action rather than the archaeology of the battlefield itself.⁵ The

¹ Keegan, *The face of battle*, Harmondsworth, Penguin, 1978, 32. Delbruck, *History of the art of war within the framework of political history*, Westport, Conn, Greenwood Press, 1975

² Delano-Smith, *English Maps: A History*, London, The British Library, 1999, esp. 215-224;

³ Burne, *The battlefields of England*, London, Greenhill Books, 1996

⁴ Newman, *The Battle of Marston Moor*, Chichester, Anthony Bird, 1981 and Newman, *Marston Moor, 2 July 1644 : the sources and the site*, [York], [University of York Borthwick Institute of Historical Research], 1978.

⁵ Freeman, et al., *Fields of conflict: progress and prospect in battlefield archaeology : proceedings of a conference held in the Department of Archaeology University of Glasgow, April 2000*, Oxford, England, Archaeopress 2001, 2001.

complementary study of the historic terrain of the battlefield, using the documentary record supplemented where appropriate by archaeological evidence, has tended to be ignored. Yet this can provide two essential components of a holistic study. It enables the use of the topographical evidence contained in the military accounts to place the events within the landscape, with a greater or lesser degree of accuracy depending on the quality of that evidence. This can then be tested by the independent evidence provided by the archaeology of the battle. Secondly, if the locational problems have been resolved, landscape reconstruction can enable the impact of historic terrain upon the events of a battle to be examined, with the confidence that it is the 'right' terrain, both in terms of location and character.

The objective of this paper is to show, through the examination of one English battle, how 'historic terrain' can be returned to the central role that Delbruck showed it deserves. Returned, because the exploitation of the opportunities provided by terrain, or the dangers posed by the enemy's use of it, has always been recognised by military commanders over the centuries, and even by the common soldier because his very survival might depend upon the cover it provided. Perhaps the most famous example of the exploitation of terrain in an historic battlefield situation was at Waterloo by Wellington, who always took great pains to understand topography and was an avid student of maps.⁶ But the principles, though not codified, have always been known and exploited, to greater or lesser effect.

The selection of Sedgemoor for our case study was a careful choice. As the last battle on English soil it is arguably the best documented of all, with detailed plans that have not been effectively used in a modern analysis of the battle, plans which also show how significant contemporaries considered terrain to be for the understanding of the action. Also this is a landscape dramatically transformed since 1685, most notably under the Act of Parliament of 1791 for the drainage and inclosure of King's Sedgemoor. But it is a landscape for which there is excellent documentary and archaeological data to enable the clear demonstration of the methodology of historic landscape reconstruction and the placing of documented military events within it.

The battle and its documentation

On 11th June 1685 the Duke of Monmouth landed at Lyme Regis in Dorset with a small force in an attempt to topple the new Catholic king, James II. Initially large numbers rallied to his cause but, after an abortive campaign in the South West, by the 5th July 1685 the rebel army lay cornered in the town of Bridgwater (Somerset) by a smaller but far more experienced royal army. The royal forces were camped less than four miles to the east, at Westonzoyland on the edge of King's Sedgemoor, in an easily defended location between the village and the Bussex Rhyne, the main dyke draining the moor. There were also militia forces in support in villages further east. The rebel army had suffered significant desertions over the previous week and was now perhaps no more than

⁶ Roberts, *Napoleon and Wellington*, London, Phoenix, 2002

3500 strong. That night, in a last desperate attempt to salvage something from his abortive rebellion, Monmouth launched a surprise night attack from the least expected direction, across the marshy wastes of Sedgemoor. But the rebels' bold strategy was discovered before they reached the royal camp and then, in the darkness, their cavalry failed to locate the ford (the 'upper plungeon') giving access to the royal camp. With the element of surprise lost, any chance of victory had disappeared. Most of the rebel horse soon fled the field and, in open country without cavalry support, Monmouth's infantry proved an easy target for the royal cavalry. The discipline, experience and firepower of the well equipped professional soldiers of the army of James II soon began to tell. As the morning light revealed the rebels' true plight of the rebels Feversham, the royal general, launched a joint cavalry and infantry attack. Monmouth's army was totally destroyed.⁷

There are a number of detailed accounts of the battle, most written by combatants and one compiled by the king himself who, although not present, worked from detailed interviews with and reports by the combatants. James even visited the battlefield the following year, in order to better understand the terrain and thus the battle. There are also plans that accompany two of the accounts.⁸ One is by Paschal, the local vicar, which is well known and often reprinted.⁹ The other is a set of three colour plans by Dummer, an officer of the royal artillery who fought at Sedgemoor. Dummer's plans have not previously all been published¹⁰ and have never been effectively used by any modern author on the battle, yet they are exceptional in English military history for their detail of both the sequence of events and the landscape. As with Streeter's illustration of the battle of Naseby (Northamptonshire, 1645) the distinctive distortions, especially as regards the scale of the military components, need to be taken into account. Once they are the information these plans contain can be unlocked with what seems to be remarkable accuracy, though only the archaeology of the battle will finally confirm this.¹¹ The data can only be unlocked by the accurate reconstruction of the contemporary landscape, using the techniques of regressive map analysis, and by applying the principles and exact measurements for infantry and cavalry deployments detailed in the contemporary military manuals.¹²

From historic landscape to battlefield terrain

Despite its importance to the understanding of the action, the historic terrain of Sedgemoor in 1685, although considered by various authors, has never been

⁷ There are a number of detailed works of military history on the battle, most notably Chandler, *Sedgemoor 1685 : from Monmouth's invasion to the Bloody Assizes*, Staplehurst, Spellmount, 1999, which also references the many other studies.

⁸ Transcripts are published by Chandler, *Sedgemoor 1685 : from Monmouth's invasion to the Bloody Assizes*, Staplehurst, Spellmount, 1999.

⁹ The best reproduction is in Young & Adair, *From Hastings to Culloden*, 1979, plate 13.

¹⁰ The plans are in Dummer's Journal, Pepys Library: 182, p.4-5, 8-9 & 12-13. The first plan of the three was published by Earle, *The life and times of James II*, London, Weidenfeld and Nicolson, 1972, 154.

¹¹ Foard, *Naseby: The Decisive Campaign*, Whitsable, Pryor Publications, 1995, 232-3.

¹² The principles and sources are explained in detail in Foard, *Naseby: The Decisive Campaign*, Whitsable, Pryor Publications, 1995, 237-242.

reconstructed in detail. Even where archaeological work has been employed, in the mapping of the Bussex Rhyne, sufficient accuracy has not been achieved.¹³ The reconstruction presented here has been achieved using the sequence of maps available for this part of Sedgemoor, starting with the Ordnance Survey 1:10,560 1st edition maps of 1880s, which have been registered in GIS (MapInfo) to the modern OS map base. Relevant data from each earlier map has then been successively added, the later map providing the base for mapping from its predecessor and thus correcting for the geodetic inaccuracy of the earlier maps.¹⁴ Where features have been depicted on earlier maps but not later ones then archaeological earthwork evidence from the RAF 1947 vertical air photographs, rectified and registered in GIS, have been used where possible to accurately position them. This has been most successful with regard to locating the 'rhyne' or drainage dykes, although there are many earlier and some later features on those photographs that warrant further detail study both in their own right and because they confuse the 17th century evidence.¹⁵

The end product is a reconstruction plan of a small section of King's Sedgemoor, itself just a part of the Somerset Levels. It was a landscape of lowland moor, restricted largely to areas of poorly drained alluvium, with anciently enclosed arable fields on the main islands of Chedzoy and Zoy (on the north west corner of which lay Westonzoyland). Small areas on the periphery of Chedzoy and of the mainland to the north east had been drained and enclosed as meadow, and earthwork drainage ditches are visible here on the 1947 air photos. However, the main medieval drainage of the moor had been to the south and east of Zoy. There were however several smaller very low areas of island, notably Penzoy immediately west of Westonzoyland, that were not enclosed or cultivated, while the rough wet pasture of the moor had been subject to limited works to improve the drainage, for the various rhyne appear to be man made dykes or at least improved natural water courses.

From Westonzoyland a main road led across the moor to Bridgewater, but there was also a moorland route to Bridgewater that crossed the Bussex Rhyne via the lower plungeon and passed by Penzoy Pound. This small square animal pound built of stone must lie on Penzoy island and is roughly located by Dummer. Its site may be that seen as a square earthwork on the air photographs, though that may prove to be of much earlier date. Another track led from the plungeon to Chedzoy, entering the enclosures via Brinsell Gate, while another crossed by the Upper Plungeon and went via Langmoor Stone. It will have followed the long thin tongue of moorland seen skirting Chedzoy to the east and north, ultimately joining lanes leading from the Bridgewater to Bristol / London road, exactly as shown in simplified form by Paschal.

¹³ Curran, Paul 'The Bussex Rhyne', *Somerset Archaeology and Natural History*, 124, 1980, p.167-9.

¹⁴ Pre inclosure map of Kings Sedgemoor, late 18th century: SRO DD/AH Box 47, 11. Map of Kings Sedgemoor re Drainage and Enclosure, 1795, PRO CP43/851, after rot.276; Tithe Map of Westonzoyland, 1843, PRO IR30/30/453.

¹⁵ RAF CPE/UK/1924/3035-8. Further aerial reconnaissance, now that much of the land is ploughed, should yield good soilmark evidence, as noted on the ground in spring 2003.

Having completed this reconstruction, the landscape defined by Dummer, Paschal and the other contemporary military sources can be reconciled quite easily with that depicted on the 18th century maps, though it is now clear that the hedged fields depicted by Dummer within the ancient enclosure boundary are wholly stylised. The various rhynes in the accounts can be seen to be the dykes which drained the moor, though these and other features on the maps and air photos are again shown to be more complex than Dummer implies.

It was along the London road and then the lanes leading to the moor land that the rebel army advanced, seriously delayed at first by the narrow lanes between the main road and the moor. Once onto the moor they made better progress, avoiding royal scouts, until they reached the Langmoor Rhyne. It was here that the attack first began to go wrong. In the dark the local guide could not find the crossing marked by the Langmoor Stone. Military historians have had equal difficulty, but the pre inclosure map and the earthworks on the air photos allow its exact identification. As the rebels finally found the crossing they were discovered by a royal scout who had time to return to the camp and raise the alarm before the rebel forces could cross the rhyne and march the remaining 1.4 km to attack the camp. But the rebel cavalry were soon across and galloped off to implement the first stage of the planned attack. This was to be a daring outflanking move, crossing the Bussex Rhyne by the upper pluncheon and riding along the narrow strip of unenclosed moor that separated the enclosures of Bussex from the enclosures around Westonzoyland village, to attack the unprotected royal artillery from the rear. If it had been effectively implemented they would have turned the guns onto the royal infantry and the outcome of the battle might have been very different. But the cavalry failed to find the upper pluncheon and rode west along the north side of the Bussex Rhyne. Once the royal infantry realised these were enemy horse the musketeers opened fire across the rhyne, driving off the rebel horse. Then they were caught by the returning royal cavalry patrol and fled the field. Just one troop, under a veteran of Cromwell's Ironsides, seems to have fought a gallant if forlorn action. There are however still considerable doubts as to exactly where this cavalry action was fought because of the lack of closely related topographical features and also due to the conflict between the sources. Dummer shows the skirmish to the north east of the infantry action while Pascal shows it to the north. However, Pascal's plan provides more specific information on the rebel cavalry route across the battlefield and this accords far better with the written accounts, so we have tentatively used his approximate location. This would also accord well with them being engaged by a patrol returning from the direction of Chedzoy, and on this various accounts, including Dummer's plan, agree.

By this time the rebel infantry had arrived in line of march. Wade, the infantry commander, deployed his first battalion just short of the rhyne and prepared to march forward, across what he knew was just a shallow dyke, to engage the enemy. But as the other battalions deployed to his right they immediately opened fire. This was the final mistake. The royal cavalry, which was quartered in the village, had still not reached the field. The royal artillery were unlimbered standing helplessly 500 metres from the action and it would be many minutes before they were able to engage. Until both were brought up the rebels still had a good chance of completing the central part of their well thought out battle plan. Monmouth had very effectively exploited Feversham's failings and with

experienced troops would surely have easily won the battle. But Wade was now unable to persuade his men to march forward across the rhyne, where his superior numbers, in hand to hand fighting, might have enabled him to break the royal infantry. Standing off in a fire fight the better trained and better equipped royal musketeers were bound to win. It has been said that Wade was deployed too far to the east, so he could only engage the right three battalions of the royal infantry, but we can now see that the alignment of the Bussex Rhyne almost precluded the engagement of the other three battalions, unless the rebels could advance across the rhyne, which they would not do. When the royal artillery were brought up the rebel ordnance was quickly silenced and the case-shot from the royal guns then began to rip through the rebel infantry. As dawn began to break the royal commander, now with his cavalry deployed, ordered a general advance. The two wings of cavalry attacked on the flanks and in the centre two bodies of commanded musketeers advanced across the rhyne firing on the rebels, followed by the remaining pike and musket of four battalions, while two other battalions crossed the upper pluncheon to support the attack. The rebel regiments wheeled to right and left to meet the attack but rapidly began to collapse as, in typical fashion, troops began to flee from the back of each formation. They were desperately seeking the cover of the hedged fields of Chedzoy and many, like Daniel Defoe who would survive to become one of our better known authors, did reach safety. Wade's battalion fought a dogged retreat towards the moor edge, but with little support he was soon overwhelmed and the royal forces then pursued a bloody execution of the fleeing rebels.

The infantry action can be closely positioned using the topographical information provided by Dummer and the other accounts. To determine the exact frontages and depths of the deployments we have used measurements for spacings specified in the 17th century manuals, together with the troop numbers from the various accounts.¹⁶ The result is a detailed mapping of the deployments and the action. The only mass grave yet located on the field, dug into in the late 19th century and depicted as an earthwork in 1896 by Barrett can be seen to lie close to the centre of the rebel position. This is exactly where one would expect it to lie, as Burne has observed that such graves on a number of English battlefields provide a vital clue as to the centre of the action.¹⁷ However the real test of this reconstruction will be by systematic investigation of the archaeology of the battle, most particularly the evidence of the distribution of musket shot, and of case shot and round shot from the artillery.

¹⁶ Royal cavalry: 700 in 10 units, each with a 1st division 3 deep and seconded by another 3 deep, giving 11 files at 5ft width per horse giving 55ft frontage per unit and 20ft between units. Royal infantry: c.1900 in 6 battalions, each of c.316, 6 deep giving 53 files at 3ft width per man giving 159ft frontage per battalion and 50ft spacing between battalions. Rebel infantry: 5 battalions each of c.510, 6 deep giving 85 files at 3ft per man giving 255ft per battalion and 50ft between battalions.

¹⁷ The OS 1st edition 6 inch map shows the approximate location, though modern survey work is needed to accurately position it. Barrett Charles Raymond, *Battles and Battlefields in England*, London, Innes & Co., 1896. Burne, *The battlefields of England*, London, Greenhill Books, 1996. Similar association can be seen at Naseby, Foard, *Naseby: The Decisive Campaign*, Whitsable, Pryor Publications, 1995. Other burials are reported as having been found c.1858 from between Bussex and the Bussex Rhyne (Somerset SMR, 10926).

Opportunities for the future

This brief analysis has attempted to show how the techniques of historic landscape study can be applied to battlefields. The results have not radically altered the interpretation of this battle, nor was it expected to with such a well understood action, though even here it has clarified the rebel tactics and shown exactly how they intended to exploit the opportunities provided by the terrain and the royal commander's inept deployment. On other less well understood battlefields the methodology can certainly deliver much more, as has already been demonstrated at Naseby, as Panter's 'low resolution' landscape reconstruction has suggested for Edgehill and as other work is beginning to reveal at Marston Moor, Northallerton and other battlefields.¹⁸ At Sedgemoor the analysis has provided detail that can now be refined by archaeological field investigation of particular features, such as the all important crossings of the rhyes and the character of the rhyes themselves.

But our analysis of historic terrain at Sedgemoor is primarily intended to set the stage for a far more significant study. The archaeology of the action at Sedgemoor may prove to be far more important than that of any other English battle of the 17th century. Because the action is so well documented it offers the potential of a 'Rosetta Stone' to unlock the story that the many thousand bullets and other unstratified artefacts hold. Because it appears we can pinpoint almost every phase of the action, each of which seem to have been on a slightly different piece of ground, so it may be possible to clearly distinguish the physical evidence from each component of the action. Such a study is needed because the interpretation of the archaeology of battle is far from straightforward, as can be seen from the few cases where extensive archaeological evidence has so far been published in England.¹⁹ There is the need to understand what the physical evidence means, to recognise the distinctive archaeological signature of advance, attack, retreat and rout – if indeed there is a distinctive signature to be found. If such subtle variation in the character of artefact scatters does exist, then a detailed study of the archaeology of battle at Sedgemoor, placed within our new understanding of the historic terrain, may provide the answers and thus enable other, less well documented battles to be far better understood through the study of their archaeology.

ILLUSTRATIONS:

Dummer: 3 plans of battle
Extract of Pre Inclosure map of Sedgemoor
Vertical Air Photo of earthworks
Reconstruction of Sedgemoor historic terrain.
Reconstruction of deployments and action

BIBLIOGRAPHY

¹⁸ Foard, *Naseby: The Decisive Campaign*, Whitsable, Pryor Publications, 1995; Panter, unpublished reconstruction in English Heritage battlefield file.

¹⁹ Eg: Foard, *Naseby: The Decisive Campaign*, Whitsable, Pryor Publications, 1995, and Newman and Roberts, *Marston Moor 1644 : the battle of the five armies*, Pickering, Blackthorn Press, 2003.

- Barrett Charles Raymond, Booth, and Duff Traill Henry. *Battles and Battlefields in England*. London: Innes & Co., 1896.
- Burne, Alfred H. *The battlefields of England*. London: Greenhill Books, 1996.
- Chandler, David. *Sedgemoor 1685 : from Monmouth's invasion to the Bloody Assizes*. Staplehurst: Spellmount, 1999.
- Delano-Smith, Catherine & Kain, Roger J P. *English Maps: A History*. London: The British Library, 1999.
- Delbruck, Hans. *History of the art of war within the framework of political history, Contributions in military history ; no. 9, 20, 26, 39*. Westport, Conn: Greenwood Press, 1975.
- Earle, Peter. *The life and times of James II, [Kings and queens of England]*. London: Weidenfeld and Nicolson, 1972.
- Foard, Glenn. *Naseby: The Decisive Campaign*. Whitsable: Pryor Publications, 1995.
- Freeman, Philip, Tony Pollard, and Conference University of Glasgow Dept. of Archaeology. *Fields of conflict: progress and prospect in battlefield archaeology : proceedings of a conference held in the Department of Archaeology University of Glasgow, April 2000, BAR international series ; 958*. Oxford, England: Archaeopress 2001, 2001.
- Keegan, John. *The face of battle*. Harmondsworth: Penguin, 1978.
- Newman, P. R. *Marston Moor, 2 July 1644 : the sources and the site, Borthwick papers ; no.53*. [York]: [University of York Borthwick Institute of Historical Research], 1978.
- Newman, P. R., and P. R. Roberts. *Marston Moor 1644 : the battle of the five armies*. Pickering: Blackthorn Press, 2003.
- Newman, Peter. *The Battle of Marston Moor*. Chichester: Anthony Bird, 1981.
- Roberts, Andrew. *Napoleon and Wellington*. London: Phoenix, 2002.
- Young & Adair, Peter & John. *From Hastings to Culloden*, 1979.