

<b>BOSWORTH BATTLEFIELD INVESTIGATION</b>	
<b>Project Design Summary</b>	
<b>The Battlefields Trust</b>	<b>July 2005</b>

## Summary

The battle of Bosworth, fought on the 22<sup>nd</sup> August 1485, is one of the best known and most influential of English battles. It saw perhaps the most dramatic of military reversals in English history. A rebel force defeated a royal army more than twice its size leaving Richard III, the last Plantagenet king, dead on the field and placing Henry VII on the throne as the first of a new, Tudor dynasty.

Today Bosworth is the most contentious of English battles, because at least three alternative sites have been proposed for the battlefield. When the dispute is finally resolved and the detail of the action is accurately placed within the historic terrain of 1485, our understanding of the battle is likely to be transformed. This should give us a far better understanding not only where but also how the battle was fought and why it had the outcome it did.

The Assessment Report on Bosworth battlefield, prepared in 2004, summarised the current state of knowledge, provided limited new detailed mapping of the historic terrain, identified the significant gaps in knowledge and indicated the evidence which might reasonably be collected to address these shortcomings.<sup>1</sup> The importance of a detailed study to answer the major questions about the battle cannot be overemphasised. This most significant of English battles may prove to have been won and lost on the field through the tactical exploitation of the terrain not, as has often been said, by treachery. It is thus a battle well worth detailed study, where the understanding of the historic terrain, of the initial deployments within it, and of the movement of the action across that terrain may reveal a quite different story to any of those which have been previously told. In so doing it may also cast valuable light on the nature of warfare in the 15<sup>th</sup> century.

The Assessment pointed to the core of the battlefield lying more than a mile (1.5 km) to the south west of the currently interpreted Ambion Hill site, the broad topographical context of the battle having been determined thanks mainly to the work of Foss.<sup>2</sup> However major uncertainties were shown to remain over the detail of key elements of the historic terrain, the positioning in the landscape of the initial deployment of the armies and the location of the main phases of the action. There also remain issues regarding the terrain evidence for the other alternative sites which require definitive resolution before absolute certainty as to the siting of the battle can be achieved, hence limited and very specific data must also be initially collected from these sites.

The extent and character of the surviving physical evidence of the battle itself and of the historic terrain of the battlefield within which it was fought has never been adequately defined. As a result it has not been possible to define an adequate interpretive scheme for the battlefield or to determine the conservation needs of the site.

The Project Design for the investigation of Bosworth battlefield defines an interdisciplinary research strategy involving documentary study and field survey to address the gaps in knowledge. Through the collection and analysis of a wide range of evidence the project aims

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<sup>1</sup> Foard, 2004.

<sup>2</sup> Foss, 1998

**to resolve the key issues regarding the location and character of the action at Bosworth and in so doing to set new standards for the investigation of medieval battlefields.**

## **1. Methodology**

The detailed study of the battlefield will integrate the techniques of military history, historical geography and landscape archaeology. Building upon tried and tested techniques it will work at the cutting edge of battlefield studies, drawing lessons from past and ongoing work, particularly in the UK, Europe and the USA.<sup>3</sup> The methodology applied in these studies enables the accurate placing of the events within their contemporary landscape.

### *Military History*

The primary sources for the military history will be re-analysed in the light of current knowledge of military theory and practice of the later 15<sup>th</sup> century, to define the likely scale and form of deployments and key elements of the action with their related topographical clues. It will also examine the military technology of the period with regard particularly to archery and ordnance, both of which may have left a significant archaeological record from the battle. This area of research will be conducted under the direction of Professor Anne Curry, a specialist in 15<sup>th</sup> century military history, and undertaken by Mark Page.

### *Historic Terrain*

The historic terrain of the five townships which impinge upon the battlefield (Shenton, Sutton Cheney, Dadlington, Stoke Golding and Upton) will be comprehensively reconstructed, following established techniques of battlefield terrain study. This will be undertaken by David Hall and Tracey Partida, applying the methodology for the integration of archaeological and historic map data developed for a major new AHRC funded research programme in digital historic landscape mapping at the University of East Anglia. This mapping of the open and enclosed field systems, road network and other features, will be complemented by detailed investigation of written documentary sources, undertaken by Mark Page, drawing upon the expertise gained in the major project recently completed on the landscape of Whittlewood Forest.

The terrain investigation will be complemented by soils mapping, by the National Soils Resources Institute, and detailed palaeo-environmental work, by Dr Andy Howard, in order to reconstruct, as far as practicable, the landscape as it was at the time of the battle. The key initial information on soils and work on the field systems will be undertaken at the outset to ensure that all potential locations for the marsh, which is the key element in the location of the battle, are identified in the first stage of work. These locations will then be tested with the palaeo-environmental pilot work to confirm that they could have been marshland in 1485. Once these are securely established then the comprehensive survey of the historic terrain can be completed with certainty that the correct areas are being investigated. This will include a programme of more detailed palaeo-environmental investigation, by Andy Howard, of the early character and date of drainage of the marsh areas, critical to understanding the exact location of the battle action and the tactics employed, the exact work programme being determined on the results of the pilot work.

Fieldwalking survey will also be undertaken, by a team of volunteers, to complement the other survey and documentary research in determining the likely land use pattern in the later 15<sup>th</sup> century on the battlefield and in its environs. In early summer 2006, once the key archaeological and documentary terrain data is in, there will be a rapid hedgerows assessment by Dr Janet Jackson, to determine if a detailed survey is appropriate, and if it is then we hope to carry out such a study with the assistance of volunteers.

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<sup>3</sup> Foard, 1995; Sutherland and Schmidt, 2003.

### ***Integration***

Using the topographical evidence contained within the accounts of the military action, enhanced, where necessary by the principle of Inherent Historic Military Probability, the initial deployments of the armies together with the subsequent action will be placed within this reconstruction of the historic terrain of 1485, using principles of analysis first developed in the study of 17<sup>th</sup> century battlefields. This will be complemented by computer modelling and viewshed analysis undertaken by Michael Athanson, drawing upon his ongoing research at the University of Oxford into computer based investigation of trajectories of ordnance and firearms within a battlefield context.

### ***Battle Archaeology***

The resulting hypotheses will be tested with the evidence of battle archaeology. The investigation of the physical evidence left in the ground by the battle will comprise a systematic, accurately recorded metal detecting survey to recover a representative sample of the artefacts deposited on the field during the action. Work at Towton in particular has demonstrated the potential to recover metal artefacts of 15<sup>th</sup> century date related to major battles, and work at Bosworth has already shown that artefacts of the period do survive at various locations across the Registered battlefield.

This investigation will begin with a reassessment of the results so far achieved on this by LCC, particularly from the 2004-5 season. There will then be a systematic large scale metal detecting survey, undertaken by a team of volunteers and led by Glenn Foard and Richard Mackinder, of the probable battlefield site and sample areas on the alternative sites. Decisions as to the exact areas to be surveyed will be informed by the developing results of the terrain study. This testing of the alternative sites will provide important comparative evidence to the currently preferred location, as the genuine battle site should show a quite different archaeological signature to all other locations, but comparative data from such other locations will be essential to enable that distinctiveness to be recognised. The methodology applied in the metal detecting survey will be based around that developed and implemented by the Trust for the ongoing Edgehill Battlefield Survey, enhanced through input by Sutherland and Richardson based on their experience in the Towton Battlefield Survey.

Fieldwalking survey will also be undertaken in sample areas within each zone of metal detecting survey, to provide critical supporting evidence of pottery scatters. The fieldwalking will provide independent evidence on the intensity of manuring scatters, which should assist in establishing where the scatters of metal artefacts is likely to be the result of manuring activities rather than battle action and, conversely, where the metal artefact distribution significantly diverges from the norm, as would be expected in the heart of the battle action. The methodology applied in the fieldwalking survey will be based on the existing Leicestershire fieldwalking methodology, but with recording implemented in a digital environment.

There is a wide range of research questions which surround the survival of battle related artefacts on medieval battlefields, many of which relate to the processes of decay of metal artefacts in the ground. These factors will have resulted in many artefacts but particularly ferrous items, which include the all important arrowheads, having been decayed and lost. These issues of taphonomy relate closely to factors such as soil pH and past land use history and are to be explored by Dr Rob Janaway. It is essential that these factors are explored in detail to enable the presence or absence of particular artefacts to be understood.

Finds will be processed by the volunteers in accordance with the guidelines of the Portable Antiquities Scheme (PAS). All data will be collected, stored and analysed in digital form using the MapInfo format developed for the Edgehill Survey, complemented by the PAS database. Initial identification will be undertaken by the Wendy Scott, Finds Liaison Officer for Leicestershire, and

Richard Knox. Artefacts likely to be battle related will then be referred to the Royal Armouries for specialist examination and, where appropriate, reporting. All artefacts will be assessed for conservation requirements by Wendy and Richard and, after validation by the Armouries of the identification where appropriate, those metal finds likely to be related to the battle and other highly significant artefacts needing attention will be given remedial conservation treatment.

### ***Geophysics and trenching***

There will be a progressive focussing down of attention as the survey and analysis proceeds, to enable, in the later stages of the project, the specific testing of key locations using geophysical survey, possibly phosphate analysis and then trial trenching. The latter techniques will be used firstly to test and confirm any key features of the historic terrain identified by the terrain survey, such as the Roman road, which is likely to have been a key feature of the landscape and may help pinpoint the location of Sandyford. Trenching will also be undertaken to investigate the state of preservation of battle archaeology where, hopefully, the metal detecting and terrain research reveals a significant battle archaeology scatter, especially if anywhere this extends to and stops at the edge of an alluviated, former marsh area, which might mean there is a buried battlefield surface. Geophysics and trenching will also be used to test possible locations for mass graves suggested by the other research, though this will always be a highly difficult exercise as research on other battlefields has demonstrated.

### ***Reporting, Consultation & Archiving***

Seminars will be held in collaboration with the Institute of Medieval Studies, University of Leeds at the end of each fieldwork season and interim reports published at the end of years 1 and 2 following the seminars. In the final phase of the project all the data will be reviewed by the Project Officer in the light of battlefield study elsewhere in the UK and a detailed interpretation of the battle and battlefield prepared. The results of the research will be presented in a detailed project report, edited by the Project Officer, combining reports from each of the specialists working on particular aspects of the project. The full report will be published on the web, and from this an overview paper or papers will be prepared for publication in a national or international journal. It is also anticipated that particular elements of the research will also be published in individual papers in academic journals by various of the participants.

The results will also be provided progressively in a form to enable the effective interpretation of the research, as well as the battle and battlefield, to the public. Most data will be collected in digital form and this data will be securely managed, with metadata prepared as the project progresses. The data will then be copied to the SMR as well as the Battlefield Visitor Centre and securely archived with the Archaeology Data Service at the end of the project.

## 2. Indicative Time Plan

	2005		2006				2007				2008	
	Aug-Sept	Oct-Dec	Jan-Mar	Apr-June	July-Sept	Oct-Dec	Jan-Mar	Apr-June	July-Sept	Oct-Dec	Jan-Mar	Apr-July
<b>MILITARY HISTORY</b>												
<i>Curry</i>												
<i>Page</i>		PILOT										
<b>HISTORIC TERRAIN</b>												
<i>Hall &amp; Partida</i>												
<i>Page</i>	PILOT											
<i>Foss</i>												
<b>Palaeo-environmental</b>	PILOT											
<b>Soils</b>												
<i>Hedgerow assessment</i>												
<b>ARTEFACT SURVEY</b>												
<b>Metal Detecting</b>												
<i>detectorist training</i>												
<i>Survey</i>	PILOT											
<b>Fieldwalking</b>		PILOT										
<b>Taphonomy</b>		PILOT										
<b>GEOPHYS / TRIALING</b>												
<i>geophysics</i>												
<i>trial trenching</i>												
<b>MANAGEMENT</b>												
<i>major reviews</i>			REVIEW					REVIEW				
<i>seminars</i>	team			external				external				external
<b>ANALYSIS / REPORTING</b>												
<i>Interim / final reports</i>												
<i>viewshed analysis</i>												
<b>ARCHIVING</b>												
<i>digital archiving</i>												
<i>finds archiving</i>												

### **3. Project team**

#### ***Glenn Foard FSA MIFA: Project leader***

Project Officer of the Battlefields Trust. A specialist in battlefield studies with a background in landscape archaeology and the application of information technology to the mapping and interpretation of the historic environment. From the early 1990s his research has concentrated particularly upon the history and archaeology of military action. He is currently leading the Trust's two major battlefield surveys: at Edgehill and Bosworth. He is also working for the University of Leeds on an English Heritage funded Resource Assessment of English battlefields, which builds upon and develops a methodology established in a Resource Assessment of Scottish battlefields undertaken for Historic Scotland.

#### ***David Hall FSA MIFA: Open Fields survey***

A consultant and national expert on the integrated documentary and archaeological study of the open field landscapes of England. He has lectured and published extensively on the medieval and post medieval landscape, particularly of Northamptonshire, and is currently completing a national overview of open field systems of England. He is Honorary Research Fellow at the University of Exeter, and a specialist to the University of East Anglia's AHRC project on the mapping and analysis of the medieval and post medieval landscape of Northamptonshire.

#### ***Tracey Partida MA: Historic map analysis / all digital mapping***

T Partida (formerly Britnell) is a consultant with extensive experience in digital mapping of the historic landscapes from historic map and archaeological evidence. She has worked on the mapping of both historic landscapes of Northamptonshire and on terrain analysis of battlefields in England and Scotland, including detailed terrain reconstruction for the Edgehill Survey. She is currently working for the Battlefields Trust on the Scottish Battlefields Assessment and from September 2005 will be Research Assistant at the University of East Anglia on the AHRC project mapping and analysing the medieval and post medieval landscape of Northamptonshire.

#### ***Professor Anne Curry: Specialist advisor on military history of the 15<sup>th</sup> century***

Professor of Medieval History, University of Southampton. A specialist in medieval history and warfare, and in teaching and learning in Higher Education. Her principal area of research is the Hundred Years War. She has also carried out much original work in the archives relating to the English army which conquered and occupied Normandy in the early fifteenth century. She has written extensively on warfare in the 15<sup>th</sup> century and especially the battle of Agincourt.

#### ***Dr Mark Page: documentary researcher on landscape and military history***

Former Research Fellow at the Universities of Durham and then Leicester, now Assistant Editor (part time) of the Victoria County History of Oxfordshire. Mark is a specialist in documentary research. His research has concentrated primarily on aspects of the social, economic and landscape history of medieval England, but extending into aspects of military history, as in his work on Cornwall in the 15<sup>th</sup> century. He was the documentary researcher in the Dept of Local History, University of Leicester, working on the Whittlewood Project.

#### ***Dr Rob Janaway: taphonomy of battlefield artefacts***

Lecturer in Archaeological Sciences at the University of Bradford. He has worked on a wide range of archaeological projects both in the field and the laboratory and has a special interest in textiles, taphonomy, archaeological materials degradation and marine finds.

***Peter Foss: Advisor on documentary research***

Peter Foss is a highly experienced and well respected local historian who has extensively researched and published on the history of the Bosworth area and most notably on the battle and battlefield of Bosworth.

***Tim Sutherland PIFA: battlefield archaeologist specializing in geophysics/excavation***

Tim Sutherland has specialised in battlefield studies. He instigated and managed 'The Towton Battlefield Archaeological Survey Project' since 1997 in connection with his PhD research. This was the first successful multidisciplinary approach to the task of systematically accumulating archaeological evidence in Britain for a medieval battle. He has specialist expertise in geophysical survey and is the only person to have successfully designed and implemented a programme of prospection for battlefield mass graves in the UK using geophysics and follow up trial excavation.

***Simon Richardson: metal detecting specialist in medieval battle archaeology***

Simon Richardson is a highly skilled metal detectorist who has used his skills in archaeological survey on battlefields since the late 1990s, most notably at Towton but also on other sites such as Agincourt. He has achieved remarkable results in the recovery of the full range of battle related artefacts, most notably at Towton. Here his work has broken new ground in demonstrating how to recover substantial numbers of iron arrowheads from a battlefield.

***Dr Andy Howard: palaeo-environmental archaeology***

Lecturer in Archaeo-Geomorphology and Remote Sensing, Institute of Archaeology and Antiquity, University of Birmingham. His research interests include the location, preservation, prospection and interpretation of archaeological resources in Holocene temperate alluvial landscapes; the application of remote-sensing techniques to geoarchaeological prospection and cultural resource management; deciphering climatic and cultural signals of environmental change in temperate and semi-arid alluvial basins; and Pleistocene landscape development of midland and northern Britain and the environmental and cultural setting of Palaeolithic communities.

***National Soil Resources Institute: Soils Mapping***

NSRI at the University of Cranfield, holds the national soils information for England and Wales and has the most comprehensive range of expertise on the mapping of soils in England.

<http://www.silsoe.cranfield.ac.uk/nsri/>

***Mike Athanson: 3 D mapping/viewshed analysis***

His current research at the University of Oxford centres around studies of bullet trajectories on historic battlefields, using exterior ballistics to calculate bullet path over the terrain and viewshed analysis to determine the visibility of possible target locations.

***Royal Armouries***

Specialist military finds expertise is being provided by the Royal Armouries, under the supervision of Graeme Rimer, Academic Director. The Battlefields Trust has developed a close working relationship with the Armouries through the Edgehill Survey, and in collaboration with English Heritage and Leeds University in the planning of the Fourth International Fields of Conflict Conference at Leeds in September 2006.

### *Volunteers*

Volunteer help will form a key part of the project, particularly with regard to fieldwalking and metal detecting.

## **Consultation and Monitoring**

The Bosworth archaeology project management team will review progress at key stages during the project, particularly where decisions need to be taken based on the results of pilot work, and at the end of each field work season. These meetings will be critical because, while the terrain and military history research is working within well established areas of research where methodology and tasks can in most cases be closely defined, the battle archaeology investigation is pushing the boundaries of existing knowledge. It is therefore likely that significant modifications to the programme will prove necessary during the life of the project.

The decisions of the management team will be informed by discussion in a series of seminars, by invitation, to involve a range of specialists from within and, where appropriate, outside the project to review methodology, results and strategy for the project. The seminars will be held at the end of each season's fieldwork to review progress and develop initial ideas on interpretation, with the final seminar feeding into the final phase of analysis and reporting.

At the outset there will be information provided to and where appropriate consultation with a wide range of local interest groups and key individuals who have undertaken work on the Bosworth problem. Through this we will seek to ensure both that all important and relevant knowledge is taken account of, and that no party with a significant contribution to make is missed out of the consultation process. A regular series of reports will also be issued on progress in the project to interested parties both locally and nationally. Detailed reporting of progress on the project will be delivered through the Trust's UK Battlefields Resource Centre at:

<http://www.battlefieldstrust.com/resource-centre/warsoftheroses/battlepageview.asp?pageid=824>

## **BIBLIOGRAPHY**

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