

Rebellion and Warfare in the Tudor
State: Military Organisation,
Weaponry, and Field Tactics in Mid-
Sixteenth Century England

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The candidate confirms that the work submitted is his own and that appropriate credit has been given where reference has been made to the work of others

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Abstract

This thesis investigates the battles associated with rebellion in the Tudor state between 1549 and 1554, considering these actions as case studies for English warfare, rather than as internal policing operations. Evaluating such engagements in this fashion broadens the currently limited sample of battles fought in the sixteenth-century British Isles and provides an opportunity to assess the organisation, weaponry, and tactics of Tudor armies in the field. The thesis also makes use of methodologies of terrain reconstruction to ascertain the historic landscape in which these encounters occurred, building up a picture of their battlefield environment from cartographic and narrative source material. These reconstructions are then used to undertake detailed analysis of individual battles, beyond that which can be attempted using purely written accounts, discerning how opposing forces deployed and manoeuvred within the terrain.

The first half of the thesis explores England's available military resources, in terms of personnel and armaments, and establishes the way in which these assets were typically employed in battle. This forms a vital precursor to the case studies of subsequent chapters, illustrating the sources of recruitment upon which both loyalist and rebel forces could draw, as well as defining how English armies were equipped, and how they fought. The case studies themselves comprise the latter half of the thesis, with conclusions regarding the composition, requirements, and battlefield performance of Tudor armies being extrapolated from the outbreak and suppression of uprisings in Devon and Cornwall, Norfolk, and Kent. In each of these instances, insurgents conducted military campaigns that culminated in battles with government forces, furnishing a rich seam of information that can complement and enhance the study of warfare in this period.

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Introduction

The late-fifteenth to mid-sixteenth centuries represented an important transitional stage in the developing nature of European conflict, with military organisation, weaponry, and tactics undergoing dramatic modifications that, it has been argued, amounted to a revolution in the theory and practice of warfare.¹ The implementation of these changes can be discerned by analysis of the period's battles, which demonstrate the ways in which new technologies and methodologies were applied in the field. For mainland European powers, which fought a succession of engagements during long-running conflicts like the Italian Wars (1494-1559), information is plentiful, supporting the assertion that these events provided both a catalyst and testing ground for many military reforms.² Tudor England, however, participated in far fewer battles throughout this period, with the country's major actions at Flodden (1513) and Pinkie (1547) occurring against a backdrop of intermittent raiding on the Anglo-Scottish Border and sporadic conflict with France. On the Borders, low-level warfare occasionally gave way to larger encounters, including Haddon Rig and Solway Moss (1542), and Ancrum Moor (1545), while invasions of French territory (1513, 1522/3, and 1544/5) resulted in a single skirmish, the grandly named Battle of the Spurs (1513), amidst sieges at Thérouanne, Tournai, and Boulogne. As Figure 1 depicts, the small number of battles fought within the British Isles during the reigns of Henry VIII (1509-1547), Edward VI (1547-1553), and Mary (1553-1558), contrasts with the preceding Wars of the Roses (1453-1487), and with Elizabeth's subsequent conquest of Ireland (1565-1601), showing the limited evidence available for mid-Tudor field warfare.

¹ Geoffrey Parker, *The Military Revolution, Military Innovation and the Rise of the West: 1500-1800* (Cambridge: Cambridge University Press, 1988).

² Michael Mallett, 'The Transformation of War, 1494-1530', in *Italy and the European Powers: The Impact of War, 1500-1530*, ed. by Christine Shaw (Leiden: Brill, 2006), pp.3-22 (pp.4-12).

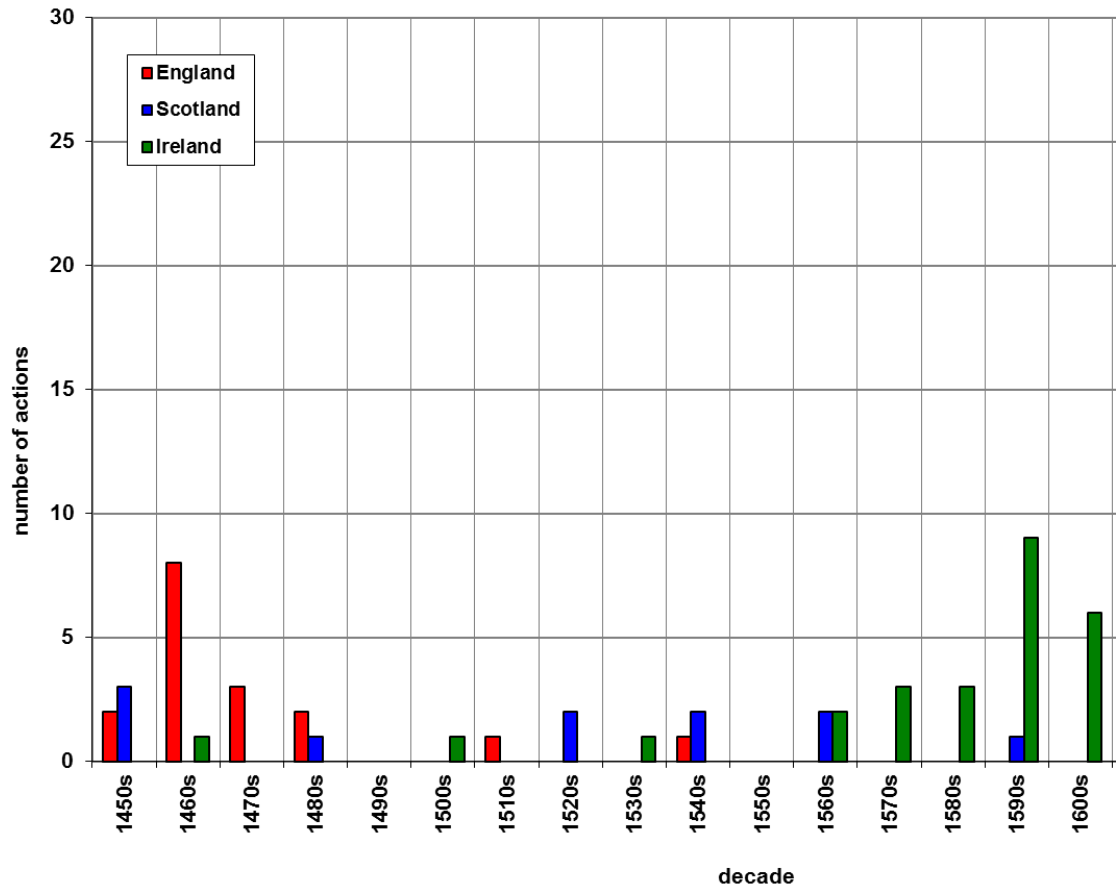


Fig.1. Graph showing battles fought in England, Scotland, and Ireland between 1450 and 1600. Note the dip in the early-to-mid sixteenth century. After Glenn Foard and Richard Morris, *The Archaeology of English Battlefields: Conflict in the Pre-Industrial Landscape* (York: Council for British Archaeology, 2012), p.98.

This situation is problematic given the continued debate concerning England's adherence to the changing template of continental warfare, with scholars variously claiming that the Tudor state lagged behind European innovations, attained similar capabilities at the same time, or experienced these transitions at a later date.³ While a partial answer to these questions can be found in the defence and assailing of fortified sites, which demonstrate England's increasing adoption of modern military practices, these instances are not transferable to battles, where weapons and tactics had different requirements. Similarly, skirmishes and raids, which can be defined as actions involving fewer than 1000 combatants per side or which were conducted in dispersed formations rather than in battle array, likewise have limited applicability for assessing how armies performed in larger, more structured engagements.⁴ Thus, in the absence of

³ Charles Oman, *A History of the Art of War in the Sixteenth Century* (London: Methuen, 1937), p.368; James Raymond, *Henry VIII's Military Revolution, The Armies of Sixteenth Century Britain and Europe* (London: Tauris Academic Studies, 2007), pp.116-85; David Eltis, *The Military Revolution in Sixteenth-Century Europe* (London: Tauris Academic Studies, 1995), pp.103-22. See Chapter 1 for more discussion of these arguments.

⁴ Foard and Morris, p.6.

sufficient proof, historians risk inferring too much regarding the practical implementation of England's military capabilities from a limited selection of examples. What is needed, then, is a means of broadening the range of actions under consideration beyond large-scale, international warfare, such as Henry's French campaigns, the Anglo-Scots Wars, and the major engagements of Flodden and Pinkie, to incorporate lesser battles involving Tudor armies within a domestic context.

England's spate of high-profile revolts, occurring as a consequence of religious reform, socio-economic pressures, and dynastic uncertainty, represent just such a resource, encompassing the 1536/7 Pilgrimage of Grace, the 1549 uprisings in Norfolk and the Western counties, Wyatt's Rebellion of 1554, and the 1569/70 Northern Rising. In each case, insurgents assembled armies capable of meeting government forces in the field, enabling a distinction to be drawn between militarily dangerous rebellions and other forms of civil unrest, such as the 'lesser stirs' of 1549.⁵ Actions between rebel and loyalist armies can supplement England's limited number of international battles and, because insurgencies effectively turned portions of the state's resources against itself, provide valuable opportunities to assess the typicality of the personnel, armaments, and tactics employed at these larger confrontations. Such instances, while not undocumented by historians, have yet to be considered as potential case studies of mid-sixteenth-century field warfare, a vacancy that my thesis will address. Although the study of rebellions represents only one possible avenue of research, it highlights the ways in which other small battles, for instance on the Scottish border or in Ireland, might be similarly responsive to investigation, offering an alternative framework of evidence distinct from that of large-scale international conflict.

Despite the scope of the aforementioned disturbances, they did not all result in battlefield encounters, with several potential confrontations, notably between the Pilgrimage of Grace and a vastly outnumbered government army at Doncaster (1536), being averted through negotiation.⁶ Although these events can still prove useful, for example by providing information about how rebel armies were recruited and organised, they are of secondary importance to occasions on which opposing forces engaged in battle. In short, any study of the battlefield implications of rebellions must be governed by the occurrence of battles themselves. Applying this criterion to the period's main episodes of revolt narrows the thesis' chronological extent to between 1549 and 1554, and the risings in Devon, Norfolk, and Kent. In the first instances, the

⁵ Amanda Clair Jones, 'Commotion Time': The English Risings of 1549' (unpublished doctoral thesis, University of Warwick, 2003), pp.1-6. Jones noted that the revolts in Norfolk, Devon, and Cornwall tend to dominate discussion of the 1549 uprisings, which encompassed widespread disturbances across the country, the majority of which were ended through non-violent means.

⁶ Scott Michael Harrison, *The Pilgrimage of Grace in the Lake Counties, 1536-7* (London: Royal Historical Society, 1981), pp.113-14.

government of Edward VI suppressed the Western and East Anglian rebellions by deploying thousands of soldiers, including foreign mercenaries originally intended for service in Scotland, in a pair of month-long military campaigns. These forces encountered strong resistance from numerous, well-armed, and organised insurgents, with the conflict in Devon encompassing battles at Fenny Bridges, Woodbury, Clyst St Mary, Clyst Heath, and Sampford Courtenay, while the Norfolk rebels stormed Norwich and routed a loyalist relief force prior to their eventual defeat at Dussindale. Such was the ferocity of the struggle that, between the two regions, over 10,000 people may have died in the fighting and subsequent reprisals, a figure with demographic implications that have been likened to a First World War battle.⁷

In the later Wyatt Rebellion, insurgents mounted an audacious advance on London, after skirmishes in Kent at Wrotham and Rochester, culminating in an encounter with Queen Mary's forces outside Westminster, which, while notably less sanguinary than the clashes in Devon and Norfolk, saw both sides assembled in battle array. Although relatively little fighting occurred, this incident clearly demonstrates the composition and tactical deployment of mid-sixteenth-century English armies in the same manner that the Elizabethan musters at Tilbury (1588) depicted later practices in the absence of a battle.⁸ The Pilgrimage of Grace, by contrast, encompassed several small sieges and skirmishes, but, as previously noted, concluded without a major field engagement and remained relatively bloodless until the government's subsequent reprisals following the failed attack on Carlisle (1537). This lack of battles disqualifies the Pilgrimage from consideration as a case study, although its unprecedentedly large armies provide examples of the composition and assembly of rebel forces that can inform discussion of later uprisings. Figure 2 plots the location of England's mid-sixteenth-century rebellions, and their associated actions, in relation to the country's contemporary international battlefields.

⁷ Richard Brooks, *Cassell's Battlefields of Britain and Ireland* (London: Weidenfeld & Nicolson, 2005), p.306; Roger Manning, 'The Rebellions of 1549 in England', *Sixteenth Century Journal*, 10 (1979), 93-9 (p.98).

⁸ Jonathan Davies, *The Tudor Art of War 1485-1603* (Bristol: Stuart Press, 2001), p.54. A similar example can be found in the confrontation between royalist and parliamentary forces at Turnham Green (1642), which, while the expected battle failed to occur, reveals the tactical deployment of armies during the Civil Wars (Brooks, *Battlefields*, pp.379-80).

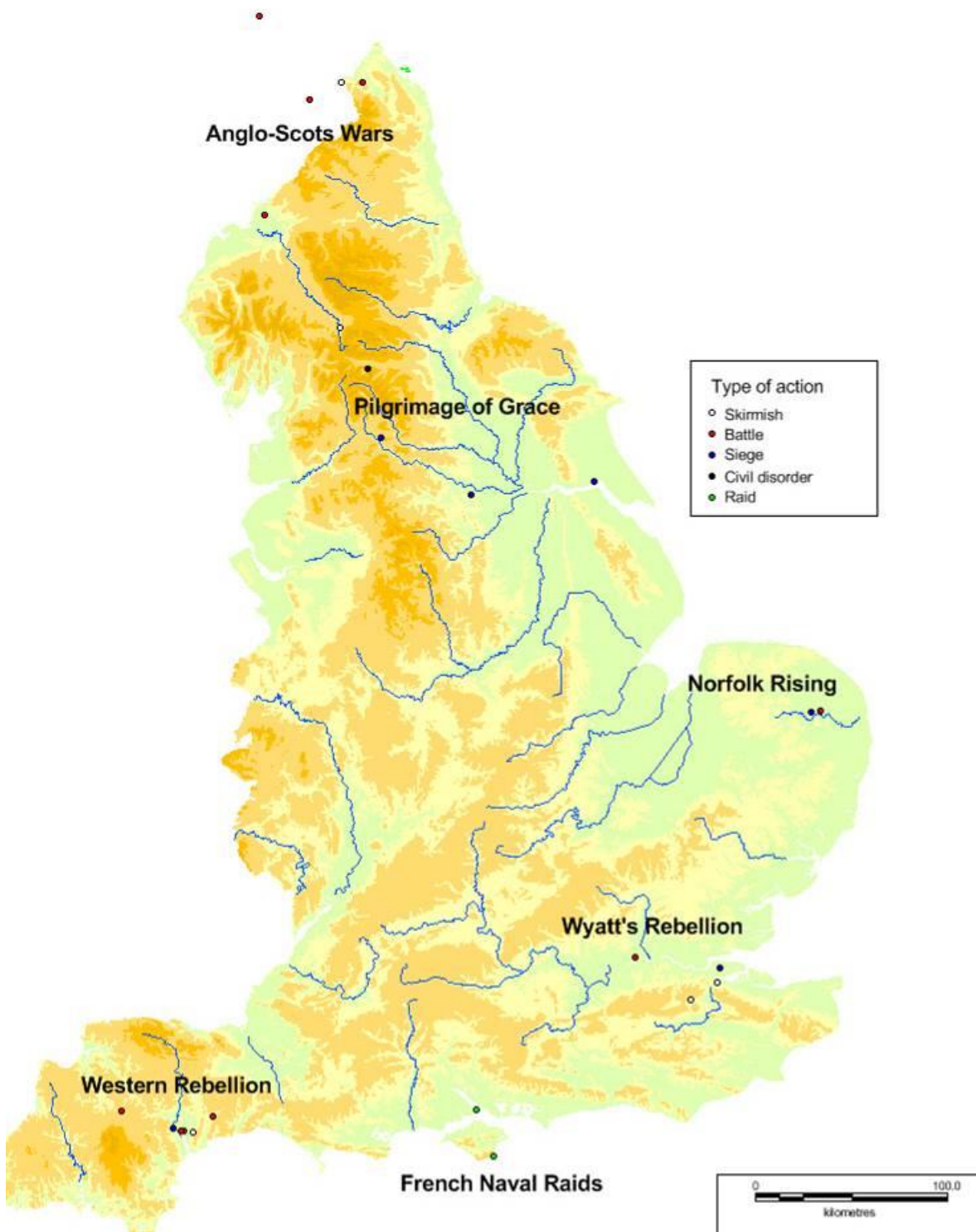


Fig.2. Military actions in Tudor England (1513-1554). Note the concentration of the country's few international conflicts along the Anglo-Scottish Border and southern coastline, contrasted with actions connected with rebellions, which are spread more evenly throughout the country.

The Northern Rising (1569/70), which marked the last major English rebellion prior to the Civil Wars of the 1640s, has been deliberately omitted from this study for several reasons. Firstly, much like the Pilgrimage of Grace, conflict during the uprising was confined to sieges and

limited skirmishes, with the insurgents' eventual decision to disband the majority of their 7000 to 8000 soldiers precluding a field engagement.⁹ Secondly, and perhaps more crucially, its occurrence in the latter part of the sixteenth century presents few grounds for comparison with earlier rebellions, which took place in different political and military contexts. Including this event would not only entail discussion of Elizabethan reforms in army administration and military technology, an unnecessary diversion for a conflict that produced no significant actions, but would also complicate conclusions drawn from earlier engagements. While the battles associated with the 1549 and 1554 rebellions were contemporaneous with England's mid-century international actions at Solway Moss, Ancrum Moor, and Pinkie, and look back toward the earlier battle of Flodden, the Northern Rising belongs to another era and would require investigation of a significantly broader set of case studies.

Having defined the boundaries and principal objective of this thesis, to investigate battles associated with uprisings between 1549 and 1554, and, in doing so, to increase the coverage of what is currently a very limited set of data regarding England's mid-sixteenth-century field warfare, the studies' subsidiary research questions must also be delineated. The central assertion that the battles of rebellions have sufficient resonance with Tudor warfare to facilitate their use as case studies must be supported by consideration of the broader framework surrounding English and European conflict. Only by assessing how the Tudor state's armies were assembled, organised, and employed in battle, in comparison with their continental equivalents, will it be possible to test how far insurgents created similar forces and fought in the same manner. Thus, the first issue to examine is how English armies were comprised, what personnel they contained, and whether rebels had access to these sources of recruitment and infrastructure.

A second area of enquiry involves Tudor military technology, which blended England's traditional weapons of longbows and bills with the products of warfare in mainland Europe, like pikes, firearms, and improved artillery. This limited conversion to the continental model has frequently been cited as evidence that England failed to fully engage with developments in warfare, and instead retained inferior weapons as a result of conservatism and ignorance.¹⁰ While the coexistence of old and new armaments is already conclusively proven, the rationale governing their simultaneous use is obscure and disputed. Did Tudor armies continue to employ bows and bills because of a shortage of superior armaments, or was their retention of these weapons a deliberate attempt to combine traditional and modern technologies for mutual benefit? Equally, the shortage of battles occurring between English and European armies limits the conclusions which can be drawn regarding either the relative performance of their commonly used weapons, or the effectiveness of the Tudor system of mixed armaments

⁹ Mark Charles Fissel, *English Warfare: 1511-1642* (London: Routledge, 2001), pp.125-33.

¹⁰ Oman, *Art of War*, pp.285-6.

versus the more homogenous equipment of continental powers. Only at Flodden were pikes and bills directly opposed, while Ancrum Moor saw the deployment of English archers alongside arquebusiers, and Pinkie united all four weapon systems within a single Tudor army. Both sets of issues can be further explored by analysing the battles of rebellions, which provide examples of these armaments used together and on opposing sides, showing how they were employed by English forces, and how the different weapons compared when pitted against each other. Although such encounters commonly involved rebel soldiers armed with bills and bows versus loyalists using mixed weapons, there were exceptions, namely the battle of Dussindale, wherein government forces exclusively employed modern armaments, providing a direct comparison between traditional and newer forms of military technology.

The final series of contextual questions focus on the battlefield formations and tactics utilised by Tudor armies in combat, and seek to ascertain the way in which English forces typically deployed and fought. As part of this investigation, England's instructional military literature must be evaluated to discern the extent to which the country followed or diverged from European precedents, and whether or not the Tudor state's unique battlefield operating procedures amounted to an independent doctrine. Such precedents included the ratio of differently armed troops within an army, whether of footmen to horsemen, or soldiers with melee weapons to those with missile weapons, the common tactical formations used to array formations of infantry and cavalry, and the use of these forces during action. While the period's instructional manuals and tactical treatises provide a wealth of theoretical information, its implementation must be tested with reference to actual battles, determining how far military literature informed the practice of warfare. This process can verify the composition of forces in the field, revealing any discrepancies between the resources supposedly possessed by the state and those which were employed in battle, and so is particularly important given England's blending of modern weapons with its traditional arms. By answering these questions, the thesis will establish an overview of Tudor England's military resources, and the way these assets were typically employed in battle, providing a template against which rebel armies can be measured to determine their degree of similarity with forces raised for international warfare.

Assuming that rebel armies broadly adhered to the typical features of Tudor forces, employing similar personnel, weapons, and tactics, the battles in which they participated provide an arena in which these resources can be assessed. However, detailed, tactical-level scrutiny of individual actions, a central aspect of this thesis, also necessitates that greater attention be paid to the environment in which these battles occurred, as the deployment and manoeuvre of armies often depended upon an area's topography. This requirement can be met through employing terrain reconstruction techniques to portray the battlefield at the time of an engagement in digital map form, using Geographical Information Systems (GIS). Such an approach not only enables in-depth assessment of the historic site, but also establishes its

location within the modern landscape, offering opportunities for future archaeological investigation of an underrepresented period of English warfare.¹¹ The implementation of this methodology requires the survival of suitable source material, and forms a final, crucial, research question: to what extent can the battlefields of rebellion be reconstructed from the available evidence?

These research questions will inform the structure of the thesis, with Chapter 1 providing a review of relevant scholarship, thereby situating the study within its critical framework, before assessing primary source material used throughout the project, and discussing the methodology of terrain reconstruction. The second chapter will focus on Tudor military institutions and personnel, defining the administrative infrastructure from which rebel and loyalist armies were assembled, and assessing soldiers' individual and collective levels of training and equipment. Chapter 3 will investigate the period's common weaponry in greater detail, discerning its relative advantages and deficiencies, and examining its performance in action. This overview of military context will be completed in the fourth chapter, which will discuss the organisation of soldiers into fighting units, the arrangement of these units on the battlefield, and the tactical role they performed during engagements. In doing so, the chapter will elucidate the key differences and similarities between English and European armies, and will also suggest to what degree rebel forces operated within this framework. Having presented this model of early-to-mid-sixteenth-century field warfare, the remaining chapters will comprise an investigation of several case studies, drawn from the previously outlined rebellions, to determine the extent to which this template was followed in practice. Chapter 5 will encompass an overview of the Western Rebellion, providing a campaign history and noting the reconstructive potential of its component actions, while Chapter 6 will address the Norfolk Rising, focusing upon the battle of Dussindale. The final chapters will consider Wyatt's Rebellion, with Chapter 7 detailing the composition of the unusually well-documented insurgent forces, and Chapter 8 analysing the battle of London. The conclusion will then revisit the research questions and discuss the implications of battles associated with the 1549 and 1554 rebellions for mid-sixteenth-century Tudor field warfare.

¹¹ Foard and Morris, pp.102-4.

Chapter 1: Sources and Methodology

Studying the battles of rebellions as examples of Tudor field warfare necessitates engagement with several distinct types of source material to furnish information on individual actions and to explore the broader issues of England's military context. This chapter will outline the key primary texts referred to throughout the thesis, dividing these into three categories of narrative accounts, administrative documents, and military manuals. Assessing the available evidence in this manner will avoid repetition in subsequent chapters, and will enable later case studies to proceed unhindered by tangential discussion of their primary material. Sources for the historic landscape, including maps, plans, and written documents, are exclusive to particular battlefields, however, and so will be considered separately in each instance, utilising the methodology of terrain reconstruction outlined at the end of this chapter. Prior to undertaking the aforementioned analysis of primary material, this chapter will review the relevant scholarship surrounding the Military Revolution, Tudor warfare, and England's sixteenth-century uprisings, before progressing to the study of battlefields, as a means of situating the thesis within its historiographical context.

Research on Warfare and Rebellions

English and European Military Context

Attempts to assess sixteenth-century warfare, both in Europe and England, are significantly complicated by the Military Revolution debate, which arose as a result of theories articulated by Michael Roberts in 1955 and subsequently modified by Geoffrey Parker in 1976. According to these interpretations, military tactics, technology, and infrastructure underwent substantial changes during the sixteenth and seventeenth centuries, which marked a decisive break with previous practices of medieval warfare. For instance, Roberts suggested that soldiers in the Early Modern period were less individually skilled than their medieval predecessors, but were raised in greater numbers, fought in larger formations, and made more extensive use of firepower, according to the tactical system known as pike and shot.¹² Similarly, Parker credited the advent of gunpowder weapons, particularly artillery, with driving this process by rendering castles temporarily obsolete, forcing a greater reliance on field engagements until the emergence

¹² Michael Roberts, 'The Military Revolution, 1560-1660', in *The Military Revolution Debate: Readings on the Military Transformation of Early Modern Europe*, ed. by Clifford Rogers (Boulder: Westview, 1995), pp. 13-36 (first publ. in *Essays in Swedish History* (1967), revised from inaugural lecture at The Queen's University of Belfast, 21 January, 1955).

of the *Trace Italienne* method of fortification restored the status quo in the 1530s.¹³ While many of these observations are broadly accurate, with increasing numbers of soldiers mobilised, more battles taking place, and new armaments being developed, the period of this transition, which Roberts originally situated between 1560 and 1660 has attracted both criticism and attempted revision. Further to Parker's relatively minor, though crucial, amendment of the Revolution's starting date, historians, including Clifford Rogers and Jeremy Black, have sought to redefine the term to cover a period of almost 500 years, between the 1300s and 1800s.¹⁴ According to Rogers, major advances in warfare, such as the changing capabilities of infantry, refinements in gunpowder manufacture, and improvements in fortification, occurred in short bursts of activity separated by longer periods of stasis, a process he termed 'punctuated equilibrium'.¹⁵ However, as John Childs has observed, such a lengthy process of conversion can hardly be termed a 'revolution', and is in fact more symptomatic of evolutionary processes occurring over a protracted period.¹⁶

Regardless of the exact duration and nature of the transition, sixteenth-century warfare existed in a state of flux, with authors such as Stephen Turnbull, Frank Tallett, and David Trim emphasising the exploratory aspects of European military reforms.¹⁷ For instance, while Roberts's theory presupposed that cavalry were all-but displaced from the battlefield by the arrival of infantry wielding firearms and pikes, Gervase Phillips has convincingly shown that horsemen adopted new roles in response to changing tactical situations.¹⁸ Similarly, attitudes to the adoption of gunpowder weapons, seen by many scholars as a catalyst that suddenly changed the face of warfare, have been nuanced by Bert Hall, whose seminal work demonstrated the degree of continuity in the use of old and new armaments, and argued that alterations to tactics and organisation were incremental rather than abrupt.¹⁹ These shifting interpretations of

¹³ Geoffrey Parker, 'The "Military Revolution", 1550-1660 – a Myth?', in *Warfare in Early Modern Europe 1450-1660*, ed. by Paul Hammer (Aldershot: Ashgate, 2007), pp.1-20 (first publ. in *Journal of Modern History*, 48 (1976),195-214).

¹⁴ Jeremy Black, *A Military Revolution? Military Change and European Society: 1550-1800* (London: Humanities Press, 1991).

¹⁵ Clifford J. Rogers, 'The Military Revolutions of the Hundred Years' War', in *Warfare in Early Modern Europe*, ed. by Hammer, pp.21-58 (first publ. in *The Journal of Military History*, 57 (1993), 258-75).

¹⁶ John Childs, *Warfare in the Seventeenth Century* (London: Cassell, 2001), pp.21-2.

¹⁷ Stephen Turnbull, *The Art of Renaissance Warfare: From the Fall of Constantinople to the Thirty Years War* (London: Greenhill Books, 2006); Frank Tallett and David Trim, 'Then Was Then and Now is Now': *An Overview of Change and Continuity in Late-Medieval and Early-Modern Warfare*, in *European Warfare: 1350-1750*, ed. by Frank Tallett and David Trim (Cambridge: Cambridge University Press, 2010), pp.1-26.

¹⁸ Gervase Phillips, 'Of Nimble Service': Technology, Equestrianism and the Cavalry Arm of Early Modern Western European Armies', in *Warfare in Early Modern Europe*, ed. by Hammer, pp.59-80 (first publ. in *War and Society*, 20 (2002), 1-21).

¹⁹ Bert Hall, *Weapons and Warfare in Renaissance Europe* (Baltimore: Johns Hopkins University Press, 1997).

sixteenth-century-European warfare, evolving from teleological assertions of a ‘revolution’ to a more complex model of gradual and inconsistent change, is mirrored by a correspondingly developing outlook upon England’s place within this context.

Early assessments of English warfare in the sixteenth century, by Sir Charles Oman, branded it ‘singularly dull’ and dismissed the country as a military backwater which showed few signs of progress, in contrast to French and Italian experimentation with emergent weapons and tactics.²⁰ John Goring’s study of England’s sources of recruitment implicitly buttressed these conclusions, characterising the Tudor state as depending upon either an atrophied ‘quasi-feudal system’ of lords and retainers, or an anaemic ‘national system’ which had yet to attain its full potential.²¹ While Goring arguably exaggerated the decline of magnate retinues, which continued to play an influential part in the Tudor army, and underrepresented the capabilities of England’s ‘national system’, focusing on the regional militia rather than their urban, garrison, or naval equivalents, his work exerted a considerable influence on subsequent historians. Charles Cruickshank and John Gilbert Miller, for example, utilised Goring’s findings to argue that England remained geographically and culturally isolated from European reforms, and retained its medieval military structures to the point of relying on foreign mercenaries for operations on the continent.²² Similar criticism abounded in studies of the Elizabethan militia, undertaken by Cruickshank and Lindsay Boynton, which observed flaws in both English military technology and administration prior to the creation of the Trained Bands in the 1570s, characterising the Tudor army as ill-trained and poorly equipped.²³

However, later studies by James Raymond, David Grummitt, and Phillips have contested these assertions, suggesting that the Tudor state had access to comparable weaponry and personnel, and that it remained abreast of continental strategy and tactics. In the first case, Raymond argued that Henry VIII was instrumental in modifying existing administrative structures and investing in new technology, while Grummitt emphasised the importance of the Calais garrison as a means of absorbing and disseminating knowledge throughout the English military establishment.²⁴ Phillips, in a perceptive evaluation of the Anglo-Scottish conflicts of the early-to-mid-sixteenth century, concluded that England displayed greater adherence to the hallmarks of Renaissance warfare than its northern neighbour, particularly with regard to its

²⁰ Oman, *Art of War*, p.368.

²¹ John Jeremy Goring, ‘The Military Obligations of the English People, 1511-1558’ (unpublished doctoral thesis, London University, 1955).

²² Charles Cruickshank, *Army Royal: Henry VIII’s Invasion of France, 1513* (Oxford: Clarendon, 1969); John Gilbert Miller, *Tudor Mercenaries and Auxiliaries 1485-1547* (Charlottesville: Virginia University Press, 1980).

²³ Charles Cruickshank, *Elizabeth’s Army* (Oxford: Clarendon, 1966); Lindsay Boynton, *The Elizabethan Militia, 1558-1638* (London: Routledge & Kegan Paul, 1967).

²⁴ Raymond; David Grummitt, *The Calais Garrison: War and Military Service in England, 1436-1558* (Woodbridge: Boydell & Brewer, 2008).

military organisation, hiring of mercenaries, and use of combined-arms tactics in field engagements.²⁵ Furthermore, both Paul Leroy Holmer and Anthony Goodman discerned the roots of the Tudors' modernisation in the latter part of the fifteenth century, with gradual refinements in military administration, infrastructure, and tactics occurring throughout the Wars of the Roses and during Edward IV's 1475 French expedition.²⁶ The influence of England's medieval and post-medieval tactical developments is shown by Niall Barr and David Caldwell's respective assessments of the battles of Flodden and Pinkie, the country's largest sixteenth-century engagements.²⁷ Both works offer revisionist approaches, with Barr partially rehabilitating the English militia from earlier criticisms and Caldwell emphasising the country's increasing adherence to European battlefield doctrine. Many of these findings are mirrored in surveys by Mark Fissel and Jonathan Davies, which provide an overview of England's changing military capabilities throughout the sixteenth century.²⁸

The issue of military technology is also crucial to assessing English parity with European warfare, owing to a long-running historiographical debate regarding the relative merits of the longbow versus its continental counterpart the arquebus.²⁹ Although most of the previously cited scholars of English warfare engage with this question, which is of vital importance during the early-to-mid-century period before the longbow was conclusively eclipsed, works by Matthew Strickland, Robert Hardy, and Sean McLachlan are especially useful. In the first instance, Strickland and Hardy presented a technological history of the longbow from the Middle Ages to its eventual decline during the late-Tudor period, assessing the weapon's capabilities, tactical deployment, and changing battlefield role, while McLachlan performed a similar survey of gunpowder small arms.³⁰ The study of Tudor war material is greatly enhanced by Alexzandra Hildred's analysis of artefacts recovered from the 1545 Mary Rose wreck, which furnished a large, well-documented assemblage of personal weapons and artillery from the mid-sixteenth century.³¹ This is particularly valuable in revealing the extent to

²⁵ Gervase Phillips, *The Anglo-Scots Wars, 1513-1550: A Military History* (Woodbridge: Boydell, 1999).

²⁶ Paul Leroy Holmer, 'Studies in the Military Organization of the Yorkist Kings' (unpublished doctoral thesis, University of Minnesota, 1977); Anthony Goodman, *The Wars of the Roses: Military Activity and English Society, 1452-1497* (London: Routledge & Kegan Paul, 1981).

²⁷ Niall Barr, *Flodden, 1513: The Scottish Invasion of Henry VIII's England* (Stroud: Tempus, 2001); David Caldwell, 'The Battle of Pinkie', in *Scotland and War: AD79-1918*, ed. by Norman Macdougall (Worcester: Billing, 1991), pp.61-94.

²⁸ Fissel; Davies, *Tudor Art of War*.

²⁹ Gervase Phillips, 'Longbow and Hackbutt: Weapons Technology and Technology Transfer in Early Modern England', *Technology and Culture*, 40 (1999), 576-93.

³⁰ Matthew Strickland and Robert Hardy, *The Great Warbow from Hastings to the Mary Rose* (Stroud: Sutton Publishing, 2005); Sean McLachlan, *Medieval Handgonnes: The First Black Powder Infantry Weapons* (Oxford: Osprey, 2010).

³¹ Alexzandra Hildred, *Weapons of Warre: The Armaments of the Mary Rose*, 2 vols (Portsmouth: The Mary Rose Trust, 2011).

which the military technology deployed by English forces corresponded to that described in contemporary tactical manuals and inventories. Additionally, Ann Stirland's work on the remains of English archers found aboard the vessel has demonstrated the wreck's capacity to inform discussion of Tudor military personnel as well as weaponry, giving it a continued relevance throughout early chapters of this thesis.³²

Rebellions

Much of the secondary scholarship concerning rebellions appears in general histories, such as W.K Jordan's study of Edward VI's reign, which relate these occurrences alongside other significant events including the wars with France and Scotland and the mid-century dynastic crisis, often imposing significant constraints upon the space allotted to them.³³ Similarly, while battles associated with insurgencies occasionally appear in surveys of English military history, by Michael Rayner and Richard Brooks for example, the depth of analysis afforded by these works, which collate existing findings rather than engaging in new research, is severely limited.³⁴ Finally, thematic studies of rebellion in Tudor England, exemplified by Diarmaid MacCulloch and Anthony Fletcher's work, approach the topic on a socio-political level and give a perceptive insight into the relationship between popular unrest, government, and society throughout the period, but relegate military issues to a peripheral role.³⁵ Thus, although general and thematic survey works fulfil an important function in defining the scope of the resource, histories of individual rebellions must be considered in the following subsections.

The Pilgrimage of Grace (1536/7)

The first complete history of the Pilgrimage of Grace was produced by Madeleine and Ruth Dodds in 1915, and, despite challenges regarding a perceived lack of objective analysis, still forms the basis of all subsequent discussions of the rebellion.³⁶ Although modern scholars including Geoffrey Moorhouse have sought to provide more accessible narratives of the revolt's key events for a general readership, such works are admittedly indebted to the Dodds and make

³² Ann Stirland, *Raising the Dead: The Skeleton Crew of Henry VIII's Greatship, The Mary Rose* (Chichester: John Wiley, 2000).

³³ W.K. Jordan, *Edward VI: The Young King: The Protectorship of the Duke of Somerset* (Cambridge, MA: Harvard University Press, 1968).

³⁴ Michael Rayner, *English Battlefields: An Illustrated Encyclopaedia* (Stroud: Tempus, 2004); Brooks, pp.305-15.

³⁵ Anthony Fletcher and Diarmaid MacCulloch, *Tudor Rebellions*, 5th edn, rev. (London: Pearson Longman, 2004).

³⁶ Madeleine Hope Dodds and Ruth Dodds, *The Pilgrimage of Grace 1536-1537 and the Exeter Conspiracy 1538*, 2 vols (Cambridge: Cambridge University Press, 1915).

no advance on the former authors' depth of research.³⁷ In evaluating the Dodds's continued pre-eminence, Michael Bush argued that debate surrounding the Pilgrimage's origins and objectives became polarised by 'special pleading' on behalf of Catholic and Protestant historians, with the former emphasising the importance of the Reformation and the latter ascribing the revolt's popularity to economic factors.³⁸ This issue, combined with uncritical use of government documents, led to disjointed and often oversimplified assessments which focused solely on the Pilgrimage's origins, perceived causes, and trends, rather than engaging with the complexities of the revolt itself.

Perhaps in response to this problem, authors such as Scott Michael Harrison chose to focus on specific examples, detailing the insurgency within a regional context. In Harrison's case, this involved an assessment of the Lake Counties which concluded that insurgents from these areas were particularly motivated and active within the uprising, and operated largely without the support of local gentry.³⁹ Bush continued and expanded this approach through a detailed consideration of the rebel army's component 'hosts' prior to their amalgamation at Doncaster. By examining each portion of the rebel force in isolation, he documented the rising's inception and spread through each affected region, as well as the manpower and resources available to the insurgency as a whole. This work is particularly useful for its appendices discussing the pilgrims' numbers and armaments, and helps to defend the assertion, central to this thesis, that rebel armies mirrored the county levies from which the conventional military was drawn.⁴⁰ Although the Pilgrimage of Grace concluded largely without violence, Bush's study illustrates the degree to which information on English military personnel and resources can be derived from the mobilisation of rebel armies. It similarly emphasised the rebellion's popularity amongst all classes of society, rejecting assertions that the pilgrims were predominately peasants who lacked the support of their social superiors.

The involvement of members of the gentry and nobility in rebellions is taken up in more detail by R.W Hoyle, who discussed the dilemma popular uprisings posed to the upper echelons of society, which were often compelled to join the rebels or face a loss of influence over the commons, and the associated appeal of adopting a neutral stance.⁴¹ While Hoyle confined his study to the Pilgrimage, this issue recurred in successive uprisings and, given the vital administrative and battlefield role fulfilled by nobles and gentry in Tudor armies, is of key importance to interpreting insurgencies as military campaigns. As these examples have shown,

³⁷ Geoffrey Moorhouse, *The Pilgrimage of Grace: The Rebellion that Shook Henry VIII's Throne* (London: Weidenfeld & Nicolson, 2002), p.xiv.

³⁸ Michael Bush, *The Pilgrimage of Grace: A Study of the Rebel Armies of October 1536* (Manchester: Manchester University Press, 1996), pp.1-6.

³⁹ Harrison, *Pilgrimage of Grace*.

⁴⁰ Bush, *Rebel Armies*, pp.418-24.

⁴¹ R.W. Hoyle, *The Pilgrimage of Grace and the Politics of the 1530s* (Oxford: Oxford University Press, 2001).

the extensive scholarship surrounding the Pilgrimage of Grace can contribute to understanding similar issues in the study of other rebellions.

The 1549 Rebellions

The 1549 rebellions, or ‘commotion time’, are a popular topic for historians of Edward VI’s reign, on account of their origins in the Duke of Somerset’s religious and economic policies, the wide-ranging and violent nature of the disorder, and the resultant collapse of his Protectorate in their aftermath. As such, they tend to feature prominently in general and regional histories of the period, biographies of Somerset and Edward VI, and discussions of mid-Tudor government, where they intersect with some or all of these debates. This is illustrated by Bush’s monograph *The Government Policy of Protector Somerset*, which combined elements of several genres and placed the rebellions at its centre.⁴² Although Bush was, perhaps inevitably, unable to cover the rebellions in great detail, he noted their widespread occurrence and observed that the uprisings in the western counties and East Anglia were merely their most violent manifestations.

Further histories dedicated solely to the summer of 1549 were produced by Barrett Beer, Julian Cornwall, and Andy Wood, while a succession of works also documented individual uprisings, specifically the Western Rebellion in Devon and Cornwall, and Kett’s Rebellion in Norfolk. Both Beer and Wood provided valuable consideration of these events as popular protests, although, as might be expected, military detail concerning the suppression of the risings is sparing and subjected to little analysis.⁴³ Cornwall, by contrast, provided the only avowedly military history of the rebellion, considering the government suppression of the insurgencies of Norfolk and the West as fully fledged campaigns rather than internal policing actions.⁴⁴ The resultant work uses contemporary chronicles, correspondence and administrative information to good effect in reconstructing the tactical and operational details of the campaign, and is limited only by its traditional narrative approach, its identification of Kett’s Rebellion solely with Norwich, and the superficial terrain analysis for the actions discussed. Despite these flaws, Cornwall’s work is highly significant for this thesis and for the study of the 1549 rebellions as military events.

While accounts of the Western Rebellion and Norfolk Rising have since declined in favour of summative assessments of the ‘commotion time’ as a socio-political phenomenon, several books and articles cover these distinct regional uprisings in extensive detail. In the

⁴² Michael Bush, *The Government Policy of Protector Somerset* (Montreal: McGill-Queen’s University Press, 1975).

⁴³ Barrett Beer, *Rebellion and Riot: Popular Disorder in England During the Reign of Edward VI* (Kent, Ohio: Kent University Press, 1982); Andy Wood, *The 1549 Rebellions and the Making of Early Modern England* (Cambridge: Cambridge University Press, 2007).

⁴⁴ Julian Cornwall, *Revolt of the Peasantry, 1549* (London: Routledge & Kegan Paul, 1977).

former case, Frances Rose-Troup's 1914 work remains the dominant account of the uprising despite the passage of time, offering a comprehensive narrative supported by the full range of available primary evidence.⁴⁵ Notwithstanding criticisms levelled against Rose-Troup for sentimentalising the revolt, and for insufficient analysis of its sources' origins, few modern works can escape her continued influence.⁴⁶ This is illustrated in later publications by John Sturt and Philip Caraman, both of whom are reliant upon Rose-Troup, and by a series of regional histories of Devon and Cornwall, which confine their treatment of the rebellion to a chapter or two drawn extensively, and often uncritically, from this source.⁴⁷ While Sturt aligned his work more closely with Cornwall in discussing the strategic aspect of the campaign, Caraman largely followed the established version of events, adding little detail to Rose-Troup's conclusions.⁴⁸ This inability to diverge from Rose-Troup's initial findings can be partially explained by the small selection of source material documenting the rebellion, a problem first identified by Joyce Youngs, who noted how most attempts to describe its military phase lapse inevitably into summarised narrative.⁴⁹ Where new evidence has been uncovered regarding the revolt, such information is often derived from chance discoveries, reinforcing the extent to which other, more obvious, sources have been exhausted. For instance, Eamon Duffy's investigation of the Devonshire village of Morebath, primarily a work of social history, utilised the churchwarden's accounts to demonstrate the inhabitants' employment of local infrastructure to muster forces for the rebels.⁵⁰

The Norfolk Rising, or Kett's Rebellion, as the East Anglian revolt is known, holds an enduring appeal for socio-economic historians on account of the insurgents' opposition to mid-sixteenth-century agrarian reforms, a stance which led Stanley Bindoff to characterise it as a labour dispute between the commons and gentry, or 'a vast sit-down strike'.⁵¹ Although Bindoff's chief concerns were the underlying causes and consequences of the revolt, he also showed an acute awareness of the conflict's strategic dimensions, citing the importance of rebel sympathisers within Norwich, and noting the problems facing loyalist attempts to retake the city. Reg Groves similarly discussed the rebellion's military phase in the context of agrarian and social conflict, although with considerably less subtlety, producing an ideologically motivated

⁴⁵ Frances Rose-Troup, *The Western Rebellion of 1549* (Exeter: Smith and Elder, 1914).

⁴⁶ Cornwall, p.5.

⁴⁷ A.L. Rowse, *Tudor Cornwall, Portrait of a Society* (London: Jonathan Cape, 1941); Robin Stanes, *A History of Devon* (Chichester: Phillimore, 1986); John Chynoweth, *Tudor Cornwall* (Stroud: Tempus, 2002).

⁴⁸ John Sturt, *Revolt in The West, The Western Rebellion of 1549* (Exeter: Devon Books, 1987); Philip Caraman, *The Western Rising, 1549: The Prayer Book Rebellion* (Tiverton: West County Books, 1994).

⁴⁹ Joyce Youngs, 'The South-Western Rebellion of 1549', *Southern History*, 1 (1979), 99-122.

⁵⁰ Eamon Duffy, *The Voices of Morebath, Reformation and Rebellion in an English Village* (New Haven: Yale University Press, 2001).

⁵¹ Stanley Bindoff, 'Ket's Rebellion 1549', *The Historical Association* (1949), 1-24.

narrative which sought to lionise the ‘ragged, rough, untrained, ill-armed soldiers of the Norfolk Commonwealth’ at the expense of both factual accuracy and detailed analysis.⁵² For instance, while the rebels may have lacked the military skill of the foreign mercenaries involved in their suppression, they assimilated the administrative structures of the militia and deployed substantial quantities of artillery during the campaign, a nuance lost in Groves’s appeal to pathos. Equally, events which cannot be reinterpreted in the rebels’ favour, such as their use of prisoners as human shields at Dussindale, are omitted entirely from Groves’s account, eloquently exposing the flaws which characterised this work.

Although Norwich lay at the heart of the uprising, representing the rebels’ main target and their subsequent base of operations, MacCulloch has suggested a broader approach be taken when considering the revolt.⁵³ In doing so, he criticised previous authors such as Bindoff, Groves and Stephen Land, who confined much of their analysis to Norwich and the immediate area, used the same set of sources, and consequently drew similar conclusions, an issue MacCulloch dubbed ‘tunnel history’.⁵⁴ He also challenged the identification of Robert Kett as the insurgents’ leader, asserting that Kett’s prominence in near-contemporary chronicles resulted from their desire to appoint a figurehead for the uprising, rather than proving his undisputed authority. This view has since been developed by Jane Whittle, who demonstrated that many wealthy yeomen, occupying the middle ground between the commons and gentry, were active and influential in the rebellion, and probably formed the core of the insurgents’ leadership.⁵⁵ While MacCulloch and Whittle offer a greater insight into the rebellion’s composition, administration, and strategic capabilities, they refrain from discussing the battles fought within and outside Norwich, and so cannot assist in tactical analysis.

This problem can be resolved with reference to earlier historians, such as Land and Cornwall, whose near-exclusive focus on Norwich proves advantageous by providing clear descriptions of the engagements fought inside the city and at Dussindale.⁵⁶ The information derived from these works can be refined by discussion of the rebellion’s source material, Beer’s scrutiny of Nicholas Southerton’s chronicle for example, serving to establish its authorship shortly after the revolt.⁵⁷ In addition to evaluating existing sources, historians have also discovered new avenues of investigation, with Matthew Champion arguing that John Smythe’s late-sixteenth century tract incorporated eyewitness testimony from the rebellion’s climactic

⁵² Reg Groves, *Rebels’ Oak: The Story of the Great Rebellion of 1549* (London: Red Flag Fellowship, 1947).

⁵³ Diarmaid MacCulloch, ‘Kett’s Rebellion in Context’, *Past and Present* (1979), 36-59.

⁵⁴ MacCulloch, ‘Kett’s Rebellion in Context’, p.36.

⁵⁵ Jane Whittle, ‘Lords and Tenants in Kett’s Rebellion, 1549’, *Past and Present* (2010), 3-52.

⁵⁶ Stephen Land, *Kett’s Rebellion: The Norfolk Rising of 1549* (Ipswich: Boydell, 1977).

⁵⁷ Barrett Beer, “‘The Commoysen in Norfolk, 1549’: A Narrative of Popular Rebellion in Sixteenth-Century England”, *The Journal of Medieval and Renaissance Studies*, 6 (1976), 73-99.

battle at Dussindale.⁵⁸ Similarly, Anne Carter, in one of the most significant yet frequently overlooked contributions to research, used a series of sixteenth and seventeenth-century cartographic sources to locate the site of the battlefield.⁵⁹ As Carter's discovery of previously underused maps and documents is of crucial importance for Chapter 6, her work will be considered in greater detail when reconstructing the historic terrain of Dussindale.

Wyatt's Rebellion

Scholarship of Thomas Wyatt's 1554 uprising in Kent is surprisingly limited, being essentially confined to the work of David Loades, who has produced a number of studies documenting the history of the Tudor queens and their associated political crises.⁶⁰ This is problematic for assessing the rebellion as a military event as, although Loades has undertaken rigorous reviews of existing source material, his approach is wholly concerned with its political aspect. By focusing exclusively on such admittedly crucial issues as the challenge posed to Mary's political legitimacy, Loades reduced a well-armed and resourced insurrection to a thwarted court conspiracy, ignoring its potential to open up other avenues of enquiry. Nonetheless, his narrative of the political backdrop to the event, which also engaged with E.H Harbison's article on the international espionage underway in Mary's court, provides a valuable starting point for reassessing the rebellion.⁶¹ Notably, as with earlier revolts, Wyatt's uprising can illustrate the Tudor state's military infrastructure and resources, providing examples of how English forces were armed, administered, and assembled. Furthermore, unlike the Pilgrimage of Grace, which concluded without significant military action, Wyatt's defeat outside London, albeit in a relatively bloodless confrontation, represents a largely untapped source of evidence.

Implications of Previous Research

While numerous authors have investigated the changes in warfare which occurred throughout the mid-sixteenth century, and their reception by the Tudor state, very few secondary works incorporate rebellions within this framework, with such events often being dismissed as militarily insignificant instances of civil disorder. Equally, dedicated treatments of popular revolts are often thematically focused on an uprising's socio-political factors at the expense of

⁵⁸ Mathew Champion, 'Kett's Rebellion 1549: A Dussindale Eyewitness?', *Norfolk Archaeology*, 43 (2001), 642-5.

⁵⁹ Anne Carter, 'The Site of Dussindale', *Norfolk Archaeology*, 39 (1984), 54-62.

⁶⁰ David Loades, *Two Tudor Conspiracies* (Cambridge: Cambridge University Press, 1965); *Intrigue and Treason: The Tudor Court, 1547-1558* (London: Pearson Longman, 2004); *The Wyatt Rebellion* (Oxford: Davenant, 2000).

⁶¹ E. Harris Harbison, 'French Intrigue at the Court of Queen Mary', *American Historical Review*, 45 (1940), 533-38.

its military dimensions, leading to a narrative approach to the campaign wherein scrutiny of specific actions is elided. This has resulted in the study of rebellions falling between two camps, with military historians regarding them as peripheral to understanding warfare of the period, and general works proving reluctant to engage with the more specialised discipline of military history. Notably, where authors have produced military histories of rebellions, a category essentially confined to Cornwall's consideration of the 1549 uprisings, Bush's analysis of the pilgrim armies of 1536, and Brooks's brief examination of battles fought to suppress insurgencies, their work has illustrated the receptiveness of such events to further study. This thesis will accordingly expand upon these conclusions, viewing rebellions as military events and interpreting them through the related discipline of battlefield studies.

Battlefield Studies

Despite the historical importance afforded to battles, the study of the landscape in which they occurred, which requires the integration of military history with terrain analysis and archaeology, remains a relatively recent development in Britain. While nineteenth-century antiquarians, including William Hutton and Charles Barrett, often discussed battlefield sites when narrating an action's events, scholarship became increasingly compartmentalised into separate disciplines during the early-twentieth century, with terrain reconstruction and archaeology becoming the preserve of landscape historians.⁶² Alfred Burne, building upon the influential work of Hans Delbrück, was among the first authors to recognise the central importance of a battlefield's historic terrain, and began the process of reuniting landscape studies with military history, an objective foreshadowed by isolated examples such as Francis Twemlowe's study of Blore Heath.⁶³ Although Burne's attempts to achieve this were undermined by his unfamiliarity with landscape studies, his theory of Inherent Military Probability provided a key tool which formed the basis of later developments in military terrain analysis.⁶⁴

Later works, including Peter Newman's investigation of Marston Moor and Peter Foss's study of Bosworth, continued to develop closer links between military history and the landscape, with Foss providing one of the most significant examples of early terrain

⁶² Charles Barrett, *Battles and Battlefields in England* (London: Innes, 1896); William Hutton, *The Battle of Bosworth Field: Between Richard the Third and Henry Earl of Richmond, August 22, 1485* (London: Nicholson and Bentley, 1813); Glenn Foard, 'Integrating Documentary and Archaeological Evidence in the Investigation of Battles: A Case Study from Seventeenth-Century England' (unpublished doctoral thesis, University of East Anglia, 2008), pp.37-8.

⁶³ Martin Van Creveld, *Technology and War from 2000 B.C. to the Present* (London: The Free Press, 1989); Alfred H. Burne, *The Battlefields of England* (London: Methuen, 1950); Francis Twemlowe, *The Battle of Blore Heath* (Wolverhampton: Whitehead Brothers, 1912).

⁶⁴ Foard, 'Documentary and Archaeological Evidence', p.37.

reconstruction.⁶⁵ This interdisciplinary approach was brought to fruition by assessments of the Towton battlefield, which blended the archaeological examination of recovered artefacts and mass graves with a study of the engagement itself.⁶⁶ Since the Towton project, the integration of documentary and physical evidence to facilitate terrain reconstruction has become increasingly common, being greatly enhanced by the use of new survey techniques to carry out analysis in a more precise manner than was previously possible, and by the use of Geographical Information Systems (GIS) to present findings in digital map form. This development paralleled the earlier growth of battlefield studies in America during the late 1970s and 1980s, wherein excavations at Saratoga, Little Bighorn, and other sites were plotted in GIS as a means of assisting the first systematic metal-detection surveys.⁶⁷ In a British context, the work of Glenn Foard, at Edgehill, Sedgemoor, and Bosworth, is especially pertinent for demonstrating the methodological stages by which a battlefield can be located and investigated, and outlining the processes of map regression and terrain analysis which assist in the reconstruction of historic landscapes.⁶⁸ Because of the importance of these issues to the thesis' case studies, a further exploration of the associated benefits and problems of terrain reconstruction and its associated methodologies will be provided at the conclusion of this chapter, following the discussion of primary sources.

Primary Sources

Narrative Accounts

The unusual nature of rebellion, which represented a dramatic disruption of the rigid hierarchies of power governing Tudor England, ensured that many individuals recorded their recollection of events within narrative accounts. Historical chronicles, written to document a single incident or, more commonly, the reign of one or more monarchs, are often the most comprehensive of these sources, although such works frequently contain partisan agendas and factual inaccuracies. This

⁶⁵ Peter Young, *Marston Moor, 1644: The Campaign and the Battle* (Kington: Roundwood Press, 1970); Peter Foss, *The Field of Redemore: The Battle of Bosworth, 1485* (Leeds: Rosalba Press, 1990).

⁶⁶ *Blood Red Roses: The Archaeology of a Mass Grave from the Battle of Towton A.D. 1461* ed. by Veronica Fiorato, Anthea Boylston and Christopher Knüsel (Oxford: Oxbow Books, 2007).

⁶⁷ Douglas, D. Scott and Andrew P. McFeaters, 'The Archaeology of Historic Battlefields: A History and Theoretical Development in Conflict Archaeology', *Journal of Archaeological Research*, 19.1 (March 2011), 103-132 (pp.107-9).

⁶⁸ Glenn Foard, 'English Battlefields 991-1685: A Review of Problems and Potentials', in *Fields of Conflict: Battlefield Archaeology from the Roman Empire to the Korean War*, 2 vols, ed. by Douglas Scott, Lawrence Babits and Charles Haecker (Westport: Praeger Security International, 2007), pp.134-59 (p.134); Foard, 'Documentary and Archaeological Evidence'; Foard and Morris, pp.117-20; Glenn Foard and Anne Curry, *Bosworth 1485: A Battlefield Rediscovered* (Oxford: Oxbow Books, 2013).

is especially true of battle narratives, where details of army composition, deployment, and tactical manoeuvres are dependent upon authors who seldom witnessed or participated in the events they described. Letters and diaries, by contrast, make for particularly important evidence where they impart eyewitness accounts, although the interpretation of personal testimony can be problematic, with much depending upon the author's recollection of events, the purpose of his record, and his physical position and individual circumstances upon the battlefield.⁶⁹ This section will begin by identifying and discussing general works covering the entire period, before progressing to an evaluation of those confined to individual revolts.

General Works

While the majority of accounts were either written to provide a self-contained narrative of particular rebellions, or were included within regional histories, a small collection of wide-ranging national chronicles, including those of Raphael Holinshed (1578), John Hayward (1599), and Francis Hereford (1602), documented multiple uprisings.⁷⁰ Such works inevitably lack the detail of sources focused on a single revolt, but often have a wider overview as a consequence of their chronological and geographical separation from the events they describe. For example, both the journal of Edward VI (1537-1552) and an anonymous 'Spanish Chronicle' (c. 1549) recorded the 1549 insurgencies from the perspective of the court rather than the regions in which rebellion broke out, providing a different interpretation to those afforded by eyewitnesses and local historians.⁷¹ However, although general works provide a theoretically independent body of evidence, they often draw heavily upon previous accounts, plagiarising earlier authors and embellishing their narratives to the extent that they may be mistaken for a different but corroborating source. Hayward's chronicle, for instance, extensively summarised Edward VI's journal, while Holinshed obtained information from copying and amalgamating earlier histories. To address this problem, close attention must be paid to the wording of accounts in order to discern any repetition of earlier material, which was often reproduced verbatim by later authors.

⁶⁹ John Keegan, *The Face of Battle* (London: Jonathan Cape, 1976), pp.33, 128-33.

⁷⁰ Raphael Holinshed, *Chronicles of England, Scotland and Ireland*, (London: John Harison, 1586); John Hayward, *The Life and Raigne of King Edward the Sixth*, (London: John Wolfe, 1599); Francis Hereford, *Rerum Anglicarum Henrico VIII, Edwardo VI, et Maria Regnantibus Annales* (1602), trans. Morgan Godwyn (London, 1675).

⁷¹ *The Chronicle and Political Papers of Edward VI*, ed. by W.K Jordan (New York: Ithaca, 1966); Anonymous, *Chronicle of King Henry VIII of England, Being a Contemporary Record of Some of The Principal Events of The Reigns of Henry VIII and Edward VI. Written In Spanish By An Unknown Hand*, ed. by Martin Hume (London: George Bell, 1889) [hereafter abbreviated to *Spanish Chronicle*].

Even where general sources provide original data, there are also significant complications arising from the use of chronologically distant works for information, especially where the passage of time has resulted in inaccuracies permeating the narrative. This is particularly prevalent in accounts of battles, which often distort and overstate numerical estimates of opposing armies and casualties. While the difficulties of accurately assessing combat strength and losses in pre-modern warfare should not be underestimated, being associated with a high potential for genuine error, both sets of figures were also routinely manipulated for political advantage. Such practices are apparent through exaggerated reports of enemy deaths, the minimisation of friendly casualties, and attempts to widen the numerical disparity between armies to either magnify victory or minimise defeat, and can be seen throughout chronicles of the Anglo-Scottish conflicts of the early-to-mid century. At Flodden and Pinkie, for example, Tudor chroniclers vastly inflated the number and losses of the enemy, while accounts of Ancrum Moor erroneously claimed that the defeated English force suffered fewer fatalities than its opponents.⁷² This tendency towards inaccurate or partisan chronicling frequently appears in accounts of rebellions, where sources degraded the military capabilities of insurgents, or were simply unable to furnish accurate information regarding irregular forces, a process illustrated by estimates of the Devon and Cornish rebels at between 7000 and 30,000 men.⁷³

Equally, contemporary accounts written by geographically remote authors could also be prone to error as a consequence of including unsubstantiated or misconstrued information, an issue ubiquitous in Edward VI's journal, which relied upon reports from the loyalist forces in Devon and Norfolk to document the insurgencies in these areas. While the journal provides a means of assessing the objectives and conduct of government forces, the King's physical distance from events, coupled with his use of second-hand evidence, sometimes results in confusion regarding dates, locations, and operational manoeuvres. Similarly, when documenting the suppression of the Prayer Book rebels, the 'Spanish Chronicle' misinterpreted its sources and ran a successive series of encounters at Woodbury, Clyst St Mary, and Clyst Heath together into a single action, eliding a far more complex situation.⁷⁴ Many of these problems are not confined to general sources, but can also be found in narratives of individual insurgencies, as the following section will illustrate.

⁷² *The Trewe Encountre or Batayle Lately Don Betwene England and Scotlande: In Which Batalye the Scottsshe Kynge was Slayne*, Leeds, Brotherton Library, Brotherton Collection Gen Flo; William Patten, *The Expedition into Scotland* (London, 1547), repr. in *Tudor Tracts: 1532-1588*, ed. by A.F. Pollard (Westminster: Constable, 1903), pp.53-159 (p.65); *Letters and Papers, Foreign and Domestic, of the Reign of Henry VIII: Preserved in the Public Record Office, the British Museum, and Elsewhere in England*, ed. by J.S. Brewer, Robert Henry Brodie, and James Gairdner (London: Longman, 1862-1910).

⁷³ See Chapter 5 for more information on the size of the Western Rebellion.

⁷⁴ *Spanish Chronicle*, p.181.

The Western Rebellion

The Prayer Book Rebellion's most extensive narrative is that of John Vowell, alias Hooker, an inhabitant of Exeter who, in 1575, wrote a detailed history that included sustained reference to the events of 1549, in particular the siege and relief of the city, to which he was an eyewitness.⁷⁵ Although reproductions of Hooker's account frequently form the crux of secondary works, his confinement within Exeter imposes limitations on the utility of this source, which contains an unparalleled portrayal of the city under siege, but has a limited perspective outside its environs.⁷⁶ This is manifested in Hooker's relatively sparse coverage of the battles of Fenny Bridges and Sampford Courtenay, which contrasts with his detailed description of Clyst St Mary and Clyst Heath, fought outside Exeter, potentially as a result of the chronicler's diminishing information and interest as the fighting receded from the city. In the case of Sampford Courtenay, however, the survival of a letter written in the action's aftermath by the loyalist commander, Lord Russell, compensates for Hooker's reticence by providing an eyewitness report that proves vital for reconstructing the battle.⁷⁷

These accounts can be complemented by the general narratives outlined in the preceding section, and by later surveys of Devon and Cornwall by Richard Carew (1602) and Tristram Risdon (1714).⁷⁸ These latter works detail the principal areas connected with the rebellion, including battlefields, siege sites, and mustering points, and enable a wider appreciation of the insurgency's strategic overview. Carew's account is particularly valuable for its focus on the revolt's early stages in Cornwall, an aspect omitted by Hooker and Risdon's regional histories, and by secondary works exclusively following these narratives, but one which exerted a significant impact on the rebels' acquisition of equipment, manpower, and supplies for the campaign in Devon.

The Norfolk Rising

The main narratives of the East Anglian insurgency are provided by Nicholas Southerton and Alexander Neville, whose histories, written in the aftermath of the uprising, formed the basis for

⁷⁵ John Hooker, *The Description of The Citie of Excester By John Vowell Alias Hooker*, ed. by W.J Harte, J.W Schapp and H. Tapley-Soper (Exeter, 1919).

⁷⁶ Youings, 'South-Western Rebellion', p.110.

⁷⁷ *A Copie of My Lord Privie-Seale's Newes, Sent in the Same Letter, Wherein is Particular Mention of Notable Services of The Lord Grey and Sir William Herbert*, London, British Library, MS. Harleian 523, fol. 51.

⁷⁸ Richard Carew, 'The Survey of Cornwall' (1602), repr. in, *Devon and Cornwall Record Society*, n.s. 47 (2004); Tristram Risdon, *The Chorographical Description or Survey of The County of Devon with The City and County of Exeter* (London: E. Carll, 1714).

subsequent descriptions within Holinshed and Hayward's chronicles.⁷⁹ Southerton's work, produced between 1549 and 1559, documents the capture and occupation of Norwich, and was probably based upon information garnered from the author's acquaintances and relatives within the city, who experienced the rebellion at first-hand. Furthermore, although the source does not survive in its entirety, with most of the description of Dussindale being lost, it is the only account to offer direct information on the battlefield's location, and so plays a vital role in positioning the site within the modern landscape. Neville's text, despite being written more than twenty-five years after the rebellion, was similarly derived from contemporary eyewitnesses, drawing on the recollections of Matthew Parker, who preached to the rebels ten years before he became Archbishop of Canterbury.⁸⁰ While Neville probably read and was influenced by Southerton, his use of different sources serves to link his chronologically distant account to the events it portrays, and endorses his divergence from the former's narrative. This is particularly important in relation to Dussindale, where Neville provides a detailed treatment of the battle which supports the version given by Southerton, while enhancing it on a tactical level and explicitly naming the site for the first time.

Sir John Smythe's *Certain Discourses Military* (1589), an Elizabethan treatise on the continued effectiveness of the longbow, can also be considered a source for the 1549 revolts in both Devon and Norfolk.⁸¹ While not a chronicler as such, Smythe cited eyewitness testimony from the Earl of Warwick's son, Sir Ambrose Dudley, who was present at Dussindale, and from foreign mercenaries who served in Devon, to emphasise the strong resistance offered by the insurgents. Naturally, and in keeping with his agenda, Smyth attributed this to the superiority of the rebels' archers over the loyalist arquebusiers. However, while the author's associated biases are clear, his selection of these incidents as examples suggests that the battles fought to suppress rebellions may not have been as one-sided as other sources suggest.

Wyatt's Rebellion

Wyatt's uprising was documented by several dedicated histories, the first and most comprehensive of which was produced by John Proctor in the rebellion's immediate aftermath, and detailed the revolt from its inception in Kent to its defeat at London.⁸² While little is known about the author, a Kentish schoolmaster mentioned in contemporary records, Proctor's

⁷⁹ Nicholas Southerton, *The Commoysen in Norfolk, 1549*, ed. by Susan Yaxley (Dereham: Larks Press, 1987); Alexander Neville, *De Furoribus Norfolciensium Ketto Duce* (1575), trans. Richard Woods (London: William Stansby, 1615).

⁸⁰ Beer, "Commoysen in Norfolk", p.76.

⁸¹ John Smythe, *Certain Discourses Military*, ed. by J.R Hale (New York: Cornell University Press, 1964).

⁸² John Proctor, *The Historie of Wyates Rebellion: With the Order and Manner of Resisting the Same* (London: Robert Caly, 1554).

exhaustive narrative forms the mainstay of many subsequent accounts.⁸³ Interestingly, Proctor's condemnation of the rebels, a typical characteristic of works discussing insurgencies, contrasts with the more celebratory stance taken by early Elizabethan works seeking to delegitimise Mary's reign. One such document is the anonymous *History of the Life, Bloody Reign and Death of Queen Mary*, which contained an unusually sympathetic treatment of the Kentish rebels, praising Wyatt and his followers for acting 'out of zeal and love to their country'.⁸⁴ This favourable bias also extended to descriptions of Wyatt's army, which praise his soldiers' discipline, equipment, and morale, potentially redressing their denigration in Proctor's more typical account.

While the chronicles' polarised narratives hinder an objective assessment of the rebellion, a series of contemporary accounts provide less overtly politicised sources of evidence. Foremost amongst these is a diary written by an unnamed 'resident', probably an officer, of the Tower of London, which offers a different perspective on the uprising and its final battle, highlighting the extent to which the threat posed by the rebels was downplayed in Proctor's work.⁸⁵ Similarly, an anonymous description of the 1553/4 Spanish embassy to England offers a brief but pertinent commentary on the rebellion, as well as relating key events during the opening stages of the insurgents' attack on London.⁸⁶ While this evidence means little in isolation, its value increases when paired with other sources, for which it provides independent verification and confirms the location of troop deployments and terrain features during the rebellion's final battle. Descriptions of this action are further enhanced by the eyewitness account of Edward Underhill, a member of the Queen's bodyguard the Gentlemen Pensioners, and the testimony of George Wyatt, who wrote a treatise on his father's uprising after returning to favour during Elizabeth's reign.⁸⁷ In Underhill's case, his testimony offers a valuable insight into the preparations made prior to Wyatt's attack, but has limited utility when discussing the engagement, owing to his position in a relatively peripheral area of the battlefield. Equally, George Wyatt cited eyewitnesses amongst the loyalist army who attested to the poor morale of

⁸³ *Calendar of State Papers: Domestic Series Mary I 1553-1558*, ed. by C.S Knighton (London: PRO, 1998), p.51.

⁸⁴ Anonymous, *The History of The Life, Bloody Reign and Death of Queen Mary, Eldest Daughter to H.8* (London: D. Brown, 1682), p.56.

⁸⁵ *The Chronicle of Queen Jane, and of two years of Queen Mary, and Especially of the Rebellion of Sir Thomas Wyatt. Written by a Resident in the Tower of London*, ed. by John Gough Nichols (London: Camden Society, 1850).

⁸⁶ W.P.M Kennedy, 'The Imperial Embassy of 1553/4 and Wyatt's Rebellion', *English Historical Review*, 38 (1923), 251-8.

⁸⁷ *The Watch at the Court and in the City, on the Eve of Wyatt's Attack*, London, British Library MS. Harleian. 425; *The Papers of George Wyatt Esquire of Boxley Abbey in the County of Kent, Son and Heir of Sir Thomas Wyatt the Younger*, ed. by David Loades (London: University College, 1968).

Mary's forces, but may have exaggerated their claims in order to further his work's rehabilitative agenda.

Administrative Documents

Unlike chronicles and eyewitness accounts, which present a comprehensive, retrospective narrative, administrative evidence often relays or records information in its immediate context, but can risk inaccuracies arising through an incomplete or limited perspective. This issue is exemplified by the reports of foreign diplomats, including the Spanish Ambassador, which provide a commentary of events as they unfolded, but are prone to misconceptions stemming from unconfirmed rumours and conflicting information.⁸⁸ Domestic correspondence is similarly useful, but is subject to the same limitations and must be employed with caution, as proven by a series of draft letters exchanged between the Privy Council and John Russell, the Lord Privy Seal, during the Western Rebellion.⁸⁹ Although the letters' importance has arguably been overemphasised, with Youings expressing misgivings regarding their accuracy, they eloquently illustrate the initial disparity between the government's grasp of the situation and events occurring on the ground.⁹⁰ Furthermore, when combined with chronicles documenting the rising, they enable mutual verification of the loyalists' strategic manoeuvres during the early phases of the campaign.

A more-reliable form of evidence is provided by the Acts of the Privy Council and the State Papers of Tudor monarchs, which itemised government proceedings and expenditure, albeit with little commentary or indication of political context.⁹¹ While such sources cannot be used alone, they facilitate the empirical assessment of narrative accounts. For example, records from 1549 list the Privy Council's payment of mercenaries, provision of conduct money for native soldiers, and supplying of artillery, giving an insight into the forces it deployed against the insurgents.⁹² Likewise, official documents sometimes provide extensive data regarding individual events, as illustrated by an inventory of weapons and equipment issued from the Tower of London to Mary's army prior to Wyatt's attack on the city in 1554.⁹³ However, these resources are neither infallible nor comprehensive, and often omit information which lies

⁸⁸ *Calendar of State Papers Spanish*, vol.9, ed. by Martin A.S Howe and Royall Tyler (Hereford: The Hereford Times, 1912).

⁸⁹ *Troubles Connected with the Prayer Book of 1549*, ed. by Nicholas Pocock (London: Camden Society, 1884).

⁹⁰ Youings, 'South-Western Rebellion', p.100.

⁹¹ *The Complete State Papers Domestic, 1509-1702, Series 3: Henry VIII, 1509-1547*, ed. by Michael Hawkins (Reading: Research Publications, 1990-1995); *Calendar of State Papers, Foreign Series, of the Reign of Mary: 1553-1558*, ed. by William Turnbull (London: Longman, 1861).

⁹² *Acts of The Privy Council*, ed. by J.R. Dasent, 2 vols (London: H.M.S.O, 1890).

⁹³ *CSP: Domestic Mary*, p.52.

outside their specified remit. The Privy Council's records, for instance, often fail to identify the number or type of troops in a contingent, as payment was made to their officers rather than individual soldiers. Similarly, while the Tower's inventory logged the quantities of various armaments issued and returned, it neither indicated to whom they were allocated, nor whether equipment losses occurred in action or were the result of theft.

Direct references to resources gathered to suppress rebellions are also complemented by muster rolls and military inventories, which provide an overview of a region's reserves of manpower and equipment. In the first instance, muster rolls demonstrate the military resources available to a particular area, identifying all eligible members of the militia and listing their accoutrements. While such records have only haphazard coverage, existing for some years but not others, they provide a useful means of assessing the calibre of local forces, and determining the regional availability of military technology. These factors can be tested at a national level through Henry VIII's Inventory, an extensive survey of the King's possessions at the time of his death, which will be frequently referred to throughout this thesis.⁹⁴ In addition to cataloguing Henry's personal trappings, the Inventory details the full scope of the Tudor state's military equipment, ranging from bills and body armour to cannon and warships, describing the quantities of munitions available, and their place of storage. This represents an invaluable resource which facilitates investigation of not only English military technology, but also of its distribution throughout the country by providing the location of government armouries, a factor with particular significance for rebellions, where control of these sites often proved a vital prerequisite to an uprising's success. The inventory's only limitations stem from the passage of time, with the document's unparalleled accuracy in 1547 decreasing in later years as a consequence of the incremental relocation, loss, or purchase of armaments, alongside the abandonment or expansion of military installations.

As these examples show, administrative sources have preserved vitally important information regarding England's response to rebellion and the country's military capabilities. However, the narrow focus of much of this material necessitates its consideration alongside narrative accounts, such as letters and chronicles, which can draw out its latent implications for specific events. Similarly, many of the administrative details regarding stockpiled weapons and equipment become more relevant when analysed in relation to the period's military manuals, indicating the tactical value of such resources.

Military Manuals

⁹⁴ *The Inventory of King Henry VIII*, ed. by David Starkey (London: Harvey Miller, 1998).

With the tools and methodology of warfare in a state of flux throughout the early-to-mid-sixteenth century, many European authors produced manuscripts and printed tracts with the intention of recording and interpreting the incremental developments of the Military Revolution. The content of such works ranged from treatises urging a return to Roman precedents, like those outlined by Vegetius, to more practical guidance advising officers in how to deploy and organise their troops.⁹⁵ Nor were these topics mutually exclusive, with many commentators blending pedagogical instruction of military administration, strategy, and tactics with more abstract theories of warfare.⁹⁶ Thus, while military manuals are particularly important sources of evidence for field warfare, second only to documented engagements, their use presents several challenges. Unlike administrative sources and narrative accounts, which either transmitted or recorded information regarding past or current events, military manuals were primarily concerned with future contingencies and so cannot definitively prove that their recommendations were actually implemented. Instead, they provide a guide to perceived best practice, outlining their authors' beliefs regarding the resources which should be provided, in terms of weapons, soldiers, and other war material, and how these assets might most effectively be used in battle. Securely employing such sources requires that their assertions be tested against administrative documents and accounts of field engagements, such as William Patten's contemporary record of the battle of Pinkie, in order to reveal any discrepancy between the theory and practice of warfare.⁹⁷

In contrast to the more prolific European context, the majority of English military works were produced after 1550, a lacuna possibly stemming from the country's limited involvement in continental conflicts. Nonetheless, Raymond has challenged the assertion that this situation equated to disinterest in military literature, suggesting that English soldiers may initially have read foreign texts to keep pace with European developments, rather than authoring their own.⁹⁸ Equally, many of the country's later-sixteenth-century writers, like Humphrey Barwick, drew upon personal experience accrued during the mid-century period, resulting in a degree of continuity in military practices.⁹⁹ This allows the cautious use of such works to surmise details that are unclearly stated or absent in mid-century manuals, although the utmost care must be taken to avoid retrospective inference. In practice, this is most easily accomplished by maintaining focus on England's mid-century military texts, only consulting later works when further clarification is needed.

⁹⁵ Vegetius, *Epitome of Military Science*, trans. N.P. Milner, 2nd edn. (Liverpool: Liverpool University Press, 1993).

⁹⁶ Thomas Arnold, *The Renaissance At War* (London: Cassell, 2001), pp.77-80.

⁹⁷ Patten.

⁹⁸ Raymond, pp.3-5.

⁹⁹ Eltis, p.101.

The first Tudor military manual was produced by Sir Thomas Audley, in several manuscripts between 1547 and 1553, with the intention of educating Edward VI in how to assemble, deploy, and command an army, while also advocating the establishment of a national stockpile of body armour or ‘harness’ for use in an emergency.¹⁰⁰ These recommendations were informed by Audley’s own military experience, which included service as Provost Marshal of Guînes, an important garrison within the Calais Pale, giving him a personal insight into both the administrative and operational aspects of warfare. This, combined with his political standing, allowed the author’s manuscripts to circulate amidst the highest tiers of the Tudor establishment, where they were probably read by Protector Somerset, the Marquis of Northampton, and other high-ranking individuals, potentially exerting a powerful influence on the country’s military development.¹⁰¹

In 1562, Henry Barrett authored the *Captain’s Handbook*, a treatise outlining the management and tactical deployment of an infantry company, aimed at gentlemen commissioned to raise and lead contingents of soldiers.¹⁰² Despite the decade-long gap between this work and Audley’s, the *Handbook* can be considered a companion piece for several reasons. Firstly, Barrett’s treatise was also the product of mid-century military experience, with the author serving in the Yeomen of the Guard between 1553 and 1562. Secondly, in 1550, Barrett had produced a tactical diagram which espoused similar principles to Audley’s text, illustrating elements of continuity between both works and showing that his interest in military literature began prior to his membership of the Guard.¹⁰³ While the *Handbook* lacked the comprehensiveness of Audley’s writings, its focus on the infantry company, the smallest organisational unit in the Tudor army, presents a valuable counterpoint. As a result, analysis of these sources will underpin Chapters 2, 3, and 4, by revealing the composition, armament, and battlefield deployment and tactics of Tudor forces on both a large and small scale.

Although Audley and Barrett’s works were the first native tactical manuals, they also coincided with translations of classical texts and European military literature, the latter category commencing with Peter Whithorn’s 1560 rendering of Niccolò Machiavelli’s *Art of War* (1521).¹⁰⁴ The fact that Machiavelli was the first contemporary author translated into English suggests that his work exerted a prominent influence upon Tudor commanders, with modern translations emphasising the degree to which it reflected the conflicting tactical systems and

¹⁰⁰ Thomas Audley, ‘The Book of Orders for the Warre’ (c. 1550), repr. in Jonathan Davies, ‘Thomas Audley and the Tudor “Arte of Warre”’, *The Pike and Shot Society* (2002), 1-18 (p.15).

¹⁰¹ Raymond, p.182.

¹⁰² Henry Barrett, *The Captain’s Handbook* (1562), repr. in J.R. Hale, *Renaissance War Studies* (London: Hambledon Press, 1983).

¹⁰³ Hale, *War Studies*, pp.252-4.

¹⁰⁴ Henry Webb, *Elizabethan Military Science: The Books and the Practice* (Madison: University of Wisconsin Press, 1965), pp.4-13.

armaments of the early Italian Wars.¹⁰⁵ By doing so, the work formed an alternative source, distinct from Audley and Barrett, for mid-century English audiences seeking to broaden their military knowledge in their own language. Conversely, similarities between the tactical formations described in the *Book of Orders* and the *Captain's Handbook* with those of the *Art of War* raises the possibility that Audley and Barrett may have been influenced by Machiavelli's work, either in its original or, in Barrett's case, in translation.

Finally, later Elizabethan works by Leonard Digges (1579) and George Carey (1581) have a degree of transferability for analysing earlier English armies, particularly when this discussion concerns the deployment of enduring weapons like the pike which were in widespread use during Audley and Barrett's time.¹⁰⁶ Similarly, sources such as Smythe's tract and Barwick's near-contemporary discourse can also assist in defining the technological dimensions of Tudor warfare, specifically by discerning the respective strengths of bows and firearms according to their proponents, revealing why England's transition from the former to the latter was so protracted. Although both works originated in the late 1500s, many of their supporting examples were drawn from the mid-century period, suggesting that this era marked a crucial phase in the conversion process. Some Elizabethan authors, such as Robert Barrett, combine both technological and tactical overviews, detailing the perceived failing of the longbow at the end of the century, while also describing the composition and deployment of English armies.¹⁰⁷ Although late-century sources cannot directly inform the study of mid-century battlefield tactics and technology, they provide a benchmark against which to measure the claims of Audley and Barrett's works.

Terrain Reconstruction Methodologies and Military Terrain Analysis

While the outcome of battles depended upon many factors, including the composition, armament, experience, and leadership of opposing forces, the landscape in which encounters took place was often of fundamental importance, influencing the deployment and subsequent manoeuvres of the rival armies. Thus the capacity to reconstruct an area's terrain as it was on the day of battle has widely felt impacts for the broader study of military history, permitting scholars to engage in detailed tactical analysis of the kind not normally possible for pre-modern conflicts. This resource enables a more holistic approach than is possible when relying solely on historical accounts, and has been compared to the investigation of a crime scene, with the

¹⁰⁵ Niccolò Machiavelli, *The Art of War*, trans. and ed. by Christopher Lynch (Chicago: University of Chicago Press, 2003) pp.181-6.

¹⁰⁶ Leonard Digges, *Stratioticos* (London: Henrie Bynneman, 1579; repr. Amsterdam: Da Capo Press, 1968).

¹⁰⁷ Robert Barrett, *The Theorike and Practike of Moderne Warres* (London: William Ponsonby, 1598; repr. Amsterdam: Da Capo Press, 1969).

landscape and its archaeology taking the role of physical and forensic evidence with which to validate and critique victim, suspect, and witness testimony.¹⁰⁸ Before a battlefield can be reconstructed, however, the site must be securely located, a process requiring the examination of chronicles and historic documents alongside contemporary and modern maps of the area for place names and topographical features, which give an approximate position for the action.¹⁰⁹ In some cases, as at Towton where the battlefield was bounded by a steep slope on one side and a wet moor on the other, an engagement's location will be readily apparent, while others will either require more extensive interpretation, or may prove impossible to conclusively discern.¹¹⁰ A battlefield's approximate position can be subsequently refined through the use of terrain reconstruction methodologies and military terrain analysis to divide the site into designated core and peripheral study zones. The American Battlefield Protection Program defines core areas as those in which combat occurred, while study zones encapsulate a wider region, encompassing approach and withdrawal routes, preliminary skirmishing, and the location of unengaged units, logistical areas and encampments.¹¹¹

Determining the location of a battlefield site allows terrain reconstruction to commence, using the methodology of map regression to extrapolate the composition of the historic landscape from cartographic and written sources, including enclosure awards, glebe terriers, survey books, and similar documents. This process begins by 'registering' nineteenth-century first edition six-inch-to-one-mile Ordnance Survey (OS) sheets to a modern OS map, ensuring that surviving terrain features and buildings are recorded in their true position, to establish an accurate representation of the landscape before the major industrialisation and development of the modern era.¹¹² Once a base map has been created, the same principle can be followed for successively earlier maps of the area, matching each source to surviving terrain features and tracing it onto the image at an appropriate scale.¹¹³ GIS, such as MapInfo and ArcGIS, considerably simplifies this stage by allowing maps to be traced into editable 'layers', which can be superimposed atop one another and switched off as required.

The complex nature of map regression will inevitably produce problems, often arising from the errors, inconsistent scale, and stylistic conventions of earlier maps. To compensate for this, later case studies will incorporate evaluation of their cartographic source material, enabling potential issues to be identified and, where possible, addressed. Furthermore, assessing different sources' treatment of the same landscape often requires a degree of interpretation, rendering the

¹⁰⁸ Scott and McFeaters, p.117.

¹⁰⁹ Scott and McFeaters, p.106.

¹¹⁰ Foard, 'Documentary and Archaeological Evidence', pp.58-60.

¹¹¹ 'American Battlefield Protection Program'

<http://en.wikipedia.org/wiki/American_Battlefield_Protection_Program> [accessed 8 February 2014] (paras.22-32 of 40).

¹¹² Foard and Morris, p.117.

¹¹³ Foard, 'Documentary and Archaeological Evidence', p.53.

final representation of the battlefield a composite of this incremental decision-making process, rather than a direct reproduction of the earliest map. While documentary evidence can often provide assistance at this stage, particularly where maps are unavailable, unclear, or omit vital information, the resultant composite map will always contain an element of uncertainty on account of potential unknown features within the landscape, and so cannot be regarded as definitive. Where successful, however, map regression represents a vital step towards producing physical or digital representations of the historic landscape, enabling an engagement to be analysed in the context of its reconstructed terrain. At Gettysburg, for example, this methodology has been employed by the American National Park Service as a precursor to physically recreating the area's landscape, eliminating the changes of the past one hundred and fifty years and allowing visitors to appreciate the battlefield as it was in 1863.¹¹⁴

Various archaeological measures, incorporating systematic metal-detection surveys, experimental studies, analysis of bullet impact scarring on surviving buildings, and examination of aerial photographs, have also been developed by landscape specialists to provide further security when positioning and reconstructing battlefields.¹¹⁵ Equally, it is important to note that the use of GIS to facilitate map regression represents only one possible application of a broad range of Geographical Information Technologies (GIT), which can help to solve the problems posed by historic battlefields. Other tools include geophysical techniques such as magnetometry, a means of measuring the relative magnetic fields of soils and bedrock for geospatial analysis, and aerial lidar, a pulsed laser beam capable of accurately surveying gradients and subsurface archaeology even in areas of dense woodland.¹¹⁶ Where these resources are blended with map regression and traditional historical research, as at the recent interdisciplinary project to reconstruct the battle of Chelsea Creek, they can provide a comprehensive understanding of a battlefield's terrain, its impact on an engagement, and its position within the modern landscape.¹¹⁷ However, the manpower and expertise required for these processes, which often involve dedicated teams of specialists working to collect and

¹¹⁴ 'Battlefield Rehabilitation at Gettysburg' <<http://www.nps.gov/gett/parknews/gett-battlefield-rehab.htm>> [accessed 7 February 2014] (paras.2-3, 8-9 of 9). For instance, the NPS have rebuilt over nine miles of fences which existed in 1863, revealing that the important area over which the Confederates' third-day offensive, known as Pickett's Charge, occurred was in fact a collection of smaller fields, rather than a single large field as previously assumed.

¹¹⁵ Foard, 'Documentary and Archaeological Evidence', pp.64-78.

¹¹⁶ Scott and McFeaters, p.111; 'Magnetometry' <<http://www.archaeological-surveys.co.uk/subpage1/index.html>> [accessed 12 February 2014] (para.1 of 7); 'Lidar' <<http://www.english-heritage.org.uk/professional/research/landscapes-and-areas/aerial-survey/archaeology/lidar/>> [accessed 11 February 2014] (paras.1, 7-9 of 10).

¹¹⁷ Christopher V. Maio and others, 'Application of Geographic Information Technologies to Historical Landscape Reconstruction and Military Terrain Analysis of an American Revolution Battlefield: Preservation Potential of Historic Lands in Urbanized Settings, Boston, Massachusetts, USA', *The Journal of Cultural Heritage*, 14.4 (2013), 317-331 <<https://iup.lub.lu.se/search/publication/3975938>> [accessed 10 February 2014].

interpret data, place them beyond the scope of this thesis.¹¹⁸ Nonetheless, the interrelationship between a battlefield's historic and modern terrain cannot be ignored, particularly in light of the study's implications for subsequent archaeological surveys. To resolve this issue, the thesis will refer to Google Earth, alongside photographs taken on site visits, to gain an appreciation of the changes and developments which have occurred within the battles' modern landscape. A similar approach, using identical methods, was employed by Chris Espenshade to study the little-known battle of Credit Island, fought as part of the Anglo-American War of 1812, and has enabled scholars to define the modern site of the action without archaeological excavation.¹¹⁹

Once terrain reconstruction has taken place, the deployment and subsequent manoeuvres of the opposing armies must be plotted within the historic landscape. This requires the characterisation of each army in terms of its size, composition, and commonly used tactical formations, and a corresponding assessment of the battle's key events to be gleaned from documentary sources. In the first instance, establishing the number of soldiers comprising each force, their distribution into different tactical units, and the physical space required to array these units, is a vital precursor to mapping the armies' most likely deployment. While such plans are highly conjectural, and fail to account for undocumented failure to adopt standard formations or unknown landscape features which do not appear on subsequent maps, they offer the most effective means of showing, at a glance, an army's positioning of its forces in relation to each other, their opponents, and the terrain. Additionally, awareness of common tactical formations can, when paired with an understanding of the battlefield's historic landscape, disqualify some of the more unlikely estimates of army size on the grounds that such numbers would prove impossible to deploy within the space available.¹²⁰ Ideally, narratives of the battle would inform this process by detailing where, and in what array, each commander positioned his forces. However, this is seldom the case, with sources often providing only a vague overview of the encounter, focusing on one section of the battlefield in detail, or simply failing to elucidate military deployments and terminology that would have been familiar to their contemporaries. Such shortcomings of textual evidence are inevitable, and require informed assumption, using prior knowledge of the armies' armaments, battlefield formations, and tactical doctrine to deduce how forces might operate within the context of the reconstructed terrain.

¹¹⁸ As of 2014, Lidar data for much of the UK is now available via the Environment Agency website <<http://www.environment-agency.gov.uk/research/commercial/105331.aspx>> [accessed 10 February 2014].

¹¹⁹ Chris Espenshade, 'The Forgotten Battle: Credit Island' <<http://warof1812archaeology.blogspot.co.uk/2013/04/the-forgotten-battle-credit-island-part.html>> [accessed 7 February 2014].

¹²⁰ Foard, 'Problems and Potentials', p.142.

Military Terrain Analysis, as this methodology is termed, has developed from Burne's theory of Inherent Military Probability into a more nuanced concept, variously referred to by the acronyms KOCO, OAKOC and OCOKA, derived from modern tactical guidelines.¹²¹ Where Burne interpreted a battlefield as a whole, assessing how a trained soldier would seek to exploit the available terrain, the KOCO method breaks this process down into a series of quantifiable stages.¹²² These are identified as Key Terrain, Observation and Fields of Fire, Cover and Concealment, Obstacles, and Avenues of Approach and Withdrawal.¹²³ The first of these categories, key terrain, defines topographical features that exert an impact during combat, including those designated as Decisive Terrain, where victory is contingent upon gaining or retaining control of these areas.¹²⁴ The principles of observation and fields of fire govern where soldiers can be most-effectively deployed to detect and destroy their enemy, for example a commander siting artillery might place his guns atop available high ground, whereas the availability of cover and concealment offers to negate these factors by hiding or screening troops behind intervening terrain.¹²⁵ Obstacles represent the various natural (existing) or man-made (reinforcing) impediments that can be used to block, disrupt, or redirect an enemy advance, for instance by channelling attacking forces away from areas of cover and concealment and into defending troops' field of fire.¹²⁶ Finally, avenues of approach and withdrawal can represent both the paths by which soldiers arrive at or leave the battlefield, and also the key access points to a particular area or terrain feature within the combat zone.¹²⁷ As a rule, attacking commanders seek routes that offer the greatest possible cover and concealment, while defenders attempt to neutralise these same approaches through the use of obstacles, and by preparing counterattacks.¹²⁸

Applying these general principles to historic engagements, however, can lead to problematic assumptions regarding the universality of military thinking and processes, with John and Patricia Carman asserting that battlefields were selected as much for their ritualistic and cultural significance as for more practical advantages of ground and terrain.¹²⁹ Although

¹²¹ 'American Battlefield Protection Program', (para.17 of 40).

¹²² Burne, pp.xix-xx; 'Introduction to Terrain Analysis' <http://www.mc.edu/rotc/files/8113/1471/9553/MSL_202_L03a_Intro_to_Terrain_Analysis.pdf> [accessed 10 February 2014] (244-65), p.249.

¹²³ 'OAKOC: A Method of Terrain Analysis' <<http://varifleman.wordpress.com/2011/01/27/oakoc-a-method-of-terrain-analysis/>> [accessed 9 February, 2014] (para.2 of 4).

¹²⁴ 'Introduction to Terrain Analysis', p.252.

¹²⁵ 'American Battlefield Protection Program', (paras.18, 22 of 40).

¹²⁶ 'Introduction to Terrain Analysis', pp.253-4.

¹²⁷ 'American Battlefield Protection Program', (para.20).

¹²⁸ 'Introduction to Terrain Analysis', p.251.

¹²⁹ John Carman and Patricia Carman, *Bloody Meadows: Investigating Landscapes of Battle* (Stroud: Sutton Publishing, 2006), pp.13-26. This study argues that certain tactical decisions, deployments, and manoeuvres were 'dysfunctional' within a modern military context and thus

this challenge to the concepts of Military Terrain Analysis cannot be sustained on the strength of evidence currently available to the Bloody Meadows project, which bases its conclusions upon contemporary rather than reconstructed landscapes, such alternative theories highlight the importance of considering period-specific, rather than modern, tactical requirements.¹³⁰ For example, Burne's inference that all soldiers, irrespective of their historical context, would assess terrain in the manner of a mid-twentieth-century staff officer fails to account for changes and developments in weapons and tactics, which could exert a significant impact on the way in which armies deployed within the landscape.¹³¹ Where a modern commander might place infantrymen in small, dispersed units amidst woods or urban terrain, to provide concealment and protection from incoming fire, his medieval or Renaissance antecedent would be more concerned with finding open ground on which to array large, densely packed formations containing thousands of troops. Providing, then, that due attention is paid to the period's standard tactical deployments, as far as they can be discerned from instructional manuals and other engagements, Military Terrain Analysis can aid in the interpretation of battlefield positioning within a reconstructed landscape. This has been demonstrated by numerous examples within US battlefield studies, for instance at Chelsea Creek, Gettysburg, and Buckland Mills, leading to KOCOAs requirements becoming the standard means by which engagements are assessed.¹³²

The final stage of evaluating a battle, which involves considering the tactical movement of particular bodies of troops throughout the engagement, is heavily dependent upon narrative sources, and thus necessitates that this material, which may be of variable reliability and accuracy, be carefully scrutinised in relation to other evidence. The most efficient means of performing this task is through compiling a table of sources, breaking down the battle into a sequential catalogue of its component events and appraising the way in which these occurrences were rendered in different reports.¹³³ This establishes the key phases of the battle, provides a straightforward method of examining different interpretations of these events, and can also enable the detection of derivative material, where chroniclers have reproduced or embellished

demonstrated the different cultural factors shaping medieval, Renaissance, and early modern attitudes toward warfare.

¹³⁰ Scott and McFeaters, pp.12-14; Foard, 'Documentary and Archaeological Evidence', pp.23, 28-9. Scott and McFeaters suggest the importance of period-specific military knowledge, while Foard articulates this concept as a modification to Burne's theory, emphasising the importance of Inherent *Historic* Military Probability.

¹³¹ Foard, 'Documentary and Archaeological Evidence', p.23.

¹³² Maio, pp.323, 326-8; 'Battlefield Rehabilitation at Gettysburg', (para.6 of 9); 'Key Terrain; Observation and Fields of Fire; Cover and Concealment; Obstacles; and Avenues of Approach and Retreat at the Battle of Buckland Mills, 19th October 1863'

<http://www.fauquiercounty.gov/documents/committees/TranspComm/minutes/Battle_of_Buckland_KOCoA_Analysis.pdf> [accessed 6 February 2014], pp.1-7.

¹³³ See Espenshade, for instance, who uses a concordance of sources when assessing the battle of Credit Island.

earlier histories.¹³⁴ While these concordances will not, for reasons of space, be presented as part of the thesis, they represent a vital part of the methodological framework underpinning the reconstruction of a battle's events. Where sources are sparse, contradictory, or elliptical, their interpretation can be assisted by Military Terrain Analysis, in the same manner as when assessing deployments, allowing historians to engage in educated guesswork as to where poorly documented phases of an action could conceivably have occurred. The value of this approach has been proven by work at Gettysburg, where KOCOA analysis, based upon reconstructed terrain, provided a template of how an army operating according to the period's standard tactical doctrines would interact with the landscape of the battlefield.¹³⁵ In this instance, the well-documented nature of the encounter enabled the validation of the KOCOA model, with the rival armies behaving as predicted and illustrating the high degree of correlation between military theory and practice.¹³⁶

Having outlined the key sources and methodologies used throughout this thesis, the following chapters will expand upon England's military organisation, weapons, and tactical deployment, to determine the country's place within the European context and establish a framework for later case studies of battles associated with rebellion. Discussion of these conflicts, in Devon, at Dussindale, and at London, will be facilitated by this prior consideration of their source material, allowing focus to be maintained upon the campaigns and battles themselves, rather than being diverted to assess the accuracy and reliability of the available evidence. Similarly, where terrain reconstruction can be attempted, it will be carried out in accordance with the processes described in this chapter, obviating the need to repeat this information and allowing subsequent analysis to concentrate on the individual circumstances of each battle and its unique landscape.

¹³⁴ Foard, 'Documentary and Archaeological Evidence', pp.45, 180-2.

¹³⁵ 'Battlefield Rehabilitation at Gettysburg', (para.7 of 9).

¹³⁶ 'Battlefield Rehabilitation at Gettysburg', (para.8of 9).

Chapter 2: The Tudor Military

Introduction

The army of Henry VIII and his successors has attracted considerable attention amongst historians despite the infrequent deployment of English military assets throughout the early-to-mid-sixteenth century. In the context of parallel changes in European warfare, which arguably amounted to a Military Revolution, England's differing rate of technological and organisational transition has been interpreted as proof of the country's backwardness. While this viewpoint has been challenged by some modern scholars, who have emphasised England's emerging military infrastructure, these revisionist approaches have yet to gain widespread acceptance. In light of this issue, and because of the fundamental importance of defining the resources used in propagating and suppressing rebellions, consideration of England's army forms a prerequisite to the detailed studies of later chapters. Accordingly, this chapter will comprise the first of a three-part overview of the Tudor army, detailing its organisation and personnel, prior to Chapter 3's consideration of armaments and Chapter 4's discussion of tactical formations and battlefield deployment. The first stage of this process will involve the characterisation of England's military institutions, including small, professional bodies like the Gentlemen Pensioners, Yeomen of the Guard, and Honourable Artillery Company, alongside the larger institutions of the militia and navy. Semi-permanent sources of recruitment, such as foreign mercenary bands and the retinues of leading nobles, will also be examined to establish their relationship to official state organs. Having identified the army's underpinning infrastructure, the remainder of the chapter will delineate the different types of personnel it contained, briefly summarising their equipment and battlefield role, before considering the way in which contingents of Tudor soldiers were organised for battle.

Military Institutions

The English army of the early-to-mid-sixteenth century was distinct from those of its continental neighbours on account of both its decentralisation and the scarcity of its permanent organisations, a peculiarity which Cruickshank interpreted as an absence of military infrastructure and, implicitly, professionalism.¹³⁷ Where European powers increasingly experimented with large standing formations, for example the Spanish *Tercios* and later French Legions, the Tudor state lacked comparable institutions until the creation of the Elizabethan

¹³⁷ Cruickshank, *Army Royal*, p.188.

Trained Bands in the 1570s.¹³⁸ Instead, English armies were assembled afresh for each campaign from a heterogeneous collection of permanent and semi-permanent bodies, rather than existing as a pre-established whole.¹³⁹ Furthermore, as Goring noted, troops were either drawn from the country's traditional 'quasi feudal' infrastructure or its newly emerging 'national system', potentially creating tensions through the combination of these separate methods of recruitment.¹⁴⁰ Despite the ad hoc nature of this process, the state could muster sizeable campaign armies, as evidenced by the 1513 and 1544/5 invasions of France, which respectively involved the deployment of 31,000 and 40,000 soldiers, illustrating the effectiveness of its military organisation.¹⁴¹

The King's Spears/Gentlemen Pensioners and the Yeomen of the Guard

The soldiers comprising these units embodied, along with the state's artillery organisations, the few standing forces available to English rulers. Created in 1509 upon Henry VIII's accession, the King's Spears were a small corps of fifty veteran officers appointed by royal favour and accompanied by one hundred mounted archers and fifty light horsemen.¹⁴² While theoretically a tactical unit, members of the Spears were frequently used as a ceremonial bodyguard to the King, or were detached to undertake independent duties, which could include commanding garrisons, leading contingents of soldiers, and serving as sea captains.¹⁴³ In 1539 this unit was expanded to contain seventy five officers and renamed the Gentlemen Pensioners, gaining a standard bearer, pay clerk, and harbinger, to give it greater tactical cohesion than its previous incarnation as the Spears.¹⁴⁴ Although individual Pensioners were still assigned to other functions, they also fought together on occasion as a company of mounted men at arms, a role they fulfilled at the 1547 battle of Pinkie, where they led the charge against the Scots' pikemen.¹⁴⁵ The Pensioners were England's only official body of domestically raised heavy

¹³⁸ John Nolan, 'The Militarization of the Elizabethan State', in *Warfare in Early Modern Europe*, ed. by Hammer, pp. 259-88 (pp.264-8), (first publ. in *The Journal of Military History*, 58 (1994), pp.391-420); Steven Gunn, 'War and the Emergence of the State: Western Europe, 1350-1600', in *European Warfare*, ed. by Tallett and Trim, pp.50-73 (p.53).

¹³⁹ Raymond, pp.113-15.

¹⁴⁰ John Jeremy Goring, 'Social Change and Military Decline in Mid-Tudor England', *History*, 60 (1975), 185-97 (p.188).

¹⁴¹ Oman, *Art of War*, pp.290-1, 332-3.

¹⁴² A.V.B Norman and Don Pottinger, *English Weapons & Warfare 449-1660* (London: Arms and Armour Press, 1966), p.145.

¹⁴³ Luke Macmahon, 'Chivalry, Military Professionalism and the Early Tudor Army in Renaissance Europe', in *The Chivalric Ethos and the Development of Military Professionalism*, ed. by David Trim (Leiden: Brill, 2002), pp.185-212 (p.193).

¹⁴⁴ Raymond, p.145; Goring, 'Obligations', p.239. Harbingers were tasked with securing lodgings for formations on campaign.

¹⁴⁵ Davies, 'Thomas Audley', p.6.

cavalry, illustrating the necessity of compensating for this shortfall through the use of noble retainers and mercenaries.

The Yeomen of the Guard, created in 1485, were originally intended as a royal bodyguard and officer corps similar to the Pensioners, and fulfilled an almost identical role. However, rather than existing as a stable, company-level organisation, the Guard could be expanded from their stated strength of one hundred men by ‘extraordinary recruitment’ to temporarily boost their numbers in times of need.¹⁴⁶ Thus the 1549 rebellions saw their company swell to three hundred soldiers, while Queen Mary’s coronation in 1553 and the subsequent Wyatt Rebellion (1554) saw the mobilisation of an extra one hundred Guards. Equally, during the 1513 French campaign, Henry VIII was accompanied by six hundred Guards, transforming the unit into a powerful battlefield detachment.¹⁴⁷ In addition to serving as a discrete formation, contingents were also periodically despatched to the Calais Pale, with the garrison of Tournai being reinforced by 130 members of the Guard in 1515, and 185 of these troops serving at Boulogne in 1544.¹⁴⁸ As befitted such elite soldiers, the Guard were routinely outfitted with high-quality equipment including plate armour, halberds and bows, while members of the unit had carried more exotic weapons like javelins and firearms since the unit’s inception.¹⁴⁹

Artillery Institutions

England’s artillery infrastructure was significantly expanded during Henry VIII’s reign, rising from a nucleus of twelve gunners to encompass over thirty gunners and two hundred permanent personnel by 1526.¹⁵⁰ In the early sixteenth century England was reliant upon foreign imports, with the King’s agents obtaining weapons from Dutch, Flemish and German manufacturers, such as Hans Poppennyter of Malines, in preparation for war with France.¹⁵¹ This policy was clearly effective, providing the English expedition with sufficient stores of gunpowder and artillery to maintain an eight-day siege, helping to capture Thérouanne and Tornai, and supplying the ordnance that contributed to the Scottish defeat at Flodden.¹⁵² By 1515, continued continental purchases led to the country holding over four hundred bronze artillery pieces at the

¹⁴⁶ Hale, *War Studies*, p.252.

¹⁴⁷ *Ibid.*, pp.252-4.

¹⁴⁸ Goring, ‘Obligations’, p.230.

¹⁴⁹ Hale, *War Studies*, pp.252-4; Holmer, pp.61-2.

¹⁵⁰ O.F.G. Hogg, *English Artillery: 1326-1716 – Being the History of Artillery in this Country Prior to the Formation of the Royal Regiment of Artillery* (London: Royal Artillery Institution, 1963), pp.151-2.

¹⁵¹ H.L. Blackmore, *The Armouries of the Tower of London, Vol 1: Ordnance* (London: HMSO, 1976), pp.4-5.

¹⁵² Raymond, pp.34-5.

Tower.¹⁵³ Between 1515 and 1545, however, England began to recruit experienced European gun founders, such as Peter Baude, from France, Peter van Collen, from Cologne, and the Arcana family, from Italy, as a means of boosting domestic production.¹⁵⁴ As a result of this assistance, English craftsmen became more proficient, with Cornelis Johnson, Parson William Levett, Ralph Hogge, and the Owen family emerging as skilled native manufacturers in London, Sussex, and Wales by the early 1540s.¹⁵⁵ Under the influence of both foreign and native specialists, England's artillery industry, which had slowly developed around the Ashdown Forest since the late-fifteenth century, began to expand, with the casting of whole cannon in 1543 placing the country at the forefront of European development.¹⁵⁶

These increases in production and manufacturing techniques were accompanied by a shift towards a more institutionalised framework based around the arsenals and workshops of the Tower.¹⁵⁷ While this process was initially intended as a means of securing Henry VII's regime by consolidating control of England's artillery industry, transferring stockpiles of ordnance from Calais to London, it also resulted in the growth of administrative infrastructure.¹⁵⁸ The Tower not only kept detailed catalogues of all its weapons and provisions, but also recorded the frequency with which guns could be safely fired, assisting English armies during sieges and in battle.¹⁵⁹ Much of this increased efficiency can be credited to the expanded remit of the Master of Ordnance, England's highest ranking artillery officer. Where previously Tudor artillery had been commanded and administered on a temporary basis, Henry VIII broadened the Master's role to that of a permanent position.¹⁶⁰ The impact of this approach can be demonstrated by the long career of Christopher Morris, the first post-reform Master, who originally served as a gunner in the Tower in 1513, illustrating the Tudor state's retention of experienced personnel in the absence of official infrastructure. In 1523, after having participated in the sieges of Tournai (1515) and Morlaix (1522), Morris was promoted to Quartermaster Gunner at Tournai before becoming Overseer of Ordnance in 1524 and being assigned to diplomatic work until 1536, when he was named Master of Ordnance.¹⁶¹ After his appointment Morris accompanied the expedition to Scotland in 1544, participating in the unsuccessful siege of Edinburgh, before dying later that year from gunshot wounds suffered at Boulogne.¹⁶²

¹⁵³ Blackmore, pp.4-5.

¹⁵⁴ Hogg, *English Artillery*, p.19.

¹⁵⁵ Hogg, *English Artillery*, p.20.

¹⁵⁶ Fissel, p.44.

¹⁵⁷ Blackmore, p.10.

¹⁵⁸ David Grummitt, 'The Defence of Calais and the Development of Gunpowder Weaponry in England in the Late Fifteenth Century', *War in History*, 7 (2000) 253-72 (p.264).

¹⁵⁹ O.F.G. Hogg, *The Royal Arsenal: Its Background, Origins and Subsequent History* (London: Oxford University Press, 1963), p.39.

¹⁶⁰ Raymond, pp.163-7.

¹⁶¹ Hogg, *English Artillery*, pp.103-6.

¹⁶² *Ibid.*, p.106.

The increased duties and prestige associated with the Master of Ordnance were only one part of Henry VIII's reforms. In 1537 the Honourable Artillery Company, also known as the 'Fraternity or Guild of St George', was created to oversee the storage, maintenance, and deployment of ordnance and small arms, including handguns, crossbows, and longbows.¹⁶³ The formation of this body established a pool of trained personnel, often employed at the Tower or distributed amongst the country's many artillery fortifications, who were assisted by additional forces mobilised from nearby garrisons or the militia. Gunners also relied upon other troops, drawn from the least-capable members of the militia and formed into dedicated pioneer units, to transport, entrench, deploy, and defend their pieces in action. While pioneers made poor soldiers, their picks and mattocks could prove vital when emplacing artillery, creating earthworks, or breaching battlefield obstacles, and they also fulfilled a strategic function by destroying natural resources and fortification, a role that earned their Italian forerunners the appellation *Guastatori* or 'devastators'.¹⁶⁴ The English army at Pinkie contained fourteen hundred pioneers, who defended the artillery from enemy cavalry, while the victories over the Western rebels at Clyst St Mary and Sampford Courtenay were partly dependent on the tactical use of pioneers to outflank the insurgents' positions.¹⁶⁵

The creation and expansion of England's domestic artillery industry, alongside its associated administrative reforms, ranks as one of Henry VIII's key contributions to the country's military infrastructure, demonstrating the means by which the Tudor state incrementally modernised its army. However, like the aforementioned Spears/Pensioners and the Guard, artillery institutions existed on a far lesser scale than England's militia, the main manifestation of the 'national system'.

The County Militia

The largest of England's military institutions was the county or shire militia, a ubiquitous organisation that included significant portions of the country's population and could be called upon to provide manpower for both foreign and domestic service. The militia system originated with the Winchester Provisions of 1285 which stipulated the responsibility of every able-bodied man between the ages of sixteen and sixty to retain weapons and equipment appropriate to their wealth and social standing.¹⁶⁶ In practice, this commonly equated to a longbow or bill and limited body armour, although prosperous individuals might be obliged to provide additional

¹⁶³ Raymond, p.171.

¹⁶⁴ Michael Mallett, *Mercenaries and their Masters: Warfare in Renaissance Italy* (London: Bodley Head, 1974), p.191.

¹⁶⁵ Caldwell, 'Pinkie', p.83; see Chapter 5 for Western Rebellion.

¹⁶⁶ Raymond, pp.118-19.

supplies for those unable to furnish their own equipment.¹⁶⁷ Compliance with these regulations was assessed through periodic local musters and annual shire musters, wherein an area's military-aged population was assembled by ringing church bells and lighting beacons and was inspected by government-appointed Commissioners of Array, who recorded the suitable men and their armaments.¹⁶⁸ While attendance at the musters was not universal, and equipment was often lacking or defective, these methods ensured the maintenance of relatively accurate information on each region's military resources.¹⁶⁹ Furthermore, although all potential soldiers were gathered for review, only a portion of those mustered would be enlisted, making the militia more of a selection tool than a mass levy.¹⁷⁰

Nonetheless, adherence to the Winchester Provisions meant that significant quantities of war material were distributed amongst England's population, with Oman noting that 'bills and bows were in every farm and cottage', a situation with particular importance for the study of rebellions.¹⁷¹ As later chapters will show, popular uprisings often drew upon the same sources of local recruitment and equipment that were available to the militia, with individual soldiers proving capable of employing their weapons against the state. In the most severe cases of unrest, such as 1536, 1549, and 1554, insurgents could appropriate regional power structures, effectively making them synonymous with the shire militia and facilitating their calling the muster through the traditional means of beacons and bell-ringing to recruit supporters as though for legitimate purposes. The effectiveness of these methods can be seen during the Pilgrimage of Grace, where over 40,000 soldiers from the northern counties were assembled in this fashion.¹⁷²

Under normal circumstances when widespread mobilisation was required, expanded Commissions of Array, known as Commissions of Lieutenancy, were granted to prominent individuals, authorising them to recruit forces from several counties.¹⁷³ This process was streamlined through the introduction of Shire Commissions in 1488, replacing centrally administered mustering, and by the gradual substitution of indenture contracts for the existing Commissions of Array. Such contracts were drawn up between the Crown and militia administrators to specify a pre-determined number of soldiers to be made available when required, enhancing the speed with which troops could be raised and ratifying the length and conditions of their service.¹⁷⁴ Regardless of the means by which they were recruited, men

¹⁶⁷ Cruickshank, *Elizabeth's Army*, pp.12-17.

¹⁶⁸ Goodman, pp.137-40.

¹⁶⁹ Cruickshank, *Elizabeth's Army*, pp.131-40.

¹⁷⁰ Goring, 'Obligations', pp.6-7.

¹⁷¹ Oman, *Art of War*, p.288.

¹⁷² Bush, *Rebel Armies*, p.419.

¹⁷³ Goring, 'Obligations', p.311.

¹⁷⁴ Gervase Phillips, 'The Army of Henry VIII: A Reassessment', *Journal of the Society for Army Historical Research*, 75 (1997), 8-22 (pp.15-16).

selected for the militia were grouped into companies, often of variable size, under the command of local gentlemen and nobility.¹⁷⁵ As later sections will show, these were organisational rather than tactical units and so were routinely split up and combined into larger formations once they joined an army. Limited training was provided for these soldiers at the musters, although many individuals in northern counties would have already accrued combat experience through participation in border warfare with Scotland.¹⁷⁶ The seemingly makeshift nature of the militia, comprising heterogeneous contingents of part-time soldiers equipped according to their individual means, has attracted censure from subsequent historians who drew unfavourable comparisons with more administratively sophisticated European armies.¹⁷⁷ However, while contemporary continental bodies, such as the 1531 French Legions, had greater structural cohesion, they were still in their infancy and were often tactically unwieldy, had too few officers, and were irregularly paid, resulting in recurrent problems of discipline and morale.¹⁷⁸

The militia's continued use of England's traditional weaponry, the longbow and bill, has also been identified as a further weakness, with historians regarding the country's scarcity of pike and shot as proof of a nostalgic attachment to obsolete technology.¹⁷⁹ This theory, however, fails to account for the incremental expansion of England's supply of modern weapons, with Henry VIII's Inventory recording significant quantities of pikes and firearms, which were also shown in contemporary sketches of Pinkie, by John Ramsay, a Scot serving with Protector Somerset's army (Fig.3). The presence of these armaments in 1547 illustrated the Tudor state's slow but steady accumulation of pike and shot, a trend discernible at the 1544/5 siege of Boulogne, where between a quarter and a third of English soldiers were equipped in this manner.¹⁸⁰

¹⁷⁵ Goring, 'Obligations', pp.74-5.

¹⁷⁶ Phillips, *Anglo-Scots Wars*, pp.185-7; Raymond, pp.63-4.

¹⁷⁷ Oman, *Art of War*, pp.327-8; James Hooker, 'Notes on the Organisation and Supply of the Tudor Military under Henry VII', *Huntington Library Quarterly*, 23 (1959), 19-31 (pp.29-30). Hooker emphasised the continuity of England's medieval infrastructure under Henry VIII.

¹⁷⁸ Macmahon, p.200.

¹⁷⁹ Paul Cornish, *Henry VIII's Army* (Osprey: London, 1987), pp.22-3.

¹⁸⁰ Oman, *Art of War*, pp.324-33.

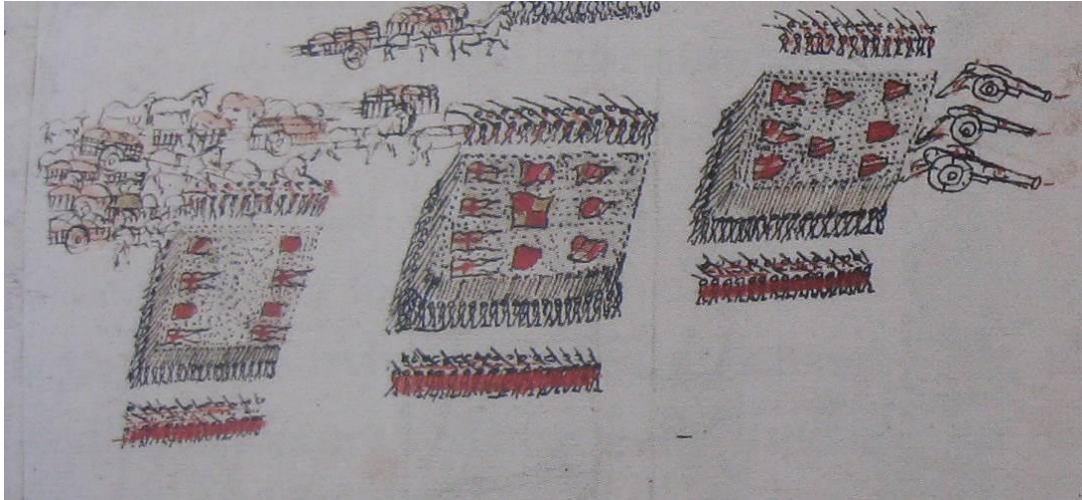


Fig.3. *Detail of contemporary drawing of battle of Pinkie by John Ramsay (1547)*, Bodleian Libraries, University of Oxford MS. Eng. Misc. c. 13 (r), repr. in Foard and Morris, p.99. Note that each of the main units of soldiers shown in this section of the drawing (the English army) appears to be armed with pikes, while the flanking detachments carry longbows (far side) and firearms (near side).

However, as these weapons were the property of the Crown, and were kept in storage at garrisons and national armouries ready for distribution during times of war, they were underrepresented at militia musters. This can be proven by analysis of general muster rolls from 1522 to 1557, which reveals that the majority of the militia were billmen or archers, with the latter category encompassing between a third and a quarter of the total.¹⁸¹ While these were not the only troop types available (for instance northern or Border regions often supplied light horsemen) exceptions were rare. County armouries were similarly representative of these patterns, containing stockpiles of spare weapons and armour, although such equipment was often of poor quality as a consequence of continued use or decay.¹⁸² For instance, armouries at Pontefract and Nottingham castle contained no pikes or firearms, but instead ‘olde empty chestes for arrowes’ and bows which were ‘old and nedeth reparacion’.¹⁸³ The shift in this trend began with the 1558 Militia Act, which sought to increase the presence of pikes and arquebus at the musters, further confirming that they were not widely available to the general population before this date.¹⁸⁴ By 1573, when the first Trained Bands were created in a bid to provide units armed exclusively with pike and shot, many of the better-resourced county militias had attained a 1:1 ratio of modern to traditional weapons.¹⁸⁵ While the Elizabethan army is beyond the scope of this study, the aforementioned distribution of weapons indicates that pike and shot did not

¹⁸¹ Goring, ‘Social Change’, p.192.

¹⁸² Davies, *Tudor Art of War*, pp.9-10.

¹⁸³ *Inventory*, fols.339^r-40^r.

¹⁸⁴ Raymond, pp.118-19.

¹⁸⁵ Fissel, p.55.

form part of the shire militia's armament until after the mid-sixteenth century, when the transition from 'quasi-feudal' to 'national' systems of recruitment was completed.

Garrisons, Urban Militias and the Navy

The Tudor garrison system encompassed over seventy cities, towns, castles, and bulwarks, storing vast quantities of weapons, armour, and artillery for supplying the militia and more experienced or professional soldiers.¹⁸⁶ The largest of these repositories, outside the Tower and palaces of London, were situated at Portsmouth and the Isle of Wight, to defend the southern coast, and on the Scottish Border, at Berwick and Carlisle, while fortresses in the Calais Pale protected England's French territories. Many of these garrisons were primarily artillery forts, housing ordnance of varying designation, calibre, and states of repair, with larger defences having between seventy and one hundred pieces and smaller outposts ten or fewer guns.¹⁸⁷ Although longbows and bills comprised the bulk of mustered armaments, England's larger garrisons often held extensive supplies of continental weaponry. For instance, Calais' stockpile of arquebus equalled its number of longbows in 1547, while the majority of Boulogne's 1544 arquebusier contingent were English, demonstrating the presence of large numbers of firearms in the country's arsenal, and a familiarity with gunpowder technology.¹⁸⁸ Handgun distribution clearly prioritised the largest garrisons, especially those skirting hostile territory like Calais and Berwick, while bows were universally amassed in large numbers throughout the country.¹⁸⁹ For close-quarter armaments a similar distribution can be observed, with the Inventory displaying an approximate 2:1 ratio of bills to pikes, with the bulk of the latter stored in major garrisons.¹⁹⁰

These institutions were more than mere storehouses, often forming vital staging posts for expeditions into France and Scotland by providing a secure base of operations where troops and supplies could be assembled.¹⁹¹ For instance, Protector Somerset's army commenced its 1547 invasion of Scotland from Berwick, which was intended to form the first of a series of garrisons in the ill-fated Scottish Pale.¹⁹² Additionally, garrison service may have been used for consolidating training and familiarising soldiers to military life on extended deployments before encountering the enemy in battle. While never formalised in the same way as the Spanish occupation of Italy, which was deliberately structured to rotate units between different areas, the

¹⁸⁶ *Inventory*, fols.250^r-374^r.

¹⁸⁷ *Ibid.*, fols.340^v-3^r.

¹⁸⁸ Grummitt, *Calais Garrison*, pp.123, 61.

¹⁸⁹ *Inventory*, fols.291^r-335^r, 347^r-59^v.

¹⁹⁰ *Ibid.*, fols.347^v-51^v.

¹⁹¹ Grummitt, *Calais Garrison*, pp.15-16.

¹⁹² Caldwell, 'Pinkie', pp.66-7.

Tudor army's use of garrisons may arguably have resulted in similar benefits.¹⁹³ This would have furnished a supply of trained manpower armed with a mixture of traditional and modern weapons to support both the militia and more specialised formations in battle. The number of soldiers deployed in this fashion would fluctuate according to the strategic context, declining in times of peace but increasing during periods of hostility. The Calais garrison, for instance, had its permanent staff reduced from one hundred to sixty six in 1502, but saw a dramatic rise throughout the 1540s, when it expanded to contain over seven hundred troops.¹⁹⁴ Additionally, this official strength was further supplemented by the 'petty wage' system, which permitted soldiers to subcontract their duties by hiring servants, effectively increasing the size of the garrison.¹⁹⁵ The full extent of this policy became apparent when Queen Mary attempted to reduce the Calais garrison's budget at the beginning of her reign, revealing that over three hundred servants had been recruited in this fashion.¹⁹⁶

The supply of trained, well-armed soldiers available from major garrisons was mirrored by England's urban militias. Unlike their rural equivalents, these troops were often recruited from wealthier portions of the population, or were armed at their municipalities' expense, giving them access to higher standards of equipment. This can be demonstrated by John Stow's description of the 1539 midsummer muster, the largest recorded assembly of London's militia, which reportedly totalled some fifteen thousand soldiers 'all in bright harness, with coats of white silk, or cloth and chains of gold'.¹⁹⁷ Stow's account emphasised both the quality of the London militia's accoutrements and the range of personnel it encompassed, as the following extract illustrates:

The marching watch contained [...] old soldiers of skill, to be captains, lieutenants, serjeants, corporals, [...] wiflers, drummers, and fifes, standard and ensign bearers, sword players, trumpeters on horseback, demilances [...] gunners with hand guns, or half hakes, archers in coats of white fustian, signed on the breast and back with the arms of the city [...] pikemen in bright corselets [with] burganets [...] halberd[iers], the like billmen in almaine rivets, and [...] mail in great number.¹⁹⁸

In addition to listing many of the Tudor army's common troop types, this passage also referred to 'old soldiers of skill' in positions of authority, indicating that the London militia was both well-led and equipped with a range of standardised armaments. The elite status of this body was signalled by the deployment of its companies to bolster regional forces in times of crisis, providing supplies of modern weapons alongside disciplined soldiers trained in their use. For

¹⁹³ Nolan, pp.265-6.

¹⁹⁴ Grummitt, *Calais Garrison*, pp.46, 52.

¹⁹⁵ *Ibid.*, p.56.

¹⁹⁶ *Ibid.*, p.61.

¹⁹⁷ John Stow, *Survey of London*, ed. by Henry B. Wheatley (London: Everyman's Library, 1912), p.94.

¹⁹⁸ Stow, p.94

example, accounts of the 1549 Norfolk Rising recorded the presence of a London company of two hundred pike and shot, commanded by Captain ‘Poignard’ Drury, which was instrumental in recapturing Norwich and defeating insurgents at the battle of Dussindale.¹⁹⁹ Equally, in 1554, a detachment of five hundred armoured London ‘White Coats’ formed part of a force despatched to confront Sir Thomas Wyatt’s rebels at Rochester.²⁰⁰ While the capital’s forces were evidently of the highest quality and represented the pinnacle of the ‘national system’ prior to the later formation of the Trained Bands, other cities were also capable of assembling smaller numbers of similar troops. This is demonstrated by the 1548 despatch of fifty arquebusiers from York into the Scottish Pale, a process which demonstrated the overlap between garrison forces and the urban militias.²⁰¹

The Tudor navy could also be considered a type of garrison force, based at sea but able to supply soldiers and weaponry for use in land operations.²⁰² Examples of this practice can be seen at Flodden and Pinkie, which were both won with the support of naval personnel. At Flodden the Lord Admiral, Thomas Howard, accompanied the Earl of Surrey’s army with 1200 marines, who participated in sustained close-quarter fighting with the Scots.²⁰³ At Pinkie, a fleet of between sixty five and eighty vessels bombarded the enemy positions and helped to transport the English field army’s supplies before the action.²⁰⁴ Furthermore, the navy underwent significant expansion throughout the early-to-mid century, rising from a total of 3982 seamen and soldiers and 447 gunners in 1514 to number 7741 men, including 1845 soldiers, 5136 sailors, and 759 gunners, in 1547.²⁰⁵ Although this represented a sizeable force when considered as one entity, these troops were dispersed between different vessels of the fleet, forming a semi-professional reserve similar to England’s garrison soldiers.

In addition to its considerable manpower the navy also provided stores of weaponry, with many warships containing excess armaments which could be distributed amongst land forces, effectively making these vessels akin to floating armouries.²⁰⁶ For example, the 1547 Inventory recorded that the *Mathewe Henry*, a warship with 300 crewmen, carried over 700 weapons, encompassing 300 pikes, 200 bills, 215 bows, and 18 hackbutts.²⁰⁷ Similarly, the *Mary Rose*, which had a crew of 400, was stated as carrying 50 hackbutts, 250 bows, 150 pikes,

¹⁹⁹ Cornwall, p.170.

²⁰⁰ *Chronicle of Queen Jane*, p.37.

²⁰¹ Grummitt, *Calais Garrison*, p.61.

²⁰² Phillips, ‘Army of Henry VIII’, p.15.

²⁰³ John Sadler, *Border Fury England and Scotland at War: 1296-1568* (Edinburgh: Pearson, 2005), pp.421-2.

²⁰⁴ Caldwell, ‘Pinkie’, p.68.

²⁰⁵ Stirland, p.54; *Inventory*, fol.380r.

²⁰⁶ David Loades, *The Tudor Navy: An Administrative, Political and Military History* (Aldershot: Scolar Press, 1992), p.97.

²⁰⁷ *Inventory*, fols.385^f-5^v, 391^f-1^v.

and 150 bills when the vessel sank during the 1545 battle of the Solent.²⁰⁸ While the relatively equal ratio of bills to pikes illustrated both weapons' usefulness at sea, bills proving effective in close-quarter boarding actions and the pike's greater reach making it valuable for ship-to-ship fighting, firearms comprised only a small portion of a vessel's transported missile weapons.²⁰⁹ Recent work on the *Mary Rose* wreck, however, has revealed the importance of handguns in action, with the majority of these weapons discovered in positions suggesting imminent use, while the ship's supply of longbows was mostly kept in storage below deck, implying that naval soldiers provided another source of arquebusiers.²¹⁰

Magnate Retinues

In addition to assembling the militia, garrisons, and the country's few permanent formations, English armies frequently employed indentured soldiers drawn from the entourages of leading members of the gentry, nobility, and clergy. This practice originated in the fourteenth century, when it replaced the feudal levy, and became the standard procedure for raising forces during the Hundred Years War and Wars of the Roses.²¹¹ The retinue system was essentially a form of military subcontracting, wherein the Crown liaised with regional magnates to provide contingents of soldiers from their household servants, attendants, and members of their estates. In some cases, powerful individuals could amass sizeable forces that amounted to private armies, particularly if their followers included lesser nobles and gentry who maintained smaller retinues of their own.²¹² While the existence of a parallel system of recruitment may have distorted regional musters through duplication, with retinue members being inadvertently recorded as part of the local militia, it evidently provided a highly effective means of rapidly mobilising semi-professional and well-armed soldiers²¹³. This can be demonstrated by the various indentured contingents accompanying Henry VIII's army in 1513, which included over a thousand pikemen supplied by the combined retinues of Lord Lisle, Burgeny, and the Duke of Buckingham.²¹⁴ Similarly, in the aftermath of the 1549 rebellions, the Duke of Northumberland created a unit of 850 men at arms to suppress further disturbances, assigning eight of its twelve companies to the command of members of the Privy Council.²¹⁵ While the unit's official disbandment in 1552 has been cited as proof of England's failure to develop permanent military

²⁰⁸ Peter Marsden, *Sealed by Time: The Loss and Recovery of the Mary Rose* (Portsmouth: The Mary Rose Trust, 2003), p.120.

²⁰⁹ Strickland and Hardy, p.394.

²¹⁰ Hildred, p.537.

²¹¹ Strickland and Hardy, pp.198-9.

²¹² Goodman, pp.127-37.

²¹³ Boynton, pp.32-3.

²¹⁴ Raymond, pp.82-3.

²¹⁵ *Ibid.*, p.117.

institutions, the soldiers contained therein had effectively been absorbed into Northumberland's retinue, an occurrence which highlights the formidable nature of many of these unofficial bodies.²¹⁶

Despite, or rather because of, the size and effectiveness of retinues, their independence was gradually but effectively curtailed throughout the early-to-mid-sixteenth century, continuing the centralisation of authority under the Crown that had begun during the late 1400s.²¹⁷ This growing royal control over military infrastructure can be discerned in the composition of garrisons within the Calais Pale, whose personnel were recruited from retinues in the same manner as English field armies. Between 1466 and 1502 the percentage of garrison soldiers belonging to an independent retinue fell from 36.6% to half that figure.²¹⁸ Henry VIII continued this trend by confining nobles to recruiting only their own tenants, ending a practice whereby followers could be acquired from any source.²¹⁹ Instead, indenture contracts were altered to mobilise retainers under a trusted servant of the Crown, preserving access to traditional sources of recruitment while affording greater control over such contingents.²²⁰ The impact of these restrictions, combined with the dissolution of the monasteries, the decline of noble families, and high levels of inflation, led Goring to assert that the 'quasi feudal' system was beginning to break down by the 1540s, with magnates and their tenants lacking the means or inclination to fulfil their obligations.²²¹

Regardless of this eventual decline, an inevitable consequence of the Crown's steady monopolisation of military power, the process was not completed until the passing of the Militia Act, which amalgamated the distinct 'national' and 'quasi feudal' systems into a single entity.²²² Prior to this, retinues remained a potent force, particularly in situations where regional infrastructures like the militia had been compromised, a frequent occurrence during instances of rebellion. In such cases, indentured troops often formed a first response force because of their greater operational mobility, an asset that was commonly achieved through higher standards of equipment and rapidity of mobilisation. In the first instance, many nobles were sufficiently wealthy to arm their followers as demi-lances or other horsemen, allowing their companies to travel further and faster than infantry soldiers. This can be seen during the Norfolk Rising, where the Marquis of Northampton, William Parr, responded to the capture of Norwich with a force of cavalymen.²²³ In the second instance, the capacity of nobles and gentry to fund their soldiers' wages allowed the Crown to reimburse retinue leaders in the aftermath of an

²¹⁶ Cruickshank, *Army Royal*, pp.192-4.

²¹⁷ Holmer, pp.161-2.

²¹⁸ Grummitt, *Calais Garrison*, p.49.

²¹⁹ Davies, *Tudor Art of War*, p.7.

²²⁰ Raymond, pp.120-1.

²²¹ Goring, 'Social Change', pp.189-91.

²²² *Ibid.*, p.196.

²²³ See Chapter 6.

emergency, a factor which eased the assembly and deployment of these forces.²²⁴ The combination of personal retainues' ease of mobilisation and high standards of equipment also increased the chance of their members participating in military operations, often ensuring that such units were not only better armed but also more experienced than the majority of the shire militia.

Mercenaries

England made extensive use of European mercenary soldiers throughout the first half of the 1500s, fuelling speculation that domestically raised forces were incapable of meeting their continental opponents in battle.²²⁵ This argument is buttressed by the fact that many hired soldiers were equipped with pike and shot or as heavy cavalry, supplying troop types and weaponry that the Tudor army was traditionally assumed to lack.²²⁶ The 1513 French campaign illustrates such practices, with the 31,000-strong English force containing approximately 7000 mercenaries, including 6000 pikemen and 1000 men at arms.²²⁷ Similarly, in 1523, foreign soldiers comprised over 40% of the English expedition to France.²²⁸ However, the significance of these instances has been exaggerated and, while England possessed smaller quantities of certain armaments and personnel than its European neighbours, the previous section has shown that these resources were not entirely absent and could be furnished in limited numbers by garrisons and retainues. Furthermore, analysis of contemporary French and Spanish armies shows that even states with plentiful stockpiles of modern weapons continued to hire large numbers of mercenaries.²²⁹ At the battle of Pavia (1525), for instance, 16,000 of the 28,000 soldiers deployed by France were mercenaries, a far higher proportion than were present in English armies.²³⁰ Equally, in 1542 the French army, estimated at 70,000 men, contained over 50,000 hired troops, including 43,000 Swiss or German pikemen, 4000 to 5000 Italian, Spanish and Albanian light cavalry, and 2000 heavy horsemen from Cleves.²³¹

If, as these figures assert, mercenaries were not hired to provide otherwise unfamiliar weapons and personnel, why were they employed in such numbers by both English and European armies? Macmahon and Phillips offer one interpretation of this phenomenon,

²²⁴ Goodman, p.130.

²²⁵ Miller, *Tudor Mercenaries*, p.xi.

²²⁶ Turnbull, *Renaissance Warfare*, p.143.

²²⁷ Oman, *Art of War*, pp.289-91.

²²⁸ Macmahon, p.197.

²²⁹ David Potter, 'The International Mercenary Market in the Sixteenth Century: Anglo-French Competition in Germany, 1543-50' (1996), repr. in *Warfare in Early Modern Europe*, ed. by Hammer, pp. 157-192 (p.157), (first publ. in *English Historical Review*, 111 (1996), 24-58).

²³⁰ Macmahon, p.200.

²³¹ Phillips, *Anglo-Scots Wars*, pp.52-3.

asserting that mercenaries were recruited to satisfy many states' demand for greater quantities of certain troop types.²³² In 1523, for example, although France possessed large numbers of heavy cavalry, comprising one hundred *companies d'ordonnance* which each contained forty men at arms and sixty mounted squires, these units were distributed throughout a country significantly larger than England.²³³ During the co-ordinated Anglo-Spanish invasion of 1544, only eight hundred men at arms could be mobilised to oppose the English, illustrating the shortages of manpower that could hinder even the best-resourced states when defending large frontiers.²³⁴

While this theory accounts for England's use of pikemen and heavy cavalry to augment the country's pre-existing but relatively scarce provision of these troops, it fails to recognise the importance of mercenary soldiers' greater combat experience. The effectiveness of well-trained, battle-hardened veterans is beyond dispute, and provided a central rationale for their employment by states with the capacity to raise large numbers of comparably armed troops. This can be proven by the frequent participation of Swiss pikemen and their counterparts, the Imperial landsknechts, in many of the battles fought between French and Spanish forces throughout the Italian Wars, where they proved superior to national troops. At Fornovo (1495) for instance, Spanish soldiers were defeated by the superior discipline and weapon-handling abilities of the French army's Swiss mercenaries, even when the enemy army was attacked during a river crossing.²³⁵ The suppression of the 1549 revolts in England similarly emphasised the superior fighting qualities of mercenaries in comparison to rebels drawn from the ranks of the county militia. This does not suggest that England's native forces were of uniquely poor quality, or that the country was more reliant on mercenaries than other European powers, but instead illustrates the inevitable disparity between experienced and amateur soldiers, regardless of their nationality.²³⁶

In England, mercenary usage was less sustained as a consequence of the state's geographical separation from European conflicts, a factor which not only removed the necessity of keeping large bodies of troops under arms but also reduced the country's ability to secure and retain these units. As Potter noted, it took until the 1540s for England to acquire the longstanding connections with mercenary suppliers enjoyed by their more frequent employers, making the Tudors only sporadic hirers of foreign soldiers.²³⁷ While a wide variety of troops were recruited for service in Scotland and France, ranging from the customary landsknechts to Italian men at arms, Spanish mounted arquebusiers, and Albanian *Stradiots*, these forces were reserved for limited-duration campaigns rather than prolonged deployments. At the battle of

²³² Phillips, *Anglo-Scots Wars*, p.52; Macmahon, 'Professionalism', p.198.

²³³ Macmahon, p.199

²³⁴ *Ibid.*

²³⁵ Mallett, *Mercenaries*, pp.244-7.

²³⁶ Hall, *Weapons*, p.225.

²³⁷ Potter, 'Mercenary Market', pp.159-63.

Pinkie, for example, an English army of some 18,000 soldiers was accompanied by a mere 800 mercenaries, while a further 3000 were obtained for the projected 1549 Scottish campaign and subsequently deployed against the Western and Norfolk rebels.²³⁸ Much like England's permanent formations, garrison troops, and retinues, these forces were primarily intended to augment rather than replace the country's militia. This was demonstrated at Pinkie, where mercenary arquebusiers combined their firepower with English archery and artillery to defeat the Scottish army.²³⁹ In this context, England's employment of hired soldiers, which took place on a significantly smaller scale than its European neighbours, was less a sign of weakness than an appreciation of the advantages offered by military professionals.

Personnel

Close-quarter Infantry: Pikemen and Billmen

Despite the increasing importance of artillery and infantry firepower, the outcome of sixteenth-century battles was commonly determined through prolonged close-quarter fighting between large units of footmen armed with staff weapons like the bill, halberd, or pike. The latter armament had become increasingly popular amongst European states during the early-to-mid-fifteenth century, after Swiss forces employed it in a series of resounding victories, resulting in the relegation of shorter weapons and cavalry to secondary roles. England, however, defied this trend for the first half of the sixteenth century and used limited quantities of pikemen to support greater numbers of bills, possibly because the Tudor state's nearest hostile neighbours, Scotland and Ireland, lacked heavy cavalry of their own.²⁴⁰ Additionally, the success of England's traditional weapons in the few battles in which they were deployed against the pike, at Stoke (1487) and Flodden (1513), may have encouraged their retention.²⁴¹ Similarly, some commanders also followed Spanish practices of partially or wholly arming units with swords and bucklers, small round shields used to deflect blows and turn aside weapons, having noted their utility against pikemen at the battles of Barletta (1502), Cerignola (1503), and Ravenna (1512).²⁴² Swords were more commonly carried as secondary weapons, however, enabling pikemen to defend themselves at close-quarters or in situations in which their formation was broken.

²³⁸ Potter, 'Mercenary Market', pp.187-9.

²³⁹ Caldwell, 'Pinkie', pp.84-5.

²⁴⁰ Raymond, pp.110-11.

²⁴¹ Eltis, p.104.

²⁴² Turnbull, *Renaissance Warfare*, pp.67-8.

Although professional soldiers would have been skilled fighters, gaining familiarity with their armaments through periodic drills and experience in battle, assessing the training and weapon-handling abilities of England's semi-professional billmen and pikemen is problematic. In the first instance, Boynton interpreted the lack of evidence for formalised training to imply that there were two tiers to England's army, and only those too poor or inexpert to arm themselves with other weapons were equipped with bills.²⁴³ However, this suggestion fails to recognise the weapon's performance in combat, as demonstrated at Flodden where English billmen defeated Scottish pikemen in gruelling close-quarter fighting, a confrontation that will be explored in more detail in Chapter 3.²⁴⁴ For pikemen the situation was different, as their weapons were impossible to employ without training in manoeuvring in formation, a requirement demonstrated by the Scots' rudimentary instruction by French advisors prior to the Flodden campaign.²⁴⁵ Thus, although England possessed relatively few pikemen until the mid-century period, these soldiers must have received some form of instruction prior to participating in battle. Barrett's *Handbook* alluded to this process, describing how the sergeant of a company should train his pikemen:

Such must instruct soldiers as well by signs [...] as by words and deeds how to train, march and use themselves in all points [...] laying the [pike]staff on his shoulder [the sergeant] march[es] forth, the company doing the like, sometimes he traileth the same on the ground, sometimes coucheth the same as it were to encounter enemies, sometimes retireth so couched, still his face toward the enemies, sometimes standeth still advancing his staff on high, the company standing still giveth silence, and according to every sign by him framed they do the like.²⁴⁶

Notwithstanding the impossibility of determining adherence to these guidelines, the above passage illustrates a relatively efficient means of tuition, whereby mustered soldiers could copy their sergeant's movements to familiarise themselves with the pike's standard handling drills. While such training would allow units to manoeuvre and fight with their weapons, their level of expertise would be considerably less than that of professional pikemen, perhaps explaining why English forces continued to hire mercenary landsknechts to support their continental campaigns.

Pikemen and billmen also wore protective equipment ranging from padded or quilted jacks, reinforced leather jerkins capable of absorbing a glancing blow or cushioning the impact of an arrow, to partial or full plate armour, which was expensive to manufacture but offered

²⁴³ Boynton, p.112.

²⁴⁴ Barr, p.52.

²⁴⁵ Gervase Phillips, 'In the Shadow of Flodden: Tactics, Technology and Scottish Military Effectiveness, 1513-1550', *The Scottish Historical Review*, 77 (1998), 162-83 (pp.169-70).

²⁴⁶ Barrett, *Handbook*, fol.5^r.

greater security for the wearer.²⁴⁷ Many soldiers attained a compromise between these extremes through the provision of ‘munition’ plate, often made from wrought iron rather than steel, which lacked the resilience of handcrafted armour but had the advantage of being cheap and was consequently mass-produced.²⁴⁸ English troops had variable access to armour or ‘harness’ depending on their position within the military hierarchy, with the country’s professional and semi-professional soldiers, like the Guard, London militia, and retainers, tending to possess the best quality protective equipment. Barrett’s *Handbook* listed the ideal quantities of armour for billmen and pikemen, stating that they ‘must be fair armed with corselets [breastplates], long tasses [upper leg protection], vambraces [arm pieces], [and] burgannets [helmets]’.²⁴⁹ For the shire militia, however, armour was often lacking or confined to jacks and sallets, the standard jerkin and helmet worn by their medieval predecessors, and ‘splints’, partial pieces of plate armour to protect the arms, with only 25% of personnel listed as ‘harnessed’ by the 1544 county muster lists.²⁵⁰ This is confirmed by Audley’s manual, which observed that ‘corselets be not easy for poor men to come by’ and called for greater state purchases of armour.²⁵¹ Audley also confirmed the limited availability of armour by recommending that units of soldiers contain ‘of every hundred of men XX [20] corselets’ and that the remainder ‘should be armed with such armour as they bring [...] with them for somewhat is better than nothing’.²⁵²

Missile-armed Infantry: Archers and Arquebusiers

Soldiers armed with missile weapons, collectively known as ‘shot’, were a vital component of an army’s infantry contingent, able to skirmish, attack enemy troops at range, or assist in close-quarter fighting where necessary. While Europeans exclusively carried gunpowder small arms like the arquebus, which had superseded the crossbow by the beginning of the sixteenth century, English soldiers continued to employ their traditional longbows alongside this new technology. Chapter 3 will provide extensive comparisons of these armaments, discussing their capabilities and the reasons for England’s delayed and partial transition to firearms. Beyond their weapons and ammunition, shot carried few accoutrements and wore significantly less armour than their comrades equipped with bill or pike, a practice corroborated by Audley’s statement that ‘no shot should have armour upon him but a morrion or skull upon his head’.²⁵³ Unlike arquebusiers,

²⁴⁷ David Caldwell, ‘Royal Patronage of Arms and Armour Making in Fifteenth and Sixteenth Century Scotland’, in *Scottish Weapons and Fortifications: 1100-1806*, ed. by David Caldwell (Edinburgh: John Donald, 1981), pp.73-93 (pp.84-9).

²⁴⁸ Strickland and Hardy, p.274.

²⁴⁹ Barrett, *Handbook*, fol.8^r.

²⁵⁰ Cornish, p.34.

²⁵¹ Audley, p.18.

²⁵² *Ibid.*

²⁵³ Audley, p.18.

who carried little more than a sword or similar weapon for protection, English archers were equipped for close-quarter fighting in the same manner as their fourteenth- and fifteenth-century predecessors, as Barrett's *Handbook* showed:

Such weareth light armour or else none, [having] a burganet or huslyn, a maul of lead with a pick of five inches long, well styled, set in a staff of five foot of length with a hook at his girdle to take off and maintain the fight as our elders have done, by handy strokes.²⁵⁴

Thus although archers matched arquebusiers in wearing 'light armour or else none', a description exemplified by their 'burganet or huslyn' helmets, they carried dangerous secondary armaments in the form of five-foot-long staff weapons, which have been compared to the feared Flemish *goedendag*.²⁵⁵ The provision of these weapons clearly anticipated close-quarter fighting, a tactical role explicitly described by Barrett's instruction that archers should 'maintain the fight as our elders have done, by handy strokes'.

A similarly longstanding tradition informed the training of archers, which was accomplished by weekend shooting practice and occasional competitions, and assessed at the musters according to the requirements of the Winchester Provisions.²⁵⁶ The importance attached to such continued drilling can be proven by Henry VIII's reissue of the Provisions in response to the 1522 general muster, which revealed the declining numbers of skilled archers available to the Tudor state.²⁵⁷ This led to many urban and rural areas increasing their efforts to maintain archery butts, and handing out fines to those who failed to practice with the bow.²⁵⁸ Despite these efforts, the country's changing agricultural patterns, which increasingly favoured pasture over arable farming, and severe outbreaks of disease in the 1540s and 1550s ensured that the reduction or 'decay' in suitable manpower could not be arrested.²⁵⁹ Similarly, the emergence of wealthier members of the commons, who abjured archery as a symbolic rejection of their feudal obligations, further sapped the inclination to train, although poorer subjects continued to hone their skills with the bow.²⁶⁰ While these factors reduced the numbers of proficient soldiers, the decline in archery was a gradual process and many bowmen retained their previous expertise. The skeletal deformities of bodies recovered from the *Mary Rose* wreck confirm this theory, with the vessel's archers having abnormally developed shoulder blades arising from continued practice with their heavy-draw-weight weapons.²⁶¹ As those who served aboard ship tended to

²⁵⁴ Barrett, *Handbook*, fol.7^v

²⁵⁵ Strickland and Hardy, pp.336-7.

²⁵⁶ Strickland and Hardy, *Warbow*, pp.391-3.

²⁵⁷ Fissel, pp.9-10.

²⁵⁸ Steven Gunn 'Archery Practice in Early Tudor England', *Past and Present*, 209 (2010), 53-81 (pp.53-9).

²⁵⁹ Goring, 'Social Change', pp.185-7.

²⁶⁰ Phillips, 'Longbow and Hackbutt', pp.592-3.

²⁶¹ Stirland, pp.118-22.

belong to retinues or specialist formations like the Guard, it seems likely that such organisations represented England's core of professional archers by the mid-century period.²⁶²

For arquebusiers, the situation was more complex, with Henry VIII's archery proclamations theoretically outlawing possession of gunpowder weapons.²⁶³ While this stance has been interpreted as a fear of rebellious subjects with access to firearms, the reality was probably more prosaic, with Phillips observing that untrained personnel posed a significant safety risk on account of the weapon's inherent inaccuracy.²⁶⁴ Regardless of the intentions behind the prohibition, it would only have applied to the shire militia, as significant stocks of arquebus were held in garrisons and similar repositories, as shown in the first half of this chapter. After the King's death, the Privy Council prioritised arquebus training and instructed urban militias and garrisons, such as the men of York, to practice with the weapon, perhaps in recognition of the longbow's declining influence in mid-century warfare.²⁶⁵ Although, with training like that described in Barrett's *Handbook*, native soldiers would have made competent arquebusiers, the state continued to hire mercenaries on campaigns, suggesting that expert soldiers may have handled their arms more effectively, perhaps attaining quicker loading or better marksmanship in action.²⁶⁶

Cavalry: Men at Arms and Demi-lances

Men at arms were heavily armoured cavalymen commonly associated with the medieval period and employed in battle to sweep away other horsemen, skirmishers, and disordered infantry units through the shock and momentum of their attack.²⁶⁷ Despite the increasing prominence of pike and shot, heavy cavalry continued in service throughout the sixteenth century, modifying their tactical function to a supporting rather than principal role to compensate for the changing battlefield environment.²⁶⁸ These troops were the best equipped soldiers in an army, having access to good-quality plate armour, shields, and barding for their mounts, which were powerful warhorses, while wielding lances and auxiliary weapons like swords and maces.²⁶⁹ In some cases, individual men at arms also carried pistols, although they were used as a secondary armament rather than in place of the lance.²⁷⁰ The expense of this equipment made dedicated *companies d'ordonnance* a rare sight outside the wealthiest European states, with the Pensioners

²⁶² Ibid., pp.127-30.

²⁶³ Boynton, pp.68-9.

²⁶⁴ Cruickshank, *Army Royal*, pp.79-81; Phillips, 'Longbow and Hackbutt', p.583.

²⁶⁵ Grummitt, *Calais Garrison*, p.136.

²⁶⁶ Barrett, *Handbook*, fol.16^r.

²⁶⁷ Phillips, *Anglo-Scots Wars*, p.24.

²⁶⁸ Phillips, 'Nimble Service', pp.66-70.

²⁶⁹ Norman and Pottinger, p.153.

²⁷⁰ Eltis, p.114.

representing England's only native source of such troops, although exceptionally wealthy magnates may have furnished retinues armed in this fashion. Nonetheless, the country could also draw upon its garrisons in the Calais Pale, who in 1547 provided a unit of five hundred heavy horsemen from Boulogne, known as the 'Bulleners', for service in the battle of Pinkie, where they supported the Pensioners' charge against the Scots' pikemen.²⁷¹ Equally, as previous sections have shown, mercenaries were regularly employed to circumvent this problem, granting Tudor armies access to heavy cavalry that was as well-equipped as that of their continental opponents.

Demi-lances had been a longstanding feature of English armies and were essentially lighter, faster, and more mobile versions of the men at arms, carrying similar equipment and intended to perform near-identical tactical functions. Their name derived from their eponymous weapon, a long spear intended for use on horseback, and they too would also have carried swords and similar weapons for sustained fighting.²⁷² Demi-lances were less protected than the men at arms, having only three-quarter length armour and lacking the horse barding of the former troops, but compensated for this with greater manoeuvrability, which enabled them to avoid undesirable confrontations.²⁷³ Despite their uniquely English name, similar troop types, such as the squires within French *companies d'ordonnance*, operated throughout Europe, illustrating the universality of lancers equipped to support men at arms and other forces in battle. In England these soldiers were commonly provided by retinue leaders, who were often unable to equip their followers as men at arms but could meet the cost of demi-lance service, a capacity recognised by the 1542 Warhorse Act which obliged those with sufficient resources to furnish suitable steeds.²⁷⁴ Neither men at arms nor demi-lances were formally trained, but instead derived their skills from their unofficial military education and participation in battle, both of which were assured because of their wealth and status.²⁷⁵

Light Cavalry: *Genitors/Stradiots*, Northern/Border Horse and Mounted Shot

While heavy horsemen and lancers performed a limited range of tactical functions, light cavalry had a wider remit encompassing raiding, escort duties, reconnaissance, and pursuit.²⁷⁶ In Europe, mercenary Albanian *Stradiots* (and their imitators the Spanish *Genitors*), customarily armed with javelins, scimitars and shields, and riding small, fast horses, were widely employed

²⁷¹ Norman and Pottinger, p.175.

²⁷² Norman and Pottinger, pp.153-4.

²⁷³ Phillips, *Anglo-Scots Wars*, p.26.

²⁷⁴ Goring, 'Obligations', pp.39-40.

²⁷⁵ Hale, *War Studies*, p.231.

²⁷⁶ Phillips, 'Nimble Service', pp.71-2.

to provide these operational functions, and to harass enemy forces in battle.²⁷⁷ At Cerignola, for instance, these troops were used to screen the Spanish defences from enemy reconnaissance, resulting in the failure of the French attack.²⁷⁸ From the mid-century onwards, English armies also began to employ *Stradiots*, with a contingent participating in the suppression of the 1549 Western Rebellion.²⁷⁹ While the hiring of mercenary soldiers was not in itself unusual, England already possessed exemplary light cavalry recruited from northern counties and the Border regions, which were commonly regarded as amongst the best in Europe.²⁸⁰

These Northern or Border horsemen were organised into hundred-strong companies equipped much like the *Genitors* and *Stradiots*, with spears, swords and shields, sometimes carrying missile weapons like bows and javelins, wearing a mixture of light armour, including jacks, sallets, and splints, and riding nimble mounts.²⁸¹ By 1546, England possessed approximately 2500 of these soldiers, who had proven their worth in engagements like Solway Moss (1542), where a small force commanded by Sir Thomas Wharton comprehensively routed an 18,000 strong Scottish army through a series of hit-and-run attacks as they crossed the Esk.²⁸² Although the defeat was attributable to ineffective Scottish leadership, the light horsemen's speed and manoeuvrability enabled them to exploit this weaknesses, illustrating the potential of such troops in the right circumstances. Despite the evident success of the Northern Horse, the increasing use of *Stradiots* from the mid-century onwards, and the rising expense of providing cavalry equipment, led to their rapid disappearance from English armies, with most Borderers serving as archers by the late 1550s.²⁸³ When not employed in their traditional skirmishing role, these soldiers may have been held in reserve to pursue defeated opponents, with Ramsay's drawing of Pinkie (Fig.4) showing the English light horsemen, who had defeated their Scottish counterparts the previous day, remaining unengaged as the other cavalry charged the enemy. Alternatively, when operating without infantry support, light cavalry forces may have dismounted, as occurred at Ancrum Moor (1545) when the English raiding party fought on foot with spears, flanked by archers and arquebusiers.²⁸⁴

²⁷⁷ Phillips, *Anglo-Scots Wars*, p.27.

²⁷⁸ Turnbull, *Renaissance Warfare*, pp.67-8.

²⁷⁹ Fissel, p.30.

²⁸⁰ George MacDonald Fraser, *The Steel Bonnets: The Story of the Anglo-Scottish Border Reivers* (London: Barrie & Jenkins, 1971), p.217.

²⁸¹ Ralph Robson, *The English Highland Clans: Tudor Responses to a Mediaeval Problem* (Loughborough: Bell & Bain, 1989), pp.174-6.

²⁸² Robson, p.175; Marcus Merriman, *The Rough Wooings, Mary Queen of Scots, 1542-1551* (East Linton: Tuckwell Press, 2000), pp.79-80.

²⁸³ Robson, p.203.

²⁸⁴ Glenn Foard, 'Scottish Battlefield Inventory: Ancrum Moor' (unpublished work, Battlefields Trust, 2006), p.4.

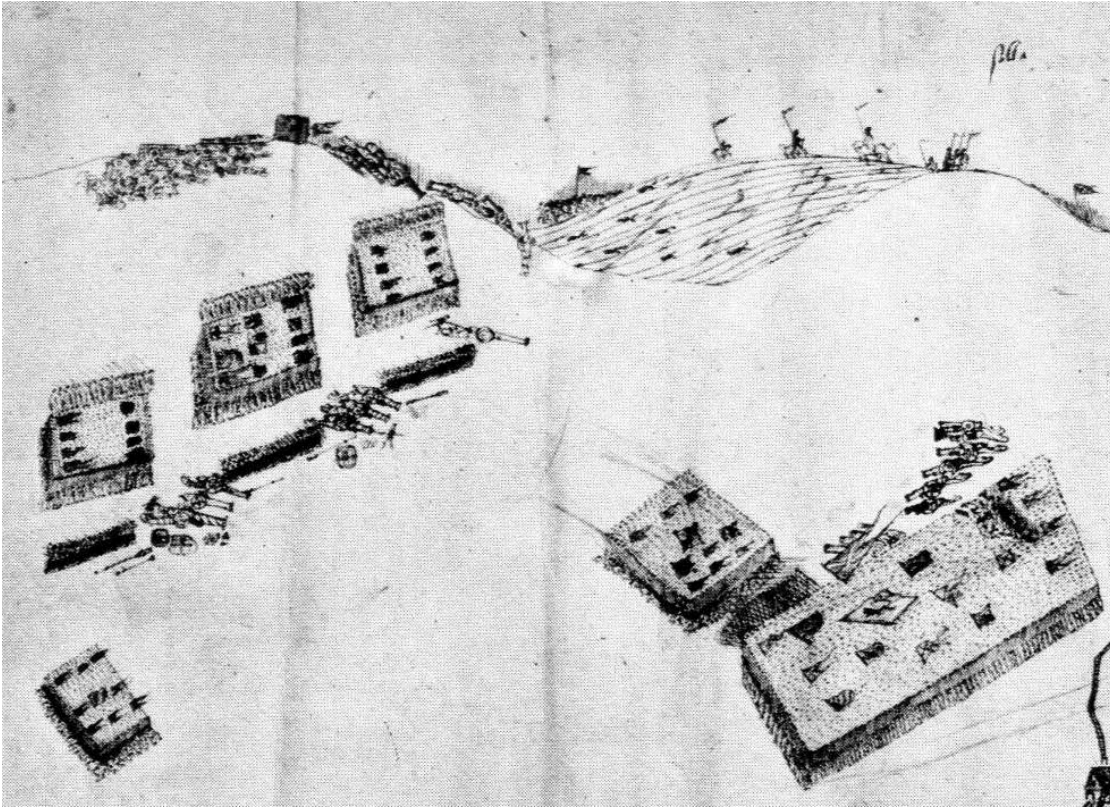


Fig.4. MS. Eng. Misc. c. 13 (r), repr. in Charles Oman, 'The Battle of Pinkie, September 10, 1547. As represented in unpublished drawings in the Bodleian Library', *Archaeological Journal*, 90 (1933), 1-25. Note the English light horse (bottom left) remain uncommitted while the other English cavalry (centre) charge the Scots' pikes.

In addition to light and heavy horsemen, Renaissance armies were often accompanied by mounted missile troops armed with either arquebuses or pistols, both of which became increasingly common throughout the later-sixteenth century, particularly during the French Wars of Religion (1562-1598).²⁸⁵ While these soldiers could function as dragoons, exploiting their steeds' manoeuvrability to redeploy before dismounting to fight, their main appeal was their expertise in discharging the arquebus from horseback, which made them ideal for skirmishing with and harassing enemy forces. The high weapon-handling and horsemanship skills required from these soldiers made them comparably rare in the early-to-mid 1500s, with Scotland first deploying native mounted arquebusiers in 1543 and England using foreign mercenaries throughout the mid-century period.²⁸⁶ At Pinkie, for instance, a detachment of two hundred mounted arquebusiers, led by the Spanish captain Pedro de Gamboa, accompanied the English army and exerted a powerful impact on the engagement in co-operation with the other shot. Units of infantry shot could also be mounted to enable them to keep pace with fast-moving raiding forces, although these troops would almost certainly have dismounted in action as they

²⁸⁵ Oman, *Art of War*, pp.463-4.

²⁸⁶ Phillips, *Anglo-Scots Wars*, pp.177-9.

either lacked the training or equipment required to fight from horseback, with longbows proving impossible to employ in this way. At Ancrum Moor, for instance, the English army consisted of two thousand light horsemen accompanied by fifteen hundred archers and fifteen hundred arquebusiers, all of whom dismounted prior to combat.²⁸⁷

The final category of cavalry, featuring soldiers armed with pistols, was commonly known as *Reiters* and had first seen use after the invention of the wheel-lock pistol during the 1520s, but became an increasingly common sight by the 1540s.²⁸⁸ As with mounted arquebusiers, such troops were highly specialised and were rarely seen in English armies, with small detachments of mercenaries accompanying Henry VIII's forces to Boulogne in 1544/5 and helping to suppress the 1549 rebellions.²⁸⁹ *Reiters* often wore partial or complete armour, rode unbarded horses, and carried at least two, and frequently more, wheel-lock pistols.²⁹⁰ During battle, they could either harass enemy infantry or engage men at arms at close-quarters, their weapons proving so successful against lance-armed heavy cavalry that the latter unit eventually faded from use.²⁹¹

Organising Tudor Armies

The Infantry Company and the Battle

Sixteenth-century armies were usually divided into three contingents, known as the Forward, Mainward, and Rearward battles, to provide administrative coherency and alleviate the difficulties of forming marching columns and fighting units.²⁹² Each battle was a huge, self-contained tactical entity encompassing thousands of soldiers, with only cavalry units and artillery operating with relative independence. The Swiss, for instance, deployed their pikemen in a single 3000-strong unit at Fornovo, and in battles each containing 7500 men at Bicocca (1522).²⁹³ English forces followed these precedents at Pinkie, dividing their 10,000 footmen into the customary three battles, with 4000 soldiers in the Mainward, and a further 3000 in both the Forward and Rearward.²⁹⁴ However, few countries recruited soldiers into pre-established formations of this size, meaning that battles had to be assembled from a collection of smaller companies before an engagement.

²⁸⁷ Foard, 'Ancrum Moor', p.4.

²⁸⁸ Turnbull, *Renaissance Warfare*, pp.175-6.

²⁸⁹ Davies, *Tudor Art of War*, p.14.

²⁹⁰ Arnold, pp.113-15.

²⁹¹ Hall, *Weapons*, pp.193-9.

²⁹² Oman, *Art of War*, pp.34-5.

²⁹³ Eltis, p.52.

²⁹⁴ Caldwell, 'Pinkie', p.68.

English companies, while theoretically established at one-hundred men, could be almost any size depending on the status of their captain and the area from which recruits were drawn, with forces raised from magnate retinues often proving particularly large and well resourced. In 1513, for example, the Earl of Northumberland provided a company of three-hundred archers and one-hundred billmen for Henry VIII's French expedition, in addition to a separate contingent of a hundred demi-lances.²⁹⁵ By contrast, forces mustered from sparsely populated areas or by poor gentlemen, such as the 'one tall billman' sent to Boulogne in 1544 by Lewis ap Richard, were inevitably under-strength and must have been combined to form larger companies.²⁹⁶ This numerical uncertainty, which continued throughout Elizabeth's reign, is summarised by Barrett's references to company sizes, in which he claimed that 'some think 100 some 150 sufficient; but whether it be of 100, 150, 200, 300 or more [...] it importeth not much'.²⁹⁷ Barrett's apparent lack of interest in standardised companies stemmed from the fact that such formations were not intended to operate alone, but were instead amalgamated to form the army's battles.²⁹⁸ While the bulk of the company would be kept together, archers and arquebusiers were often assigned to units of shot, a practice that Leonard Digges noted could place soldiers under unfamiliar officers, as a captain who remained with his close-quarter weapons 'must commit his shot to be led by another'.²⁹⁹ The resultant process of 'embattling' would have been complex and time-consuming, with commanders having to integrate numerous differently sized contingents into a single formation while maintaining the correct proportion of weapons and personnel. This is demonstrated by Audley, who asserted the need for battles to embody a carefully balanced distribution of weapons for the purpose of tactical versatility:

The division of weapons and placing of them is the chief strength of all battles [...] for if you have too many of one kind of weapon and too few of one other kind of weapon when you shall come to setting of the battle you shall find a great weakness by reason thereof. And the remedy thereof is easily to be done. For let every standard be like appointed to so many shot so many pikes so many bills, then shall all your army of footmen be in good order.³⁰⁰

The potential difficulties arising from these requirements were illustrated at the battle of Murten (1476), where the Swiss army had to merge twenty-seven separate sub-units into a single body, necessitating high levels of discipline and the existence of specialist administrative roles to co-

²⁹⁵ *Remembrances for the Apparel, Accoutrements, and Necessities of Henry Algernon Percy, Earl of Northumberland and his Retinue, preparatory to his joining the English Army in France in the year 1513: Commissioned from an MS in the College of Arms*, Sir Frederic Madden, K.H and S.A, in a letter to Charles George Young esq. F.S.A York Herald (24 December, 1835), pp.395-6.

²⁹⁶ Oman, *Art of War*, pp.333-4.

²⁹⁷ Barrett, *Moderne Warres*, Bk.2. fol.1^r.

²⁹⁸ Webb, p.99.

²⁹⁹ Digges, p.91.

³⁰⁰ Audley, pp.15-16.

ordinate the troops involved.³⁰¹ For Tudor forces these problems may have been exacerbated by a lack of comparable sophistication, with records of the 1544/5 French campaign failing to identify any intermediate ranks between the ‘grand captains’ temporarily appointed to command each battle and the company captains who officered each contingent therein.³⁰² Nonetheless, English military treatises emphasised the value of training in ‘embattling’ and suggested that company organisation was a key factor in this process, with Audley noting how ‘it is a grievous pain to set a battle with untrained men’.³⁰³

In addition to the captain, who was responsible for recruiting, administering, and leading their contingent, each company would have contained several subordinate individuals to manage its integration into the battle and ensure its cohesion during action.³⁰⁴ These ranks were identified by Audley as ‘a lieutenant, a standard bearer, a sergeant [...], four viteners [...], one drummer and a fife’, and are shown in the table below (Fig.5).³⁰⁵ As Barrett stated, the lieutenant, known as a ‘petty captain’ in the early-sixteenth century, served to assist the captain, and would ideally possess ‘great experience and knowledge of service in the field’, while the sergeant was responsible for ‘exercising or embattling’ the formation, making him a key member of the unit.³⁰⁶ Digges similarly emphasised the importance of the latter role, stating that the sergeant ‘ought perfectly by memorie to know every soldier within the bande, and how he is armed [...] that he may upon every sodain, place them accordingly’.³⁰⁷ Although the sergeant was integral to the company, possessing the necessary skills to arrange, or as Audley termed it ‘set’ the battle, he undoubtedly required assistance to do so.³⁰⁸ This role was filled by the viteners who were appointed to ‘have the leading of xx [20] men, of whose weapons they have the best skill’, an arrangement which would distribute them throughout the company, and in turn a battle, ensuring that discipline was maintained and the companies integrated in a coherent fashion.³⁰⁹ Regardless of the formation’s total size, it would effectively be divided into a series of twenty-man detachments operating under an experienced soldier’s supervision. The ensign bearer, drums and fifes would provide further assistance through communicating signals to soldiers during action, aiding the transmission of orders and serving, in Audley’s words, as ‘the mouth of the captain’.³¹⁰

³⁰¹ Eltis, p.19.

³⁰² Norman and Pottinger, pp.160-3; Oman, *Art of War*, p.328.

³⁰³ Audley, p.18.

³⁰⁴ Goodman, pp.127-8.

³⁰⁵ Audley, p.20.

³⁰⁶ Oman, *Art of War*, p.334; Barrett, *Handbook*, fols.4^r, 10^f.

³⁰⁷ Digges, p.86.

³⁰⁸ Audley, p.27.

³⁰⁹ Barrett, *Handbook*, fol.5^v.

³¹⁰ Audley, p.20.

| Rank | Typical Number | Function |
|--------------------------|--|--|
| Grand Captain | One per battle | Commanded an infantry battle. Selected from amongst company captains. |
| Captain | One | Commanded a company in battle and was responsible for recruiting, provisioning, and administering soldiers. |
| Petty Captain/Lieutenant | One | Assisted the captain with tactical manoeuvres and company administration. |
| Standard Bearer | One | Carried the company ensign, sometimes known as an 'ancient', providing a vital rallying point during combat. |
| Sergeant | One | Responsible for training company and organising soldiers within the battle. |
| Vitener | Ideally one vitener for every twenty soldiers | Assisted the sergeant in maintaining company cohesion. |
| Drums and Fifes | One of each | Used for military signals and for morale. |
| Footmen | Indeterminate (theoretically ninety in a one-hundred strong company) | Armed with pike, bill, arquebus, or bow. Missile weapons would be divided from remainder of company. |

Fig.5. Table showing the standard ranks contained within a typical English company.

Cavalry Organisation

While Renaissance armies were far larger than their medieval predecessors and frequently contained many thousands of troops, the majority of these soldiers were footmen, who were cheaper to recruit and equip. Thus for the first quarter of the century, between the battles of Fornovo and Pavia, the average proportion of horse to foot steadily decreased from a ratio of 1:1 to 1:6, as infantry armed with pike and shot gradually displaced the previously dominant cavalry

arm.³¹¹ By the mid-century period, however, increasing appreciation of the value of combined-arms tactics had begun to reverse this trend, leading to cavalry once again comprising a significant, though not dominant, proportion of field armies.³¹² The few occasions on which Tudor armies were deployed for major campaigns confirm England's adherence to this pattern, with Henry VIII's forces during the 1544/5 invasion of France having a general ratio of 1:7 cavalry to infantry, rising to 1:3 for more tactically important formations like the King's battle.³¹³ The English army at Pinkie had an even higher proportion, containing approximately 5000 to 6000 horsemen to support 10,000 footmen in accordance with contemporary European practices.³¹⁴ These soldiers followed the same organisational guidelines as the infantry, being assembled into battles from companies which theoretically contained one hundred soldiers, including a captain, standard bearer, and similar command staff.³¹⁵

Much like infantry battles, which balanced their numbers of shot against quantities of pikes and short weapons, cavalry units also comprised set proportions of different troop types in the interests of tactical flexibility, with Audley stipulating that 'every standard [have] so many men at arms unbarded and so many light horsemen'.³¹⁶ In this respect, the organisation of cavalry followed medieval precedents, wherein men at arms, acting as the leaders of tactical sub-units known as the 'lance', provided the foundations of a larger body of supporting troops.³¹⁷ Thus the larger each man at arms' 'lance', the more soldiers would be encompassed by the total formation and the smaller proportion of heavy horsemen it would contain. Audley explicitly confirmed this rationale through his requirement that 'if you have three horses to the furniture of a man at arms' two of these should be support troops, 'his demilance [and/or] his harquebusier on horseback', while larger 'lances' of five men should contain a further 'two demilances or harquebusiers on horseback'.³¹⁸ Following these guidelines would result in a battle's heavy cavalry being confined to between a third and a fifth of its horsemen, a distribution corroborated by further instructions in Audley's work to 'set forth no barded horses [...] but the fourth part' of each unit.³¹⁹ This advice to curtail 'barded horses' accurately reflected the Tudor state's limited access to men at arms, which were provided by foreign mercenaries or small native formations including garrisons, retinues, and the Pensioners. In their place, Audley asserted that 'I would have at the least the one half of the band light horses', a principle derived from such troops' exemplary performance on the continent, at Solway Moss,

³¹¹ Mallett, 'Transformation', pp. 4-5.

³¹² Oman, *Art of War*, p.367.

³¹³ Davies, 'Thomas Audley', p.6.

³¹⁴ Caldwell, 'Pinkie', p.69.

³¹⁵ Oman, *Art of War*, pp.335-6.

³¹⁶ Audley, p.16.

³¹⁷ Davies, *Tudor Art of War*, pp.31-3.

³¹⁸ Audley, p.19.

³¹⁹ *Ibid.*, p.18.

and at Pinkie, with the 2000 light horsemen present at the latter action inflicting heavy casualties during the Scots' rout.³²⁰

Despite Audley's implication that mounted arquebusiers should comprise a third of a force's cavalry contingent, it is unclear whether mid-century English commanders attained such a ratio in practice. For instance, while accounts of the engagement at Ancrum Moor suggested that the 5000-strong English raiding force contained approximately 1500 mounted arquebusiers, the far larger Tudor army at Pinkie was limited to 200 'hackbutters on horseback' amongst 5000 cavalymen.³²¹ The reasons for this inconsistency may have stemmed from the quality of the troops involved, with accounts suggesting that the smaller company at Pinkie, led by the Spanish captain Pedro de Gamboa, who in 1544 had been appointed to command all of England's Spanish mercenaries, were professional soldiers.³²² By contrast, the force defeated at Ancrum Moor contained 'sundry hacquebutiers of the garrison', who, although mounted to allow their participation in the raid, dismounted to fight on foot.³²³ Thus a distinction may be drawn between specialist mounted troops, like Gamboa's company, and semi-professional infantry arquebusiers given mounts for operational mobility, with English armies mostly deploying smaller numbers of the former in preference to the latter. *Reiters* were limited to foreign mercenaries, and so comprised only a fraction of the Tudor army's total cavalry contingent.

Conclusions

Early-to-mid-sixteenth-century England, like contemporary European states, had access to a variety of troop types, each with different equipment and battlefield roles, whose combined deployment resulted in a versatile and tactically flexible army. Many of these units, while operating under differing nomenclature, performed identically to their continental counterparts, providing Tudor armies with infantry, missile troops, artillery, and the standard cavalry classifications of light, medium, and heavy horsemen. As with European powers, the country possessed variable quantities of certain soldiers, having, in an inversion of France's strengths, a surplus of light cavalry but a shortage of men at arms, and took steps to remedy such deficiencies on campaign by following the common practice of employing mercenaries.³²⁴

Although England's military administration was less permanently established than that of its continental neighbours, its armies were organised according to similar criteria, with companies amalgamated into larger battles which were supported by cavalry and artillery.

³²⁰ Audley, p.18; Phillips, *Anglo-Scots Wars*, pp.151-3; Patten, p.124.

³²¹ Foard, 'Ancrum Moor', p.3; Patten, p.77.

³²² Potter, 'Mercenary Market', p.163.

³²³ *Letters and Papers [...] Henry VIII*, p.436.

³²⁴ Audley, p.18 on French cavalry.

As this chapter has demonstrated, the Tudor state utilised a number of key national organisations: the militia, garrisons, and navy, to furnish its armies. These soldiers were supplemented by troops raised from smaller native bodies, the artillery institutions, Pensioners, and Yeomen; by magnate retinues, recruited ‘quasi-feudally’; and finally by foreign mercenaries, hired to provide specialist manpower. This resulted in a pyramidal structure of military professionalism (Fig.6), placing native elites and foreign mercenaries at its apex, followed by larger numbers of soldiers drawn from garrisons, urban militias, retinues, and the navy, and finally by the broad base of the shire militia. While the militia inevitably comprised the bulk of English field forces, they were rarely deployed alone, but instead formed a core around which better-trained, armed, and motivated soldiers were assembled. Thus, although rebel armies frequently recruited members of the militia, either unofficially or via the appropriation of state infrastructure, and gained a supply of weaponry and personnel, they often lacked the means to substantially access the upper levels of the military hierarchy, making them tactically inferior to government forces. As later chapters will show, insurgencies were at their most dangerous when only limited resources could be mustered to oppose them, or, as with Wyatt’s Rebellion, when they gained the support of a wider spectrum of the Tudor military, including the soldiers of magnate retinues, urban militias, and other semi-professional forces.



Fig.6. The composition of the Tudor military. Note the broad base of the shire militia in contrast to smaller, more professional groups.

Chapter 3: Armaments

Introduction

The requirements and capabilities of weaponry exerted a powerful influence upon the nature of battle, determining, for instance, the way in which armies were deployed, and the formations and tactics used in combat. This was particularly true of the Renaissance, where the evolution of technology, including improvements in gunpowder small arms and artillery and the widespread adoption of the pike, acted as a catalyst for the organisational and tactical reforms that have been termed a Military Revolution. As Chapter 2 has shown, Henry VIII strengthened England's embryonic military infrastructure, augmenting the country's administrative systems and expanding its stockpiles of modern weaponry through imports and, increasingly, domestic production. Defining the characteristics of the longbow and bill alongside their European equivalents of pike and shot will establish the technological context in which Tudor armies operated, and will also enable direct comparison between the country's traditional and modern weapon systems. Such assessment is vital for determining the relative merits of both sets of armaments, and for exploring England's irregular developmental path, which witnessed their simultaneous deployment throughout the first half of the 1500s. Similarly, artillery played a vital role in many Renaissance battles, and became increasingly prevalent in English armies, necessitating an overview of the types of weapon employed and their capabilities in action.

Missile Weapons

The Longbow

The bow had been England's principal weapon since before the Hundred Years' War (1337-1453), underpinning a tactical system which had resulted in the victories of Crécy (1346), Poitiers (1356), and Agincourt (1415), and was subsequently memorialised by Tudor propagandists like Roger Ascham.³²⁵ Despite these associations, which led some historians to condemn it as obsolete by the sixteenth century, the bow was an exceptional weapon in the hands of experienced archers.³²⁶ The weapon was constructed from imported Spanish yew, consisting of a single 1.8 metre (m) piece of timber capable of withstanding the tremendous

³²⁵ Strickland and Hardy, pp.29-30.

³²⁶ Oman, *Art of War*, pp.382-4.

force exerted upon it without either breaking or losing its elasticity through repeated shooting.³²⁷ When loosing an arrow, an archer would draw his bowstring level with his ear using two fingers, twisting his body to apply the greatest possible pressure.³²⁸ Practice was essential to attain the necessary muscle strength for this exacting task, with an average longbow having a draw weight of 150-160lb, while heavier bows might require up to 190lb to attain their full draw.³²⁹ As noted in Chapter 2, the considerable strain of repeatedly drawing the bow appears to have led to unusual musculature development and skeletal deformity in professional archers.

An impression of the bow's power can be gained through its long reach, with an effective range of 150m, reaching an optimal distance at between 60m and 120m, and having the ability to harass targets at up to 400m under ideal conditions.³³⁰ While attaining the weapon's extreme range may have required considerable practice, the *Handbook*, which advised archers to carry a third of their arrows 'more flighter than the rest to gall [...] further off than the usual custom', suggests that ammunition was also a factor.³³¹ The use of different types of arrow is well attested, with archers in the Hundred Years' War employing a selection (see Fig.7) which included broad-headed 'type 16s', for targeting horses and unarmoured personnel, and needle-headed bodkins for penetrating mail.³³² Modern testing has demonstrated the longbow's damage-dealing properties, with arrows shot by a strong archer typically imparting between 130 and 150 Joules (J) of energy to a target within 180m, easily exceeded the estimated 80J required to kill an unarmoured man.³³³ Although conservation issues have prevented comparable testing of medieval armour, the battles of the Hundred Years' War illustrate the weapon's capacity to pierce leather, mail, and low-quality plate, causing lethal or disabling wounds within its optimum range.³³⁴

³²⁷ Strickland and Hardy, pp.16-18.

³²⁸ Stirland, pp.123-6.

³²⁹ Strickland and Hardy, p.17.

³³⁰ Hall, *Weapons*, p.19. Such conditions included shooting in favourable winds from a slight gradient (see Strickland and Hardy, pp.412-14 for details).

³³¹ Barrett, *Handbook*, fol.7^v.

³³² Strickland and Hardy, pp.26-7.

³³³ *Ibid.*, pp.412-14.

³³⁴ *Ibid.*, p.278.

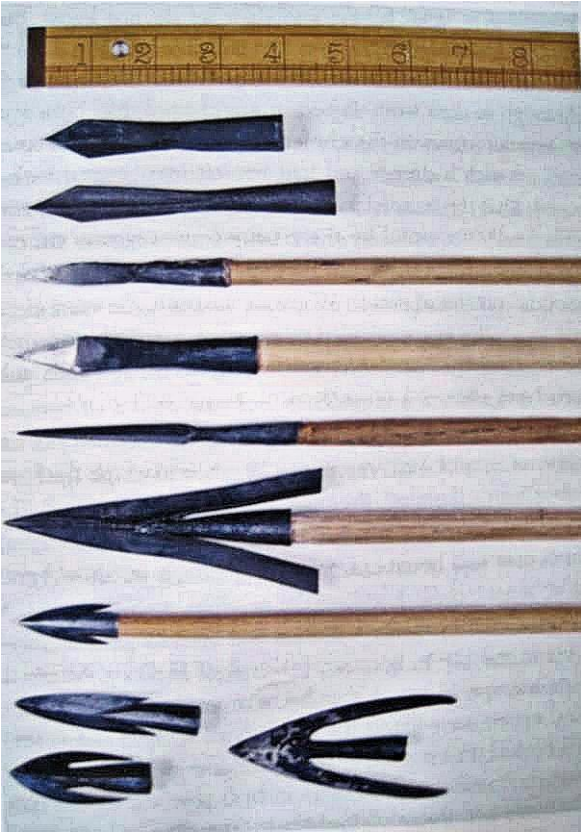


Fig.7. Reproduction arrowheads including (from top to bottom), four armour-piercing heads, bodkin head, broad-headed hunting arrow, three 'type 16s' and another hunting arrow, Strickland and Hardy, p.41.

This range and penetrative power was coupled with the weapon's frequency of shooting, with skilled bowmen able to loose five or more arrows per minute.³³⁵ While an archer attempting to maintain this rate would quickly exhaust his strength or ammunition, the ability to rapidly develop a concentrated barrage wherever it was required, against an incoming attack for instance, was a valuable asset.³³⁶ When shooting in this way, particularly at extreme range, archers would inevitably have sacrificed their customary accuracy. However, as the *Handbook* concluded, a long-ranged, albeit inaccurate, shower of arrows 'whose sharp manifold hailshot may not be endured' would force enemy soldiers to attempt to close with the archers, bringing them within the weapon's lethal range.³³⁷ It was this versatility, with archers able to engage distant targets before switching to heavier arrows for close-range shooting, that made bowmen the crux of England's tactical doctrine throughout the Middle Ages.³³⁸ In battles against the Scots, at Duplin Moor (1332) and Halidon Hill (1333), and French, throughout the Hundred Years' War, archers were deployed to catch attacking enemies in a double enfilade, disordering

³³⁵ Strickland and Hardy, p.298.

³³⁶ Hall, *Weapons*, p.20.

³³⁷ Barrett, *Handbook*, fol.7^v.

³³⁸ Barr, p.53.

and fatally compressing their formations so that they could be defeated by more compact bodies of English infantry.³³⁹

By the mid-sixteenth century the effectiveness of archery was widely regarded to be in decline owing to a paucity of training, the use of inferior-quality wood for longbow manufacture, and the increasing prevalence of plate armour.³⁴⁰ While the previous chapter has discussed the socio-economic factors underlying this ‘decay’, which resulted in ever fewer numbers of professional archers available, issues of armour penetration also represented a significant reduction in the longbow’s battlefield utility. At Flodden, Hall recorded that the Scottish pikemen, who had armoured soldiers in their front ranks, ‘abode the most dangerous shot of arrows [...] and yet except it hit them in some bare place it dyd them no hurt’.³⁴¹ This historical evidence can be verified by scientific analysis showing that arrows could only penetrate an average of 2mm of plate armour, whereas most breastplates were at least 3mm thick.³⁴² Thus, while armoured troops were still susceptible to injury, particularly to their limbs where plate was at its thinnest to enable easier movement, they were unlikely to have been killed by arrow shot.³⁴³ The 1549 insurgencies, in which longbow-armed rebels struggled to inflict heavy casualties on well-armoured loyalist forces, illustrates this trend in practice, as later chapters will show.

Despite their decreasing impact, archers still occupied an important battlefield role, as the *Handbook*’s comments show, and continued to be employed in English armies in support of more modern weapons. Although unable to penetrate armour as efficiently as firearms, the longbow maintained its tactical function of harassing enemy units at long range, forcing its targets to either endure sustained shooting, against which ‘neither may the enemies put up hands or face to encounter the same’, or compelling them to advance.³⁴⁴ Even Hall’s account of Flodden, which emphasised the inability of English archery to seriously harm the Scots, conceded that they were ‘sore [...] [an]noyed’ by the deluge of arrows falling on their ranks.³⁴⁵ Equally, not all soldiers wore the same quantities or quality of armour, allowing the longbow to potentially retain its effectiveness against less well-protected footmen, horsemen, and shot.

The Arquebus

³³⁹ Hall, *Weapons*, p.20.

³⁴⁰ Strickland and Hardy, p.397.

³⁴¹ Edward Hall, *The Triumphant Reigne of Kyng Henry the VIII*, ed. by C Whibley (London: Jack, 1904), p.109.

³⁴² McLachlan, pp.63-4.

³⁴³ Phillips, ‘Longbow and Hackbutt’, pp.578-9.

³⁴⁴ Barrett, *Handbook*, fol.7^v.

³⁴⁵ Hall, *Triumphant Reigne*, p.109.

The arquebus was a form of matchlock firearm (see Fig.8) known by a variety of English names, including harquebuses, hagbuts, hackbutts, and double-, half-, or demi-hacks, terms which may have been interchangeable or which may have referred to particular variants of the weapon.³⁴⁶ Regardless of their exact nomenclature, such weapons were commonly made from wrought iron and mounted on a wooden stock, being fired via the application of a constantly burning ‘slow match’ to their touchhole.³⁴⁷ This ‘slow match’, while inconvenient, made the arquebus significantly easier to employ than earlier handguns, which required a lighted match be held directly against the touchhole, reducing the gunner’s ability to aim his weapon.³⁴⁸ Like all early-modern firearms, the arquebus had a time-consuming loading procedure designed to reduce misfires, wherein the gunpowder failed to properly ignite. The most common cause of such failures was the loading of too much or too little powder, the risk of which was gradually reduced through the use of pre-measured charges, and the build-up of powder residue from repeated firings, which could clog the barrel and prevent the weapon discharging.³⁴⁹ Notwithstanding misfires, which could reach high numbers during the stress of combat, particularly amongst inexperienced soldiers, contemporaries estimated that it would take approximately forty seconds to load and fire the arquebus.³⁵⁰

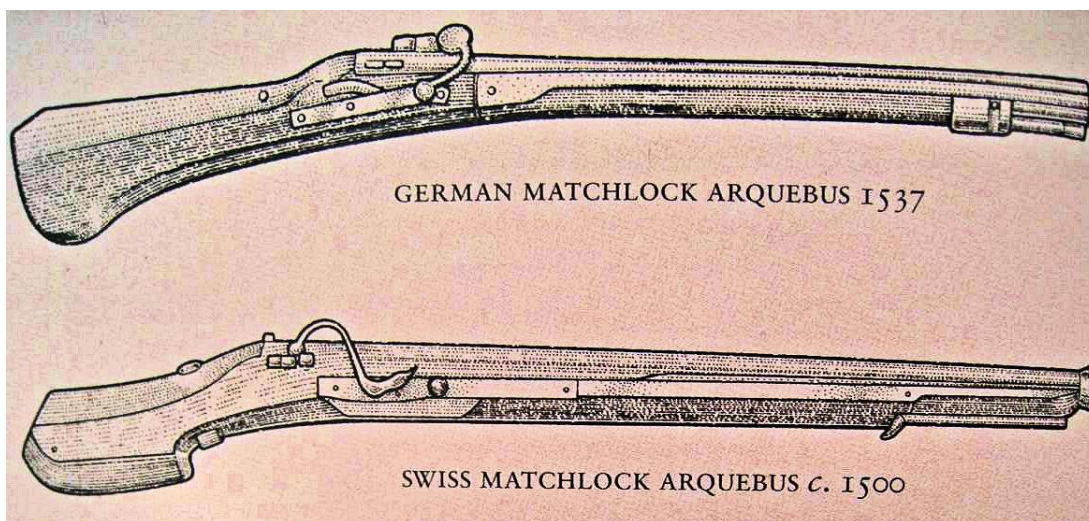


Fig.8. Sixteenth-century German and Swiss Matchlock Arquebus. Arnold, p.96.

According to Barwick, who, in 1594, recorded details of his earlier service in Henry VIII’s army at Boulogne (1544/5), the arquebus had a maximum range of 220m but was only accurate at half

³⁴⁶ Hildred, p.543.

³⁴⁷ McLachlan, pp.31-3, 65-6.

³⁴⁸ Ibid., pp.32-3.

³⁴⁹ Hall, *Weapons*, p.149.

³⁵⁰ McLachlan, p.71.

this distance.³⁵¹ In truth, gunpowder small arms were intrinsically imprecise, even when employed by trained marksmen, with tests conducted at the Graz armoury in the 1800s demonstrating that just 50% of shots from pre-modern weapons landed on target within 100m.³⁵² This inaccuracy stems from the poor ballistic properties of spherical projectiles, which exhibit an irregular aerodynamic performance in comparison with modern conical ammunition, an issue exacerbated by smooth-bore gun barrels that impart an unpredictable spiralling trajectory to their shot.³⁵³ Nonetheless, although handgunners struggled to hit lone individuals, they could attain reasonable accuracy when targeting large bodies of troops within 45m, where even shots deviating by several metres might strike soldiers further along the formation.³⁵⁴

These considerations informed the way in which firearms were employed in battle, with commanders often seeking to immobilise enemy forces within close range through the use of field fortifications and natural obstacles, while massing such weapons on narrow frontages to saturate an area with shot.³⁵⁵ At Cerignola (1503), for instance, the Spanish army dug a large ditch to stall French cavalry within their arquebusiers' optimum range, while at Bicocca (1522) French-hired Swiss pikemen were halted by a sunken lane and exposed to four devastating close-ranged volleys that succeeded in breaking their assault.³⁵⁶ An alternative means of operating within the arquebus' short effective range was pioneered by Swiss armies in the fifteenth century, which employed handgunners as skirmishers to rapidly close with enemy units and retire after discharging their weapons.³⁵⁷ This tactic continued in use throughout the sixteenth century, and can be seen at Pavia (1525) where Spanish arquebusiers took cover amidst woodland, hedges, and their own supporting blocks of pikemen while harassing the French at close range.³⁵⁸

Despite early firearms' inaccuracy, slow rate of shooting, and susceptibility to misfires, gradual refinements in manufacturing techniques and gunpowder production during the late-fifteenth and early-sixteenth centuries led them to displace the crossbow as the principal missile weapon of European armies.³⁵⁹ Given both weapons' similar rate of shooting, the increased stopping power of gunpowder small arms represented a key factor in this transition, with the arquebus having an initial muzzle velocity of 340 metres per second (m/s), significantly

³⁵¹ McLachlan, p.71.

³⁵² Hall, *Weapons*, pp.138-44.

³⁵³ Clifford Rogers, 'Tactics and the face of battle', in *European Warfare*, ed. by Tallett and Trim, pp.203-235 (p.211); Hall, *Weapons*, p.36.

³⁵⁴ McLachlan, pp.75-6.

³⁵⁵ Phillips, 'Longbow and Hackbutt', pp.577-8.

³⁵⁶ Hall, *Weapons*, pp.167-9; Turnbull, *Renaissance Warfare*, p.74.

³⁵⁷ McLachlan, pp.51-3.

³⁵⁸ Hall, *Weapons*, pp.179-183.

³⁵⁹ Hammer, *Warfare in Early Modern Europe 1450-1660*, pp.xvii-xvix.

surpassing the crossbow's typical 50-70m/s.³⁶⁰ This high velocity, coupled with the weight of the lead shot, produced more than ten times the crossbow's 200J of kinetic energy upon impact, piercing even the best armour at 25 to 30m, while heavier weapons like the Spanish musket could maintain this power over longer distances.³⁶¹ Although arquebus shot would rapidly lose its penetrative power beyond this range, as a consequence of air resistance and its associated 'drag', ballistic tests have indicated that the weapon caused more damage than modern small arms at close quarters, creating large entry wounds that tapered to a point as the projectile lost mass and energy.³⁶² In practice this would mean individuals struck by close-ranged fire would probably sustain fatal or incapacitating injuries even if wearing armour. Similar considerations governed the increasing prevalence of the wheel-lock pistol amongst cavalymen, with the weapon's short reach of approximately 5m proving sufficient to outrange the lances used by men at arms, whose armour would provide little protection at close-quarters against the pistol's 1000J discharge.³⁶³ Additionally, while heavy crossbows continued to be used in sieges, these weapons dramatically lengthened their reloading process in pursuit of greater power. This made them less useful on the battlefield at a time when firearms were becoming faster firing via the introduction of pre-measured gunpowder charges.³⁶⁴

Thus the decision to exchange crossbow for arquebus in Europe, effectively replacing less powerful and slower shooting weapons for those which fired faster and with greater impact, seems eminently practical. England's dissimilar national armament, however, made this process more complex, with the longbow and arquebus having comparatively little in common.

Longbow versus Arquebus

While there has been much debate regarding the relative merits of the longbow and arquebus, it is clear that neither weapon enjoyed unchallenged supremacy during the first half of the sixteenth century, with Audley and the *Handbook* advocating their simultaneous deployment based on earlier practice. The pairing of these armaments, which continued into the Elizabethan era, underlines the uncertain status of gunpowder weapons in England and challenges teleological assertions of their superiority. In fact, as modern research has demonstrated, early firearms were expensive, temperamental, and time-consuming to reload, with arquebusiers struggling to discharge more than one or two rounds per minute.³⁶⁵ These dubious accolades

³⁶⁰ Strickland and Hardy, pp.399, 410-11; Rogers, 'Tactics', p.210.

³⁶¹ Hall, *Weapons*, pp.138, 176-9; Rogers, 'Tactics', p.210. Modern testing of the arquebus has reported energy transfer of 2700J to its target.

³⁶² Hall, *Weapons*, pp.141-6.

³⁶³ Rogers, 'Tactics', pp.225-6.

³⁶⁴ McLachlan, p.27.

³⁶⁵ Hall, *Weapons*, pp.149-50.

were matched by inaccuracy and limited range, suggesting that the arquebus compared unfavourably with the longbow, which had a longer reach, greater accuracy, and a higher rate of shooting.³⁶⁶ The key issues of armour penetration and stopping power, however, allowed the arquebus to function as a credible alternative to the longbow, which had yet to be challenged by the slow evolution of the handgun.³⁶⁷ Mid-sixteenth-century English coroners' reports of fatal accidents involving longbows and firearms confirm their comparative depth of penetration against unarmoured personnel, graphically illustrating the greater lethality of gunpowder weapons.³⁶⁸ From the mid-century onwards, further improvements in gunpowder small-arms widened the gap between the two armaments to the extent that later commentators were able to claim that longbows were 'to no such effect as any of the fiery weapons'.³⁶⁹ Barrett's tract illustrated this point by outlining the longbow's flaws in relation to the calliver, a slightly later matchlock firearm with a longer barrel and consequently greater range and power than the arquebus.³⁷⁰

Your best archers can hardly shoot any good sheaf arrow above twelve score off, to perform any great execution, except upon a naked man or horse [...] and the said calliver [...] will reach and perform twenty, or four and twenty score off, whereunto you have few archers will come near. And if you reply, that a good archer will shoot many shots to one; truly no, your archer shall hardly get one in five of a ready shot, nay haply scarce one.³⁷¹

These criticisms of the longbow's range, accuracy, and armour-piercing abilities in comparison to gunpowder small arms, indicate the extent to which the latter had improved since the early-sixteenth century. While Barrett conceded that an archer's 'many shots to one' surpassed that of the calliver, he argued that such a rate of shooting would be inaccurate and 'shall hardly get one in five' arrows to land on target. Similarly, he contrasted the longbow's shorter lethal range with that of firearms, suggesting that they outranged bows to the extent that 'few archers will come near'. Although the calliver was superior to the arquebus, rendering Barrett's argument less convincing in an earlier context, many of the flaws he identified with the bow, such as its lack of range, power, and accuracy, originated in the mid-sixteenth-century decline in archery.

The reduction in numbers of skilled archers, coupled with technological advances in arquebus production, may have enabled firearms to outrange the longbow by the mid-century, a fact alluded to in a 1549 letter from Protector Somerset to John Russell urging the loyalist

³⁶⁶ Strickland and Hardy, pp.403-4.

³⁶⁷ Phillips, 'Army of Henry VIII', pp.18-20.

³⁶⁸ Gunn, 'Archery Practice', pp.73-5. The mean penetration of fatal arrow wounds can be established at 1.5", up to a maximum of 6", whereas individuals killed by firearms suffered a mean penetration of 6", up to a maximum of 10". As a result, it was not unusual for arquebus shot, having inflicted lethal injuries, to pass clean through its target.

³⁶⁹ Barrett, *Moderne Warres*, Bk.1. fol.2^r.

³⁷⁰ Phillips, 'Longbow and Hackbutt', p.589.

³⁷¹ Barrett, *Moderne Warres*, Bk.1. fol.2^r.

commander to use arquebusiers to draw rebel archers out of defended positions.³⁷² Alternatively the letter may refer to firearms' greater lethal range, with the bow's diminishing effectiveness against plate armour enabling arquebusiers to outperform archers at the same distance. Both factors would render archery inferior to gunpowder weapons, and would indicate that the 1549 rebellions marked the point at which this situation became apparent. Notwithstanding the longbow's inferiority in a direct contest, archers evidently still had a role in battle, serving to harass enemy forces with their rapid shooting, which could draw them into the close range of soldiers with firearms and disorder attacking formations prior to the commencement of close-quarter fighting.

Close-Quarter Weapons

The Bill

The English bill, which first saw widespread use during the Wars of the Roses, was a commonly available and lethally effective close-quarter armament originally created through the alteration of an agricultural implement, intended for trimming hedges, to military purposes.³⁷³ The weapon (Fig.9) consisted of a multi-bladed metal head, incorporating a convex forward-facing blade, which tapered to a hooked point, a rearward facing spike, and a spearhead, all of which were mounted on a wooden staff, giving a total length of approximately 2.4m.³⁷⁴ These multiple appendages gave soldiers several offensive options, including thrusting with the weapon's point, delivering downward strokes with either blade, or, if space permitted, swinging the bill in an overhead or lateral arc for greater force.³⁷⁵ The hook could also be employed to drag horsemen from their mounts or pull enemy infantrymen off their feet, a manoeuvre which may have caused disabling injuries by circumventing armoured grieves and severing tendons at the back of an opponent's knee.³⁷⁶ Even if unharmed by this attack, prone adversaries would be unable to effectively defend themselves, and could be easily dispatched by their opponent or another combatant.³⁷⁷

³⁷² Pocock, pp.16-17.

³⁷³ Barr, p.52.

³⁷⁴ Norman and Pottinger, p.174.

³⁷⁵ John Waller, 'Combat Techniques' in *Blood Red Roses*, ed. by Fiorato, Boylston and Knüsel, pp.148-54 (p.150).

³⁷⁶ Graeme Rimer, 'Weapons', in *Blood Red Roses*, ed. by Fiorato, Boylston and Knüsel, pp.119-29 (p.125).

³⁷⁷ Waller, p.150.

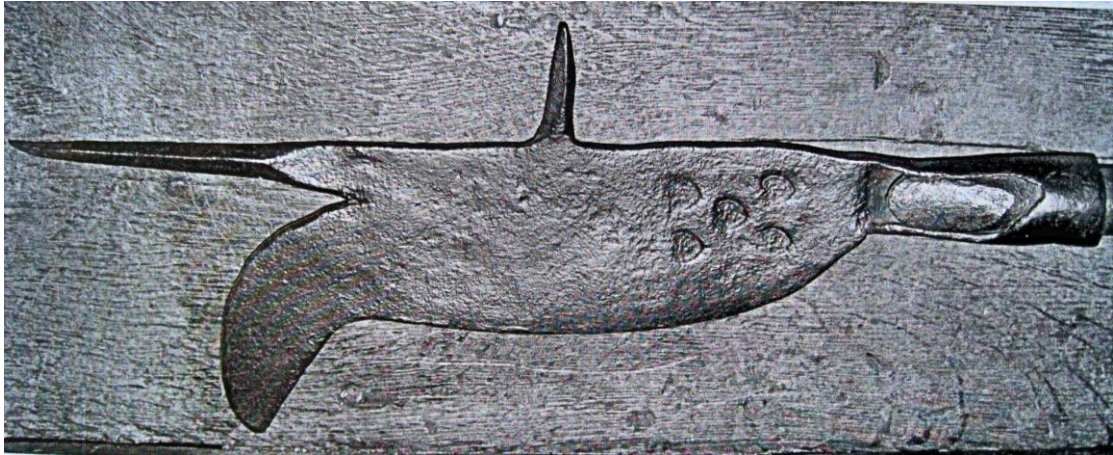


Fig.9. Bill head detail, Coventry. Hildred, p.716.

Despite its traditionally English connotations, the bill also saw use on the continent, and bore a distinct likeness to the European halberd, which encompassed a long spear point, hatchet-like axe blade, and rearward-facing, armour-piercing spike (Fig.10).³⁷⁸ While differences existed between the two armaments, the halberd, for instance, lacking the bills' distinctive hook but having a smaller, more acutely angled axe blade, they were both intended for close-quarter fighting against well-armoured adversaries. The battles of Morgarten (1315) and Laupen (1319), wherein Austrian men at arms were defeated by Swiss halberdiers, illustrated the effectiveness of these weapons when used by disciplined formations.³⁷⁹ Although the outcome of these engagements was influenced by terrain, which limited the manoeuvrability of the Austrian cavalry, the Swiss' continued employment of the halberd until the mid-fifteenth century illustrates its popularity for infantry armies facing enemy horsemen.³⁸⁰ Even after the Swiss rearmament with the pike, following their defeat by dismounted lance-armed Milanese forces at Arbedo (1422), halberds still remained an integral part of their army and typically comprised a sixth of their weapons.³⁸¹ This gradual and incomplete conversion from halberd to pike mirrored England's more protracted transition of the mid-sixteenth century, and is suggestive of a developmental trend undergone by both countries at a different time. The pace of this development would have been determined by both states' experiences on the battlefield, with the Swiss defeat at Arbedo encouraging a re-evaluation of their military technology, whereas English victory at Flodden served to reinforce faith in the bill.³⁸²

³⁷⁸ David Caldwell, 'Some Notes on Scottish Axes and Long Shafted Weapons', in *Scottish Weapons*, ed. by Caldwell, pp.253-314 (p.279).

³⁷⁹ Phillips, *Anglo-Scots Wars*, pp.17-18.

³⁸⁰ Rogers, 'Military Revolutions', pp.27-8.

³⁸¹ Barr, pp.37-9.

³⁸² Raymond, pp.86-7.

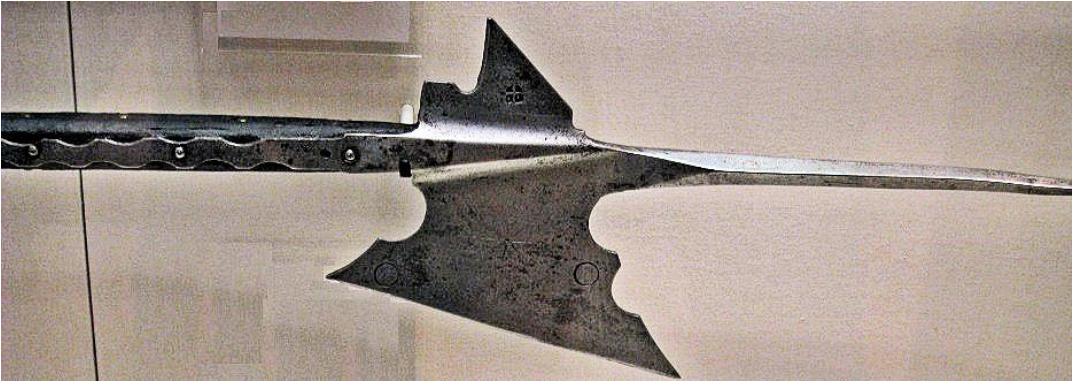


Fig.10. Early sixteenth-century Swiss halberd head (Royal Armouries, Leeds)

The Pike

The pike, which first saw large-scale use by the Swiss during the mid-to-late-fifteenth century, was one of the signature weapons of Renaissance conflict, transforming the nature of warfare as armies sought to benefit from it or negate the threat it posed.³⁸³ English military manuals reflected this viewpoint, the *Handbook* stating that ‘the strength of the battles chiefly consisteth in the length of the pikes, and the good government of the same’.³⁸⁴ Pikes (see Fig.11) mounted a leaf or lozenge-shaped pointed steel head on a 5.5 to 8m-long wooden shaft with metal langets on either side to prevent it being severed.³⁸⁵ In some cases, the standard spearhead was replaced with a bladed attachment similar to a halberd or bill head, a form of weapon known in England as the ‘morris pike’, presumably a corruption of the ‘Moorish’ pikes used by Ottoman soldiers.³⁸⁶ Unlike bladed edged weapons such as swords, which, when swung in an arc, dispersed kinetic energy across their target, a pike thrust concentrated pressure on a single point, often exerting sufficient force to pierce plate armour.³⁸⁷ Because of their cumbersome length and weight, pikes were unwieldy and ill-suited to individual combat, and so were instead employed within large infantry formations where the levelled weapons of the first few ranks presented a near-impenetrable thicket of steel to the unit’s front.



Fig.11. Early sixteenth-century English pike head (Royal Armouries, Leeds).

³⁸³ Turnbull, *Renaissance Warfare*, pp.50-2.

³⁸⁴ Barrett, *Handbook*, fol.8^r.

³⁸⁵ Hildred, pp.717-18.

³⁸⁶ Loades, *Tudor Navy*, p.286.

³⁸⁷ Rogers, ‘Tactics’, p.214.

Far from being merely a longer form of spear, however, the pike significantly altered infantry's battlefield function by allowing footmen to resist cavalry attack in open ground without the aid of defensive obstacles.³⁸⁸ The weapon was also highly effective against other types of infantry, particularly those with shorter armaments, who would be driven back by an oncoming wall of pike points which their weapons lacked the reach to oppose. Repeated Swiss victories over Charles the Bold of Burgundy (1474 to 1477), and during the Swabian War (1499), demonstrated pikemen's capacity to overrun defensive positions through the momentum of their assault and the length of their weapons.³⁸⁹ The effectiveness of these tactics resulted in the pike's increasing deployment, as other states either armed their own infantry in this fashion or hired appropriately equipped mercenaries, leading to the incremental homogenisation of continental armies.³⁹⁰ Where two such units met in combat, their weapons frequently became locked together in a contest known as the 'push of pike', which was won by the side that could exert the most force in pressing forwards with successive ranks of soldiers.³⁹¹ The 'push' itself was often relatively bloodless, with the majority of casualties being incurred when a unit broke, leaving its scattered personnel easy prey for their opponents.³⁹²

However, the pike's success was more than simply the result of impetus and mass, with training, discipline, and tactical cohesion proving vital assets in battle.³⁹³ Soldiers would be taught how to handle their armament according to one of several drills, with professional pikemen like the Swiss and landsknechts proving equally adept in offensive or defensive roles. When attacking, the pike was held near the middle of its shaft and pointed downwards, a fighting style that rendered it less likely to be forced overhead during the 'push', while defending troops gripped the weapon at its base and angled it upwards to receive a charge.³⁹⁴ The effectiveness of the latter drill was illustrated by the Scots at Pinkie, who withstood successive assaults by English cavalry, led by the Pensioners and Bulleners, Patten describing how 'the whole ward [was] so thick that as easily shall a bare finger pierce through the skin of an angry hedgehog, as any encounter the front of their pikes'.³⁹⁵ The *Handbook* described a similar defensive arrangement in the form of the so-called 'couch, cross and defend' manoeuvre:

³⁸⁸ Rogers, 'Tactics', p.112.

³⁸⁹ Maurice Keen, *Medieval Warfare: A History* (Oxford: Oxford University Press, 1999), p.287.

³⁹⁰ Turnbull, *Renaissance Warfare*, p.112.

³⁹¹ Oman, *Art of War*, p.72.

³⁹² Turnbull, *Renaissance Warfare*, p.62.

³⁹³ Phillips, *Anglo-Scots Wars*, p.40.

³⁹⁴ Oman, *Art of War*, pp.76-7.

³⁹⁵ Patten, p.112.

Five ranks will couch, cross and defend as followeth. Two ranks crosseth by the mid pike, the third rank coucheth forth right betwixt the two aforesaid, holding their pikes fast with both hands, stay the same against their left knee, kneel on the same with right knee firmly. The other two ranks beareth their pikes above hand, ready to push with the right hand at the whole length of the pike.³⁹⁶

This process, which involved the two front ranks of soldiers kneeling, the third rank crouching behind them, and the fourth and fifth ranks standing to the rear, holding their weapons above their comrades, demonstrates the precision and expertise required to utilise the pike effectively. When faced with this formation, attacking forces would have to negotiate a dense hedge of pike points at various heights, some levelled at their chests and others angled higher, with the strength of any impact being magnified by the momentum of their charge.

Well-trained pikemen enjoyed considerable advantages over enemies with short weapons who, unless the pikemen lost their momentum when attacking, were outmanoeuvred, or had their ranks disordered by terrain or incoming fire, would be forced to retreat before the formation.³⁹⁷ If, however, any of these possibilities occurred, and the unit lost its cohesion, the pike would go from an effective weapon to an unwieldy encumbrance that was no match for more compact armaments at close range.³⁹⁸ Machiavelli was particularly critical of these weaknesses, citing instances from the Italian Wars as evidence that soldiers armed with swords and bucklers were superior to pikemen.³⁹⁹ At Ravenna, for instance, he claimed that only the intervention of French men at arms, who had defeated their Spanish counterparts and outflanked the enemy, preserved attacking Swiss pikemen from destruction at the hands of their opponents.⁴⁰⁰ As the relationship between pikes and short weapons has particular importance for English warfare, where both armaments continued in widespread use, it will be explored in more detail by the following section.

Pike versus Bill

Although the pike, promoted by Swiss victories, rapidly came to displace the halberd as the foremost weapon on the continent, England's transition from the bill was cautious and proceeded slowly until the mid-century period. The country's stockpile of pikes, amassed in garrisons and armouries and employed by retainers and other semi-professional soldiers, was eclipsed by enormous quantities of bills, which, together with the longbow, remained the shire militia's principal weapons until after the passing of the Militia Act.⁴⁰¹ Notwithstanding battles

³⁹⁶ Barrett, *Handbook*, fols.10^r-10^v.

³⁹⁷ Rogers, 'Tactics', pp.205-6.

³⁹⁸ Raymond, p.87.

³⁹⁹ Machiavelli, Bk.2.25-67, pp.35-9.

⁴⁰⁰ *Ibid.*, Bk.2.66, p.39.

⁴⁰¹ Raymond, p.30.

with rebel armies during the mid-century period, which will form the basis of later chapters, the engagement at Flodden represented the only occasion on which both weapons were used on opposing sides in a large-scale contest. This action is particularly relevant because of the victory by bills over pikes, an occurrence which appears to confirm Machiavelli's claims regarding the latter's vulnerability to short weapons.

At Flodden, Scottish pikemen, deployed in several large columns accompanied by French military advisors, attacked downhill towards English billmen and swiftly overran portions of their adversaries' line. However, as their assault lost momentum in the boggy ground at the foot of Branxton Hill, English units stalled and eventually encircled the Scots' formations, slowly wearing them down in protracted close-quarter fighting.⁴⁰² Once the enemy had lost their impetus the battle became a contest of attrition, with English billmen having a distinct advantage because of the versatility of their weapons in relation to the unwieldy pike. Not only was the Scots' principal armament too cumbersome to employ at close quarters, the English either pushing it aside or severing the shaft with their weapons; their swords were in turn outranged by the bill.⁴⁰³ This led to the near-total destruction of the Scottish army, which was reported to have suffered over 10,000 casualties in contrast to English losses of approximately 1500 men.⁴⁰⁴ On first impressions, the outcome of Flodden seems to verify the weakness of pikes versus shorter weapons, according with Machiavelli's account of the battle of Cerignola which emphasised the key role of Spanish swordsmen in defeating the French army's Swiss mercenaries:

With their pikes low, [the Swiss] opened up the Spanish infantries. But the latter, helped by their bucklers and by the agility of their bodies, so mixed themselves with the [Swiss] that they were able to join them with their swords. From this arose the death of almost all and the victory of the Spanish.⁴⁰⁵

While the extract claimed that the swordsmen counterattacked and entered the enemy formation via their use of 'bucklers and [...] agility', performing this manoeuvre in action would depend upon the advancing pikemen first losing their momentum. Although this did occur at Cerignola, Machiavelli neglected to mention that the Swiss troops were not only disordered by incoming arquebus fire, but had also lost their cohesion after advancing over a defensive ditch before their charge was absorbed by the Spanish swordsmen.⁴⁰⁶ This omission gives the mistaken impression that short weapons held the advantage on open ground, when in fact they would have been unable to withstand an intact, well-ordered body of pikemen.

⁴⁰² Sadler, pp.435-8.

⁴⁰³ Norman and Pottinger, p.174; Barr, pp.106-7.

⁴⁰⁴ Phillips, *Anglo-Scots Wars*, pp.131-2.

⁴⁰⁵ Machiavelli, Bk.2.64-6, p.39.

⁴⁰⁶ Turnbull, *Renaissance Warfare*, pp.67-8.

The failure of pike tactics at Flodden mirrored the circumstances of Cerignola, with the Scots being similarly harassed from afar, albeit by archers rather than arquebusiers, and losing their formation upon crossing broken ground, reducing their impact on the centre of the English line. In the melee that followed, the Scots were unable to assist their embattled pikemen as they lacked either cavalry, which the French had used to reinforce their attack at Ravenna, or the supporting infantry which typically accompanied Swiss and landsknechts formations.⁴⁰⁷ These ancillary units, comprising crossbowmen, arquebusiers, or Doppelhanders equipped with two-handed swords, played a vital role in screening and supporting the pikemen, who could not be expected to function in complete isolation.⁴⁰⁸ Furthermore, the Scots had received only limited training with their weapons, with the pikes imported immediately prior to the campaign and the French officers, vital for instructing soldiers in their use, arriving after the Scottish army had been mustered.⁴⁰⁹ This represented a fundamental weakness, with soldiers unaccustomed to the pike's necessary drills and battlefield manoeuvres struggling to maintain the good order upon which their tactics depended. Thus, the reasons for the Scots' defeat stemmed more from the tactical inflexibility of their army, coupled with the inexperience of their troops, than from the superiority of the bill.

Nonetheless, Flodden evidently encouraged a continuation of England's existing policy, wherein pikes were restricted to foreign mercenaries or native semi-professional soldiers. The justification of this approach can be seen not only in the bill's circumstantial advantage, primarily attained through favourable terrain, but also in the failings of the Scottish army, which demonstrated the perils of deploying inadequately trained pikemen. While the pike was almost certainly the better weapon in an abstract reckoning, its successful use was contingent upon many factors, not least the professionalism of its wielders. In light of this, English commanders may have concluded that it was better to maintain the militia as a force of competent billmen than risk defeat by rearming inexperienced troops with pikes. These options were not, however, mutually exclusive, as illustrated by the country's use of pikemen to provide protection against cavalry when on campaign. Indeed, the deployment of pikemen against units armed solely with short weapons arguably made Flodden atypical for the period, with mixed formations along the Swiss model representing an effective way to combine the strengths and mitigate the weaknesses of both armaments. As Chapter 4 will show, such formations primarily consisted of pikemen but maintained an inner core of halberdiers or billmen, allowing the two weapons to complement one another and the unit to fight at either arms' length or close quarters as the situation required.

⁴⁰⁷ Barr, pp.47-8.

⁴⁰⁸ *Ibid.*, p.42.

⁴⁰⁹ *Ibid.*, pp.47-8.

Artillery

Artillery was a vital component for both sieges and battles, playing a major role throughout the Italian Wars, and being present at many of England's fifteenth and sixteenth-century engagements, including Bosworth, Flodden, and Pinkie. As Chapter 2 has shown, Henry VIII significantly advanced England's artillery infrastructure and production throughout the early to mid-sixteenth century, ensuring that the country's stockpiles of ordnance and contingents of gunners continued to expand. Unfortunately, despite detailed records arising from this process, Tudor artillery encompassed many different categories of ordnance, with a confusing array of nomenclatures, the use of different construction materials, and a lack of standardisation within each class impeding objective analysis.⁴¹⁰ While bronze or brass guns were generally regarded as superior to iron weapons, which were proportionally heavier, harder to cast, and could be brittle and vulnerable to rust, the quantity and relative cheapness of English iron ensured that the vast majority of artillery was produced from this material.⁴¹¹ Ammunition was equally diverse, with guns using solid round shot, made from stone, iron, or lead; composite round shot, with an iron dice inset within a layer of lead; and hailshot, a short-ranged anti-personnel charge comprising a mixture of wooden splinters, stone fragments, and iron dice.⁴¹² Much like the guns themselves, each type of shot exhibited unique ballistic properties, and, in some cases, had distinct tactical functions.⁴¹³ Hailshot, for example, could inflict heavy casualties on massed troop formations, as occurred at Pinkie, where it was reported that English gunners 'did gall [the Scots] with hail shot and other out of the great ordnance'.⁴¹⁴

Because of the complexity of these issues, and the relatively minor significance of artillery's technical aspect in many of the thesis' case studies, this section will present a limited overview of the classification and capabilities of Tudor ordnance. Hildred's analysis of guns recovered from the *Mary Rose*, which combines scientific testing with discussion of sources such as William Bourne's *Art of Shooting in Great Ordnance* (written 1572/3 and printed in 1587) and Robert Norton's *The Great Gunner* (1628), forms a useful repository of information on English artillery.⁴¹⁵ This can be combined with general works detailing European ordnance to group the period's artillery into distinct categories of heavy siege guns, smaller siege weapons, and light field pieces, each of which performed discrete tactical functions depending upon the size and weight of shot they fired. While more specialised weapons, such as bombards,

⁴¹⁰ Blackmore, p.391.

⁴¹¹ Hildred, pp.19-21.

⁴¹² Ibid., pp.307, 312.

⁴¹³ Ibid., pp.370-80.

⁴¹⁴ Patten, p.123.

⁴¹⁵ Hildred, pp.24-5.

murderers, and pettards, were employed in sieges, these guns did not see general battlefield use, and so will be omitted from this section.

The largest artillery pieces were solely intended for breaching fortifications during sieges, and could fire shot weighing anything from 30 to 260lb (13.6 to 117.9 kilograms).⁴¹⁶ Much like their predecessors, the Burgundian *Veuglaires* of the 1430s, heavy siege artillery was often short ranged owing to its large calibre and the correspondingly high weight of shot they projected.⁴¹⁷ These weapons, although extremely powerful, were cumbersome to transport, position, and redeploy, and required a long reloading cycle, rendering them little use in field warfare.⁴¹⁸ Similarly, while the massive weight and kinetic energy of these cannons' shot would be invariably deadly to anyone unfortunate enough to be struck by it, such firepower was arguably wasted in battle, where targets were almost exclusively ranks of men and horses rather than fortified walls.⁴¹⁹ Tudor cannon, a category encompassing, in descending calibre, double cannon, cannon royal, whole cannon, and demi-cannon, including minions and drakes, had bores of 6" to 8", and typically fired cast-iron shot weighing up to 63lb (28.6kg).⁴²⁰

Smaller siege guns, known in England as culverins, and their variants the double and demi-culverin, had bores of 4.25" to 5.5", and fired cast-iron shot weighing 9 to 25lb (4.1 to 11.3kg) at ranges of approximately 1800m and velocities of over 150m/s.⁴²¹ These pieces had a faster reloading time than their larger counterparts, making them more effective in battle, although their high recoil significantly reduced their rate of fire in comparison with lighter weapons, which could be dragged back into position more quickly after each shot.⁴²² This could leave such guns disadvantaged in an artillery duel, as occurred at Flodden, where the faster-firing English ordnance silenced its heavier counterparts before directing fire onto enemy infantry formations.⁴²³

The final category of light field pieces, termed *Crapaudeux* by Burgundian artilleryists, were smaller anti-personnel weapons intended for naval and battlefield use.⁴²⁴ England employed an eclectic system of categorisation for such guns, encompassing, in descending order of calibre, sakers, falcons, falconets, robinets, and bases, with bores of between 1.25" and 4".⁴²⁵ Each fired an iron, or lead and iron composite, ball weighing between 0.5lb and 5.5lb (0.23 to 2.5kg), at ranges of approximately 1000 yards (914m) and a velocity of over 90m/s, sufficient to

⁴¹⁶ Raymond, p.27.

⁴¹⁷ Robert Douglas Smith and Kelly DeVries, *The Artillery of the Dukes of Burgundy, 1363-1477* (Woodbridge: Boydell, 2005), p.32.

⁴¹⁸ Cruickshank, *Army Royal*, pp.73-5.

⁴¹⁹ Caldwell, 'Arms and Armour', p.75.

⁴²⁰ Hildred, pp.24, 46.

⁴²¹ *Ibid.*, pp.74, 89; Raymond, p.27.

⁴²² Turnbull, *Renaissance Warfare*, pp.40-41.

⁴²³ Sadler, pp.431-2.

⁴²⁴ Smith and DeVries, p.32.

⁴²⁵ Raymond, p.27; Hildred, pp.24, 101.

inflict fatal injuries on a line of soldiers, although lacking the power to destroy fortifications.⁴²⁶ Patten's account of the battle of Pinkie gives an account of the damage caused by such weapons:

Sir Thomas Darcy upon his approach to the enemy was struck glancing wise, on his right side, with a bullet of one of their field pieces; and thereby his body bruised with the bowing in of his harness, his sword hilt broken, and the forefinger of his right hand beaten flat.⁴²⁷

Despite being struck only 'glancing wise' and by a light ball, Darcy's injuries were extensive and would have proven lethal were it not for his armour, which was badly damaged and 'bow[ed] in' by absorbing the impact. Further to their destructiveness in battle, field pieces also had other advantages, notably their lower recoil and lighter weight, which allowed them to fire faster and be redeployed in support of other troops whereas larger guns were almost always static.⁴²⁸ Bases, the smallest of these armaments, were extremely portable, and could be loaded, traversed, and fired by a single operator, resulting in their frequent use aboard ship, as swivel guns, and in battle, as short-ranged infantry support weapons.⁴²⁹

Conclusions

Renaissance warfare was conducted with a multitude of different weapons, including pikes, halberds, firearms, and artillery, all of which were extensively employed by mid-sixteenth-century European armies. While the Tudor state retained its traditional armaments, the longbow and bill, it also kept pace with continental developments, and used increasing quantities of modern weapons as the period progressed. As noted in Chapter 2, however, many of these modern arms, such as pike and shot, were confined to semi-professional forces, including garrison troops, urban militias, and retainues, while the shire militia tended to retain the longbow and bill until the latter part of the century. Comparative analysis of common missile and close-quarter armaments has revealed their respective performance and requirements, and has shown that established English weapons were not necessarily inferior to their European equivalents, but could sometimes defeat them in the right circumstances, as occurred at Flodden. The continued viability of these armaments, combined with their widespread distribution, resulted in Tudor armies intermingling bows and bills with pike and shot in a bid to synthesise the tactical advantages of different weapon systems for mutual support. This practice, the tactical implications of which will be considered in Chapter 4, continued into the mid-sixteenth century

⁴²⁶ Blackmore, p.391; Raymond, p.29; Hildred, pp.24, 101-2.

⁴²⁷ Patten, p.115.

⁴²⁸ Hall, *Weapons*, pp.151-3.

⁴²⁹ Hildred, pp.221-4.

and beyond, until the effectiveness of firearms conclusively surpassed the bow and the creation of the Trained Bands made wider use of the pike more feasible.

Understanding the capabilities and limitations of England's traditional and modern weapon systems has crucial implications for the study of battles, with such key factors as range, power, rate of shooting, and necessary training often determining where, and in what formation, armies were deployed, and how differently armed soldiers interacted in combat. This is especially true of battles associated with the country's mid-sixteenth-century rebellions, which tended to pit bill- and bow-armed insurgents against more representatively equipped loyalist armies. In some cases, as at Dussindale, the loyalists exclusively used pike and shot, facilitating a direct comparison between old and new technologies. This can test tactical manuals' assertions of the bow's inferiority to firearms, and the conclusions drawn from Flodden regarding the pike versus the bill. More frequently, however, government forces made use of mixed armaments, in the same manner as the Tudor army at Pinkie, with such instances providing further proof of how England's parallel weapon systems were integrated, and the relative effectiveness of this approach versus traditionally armed enemies. Thus, the study of armaments can both inform, and be informed by, their use in battle, an assertion that will be proven by the case studies of later chapters.

Chapter 4: Tactical Formations and Battlefield Deployment

Introduction

While an army's composition and armament exerted a significant impact on its performance in combat, the outcome of an engagement was also determined by each side's tactical formations, deployment, and manoeuvres. This chapter will explore these issues by comparing the recommendations of English military manuals with examples of mid-sixteenth-century field warfare, assessing the relationship between such texts and the tactics and deployments implemented in practice. Pinkie, as England's largest, most extensively documented mid-sixteenth-century battle, will inevitably play a key role in such comparisons, facilitating its subsequent use as a benchmark against which battles associated with rebellion can be measured. Although Tudor armies were mobilised on several other occasions, namely during the Anglo-Scots wars and Henry VIII's invasions of France, these campaigns failed to produce a major battle after the English victory at Flodden in 1513, with intervening actions, including the large-scale encounter at Solway Moss, taking the form of raids and skirmishes. Because of these limited English examples, contemporary European field warfare will form another means of assessing the period's common battle tactics and deployments, providing a broader sample of actions upon which to base conclusions.

The chapter will begin by detailing the components of an army's infantry and cavalry formations, using diagrams to illustrate the placement of soldiers within these units as a precursor to showing how an entire army was arrayed, and discussing the tactics it might employ in an engagement. This process will give an overview of how Renaissance armies, and Tudor forces in particular, deployed and fought, establishing a template which can be used when reconstructing battles associated with rebellions in later chapters. Where narrative sources fail to define certain phases of a battle, awareness of typical English and European tactics, as outlined in this chapter, may enable the inference of possible alternatives in accordance with the methodology of Military Terrain Analysis.

Infantry Formations

As described in Chapter 2, infantry companies were amalgamated into vast units known as battles, their pike and billmen remaining together in the main body, and their archers and arquebusiers joining detachments of shot stationed amongst the formation's outer ranks or upon its flanks. While dividing companies in this fashion was less efficient than assembling homogenous units, Audley emphasised the need to alter a battle's proportion of missile weapons

depending upon the number of troops it contained, stating that ‘the more that ye do appoint for the shot, the weaker is the body of your battle’.⁴³⁰ Accordingly the work recommended restricting an army’s contingent of missile troops to contain ‘in a small number [...] the third part shot and in a bigger the iiiith part shot and in a bigger the vth part shot and so upward’.⁴³¹ Where the total number of shot exceeded these guidelines Audley advised that ‘ye must diminish those that be superfluous and put them to other weapons in the body of your battle’, a role probably fulfilled by archers, whose additional equipment was suited to close-quarter fighting.⁴³² This reluctance to include high proportions of missile weapons was shared by continental armies, which tended to contain no more than a third of their total strength as shot, on account of the difficulties in effectively employing large quantities of firepower.⁴³³ Whereas soldiers in a battle’s main body could add their strength to the push of pike, those in the rear ranks of units of shot could contribute little to the outcome of an action and, as Audley noted, served only to diminish the numbers available for hand-to-hand combat.

The ‘Body of the Battle’

Although Audley, doubtless with the recent English triumph at Pinkie in mind, noted that victories ‘hath been gotten by shot only, without push or stroke stricken’, such circumstances were exceptional in Renaissance warfare.⁴³⁴ While in later eras the increasing effectiveness of firepower led to formations of pikes and short weapons becoming largely symbolic, these armaments commonly determined the outcome of sixteenth-century battles, which frequently involved large-scale confrontations between opposing infantry units. The first day of the battle of Marignano (1515) for instance, saw landsknecht mercenaries engage in a sustained push of pike with their Swiss rivals throughout the evening, buying time for the deployment of French cavalry and artillery.⁴³⁵ Similarly, Blaise de Monluc’s description of Ceresole (1544) credited the Imperial and French infantry with undertaking the bulk of the fighting and noted their stubborn resistance to opposing cavalry attacks.⁴³⁶

At the heart of each battle lay the company captains and subordinate officers, accompanied by vital command and control apparatus like ensigns, drums, and fifes. Given the composite nature of the battle there may have been several such groups situated at various points within its centre, each helping to maintain the tactical cohesion of a portion of the unit,

⁴³⁰ Audley, p.17.

⁴³¹ Ibid.

⁴³² Ibid.

⁴³³ Hall, *Weapons*, pp.178-9.

⁴³⁴ Audley, p.17.

⁴³⁵ Turnbull, *Renaissance Warfare*, p.72.

⁴³⁶ Hall, *Weapons*, pp.185-90.

with ensign bearers providing a focal point for their company, while drums and fifes facilitated the transmission of their captain's orders and raised morale. These soldiers were surrounded and defended by ranks of armoured halberdiers or billmen who, according to the *Handbook*, may have been longstanding veterans, assigned as much to advise the command staff as to protect them.⁴³⁷ If an army contained large numbers of billmen, Audley recommended expanding this bodyguard to include two or three further ranks, although he also counselled that pikemen should be retained on the end of each rank to defend against cavalry.⁴³⁸ The space between the battle's centre and its outer ranks was occupied by lightly armoured pikemen, the *picche secche*, equipped with whatever protection they could obtain, while a layer of veteran, armoured pikemen, *picche armate*, formed the unit's edge.⁴³⁹ The location and extent of the 'armed pike' would vary depending on the availability of such soldiers, as Audley's work observed:

These men at arms [...] may in no wise be mixed amongst [unarmoured] footmen, for if they be, farewell the strength of footmen [...] and if you have sufficient number of corselets you may not set them all before, but you must set ii or iii ranks of them behind your battle lest peradventure you might have an onset behind of your battle. And besides that they shall keep in your men behind from flying.⁴⁴⁰

While promoting the concentration of armoured pikemen at one point, rather than diffusing their strength 'mixed amongst footmen' throughout the battle, Audley sought to divide them between the front and back ranks of his formations to protect against 'an onset behind'. The positioning of veteran soldiers towards the rear, to 'keep in your men behind from flying', also arrested the process known in the seventeenth century as 'leakage', wherein retreats began with a trickle of soldiers fleeing from a unit's back ranks.⁴⁴¹ The *Handbook* also confirmed this trend, recommending the selection of 'the best armed and most skilful soldiers [and] placing the same on the uttermost parts of the battle on all sides'.⁴⁴² Providing sufficient numbers were available, this would encase the *picche secche* within a carapace of armoured soldiers, reducing their likelihood of incurring injury while enabling them to contribute to the push of pike from the relative safety of the battle. When describing the English Forward battle at Pinkie, Patten attested to a similar arrangement of armoured soldiers, illustrating the extent to which Audley and Barrett's works drew upon earlier usage:

Sir John Lutterell, who had the leading of a three hundred of his Lordship's [John Dudley, Earl of Warwick] men, that were the foremost of this Foreward; all with harness and weapon: and [...] so well trimmed for war that [...] I could well note my Lord's great cost and honour, for their choice and perfect appointment and furniture;

⁴³⁷ Barrett, *Handbook*, fol.8^v.

⁴³⁸ Audley, p.26.

⁴³⁹ Eltis, p.54.

⁴⁴⁰ Audley, p.26.

⁴⁴¹ Childs, p.21.

⁴⁴² Barrett, *Handbook*, fol.10^r.

[...] also consider Sir John Lutterell's prowess and wisdom for their valiant conduction, and exact observance of order. Whom [...] I have good cause to count both a good Captain at warfare in field, and a worthy Courtier.⁴⁴³

This extract confirms the practice of placing armoured troops, outfitted with 'harness' and 'well trimmed for war', in the 'foremost' ranks of the battle, with Patten similarly emphasising the veteran status of these soldiers and their commander, praising them for their 'valiant conduction, and exact observance of order'. All of these factors clearly foreshadowed Audley and Barrett's later recommendations, revealing England's mid-century conversance in the tactical placement of *picche armate*. The passage also depicts the battlefield use of the retinues which formed a key part of the Tudor army, with Warwick's followers being led by a trusted subordinate and 'worthy Courtier', Sir John Lutterell, while their professionalism and high standard of equipment reflected 'my Lord's great cost and honour'.

In addition to pike and billmen, who provided the mainstay of infantry formations, manuals also suggested incorporating missile troops within the body of the battle to offer support prior to, or during, close-quarter fighting. Such tactics were far from innovative, however, with Charles the Bold's 1473 military ordinances advocating the intermingling of longbows, handguns, and crossbows within the outer ranks of units of pikemen, a method potentially disseminated through English archers' service in Burgundian armies.⁴⁴⁴ While Charles's mixed formations ultimately failed to deliver victory against the Swiss, having too few of any one type of armament to function effectively, the principle of stationing missile weapons within pikes was sometimes adopted as a tactical experiment.⁴⁴⁵ Where European armies applied this theory at Ceresole, with both French and Spanish battles including arquebusiers in their second rank, the results were predictably bloody as both sides sustained massive casualties from the exchange of close-ranged fire amidst the push of pike.⁴⁴⁶ Despite the sanguinary outcome of the encounter, Audley made reference to this custom, noting that some commanders 'set within the first rank of pikes one rank of harkebusses to shoot at every joining of the battle'.⁴⁴⁷ The *Handbook* similarly included a diagram (Fig.12) showing the alternating placement of pike and shot along the outer edges of an infantry battle, implying that the deployment remained popular throughout the period. This can be confirmed by Barrett's later tract, which advised against incorporating shot within pikes because of the risks of 'friendly fire' during the push, claiming that 'those shot [...] must kill their own men, as their enemy, being thus mingled at all adventure'.⁴⁴⁸

⁴⁴³ Patten, p.121.

⁴⁴⁴ Smith and DeVries, pp.172-3.

⁴⁴⁵ Strickland and Hardy, pp.363-8.

⁴⁴⁶ Hall, *Weapons*, pp.187-8.

⁴⁴⁷ Audley, p.26.

⁴⁴⁸ Barrett, *Moderne Warres*, Bk.3. fol.2^v.

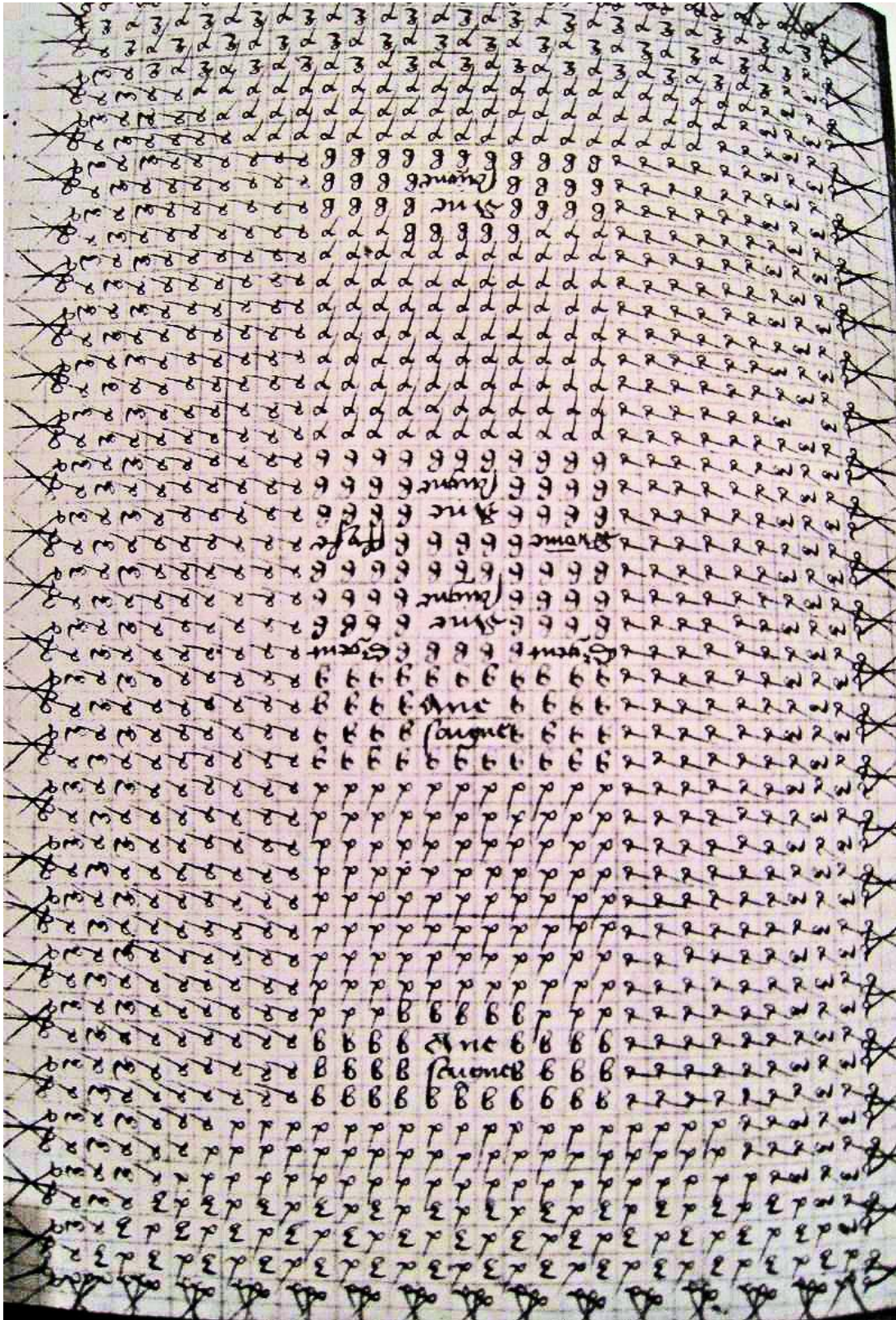


Fig.12. The *Handbook*'s diagram of infantry battle with pike (P) and shot (S) intermingled amidst the outer ranks of the unit. Note the presence of command groups surrounded by billmen (B) in the centre of the formation. Hale, *War Studies*, plate 6.

Although Barrett's diagram failed to specify the composition of the shot, which could comprise either longbow or arquebus in English armies, the physical space required to draw a bow would render it impractical to employ it within the ranks of a pike formation. This accounts for Audley's specification of 'harkerbusses' to be placed within the ranks, and suggests that archers would have been confined to the supporting units accompanying the battle, detailed later in the chapter. The body of the battle was thus formed from the command groups and their bodyguard of billmen or halberdiers at the centre of the unit, the lightly armoured *picche secche* beyond them, and the veteran *picche armate* who, with the possible assistance of arquebusiers, guarded the edges of the formation.

Tactical Deployment of the Battle

Sixteenth-century military manuals offered a variety of methods for arraying infantry units, with many tracts incorporating charts, diagrams, and mathematical formulae to assist a company sergeant in 'embattling' his soldiers. Unfortunately, many of these creations were intended more as theoretical exercises than practical guidelines, and would have been unfeasibly convoluted, if not suicidal, to employ during action.⁴⁴⁹ Such works were well-established by the late 1500s, prompting Barrett to warn against the perils of books 'penned by learned men [...] which never saw any wars'.⁴⁵⁰ Classical authors, such as Vegetius and Caesar, attracted a devoted readership and were another potential source of tactical deployments, although their influence on the Military Revolution has been drastically overstated.⁴⁵¹ While the formations these texts described were more viable than some of their later equivalents, they would have required high levels of discipline and individual training, and were better suited to the small, elite armies of antiquity than the huge forces mustered by sixteenth-century European powers.⁴⁵² Furthermore, the editors and translators of these works often encountered difficulties balancing the demands of textual accuracy with the desire to remain abreast of changing military technology, leading to an awkward compromise between ancient and modern tactical systems.⁴⁵³

The aforementioned problems of instructional manuals were compounded by their lack of relevance for many Renaissance commanders, who derived their military knowledge from service alongside experienced professionals rather than through textual learning.⁴⁵⁴ The confluence of these factors would have curtailed the diversity of formations used in combat, with few generals proving willing to gamble the outcome of an engagement upon an overly

⁴⁴⁹ Raymond, pp.3-8.

⁴⁵⁰ Barrett, *Moderne Warres*, Bk.1.fol.3^r.

⁴⁵¹ Webb, pp.46-50; Childs, pp.47-8.

⁴⁵² Hale, *War Studies*, pp.232-3.

⁴⁵³ Webb, pp.170-1; Raymond, pp.7-8.

⁴⁵⁴ Mallett, *Mercenaries*, p.176.

complex or demanding battle array. In short, an element of risk avoidance would have prioritised formations of proven efficiency and practicality over experimental deployments. England's mid-sixteenth century works confirm this hypothesis, with the *Handbook* seemingly challenging the influence of Classical precedents by noting that 'the practices of the wars doth daily alter and change to the great peril of the ignorant in such behalf'.⁴⁵⁵ Similarly, rather than looking to antiquity for guidance, Audley advocated following continental practices, particularly those of the Germans or 'Almains [...] who be counted among all nations the flower of the world for good order of footmen' stating that 'all nations have learned of them'.⁴⁵⁶ In keeping with their emphasis on current, rather than antiquarian, military science, Tudor authors limited their battles to a pair of formations, the 'just' and 'broad' square, with Audley's advice to organise the shot and then 'cast the rest of your men in [...] a just square or a broad square' recognising no alternative deployments.⁴⁵⁷

Troops arrayed in either fashion were organised into a series of evenly spaced ranks and files according to Vegetius's requirements, reproduced verbatim by subsequent authors, that each soldier should be allotted 3 feet (0.9m) in width and 7 feet (2.1m) in depth.⁴⁵⁸ This form of dispersed deployment (Fig.13) would help prevent disordering when crossing uneven ground; allow billmen and halberdiers room to handle their weapons; and give pikemen sufficient space for adopting defensive positions like the *Handbook's* 'couch, cross and defend' manoeuvre. When fighting enemy infantry in the push of pike, where a unit's collective strength was of more consequence than individual manoeuvrability, the ranks and files could be closed up to exert greater pressure to the front. In addition to offering tactical flexibility, open-order formations could protect the battle's ancillary components, with George Carey's *Pathway to Martial Discipline* (1581) and the *Handbook* recommending that shot shelter amongst the soldiers' outstretched pikes in the event of cavalry attack (Fig.14).⁴⁵⁹

⁴⁵⁵ Barrett, *Handbook*, fol.1^r.

⁴⁵⁶ Audley, p.16.

⁴⁵⁷ *Ibid.*, p.17.

⁴⁵⁸ Vegetius, Bk.3.14-15, pp.93-7.

⁴⁵⁹ Boynton, pp.117-8; Barrett, *Handbook*, fol.10^v.

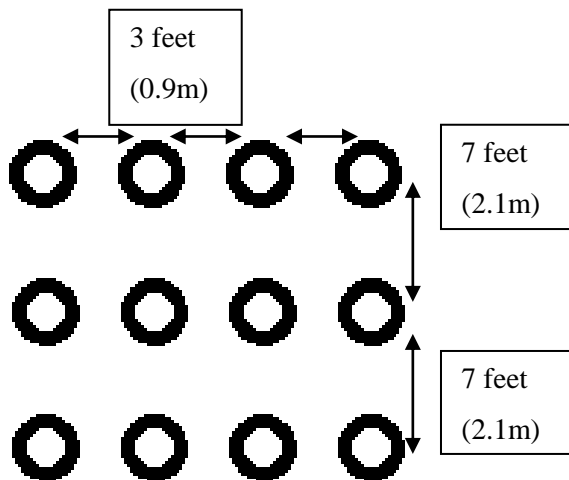


Fig.13. Soldiers (circles) arrayed according to Vegetius's instructions, with 3ft (0.9m) between each soldier in a rank, and 7 feet (2.1m) between each file member.

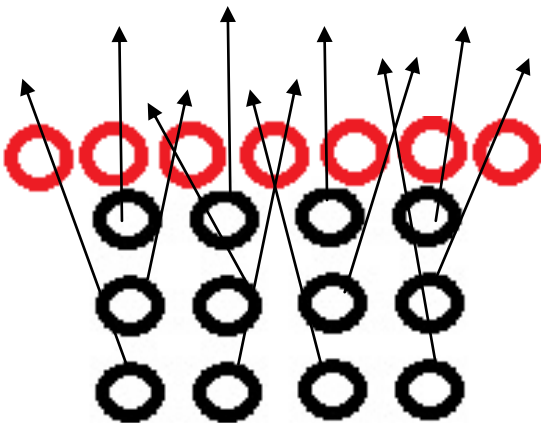


Fig.14. An open-order formation sheltering a detachment of shot (red) beneath the unit's pikes (arrows).

The 'just' square, as the period's standard tactical formation was known, was defined in sixteenth-century manuals as having a near identical number of ranks and files. Although neither Audley nor the *Handbook* provide further detail of this arrangement, Barrett's later work described how a company of one hundred pikemen could adopt the formation by deploying in ten ranks, each of ten soldiers, as illustrated in the diagram below (Fig.15). Despite the unit's apparent symmetry, the 3x7ft space allotted to each soldier meant that 'just' squares belied their name and resulted in a rectangular array unless their ranks were closed up for combat.⁴⁶⁰ In battle, the 'just' square would have proven useful for manoeuvring troops into position, particularly when travelling between areas of restrictive terrain, where its comparatively narrow frontage and small turning circle would grant greater freedom of movement. The formation

⁴⁶⁰ Davies, 'Thomas Audley', p.7.

could also be useful in close-quarter fighting, with pressure from the rear ranks of an advancing column providing concentrated momentum that would allow pikemen to rapidly break through dispersed enemy forces.⁴⁶¹

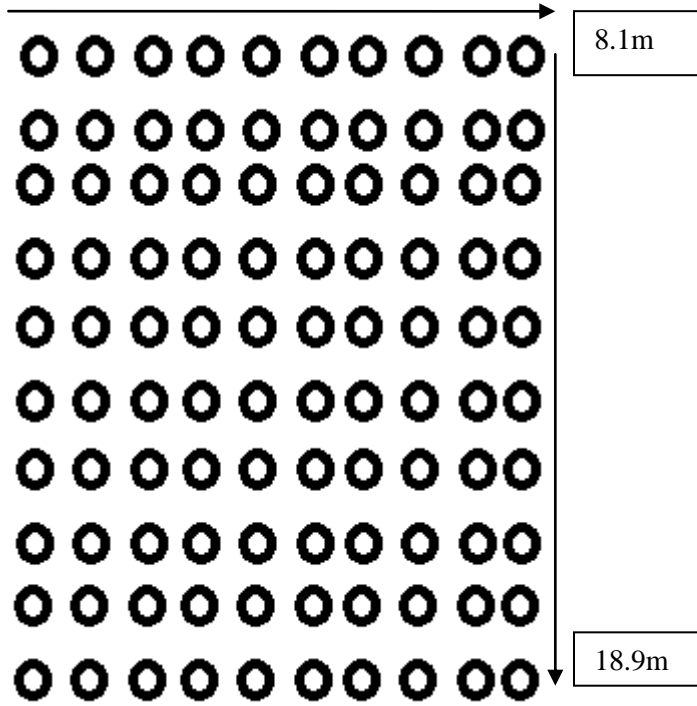


Fig.15. 100 pikemen in 'just' square. The unit's frontage and depth have been calculated based on Vegetius's specified 3 feet (0.9m) between each soldier in a rank, and 7 feet (2.1m) between each member of a file. Note, however, that soldiers stationed at the front of the unit would have no-one ahead of them, while those on the extreme flank would have no-one adjacent to them. Thus the 10 ranks' depth can be worked out at $9 \times 7\text{ft}$ for a total of 63ft (18.9m), while the unit's frontage (of 10 soldiers) equalled $9 \times 3\text{ft}$ resulting in 27ft (8.1m).

While the 'just' square had many uses, its companion the 'broad' square, which had a wider frontage but a shallower depth, was more popular in action, particularly following the failure of aggressive, columnar Swiss pike tactics at Marignano and Bicocca.⁴⁶² A unit arrayed in this manner had approximately twice as many files as ranks, meaning that two hundred soldiers would be deployed in ten ranks of twenty men, occupying an area of $17.1 \times 18.9\text{m}$, and would present a more evenly proportioned formation than the 'just' square.⁴⁶³ As Audley observed, this deployment had several tactical advantages, namely 'the occupying of many hands and [...] the fair presence made to their enemies'.⁴⁶⁴ In addition to its psychological impact or 'fair presence', the 'broad' square's frontage also enabled greater numbers of soldiers to employ both

⁴⁶¹ Eltis, p.30.

⁴⁶² Hall, *Weapons*, pp.210-14.

⁴⁶³ Davies, 'Thomas Audley', p.7.

⁴⁶⁴ Audley, pp..25-6.

melee and missile weapons, with Audley commenting that it ‘occupieth a certain of more shot than the just square doth’.⁴⁶⁵ Barrett also described the advantages offered by the ‘broad’ square, stating that redeploying into this array:

(besides the readiness it breedeth in the soldiers) doth serve to alter [the formation] into a battle of double front and [if] your foot enemy shall come to charge you upon the flank, they shall make of flank the front, and so be ready with double hands, either to receive or give the charge. For those battles of [...] double fronts, do bring many hands to fight at once: being very advantageous for footmen against footmen.⁴⁶⁶

This passage outlines several situations in which it would be beneficial for a battle to adopt the ‘broad’ square, the first and most obvious of which being when a commander wished to widen his frontage and allow more of his soldiers to engage the enemy. Although lacking the impetus of a charging ‘just’ square, the unit would be better positioned for a sustained contest such as the push of pike, perhaps prompting Barrett’s claim that this was ‘advantageous for footmen against footmen’. Secondly, changing formation would psychologically prepare soldiers for impending combat through ‘the readiness it breedeth’, while presenting opposing forces with a more threatening deployment. Finally, in the event of a ‘just’ square being outflanked, the soldiers could reform into ‘broad’ square, ‘mak[ing] of flank the front’ to confront their enemies. In practice, although armies occasionally deployed in perfectly proportioned formations, the Swiss, for instance, embattling 3000 men into a single 60m² unit at Fornovo, irregularly sized forces often necessitated a degree of latitude when assembling into battles.⁴⁶⁷ For example, the Swiss formations at Bicocca, nominally ‘broad’ squares containing 7500 soldiers, were arrayed in 75 ranks of 100 men, and had an approximate frontage of 90m and a depth of 155m, which was neither obviously ‘broad’ nor ‘just’.⁴⁶⁸ This compromise between the two formations was also recorded in a diagram within the *Handbook* (Fig.16), which depicted 1500 soldiers in ‘broad’ square, illustrating how a small battle would appear when deployed in such a fashion.

⁴⁶⁵ Ibid., p.17.

⁴⁶⁶ Barrett, *Moderne Warres*, Bk.2. fol.5^v.

⁴⁶⁷ Eltis, p.52.

⁴⁶⁸ Ibid.

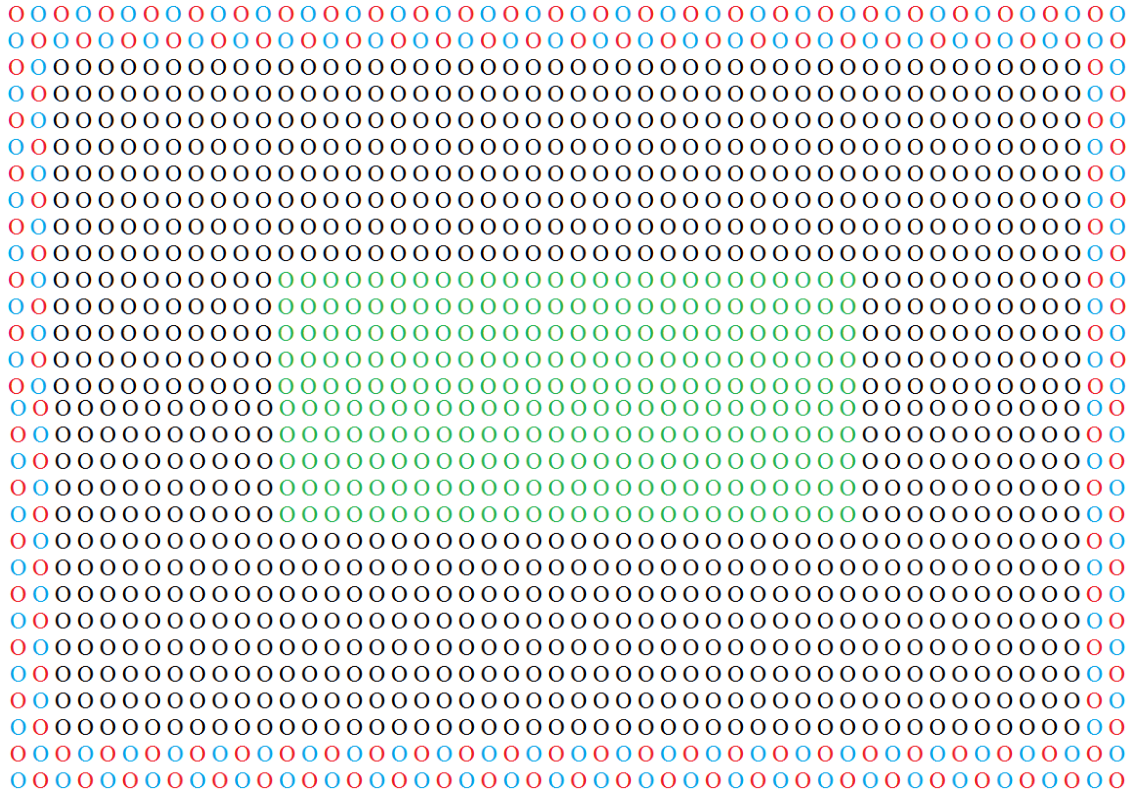


Fig.16. 1500 soldiers deployed in 30 ranks of 50 to form a ‘broad’ square with an approximate area of 61x44m. Armoured pikemen (blue) are stationed at the edges of the unit, and were sometimes interspersed with arquebusiers (red), while billmen (green) protect the command groups in its centre. The black circles represent lightly armoured pikemen.

In addition to the ‘broad’ and ‘just’ squares, which were essentially principles of deployment rather than exact arrangements, armies also adopted defensive formations for use by heavily outnumbered forces, particularly those facing numerous enemy horsemen. Such dispositions depended upon a stationary body of pikemen and billmen facing in all directions, with shot interspersed amongst their outer ranks, and were variously rendered as a ring, a somewhat implausible ‘S’ shaped column, and, most practically, an outward-facing square.⁴⁶⁹ Audley’s ‘round ring’ provided a typical example of this approach, placing the unit’s command staff at its centre and then surrounding them with concentric circles of bills and pikemen, with shot incorporated within the outer layers to ‘make answer to his enemies every way’.⁴⁷⁰ While this formation (Fig.17) would undoubtedly prove effective as a defence against cavalry, it lacked the necessary cohesion to oppose enemy infantry, and was difficult to manoeuvre lest its ranks become disordered, imposing significant limitations upon its use.

⁴⁶⁹ Audley, p.27; Barrett, *Handbook*, fols.10^f-10^v; Barrett, *Moderne Warres*, Bk.2.fols.26^v-7^f.

⁴⁷⁰ Audley, p.27.

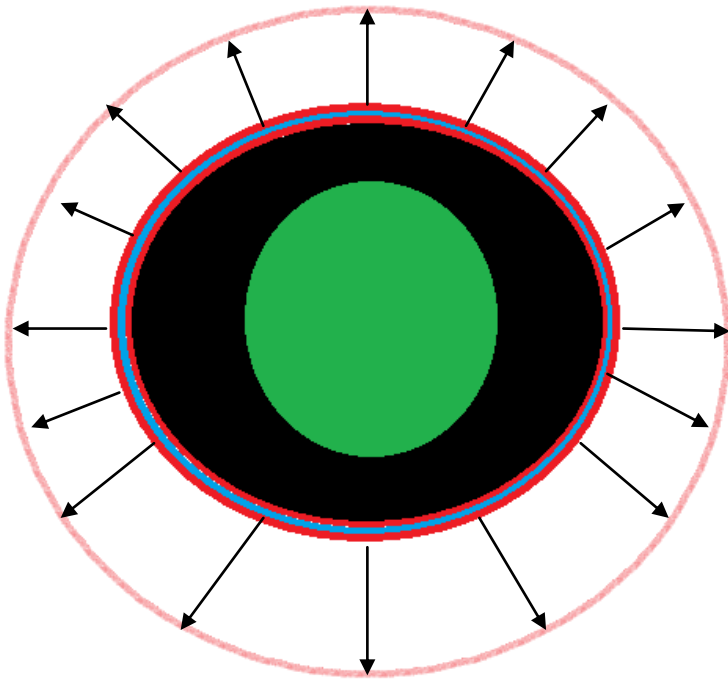


Fig.17. soldiers arranged according to Audley's description of a 'round ring', with bills and command staff (green) at the centre of the unit's pikemen (black). A layer of armoured pikemen (blue) would protect arquebusiers (red), who had a 360° field of fire (indicated with arrows). The light red band shows the limits of the arquebusiers' range.

The Shot

Missile troops were a vital part of European and English armies, being proclaimed by Barrett as 'the fury of the field' for the damage they could inflict at range, and proving instrumental in a succession of engagements throughout the period.⁴⁷¹ This endorsement, prefigured in Audley's comments that some battles 'hath been gotten by shot only', was, however, tempered by an awareness of the limitations of firepower and the symbiotic relationship existing between missile troops and the battle's main body, as Barrett went on to state:

For a stand of pikes [are] not able to abide the field, unless they had shot, to answer their enemies shot. In like sort, any troop of shot [...] being in open field, having no stand of pikes [...] nor hedge, ditch, trench or rampier [...] could not long endure the force of horse.⁴⁷²

This passage encapsulates the need to deploy pike and shot in close proximity and highlights their mutual dependency, with unsupported pikemen vulnerable to missile fire, as befell the Scots at Pinkie, and isolated detachments of shot liable to being swept away by opposing cavalry. While an army's shot could, as at Cerignola or Pavia, use the natural or man-made

⁴⁷¹ Barrett, *Moderne Warres*, Bk.3.fol.13^r.

⁴⁷² Barrett, *Moderne Warres*, Bk.3.fol.13^r.

terrain of ‘hedge, ditch, trench or rampier’ to shelter from enemy forces, it was often reliant upon the body of the battle to provide this safeguard. At Bicocca, for example, Swiss pikemen advanced against a virtually impregnable Spanish position, suffering heavy casualties from artillery and close-ranged arquebus fire as they approached. Nonetheless, the Swiss pressed their assault and succeeded in scaling a sunken road to attack their opponents, only being repelled after an encounter with the landsknechts stationed to intercept them, thus illustrating that even the best-prepared defences could not necessarily prevent an enemy reaching close-quarters.⁴⁷³ In accordance with these requirements, shot was often deployed in one of three ways, the first of which, intermingling missile troops within a unit’s outer ranks, has already been described. The second method, recorded by Audley, involved placing groups of shot in close proximity to the infantry battle:

And you must have for the covering of the weak flanks two sleeves, for every flank a sleeve, and as many ranks of them as be in the flanks of the body of the battle, which sleeve of shot ought not to remove, but to abide still for the safeguard of the flanks.⁴⁷⁴

This would place ‘sleeves’ of shot alongside the battle to act as a buffer ‘for the safeguard of the flanks’, with each detachment having an equal number of ranks to the formation they accompanied. During action the sleeves were expected to remain in position on the battle’s flanks, from where they could shoot at enemy forces and shelter beneath the unit’s pikes should they come under attack. In practice such instructions could be disregarded in certain tactical situations, as occurred at Pinkie when arquebusiers accompanying the English battles were redeployed to concentrate their fire against the Scots, Patten noting how Piero Malatesta ‘Captain of all the Hackbutterers afoot, did very valiantly conduct, and place a good number of his men [...] hard at the face of the enemy’.⁴⁷⁵ While Audley was familiar with continental deployments, noting that ‘the Almaines use [...] iii in a rank of shot about their battles’, he advised that English armies, which included limited firearms but large numbers of archers, should ‘mingle our archers and harquebusiers together [...] about your battle v in a rank, they to have iii archers and ii harquebusiers’.⁴⁷⁶ These recommendations demonstrate how Tudor tacticians were aware of European precedents, but modified their implementation to suit England’s military resources. Although Audley’s divergence from European tactical deployments may have been motivated by expediency, with the country’s shortage of arquebusiers compelling the use of archers, his intermingling of both weapons could also represent an attempt to blend their individual strengths and compensate for their deficiencies.

⁴⁷³ Oman, *Art of War*, pp.178-82.

⁴⁷⁴ Audley, p.26.

⁴⁷⁵ Patten, p.123.

⁴⁷⁶ Audley, p.17.

Mixing bows and firearms would, as discussed in Chapter 3, allow the two weapon systems to complement each other, with archers providing accurate and rapid shooting to supplement the range and stopping power of the arquebus. This would accord with the sixteenth-century trend towards combined-arms tactics, and is observable in Audley’s suggestion that battles should be armed heterogeneously for greater versatility. Nor were such policies confined to the mid-Tudor period, with the *Handbook*, written between the passing of the Militia Act and the creation of the Trained Bands, following Audley’s lead and advocating the deployment of archers ‘in wings or bands [...] and sometimes mixed together with hagbutters’.⁴⁷⁷ Figures 18 and 19 depict a battle of 1500 men in ‘broad’ square accompanied firstly by arquebusiers ‘iii in a rank’, according to the ‘Almain’ practice, and then by mixed archers and arquebusiers as per Audley’s work.

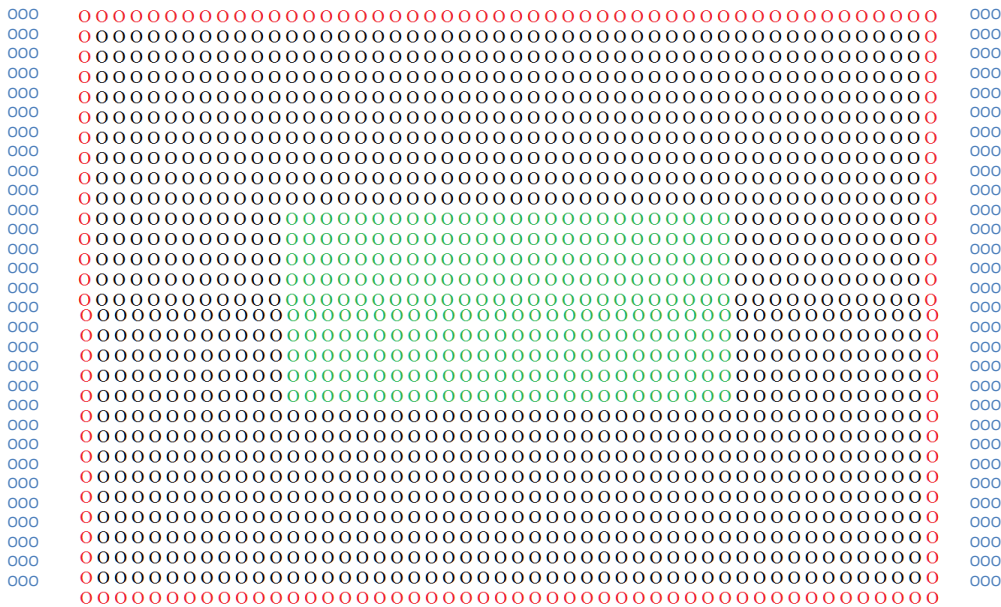


Fig.18. 1500 infantrymen, deployed in 30 ranks of 50, accompanied by 180 arquebusiers (blue) arranged ‘iii in a rank of shot about their battle’ as Audley defined the ‘Almain’ practice. The battle would occupy an approximate area of 60x44m, while each sleeve would require 60x2.7m to deploy (assuming the usual 3 feet (0.9m) was left between the sleeve and the battle).

⁴⁷⁷ Barrett, *Handbook*, fol.16r.

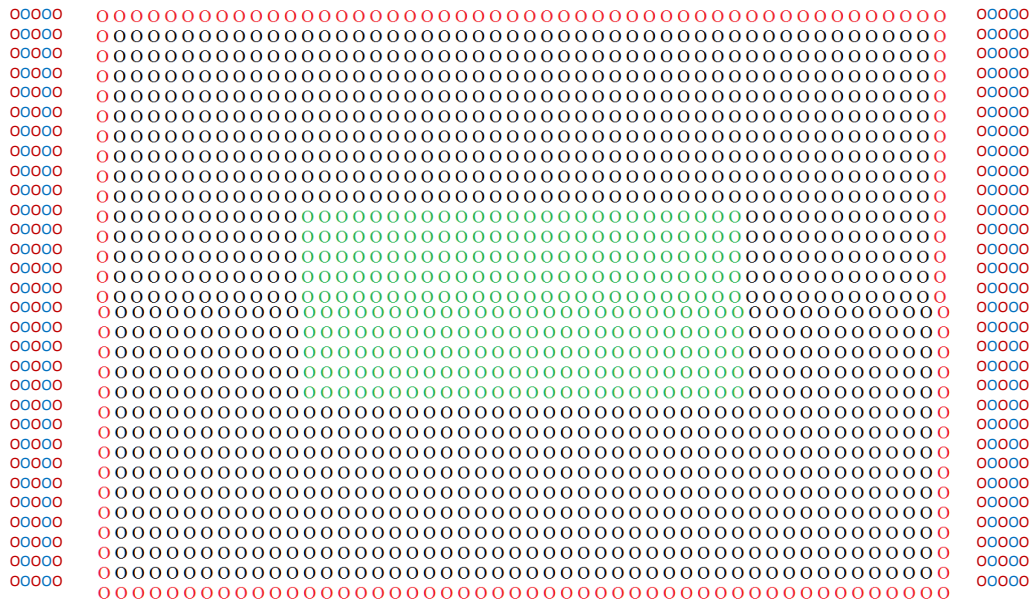


Fig.19. 1500 infantrymen accompanied by mixed shot ‘v in a rank [...] iii archers and ii harquebusiers’ as Audley recommended for English armies. This formation requires 120 arquebusiers (blue) and 180 archers (dark red), with each sleeve needing 60x4.5m of ground.

As Figure 19 illustrates, a battle of 1500 infantrymen arranged into 30 ranks of 50 soldiers would be accompanied by 300 shot, comprising 120 arquebusiers and 180 archers, satisfying Audley’s requirement that missile troops should comprise at least a fifth of the total. English armies following Audley’s recommendations would therefore contain a larger proportion of shot than their European equivalents, a peculiarity which perhaps amounted to a tactical doctrine emphasising greater degrees of missile fire as a means of employing the country’s substantial number of archers in battle. England’s use of sleeves of shot pre-dated Audley’s work, however, with Ramsay’s sketch of Pinkie (Fig.20) revealing actual deployments used in the engagement, which may have influenced Audley’s near-contemporary treatise. The image below clearly shows English pike battles arrayed in ‘broad’ square and accompanied by detachments of shot, armed with longbows and arquebus, extending along their flanks in exactly the manner Audley described. However, while the deployment of sleeves containing bows and firearms foreshadowed Audley’s work, the quantity and composition of the English shot differed in Ramsay’s drawing. Rather than containing ‘v in a rank [...] iii archers and ii harquebusiers’, the shot at Pinkie appeared to be equally divided between two files of archers to the left of each battle, identifiable through their curved bow staves, and two files of arquebusiers, with shorter weapons, on the right. This would leave the army with substantially fewer missile troops than Audley recommended, but an even ratio of bows to firearms.

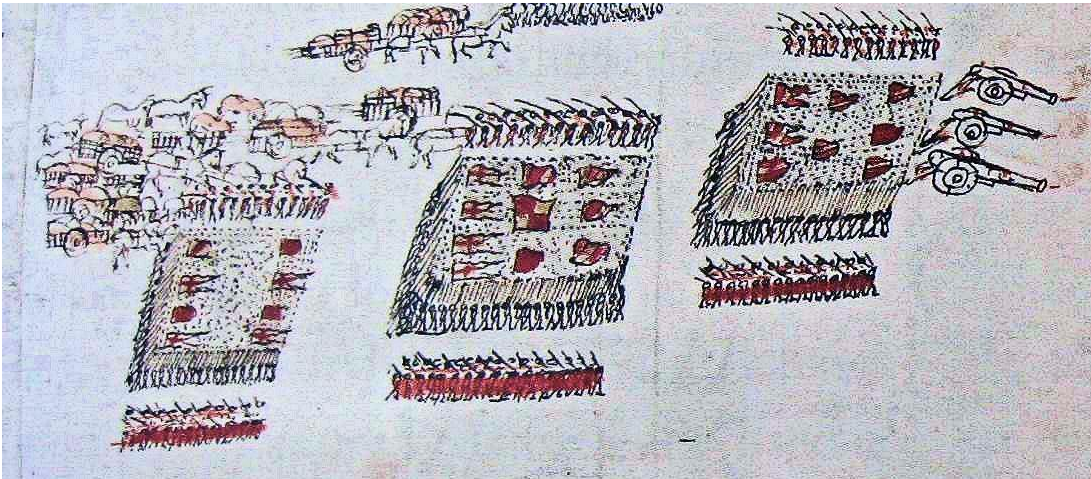


Fig.20. MS. Eng. Misc. c. 13 (r), repr. in Foard and Morris, p.99. Each English battle in Ramsay's drawing is shown carrying pikes, arrayed in 'broad' square, and accompanied by a sleeve of archers to its left (far side) and arquebusiers to the right (near side). Unlike Audley's recommendation, the shot are deployed in two files rather than five, and are in separate units instead of being intermingled.

The use of Ramsay's drawing is, however, hampered by its small scale and abstract depiction of the relevant tactical units, which prevents an accurate assessment of the number of soldiers armed with particular weapons. Additionally, where other sources provide numerical estimates, these complicate the interpretation of artistic representations. For instance, Patten's claim that the army's infantry firearms were limited to a unit of Spanish mercenaries comprising 'all the Hackbutters a foot, being in number, 600' is difficult to balance with Ramsay's image, which shows near-identical numbers of arquebusiers to archers.⁴⁷⁸ As the English force was known to contain an indeterminate though large quantity of bowmen, probably numbering in the thousands, it is inconceivable that only six-hundred archers were present.⁴⁷⁹ This leads to two possible conclusions. In the first scenario Patten is correct: the army only contained six-hundred arquebusiers and Ramsay, who drew an equal number of archers, simply sketched an idealised deployment in which the ratio of both weapons was equal. Alternatively, the mercenaries may have formed only part of the army's total firearms contingent, with further arquebusiers being drawn from native sources of recruitment like garrison forces and urban militias. Notwithstanding the Tudor state's extensive use of these resources, the first option appears more likely, particularly given the abstract uniformity with which Ramsay presented the English army. Despite the uncertainty regarding the number of bows and firearms present, Ramsay clearly shows both units in separate sleeves, a deployment that can be confirmed by another key

⁴⁷⁸ Patten, p.77.

⁴⁷⁹ Glenn Foard, 'Scottish Battlefield Inventory: Pinkie' (unpublished work, Battlefields Trust, 2006), p.1.

visual source: the Cowdray Engraving (Fig.21), a facsimile of a lost painting commemorating the battle of the Solent and the sinking of the *Mary Rose*.

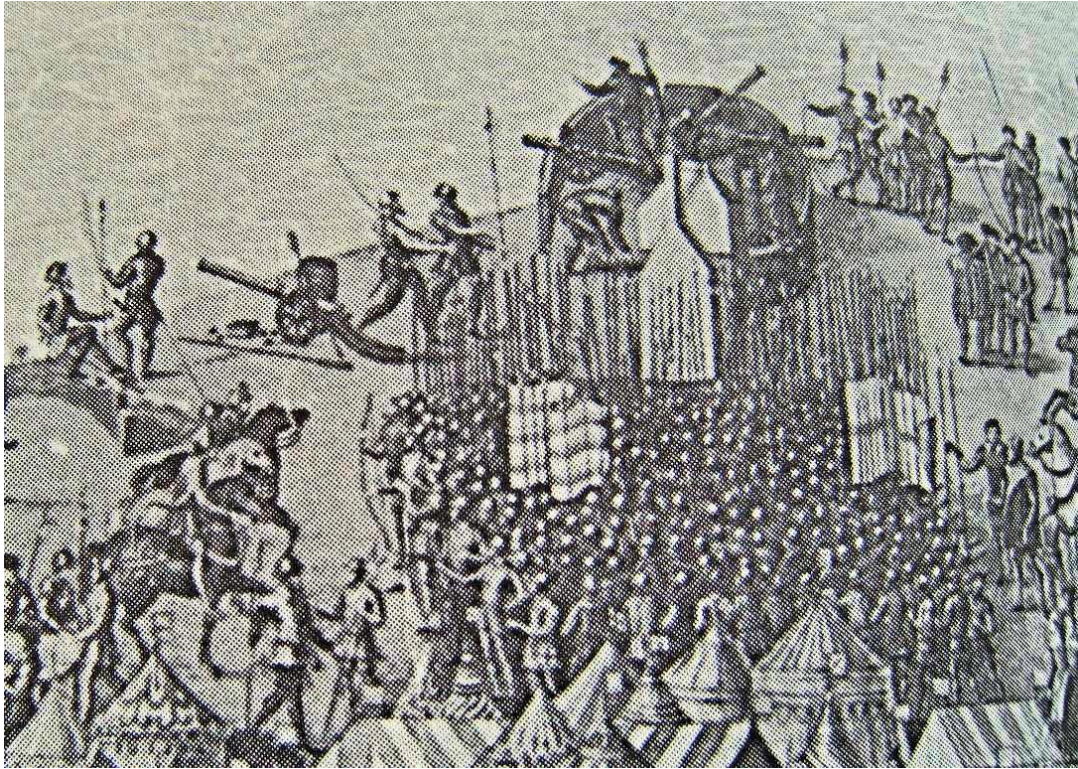


Fig.21. Detail from the Cowdray Engraving, a c.18th engraving of a lost painting at Cowdray House, showing English soldiers during the battle of the Solent (1545), repr. in Margaret Rule, *The Mary Rose: The Excavation and Raising of Henry VIII's Flagship* (Leicester: Conway Maritime Press, 1982), p.33. Note the pike battle's accompanying sleeves of archers and arquebusiers.

The foreground of this image, duplicated above, depicted a unit of English pikemen and their accompanying sleeves of shot in the process of embattling on the shoreline to resist the anticipated French attack. As with Ramsay's drawings, both archers and arquebusiers are shown as separate, seemingly equal sleeves, suggesting that while both missile weapons were used together, they were deployed in distinct units rather than being intermingled in the manner Audley described. Additionally, the smaller numbers of missile troops shown in both illustrations implies that Audley may have sought to increase the proportion of English shot, perhaps in recognition of the crucial role it played in defeating the Scots at Pinkie. While it is impossible to estimate the exact numbers of shot Tudor armies allocated to support their infantry battles, bows were likely to outnumber firearms at a ratio of at least 2:1. This would mean that a unit of 1500 infantrymen, in 30 ranks of 50, might be accompanied by sleeves of 120 archers and 60 arquebusiers, as Figure 22 shows.



Fig.22. Battle of 1500 infantrymen accompanied by a sleeve of 120 archers, in four files, and 60 arquebusiers, in two files. The sleeve of archers would require 60.9.x3.6m and the arquebusiers 60.9x1.8m.

Finally, instead of operating within the battle's outer ranks or as a sleeve, shot could also be stationed ahead of the main body as a Forlorn Hope, comprising groups of skirmishers intended to screen the formation and harass enemy forces. This method of deployment became increasingly popular following the battle of Pavia, where Fernando d'Avalos, the Marquis of Pescara, employed arquebusiers in dispersed units to better exploit terrain to shield them from attack.⁴⁸⁰ During this engagement large numbers of Spanish arquebusiers, which comprised a fifth of the Imperial army and operated as forward skirmishers, spearheaded an attack into French siege lines and inflicted heavy casualties on enemy men at arms by delivering close-ranged fire from the shelter of foliage, fog, and their supporting units of pikemen.⁴⁸¹ The tactical flexibility of skirmishers, which were able to aggressively advance and bring the enemy within range before withdrawing to evade attack, also featured prominently within Audley's work:

Then must you place them that must assail your enemies at the first encountering [...] before the forefront of the battle, and so they do advance themselves, somewhat before the battle, and to shoot off at their enemies as often as they might retire to the sides [when] the battle did join and then to grieve their enemies with shot to the uttermost of their power as long as the fight doth endure. But the said small shot must beware that they do not advance themselves too far before the battle lest peradventure they might be overthrown with horsemen.⁴⁸²

⁴⁸⁰ Mallett, 'Transformation', p.7.

⁴⁸¹ McLachlan, pp.72-3; Hall, *Weapons*, pp. 179-83.

⁴⁸² Audley, p.26.

This passage outlined the function of skirmishers ‘to assail your enemies at the first encountering’ before withdrawing to the flanks of battles engaged in close-quarter fighting ‘to grieve their enemies with shot’ by shooting into their rear ranks, a common tactic mentioned by Machiavelli.⁴⁸³ Audley also emphasised the vulnerability of the Forlorn Hope to cavalry, stating ‘the said small shot must beware that they do not advance themselves too far’, and implying that they should remain within protective terrain or within reach of the infantry’s pikes. Unlike the shot surrounding the battle, which separated bows and firearms into distinct, though mutually supporting, sleeves, English Forlorn Hopes probably mixed archers and arquebusiers to maintain this combination throughout a more dispersed unit. The *Handbook* confirms this supposition by recommending ‘the noble assistance of longbows’ for a battle’s detachment of skirmishing arquebusiers, implying that the former weapon’s high rate of shooting could maintain a constant barrage while the latter was reloading.⁴⁸⁴ Given that firearms were more widely available in Barrett’s era, earlier Tudor forces probably assembled their Forlorn Hopes primarily from archers in a continuation of fifteenth-century practices, where units of bowmen were deployed ahead of the main army and retreated behind the lines as the enemy approached.⁴⁸⁵ This would provide a tactical role for England’s many archers, who could assist small numbers of arquebusiers in skirmishing while the bulk of the army’s firearms deployed as one of each infantry battle’s sleeves. However, as events at Pinkie show, the distinction between sleeves and the Forlorn Hope may have been primarily organisational, with units of shot able to shift freely between both types of formation and battlefield role in accordance with situational requirements.⁴⁸⁶ The diagram below (Fig.23) shows an infantry battle preceded by a Forlorn Hope, consisting mostly of archers, while sleeves of arquebusiers and archers are stationed on its flanks.

⁴⁸³ Machiavelli, Bk.3.79-97, pp.70-1.

⁴⁸⁴ Barrett, *Handbook*, fol.16^r.

⁴⁸⁵ Strickland and Hardy, pp.375-7.

⁴⁸⁶ Foard, ‘Pinkie’, p.7.

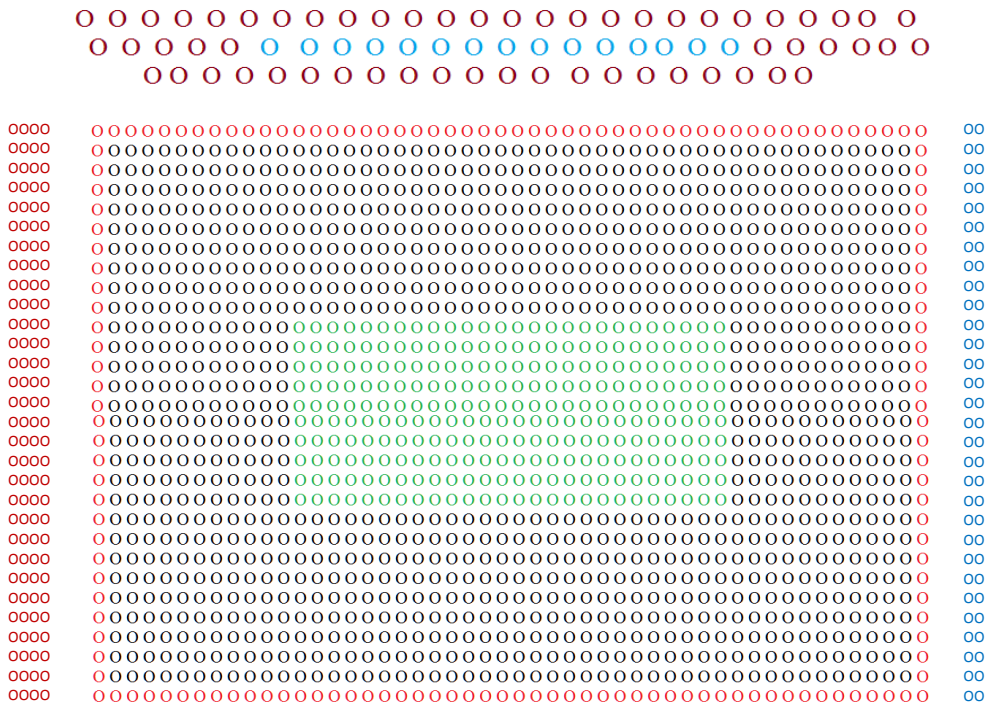


Fig.23. Infantry battle with Forlorn Hope ahead and sleeves of archers and arquebusiers on its flanks. The majority of the Forlorn Hope consists of archers (dark red), with a small number of arquebusiers (blue).

Cavalry Formations

Although cavalry seldom singlehandedly determined the outcome of engagements in the manner of their medieval predecessors, mounted troops still played an important role in Renaissance warfare, and proved instrumental for the evolution of combined-arms tactics.⁴⁸⁷ To this end, while horsemen could operate with a greater degree of tactical autonomy than infantry battles, and sometimes, as at Fornovo and Ravenna, fought isolated actions against their opposing counterparts, commanders were increasingly encouraged to keep horse and foot in close proximity.⁴⁸⁸ Audley, for instance, recommended having ‘for every battle of footmen two wings of horsemen which is a strength for the flanks [...] and an occasion to take the advantage of the flanks of the enemies’.⁴⁸⁹ This integration between mounted troops and footmen will be considered in more detail when discussing the deployment of an army, while the following section will describe the embattling of individual cavalry units.

Tactical Formations and Deployment

⁴⁸⁷ Phillips, ‘Nimble Service’, pp.59-63.

⁴⁸⁸ Hall, *Weapons*, pp.166, 171-4.

⁴⁸⁹ Audley, p.27.

Sixteenth-century horsemen were arrayed into battles following the same principles used to organise units of infantry, although each soldier and his mount would occupy a larger physical area, and so would require 5x10ft (1.5x3m) of space in a formation rather than the 3x7ft (0.9x2.1m) allotted to footmen.⁴⁹⁰ When deploying lancers, whose success in combat depended upon bringing the greatest number of horsemen into contact with the enemy during a charge, European armies made frequent use of linear (*en haie*) formations.⁴⁹¹ This precedent was followed in English tactical manuals, with Audley remarking that ‘the broad square is very good for horsemen to fight in’.⁴⁹² The *Handbook*, while intended exclusively for infantry captains, alluded to the positioning of men at arms within a unit’s front ranks during its discussion of armoured soldiers, stating that such troops ‘be as profitable to footmen as barded horses in the fronts of horsemen’.⁴⁹³ This placement, shown below (Fig.24), accorded with the practice of shielding the majority of a unit’s members behind their better-protected comrades, and allows Audley’s instruction to limit the numbers of men at arms to a quarter of each battle to be interpreted as a means of evenly distributing these troops throughout the army. At Pinkie, the position of the Pensioners and ‘Bulleners’, which preceded the demi-lances in charging the Scots’ pikes, seems to confirm that heavier horsemen operated in mixed units, mirrored the composition of infantry battles by employing men at arms as *picche armate* and demi-lances as *picche secche*.⁴⁹⁴

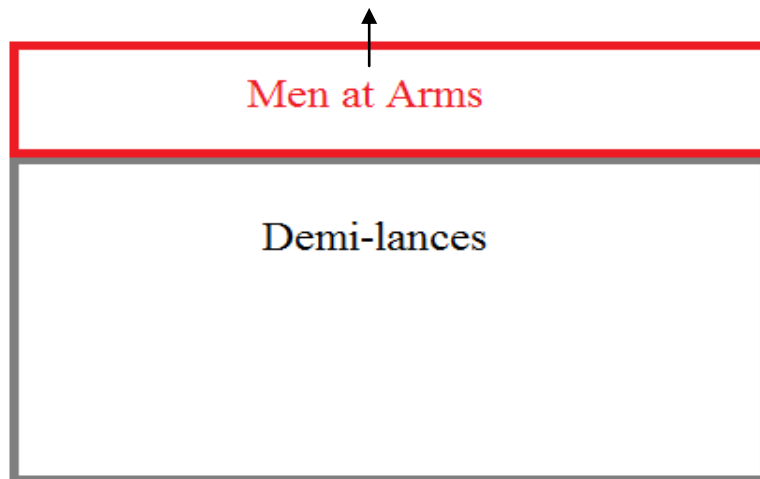


Fig.24. Cavalry battle containing men at arms in the front ranks (comprising 25% of the unit) and demi-lances behind.

⁴⁹⁰ Davies, *Tudor Art of War*, p.39.

⁴⁹¹ Rogers, ‘Tactics’, p.225.

⁴⁹² Audley, p.27.

⁴⁹³ Barrett, *Handbook*, fols.10^r-10^v.

⁴⁹⁴ Patten, p.109.

Just as men at arms and demi-lances adopted the 'broad' square and mixed deployment favoured by infantry forces, so the army's detachments of mounted shot were similarly arrayed to precede and flank these units as a Forlorn Hope or sleeve.⁴⁹⁵ The first manner of deployment was attested by Barrett's work, which explicitly referred to mounted shot as 'forlorn skirmishers on horseback' and described them operating in a similar fashion, stating that, once an engagement had begun, they 'having performed their duty, do retire behind their lancers'.⁴⁹⁶ Equally, at Pinkie, Gamboa's mounted arquebusiers were sent forward to assist the other English shot engaged in harassing the enemy battles, exploiting their high manoeuvrability to rapidly increase the concentration of missile fire at the engagement's decisive point.⁴⁹⁷ When deployed as sleeves, mounted shot would adopt deep columnar formations (*en host*) to shield the flanks of their accompanying lancers in the same fashion as their infantry counterparts, and better enable the process of firing by ranks known as the *caracole*.⁴⁹⁸ Such units were also used by *Reiters* to maximise their firepower, allowing them to employ the *caracole* against infantry and discharge their pistols to right or left when participating in cavalry action, giving them a notable advantage over lancers, who could only attack enemies to their fore.⁴⁹⁹ It is unclear how light horsemen operated in battle, although Ramsay's representation of Pinkie (Fig.25) appears to show English light horsemen deployed in narrow columns in contrast to the broader squares of heavier cavalry.

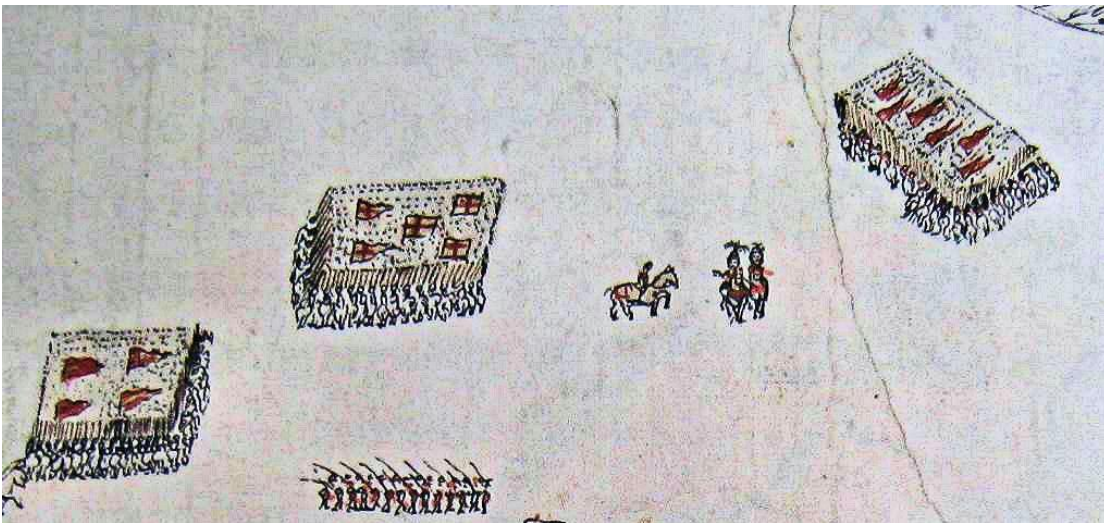


Fig.25. MS. Eng. Misc. c. 13 (r), repr. in Foard and Morris, p.99. Note the English light horsemen (top right) are deployed in a narrower formation than the 'broad' square of the men at arms and demi-lances (left).

⁴⁹⁵ Phillips, *Anglo-Scots Wars*, pp.28-9.

⁴⁹⁶ Barrett, *Moderne Warres*, Bk.3.fol.40^r.

⁴⁹⁷ Caldwell, 'Pinkie', pp.84-5.

⁴⁹⁸ Hall, *Weapons*, p.197.

⁴⁹⁹ Rogers, 'Tactics', p.220.

Artillery Deployment and Tactics

Artillery played a vital role in both European and English warfare, with Tudor armies making skilful use of ordnance at major engagements, their bombardment arguably compelling the Scots to advance at Flodden, and concentrated artillery fire proving the chief determinant of victory at Pinkie.⁵⁰⁰ Despite the evident importance of such weapons, Tudor military treatises contain surprisingly few references to their tactical deployment in battle. While such matters lie beyond the *Handbook*'s company-level remit, even authors such as Audley and Barrett, who followed a holistic approach within their manuals, clearly regarded artillery as a specialist arm, distinct from infantry and cavalry formations, and provide only the sparsest mentions of its use. A crucial exception was provided by Machiavelli's *Art of War*, which was one of the first and most influential English translations of European military literature, and saw many of its recommendations reproduced in later works.⁵⁰¹

Machiavelli summarised key aspects of continental artillery doctrine, namely the need to balance offensive capabilities with protecting vulnerable guns from destruction or capture, and outlined the basic requirements for its employment in support of other forces. These assertions simultaneously demonstrated both the limitations and perceived potency of ordnance, noting how a commander must endeavour to neutralise enemy guns at the earliest opportunity, even at the cost of silencing his own, lest his army incur heavy casualties and a fatal loss of cohesion.⁵⁰² The accuracy of Machiavelli's observations can be proven by numerous examples from the Italian Wars, where large, densely packed infantry and cavalry formations presented an easy target for sustained artillery bombardment, particularly if remaining stationary under fire, resulting in appalling losses unless the guns could be masked. At Marignano, for instance, Swiss pike battles were pinned in place by French cavalry charges and destroyed by cannon fire during the action's second day, an outcome reprised by English forces at Pinkie, which likewise used horsemen to immobilise their Scottish adversaries until ordnance could be applied.⁵⁰³ Similarly, over two thousand French and Spanish soldiers died during the two-hour artillery duel preceding the French advance at Ravenna, with a single cannon ball reportedly killing thirty three Spanish cavalymen.⁵⁰⁴ Even where infantry successfully overran enemy ordnance, as occurred at Novara (1513), casualties could be severe, with an estimated 700 Swiss being killed within minutes by the lethally effective short-ranged fire of the French guns.⁵⁰⁵ For these

⁵⁰⁰ Raymond Campbell Paterson, *My Wound is Deep: A History of the Later Anglo-Scots Wars 1380-1560* (Edinburgh: John Donald, 1997), pp. 144-5; Phillips, *Anglo-Scots Wars*, pp.194-9.

⁵⁰¹ See Barrett, *Moderne Warres*, Bk.3.fol.16^v for an example of this.

⁵⁰² Machiavelli, Bk.3.79-97, pp.70-1.

⁵⁰³ Turnbull, *Renaissance Warfare*, p.72; Phillips, *Anglo-Scots Wars*, p.65.

⁵⁰⁴ Oman, *Art of War*, pp.138-40.

⁵⁰⁵ *Ibid.*, pp.156-9.

reasons, Machiavelli advocated rapidly committing skirmishers and light cavalry to silence artillery, while holding heavy horsemen and other vulnerable targets behind the lines until this had been accomplished, a recommendation that English military authors tacitly adopted.⁵⁰⁶

With this in mind, England's tactical deployment of artillery was primarily intended to maximise the effectiveness of the guns' opening volleys, based on the assumption that there would be few opportunities for repeated firings. Field ordnance was accordingly placed in two possible locations, either ahead of or directly beside infantry battles.⁵⁰⁷ The first of these deployments was favoured by Machiavelli, who proposed widening the front ranks of a battle to create a 'horned' formation capable of protecting artillery placed to its fore, presumably by arranging pikemen to shelter the gun crew in the same manner as they would a detachment of shot.⁵⁰⁸ In practice, as Ramsay's drawings of Pinkie show (Fig.26), it may have been easier to place the guns directly ahead of an infantry unit and then drag them aside so the soldiers could advance upon the conclusion of the barrage, rather than redistributing soldiers from projecting wings back into the body of the battle.

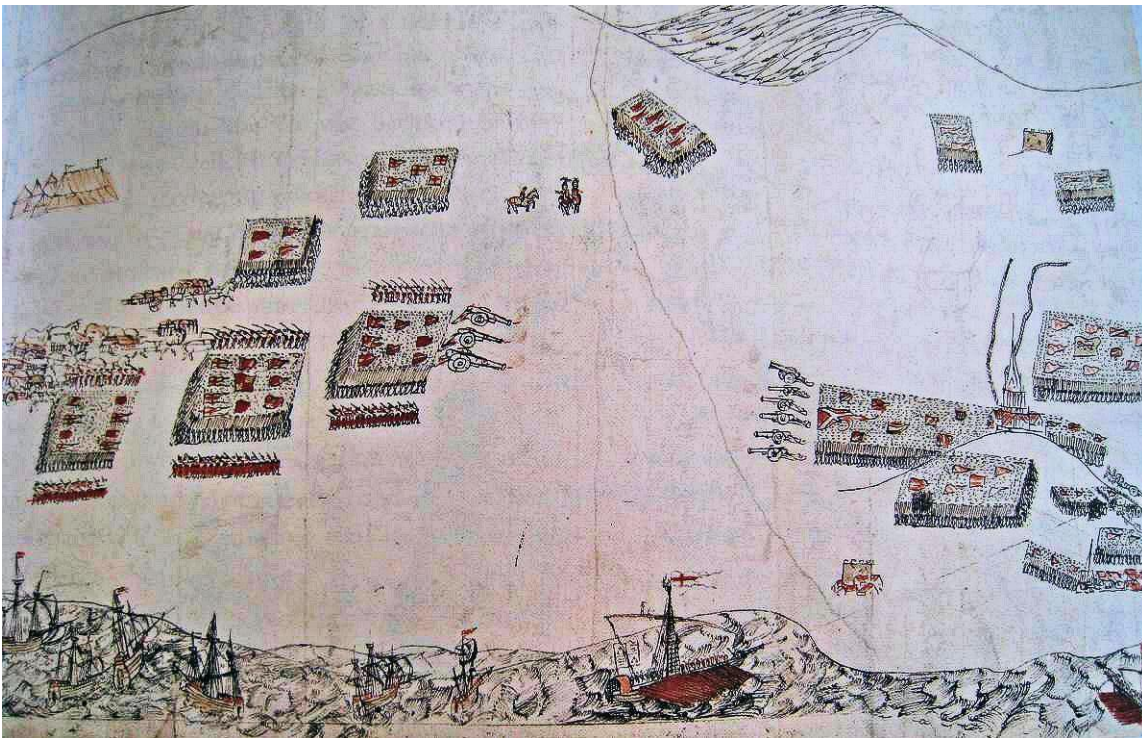


Fig.26. MS. Eng. Misc. c. 13 (r), repr. in Foard and Morris, p.99. Note that both English (left) and Scottish (right) forces have stationed artillery pieces directly ahead of their lead infantry battles.

⁵⁰⁶ Machiavelli, Bk.3.109-161, pp.72-5.

⁵⁰⁷ Raymond, p.26.

⁵⁰⁸ Machiavelli, Bk.3.242-7, p.55.

Alternatively, ordnance could be deployed beside a battle, which had the advantage of not obstructing the formation's movement, but would require more ground to accommodate alongside sleeves of shot. Audley's work, in its only mention of the battlefield positioning of artillery, described how best to arrange the sleeves 'if you have artillery by the flanks of the battle' so that 'the said small shot be no impeachment to the artillery, nor yet the artillery no impeachment to them' by 'plac[ing] the shot [...] straight out at ii corners of the battle'.⁵⁰⁹ A battle arranged according to this deployment (Fig.27), would thus have its shot projecting as wings on either side of the artillery, and so would require a wider frontage than when using a standard array with sleeves covering its flanks. English armies could address this difficulty in a manner unmentioned by Audley, however, stationing sleeves of archers behind their battle to shoot over the intervening soldiers without increasing the unit's frontage. As sleeves normally lay alongside the battle, this formation was likely to be adopted when reforming front to flank, as depicted by Ramsay's illustration of Pinkie (Fig.28). While archery delivered in this manner would be less accurate than normal, with the bowmen lacking a direct line of sight to their target, it would enable artillery to deploy more efficiently amongst sleeves of arquebusiers in areas of restricted ground.

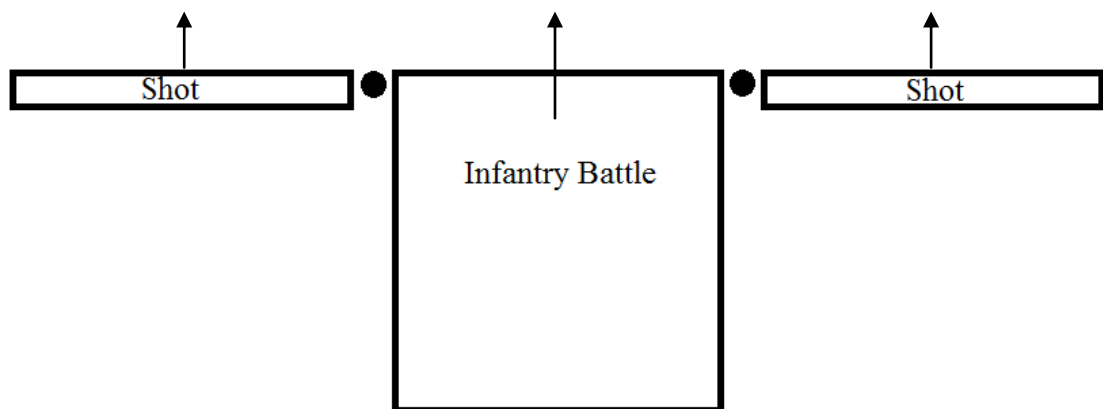


Fig.27. Infantry battle arrayed according to Audley's recommendations for deploying artillery. Note that the sleeves have been extended into line, forming wings on either side of the unit to protect the nearby artillery (black circles), but increasing the unit's frontage.

⁵⁰⁹ Audley, pp.26-7.

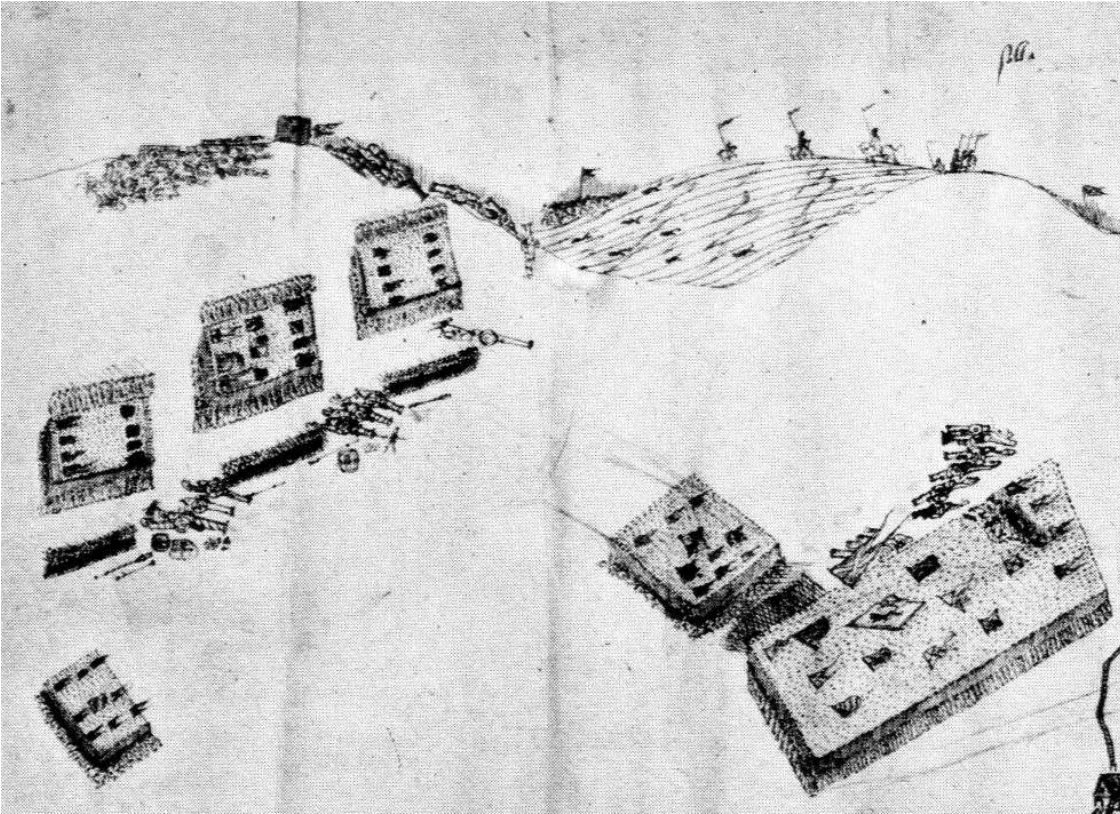


Fig.28. MS. Eng. Misc. c. 13 (r), repr. in Oman, 'Battle of Pinkie'. Note the English battles (top left) have turned to the right to confront the Scots (bottom right), placing their artillery amongst the sleeves of arquebusiers nearest the enemy, while the archers (to the rear of each unit) remain behind the battle and shoot over the heads of the troops before them. The Scots' guns are shown ahead of their battles, following standard practice.

While ordnance was sometimes deployed in other ways, for instance by placing guns between two battles, Machiavelli inveighed against such methods, arguing that either the artillery's firepower or the units' flanks would be weakened. Field pieces stationed deep between two formations (Fig.29), although minimising their risk of being overrun, would have their field of fire restricted to a narrow corridor, which enemies could avoid. Conversely, widening the space between the battles (Fig.30) would grant the gunners greater visibility, but leave them and nearby formations exposed to attack, creating a weak point in the army's deployment that rapidly moving enemies could exploit.⁵¹⁰ Heavy artillery was also used in battle where convenient, despite being difficult to transport, slow to reload, and near-impossible to redeploy during action, often being stationed on the army's flanks or rear. Unlike smaller field guns, which were commonly assigned to infantry battles in a close-support role, heavy artillery was overseen by an army's senior officers, who might order the positioning of individual weapons or their assembly into batteries. At Pinkie, for instance, Protector Somerset, the English general,

⁵¹⁰ Machiavelli, Bk.3.152-161, p.76.

undertook personal reconnaissance to determine the ideal placement of his artillery prior to the action.⁵¹¹

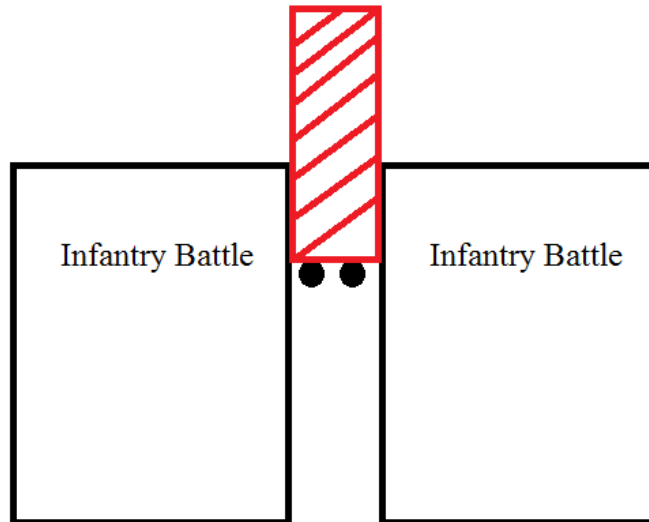


Fig.29. Artillery pieces (black circles) deployed between two infantry battles. Note their narrow corridor of fire (red cross-hatching) between the two units.

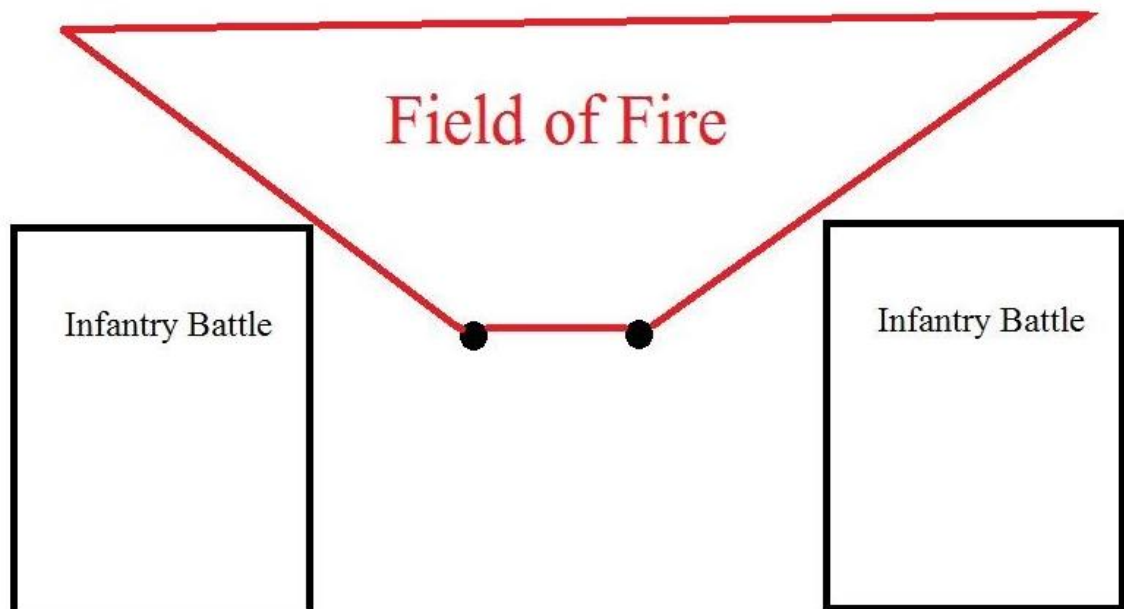


Fig.30. Artillery (black circles) deployed between two distant infantry battles. This grants a far wider field of fire but leaves the guns, and the formations' flanks, exposed.

Army Level Deployments

⁵¹¹ James Fergusson, *The White Hind and Other Discoveries* (London: Faber & Faber, 1963), pp.20-1.

As this chapter thus far has shown, sixteenth-century armies assembled their soldiers into vast, heterogeneously equipped units, which were arranged according to standardised tactical formations. While infantry battles and their accompanying shot were theoretically self-sufficient, enabling portions of the army to operate independently, they were often employed in close proximity to form predetermined configurations for the purposes of mutual support. Just as a grand captain and his sergeants would array companies into a battle and its ancillary units, so too would a commander disperse his forces to adopt one of a number of army level deployments. Such formations were often subject to the same caveats as their smaller counterparts, with military manuals documenting a number of over-elaborate or tactically limited deployments which would inevitably be rejected in favour of simpler, more effective arrangements. This section will consider several of the most common multiple-battle deployments, including the standard linear formation and its frequent variants the echelon and wedge, describing how an army could be arrayed and the tactical advantages each disposition conferred.

Deploying the Army

While a general could organise his entire force into a single battle, this was considered an inelegant and tactically inflexible means of deployment, with the lack of reserve units rendering the army vulnerable to being outmanoeuvred, and risking defeat should its main formation be overcome.⁵¹² Instead, armies commonly fought in two or more battles, with a typical disposition involving the use of three ‘wards’ arrayed according to the traditional administrative designations of Forward, Mainward, and Rearward one behind the other for ease of movement on the march.⁵¹³ As a marching column was led by its Forward battle, this formation had a correspondingly greater risk of encountering the enemy before its other units could deploy, leading Audley to recommend that the High Marshal and other officers at the forefront of the army should be accompanied by an appropriately large and well-equipped force:

Your High Marshall the Master of the Artillery, the captain of the pioneers and the carriage master [...] ought to be strongly appointed and accompanied with good men of war both on horseback and on foot, as well men at arms as light horses [and] ought never to be under ii or iii thousand men lest [...] your enemies might devise [...] to overthrow your Marshall. Wherefore make your Marshall strong that goeth before and he shall be a good shield for those that follow.⁵¹⁴

⁵¹² Webb, p.99.

⁵¹³ Ibid., p.100.

⁵¹⁴ Audley, p.21.

Thus a Forward battle would contain ‘good men of war both on horseback and on foot’, including a variety of cavalymen ‘as well men at arms as light horses’ alongside artillery and pioneers, and should ‘never be under ii or iii thousand men’. Such a force would effectively embody a representative cross-section of the army’s troops and could operate independently until its reserves arrived. This manner of deployment for the march can be seen in Ramsay’s depiction of the early stages of Pinkie (Fig.31), where English forces, their Forward in the vanguard and cavalry on their flank, advanced towards the Scots’ camp. As it transpired, the Scots’ attempted surprise attack demonstrated the value of maintaining a ‘well appointed’ Forward, with the English shot, cavalry, and artillery buying time for their infantry battles to redeploy, prefiguring or perhaps inspiring Audley’s recommendations that the lead battle should ‘be a good shield for those that follow’.⁵¹⁵

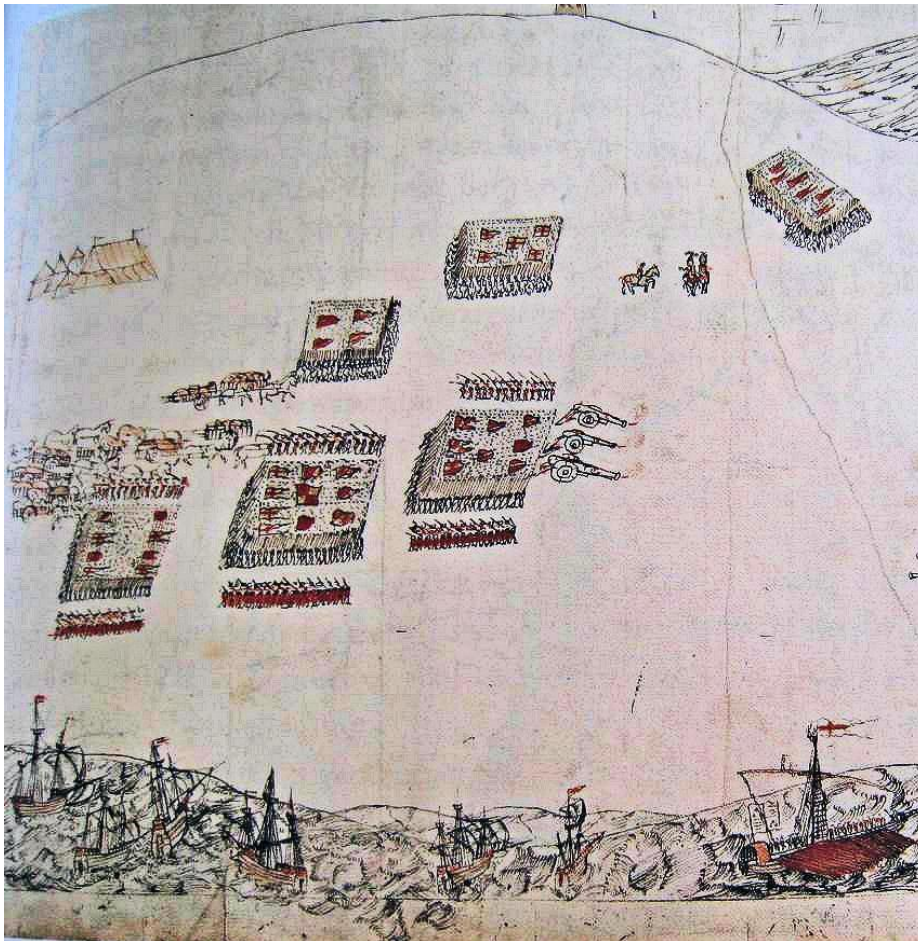


Fig.31. MS. Eng. Misc. c. 13 (r), repr. in Foard and Morris, p.99. The English Forward battle (centre of image) leads the marching column and is accompanied by sleeves of shot and artillery. Cavalry are stationed on the left flank of the army, while the guns of the English fleet protect the right.

⁵¹⁵ Caldwell, ‘Pinkie’, pp.79-80.

In addition to withstanding unexpected attacks of the kind encountered at Pinkie, an army's Forward could also be aggressively employed as a spearhead unit to pin hostile forces in place while the Mainward and Rearward arrived to engage them, making missile troops and cavalry particularly valuable components of this battle.⁵¹⁶ This manner of formation, known as the echelon, was particularly popular amongst the Swiss and allowed an army to attack directly from the march, positioning its forces to engage the enemy in successive waves, with one battle reinforcing another if encountering significant opposition. Equally, a commander could use this deployment to hold a portion of his army in reserve, probing for weaknesses with his Forward, before committing the bulk of his soldiers to the battle's decisive point. At Novara for instance, Swiss forces made a series of feints against the French army, confusing and fracturing its response, before their main assault swept through the enemy camp and overran the landsknechts units and artillery stationed there.⁵¹⁷ When describing these tactics, Machiavelli noted how the Swiss arrayed their battles 'one brigade in front and another behind it on its right hand [...] the third brigade they put behind these, but at a distance of one arquebus shot', a deployment reproduced in Figure 32.⁵¹⁸

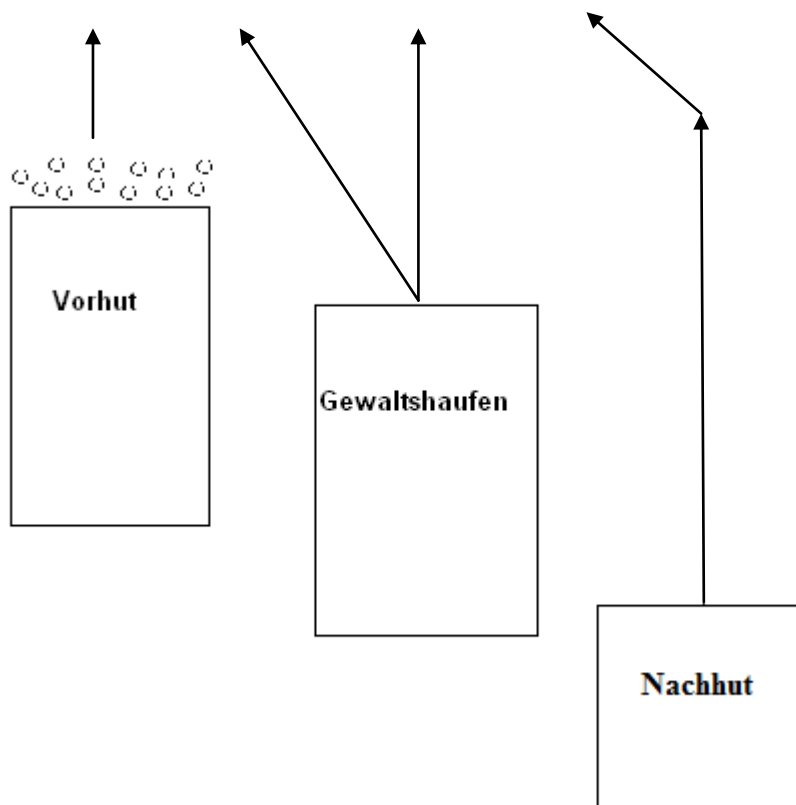


Fig.32. Army deployed according to the Swiss method, with multiple battles advancing in echelon. The Forward (*Vorhut*) included many skirmishers (shown as a loose arrangement of

⁵¹⁶ Goodman, pp.167-9.

⁵¹⁷ Oman, *Art of War*, pp.155-7.

⁵¹⁸ Machiavelli, Bk.3.27-8, p.65.

circles), while the Mainward (*Gewaltshaufen*) mainly consisted of pikemen. The Rearward (*Nachhut*) was stationed further back to act as a reserve. Each battle could attack separately or converge on a portion of the enemy army, as the arrows in the diagram depict.

An army attacking in the Swiss style would use its Forward (*Vorhut*) battle, accompanied by large numbers of skirmishers to screen the units behind, in the manner previously described: fixing the enemy in place and preventing their redeploying to evade the main thrust.⁵¹⁹ The Western Rebellion's final engagement at Sampford Courtenay illustrated just such a deployment, with Sir William Herbert's Forward battle arriving at the rebel encampment ahead of the bulk of the loyalist army and initiating an artillery bombardment and assault while the Mainward and Rearward reached the action.⁵²⁰ The *Vorhut* was shadowed by the main body (*Gewaltshaufen*), containing the bulk of the army's pikemen and halberdiers, which advanced in parallel to but slightly behind the *Vorhut* as Machiavelli described. The unit's positioning allowed the *Vorhut*'s skirmishers to shield the main body from incoming fire, and also misled the enemy as to where the blow would fall, leaving the *Gewaltshaufen* free to follow its preceding units or strike a different portion of the enemy army.⁵²¹ Finally, the smaller rearward battle, (*Nachhut*), which contained a mixture of missile troops and close-quarter infantry, followed the other units 'at a distance of one arquebus shot', approximately 200m. This force, which at Nancy (1476) consisted of 600 handgunners, operated as a tactical reserve and was not committed until the critical moment, where its mobility, the freshness of its troops, and their application at the battle's focal point, could often prove decisive.⁵²²

While the echelon proved a highly effective formation for implementing aggressive battlefield doctrines, it relied upon the rapid, co-ordinated advance of highly disciplined forces, and so was unsuitable for the majority of armies, which either lacked the necessary cohesion to carry out such attacks, or placed a greater emphasis on firepower. When deploying a marching column for battle under normal circumstances, established practice dictated that the lead unit, the Forward, manoeuvred to the right while the Mainward advanced alongside it and the Rearward took up position on the left, rearranging the army from a column into line abreast, as Figure 33 shows.⁵²³ The wedge was a common variation of this array that allowed the Mainward battle to advance slightly ahead of the Forward and Rearward in a triangular arrangement which, as Audley noted, 'cover[ed] both their flanks [...] with their vaward and rearward' while providing a 'safeguard for the inner flank of the vaward [and] rearward'.⁵²⁴ In addition to providing mutual flank protection, the wedge also positioned the Mainward, an army's largest

⁵¹⁹ Barr, pp.38-9.

⁵²⁰ See Chapter 6.

⁵²¹ Barr, pp.38-9.

⁵²² Ibid.

⁵²³ Oman, *Art of War*, pp.34-5.

⁵²⁴ Audley, p.27.

tactical unit, at the forefront of the advance where it would normally be first into combat and could be reinforced on either side by its accompanying battles. Ramsay's illustration of Pinkie (Fig.34) shows the Scottish army advancing towards the English in a wedge formation with its Mainward battle projecting ahead of the Forward and Rearward.

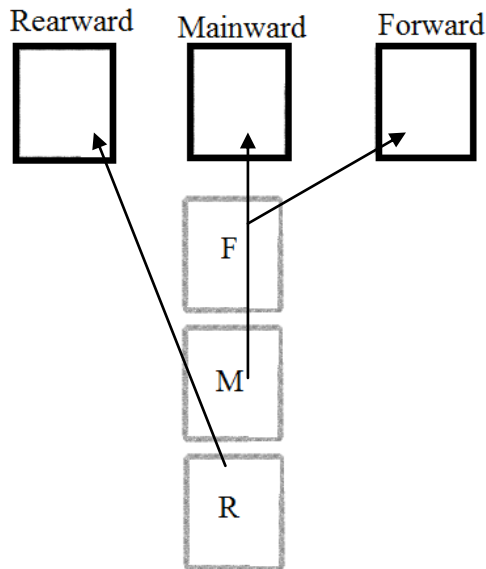


Fig.33. Three battles deploying from marching column into line abreast. The Forward battle moves to the right to make space for the Mainward to advance, while the Rearward positions itself upon the left flank.

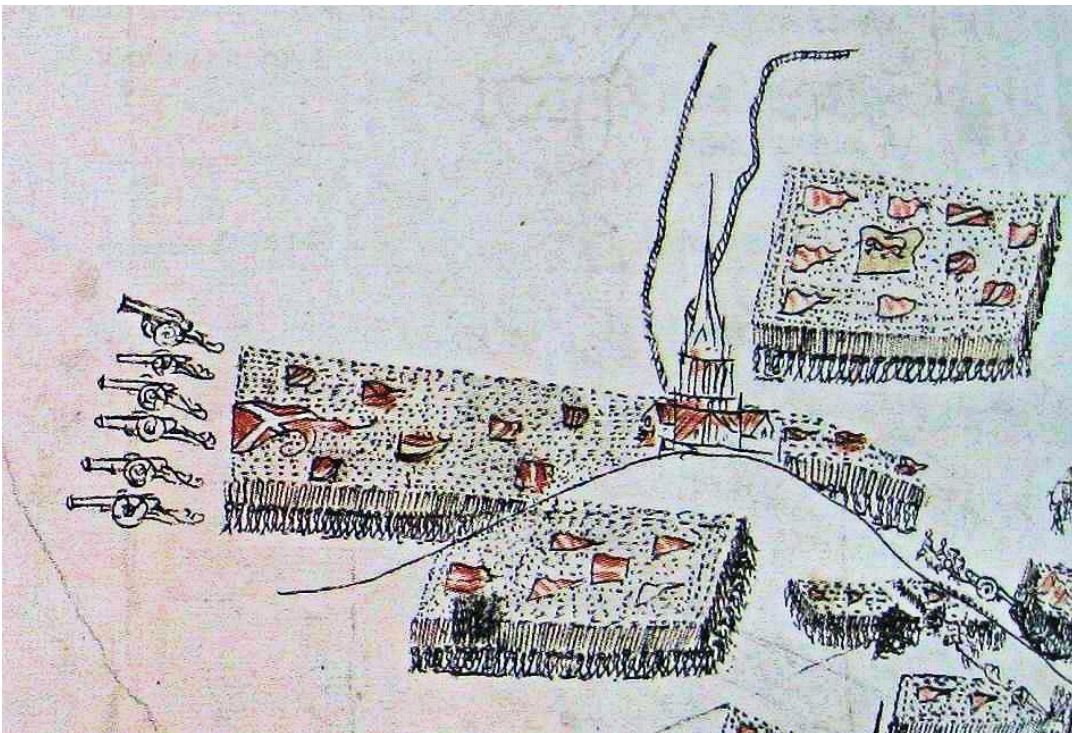


Fig.34. MS. Eng. Misc. c. 13 (r), repr. in Foard and Morris, p.99. Note the Scots' battles are deployed in a wedge formation with their Mainward battle (centre) advancing ahead of the Forward and Rearward, which are stationed further back to protect its flanks.

The efficiency with which multiple battles could be brought into line to present a continuous front was enhanced by the ancillary units accompanying each formation, which filled the gaps between the main divisions and served to protect their flanks in action. Cavalry was particularly valuable in the latter role, with Audley advising commanders to 'set all the horsemen on the two uttermost sides of all your battles without the artillery'.⁵²⁵ This would effectively enclose an army between wings of cavalry on each flank, which Audley recommended be divided into 'diverse and several bands' for greater flexibility and mutual support, so that 'if one band were repulsed or disordered [...] the other band might be ready to rescue at hand'.⁵²⁶ Figure 35 shows an army arranged in wedge formation with units of men at arms and demi-lances, preceded by light horsemen and mounted shot, on the flanks.

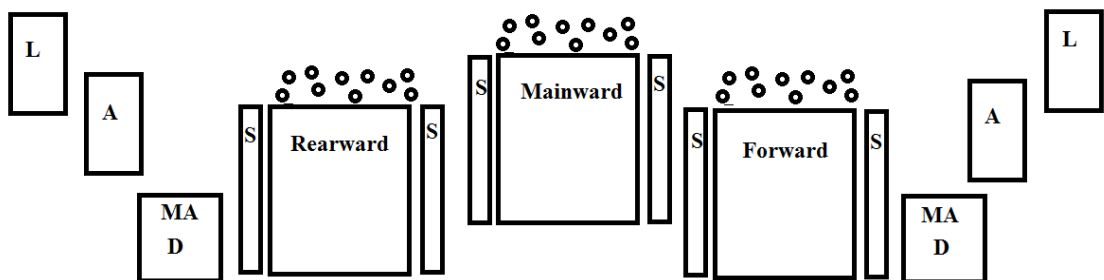


Fig.35 Army arrayed in wedge formation, with the Mainward between the Forward and Rearward. All of the infantry battles are preceded by Forlorn Hopes (circles) and flanked by sleeves of shot (S). On the flanks, men at arms and demi-lances (MA/D) are preceded by mounted arquebusiers (A) and light horsemen (L).

Finally, while Tudor soldiers were deployed in units of pike and shot according to sixteenth-century tactical principles, armies raised exclusively from the shire militia, which became increasingly rare throughout the period, may have maintained England's medieval battlefield formations. As Chapter 2 has shown, these bodies tended to lack access to the state's modern armaments and were often equipped solely with longbow and bill, making them better suited to traditional arrays intended to maximise the capabilities of these weapons in the absence of cavalry, pikes, or firearms. When deployed in this fashion, linear units of billmen, often no more than four ranks deep, were positioned with archers on their flanks in open-order

⁵²⁵ Audley, p.27.

⁵²⁶ Ibid.

formations.⁵²⁷ The arrangement could either be adopted by each battle (see Fig.36), interspersing units of archers with billmen, or an entire army (Fig.37), massing all the bills into a single body with wings of bowmen.⁵²⁸ Alternatively, archers could be positioned ahead of the billmen to provoke enemy forces into mounting an assault, at which point they could withdraw behind the lines (see Fig.38). In battle these formations relied upon the use of terrain and concentrated archery to disorder incoming enemy forces before billmen received the charge, and bowmen, armed and trained for close-quarter fighting, delivered lethally effective counterattacks against their adversary's exposed flanks.⁵²⁹ Where such units were employed against continental-style pike battles, as at Flodden and potentially during the 1549 rebellions, success depended upon negating the enemy's momentum, preventing the attacking column punching through the line. In a prolonged contest, such as Flodden, a wider, shallower body of troops would have the advantage, enveloping, constricting, and eventually destroying a deeper formation which had lost its cohesion.⁵³⁰

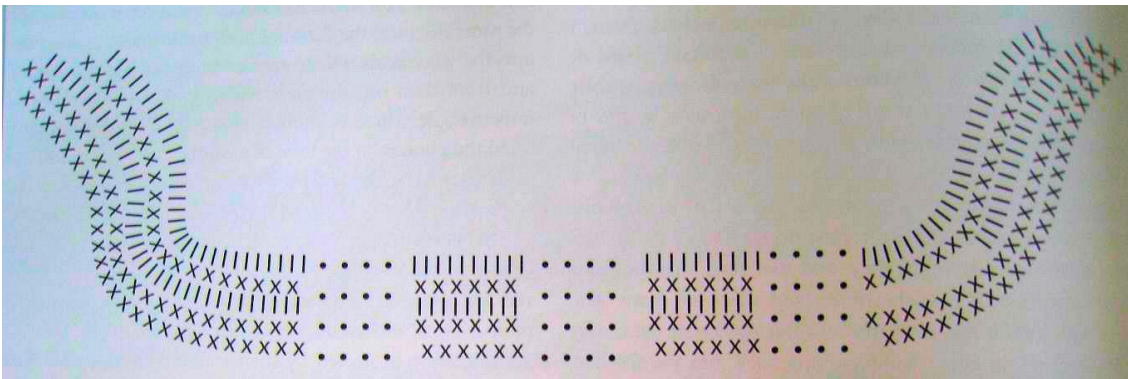


Fig.36. Archers (X) with defensive stakes (I) interspersed with blocks of infantry (black circles). Strickland and Hardy, p.310.

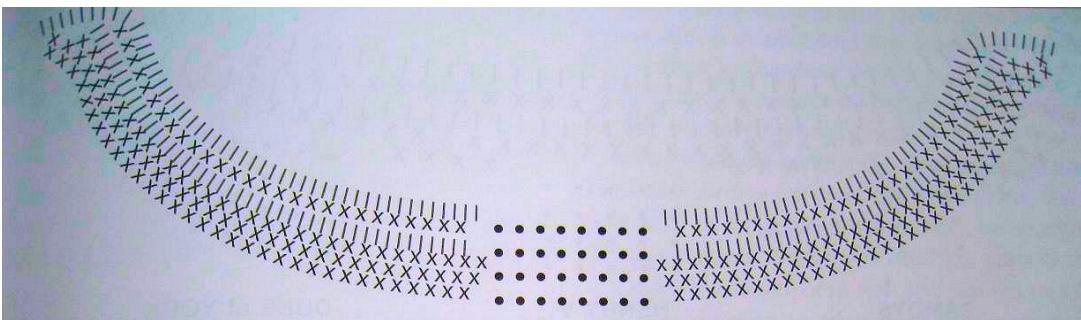


Fig.37. Archers (X) and defensive stakes (I) placed either side of a single block of infantry (black circles). Strickland and Hardy, p.309.

⁵²⁷ Barr, p.53.

⁵²⁸ Strickland and Hardy, pp.309-10.

⁵²⁹ *Ibid.*, pp.336-8.

⁵³⁰ Barr, p.108.

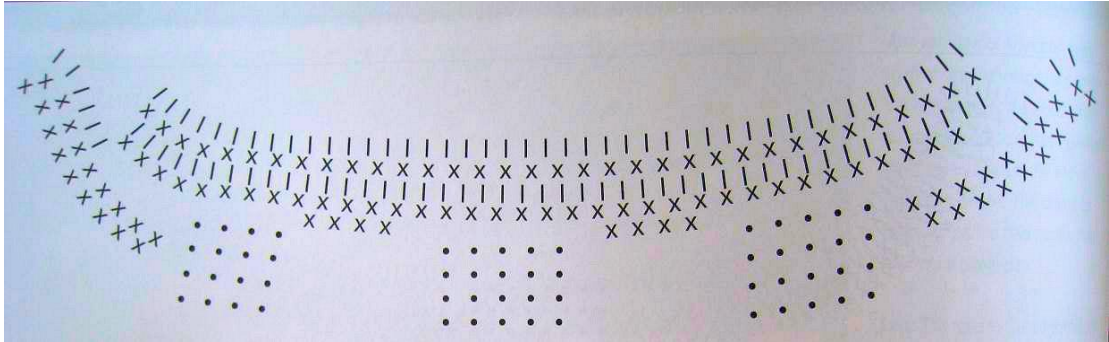


Fig.38. Archers (X) and defensive stakes (I) placed ahead of units of infantry (black circles). In battle the archers could withdraw behind their accompanying infantry when enemy forces approached. Strickland and Hardy, p.310.

Battlefield Tactics

Armies arrayed for battle would commonly position their infantry formations according to one of the previously outlined deployments of line, echelon, or wedge, before stationing cavalry and heavy ordnance upon their flanks for protection and offensive action. Once the engagement had begun, skirmishers and light horsemen would frequently be thrown forward to mask enemy guns and harass opposing troops, before withdrawing to the flanks and rear while rival bodies of infantry advanced against each other for the push of pike. As this struggle occurred, supporting units of cavalry and artillery would be employed to target the vulnerable flanks of enemy forces, with gunners seeking to acquire enfilading shots against densely packed battles, and horsemen clashing with their opposing counterparts to strike at units engaged in the 'push'. Eventually one force would begin to give way, particularly if outflanked or subjected to sustained firepower, its formations becoming increasingly disordered under pressure until they collapsed into a mass of fleeing individuals. The extent to which this occurred would depend upon the cohesion of the losing army, with disciplined soldiers often proving capable of retreating in good order and minimising further casualties, while badly beaten or disorganised troops might become irrevocable scattered and easy prey for their adversaries' pursuing light cavalry. While there were exceptions to these patterns, as exemplified by the Swiss doctrine of surprise attacks, they existed within an established framework and could be countered by particular tactics, namely the use of field fortifications, firepower, and cavalry attack, as occurred at Marignano and Bicocca.

Given the formulaic nature of Renaissance warfare, with infantry, cavalry, and artillery fulfilling predetermined roles in limited permutations, the period's military manuals tended to confine themselves to summarising the foundations of combined-arms tactics, and the correct manner of deployment, rather than speculating on the uncertain outcome of battle. Where

manuals and contemporary commentators described battlefield tactics, they often repeated standard military axioms, enshrined by Vegetius and other Classical authors, advocating the importance of ‘hill [...] wind and sun’ and suggesting that a commander benefitting from these assets ‘hath his force doubled against his enemy’.⁵³¹ Mid-century English authors adhered to this trend and cited the importance of environmental and positional factors when selecting a battlefield and manoeuvring during an engagement. Audley, for instance, advised deploying atop high ground to ‘discover all low ground with your artillery’, to exhaust enemy troops climbing uphill, and to profit from the increased momentum of a downhill charge, while the *Handbook* claimed that troops moving into the wind ‘shall lose both sight and breath’ from the smoke and dust.⁵³² Such generic guidelines extended to the tactical movement of soldiers, with Audley’s work extolling the virtues of combined attacks ‘upon the front of the enemies, likewise on the flanks both at one time’, and claiming that successfully performing this manoeuvre in action would ‘no doubt but to have victory’.⁵³³

In practice, as the victory at Pinkie illustrated, mid-century English warfare was influenced by European conflicts, with historians quick to note how Protector Somerset’s intended battle plan closely resembled that of the French at Ravenna, while his revised tactics mirrored Marignano.⁵³⁴ However, such similarities, rather than proving a direct correlation between temporally distant events, instead suggest the degree to which Tudor commanders were conversant in the battlefield equations of Renaissance warfare. When faced with an enemy occupying a defended position, Somerset’s recourse was to bombard them with artillery and, when the Scots unexpectedly advanced, his natural response was to stall them with cavalry. The application of these tactical orthodoxies was combined with adherence to pre-existing military logic, with the English army manoeuvring to take the high ground, gaining the advantage of sun and wind, and, having immobilised the Scots’ battles, intending to co-ordinate cavalry and infantry assaults upon their front and flanks. This can be seen in Patten’s account of the action, which asserted Somerset’s plan in terms anticipating Audley’s later work, stating that ‘our horsemen should retire up the hill’s side; to come down, in order, afresh, and in[v]est them on both their sides; while our battles should occupy them in fight a front’.⁵³⁵ Thus Audley’s treatise and the *Handbook*, while providing valuable information about how English armies deployed and fought, were frequently a reflection of mid-century practices, rather than an outlining of previously unfamiliar processes.

⁵³¹ Patten, p.108; see Vegetius, Bk.3.13-14, pp.92-3 for original.

⁵³² Audley, p.22; Barrett, *Handbook*, fol.9^v.

⁵³³ Audley, p.27.

⁵³⁴ Sadler, pp.491-4.

⁵³⁵ Patten, p.109.

Conclusions

This chapter has explored the common battlefield deployments in use throughout the early-to-mid sixteenth century, showing how soldiers adopted one of a limited selection of mutually supporting formations in accordance with their armament and resultant tactical role. Thus troops equipped for close combat, with pikes and short weapons, were arrayed in either a rectangle or square and accompanied by integrated shot, stationed within their outer ranks, as sleeves, or skirmishers. For cavalry, whose arms and armour even more closely determined their combat role, deployment was effectively preselected, with lancers fighting in line and mounted shot and *Reiters* in column, while artillery pieces were similarly positioned according to acknowledged conventions. Although these generic methods of deployment were transmitted to Renaissance commanders via different mediums, sometimes through tactical manuals, and sometimes through apprenticeship to an experienced general, adherence to their requirements was widespread, often resulting in battles following a predictable template. Sustained analysis of Pinkie, alongside consideration of the works of Audley and his contemporaries, has demonstrated the Tudor state's willingness and capacity to follow this template, and its mirroring of the battlefield deployments and tactics of the European powers both in theory and in practice.

While England made occasional exceptions and adjustments to this model, these tended to be on technological rather than philosophical grounds. At Flodden, for instance, Tudor forces adopted a traditional array that was appropriate to their armament, while the country's later preference for sleeves over embattled shot can be explained by the state's many archers and the physical requirements of the longbow, which was ill-suited for use within a ranked battle. Equally, where large quantities of pikes were deployed, as at Pinkie, English armies used the formations that were most effective with these weapons, indicating their familiarity with field warfare as practiced on the continent. This theory, first articulated by Hall, that deployment and tactics were determined by technology, has a particular relevance for the study of battles associated with rebellions.⁵³⁶ In many of these engagements, particularly those of the 1549 insurgencies, opposing armies were recruited from separate branches of the Tudor military, with rebel forces drawing upon the shire militia and loyalists assembling magnate retinues, urban militias, and foreign mercenary companies. This resulted in both sides having correspondingly different levels of military technology, as illustrated in Chapter 3, and thus potentially utilising different modes of deployment. Insurgents, who were predominantly armed with bills and bows, may, like the militia at Flodden, have adopted traditional linear formations, while their opponents, who intermingled these weapons with pike and shot, would have implemented the

⁵³⁶ Hall, *Weapons*, pp.44-5.

standard 'broad' and 'just' square employed at Pinkie and advocated in contemporary manuals. Equally, the better-resourced Wyatt Rebellion, which acquired supporters from retinues and the London militia, may have had access to the weapons used by these forces, and so could have utilised standard tactical deployments.

The following chapters will test this hypothesis when discussing the battles associated with the 1549 and 1554 uprisings in Devon, Norfolk, and Kent, assessing the extent to which rebel and loyalist forces adhered to the period's common tactical formations and dispositions. Where this can be determined, analysis of the engagements themselves will be assisted by this chapter's overview of how Tudor armies deployed, manoeuvred, and fought, enabling more effective tactical reconstruction via the use of Military Terrain Analysis. Additionally, the potential use of England's traditional battle array against armies deployed according to the European template provides a rare opportunity to assess the relative merits of both tactical systems, potentially building upon or challenging conclusions drawn from Flodden, the sole instance of international warfare in which such an encounter occurred.

Chapter 5: The Western Rebellion

Introduction

During the summer of 1549, amidst nationwide civil disorder prompted by Protector Somerset's economic policies, the populations of the western counties rose up against the government's religious reforms, encapsulated by Edward VI's new Book of Common Prayer, which continued the erosion of English Catholicism begun by Henry VIII.⁵³⁷ The revolt began on 6 June at Bodmin in Cornwall and shortly afterward at Sampford Courtenay in Devon, spreading rapidly through the surrounding countryside despite the regional gentry's attempts to contain it. The heavy-handed response of local Protestant landowners Sir Peter and Gawen Carew saw negotiations at Crediton degenerate into a skirmish between their retinue and rebel forces, significantly exacerbating the insurgency in its early stages. By 2 July Exeter was under siege and the Cornish strongholds of Trematon Castle and St Michael's Mount had fallen to the rebels, who had imprisoned many of the region's gentry and were seeking to consolidate their control over both counties as a precursor to advancing on London.

The Privy Council, preoccupied by concurrent events, initially underestimated the severity of the rising, despatching a small army, led by John Russell, Lord Privy Seal and future Earl of Bedford, to restore order.⁵³⁸ This force, however, lacked the troops and supplies necessary to confront the rebels, and so assumed a holding position at Honiton. On 28 July, after receiving financial assistance from local merchants and recruiting additional soldiers, Russell drove off an advancing rebel detachment at Fenny Bridges and was subsequently reinforced by Lord William Grey de Wilton and several contingents of foreign mercenaries. With his army augmented by these new arrivals, Russell went on to defeat the insurgents in a series of interlinked engagements, at Woodbury, Clyst St Mary, and Clyst Heath, between 3 and 5 August, before relieving Exeter on 6 August. The rebellion's final battle was fought on 23 August at Sampford Courtenay, where a force of insurgents had regrouped for a last stand against the, now considerably larger, loyalist army. The map below (Fig.39) illustrates the area encompassed by the rebellion, and the location of its key actions.

⁵³⁷ Duffy, pp.118-27.

⁵³⁸ Diane Willen, *John Russell, First Earl of Bedford: One of the King's Men* (London: Royal Historical Studies, 1981), pp.71-5.

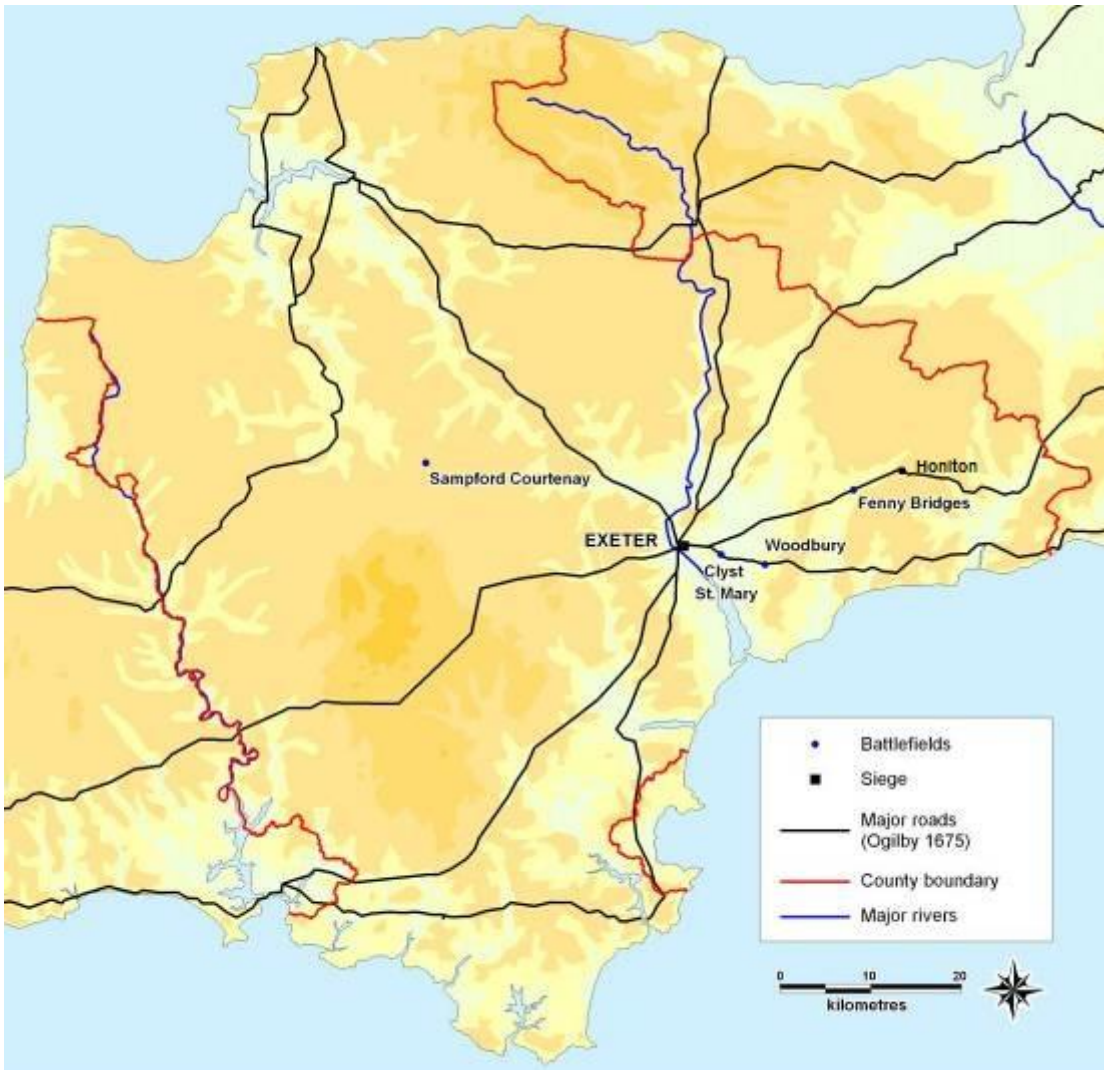


Fig.39. Map showing the location of actions connected with the Western Rebellion, in relation to the pre-turnpike post road system depicted by Ogilby (1675). Glenn Foard and Alexander Hodgkins, 'Battlefields of the Prayer Book Rebellion: An Archaeological Resource Assessment' (unpublished report for Devon County Council, University of Leeds, 2009), p.7.

Accounts of these battles emphasise that several were particularly hard-fought, with rebel armies exhibiting high morale and a degree of tactical acumen, earning the praise of their opponents and subsequent chroniclers. Lord Grey, a veteran of Pinkie, reportedly commented that 'such was the valour and stoutness of these men [...] that he never, in all the wars that he had been in, did know the like'.⁵³⁹ The engagements also appear to have been sizeable encounters, with accounts suggesting that the fighting around Exeter and at Sampford Courtenay involved approximately 10,000 combatants and included artillery on both sides. Such battles were on a comparable scale to similar encounters at Dussindale and London, as well as smaller conflicts on the Scottish Borders like Haddon Rig and Ancrum Moor.

⁵³⁹ Hooker, *Description*, pp.78-9.

Despite the scale and intensity of the insurgency, its engagements are difficult to assess, with actions often being poorly documented or, when occurring in urban environments, having little relevance for sixteenth-century field warfare. By far the greatest obstacle, however, is the shortage of suitable cartographic material, which precludes detailed terrain reconstruction of the kind described in the thesis methodology. This is particularly problematic given the extent to which the rebellion's battles revolved around topographic features, with insurgents often exploiting the landscape for tactical advantage. While historic maps, by Christopher Saxton (1576), John Ogilby (1675), and Benjamin Dunn (1765), provide overviews of Devon at approximately hundred-year intervals, these works are insufficiently precise for analysing individual battlefields. Saxton's *Devonia Comitatus* (Fig.40), for instance, furnished the earliest representation of the region, depicting settlements, rivers, and hills, but did so in an abstract fashion and failed to show the county road networks. By contrast, Ogilby (Fig.41) largely confined himself to illustrating the post road system (shown on Fig.39), providing an insight into the main routes between settlements, which were unlikely to have significantly changed since 1549, but offering few observations on other aspects of the terrain. Dunn's plan (Fig.42) was similarly focused on major roads, incorporating alterations made as a result of turnpiking, and paid little attention to settlements or terrain features, which were often shown via symbols rather than being accurately mapped.



Fig.40. *Christopher Saxton's Devonia Comitatus* (1575), in *An Atlas of the Counties of England and Wales* (1579), Leeds, Brotherton Library, MS Whitaker Collection 1. Note the pictorial representation of settlements, and the omission of road networks. North is at the top of the image.

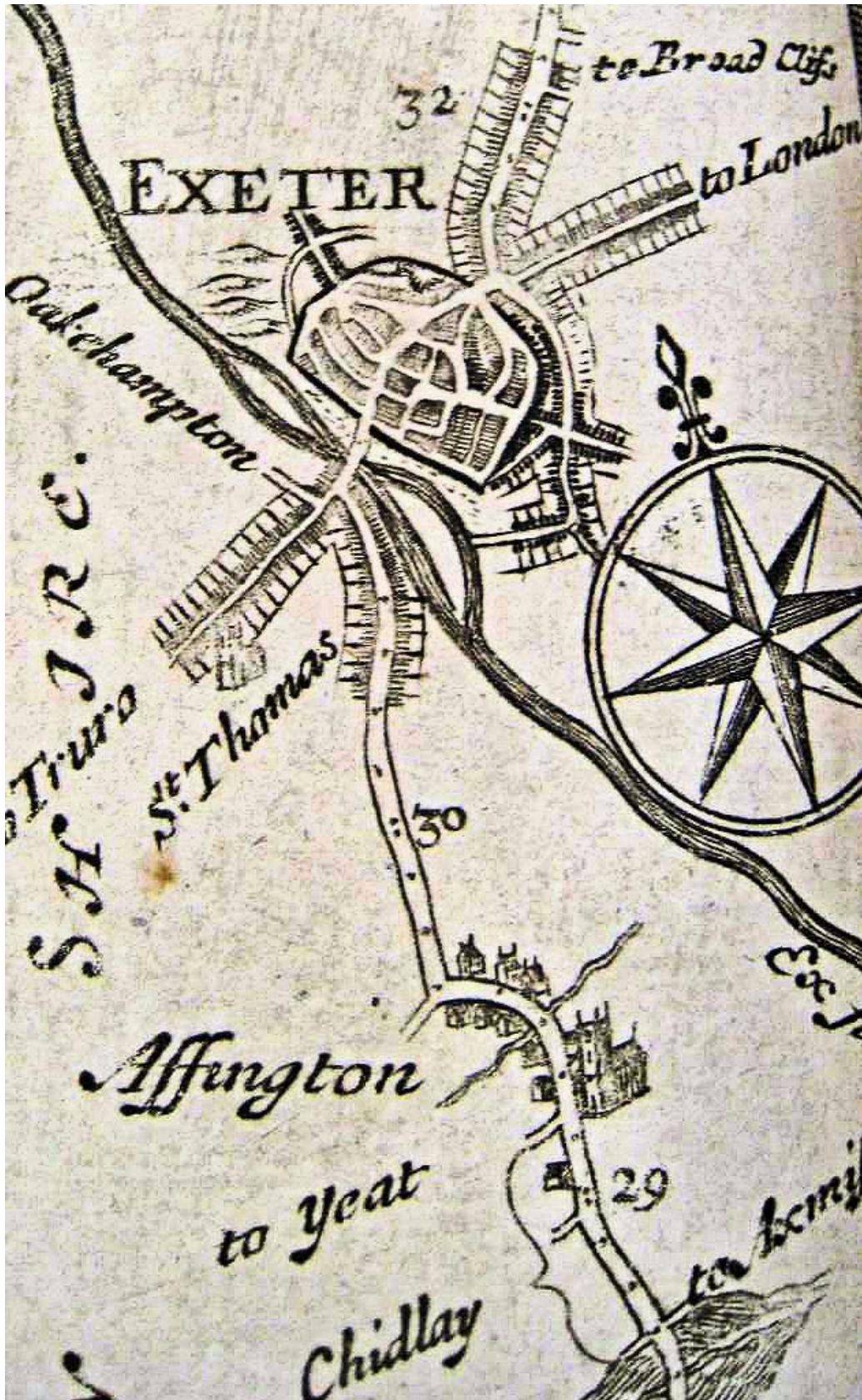


Fig.41. John Ogilby, *Britannia: Volume the First, or an Illustration of the Kingdom of England and Dominion of Wales* (London: Ogilby, 1676), plate 94. Note the lack of topographical detail away from major roads.

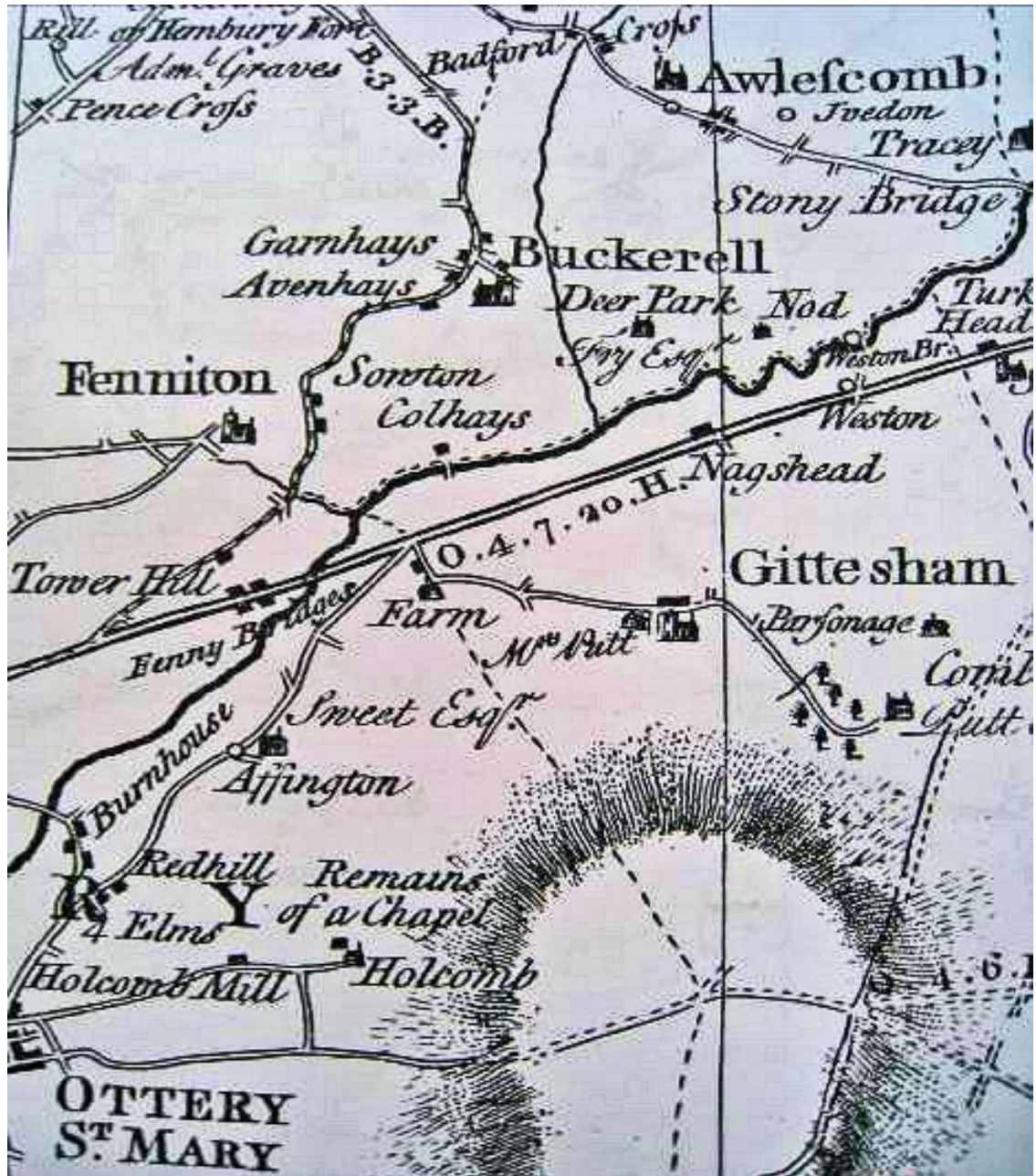


Fig.42. Benjamin Dunn's *Map of the County of Devon* (1765), repr. in *Devon and Cornwall Record Society*, 9 (1965). North is to the top of the image.

While the battles' occurrence near to river crossings and settlements helps to determine their location on nineteenth-century plans, such as OS surveyors' drawings, the first edition OS six-inch-to-one-mile sheets, and tithe maps, map regression cannot occur without earlier evidence for the historic landscape. Sampford Courtenay represents the one exception to this situation, with a sixteenth-century survey book (1568) surviving at King's College Cambridge, which

held land within the parish.⁵⁴⁰ In theory, providing sufficient evidence was available, the battlefield could be reconstructed solely from this and other, yet-to-be determined, written sources within the College archive, before integrating these findings with GIS. Such a process, however, lies beyond the scope of this thesis, requiring both a sustained period of investigation and the use of different methodologies. Thus while limited forms of landscape reconstruction may be attempted, particularly at Sampford, the generalised conclusions produced by this process cannot be tested in the manner of the battles of Dussindale and London, demonstrating the limitations of terrain analysis in the absence of adequate sources.

As a result of these problems, the chapter will seek to extrapolate the rebellion's key implications for Tudor military organisation and field warfare, rather than providing an exhaustive narrative of each battle. After first assessing the numbers, personnel, and weaponry of loyalist and rebel forces, it will briefly discuss each of the campaign's engagements, characterising their terrain as far as is practicable, before analysing the formations, deployment, and tactics used by both armies. This will establish the extent to which opposing forces adhered to the principles discussed in earlier chapters, and will facilitate an evaluation of what the rebellion adds to the study of sixteenth-century warfare.

The Opposing Armies

Loyalist Forces

The government's operations in Devon were initially small-scale, under-resourced, and hesitantly conducted, with Russell being confined to Honiton with fewer than 1000 men. Notwithstanding these inauspicious beginnings, the loyalists were reinforced towards the end of July, and again in early and mid-August, rising from their initial strength to an estimated 8000 to 10,000 troops by the campaign's conclusion.⁵⁴¹

Letters exchanged between Russell and the Privy Council in mid-July, before the battle of Fenny Bridges, described how the loyalist force 'loke[d] not to have above M [1000] fotemen, and that [its] number of horses exced[ed] not vi or vii c [6 or 700]'.⁵⁴² Given that the government army was initially limited to Russell's own followers, joined with those of unnamed 'gentlemen of Dorsetshire' and the Devon gentry, it appears probable that the majority

⁵⁴⁰ *Survey Book of Sampford Courtenay, Written by Mr Penruddock, Kept with Notes of Comparison With a Later Survey (1642), 1st Oct 1568*, Cambridge, King's College, KCAR/6/2/140/08 SAC/66.

⁵⁴¹ Hooker, *Description*, p.86.

⁵⁴² Pocock, p.32.

of his cavalry consisted of retinue members.⁵⁴³ Such troops were commonly equipped as demi-lances, a trend noted in Chapter 2, and supported by a payment authorised on 19 June to John Coke, presumably an armourer, for ‘140 corselets [and] 70 demi-lances’ on behalf of the Carews’ retinue prior to their return from London with the loyalist army.⁵⁴⁴ The army’s 1000 footmen were a relatively late addition, assembled from the local militia, as the land west of Honiton ‘was not for horses to do service in’.⁵⁴⁵ Analysis of the muster rolls for Devon and neighbouring counties suggests that the majority of Russell’s infantrymen would have carried bills or longbows, at a ratio of either 1:1 or 2:1, and that a small proportion, perhaps 10%, may have been arquebusiers.⁵⁴⁶ This is consistent with the patterns of weapon distribution discerned in Chapter 2, and would have resulted in an average of 600 billmen, 300 archers, and 100 arquebusiers. Correspondence with the Privy Council provides further proof that Russell’s army included both archers and arquebusiers, with a reply to a request for ammunition on 25 July promising to ‘send you sufficient furniture of shot for bows’, but advocating the use of firearms to prevent the rebels recycling arrows as ‘the shot of the harbirgon pellet [...] never returneth’.⁵⁴⁷

The army’s initial shortage of footmen may have stemmed from the reluctance of the shire militia to oppose their compatriots, with the Privy Council’s assertions that 4000 soldiers could be mobilised from Dorset and Somerset being contradicted by Russell’s claim to have only a quarter of this total available to him.⁵⁴⁸ Even then, many of those mustered may have assembled under the threat of property confiscation and other penalties discussed in official correspondence, with Hayward remarking how ‘many of those [Russell] had slipped away from him’ in the campaign’s early stages.⁵⁴⁹ While Hooker described how a group of Exeter merchants raised funds for Russell from Bristol, Lyme and Taunton, these resources could only retain members of the militia already willing to serve.⁵⁵⁰ This discrepancy between Russell and the Privy Council’s estimates evidently became a point of contention between both parties, with a letter sent on 28 July admonishing the loyalist commander for requesting reinforcement and proclaiming ‘your band alredie we take yt to be no less then [sic] about iiiim [4000]’.⁵⁵¹ Thus the government had convinced itself of the size of its army in Devon despite Russell’s statements to the contrary, an error reproduced in some secondary works, which claim the loyalists deployed 4000 soldiers at Fenny Bridges.⁵⁵² A key reason for these continued

⁵⁴³ Hooker, *Description*, p.70.

⁵⁴⁴ *Acts of Privy Council*, p.292, item.535.

⁵⁴⁵ Pocock, p.11.

⁵⁴⁶ Cornwall, pp.90-5.

⁵⁴⁷ Pocock, p.42.

⁵⁴⁸ Pocock, p.32.

⁵⁴⁹ *Ibid.*, p.30; Hayward, p.147.

⁵⁵⁰ Hooker, *Description*, pp.70-1.

⁵⁵¹ Pocock, p.44.

⁵⁵² Rayner, p.144.

misconceptions is the initial correspondence from the Privy Council, which promised to despatch several bands of reinforcements upon the outbreak of the revolt:

Yet do we put in order with all the spede that we maye cl [150] Italyan harquebutters, which furthwith repayre towards you; we do lykewyse geve order for three or foure hundreth horssemen under the leyding of the lord Graie to repayre towards [...] you [...] besydes other iiiic [400] horssemen strangers and one thossand almaynes footmen.⁵⁵³

Despite such assurances, unrest in Oxfordshire, Buckinghamshire, and other southern counties delayed the arrival of these troops and reduced the numbers available, as illustrated by the Privy Council's own payment records. For example, references to 'Captain Spinola [and] 150 Spaniards' clearly accorded with the Italian captain of the same name mentioned in the Privy Council letters, while a contingent of '300 strangers' led by Albanian and Italian cavalry captains Peter Sanga and Jacques Germyn embodied the promised mercenary horsemen.⁵⁵⁴ Narrative accounts similarly attested to the presence of these mercenary contingents, with Holinshed identifying 'a band of horsemen, most part Albanians and Italians [and] Captain Paulo Baptist Spinola, an Italian born of a noble house in Genoa with a band of Italian footmen'.⁵⁵⁵ Hooker and Hayward likewise confirmed the presence of 'Spinola with his band of Italians', although they erroneously described '300 shot', potentially amalgamating these troops with the small number of English arquebusiers.⁵⁵⁶ While the cavalry's designation was unspecified, the Albanians were almost certain to be *Stradiots*, particularly in an army such as Russell's which lacked its own light horsemen. The Italians may have been heavier horsemen, with Cornwall suggesting they were *Reiters*, comprising a mixture of men at arms and demi-lances armed with pistols.⁵⁵⁷ The remaining forces were described in a receipt to 'William Grey for conducting of 200 soldiers westwards' and by the payment of 'the 2 Allemayn captains [...] Clein Von Buren and William Walderdon'.⁵⁵⁸ Grey's horsemen, which had been reduced from their initial 'three or foure hundreth', would probably have been demi-lances, while Von Buren and Walderdon, the former being identified as 'captain of 500 Almagnes' and the latter presumably commanding a similar company, provided the landsknechts pike and shot promised to Russell.⁵⁵⁹

Grey's horsemen and the mercenary contingents, which totalled approximately 1650 soldiers, were recorded as reaching Russell's army immediately after the battle of Fenny Bridges, with Hooker remarked how they 'were in a great chaff and much bewailed their evil

⁵⁵³ Pocock, p.23.

⁵⁵⁴ *Acts of the Privy Council*, p.298, item.544; p.304, item.562.

⁵⁵⁵ Holinshed, p.1651.

⁵⁵⁶ Hooker, *Description*, p.73; Hayward, p.149.

⁵⁵⁷ Cornwall, p.161.

⁵⁵⁸ *Acts of Privy Council*, p.304, items.559, 565.

⁵⁵⁹ *Ibid.*, p.302, item.550.

luck that they had not come sooner to have been partakers of that service'.⁵⁶⁰ A portion of Spinola's company, however, may have arrived beforehand, with the Privy Council reportedly despatching 'viii^{xx} [80] good Hagbutterers strangers' ahead of Grey's forces, which were listed as containing his horsemen 'and the viii^{xx} [80] hagbutterers sent by Spinola'.⁵⁶¹ This implies that the 150 Italian arquebusiers were divided into two roughly equal detachments, and that one of these units could have participated in the encounter at Fenny Bridges. Excepting this small body of 80 soldiers, the remainder of the army can be accurately defined as comprising approximately 1600-1700 men before Fenny Bridges, including 1000 infantry and 600-700 cavalry, and roughly 3350, divided between 2150 footmen and 1200 horsemen, afterwards.

The loyalist forces also included an unspecified quantity of artillery, with accounts attesting to its presence at both Clyst St Mary and Sampford Courtenay, and payment records of 31 July noting the 'transporting of ordnance and munitions [...] sent westwards to my Lord Privy Seal'.⁵⁶² Much of these supplies may have been conveyed by Grey's contingent, as the Spanish Ambassador implied, observing how Grey 'was sent to assist the Lord Privy Seal with a great number of noblemen and foreign troops [...] and some field artillery'.⁵⁶³ Prior to Grey's arrival, a letter from Protector Somerset, which discussed attacking fortified areas, implied that the government force included 'half a dosen or double bases', England's lightest and most portable anti-personnel guns with bores of 1.25" and shot weighing 0.51lb (0.23kg).⁵⁶⁴ While such weapons were included in the loyalists' artillery train, its exact composition was evidently unknown to the Privy Council, who refused to send Russell ammunition on the grounds that they were ignorant of the calibre of his guns, advising him to cast his own shot:

For a mould with you is soon made, and with dice of iron and lead there, ye should soon cast your fit shot. And for us here, not knowing the height [...] of your pieces, how is it possible we should send you shot, we should peradventure sent you shot as a shoe for a man's hand.⁵⁶⁵

This extract confirms that the government force possessed artillery of varying calibres during the campaign's early stages, with the letter being sent on 25 July, and thus had access to these weapons at Fenny Bridges. The Privy Council's implication that, had it known the type of guns accompanying the army, standardised ammunition could be provided, also has broader relevance for the study of English military infrastructure. Supplying ready-made shot would significantly decrease logistical requirements by removing the need to create unique moulds for each artillery piece, making ammunition easier to manufacture and store en masse, and

⁵⁶⁰ *Chronicle [...] of Edward VI*, p.14; Hooker, *Description*, p.73.

⁵⁶¹ Pocock, pp.30-1.

⁵⁶² *Acts of Privy Council*, p.304, item.556.

⁵⁶³ *State Papers Spanish*, p.406.

⁵⁶⁴ Pocock, p.15; Hildred, p.223.

⁵⁶⁵ Pocock, p.41.

interchangeable between weapons of the same calibre. In addition to the guns themselves, Russell's army also included a complement of artillerymen to maintain and operate them, as well as detachments of pioneers to help transport, deploy, and defend the ordnance in battle. These accompanying forces are mentioned only briefly in narrative accounts, with the pioneers reportedly breaching hedges at Clyst Heath and Sampford Courtenay, and probably served to raise the loyalist army to an estimated 3500 troops.⁵⁶⁶

Although the majority of the units hitherto described remained in service for the duration of the campaign, many of the army's foreign mercenaries were recalled following the battle of Clyst Heath. In some cases, as with the 'straungers horsemen' of the *Stradiots* and *Reiters*, the Privy Council sought to redeploy elite units overseas, while the landsknechts were despatched to assist the Earl of Warwick against the Norfolk rebels at Dussindale.⁵⁶⁷ These troops were replaced by 1000 Welshmen under the command of Sir William Herbert, arriving after the relief of Exeter, and local reinforcements, with Hooker describing Russell's army expanding to 8000-10,000 soldiers 'by reason of the Welshmen, and the gentlemen of the country, and of the commons who, upon submission, had obtained pardon'.⁵⁶⁸ Taking the lower figure as a conservative estimate, the government force must have increased by approximately 5000 men, including Herbert's Welsh militia and other 'gentlemen of the country' and their retinues. The bulk of these recruits, however, were provided by former rebels who, upon the relief of Exeter, had submitted to the victorious loyalists and 'obtained pardon'.

Rebel Forces

Assessments of the rebel army are hampered by the limited information provided by pro-government narratives and administrative sources, which prevents firm conclusions being drawn regarding the uprising's size, personnel, and armaments. One area to which chronicles paid close attention, however, was that of the insurgency's leadership, with a succession of individuals being identified as officers of the rebel forces. The most prominent of these figures was Humphrey Arundell of Helland in Cornwall, who was cousin to the influential Sir John Arundell of Lanherne and captain of the garrison of St Michael's Mount, one of the insurgents' first targets.⁵⁶⁹ Despite 'sufficient revenues and ancient descent', Arundell's regional influence was stymied by Protector Somerset's regime, which promoted the interests of Protestant gentry over that of traditional Catholic power holders, motivating his involvement with the

⁵⁶⁶ Cornwall, p.177.

⁵⁶⁷ Pocock, p.48; see Chapter 6 for Dussindale.

⁵⁶⁸ Hooker, *Description*, p.86.

⁵⁶⁹ J.P.D. Cooper, 'Humphrey Arundell (1512/3-1550), Rebel', in *Dictionary of National Biography* <<http://0-www.oxforddnb.com.wam.leeds.ac.uk/view/article/717/?back=.41331>> [accessed 12 June 2013] (para.2 of 8).

insurgency.⁵⁷⁰ Like many gentlemen Arundell possessed a degree of military experience, having commanded a company of soldiers at Boulogne in 1544 prior to his appointment as captain of St Michael's Mount, making him an ideal choice to lead the insurgency.⁵⁷¹ Although Arundell subsequently claimed to have been abducted by rebels and forced to assist them, a common means of coercion employed throughout the Pilgrimage of Grace, his command of the insurgents at Sampford Courtenay renders such explanations unlikely.⁵⁷² A handful of Arundell's associates amongst the Cornish gentry, such as John Winslade of Helston and Robert Smythe of St Germans, were also involved in the rising, forming a corps of semi-professional officers who may have had similar combat experience.⁵⁷³

While small numbers of Devon gentlemen, including Sir Thomas Pomeroy and John Bury, were similarly induced to join the rising, the revolt in this region was clearly initiated by the commons, as exemplified by the list of original conspirators provided by Hooker.⁵⁷⁴ These men, identified as William and Thomas Underhill, Maunder, Aisheredge, and William Segar, were parishioners of Sampford Courtenay, with many occupying skilled trades such as tailors and shoemakers, which would have given them a degree of local standing. Equally, given the revolt's religious dimension, Catholic priests were frequently associated with its incitement and direction, being denounced by Holinshed as 'principal stirrers, and [...] chief governors of the camps'.⁵⁷⁵ However, although members of the clergy certainly participated in the insurgency, with at least eight named priests reportedly executed in its aftermath, their involvement was more likely to be predicated on their individual status within their communities rather than their vocation.⁵⁷⁶ For instance, Hooker identified Robert Welsh, vicar of St Thomas the Apostle near the Exe Bridge, as 'an arch captain and principal doer', noting his personal authority amongst the insurgents and claiming that he averted an incendiary attack on Exeter, an evaluation that, along with his later execution, led Youngs to claim he was the rising's overall leader.⁵⁷⁷ Whatever their strategic role, such influential local figures were likely to have occupied prominent positions within the area's militia contingents as lieutenants, sergeants, and viteners, and so would have fulfilled similar functions during the uprising by assisting the cohesion of rebel companies on the battlefield.

⁵⁷⁰ Hereford, p.136. Youngs, 'South-Western Rebellion', pp.117-19.

⁵⁷¹ Cornwall, p.61.

⁵⁷² Cooper, 'Humphrey Arundell', (para.6 of 8); Hoyle, pp.445-7.

⁵⁷³ Cooper, 'Humphrey Arundell', (paras.1, 6, 7 of 8); Cornwall, *Revolt*, p.54. Winslade had leased land to Arundell's illegitimate son, while Smythe sat with Arundell on the commission investigating the Helston riot in 1548.

⁵⁷⁴ Hooker, *Description*, pp.47-8.

⁵⁷⁵ Holinshed, p.1649.

⁵⁷⁶ Hereford, p.136.

⁵⁷⁷ Hooker, *Description*, p.82; Youngs, 'South-Western Rebellion', p.121.

Contemporary and subsequent appraisals of the rebel army's size were contradictory and confusing, with the *Spanish Chronicle*'s claim that the insurgents had mustered an implausible 30,000 men contrasting with the Privy Council's more measured assessment that 'Cornwall and Devonshire [with] all their force is not able to make above viim [7000]'.⁵⁷⁸ Most accounts fall somewhere between these two extremes, with Holinshed and Hayward offering figures of 10,000 while Hereford argued 'Devonshire and Cornwall with some additions of Somersetshire, had [...] armed fifteen thousand men'.⁵⁷⁹ Somerset's role in the revolt was uncertain, with Russell expressing fears that the rebels 'had x^x [10,000] to set on [his] back', and noting his struggle to recruit soldiers from the region's militia.⁵⁸⁰ Equally, the Privy Council advised him to 'prevent the enemy from getting of horses out of Somersetshire', illustrating the degree to which the county was regarded as receptive to the insurgency.⁵⁸¹ Although Hereford's total of 15,000 was probably an overestimate, Carew related how the Cornish rebels assembled '6000 [w]ith which power they marched into Devon', producing a figure of 13,000 men if combined with the Privy Council's contemporary reckoning and perhaps defining the upward limit of the rising.⁵⁸² Notably, Hooker abjured speculation on the rebellion's total number of participants, merely commenting that, by the end of the fighting and subsequent reprisals 'about four thousand men' had died.⁵⁸³ Ultimately, accurate figures are impossible to obtain, with most secondary works following the Privy Council and crediting the insurgents with deploying 7000 soldiers, a figure which could be increased to the 10,000 given by Holinshed and Hayward if accounting for troops left behind in Cornwall and arrivals from neighbouring counties.⁵⁸⁴

Although the uncertainty regarding rebel numbers may stem from inaccurate source material, with contemporary assessments based on rumour rather than factual evidence, the insurgency's strength probably waxed and waned at various points throughout the campaign, and diminished sharply following the relief of Exeter.⁵⁸⁵ This resulted in the insurgency eventually contracting to a small core who were either too stubborn to accept defeat, or were too heavily implicated in the rising to expect mercy. To an extent, precise figures are unimportant as the insurgents never fought as a single entity, but dispersed their strength throughout the countryside surrounding Exeter during its unsuccessful five-week siege. Where the loyalists engaged these elements, they either attacked rebel garrisons and camps, as at Clyst St Mary and Sampford Courtenay, or encountered smaller portions of their army, as at Fenny Bridges, Woodbury, and Clyst Heath.

⁵⁷⁸ *Spanish Chronicle*, p.181; Pocock, p.44.

⁵⁷⁹ Holinshed, p.1649; Hayward, p.133; Hereford, p.136.

⁵⁸⁰ Pocock, p.32.

⁵⁸¹ *Ibid.*

⁵⁸² Carew, p.98.

⁵⁸³ Hooker, *Description*, p.88.

⁵⁸⁴ Cornwall, p.97.

⁵⁸⁵ Sturt, p.73.

The insurgents also benefitted from the support of their local communities, which provided weapons, funding, intelligence, and supplies, blurring the distinction between the army's combatants and the sympathetic population in which it operated. This can be illustrated by the churchwarden's accounts of Morebath, which documented the parish's equipping and despatch of five local men to join a nearby rebel camp at St David's Down, northeast of Exeter, in the same manner as troops responding to a legitimate muster.⁵⁸⁶ By appropriating the infrastructure of the shire militia, through occupying mustering points and employing traditional methods of mobilisation like beacons and bell ringing, rebel forces could assemble the military-age males of a friendly area and select the most capable for service in exactly the same fashion as government commissioners.⁵⁸⁷ Thus the personnel contained within a rebel army would be identical to those mustered for government militia service, comprising eligible soldiers between the ages of 16 and 60, equipped according to their wealth as outlined in the Winchester Provisions.⁵⁸⁸ Hooker's description of the loyalist army before Sampford Courtenay, which was dramatically expanded by large numbers of pardoned insurgents, made this comparison explicit by revealing that the same men who had fought against Russell now joined him in defeating their erstwhile comrades.⁵⁸⁹

The rebels' recruitment of militiamen allows a degree of inference regarding their armament, as soldiers participating in the rising would employ the same weapons and equipment recorded at general and local musters in the years surrounding the revolt. This is particularly useful given chronicles' lack of detail, with Hooker making isolated references to bills and bows used in a skirmish with Exeter's defenders, and at Fenny Bridges, while Carew, relating the capture of St Michael's Mount, stated the insurgents unleashed 'a whole shower of arrows' against the garrison.⁵⁹⁰ Smythe, while hardly an unbiased account, selected the 'rebels of the west parts' as an example of the skilful use of longbows, asserting the effectiveness of their 'volleys of arrows against diverse old bands harquebusiers Italian and Spaniards'.⁵⁹¹ Pikes were entirely absent from descriptions of the rebels' armament, while mention of firearms was confined to the assertion that vicar Welsh 'handled his handgun and piece very well', implying that such weapons were only available in small numbers within major population centres.⁵⁹² Analysis of Devon muster rolls, such as those of the parish of Uffculme, north-east of Exeter, confirm these observations, illustrating that the militia maintained an approximate 2:1 ratio of

⁵⁸⁶ Duffy, pp.134-8.

⁵⁸⁷ Bush, *Rebel Armies*, pp.407-8.

⁵⁸⁸ See Chapter 2.

⁵⁸⁹ Hooker, *Description*, p.86.

⁵⁹⁰ Hooker, *Description*, p.62; Carew, p.155.

⁵⁹¹ Smythe, p.96.

⁵⁹² Hooker, *Description*, p.82.

bills to bows but did not acquire pikes or gunpowder small arms until the late 1560s.⁵⁹³ Similarly, supplies of 'harness' were limited, with under half of those assembled providing their own protective accoutrements.⁵⁹⁴ In Cornwall, however, the situation was different, with musters reporting far greater quantities of body armour and an even distribution of bows and bills, reflecting the county's national importance for coastal defence and the relative poverty of its gentry, a factor which placed a greater proportion of equipment in the hands of its inhabitants.⁵⁹⁵ This comparably high standard of arms and armour may have seen Cornish contingents acting as the rebels' elite, supplying the 'harnessed' soldiers that were vital in field warfare.⁵⁹⁶

The insurgents also made extensive use of artillery, with the *Spanish Chronicle* reporting how they 'fortified themselves strongly with much cannon, taken from Plymouth and other forts of the King'.⁵⁹⁷ The majority of these weapons would have been of light calibre, with Carew reporting how, had Trematon castle not fallen to treachery, the insurgents 'wanting great ordnance, could have wrought the besieged small scathe'.⁵⁹⁸ Similarly, Hooker described the positioning of ordnance at Exeter 'so set and placed, that in certain streets [...] none could go but in peril and danger of their shot', suggesting that the rebels used their artillery to target the city's defenders as they lacked the firepower to breach the walls.⁵⁹⁹ Further references to 'Ba[s]jes and Slings', captured by loyalist sallies, confirm that the rebel guns comprised light field pieces rather than heavy ordnance.⁶⁰⁰ Although these weapons were of limited utility in sieges they were often employed in battle, where their manoeuvrability and rate of fire was more tactically valuable, and were used by rebel forces at Clyst St Mary, Clyst Heath, and Sampford Courtenay, with Russell's report of the latter noting 'we have taken xv [15] pieces of ordnance some brass and some iron'.⁶⁰¹

The insurgents were also praised for their bravery, with Holinshed characterising them as 'stout and valiant personages, able [...] to have wrought great feats'.⁶⁰² This was particularly true of Cornish troops, who conducted spirited counterattacks at Fenny Bridges and Sampford Courtenay. The insurgents' determination was also reflected at a strategic level, enabling them to repeatedly regroup after suffering heavy casualties at the hands of government forces. Such

⁵⁹³ Mary Fraser 'The Muster Rolls of 1539 and 1569', in *Uffculme: A Peculiar Parish, A Devon Town from Tudor Times*, ed. by Peter Wyatt and Robin Stanes (Uffculme: Uffculme Archive Group, 1997), pp.115-18.

⁵⁹⁴ Fraser, 'Muster Rolls', pp.115-16.

⁵⁹⁵ Cornwall, pp.96-7.

⁵⁹⁶ *Ibid.*

⁵⁹⁷ *Spanish Chronicle*, p.181.

⁵⁹⁸ Carew, p.111.

⁵⁹⁹ Hooker, *Description*, p.53.

⁶⁰⁰ *Ibid.*, p.62.

⁶⁰¹ MS. Harleian 523, fols.50-1.

⁶⁰² Holinshed, p.1649; Hooker, *Description*, p.72.

attributes can, however, be overemphasised, as, although equal to the militia in armament and training, the insurgents were little match for foreign mercenaries, with the Spanish Chronicle observing that ‘the rebels were not soldiers, although they were very brave and well armed’.⁶⁰³ Equally, while provided with ordnance, the rebels may have possessed few skilled artilleryists, with Hooker referring to a single such individual, ‘John Hamon, an alien and a smith, and dwelling then at Woodbury’.⁶⁰⁴ Hamon almost certainly participated in the siege of Exeter, where accounts mentioned ‘a stranger and alien, who was a very skilful gunner, and could handle his piece very well’, and was probably the ‘gunner’ killed at Clyst St Mary.⁶⁰⁵ The identification of Hamon obviously does not preclude the existence of subordinate artilleryists, particularly given the insurgents’ use of ordnance at Clyst Heath and Sampford Courtenay, but does suggest that these men were less proficient with their weapons.

Overall, the rebel forces were comparable to armies mustered from England’s militia and had several corresponding strengths, including large numbers, and access to weapons, armour, and artillery, which were combined with high morale and strategic resilience. However, these attributes were counterbalanced by their lack of cavalry, which impaired their operational and tactical mobility, and the disparity between the quality and variety of their soldiers with those of the professionals who opposed them.

Fenny Bridges (28 July)

The Western Rebellion’s first battle occurred at Fenny Bridges, where a major road from London to Exeter crossed the River Otter, as a consequence of skirmishing between loyalist and rebel forces. In the preceding days, Russell had attempted a reconnaissance mission to Exeter via the nearby town of Ottery St Mary, but was prevented from advancing by blockades, the insurgents having ‘cut all the trees between Ottery St Mary and Exeter’.⁶⁰⁶ Unable to make headway, the loyalists burned the town and withdrew to Honiton, prompting a rebel force to march east along the Honiton Way to threaten Russell’s base, halting three miles to the west, where they were attacked by the loyalists on the following day. The action itself was a brief and poorly documented affair, with government soldiers crossing the river and driving the rebels from the bridge and a nearby meadow despite a surprise counterattack by Cornish troops.⁶⁰⁷ Erroneous reports of enemy reserves curtailed Russell’s pursuit, allowing the rebels to escape, but the victory nonetheless opened the way to Exeter and restored confidence to his forces.

⁶⁰³ *Spanish Chronicle*, p.181.

⁶⁰⁴ Hooker, *Description*, p.43.

⁶⁰⁵ Hooker, *Description*, p.84.

⁶⁰⁶ *Chronicle [...] of Edward VI*, p.14.

⁶⁰⁷ Brooks, pp.307-8.

Historic Terrain

Hooker recorded that the action occurred at ‘Fennyton Bridge’, a feature shown on Ogilby and Dunn’s maps (figs.43 and 44), and by nineteenth-century plans, which confirm the approximate position, if not the exact location and alignment, of the original bridge.⁶⁰⁸ The first edition OS map (Fig.45) identified the battlefield as lying in Fenny Meadow, north of the current bridge, based on local traditions which referred to the site as ‘Blood Meadow’ and attested to the presence of a supposed ‘arrow-pitted tree in the centre of this field’.⁶⁰⁹ This assertion is, however, contradicted by accounts of the action, with Hooker describing the rebels deploying ‘in the meadow beneath the bridge’ and Hayward stating they occupied ‘a great fair meadow behind the bridge’, placing them to the south or west of the crossing.⁶¹⁰ Arraying forces north of the bridge would make little tactical sense unless this was the only suitable space for deployment, as it would leave the road to Exeter unguarded and the rebels cut off from their easiest line of retreat.

⁶⁰⁸ Hooker, *Description*, p.71.

⁶⁰⁹ H.W. Watson, ‘A Devonshire Village (Feniton) in the Olden Days’, *Transactions of the Devonshire Association for the Advancement of Science, Literature and Art* (1929), 375-97 (p.378).

⁶¹⁰ Hooker, *Description*, p.71; Hayward, pp.146-7.



Fig.43. Ogilby, plate 27 showing the London to Land's End road as it passed through Honiton (bottom of image) and headed south west across the River Otter via Fenny Bridges, here labelled as Honiton Bridge (top of image).



Fig.44. Detail of Dunn's map. North is at the top of the image.

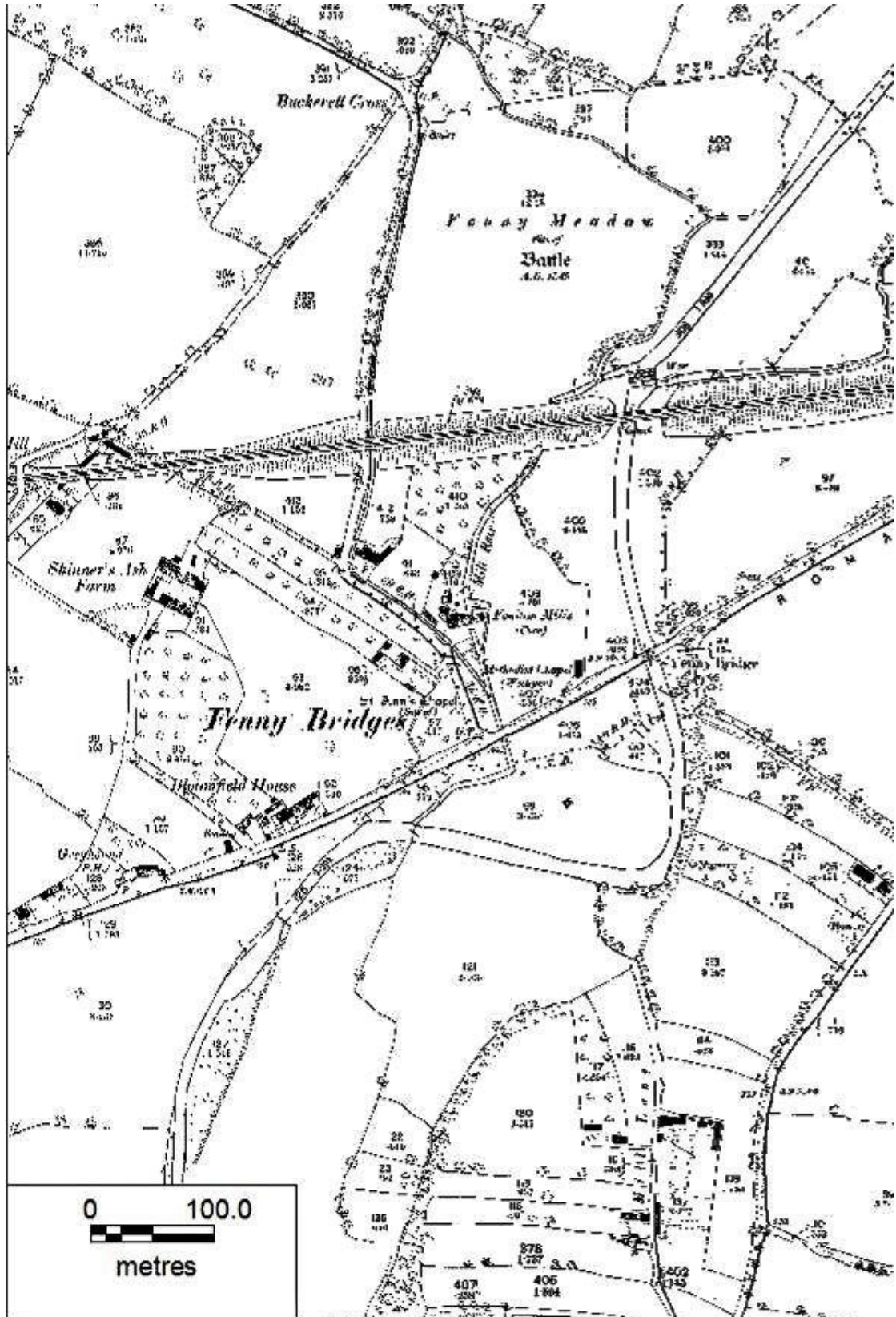


Fig.45. First Edition Ordnance Survey 6":1 mile © Crown Copyright and Landmark Information Group Limited (2013). All rights reserved. (1854). North is at the top of the image.

Attempts to clarify this issue through terrain reconstruction are hindered by an absence of suitable sources, with John Leland's brief description in his 1542 itinerary providing the only evidence identified by the present study until the nineteenth century. Leland noted that the area west of the bridge lay amongst a series of streams and mill leats, dividing the River Otter into four separate branches, which are also visible on later tithe maps and OS surveyors' drawings (figs.46 and 47).⁶¹¹ While the woods and buildings depicted by these maps are neither mentioned by Leland nor appear on Ogilby's work, suggesting they were absent in the sixteenth century, the surveyors' drawings show alterations to the course of the river north of the bridge, implying that Fenny Meadow may have been smaller, and thus less-suitable for deploying the rebel army, in 1549. By contrast, the ground to the south and west may have been predominantly open, providing an ideal area in which to position troops to block the road to Exeter. Unfortunately, this hypothesis is impossible to test because of uncertainties regarding the extent of the area's enclosure, demonstrating the degree to which accurate terrain reconstruction is reliant upon access to suitable source material.

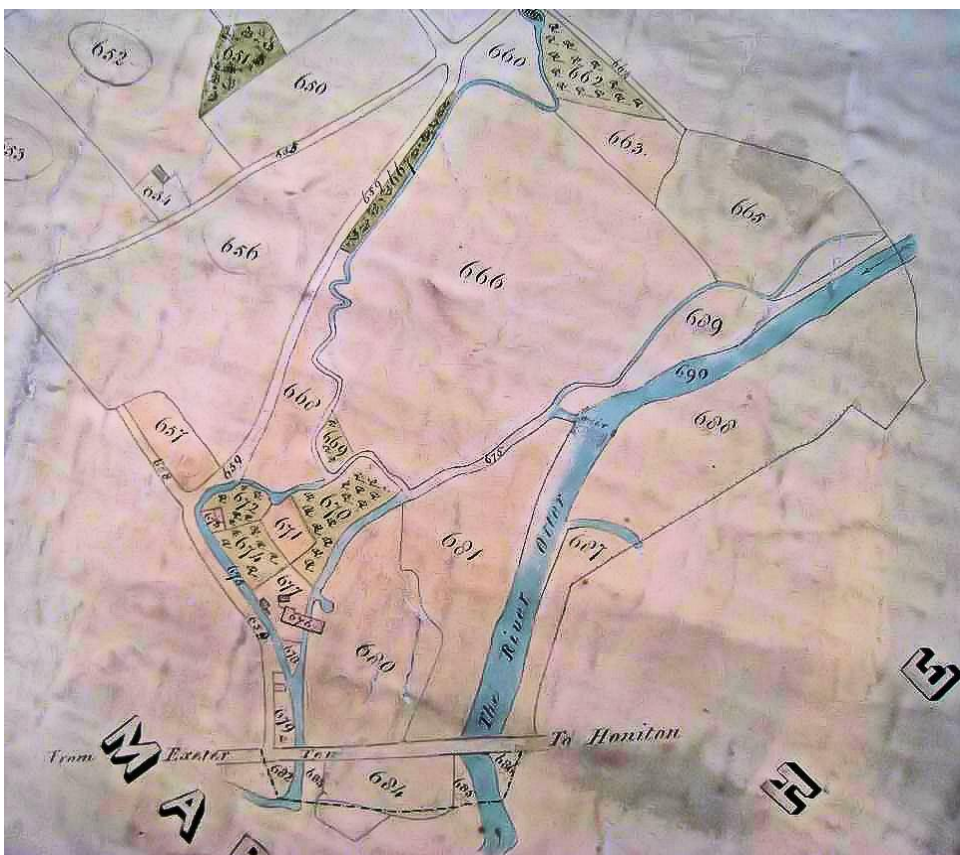


Fig.46. *Feniton Tithe Map*, Devon Record Office 1090A/PI 238-239. North is at the top of the image.

⁶¹¹ *The Itinerary of John Leland the Antiquary, in Nine Volumes*, ed. by Thomas Hearne (Eton College: James Fletcher & Joseph Pote, 1770), vol.3, p.69.



Fig.47. *Ordnance Surveyors' Drawings (1806)*

<<http://www.bl.uk/onlinegallery/onlineex/ordsurvdraw/>> [accessed 20/6/2009]. North is at the top of the image. Note the alteration to the river course north of the bridge (centre), and the realignment of the road between the crossing points to the west.

The Battle

Despite the rebels' advance into a naturally defensible area, a strategic manoeuvre often employed to draw enemy forces into disadvantageous confrontations, their army lacked artillery and may have represented little more than a reconnaissance in force.⁶¹² Although Hayward claimed that Russell, who at this point had 1600 to 1700 men, was outnumbered, this assertion stems from a misreading of Hooker, who emphasised the weakness of the loyalist army before its replenishment via the Exeter merchants' funds.⁶¹³ In fact, Hooker remarked that the rebels, 'understanding of [Russell's] distressed state, were coming [...] to assail him', but arrived after the first batch of loyalist reinforcements and may thus have been the smaller of the two

⁶¹² Clifford Rogers, 'The Offensive/Defensive in Medieval Strategy', in *XXIInd Colloquium of the International Commission of Military History, 9-13th September, Vienna* (Vienna: Heeresgeschichtliches Museum, 1997), pp.158-71 (pp.163-7).

⁶¹³ Hayward, p.147.

forces.⁶¹⁴ Regardless of the rebel army's size, Hooker's sparse narration that it stationed 'some at the bridge, but the greatest company in the meadow beneath the bridge' can be interpreted in the context of what little is known of the terrain.⁶¹⁵ The most likely scenario would see the insurgents placing an advance guard at the western edge of Feniton Bridge and the bulk of their forces to the southwest, stretching their frontline across the Honiton Way and resting their right flank against the river and their left upon the mill leats or, if deployed sufficiently far back, the rising ground or enclosures to the north.⁶¹⁶

This position, shown below within the modern landscape (Fig.48), would enable the insurgents to array their troops in open ground, shielding their flanks with terrain, while using the river and bridge to impede their attackers. The rebels, who were all billmen or archers, may have used a traditional linear formation with wings of bowmen flanking a central body of bills, which would have the added advantage of requiring relatively little depth within a shallow deployment area.⁶¹⁷ Hayward's description that the insurgents 'placed a great number under banners displayed', strongly implied that a formation of some sort was adopted, illustrating a degree of military training and cohesion.⁶¹⁸ Russell's deployment is impossible to determine from the available evidence, but Hayward's account described how an initial attack on the bridge, probably by dismounted cavalry, was repelled before another detachment of horse forded the river and outflanked the rebels:

With good order and courage [Russell] attempted the bridge but could not force it, at the last finding the river to be fordable at the foot of the bridge, he there sent over his horse, whereupon the guards appointed to defend the bridge forsook their charge and retired to their strength in the meadow.⁶¹⁹

Hooker verified Russell's eventual capture of the bridge 'by bold adventuring [...] but with the hurt of sundry of his company, amongst whom Sir Gawen Carew was one being hurt with an arrow in the arm'.⁶²⁰ This incident confirms the limitations of archery against armoured soldiers, with Carew's retainers being protected against arrows unless struck on the limbs where their plate was thinnest. Nonetheless, 'sundry' of Russell's army were wounded and would have been forced to retire from the fighting, illustrating that archers could still play an important tactical role even if their weapons were unable to cause fatal injuries. Once the bridge had been secured, the remainder of the loyalist army crossed the river and formed up to face the insurgents in the meadow, which Hayward remarked 'stoutly received the charge, [...] but were soon broken and

⁶¹⁴ Hooker, *Description*, p.71.

⁶¹⁵ Hooker, *Description*, p.71.

⁶¹⁶ Brooks, p. 307.

⁶¹⁷ Cornwall, p.162.

⁶¹⁸ Hayward, pp.146-7.

⁶¹⁹ Hayward, p.147.

⁶²⁰ Hooker, *Description*, pp.71-2.

put to flight'.⁶²¹ While no mention is made of Russell's archers, or his small complement of arquebusiers and artillery, these units presumably provided missile cover as the militia and demi-lances engaged the rebels, weakening and disordering the enemy formations prior to close-quarter combat.

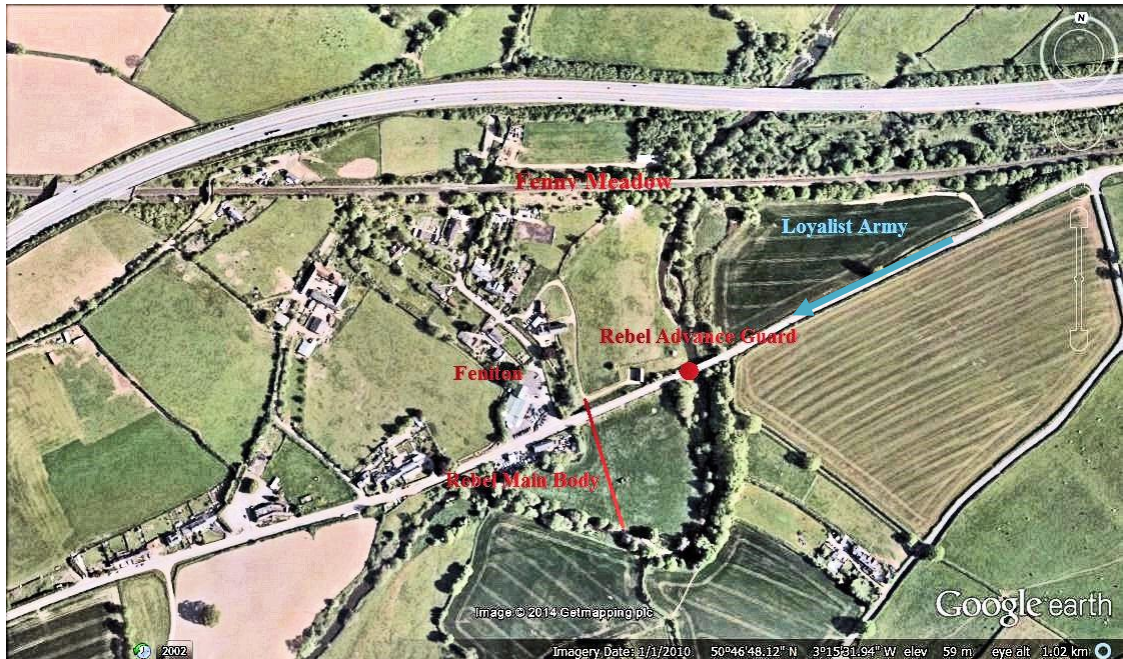


Fig.48. The estimated location of the battlefield within the modern landscape, shown via Google Earth, depicting the approximate positions of the rebel advance guard and main body in relation to Fenny Meadow, Feniton, and the path of the loyalist army's advance across the River Otter.

The battle's final action occurred when a company of approximately 200 Cornish insurgents, commanded by Robert Smythe, mounted a counterattack upon the victorious government forces in the meadow, which had apparently broken ranks and 'gave themselves all to the spoil' of their fleeing opponents.⁶²² Hooker emphasised the unexpected nature of this assault, commenting that the loyalists were 'nothing thinking less than of any more enemies', and implying that the rebels must have approached the meadow undetected, perhaps via the steep-sided, embanked lanes south of Fenny Meadow (Fig.49). The absence of adequate cartographic material, however, once again precludes firm answers, owing to the impossibility of determining patterns of enclosure from the modern landscape. After the initial confusion caused by the assault, the loyalists reorganised their ranks, 'the Lord Russell forthwith sett[ing] all his company in good array', and engaged the vastly outnumbered insurgents, defeating them in a short struggle wherein their commander was wounded but escaped.⁶²³ This rearguard action, which brought time for the bulk of the rebel army to withdraw, concluded the engagement, the

⁶²¹ Hayward, p.147.

⁶²² Hooker, *Description*, p.72.

⁶²³ Hooker, *Description*, p.72.

loyalists abandoning their pursuit after two or three miles for fear of further attacks, and returning to Honiton. Hooker estimated that, in total, 300 insurgents were killed, while secondary works claimed Russell's losses were unlikely to have exceeded 100.⁶²⁴



Fig.49. Embanked lane looking south from Honiton Way as it crosses Fenny Bridges. The area suggested for the rebel deployment lies to the east (left of image), and could be approached unseen via this road thanks to its steep-sided banks and dense vegetation. Such conclusions, however, are impossible to substantiate without terrain reconstruction work.

Fenny Bridges illustrates the vital importance of terrain reconstruction for interpreting narrative sources, with the indecipherability of the landscape imposing severe restrictions upon the conclusions that can be drawn regarding the tactical movement and positioning of armies in battle. The action's value is accordingly confined to illustrating some of the assertions of previous chapters, namely the resilience of plate armour to archery; the effectiveness of combined arms against homogenous forces; and the assertion that rebel soldiers fought in organised tactical units.

Relief of Exeter (Woodbury, Clyst St Mary, Clyst Heath, 3-5 August)

⁶²⁴ Cornwall, p.163.

On 3 August, the loyalist army, reinforced by Grey's detachment and additions to its artillery train, set out from Honiton towards Exeter. Blockades along the main road, however, compelled the army to take a circuitous route, travelling 'over the downs towards Woodbury and [encamping] that night at a windmill appertaining to one Gregory Cary' as a precursor to crossing the river at Clyst St Mary the following day.⁶²⁵ This manoeuvre alerted insurgents stationed in the aforesaid village, who launched an unsuccessful surprise attack on Russell's camp atop Windmill Hill near Woodbury Salterton.⁶²⁶ The next day, loyalist forces continued on to Clyst St Mary, storming and burning the settlement, which was strongly held and fortified against them, in a fierce struggle. Finally, on 5 August, the insurgents, notwithstanding their previous losses, assembled on Clyst Heath and bombarded Russell's camp with artillery, initiating a third engagement in which the rebel army was encircled and destroyed. The map below (Fig.49) shows the position of these actions, which had a profound strategic significance in facilitating the relief of Exeter. While the latter battles, at Clyst St Mary and Clyst Heath, were complex engagements, occurring in close proximity on consecutive days and requiring detailed examination, the confrontation at Woodbury was so poorly documented as to prohibit meaningful analysis. According to Hooker's narrative, the rebels attacked Windmill Hill 'with all their force and power [...] yet in the end they were overthrown and the most part of them slain', an ambiguous description that reveals nothing about the tactical circumstances of the action or the terrain in which it occurred.⁶²⁷

⁶²⁵ Hooker, *Description*, p.74.

⁶²⁶ Rose-Troup, p.265. Apparently Gregory Cary was granted land in Grendale, an area encompassing what is now Windmill Hill, in 1546.

⁶²⁷ Hooker, *Description*, p.74.

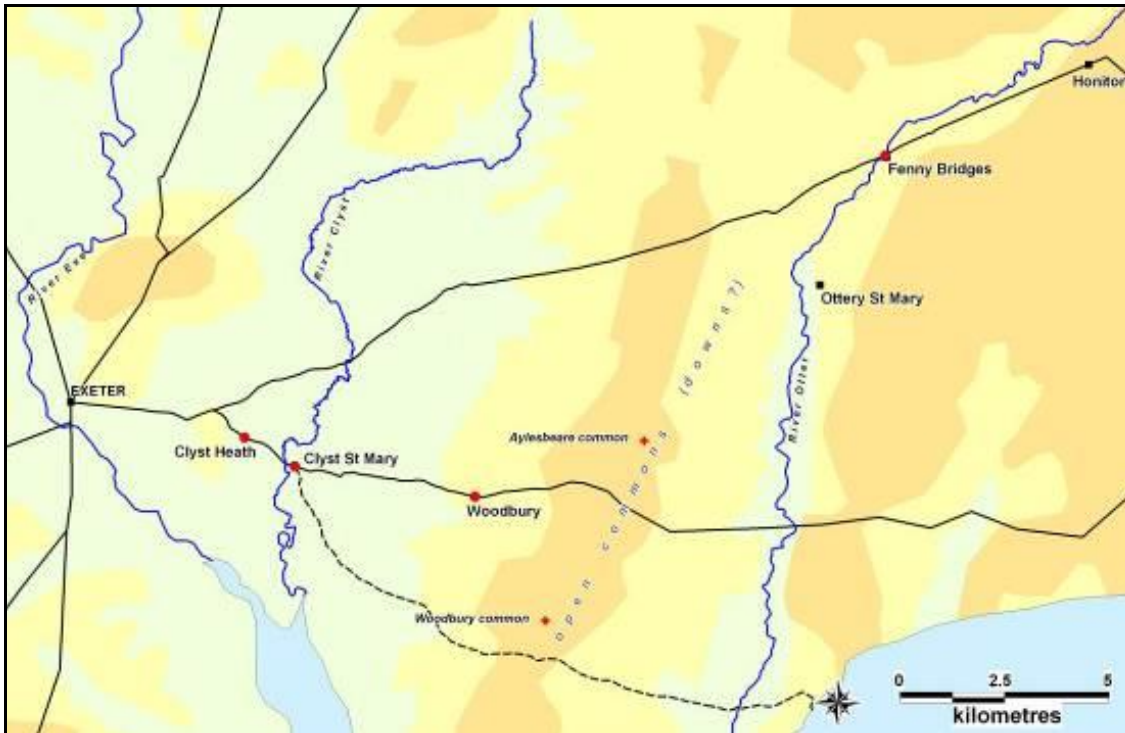


Fig.50. Map showing positions of Woodbury, Clyst St Mary, and Clyst Heath. The areas of Aylesbeare Common and Woodbury Common have been suggested as alternative sites for the action at Carey's Windmill, but lack even the limited evidence supporting the engagement's positioning at Windmill Hill. Foard and Hodgkins, p.22.

Clyst St Mary: Location, Terrain, and Rebel Deployment

The modern settlement of Clyst St Mary lies two-and-a-half miles west of Russell's position on Windmill Hill, where the Exmouth road intersects with the Exeter-Dorchester road at the crossing over the River Clyst (see Fig.51). This matches Edward VI's description that Russell, advancing towards Exeter, 'came to a little town of his own, whither came but only two ways, which [the rebels] had reinforced with two bulwarks made of earth'.⁶²⁸ However, despite secondary works commonly referring to the battle by its modern name, the engagement actually took place slightly further west at Bishop's Clyst, site of the contemporary Clyst Bridge, which survives at its historic location north of the modern crossing. Dunn's map (Fig.52) depicted both settlements as separate entities in the eighteenth century, while their relative position is shown more clearly by the OS surveyors' drawings (Fig.53), with Clyst St Mary lying south east of Bishop's Clyst, between rather than astride the two roads and near to Winslade House and Grindle Brook.

⁶²⁸ *Chronicle [...] of Edward VI*, p.14.



Fig.51. Google Earth map showing the loyalist army's approach march (marked in red) from Windmill Hill two-and-a-half miles west towards Cyst St Mary.



Fig.52. Dunn's map. Note that Clyst St Mary and Bishop's Clyst (centre of image) are shown as distinct settlements. North is at the top of the (rotated) image.

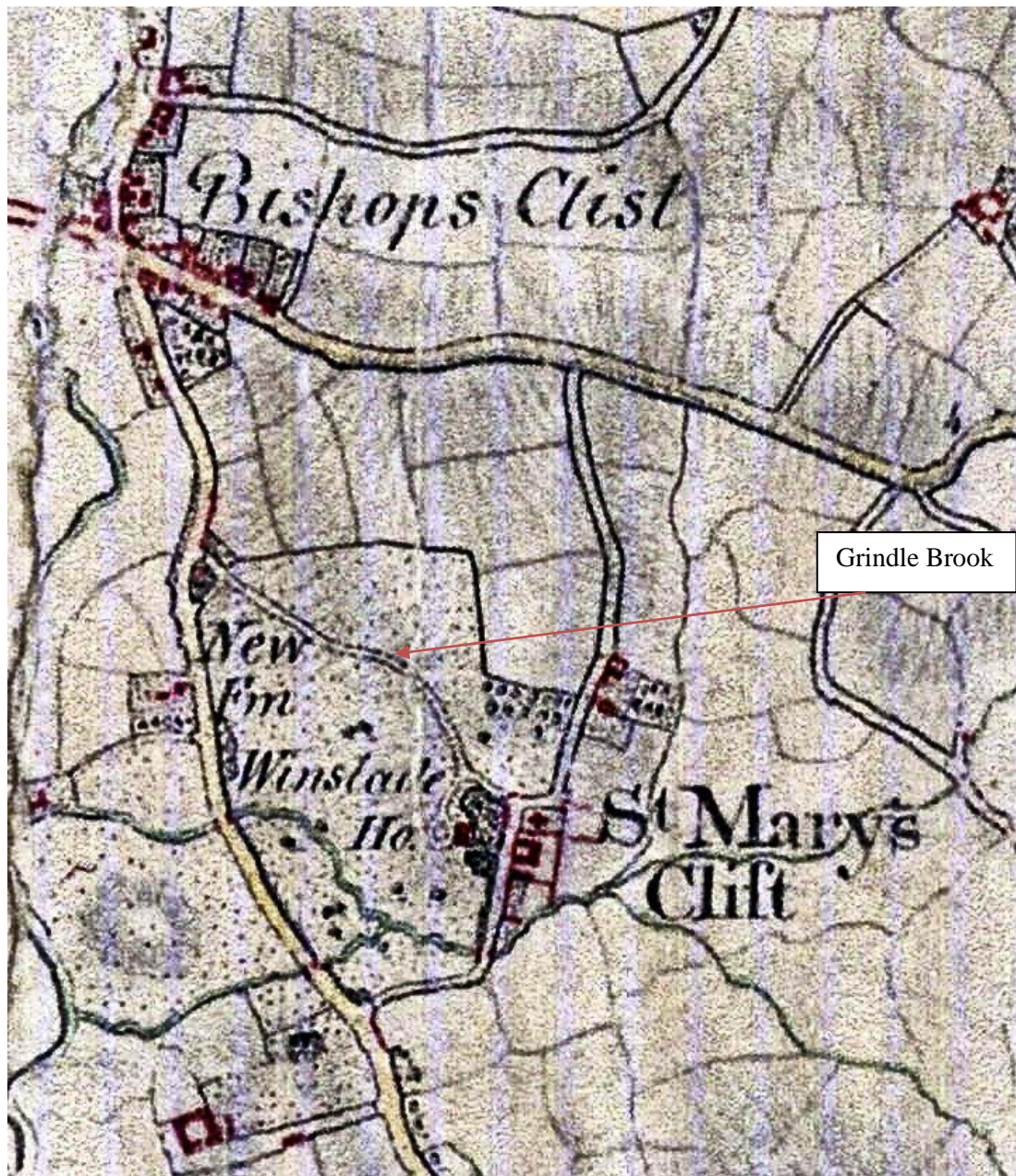


Fig.53. *Surveyors' Drawings*. Note the position of Clist St Mary, off the main Exmouth (left) and Exeter road (right), near to Winslade House and the Grindle Brook. North is at the top of the image.

Clist St Mary's situation away from the major roads, which Edward VI noted were blockaded with earthworks, serves to disqualify it from the prominent role afforded by historians, with the insurgents' occupation of the settlement proving fruitless if they could not command the approaches to Clist Bridge. Cornwall, for example, uses the presence of a hedgerow at Church Lane, which runs southward towards the Grindle Brook, to position the rebels' defences 400m

west of Bishop's Clyst at the entrance to the modern Clyst St Mary.⁶²⁹ This location (Fig.54), however, would not only be offset from Clyst St Mary's position on earlier maps, but is also contradicted by Hooker's statement that the rebels 'had fortified the town, and made great rampires for their defence', which implied that the 'rampires' were intended to defend the entrances to Bishop's Clyst.⁶³⁰ The battle's subsequent events, wherein rebels were driven from their barricades into the town, supports this conclusion, with a force retreating from Church Lane liable to be scattered before it could reach the shelter of Bishop's Clyst, especially if the loyalist cavalry were able to participate in the pursuit.

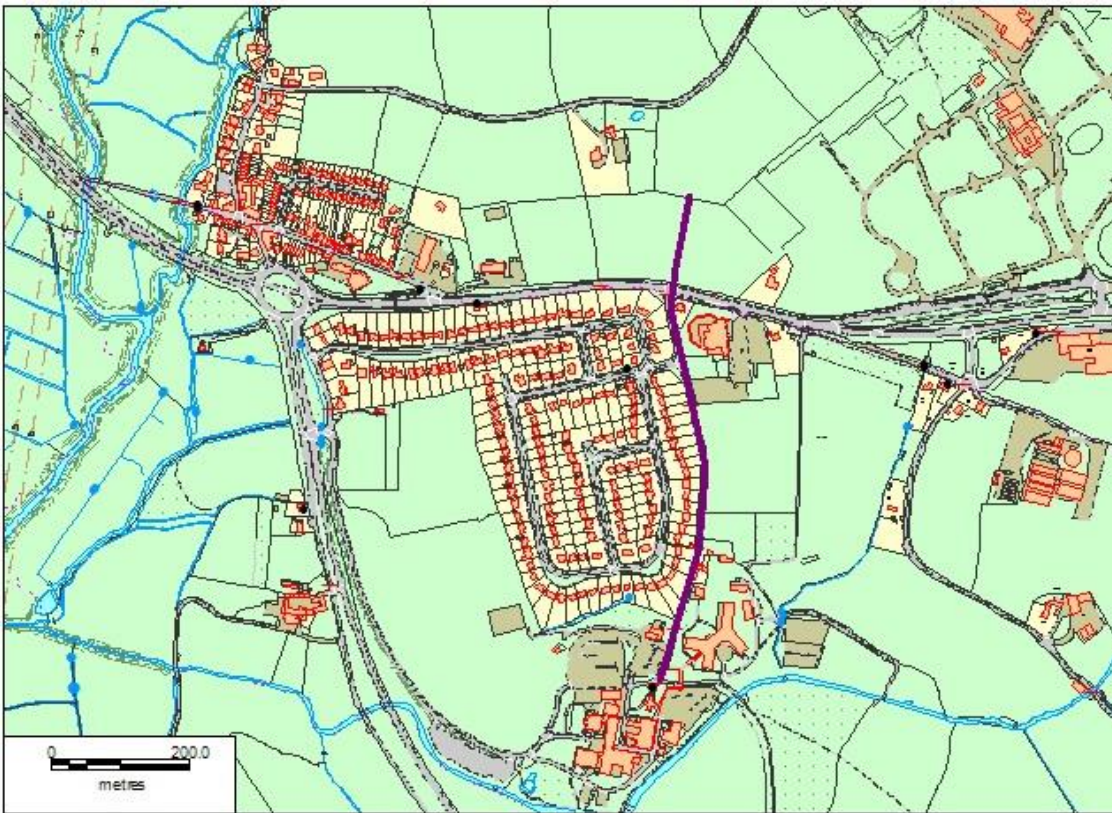


Fig.54. Ordnance Survey Mastermap © Crown Copyright/database right 2013. An Ordnance Survey/EDINA supplied service. This image shows Cornwall's suggested positions for the rebel defences (marked in purple), based on the modern location of Clyst St Mary, stretching across the Exeter road at Church Lane. Note the distance from Bishop's Clyst. North is at the top of the image.

If the earthen 'rampires' described by Hooker and Edward VI lay across the Exmouth and Exeter roads, Bishop's Clyst would be protected on both its eastern and south-eastern sides, while the fields to the north-east were perhaps enclosed. Although the latter assumption cannot be proven, accounts state that the loyalists entered the town through the 'rampires' and a sunken

⁶²⁹ Cornwall, pp.181-2.

⁶³⁰ Hooker, *Description*, p.75.

lane to the north-east, suggesting that the intervening fields were impassable.⁶³¹ The sunken lane, described as ‘both deep and narrow’, may be Bishop’s Court Lane (Fig.55), a high-sided, narrow road which enters Bishop’s Clyst approximately 250m north of the Exeter road.⁶³² Figure 56 illustrates how the rebel positions might have appeared based on this evidence, while Figure 57 shows their approximate location within the modern landscape.



Fig.55. Photograph looking north up Bishop’s Court Lane, a narrow pathway with deeply incised sides leading into Bishop’s Clyst, which may have been the route taken by the loyalists’ second attack.

⁶³¹ Brooks, p.309.

⁶³² Hooker, *Description*, p.76.

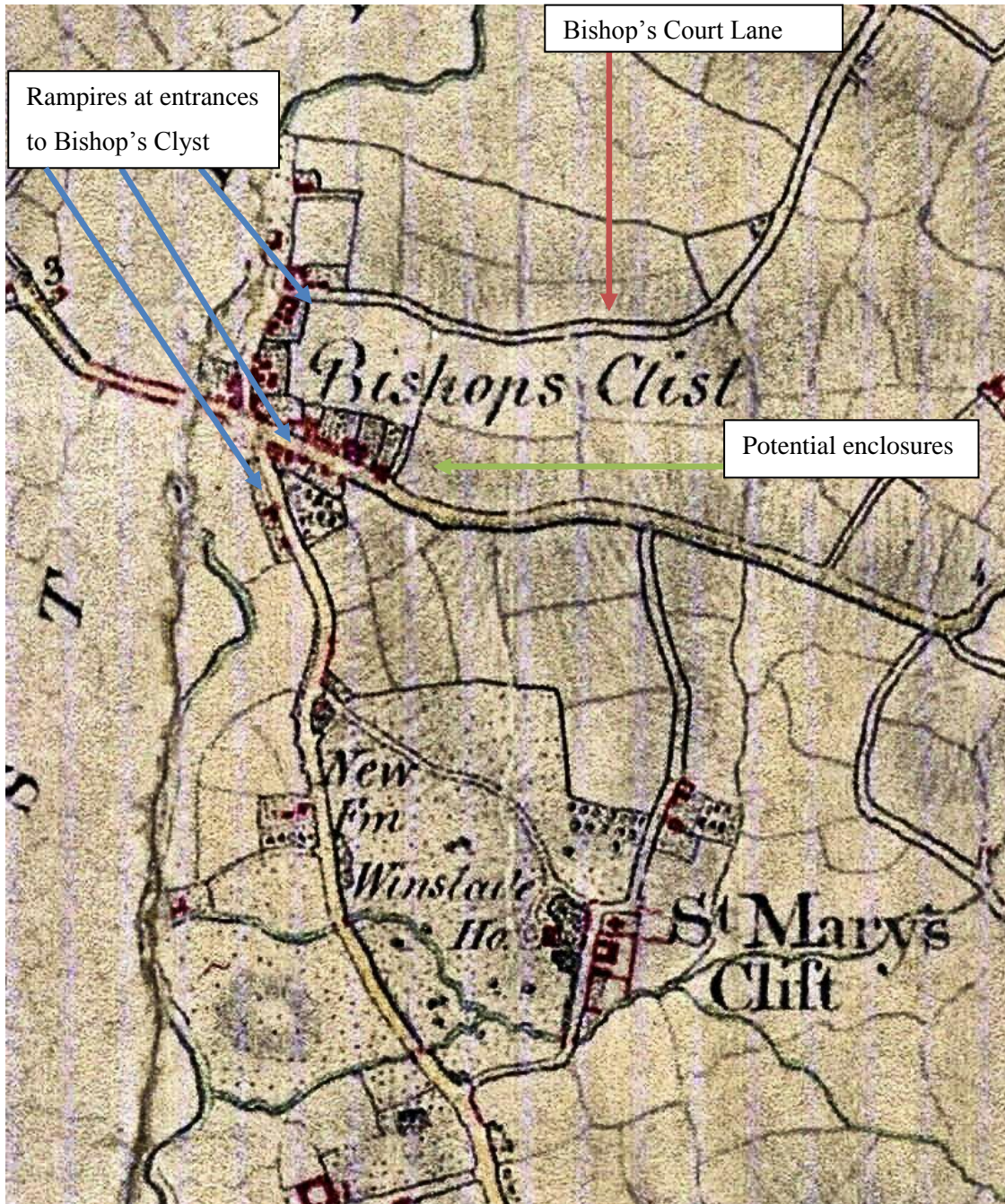


Fig.56. *Surveyors' Drawings*, annotated to show approximate positions of rebels' defences and significant terrain features. North is at the top of the image.



Fig.57. Google Earth image showing Clyst St Mary, with Bishop's Clyst, Clyst Bridge, and Bishop's Court Lane identified within the modern landscape. The approximate site of the rebel fortifications are shown with red circles, while a red line marks the route of the loyalist's advance down Bishop's Court Lane.

While Hooker failed to detail the distribution of the insurgents' forces, simply claiming that, after their defeat at Woodbury, they were reinforced from the siege of Exeter to an improbable total of 6000 men, Edward VI offered a more precise deployment.⁶³³ According to the King, the rebels stationed 2000 men at their earthworks, further unspecified detachments at Clyst Bridge and on Clyst Heath, 'and the most part at the siege of Exeter', implying that their manpower for the battle did not exceed 3000 soldiers.⁶³⁴ This failure to attain numerical superiority on the battlefield was alluded to by the Spanish Ambassador, who described how 'the Privy Seal met the Cornishmen who had been besieging Exeter and split up their force and defeated them'.⁶³⁵ Accounts contained no reference to artillery beyond Hooker's mention of a piece stationed at the western end of Clyst Bridge and overseen by 'the gunner', presumably John Hamon, suggesting that the bulk of the rebels' ordnance was concentrated at the siege of Exeter and played no part in the engagement.

The Battle

Russell's force, marching west from Woodbury along the Exeter road, reached Bishop's Clyst just after nine o'clock AM, whereupon 'the army [was] divided into three parts' to assault the rebels' defences.⁶³⁶ The loyalists' dispositions were elucidated by Edward VI, who noted how 'the rearward of the horsemen, of which Travers was captain, set upon the one bulwark, the vanguard and battle on the other', while 'Spinola's band kept [the rebels] occupied at their wall'.⁶³⁷ This description, along with Hooker's assertion that a member of the local gentry, Sir William Frances of Broadclyst, led the army's Forward battle, can be used to reconstruct the formation adopted by Russell's troops, which by this point numbered over 3000 men, comprising roughly equal numbers of cavalry, landsknechts, and militia.⁶³⁸ Dividing the army into three relatively even battles would result in the militia, led by Frances, acting as the army's Forward, the bulk of the cavalry comprising the Rearward, and the landsknechts, Russell's elite infantry, forming the Mainward. Standard practice, demonstrated in Chapter 4, suggests that the militia may have been led by dismounted retainers, to provide effective leadership and a leavening of armoured veterans, and would also have had sleeves of archers and arquebusiers on their flanks. The landsknechts, by contrast, would have deployed as a single body, their shot integrated amongst their outer ranks. Finally, the army's *Reiters*, *Stradiots*, and demi-lances

⁶³³ Hooker, *Description*, p.74.

⁶³⁴ *Chronicle [...] of Edward VI*, p.14.

⁶³⁵ *State Papers Spanish*, p.432.

⁶³⁶ Hooker, *Description*, p.75.

⁶³⁷ *Chronicle [...] of Edward VI*, p.14.

⁶³⁸ Hooker, *Description*, p.74.

were placed under the command of Captain Travers, although they would probably have been arrayed in ‘diverse and several bands’, as Audley recommended, rather than as a single tactical entity.⁶³⁹

When deploying from the march, Russell would probably have placed his Forward battle on the right and the Mainward in the centre, aligning the militia and landsknechts with the nearest fortifications and according with Edward VI’s assertion that ‘the vanguard and battle’ made a joint attack. The cavalry in the Rearward would thus have occupied the left flank, where they could threaten the other barricade. Spinola’s arquebusiers could have been positioned between the landsknechts and cavalry, allowing them and the artillery to support both assaults. The tactical formations adopted by these units would have depended upon the space available for their frontages and depth, and so cannot be ascertained in the absence of terrain reconstruction, although a ‘just’ columnar array would seem more likely than the ‘broad’ square. While the area’s enclosure is impossible to determine, the use of the cavalry to ‘set upon the [...] bulwark’ suggests that the fields southeast of Bishop’s Clyst were partially open, an interpretation shown, alongside the army’s conjectural deployment, on Figure 58.

⁶³⁹ Audley, p.27.

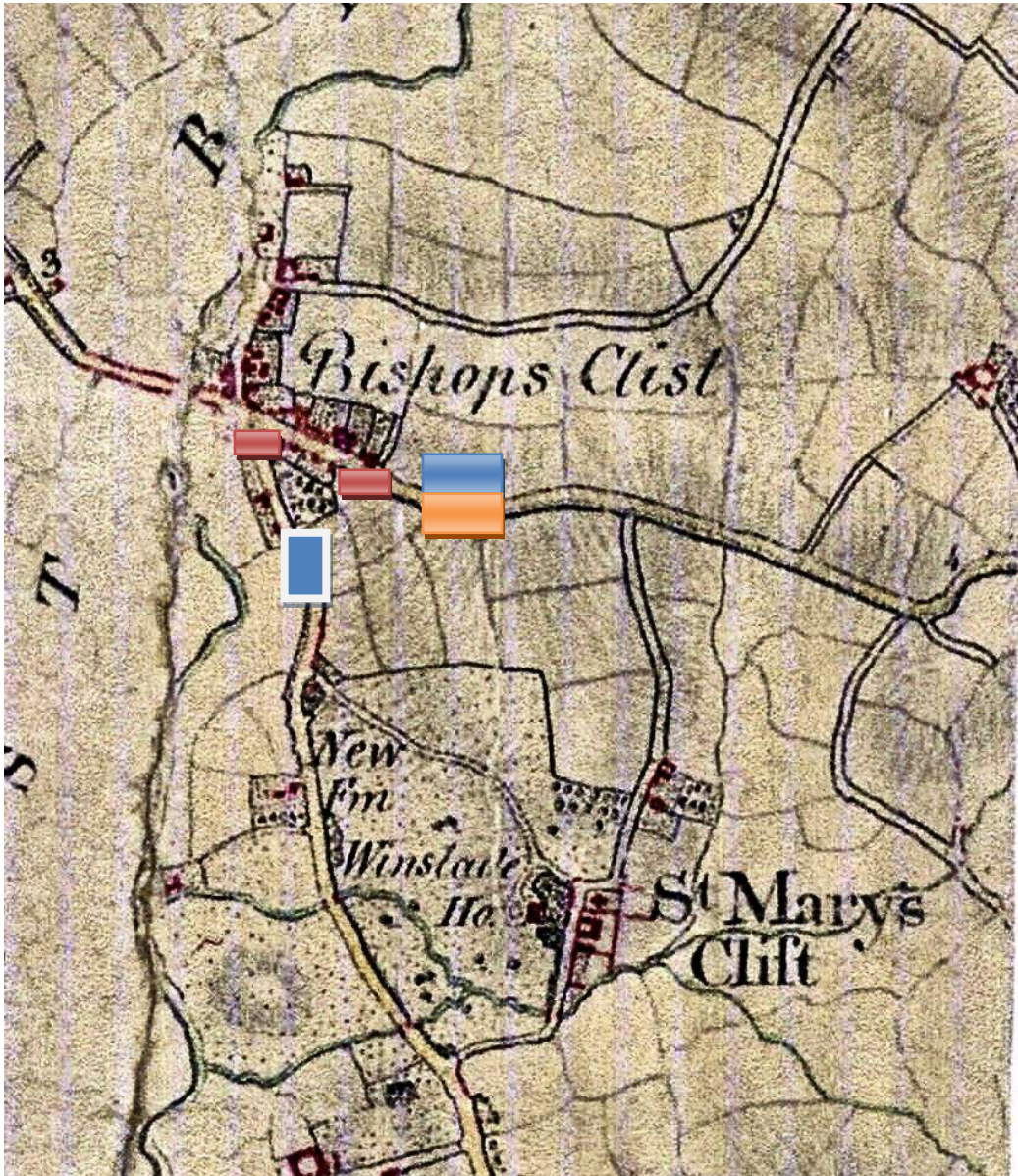


Fig.58. *Surveyors' Drawings*, annotated to show loyalist attack on Bishop's Clist. The Forward (militia), and Mainward (landsnechts), battles (blue and orange) attacked directly down the Exeter road, while the Rearward (cavalry) battle (blue with white outline), supported by artillery and Spinola's shot, threatened the rebels guarding the Exmouth Road (red). This diagram is heavily conjectural and is not to scale.

The loyalist tactics at the engagement's outset were prefigured in a letter sent to Russell in the early stages of the rising, in which Somerset advised him of the best methods to assault a fortified settlement:

Assembling your power of horsemen and some convenient nombre of hagbutes footmen [...] your horsemen may lye aloofe, making nowe and then offers to the towne, and sending certen harcquebutters [...] to the places of adventayg, to the intent the rebellors may be draune to the utter p[ar]ts of the towne, where they have cheyned upp theyr passages. And then, your bases being fyrst placed, x or xii score from the towne behynde your horsemen, agaynst the same passages shall redely after the retorne of your

horsemen annoy them, and slay suche numbers of them, as we thynke playnly the press therof will cause them sodenly to gyve over and shrinke, and yf not but that they shall break or yssue out upon you, then we doubt not but that your horsemen [...] shall utterly dystresse them.⁶⁴⁰

This extract described how cavalry should be used for demonstrations against fortified areas ‘ly[ing] aloofe [and] making nowe and then offers to the towne’, as a means of compelling the defenders to muster to repel them and, in doing so, expose themselves to firepower. These tactics would place defending troops in a dilemma, forcing them to either remain stationary under fire, where they would eventually ‘gyve over and shrinke’, or ‘yssue out’ and abandon their fortifications, leaving them vulnerable to the nearby cavalry. At Bishop’s Clyst, Captain Travers’s battle was clearly equipped to occupy this role, harassing the town’s defenders with *Stradiots*, *Reiters*, Spinola’s shot, and the artillery, rather than mounting an assault. This, as Edward VI confirmed ‘kept them occupied at their wall’ and prevented the insurgents redeploying to strengthen their defences against the landsknechts and militia advancing from the east. Unable to resist this attack, which outnumbered them by two to one, the rebels were pushed back into Bishop’s Clyst, with Hooker describing how the rebels ‘being driven from the said rampires, ran all into the town, and there join themselves together’, presumably forming up in battle array to confront their attackers.⁶⁴¹ The imminent confrontation was forestalled, however, by Sir Thomas Pomeroy, one of the rebel officers, who, separated from his troops, successfully deceived the loyalists into believing they had triggered an ambush:

As the King’s army was in good order marching into the town, one of the chief Captains of these rebels, named Sir Thomas Pomeroy, knight, kept himself in a Furze Close, and perceiving the army to be past him, and having then with him a trumpeter and a drumslade, commanded the trumpet to be sounded and the drum to be stricken up. At which sound the Lord Privy Seal and his company were amazed, supposing verily that there had been an ambush behind them, [...] whereupon, they forthwith retire back in all haste they may.⁶⁴²

This incident, which threw Russell’s advance into confusion and resulted in a panicked retreat, also offers further proof of the rebels’ battlefield organisation. Pomeroy’s accompaniment by ‘a trumpeter and a drumslade’ mirrored Hayward’s assertion that insurgents deployed ‘under banners’ at Fenny Bridges, and demonstrated the degree to which rebel forces fighting in standard formations and using military signals were comparable to England’s militia. The loyalists’ retreat was a critical moment in the engagement and could have resulted in a rebel victory had the insurgents possessed cavalry to pursue and scatter Russell’s forces.⁶⁴³ This also has a broader significance, highlighting the vital role horsemen performed in battle during the

⁶⁴⁰ Pocock, p.15.

⁶⁴¹ Hooker, *Description*, p.75.

⁶⁴² Hooker, *Description*, p.75.

⁶⁴³ Jordan, *Young King*, pp.472-4.

increasingly infantry-dominated warfare of the Renaissance, with mounted troops proving integral to exploiting victory, even if they were unable to defeat footmen without support. Notwithstanding the rebels' lack of cavalry, they captured the loyalists' baggage and artillery, bringing 'munitions, armour, and treasure' back into Bishop's Clyst while 'the pieces of Ordnance [...] with the shot and powder, they bestowed in places convenient, and employed the same against [Russell] and his company'.⁶⁴⁴ The insurgents' redeployment of captured ordnance 'in places convenient', probably at the entrances to Bishop's Clyst, indicates that they must have been accompanied by gunners of sufficient skill to operate these weapons, implying that John Hamon was not their only artilleryman.

Meanwhile the government soldiers, who Hooker reported fled back eastward towards Woodbury and 'recovered the hill', managed to regroup and eventually returned to mount a fresh assault.⁶⁴⁵ This would have been a time-consuming process, with Russell and his officers having to rally their troops, reorganise the battles, and march back to Bishop's Clyst, with Hooker remarking that, after the eventual capture of the town, 'night [was] approaching'.⁶⁴⁶ Given that the first attack began at nine o'clock, and that sunset in early August would not occur until after eight o'clock, several hours may have elapsed between Russell's retreat and his subsequent reappearance, allowing the insurgents ample time to augment their defences. Thus, upon Russell's return, his scouts informed him that 'the town, and every house therein, was fortified and full of men; and that it was not possible for any to pass that way without great peril and danger'.⁶⁴⁷ Rather than renewing their advance along the same route, the loyalist Forward battle reportedly entered Bishop's Clyst from another direction, in which approach Sir William Frances was killed, before burning the town and defeating the insurgents in close-quarter fighting:

Sir William Frances being in the fore-ward was foremost, and leaving the way he took before, took now another way [...] both deep and narrow. The enemies being upon the banks upon every side of the way, with their stones so beat him, that they struck his headpiece fast to his head, and whereof he died. The army being come into the town, they set fire on every house as they passed by. But the rebels conjoining themselves in the middle of the town, do stand at their defence, where the fight was very fierce and cruel.⁶⁴⁸

Hooker's description of Frances's approach to the town, alongside the narration of his death by stones thrown from the 'banks upon every side of the way', suggests that this attack proceeded down Bishop's Court Lane, which was, as previously noted, a narrow, steep-sided road. The movement of the loyalist Mainward and Rearward battles during this stage of the action is not

⁶⁴⁴ Hooker, *Description*, pp.75-6.

⁶⁴⁵ *Ibid.*

⁶⁴⁶ *Ibid.*, p.78.

⁶⁴⁷ *Ibid.*, p.76.

⁶⁴⁸ Hooker, *Description*, p.76.

recorded, but they may have repeated their previous attack west along the Exeter road to pin the rebels in place while the army's Forward battle executed its flanking manoeuvre and entered Bishop's Clyst from the northeast. While the resulting combat was 'very fierce and cruel', the insurgents, despite their use of captured equipment, lacked the necessary skill to withstand the government's mercenaries and were eventually defeated, suffering an estimated 900 casualties in the fighting and subsequent rout.⁶⁴⁹ These heavy losses may have stemmed from the environment in which the battle occurred, as the buildings and nearby river restricted the rebels' escape routes, with the result that 'some were slain with the sword, some burnt in the houses, some shifting for themselves were taken prisoners, and many, thinking to escape over the water, were drowned.'⁶⁵⁰ Loyalist fatalities were significantly lower, with the Spanish Ambassador reporting that 'the Privy Seal lost only fifteen men on his side, though more were wounded'.⁶⁵¹ This assertion was verified by Sir Hugh Paulet, who claimed that twenty soldiers were killed and seventy-nine out of one hundred archers accompanying the Forward battle were wounded, illustrating the intensity of the fighting for units caught within the action's epicentre.⁶⁵²

After capturing the town, and presumably retaking some of their lost ordnance, Russell's forces sought to cross the river and consolidate their position on Clyst Heath, but were delayed by a small rearguard of insurgents holding Clyst Bridge with an artillery piece. While the rebels probably numbered only a few dozen men, the bridge was the only means of crossing the tidal River Clyst, which Hooker noted was 'miry and muddy, as also at that time very deep, by reason of the flowing of the seas'.⁶⁵³ Furthermore, Clyst Bridge (Fig.59) was so narrow that it could be commanded by a single artillery piece, and was also 'overlaid with great trees and timber' to further impede passage along its length.⁶⁵⁴ An initial attempt on the bridge, encouraged by Russell's offer of financial reward, a common practice when seeking volunteers for hazardous duties, was thwarted by the insurgents' ordnance, but distracted the insurgents while John Yard, a local gentleman, led a force across the river 'near unto a mill above the bridge'.⁶⁵⁵ The location of the crossing point is uncertain, but the OS surveyors' drawings and first edition OS map (figs. 60 and 61) suggest that either Sowton Mill or Clyst Mill, which both lay to the north of Bishop's Clyst, may have been the site of the crossing point. Yard's detachment, which probably consisted of demi-lances able to ford the river and quickly

⁶⁴⁹ Cornwall, p.184; *Chronicle [...] of Edward VI*, p.14.

⁶⁵⁰ Hooker, *Description*, p.76.

⁶⁵¹ *State Papers Spanish*, p.432.

⁶⁵² Beer, *Rebellion*, pp.79-80.

⁶⁵³ Hooker, *Description*, p.77.

⁶⁵⁴ *Ibid.*

⁶⁵⁵ Gervase Phillips, 'To Cry "Home! Home!: Mutiny, Morale, and Indiscipline in Tudor Armies', *The Journal of Military History*, 65 (2001) <<http://www.jstor.org/stable/2677162>> [accessed 28 December, 2012] (325-6); Hooker, *Description*, p.77.

approach Clyst Bridge from the north, succeeded in outflanking and destroying the rebel force, allowing the remainder of Russell's army to advance onto Clyst Heath.



Fig.59. Photograph of Clyst Bridge looking east towards Bishop's Clyst. Note the length and narrowness of the bridge.

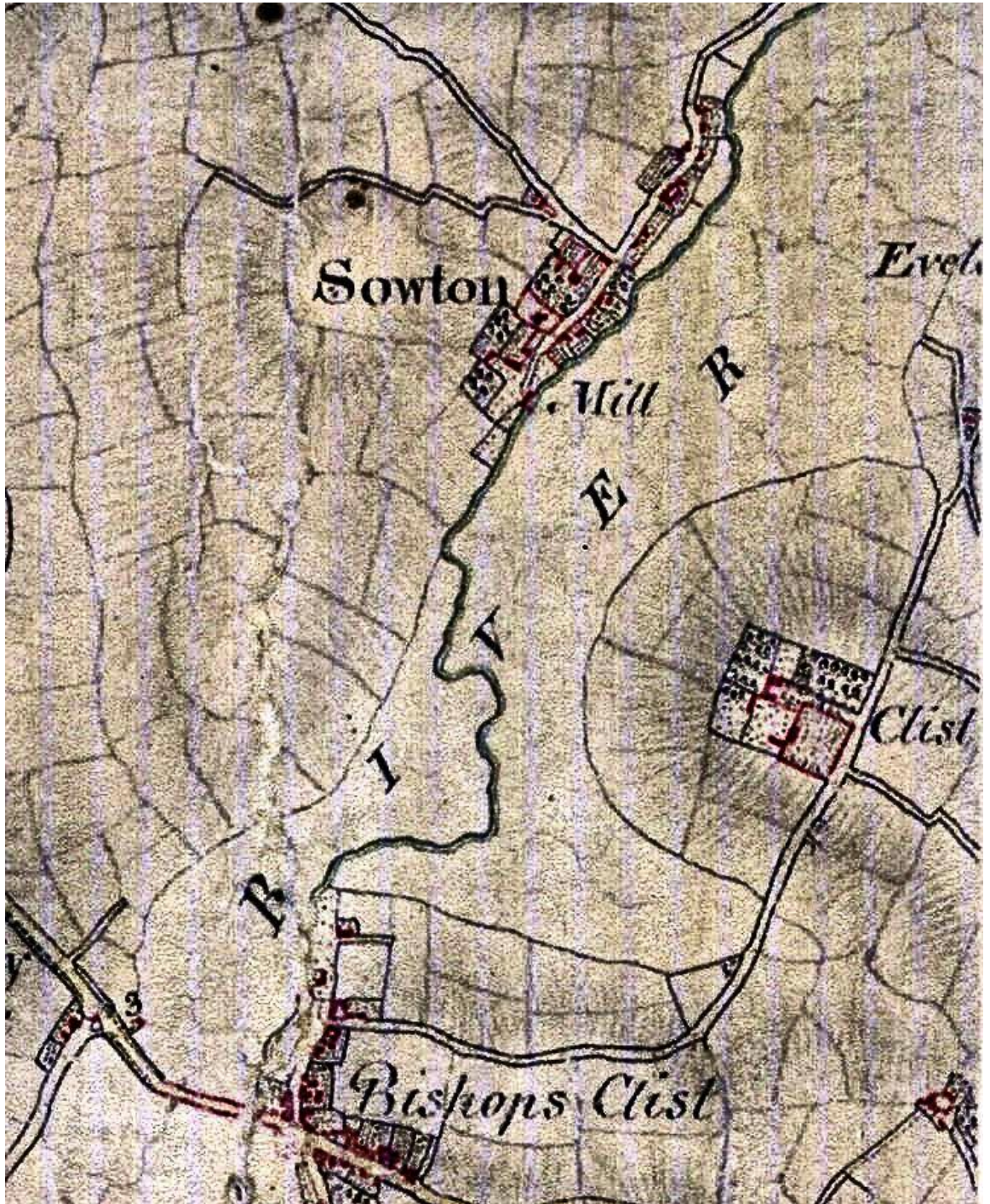


Fig.60. *Surveyors' Drawings*. Note Sowton Mill (centre of image) to the north of Bishop's Clist (bottom of image). North is at the top of the image.

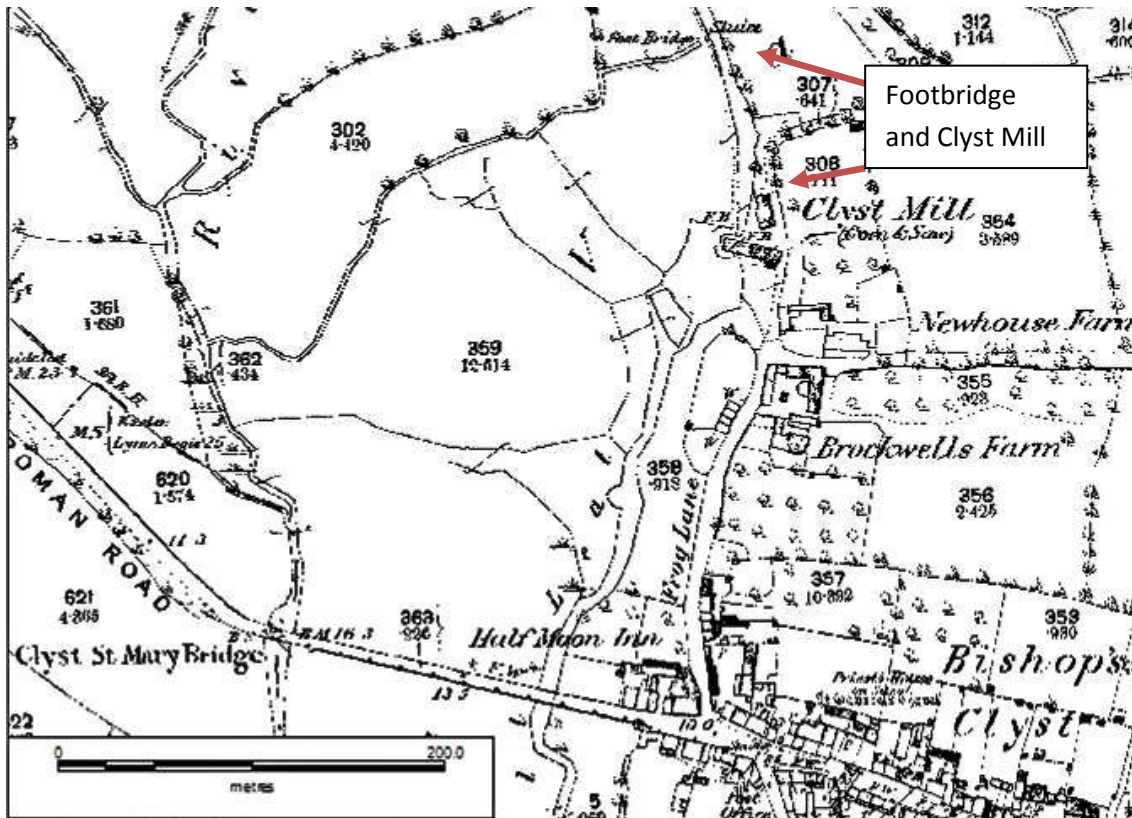


Fig.61. First Edition Ordnance Survey 6":1 mile © Crown Copyright and Landmark Information Group Limited (2013). All rights reserved. (1854). North is at the top of the image. Note Clyst Mill and the nearby footbridge to the north of Bishop's Clyst.

The battle's final act occurred shortly after the conclusion of the day's fighting, when Grey, sent forward to reconnoitre the army's campsite on Clyst Heath, reportedly saw 'looking back towards Woodbury [...] upon Windmill Hill, a great company assembled, and marching forward'.⁶⁵⁶ While it is unclear whether this 'great company' were rebel soldiers, battlefield scavengers, or simply onlookers from the surrounding area, Grey and Russell, believing their forces to be under imminent threat of a renewed attack, ordered the execution of the prisoners taken over the preceding days.⁶⁵⁷ It is uncertain how many captives died in this incident, with Hayward's assertion that the loyalists 'slew of them about 900 not sparing one' being frequently misapplied to the massacre when it in fact described the preceding action in Bishop's Clyst, and Hooker merely stating that 'a great number' were killed.⁶⁵⁸ As Hooker's statement followed his claim that 1000 men died fighting for the town, his chronicle suggests that the rebels killed in the battle's aftermath were in addition to this total. Regardless of what Grey and Russell saw, however, no further attack was forthcoming, with Hooker noting that the loyalists 'encamped

⁶⁵⁶ Hooker, *Description*, p.78.

⁶⁵⁷ Cornwall, p.185.

⁶⁵⁸ Hayward, p.151; Hooker, *Description*, p.78.

themselves for that night' upon Clyst Heath, where the surviving rebels gathered to resume the battle the following morning.⁶⁵⁹

Clyst Heath: Location, Terrain, and Rebel Deployment

Unlike the preceding days' fighting, the battle of 5 August is difficult to locate, with the action being poorly documented and occurring away from settlements or named landscape features beyond the heath itself. Hooker's account provides the only evidence for the terrain, stating that Russell's camp was upon 'the top of the hill, which is in the middle of the heath', and that the rebels, on the evening of 4 August, 'came to Clyst Heath: and in the lower side thereof, next to the highway, do entrench [...] fast by a hedge' in preparation for the loyalist attack.⁶⁶⁰ The Hevitree and Sowton tithe maps defined the nineteenth-century heath as stretching from Clyst Bridge towards East Wonford, although the earlier OS surveyors' drawings (Fig.62) show adjacent patches of moorland that may previously have been encompassed within the area, as depicted below (Fig.63). Regardless of Clyst Heath's total extent, the prominence described by Hooker was probably that of Sandy Gate Hill, which lies directly across the River Clyst and could be accessed via Clyst Bridge. This position accords with Hooker's assertion that Grey ascended the hill immediately after he 'passed over the water', and could be described as being 'in the middle of the heath' if the heath included the Sowton moors. While another piece of high ground, Hill Barton, lies further northwest at the entrance to the Honiton Road, this is over a mile from Clyst Bridge, and would necessitate Grey crossing Sandy Gate Hill in order to reach it. Further confirmation is offered by Ogilby's description of the route from Exeter, by which a traveller would, by 'a small asc[ent] and desc[ent] come [...] to Bishop's Clyst first crossing Clyst flu[vius]'.⁶⁶¹

⁶⁵⁹ Hooker, *Description*, p.78.

⁶⁶⁰ *Ibid.*, pp.77-8.

⁶⁶¹ Ogilby, *Britannia*, p.44.

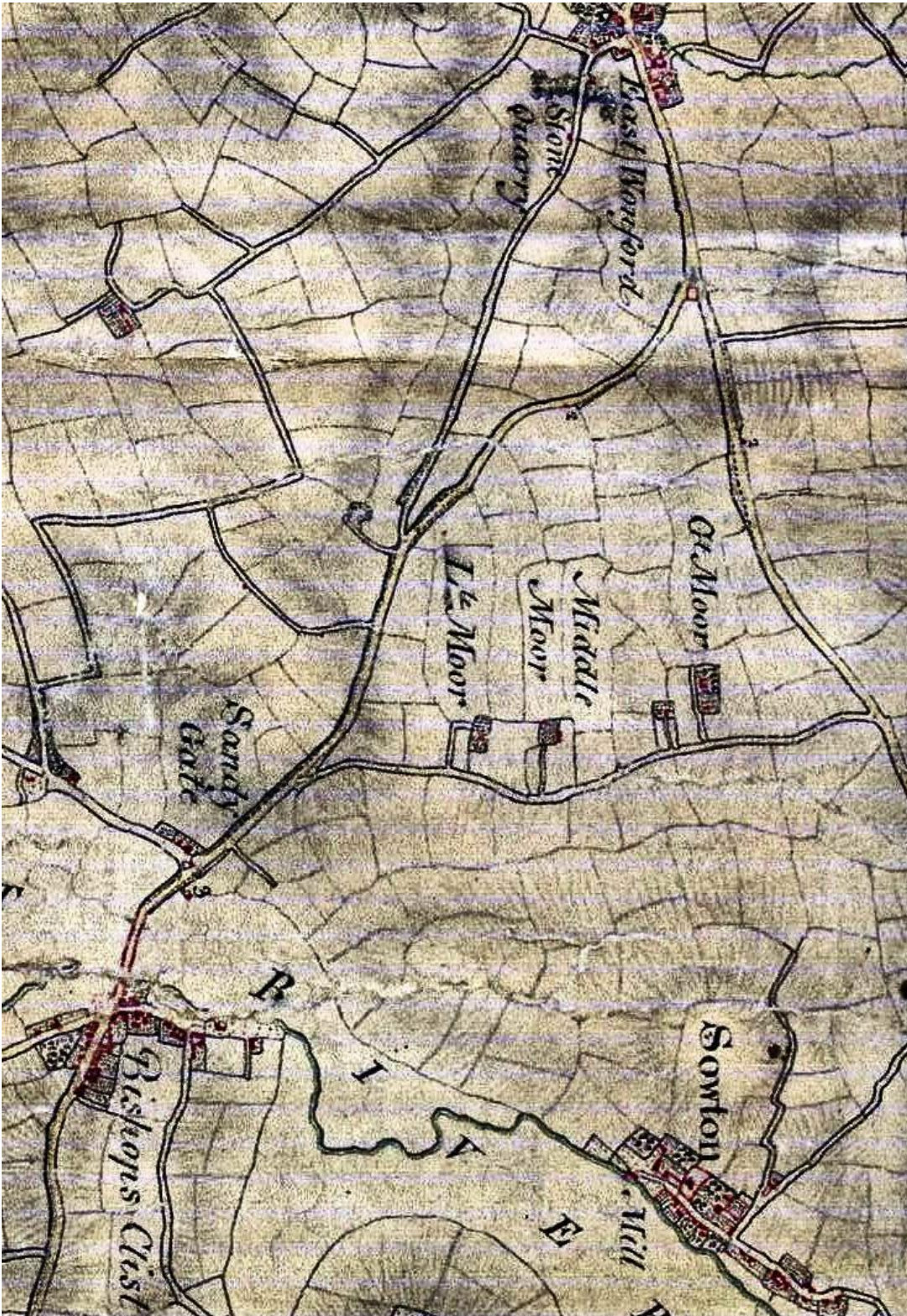


Fig.62. *Surveyors' Drawings*. The Sowton moors (centre of image) were not included within Clyst Heath (stretching from Sandy Gate to East Wonford) in 1838, but may have been previously. North is at the top of the (rotated) image.

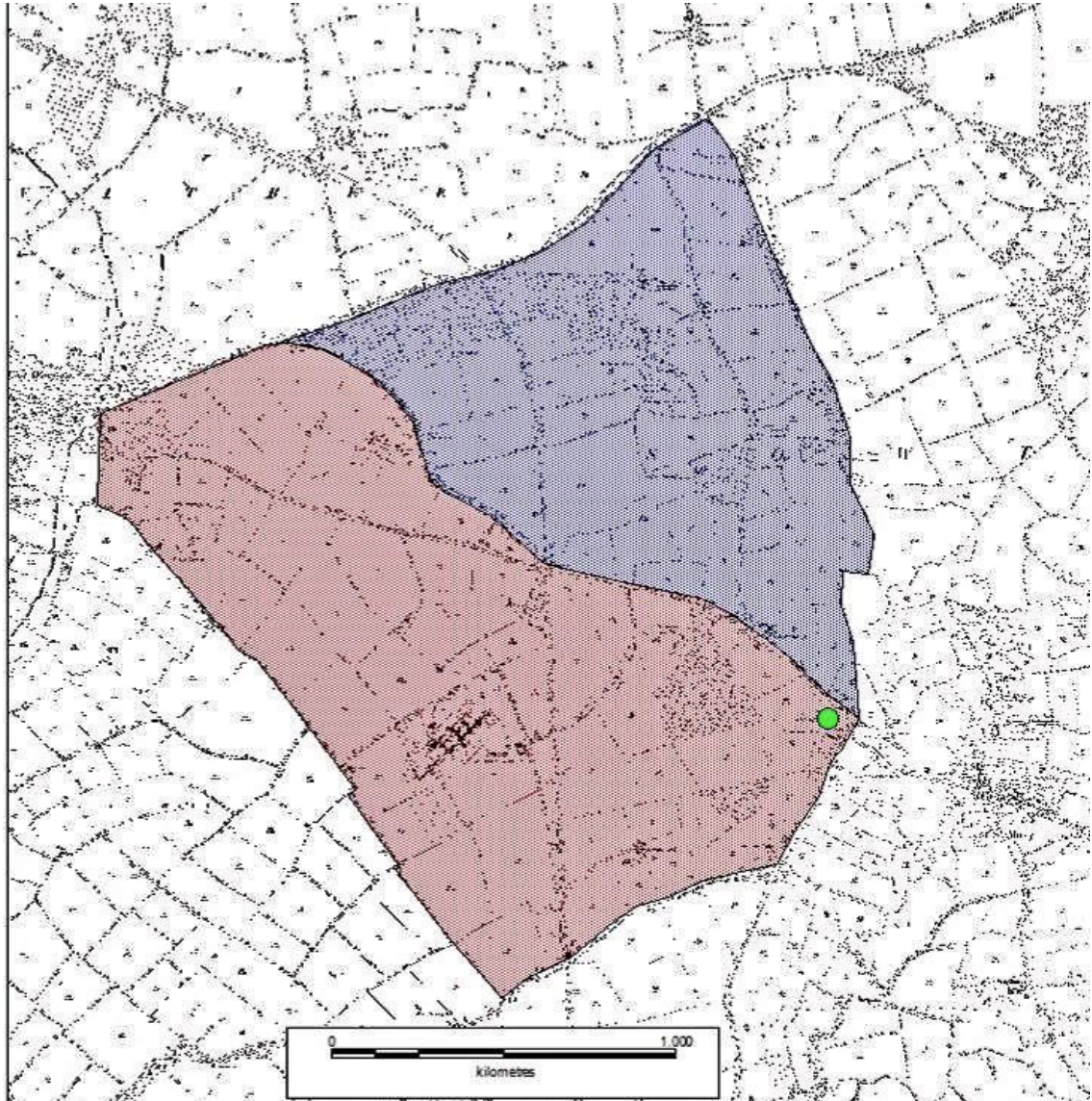


Fig.63. Ordnance Survey First Edition 6":1 mile © Crown Copyright and Landmark Information Group Limited (2013). All rights reserved. (1854). The image has been annotated to show the approximate area encompassed by Clyst Heath in 1838. The area shown in red was contained within Hevitree parish, and is explicitly identified as Clyst Heath on the tithe map. The blue area is part of Sowton parish which may also have lain within the heath. Note the position of Sandy Gate Hill immediately beyond the Clyst Bridge (shown with a green circle). North is at the top of the image.

Determining the area in which the insurgents deployed is complicated by local traditions, which assert that the battle occurred on the same spot as a smaller engagement, fought in 1455 between Lord William Bonville and Thomas Courtenay, Earl of Devon, during the Wars of the Roses.⁶⁶² The OS first edition map (Fig.64) identified this area as Clyst Heathfield Plantation, where substantial quantities of human remains from both encounters were reportedly discovered

⁶⁶² G.H. Radford, 'The Fight at Clyst in 1455', *Reports and Transactions of the Devonshire Association for the Advancement of Science, Literature and Art* (1912), 252-65 (p.261).

when the heath was first ploughed in the early-nineteenth century.⁶⁶³ However, this otherwise unrecorded interment may not necessarily delineate the exact location of either the 1455 or 1549 action, with mass graves commonly being created wherever large numbers of deaths occurred, such as along the path of a defeated army's rout, as demonstrated by the Towton burials.⁶⁶⁴ The plantation's position immediately west of Sandy Gate Hill makes the site more likely to be associated with the execution of captured rebels on 4 August than the battle on the following day. This would account for the high concentration of human remains within an area so close to the loyalist camp, particularly as Hooker clearly described the insurgents establishing a fortified position in which to receive an attack, rather than advancing against Russell's army.

⁶⁶³ Radford, p. 261.

⁶⁶⁴ Christopher Knüsel and Anthea Boylston, 'How has the Towton Project Contributed to our Knowledge of Medieval and Later Warfare?', in *Blood Red Roses*, ed. by Fiorato, Boylston and Knüsel, pp.169-88 (p.186).

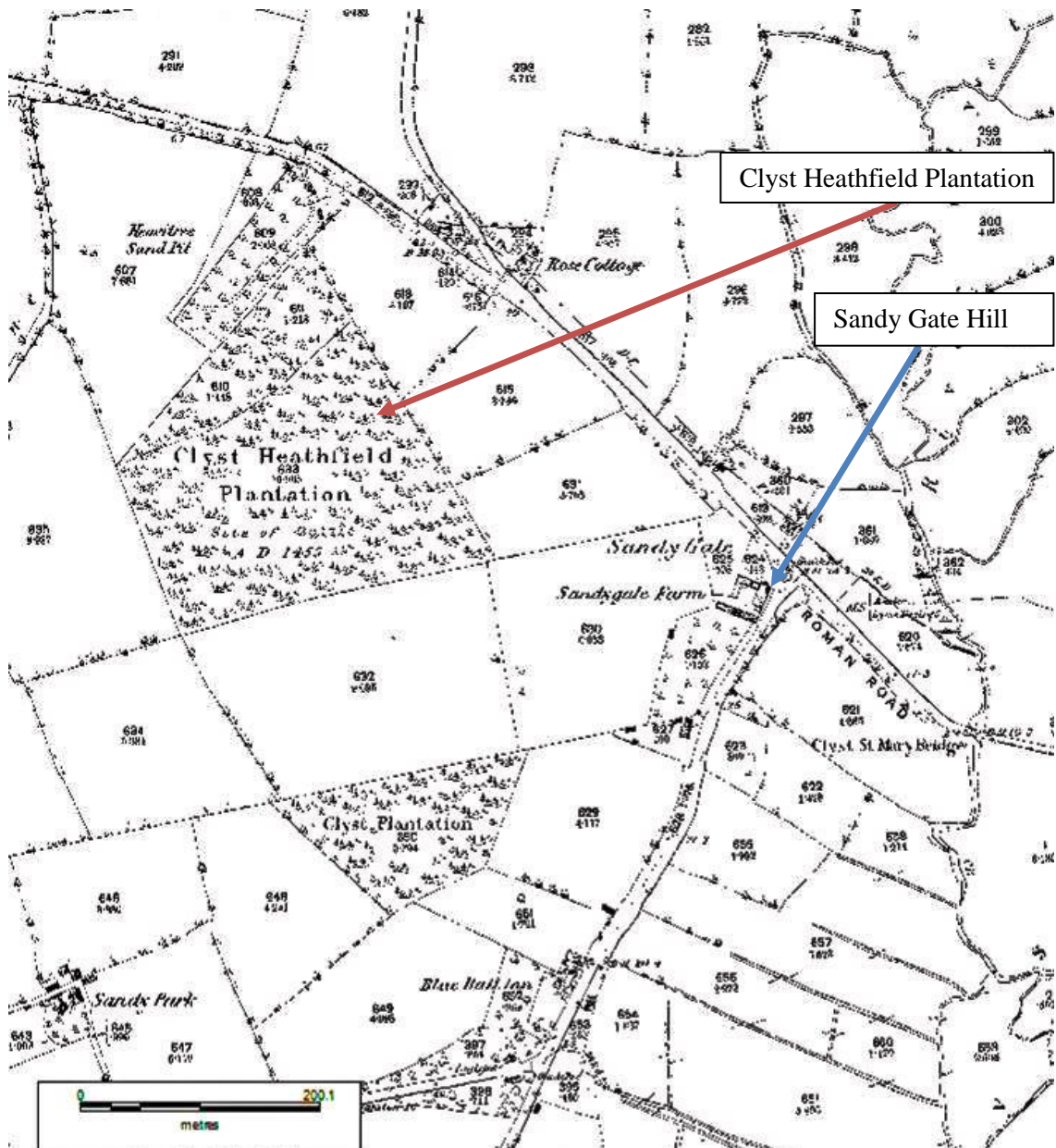


Fig.64. Ordnance Survey First Edition 6":1 mile © Crown Copyright and Landmark Information Group Limited (2013). All rights reserved. (1854). North is at the top of the image. Clyst Heathfield Plantation's position immediately west of the loyalists' camp on Sandy Gate Hill, makes it more likely to be associated with the massacre on 4 August than the following day's battle.

While Clyst Heathfield Plantation can be discounted as the site of the action, Hooker's description that the insurgents deployed 'in the lower side' of the heath, 'next to the highway' suggests that the battle may have occurred further west, below the main road to Exeter. Edward VI, however, in his sole reference to the battlefield, offered a slightly different interpretation, stating that the rebels gathered 'at the entry of a highway', potentially meaning the entrance to

another road branching off from the main route.⁶⁶⁵ Ogilby's map (Fig.65) depicts several such branches descending southwards from the Exeter road, which are shown in the same manner as the main route to denote enclosed lanes, raising the possibility that the rebels deployed behind one of these spurs with the highway to their left, 'fast by a hedge' protecting both their front and left flank. Equally, when describing the action, Hooker related how Russell's battle had to cross 'hedges and enclosed grounds' to encircle the rebels, suggesting that their right flank, positioned away from the Exeter road, was similarly protected.⁶⁶⁶ The OS surveyors' drawings (Fig.66), while not necessarily representative of the landscape in 1549, clearly illustrate just such an area lying west of the modern Apple Lane, en-route to Exeter, where the road network offered three-sided protection against an attack originating from Sandy Gate Hill. However, the lack of pre-nineteenth-century mapping prevents the process of terrain reconstruction necessary to confidently position the battle in this area (shown in Fig.67), meaning that this remains, at best, a supposition.

⁶⁶⁵ *Chronicle [...] of Edward VI*, p.14.

⁶⁶⁶ Hooker, *Description*, pp.78-9.

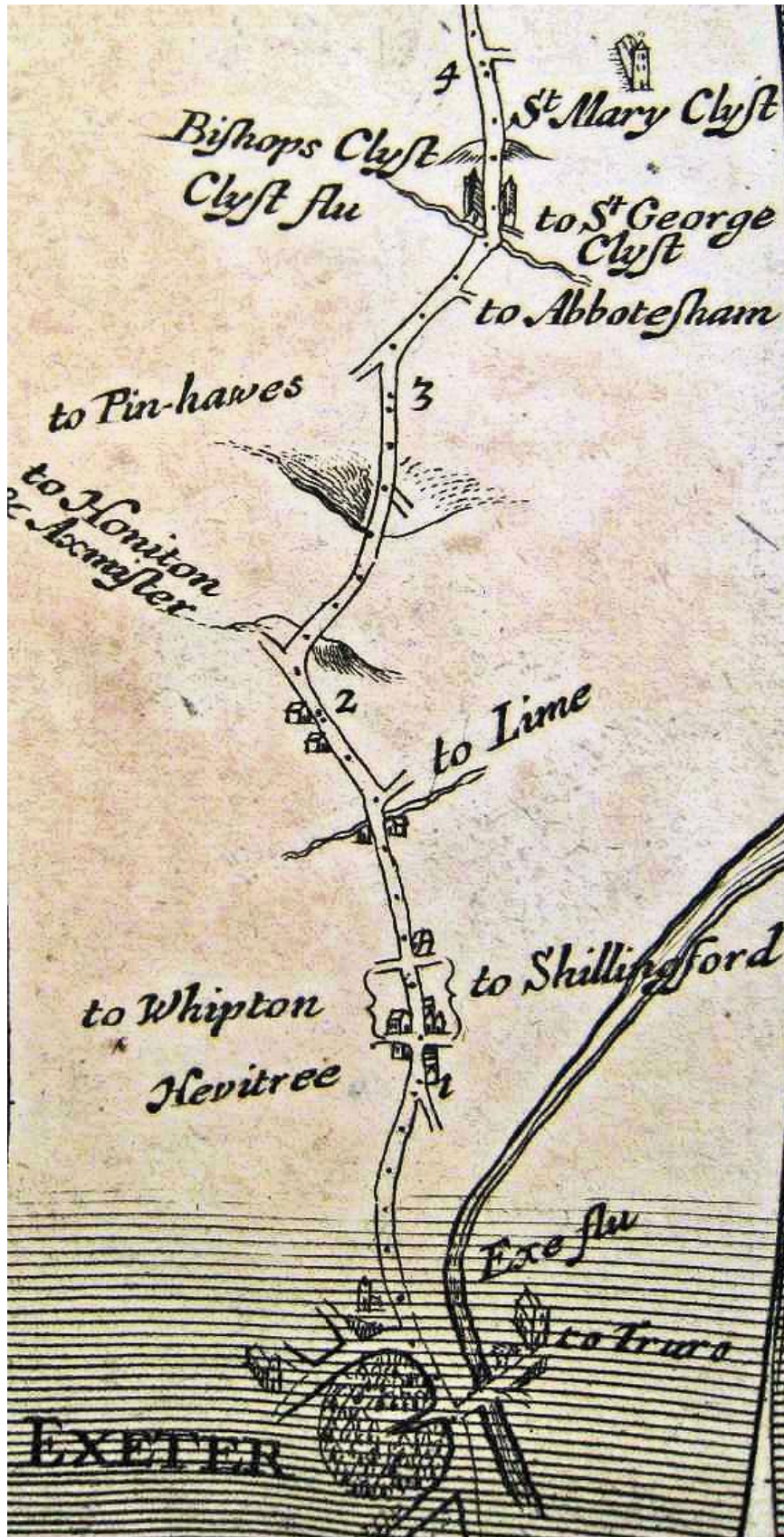


Fig.65. Ogilby, plate 94. North is at the left of the image. Note the main route west from Bishop's Clist to Exeter has several spurs leading southwards, which are depicted with solid lines indicating enclosed roads.

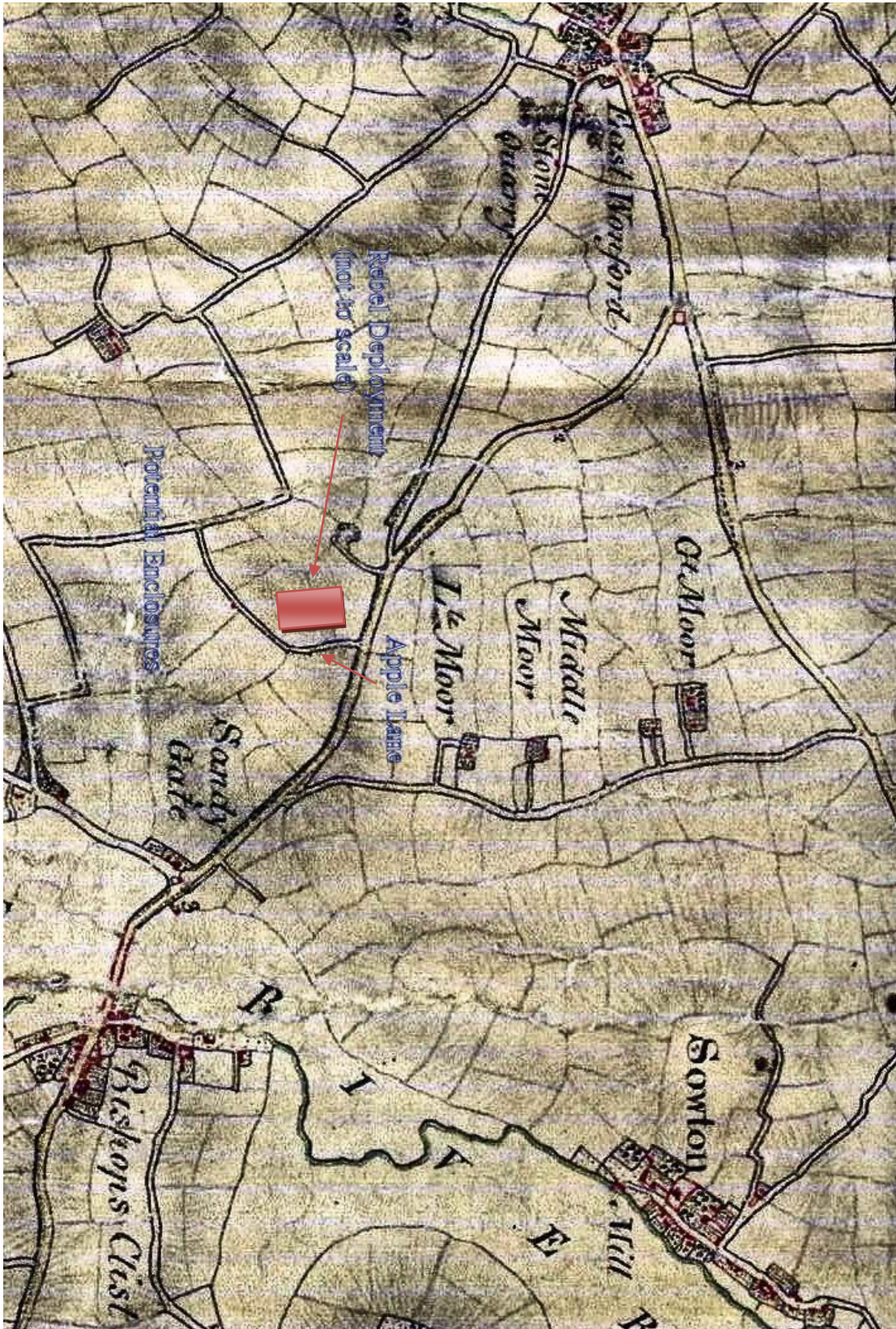


Fig.66. *Surveyors' Drawings*. North is at the top of the (rotated) image. Annotations show the suggested rebel position behind Apple Lane. If the surrounding roads were enclosed, the insurgents would benefit from protection on three sides from the nearby hedges. Hooker also implied that the land southwest of Sandy Gate Hill was enclosed.



Fig.67. Google Earth image of modern landscape of Clyst Heath, showing the approximate positions of Clyst Heathfield Plantation, Sandy Gate Hill, and Apple Lane in relation to the rebels' probable deployment area.

The Battle

Despite the engagement's significance for the relief of Exeter, narratives of the action on Clyst Heath are brief and contradictory. Edward VI asserted that the rebels mustered 2000 troops on the morning of 5 August to block the way to Exeter, but lacked the time to fully prepare their position and attempted to delay Russell's advance with negotiations while they completed their entrenchments, 'which being perceived, they ran their ways'.⁶⁶⁷ Hooker, by contrast, provided a radically different account, relating how the insurgents fortified themselves on the heath during the night of 4 August, before bombarding the loyalists' camp the following morning and resisting their enemies' attack in a bitterly contested last stand. This version of events can be confirmed by Paulet's estimate that the government army sustained forty fatalities and over 1000 wounded on 5 August, suggesting that a major confrontation occurred on Clyst Heath to increase the casualty figures from those specified at Bishop's Clyst.⁶⁶⁸ It is possible that Edward VI's narrative, which was normally reliable but contained occasional geographical inaccuracies, for instance confusing Clyst and Honiton Bridge when describing the action on 4 August, simply compressed the battle on Clyst Heath into the previous day's fighting.⁶⁶⁹ This would explain the King's jumbled references to insurgents deploying 'at a certain hedge in a highway' during the battle of Bishop's Clyst, a statement strikingly similar to Hooker's description of their position on Clyst Heath, indicating that the two sources probably recorded the same event.⁶⁷⁰

According to Hooker's narrative, the battle opened 'as soon as daylight served', probably soon after dawn at approximately half past five, with the rebels 'discharg[ing] and shoot[ing] off their pieces unto the army encamped about the top of the hill'.⁶⁷¹ Russell's pitching camp atop Sandy Gate Hill, rather than remaining in battle array, demonstrated a degree of overconfidence and complacency, with his officers clearly not anticipating another confrontation after the previous day's victory. This unpreparedness left the loyalists at an initial disadvantage, having to 'divide themselves into three parts, and every [soldier] hath his place assigned and order appointed unto him'.⁶⁷² While the rebel artillery's overnight positioning may have impacted on its initial accuracy, as the gunners lacked a clear view of Russell's camp until the following morning, the time taken for the loyalist commanders to embattle their forces would have provided ample opportunity for the insurgents to correct their aim. Given the effectiveness of uphill artillery fire, proven by the English at the battle of Flodden, the rebels'

⁶⁶⁷ *Chronicle [...] of Edward VI*, p.14.

⁶⁶⁸ Beer, *Rebellion*, p.80.

⁶⁶⁹ Brooks, pp.309-10.

⁶⁷⁰ *Chronicle [...] of Edward VI*, p.14.

⁶⁷¹ Hooker, *Description*, p.78.

⁶⁷² Hooker, *Description*, p.78.

barrage may have caused a significant proportion of the loyalists' casualties and motivated Russell's decision 'to end the quarrel [and] give the onset upon them' rather than prolonging the exchange with his own ordnance.⁶⁷³ Unlike the bulk of the loyalist army, which was able to engage the rebels head-on, probably by marching west along the Exeter road or across the open heath, Russell's battle was forced to cross several obstacles with the aid of their pioneers, as Hooker described:

The Lord Russell, having no way open before him, causeth his pioneers to make way over the hedges and enclosed grounds; and by that means doth at length recover upon the very back of the enemies: and they were so entrapped on every side that they could not, by any means, escape, but must yield or fight. The one they would not, and in the other they prevailed not. For [...] in the end, they were all overthrown, and few or none left alive.⁶⁷⁴

As this process was underway, the army's other battles would have attacked the rebels to the fore, pinning them in place to prevent their withdrawing before Russell 'at length' arrived from the rear. This completed the encirclement, the rebels by now being 'so entrapped on every side that they [...] must yield or fight', demonstrating the important tactical role of pioneers for operating in enclosed landscapes. Despite their hopeless situation, being attacked from three sides and unable to withdraw, the insurgents refused to surrender and instead fought on until 'they were all overthrown, and few or none left alive', a situation which perhaps accounted for the loyalists' unusually high casualties in comparison with other battles where an avenue of retreat remained open. Although the insurgents' losses were undoubtedly heavy, Hooker's implication that their entire force, estimated at 2000 men by Edward VI, was wiped out is clearly an exaggeration, with Paulet and the Spanish Ambassador asserting that this figure represented the number of rebels killed during both days' fighting.⁶⁷⁵ Given Hooker's previous assertion that almost 1000 rebels were killed in Bishop's Clyst, and Edward VI's statement that 'there were in a plain about 900 of them slain', coupled with the indeterminate number of insurgents executed after the former battle, it seems probable that roughly 1000 insurgents were killed in each battle and the related executions.⁶⁷⁶ This means, despite Hooker's contrary claim, that half of the rebel force at Clyst Heath must have successfully withdrawn, perhaps managing to escape before the arrival of Russell's flanking force. Notwithstanding the rebels' stubborn resistance and skilful use of terrain to provide protection in the field, the denouement of the action illustrated the value of co-ordinated battlefield manoeuvre and exposed the vulnerability of infantry forces occupying static positions, which could be outflanked by more tactically mobile armies during an engagement.

⁶⁷³ Raymond, pp.38-9; Hooker, *Description*, p.78.

⁶⁷⁴ Hooker, *Description*, pp.78-9.

⁶⁷⁵ Beer, *Rebellion*, p.80; *State Papers Spanish*, p.432.

⁶⁷⁶ *Chronicle [...] of Edward VI*, p.15.

While the relief of Exeter encompassed the rebellion's most strategically significant actions, defeating the insurgents besieging the city and forcing them irrevocably onto the defensive, the assessment of each battle's tactical detail is often impossible without adequate cartographic sources from which to reconstruct its historic terrain. In some cases, careful analysis of narrative accounts enables limited conclusions to be drawn regarding the landscape, for instance with regard to the presence of enclosures in proximity to Bishop's Clyst, and the probable location of the rebels' earthen 'rampires', but this is insufficient for detailed study. Similarly, these sources sometimes allow discussion of broader issues, such as the rebels' use of military music, the probable adherence of the loyalist deployment to the period's conventions, and the tactical importance of pioneers in battle.

Sampford Courtenay (23 August)

The campaign's final battle occurred two weeks after the relief of Exeter, when the much-diminished rebel army regrouped at the village of Sampford Courtenay, 20 miles west of Exeter. The insurgents' rationale for giving battle here may have stemmed from many of their leaders' association with the area, and, more practically, its geographical position near the major routes from Exeter to Cornwall, with the Spanish Ambassador remarking that 'they assembled again [...] to guard the road to their country'.⁶⁷⁷ Despite dramatic reductions in the rebels' manpower, historians have estimated that the army still comprised over 2000 men, including many of the better-armed Cornish troops, and contained artillery.⁶⁷⁸ The insurgents, however, were significantly outmatched by the loyalists, who, despite the recall of many of their mercenaries, had expanded to an estimated 8000 soldiers, with Hooker remarking that Arundell's troops were 'nothing, nor in order, nor in company, nor in experience to be compared with the others'.⁶⁷⁹ According to Russell's report the loyalists made a slow approach march northwest from Exeter, stopping after seven miles at Crediton on 21 August before approaching Sampford and capturing Maunder, one of the rebel commanders, in a skirmish at North Tawton on 22 August.⁶⁸⁰ The battle took place on the following day, with the rebels seeking to compensate for their numerical disadvantage by dividing their army into two, placing part within a hilltop camp and concealing the remainder in ambush positions amidst the area's network of enclosures. Despite these preparations, the insurgents were unable to resist the loyalists, who stormed their

⁶⁷⁷ *State Papers Spanish*, p.434.

⁶⁷⁸ Cornwall, pp.197-8.

⁶⁷⁹ Hooker, *Description*, p.86.

⁶⁸⁰ H. Fulford Williams, 'Sampford Courtenay and Honeychurch', *Transactions of the Devonshire Association for the Advancement of Science, Literature and Art*, 89 (1957), 225-40 (p.231).

camp and killed its commander, Underhill, compelling the ambush party to withdraw into the village, from which they fled rather than face a renewed attack.

The Battlefield: Location, Terrain and Rebel Deployment

The action at Sampford Courtenay occurred in direct proximity to the settlement, which modern maps (Fig.68) show as lying between large hills to both east and west. While the insurgents could have occupied either hill, the loyalists' approach march from North Tawton would place the eastern prominence directly in their path, according with accounts that they assaulted the rebel camp before advancing on the village. Similarly, the OS surveyors' drawings (Fig.69) depict Sampford Courtenay stretching northwards from the main road, where it would be partially screened behind this same hill. Although there are no earlier visual representations, preliminary investigation of the 1568 survey book suggests that the battlefield encompassed moorland to the south and east, but that the majority of fields around the village and western side of the hill were enclosed.⁶⁸¹ Site visits give an impression of this historic environment, with Sampford Courtenay being surrounded by a network of enclosed fields and steep-sided, hedged lanes (Fig.70), which would have restricted movement and assisted the concealment of the rebel army.⁶⁸²

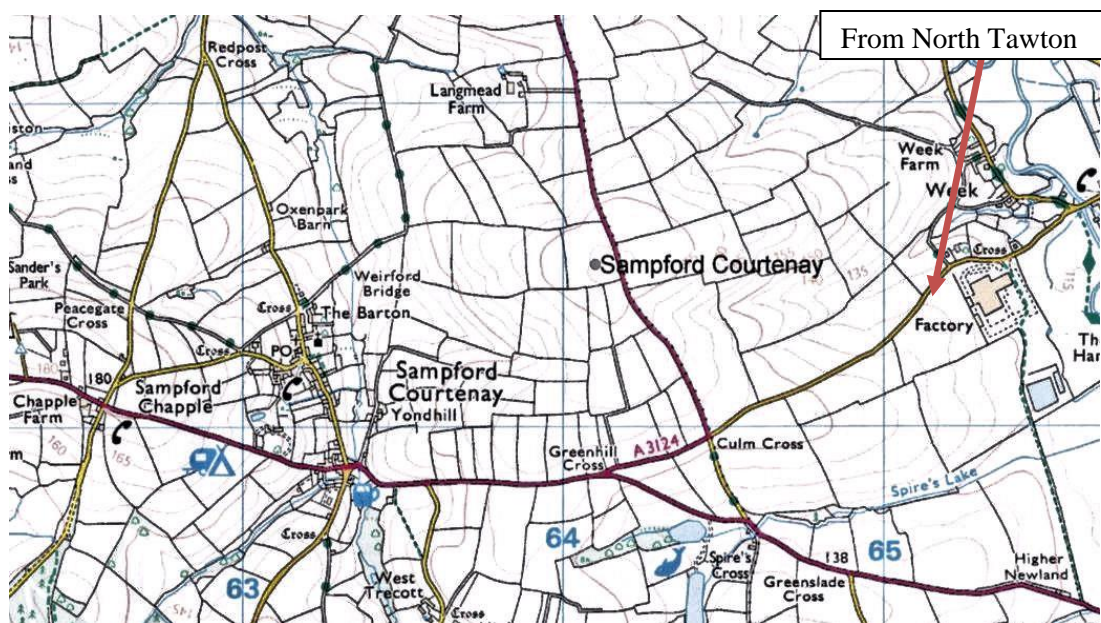


Fig.68. Ordnance Survey Explorer map, 1:5000 scale colour raster © Crown Copyright/Edinburgh (2009) an Ordnance Survey/Edina Digimap supplied service. North is at

⁶⁸¹ KCAR/6/2/140/08 SAC/66.

⁶⁸² Clement Pike, 'Devonshire Hedges', *Reports and Transactions of the Devonshire Association for the Advancement of Science, Literature and Art*, 57 (1925), 307-310 (pp.307-9).

the top of the image. The map shows Sampford Courtenay lying between two hills. Note the route from North Tawton leading to Sampford Courtenay, along which the loyalists probably approached.

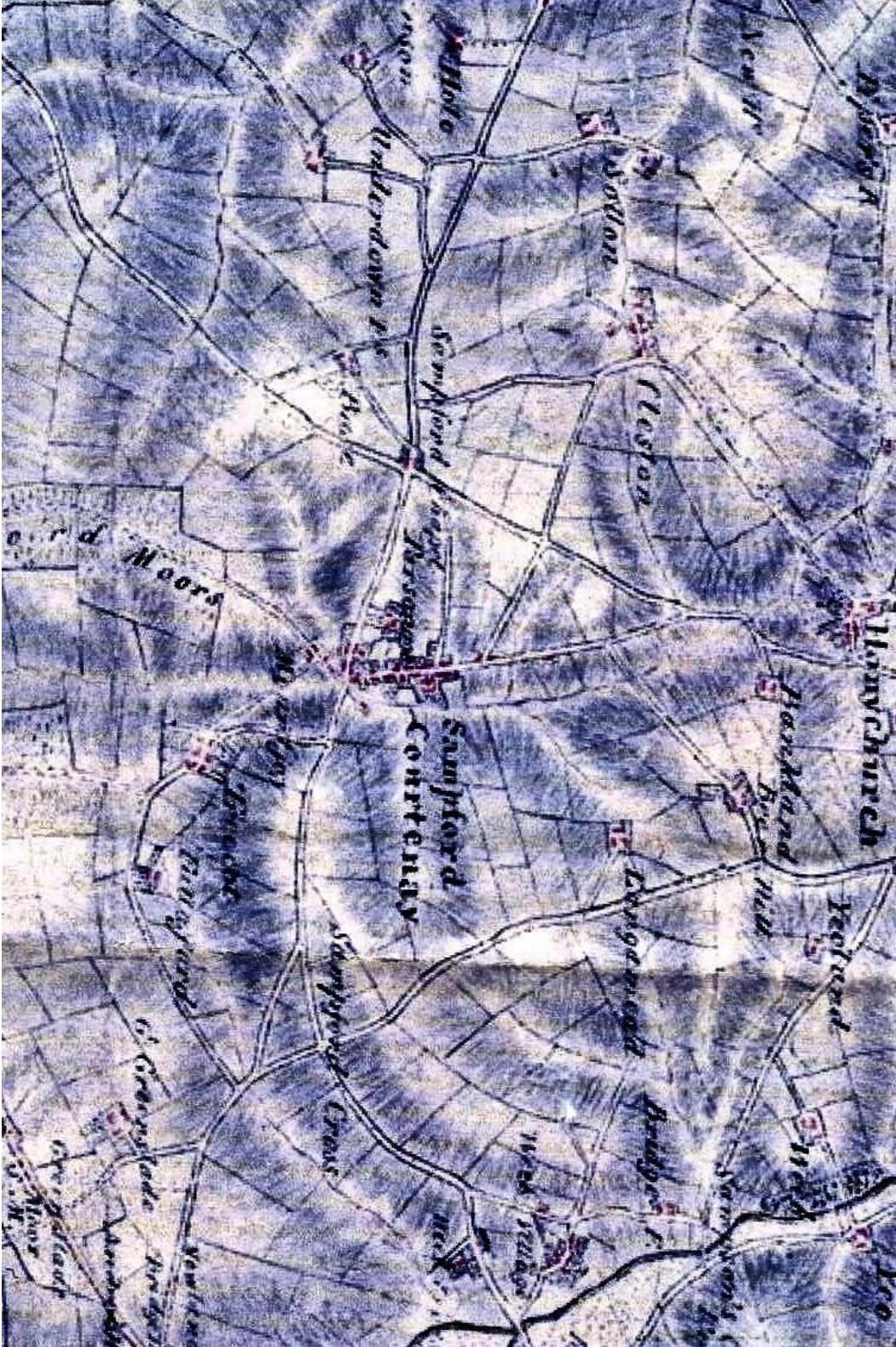


Fig.69. *Surveyors' Drawings*. North is at the top of the (rotated) image. Note the position of Sampford village and the large hill (centre of image) immediately to the east, which was the probable site of the rebel camp.



Fig.70. Photograph showing Weirford Lane looking east from Sampford Courtenay. Note the lane's high banks and hedges, which could have concealed the rebels from their opponents.

The insurgents aimed to exploit these landscape features with their deployment, stationing Underhill and the poorly equipped Devon rebels atop the hill (Fig.71), 'encamped as well by the seat of the ground as by the entrenchment of the same', to draw the loyalists onto their position, while Arundell's elite Cornish soldiers concealed themselves for a counterattack.⁶⁸³ Both detachments also possessed ordnance, with Russell describing exchanges of artillery fire with each force, although the heavier guns were probably concentrated within the camp, from where they could survey the surrounding area without needing to be redeployed, leaving Arundell with lighter and more mobile weapons. The rebels also erected defences at the entrances to the village, with Hooker recording a 'rampire, at the town's end' and Russell noting it was 'fortified for all events'.⁶⁸⁴ While uncertainties regarding both the rebel force and the battlefield terrain prevent an exact assessment of their deployment, Arundell and his lieutenants appear to have been familiar with general military principles, positioning their ordnance atop areas of high

⁶⁸³ MS. Harleian 523, fols.50-1; Cornwall, p.198.

⁶⁸⁴ Hooker, *Description*, p.86; MS. Harleian 523, fols.50-1.

ground and despatching scouts, led by Maunder, to forewarn them of their enemies' approach. Figure 72 depicts the probable positions of the rebel forces in relation to the modern landscape.



Fig.71. Photograph taken from the presumed site of the rebel camp, looking south along the road dividing the parishes of Sampford Courtenay (right) and North Tawton (left).



Fig.72. Google Earth image showing the approximate positions of the rebel camp and ambush party in relation to the modern settlements of Sampford Courtenay and North Tawton.

The loyalist deployment corresponded to the echelon array described in Chapter 4, with their Forward, led by Grey and Herbert, attacking directly from the march 'for the winning of time' as the Mainward and Rearward, under Kingston and Russell, reached the battle.⁶⁸⁵ In practice, however, these follow-up waves were unnecessary, with the Forward taking the camp alone, and the rebels within the village fleeing after the remainder of the government army arrived.

⁶⁸⁵ MS. Harleian 523, fols.50-1.

Although the exact composition of Herbert and Grey's battle is unclear, they probably outnumbered the rebels opposing them, with Russell noting that they included horsemen, footmen, Spinola's arquebusiers, pioneers, and ordnance, fulfilling Audley's later requirements that an army's Forward should contain a mixture of different troops.⁶⁸⁶

The Battle

After leaving North Tawton on 23 August, the loyalists travelled southwest towards Sampford Courtenay, committing their Forward to the attack as soon as they caught sight of the insurgents' camp. Russell described how loyalist gunners initiated the battle by engaging the rebels in an artillery duel until 'way was made by the pioneers', facilitating an assault on the hill 'on the one side with our footmen and on the other side with the Italian harquebutters'.⁶⁸⁷ This reference to pioneers clearing a path towards the camp confirms its position amongst enclosures, with the destruction of hedges either side of the North Tawton boundary road, which may have existed in 1549, perhaps facilitating access for Herbert's footmen as Spinola's arquebusiers attacked from the southeast. While Russell emphasised the ease with which the camp was taken, asserting that 'it was not long before [the rebels] turned their backs and recovered the town', Smythe's narrative asserted that Spinola and many of his mercenaries were wounded in the fighting.⁶⁸⁸

The archers of the rebels did so behave themselves with their volleys of arrows against [the] harquebusiers Italian [...] that they drave them from all their strengths [...] to the great mischief of many of those strangers. And of these great effects of archers against harquebusiers I have heard the Lord of Hunsdon aforesaid (who was there an eyewitness) very notably report. Besides that, many years past I have heard Captain Spinola, an Italian, who was a very brave soldier and wounded with arrows [...] give singular commendation of the archery of England.⁶⁸⁹

Smythe's assertion that 'the Lord of Hunsden' [...] was there an eyewitness' clearly illustrates that Sampford Courtenay was the action described, with Herbert, who held this position in 1549, only participating in the rebellion's final action. The account's description of insurgents loosing 'volleys of arrows against [...] harquebusiers Italian' which 'drave them from all their strength' implied that Spinola's troops encountered fierce resistance and were either stalled or driven back. These 'great effects of archers against harquebusiers', however, were more likely to have resulted from the limited body armour worn by Spinola's men, than any technological superiority on behalf of the bow. Even if the bow was outranged by mid-sixteenth-century

⁶⁸⁶ Ibid.; see Chapter 4.

⁶⁸⁷ MS. Harleian 523, fols.50-1.

⁶⁸⁸ MS. Harleian 523, fols.50-1.

⁶⁸⁹ Smythe, p.96.

firearms, as Chapter 3 has suggested, the Italians would have struggled to advance in the face of sustained shooting from hundreds of archers, and may have been pinned down amidst the hedges approaching the rebel camp. Despite the casualties inflicted amongst their shot, Herbert's footmen continued methodically towards the rebels' position, with the assistance of the pioneers and covering fire from their artillery. At this point, with the loyalist Forward fully committed to the attack and the remainder of the army still en-route to the battle, Arundell sprung his ambush and moved to threaten his enemies' flank, as Russell described:

Humphrey Arundell with his sole power came on the back of our forward being thus busied with the assault of the camp, the sudden show of whom wrought such fear in the hearts of our men as we wished our power a great deal more not without good cause. For remedy whereof the Lord Gray was fain to leave Mr. Herbert at the enterprise against the camp and to retire to our last horsemen and foot man, whom so caused to turn their faces in the hew of battle.⁶⁹⁰

Russell's account alluded to the initial panic caused by Arundell's 'sudden show', but also emphasised the disciplined nature of Grey's response, 'retir[ing] to our last horsemen and foot man' and turning about to face the oncoming rebels while Herbert continued his assault on the camp. Given that Grey redeployed both 'horsemen and foot', it is possible that he divided the Forward into two halves, allowing Herbert to advance with the fore part of the unit, while the rear half halted and reformed front to flank. This manoeuvre was covered by the Forward's cavalry units, creating a standoff in which neither side could advance, with Russell noting how 'against Arundell was nothing for an hour but shooting of ordnance to and fro'.⁶⁹¹ While neither force's position can be accurately determined, Arundell's troops, who lacked pikes, probably remained within enclosed ground for protection against Grey's horsemen. This would explain both sides' apparent reluctance to advance, with the insurgents unwilling to leave their defended position and the loyalists proving content to wait for reinforcements rather than attack across the enclosures, where their cavalry would be at a disadvantage. As this impasse continued, Herbert overran the hill, killing 'v or vi c [5 or 600] of the rebels [...] and one Underhill who has the charge of that camp' during the fighting and subsequent pursuit.⁶⁹² Figure 73 represents these inferred manoeuvres within the modern landscape, although terrain reconstruction would be required to confirm this hypothesis.

⁶⁹⁰ MS. Harleian 523, fols.50-1.

⁶⁹¹ *Ibid.*

⁶⁹² *Ibid.*

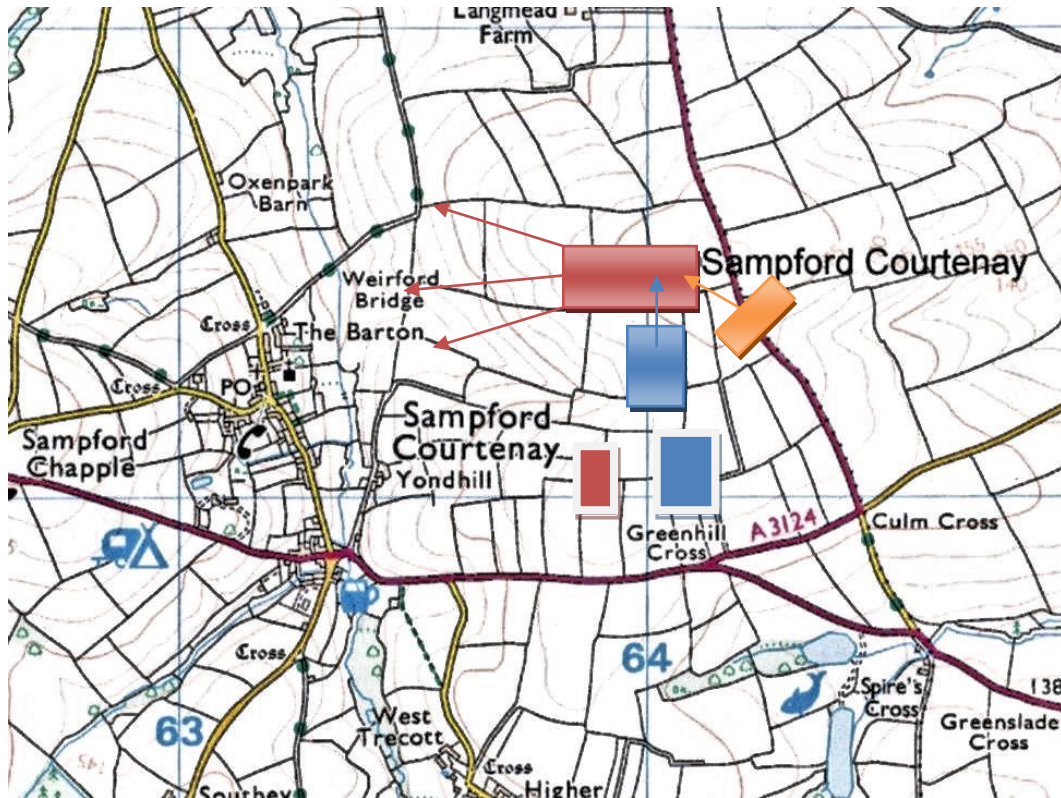


Fig.73. Ordnance Survey Explorer map, 1:5000 scale colour raster © Crown Copyright/Edinburgh (2009) an Ordnance Survey/Edina Digimap supplied service. North is at the top of the image. The rebel camp (red) was attacked by Spinola's arquebusiers (orange) and Herbert's Forward battle (blue), while Arundell's ambush party (red with white outline) faced off against Grey's portion of the Forward battle (blue with white outline). As neither the landscape nor the number of soldiers within each formation can be accurately estimated, this diagram is not to scale.

With the loss of their camp the surviving rebels withdrew into Sampford Courtenay, presumably assembling their troops and artillery at the village entrances as the loyalist Mainward and Rearward arrived and deployed alongside the army's Forward. When describing his array, Russell stated that he 'appointed Sir William Herbert and Mr Kingston with their footmen and horsemen to set on the one side, my Lord Grey to set on their far and I with my company to come on the other side'.⁶⁹³ The assignment of Kingston and Herbert 'to set on the one side' as Russell advanced 'on the other side' indicated that the loyalists planned to storm the village from both entrances, with the Forward and Mainward entering from the north and the Rearward from the south. Grey's attack on 'their far' implies an attempted encirclement by loyalist cavalry, perhaps manoeuvring around the village to sever the insurgents' line of retreat. Faced with this well-co-ordinated assault, Russell described how 'upon the sight, the rebels' stomachs so fell from them as without any blow they fled', abandoning their positions and heading west

⁶⁹³ MS. Harleian 523, fols.50-1.

in a bid to evade the closing government forces.⁶⁹⁴ Figure 74 shows the approximate movements of loyalist forces during the final phases of the battle.

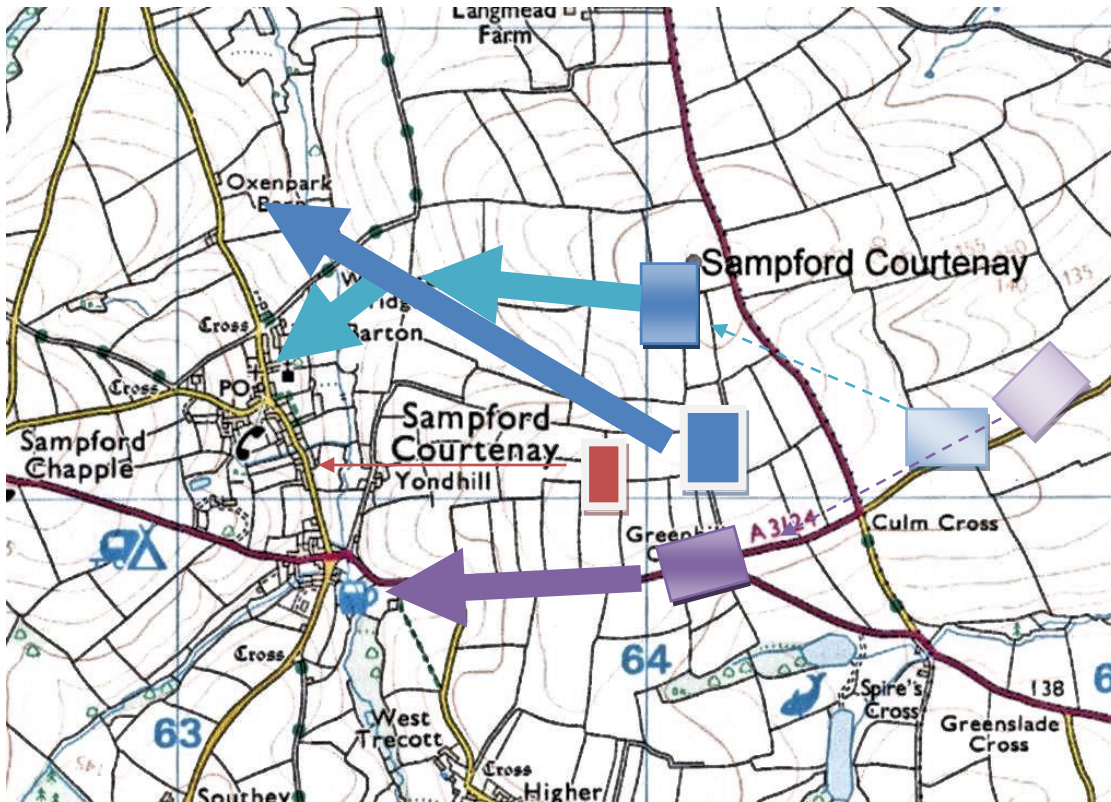


Fig.74. Ordnance Survey Explorer map, 1:5000 scale colour raster © Crown Copyright/Edinburgh (2009) an Ordnance Survey/Edina Digimap supplied service. North is at the top of the image. Arundell's forces (red with white outline) retreated into Sampford Courtenay while Herbert's Forward, joined by Kingston's Mainward (blue), advanced to the north. Russell's Rearward (purple) moved along the road towards the southern edge of the village, and Grey's cavalry (blue with white outline) flanked the rebel position. These units are not shown to scale.

With no cavalry of their own to protect them, the rebels suffered heavy casualties during their retreat, with Russell remarking that 'the horse men followed the chase and slew to the number vii C [700] and took a far greater number', and noting how 'great execution had followed had not the night come on so fast'.⁶⁹⁵ While Arundell and other ringleaders managed to escape, being captured the following day at Launceston, their army suffered approximately 1200 losses and was effectively destroyed. The loyalists sustained few fatalities, with Russell admitting to 'many hurt but not passing x or xii slain', although he also recorded how 'all this night we sat on horseback' for fear of a rebel counterattack.⁶⁹⁶ Hooker also noted the death of ap Owen, 'a

⁶⁹⁴ MS. Harleian 523, fols.50-1.

⁶⁹⁵ MS. Harleian 523, fols.50-1.

⁶⁹⁶ MS. Harleian 523, fols.50-1.

Welsh gentleman', who 'more boldly than advisedly, giving the adventure to enter the rampire, at the town's end, was there slain by the rebels'.⁶⁹⁷ As Owen was probably one of Herbert's officers, his death 'at the town's end' would have occurred during the final stage of the battle, perhaps as a consequence of a small party of loyalists assaulting the village without adequate support, or becoming overextended during the pursuit.

Notwithstanding such misfortunes, however, there was a clear disparity between the battle's cost to loyalist and rebel forces, arising from several key factors. Firstly, although prolonged exchanges of ordnance occurred throughout the action, the insurgents guarding their camp sought to engage moving targets with downhill fire, while Arundell's ambush force, constrained by the need to cross enclosure hedges, would have contained only small numbers of the lightest, most portable pieces. Both of these factors would have limited the effectiveness of rebel gunners in comparison to their performance at Clyst Heath, where larger numbers and calibres of weapons were employed against static, uphill targets at the battle's outset. Moreover, unlike the former action, there was little sustained close-quarter fighting at Sampford Courtenay, with the majority of the rebels' losses being incurred during flight, after their formations had broken, at the hands of pursuing horsemen. Where hand-to-hand combat took place, at the storming of the hilltop camp for instance, the insurgents were probably outnumbered and certainly outclassed, with the loyalist militia being supplemented by more experienced and better-armed soldiers from personal retinues. Finally, as demonstrated in earlier encounters, the rebels' longbows were unable to reliably penetrate plate armour, making many of the government soldiers virtually immune to fatal injury, although, as Russell noted, there were 'many hurt'. The majority of those killed or wounded, however, were likely to have come from Spinola's relatively unarmoured arquebusiers, which were implied by Smythe's account to have suffered particularly heavy losses.

Despite the insurgents' easy defeat, with their morale proving noticeably weaker than in previous actions, the battle demonstrated the tactical abilities of rebel commanders, who made skilful use of the landscape to protect and conceal their troops. Equally, the government force's use of artillery, pioneers, arquebusiers, and cavalry to support its attack illustrates the degree to which English armies could integrate footmen with ancillary units in battle, and shows an understanding of the underlying principles of Renaissance warfare. The division of the Forward battle in response to Arundell's attack, and Herbert's subsequent amalgamation with Kingston's Mainward, demonstrates the fluidity of the period's tactical formations, which could apparently be separated and recombined during battle should the need arise. These instances demonstrate the potential revelations offered by further study of this action, which could be subjected to more intensive scrutiny through the investigation of Sampford Courtenay's historic terrain.

⁶⁹⁷ Hooker, *Description*, p.86.

Conclusions

Unlike many other disturbances during the 1549 ‘commotion time’, the Western Rebellion posed significant dangers to the stability of surrounding counties, and to England as a whole. While the rebels’ objective to march on London was thwarted by the prolonged siege of Exeter, they mounted a determined campaign against responding loyalist forces, necessitating five separate defeats before their eventual dispersal. This strategic resilience was matched by a degree of tactical proficiency, with insurgents selecting advantageous battlefields, constructing field fortifications, and deploying their troops in military array. Similarly, the relative sophistication of the rebels’ tactics, which frequently involved ambushes and counterattacks from concealing terrain alongside more conventional deployments, illustrates the capabilities of England’s militia, from which the majority of the insurgents were drawn. Although historians have argued that the rebels may have enjoyed greater success by adopting guerrilla tactics, rather than fighting field engagements against the more-professional loyalist army, such methods were not in keeping with the militia’s battlefield role, and would have precluded the decisive victory the insurgents hoped to achieve.⁶⁹⁸ If the rebels were representative of traditional militia armies, such as that deployed at Flodden, then Russell’s force, which blended the militia with personal retainers, modern weapons, and professional mercenaries, reflected the changes undergone by England’s military infrastructure during the early-sixteenth century, as seen at Pinkie. Thus the rebellion’s battles, which pitted these two concurrent military systems against each other, theoretically provide an opportunity to assess the performance of mid-century English armies in action.

Despite this apparent potential, extrapolating useful information from the rebellion’s five engagements is problematic as a consequence of insufficiently diverse source material and the impossibility of reconstructing the battlefields’ historic terrain. The latter issue is particularly significant, as, although the approximate locations of the majority of battlefields are identifiable, deeper investigation of how both armies deployed and manoeuvred within the 1549 landscape, as opposed to the modern environment, cannot be performed. Similarly, while an account of each action’s key components can be assembled, furnishing a stage-by-stage description of the battle, these narratives are often dependent upon a single source and so, without terrain analysis, cannot be substantiated. This imposes severe restrictions on the interpretation of each battle, effectively preventing their consideration at a tactical level and confining analysis to the exploration of incidental references within chronicles and eyewitness accounts. In some cases, as with reports that insurgents fought in formations with banners and

⁶⁹⁸ Sturt, pp.83-4.

military music, or that pioneers were used to breach enclosures, these revelations can be highly significant from an organisational standpoint, but reveal little about the actions themselves when considered in isolation. While these findings serve to incrementally broaden understanding of England's mid-sixteenth-century battlefield tactics, their value for studying specific actions is negligible unless further research can provide a greater level of detail regarding the historic terrain. Barring the discovery of previously unknown source material, the battlefield of Sampford Courtenay, documented in the King's College archive, represents the most likely avenue for subsequent inquiry, with the reconstruction of the landscape via written records offering the potential to assist analysis of Russell's report and resolve the action's unanswered questions. Equally, the use of other forms of GIT, such as lidar, could enable the rebellion's other sites to be considered via different methodologies.

Rather than demonstrating the capabilities of map regression, this chapter has shown its limitations in the absence of suitable cartographic material. Subsequent case studies, namely the battle of Dussindale, in Chapter 6, and Wyatt's defeat at London, in Chapter 8, will demonstrate what can be achieved where appropriate resources are available.

Chapter 6: The Battle of Dussindale

Introduction

The Norfolk Rising

Even as loyalist forces began the protracted suppression of the Prayer Book rebels in Devon, a simultaneous though unrelated disturbance broke out in East Anglia in July 1549. While the Norfolk Rising was initially indistinguishable from the spate of riots and civil disorder gripping the country, it rapidly escalated from a small anti-enclosure protest at Wymondham to a full-scale insurgency which spread into Suffolk and encapsulated a plethora of popular issues.⁶⁹⁹ As in other parts of the country, the rebels swiftly constructed a network of fortified camps in proximity to administrative centres, allowing them to exercise control over the surrounding areas and effectively subvert regional government.⁷⁰⁰ In Norfolk this strategy was further aided by both the timing of the revolt, and the weakness and internal divisions of the gentry, which prevented a coherent response until the uprising was well under way.⁷⁰¹

The largest and most renowned of the rebel camps, under the nominal leadership of Robert Kett, a tanner and local landowner, was formed on 12 July atop Mount Surrey on Mousehold Heath to the east of Norwich, as seen in the map below (Fig.75).⁷⁰² After establishing their camp, the insurgents were able to requisition supplies and recruits from Norwich, whose population was either unable or unwilling to resist them, eventually attacking and capturing the city on 24 July. Kett's forces remained in their camp for the following month, repelling an ill-advised attempt to oust them in early August by William Parr, Marquis of Northampton, who entered Norwich with a small mounted detachment but was driven out the next day.⁷⁰³ Finally, on 24 August, a second government army, led by John Dudley, Earl of Warwick, reached the city and succeeded in severing the rebels' supply lines after three days of sporadic fighting, which concluded with the arrival of further loyalist reinforcements. Having lost control of Norwich, the rebels abandoned their position on the night of 26/27 August and redeployed to the more defensible valley of Dussindale, where they were defeated by Warwick's army on 27 August.

⁶⁹⁹ Aubrey R. Greenwood, 'A Study of the Rebel Petitions of 1549' (unpublished doctoral thesis, University of Manchester, 1990), pp.353-61.

⁷⁰⁰ MacCulloch, 'Kett's Rebellion', pp.39-42.

⁷⁰¹ Bindoff, pp.14-15.

⁷⁰² Elizabeth Rutledge, 'Kett's Rebellion, 1549', in *An Historical Atlas of Norfolk*, ed. by Peter Wade-Martins and Jane Everett (Norwich: Norfolk Museums Service, 1993), pp.98-9 (pp.98-9).

⁷⁰³ Cornwall, p.143.

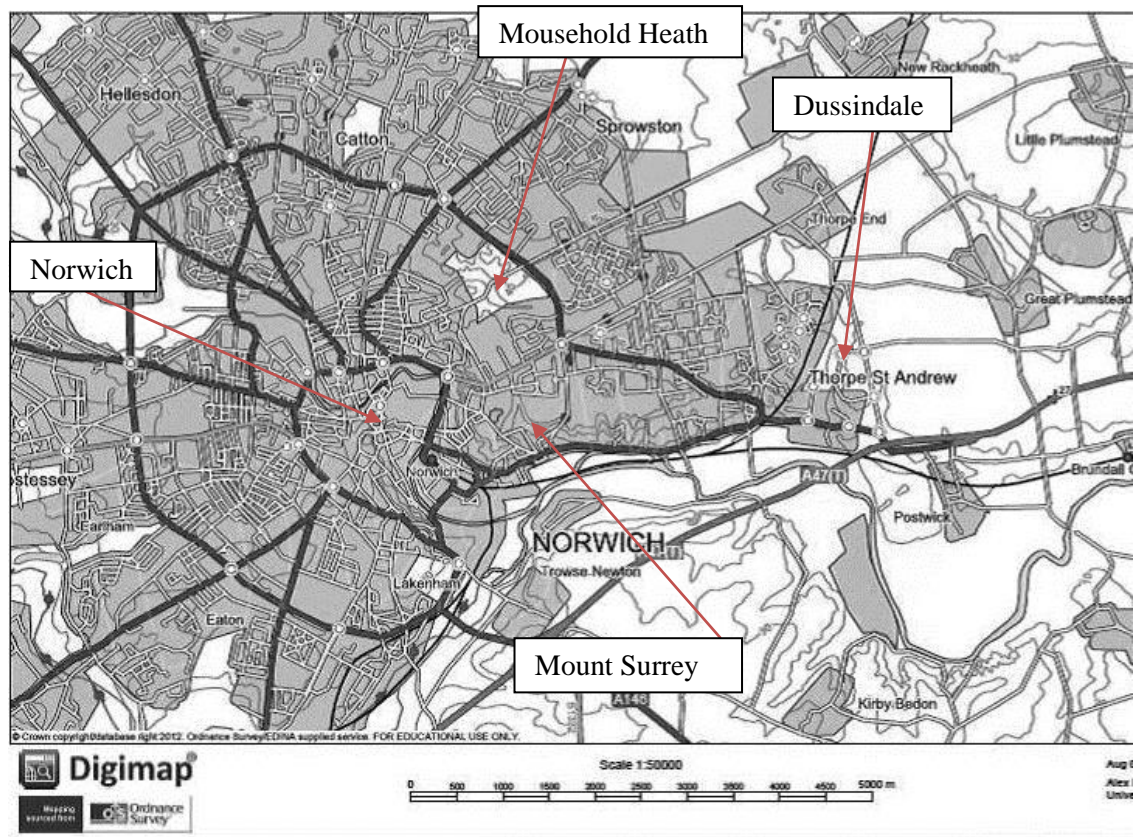


Fig.75. Ordnance Survey Explorer map, 1:5000 scale colour raster © Crown Copyright/Edinburgh (2013) an Ordnance Survey/Edina Digimap supplied service. North is at the top of the image. Note the position of the rebel camp on Mount Surrey, east of Norwich. This area formed part of Mousehold Heath, and was used as a base of operations and to house loyalist prisoners taken during the occupation of Norwich.

While the Norfolk Rising involved several significant military engagements, including the capture of Norwich and the defeat of Northampton's force, the majority of these actions occurred within urban terrain, and so are of little utility for the purposes of this study. The encounter at Dussindale, however, is an exception to this pattern and represents an ideal case study with a high importance for assessing battlefield tactics and performance in mid-sixteenth-century England. According to primary accounts the battle was fought outside the city's environs and involved approximately 15,000 combatants, with both sides possessing artillery and the loyalist force containing a large cavalry contingent. Additionally, while mid-century English field armies normally deployed pike and shot in limited numbers alongside more traditional weapons, Warwick's force at Dussindale was armed exclusively in the continental fashion. This is particularly significant given the rebels' appropriation of militia resources and personnel, allowing the battle to act as a rare testing ground for comparisons between longbow and arquebus, bill and pike, and England's differing military systems exemplified by Warwick and Kett's armies. Additionally, unlike the battles of the Western Rebellion, Dussindale has

extensive sources for its historic landscape, collated by Carter in 1984, enabling the site's location to be defined, and allowing its terrain to be reconstructed in GIS.⁷⁰⁴

The chapter will begin by assessing this evidence, as a precursor to reconstructing the battlefield, the latter process serving to evaluate and advance Carter's findings, testing her posited location and resolving the debate regarding the site of the engagement. Once a composite map of the 1549 battlefield has been created, the chapter will consider the configuration and equipment of Kett and Warwick's armies with reference to the rebellion's sources, and to England's previously established mid-century military context. Both forces will then be placed within the reconstructed terrain using reports of their deployment and an appropriate degree of inference, following the principles of Military Terrain Analysis. Finally, the events comprising the engagement can be interpreted within this framework, leading to a stage-by-stage narrative of the battle in which an informed hypothesis as to the movement of both armies within the landscape can be plotted and analysed. At this point, conclusions can also be drawn regarding Dussindale's significance as a case study for England's mid-sixteenth-century battlefield tactics, army composition, and military technology.

Cartographic Sources

Despite Dussindale's significance as the largest and bloodiest single action of the 1549 revolts, narrative accounts are unable to determine its whereabouts, while Kett's indictment, the earliest source to locate the engagement, merely claimed that it occurred 'in the parishes of Thorpe and Sprowston', northeast of Norwich.⁷⁰⁵ This has led many secondary works to assume that the site of the action has been lost, notwithstanding the survival of documentary sources and maps, which enable its identification at the intersection of Great Plumstead, Postwick, and Thorpe parishes, as Figure 76 shows.⁷⁰⁶ The first source to explicitly mention Dussindale was a 1576 court book itemising the lands of Thomas Ward and his tenants in Great Plumstead and Postwick, written in an eclectic mixture of English and Latin and containing marginal notes by John Russell, Reverend of the former parish, in 1705 and an unknown hand in 1714.⁷⁰⁷ This work was mirrored by the later *Postwick and Relatives* (1734/5), a description of the area written by Russell's clerk, Thomas Harrison, which similarly referred to the valley and its surrounding closes, commons, and topographical features, providing the first link in a chain of evidence that can be followed through earlier and later records.⁷⁰⁸

⁷⁰⁴ Carter, pp.54-62.

⁷⁰⁵ Land, p.140.

⁷⁰⁶ Rayner, pp.123-4; Brooks, p.312.

⁷⁰⁷ *Manorial Court Book of Postwick and Great Plumstead*, Norfolk Record Office (NRO) MS 4460 Hansell 12/1/1971, No.12 (1576) R 187 B.

⁷⁰⁸ Thomas Harrison, *Postwick and Relatives* (1735/6), repr. in Carter 'Site of Dussindale'.

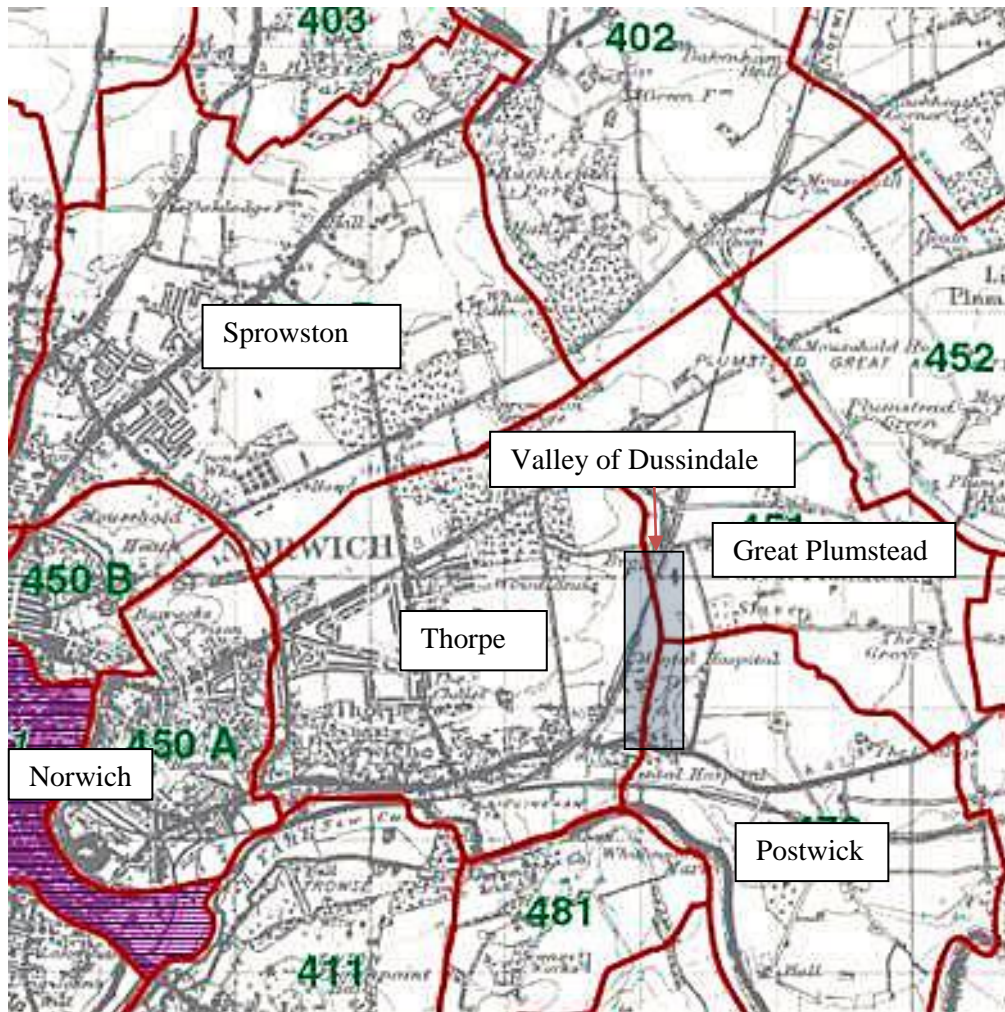


Fig.76. Map of historic parishes east of Norwich. Roger Kain and Richard Oliver, *The Historic Parishes of England and Wales: An Electronic Map of Boundaries Before 1850 with a Gazetteer and Metadata*, (Colchester: History Data Service, 2001), sheet 126.

The information derived from both works can be confirmed by William Cooke of Tharston's 1718 plan of the area's fold courses (Fig.77), a birds-eye perspective produced for the Dean and Chapter of Norwich Cathedral. This map situated Dussindale at the boundary of the aforesaid parishes, and also depicted surrounding features described by Ward and Harrison, aiding the valley's identification on less explicit sources. For example, two anonymous, late-sixteenth-century maps of Mousehold Heath (figs. 78 and 79) show the land west of Dussindale, but would be impossible to interpret without Cooke's plan, which portrayed areas including 'Lumners Great Close' and 'Peke Herne' that appear on all three maps, demonstrating that they encompass the same area.

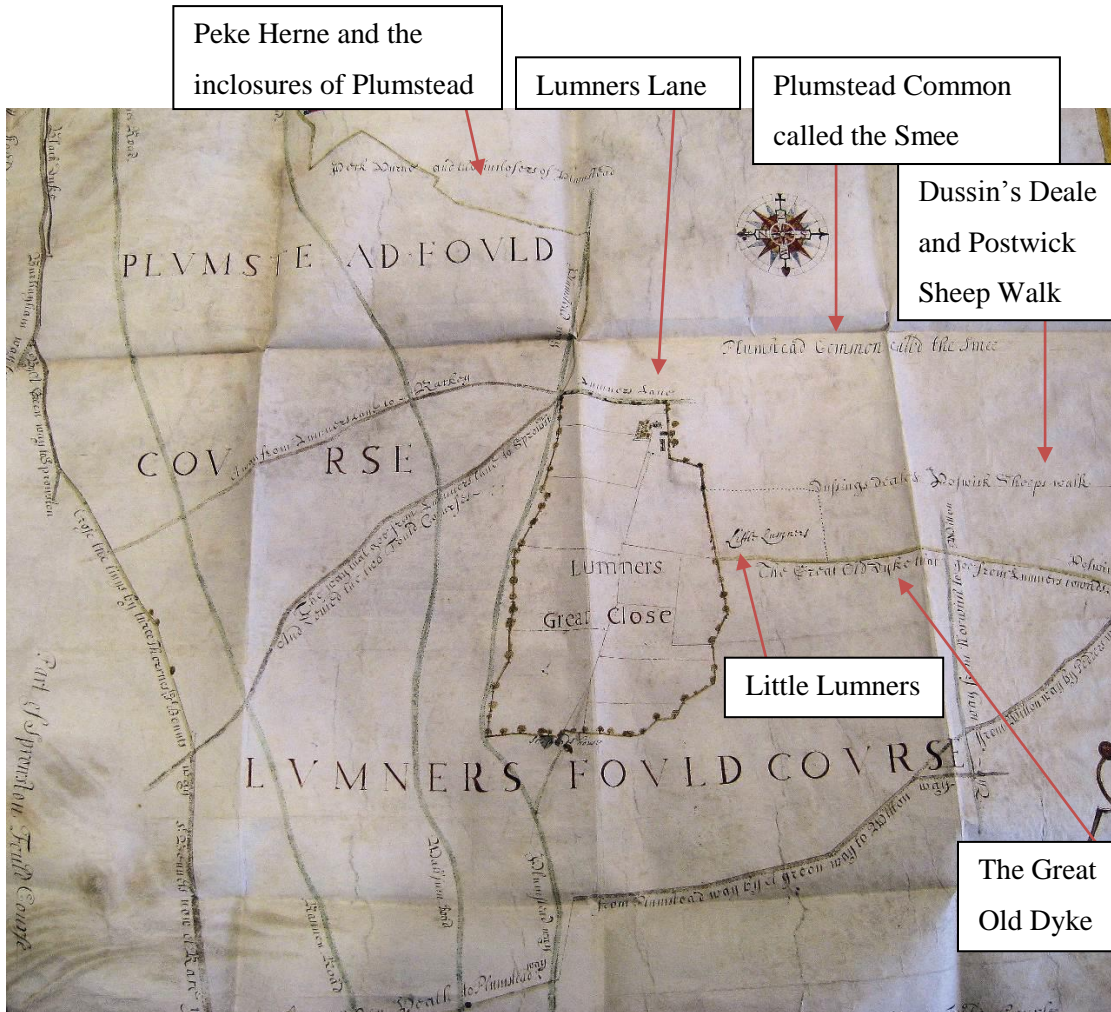


Fig.77. William Cooke: Church Commissioner's Survey of Fold Courses of Plumstead, Lumners Great Close and Fold Course, lying in Plumstead, Sprowston and Thorpe (1718), Norfolk Record Office (NRO) MS 11913. Note 'Lumners Great Close' (centre of image), and other significant features (identified with arrows). North is at the left of the image.

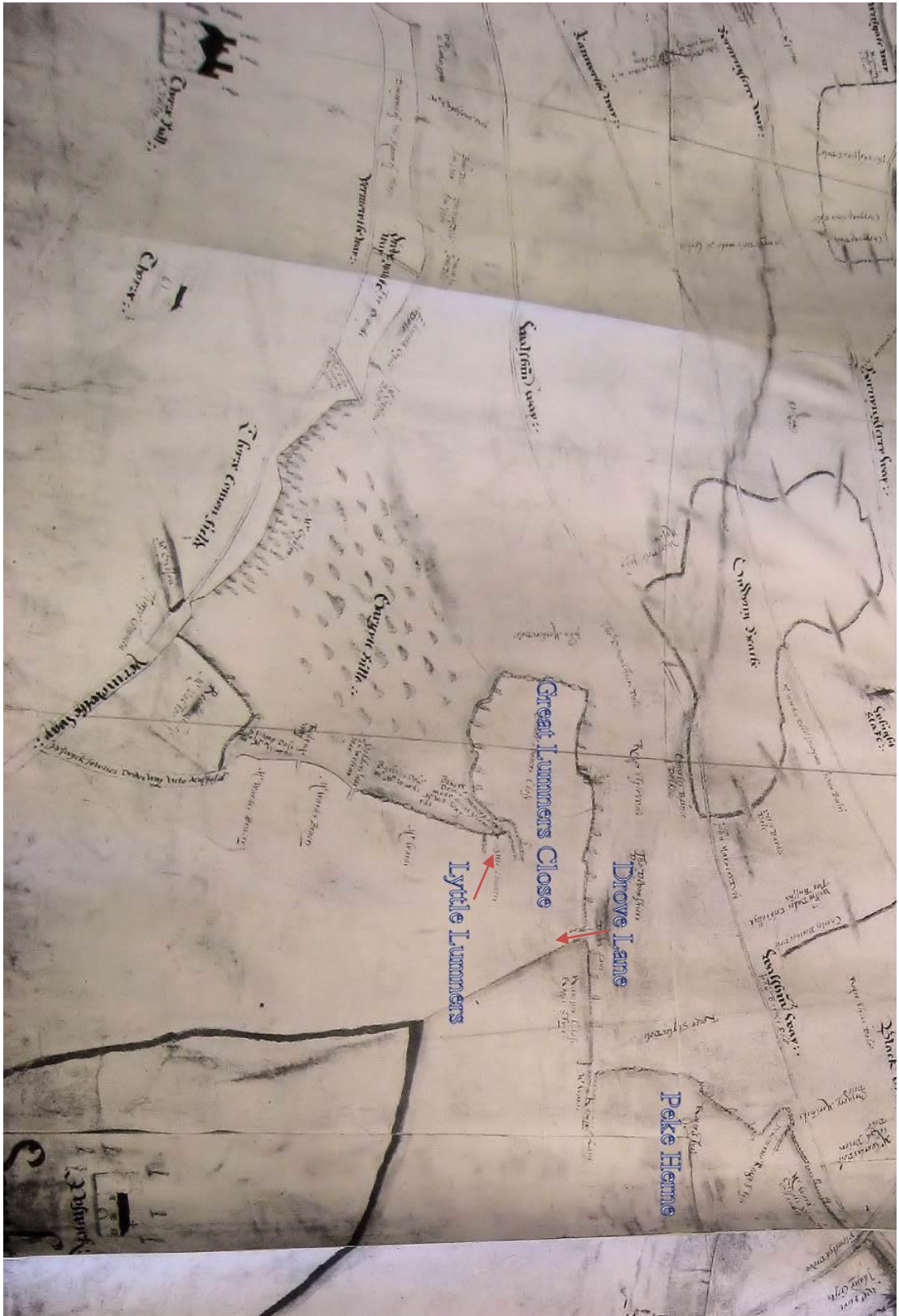


Fig.78. *Map of Mousehold Heath (1589)*, Norfolk Record Office (NRO) MS 4547. North is at the top of the (rotated) image. Note the reoccurrence of terrain features (including ‘Great Lummers Close’) in proximity to Dussindale, as identified on Cooke’s map (fig.72).



Fig.79. *Undated Map of Mousehold Heath (c. 1600)*, Norfolk Record Office (NRO) MS 4460 Cab.II. North is at the top of the image. Note that Lumners Close also reappears on this map.

The lands east of Dussindale, however, were not surveyed in detail until the 1812 Great Plumstead and Postwick enclosure award (Fig.81), which recorded the position of pre-existing roads and closes alongside those created in the nineteenth century. The accompanying map accurately delineated areas portrayed by earlier works, including several commons featured in Harrison's text and Cooke's plan, and a drove lane marked on the 1589 map as lying to the rear of Great Lumners Close, corroborating the valley's location. This evidence can be further cross-referenced with seventeenth-century Glebe Terriers to discern whether 'ancient' enclosures lay

open in earlier eras.⁷⁰⁹ The only source to show the area prior to this was Faden's 1797 one-inch-to-one-mile map of Norfolk (Fig.80), which gave an overview of the entire region, although with notably less detail of the battlefield than appears on the enclosure award. Figure 82 consolidates all of the aforementioned sources into a composite map, using the first edition six-inch-to-one-mile OS sheets (1882 to 1885) as an accurate base and overlaying the resultant image atop a modern gradient map, to show a projection of the landscape at the time of the battle which will inform subsequent discussion of the historic terrain.



Fig.80. Faden's one-inch-to-one-mile map of Norfolk (1797), repr. in *Norfolk Record Society*, 42 (1975). North is at the top of the image.

⁷⁰⁹ *Terriers of Great Plumstead and Postwick*, Norfolk Record Office DN/TER 117/5/1-16; Norfolk Record Office DN/TER 118/4/1/7-12.

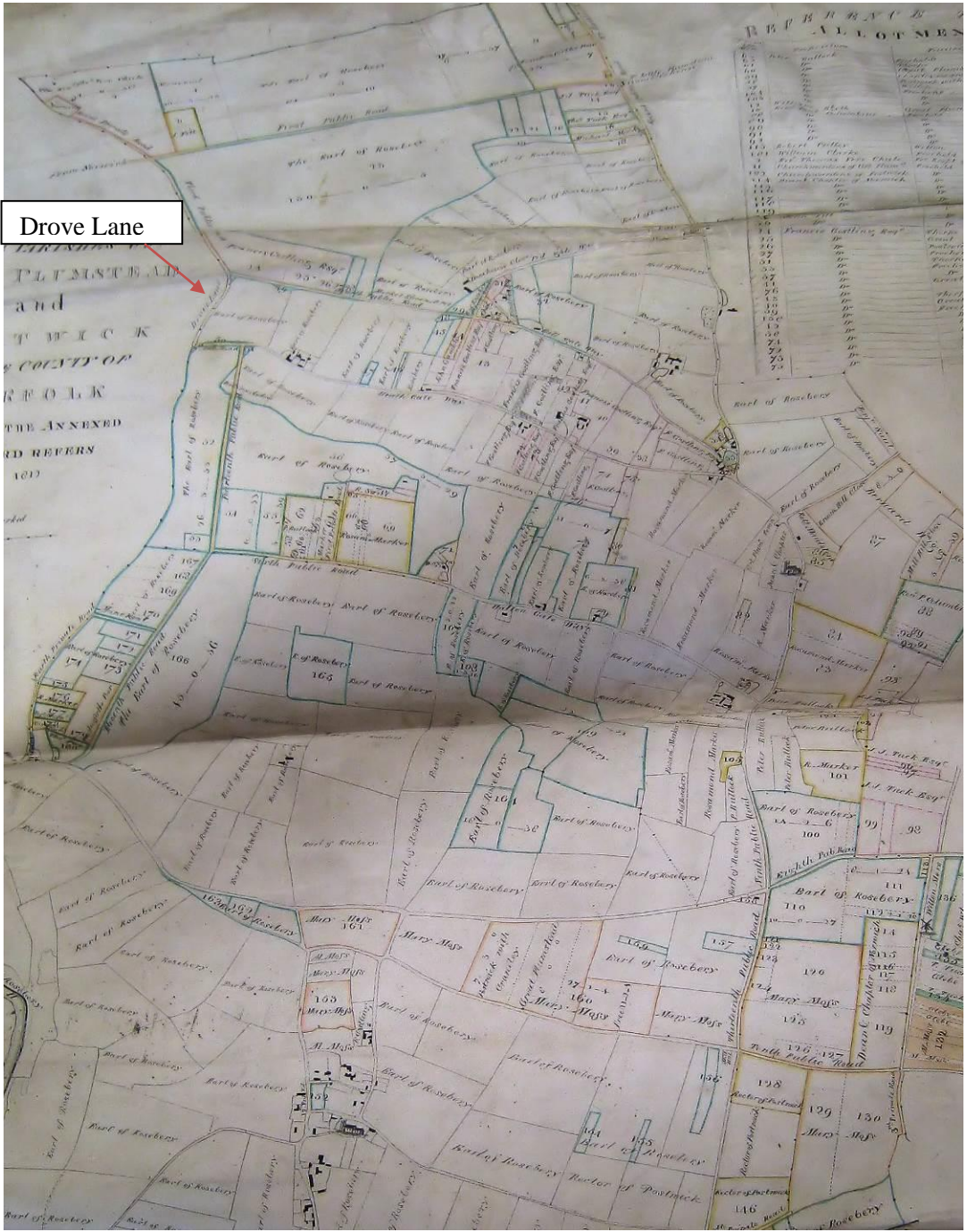


Fig.81. Enclosure Map of Great Plumstead and Postwick (1812), Norfolk Record Office (NRO) C/SCA2/272. North is at the top of the image.

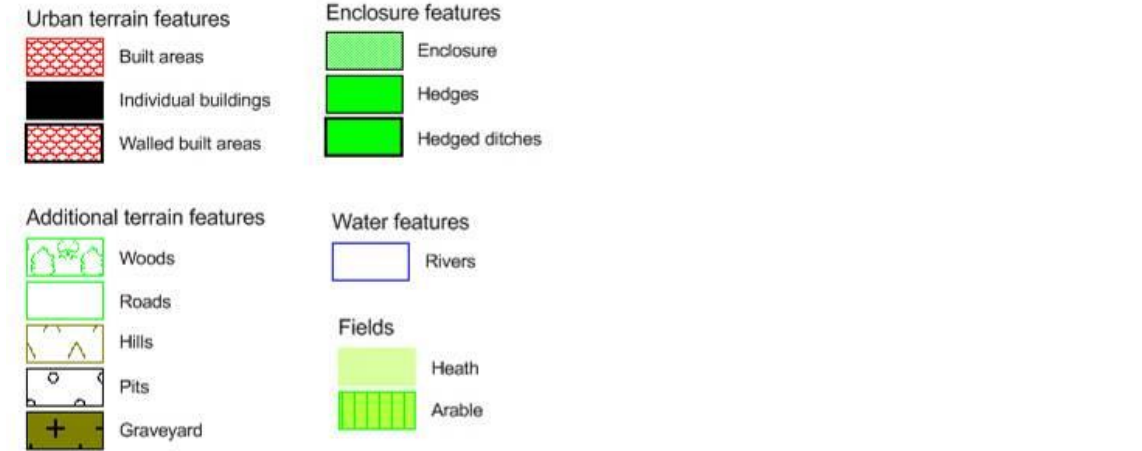
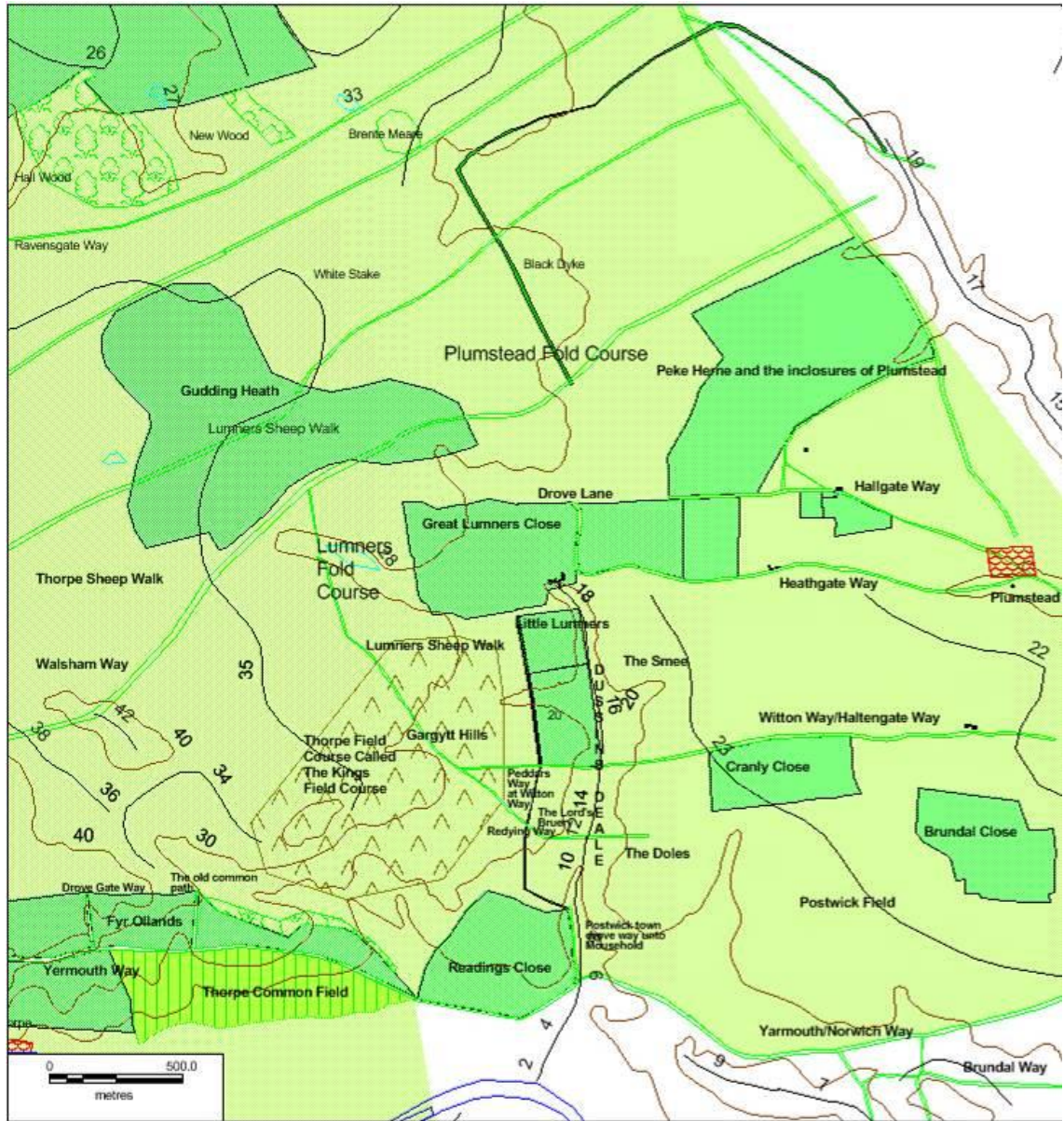


Fig.82. Map showing the area surrounding Dussindale (labelled in centre of image). North is at the top of the image. Contour data is also included on the map, showing height in metres above Newlyn Datum, and revealing the valley to lie between Readings Close and Great Lumniers Close. PROFILE DTM [DXF geospatial data], Scale 1:10000, Tiles: tg20ne,tg21se,tg30nw,tg31sw, Updated: November 2009, Ordnance Survey (GB), Using:

EDINA Digimap Ordnance Survey Service, <<http://edina.ac.uk/digimap>>, Downloaded: Sun Apr 21 07:38:51 GMT 2013.

Reconstructing the Battlefield

Locating and Reconstructing Dussindale

As the composite map's gradient markings show, the valley of Dussindale stretched north to south from Great Lumners Close to Readings Close, forming a shallow depression between the land east of the Gargytt Hills, in the west, and the commons of the Doles and Smee, in the east. This can be confirmed by the previously described sources for the historic landscape, with Harrison and Cooke's works proving vitally important for locating and reconstructing the battlefield. In the first instance, Harrison discussed the land surrounding the Postwick Doles, mentioning the relationship between Dussindale and other key terrain features, which are emboldened in the extract below:

There is also in [Postwick] a large tract of land, near 100 acres, called the **Doles**; lying between **Postwick Field** in part, and **Great Cranley** in part, on the east; and the **Old Ditch** which extends from the bottom of the valley called **Dussings Dale** up to the west corner of a **Twenty Acre Close** of the Lords of Postwick, (but lying in Thorpe bounds), on the west, and abutting north upon **Great Plumstead Smeeth** [...] There hath been a Difference long subsisting between Thorpe and Postwick, as to The Bounds betwixt the two towns; Thorpe people taking in some part of the aforesaid **Doles**, and Postwick people taking in the ground between **Dussing Dale**, and the **Old Ditch** before mentioned. Both seem to be in the wrong. **Dussing Dale** seems to be a proper and natural division, and it would be more proper and expedient for both Towns to avoid contention, mutually to agree to make their Perambulation in that Dale, from the nook of the east part of **Thorpe Common**, directly towards **Drove Lane**, which leads unto **Mousehold Heath**. This seems to be a natural and lasting Division.⁷¹⁰

This passage's location of 'Postwick Field' and 'Great Cranley', east of the Doles, and 'Great Plumstead Smeeth' to the north, can be confirmed by the 1812 enclosure award, which accurately recorded the acreage of these areas and mapped their position in the pre-modern landscape.⁷¹¹ Similarly, Harrison's claim that Dussindale lay on the west of the Doles, stretching 'from the nook of the east part of Thorpe Common, directly towards Drove Lane', precisely mirrors the information derived from the region's gradient map (Fig.82). Cooke's plan (Fig.77) supported Harrison's description by showing 'Dussin's Deale' between the 'Great Old Dyke' and 'Plumstead Common called the Smee', while also defining features missing from the later work, namely 'Lumners Great Close' and 'Little Lumners' north of the valley. As previously noted, these areas appear on the 1589 map (Fig.78), which depicts 'Great Lumners Close' and

⁷¹⁰ Harrison, *Postwick and Relatives*, pp.23-4.

⁷¹¹ NRO, C/SCA2/272.

‘Lyttle Lumners’ in the same position recorded by Cooke, implying that Dussindale lay to the southeast. Interpretation of this map can be further enhanced by Ward’s court book, which detailed the boundaries of a parcel of land, known as the ‘Bruery’, on the border of Postwick and Thorpe. This is particularly significant, as the area described shared many similarities with the focus of Harrison’s later work, and appears on the 1589 map explicitly labelled as ‘Mr Wardes Bruery’, establishing a direct connection between all three sources for the landscape:

The Lord’s Bruery in Postwick stretches [...] in Norwich way west up to Readings then turns north under the said close and then turns west under the said close up to Mousehold boundary to a great ditch dividing Postwick and Thorpe or Mousehold and so in the said ditch north up to a great close in Thorpe containing 20 acres and so from the south of the said close east as far as Dussindale.⁷¹²

The court book’s description of the ‘Bruery’s’ bounds, which followed Norwich/Yarmouth Way before turning north along the back of Readings Close, indicates that they mirrored the course of ‘Poswyck Townes Drove Way’ along the bottom of Dussindale, before once again heading west to a point directly above Reading Close, as Figure 83 depicts. By stating the Bruery continuance west ‘to a great ditch dividing Postwick and Thorpe’ before heading north ‘in the said ditch [...] to a great close [...] containing 20 acres’, Ward’s book identified the Bruery’s western boundary as the Old Ditch of Harrison’s tract, which ‘extend[ed] from the bottom of the valley [...] up to the west corner of a Twenty Acre Close’. The 1589 map confirms this theory, showing a hedged area, presumably the Twenty Acre Close, to the north of Peddars Way, leading northeast towards Little Lumners. When the close is plotted in GIS and extended ‘east as far as Dussindale’, as the court book noted, it encompasses precisely twenty acres prior to reaching the parish boundary of the Sme. This suggests that the Old Ditch ran directly into the hedge of the ‘great twenty acre close’, forming a contiguous obstacle rising from ‘Poswyck Drove Way’, the bottom of Dussindale, up the valley’s western side and then stretching northwards from Reading Close to Little Lumners, as Figure 84 shows.

⁷¹² NRO, MS 4460 Hansell 12/1/1971, No.12 (1576) R 187 B, fol.14^r.

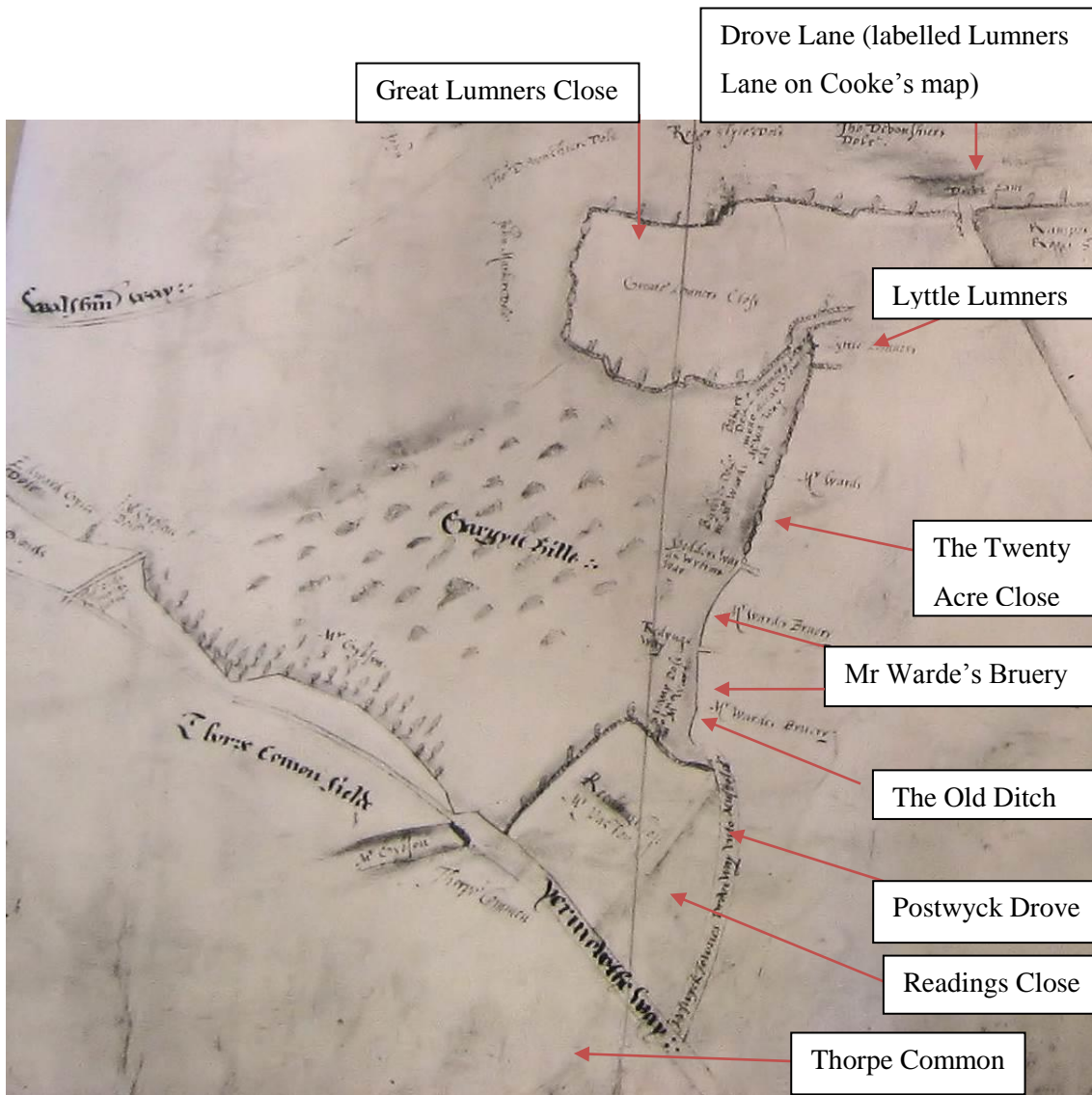


Fig.83. NRO, MS 4547. North is at the top of the image. Note the labels marking significant terrain features. Harrison's description implied that Dussindale stretched from the east corner of Thorpe Common up to Drove Lane (at the top right of the image), perhaps following the route of 'Poswyck Drove Way'. Analysis of Ward's court book suggests that 'Mr Wardes Bruery' north of Reading Close, had the 'great ditch', leading to the 'great close [...] containing 20 acres', on its western border.

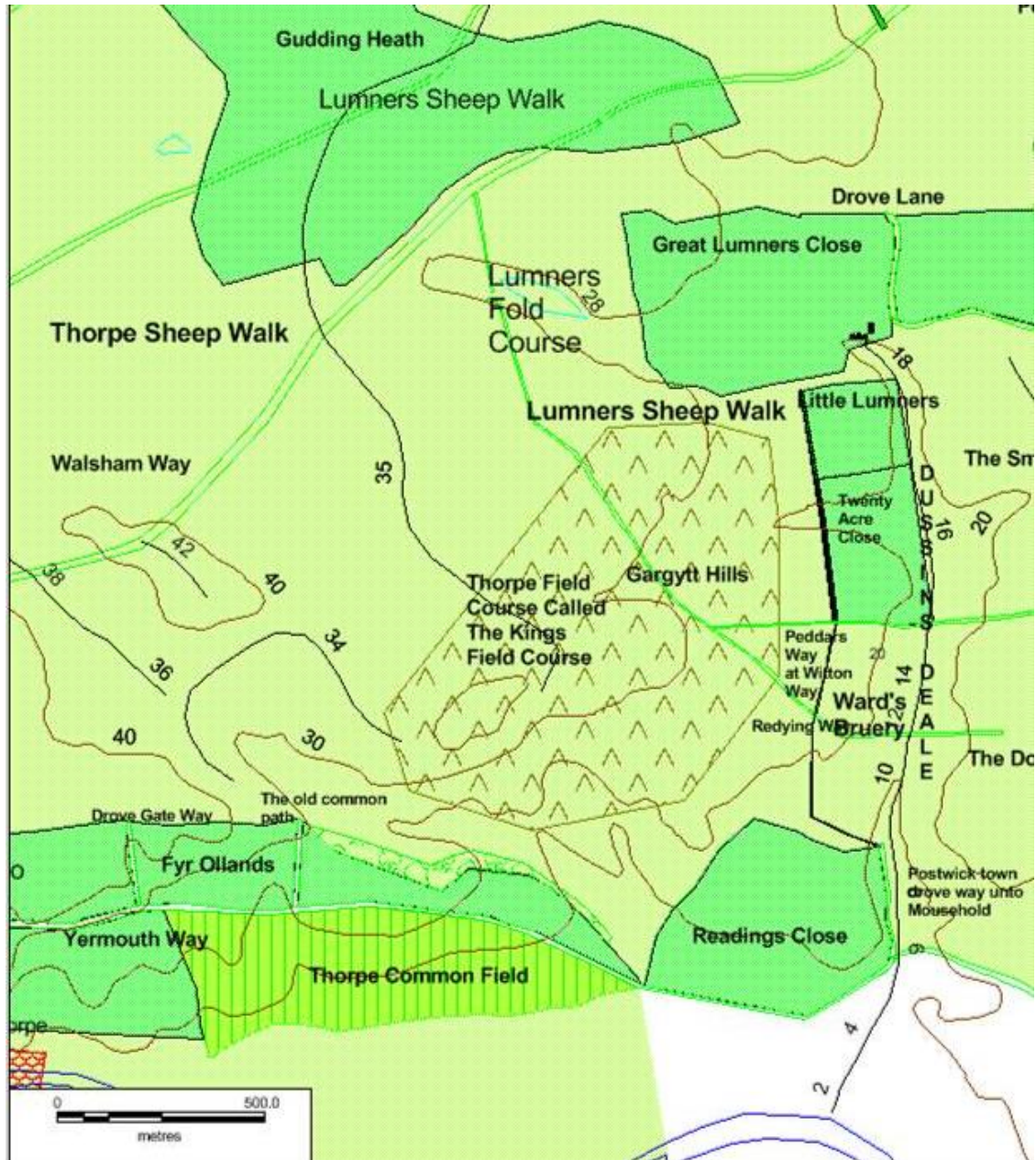


Fig.84. Map of Dussindale, with north at the top of the image. Note the Old Ditch running west up the valley side (north of Readings Close), along the western edge of Ward's Bruery, and up to the western corner of the Twenty Acre Close. Contour data is included on the image, showing height in metres above Newlyn Datum. PROFILE DTM [DXF geospatial data], Scale 1:10000, Tiles: tg20ne,tg21se,tg30nw,tg31sw, Updated: November 2009, Ordnance Survey (GB), Using: EDINA Digimap Ordnance Survey Service, <<http://edina.ac.uk/digimap>>, Downloaded: Sun Apr 21 07:38:51 GMT 2013.

Carter's Reconstruction of Dussindale

After assembling and following the aforementioned chain of evidence to conclusively position Dussindale at the juncture of Thorpe, Postwick, and Great Plumstead, Carter produced a reconstruction of the valley (Fig.85), which consolidated her sources onto a sketch of the 1812

enclosure map. While the diagram defined the area's road network, alongside ancient enclosures like Peke Herne and Cranly Close, and commons like the Smee, Doles, and Postwick Field, it lacked either gradient data or an accurate OS base, and so inevitably had less precision than can be afforded by modern GIS methodologies. This led to an error regarding Dussindale's exact location, with Carter placing the valley along the route of the enclosure award's eleventh and fourteenth public roads, the modern Green Lane, based on a misreading of the historic landscape. By assuming that the Old Ditch was synonymous with a watercourse depicted on Faden's map, which ran along the enclosure award's fourth private road, the modern Boundary Lane, Carter used Cooke's plan, showing Dussindale 200m east of the ditch, to assert that the valley overlapped with the Smee and Doles⁷¹³ Figure 86 shows these positions in relation to a modern OS map.

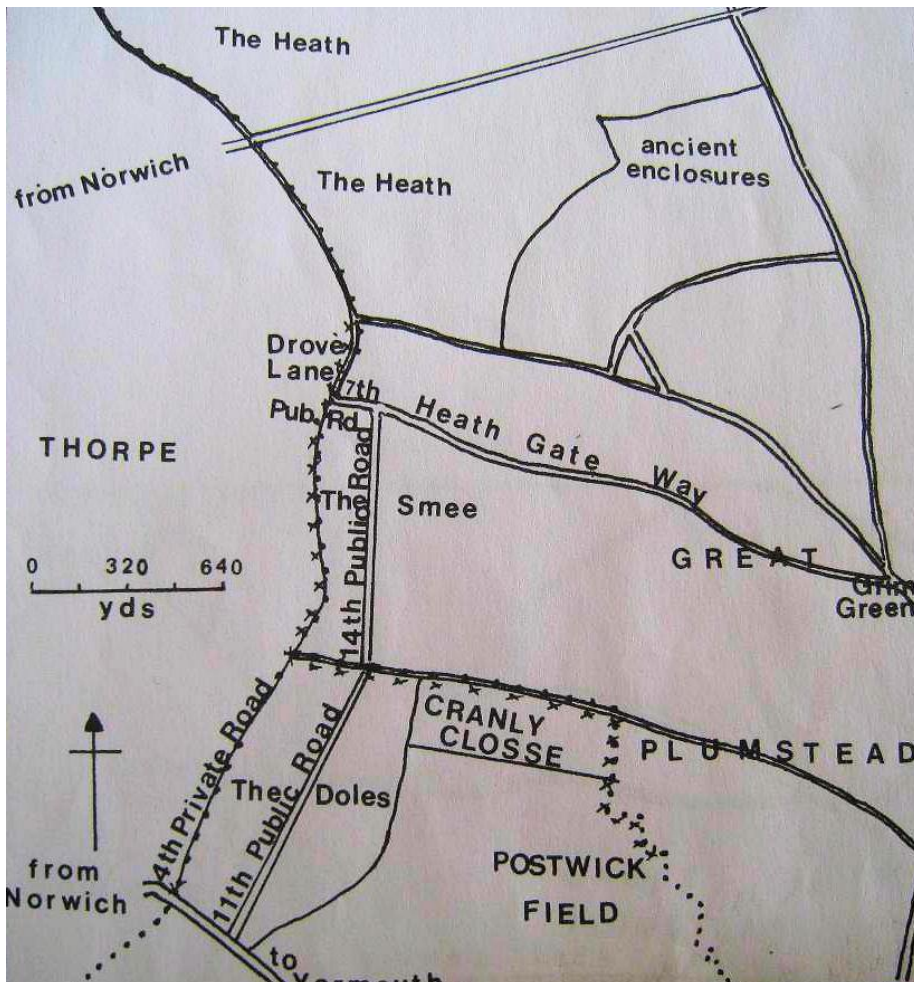


Fig.85. Carter's projection of Dussindale based on superimposition of Cranly Close, Postwick Field and ancient enclosures onto 1812 enclosure map, 'Site of Dussindale', p.58. North is at top of image.

⁷¹³ Carter, pp.55-9.

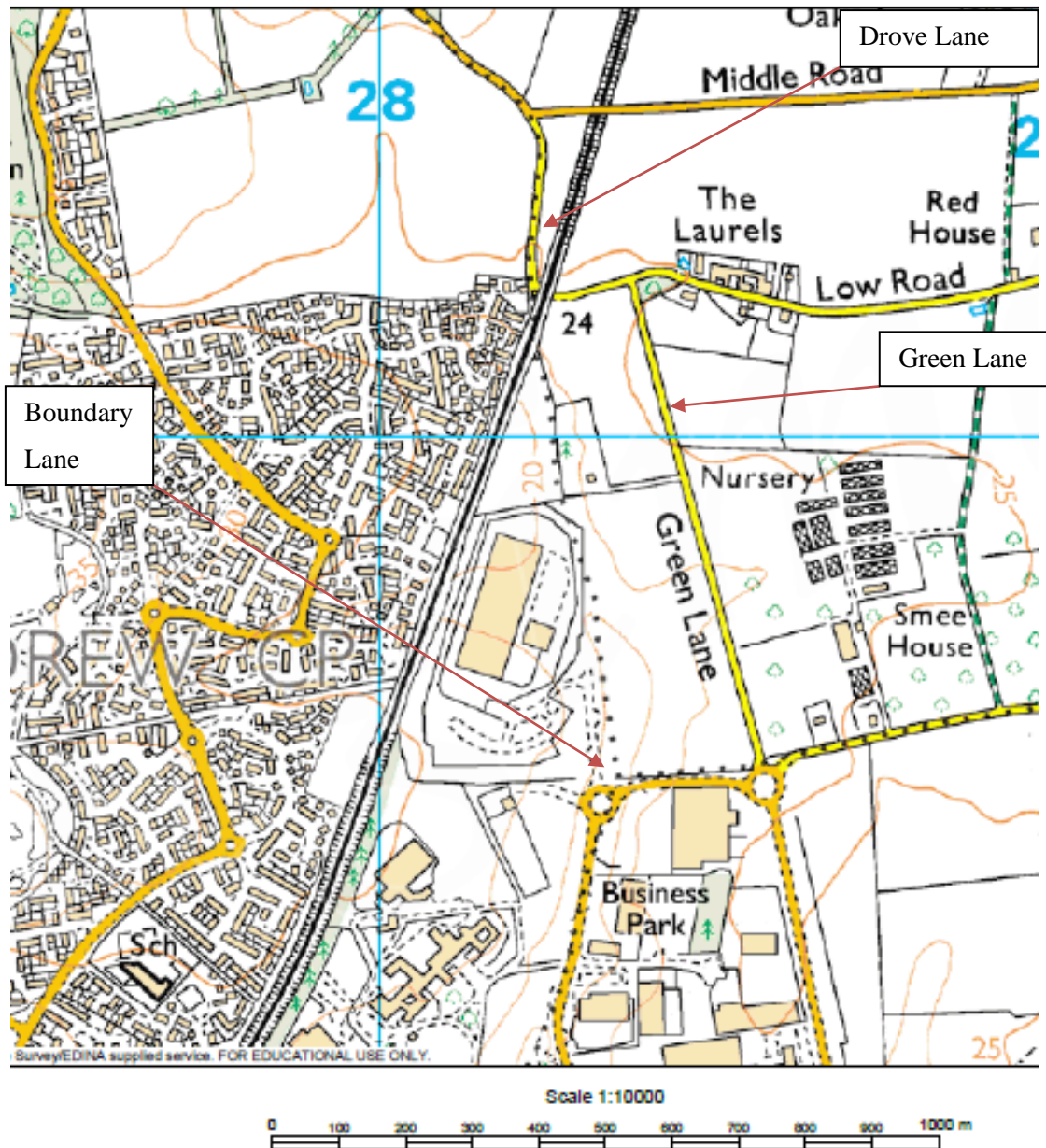


Fig.86. Ordnance Survey Explorer map, 1:10,000 scale colour raster © Crown Copyright/Edinburgh (2013) an Ordnance Survey/Edina Digimap supplied service. North is at the top of the image. Carter argued that Boundary Lane (now subsumed within the Business Park) was the site of the Old Ditch, and that Dussindale followed the course of Green Lane, the southern half of which has been realigned with the modern main road.

This supposition, however, is contradicted by the court book's clear indication that the Old Ditch formed the western edge of Ward's 'Bruery', and by Harrison's description of Dussindale running 'from the nook of the east part of Thorpe Common, directly towards Drove Lane', along the same route shown by Faden's watercourse. Similarly, both Cooke and the 1589 map position Little Lumners Close east of the Old Ditch and west of Drove/Lumners Lane, while the 1812 Thorpe enclosure award described the Postwick boundary following Drove Lane south

before crossing the Smeeth to Yarmouth Road, 'leaving the south east corner of [...] Little Lumners, about ten yards to the right'.⁷¹⁴ These sources imply that Dussindale, not the Old Ditch, represented the 1812 parish boundary, which had been altered in recognition of Harrison's assertion that the valley would form 'a natural and lasting Division' between Thorpe and Postwick.⁷¹⁵ Although Carter erroneously situated Dussindale 200m east of its true position, the preceding section has shown how tactical terrain analysis can redress this and accurately define the battlefield's position within the modern landscape (Fig.87). Figure 88 amalgamates this evidence onto a composite reconstruction of the area's historic landscape, which in turn enables detailed discussion of the site's key features.

⁷¹⁴ *Enclosure Award of Thorpe (1812)*, Norfolk Record Office (NRO) C/SCA2/272.

⁷¹⁵ Harrison, *Postwick and Relatives*, p.24.

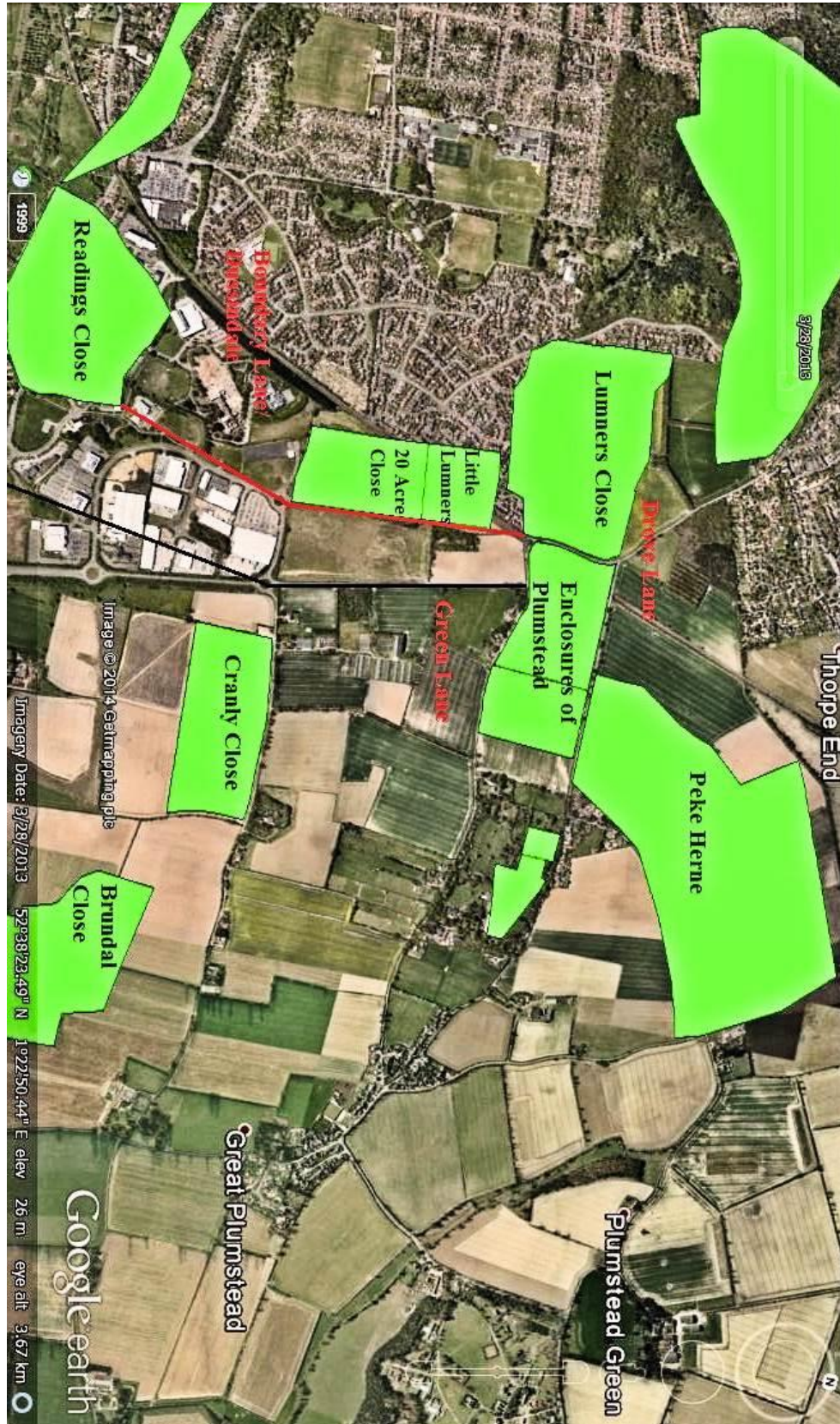


Fig.87. Google Earth image with historic enclosures (light green) superimposed from MapInfo atop the modern landscape. Carter suggested that Dussindale followed Green Lane (black line), while terrain reconstruction shows the valley lying between Drove Lane and Boundary Lane (red line).

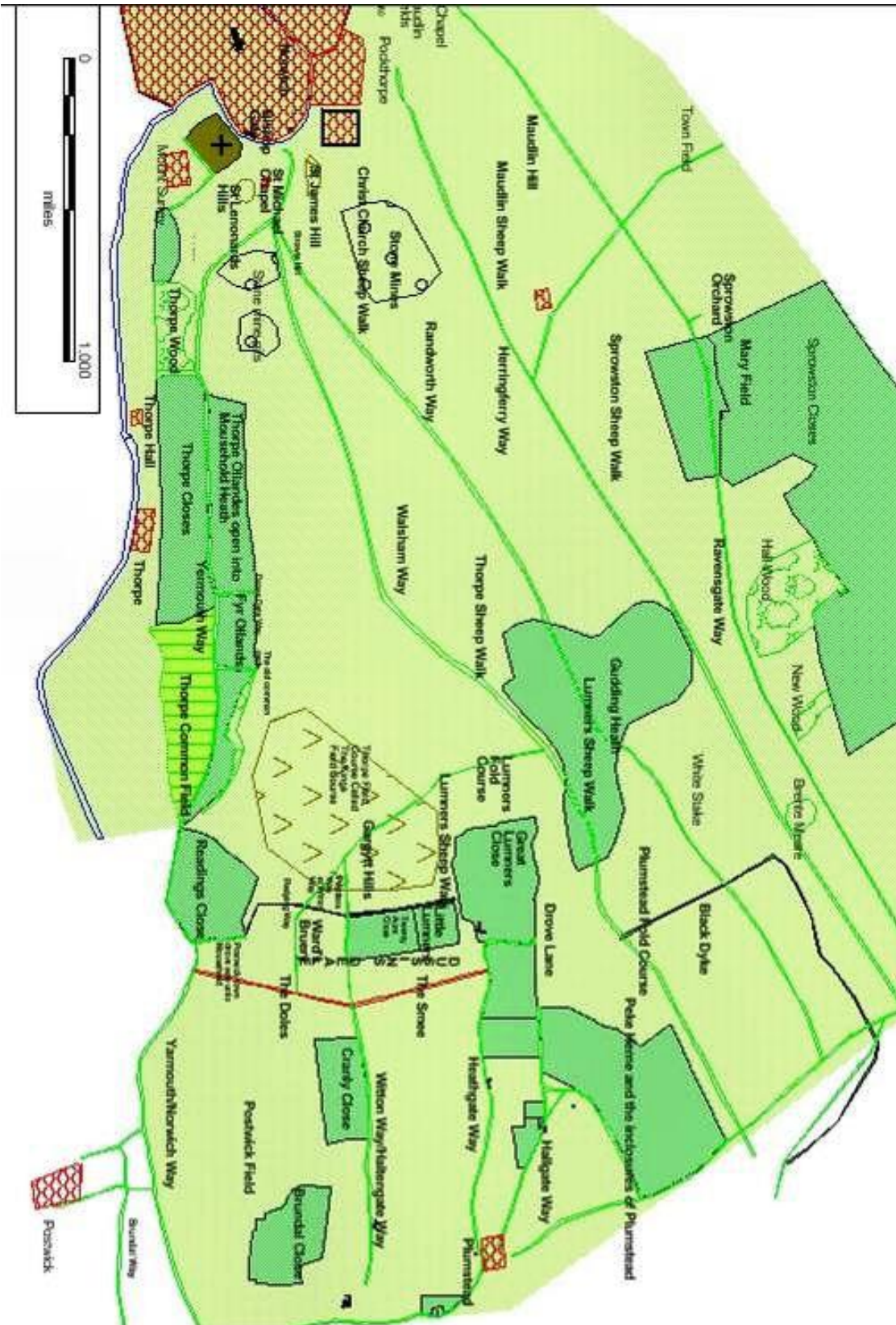


Fig.88. Map of area east of Norwich with north at the top of the (rotated) image. Norwich is to the left (in the west), while Dussindale is to the right (in the east). The red area marked east of Dussindale shows the path of Green Lane North and South, which Carter argued represented the site of Dussindale, but, as terrain reconstruction has shown, actually lay 200m to the east.

The 1549 Battlefield

Although the image above (Fig.88) reveals much of the terrain east of Norwich to be unenclosed heathland, facilitating sheep grazing on Mousehold Heath between Sprowston and Thorpe, Dussindale was partially encircled by a network of enclosures. Great Lumners Close, Peke Herne, and the enclosures of Plumstead formed a barrier to the north, while Little Lumners and the 'great twenty acre close' lay to the west. The Old Ditch also followed the length of the valley, running southeast from Little Lumners, along the western edge of the Twenty Acre Close and Thomas Ward's Bruery and the eastern edge of the Gargytt Hills, to connect with Readings Close in the south. To the east of Dussindale, however, the ground rose towards the commons of the Smee and Doles, which continued towards the settlements of Great Plumstead and Postwick. Like Mousehold Heath, these areas were predominantly left open for livestock, although Postwick Field contained a large enclosure, Cranly Close, in its northern portion and another, Brundal Close, against its north-eastern boundary.

The area's extensive road networks connected Dussindale with Norwich, and would have granted both rebel and loyalist forces relatively easy access to the battlefield. Several major highways, including Ravensgate Way, Herringferry Way, and Randworth Way stretched northeast from the city across Mousehold Heath, extending between Sprowston and Great Plumstead, while Walsham Way passed to the north of Great Lumners Close and Peke Herne. This last mentioned road diverged to the west of Great Lumners, with a spur or 'green way' descending south east through the Gargytt Hills and proceeding across the Old Ditch in two places, as the 1589 map and Cooke's plan can confirm. Both paths, Witton/Haltengate Way to the north and Reading Way to the south, can be followed on the 1812 enclosure award and so provide a point of correlation between sixteenth, eighteenth, and nineteenth-century maps of Dussindale.

The first of these routes, Haltengate Way, crossed the Old Ditch at the southern edge of the Twenty Acre Close and headed east between the Smee and the Doles to Witton, passing by the northern edge of Cranly Close as it did so. The second, Reading Way, traversed the Old Ditch midway between the Twenty Acre Close and Readings Close, before crossing Dussindale and running into the Doles. To the north of Haltengate Way, a further pair of roads, Hallgate and Heathgate Way, led west from Great Plumstead, terminating to the north and south of Drove Lane and emerging onto Mousehold Heath. Heathgate Way ran beneath the enclosures of Plumstead to the site of Brook Farm in Great Lumners, while Hallgate Way passed Plumstead Hall and threaded between the same closes and Peke Herne. As it did so, it was also joined by Pedgate Way, which descended from the north east along the back of Peke Herne. While these roads occupied near-identical positions to modern highways, they were recorded as 'ancient' by the 1812 enclosure award, and can also be identified using Ward's court book, conclusively

demonstrating that they dated from at least the late-sixteenth century. Finally, at the southern edge of the diagram, the way from Norwich to Yarmouth shadowed the river eastwards through the enclosures and common fields of Thorpe to Readings Close, as illustrated on the 1589 and c. 1600 maps. From here, the enclosure award and Terriers confirm that it skirted along the bottom of the Doles and Postwick Field before connecting with the roads from Postwick, where the Brundal Way split off at a south-eastern angle.⁷¹⁶

This overview of Dussindale and its immediate surroundings illustrates the manifold advantages the site offered and justifies its selection by the Norfolk rebels on a number of grounds. On a strategic level, the valley was situated within easy reach of a number of key roads near Norwich, allowing an army stationed here to interdict movement into and out of the city. The position's location would also have facilitated the redeployment of the insurgents on the evening of 26/27 August, allowing the rebels to either follow the road from Norwich towards Yarmouth, or travel along Walsham Way before crossing the Gargytt Hills. In either case, this matches Southerton's assertion that the valley was 'not past a mile off and somewhat more' from Mount Surrey, with the site lying just over two miles from the rebel camp.⁷¹⁷ The simplicity of the route from the rebel camp to Dussindale, proceeding directly east from Norwich, would also have been particularly useful for a night march, where complex or lengthy manoeuvres are best avoided lest an army's component contingents become lost or dispersed during the process. In addition, as discussion of the rebels' pre-battle deployments will reveal, possession of the valley and its nearby closes prevented Kett's forces being outflanked, facilitated the construction of earthworks and field fortifications, and granted substantial tactical benefits during the action itself.

Reconstructing the armies

The Rebels

Numbers and Personnel

Characterising the size and composition of Kett's army using unreliable and inflated figures from chronicles is problematic, with Neville and Holinshed agreeing that the insurgents were 15,000 men strong, Hayward suggesting they had 16,000 troops, and Southerton alleging a vast 20,000.⁷¹⁸ Revealingly, contemporary commentators like Edward VI and the Spanish

⁷¹⁶ NRO, C/SCA2/272.

⁷¹⁷ Southerton, fol.259^r.

⁷¹⁸ Neville, p.12; Holinshed, p.1660; Hayward, p.67; Southerton, fol.252^r.

Ambassadors remain silent on this issue, tacitly admitting their ignorance of the extent of the rebel forces. These omissions and conflicting estimates are indicative of the uncertainty surrounding the rebels' support base, which would have periodically fluctuated as individuals joined and left the army according to the prevailing mood and strategic situation. Similarly, accounts were unable to discern what portion of the rebels were combat effective, or how many of the initial number remained to fight at Dussindale, meaning that the size of the army that opposed Warwick's forces can never be conclusively determined. While sources fail to overtly mention non-combatants amongst Kett's followers, they sometimes address these concerns indirectly, with Neville referring to 'the unarmed multitude' participating in the attack on Norwich, and describing rebels fighting Warwick's forces in the city 'armed with staves, bills, and pitchforks'.⁷¹⁹ This suggests that although some insurgents carried military armaments like bills, even those who lacked such equipment fought with improvised weapons, making the rebellion's overall numbers and total combat strength closely related, at least while they remained within Norwich where they enjoyed a measure of support. Once compelled to leave the city, however, the inability to replenish their losses, coupled with desertions during the subsequent night march to Dussindale, which provided ample opportunity for disillusioned rebels to slip away, may have significantly reduced the insurgents' numbers.

In the first instance, chroniclers estimated that the fighting within Norwich cost the rebels an estimated 1000 dead, a figure that could be doubled or tripled when including insurgents who were too severely wounded to participate in further combat.⁷²⁰ Similarly, although desertion rates were unrecorded, the arrival of Warwick's reinforcements and the subsequent retreat from Norwich severely demoralised Kett's troops, leading the Spanish Ambassador to remark that 'some of the more important peasants have left their ranks [leaving] nothing but young serving-men and riff-raff'.⁷²¹ While it is impossible to accurately gauge how many rebels absconded in this fashion, desertion was endemic in early modern armies, with between 15% and 20% of mustered Scottish soldiers disbanding before the battle of Flodden.⁷²² As the Norfolk insurgents were, at best, the equivalent of a semi-professional militia, a similar percentage may have disappeared as their hopes of victory faded, perhaps leaving between 9000 and 10,000 rebels to fight at Dussindale. Despite the Spanish Ambassador's disparaging assessment, the 'young serving-men' who remained to oppose the loyalists would have embodied the army's most militarily useful contingent, and represented Kett's force contracting to its most combat-effective elements in preparation for battle.

⁷¹⁹ Neville, pp.29, 57.

⁷²⁰ Neville, pp.40-57; Hayward, p.74.

⁷²¹ *State Papers Spanish*, p.434.

⁷²² Phillips, *Anglo-Scots Wars*, p.114; Sadler, p.419.

Contrary to other insurrections like the Pilgrimage of Grace and Western Rebellion, which invested members of the gentry and nobility with nominal authority, the Norfolk insurgents were led by landowning yeomen, such as farmers, butchers, and graziers, who represented their primarily agrarian grievances.⁷²³ These men, including Kett and his brother William, capitalised upon their influence to effectively assume the responsibilities of the gentry by exercising strategic oversight and mobilising supporters from their communities. One of the key expressions of this power was the appropriation of the shire militia, with Neville recording the ‘ringing of bells and firing of beacons’ to call the muster.⁷²⁴ While the regional gentry were excluded from direct participation in the rising, with many individuals being imprisoned or driven into hiding, others may have been coerced or acquiesced to providing material support or legitimisation to the rebels. For instance accounts note that the Mayor of Norwich, Thomas Codd, and several other gentlemen entered the camp at Mousehold to assist in the administration of the county, while Bishop William Rugge, reportedly held private meetings with Kett.⁷²⁵ The post-rebellion testimony of Robert Themilthorpe, lessee of Tunstead Manor, corroborates this use of the county’s infrastructure by accusing Constable Christopher Amis of assembling the inhabitants of Sco Roston, Tunstead, and other towns, before leading them to the camp at Mousehold.⁷²⁶ Similarly, rebel-appointed commissioners were tasked with requisitioning weapons, and supplies from Norwich and the surrounding countryside, reportedly conveying ‘shot, powder, ammunition, corn, cattle, money, and everything else’ to the camp on Mousehold Heath, and illustrating the advantages occasioned by the insurgents’ control of local government.⁷²⁷

Although rebel leaders undertook many of the gentry’s martial functions and administrative duties, their military experience, which might have encompassed service as sergeants or viteners, responsible for assembling soldiers into units and maintaining their cohesion in action, would have stopped short of controlling large troop formations. This has crucial implications for the outcome of Dussindale, where rebel officers had to abandon their accustomed roles, leaving their battles weakened as a result, and adapt to leading an entire army in a field engagement against professional soldiers, a situation perhaps responsible for their defeat despite numerical superiority and an advantageous position.

The insurgency’s rank and file were drawn from a mixture of tenant farmers, landless labourers, and the urban poor, all of whom had obligations to provision and serve in the militia, as outlined in Chapter 2. Whittle’s investigation of Manorial Court Rolls has revealed that the tenant farmers, who were wealthier and better-equipped than their poorer associates, were well-

⁷²³ MacCulloch, ‘Kett’s Rebellion’, pp.45-9.

⁷²⁴ Neville, p.10.

⁷²⁵ Whittle, pp.29-30.

⁷²⁶ *Ibid.*, p.12.

⁷²⁷ Southerton, fol.252^v.

represented at Dussindale, with many Quarter Session reports declaring known rebels ‘dead or fugitive’ in the chaotic aftermath of the battle.⁷²⁸ In addition to furnishing armaments for their militia service, all of the rebels would have received instruction in weapon-handling and manoeuvring in formation at periodic general musters. While this would not equal the skill and discipline attained by professional soldiers, the insurgents would have possessed at least rudimentary military training, and would have been capable of deploying in similar tactical units to their opponents. This latter point can be demonstrated by claims that rebel contingents journeyed to Norwich ‘with their banner before them’ and were welcomed by ‘drums and drumilletes’, attesting to the presence of ensigns and military music, which were both vital components in assembling and maintaining battlefield formations, as Chapter 4 has shown.⁷²⁹

Armaments

The Norfolk rebels’ appropriation of the county militia’s infrastructure not only facilitated the mobilisation of their supporters, but also provided them with a supply of weapons and armour, as personnel who served the state in times of war proved equally capable of employing their armaments in support of the insurgency. The contents of surviving Norfolk muster rolls, from North Greenhoe in 1523 and the general musters of the late 1560s and early 1570s, reveal that the regional militia’s equipment underwent few changes since the Middle Ages. The soldiers of North Greenhoe, for instance, mirrored national trends in retaining their traditional longbows and bills, while relying upon quilted jacks, sallets, and steel caps for protection.⁷³⁰ Even when later, more comprehensive, documents are considered, there were only slight changes in weaponry, with arquebuses beginning to appear at the musters, but failing to exceed a one in ten ratio with other armaments.⁷³¹ By contrast, longbows continued in widespread use, with between half and two thirds of mustered individuals carrying the weapon.⁷³² This conclusion can be supported by contemporary Quarter Session reports, which described parties of rebels ‘arrayed as if for war’, and attested to the theft of military accoutrements, including body armour and weapons, from houses and armouries.⁷³³

Similarly, Southerton and Neville’s chronicles described the insurgents’ close-quarter armaments in detail, with the former recording ‘halberds, spears, [and] swords’ and the latter

⁷²⁸ Whittle, pp.20-1.

⁷²⁹ Ibid., p.12.

⁷³⁰ ‘Muster Roll Hundred of North Greenhoe, Circa 1523’, *Norfolk Record Society*, 1 (1930), 41-68 (pp.41-68).

⁷³¹ ‘The Muster Returns for Divers Hundreds in the County of Norfolk, 1569, 1572, 1574 and 1577, parts 1 & 2’ *Norfolk Record Society*, 6-7, (1936).

⁷³² ‘The Muster Returns for Divers Hundreds’.

⁷³³ Whittle, pp.18-20.

mentioning ‘clubs and swords’ as well as ‘spears, staves and javelins’.⁷³⁴ This eclectic collection appears to represent both the improvised weapons of poorer insurgents, encompassing clubs, staves, and agricultural implements, and the halberds, bills, spears and swords provided by members of the militia. Despite this heterogeneous mixture of melee weapons, accounts agree that the rebels deployed substantial numbers of longbows to support their forces at range, with Smythe remarking that they were ‘all bowmen, swords and bills’.⁷³⁵ Neville supplied less partisan evidence for the insurgents’ use of longbows, describing an ambush in Norwich in which they unleashed ‘a mighty force of arrows; as flakes of snow in a tempest’.⁷³⁶ While it is impossible to accurately define the rebel army’s ratio of longbows to close-quarter weapons, the poor quality of some insurgents’ equipment, and the evidence from muster rolls, suggests that no more than 50% of Kett’s forces carried bows. The remainder were armed with a mixture of polearms and improvised weapons, and wore variable quantities of standard protective equipment including jacks, sallets, and splints.

In addition to their personal weapons, the insurgents also amassed a sizable artillery train, seizing guns, powder and ammunition from storage depots in Norwich, Yarmouth, and private residences, as Southerton’s account described:

They went to old Paston Hall and got ordnance [...] and so to Yarmouth and other places and brought in foresaid several pieces [...], and came into Norwich for powder and sent to Lynn and other places [for] both shot, powder, [and] ammunition.⁷³⁷

Neville likewise recorded the ‘great store of gunpowder, and gunners of all sorts’ brought to the camp at Mousehold, which, alongside repeated bombardments of Norwich throughout the revolt, demonstrated that the insurgents not only had access to ordnance, but also to the powder and personnel required to operate it.⁷³⁸ While the rebel artillerists were of mixed ability, ‘of all sorts’ as Neville put it, they were overseen by a ‘Master Gunner’ named Miles who, according to Holinshed, ‘was a born perfect gunner, and marvellous skilful in the feat of shooting of great artillery’.⁷³⁹ Although Miles’ accreditation as ‘Master Gunner’ appeared to be an honorific title bestowed by his comrades, rather than indicating possession of royal ‘letters patent’, his marksmanship was noted in accounts of Dussindale and other actions.⁷⁴⁰

The resources gathered in the rising’s early phases were supplemented by artillery captured in Norwich, both after the initial taking of the city and during subsequent fighting with Northampton and Warwick’s forces. In the first instance, Southerton described the city guns as

⁷³⁴ Southerton, fol.254^r; Neville, p.29.

⁷³⁵ Smythe, p.95.

⁷³⁶ Neville, p.56.

⁷³⁷ Southerton, fols.252^r-2^v.

⁷³⁸ Neville, p.12.

⁷³⁹ Holinshed, p.1671.

⁷⁴⁰ Champion, ‘Dussindale Eyewitness?’, p.642.

‘six small pieces’, a more plausible claim than Neville’s assertion that they were ‘ten of the greatest pieces of ordnance’.⁷⁴¹ Similarly, the artillery captured from Northampton, which the Spanish Ambassador listed as eleven pieces, was also likely to have been small-calibre field guns.⁷⁴² Although such weapons were of little utility in siege warfare, Chapter 3 describes how their greater manoeuvrability and faster rate of fire made them invaluable on the battlefield.

The ordnance seized from Warwick’s army, however, was another matter, and almost certainly included heavy guns. While Smythe reported that the insurgents ‘recovered eighteen field pieces’ by attacking the loyalist’s baggage train in Norwich, Neville, describing the same incident, emphasised that before this Kett’s forces ‘were utterly unprovided of such things’.⁷⁴³ As the rebels already possessed extensive quantities of light artillery, such comments must refer to the power of the newly acquired weapons, a supposition confirmed by Southerton’s prior description of their ‘brak[ing] ye half gate and portcullis’, during the loyalist entry into Norwich.⁷⁴⁴ Similarly, Neville’s assertion of the ferocious bombardment unleashed on the night of the guns’ capture, which, in contrast to earlier barrages, caused havoc across the city, illustrated the effectiveness of Warwick’s ordnance:

Kett’s gunners discharged upon us, and most cruelly those iron bullets from the ordnance [...] which they took from us [...] battered the city grievously. And many being slain, torn and rent in sunder with the rage of the shot, [...] they beat down most furiously a great part of the wall, and the tower upon Bishop’s Gates.⁷⁴⁵

This passage not only indicated the potency of heavy artillery, which was capable of ‘beat[ing] down [...] a great part of the wall, and the tower upon Bishop’s Gate’, but also explicitly identified the source of the devastation as ‘the ordnance and guns which they took from us’, rather than those which the rebels already possessed. Adding Warwick’s captured artillery to the insurgents’ previous stockpile produces a total of at least thirty five guns of varying calibres, a considerable figure for an army of the period. Furthermore, this estimate is based solely upon documented seizures and does not include any weapons requisitioned from the surrounding area, prompting speculation that the rebels may have controlled as many as sixty pieces of ordnance.⁷⁴⁶ Despite the size of their artillery train, the insurgents lacked the time and capabilities to move all their captured guns to Dussindale, and would have probably abandoned the largest and least effective weapons during their redeployment, perhaps transporting twenty or thirty field pieces and a handful of larger cannon to the battlefield.

⁷⁴¹ Southerton, fol.253^v; Neville, p.27.

⁷⁴² *State Papers Spanish*, p.423.

⁷⁴³ Smythe, p.95; Neville, p.56.

⁷⁴⁴ Southerton, fol.257^v.

⁷⁴⁵ Neville, p.58.

⁷⁴⁶ Champion, ‘Dussindale Eyewitness?’, p.264.

While the insurgents were armed to the standards of the shire militia and possessed a sizeable quantity of artillery, they lacked an effective cavalry contingent, with their few horsemen being, in Holinshed's words, 'better practiced to fetch in booties' than to participate in combat.⁷⁴⁷ This absence of a mounted arm, combined with the aforementioned weakness of the rebels' senior officers, would have forced the insurgents onto the tactical defensive and left them at a substantial disadvantage in a confrontation with Warwick's forces, which the following section will define in greater detail.

The Loyalist Army

Numbers and Personnel

Unlike the rebels' uncertain and fluctuating strength, the size and composition of Warwick's army can be more readily ascertained through chronicles and official records, with Edward VI estimating his forces at 7500 men, encompassing 6000 foot and 1500 horse, while Southerton and Neville stated larger totals of 12,000 and 14,000 respectively.⁷⁴⁸ Although the latter claims may be exaggerated, the loyalist army was reinforced on two occasions during the campaign, instances that may not be reflected in Edward VI's figures. The first incident occurred when Warwick, en-route to East Anglia, rendezvoused with Northampton at Cambridge, while the second, on 26 August, saw the arrival of 1000 landsknechts, detached from Russell's army in Devon after the victory of Clyst St Mary (5 August), at Norwich.⁷⁴⁹ When describing Northampton's earlier defeat, Edward VI recorded 100 men killed and 30 taken prisoner from a force of 1060 cavalry, theoretically leaving 930 soldiers to unite with Warwick at Cambridge.⁷⁵⁰ However, Neville's account of the same action described 'fifteen hundred soldiers', including a company of Italian mercenaries whose presence can be verified both by Holinshed and the Spanish Ambassador.⁷⁵¹ This implies that Edward VI mentioned only the English forces and that the remaining 440 troops were foreigners, meaning that 1370 soldiers would have survived. The reappearance of mercenary captains from Northampton's command in Warwick's force demonstrates that both native and foreign soldiers were amalgamated into the second loyalist army.⁷⁵² Hayward's account, while normally duplicating Edward VI, provided further evidence by stating that Warwick was 'newly supplied with 1400 horse', a near-identical figure to that

⁷⁴⁷ Holinshed, p.1663.

⁷⁴⁸ *Chronicle [...] of Edward VI*, p.15; Southerton, fol.257^r; Neville, p.48.

⁷⁴⁹ Southerton, fol.258^v; Neville, pp.48, 60.

⁷⁵⁰ *Chronicle [...] of Edward VI*, p.15.

⁷⁵¹ Neville, p.34; Holinshed, p.1663; *State Papers Spanish*, p.423.

⁷⁵² Holinshed, p.1663; Smythe, p.95.

described.⁷⁵³ Thus while Warwick may have left London with approximately 7500 men, incremental additions to his forces may have resulted in his having almost 10,000 soldiers, including approximately 7000 infantry and 3000 cavalry, before the battle of Dussindale.

The majority of Warwick's infantry, whether frontline fighters or ancillary troops like pioneers, belonged to England's shire militia, and would have exhibited similar degrees of discipline and training to the rebels. However, while militia contingents from as far afield as Wales reportedly participated in the recapture of Norwich, these units were supported by bodies of semi-professional and professional soldiers. One such example was the company of Captain 'Poignard' Drury, a formation of 200 'young men [...] of excellent courage and skill', recruited in London, perhaps from the prestigious city militia, and repeatedly singled out for praise by accounts of the campaign.⁷⁵⁴ Drury's men not only distinguished themselves in street fighting within the city, where they dispersed rebel ambushes and helped recover some of Warwick's lost artillery, but were also commended for their performance at Dussindale.⁷⁵⁵ The landsknechts, however, provided the loyalist army's true elite, comprising disciplined veterans whose considerable battlefield experience made them markedly superior to Warwick's other forces and, as later sections will demonstrate, the rebels who opposed them at Dussindale.

The loyalist cavalry, which at nearly 3000 men comprised almost a third of their force, was similarly divided between foreign and domestic contingents, with many mercenaries accompanying Northampton, and subsequently being recruited into Warwick's army at Cambridge. Holinshed, for example, described 'a small band of Italians, under the leading of a captain named Malatesta' in Norfolk's force, while Smythe also stated that 'Count Malatesta Baglion (an ancient and a noble soldier Italian)', was present at Dussindale.⁷⁵⁶ This individual, Piero Malatesta, had fought alongside Warwick at Pinkie two years previously, where he led a company of men at arms, perhaps the same unit he commanded at Dussindale.⁷⁵⁷ The Spanish Ambassador also referred to further mercenary horsemen such as 'Charles de Guevera's company', which Fissel claimed were *Genitor* light cavalry, and 'Hacfort's company', identified by Cornwall as men at arms.⁷⁵⁸ The latter formation, which was included in a contingent of 420 mercenaries recalled from Boulogne to combat the 1549 rebellions, had apparently not accompanied Northampton, but joined Warwick's force after their commander refused to serve against the Western Rebels.⁷⁵⁹ Although it is impossible to accurately assess Warwick's total

⁷⁵³ Hayward, p.76.

⁷⁵⁴ Cornwall, *Revolt*, p.170; Neville, *Furoribus*, p.57.

⁷⁵⁵ Neville, p.58.

⁷⁵⁶ Holinshed, p.1663; Smythe, p.95.

⁷⁵⁷ Fergusson, pp.15-16.

⁷⁵⁸ *State Papers Spanish*, p.423; Fissel, p.30; Cornwall, pp.211-13.

⁷⁵⁹ Potter, 'Mercenary Market', pp.187-8.

numbers of foreign light horsemen and men at arms, Hackfort's subsequent assignment to the army implies that at least 400 to 500 mounted mercenaries were present at Dussindale.

Despite the government army's substantial mercenary contingent, most of their cavalry were native soldiers, with the large number of gentlemen accompanying Northampton and Warwick's forces suggesting that these horsemen were provided by personal retinues, whose leaders possessed the necessary wealth to outfit their followers for cavalry service. Such an arrangement was, as Chapter 2 has shown, typical for English armies of the period, and may have accounted for the army's high proportion of horsemen, which equalled the one to three ratio to footmen attained at Pinkie. Evidence from this action and contemporary tactical manuals revealed that Tudor forces commonly included between a third and a half of their mounted troops as light cavalry, with the remainder comprising demi-lances and men at arms in equal proportions. Unfortunately, beyond a brief reference by Holinshed to 'light horsemen of the King's part', the rebellion's sources failed to specify whether Warwick's army adhered to this template.⁷⁶⁰ However, the absence of the Pensioners, England's few native men at arms, alongside the presence of Malatesta and Hackfort's companies, suggests that the loyalists relied upon foreign mercenaries for heavy cavalry, leaving native troops to assume the remaining roles of demi-lance and light horse, the latter supplemented by Guevera's *Genitors*.

The majority of Warwick's soldiers would have been overseen by members of the gentry, who acted as captains for the troops they assembled and equipped, and combined their differently sized companies to form larger tactical entities, which were then placed under the supervision of a high-ranking commander. Senior officers were provided by the nobility, with Neville furnishing a list of Warwick's subordinates including his son, Ambrose, and Northampton, who often made effective leaders on account of their longstanding military experience. Warwick, for instance, was a renowned commander, and had recently served at Pinkie, where he oversaw the army's Forward battle of 3000 men.⁷⁶¹ Accounts also mention the presence of 'Bray', possibly alluding to Sir Edward Bray, Master of Ordnance, who would have provided expert guidance on the tactical deployment and use of artillery.⁷⁶² Mercenaries, who had a separate command structure, represented the only exception to this system, with companies like Guevera's, Malatesta's, and Hackfort's, operating as independent units, while the landsknechts would have amalgamated into a single formation

Notwithstanding the extent and diversity of Warwick's army, only a chosen force, consisting of Captain Drury's company and the landsknechts alongside the cavalry and artillery, accompanied the Earl to Dussindale. As Hayward related, the militia, which comprised the mainstay of the army's infantry were 'retained within the town', taking no direct part in the

⁷⁶⁰ Holinshed, p.1673.

⁷⁶¹ Patten, p.77.

⁷⁶² Neville, p.48.

fighting, but instead being used to secure Norwich in the event of further unrest.⁷⁶³ While numerous historians have interpreted this as either a sign of the militia's limited tactical utility or their propensity to defect, such assertions disregard the sustained fighting of the preceding days, wherein these same units had withstood repeated rebels attacks on Norwich prior to the arrival of their reinforcements.⁷⁶⁴ Instead, it seems more likely that Warwick sought to spare his exhausted soldiers further combat, relying on the newly arrived landsknechts to support his cavalry outside the city and defeat the insurgents. Without the militia Warwick's army would have numbered roughly 4000 troops, including almost 3000 horsemen and a further 1000 elite infantrymen.

Armaments

Although Warwick's handpicked forces were heavily outnumbered, they were considerably better armed than their opponents, with the cavalry, comprising mercenary men at arms and *Genitors* as well as native light horsemen and demi-lances, being equipped according to the specifications outlined in Chapter 2. Captain Drury's company and the landsknechts, the only part of the loyalist infantry to participate in the battle, were armed with pike and shot, confirming the country's tendency to confine modern weaponry to garrisons, urban militias and foreign mercenaries. While these armaments were issued during England's international campaigns, the domestic deployment of an army equipped in this way was sufficiently unusual to be recorded in Smythe's account, which asserted that Warwick 'had changed many archers into arquebusiers (because he had no opinion of the long bow)'.⁷⁶⁵ As it was highly unlikely for large numbers of soldiers to be suitably proficient with both longbow and arquebus to alternate between them, Smythe's statement implied that Warwick selected his arquebusiers from a larger pool of 'many archers'. Southerton provided similar proof of the loyalist army's complement of archers, originating in its large militia contingent, when reporting on a skirmish within Norwich where 'on both parts were shot a great number of arrows'.⁷⁶⁶

A pay roll for Drury's troops noted that the company, which originally contained 200 soldiers with an equal ratio of pike to shot, was below strength at Dussindale, consisting of 120 men from an initial complement of 107 arquebusiers and 73 pikemen, with the remainder having been killed or wounded in Norwich.⁷⁶⁷ While no specific details are given for the landsknechts' armament, beyond the fact that they contained both pike and shot, such units were commonly equipped with a mixture of pike, halberd, double-handed swords and arquebus, with

⁷⁶³ Hayward, p.76.

⁷⁶⁴ Bindoff, p.6.

⁷⁶⁵ Smythe, p.95.

⁷⁶⁶ Southerton, fol.254^f.

⁷⁶⁷ Cornwall, p.170.

the latter category comprising up to 30% of each company.⁷⁶⁸ The presence of large numbers of arquebusiers can be supported by Smythe's description, which claimed that 'the most part of them [were] brave shot'.⁷⁶⁹ However, as the landsknechts would have been supplemented by Drury's company, which contained a preponderance of firearms and was too small to form a separate battle, estimates based on these proportions should be taken for both units. When calculated in this fashion, a third of the almost 1200 soldiers would total 400 arquebusiers, while a fifth, perhaps a more reasonable proportion given the small infantry contingent, would equal nearly 250. This would leave approximately 800 to 1000 soldiers armed with close-quarter weapons, the minimum number required for assembling an infantry battle. The aforementioned mixture of melee and missile weapons would, as Chapter 4 has shown, have enabled the formation to fight effectively at close quarters in support of the army's cavalry, while simultaneously providing integrated supporting fire. Both the landsknechts and Drury's soldiers would also have worn plate armour for protection, which would have greatly assisted against the rebels' arrowshot throughout the battle as subsequent discussion of the action will illustrate.

Finally, Smythe provided the only estimate of Warwick's artillery train, stating that it contained 'four and twenty field pieces', of which eighteen were lost to the rebels, while Neville reported how loyalist forces 'recovered the greatest part of the provision [the rebels] drove away'.⁷⁷⁰ Assuming that this 'greatest part' comprised over half the captured guns, the loyalists would have retained possession of 15 or 16 artillery pieces, which were subsequently deployed at Dussindale.

The previous section's consideration of both rebel and loyalist armies has defined the assets available to both sides and implicitly emphasised the strength of Warwick's outnumbered but elite force. While the rebels' substantial resources refute their characterisation in some secondary works as a disorganised rabble, it is important neither to elide the disparity with Warwick's professional army nor ignore the deficiencies in their force. For example, individual insurgents would have proven little match for seasoned mercenaries, whose weapon-handling skills would have far surpassed their own, in either close-quarter fighting or at range. On a larger scale, the loyalist battles would have operated with a far greater degree of discipline and cohesion, giving them a crucial advantage over their rebel counterparts which would have struggled to manoeuvre with the same speed and fluidity. Similarly, rebel officers' comparable inexperience in commanding large bodies of troops contrasted with the military professionals in Warwick's force, and, combined with their army's lack of cavalry, denied them tactical

⁷⁶⁸ Olaf Van Nimwegan, 'The Transformation of Army Organisation in Early-Modern Western Europe, c.1500-1789' in, *European Warfare*, ed. by Tallett and Trim, pp.159-80 (p.163); McLachlan, pp.72-3.

⁷⁶⁹ Smythe, p.95.

⁷⁷⁰ Smythe, p.95; Neville, p.58.

mobility, compelling them to assume a primarily defensive posture throughout the battle. There was also an important technological difference between the rival armies, with Warwick's troops having access to better-quality armour and more modern weapons, which would have given them an advantage during the engagement.

Pre-Battle Manoeuvres and Deployments

On the evening of 26/27 August, the day after the arrival of the loyalists' reinforcements at Norwich, the insurgents withdrew from Mousehold Heath, burning their shelters and relocating to Dussindale to await their enemies in the field. Despite chronicles' assertions that dubious prophecies encouraged Kett's followers to seek a decisive confrontation, their perceived eagerness for battle can more accurately be attributed to a shortage of provisions incurred by Warwick's severing of their supply lines into Norwich.⁷⁷¹ In redeploying that evening, the rebels, although unable to conceal either the destruction of their camp or their transfer of troops and ordnance to the valley, would have gained a head start on the government forces, allowing them more time to fortify their position in preparation for the following day.⁷⁷² Although Southerton noted that Warwick and his officers observed the rebels' movements, 'having intelligence by ye watch in Christ Church steeple', their forces were unprepared for an immediate pursuit and night action.⁷⁷³ Instead, the loyalists set out the next morning, marching to Dussindale and defeating the rebels gathered there in a short but sanguinary confrontation.

Loyalist Approach March

The loyalist army departed Norwich on the morning of the engagement and deployed from the march directly into battle array upon reaching the rebels' position. While Neville's statement that government forces 'marched against the enemy through Cosleny [now St Martin at Oak] Gate' has been used to suggest that the battle took place north or north east of Norwich, the army's exit point from the city does not necessarily indicate its subsequent route.⁷⁷⁴ Carter has instead argued that extensive damage to the city's eastern gates, caused in the fighting between loyalist and rebel forces, would have left them unsuitable for use and forced Warwick's army to exit via the north before changing course toward the east.⁷⁷⁵ Although the gates may not have been rendered utterly inaccessible, their partial destruction may have disrupted the formations of

⁷⁷¹ Cornwall, p.220.

⁷⁷² Land, p.122.

⁷⁷³ Southerton, fol.259^f.

⁷⁷⁴ Neville, p.62.

⁷⁷⁵ Carter, pp.60-1.

cavalry or large bodies of infantry passing through them, potentially exposing such units to rebel ambushes.⁷⁷⁶ Given the insurgents' previous inclination toward infiltration and surprise attacks, a regular feature of their conflict with government forces, Warwick would have been unlikely to risk moving his army through a vulnerable defile in preference to a safer, albeit more circuitous, route.

After leaving the city, the army approached Dussindale, 'marching straight towards the enemies' according to Holinshed.⁷⁷⁷ While the route eastwards, proceeding over a short stretch of relatively gentle gradients, would not have been particularly arduous, the presence of Walsham Way and Yarmouth Way would have facilitated the easy transportation of artillery to the battlefield. However, of the two possible routes Walsham Way represented a far safer and more viable road when compared with its southern equivalent, which invited an ambush as it passed through the closes of Thorpe and ran alongside the river.⁷⁷⁸ Had Warwick been attacked along this road, with the surrounding enclosures hindering his deployment and the river blocking his line of retreat, the loyalist army could easily have been destroyed, a prospect that would doubtlessly invite caution from such an experienced commander. With this in mind, it seems likely that the loyalist army would have marched along Walsham Way until it began to curve northeast, about a mile from Dussindale, whereupon Warwick's troops would have left the road and continued heading east, as shown on the map below (Fig.89).

⁷⁷⁶ Champion, pers.com.

⁷⁷⁷ Holinshed, p.1672.

⁷⁷⁸ Champion, pers.com.

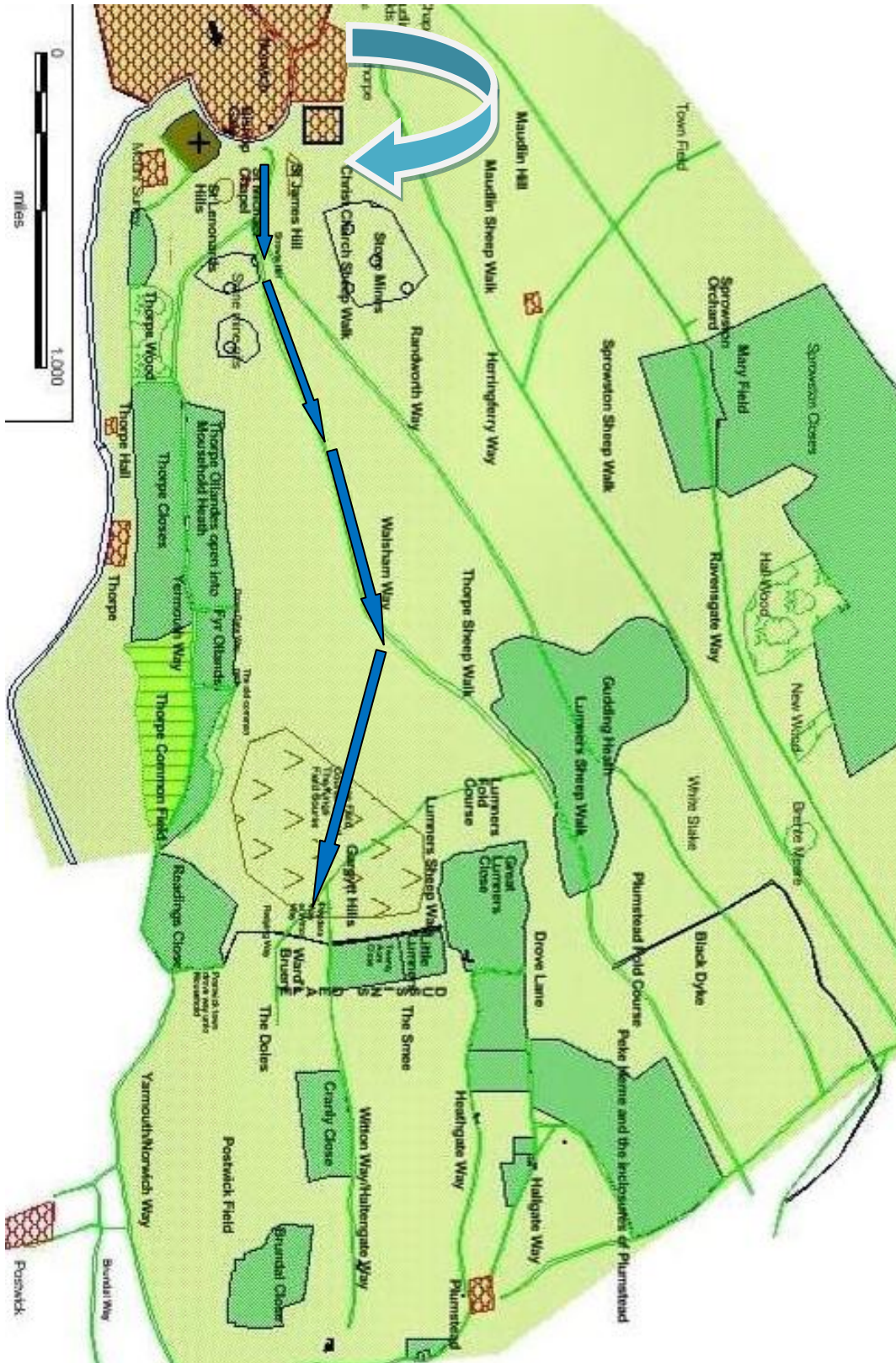


Fig.89. Map showing route from Norwich to Dussindale. North is at the top of the (rotated) image. Yermouth Way (left of image) runs between several enclosed fields, such as Thorpe Ollandes and Thorpe Closes, and the River Yare, making it vulnerable to ambush. Walsham Way (centre) represents a safer and more direct path to Dussindale. The movement of Warwick's army out of Norwich and eastwards via Walsham Way is indicated using blue arrows

Before Warwick's forces reached the battlefield, a delegation, including Sir Edmund Knevet and Sir Thomas Palmer, was sent ahead to invite the rebels' surrender, an offer that was wholeheartedly rejected. Interestingly, both Neville and Holinshed specified that the loyalists despatched the embassy 'before they came into the sight of the enemy', a decision that enabled Warwick to initially conceal his army's relatively small size from the insurgents.⁷⁷⁹ Despite the failure of its mission, the delegation would also have had the opportunity to reconnoitre the rebel position as the loyalist forces approached, allowing Warwick to assess the best means of launching his assault. Unfortunately, while these pre-battle manoeuvres are faithfully recorded by almost all the action's narratives, virtually no information is given regarding the tactical deployment of Warwick's army. Holinshed, for instance, described how 'the Earl [...] appointed as well the horsemen as footmen in what order they should give the charge' but failed to specify what their 'order' comprised.⁷⁸⁰ Likewise, Neville's statement that the loyalists were instructed to 'valiantly invade the enemy' attested to the aggressive nature of their tactics, although this was hardly surprising for an army consisting primarily of cavalry.⁷⁸¹

Assuming that Warwick's forces followed the standard tactical precedents, outlined in Chapter 4 they would have been arrayed into three battles: a Forward, Mainward, and Rearward, with their soldiers divided roughly evenly between them. While such formations were typically comprised of infantrymen, the preponderance of horsemen to footmen would have necessitated forming two of the three battles from cavalry. As Audley noted, cavalry units typically contained at least half their strength in light horsemen and no more than a quarter of its soldiers as men at arms, with demi-lances comprising the remainder.⁷⁸² The foreign heavy cavalrymen accompanying Warwick's native horse would thus have been integrated into each battle, which would have numbered approximately 1500 troops if both were of equal size. The remaining battle would have consisted of the landsknechts amalgamated with Captain Drury's company to form a unit of around 800 to 1000 pikemen and between 100 and 200 arquebusiers stationed on its flanks. When deploying for an engagement it was common practice to array cavalry on an army's flanks, meaning that Warwick's infantry would probably have formed the Mainward, allowing the loyalist horse to deploy either side of them as the Forward and Rearward. While accounts of the action give no indication of the loyalist positions beyond Neville's assertion that 'the enemy was within shot', Cooke's map provides a potential clue by alternatively labelling 'Thorpe fould course' as 'the Kings Fould Course'. Although this designation cannot be conclusively related to the battle of Dussindale, its location west of Peddars/Witton Way and

⁷⁷⁹ Neville, p.62; Holinshed, p.1672.

⁷⁸⁰ Holinshed, p.1672.

⁷⁸¹ Neville, p.63.

⁷⁸² See Chapter 4.

approximately 300 metres from the Old Ditch would seem an appropriate spot for Warwick to deploy his forces. This deployment is shown on the image below (Fig.90).

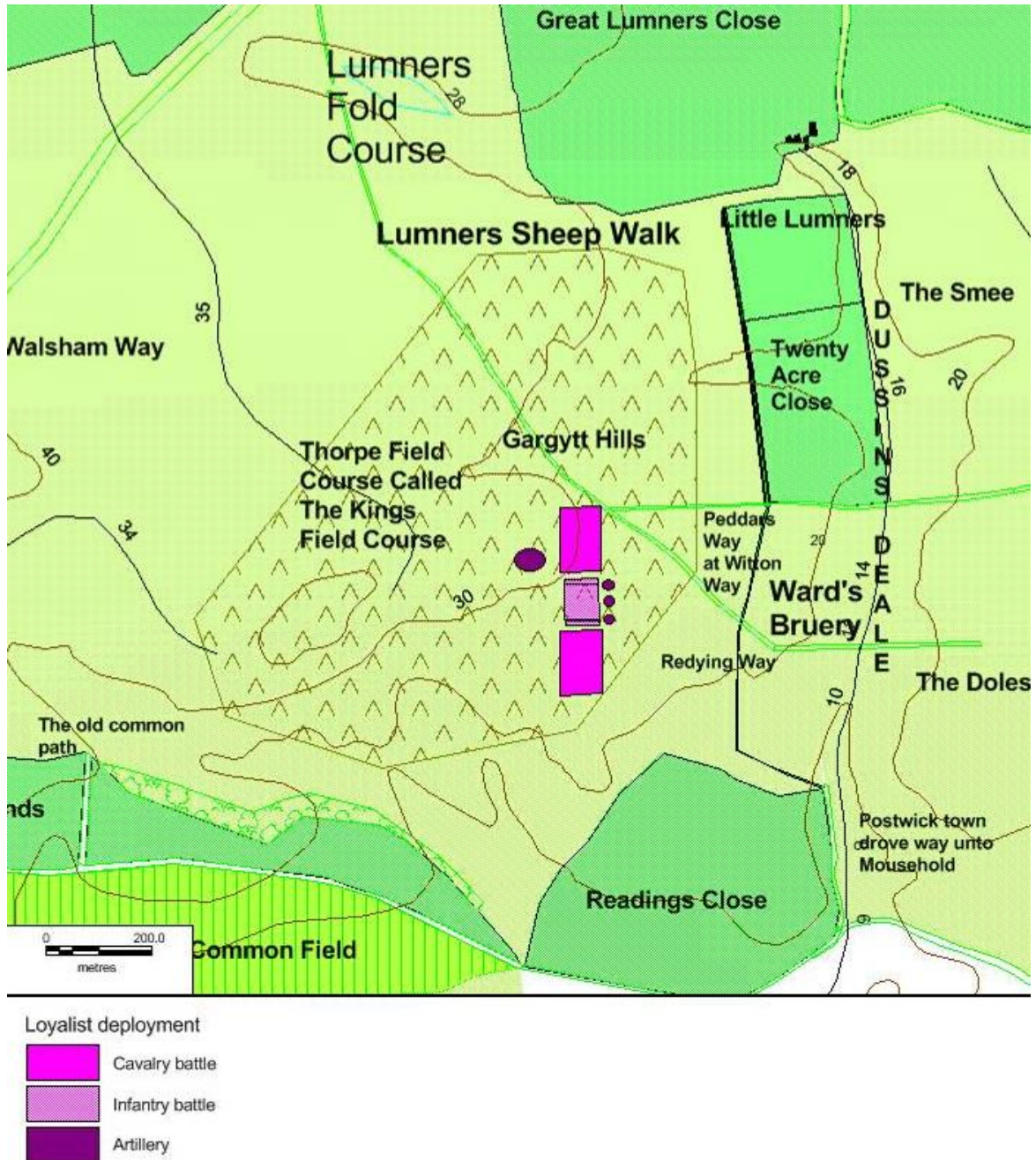


Fig.90. Map showing potential position of loyalist army in area marked ‘Thorp Fould Course called the Kings Fould Course’ on Cooke’s 1718 map. Note the presence of sleeves of arquebusiers beside the main infantry battle, and the artillery (shown with circles) to the rear, in a battery atop the higher ground to the west, and ahead of the unit. North is at the top of the image. Contour data has been provided, showing height in metres above Newlyn Datum. PROFILE DTM [DXF geospatial data], Scale 1:10000, Tiles: tg20ne,tg21se,tg30nw,tg31sw, Updated: November 2009, Ordnance Survey (GB), Using: EDINA Digimap Ordnance Survey Service, <<http://edina.ac.uk/digimap>>, Downloaded: Sun Apr 21 07:38:51 GMT 2013.

Rebel Deployments

As the reconstruction of Dussindale has shown, the land west of Postwick and Great Plumstead was ideally suited to the insurgents' tactical and strategic needs, lying within easy reach of their camp on Mount Surrey and controlling the nearby road networks leading east from Norwich. This latter factor, coupled with enclosures to the north and the River Yare to the south, prevented the rebels being encircled before or during the battle, and compelled Warwick to mount a frontal assault on their position, hampered by the Gargytt Hills and Old Ditch stretching along the top of the valley between Great Lumners Close and Reading Close. The northern portion of the Old Ditch represented a particularly difficult obstruction because of the hedges of Little Lumners and the adjacent Twenty Acre Close, which would have closed off this area of the battlefield to cavalry, dramatically restricting the valley's width, and potentially compressing oncoming forces into a narrow defile. Additionally, accounts attested to the rebels constructing field fortifications after their arrival at Dussindale, as Neville described:

There they [the rebels] practice all they can, and begin to devise how to take away from our men the assault and hope of giving the charge. Insomuch as they entrenched then themselves as in a moment, and made bulwarks, and other defences. Moreover, they brought a ditch over the high ways, and cut off all passage, pitching their javelins and stakes in the ground before them.⁷⁸³

The key features of this extract were confirmed by Southerton's observation that the insurgents 'devised trenches and stakes [...] and set up great bulwarks of defence before and about', which, in the context of the battlefield, suggests the use of both man-made and natural obstacles.⁷⁸⁴ Although the rebels' march to Dussindale may have left little time to construct extensive defences, the 'bulwarks' described by these narratives could allude to the closes at the north, northwest, and south of the valley, while Neville's reference to the 'ditch over the high ways' evokes the Old Ditch crossing Peddars/Witton Way and Reading Way. By creating earthworks along the southern portion of the Old Ditch, as it headed towards Readings Close, the insurgents would have extended the existing barrier formed by the northern enclosure hedges, hindering enemy troops attempting to descend into the valley as Figure 91 (below), shows.

⁷⁸³ Neville, p.62.

⁷⁸⁴ Southerton, fol.259^r.

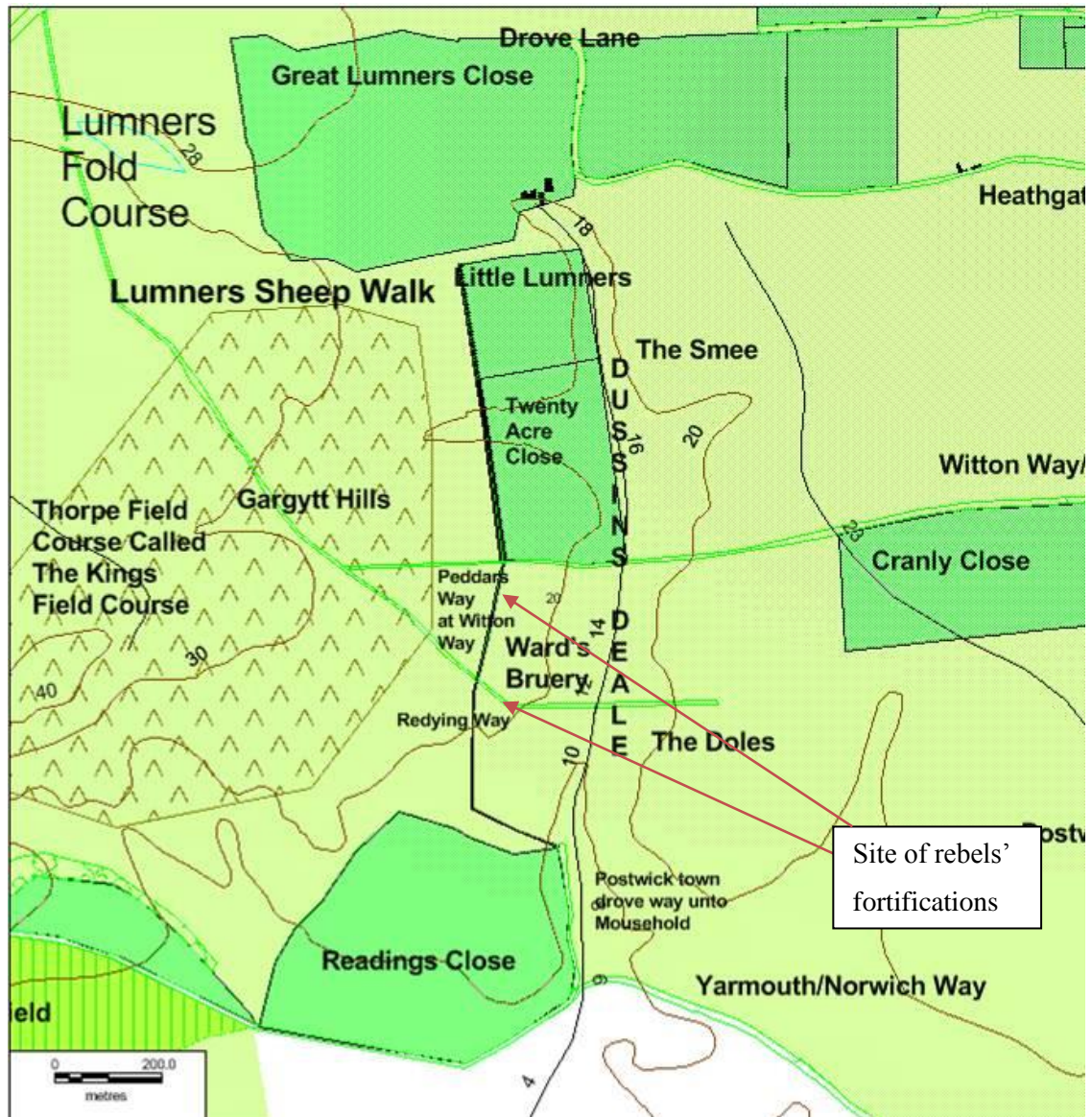


Fig.91. Image showing rebel fortification along the Old Ditch, as it crossed Peddars/Witton Way and Reading Way. North is at the top of the image. Placing obstacles atop the ditch would have transformed this area into a barrier like that formed by the hedges to the north. Contour data has been provided, showing height in metres above Newlyn Datum. PROFILE DTM [DXF geospatial data], Scale 1:10000, Tiles: tg20ne,tg21se,tg30nw,tg31sw, Updated: November 2009, Ordnance Survey (GB), Using: EDINA Digimap Ordnance Survey Service, <<http://edina.ac.uk/digimap>>, Downloaded: Sun Apr 21 07:38:51 GMT 2013.

While the site's extensive cartographic information supports chronicles' assertions that Dussindale was naturally defensible, written sources fail to delineate the placement of rebel forces within the historic landscape, with the Old Ditch, in the west, and the Doles and Smee, in the east, both providing viable deployments on either side of the valley. Nonetheless, knowledge of the rebel army's weaponry and tactics, which mirrored those of England's militia, can be used to make an informed assessment of their probable dispositions. As earlier chapters have shown, forces assembled wholly from the militia often adopted a traditional linear array, stationing archers and billmen atop gentle slopes with flank protection, and, where possible,

having broken ground or obstacles ahead of them to slow attacking troops. All of these advantages could be gained through deploying atop the eastern edge of Dussindale, compelling Warwick's army to descend into the valley and climb the slope to reach the rebel position, costing his forces much of their impetus and cohesion and exposing them to sustained archery within the longbow's optimum range of 150 metres. As obstacles like the Old Ditch, at the western edge of the valley, lay within the bow's 400 metre extreme range, the insurgents could have employed long-distance shooting to harass Warwick's soldiers and provoke their advance, a common tactic noted in Barrett's contemporary *Handbook*.⁷⁸⁵ Furthermore, the rebels followed established principles by 'pitching their javelins and stakes in the ground before them', a stratagem they combined with the unconventional decision to place captured gentlemen, taken prisoner throughout the rising, in chains amidst their front line.⁷⁸⁶ These measures fulfilled a similar purpose, with the stakes and shackled captives serving to screen Kett's troops from incoming fire and, more crucially, disrupting the loyalist assault so that the rebels could absorb their enemies' charge more effectively.

Figure 92 provides a speculative illustration of how the insurgents may have deployed within the historic landscape, interpreting Neville's assertion that they 'cut off all passage' to the highways to position their battles between Peddars/Witton Way and Reading Way. While sixteenth-century transitions in warfare and military technology had modified English battlefield formations and tactics, Kett's army was armed exclusively in the old style with longbow and bill, and so would not have reflected these changes. With this in mind, the placement of rebel units, with billmen in the centre and archers on the army's flanks, arguably owed more to the victories of the Hundred Years' War than the recent battle of Pinkie. Their formation, as at Crècy where similar numbers of soldiers were arrayed, would have stretched across a frontage of approximately 450 metres, with Readings Close and the Twenty Acre Close anchoring their flanks, and the slightly higher ground of the Doles providing a vantage point for artillery to the east.⁷⁸⁷ In this respect, Cranly Close seems an ideal location for siting the rebels' larger guns and baggage, with the hedges offering a degree of protection from incoming fire and assault. While Kett's heavy guns would have been grouped into a battery, Chapter 4 has shown that lighter field pieces were more likely to be dispersed between or ahead of their battles to provide localised artillery support, a deployment alluded to by Southerton's statement that the insurgents 'placed their ordnance all about them'.⁷⁸⁸ Figure 93 shows the approximate position of this deployment within the modern landscape.

⁷⁸⁵ See Chapter 3.

⁷⁸⁶ Neville, p.62.

⁷⁸⁷ Strickland and Hardy, pp.223-9.

⁷⁸⁸ Southerton, fol.259^r.

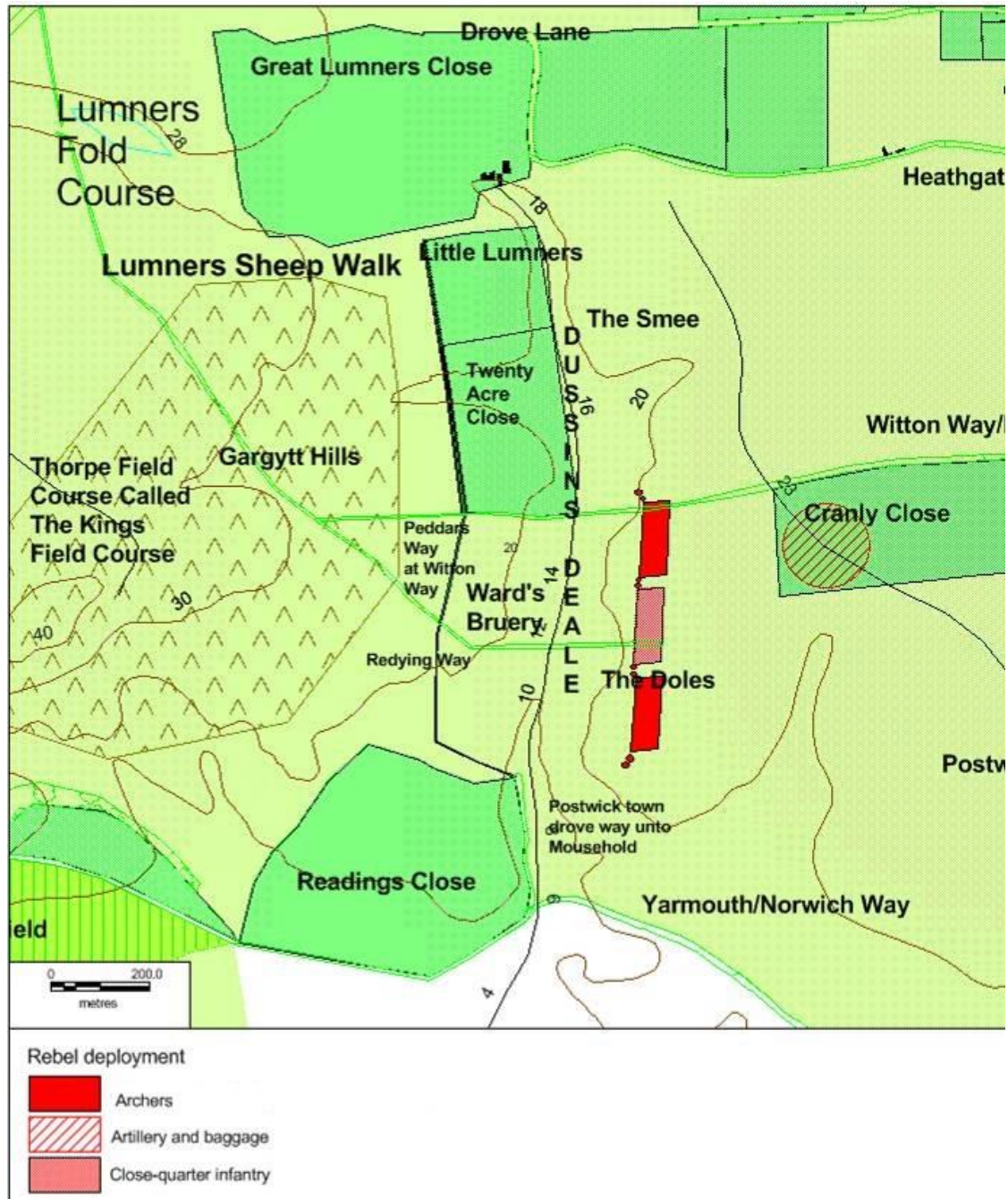


Fig.92. Map showing the rebel deployment. North is at the top of the image. Field artillery (shown with red circles) is depicted between the rebel battles, while their heavy ordnance and baggage are located to the rear. Contour data has been provided, showing height in metres above Newlyn Datum. PROFILE DTM [DXF geospatial data], Scale 1:10000, Tiles: tg20ne,tg21se,tg30nw,tg31sw, Updated: November 2009, Ordnance Survey (GB), Using: EDINA Digimap Ordnance Survey Service, <<http://edina.ac.uk/digimap>>, Downloaded: Sun Apr 21 07:38:51 GMT 2013.

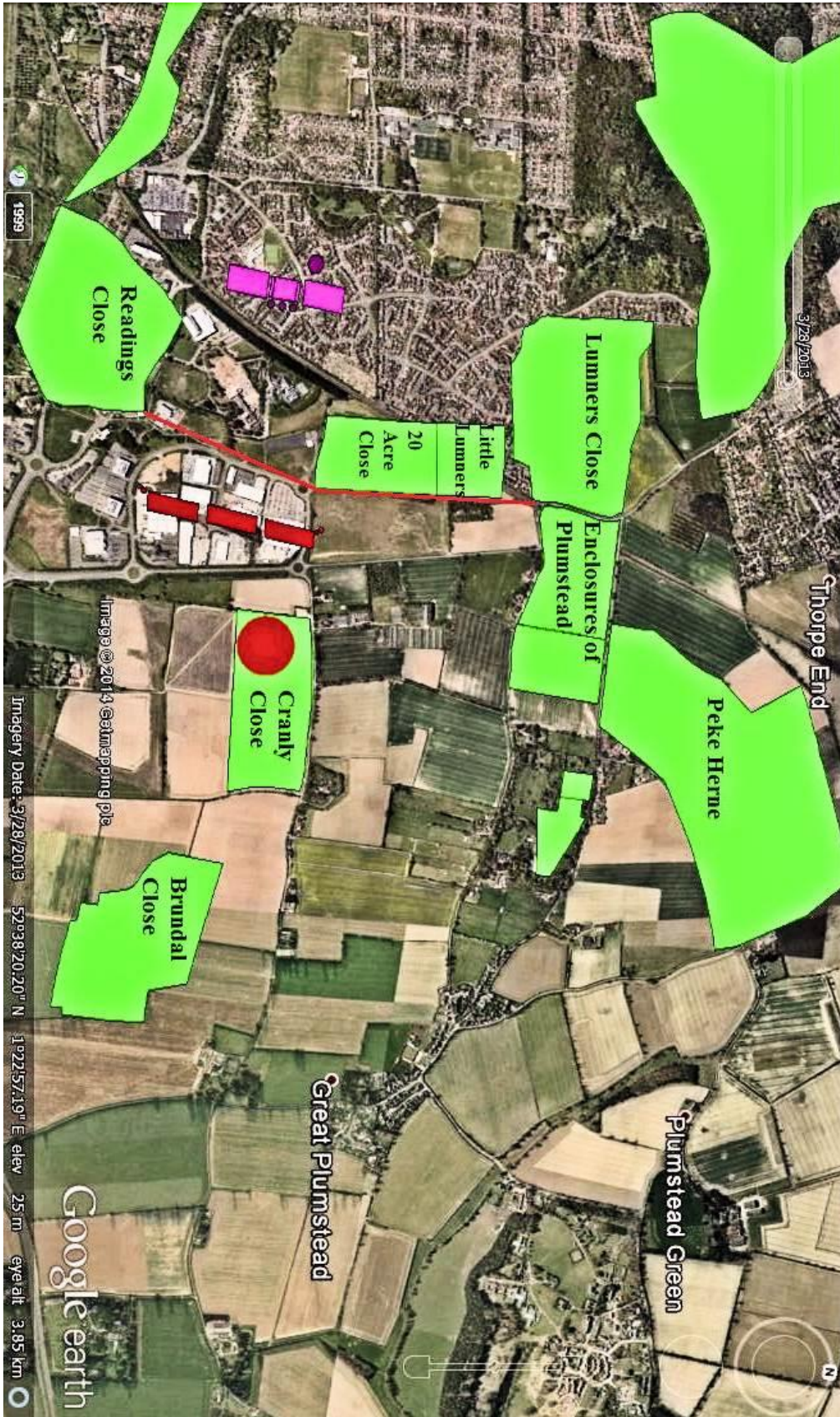


Fig.93. Google Earth image (with superimposed enclosures) annotated to show approximate position of both armies' deployments within the modern landscape. The rebels are depicted in red and the loyalists in purple. The red line shows the bottom of the valley of Dussindale.

The Battle

For all the rebels' strategic acumen in selecting and fortifying such a tactically advantageous site, the battle itself was a relatively brief affair, with loyalist forces swiftly overrunning the insurgents' position and destroying their army in the ensuing rout. Having deployed west of the Old Ditch, potentially in the 'Kings fould course', Warwick signalled the advance after the failure of Knevet and Palmer's delegation, although Neville's comment that 'the enemy was within shot' implies that the insurgents initiated the action by opening fire at the earliest opportunity. The position of the rebel army, on the eastern side of the valley, would place their longbows out of range of the loyalists, meaning that outgoing fire must have originated from their ordnance. This can be confirmed by reports of Miles, the rebels' Master Gunner, striking Warwick's standard bearer 'with an iron bullet [...] through the thigh, which struck also the horse he rode on through the shoulder, so as both died with the same shot'.⁷⁸⁹ Although this is the only casualty mentioned in accounts, with an accurate ranging shot proving a noteworthy example of marksmanship, Miles was not the rebels' only gunner, and their other artillerists were probably likewise engaged. As Chapter 3 has shown, the opening salvos of an engagement were often speculative, with gunners struggling to hit distant moving targets, but would become increasingly effective if they were permitted time to correct their aim.

To reduce the risk of the heavy casualties which often accompanied sustained artillery bombardment, Warwick's cavalry, comprising the majority of his force, would have mounted an immediate attack, crossing the valley as rapidly as possible and masking the rebels' ordnance. Upon reaching the insurgents' front line the men at arms and demi-lances, which comprised a portion of each battle, may have launched charges against the enemy to pin them in place and screen the advance of their supporting infantry. Although unlikely to break the rebels without assistance, such aggressive use of cavalry would serve to keep the rebels on the defensive and attract the shooting of their archers, as depicted by Smythe's account. In relating the battle, Smythe noted the potency of archery against the loyalist horse, stating that Warwick's own mount was 'wounded under him [...] with three or four arrows, whereof he died', a statement confirming the cavalry's exposure to danger and its targeting by the rebel bowmen.⁷⁹⁰ The diagram below (Fig.94) depicts the opening stages of the battle, with the loyalist cavalry moving to engage the rebels as their infantry began to advance across the valley.

⁷⁸⁹ Neville, p.63.

⁷⁹⁰ Smythe, pp.95-6.

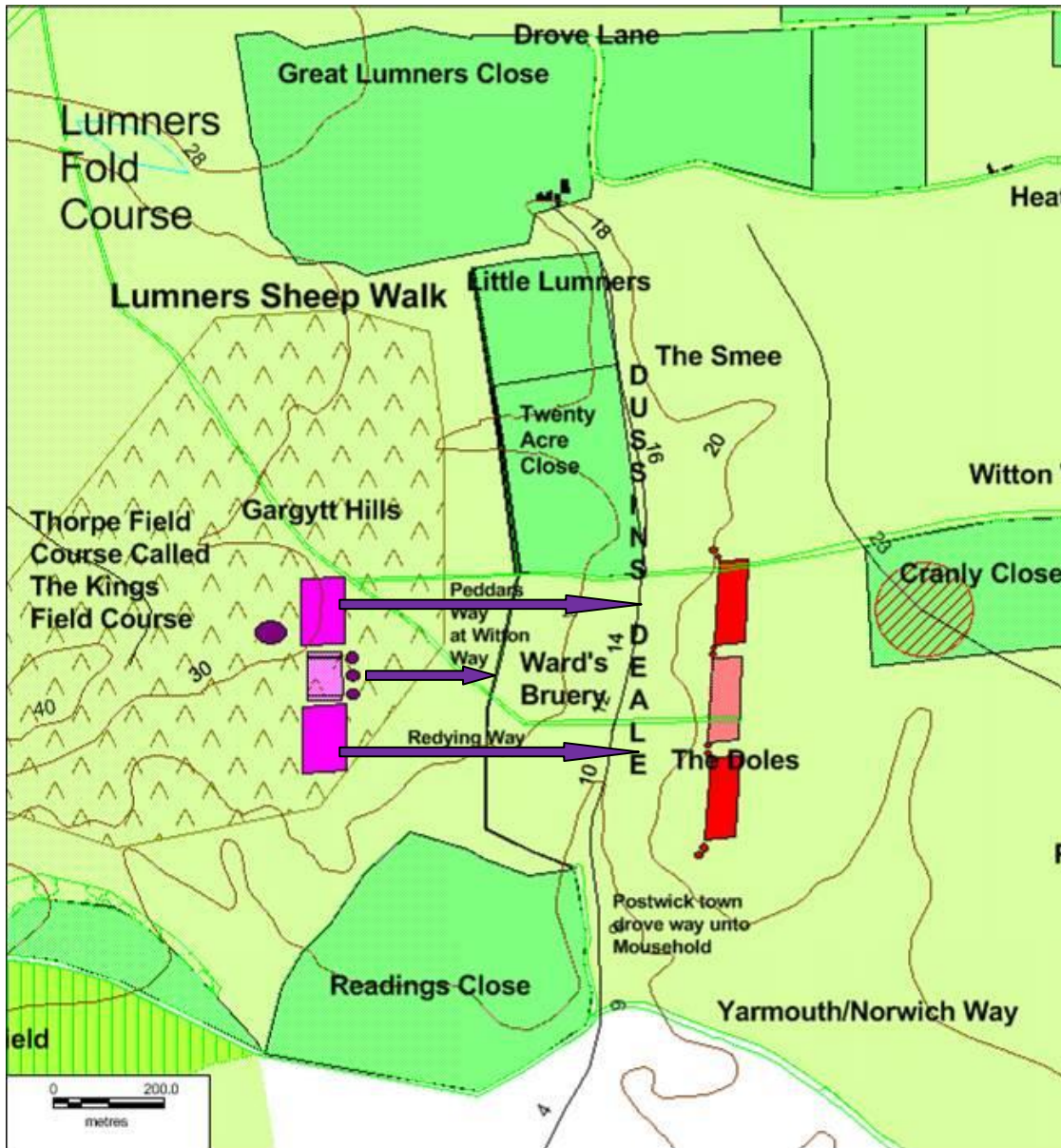


Fig.94. Map showing loyalist advance (with arrows). North is at the top of the image. The cavalry battles on the loyalist flanks moved directly to engage the enemy archers, as corroborated by Smythe's account, while artillery opened fire from the rear. Contour data has been provided, showing height in metres above Newlyn Datum. PROFILE DTM [DXF geospatial data], Scale 1:10000, Tiles: tg20ne,tg21se,tg30nw,tg31sw, Updated: November 2009, Ordnance Survey (GB), Using: EDINA Digimap Ordnance Survey Service, <<http://edina.ac.uk/digimap>>, Downloaded: Sun Apr 21 07:38:51 GMT 2013.

While this action was under way, Holinshed related that the loyalists, 'sore grieved' by the incoming ordnance, 'caused a whole volley of their artillery to be shot off at the rebels'.⁷⁹¹ In the context of the rebel bombardment, this is suggestive of counter-battery fire with the aim of silencing Kett's guns and protecting the advance of Warwick's forces. Although the insurgents possessed more ordnance than their adversaries, and so would theoretically enjoy an advantage

⁷⁹¹ Holinshed, p.1673.

in an artillery duel, several crucial issues may have negated their numerical superiority. Firstly, with the notable exception of Miles, many of the rebel gunners would have been outclassed by their loyalist counterparts, who included Sir Edward Bray and potentially other skilled artillerymen. Secondly, the insurgents' heterogeneous collection of artillery pieces, which encompassed different ranges and calibres of shot, may have hindered the co-ordination of accurate battery firing and made their gunnery less efficient than that of the loyalists. Finally, the loyalist cavalry attack may have also exerted an impact on the rebels' artillery capabilities, initially by drawing fire as they approached and subsequently by overrunning, masking or threatening guns stationed in or near the frontline. The combination of these factors may have enabled the rebels' ordnance to be swiftly neutralised, accounting for its apparent lack of influence on the remainder of the engagement. With the insurgents' guns out of action, Warwick's ordnance could subsequently have switched targets to engage the enemy infantry, co-ordinating their fire with the arrival of the landsknechts' battle, as Holinshed's account implies:

Herewith Captain Drury with his own band, and the Almaines [...] on foot, getting near to the enemies beset them with their harquebuses shot so sharply, and thrust forward upon them with their pikes so strongly, that they brake them in sunder.⁷⁹²

This passage suggests that Warwick's arquebusiers held their fire until reaching close-quarters, 'getting near to the enemies' to heighten the precision and impact of their weapons. As discussed in Chapter 3, the inherent inaccuracy of early firearms could be offset by targeting large troop formations within 50 metres, a range at which their damage-dealing capabilities were also maximised.⁷⁹³ At Dussindale, a close-range volley of arquebus shot, delivered as a precursor to a pike charge, would have been lethally effective, killing or incapacitating anyone unfortunate enough to be hit and throwing the insurgents' ranks into confusion. Furthermore, the rebels' defensive stakes, planted before them to deter assault, may have proven disadvantageous by immobilising Kett's forces within the arquebus' effective range. As the Spanish victories of Cerignola and Bicocca attest, the use of natural and man-made obstacles to pin enemy units in place was a common tactic in Renaissance warfare, and greatly enhanced the effectiveness of firepower.⁷⁹⁴ This situation may have allowed loyalist arquebusiers to target the flanks of rebel formations, advancing to discharge volleys into the rear ranks while their accompanying pikemen engaged the insurgents head on.

The resulting confrontation between the insurgents and Warwick's infantry would have proven brief and bloody, with the loyalists' pikes proving superior to the rebels' bills in the circumstances in which they were opposed. While bills and other short weapons were well

⁷⁹² Holinshed, p.1673.

⁷⁹³ McLachlan, pp.75-6.

⁷⁹⁴ See Chapter 4.

suites to close-quarter fighting and had defeated pike-armed troops at the battles of Ravenna and Flodden, such victories depended on negating the cohesion and momentum of pike formations, something which could only be achieved through firepower or terrain.⁷⁹⁵ Although the ditches, stakes, and other obstacles may have blunted the landsknechts' initial charge, the insurgents would have found themselves outmatched in a prolonged contest, particularly given their simultaneous attack by loyalist cavalry and the mounting casualties suffered from artillery and small arms fire. Southerton's brief description of the action laconically alluded to the psychological impact of the loyalists' firepower, stating that 'the army shot at them and break [sic] their courage'.⁷⁹⁶ All of these factors would have fatally disordered the rebel battles, leading to their rapid fragmentation under pressure from the loyalist infantry and leaving the fleeing insurgents prey to Warwick's cavalry, as Neville's account illustrated:

Our horsemen, after they perceived the enemy to be scattered, and put to flight with the often shot of the gunners, and harquebusiers [...] gave them a charge, where they were so far from abiding the encounter; as like sheep confusedly they ran away headlong, as it were mad men. But through the noise, and cry of our men following [...] (turning themselves speedily from their flight) with deadly obstinacy they withstood our men a little while: yet such was the force of the shot, and the heat of our men rushing upon them, which [...] broke into the host of the enemy, that Kett's army being beaten down, and overthrown on every side (with the hot assault) were almost with no labour driven from their standing.⁷⁹⁷

While this passage emphasised the panic spreading through Kett's army as the insurgents 'ran away headlong', it also described them 'turning themselves speedily from their flight' and returning to the action. Such an occurrence was highly unusual given the complex and time-consuming business of assembling or 'setting' a battle, with broken formations normally having scant hope of recovery during an engagement. Thus, Neville's account seems to imply that, although the insurgents' battles rapidly disintegrated into rout, isolated parties of rebels succeeded in regrouping and offered continued resistance to their assailants, but were irrevocably pushed back via the loyalists' sustained assault. The image below (Fig.95) shows this stage of the battle, with the arrival of the loyalist infantry triggering the insurgents' retreat.

⁷⁹⁵ See Chapters 3 and 4.

⁷⁹⁶ Southerton, fol.259^r.

⁷⁹⁷ Neville, p.64.

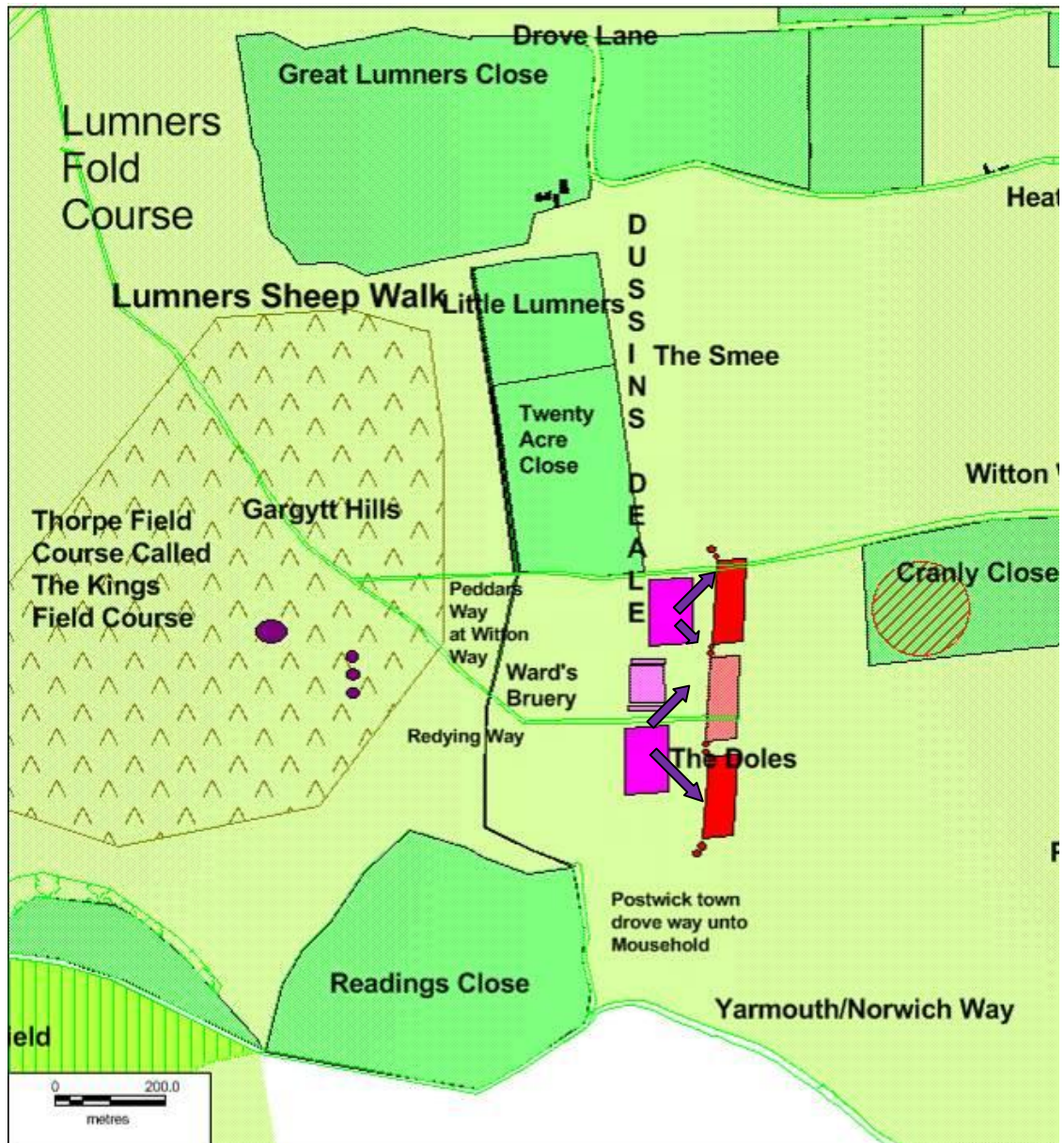


Fig.95. Map showing the loyalist attack on the rebel positions. North is at the top of the image. The cavalry would remain on the flanks and could continue to engage the insurgents stationed here, while also assisting the infantry by charging into the enemy flanks (shown with arrows).

The Pursuit

The destruction of the insurgents' forces resulted both from Warwick's carefully-applied combined-arms tactics, which co-ordinated infantry, cavalry, and artillery, and the abrupt collapse of the rebels' morale. The latter factor was induced by key failures in the insurgents' command and control, with Kett and his fellow officers abandoning the army during the loyalist attack, an occurrence which speedily converted retreat into rout as Neville described:

Kett himself, [...] when he saw all went against him: their ranks broken, their soldiers overthrown, our forces fiercely to invade [he] secretly fled out of the camp from his company. Which as soon as it was known, the captain to be fled out of the field: it is incredible to think how it weakened the minds of the rebels, and brought to pass in a short time, as all that heat of late, and earnest desire to fight again [...] fainted, and waxed cold.⁷⁹⁸

According to this passage, the rebel commanders fled after witnessing ‘their ranks broken [and] their soldiers overthrown’, implying that the initial impact of the loyalists’ attack, which shattered the rebels’ formation, convinced them that the engagement was lost. While parties of insurgents continued to resist, expressing an ‘earnest desire to fight again’, the absence of their leaders prompted them ‘at last [...] to run away’, highlighting the rebels’ previously identified weaknesses in command and control.⁷⁹⁹ The flight of the rebel officers not only deprived their army of tactical direction, but was doubly significant as these men may have been drawn from the sergeants and vintners that would ordinarily serve to steady the ranks and prevent the wholesale breakdown of discipline and morale. Without adequate leadership, soldiers were liable to panic in the confusion of battle, particularly when facing cavalry attack and incoming fire while seeing portions of their army beginning to turn and run, a situation similar to that encountered by the Scottish army at Pinkie.⁸⁰⁰ As at Pinkie the retreat of the rebels’ infantry across open ground, with no cavalry to cover their withdrawal, resulted in a massacre at the hands of enemy horsemen, Holinshed recording how their pursuers ‘slew them down in heaps [...] for the space of three or four miles’.⁸⁰¹ The reconstructed terrain east of Dussindale corroborates this claim, with the open ground of the Doles and Smee offering little shelter for fleeing insurgents who would have been relentlessly harried by the many light horsemen accompanying Warwick’s army. The speed and manoeuvrability of such forces made them ideal for the pursuit of disordered enemy infantry, who could offer little resistance and would suffer heavy losses during the prolonged chase.

While the majority of the rebel army would have been irretrievably scattered in the rout, a small group of insurgents held out in a fortified portion of the battlefield, prompting Warwick to personally intervene and guarantee their safety on condition of surrender. This is described by Holinshed in the paragraph below, an extract which may be analysed to determine the location of the area:

Yet one part of them that had not been assailed at the first onset, [...] kept their ground by their ordnance and shrank not, determining [...] to fight it out to the last man. They were so enclosed with their carts, carriages, trenches [...] and stakes perched in the ground to keep off the force of horsemen, that it would have been somewhat dangerous

⁷⁹⁸ Neville, p.64.

⁷⁹⁹ Neville, p.64.

⁸⁰⁰ Caldwell, ‘Pinkie’, p.85.

⁸⁰¹ Holinshed, p.1673.

to have assailed them within their strength; but sure they were now they could not escape, seeing no small part of their whole numbers cut off and distressed, and they environed on each side, without hope of succour or relief of vitals, which in the end must needs have forced them to come forth of their inclosure to their undoubted overthrow and destruction.⁸⁰²

By specifying that the rebels ‘kept their ground by their ordnance’, in an area which also contained ‘carts [and] carriages’ and was suggestive of the army’s baggage train, the preceding extract implied that this last stand occurred amidst Cranly Close, to the east of Dussindale. The close, as previously described, would have provided an ideal site for the insurgents’ heavy artillery and baggage, allowing the army’s impediments to be placed a sufficient distance from the frontline in an easily defensible area. This position, shown below (Fig.96), agrees with the key features of Holinshed’s narrative, lying to the rear of the rebel army, where soldiers were unlikely to be ‘assailed at the first onset’, in a location where it could be ‘environed on every side’ by pursuing loyalist forces.

⁸⁰² Holinshed, p.1673.

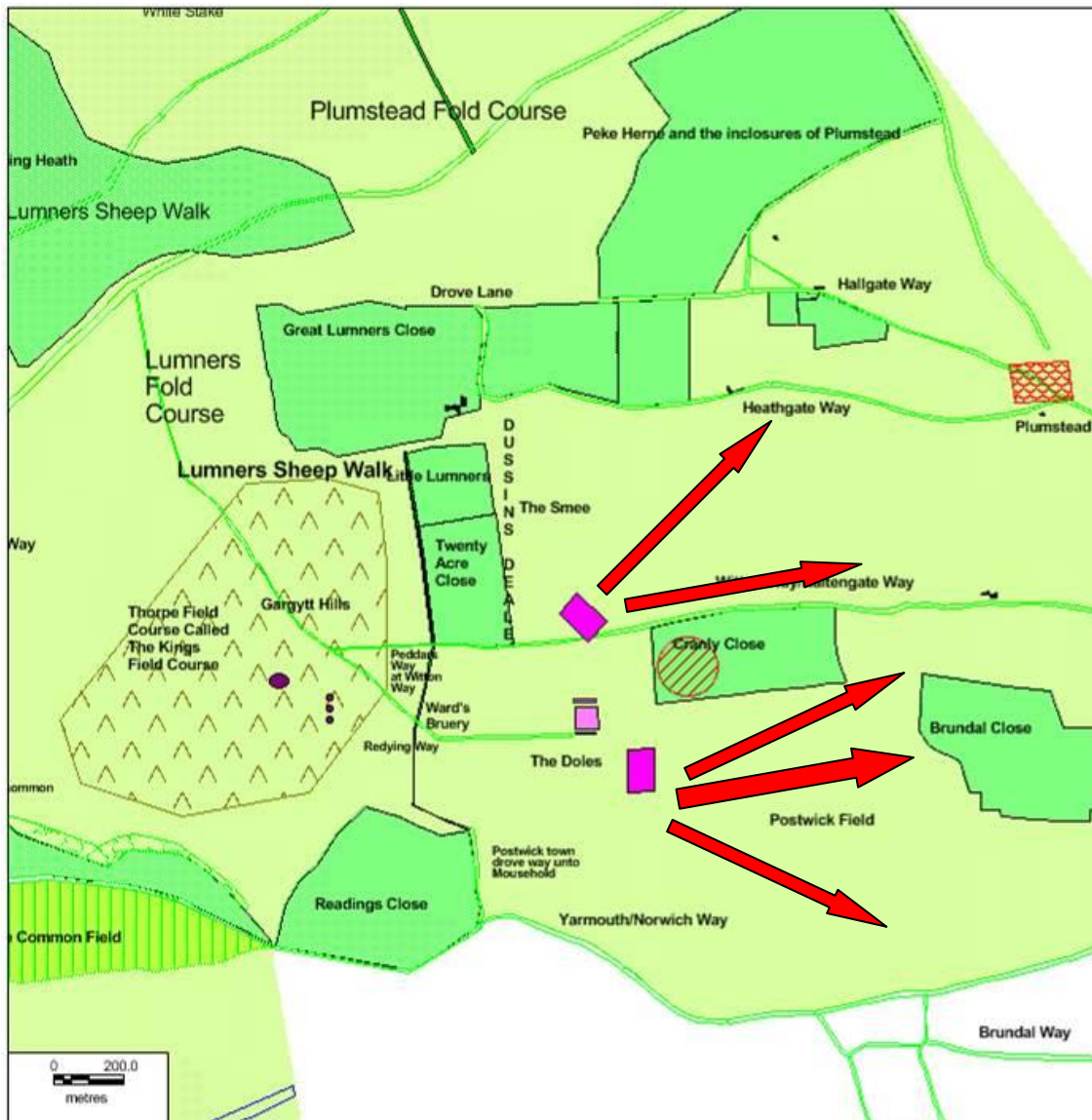


Fig.96. Map showing the insurgents' rout, leaving their artillery and baggage stranded within Cranly Close, allowing the loyalists to encircle them during their pursuit of the fleeing rebels (shown with red arrows). North is at the top of the image.

Once the insurgents were surrounded within their fortifications, Holinshed attested that Warwick 'sent to the city and caused the most part of his footmen [...] to come forth now in battle array'.⁸⁰³ This decision to refrain from an immediate attack, waiting instead to bring up additional forces, is a telling acknowledgment of the effectiveness of the rebels' defences. Had the loyalists been capable of taking the position, they would surely have done so, unless they feared the prohibitive losses such an assault could incur. Although chronicles sought to justify Warwick's actions on humanitarian grounds, Neville for instance praising the Earl's 'wisdom and compassion', they also emphasised the 'carts, carriages, trenches [...] and stakes' which

⁸⁰³ Holinshed, p.1673.

made the area impassable to cavalry.⁸⁰⁴ This would have resulted in a tense stand-off, possibly lasting several hours, while Warwick's messengers reached Norwich and returned with the reinforcements necessary to induce the rebels' surrender. During this time, the surviving insurgents would have witnessed firsthand the ruthless pursuit of their comrades, clearly justifying Hayward's assertion that 'they expected nothing but death' until personally assured of their safety by Warwick.⁸⁰⁵ The surrender of these rebels marked the conclusion of the fighting, with Southerton confirming that 'the battle ended about four of ye clock'.⁸⁰⁶ However, as Hayward observed, the light horsemen continued to pursue the fleeing rebels and 'filled themselves with blood until night'.⁸⁰⁷ Given the engagement's occurrence in late August dusk may not have come until mid-evening, allowing the victorious loyalists several hours of pursuit until the onset of darkness curtailed cavalry operations and allowed surviving rebels to escape unnoticed.

Losses for the battle are difficult to accurately assess, with chronicles claiming that 3500 insurgents died, but the Spanish Ambassador and Edward VI providing lower estimates of 3000 and 2000 respectively, perhaps suggesting that the highest figures covered the entire campaign as opposed to only those killed at Dussindale.⁸⁰⁸ The sole indication of loyalist casualties comes from the Spanish Ambassador, who reported that 'the Earl of Warwick had defeated the peasants in Norfolk [...] but with greater loss on his side than he cared to confess'.⁸⁰⁹ While this account implies that Warwick's losses were substantial, they were unlikely to have approached those of his enemies and would probably not have exceeded a few hundred, as a consequence of several factors. Firstly, the majority of the insurgents killed in the action would have died during the retreat, when their formations were broken and they were defenceless against their pursuers in the open fields east of Dussindale, which magnified the scale of the slaughter by providing ideal ground for cavalry. By contrast, loyalist forces retained their array throughout the engagement, with no reports of any unit being repulsed or scattered, something which reduced the danger to which individual soldiers were exposed.

Secondly, while many of Warwick's troops may have been wounded by rebel archery, their armour would have protected most of them from fatal injuries.⁸¹⁰ This is particularly apparent in Smythe's account which, despite his favourable bias toward the bow, emphasised the weapon's impact on the cavalry's lightly-armoured horses rather than their riders.⁸¹¹ Instead loyalist soldiers were far more likely to have been killed by artillery fire in the battle's opening

⁸⁰⁴ Neville, p.64.

⁸⁰⁵ Hayward, p.77.

⁸⁰⁶ Southerton, fol.259^f.

⁸⁰⁷ Hayward, p.77.

⁸⁰⁸ *Chronicle [...] of Edward VI*, p.16; *State Papers Spanish*, p.446.

⁸⁰⁹ *State Papers Spanish*, p.446.

⁸¹⁰ Champion, 'Dussindale Eyewitness?', p.65.

⁸¹¹ Smythe, pp.95-6.

stages, rather than subsequently by the longbow. Finally, once the two armies met at close-quarters, the superior armament, armour, and weapon-handling abilities of the loyalists may have produced noticeably different casualty figures. The rebels, although far from their romanticised image of unskilled peasants using rudimentary weapons, would have been decidedly outclassed by Warwick's professional mercenaries and the well-armed members of personal retinues.⁸¹²

Additionally, a significant portion of the loyalists' losses would have stemmed from the captive gentlemen whom the rebels had placed before their formations. In such positions, the prisoners would have been exceptionally vulnerable to the massed pikes and firearms of Warwick's infantry, with those deployed where the soldiers attacked almost certain to be killed. While Holinshed blames these deaths on mistaken identification by 'Almaines and others that knew not what they were', Neville is less circumspect, claiming that 'many gentlemen [...] were slain in this tumult [...] although they have money and great rewards to the soldiers to spare their lives'.⁸¹³ These inadvertent deaths can be attributed to the tactical requirements of the loyalist armaments, which depended on maintaining cohesive formations and offered little opportunity for breaking ranks to rescue or avoid the prisoners in combat. Notwithstanding these fatalities, it appears that the majority of the prisoners managed, in Holinshed's words, 'to shrink aside and escaped the danger'.⁸¹⁴ However, being chained together, it seems more likely that they were bypassed by the fighting as the loyalists advanced. Regrettably, the chronicles give no indication of how many captives were killed, or what proportion of Warwick's total casualties they comprised.

Conclusions

Reappraising the battle of Dussindale produces several important conclusions for the study of the engagement itself, for the broader context of England's mid-sixteenth-century field warfare, and for the applicability of terrain reconstruction methodologies to these issues. In the first instance, consideration of the opposing armies and the action itself has emphasised the degree to which Dussindale can be considered a conventional engagement rather than dismissed as the one-sided suppression of a poorly armed and undisciplined rabble. Although the rebels lost the battle, their defeat was not predetermined but rather the consequence of skilfully applied combined-arms tactics by their opponents coupled with a breakdown in command and control during the action. Before the engagement, the insurgents had amassed a large and relatively well-armed force, performed a complex operational manoeuvre in relocating from their camp

⁸¹² Cornwall, pp.220-21.

⁸¹³ Holinshed, p.1673; Neville, *Furoribus*, p.66.

⁸¹⁴ Holinshed, p.1673.

via a night march, and selected and fortified a tactically advantageous site in accordance with prevailing military orthodoxies. Similarly, their army's probable composition from members of the Norfolk militia, alongside its inclusion of longbows, bills, and large quantities of artillery, would have rendered it equivalent to a locally raised force, such as that which fought at Flodden.

As this chapter has identified, the radically different composition and armament of rebel and loyalist forces arguably illustrates both facets of the Tudor military, with the former represented armies raised for domestic defence, and the latter proving indicative of the country's increasing adherence to the sixteenth-century Military Revolution. While Dussindale can facilitate a comparative assessment of different armaments, the longbow versus the arquebus and the bill versus the pike, these weapons represented only one part of an underpinning tactical methodology dictating how armies deployed and fought. Focusing solely on the weapons' performance, particularly when they were not opposed in isolation, diminishes the importance of their supporting tactical context. In this respect, the defeat of a traditionally armed and assembled English army by its contemporary counterpart stands as unsurprising proof of the superiority of 'modern' military technology and organisation, but also of England's recognition and employment of these assets. In practice, as earlier chapters have shown, Tudor armies of the mid-sixteenth century tended to combine elements from both traditional and modern tactical systems, synthesising the mutually supportive armaments of longbow, arquebus, pike, and bill by deploying the militia alongside foreign mercenaries and semi-professional soldiers.

Consideration of Dussindale's historic landscape has a significant impact on investigation of the battle, and also demonstrates the scope and limitations of tactical terrain analysis as a methodology. In the first instance, the identification and reconstruction of the battlefield, from a body of evidence far surpassing that available for the Western Rebellion, is highly useful for considering the insurgents' fortifications and pre-battle deployment. However, accounts of the action are both brief and inexplicit, with this brevity hindering the placement of units within the landscape and even rendering the engagement's central events difficult to determine. Although Military Terrain Analysis can be used to infer certain aspects of the battle, overreliance on supposition prevents definitive conclusions being drawn. Thus, while digital mapping enables Dussindale to be more effectively interpreted than previous studies, based purely on written accounts, the use of this methodology cannot entirely compensate for the absence of detailed battle narratives. In the context of the whole thesis, this case study represents a significant advance on the Western Rebellion of Chapter 5, demonstrating that tactical terrain analysis can be successfully employed to interpret the battlefields of mid-sixteenth-century insurgencies. However, as the final case study will show, the methodology is at its most effective when used alongside detailed written sources, which can reconstruct the events of an action within the environment in which it occurred.

Chapter 7: Wyatt's Rebellion

Introduction

In 1554, Sir Thomas Wyatt, an influential Kentish gentleman and son of the identically named Tudor poet, instigated a rebellion against the unpopular marriage of Queen Mary and King Philip II of Spain, claiming that England faced 'overrunning by strangers' and seeking to compel the Queen's union with Edward Courtenay, Earl of Devon.⁸¹⁵ Wyatt's revolt also had underlying religious dimensions and sought to defend the Reformation against a Catholic revival, an assertion given credence by the involvement of several high-ranking Protestants, including the Carews of Devon, Henry Grey, Duke of Suffolk, and William Thomas, former clerk of Edward VI's council.⁸¹⁶ Regardless of the conspirators' specific grievances, the uprising presented a clear threat, attracting widespread support and culminating in an audacious but ultimately unsuccessful attack on London. Although the rebellion was intrinsically less violent than the sustained conflicts of 1549, with its only large engagement proving more a question of allegiance than a contest of strength, it provides a vital link in the study of insurgent armies.⁸¹⁷ Unlike earlier revolts, whose composition, equipment, and tactical deployment often remained opaque, the events of 1554 are well-documented by several contemporary sources, allowing these aspects of Wyatt's forces to be reconstructed with a greater degree of accuracy. Accordingly, this chapter will employ the uprising as a case study for the organisation and operation of rebel forces, prior to reconstructing the confrontation at London in Chapter 8. Firstly, however, the following section will summarise the rebellion's strategic objectives and key events, establishing a narrative framework in which to situate subsequent discussion.

Strategic Objectives and Summary

In keeping with their stated objective of reversing the Queen's marriage, the rebels sought to isolate Mary from her supporters through co-ordinated risings by Wyatt in Kent, the Carews in Devon, Croft in Hereford, and Grey in the Midlands.⁸¹⁸ After recruiting armies from these areas, the insurgents planned to converge on London, surrounding the city and forcing the Queen to negotiate, while the offer of French naval support was secured to intercept Spanish

⁸¹⁵ Proctor, p.9.

⁸¹⁶ Fletcher and MacCulloch, pp.98-101.

⁸¹⁷ Loades, *Conspiracies*, p.67.

⁸¹⁸ Fletcher and MacCulloch, pp.92-3.

reinforcements.⁸¹⁹ In this respect, Wyatt's Rebellion would have proven unusually resilient, consisting of four separate branches working in concert, rather than being confined to a single easily containable region. Despite this careful planning, the project's secrecy was compromised in early January by Bishop Stephen Gardiner's questioning of Courtenay, the preferred English candidate for Mary's marriage. While Gardiner obtained a confession, his association with Courtenay threatened to implicate him in the ensuing investigation, compelling him to delay revealing the plot until he could distance himself from its beneficiaries.⁸²⁰ Meanwhile, Wyatt, recognising that his plans risked imminent exposure, left court for his estates in Kent on 10 January and began the revolt a fortnight later. By initiating his phase of the uprising early, Wyatt sought to assemble his forces before he could be apprehended and was largely successful, recruiting approximately 2000 followers after raising his standard at Maidstone on 25 January.⁸²¹

Unfortunately, the speed with which the Kentish rebels mobilised also caught many of Wyatt's co-conspirators unawares, with Croft failing to respond, and the Carews and Grey proving inadequately prepared for an immediate call to arms. In Devon, the Carews endeavoured to gain the assistance of local gentry, citing fears of a Spanish invasion, but were hindered through the efforts of the County Sheriff, Sir Thomas Dennis. Eventually, after several days of tense manoeuvring, culminating in Dennis occupying the regional capital Exeter in preparation for an assault or siege, Peter Carew fled for the safety of Normandy, abandoning his accomplices, who were subsequently arrested.⁸²² The Carews's failure stemmed partially from their suppression of the Western Rebellion five years earlier, making them unpopular with the commons, and partially from their hasty assembly of forces, which alerted vigilant loyalists before sufficient preparations could be made. Similarly, in the Midlands, Grey managed to raise a small detachment from his own retinue, but was forced to disband his soldiers and go into hiding after his overtures to Leicestershire and Coventry met respectively with apathy and hostility.⁸²³ The premature triggering of the revolt also sacrificed the prospect of French aid, leaving the Kentish rising as the only active portion of the insurgency.

This situation prompted a change of strategy, compelling the rebels to adopt a more aggressive approach. Where the conspirators had planned to gather their forces and pressure London from all sides, isolating the Queen from external intervention, Wyatt's only hope of success now lay in mounting a rapid offensive before Mary could gather sufficient troops to resist him. The revolt's timing was fortunate in this respect, the government being as unprepared to raise soldiers as Wyatt's associates, with many gentlemen having returned to their

⁸¹⁹ Loades, *Conspiracies*, p.21.

⁸²⁰ *Ibid.*, p.24.

⁸²¹ Fletcher and MacCulloch, p.94.

⁸²² Loades, *Conspiracies*, pp.35-41.

⁸²³ Fletcher and MacCulloch, pp.92-4.

estates following attendance at court over the Christmas period.⁸²⁴ Facing only token resistance from Henry Neville, the Lord Burgavenny, and Robert Southwell, the County Sheriff, the rebels quickly consolidated their position by apprehending loyalist sympathisers and securing weapons and supplies from the surrounding area. On 26 January Wyatt's army marched from Maidstone to Rochester, a distance of just over six miles, and gained both access to London, via a Roman road, and control of one of the few crossing points over the Medway at Rochester Bridge.⁸²⁵ Rochester had been heavily fortified since the Roman occupation, with Leland claiming that its walls boasted 'a marvelous strong gate' and 'vi or vii toures [towers]', while Camden's *Britannia* described it as 'a castle rather than a city', demonstrating its value as a secure base of operations.⁸²⁶

Faced with the insurgency's near-total control over the county administration, the heavily outnumbered Kentish loyalists lacked the strength to mount a serious challenge. Instead they remained at Malling, four miles from Maidstone, and succeeded in intercepting a rebel detachment engaged in looting private houses and armouries at Wrotham on 28 January. While the insurgents, led by Sir Henry Isley, and Anthony and William Knevet, were routed in the resultant skirmish, the loyalists' success was dramatically overshadowed by the wholesale defection of a government force to Wyatt's army at Rochester Bridge on the same day.⁸²⁷ This incident provided the rebels with a substantial influx of armaments and personnel, and occasioned a further change in strategy by encouraging Wyatt to advance on London, where he hoped to garner the support of its inhabitants against the Queen.⁸²⁸ Accordingly, after detaching a small contingent to besiege and capture Cooling Castle from the Lord Cobham, Sir George Brook, Wyatt left Rochester on 29 January.⁸²⁹

The rebels subsequently marched to Gravesend, and then on to Southwark via Dartford and Deptford, arriving at their destination on 3 February, but found London Bridge barricaded and heavily guarded. Unable to cross the Thames, and under artillery fire from the Tower, Wyatt relocated south west to Kingston, intending to traverse the river and approach London from the west early on 7 February. This decision was also governed by news that Burgavenny and Southwell had mustered an army in Kent and were advancing in pursuit of the rebels, reaching Blackheath and Greenwich by 5 February.⁸³⁰ However, difficulties transporting their

⁸²⁴ Loades, *Tudor Court*, p.156.

⁸²⁵ *The Victoria County History of the Counties of England: Kent vol.2*, ed. by William Page (London: St Catherine Press, 1926), p.80.

⁸²⁶ Leland, p.10; William Camden, *Britannia* (London: F. Collins, 1695), p.213.

⁸²⁷ Fletcher and MacCulloch, p.95.

⁸²⁸ Proctor, pp.47-8.

⁸²⁹ Kennedy, fol.84^r. This source stated that Wyatt sent 'too or thre hundreth rebelles [and] a copell of pecs as Faucons' to take Cooling Castle, not his entire army, as some secondary works claim.

⁸³⁰ *Chronicle of Queen Jane*, p.45.

artillery fatally slowed the insurgents' march on London, and resulted in Mary's forces being deployed to oppose them outside Westminster. In the ensuing confrontation, discussed in Chapter 8, Wyatt evaded the loyalists and entered the city, but found the population unwilling to support him, whereupon he was eventually forced to surrender. Following Wyatt's defeat large numbers of captive rebels, held within London's prisons and churches, were pardoned by the government in several batches over the following months. While the bulk of the insurgents were fined and released, the majority of their leaders were put to death for their part in the uprising, with Wyatt himself being executed on 11 April 1554.⁸³¹

Several near-contemporary maps of Kent and Middlesex survive to assist consideration of the rebellion's strategic movement, with Saxton's atlas (see Fig.97, below) providing the earliest representation of the region in 1579.⁸³² This can be supplemented by individual works by John Norden (1593) and Phillip Symonson (1596), which showed the area in greater detail (see figs. 98 and 99, below). While Symonson lacked Norden's renown, he was an experienced cartographer, having been superintendent and surveyor of Rochester Bridge and its estates from 1592 until his death in 1598 when Mayor of Rochester.⁸³³ These early maps can be combined with seventeenth-century plans by John Speed (1611) and Ogilby (1675) to produce the final diagram below (see Fig.100), which shows the road networks and locations connected with the rebellion and illustrates the movement of Wyatt's forces towards London.

⁸³¹ Loades, *Conspiracies*, pp.115-16.

⁸³² Catherine Delano-Smith and Roger J.P Kain, *English Maps: A History* (London: British Library, 1999), pp.49-51.

⁸³³ *Phillip Symonson's Map of Kent (1596)*, Leeds, Brotherton Library, Special Collections (SC) Geography C-1.223 fol.SYM.



Fig.97. Christopher Saxton's map of Kent (1579). Leeds, Brotherton Library, Whitaker Collection 1 fol. North is at the top of the (rotated) image.

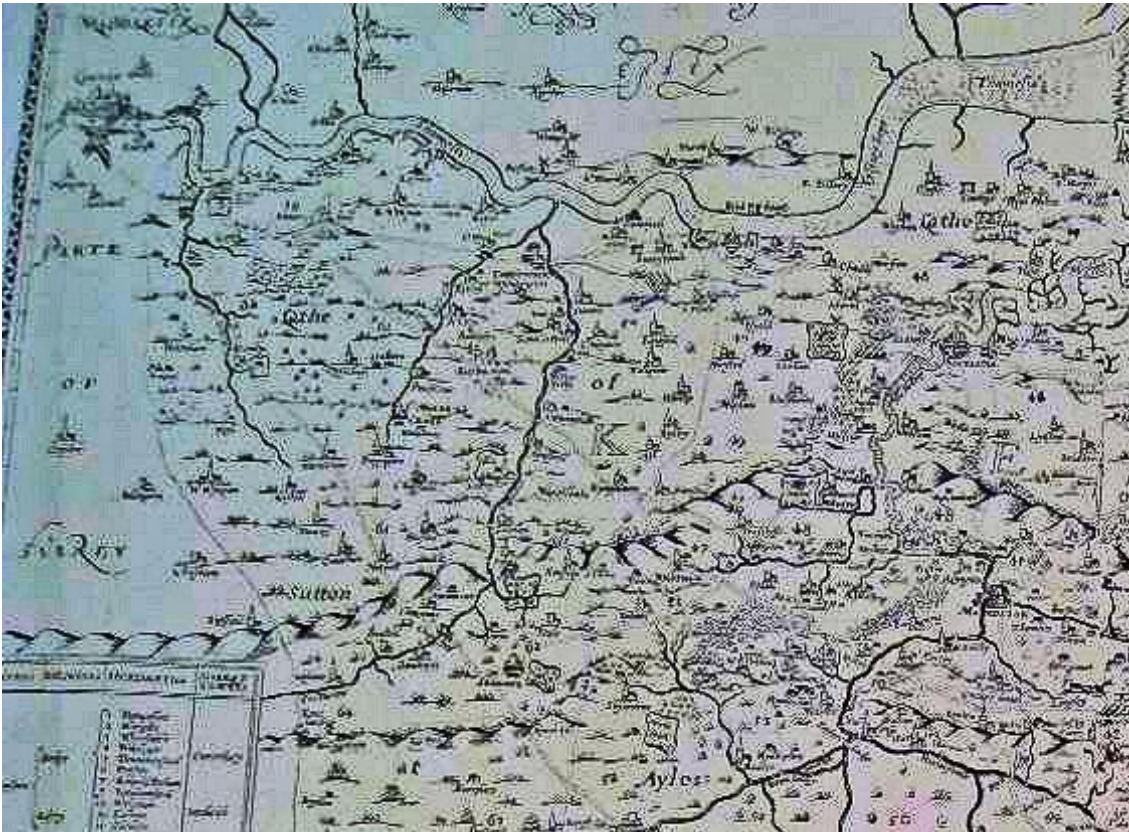


Fig.99. Brotherton, SC Geography C-1.223 fol. SYM . Note the presence of roads and administrative divisions, as well as the Lathe and Hundred names in the bottom left corner. North is at the top of the image.

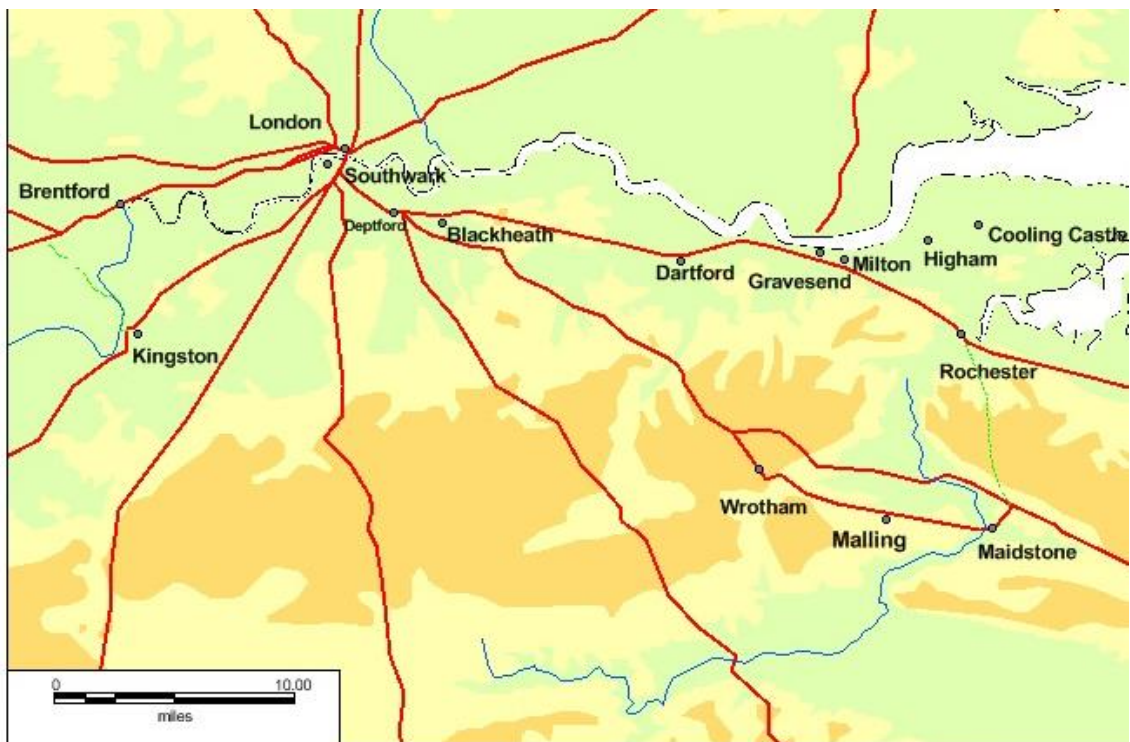


Fig.100. Overview of areas connected with Wyatt's Rebellion. North is at the top of the image. Major post roads (shown by Ogilby) are depicted in red, while relevant minor roads (shown by Symonson and Norden) are in green. Tributaries of the Thames are shown in blue. The rebels gathered at Maidstone (bottom right) on 25 January, before marching to Rochester on 26 January. On 28 January their reinforcements were intercepted at Wrotham, but the loyalist assault on Rochester was abandoned after the defection of their forces to Wyatt. On 29 January the rebels occupied Cooling Castle, before marching to Southwark, arriving on 3 February. Unable to cross the Thames, the rebels marched to Kingston on 5 February and reached London via Brentford on 6/7 February.

The Rebel Forces

Although Wyatt's army was relatively small, fought only one battle, and engaged in few sieges, the revolt was unusually well-documented in primary accounts because of its location, timing, and the threat it posed to Queen Mary. This has ensured that valuable information regarding the insurgents' military forces has been preserved, facilitating further investigation. Accordingly, this section will consider the resources mobilised in Wyatt's uprising under the thematic headings of leadership and organisation, training and experience, and equipment and supplies, as a means of assessing the degree to which the rebels assembled a conventional army.

Leadership and Organisation

Wyatt's uprising had a different developmental path to previous revolts like the Pilgrimage of Grace and 1549 insurgencies, which often grew from mass protest movements and were driven by the grievances of the commons. Although Wyatt gained substantial popular support in Kent, largely through circulating anti-Spanish propaganda, his followers also included members of the upper social echelons. This produced a significant challenge to Mary's government, confronting it with elements of a hostile political class, rather than one which had been co-opted, persuaded, or intimidated into offering direct support or tacit acceptance of a commons-led revolt.⁸³⁴ As the Tudor military depended upon England's nobility and gentry to mobilise personnel and command soldiers in battle, the willing presence of these individuals amongst Wyatt's army made it organisationally comparable to the Queen's forces. While distinguished members of the Tudor political establishment, like the Carews, Croft and Grey, have been identified as Wyatt's associates, their role, and that of their subordinates, within the rebellion's military phase must be defined.

Wyatt himself had considerable combat experience, having led a company of 100 men in France during 1544 and 1545, having been knighted and appointed commander of the garrison at Basse-Boulogne, and having participated in the Earl of Surrey's defeat at the

⁸³⁴ Fletcher and MacCulloch, pp.132-4.

skirmish of St Étienne (1546).⁸³⁵ His military qualifications were supplemented by a corresponding political involvement, serving as Knight of the Shire for Kent at the 1547 parliament, Sheriff from 1550 to 1551, and holding extensive lands within the county.⁸³⁶ Additionally, in 1549, prior to that summer's rebellions, he wrote a treatise advocating a selective militia composed of better trained and equipped soldiers to guard against unexpected invasion.⁸³⁷ This combination of regional political power, practice of warfare, and an interest in military affairs rendered Wyatt a particularly dangerous rebel, yet his experience was not uncommon and was paralleled by many of his contemporaries. Peter Carew, for instance, had also seen military service, fighting as a volunteer in several continental wars and playing a prominent role in the suppression of the 1549 Prayer Book Rebellion.⁸³⁸ He had similarly combined this career with county politics, mirroring Wyatt's trajectory by being Sheriff of Devon in 1546-7 and Knight of the Shire to the 1553 parliament.⁸³⁹ As these examples demonstrate, the rebels' high commanders, responsible for overseeing the rising in their own shires, was composed of well-connected, politically involved military veterans capable of harnessing their county's resources. Their failure to do so, as occurred in Devon, Herefordshire, and the Midlands, owed more to the unexpected speed of Wyatt's rising, rather than their inability to recruit supporters.

Furthermore, this trend extended beneath the high-status figureheads of the insurgency's leadership, with many lower-ranking Kentish rebels holding similar military and political qualifications. For instance, of the five Sheriffs immediately preceding Southwell, the incumbent during the uprising, four of them, George Harper, Thomas Culpepper, Thomas Wyatt, and Henry Isley, became rebel leaders.⁸⁴⁰ Their tenure of this office, which required them to administer and assemble the militia, would have given them organisational expertise directly applicable to their subsequent activities. As in conventional Tudor warfare, the chief duty of these knights and gentry would have been raising and equipping the insurgent forces, either deploying their own servants and retainers, or drawing soldiers from the militia. Consequently, the composition of the rebel leadership would have allowed it to control, and arguably embody, the state's military apparatus. This process can be demonstrated by Proctor, who described the transparent use of official infrastructure to muster the rebel forces:

⁸³⁵ Ian W. Archer, 'Thomas Wyatt (1521-1554): Soldier and Rebel', in *Dictionary of National Biography* <<http://0-www.oxforddnb.com.wam.leeds.ac.uk/view/article/30112?docPos=2>> [accessed 24 March 2012] (para.2 of 14).

⁸³⁶ *Papers of George Wyatt*, pp.8-9.

⁸³⁷ *Ibid.*, pp.163-9.

⁸³⁸ John Hooker, 'Life of Sir Peter Carew', repr. in *Archaeologia*, 28 (1840), 96-119.

⁸³⁹ J.P.D Cooper, 'Peter Carew (1514-1575): Soldier and Conspirator', in *Dictionary of National Biography* <<http://0-www.oxforddnb.com.wam.leeds.ac.uk/view/article/4634>> [accessed 24 March 2012] (paras.4-7 of 15).

⁸⁴⁰ Edward Hasted, *The History and Topographical Survey of the County of Kent* (Canterbury: Simmons and Kirkby, 1798), p.111.

Wyatt, Thomas Isley, and others were occupied at Maidstone [...] so were others his confederates occupied in like manner [...] at Milton, Athford, and other towns in the East parts of the shire. [...] Sir Henry Isley, Anthony Knevet, William Knevet with others, were at Tunbridge, Sevenoak, and other towns in the west parts of the shire, stirring the people by alarms, drums and proclamations.⁸⁴¹

As the extract shows, Wyatt and his subordinates, Sir Thomas and Henry Isley and Sir Anthony and William Knevet, employed the customary ‘alarms, drums and proclamations’ to muster the militia as though for an external military campaign. Additionally, their position as holders of local authority, coupled with their access to networks of political association, kinship and service, gave them the means to raise forces across Kent, with each rebel drawing support from his own region. Possession of key administrative areas like Rochester and Maidstone, both of which lay at the centre of their Hundred, would ease the organisational burden of amassing rebel forces and would have given the resultant musters a façade of legitimacy.⁸⁴² In the rising’s initial stages this appearance of legality served a useful purpose, with insurgent leaders employing their influence to hinder the loyalists’ response.⁸⁴³ Not only were several Justices of the Peace, like Christopher Roper of Milton, arrested to prevent their interference, but proclamations were issued to falsely denounce Southwell, Bergavenny, and the loyalist gentry, suggesting that they, not Wyatt, were in revolt.⁸⁴⁴ The confusion resulting from this disinformation gave the rebels an unimpeded opportunity to gather troops and supplies from across the county until Mary’s Letters Patent were publicly read at Malling, removing her supporters from suspicion.⁸⁴⁵

The rebels’ exploitation of their official authority demonstrated a fundamental flaw in Tudor government: the reliance of the state upon a quasi-medieval military infrastructure. While this system was effective against isolated risings lacking in political influence, it was vulnerable to subversion by rebel knights and gentry during a conflict between its component members.⁸⁴⁶ This danger can be amply illustrated by the defection of government forces to Wyatt’s army, making any confrontation with the insurgents a risky undertaking for loyalist commanders. The treachery of the Duke of Norfolk’s detachment at Rochester represented the largest single instance of its kind, with over 500 soldiers switching sides at the urging of their captains, whose loyalty was already compromised by association with the rebel leaders and communication with the French ambassador.⁸⁴⁷ As Holinshed attested, Norfolk’s officers were largely responsible for the resulting betrayal, with Alexander Brett and the other militia captains making ‘great and

⁸⁴¹ Proctor, pp.6-7.

⁸⁴² William Lambard, *Perambulation of Kent* (1576), p.39.

⁸⁴³ Proctor, p.12.

⁸⁴⁴ Holinshed, p.1724.

⁸⁴⁵ *Ibid.*

⁸⁴⁶ Fletcher and MacCulloch, pp.132-3.

⁸⁴⁷ Loades, *Tudor Conspiracies*, p.60.

loud shouts sundry times, crying “we are all English men” as the signal to defect.⁸⁴⁸ Nor was this the only such incident, with Wyatt’s son, George, relating an eyewitness account of the unreliability of the government forces outside London:

I have heard also a Gentleman yet livinge in court, and then one there in the queen’s armie report that the Earle of Pembroke had muche adoe bareheaded to intreate his men to stand, and that still where the Earle was not, his men weare bending towards the kentishmen, where voices weare heard, that they would joine with their countrie men.⁸⁴⁹

Equally the Tower Chronicle suggested that a similar, though less dramatic, event may have occurred at Southwark after Wyatt left Deptford, with ‘by estimation about ii thousand men’.⁸⁵⁰ Upon arriving into the town, on 4 February, it was claimed that ‘many men of the country [...] raised and brought thither [...] to have gone against the said Wyatt [...] all joined themselves to the said Kentish rebels.’⁸⁵¹ Although other sources refrain from directly mentioning this, the anonymous *History* appeared to support the rebel army’s expansion en-route to London. This work described Wyatt recruiting ‘about 3000 of the Commons of Kent’ before commencing his advance on the capital, but leaving Southwark with ‘about 4000 men’.⁸⁵² Proctor’s account, supported by Holinshed, corroborates both the *History* and Tower Chronicle estimates, claiming that the initial force mustered in Kent, specified at 2000, had doubled prior to arriving at London, presumably by gaining 1000 men from Rochester and an equal number from Southwark.⁸⁵³

As this section has shown, the leaders of Wyatt’s army possessed the necessary credentials, contacts, and experience of government to mobilise their county’s resources for their cause. Equally, their wartime role as military commanders, with nobles, knights and gentry being called upon to lead their own contingents on campaign, provided them with the experience to officer the rebel army. Finally, their status and popularity also made them a severe threat to the Queen’s forces, which risked the defection of their soldiers when attempting to confront them. Wyatt also employed traditional methods of payment and purveyance to maintain his forces, establishing a further parallel with conventional armies. In a fictitious dialogue between the rebel leaders, Proctor has Wyatt claim that ‘such gentlemen as are considered with us keeping appointment, their soldiers shall come ready furnished to bear their own charges for ix [nine] days’, implying that the responsibility for provisioning each

⁸⁴⁸ Proctor, p.39.

⁸⁴⁹ George Wyatt, ‘Defence of Sir Thomas Wyatt the Elder, and Sir Thomas the Younger, Against the Accusations of Nicholas Sanders’, in *Papers of George Wyatt*, fol.4^r.

⁸⁵⁰ *Chronicle of Queen Jane*, p.42.

⁸⁵¹ *Ibid.*, p.43.

⁸⁵² *History*, pp.57, 70.

⁸⁵³ Proctor, p.69.

contingent lay with its commanding officers.⁸⁵⁴ Similarly, the anonymous *History* described how the Duke of Suffolk, recognising his lack of support in the Midlands, ‘distributed what moneys he had amongst his company, to every man according to his worth [and] admonished them to disperse, and shift for themselves’.⁸⁵⁵ In Suffolk’s case, the *History* implied a pay structure, as evidenced by the statement that each soldier was rewarded ‘according to his worth’, presumably at accustomed rates of remuneration. This further strengthens the belief that the rebel leaders operated according to established military conventions and administered their forces identically to those raised for legitimate purposes.

Training and Experience

As Chapter 2 described, the Tudor military was primarily composed of soldiers drawn from the ranks of the militia or retinues, allowing a degree of selection when assembling an army, as, although England’s entire fighting-age male population could theoretically be enlisted, the bulk of these troops were never mobilised. Instead, commanders often recruited from more experienced and better equipped garrison and border troops and from their own correspondingly select personal retinues, only deploying the mainstream militia where other forces were unavailable. The training and experience of the men comprising the bulk of Wyatt’s army was a crucial issue, not only for establishing the relative skill with which rebel and loyalist soldiers handled their weapons, but also for assessing the insurgents’ capacity to adopt the common tactical formations of the period, a key determinant in battlefield performance.

While Proctor demeaned the insurgents’ military prowess, claiming ‘most of them [were] void of all policy and skill’, contemporary eyewitnesses gave different accounts which suggested a degree of tactical ability.⁸⁵⁶ The Tower Chronicle, for instance, asserted that when Wyatt entered Southwark ‘his company came in good array’, and similarly described how, at London, the rebels deployed under banners ‘with iv or v ancients; [the] men marching in good array’, implying an adherence to military discipline and the use of formations.⁸⁵⁷ For this to be the case the insurgents must have included experienced soldiers, the sergeants and viteners equivalent to non-commissioned officers, to organise them into battles and maintain their cohesion during action. Such men may have been provided by the retinues of rebel leaders, or may have been amongst defecting government forces at Rochester and Southwark. Descriptions of the Rochester incident identify the types of soldiers joining Wyatt’s army, with the Embassy Account portraying the composition of Norfolk’s force as follows:

⁸⁵⁴ Proctor, pp.58-9.

⁸⁵⁵ *History*, p.65.

⁸⁵⁶ Proctor, p.69.

⁸⁵⁷ *Chronicle of Queen Jane*, p.43, 48. As noted in Chapter 2, ‘Ancients’ were another term for ensigns.

Unto the which rebellyous was sent [...] the Duke of Norfolke and wth him the capteyne of the gard Mr Jerningham with a vics [600] of the gard, with certeyne other capteynes, as the Earle of Ormond cheiffe, Sr Georg Hayward Sr John Fogge, Captayne Bret Pelham and Phitz Williams wth viic [700] men at uttermost where vc [500] of them they had out of London and the rest prest and taken up at greenwyche and other place.⁸⁵⁸

As the account revealed, the army numbered approximately 1300 men and included a cross-section of English troop types, namely the Yeomen of the Guard, retinues, and militia, organised under several knights and gentlemen. The Guard, one of England's few permanent military bodies, represented the elite of this force and was included within a group of 600 soldiers alongside the troops of 'certeyne other capteynes'. This can be confirmed by Proctor, who, in specifying that Norfolk's force incorporated 'certain of the guard [...] to the number of cc [200]', implicitly separated these soldiers from the other 400 men of their contingent.⁸⁵⁹ Given that the forces of the 'other capteynes' were identified with the Guard, rather than the militia, they were likely to have been retinue members armed and trained to a high standard. The militia were similarly divided between those 'vc of them had out of London' and the remaining 200 who were 'prest and taken up at greenwyche and other places', presumably en-route to Rochester. Of the two contingents, the Londoners, who rendezvoused with Norfolk's forces at Gravesend, were clearly superior, with Proctor describing 'Bret and other five captains [leading] five hundred all in white coats', while the Tower Chronicle mentioned 'about vc [five hundred] of harnessed men' under Brett's command.⁸⁶⁰ This uniformed, armoured regiment represented the pinnacle of England's militia and was heavily reminiscent of the troops assembled for the 1539 London muster, which John Stow claimed were 'all in bright harness, with coats of white silk, or cloth'.⁸⁶¹ Thus, while the force was relatively small, it appears, with a few exceptions, to have contained a high proportion of well-equipped, organised and trained soldiers.

During their resultant defection, the Tower Chronicle related that 'all the Londoners, part of the guard, and more than iii [3] parts of the retinue' joined Wyatt's army.⁸⁶² Even discounting the Yeomen of the Guard, of whom only 'a part' switched sides, the 500 Londoners and 450, of 600, retinue members would increase the insurgency's strength by almost 1000 men. Thus, while Loades presented the Londoners as the sole source of Wyatt's supporters, they were accompanied by comparable numbers of other troops, providing a supply of semi-professional and professional manpower which assisted the mainstay of the rebel army in

⁸⁵⁸ Kennedy, fol.84^f.

⁸⁵⁹ Proctor, p.38.

⁸⁶⁰ Proctor, p.38; *Chronicle of Queen Jane*, p.37.

⁸⁶¹ Stow, p.94.

⁸⁶² *Chronicle of Queen Jane*, p.39.

battle.⁸⁶³ Notwithstanding their inclusion of former loyalists, Wyatt's forces were of a higher calibre than those of earlier insurgencies, which recruited primarily from the general populace. While these armies could be considered analogous with the shire militia, with correspondingly variable levels of equipment and experience, the Kentish rebels benefitted from the greater social standing and resources of their officers. This was chiefly reflected in rebel commanders' mobilisation of their personal retinues, which tended to be better armed and more experienced than the majority of militiamen. Despite this trend, Wyatt's militia scheme, which recommended considerable reform of the existing systems of recruitment, may have impacted on the overall quality of the Kentish levies. For instance, the document called for selective mustering, whereby commissioners, finding prospective militiamen to 'lacke good will and desire to serve as men of warr they maie right justly refuse them, so that [...] other maie be provided'.⁸⁶⁴ Similarly, Wyatt also emphasised the importance of weapon-handling skills, as the extract below shows:

Archers [should] be not onely nymble shooters but also [...] be cleene and lighte men, for by mean of there quick channgeinge of the placis they shall righte often molest and greeve there enemyes [...] And [...] all suche as be weapned withe halberdes and pikes [...] be lighte and nymble in handleng of there weapons.⁸⁶⁵

By requiring that soldiers be 'light and nymble in handleng of there weapons', Wyatt illustrated his appreciation of military drill to familiarise soldiers with their armaments prior to their deployment in battle. This scheme potentially foreshadowed later works by Digges, who may have collaborated in its composition, and also pre-empted calls for the widespread professionalization of English forces along the model of the Elizabethan Trained Bands.⁸⁶⁶ Although Wyatt's selective militia remained unrealised as a result of the mid-century crisis in Tudor government, the project's failure, like Northumberland's comparable attempts to institute a standing force of men at arms, may have resulted in the indirect strengthening of Wyatt's own retinue.⁸⁶⁷ Additionally, Wyatt's tenure as Sheriff (1550-51) would have given him the opportunity to augment the region's militia according to the principles outlined in his treatise, and suggests that he took undertook frequent mustering and training while occupying this role.⁸⁶⁸

The composition of Wyatt's forces clearly mirrored that of conventional English armies, incorporating elements from across the military spectrum, and including elite troops from the Guard, retinues, and London militia. These formations, which encompassed a substantial

⁸⁶³ Loades, *Tudor Court*, pp.156-7.

⁸⁶⁴ Thomas Wyatt, 'Treatise on the Militia', in *Papers of George Wyatt*, fol.3^r.

⁸⁶⁵ Wyatt, 'Treatise', fol.6^v.

⁸⁶⁶ *Papers of George Wyatt*, p.163.

⁸⁶⁷ See Chapter 2 for more details.

⁸⁶⁸ Fletcher and MacCulloch, p.94.

portion of the insurgency's total strength, were supported by the more numerous Kentish militia, whose training and drill may have been significantly enhanced through Wyatt's influence in the years preceding the uprising.

Armaments and Supplies

Evidence of the rebels' extensive armament suggested that Wyatt's soldiers were not only equipped with pikes, handguns, and body armour, but were also supported by a sizeable artillery train. This was demonstrated by Holinshed's description of a skirmish at Charing Cross, during Wyatt's attack on London, which emphasised the high standard of the rebels' equipment:

At Charing Cross [the loyalists] joined with those rebels, half armed, and half unarmed, at the push of the pike [...]. In this conflict [...] there was not found slain to the number of twenty of those rebels, which happened by reason that upon their joining with the Queen's soldiers, the one part could not be discerned from the other, but only by the maize and dirt taken by the way, which stuck upon their garments.⁸⁶⁹

This extract allows several observations to be made regarding the army's armament. Firstly, and most crucially, Holinshed's assertion that Wyatt's followers 'could not be discerned from the other' except by the travel-worn condition of their clothes eloquently expressed the degree to which the rebels' accoutrements mirrored those of their adversaries. Secondly, the description of the encounter as a 'push of the pike' implied that these weapons were deployed in large numbers by Wyatt's troops. Finally, the fact that the insurgents were 'half armed [armoured], and half unarmed [unarmoured]' is impressive in an era when 'harness' or body armour was often in short supply in England, as Audley's contemporary manual attested.⁸⁷⁰ Further evidence for this use of 'harness' can be found in Proctor's description of the skirmish at Wrotham, which claimed Isley's rebels were 'all very well armed (and weaponed)'.⁸⁷¹ The specific mention of the insurgents being 'weaponed' removes any ambiguity from Proctor's words, demonstrating that 'well armed' referred to body armour and not armaments.

These same sources characterised the rebels' use of missile weapons, attesting to their deployment of longbows at both Wrotham and London, and of handguns during their stay in Southwark. At Wrotham, Proctor reported that loyalists quickly scattered their enemies 'after a small shot with long bows by the traitors', while at London, a party of insurgents attacked the court at Whitehall and 'shot diverse arrows' into the open gate, windows, and grounds.⁸⁷² At

⁸⁶⁹ Holinshed, p.1731.

⁸⁷⁰ See Chapter 2.

⁸⁷¹ Proctor, p.32.

⁸⁷² Proctor, p.31, p.72.

Southwark, the Tower Chronicle described how ‘hagabusyars of Wyatt’s company’ interdicted loyalist river traffic on the Thames by opening fire upon boats departing the Tower.⁸⁷³ While it is impossible to calculate the relative quantities of rebel archers and arquebusiers based on these sources, the rare mentions of firearms usage, alongside reports of bows’ deployment in action, seems to suggest that the latter weapons were more commonly available. This mirrors the uneven distribution of modern and traditional English military technology observed in Chapter 2, and has corresponding implications for exploring the rebels’ procurement of such armaments.

While pike and shot usage was far from rare in England at this time, with both weapons frequently being deployed in support of the bow and bill, neither pikes nor handguns were in widespread circulation amongst the militia. Instead, their importance in international warfare meant that limited quantities tended to be concentrated in strategically important areas along with appropriately trained personnel.⁸⁷⁴ Such stockpiles, along with supplies of ‘harness’, were often held by private armouries and garrisons ready for distribution in the event of an emergency, and so would have been available to the rebels upon gaining control of these sites. Wyatt’s march to Southwark, along the route depicted on Symonson’s map (Fig.99), encompassed stops at several government storehouses, including Gravesend, Milton and Deptford, while similar repositories, at Cooling Castle and Higham, lay within easy reach of his route (see Fig.101, below).⁸⁷⁵ Henry VIII’s Inventory confirms that the bulwarks of Gravesend, Milton and Higham contained an estimated total of 72 bills, 65 bows, 58 pikes, and 60 handguns, a near even distribution of weapons, while Deptford, site of a Tudor naval base, would probably have had similar resources.⁸⁷⁶

⁸⁷³ *Chronicle of Queen Jane*, p.45.

⁸⁷⁴ *Inventory*, fols.258^r-69^r.

⁸⁷⁵ Holinshed, *Chronicles*, pp.1727-9.

⁸⁷⁶ *Inventory*, fols.258^r-262^r; Lambard, p.335.

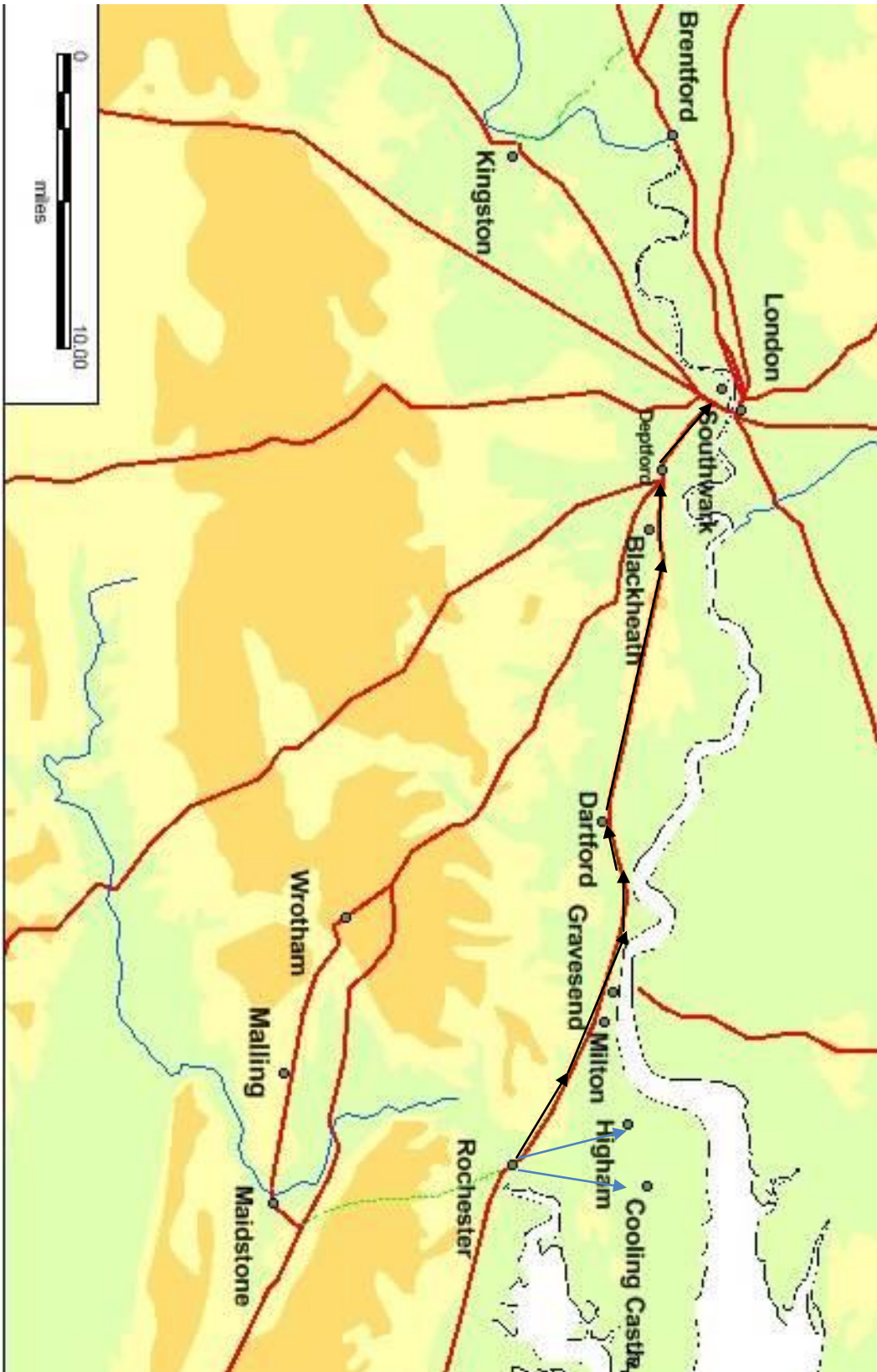


Fig.101. Wyatt's route (marked with black arrows) from Rochester (right) to Southwark (left). The rebels left the road to secure government storehouses at Higham and Cooling Castle (shown with blue arrows), before moving through Milton and Gravesend, to Dartford, and reaching Southwark via Deptford. North is at the top of the (rotated) image.

Nor were these depots the only source of supplies, with Proctor recounting the systematic looting of loyalist Kentish gentry's property, stating that Isley and the Knevets's forces 'rifled Sir Henry Sydney his armoury', and intended to 'burn and spoil the house of George Clarke', when they were intercepted at Wrotham.⁸⁷⁷ The insurgents' possession of Rochester, a major way station en-route to London, also enabled them to interdict the influx of supplies to the capital, further increasing their armament while removing these weapons from circulation and preventing their acquisition by loyalists. As Proctor described, Wyatt's forces 'suffer[ed] all passengers to pass quietly through the town [Rochester] to London, [...] taking nothing from them but only their weapon'.⁸⁷⁸ Many of Wyatt's co-conspirators also amassed their own collection of armaments as a legitimate part of their role in local government. For instance according to the Statute of Winchester, which specified the obligations of the militia, members of the community unable to provide themselves with weapons were to be equipped by local knights and gentry, effectively requiring that wealthy individuals maintain private armouries for this purpose.⁸⁷⁹ In Kent, these measures may have been particularly prevalent owing to the instructions set out by Wyatt's militia treatise, which recommended that local authorities distribute 'harness' while tightly controlling access to weapons in a bid to simultaneously increase the quality of levies and minimise the risk of insurrection.⁸⁸⁰ The work also delineated the correct equipment for each category of soldier, listing the requirements for archers, pikemen, and halberdiers:

When they shall appeere at the generall musters [...] archers [require] a good coate of leather on there bodies [...] good lighte scoolles for there heddes and splyntes for there leaft armes. Also [...] good swoordes and shorte daggers and [...] a good bowe [...] and [...] sheafe of arrowes, bothe of them being well cased with leather. Also [...] three good bowstringes which must also be cased, that they neither take wete or be fraied in the carriage. [...] All suche [...] weaponed with pikes and halberdes [...] be armed on the hedd armes and body with good and stronge harnes, also girte with good swoordes and shorte daggers. And [...] of stronge and handsom pikes, and [...] stronge halberds.⁸⁸¹

Wyatt's recommendations foreshadowed those of later instructional manuals, by Barrett and Digges, emphasising the author's close engagement with England's military milieu.⁸⁸² Foremost amongst these trends is the insistence upon protective equipment, advising close-quarter fighters 'be armed on the hedd armes and body with good and stronge harnes', and archers 'a good coate of leather [...] good lighte scoolles [...] and splyntes'. Although Wyatt's plans were never

⁸⁷⁷ Proctor, p.13; Holinshed, p.1725.

⁸⁷⁸ Proctor, *Wyates Rebellion*, p.12.

⁸⁷⁹ Cruickshank, *Elizabeth's Army*, pp.12-17.

⁸⁸⁰ *Papers of George Wyatt*, p.165.

⁸⁸¹ Wyatt, 'Treatise', fols.7^r-7^v.

⁸⁸² See Chapter 3.

officially implemented, he and his associates in Kent may have adhered to the principles contained therein, making for a better-armed body of followers upon the outbreak of rebellion.

Finally, defecting government soldiers represented another vector for the procurement of armaments, with Chapter 2 detailing how urban militias like the London ‘white coats’ were often armed with pikes and handguns rather than the longbows and bills prevalent amongst provincial forces. The Tower Chronicle provided several examples in support of this assertion during its relation of events at Rochester, which alluded to the presence of both armoured soldiers and arquebusiers in the London contingent. In the first instance the Londoners were recorded as comprising ‘about vc [five hundred] of harnessed men’, demonstrating that they wore body armour, while, during their treachery at Rochester ‘each man turned their ordnance against their fellow’.⁸⁸³ This explicit identification of the unit’s ‘ordnance’ with individual soldiers, rather than the army’s artillery train, may suggest that a portion of the insurgency’s gunpowder small arms were gained from defecting arquebusiers at Rochester.

However, even if the London contingent obeyed Audley’s recommendation that ‘the third part [should comprise] shot’, disregarding the caveat that English armies tended to arm at least half of their missile troops as archers, this would only result in approximately 167 handguns, or scarcely one in twenty of the rebel army.⁸⁸⁴ Given that the ‘white coats’ formed only one part of Norfolk’s force, they may have supplied the bulk of the army’s arquebusiers, with men from the less well-equipped militia units providing comparable numbers of archers. Thus, when the ‘white coats’ weapons were supplemented by those seized from government storehouses, the rebels may have deployed approximately 250 arquebusiers, which presumably supported a far greater number of longbows. In this context, the rebels’ handguns may have been reserved for specialist duties, such as patrols and sieges, where their longer effective range and greater stopping-power were deemed more valuable than rapidity of shooting, which was provided by the longbow.⁸⁸⁵

In addition to the personal equipment of rebel soldiers, chronicles also attested to Wyatt’s capture and deployment of large numbers of artillery pieces. Some of these weapons, such as the ‘iii [3] or four double cannons’ stationed at Rochester bridge by the rebels, may have been removed from urban defences, while others were obtained from either government depots or from large-scale defections.⁸⁸⁶ For instance, after the Rochester incident, Proctor affirmed that Wyatt left the town the following day ‘in great pomp and glory, carrying with him vi [6] pieces of ordnance which they had gotten of the queen’s besides their own’.⁸⁸⁷ The Tower Chronicle, in reporting the same events, estimated the capture of greater numbers of artillery,

⁸⁸³ *Chronicle of Queen Jane*, p.39.

⁸⁸⁴ Audley, 17.

⁸⁸⁵ See Chapter 3.

⁸⁸⁶ *Chronicle of Queen Jane*, p.38.

⁸⁸⁷ Proctor, p.48.

claiming ‘the duke [of Norfolk] lost viii [8] pieces of brass, with all other munition and ordnance’.⁸⁸⁸ Thus, by 28 January, the rebels would have been accompanied by between ten and twelve cannon, including the ‘pieces of brass’, which were likewise referred to in the anonymous *History* as ‘great brass pieces’.⁸⁸⁹

The division of artillery into two categories, that of the itemised ‘double cannon’ and ‘pieces of brass/great brass pieces’, which, as Chapter 3 discussed, were primarily employed in sieges, and the ‘other [...] ordnance’, suggests that Wyatt’s force may also have possessed smaller field guns. Further evidence that these named weapons were intended for sieges can be found through the examination of Elizabethan artillery treatises, such as William Bourne’s *Art of Shooting in Great Ordnance*. In this work, an ‘old double-cannon’ was identified as firing roundshot with an 8” diameter and 70lb weight, clearly sufficient for siege operations.⁸⁹⁰ This practice of chronicles chiefly recording heavy ordnance can also be seen at the battle of Pinkie, in which a much larger English army containing approximately 18,000 troops was supported by ‘fifteen pieces’ of ‘great ordnance’, in addition to substantial quantities of smaller cannon.⁸⁹¹ While the army at Pinkie would have contained far more artillery than the rebels, indeed Caldwell has speculated it may have deployed up to 80 field pieces, it is interesting to note Wyatt’s possession of an almost identical number of heavy guns.⁸⁹²

The reasons for this may have stemmed from the rebels’ partial acquisition of their ordnance through treachery, with Norfolk’s artillery train, under the command of Sir Edward Bray, Master of Ordnance, containing many siege weapons for an intended bombardment of Rochester.⁸⁹³ Additionally, capturing arsenals and depots en-route to Southwark would have furnished Wyatt’s army with large quantities of heavy artillery, which tended to be stored in such areas for safekeeping. Henry VIII’s inventory not only confirmed this trend, but also listed the pieces housed at Gravesend, Milton, and Higham, which consisted, in descending power, of 5 demi-culverins, 8 sakers, 5 falcons, 1 robinet, 5 quarter-slings, 15 double-bases, and 13 bases.⁸⁹⁴ While the Inventory, which was written seven years before the rebellion, cannot definitively establish the armaments employed in 1554, it suggests that Wyatt’s artillery train consisted of ten to fifteen siege guns and twice as many field pieces, representing an unusually high amount of ordnance for a small army.

As this chapter has revealed, Wyatt’s forces mirrored the organisation, training, and equipment of mid-sixteenth-century English armies, being effectively indistinguishable from the

⁸⁸⁸ *Chronicle of Queen Jane*, p.39.

⁸⁸⁹ *History*, p.71.

⁸⁹⁰ William Bourne, ‘The Art of Shooting in Great Ordnance’ (London, 1587), repr. in Blackmore.

⁸⁹¹ Patten, p.77.

⁸⁹² Caldwell, ‘Pinkie’, p.68.

⁸⁹³ Proctor, pp.38-9.

⁸⁹⁴ *Inventory*, fols.258^r-62^r. See Chapter 3 for discussion of these weapons.

loyalists who opposed them. This was not only reflected in the quality of soldiers and their armaments, but also in the articulation of the army through its command structure, organisation, and procurement of supplies. The following chapter will discuss the way in which these military assets were employed in battle against the loyalist forces at London.

Chapter 8: The Battle of London

Introduction

The Wyatt Rebellion of 1554 witnessed the creation of a potent regional insurgency that seized control of Kent, assembled a substantial army, and threatened London with a *coup d'état*, during a daring, month-long military campaign, triggered by Queen Mary's marriage to Philip of Spain. The rebels' decision to march on London, where they hoped to gain custody of the Queen and possession of the Tower, was significantly accelerated by wider strategic considerations beyond their immediate control, namely the premature instigation of their revolt, and the failure of planned risings in Hereford, Devon, and the Midlands. Similarly, Wyatt's hopes of success were encouraged by the defection of loyalist forces at Rochester, an event which led him to believe that London's inhabitants were equally receptive to his cause. A successful attack on the capital offered the easiest means of securing additional manpower and supplies, while fulfilling the strategic objectives established at the outset of the rebellion. Although, as Chapter 7 has shown, Wyatt's army possessed comparable standards of officering, training and equipment to the Queen's forces, his 3000 to 4000 soldiers were insufficient either to besiege or storm London in the face of government resistance. Thus, the insurgents intended to employ speed and surprise to compensate for their numerical weakness, entering the city and raising the population in revolt before sufficient forces could be mustered to oppose them.

In practice, however, these expectations remained unrealised, with Wyatt being defeated and his army scattered in a brief confrontation with government troops outside London on 7 February. This action, wherein the rebel force disintegrated in a series of skirmishes around the suburbs of Westminster, while attempting to enter the city, has been frequently disqualified as a battle by secondary works documenting the uprising.⁸⁹⁵ However, while the engagement failed to culminate in a decisive clash of armies, in the manner of the 1549 insurgencies, elements of both sides' deployment, subsequent manoeuvres, and tactics render it comparably useful for studying mid-sixteenth-century English warfare. This chapter will briefly detail the later stages of Wyatt's approach march from Southwark to Knightsbridge, between 3 and 7 February, as a precursor to discussing the confrontation between the rebel and loyalist armies. Having ascertained the means by which the insurgents reached their destination, it will define the cartographic sources used to reconstruct the historic landscape, and present an overview of the 1554 battlefield. Finally, after characterising the opposing government forces, the chapter will determine both armies' deployment within the reconstructed terrain, before concluding with

⁸⁹⁵ Loades, *Conspiracies*, pp.72-4.

an assessment of the battle itself, defining the action's key events and their broader implications.

Approach march

The rebels, having stopped to collect supplies at Gravesend, Dartford and Deptford after leaving Rochester, attempted to reach London by the most direct route, approaching Southwark on 3 February, in the hopes of crossing London Bridge. However, their endeavour was thwarted by loyalist forces, overseen by the Lord Admiral William Howard, who, as the Embassy Account depicted, had moved to secure the crossing point:

The third day of February came the rebelles to Southworke, agaist whom imediatly was the bridge brok and cast into the Temes [...] and upon the bridge on this side [...] was thre peecs of ordennce and the bridge well garded wth men well harnest of the cytizens every day and night specially a two thousand.⁸⁹⁶

As this extract shows, the bridge was not only broken down, but was also protected by 2000 'well harnest' or armoured soldiers, comprised 'of the cytizens'. This, as Inwood observed, represented a significant proportion of London's able-bodied population, with citizenship being bestowed upon large numbers of men with an average age of twenty seven, rather than being restricted to a demographically limited elite.⁸⁹⁷ Accounts also attested to the use of artillery to guard the crossing, with the Tower Chronicle describing how, as the rebels entered Southwark, 'there was shot off out of the White Tower [...] vi [6] or viii [8] shot; but [it] missed them, sometimes shooting over, and sometimes shooting short'.⁸⁹⁸ The following evening and the next day, however, the barrage was resumed in response to attacks on loyalist river traffic, the Tower's armament causing sufficient destruction in Southwark to compel Wyatt to withdraw:

The same night [4 February] and the next morning [the Tower] bent vii [7] great pieces of ordnance [...] culveringes and demi-cannons, full against the foot of the bridge and against Southwark, and the ii [two] steeples of Saint Tools and Saint Mary Overies; besides all the pieces on the white tower, one culvering on the Devil's tower, and iii [3] fawkenets over the water gate. [...] the inhabitants of Southwark [...] came to the said Wyatt in most lamentable wise [...] and so in most speedy manner [he] marched away.⁸⁹⁹

The concentration of artillery fire against 'the foot of the bridge' and 'the ii steeples of Saint Tools and Saint Mary Overies', visible on Norden's map of London (Fig.102), suggests that this was where the bulk of Wyatt's army was encamped, with the two churches probably being

⁸⁹⁶ Kennedy, fol.84^v.

⁸⁹⁷ Stephen Inwood, *A History of London* (London: MacMillan, 1998), p.179.

⁸⁹⁸ *Chronicle of Queen Jane*, pp.42-3.

⁸⁹⁹ *Chronicle of Queen Jane*, pp.45-6.

employed as observation posts. While it was unclear what, if any, damage was caused to the rebel forces, the renewed bombardment, coupled with the insurgents' reconnaissance of the north bank of the Thames in the intervening days, convinced Wyatt that the bridge was too heavily defended to risk an assault.



Fig.102. Detail of Norden, 'Map of London', in *Speculum Britanniae*, showing the position of the Tower in relation to the rebel positions in Southwark. North is at the top of the (rotated) image.

Accordingly, Wyatt left Southwark for Kingston, the next closest crossing point, on the morning of 6 February, with sources attesting that he covered the ten miles upstream between eleven and four o'clock.⁹⁰⁰ After driving off a loyalist detachment of 'two hundred armed men' with the threat of their artillery, the rebels took possession of the recently broken down bridge and spent the evening making repairs, Holinshed reporting that it was 'about xi [11] of the clock in that same night' before Wyatt's forces crossed the Thames.⁹⁰¹ Having finally achieved their crossing, the insurgents, keen to regain an element of surprise, pressed on through the night of 6/7 February in a forced march towards London, with accounts relating that they 'came almost to Brayneford [before] they were descried by the queens scouts'.⁹⁰² As the Tower Chronicle observed, the relentless pace of the rebels' advance, shown in Figure 103, was also driven by Wyatt's need to reach London before his army disintegrated under growing logistical shortfalls:

The haste [...] Wyatt and his company made that night was partly for lack of victuals and money, which was then near spent; and partly for that he hoped of better aid of the Londoners than he had before [...]. Some said his intent was to have been in London [...] before day; but hearing that the earl of Pembroke was come into the fields, he stayed at Knightsbridge until day, where his men being very weary with travel of that night and the day before, and also partly feeble and faint, having received small sustenance since their coming out of Southwark, rested.⁹⁰³

As this passage shows, the insurgents' strategic movement was governed by their 'lack of victuals and money' forcing the rebel commanders into aggressive action, while rendering their hopes of success dependent upon the 'aid of the Londoners'. Despite this imperative, the army failed to reach its destination before sufficient forces were mobilised to oppose them, and so was compelled to halt and rest at Knightsbridge. As the *History* described, Wyatt's delay arose from an accident transporting the artillery, wherein 'one of his great brass pieces within six miles of London, overthrew and broke the carriage, so that it became unservicable'.⁹⁰⁴ Rather than abandon their ordnance, however, the rebels spent 'many hours' conducting field repairs, with the result that they failed to reach London until later that morning, with Proctor stating 'it was nine of the clock [...] before [they] came so far as Hyde Park', where they found the loyalist forces assembled to oppose them.⁹⁰⁵

⁹⁰⁰ Proctor, p.67. The Tower Chronicle described Wyatt leaving Southwark 'before xi of the clock before noon', while Proctor recorded his arrival at Kingston at 'about iiii of ye clock in the afternoon'.

⁹⁰¹ *History*, p.70; Holinshed, p.1730.

⁹⁰² *Chronicle of Queen Jane*, p.47.

⁹⁰³ *Chronicle of Queen Jane*, pp.47-8.

⁹⁰⁴ *History*, p.71.

⁹⁰⁵ *History*, p.71; Proctor, p.68.

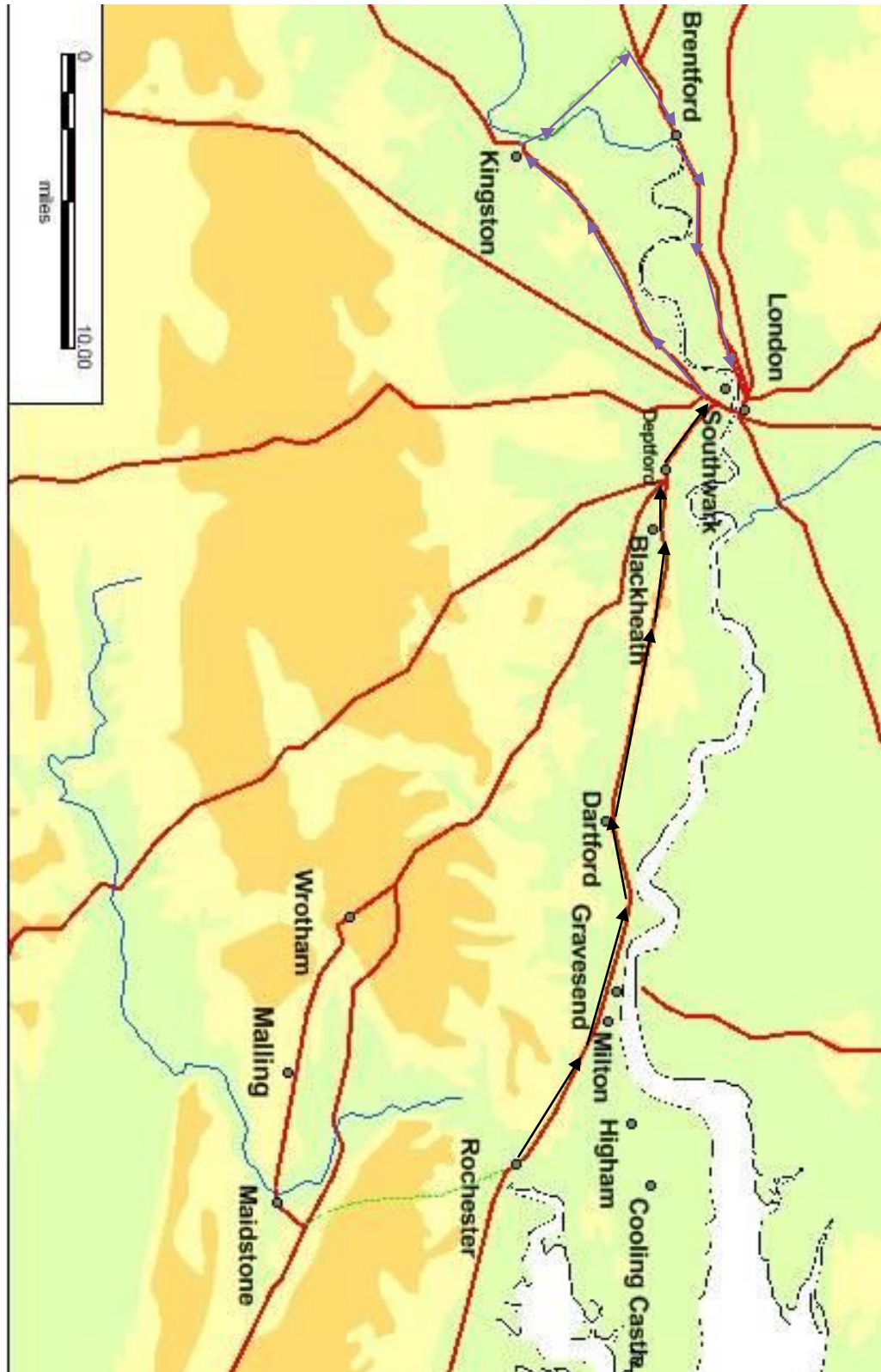


Fig.103. Wyatt's approach march to London based upon the road network shown by Norden, Symonson, and Ogilby. North is at the top of the (rotated) image. Major roads are shown with red lines, while minor roads are shown as dotted green lines. The rebels' movements up to 3 February (when they entered Southwark) are shown with black arrows, while those of the 6/7 February, during which they travelled to London from Southwark via Kingston and Brentford, are depicted with purple arrows.

Cartographic Sources

The unusually detailed narrative accounts of Wyatt's attack on London are supplemented by a broad range of cartographic material, showing the evolution of the landscape from the sixteenth to the nineteenth century. Such sources are vitally important for reconstructing the battlefield's topography, but must be individually described and interpreted before they can be employed for map regression in GIS. This process, as outlined in the thesis' introduction, allows discontinuities in the maps' representation of key terrain features to be identified and compensated for, and so is a necessary precursor to conjectural assessments of the terrain and both armies' deployment and subsequent manoeuvres.

The first printed map of London was that contained within Georg Braun and Franciscus Hogenberg's *Civitas Orbis Terrarum* (1572), a reduced-scale reproduction of an earlier copperplate engraving dating from between 1559 and 1561.⁹⁰⁶ Analysis of these works' stylistic conventions, labelling in Dutch, Italian and English, and depiction of no longer extant architectural features has confirmed their shared origin and identified the copperplate's probable draftsman as the Dutch cartographer Anthony van de Wyngaerde.⁹⁰⁷ Wyngaerde was known to have been in England during this period, and had sketched an earlier panorama of London and Westminster, known as the 'Long View', between 1540 and 1550, which incorporated many of the same aesthetic idiosyncrasies.⁹⁰⁸ The copperplate can also be authenticated by recent studies of Stow's *Survey*, which suggest that the author, who was over seventy when his work was published, used the map as an *aide memoir* from which to describe long-since demolished buildings.⁹⁰⁹ The map (Fig.104) displayed an elevated view of London, which at this time encompassed little more than the square mile between the Tower and Temple Bar, and the adjoining suburb of Westminster, lying a mile westwards along the Thames but connected to the city via a string of private manors.

⁹⁰⁶ Martin Holmes, 'An Unrecorded Map of London', *Archaeologia or Miscellaneous Tracts Relating to Antiquity*, 100 (1966), 105-128 (p.106).

⁹⁰⁷ Stephen Powys Marks, *The Map of Mid Sixteenth Century London: An Investigation into the Relationship Between a Copper-engraved Map and its Derivatives* (London: London Topographical Society, 1964), pp.11-12.

⁹⁰⁸ James Howgego, *Printed Maps of London circa 1553-1850*, 2nd edn. (London: W & J Mackay 1978), p.9.

⁹⁰⁹ Martin Holmes, 'A Source-book for Stow', in *Studies in London History*, ed. by A.E.J Hollaender and William Kellaway (London: Hodder & Stoughton, 1969), pp.273-285 (p.283).

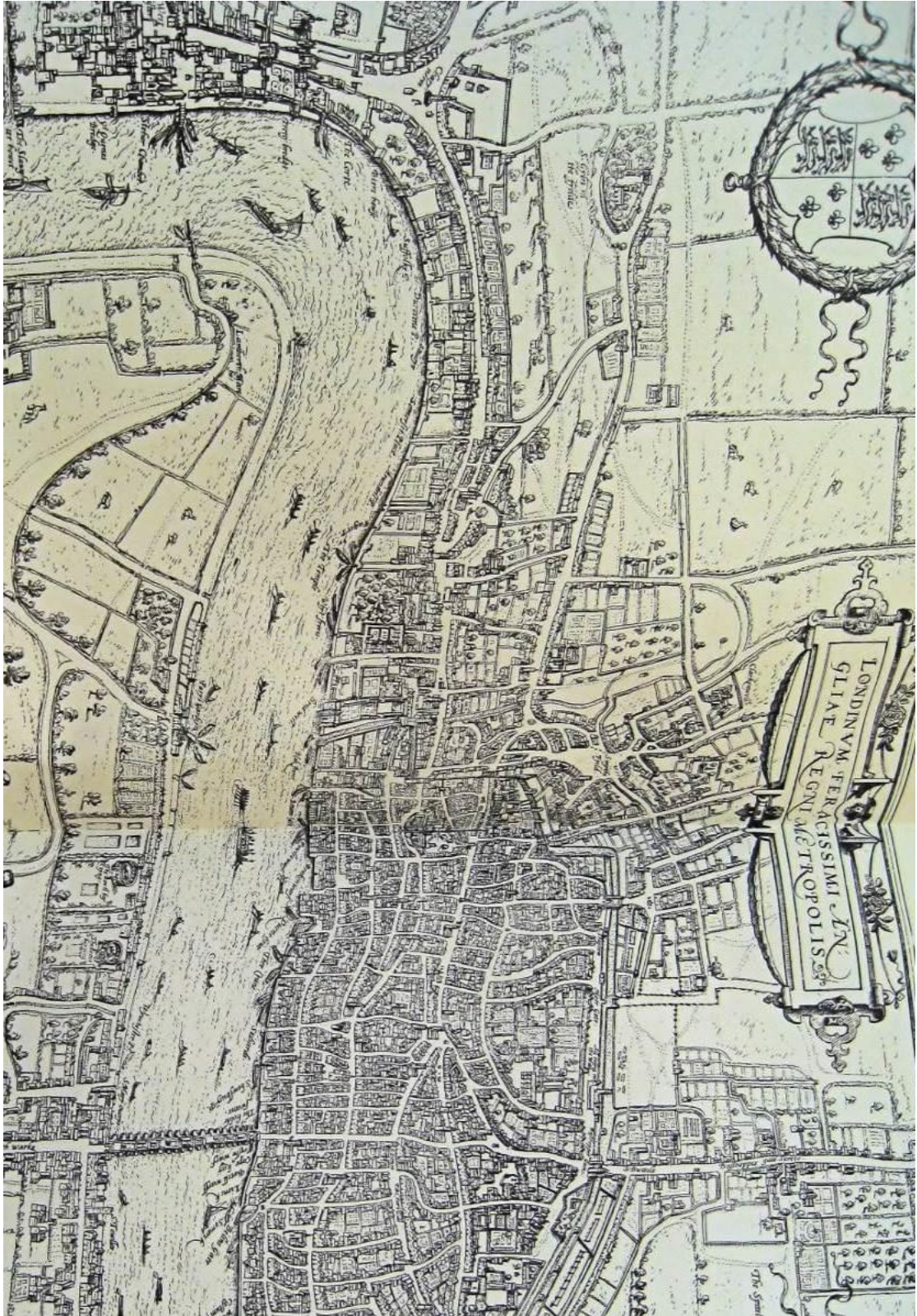


Fig.104. Georg Braun and Franciscus Hogenberg, *Civitates Orbis Terrarum* (1572), repr. in *A Collection of Early Maps of London, 1553-1667*, ed. by John Fisher (Kent: Harry Margary, 1981). North is at the top of the (rotated) image.

Further reproductions of Wyngaerde's map exist in the form of a near-contemporary woodcut (1562/3), attributable to Giles Godhed but erroneously associated with the surveyor Ralph Agas, and several eighteenth-century pewter engravings by George Vertue.⁹¹⁰ These works, however, are significantly inferior to the copperplate, with errors in representation giving them limited utility. The 'Agas' woodcut, for example (Fig.105), distorted the Thames to provide an abstract depiction of the land north of London, but in doing so omitted the area west of Westminster Abbey, one of the sites associated with Wyatt's attack.⁹¹¹ Similarly, Vertue's engravings were of poor quality and, despite showing areas missing from the woodcut, lacked detail as a consequence of material factors, with the softness of pewter requiring simpler methods of production than those used in woodcutting.⁹¹² Additionally, Vertue may have amended his engravings to reflect changes in London's topography, rendering the images less representative of the city's sixteenth-century environment.⁹¹³ The least unreliable form of these copies is an anonymous circa 1560 map found within Maitland's *History of London*, which amalgamated the woodcut and the first draft of the pewter engravings to produce a composite image lacking Vertue's later alterations. The image's angle of elevation is also sufficient to identify key features, such as street names, amidst the densely rendered network of houses, as Figure 106 shows.

⁹¹⁰ Marks, p.14.

⁹¹¹ *Ibid.*, pp.14-16.

⁹¹² *Ibid.*, pp.18-19.

⁹¹³ *Ibid.*

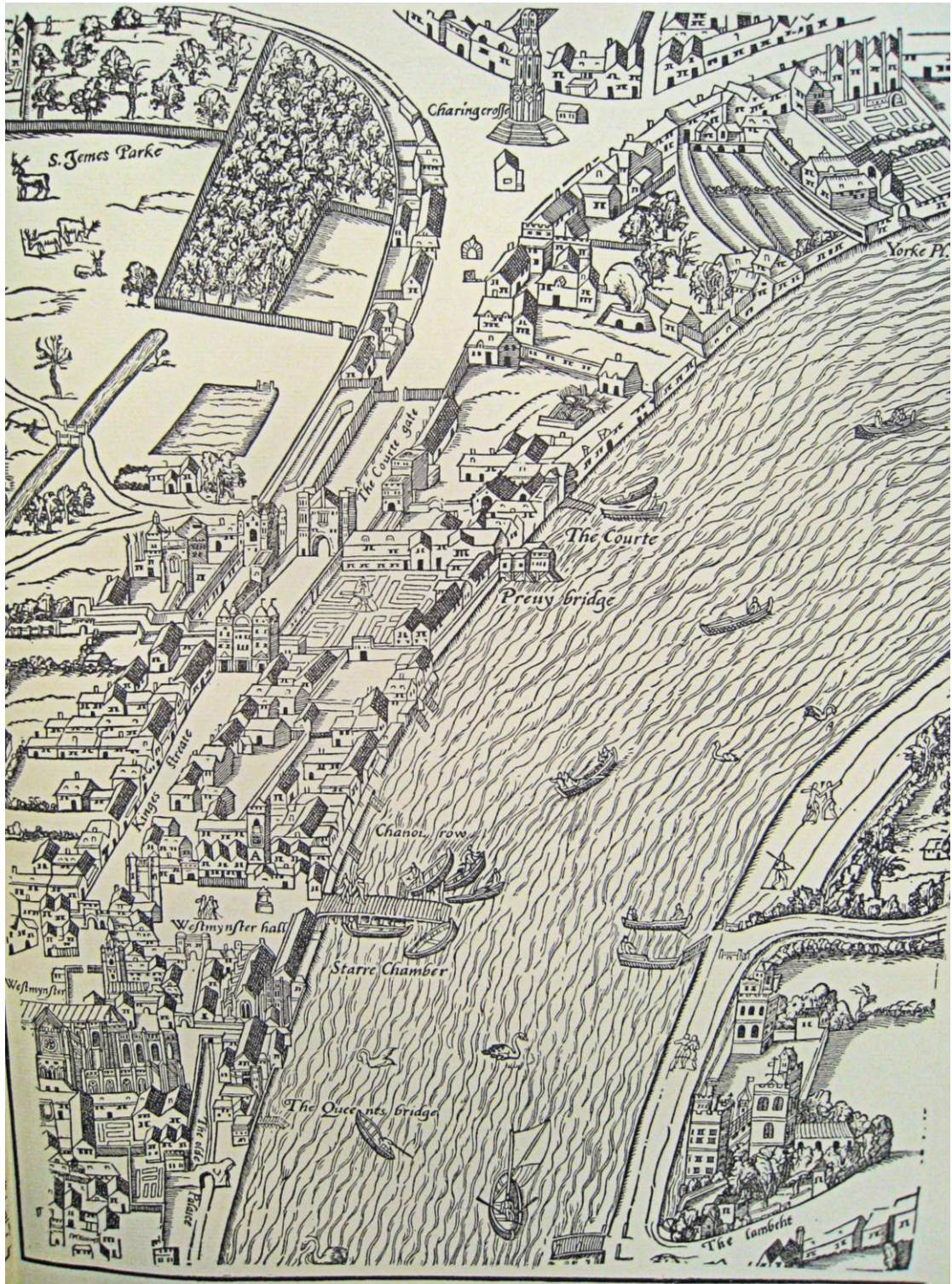


Fig.105. *The 'Agas' Map* (Giles Godhed, 1561), Westminster Archives Centre (WAC) A03A0194. Note the gentle south west curve of the Thames at Westminster, as opposed to the sharper southerly course depicted on Hogenberg's map (Fig.104).

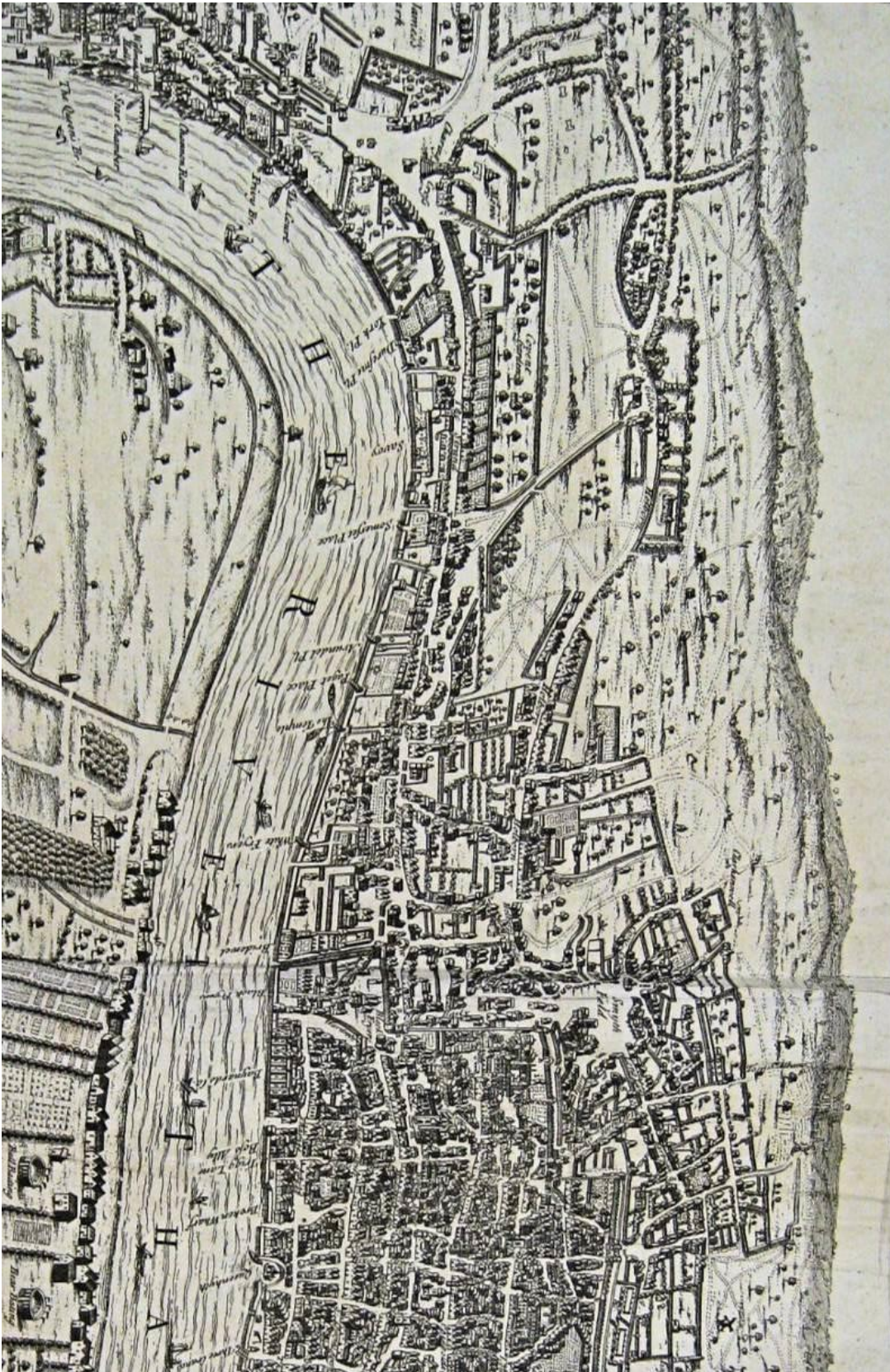


Fig.106. *Anonymous map (c. 1560)*, repr. in William Maitland, *History of London* (London: Samuel Richardson, 1739). This map is believed to be an amalgamation of the woodcut and Vertue's pewter engravings.

The survival of various reproductions of Wyngaerde's map, which was potentially created within five years of Wyatt's Rebellion, provides a rich seam of evidence for London's urban landscape at the time of the insurgents' attack. However, attempts to utilise the copperplate's derivatives for terrain reconstruction are hindered by the map's limited coverage and cartographic shortcomings. In the first instance, the failure to depict the land west of St Giles's Field, Charing Cross, and Westminster, presents problems when analysing the main stages of the battle of London, most of which occurred within this area. Secondly, the work's execution in elevation, a common sixteenth-century device to display buildings to their best architectural advantage, distorted terrain features to fit within the confines of the map and precluded the use of an accurate horizontal scale.⁹¹⁴ For example, St Giles's Field, west of St Giles's Church, is shown at a greatly reduced scale, leading to the distortion of both surrounding fields and road networks, with St Martin's Field, north of the Royal Mews, being elongated at its northern edge and the road from Knightsbridge ascending northeast at a steeper angle.

The proof of these issues, and a means to compensate for their influence, can be found in a 1585 legal deed concerning a field called 'Geldings Close', which lay amidst the land west of St Giles's Church and north of St James's Park. The area was at the centre of a complex dispute arising from the competing claims of several local landowners, and was surveyed and mapped during the resulting proceedings, producing a colour-coded, bird's-eye view (Fig.107), which denoted the ownership of the surrounding fields.⁹¹⁵ This proves highly significant for reconstructing Wyatt's attack, showing the land east of the Tyburn and overlapping with the western sections of Wyngaerde's panorama, exposing the earlier work's errors by showing the same area at an internally consistent scale. While the deed listed the majority of fields between the Tyburn and St Giles's Field as 'parcels', as distinct from a small number of 'closes' around modern day Old Bond Street and Coventry Street, its map showed gates at the entrance to these 'parcels', suggesting that they were also enclosed. This assertion is supported by Wyngaerde's plan (Fig.108), which portrayed St Martin's and St Giles's Fields as large closes, depicted hedged areas north of Oxford Street, and showed field boundaries at the edges of St James's Field. By doing so, the panorama implied that the gated 'parcels' shown by the Geldings Close map were undivided patches of common land, separately enclosed behind ring hedges.

⁹¹⁴ Peter Whitfield, *London: A Life in Maps* (London: British Library, 2006), p.55.

⁹¹⁵ Charles Lethbridge Kingsford, *The Early History of Piccadilly, Leicester Square, Soho & Their Neighbourhood Based on a Plan Drawn in 1585 and Published by the London Topographical Society in 1925* (Cambridge: Cambridge University Press, 1925).



Fig.107. 'Geldings Close' Map, drawn by R. Tiswell (1585), Westminster Archives Centre (WAC) A03A1367. The letters W, A, and B, denote the respective owners of each field. North is at the top of the (rotated) image.

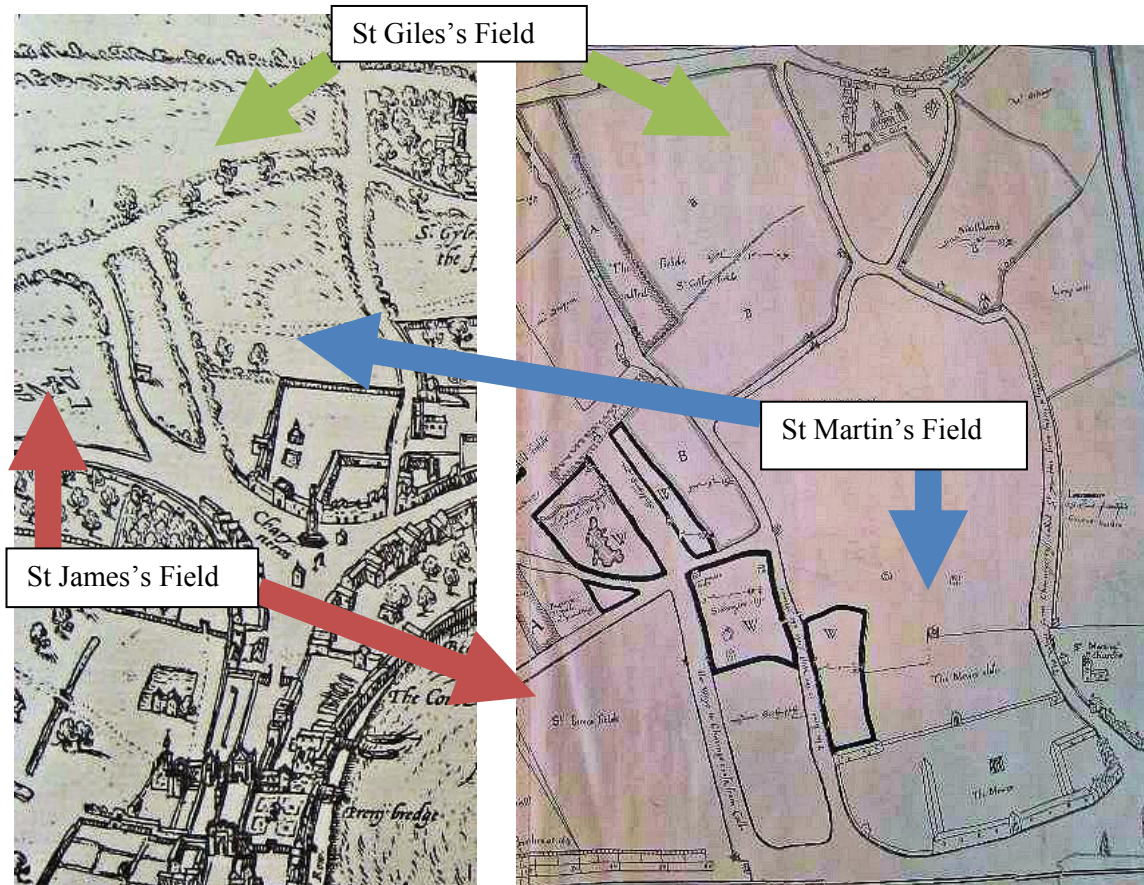


Fig.108 Detail of Wyngaerde map (left) and Geldings Close map (right) showing St Giles's Field, St Martin's Field and St James's Field. Note the distortion of the field shapes on Wyngaerde's image, but also the presence of hedges, and the gates marked on the Geldings Close image. North is at the top of both images.

Further sources of sixteenth-century evidence can be found in Norden's 1593 maps of London and Westminster (figs.109 and 110), which were drafted by the Dutch cartographer Pieter van den Keer and included within Norden's *Speculum Britanniae*.⁹¹⁶ As these images demonstrate, London's urban environment remained similar to Wyngaerde's depiction in the mid-sixteenth century, although it had begun to expand westwards, spreading along Holborn and the Strand. This development is also discernible on the Westminster map, which shows an uninterrupted chain of houses stretching to Charing Cross, effectively joining the city with Westminster, where its only previous link had been the mansions and gardens lining the north bank of the Thames. While the Westminster map has a restricted scope, confined to the area surrounding St James's Park where the Thames bends southwards, it emphasises the smallness of the village, which clustered around the Court at Whitehall and Westminster Abbey. Other than these sites, the settlement consisted solely of Tothill Street, descending from the west, and King Street, leading northwards to Charing Cross, the two roads meeting near the Abbey. Norden's maps

⁹¹⁶ Joel Hurstfield and R.A. Skelton, 'John Norden's View of London, 1600: The London Setting and a Study of the View', *London Topographical Record*, 22, (1965), 5-26 (pp.21-2).

also complement the near-contemporary Geldings Close map by depicting Westminster and St James's Park, enabling both works to be considered as a combined entity, covering the full extent of the 1554 battlefield.

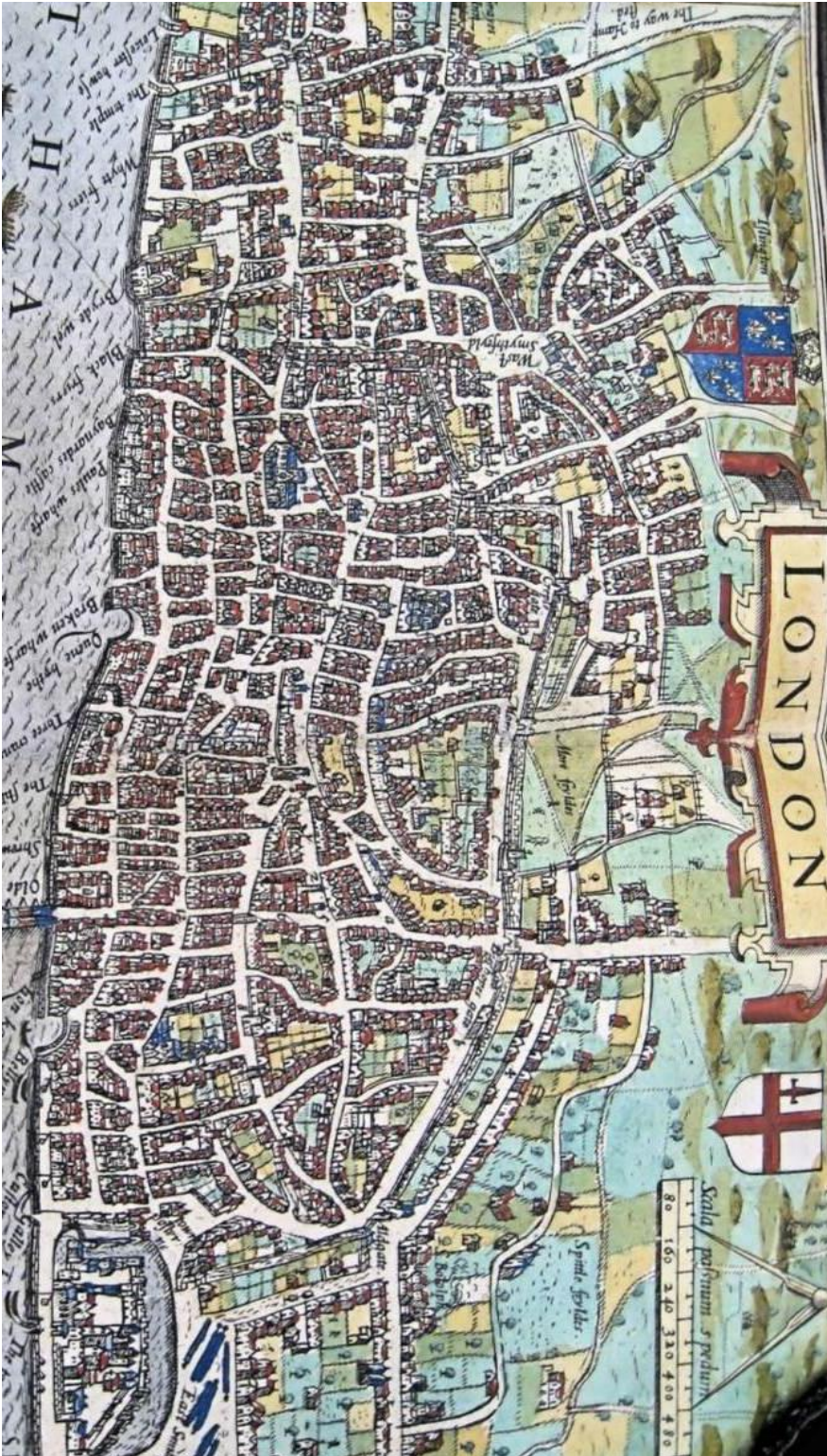


Fig.109. 'London' by Pieter van den Keer, in Norden, *Speculum Britanniae*. North is at the top of the (rotated) image.



Fig.110. 'Westminster' by Pieter van den Keer, in Norden, *Speculum Britanniae*. North is at the top right corner of the (rotated) image.

A seventeenth-century plan of the manor of Eia (1614), copied between 1662 and 1665 (Fig.111), depicts the land between the Westbourne and Tyburn, which lies west of Westminster and was omitted from sixteenth-century maps. This area encompassing Hyde, in the north, and Eybury and Neyte, in the south, formed a continuous district adjoining Westminster and included the route by which Wyatt approached London, giving it a high significance for reconstructing the 1554 battlefield.⁹¹⁷ The work's accompanying key also identifies enclosures lying south of Hyde Park and either side of the Tyburn crossing, to the south of Oxford Street, the latter having significant implications for the battle's opening manoeuvres, as later sections will show.

⁹¹⁷ William Loftie Rutton, 'The Manor of Eia or Eye Next Westminster', *Archaeologia or Miscellaneous Tracts Relating to Antiquity*, 62, (1910), 31-58 (pp.32-4).



Fig.111. Map of the Manor of Eia (1614), 1662 to 1665 copy, repr. in Charles Gatty, *Mary Davies and the Manor of Ebury* (London: Cassell, 1921) vol 2. The map has been overlaid atop a 1920s street plan of London (in red). North is at the top of the image.

In 1658, Fairthorne and Newcourt produced the last major depiction of London before the Great Fire of 1666, as shown below (Fig.112). Although drafted almost a century after Wyngaerde's map, the work was also executed in elevation but extends slightly further westwards to incorporate the entirety of St James's Park and the fields east of the Tyburn. This reveals several changes to London's sixteenth-century environment, including increased urbanisation along the north bank of the Thames, the creation of ornamental gardens in Westminster, and the division of the fields north of St James's Park into large enclosures. Beyond these changes, however, the map gives an overwhelming impression of continuity, with the fields above the park stretching north uphill to Oxford Street with little urban development.

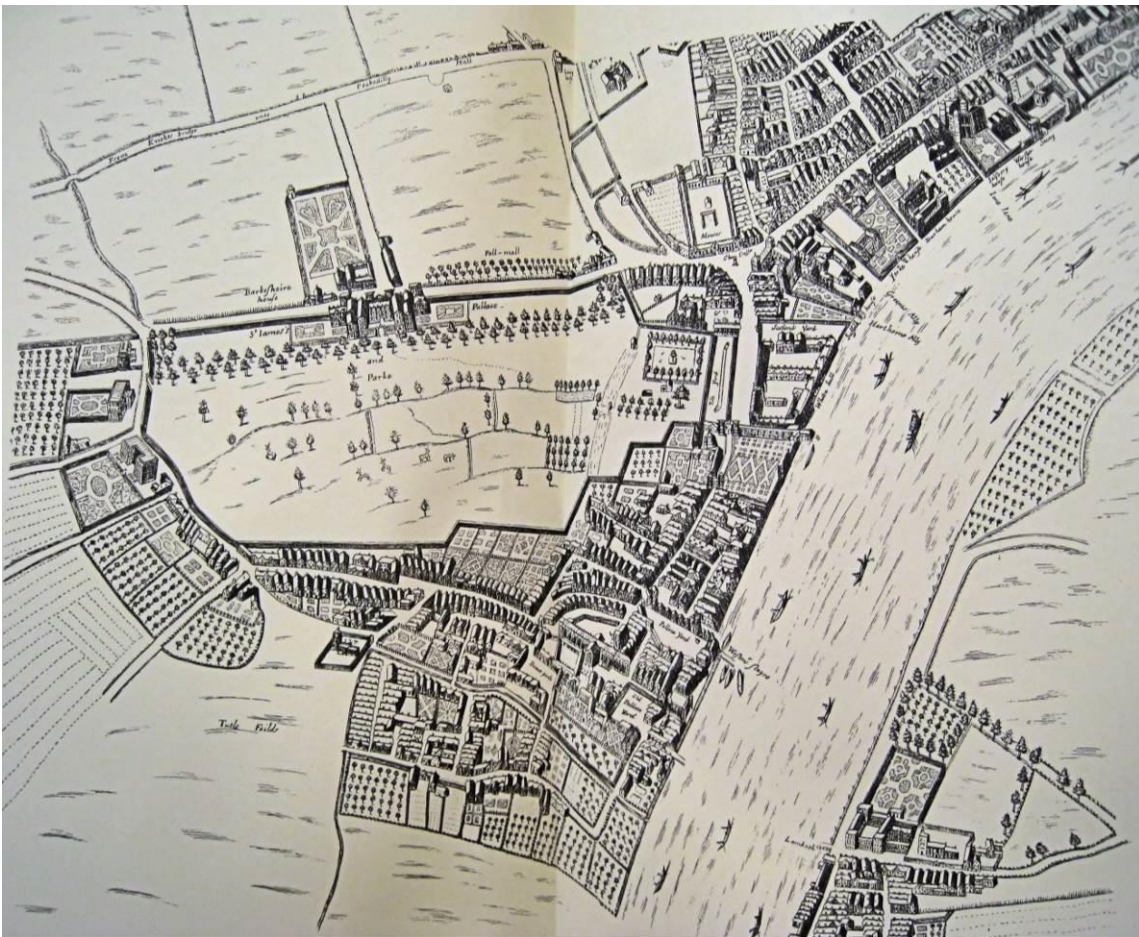


Fig.112. 'Fairthorne and Newcourt's Map of London (1658)', repr. in *Early Maps of London*, ed. by Fisher. Note the map's depiction of the western edge of St James's Park, which is often missing on earlier panoramic views of London. North is at the top of the image.

Ogilby's *Britannia* (1676) contained one of the first maps of London following the the Great Fire, which had acted as a catalyst for the adoption of accurate surveying techniques such as

bird's-eye plans and helped to displace the prominence of earlier elevated panoramas.⁹¹⁸ This map (Fig.113) not only showed the layout of the city's streets with greater precision, but also depicted the roads from London, including that by which Wyatt approach the suburbs, running along modern day Piccadilly before crossing the Westbourne at Knightsbridge. Where Ogilby's map lacked detail of the land beyond the city suburbs, Morden and Lea's 1682 'Prospect of London and Westminster (Fig.114) illustrated the increasing urbanisation of the area between Charing Cross and Hyde Park during the seventeenth-century. St James's Square, for instance, was the only patch of open ground remaining in St James's Field, while Glasshouse Street, above Piccadilly, had effectively become the western edge of London, preceded by the estates of Berkeley, Albermale, and Burlington House. Similarly, Westminster's parks and gardens, which were key terrain features during the 1554 battle, had also undergone significant changes, with Green Park and St James's Park being reshaped by extensive landscaping, and the mulberry gardens to the west, occupying the future site of Buckingham Palace, being replaced with formal gardens.

⁹¹⁸ Delano-Smith, pp.189-210.

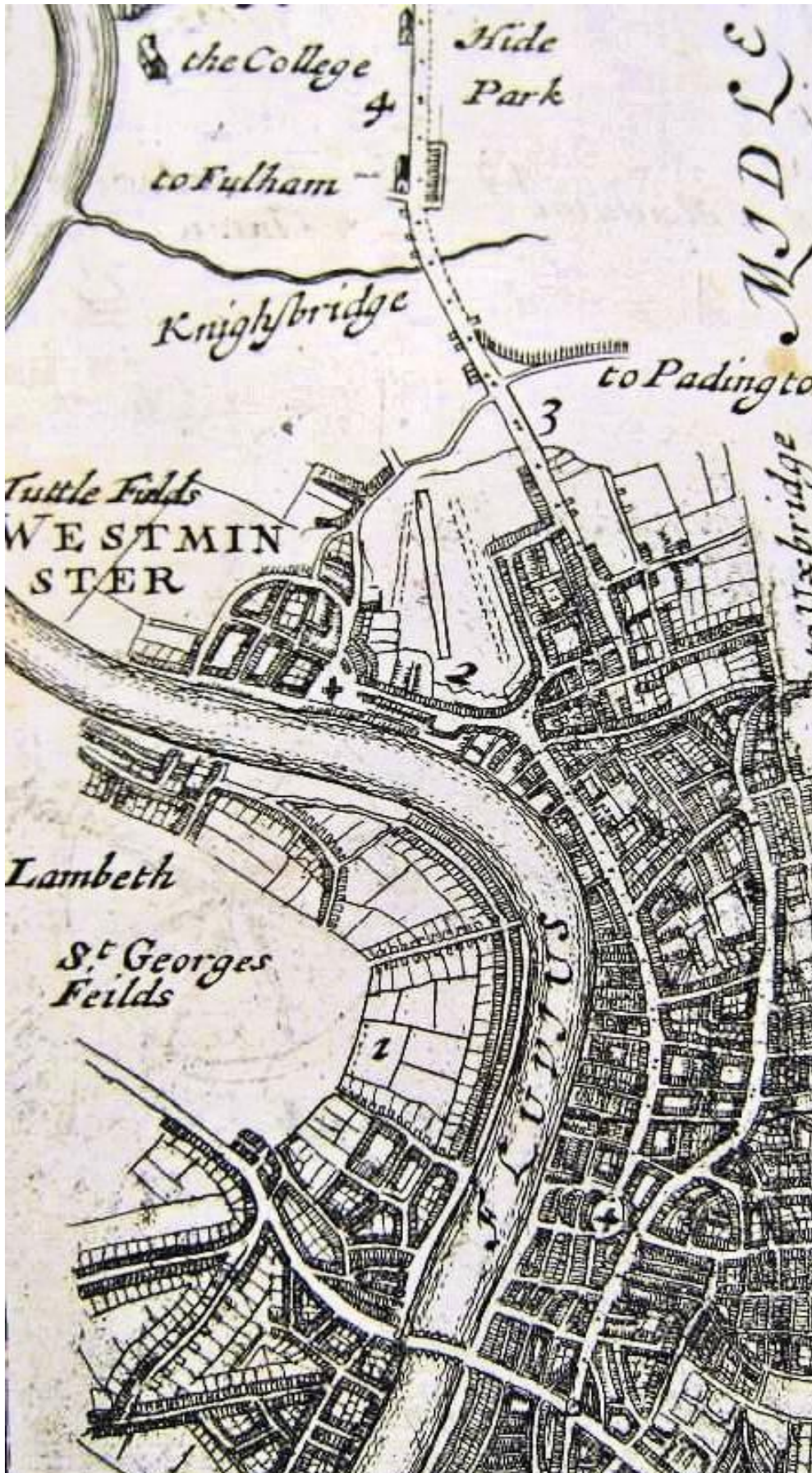


Fig.113. Ogilby, *Britannia*, plate 2. North is to the right of the image.

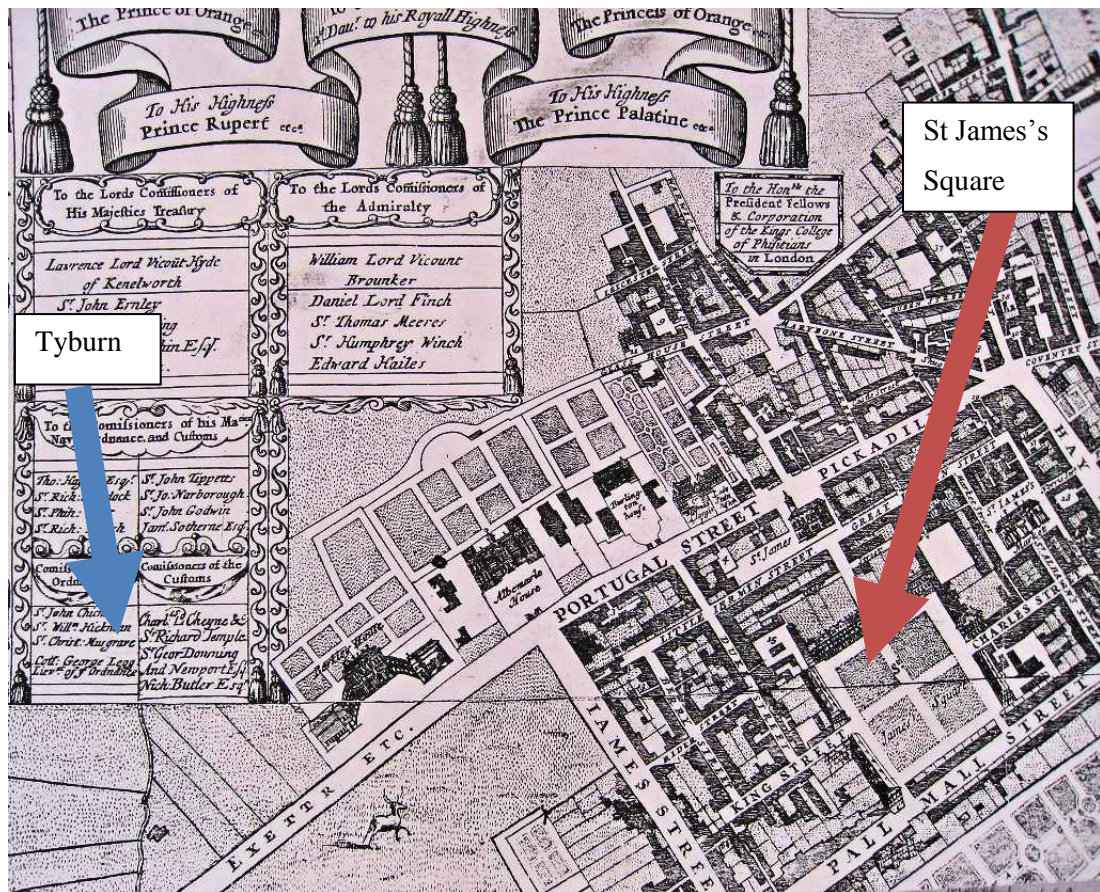


Fig.114. Robert Morden and Phillip Lea's 'Prospect of London and Westminster' (1682), Westminster Archives Centre (WAC) 5702/021. North is at the top of the image.

London's continued growth throughout the eighteenth century can be illustrated by three maps situated at approximately thirty year intervals. The first of these, a parish map of Saint George Hanover Square (Fig.115), produced in 1725 and copied in 1880, revealed the continuity of the landscape east of the Westbourne with that depicted on the 1614 plan of Eia. The most substantial alteration to this area, beyond the consolidation of the fields below the road from Knightsbridge into larger enclosures, was that of the Westbourne itself, with the Long Water Lake being depicted for the first time prior to its development into the Serpentine in 1730. Equally, the branch of the Knightsbridge road leading to Westminster, used by a portion of Wyatt's army in 1554, was realigned to accommodate the construction of Buckingham House, adjustments to the boundaries of Green Park, and the creation of Chelsea Waterworks. Greater changes occurred to the land east of the Tyburn, which was extensively urbanised, with occasional squares and marketplaces interspersed amidst continuous housing stretching to St James's Ward, although the enclosures north of Oxford Street, at the edge of Paddington parish, remained unchanged

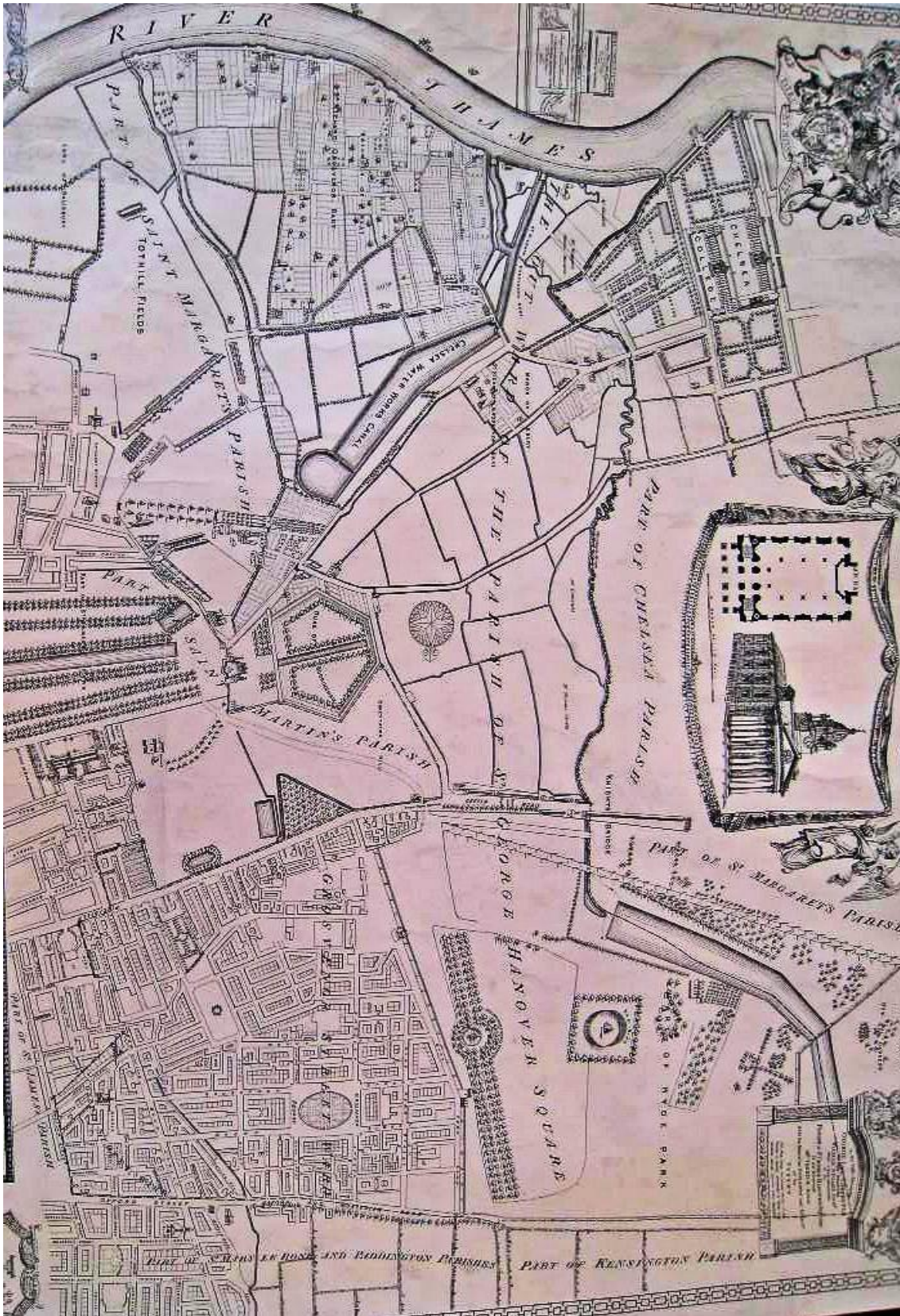


Fig.115. John Mackay's Parish map of St George Hanover Square (1725), copy by J.H Smith (1880), Westminster Archives Centre (WAC) SDC/2/1. North is at the right of the image.

John Rocque's 1762 map (Fig.116) provided the eighteenth century's first comprehensive survey of London and is invaluable for demonstrating the city's transformation into a dense network of streets, periodically interspersed with public squares. While Westminster still maintained the parks and gardens shown on earlier maps, it had expanded significantly, and now incorporated much of the Tothill lands to the south, with Horseferry Road marking its southern edge. Although this map offered an unprecedentedly extensive view of London, having wider coverage than Ogilby's *Britannia*, the small scale of the image, and its abstract representation of urban areas, elided the detail of earlier works, hindering the identification of specific architectural features.

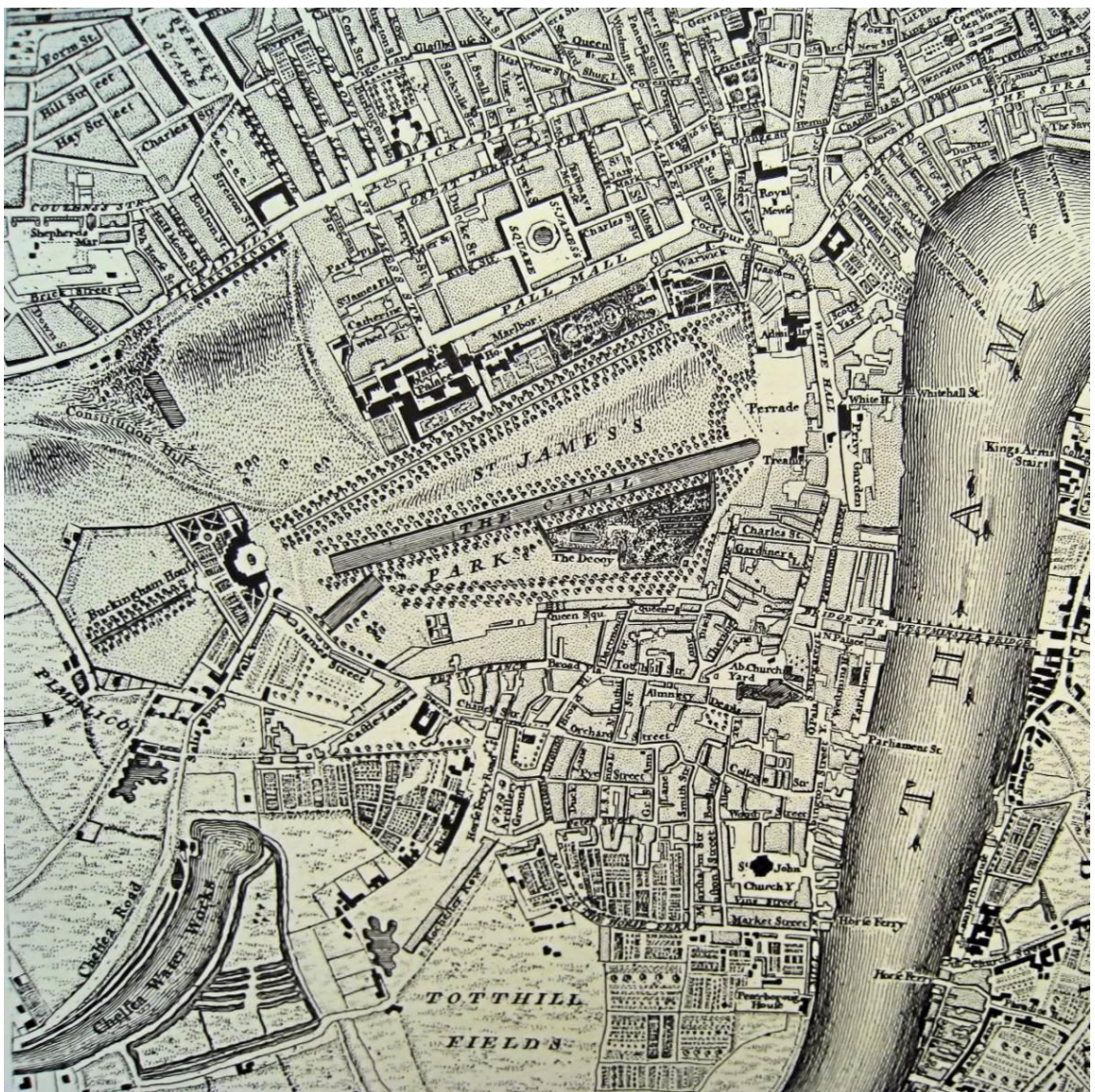


Fig.116. *John Rocque's map of London (1762)*, Westminster Archives Centre (WAC) WCA00294-8. North is at the top of the image.

The final eighteenth-century examples are two near-contemporary maps (figs.117 and 118), drafted by Stockdale (1797) and Horwood (1792 to 1799), which showed the area between Hyde Park and Ludgate as closely resembling Rocque's earlier work. Some changes in the urban terrain are noticeable, however, such as the increasing concentration of housing around Shepherd's Market, east of Hyde Park, and the reduction in parkland within Westminster. Additionally, Horwood's provided the last view of many of the minor roads south of Tothill Street before they were obliterated by further development in the nineteenth century. The full extent of these later changes become apparent when considering the first edition OS six inch to one mile map, the final pre-industrial depiction of the city and its suburbs (Fig.119), which revealed the destruction of the medieval environment surrounding Westminster, the focal point for Wyatt's attack.



Fig.117. *Stockdale's Map of London (1797)*, Westminster Record Office A06A2541. North is at the top of the image.

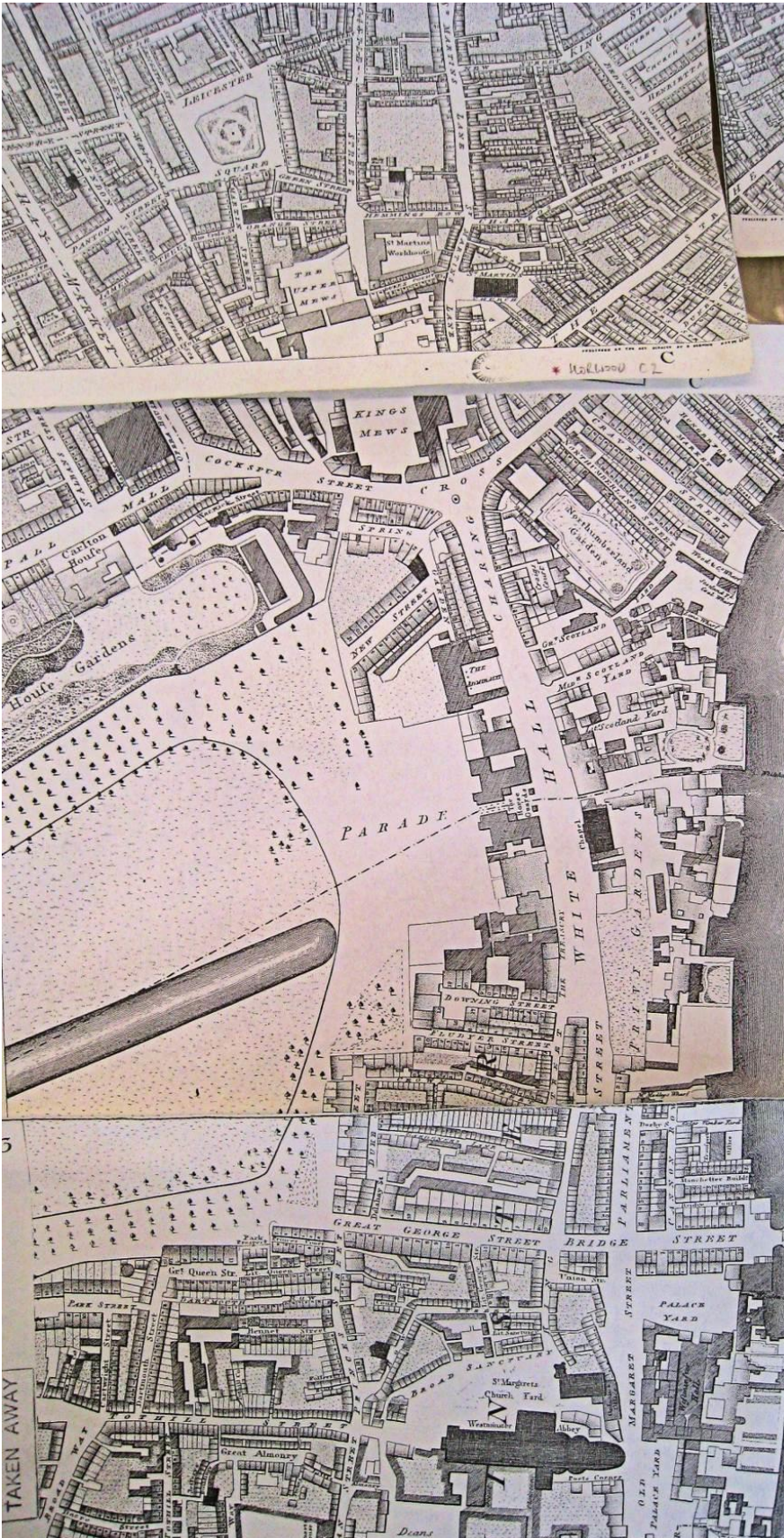


Fig.118. Horwood's map of London (1792-1799), Westminster Arcives Centre (WAC) A10A4306-7. North is at the top of the image.

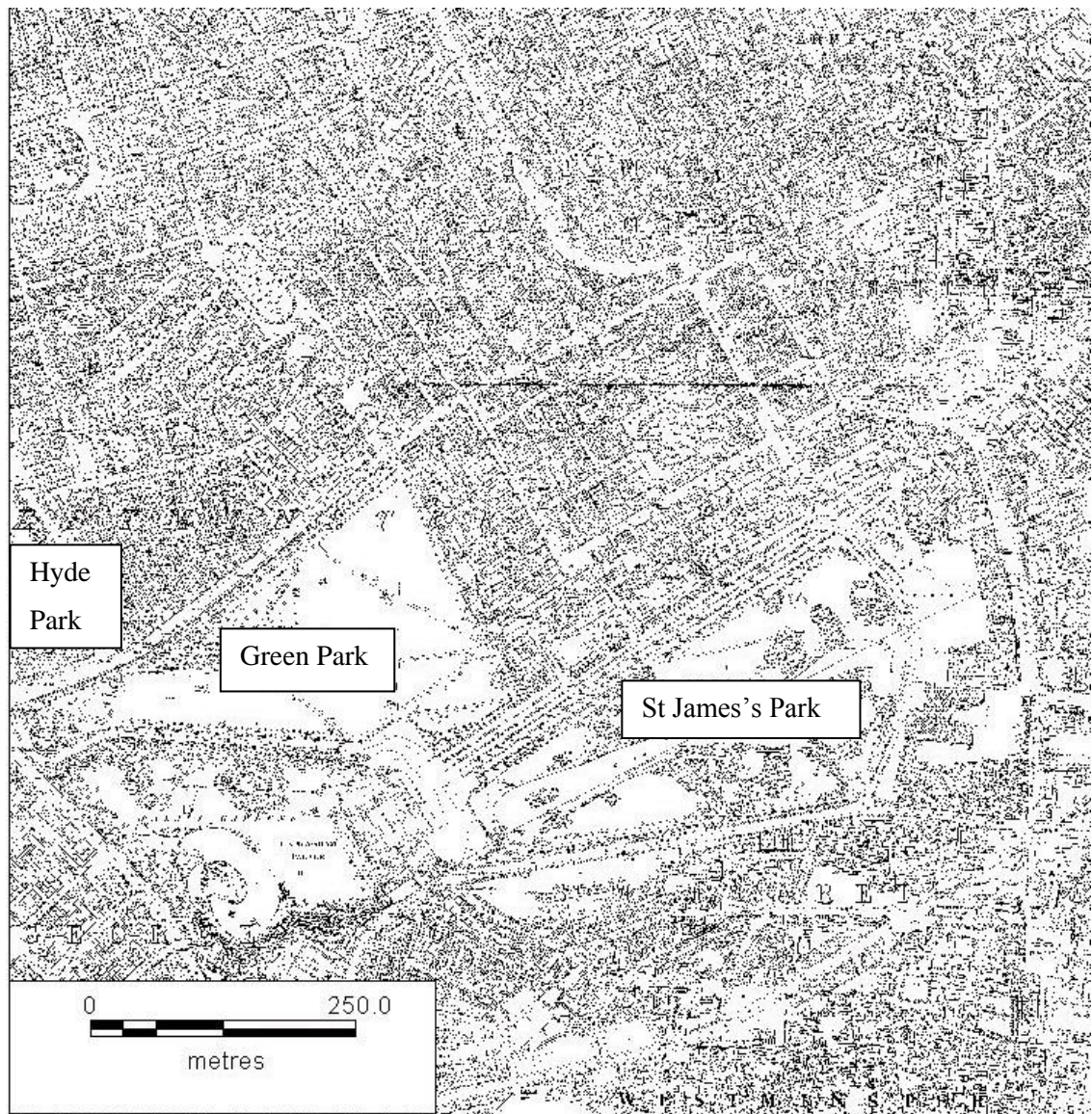


Fig.119. First Edition Ordnance Survey 6³:1 mile © Crown Copyright and Landmark Information Group Limited (2013). All rights reserved. (1854). North is at the top of the image. Note the widespread urbanisation, with only the park areas of Hyde Park, Green Park, and St James's Park remaining as open ground.

The cartographic sources explored in this section allow the historic terrain to be reconstructed through the methodology of map regression, as undertaken for the battle of Dussindale in Chapter 6. According to the processes outlined in Chapter 1, the first edition OS map can be used to establish an accurate GIS base, onto which the location of topographical features connected with Wyatt's attack can be plotted. The image below, (Fig.120) represents an interpretation of the historic landscape based upon this evidence.

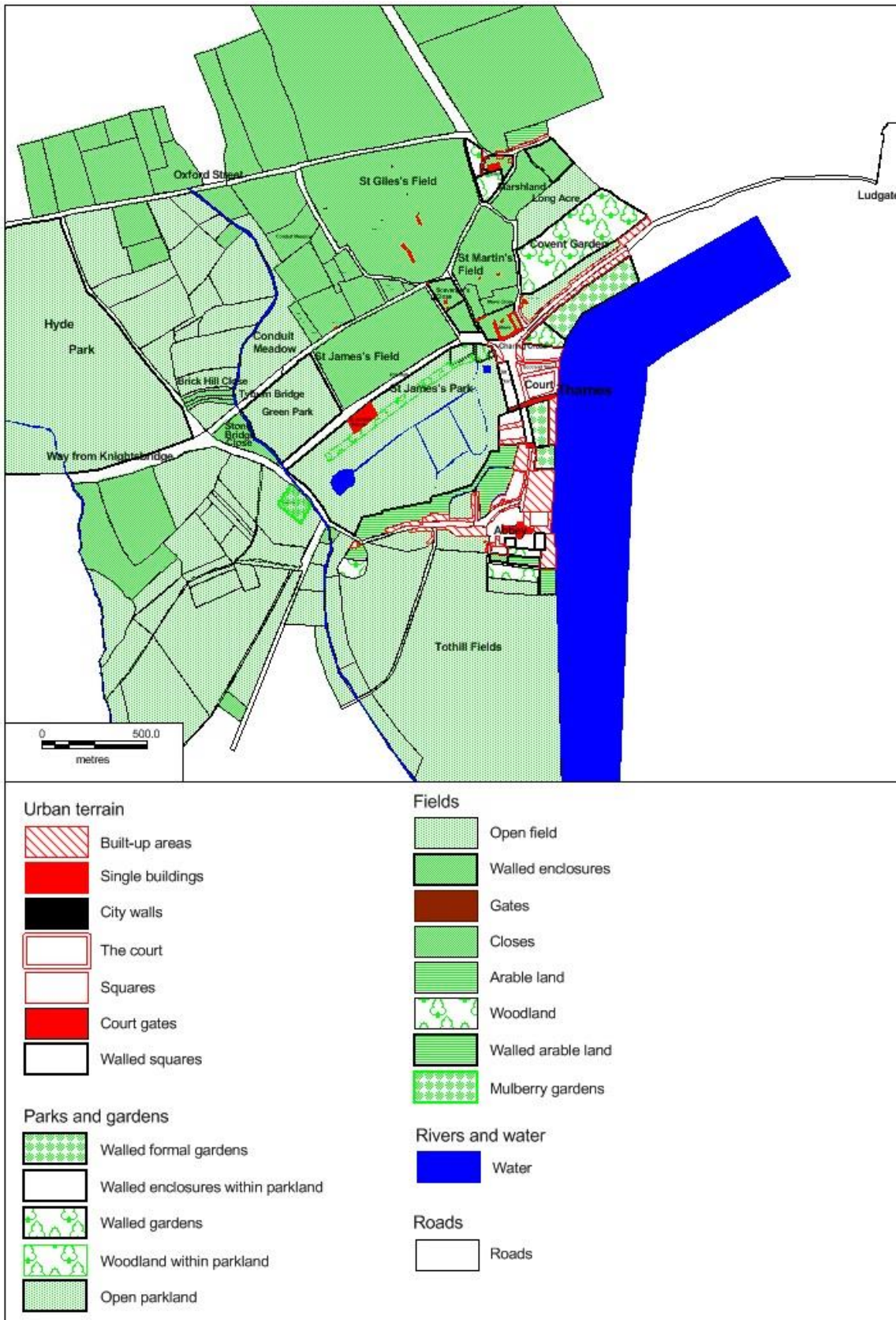


Fig.120. Map showing the battlefield area based on reconstructed terrain analysis of the previously described sources. North is at the top of the image.

Battlefield terrain

As Figure 120 shows, the approach to London from the southwest was facilitated via the road from Knightsbridge, which crossed the Westbourne beneath Hyde Park before running north east along the bottom of the park to the stone bridge over the Tyburn. Immediately prior to this, the road diverged, with one fork leading north west along the eastern edge of Hyde Park towards Oxford Street, and another heading southeast, crossing the Tyburn further downstream, near the future site of Buckingham Palace, and dividing to run either side of St James's Park. The fields surrounding the Tyburn were predominantly open, with the notable exception of a pair of enclosures, Brick Hill Close and Stone Bridge Close, either side of the road west of the bridge, and additional enclosures on both sides of Oxford Street.

Further proof of these features can be found amongst the grant of lands in the manors of Eia and Westminster to King Henry VIII by Abbot Boston in 1536, which identified 'a close called *Bryk Close* lying between the great close belonging unto Eybury on the west and north, and the meadow called *Conduyt Mead* on the east'⁹¹⁹. In the first instance, Rutton claimed that the 'great close' encompassed what is now Grosvenor Square, while 'Conduyt Mead' was synonymous with Bond Street, effectively placing 'Bryk Close' between the two, near Berkeley Square.⁹²⁰ This can be verified by the 1614 map of Eia, which provided the location of Brick Hill Close as well as enclosures to the northwest near Grosvenor Square, and by the 1585 Geldings Close map, which clearly labelled the area east of the Tyburn as 'Cunditt Meadow'. While the 'great close' to the south of Oxford Street had little importance for the battle, lying far from the path of Wyatt's advance, the closes west of the Tyburn bridge created a tactically significant defile through which the rebels were compelled to pass.

Once over the Tyburn, the road from Knightsbridge continued northeast, heading uphill, past St Giles in the Fields, before connecting with Oxford Street and progressing towards Holborn and Clerkenwell. This route became increasingly enclosed as it approached the city suburbs, passing the walls and hedges of Green Park, St James's Field, Scavenger's Close, and St Martin's Field to the south, while the open expanse of the 'Cunditt Meadow' gave way to a network of hedged fields, and the enclosed common of St Giles's Field, on the north. At the confluence of these enclosures, where modern day Piccadilly becomes Coventry Street, branches of the road descended to Charing Cross on either side of Scavenger's Close. Haymarket, on the western edge of the close, ran alongside the eastern boundary of St James's Field, while Coleman Hedge Lane, on the eastern side, bordered St Martin's Field and the Royal Mews area. Similarly, on the opposite side of St Martin's Field, adjacent to Covent Garden, St Martin's Lane ran southwards from St Giles, past St Martin's Church, to Charing Cross. A

⁹¹⁹ Rutton, p.56-8.

⁹²⁰ *Ibid.*, pp.49-50.

fourth and final road is also shown in this area, heading northwest along the route of modern day Glasshouse Street, past the western edge of St Giles's Field, to join Oxford Street. Further east, the walled grounds of Covent Garden and the surrounding closes continued along the Strand before merging with the houses of Fleet Street and finally arriving at Ludgate, where the city walls marked the limits of Wyatt's advance.

The village of Westminster lay immediately south of Charing Cross, with King Street descending through the court gates and passing the Queen's palace at Whitehall, along with several aristocratic residences on the west bank of the Thames, before terminating at Westminster Abbey. From the Abbey Sanctuary, and the adjacent Thieving Lane, Tothill Street, embodying a succession of shops and houses, stretched westward towards Petty France and the Tyburn, from whence it rejoined the road from Knightsbridge.⁹²¹ While Tothill Street was bordered on both sides by the gardens of its occupants, St James's Park, which formerly belonged to the leper hospital of Saint James in The Fields, formed a more substantial northern boundary.⁹²² After acquiring the park in 1530, Henry VIII had added courts in the hospital meadows 'for the tennis plays and cockfight', 'walled the park with a sumptuous wall', and refurbished the hospital as 'a magnificent and goodly house', or St James's Palace, effectively transforming the area into an annex of Whitehall.⁹²³ As Fairthorne and Newcourt's map has shown, the palace was situated in the centre of the park's north wall, level with the road dividing St James's Field from Green Park, and adjacent to Pall Mall, the road running east to Charing Cross from the Tyburn along the top of the park.

The landscape described in this reconstruction resembles Brett-James's representation of early-seventeenth-century west London (Fig.121), but for the larger area ascribed to St Giles's Field. This difference resulted from the division of the field, which previously encompassed the land north of Scavenger's Close and northeast of St James's Field, into smaller parcels towards the end of the sixteenth-century, between the production of the Wyngaerde panorama and the Geldings Close map. While the enclosure patterns of St Giles's Field can be corroborated in this fashion, the closes north of St James's Field, which do not appear on any source before the Geldings Close map, are more difficult to define. Their omission from Wyngaerde's panorama means that their enclosure and subdivision could have occurred at any time before 1585, making them one of the unknowable aspects of the 1554 landscape. Having presented an overview of the battlefield, the following sections will consider the personnel mustered to resist Wyatt's army, and then manner in which both armies were deployed within the historic terrain.

⁹²¹ Gervase Rosser, *Medieval Westminster 1200-1540* (Oxford: Clarendon Press, 1989), pp.65-74.

⁹²² L.E. Tanner, 'Westminster Topography', *Transactions of the London and Middlesex Archaeological Society*, 5th ser., 10 (1954), 234-43 (p.242).

⁹²³ *Letters and Papers, Henry VIII*, vol.10, no.1231. quoted in Rosser, p.309.

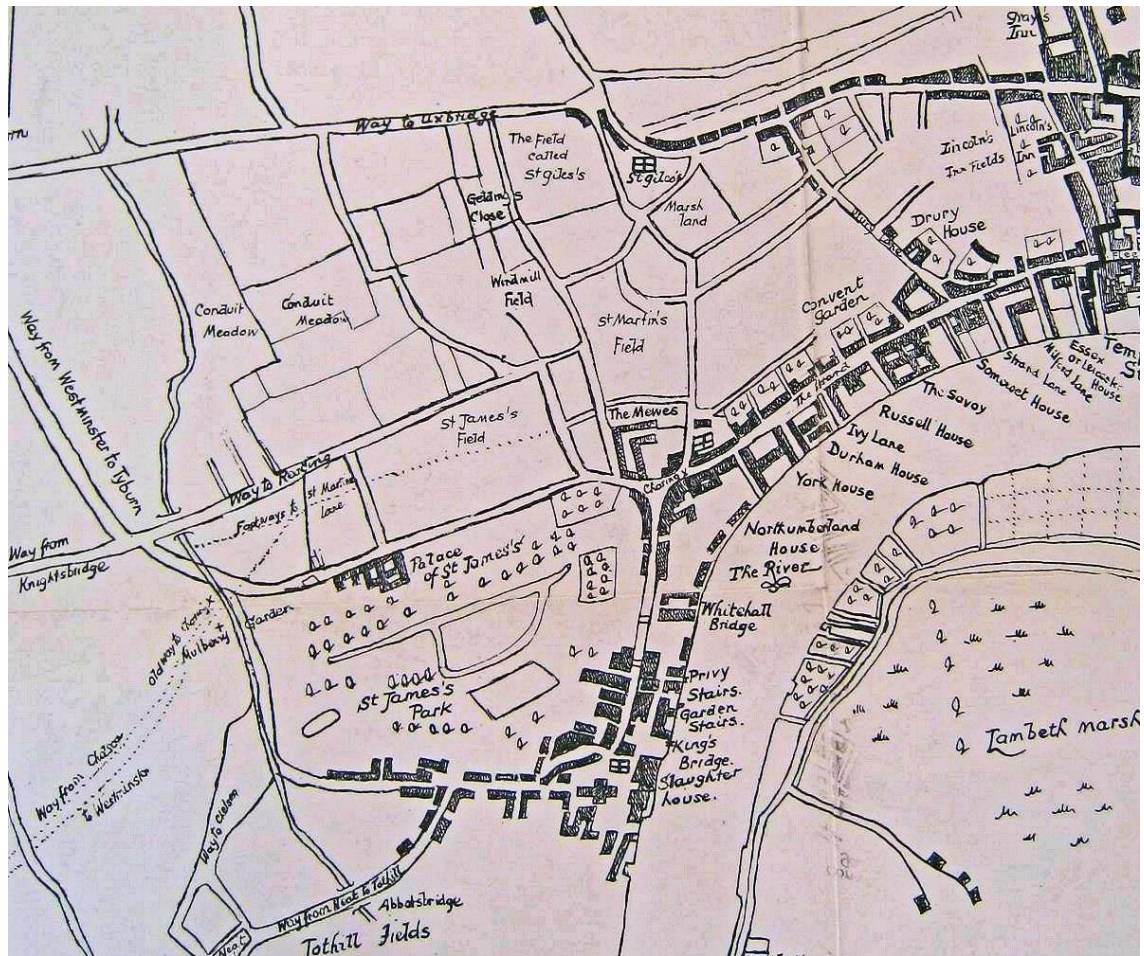


Fig.121. Norman George Brett-James, 'London as it was in 1603', in *Three Maps of 17thC London* (London: Brett-James, 1927). North is at the top of the image.

The Queen's Army

While narratives of Wyatt's uprising have enabled his army's composition, size, and armament to be assessed in Chapter 7, these same sources provided only limited accounts regarding the opposing loyalists, resulting in an unusual situation that contrasts markedly with earlier revolts. Such is the paucity of information that even the size of Mary's force, divided between a field army stationed to intercept the rebels, a detachment at Whitehall to protect the Queen, and a garrison to safeguard the city, remains unknown. Notwithstanding this lack of detail, the evidence from previous chapters can compensate for some of the missing data, facilitating assessments of the government army in relation to similar mid-century forces deployed at Pinkie, Dussindale, and during the Western Rebellion. Accordingly, this section will discuss the army's component divisions, appraising the personnel and armaments contained within each

group, while also laying the foundations for establishing their deployment within the battlefield's historic terrain.

Loyalist Forces (1): The Court and City

The judges [...] at Westminster were in armour. The mayor, aldermen, and the householders of the city, by four of the clock in the morning were in armour [...] for the sure and speedy guarding, and warding of the city [...] gates were diligently watched every gate with 100 men.⁹²⁴

As Proctor's account shows, the loyalist field army was merely the first of several lines of defence, with soldiers being mobilised to defend key objectives, such as the city gates and court, against the attacking rebels or their sympathisers within London. In the case of the court, Proctor's description can be enhanced through the Tower Chronicle and Underhill's account, which confirm that Whitehall was held by 1000 troops, including the Queen's Guard, the Gentlemen Pensioners, and the servants of loyalist gentry and judges.⁹²⁵ Given the Guard and Pensioners' status as small, elite formations, the first containing approximately 200 members in 1553 and the latter under 100, the final category, that of retainers and servants, must have comprised the largest contingent.⁹²⁶ This is confirmed by Underhill, who served in the Pensioners during Wyatt's attack and provided eyewitness evidence of the loyalist deployments:

I put on my armour and went to the court, where I found all my fellows armed in the hall, which they were appointed to keep that day. Old Sir John Gage was appointed without the upper gate, with some of the Guard and his servants and others with him; the rest of the Guard were in the great court, the gates standing open. Sir Richard Southwell had the charge of the backsides [...] with Vc [500] men.⁹²⁷

While the full implications of this deployment will be explored later in this chapter, Underhill's placement of particular units within the environs of Whitehall provides information regarding the composition of its defenders. As the extract states, Underhill and his fellow Pensioners were stationed 'in the hall', within the court itself, while the Guard were divided between both sides of the gates: a small contingent accompanying the 'servants and others' of the Lord Chamberlain, Sir John Gage, and the remainder occupying 'the great court'. Gage's detachment was also noted to include 'three of the judges', who presumably also supplied their own followers, further augmenting the forces at the upper gate to an estimated 300.⁹²⁸ Finally, the 'Vc men' of Sir Richard Southwell's retinue, tasked to defend the rear or 'backsides' of the position, added their numbers to the Guard and Pensioners to total the stated 1000 defenders.

⁹²⁴ Proctor, p.73.

⁹²⁵ *Chronicle of Queen Jane*, p.49.

⁹²⁶ See Chapter 2 for further discussion of these units

⁹²⁷ MS. Harleian 425, fol.95^v.

⁹²⁸ MS. Harleian 425, fol.96^r.

The association between named individuals and tactical units, coupled with the importance of protecting the Queen and court, suggests that many of these soldiers were retainers, who would be more likely to possess prior military experience, have access to higher-quality equipment, and show greater loyalty than the militia.

In terms of armament, although the Guard and Pensioners carried a mixture of missile and close quarter weapons, the latter being ‘all armed [armoured], [...] with our polaxes in our hands’, their accompanying units would probably have been less well equipped.⁹²⁹ For instance, Underhill mentioned that ‘Gage and three of the judges [...] were meanly armed in old brigantynes’, implying that, while their troops wore body armour, it may not have equalled the high-quality plate provided to the Guard and Pensioners.⁹³⁰ The Tower Chronicle’s subsequent coverage of the battle, while remaining silent on the loyalists’ close-quarter armament, confirmed the presence of missile troops amongst their company, which probably, as earlier chapters have demonstrated, comprised a mixture of arquebus and bow.⁹³¹

The passing references of narrative sources to the court defenders’ equipment can be supported by an inventory of stores provided by the Tower armoury before the battle.⁹³² In addition to listing items intended for the Queen’s field army, such as cavalry spears and gunpowder, the inventory also recorded weapons and armour issued to the Guard and Pensioners. For example, Underhill’s description of the Pensioners’ accoutrements is confirmed by the Tower’s catalogue of 95 poleaxes and 100 animes, high-quality suits of overlapping plate, both sets of items corresponding to the unit’s probable size.⁹³³ The prohibitive cost of these objects, with the animes totalling £300 and the poleaxes a further £4, validates this assessment, with such expensive equipment likely to be reserved for the army’s elite troops.⁹³⁴ Similarly, the inventory also documented the equipping of the Queen’s Guard, specifically designating 100 brigandines ‘for the Guard’ alongside weapons used predominately by these troops, such as 254 partisans, 7 javelins and 33 targets or shields, 6 of which were noted to be ‘special’.⁹³⁵ The presence of such ‘special’ targets, which may have included rare in-built handguns like those found aboard the *Mary Rose*, encourages the theory that they were issued to the Guard, which embodied an elite force, rather than the militia.⁹³⁶ Although the equipment listed here exceeded the Guard’s 1553 strength of 200 men, surplus items could have been distributed amongst the retinues which supported them, or may, given the crisis prompted by the

⁹²⁹ *Ibid.*, fol.94^r.

⁹³⁰ *Ibid.*, fol.96^r.

⁹³¹ *Chronicle of Queen Jane*, p.49.

⁹³² *CSP: Domestic Mary*, p.52.

⁹³³ *Ibid.*

⁹³⁴ *Ibid.*

⁹³⁵ *Ibid.*

⁹³⁶ Hildred, pp.553-77.

rebellion, point towards the presence of greater numbers of ‘extraordinary Yeomen’, which were mobilised in emergencies.

Additional proof of these items’ allocation to the court defenders can also be found in the high number recorded as lost during the action, with 83 poleaxes and 77 partisans going missing.⁹³⁷ While loss, damage, or theft was an inevitable consequence of issuing military stores, which might subsequently be retained by their recipients or sold on for profit after the event, the disappearance of almost all the issued poleaxes and a third of the partisans points towards a different explanation. As later portions of this chapter will show, the Guard and many of their supporting units were driven back from the court by Wyatt’s advance, resulting in a chaotic situation which would explain the consequently high losses of equipment and can further link these armaments to the Queen’s protectors.

In contrast to the soldiers at Whitehall, which were concentrated in a geographically contained area and part of a well-documented stage of the battle, ascertaining the numbers involved elsewhere in the city is problematic. Stow, for instance, claimed that, in 1539, when the entire London militia was mustered, the city raised 15,000 soldiers, highlighting the maximum available manpower.⁹³⁸ In 1554, however, there was little mention of such vast numbers, suggesting that the surprise and suddenness of the revolt left insufficient time for a wholesale assembly of the capital’s armed forces. Commenting on the preparations within London, the Tower Chronicle related that the mayor and aldermen had sought to raise ‘iiml [2500] [...] for the safeguard of the city’ towards the end of January, and that ‘the city began to be kept with harnessed men’ shortly after.⁹³⁹ This figure can also be confirmed by the descriptions of the Embassy Account and *History*, which recorded the deployment of 2000 citizens at London Bridge, and a further 200 at Kingston, during Wyatt’s approach. While both contingents were probably included within the Tower Chronicles’ initial assessment, the soldiers at Kingston would almost certainly have been recalled to London as the rebels crossed the Thames, and other forces likewise mustered, allowing for the possibility of a larger assembly by the time Wyatt reached the city. Assuming, however, that the government succeeded in mobilising additional troops in the week prior to Wyatt’s arrival, these were unlikely to have substantially increased their available manpower within the city given the concurrent need to constitute the field army. Thus, while the citizens initially deployed at London and Kingston might have been reassigned to join the field force or the city’s garrison, the latter was unlikely to have exceeded 4000, even including the Guard, Pensioners, and retainues protecting the court.

⁹³⁷ *CSP: Domestic Mary*, p.52.

⁹³⁸ Stow, p.94.

⁹³⁹ *Chronicle of Queen Jane*, p.36.

Proctor's statement that loyalist forces were divided between the various city gates can be verified by the Embassy Account's assertion that, as well as guarding London Bridge, 'all other places of the city where advantage might be taken was foreseen in like manner'.⁹⁴⁰ In addition to protecting the access routes into the inner city, loyalist forces were also stationed in the surrounding areas before the battle, with the Tower Chronicle identifying the 'lord treasurer's band [...] of ccc [300] men' at Ludgate, and 'a great company of harnessed men, which stood on both sides [...] of Fleet Street'.⁹⁴¹ While the 'treasurer's band' appears to have been an independent tactical unit, moving westwards from Ludgate towards Westminster, the Embassy Account asserted that the 'great company' gathered on Fleet Street were in fact 'house holders standinge each man at his dore with wepon and harnes all alonge [the street]'.⁹⁴² The distinction drawn between these two identically equipped units reveals something of the composition of the city's defenders, described by Holinshed as a mixture of 'most honest citizens, [...] and] others bands of the queens assured friends', implying that the 'treasurer's band' comprised a retinue, while the 'house holders' were citizens.⁹⁴³

Differentiating between the types of soldiers embodying the Queen's forces also illuminates the government's allocation of particular tactical roles to its army's component contingents. By constraining the citizens to the defence of their own property, while assigning retinues the tasks of patrolling the city and acting as a reserve in the event of a rebel breakthrough, loyalist commanders sought to minimise their reliance upon London's population. While this caution was justified in light of the earlier defections at Gravesend and Southwark, the imposition of such safeguards would have limited the number of soldiers available to actively confront the rebels in the field, restricting the citizens to guard duties under the supervision of loyalist officers. Underhill's account provides an example of this, recalling how, the night before the rebels' arrival, he and a party of gentlemen struggled to pass through Ludgate:

When we came to Ludgate it was past eleven of the clock, the gate was fast locked, and a great watch within the gate [we] knocked hard, and called unto them, saying, "Here is iiii [three of four] gentlemen come from the court that must come in, and therefore open the gate." [...] Then said two or three of them, "We have not the keys, we are not trusted with them; the keys be carried away for this night".⁹⁴⁴

The presence of 'a great watch' and the fact that 'the keys be carried away' as the guards were 'not trusted' all depict the precautions taken against the threat of treachery. Nor were such measures the only insurance taken against betrayal, with the Tower Chronicle recording a

⁹⁴⁰ Kennedy, fol.84^v.

⁹⁴¹ *Chronicle of Queen Jane*, p.50.

⁹⁴² Kennedy, fol.85^r.

⁹⁴³ Holinshed, p.1731.

⁹⁴⁴ MS. Harleian 425, fols.94^v-5^r.

proclamation issued within London, as Wyatt approached Deptford, commanding ‘that all his wellwishers [in the city] should go through Southwark to him, and they should have free passage’.⁹⁴⁵ This announcement demonstrated that Mary would sooner drive rebel sympathisers into Wyatt’s army than risk compromising the capital’s security, and also underlined the extent to which the loyalty of the city’s inhabitants remained uncertain. In summary, the loyalists’ preparations at London, undertaken in the limited time from Wyatt’s rising to his arrival at Knightsbridge, would, while unable to muster the capital’s full military resources, have secured the city against attack from without or treachery from within.

Loyalist Forces (2): The Field Army

While measures were taken to defend Whitehall and secure the access points into London, the professionalism, equipment, and loyalty of the forces deployed outside Westminster would ultimately determine the engagement’s outcome. The Queen’s army was led by experienced officers, with Sir William Herbert, Earl of Pembroke, placed in overall command and Edward Fiennes, Lord Clinton, named as ‘marshal of the field and captain of the barded horses and demilances’.⁹⁴⁶ Herbert had previously seen service at Boulogne, where he captained a company of light horsemen, and during the 1549 uprisings, in which he suppressed the disturbances in Wiltshire, Somersetshire, and the western counties.⁹⁴⁷ In the latter campaign he had also participated in the engagement at Sampford Courtenay, where he commanded the Forward battle of Lord Russell’s army against the Devon and Cornish insurgents.⁹⁴⁸ Similarly, Lord Clinton was also a seasoned officer, having participated in England’s mid-century campaigns in France and Scotland and been Lord Admiral of the Fleet at Pinkie.⁹⁴⁹ As with the rebel army, described in Chapter 7, these high-ranking individuals would have been supported by knights and gentlemen who comprised the lower links in the chain of command and were responsible for assembling and leading troops on the battlefield. Such junior officers often had similar combat experience, with Proctor identifying the loyalists’ captain of light horsemen as ‘Jack of

⁹⁴⁵ *Chronicle of Queen Jane*, p.40.

⁹⁴⁶ Proctor, p.69.

⁹⁴⁷ Narashingha P. Sil, ‘Herbert, William, first earl of Pembroke (1506/7-1570), soldier and magnate’, in *Dictionary of National Biography* <<http://0-www.oxforddnb.com.wam.leeds.ac.uk/view/article/13055?docPos=7>> [accessed 17 July 2013] (paras.3, 6 of 19).

⁹⁴⁸ See Chapter 5.

⁹⁴⁹ Anne Duffin, ‘Clinton, Edward Fiennes de, first earl of Lincoln (1512-1585), military commander’, in *Dictionary of National Biography* <<http://0-www.oxforddnb.com.wam.leeds.ac.uk/view/article/5679>> [accessed 17 July 2013] (paras. 2, 3 of 11).

Musgrave', who may have been a veteran of Solway Moss.⁹⁵⁰ The presence of these professional soldiers, accustomed to participating in battles and campaigns, may have given the loyalists an advantage over their opponents, who lacked this familiarity with commanding field armies, making their tactical manipulation of larger bodies of troops correspondingly less adept.

The government army's potentially superior leadership was supplemented through its greater numbers as, although sources fail to conclusively establish its size, Loades has estimated it equalled or exceeded Wyatt's forces, in addition to having the support of troops remaining within the city.⁹⁵¹ Given that the forces defending London can be conservatively estimated at 3000 soldiers, an overall figure of approximately 6000 would seem likely, with roughly half of the Queen's troops placed outside the city to confront Wyatt. Although the field army's total size is difficult to determine, the Tower Chronicle reported that the loyalist infantry deployed in two battles, supported by artillery and missile troops, while Proctor and the *History* recorded the presence of men at arms, demi-lances, and light horsemen.⁹⁵² The Embassy Account is the only source to provide numerical estimates of any kind, claiming that 'the Lord Clynton [...] h[a]d to the number of vc [500] for the comming of the said rebelles'.⁹⁵³ Given Clinton's identification as the leader of the men at arms and demi-lances, this figure was unlikely to include the light horsemen under Musgrave's command, which commonly equalled or outnumbered an army's heavy cavalry, suggesting that the loyalist mounted contingent totalled over 1000 soldiers.⁹⁵⁴ The same account also alluded to the presence of a Forlorn Hope, consisting of 'xl [40] Hargerbusiers and pike men', but contained no further information on the size of the loyalist infantry battles.⁹⁵⁵

Assuming that the Queen's field army contained approximately 3000 soldiers, 1000 of which were accounted for by the cavalry, each infantry battle could be estimated at 1000 men, a two-to-one ratio of infantry to cavalry, resembling that of the force commanded by Protector Somerset seven years earlier at the battle of Pinkie. The inclusion of such varied cavalry forces would have provided the army with a corresponding degree of tactical flexibility, with light horsemen performing scouting and harassment roles, while the demi-lances and men at arms could engage enemy missile troops or weakened infantry battles. In addition to identifying the units deployed outside London, the chronicles also described their armament, with Proctor relating that the Queen's infantry carried 'handguns, [...] pikes, bows and bills', affirming the Embassy Account's mention of 'Hargerbusiers and pike men'.⁹⁵⁶ The presence of these weapons

⁹⁵⁰ Proctor, p.69; Brooks, p.290.

⁹⁵¹ Loades, *Conspiracies*, p.74.

⁹⁵² *Chronicle of Queen Jane*, p.48; Proctor, p.69; *History*, pp.72-3.

⁹⁵³ Kennedy, fol.84^v-5^r.

⁹⁵⁴ See Chapter 4.

⁹⁵⁵ Kennedy, fol.85^r.

⁹⁵⁶ Proctor, *Wyates Rebellion*, p.69.

conformed to the usual pattern of mid-century English armies, wherein battles were formed from contingents of billmen surrounded by pikes and flanked by sleeves of shot, comprising archers and arquebusiers.⁹⁵⁷ The Tower Chronicle provided further characterisation of the army's equipment by noting materials stored in St Paul's churchyard, within easy reach of Westminster, the night before the battle:

There was laden x or xii [10 or 12] carts with ordnance, as bills, morice pikes, spears, bows, arrows, gun stones, powder, shovels, mattocks, spades, baskets, and other munition, and there went out ii [2] culverings, one sacre, iii [3] faucons, and a fauconett; all of which the same night [6 February] stayed in Paules churchyard.⁹⁵⁸

This description not only confirmed Proctor's mention of a variety of personal armaments, specifying 'bills, morice pikes, spears, [and] bows', but also implied that these weapons were drawn from the city's stores, being left in carts overnight ready for distribution the next day. Although the militia would have mustered with their own weapons, the government's provision of armaments would enable a degree of selection when assembling the battles, and may have compensated for any soldiers who arrived with missing or defective equipment, ensuring that the entire force was appropriately armed. Similarly, the Chronicle also listed the army's artillery pieces, 'ii culverings, one sacre, iii faucons, and a fauconett', in descending order of their weight of shot. While these guns 'went out' to Westminster with the field force, the simultaneous provision of entrenching equipment, including 'shovels, mattocks, spades, [and] baskets', implied that they were deployed as a static battery where such tools allowed the creation of earthworks to shield themselves from incoming fire. The inclusion of the culverins, long-ranged heavy guns with a bore of 5" to 5.5" and a shot weight of 15 to 25lb (6.8 to 11.3kg), confirms this theory, with such weapons being too slow-firing and difficult to manoeuvre to be employed in an infantry support role.⁹⁵⁹ The saker, falcons, and falconet were, by contrast, much lighter weapons that could act as the 'certain field pieces, [...] flankers to each battle' identified by the *History*.⁹⁶⁰ These guns had bores of between 2.75" and 4", and fired cast-iron or iron and lead composite shot, weighing, in the saker's case, between 5 and 5.5lb (2.3-2.5kg), and between 1.25 and 2lb (0.6 to 0.9kg) for falcons and falconets.⁹⁶¹

These narrative sources are complemented by the administrative accounts of the aforementioned Tower inventory, which itemised the government's centrally distributed equipment in extensive detail, as shown in the table below (Fig.122). Notwithstanding the caveats already noted, namely that objects contained in the inventory cannot be regarded as an accurate representation of troop numbers, and may not have been used in battle, collating this

⁹⁵⁷ See Chapter 4 for further discussion of the tactical deployment of infantry.

⁹⁵⁸ *Chronicle of Queen Jane*, p.47.

⁹⁵⁹ Blackmore, pp.224-5; Hildred, p.74.

⁹⁶⁰ *History*, p.73.

⁹⁶¹ Hildred, pp.101-2.

equipment list enables several conclusions to be drawn regarding the armaments available to the loyalist army. While some items, such as the small numbers of steel saddles, collars, and vambraces, were probably spares for replacing missing equipment, others, like the poleaxes and partisans used by the Pensioners and Guard, can be clearly ascribed to particular units. The majority of objects, however, are impossible to distinguish in this fashion, and could have been distributed amongst forces within or outside London.

| Armour | | Munitions | |
|---------------------------|---------------------|-----------------------|------------------------|
| Type | Number | Type | Number |
| Demilances | 88 | Bows | 1309 (inc.100 lost) |
| Corslets | 323 | Arrows | 1387 sheafs |
| Splints | 113 | Bills | 758 (inc. 100 lost) |
| Jacks | 174 | Morris Pikes | 1353 (inc. 83 lost) |
| Morions | 377 | Demilance Staffs | 81 |
| Collars | 4 | Northern Staffs | 77 |
| Almain Rivets | 191 | Pollaxes | 95 (inc. 83 lost) |
| Sallets | 139 | Javelins | 9 |
| Gauntlets | 4 pairs | Partisans | 254 (inc. 77 lost) |
| Mail Shirts | 74 | Halberds | 29 |
| Brigandines for the Guard | 100 | Corn Powder | 1 cwt (quarter weight) |
| Animes | 100 | Hackbuts | 100 |
| Targets | 33 (inc. 6 special) | Grained Staffs | 39 (inc. 25 lost) |
| Vambraces | 9 pairs | Leather Barbs | 1 |
| Backs | 29 | Steel Saddles | 32 |
| Breasts | 50 | Boar Spears | 189 (all lost) |
| | | Demi-Partisans | 77 (all lost) |
| | | Holy Water Sprinklers | 66 (all lost) |

Fig.122. 'Issues from the armoury of the Tower (February 1554)' in *CSP: Domestic Mary*, p.52.

The mainstay of these armaments, comprising 758 bills, 1353 pikes, and 1309 bows, were unexceptional, but confirm the loyalist forces were equipped in typical English fashion, with a mixture of weapons. Interestingly, the ratio of pikes to short weapons, including bills, halberds, and holy water sprinklers, a pole-mounted flail, can be established at just below two to one. This pattern matches the recommendations of English tactical authors, who asserted that bills and comparable weapons should remain in the minority, being used to support pike battles in close-quarter fighting or for inclusion in smaller units like baggage guards and assault parties. While this objective could not always be met, particularly in armies containing large numbers of billmen from the shire militia, the Tower's armoury supplies ensured that the loyalist force in 1554 had the capacity to deploy the desired configuration of weapons. Conversely, the deliberate inclusion of large quantities of short weapons, which encompassed over a third of infantry armaments issued, demonstrated that such equipment had an appreciable tactical role and was not simply used to compensate for insufficient numbers of pikes, as some later authors have suggested.⁹⁶²

When considering missile weapons, however, there was a significant imbalance between the supply of longbows, of which over 1300 were issued, and arquebus, with only 100 hackbuts taken from the Tower's stores. While bows were often extensively stockpiled, the limited number of gunpowder small arms seems unusual given their prioritisation by the period's tactical manuals. Indeed, the scarcity of these armaments in a situation where one could reasonably expect them to be present in large numbers, namely at an engagement fought in proximity to a major armoury, raises important questions, but need not imply that they were in short supply. Instead, they may simply be underrepresented by the Tower's inventory, perhaps being provided in considerable numbers by noble retinues or the notably well-equipped London militia. Alternatively, the government may have deliberately refrained from issuing more than a small batch of its total arquebus stockpile, perhaps preferring to retain control of the bulk of these weapons lest the rebels repeat their earlier successes and induce the defection of the loyalist forces. This assertion finds ample support within Henry VIII's Inventory, which recorded the presence of over 6000 hackbuts and numerous other firearms within the Tower and palace armouries a mere seven years prior to Wyatt's rebellion, clearly showing that large quantities of these armaments were available within London.⁹⁶³ Unfortunately, there is insufficient evidence from the battle's source material to conclusively determine how many handguns were actually deployed, and whether these weapons were confined to the small

⁹⁶² Barrett, *Moderne Warres*, Bk.1.fol.2^v.

⁹⁶³ *Inventory*, fols.251^r-6^r.

numbers issued by the Tower, or included those supplied by the London militia and magnate retinues.

The Tower's distribution of armour is similarly difficult to interpret, with over 1100 protective outfits, including corselets, jacks, Almain rivets, mail shirts, brigandines, animes, breast and back plates, incorporated alongside nearly 700 additional protective items, from morrions and sallets to splints and gauntlets. While it is impossible to definitively state where this equipment was allocated, beyond the provision of brigandines 'for the Guard' and the obvious association of demi-lance armour with the cavalry, it is clear that the loyalists would have been able to deploy significant numbers of 'harnessed' soldiers. In some cases, like the previously described animes, this 'harness' might encompass complete suits of plate, which were probably monopolised by the army's elite infantry and heavy cavalry. However, composite 'harness', assembled from corselets or jacks worn with additional protective gear such as splints and a helmet, would serve to outfit a substantial proportion of the rank and file. This system accords with the period's tactical works, which counselled that veteran 'harnessed' soldiers should be placed in the front and rear ranks of each battle, with others deployed along the flanks of the unit to screen less well-protected troops inside the formation.⁹⁶⁴

Whereas most of the equipment discussed thus far has proven difficult to accurately link to specific forces, the weaponry of the army's cavalry contingent was a notable exception and can be readily discerned in the supplies of demi-lance staffs, northern staffs, boar spears and demi-partisans. Some of these weapons, notably the demi-lances which bestowed their name upon the English medium cavalry, were specifically designed for mounted use, whereas others, like the northern staffs, which saw widespread use amongst the light Border Horsemen, were flexible armaments which could be employed whether on horseback or on foot.⁹⁶⁵ The wholesale loss of the army's boar spears also implies a third category, that of disposable weapons which were discarded after an attack, much like a lance which would splinter on impact. By contrast, the comparable loss of demi-partisans, which were presumably shorter, less unwieldy, versions of their two-handed namesake, may have arisen when the loyalist horse was forced back by Wyatt's advance, in a similar manner to the loss of equipment attributed to the Guard and Pensioners' retreat. These specific tactical examples will be dealt with when describing and analysing the battle itself.

The loyalist field army comprised a range of well-equipped units under experienced leadership, which can be estimated to have equalled or exceeded the number of rebels ranged against it. While the exact size of the force is difficult to determine, its construction mirrored the English army at Pinkie, containing a high proportion of its strength in a mixed cavalry

⁹⁶⁴ See Chapter 4 for discussion of the tactical placement of armoured soldiers.

⁹⁶⁵ Caldwell, 'Shafted Weapons', pp.293-7.

contingent, including men at arms, demi-lances and light horsemen, and having the support of light and heavy artillery. The army's infantry battles and skirmishers were similarly outfitted with a diverse range of armaments, including pikes and short weapons alongside longbows and arquebus, providing increased tactical flexibility and mirroring previous mid-century English armies.

Deployment

Loyalist Deployment

Accounts of the action make sustained reference to the loyalists' tactical positioning, identifying the position of various bodies of troops in relation to the historic landscape and facilitating the creation of a conjectural deployment map (Fig.124) at the end of this section. At Whitehall, Underhill related that the Pensioners were stationed within the environs of the palace, while the Guard were deployed in 'the great court', Sir John Gage's 300 men 'without the upper gate', and Sir Richard Southwell with 500 troops guarding 'the backsides [...] the woodyard and that way'. Although this small detachment of approximately 1000 men was essentially a garrison assigned for the Queen's protection, its position along the path of the rebel advance ensured that the loyalist forces stationed here played a greater role in the action than those within London, which failed to participate in the battle. These troops were not only embroiled in a chaotic retreat from Charing Cross, but also came under attack at Whitehall, and may have assisted in a later loyalist counter-offensive, potentially seeing more combat than the majority of the field army.

The main loyalist force, which comprised approximately 2000 footmen assembled into a pair of infantry battles, 500 light horsemen, and an equal number of demi-lances and men at arms, supported by artillery and a small Forlorn Hope, was stationed further west, having received warning of Wyatt's approach. Proctor not only defined the pattern of the loyalist deployment, but also inferred their tactical objectives:

The Queen's arriere [...] determined rather by policy to achieve the victory, than by bloodshed to confound the rebels [...] permitted Wyatt with the fore part of his band to pass quietly along, and through between the Queen's majesties horsemen [...] the barded horses and demilances [...] on the south side, [...] the light horsemen on the north side: the great ordnance being charged to shoot full upon the breast of the rebels coming eastward: [...] the main battle of footmen [...] standing in goodly array on the northeast side, behind the said great ordnance, ready to set upon the rebels in the face coming towards Holborne.⁹⁶⁶

⁹⁶⁶ Proctor, p.69.

As this passage illustrates, the loyalists deployed their cavalry ahead of their infantry as the ‘*arriere*’, or vanguard, of the force, with the heavy cavalry on one side and the light horse on the other, leaving a gap for Wyatt to pass ‘between the [...] horsemen’. The artillery, grouped into a battery of ‘great ordnance’, was placed directly in the path of the rebel advance, with infantry positioned behind the guns, presumably for their protection, and to ‘set upon the rebels [...] coming towards Holborn’. This form of deployment, with cavalry on the flanks ahead of a central artillery battery supported by infantry battles stationed to the rear, was, as Chapter 4 has shown, relatively common and can be seen Figure 123 below. Despite Proctor’s succinct summary of the loyalist deployment, his account remained an essentially abstract depiction with little reference to terrain beyond stating Holborn as the rebels’ destination.

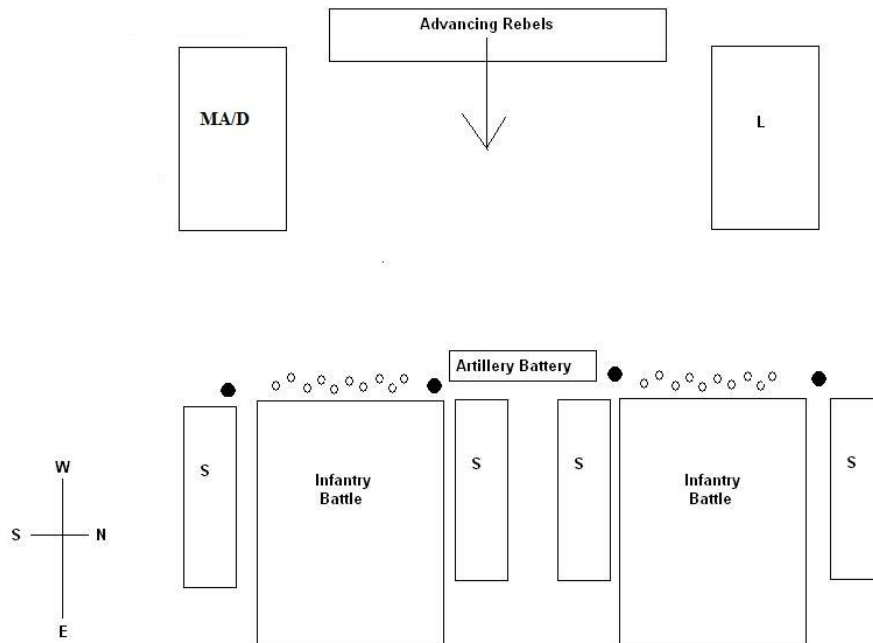


Fig.123. Abstract diagram of the loyalist deployments based upon Proctor’s *History*. As the rebel army advanced, under fire from the loyalists’ centrally positioned artillery battery, their flanks would be threatened by men at arms and demi-lances (MA/D) to their right and light horsemen (L) to their left. The main infantry battles, each with a Forlorn Hope (shown with small circles) to their fore, and sleeves of shot (S) and field pieces (black circles) on their flanks, were positioned further east.

The *History*, by contrast, nuanced Proctor’s description through the identification of key terrain features with the loyalists’ cavalry and artillery, allowing the location of these units to be established within the reconstructed landscape:

The earl [of Pembroke] by his espials, understanding which way Wyatt would march, placed his army in order, first in the field on the west side of St James’s, were all his

men of arms and demi-lances, over against which in the lane, next the park, were placed his light horsemen [...] the great artillery were planted between them, on the rising of the causeway next St James's house.⁹⁶⁷

By positioning the 'men of arms and demi-lances', comprising half the army's cavalry contingent, 'in the field on the west side of St James' the *History* explicitly located these soldiers, whom Proctor had merely stated as being 'on the south side' of the deployment. The absence of any fields west of St James's Park before the Tyburn indicates that the *History* must refer to St James's Field, thus positioning the loyalist heavy horse in or near to Green Park, which lay immediately to the west (see Fig.124). Thus the somewhat ambiguous 'lane, next the park', where the light cavalry were placed, can be identified as that which ran north from St James's Park between Green Park on the west and St James's Field on the east. Proctor's statement that the light horsemen lay 'on the north side', with the two cavalry wings on opposite flanks, suggests that the lane may have continued north of the way from Knightsbridge, allowing the horsemen to be placed either side of the road.

This theory can be confirmed through the Tower Chronicle's mention that loyalist horsemen was stationed both 'on the hill in the highway above the new bridge over against saint James's' and 'at the lane turning down by the brick wall from Islington ward'.⁹⁶⁸ In the first instance, reference to the 'bridge over against St James's' denoted the Tyburn crossing west of St James's Park, with the 'hill in the highway', the road from Knightsbridge, proving synonymous with the 'rising of the causeway' identified by the *History*. The second position, 'the lane turning down by the brick wall', similarly evokes the *History*'s portrayal of the 'lane, next the park', with the 'brick wall' potentially representing the enclosed fields and farmland of St James's shown on the 1585 map, running northwards uphill to Oxford Street in the eventual direction of Islington. Finally, the Embassy Account also attested to the heavy cavalry's deployment by describing 'the Lord Clynton [...] abydinge on the hill beonde charing crosse [...] this side the p[er]ke pale called highe Sandingfild'.⁹⁶⁹

The account's reference to 'Lord Clynton' confirms that it is the men at arms and demi-lances being described, while the unit's positioning matched the information provided by other sources. Although 'highe Sandingfild' cannot be identified from the available evidence, its location 'beonde charing crosse' but 'this side the p[er]ke pale', denotes an area just to the east of Green Park, on the same side of its 'pale', or boundary, as Charing Cross. This implies that the loyalist heavy horse may have been placed in the lane immediately opposite their light cavalry, where they could threaten forces moving past them along the Knightsbridge Road.

⁹⁶⁷ *History*, pp.72-3.

⁹⁶⁸ *Chronicle of Queen Jane*, p.48.

⁹⁶⁹ Kennedy, fols.84^v-5^r.

When discussing the loyalists' ordnance, the *History* confirmed its grouping into a single static battery of 'great artillery' placed 'on the rising of the causeway next St James' house'. As with the cavalry's deployment, the Tower Chronicle and Embassy Account both supported this statement, with the first source describing how Pembroke 'planted his ordnance upon the hill side' and the second relating Wyatt's route 'past the [Tyburn] bridge and in the high way under the foot of the hill were our ordenncs was placed'.⁹⁷⁰ This agrees with Proctor's assertion that the artillery was deployed between the army's cavalry wings to 'shoot full upon the breast of the rebels coming eastward', and with what is known of the historic terrain (Fig.124), exploiting the rising ground of the road from Knightsbridge to gain unimpeded lines of fire. Not all of the loyalists' ordnance was included within the battery, however, with the *History* stating that 'certain field pieces', probably the saker, falcons, and falconet the Tower Chronicle described, were deployed 'as flankers to each battle', in accordance with the common tactical doctrines of the period.⁹⁷¹

The Queen's infantry, organised into two battles, accompanied by their aforementioned field pieces, lay further eastward than the cavalry, being described in the Tower Chronicle as being 'somewhat lower, and nearer Charing Cross'. Their exact placement is clarified by accounts of the army mustering 'at Saint James's Field' and by Holinshed's confirmation that Pembroke 'was with his men in good order of battle in Saint James's Field' prior to the rebels' arrival. However, Proctor's description of 'the main battle of footmen [...] on the northeast side, behind the said great ordnance' implied that the loyalist infantry must have been stationed further along the Knightsbridge Road, where they could guard their artillery and simultaneously block Wyatt's predicted route towards Holborn. This form of deployment, with infantry battles having artillery to their fore and field pieces on their flanks, was commonly adopted during sixteenth-century warfare, as demonstrated in Chapter 4.

The positioning of the loyalist infantry was clearly motivated by the width of St James's Field, which, in contrast to the surrounding closes, provided a large expanse of ground suitable for assembling their infantry battles, alongside hedges offering flank protection and an obstacle to a frontal assault. The battles' missile weapons would probably have been organised into sleeves of shot, in accordance with the standard Tudor battlefield deployments outlined in Chapter 4. Furthermore, modern gradient surveys (Fig.124) support the Tower Chronicle's description of the infantry deployed 'somewhat lower' than the cavalry and artillery, showing that St James's Field was situated on the ground sloping downhill from the Knightsbridge Road, which was 'upon the hill side' climbing towards Oxford Street. Finally, the Embassy Account also suggested that the government army deployed a Forlorn Hope, containing a mixture of arquebus and pikemen, in proximity to the stone bridge over the Tyburn to skirmish with the

⁹⁷⁰ Kennedy, fol.85^r.

⁹⁷¹ *History*, p.73.

rebels and obstruct their advance.⁹⁷² While such a small force could not pose a serious threat to Wyatt's army, it may have caused considerable disruption and demoralisation by attacking as the rebels crossed the Tyburn, where the Brick Hill and Stone Bridge closes formed a narrow pass west of the bridge. As later analysis of the battle will indicate, this may have played a part in directing the rebel advance towards the Queen's forces, distracting the enemy commanders and partially concealing the remainder of the loyalist army from view.

The constricted nature of the battlefield compelled the government army to adapt its deployment in response to the terrain, but also created corresponding tactical opportunities for corralling Wyatt's advance along a predetermined route. Stationing cavalry on either side of the road from Knightsbridge, east of Green Park and the Conduit Meadow, would have curtailed the rebels' freedom of movement, threatening their flanks and channelled them towards the artillery battery stationed atop the hill by St James's Palace. Equally, the placement of infantry battles beside the main road, in St James's Field, protected the army's artillery and allowed the interception of enemy forces approaching London by any of the nearby roads. Finally, the detachment at Whitehall ensured that the Queen herself was defended, and also formed a tactical reserve that could be committed to the action with greater ease than the forces within London. The deployment shown in Figure 124 diverges heavily from Brooks's assertion that the Queen's forces 'held the high ground north of Charing Cross [...] Pembroke's front [stretching] from Oxford Street towards St Martin's Lane'.⁹⁷³ While this theory correctly noted the importance of the high ground, it failed to account for the specific terrain features referenced by chroniclers, which established the loyalist positions significantly further west and lower down the hillside, allowing their control and interdiction of the rebels' approach march.

⁹⁷² Kennedy, fol.85^r.

⁹⁷³ Brooks, p.314.

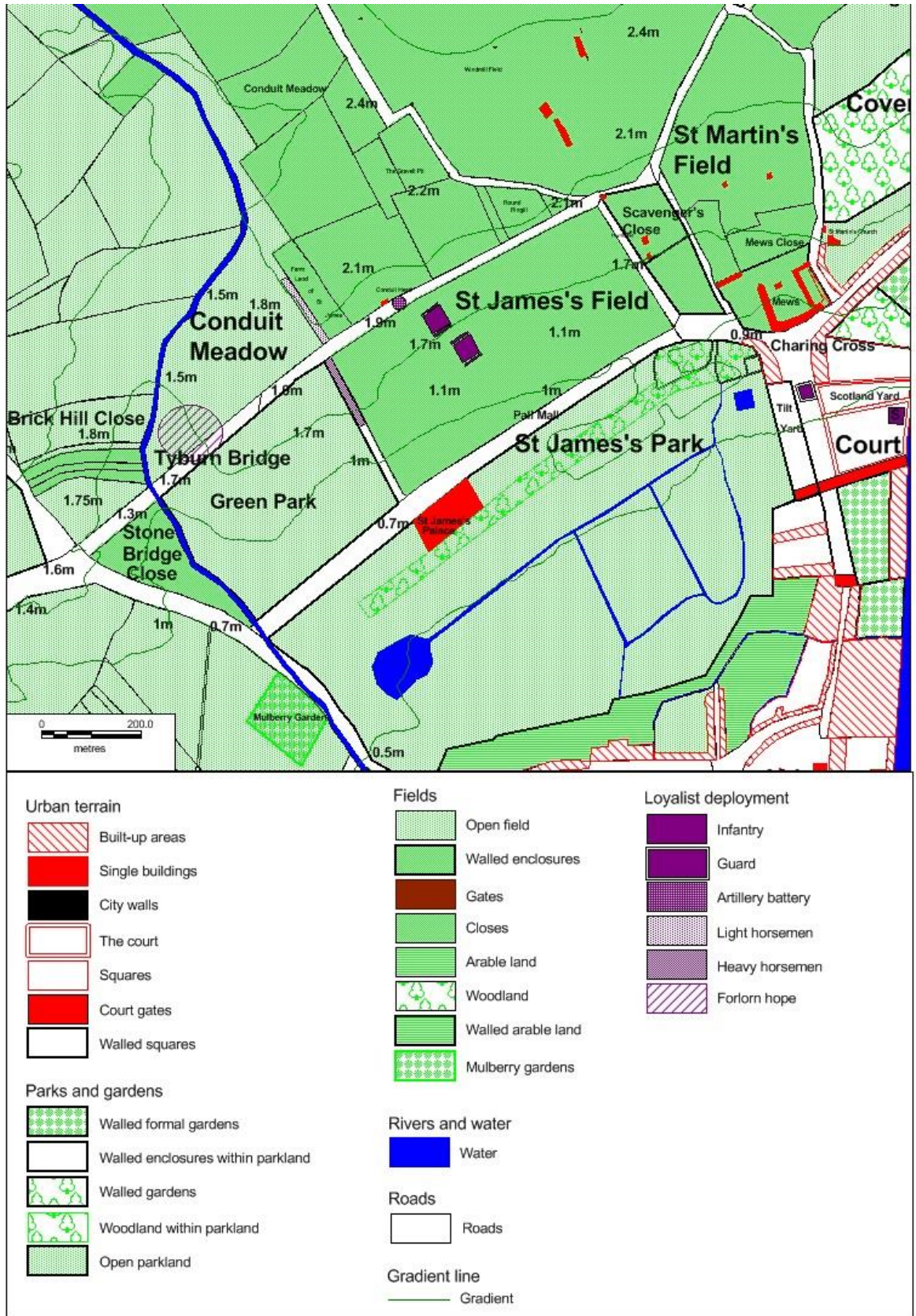


Fig.124. Loyalist deployment. North is at the top of the image. Note the Forlorn Hope east of the Tyburn bridge (left of image), the light horsemen and demi-lances in the lanes either side of the Knightsbridge Road, and the artillery set slightly further back, on the rising ground of the 'causeway' opposite St James's Palace. The loyalist infantry battles were stationed in St

James's Field, with their accompanying sleeves of shot (centre), while The Queen's Guard and Southwell's retinue (S) defended the court (extreme right). Note that the area occupied by each unit has been estimated via calculating its frontage based upon the number of soldiers it contained. Contour data is included on the image, showing height in metres above Newlyn Datum. PROFILE DTM [NTF geospatial data], Scale 1:10000, Tiles: tq27ne,tq28se,tq37nw,tq38sw,tq27nw,tq28sw, Updated: November 2009, Ordnance Survey (GB), Using: EDINA Digimap Ordnance Survey Service, <<http://edina.ac.uk/digimap>>, Downloaded: Wed Jul 11 11:57:11 BST 2012

Rebel Deployment

In contrast to the battle-readiness of the government army, the insurgents were tired, hungry, and demoralised, their forces scarcely having rested for twenty-four hours and already reduced through desertion during their exhausting night march. While the army's small size would have prevented significant numbers of its soldiers absconding, accounts depict the damaging impact of the defection of Sir George Harper, one of the rebel officers, who 'posted away to the queen, and revealed the whole series of Wyatt's projects'.⁹⁷⁴ This betrayal, combined with loyalist scouting and patrols, gave the Queen's forces sufficient information to pre-empt the rebels' arrival, confronting Wyatt's army with a carefully constructed deployment near St James's Field. Hearing of the loyalists' presence outside London, Wyatt allowed his forces to rest for a few hours at Knightsbridge, which he reached just after nine o'clock, before resuming the march towards the government's chosen battlefield, arriving at around noon and deploying his army, as the *History* recorded:

Planting his ordnance upon a hill, beyond St. James's, he left there the greatest part of his little army to guard them, and himself with five ensigns made towards Ludgate, and, Cuthbert Vaughan with two other ensigns towards Westminster, leaving St James's on the left hand, thereby to terrify that part of the city, as he supposed, and consequently by distracting the queens forces, whilst they divided, he might obtain an easier passage.⁹⁷⁵

The mention that Wyatt dividing his army, previously described as 'fourteen ensigns, under which were about 4000 men', raises questions about his tactical objectives, which are often overlooked by scholars exclusively following Proctor and Holinshed's narratives.⁹⁷⁶ The rebels' use of 'the greatest part' of their forces to guard the artillery, only sending half of their fourteen ensigns towards the city, seems to contradict the theory that Wyatt was attempting a full-scale assault on London. Instead it appears that the rebels' main battle of 'five ensigns', approximately 1500 men, sought to pass through the walls into the inner city, where they hoped to gain further support from the inhabitants and take possession of the Tower to secure money and supplies. Meanwhile, Vaughan's 'two other ensigns', encompassing 500 men, were tasked

⁹⁷⁴ *History*, p.72.

⁹⁷⁵ *History*, p.72.

⁹⁷⁶ *Ibid.*, p.70.

to attack Westminster and ‘terrify that part of the city’, creating a diversion so that ‘by distracting the Queen’s forces [Wyatt’s battle] might obtain [...] passage’. Although Mary was at Whitehall, having refused to take refuge in the Tower, this appeared to have been an unexpected benefit rather than a deliberate stratagem by Wyatt and Vaughan, given that they had no way of knowing the Queen’s location. Finally, the army’s artillery, which contained many heavy siege guns guarded by approximately half the rebel force, was stationed to the rear, where its long range allowed it to target loyalist units across the Tyburn. The rebels’ substantial numbers of field pieces, noted in Chapter 7, fail to appear in the action’s source material, suggesting that they were deployed with the battery, or alternatively, if they accompanied Wyatt and Vaughan’s battles, they exerted little impact on the engagement.

The *History*’s description can also be placed into dialogue with the reconstructed historic landscape to determine where the rebel army was deployed. For instance, the ‘hill, beyond St James’s’, where Wyatt sited his artillery and significant portions of his army, can be identified with the help of the Tower Chronicle, which stated its position ‘almost over against the Park corner’. As analysis of the area’s terrain reveals, the only suitable prominence in proximity to one of the parks is the rising ground at Hyde Park Corner, near Brick Hill Close. This also had the advantage of lying directly off the western spur of the way from Knightsbridge, enabling the rebels to branch off from Wyatt’s battle as they approached the Tyburn Bridge, deploying the artillery to cover their commander’s advance. While this hill was not particularly imposing, rising from a slope of approximately 1.75 metres to 2.2 metres at its summit, it would have allowed the rebels to overlook the enclosures around the crossing which restricted their visibility. Similarly, as Figure 125 shows, the eastern spur of this road also represents the likely route of Vaughan’s small force, which must have crossed the Tyburn near St James’s Park in order to ‘leav[e] St James’s on the left hand’ as it approached Westminster. From here, the rebel detachment could have advanced southeast along the western edge of the park before reaching Petty France and Toot Hill, a low rise near the modern site of St James’s Park underground station, and descending into Westminster via Tothill Street.⁹⁷⁷

⁹⁷⁷ Tanner, p.235.

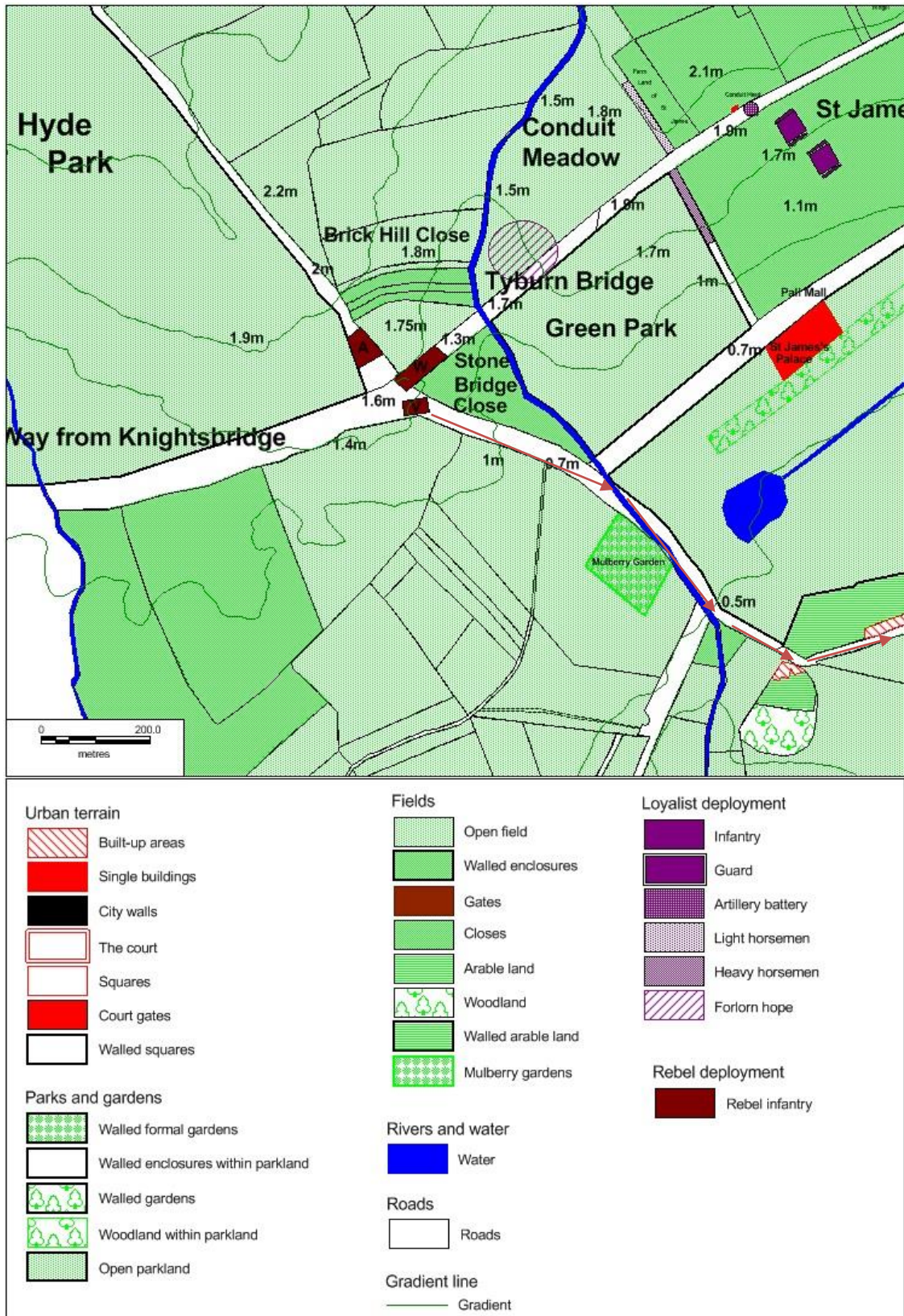


Fig.125. Rebel deployments west of the Tyburn. North is at the top of the image. Wyatt's battle (W) is in the centre, ready to advance up the way from Knightsbridge, while the baggage and artillery guards (A) have deployed to the right, near Hyde Park Corner, where the ground rises slightly, overlooking the surrounding closes. On the left, Vaughan's battle (V) has split from Wyatt's force, ready to move south-eastwards along the edge of St James's Park and down

Tothill Street into Westminster, as the arrows indicate. Contour data is included on the image, showing height in metres above Newlyn Datum. PROFILE DTM [NTF geospatial data], Scale 1:10000, Tiles: tq27ne,tq28se,tq37nw,tq38sw,tq27nw,tq28sw, Updated: November 2009, Ordnance Survey (GB), Using: EDINA Digimap Ordnance Survey Service, <<http://edina.ac.uk/digimap>>, Downloaded: Wed Jul 11 11:57:11 BST 2012

While the *History* specified that the rebels' main battle marched 'towards Ludgate', Proctor revealed this to be a subsequent change in direction made during the engagement, when Wyatt 'forsook his way intended through Holbourne', and left the road from Knightsbridge.⁹⁷⁸ Further proof of this is provided by the *History*'s later statement that Wyatt, as he advanced uphill from the Tyburn, 'perceiving he could by no means pass the direct way, coming to the [Green] park corner, he took the nearer way'.⁹⁷⁹ This description of the 'direct way', along which Wyatt initially advanced, and the 'nearer way', to which he subsequently redirected his forces, mirrors the road network of the historic terrain, with the former being the route from Knightsbridge and the latter the lane leading southwards to St James's Palace and Pall Mall. The Tower Chronicle verified these deployments, affirming that Wyatt left the road from Knightsbridge and 'came down the old lane on foot, hard by the court gate at Saint James's, with iiii or v [four or five] ancients; his men marching in good array'.⁹⁸⁰ By explicitly linking 'the old lane' with 'the court gate at Saint James's', the Tower Chronicle clearly identifies the road between Green Park and St James's Field, as shown in the map above (see Fig.125). Besides confirming the *History*'s estimate with the claim that Wyatt's battle contained 'iiii or v ancients [ensigns]', the Chronicle also noted the discipline of the rebel soldiers 'marching in good array'. This perhaps indicates that, in dividing his forces, Wyatt sought to separate the more combat-effective soldiers from those who were lacking in experience or equipment, assigning the latter as guards for the artillery, where they were less likely to be involved in close-quarter fighting.

Unlike their counterparts amidst the loyalist infantry, who were probably positioned in 'broad' squares in anticipation of battle, Wyatt and Vaughan's troops would have used a columnar array to manoeuvre along the enclosed routes approaching London. These formations would have been significantly narrower than the 'just' square identified in Chapter 4, requiring roughly twice as many ranks as files to travel between areas of enclosed ground or urban terrain. Wyatt's battle, for instance, would be unable to deploy more than thirty men wide along the Knightsbridge Road, which contracted to a width of 100ft (30.5m) after passing the Conduit Meadow to the north, meaning that the unit's 1500 soldiers would require fifty ranks in depth. For Vaughan's forces, the situation was similar, with the road to Westminster tapering to the 50ft (15.2m) wide Tothill Street, preventing them arraying more than sixteen men abreast and

⁹⁷⁸ Proctor, p.70.

⁹⁷⁹ *History*, p.73.

⁹⁸⁰ *Chronicle of Queen Jane*, p.48.

so necessitating over thirty ranks to deploy 500 troops.⁹⁸¹ The rebels stationed with the artillery may, however, have been arranged in a 'broad' square' at the base of Brick Hill, allowing the ordnance to fire overhead while presenting a wide frontage to oppose loyalist counterattacks. Accounts make no mention of the insurgents' possessing cavalry, and in fact specified that they advanced 'on foot', suggesting that any horsemen with Wyatt's army dismounted to join the infantry battles, which were better suited to the enclosed landscape of the battlefield.⁹⁸²

Faced with the Queen's substantial army, which incorporated infantry, cavalry, and artillery under professional leadership, and supported by a similar number of reserves in London itself, Wyatt's forces were simply insufficient to achieve victory on the battlefield. Despite the insurgency's inclusion of near-identically trained and equipped soldiers, it lacked the numbers to oppose the loyalist forces in a direct confrontation, being outnumbered by two to one or more, and instead relied upon the possibility of support from either the government's field army or the London population.⁹⁸³ Equally, the loyalists' deployment, which exploited foreknowledge of Wyatt's approach to block his intended route into Holborn, made good use of the terrain's tactical potential, stationing troops to intercept the rebels in an enclosed landscape favourable to its defenders.

Despite these disadvantages, the possibility of defections from either the field army or the London garrison was no vain hope, with the earlier incidents at Rochester and Southwark illustrating the uncertain allegiance of the government forces. Indeed, as the engagement itself demonstrated, it was only the actions of certain of the Queen's commanders, coupled with the continued loyalty of their retinues, which narrowly averted a similar crisis of authority. Had elements of the field army sided with Wyatt, or had greater numbers refused to engage his army, the rebels' likelihood of entering the city and achieving their objectives would have significantly increased. Equally, had Wyatt committed his full strength to the attack, his troops may have defeated the government's field force in the resultant battle, potentially encouraging rebel sympathisers, and the neutral population within London, to open the city gates and admit his army. Thus the outcome of the action was determined as much by the failures of the rebel commanders' tactics, as by their ultimate lack of support from the enemy army.

The Battle

The engagement began just after noon, with Wyatt's army marching eastwards along the Knightsbridge Road and deploying into three battles at the point where the road diverged

⁹⁸¹ These calculations are based on Vegetius's assertions that each soldier would require 3x7ft (0.9x2.1m) of space within a formation.

⁹⁸² *Chronicle of Queen Jane*, p.48.

⁹⁸³ Loades, *Conspiracies*, pp.74-6.

towards Westminster and London. Wyatt's 1500 men continued along the main road across the Tyburn towards Holborn, where, after crossing the stone bridge, they encountered the loyalists' Forlorn Hope of pikemen and arquebusiers which 'scrimged wth them at ther passing by'.⁹⁸⁴ Simultaneously, Vaughan's detachment of 500 soldiers took the southeast fork towards Westminster, crossing the stream further south and heading east along Petty France and down Totthill Street, while the rest of the army, an estimated 2000 troops, remained in position to protect the artillery. During these opening manoeuvres, the Tower Chronicle recorded how 'the great ordnance shot off freely on both sides [but] Wyatt's ordnance overshot the troop of horsemen', presumably the loyalist light cavalry stationed directly opposite them across the Tyburn.⁹⁸⁵ The loyalist gunners were, however, more accurate, and 'one piece struck iii [3] of Wyatt's company in a rank, upon their heads, and, slaying them, struck through the wall into the park'.⁹⁸⁶ The small number of casualties caused by this volley implied that the loyalists also overshot their target, merely scoring a glancing hit on the unit's edge, which, after killing three of Wyatt's soldiers, 'struck through the wall' into Green Park, which lay immediately alongside the path of the rebels' advance.

The limited impact of these long-distance opening salvos exemplified some of the problems of battlefield artillery, with guns often requiring ranging shots to acquire their target, while their slow rate of fire meant that they were frequently masked or overrun by enemy troops before accurate shooting could be attained. Nonetheless, as Wyatt's column brushed aside the loyalist skirmishers and advanced eastwards, it became exposed to increasingly effective bombardment from the loyalists' hilltop battery, the Embassy Account confirming that 'our ordenncs [...] troubled them sore'.⁹⁸⁷ Under this intensifying fire, which threatened to cause heavy casualties amongst his forces, Wyatt, 'perceiving that he could not come up the fore right way without great disadvantage' altered course to leave the Knightsbridge road and evade the loyalist artillery and infantry battles.⁹⁸⁸ In describing this manoeuvre, Holinshed related that 'when [Wyatt] was come to the Park corner, he leaving the Causeway, swerved, and took the nether way toward Saint James's'.⁹⁸⁹ Similarly, Proctor claimed that the rebels 'ran down underneath [alongside] the park wall [...] adjoining to the Queen's manor house called Saint James's, clearly indicating the lane to their right, between Green Park and St James's Field, which led directly to Saint James's Palace'.⁹⁹⁰ This unexpected manoeuvre, shown on the map below (Fig.126), succeeded in breaking through the loyalist cordon, the Tower Chronicle

⁹⁸⁴ Kennedy, fol.85^r.

⁹⁸⁵ *Chronicle of Queen Jane*, p.49.

⁹⁸⁶ *Chronicle of Queen Jane*, p.49.

⁹⁸⁷ Kennedy, fol.85^r.

⁹⁸⁸ Holinshed, p.1730.

⁹⁸⁹ *Ibid.*

⁹⁹⁰ Proctor, p.70.

remarking that ‘the said horsemen that were there set upon part of them, but were soon forced back’.⁹⁹¹

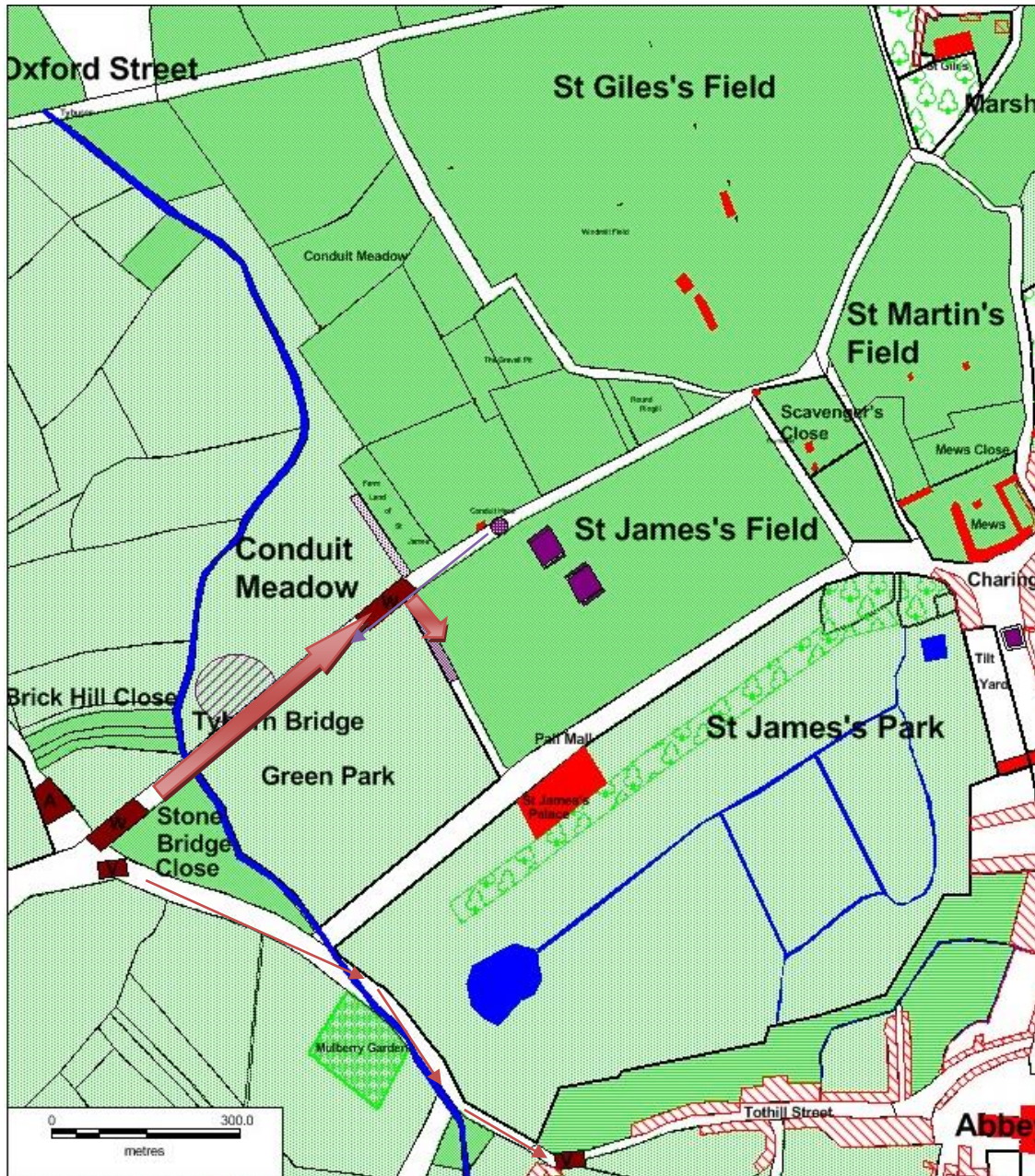


Fig.126. Map showing initial phases of engagement. North is at the top of the image. Wyatt's battle advanced along the Knightsbridge Road, through the loyalist Forlorn Hope, before turning right at the lane between Green Park and St James's Field and driving back the loyalist men at arms and demi-lances (shown with red arrows). Prior to turning right, Wyatt's forces came under artillery fire from the loyalist battery (shown with a purple arrow). Meanwhile, Vaughan's battle moved southeast along the back of St James's Park, reaching the top of Tothill Street (shown with red arrows).

⁹⁹¹ *Chronicle of Queen Jane*, p.49.

As Wyatt's forces emerged from the lane opposite St James's Palace, they were engaged afresh by the loyalist heavy horsemen, who, having been pushed back by the insurgents, had reformed into a wider array more suitable for combat. This attack was so successful that it divided Wyatt's battle in two, with the rearward portion being defeated prior to the arrival of the loyalist light cavalry from the north, who pursued the fleeing rebels even as Wyatt and the remainder of his unit continued onwards towards Ludgate, as Proctor described:

The lord Clinton observing his time, first with his demilances broke their array, and divided Wyatt's band in two parts. Then came the light horsemen who so hardly pursued the tail of his band, that they slew many, hurt more, and took most of them. While the said horsemen were thus in fight with the tail of his band, Wyatt himself and LC [500] of his men [...] pecked on still all along under James's Park wall.⁹⁹²

In describing the operation of Clinton's cavalry, Proctor highlighted the specific and complementary tactical functions of the different types of English horse. Firstly the demilances and, presumably, the men at arms, performed the role of shock troops against the rebel battle and successfully 'broke their array, and divided Wyatt's band in two parts', whereupon the light horsemen, exploiting their superior mobility, 'pursued the tail [...] slew many, hurt more, and took most of them'. While the *History* confirmed this report, stating that the loyalist horsemen 'gave such a sudden onset, that they divided [Wyatt's] battle asunder, cutting off a great number, who retired in confusion, the Tower Chronicle described a slightly different series of events:⁹⁹³

The earl of Pembroke's horsemen hovered all this while without moving, until all [of Wyatt's battle] was passed by, saving the tail, upon which they did set and cut off. The other marched forwards, and never stayed or returned to the aid of their tail.⁹⁹⁴

As this extract shows, the division of Wyatt's battle occurred when the forefront 'marched forwards' and detached from the 'tail' of the unit, rather than halting to receive the cavalry's charge. Had they done so, the rebels' possession of pikes, and their previously described 'good array', would have made their formation sufficiently resilient to withstand an assault by a force of cavalry a third of their size. Instead, after driving off the demi-lances' initial assault, the unit broke into two parts, the rearmost of which sought to stand its ground, but was subsequently routed by the renewed attack of the men at arms and pursued by the light horsemen. While Wyatt's decision to abandon two thirds of his battle is difficult to explain, his desire to escape the loyalist trap and reach London, where he hoped to gain the support of the population, may have outweighed the preservation of his forces. Furthermore, stopping to resist the enemy horsemen would have immobilised the rebels ahead of the loyalist army and presented a static

⁹⁹² Proctor, p.70.

⁹⁹³ *History*, p.73.

⁹⁹⁴ *Chronicle of Queen Jane*, p.49.

target for their ordnance, potentially mirroring the outcome of Pinkie, in which the Scots were forced onto the defensive by English cavalry charges before being broken by sustained artillery fire. Figure 127 shows the attack of Clinton's cavalry, and the resultant division of the rebel forces, with part of his battle retreating back towards the Knightsbridge Road and the remainder continuing towards Charing Cross.

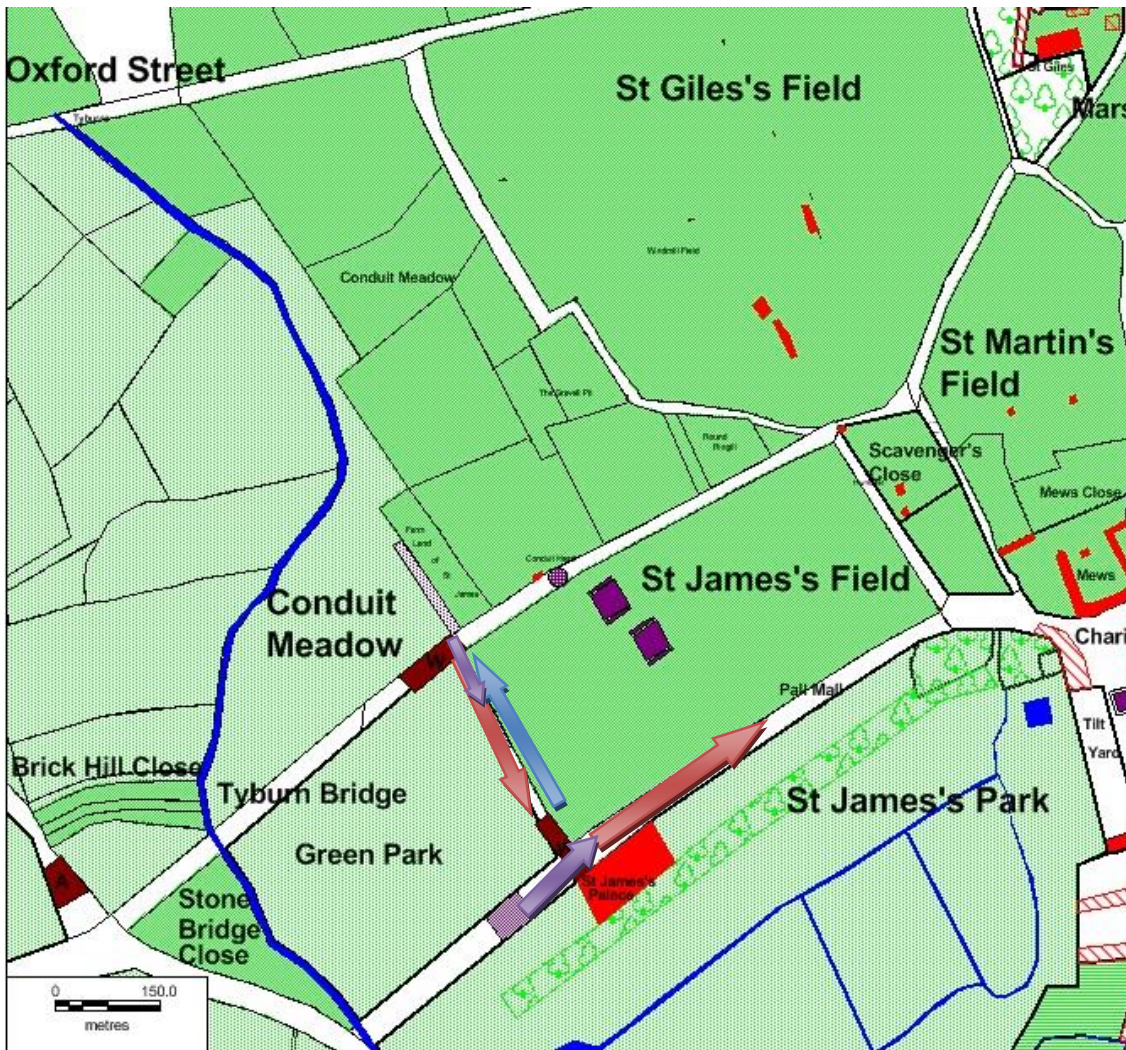


Fig. 127. Map showing later stages of action. North is at the top of the image. Wyatt's battle turned to the right and pushed back the loyalist heavy horse (shown with red arrows) before emerging opposite St James's Palace, whereupon the horsemen, now in battle array, attacked and split the rebel unit (purple arrow). Half of Wyatt's battle continued eastward along Pall Mall (red arrow), while the remainder retreated (blue arrow) to be pursued by the light horse (purple arrow)

While this attack, which virtually destroyed the rebel battle as a fighting force, was highly effective, the Embassy Account was the only source to estimate the insurgents' casualties,

claiming that there were ‘slayne, and mayned [...] vii score [140] or their abouts’.⁹⁹⁵ The Account’s subsequent statement that ‘the rest wch escaped forward were esteemed to be a vc [500]’, confirming Proctor’s figure of ‘LC [...] men’, would leave approximately 1000 rebels unaccounted for, who presumably fled back towards the west, pursued by the government horsemen.⁹⁹⁶ Notably, after this incident the action’s sources also ceased to mention the rebels’ Rearward battle, deployed to guard the artillery, a silence which seemed to imply that they, losing contact with their commander and assuming the battle lost, were embroiled in the rout and scattered. Although it would appear that the rebels were defeated at this point, with Wyatt’s battle having lost two-thirds of its starting strength and the mainstay of his army in retreat, the chaos around St James’s Park was misconstrued by loyalists further east, who mistakenly assumed the field army was defecting to the rebels. As the Tower Chronicle related, this sparked a panic at Charing Cross, where a detachment of the Queen’s forces beheld the rebel advance:

At Charing Cross there stood the Lord Chamberlain, with the Guard and a number of other, almost a thousand persons, the which, upon Wyatt’s coming, shot at his company, and at last fled to the court gates [...] In this repulse the said lord chamberlain and others [...] thought that the earl of Pembroke, who was assailing the tail of his enemies, had gone to Wyatt, taking his part against the Queen.⁹⁹⁷

This passage’s mention of ‘the Lord Chamberlain [Sir John Gage] the guard and a number of other, almost a thousand’ matched Underhill’s described of the troops protecting Whitehall, confirming that these forces had advanced to Charing Cross before fleeing back into the court, as shown by Figure 128.⁹⁹⁸ As the Chronicle asserted, the loyalists’ fear that their cavalry ‘had gone to Wyatt, taking his part against the Queen’ seemed the only explanation for their retreat when they outnumbered the remnants of the rebel battle two to one. This confusion was clearly a matter of perspective, with the disintegrating rebel army being effectively obscured from view by the cavalry ‘assailing the tail’ of Wyatt’s advancing battle, and by the rising ground leading uphill from Charing Cross towards the west.

⁹⁹⁵ Kennedy, fol.85^r.

⁹⁹⁶ Ibid.

⁹⁹⁷ *Chronicle of Queen Jane*, p.49.

⁹⁹⁸ David Potter, ‘Sir John Gage (1479-1556): Military Administrator and Courtier’, in *Dictionary of National Biography* <<http://0-www.oxforddnb.com.wam.leeds.ac.uk/view/article/10272?docPos=1>> [accessed 25 March 2012] (para.7 of 8). This confirms Gage’s role as Lord Chamberlain in 1554.

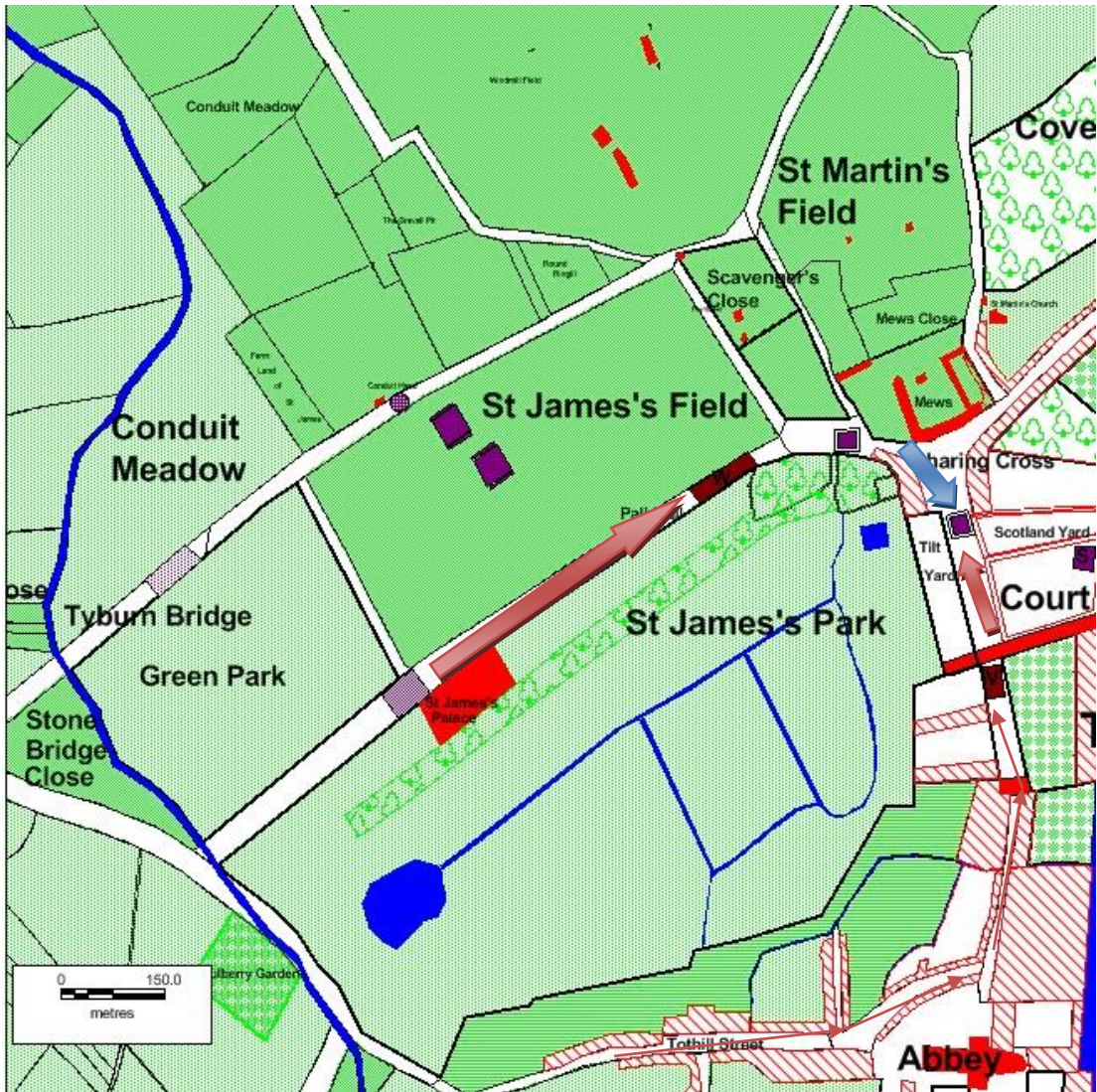


Fig.128. The rebels' advance to Charing Cross and the loyalists' retreat. North is at the top of the image. At the northern edge of St James's Park, Wyatt's battle approached Charing Cross (shown with a red arrow), prompting Gage's detachment to withdraw to the court (indicated with a blue arrow). From the loyalist perspective it would appear that the field army had joined the rebels, particularly given the heavy cavalry's movement behind Wyatt's advance. As the loyalists retreated, Vaughan's battle, which had marched through Westminster (shown with red arrows), arrived, causing them to flee back inside the court.

Meanwhile, as the image above depicts and Holinshed confirmed, Vaughan's battle, which 'escaped the charge [of the loyalist cavalry], passed by the back of Saint James's towards Westminster, and from thence to the court'. The unexpected arrival of this second rebel unit, which had been moving in parallel with Wyatt's battle, down Tothill Street, along Thieving Lane, and north up King Street coincided with the loyalists' retreat and resulted in a chaotic rush for safety, as Underhill described:

Then came [Anthony] Knevett and Thomas Cobam, with a company of the rebels with them, through the gatehouse, from Westminster, upon the sudden, wherewith Sir John

Gage and three of the judges [...] were so frightened that they fled in at the gates [...] and so shut the gates. Whereat the rebels shot many arrows. By means of the great hurly-burly in shutting of the gates, the Guard that were in the courtyard made as great haste [...] through towards the watergate, the kitchens, and those ways.⁹⁹⁹

Despite this unflattering portrayal of the Queen's elite units, with the Guard and other troops fleeing 'towards the watergate, the kitchen, and those ways', the incident had little impact on the overall outcome of the engagement, with the 'shutting of the gates' proving sufficient to deter the rebels owing to Vaughan's lack of artillery. While the insurgents 'shot many arrows' into the court, Proctor relating how 'one master Nicolas Rockwood being a gentleman [...], and in armour [...], was shot through his nose with an arrow', they possessed neither the numbers nor ordnance required for an assault, and eventually departed to the north toward Charing Cross.¹⁰⁰⁰ For all George Wyatt's protestations that his father's troops deliberately refrained from attacking the Queen, preferring 'rather to wyne by love then purchase his desier by bloude or feare', it seems unlikely that his forces either knew her whereabouts or had the necessary resources to storm the palace.¹⁰⁰¹

As this brief action occurred, Wyatt's battle, unopposed by the loyalist infantry in St James's Field, advanced through the gap opened by Gage's retreat, with accounts noting that 'the Queen's whole battle of footmen [were] standing still' as the rebels passed.¹⁰⁰² While Proctor reported this as a deliberate stratagem to avert unnecessary casualties, claiming that Wyatt 'was suffered [...] to pass so far quietly and without resistance', George Wyatt invoked an unnamed eyewitness to confirm that 'the Earle of Pembroke had muche adoe [...] to intreate his men to stand'.¹⁰⁰³ More worryingly for the loyalists, Wyatt's source also emphasised the risk of mutiny amongst troops separated from their officers, stating 'where the Earle was not, his men weare bending towards the kentishmen, where voices weare heard, that they would joine with their countrie men'.¹⁰⁰⁴ With the Queen's infantry seemingly paralysed by their conflicting loyalty, and the cavalry occupied in the pursuit of the fleeing insurgents, the remainder of Wyatt's battle marched eastwards through Charing Cross and into the London suburbs of Farringdon Ward. Recounting the rebels' unobstructed progress along the Strand, through Temple Bar to Fleet Street and Ludgate, the Tower Chronicle described a succession of similar instances of loyalist inactivity and apparent neutrality:

In Fleet Street certain of the Lord Treasurer's band, to the number of ccc [300] men, met [the rebels], and so going on the one side passed by them coming on the other side [...]. Also [...] Wyatt and his company passed [...] a great company of harnessed men,

⁹⁹⁹ MS. Harleian 425, fol.95^v-6^t.

¹⁰⁰⁰ Proctor, p.72.

¹⁰⁰¹ *Papers of George Wyatt*, 3^v.

¹⁰⁰² *Chronicle of Queen Jane*, p.49.

¹⁰⁰³ Proctor, p.70; Loades, *Conspiracies*, p.72.

¹⁰⁰⁴ *Papers of George Wyatt*, 4^t.

which stood on both sides, without any withstanding them [...]. Thus Wyatt came even to Ludgate [...] but the lord William Howard standing at the gate [refused him entry]. Seeing he could not come in, and belike being deceived of the aid which he hoped out of the city, [Wyatt] returned back again in array towards Charing Cross, and was never stopped till he came to Temple Bar, where certain horsemen which came from the field met them in the face; and then began the fight again to wax hot.¹⁰⁰⁵

As this passage illustrates, the city's defenders, while plentiful, evidently had little desire to challenge Wyatt's small force during its progress through the suburbs. Where loyalists were encountered, notably the 300 men of the 'Lord Treasurer's band' and the 'great company of harnessed men' on Fleet Street, the rebels were either ignored or unopposed. While it is possible, given their generally high standard of equipment, that Wyatt's troops were mistaken for retreating loyalists, particularly in the case of the Lord Treasurer's band who 'going on the one side passed by them', the citizens' attitude seemed more suggestive of inertia than ignorance. The Embassy Account, for instance, related that, despite 'the house holders standing eich man at his dore wth wepon and harnes all alonge' Fleet Street, the rebels were not resisted as the assembled forces 'not once moved towards them'.¹⁰⁰⁶ Even when the rebels were finally halted at Ludgate, through Howard's refusal to grant them admittance into the inner city, they were not opposed with force and were permitted to reform 'in array' and retreat back towards Charing Cross. The only incidence of further combat, which occurred upon Wyatt's return to Temple Bar, was initiated by 'certain horsemen which came from the field' rather than either the government forces already bypassed in the suburbs or the infantry battles of the field army. This demonstrated the ambiguous loyalty of the Queen's troops within and outside London, with only the cavalry, who were primarily retinue members and under the direct supervision of high-ranking officers, taking an active role in confronting the insurgents.

The Chronicle goes on to relate the rebels' rapid defeat at the hands of the government horse, presumably the heavy cavalry accompanying the field army, Wyatt being quickly prevailed upon to surrender, prompting 'taking of men on all sides' as the remnants of his battle were rounded up by the victorious loyalists.¹⁰⁰⁷ Indeed the final, and more militarily significant, stage of the battle occurred when Vaughan's detachment, refusing to acknowledge defeat, headed north from the court to Charing Cross, where they were intercepted by a group of reinforcements sent from the loyalist army, with the *History* describing how the rebels:

Were then encountered by Sir Henry Jerningham captain of the Queen's Guard, Sir Edward Bray, Master of the Ordnance, and Sir Mathew Parris whom the Earl [of Pembroke] had sent with a band of archers and two field pieces, for the rescue of the court; so that they came to the push of pike.¹⁰⁰⁸

¹⁰⁰⁵ *Chronicle of Queen Jane*, pp.49-50.

¹⁰⁰⁶ Kennedy, fol.85^r.

¹⁰⁰⁷ *Chronicle of Queen Jane*, p.51.

¹⁰⁰⁸ *History*, pp.73-4.

As the extract shows, the bulk of this force, comprising ‘Sir Mathew Parris [...] with a band of archers and two field pieces’, was detached from Pembroke’s army ‘for the rescue of the court’, the archers presumably being drawn from the ‘sleeve’ around the infantry battles, and the field pieces from their flanks. However, the presence of ‘Jerningham captain of the Queen’s Guard’ suggested that this unit may likewise have participated in the action, perhaps having regrouped from its earlier retreat to mount a counterattack. The *History*’s reference to ‘the push of pike’ is instructive in this respect, as it identified the presence of close-quarter armed infantry in addition to the archers and field artillery. Holinshed corroborated these claims, stating that, in the ensuing skirmish, Vaughan’s men were swiftly scattered, as the loyalists, having ‘discharged their field pieces upon them, joined with those rebels [...] at the push of the pike’.¹⁰⁰⁹ While Chapter 7 has shown that the insurgents were equipped with pikes, wore body armour, and were supported by archers, the greater number of armoured loyalists and, more crucially, their use of field pieces, would have given them the advantage in this encounter. Without artillery of their own, and lacking sufficient armoured personnel to replenish their casualties in a sustained push of pike, the rebels were disadvantaged both at range and at close quarters, and rapidly fled after the loss of sixteen to twenty of their soldiers, despite Vaughan’s attempts to rally them.¹⁰¹⁰ Figure 129 shows this final phase of the action, as well as the direction of the rebel retreat, with Holinshed mentioning that ‘some fled into the lane toward Saint Giles, and some on the other side by a Brewhouse towards the Thames’.¹⁰¹¹

¹⁰⁰⁹ Holinshed, p.1731.

¹⁰¹⁰ Holinshed, p.1731; *History*, pp.73-4; Proctor, p.70; *The Twysdon Papers*, British Library, Add MS.34176, fol.24. This source refers to Vaughan’s role in this action, claiming he repeatedly urged his troops to maintain the fight upon hearing of Wyatt’s capture.

¹⁰¹¹ Holinshed, p.1731.



Fig.129. Skirmish between Vaughan's rebels and the loyalists at Charing Cross. North is at the top of the image. Elements of the loyalist army, including a detachment of archers, had been despatched from St James's Field (shown with a purple arrow) to assist the Guard in defeating the insurgents. Vaughan's rebels had advanced from the court (shown with a red arrow), but were scattered in the ensuing skirmish and fled north towards St Giles, and west towards the Thames (shown with blue arrows).

The conclusion of this action, alongside the events at Temple Bar, marked the end of the engagement and signalled Wyatt's failure to either defeat the government forces or enter London and raise further supporters. Estimates of the total number of casualties are difficult to attain, with the Tower Chronicle's claim of 'on both sides, not past xl [40] persons' killed seeming an extremely low figure for a battle of this scale.¹⁰¹² While the loyalists were unlikely to have sustained heavy losses, given that Wyatt's attack disintegrated into a series of skirmishes in which they generally held the upper hand, the insurgents may have suffered higher casualties. For instance, the shooting, artillery fire and cavalry charges directed against Wyatt's battle, in which the Embassy Account claimed 140 were killed or seriously wounded, coupled

¹⁰¹² *Chronicle of Queen Jane*, p.51.

with the action at Charing Cross, wherein a further twenty died, resulted in over 150 probable fatalities before the battle's conclusion.¹⁰¹³ This number may have significantly increased during the final rout of Wyatt's army at Temple Bar, and Vaughan's forces at Charing Cross, with the Chronicle speculating that 'some think there was many slain in houses', as isolated parties of insurgents attempted to escape the London suburbs.¹⁰¹⁴ As the *History* observed, such efforts were largely unsuccessful and 'but a few of them escaped, [...] the prisons of the city were filled with most part of them'.¹⁰¹⁵ Thus, it could reasonably be assumed that Wyatt's total numbers of dead exceeded 200, with at least an equal number wounded and as many as 1000 prisoners. While this represented a relatively small figure for a field engagement, Pinkie for instance resulted in over 6000 killed and 1500 prisoners, it made up a significant proportion of Wyatt's force, which including prisoners, sustained almost 50% casualties, encompassing almost the entirety of his and Vaughan's battles.¹⁰¹⁶

Conclusions

As the previous chapters have shown, Wyatt's Rebellion, and its culminating action in London, elucidates several aspects of mid-sixteenth-century English military practices. The creation of Wyatt's army through the mobilisation of regional resources, which often hinged on the influence of local authority figures, underlines a key factor in England's military organisation. While the Queen maintained a handful of centralised institutions, notably the Guard, Pensioners, and artillery specialists, the mainstay of the country's resources were heavily dependent on locally recruited assets, whether these were the men of the militia, or retainers of the gentry. By appropriating the state's personnel and war material, rebellions could effectively challenge the government for control of its own military resources. Thus, Wyatt's uprising followed the same trajectory as the earlier rebellions of 1549, but arguably came closer to success, in a shorter time span and with fewer soldiers, as a consequence of his proximity to London, and, more importantly, his greater capacity to manipulate local power structures.

Wyatt's connections within Kent, where he and his associates had previously occupied key local roles like that of County Sherriff, facilitated this acquisition of military resources and allowed him to rapidly assemble a well-equipped army from the shire militia and the personal retinues of leading nobles and gentry. As analysis of the force's composition has illustrated, the majority of these troops were trained and armed to the same standard as the Queen's soldiers, making the soldiers of the rebel and loyalist armies effectively interchangeable. This was further

¹⁰¹³ Kennedy, fol.85^r.

¹⁰¹⁴ *Chronicle of Queen Jane*, p.51.

¹⁰¹⁵ *History*, p.75.

¹⁰¹⁶ Foard, 'Pinkie', p.8.

emphasised by the rebel commanders' prior military experience, which ensured that their forces were organised along the same lines as conventional armies, possessing adequate artillery support for example, while also proving capable of utilising established tactical formations in battle. Furthermore, the army's administration was comparably well developed, with soldiers being supplied with provisions and payment in the same manner as forces mustered by the state. In addition to providing tactical and operational benefits, the presence of the Kentish gentry, their retainers, and the militia, also gave Wyatt a greater appearance of legitimacy, making his army seem a credible alternative to the Queen's and encouraging the defection of loyalist forces at Rochester and Southwark. This issue, which arguably posed a graver threat to Mary's authority than the rebels represented militarily, could not be adequately resolved before Wyatt reached London, leading to the substantial risk that an element within the loyalist army and city population would side with the insurgents during the battle. As it transpired, a further mass defection was only narrowly averted, with several government commanders struggling to maintain control of their forces during the action, preventing the loyalists fully responding to Wyatt's attack, and illustrating the levels of support the rebels enjoyed.

The action at London, while involving relatively little combat, provides an opportunity to assess the composition of Tudor armies in battle, with evidence from narrative accounts and the Tower inventory demonstrating that the Queen's forces adhered to the recommendations of the period's tactical manuals. For instance, loyalist footmen carried a mixture of mutually supporting armaments, including pikes, short weapons, bows and firearms, and were supported by all three classes of cavalry, field artillery, and heavier guns. Similarly, although the rebels' horsemen were not deployed, sources indicate that their army possessed ordnance, and that their infantry comprised both pikemen and archers, and were, in many cases, equipped identically to their opponents. This illustrates the continuity of England's mid-century military assets, with the Queen's field army mirroring that which fought at Pinkie, albeit on a much smaller scale, having a similar organisational structure, distribution of weaponry, and ratio of cavalry to infantry.

As a case study of terrain reconstruction, the battle of London proves highly responsive to the methodologies outlined in this thesis, facilitating an unusually comprehensive examination of the historic landscape. While the resulting reconstruction, like all such assessments, remains speculative and cannot be regarded as unequivocally accurate, it demonstrates a greater degree of security than the Dussindale battlefield for several key reasons. The first of these is the sheer quantity of surviving cartographic sources, comprising over ten maps and plans, and numerous written documents, which provide a firm foundation for map regression and allow the incremental evolution of the landscape to be discerned at regular intervals. The fact that many of these works depict the same areas in detail is particularly useful in the context of such a large and complex battlefield, incorporating a range of man-made

terrain features including roads, closes, parkland, and buildings. Similarly, the short time lapse between the battle and the earliest representation of its terrain, with the Wyngaerde panorama being produced a mere five-to-seven years after Wyatt's attack, and the Geldings Close plan approximately thirty years later, provides a valuable insight into the near-contemporary topography. Although the existence of these maps cannot insure against changes in the area's landscape in the years immediately following the battle, their close temporal proximity renders this proportionally less likely than at Dussindale, where a span of forty years separated the engagement from the battlefield's earliest visual depiction. Finally, the action's narrative accounts provide a further means of assessing its historic terrain, with sources helping to define the location and characteristics of tactically significant areas, and relating these features to both armies' initial positioning and subsequent manoeuvres.

Analysis of the landscape west of Westminster has revealed the profound influence exerted by terrain upon the action, as the area's enclosed fields and commons presented physical barriers to the movement of soldiers and restricted where units could be placed. Moreover, Pembroke's decision to give battle here exemplifies the ways in which terrain could be exploited for tactical advantage, with the loyalists' control of the road network and surrounding fields severely limiting the insurgents' freedom of manoeuvre. Thus, although the resultant confrontation was dissimilar to an engagement fought in open ground, it was the attacking rebels who were forced to adapt their deployments to the landscape. For instance, both Wyatt and Vaughan's infantry battles were compelled to assume narrow columns in order to negotiate the enclosed roads leading to London and Westminster, while the loyalist footmen in St James's Field were probably arrayed in 'broad' square, a wider formation which was more suitable for combat. As these examples show, the loyalists had chosen their position carefully, enabling them to adopt the period's standard battle array despite the constricted nature of the terrain, stationing artillery ahead of and beside their infantry, with cavalry and shot upon the army's flanks, and skirmishers to the fore.

These deployments also informed the loyalists' tactics, with the Forlorn Hope assailing the insurgents as they crossed the Tyburn in a bid to disorder their formations and conceal Pembroke's dispositions to the east. Similarly, by positioning horsemen to close off the lanes either side of the Knightsbridge Road, the loyalists intended to immobilise the rebels within close range of their hilltop artillery battery, where they would undoubtedly have suffered heavy casualties from both round shot and hailshot. Notwithstanding Wyatt's escape from the trap, the majority of his forces were cut off, scattered, and effectively destroyed in the process during their encounters with the loyalist horse, leaving only a portion of the rebels to continue through Charing Cross to Ludgate. While the loyalist infantry and London garrison proved dangerously unpredictable, failing to oppose Wyatt's advance and almost permitting him entry into the city, the surviving insurgents' subsequent actions were of little tactical importance given the breakup

of the majority of their army. Gage's retreat from Charing Cross, for instance, although a vital preliminary to the rebels' successful advance, occurred as a consequence of the confusion of battle, with visual errors being compounded by the fear of treachery, rather than the actions of Wyatt's, by now severely depleted, forces. Similarly, the defeat of the remaining rebel troops at Temple Bar, upon their return from Ludgate, was swiftly accomplished in a one-sided confrontation with loyalist horsemen, wherein Wyatt rapidly surrendered.

In this context, the only other tactically significant event was the loyalists' brief skirmish with Vaughan's battle at Charing Cross, which provided a practical demonstration of several trends in English military literature. Firstly, notwithstanding the similarities between the rebel and loyalist soldiers' equipment, it appears that the Queen's forces, which may have included members of the Guard, encompassed greater numbers of 'harnessed' troops, while the rebels either wore less armour or had fewer fully armoured men amongst their unit. This gave the loyalist infantry a substantial advantage during the ensuing 'push of pike', and justified Audley and Barrett's assertions that foot soldiers should be as well protected as possible. Similarly, the assistance of a unit of archers and a pair of field guns was also cited as an important factor in the loyalists' victory, further demonstrating the value of supporting fire and the necessity of its integration with infantry forces through combined-arms tactics, a central feature in many sixteenth-century works.

Thus, although the battle of London was neither bloody nor protracted, it exemplified mid-sixteenth-century Tudor field warfare in a similar manner to earlier engagements, confirming the typicality of the troop types, formations, and tactics, seen during the Western Rebellion, at Dussindale, and identified by military manuals. Furthermore, it also demonstrates the extent to which map regression methodologies can facilitate the reconstruction of an area's historic terrain where suitable sources are available, allowing the impact of the landscape upon an action to be assessed.

Conclusion

This thesis has explored the battles of England's mid-sixteenth-century rebellions, not, as they have customarily been portrayed, as one-sided examples of civil policing, but rather as demonstrations of the Tudor state at war. In this capacity, confrontations between loyalists and insurgents offer an insight into the organisation, weaponry, and battlefield operation of English armies, compensating for the infrequency of the country's international conflicts and shedding light upon an otherwise-opaque period of England's military history. The thesis also contributes to the ongoing debate surrounding the Military Revolution, supporting recent assertions that key developments in warfare occurred during the late-fifteenth and early-sixteenth centuries, and asserting the normalcy of these new technologies and tactics by the mid-1500s. This is particularly significant for England's position within the European military context, helping to demonstrate that the resources and personnel deployed at large-scale battles like Flodden and Pinkie were not exceptional, but instead reflected the country's overall capabilities.

Early chapters have confirmed that the Tudor state could call upon two parallel military systems, the militia and magnate retinues, which were then supplemented by the country's small number of professional soldiers, and by foreign mercenaries. Armies raised in preparation for offensive campaigns, such as the invasions of France and Scotland, incorporated elements drawn from across the military spectrum, and contained the same basic troop types as their European counterparts, namely footmen, shot, artillery, and light, medium, and heavy cavalry. Conversely, domestic defence forces, like that which fought at Flodden, were frequently assembled from whatever resources were at hand, and so often contained large numbers of militiamen. This distribution of assets was paralleled in rebellions, with insurgents frequently appropriating the organisation, personnel, and weaponry of the county levies, while centrally recruited government armies deployed mercenaries, garrisons, urban militias, and retainers alongside these units. The government's mobilisation of these troops not only reflected its need for politically loyal forces to suppress domestic dissent, but also bestowed significant advantages during battle by providing better-armed and more-skilled soldiers than were found in rebel armies. Thus, with the exception of Wyatt's Rebellion, an uprising that involved members of the London militia and the retinues of Kentish gentry, insurgencies tended to assemble forces which, while similar to Tudor armies, were not identical, and contained only some of their key components.

This incomplete access to England's military infrastructure also restricted rebels' use of pike and shot, which, as Chapter 2 has shown, was available in relatively limited quantities and was generally reserved for professional and semi-professional soldiers like mercenaries, retainers, and naval and garrison troops. The shire militia, and, by extension, insurgents, almost

exclusively employed England's traditional weapons of longbow and bill, which had continued in service throughout the Hundred Years' War and Wars of the Roses. Once again, Wyatt's Rebellion provides the exception which demonstrates this rule, with the Kentish insurgents' inclusion of retainers and urban militias providing them with supplies of modern armaments, while the 1549 revolts in Devon and Norfolk drew their forces from the militia and used bows and bills. Accordingly, confrontations between rebel and loyalist forces have facilitated assessments of the country's parallel infrastructures and armaments, as well as demonstrating the similarities and differences between "modern" Tudor armies, a category including Wyatt's troops, and those of continental Europe.

As loyalist forces contained a more representative cross-section of England's available manpower, they also better reflected the mixture of modern and traditional weapons employed by Tudor armies at Pinkie and Boulogne, wherein bill- and bow-armed militia were supported by specialist troops equipped with pikes and firearms. The differing battlefield requirements of these weapons also influenced how soldiers were arrayed in combat, with forces armed entirely with bows and bills, such as the English at Flodden, assuming linear formations with archers on their flanks, a deployment frequently adopted by insurgents. Armies incorporating pike and shot, like that which fought at Pinkie, however, mirrored contemporary continental practices by deploying in large 'just' or 'broad' squares with accompanying sleeves of missile troops. Thus, as Chapter 4 has shown, Tudor armies containing more modern armaments closely resembled their European equivalents, albeit with a cavalry contingent consisting chiefly of light horse and demi-lances rather than men at arms, shot comprising both archers and arquebusiers, and a higher proportion of short weapons to pikes amongst their infantry.

The relative effectiveness of the country's different sets of weapons has formed a crucial avenue of investigation throughout the thesis, with battles associated with rebellions providing a means of assessing the deployment of longbows and bills alongside and against pikes and firearms. As noted in Chapter 3, the longbow's relative effectiveness was beginning to decline by the mid-century as a consequence of the increasing prevalence of plate armour, improvements in gunpowder small arms, and England's diminishing numbers of expert archers, while the bill and other infantry staff weapons had long been inferior to the pike in open field warfare. Although the 1549 rebels employed both weapons to good effect, their defeat at the hands of loyalist forces using mixed armaments and modern tactical formations confirms the direction of this trend and provides attestable examples of what has previously been inferred. Equally, Warwick's victory at Dussindale with a continental-style army, containing neither bows nor bills, demonstrates the superiority of correctly applied mid-sixteenth-century military methodologies over traditionally arrayed militia forces. However, while the rebels' lack of modern weapons contributed to their defeat, it was also the loyalists' greater experience, discipline, and consummate use of combined-arms tactics that allowed them to overcome

superior numbers of adversaries who were deployed on high ground and behind defended positions. Rather than proving the unqualified obsolescence of England's traditional armament, this action shows the country's grasp of the underlying principles of Renaissance field warfare, with Warwick co-ordinating close-combat infantry with missile troops, cavalry, and artillery, in the same manner as European commanders. In short, the insurgents' defeat was only partially attributable to their weapons, and was also the product of the loyalists' superior tactical system, which, as analysis of Pinkie has shown, represented the norm for mid-century Tudor armies.

While the longbow and bill had become less effective in comparison to developing European technology, they were far from useless, however, and continued to be deployed in large quantities throughout the period, with the longbow drastically outnumbering the arquebus at Pinkie and proving ubiquitous in many battles involving rebel armies. Nonetheless, as Chapter 3 has revealed, although mid-century Tudor tactical manuals, including Audley's work and the *Handbook*, advocated the inclusion of these weapons in English forces, they were primarily intended to support pikes and firearms in battle. The bow's high rate of shooting and longer extreme range made for an ideal pairing with the slower-firing, shorter-ranged arquebus, allowing English archers to harass and 'gall' their enemies at a distance, potentially disordering enemy formations and causing casualties amongst unarmoured troops like arquebusiers. For the bill, integration with the pike was essential, both to assist the latter weapon in close-quarter fighting, and because formations using only short weapons could seldom stand against pikemen on open ground. Not all battles occurred under such conditions, however, with the encounter at Flodden demonstrating the value of bills against disordered, inexperienced bodies of pikemen that lacked their own supporting troops, a conclusion underpinned by the effectiveness of Spanish swordsmen in similar circumstances at Cerignola, Barletta, and Ravenna. These factors meant that, although bill and bow use was declining, particularly in armies assembled for international warfare, where soldiers were more likely to encounter enemy pike and shot, these weapons still played an important, albeit subsidiary, role in England's mid-sixteenth-century battles.

Insofar as an independent English tactical doctrine can be discerned, it appears that, while following standard practices and deploying the majority of soldiers within mixed battles of bills and pikes, Tudor armies emphasised the use of horsemen, missile troops, and artillery to immobilise, disorder, and destroy enemy forces at range. This approach was most obviously demonstrated by the English army at Pinkie, but was also implemented, under very different circumstances and in dissimilar terrain, against Wyatt's force outside London, suggesting a degree of tactical continuity. The battles of Dussindale and the Western Rebellion, however, have also demonstrated Tudor armies' close adherence to continental military methods, with Warwick and Russell's forces employing infantry, cavalry, and artillery in close co-ordination according to the principles of combined-arms tactics. Thus English armies, although imparting

their own unique approach to field actions, remained within the established boundaries of Renaissance warfare, and made use of similar tactical deployments and manoeuvres. The fact that Tudor commanders employed these methods in the smaller engagements studied in this project eloquently expresses the typicality of such practices, and reveals the degree to which the concepts of the Military Revolution had permeated English tactical thought. Rather than embodying a veneer of military professionalism, under which lay the quintessentially medieval weapons and tactics of Flodden, the Tudor state had, by the mid-sixteenth century, effected a wide-ranging and highly significant transition.

In addition to utilising rebel and loyalist armies to develop the debate surrounding England's mid-sixteenth-century field warfare, this thesis has examined the degree to which the deployment and action of the battles of 1549 and 1554 can be accurately mapped, in GIS, through a methodology employing terrain reconstruction. The aforementioned encounters in Devon, Norfolk, and London, were all heavily influenced by the environment in which they occurred, particularly as, in many of these instances, armies adopted defensive positions that sought to exploit the terrain for tactical advantage. This makes meaningful analysis of these engagements dependent upon the accuracy of the reconstructed landscape, with ambiguities regarding the positioning of topographical features often hindering attempts to locate, and thus to fully understand, particular phases of the action. As the preceding chapters have shown, this process has yielded variable results, with case studies of the Western Rebellion, Dussindale, and London demonstrating a progressively ascending trajectory in terms of the quantity and quality of available evidence.

Chapter 5 has revealed that the majority of engagements in Devon, namely the battles of Fenny Bridges, Woodbury, and Clyst St Mary, lack the cartographic sources necessary to support map regression, rendering analysis of these actions entirely dependent upon narrative accounts, and leaving their terrain a largely unknown variable. This issue is even more apparent in the case of Clyst Heath, where the battle's occurrence away from recorded topographical features or settlements, combined with its sparse coverage by narrative accounts, leaves its location, and many of its key events, impossible to securely confirm. A notable exception to this trend is the battle of Sampford Courtenay, where the survival of a highly detailed and near-contemporary survey book may enable terrain reconstruction, although the extensive investigation of such a complex source lies beyond the scope of this thesis, not least because it would necessitate a different approach from that of map regression. The lack of cartographic evidence for the rebellion's battlefields is particularly problematic given the insurgents' frequently astute use of terrain to lay ambushes, conceal their movements, and protect their forces from loyalist cavalry, which are stratagems that cannot be fully interpreted without an understanding of the historic terrain in which they were executed. Thus, while it is clear that a

succession of hard-fought battles took place, the tactical content of such encounters remains largely elusive.

Dussindale and London, by contrast, are more rewarding case studies, with both battles having sufficiently detailed historic maps and complementary written sources for the landscape to enable their reconstruction in GIS, representing a significant development upon the Western Rebellion and enabling deeper analysis. At Dussindale, the valley itself and its nearby closes formed the basis of a defended position, which insurgents further augmented by constructing field fortifications, while loyalist forces at London exploited the tactical possibilities of an enclosed landscape to divide and entrap Wyatt's advancing rebels. In both cases, accurately locating the action, and considering the deployment and subsequent manoeuvres of the opposing armies, would be impossible without first undertaking this reconstruction. This is particularly true of Dussindale, where narratives provide little concrete evidence for the battle, resulting in a greater reliance upon Military Terrain Analysis to infer the position of tactical units within the landscape. The encounter at London, however, is far more extensively documented, with primary accounts relating both armies' deployments, and the various stages of the action, to terrain features identified on an array of near-contemporary or later maps and plans. This gives the thesis' final case study a far greater degree of accuracy and reliability than even Chapter 6's consideration of Dussindale, showing how, with the existence of suitable sources and the application of map regression techniques, an otherwise inaccessible battlefield can be reconstructed and re-accessed.

By defining the location, historic terrain, and significance of these sites, this study has also provided vital information enabling their future management and investigation, which could be assisted further through inclusion on preservation databases like the English Heritage Battlefields Register.¹⁰¹⁷ While the remit of this thesis does not extend to exploring these sites' potential for battlefield archaeology, the incrementally diminishing nature of such resources makes the assessment of identified areas a priority for further research. Unfortunately, many battlefields connected with rebellion have either been lost to urban development, as at London, or, like the conflicts in Devon, have insufficient evidence from which to reconstruct their historic terrain. Dussindale and Sampford Courtenay represent notable exceptions to this trend, although the former location has already been partially developed by housing and industrial estates and lies at risk of further encroachment from Norwich (see Fig.130). In both cases, the approximate area of the battlefield can be established, while key tactical positions remain accessible within the modern landscape, providing a high potential for testing the thesis' conclusions through archaeological techniques including targeted metal detection surveys. Such methods could recover deposited projectiles like cannonballs and lead shot, which can be used

¹⁰¹⁷ 'English Heritage Registered Battlefields' <<http://www.english-heritage.org.uk/caring/listing/battlefields/>> [accessed 26 February 2014].

to corroborate the position of particular phases of an action, and might also help to locate artefacts with lower survival rates, such as ferrous arrowheads and personal effects.¹⁰¹⁸ At Dussindale, the composite map created in Chapter 6 could assist this process, while investigations of Sampford Courtenay would require greater use of the 1568 survey book and other records held at King's College in conjunction with lidar data. Thus, the thesis' discussion of battlefield sites, and its highlighting of tactically important areas, can serve to focus and direct subsequent archaeological investigations, potentially yielding further results to augment scholarship of English warfare in this period.



Fig.130. Photograph of Dussindale, looking northwest from the northern edge of Green Lane across the valley towards the probable loyalist deployment area (top left of image). The existing industrial development (top right of image) presages further encroachment across the valley floor (foreground), clearly indicating the risks posed to the battlefield site.

Investigating the battles associated with rebellions has allowed this thesis to substantially broaden the scope of the resource comprising England's mid-sixteenth-century conflicts, refocusing attention from limited, large-scale encounters such as Pinkie, and instead examining a more representative sample of smaller engagements. This has not only strengthened analysis of the country's international warfare, by providing a greater range of examples from which to draw conclusions; it has also defined an avenue of research that similar projects could develop further, using case studies from Border conflicts and the Irish Wars to allow a more

¹⁰¹⁸ Foard and Morris, p.63. This is a distinct possibility on occasions where longbow and arquebus were deployed together, with concentrations of lead shot (which are far more likely to survive in an area's topsoil) potentially being discovered in proximity to more limited assemblages of arrowheads.

comprehensive overview of Tudor warfare to emerge. Although the case studies have been selected to represent battle in mid-sixteenth-century England, other types of action, including sieges, skirmishes, and urban combat, were equally prevalent during outbreaks of rebellion, forming an as-yet largely unexplored resource that could aid evaluation of the full range of land-based military operations. Thus the implications of rebellions for field warfare may, in fact, represent only one aspect of conflict that their study can elucidate.

Finally, this thesis has shown that the insurgent armies of 1549 and 1554 were far from a disorganised rabble, and, in fact, appropriated significant portions of the Tudor state's military infrastructure, establishing a high degree of overlap between forces raised in rebellion and those assembled for legitimate purposes. Encounters between rebel and loyalist forces sustain this conclusion, showing that both sides drew upon the same sources of recruitment, namely the county militia, and that soldiers with militia training formed a key component of all English armies. These troops were not only armed in the same fashion whether fighting for or against the Crown, but insurgents also demonstrated a relatively high degree of tactical awareness, suggesting that their armies included skilled officers and men. Although rebel militiamen could seldom stand alone against the might of the Tudor state, which united a broader range of different personnel under its banner, their performance in combat often surprised contemporary commentators with their bravery and tenacity, proving that such troops could function effectively in battle if motivated and well-led. They were, in the words of John Hooker 'very tall men, lusty, and of great courage, and who, in a good cause, might have done better service'.¹⁰¹⁹

¹⁰¹⁹ Hooker, *Description*, p.72.

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