APPENDICES

Appendix I: List of English Battles

1.i Battles by name

Action name	Alternative name(s)	year	type
Aclea	Ockley	851	battle?
Adwalton Moor	Atherton Moor	1643	battle
Aethelingadene	Alton; East or West Dean	1001	battle?
Alnwick I		1093	battle?
Alnwick II		1174	siege/battle?
Alton		1643	battle?/skirmish
Alutthelia	Bishop Auckland	844	battle?
Archenfield	Ircingafeld	914	battle?
Arthuret	Arderyth, Arfderydd	573	battle?
Ashdown	Aescesdun	871	battle
Ashingdon	Assundun; Assingdon; Assandun; Assendun	1016	battle
Aylesford	Aegelesthrep	455	battle?
Badon	Mount Badon; Mons Badonicus; Deranbyrg; Baranburh; Bera's Stronghold;	500	battle
Barbury	Barbury Castle, Beranburh	556	battle?
Barnet		1471	battle
Basing		871	battle?
Bea's Mount	Beandun	614	battle
Beda's Head	Biedanheafde; Bedwyn	675	battle?
Bedcanford	Biedcanford	571	battle
Bedford		917	battle?
Benfleet	Bleamfleote	893	battle?
Benson	Bensington	779	battle?
Beorgford	Burford?; Beorhford	752	battle?
Billingham		800	battle?
Blackheath	Deptford Bridge	1497	battle?
Blore Heath		1459	battle
Boliegh		936	battle?
Boroughbridge		1322	battle
Bosworth	Redemore	1485	battle
Boudicca		61	battle
Braddock Down	Lostwithiel	1643	battle
Bradford on Avon	Bradenforda	652	battle?
Bramham Moor		1408	battle?
Brentford		1016	battle?
Burgh by Sands		1031	battle?
Buttington		893	battle

Camlann		511	battle?
Canterbury		851	battle?
Carham		833	battle?
Carham		1016	battle
Carham		1018	battle
Carham		1028	battle?
Carrum	Carhampton	843	battle?
Castleford		948	battle?
Catterick	Catraeth; Kaltraeth; Gododin; Cor-eiddin; Kaltraez;	600	battle
Cerdic's Ford	Charford	519	battle?
Cerdic's Shore	Cerdicesora	495	battle
Cerdic's Shore	Cerdicesora	514	battle
Cerdic's Wood	Cerdicesleag	527	battle?
Cheriton	Alresford	1644	battle
Cherrenhul		820	battle
Chester	Caerlegion, Caer Legionis	604	battle?
Chesterfield		1266	battle?
Cirencester		628	battle?
Clitheroe		1138	battle?
Clyst St. Mary	Clyst Heath	1549	battle
Corbridge		913	battle?
Corbridge	Bloody Acres	918	battle
Creacanford	Crayford, Crecganford	456	battle?
Cropredy Bridge		1644	battle
Cymen's Shore	Cymenesora	477	battle
Cynwit	Bloody Corner; Countisbury Hill; Northam;	878	battle
Deal Beach		1495	battle?
Denisesburn	Heavenfield; Heaven Fields; Heavenly Plain; Hefenfelth	633	battle
DEXASTAN	FLORIDA; DEGASTAN; DEXA STONE; Degsastan; Dalston; Daegsastan	603	battle
Dunmail Raise		945	battle?
Durham		1006	battle?
Durham		1069	battle?
Dussindale	Ossian's Vale	1549	battle
Dyrham	Deorham	577	battle?
East Kennet	Cynetan	1007	battle?
Edgcote	Banbury; Danesmoor; Danes Moor; Edgecot;	1469	battle
Edgehill	Kineton fight	1642	battle
Ellandun	Ellendun; Wroughton	825	battle
Empingham	Losecote Field; Stamford?	1470	battle
Englefield	Englafeld	870	battle?
Ethandun	Edington, Aethandune	878	battle
Evesham		1265	battle
Farnham		893	battle?
Fenny Bridges	Fenny Meadow	1549	battle
Fethanleag	Battle Wood, Stoke Lyne;	584	battle?
Flodden	Branxton Moor; Branston Moor;	1513	battle

Fornham St.Genevieve		1173	battle?
Fulford	Gate Fulford; Fulford Gate	1066	battle
Fulhope Law		1400	battle?
Galford	Creodantreow; Creadantreow; Gafulford, Gafolford	825	battle?
Gillingham		1016	battle?
Guoloph		437	battle?
Halidon Hill		1333	battle
Hastings	Senlac; Senlac Hill	1066	battle
Hatfield Chase	Hatfield; Heathfield; Haethfelth; Campodonum?	632	battle?
Hedgeley Moor		1464	battle
Hereford		1055	battle?
Hereford		1067	battle?
Hexham		1464	battle
Hingston Down	Hengestesdun; Hengestdun	838	battle?
Holme	Holm	904	battle
Homildon Hill	Humbleton Hill	1402	battle
Hopton Heath		1643	battle
Hoxne	Hellesdun	869	battle?
Kempsford	Cynemaersford	802	battle?
Langport		1645	battle
Lansdown		1643	battle
Lewes		1264	battle
Lincoln I		1141	battle
Lincoln II	Nundinae; Lincoln Fair	1217	battle
London		851	battle?
London		886	battle
London		994	battle?
London		1013	battle?
Lostwithiel	Castle Dore	1644	battle
Luton		913	battle?
Maidstone	Gabriel's Hill	1648	battle
Maldon		991	battle
Marston Moor		1644	battle
Maserfield	Maserfelth; Maserfeld; Havenfield	641	battle?
Mearcred's Burn	Mearcredesburna; Mercred's Stream	485	battle
Medway		43	battle
Meretun		871	battle?
Mortimer's Cross		1461	battle
Myton	White Battle; Myton on Swale	1319	battle
Nantwich		1644	battle
Naseby		1645	battle
Neville's Cross		1346	battle
Newark		1644	battle
Newburn Ford		1640	battle
Newbury I		1643	battle
Newbury II		1644	battle
Northallerton	Battle of the Standard	1138	battle

Northampton		1460	battle
Old Sarum	Salisbury; Searoburh	552	battle?
Otford	Ottanford	776	battle?
Otford	Dane Bottom; Ottanford	1016	battle?
Otterburn	Chevy Chase	1388	battle
Penselwood	Pen; Peonnan, Peonnum	658	battle?
Penselwood		1016	battle?
Pinhoe	Poltimore; Peonho	1001	battle?
Piper Dene	Piperdean	1435	battle
Poole Harbour		896	battle?
Porlock	Polock	1052	battle?
Portland	Port	840	battle?
Portsmouth	Porchester Castle, Portesmutha	501	battle
Posbury	Posbury; Posentesburh	661	battle?
Preston I	Ribbleton Moor	1648	battle
Reading		871	battle?
Ringmere	Ringmere Pit; Wretham Heath; Rymer	1010	battle?
Ripple Field		1643	battle
River Idle	Idle	617	battle
River Lea		895	battle?
River Parrett		848	battle?
River Trent		679	battle
Rochester		999	battle?
Romney marsh		841	battle
Roundway Down		1643	battle
Rowton Heath	Rowton Moor	1645	battle
Salisbury		1143	battle?
Sampford Courtenay		1549	battle
Sedgemoor		1685	battle
Selby		1644	battle
Sherston		1016	battle?
Shidlaw		833	battle?
Shrewsbury		1403	battle
Solway Moss	Sollom	1542	battle
Southampton		840	battle?
Southwark		1066	battle?
St Albans I		1455	battle
St Albans II		1461	battle
Stainmoor	Stainmore	950	battle?
Stamford Bridge		1066	battle
Stockbridge		1141	battle?
Stoke Field	East Stoke; Stoke	1487	battle
Stow on the Wold		1646	battle
Stratton	Stamford Hill	1643	battle
Tettenhall	Uodnesfelda Campo; Wednesfield Heath	910	battle?
Tewkesbury		1471	battle
Thames		43	battle

Thanet	Tenet	853	battle?
Thetford		1004	battle?
Torrington II		1646	battle
Towton		1461	battle
Tynemoore	Tynemoor	921	battle
Vortigern's Burg		652	battle
Wakefield		1460	battle
Whalley	Billingahoth; Bullasey Ford; Hwaelleage	798	battle?
Wibbandun	Wibba's Mount	568	battle
Wicganbeorg	Weekaborough, Wigborough?	851	battle
Wichum	Wych	1146	battle?
Wilton		871	battle?
Wilton		1143	battle?
Winceby		1643	battle
Winchester		860	battle?
Winwaed	Winwedfeld; River Winwaed; Winwoed; Maes Gai, Winwidfeld	655	battle?
Winwick Pass	Red Bank	1648	battle
Wipped's Creek	Wippedesfleot, Ebbsfleet	465	battle
Wirtgernesburh	Bradford on Avon?	665	battle
Woden's Barrow	Adam's Grave, Alton Priors; Wodnesbeorh	592	battle?
Woden's Barrow	Adam's Grave, Alton Priors; Wodnesburh	715	battle?
Woodbury Hill		1405	battle?
Worcester		1055	battle?
Worcester		1651	battle
York		866	battle?
York		1069	battle?
York		1069	siege/battle?

I.ii Battles by year

Name	Year	Type	Locational accuracy	Northing	Easting
Medway	43	battle	alternatives	0	0
Thames	43	battle	alternatives	0	0
Boudicca	61	battle	alternatives	0	0
Guoloph	437	battle?		0	0
Aylesford	455	battle?		573428	158997
Creacanford	456	battle?		551499	175510
Wipped's Creek	465	battle		0	0
Cymen's Shore	477	battle		487268	094279
Mearcred's Burn	485	battle		0	0
Cerdic's Shore	495	battle		0	0
Badon	500	battle	alternatives	0	0
Portsmouth	501	battle		463465	099603
Camlann	511	battle?		361500	566203

Cerdic's Shore	514	battle		0	0
Cerdic's Ford	519	battle?		417377	119503
Cerdic's Wood	527	battle?		413568	121378
Old Sarum	552	battle?		413947	132538
Barbury	556	battle?		415698	175905
Wibbandun	568	battle		0	0
Bedcanford	571	battle	unlocated	0	0
Arthuret	573	battle?		337929	567681
Dyrham	577	battle?		374147	176780
Fethanleag	584	battle?		456702	228247
Woden's Barrow	592	battle?		411220	163402
Catterick	600	battle		424025	497916
Dexastan	603	battle	alternatives	0	0
Chester	604	battle?		340500	365499
Bea's Mount	614	battle	0	0	0
River Idle	617	battle	0	0	0
Cirencester	628	battle?		402398	201579
Hatfield Chase	632	battle?		456623	371386
Denisesburn	633	battle	2	393700	569499
Maserfield	641	battle?		379583	174554
Vortigern's Burg	652	battle	0	0	0
Bradford on Avon	652	battle?		382799	161257
Winwaed	655	battle?		436716	437617
Penselwood	658	battle?		375620	131431
Posbury	661	battle?		0	0
Wirtgernesburh	665	battle		0	0
Beda's Head	675	battle?		426400	162400
River Trent	679	battle		0	0
Woden's Barrow	715	battle?		411220	163402
Beorgford	752	battle?		425190	212465
Otford	776	battle?		552752	159361
Benson	779	battle?		462093	191912
Whalley	798	battle?		369820	437671
Billingham	800	battle?		445338	522356
Kempsford	802	battle?		415527	196758
Cherrenhul	820	battle		0	0
Ellandun	825	battle		410352	183685
Galford	825	battle?		247500	086511
Shidlaw	833	battle?		379200	637798
Carham	833	battle?		379911	638384
Hingston Down	838	battle?		277016	85883
Southampton	840	battle?		441735	111651
Portland	840	battle?		369424	072606
Romney marsh	841	battle		0	0
Carrum	843	battle?		300509	142495
Alutthelia	844	battle?		0	0
River Parrett	848	battle?		329293	142980
London	851	battle?		532702	181145

Wicganbeorg	851	battle		0	0
Aclea	851	battle?		401507	117493
Canterbury	851	battle?		614825	157773
Thanet	853	battle?		634704	167714
Winchester	860	battle?		447814	129408
York	866	battle?		460320	452191
Hoxne	869	battle?		617995	276775
Englefield	870	battle?		462140	172110
Meretun	871	battle?		405800	118200
Reading	871	battle?		471740	173369
Wilton	871	battle?		409718	131135
Ashdown	871	battle	alternatives	0	0
Basing	871	battle?		466280	150630
Cynwit	878	battle		245460	129230
Ethandun	878	battle	alternatives	0	0
London	886	battle		532702	181145
Benfleet	893	battle?		577868	187281
Buttington	893	battle		0	0
Farnham	893	battle?		483859	146710
River Lea	895	battle?		532531	212692
Poole Harbour	896	battle?		402095	087987
Holme	904	battle		0	0
Tettenhall	910	battle?		393950	299770
Luton	913	battle?		509266	221369
Corbridge	913	battle?		399137	564617
Archenfield	914	battle?		326241	242277
Bedford	917	battle?		505020	249742
Corbridge	918	battle		400160	563840
Tynemoore	921	battle		0	0
Boliegh	936	battle?		143500	024911
Dunmail Raise	945	battle?		0	0
Castleford	948	battle?		442614	425933
Stainmoor	950	battle?		380660	514190
Maldon	991	battle	alternatives	0	0
London	994	battle?		532702	181145
Rochester	999	battle?		574131	168569
Pinhoe	1001	battle?		295200	095900
Aethelingadene	1001	battle?		471797	139273
Thetford	1004	battle?		586816	283144
Durham	1006	battle?		427813	542455
East Kennet	1007	battle?		411900	168000
Ringmere	1010	battle?		590499	287510
London	1013	battle?		532702	181145
Carham	1016	battle		383301	638698
Otford	1016	battle?		552752	159361
Sherston	1016	battle?		385504	185491
Penselwood	1016	battle?		375620	131431
Ashingdon	1016	battle	alternatives	0	0

Name	Year	Type	Status	X	Y
Gillingham	1016	battle?		0	0
Brentford	1016	battle?		517555	177370
Carham	1018	battle		379859	638379
Carham	1028	battle?		0	0
Burgh by Sands	1031	battle?		0	0
Porlock	1052	battle?		288853	146776
Worcester	1055	battle?		385102	254898
Hereford	1055	battle?		351174	239989
Hastings	1066	battle	secure	574894	115632
Fulford	1066	battle	approx	461111	448889
Southwark	1066	battle?	approx	531418	180067
Stamford Bridge	1066	battle	secure	471951	455295
Hereford	1067	battle?	approx	351174	239989
York	1069	siege/battle?	approx	460320	452191
York	1069	battle?	approx	460320	452191
Durham	1069	battle?	approx	427911	542639
Alnwick I	1093	battle?	secure	419200	614400
Clitheroe	1138	battle?	approx	0	0
Northallerton	1138	battle	secure	436301	497674
Stockbridge	1141	battle?	approx	427169	398391
Lincoln I	1141	battle	alternatives	0	0
Salisbury	1143	battle?	approx	414404	129510
Wilton	1143	battle?	approx	409718	131135
Wichum	1146	battle?	approx	0	0
Fornham St.Genevieve	1173	battle?	alternatives	0	0
Alnwick II	1174	siege/battle?	secure	418020	613680
Lincoln II	1217	battle	secure	497610	371800
Lewes	1264	battle	secure	539986	111134
Evesham	1265	battle	secure	403917	245532
Chesterfield	1266	battle?	approx	438300	370910
Myton	1319	battle	secure	443084	467271
Boroughbridge	1322	battle	secure	439643	467015
Halidon Hill	1333	battle	secure	396811	654923
Neville's Cross	1346	battle	secure	426001	542428
Otterburn	1388	battle	secure	387918	593942
Fulhope Law	1400	battle?	approx	369816	606803
Homildon Hill	1402	battle	secure	396942	629152
Shrewsbury	1403	battle	secure	351238	317256
Woodbury Hill	1405	battle?	approx	374990	264515
Bramham Moor	1408	battle?	secure	443244	440981
Piper Dene	1435	battle	secure	384006	635899
St Albans I	1455	battle	secure	514990	206890
Blore Heath	1459	battle	secure	371413	335293
Wakefield	1460	battle	secure	433800	418600
Northampton	1460	battle	secure	476349	259432
Mortimer's Cross	1461	battle	alternatives	0	0
St Albans II	1461	battle	secure	515000	208300

Towton	1461	battle	accurate	448235	438426
Hexham	1464	battle	alternatives	0	0
Hedgeley Moor	1464	battle	secure	404500	619600
Edgcote	1469	battle	alternatives	0	0
Empingham	1470	battle	alternatives	0	0
Tewkesbury	1471	battle	alternatives	0	0
Barnet	1471	battle	alternatives	0	0
Bosworth	1485	battle	alternatives	0	0
Stoke Field	1487	battle	alternatives	0	0
Deal Beach	1495	battle?	approx	637668	151769
Blackheath	1497	battle?	secure	539477	176628
Flodden	1513	battle	accurate	389594	637118
Solway Moss	1542	battle	secure	338386	567772
Dussindale	1549	battle	alternatives	627811	309914
Fenny Bridges	1549	battle	secure	311400	098860
Sampford Courtenay	1549	battle	approx	264100	101500
Clyst St. Mary	1549	battle	alternatives	296520	091229
Newburn Ford	1640	battle	secure	416334	565071
Edgehill	1642	battle	accurate	435482	249404
Hopton Heath	1643	battle	secure	395612	326428
Stratton	1643	battle	secure	222782	107204
Lansdown	1643	battle	accurate	372427	170615
Newbury I	1643	battle	secure	445418	166200
Roundway Down	1643	battle	secure	401986	165116
Winceby	1643	battle	secure	531482	368804
Ripple Field	1643	battle	secure	387200	238100
Alton	1643	battle?/skirmish	accurate	471797	139273
Braddock Down	1643	battle	alternatives	217782	063204
Adwalton Moor	1643	battle	secure	421558	428958
Nantwich	1644	battle	secure	363518	353612
Cropredy Bridge	1644	battle	secure	447782	246104
Cheriton	1644	battle	alternatives	459882	129504
Newbury II	1644	battle	secure	447719	168933
Lostwithiel	1644	battle	secure	210342	054836
Selby	1644	battle	secure	461644	432355
Newark	1644	battle	secure	481100	354100
Marston Moor	1644	battle	accurate	448993	452087
Naseby	1645	battle	accurate	468582	280104
Langport	1645	battle	alternatives	343079	126618
Rowton Heath	1645	battle	secure	345602	363055
Torrington II	1646	battle	secure	249400	119190
Stow on the Wold	1646	battle	secure	419099	227275
Winwick Pass	1648	battle	secure	359750	394040
Preston I	1648	battle	secure	355707	430481
Maidstone	1648	battle	secure	576268	155536
Worcester	1651	battle	accurate	385412	252821
Sedgemoor	1685	battle	accurate	335137	135673

I.iii Numbers engaged

(The Battlefields Register documentation lists some battlefields as 'site b' where the battlefield is considered to be in too poor a condition to justify conservation, and 'site a' where the location of the battlefield is too poorly defined to enable registration. This classification is followed here, with 'site' indicating that it is the assessment given in the Register.)

UKFOC	Action Name	year	type	numbers	designation
1	Marston Moor	1644	battle	45000	Registered
34	Towton	1461	battle	40000	Registered
48	St Albans II	1461	battle	40000	site b
39	Flodden	1513	battle	40000	Registered
6	Worcester	1651	battle	40000	Registered
298	*Turnham Green*	*1642*	*no action*	*30000*	*n/a*
10	Edgehill	1642	battle	30000	Registered
15	Newbury I	1643	battle	30000	Registered
52	Newbury II	1644	battle	30000	site b
263	**Lostwithiel**	**1644**	**battle**	**25000**	**assess**
9	Naseby	1645	battle	25000	Registered
44	Shrewsbury	1403	battle	20000	Registered
46	Wakefield	1460	battle	20000	site b
35	Barnet	1471	battle	20000	Registered
242	**Blackheath**	**1497**	**battle?**	**20000**	**b**
41	Newburn Ford	1640	battle	20000	Registered
55	Preston I	1648	battle	20000	site b
8	Cropredy Bridge	1644	battle	18000	Registered
12	Langport	1645	battle	17000	Registered
235	*Ludford Bridge*	*1459*	*no action*	*15000*	*n/a*
37	Bosworth	1485	battle	15000	Registered
38	Stoke Field	1487	battle	15000	Registered
40	Solway Moss	1542	battle	15000	Registered
904	Newark	1644	battle	15000	site b
16	Cheriton	1644	battle	15000	Registered
1315	*Penrith*	*1715*	*skirmish*	*15000*	*n/a*
2	Adwalton Moor	1643	battle	14000	Registered
310	**Winwick Pass**	**1648**	**battle**	**12500**	**assess**
33	Northampton	1460	battle	12000	Registered
28	Halidon Hill	1333	battle	10000	Registered
1000	**Hilton**	**1644**	**battle**	**10000**	**b**
32	Blore Heath	1459	battle	10000	Registered
36	Tewkesbury	1471	battle	10000	Registered
247	**Dussindale**	**1549**	**battle?**	**10000**	**assess**
250	**Sampford Courtenay**	**1549**	**battle?**	**10000**	**assess**
13	Lansdown	1643	battle	10000	Registered
320	*Modbury*	*1643*	*skirmish*	*10000*	*n/a*

3	Nantwich	1644	battle	10000	Registered
306	**Maidstone**	**1648**	**battle**	**10000**	**b**
18	Braddock Down	1643	battle	9000	Registered
24	Lewes	1264	battle	8000	Registered
26	Myton	1319	battle	8000	Registered
231	**Piper Dene**	**1435**	**battle**	**8000**	**assess**
11	Stratton	1643	battle	8000	Registered
19	Winceby	1643	battle	8000	Registered
5	Rowton Heath	1645	battle	8000	Registered
264	**Selby**	**1644**	**battle**	**7000**	**b**
296	**Alton**	**1643**	**battle/skirmish**	**6300**	**b**
7	Stow on the Wold	1646	battle	6300	Registered
17	Roundway Down	1643	battle	6000	Registered
42	Sedgemoor	1685	battle	6000	Registered
56	Preston II	1715	skirmish	6000	site b
25	Evesham	1265	battle	5000	Registered
27	Boroughbridge	1322	battle?	5000	Registered
29	Otterburn	1388	battle	5000	Registered
45	St Albans I	1455	battle	5000	site b
246	**Clyst St. Mary**	**1549**	**battle?**	**5000**	**b? assess**
929	**Temple Bar**	**1554**	**skirmish**	**5000**	**b**
297	**Brentford**	**1642**	**skirmish**	**5000**	**b**
259	**Launceston**	**1643**	**skirmish**	**5000**	**b**
978	**Whalley**	**1643**	**skirmish**	**5000**	**assess**
54	Torrington II	1646	battle	5000	site b
47	Mortimer's Cross	1461	battle	4000	site a
49	Hexham	1464	battle	4000	site a
268	**Norton St. Philip**	**1685**	**skirmish**	**4000**	**b?**
262	**Sourton Down**	**1643**	**skirmish**	**4000**	**b?**
254	**Tadcaster**	**1642**	**skirmish**	**4000**	**b**
1069	**Oldcastle Heath**	**1644**	**skirmish**	**3500**	**?**
656	**Ankle Hill**	**1645**	**skirmish**	**3500**	**b**
53	Sherburn in Elmet	1645	skirmish	3500	site a
248	**Fenny Bridges**	**1549**	**battle?**	**3000**	**assess**
300	**Gainsborough**	**1643**	**skirmish**	**3000**	**assess**
65	**Ripple Field**	**1643**	**battle**	**3000**	**assess**
257	**Highnam**	**1643**	**skirmish**	**3000**	**assess**
4	Hopton Heath	1643	battle	2500	Registered
1263	**Saltash**	**1644**	**skirmish**	**2500**	
725	Wigan	1651	skirmish	2000	
165	Grindon	1558	skirmish	2000	
64	Powick Bridge	1642	skirmish	2000	Registered
256	Grantham	1643	skirmish	2000	
260	Seacroft Moor	1643	skirmish	2000	
903	Middlewich	1643	skirmish	2000	
14	Chalgrove	1643	skirmish	2000	Registered
1093	Willoughby On The Wolds	1648	skirmish	2000	
67	Clifton Moor	1745	skirmish	2000	

207	Lincoln	1217	battle	1500	
1037	Clyst Heath	1454	skirmish	1500	
1344	Carlisle Sands	1645	skirmish	1250	
255	Wetherby	1642	skirmish	1140	
307	Nibley Green	1470	skirmish	1000	
252	Wrotham Hill	1554	skirmish	1000	
1102	Longford	1644	skirmish	1000	
949	Huntingdon	1645	skirmish/stormed	1000	
576	St Neots	1646	skirmish	1000	
900	Marshall's Elm	1642	skirmish	500	
1287	South Harting	1642	skirmish	500	
270	Babylon Hill	1642	skirmish	500	
1014	South Molton	1655	skirmish	400	
1313	Lowther Hall	1745	skirmish	100	
21	Stamford Bridge	1066	battle	0	Registered
22	Hastings	1066	battle	0	Registered
192	Fulford	1066	battle	0	
194	Southwark	1066	battle?	0	
879	Hereford	1067	battle?	0	
195	Durham	1069	battle?	0	
943	York	1069	battle?	0	
944	York	1069	battle?	0	
198	Alnwick I	1093	battle?	0	
23	Northallerton	1138	battle	0	Registered
201	Stockbridge	1141	battle?	0	
58	Lincoln	1141	battle	0	
202	Wilton	1143	battle?	0	
714	Salisbury	1143	battle?	0	
1270	Wichum	1146	battle?	0	
204	Fornham St.Genevieve	1173	battle?	0	
214	Chesterfield	1266	battle?	0	
30	Neville's Cross	1346	battle	0	Registered
31	Homildon Hill	1402	battle	0	Registered
230	Woodbury Hill	1405	battle?	0	
62	Bramham Moor	1408	battle?	0	
68	Hedgeley Moor	1464	battle	0	
63	Edgcote	1469	battle	0	
50	Empingham	1470	battle	0	
241	Deal Beach	1495	battle?	0	

I.iv   Bibliographic score

Bibliographic score	Action name	Year	Type of action	Designation
141	Bosworth	1485	battle	Registered
88	Flodden	1513	battle	Registered
80	Tewkesbury	1471	battle	Registered
66	Marston Moor	1644	battle	Registered
64	Shrewsbury	1403	battle	Registered
63	Naseby	1645	battle	Registered
59	Towton	1461	battle	Registered
54	Hastings	1066	battle	Registered
52	Otterburn	1388	battle	Registered
50	Worcester	1651	battle	Registered
49	Wakefield	1460	battle	site b
47	Barnet	1471	battle	Registered
46	Newbury I	1643	battle	Registered
46	Edgehill	1642	battle	Registered
44	Sedgemoor	1685	battle	Registered
43	Lewes	1264	battle	Registered
42	Neville's Cross	1346	battle	Registered
40	Blore Heath	1459	battle	Registered
37	Northallerton	1138	battle	Registered
36	Evesham	1265	battle	Registered
35	Stamford Bridge	1066	battle	Registered
34	Stoke Field	1487	battle	Registered
33	**Newbury II**	**1644**	**battle**	**site b - reassess**
33	Cheriton	1644	battle	Registered
32	Halidon Hill	1333	battle	Registered
32	Lansdown	1643	battle	Registered
31	Roundway Down	1643	battle	Registered
30	St Albans I	1455	battle	site b
29	Newburn Ford	1640	battle	Registered
29	**Mortimer's Cross**	**1461**	**battle**	**site a - reassess**
29	**Hexham**	**1464**	**battle**	**site a - reassess**
29	Adwalton Moor	1643	battle	Registered
28	Boroughbridge	1322	battle?	Registered
27	Winceby	1643	battle	Registered
26	Homildon Hill	1402	battle	Registered
26	Solway Moss	1542	battle	Registered
26	Langport	1645	battle	Registered
25	Cropredy Bridge	1644	battle	Registered
24	St Albans II	1461	battle	site b
24	**Lostwithiel**	**1644**	**battle**	**assess**
24	Northampton	1460	battle	Registered
23	Rowton Heath	1645	battle	Registered
23	Stratton	1643	battle	Registered
23	Nantwich	1644	battle	Registered

22	Braddock Down	1643	battle	Registered
20	**Edgcote**	**1469**	**battle**	**site a - reassess**
20	Hopton Heath	1643	battle	Registered
18	Hedgeley Moor	1464	battle	
17	Newark	1644	battle	site b
16	Myton	1319	battle	Registered
15	Lincoln II	1217	battle	b
15	Preston I	1648	battle	site b
15	Torrington II	1646	battle	site b
13	Fulford	1066	battle	a
11	Bramham Moor	1408	battle?	
11	Stow on the Wold	1646	battle	Registered
9	**Lincoln I**	**1141**	**battle**	**assess**
8	**Ripple Field**	**1643**	**battle**	**assess**
8	Empingham	1470	battle	site a
7	Chesterfield	1266	battle?	
7	Selby	1644	battle	
7	**Winwick Pass**	**1648**	**battle**	**assess**
7	Alnwick I	1093	battle?	
6	Maidstone	1648	battle	
6	Alnwick II	1174	siege/battle?	
5	Durham	1069	battle?	
4	**Sampford Courtenay**	**1549**	**battle**	**assess**
4	**Piper Dene**	**1435**	**battle**	**assess**
3	**Dussindale**	**1549**	**battle**	**assess**
3	Hilton	1644	battle	
3	Blackheath	1497	battle?	
1	York	1069	battle?	
1	York	1069	battle?	
1	Alton	1643	battle/skirmish	
0	Stockbridge	1141	battle?	
0	Wilton	1143	battle?	
0	Fornham St.Genevieve	1173	battle?	
0	Fulhope Law	1400	battle	
0	Woodbury Hill	1405	battle?	
0	Deal Beach	1495	battle?	
0	Clyst St. Mary	1549	battle	
0	Fenny Bridges	1549	battle	
0	Salisbury	1143	battle?	
0	Hereford	1067	battle?	
0	Winchester	1141	siege; skirmish/battle?	
0	Wichum	1146	battle?	
0	Southwark	1066	battle?	

Appendix II: Books used for initial classification of importance

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- Smurthwaite, David, *The Complete Guide to the Battlefields of Britain*. London: Michael Joseph, 1993.
- Warner, P. *British Battlefields: The Definitive Guide to Warfare in England and Scotland,* 2002.
- Young Peter, and Adair John, *From Hastings to Culloden : battlefields in Britain*, Kineton, 1979.

Appendix III: Battlefield Metal Detecting Survey Guidelines

Experience in collaborative fieldwork on various battlefields and analysis of results of work by others on several other battlefields has demonstrated substantial problems arising from a lack of adequate published guidance as to best practice in battlefield survey, finds analysis and archiving, including health and safety issues. Guidance for survey has therefore been reviewed as part of the present study but will be published in a separate guidance document. Health and Safety and related matters are dealt with in appendices below.

Appendix IV: Percentages of Fields of Conflict on each HER

HER	FIELDS OF CONFLICT		
	Total on UKFOC database	Total on HER	% on HER
Bath & NE Somerset	2	1	50
Bedfordshire	9	5	56
Birmingham	3	2	67
Black Country	2	1	50
Bristol	2	1	50
Buckinghamshire	11	7	64
Cambridgeshire	13	9	69
Cheshire	21	13	62
Chichester District	3	0	0
Colchester UAD	1	1	100
Cornwall	11	3	27
Coventry	2	1	50
Cumbria	18	12	67
Derbyshire	15	12	80
Devon	49	25	51
Dorset	20	0	0
Dudley	3	2	67
Durham	10	3	30
East Berkshire	5	1	20
East Sussex	6	2	33
Essex	7	3	43
Exeter UAD	2	2	100
Gloucestershire	27	12	44
Greater London	18	3	17
Greater Manchester	15	7	47
Hampshire	34	23	68
Herefordshire	22	12	55
Hertfordshire	7	4	57
Humber	9	1	11
Isle of Wight	1	0	0
Kent	39	12	31
Lancashire	22	13	59
Leicestershire & Rutland	8	5	63
Lincoln	3	0	0
Lincolnshire	19	10	53
Merseyside	1	1	100
Milton Keynes	1	1	100
Norfolk	10	5	50
North East Lincolnshire	1	0	0
North Lincolnshire	3	2	67
North Yorks Moors	3	2	67
North Yorkshire	27	12	44
Northamptonshire	10	5	50
Northumberland	44	25	57
Nottingham	8	0	0
Nottinghamshire	12	4	33

Oxford UAD	4	0	0
Oxfordshire	22	3	14
Peterborough	5	5	100
Plymouth	4	3	75
Portsmouth	2	3	150
Sandwell	1	1	100
Shropshire	30	13	43
Somerset	26	8	31
South Gloucestershire	3	2	67
South Yorkshire	7	1	14
Southampton	4	1	25
Staffordshire	22	9	41
Suffolk	15	12	80
Surrey	5	3	60
Tees	6	2	33
Tyneside	13	7	54
Warwickshire	15	7	47
West Berkshire	7	6	86
West Sussex	2	1	50
West Yorkshire	22	14	64
Wiltshire	30	4	13
Winchester	2	2	100
Worcester	6	3	50
Worcestershire	10	5	50
York	8	0	0
Yorkshire Dales National	4	1	25
Grand Total	834	381	46

Appendix V: Lists of battles considered for the Register

Under designation, 'Registered' indicates this is a Registered Battlefield. 'Site a' indicates that it was considered for the Register but lacked accurate definition of location or extent. 'Site b' indicates that it was considered for the Register but is wholly or largely destroyed. Where a battle was unregistered but has been assessed in the present project then 'assess' indicates a potentially important site that is sufficiently intact to justify assessment for the Register; b indicates wholly or largely destroyed.

1992 WORKING LIST OF ELIGIBLE BATTLES

Provided by National Army Museum, indicating which were finally Registered.

ACTION	STATUS
Maldon (991)	Registered
Ashingdun (1016)	?
Carham (1018)	Site a
Stamford Bridge (1066)	Registered
Hastings (1066)	Registered
The Standard (1138)	Registered
Lincoln (1141)	?
Lewes (1264)	Registered
Evesham (1265)	Registered
Myton (1319)	Registered
Burton Bridge (1322)	?
Borough Bridge (1322)	Registered
Byland Abbey (1322)	?
Halidon Hill (1333)	Registered
Neville's Cross (1346)	Registered
North Walsham (1381)	?
Radcot Bridge (1387)	?
Otterburn (1388)	Registered
Homildon Hill (1402)	Registered
Shrewsbury (1402)	Registered
Bramham Moor (1408)	?
St Albans I (1455)	Site b
Blore Heath (1459)	Registered
Northampton (1460)	Registered
Wakefield (1460)	Site b
Mortimer's Cross (1461)	Site a
St. Albans II (1461)	Site b
Towton (1461)	Registered
Hedgely Moor (1464)	?
Hexham (1464)	Site a
Edgcote (1469)	Site a
Empingham (1470)	Site a
Barnet (1471)	Registered
Tewkesbury (1471)	Registered
Bosworth (1485)	Registered
Stoke Field (1487)	Registered
Flodden (1513)	Registered
Solway Moss (1542)	Registered
Newburn (1640)	Registered

Edgehill (1642)	Registered
Braddock Down (1643)	Registered
Ripple Field (1643)	?
Newbury I (1643)	Registered
Stratton (1643)	Registered
Chalgrove (1643)	Registered
Sourton Down (1643)	?
Lansdown Hill (1643)	Registered
Roundway Down (1643)	Registered
Adwalton Moor (1643)	Registered
Hopton Heath (1643)	Registered
Winceby (1643)	Registered
Newark (1644)	Site b
Cheriton (1644)	Registered
Cropredy Bridge (1644)	Registered
Marston Moor (1644)	Registered
Lostwithiel (1644)	?
Newbury II (1644)	Site b
Nantwich (1644)	Registered
Montgomery (1644)	?
Naseby (1645)	Registered
Langport (1645)	Registered
Rowton Heath (1645)	Registered
Sherburn-in-Elmet (1645)	Site a
Torrington (1646)	Site b
Stow-on-the Wold (1646)	Registered
Preston (1648)	Site b
Worcester (1651) with Powick Bridge (1642)	Registered
Sedgemoor (1685)	Registered
Preston (1715)	Site b
Clifton Moor (1745)	?

Appendix VI: Battlefields Trust Policy and Guidance on Metal Detecting Surveys of Fields of Conflict

POLICY ON METAL DETECTING ON BATTLEFIELD SURVEY	
Prepared by: **G Foard: 31/07/2004** **Updated by G Foard: 15/05/2006**	**Validated by:** **Trustees of the Battlefields Trust:** **2004** **Michael Rayner: 16/05/2006**

A COPY OF THIS DOCUMENT IS TO BE PROVIDED TO ALL THOSE DETECTING ON TRUST SURVEYS. A COPY OF THE WAIVER FORM TO BE SIGNED BY THEM AND BY A TRUST REPRESENTATIVE AND FILED WITH THE SURVEY RECORDS

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POLICY ON METAL DETECTING ON BATTLEFIELD SURVEYS UNDERTAKEN BY
THE BATTLEFIELDS TRUST

1.   Introduction
1.1   Metal detector users play a central role in battlefield survey. Across the world, collaboration between them and battlefield archaeologists has led to the recovery of a wide range of data which is transforming our understanding of past military action.

1.2   This document has been prepared by **The Battlefields Trust** to define how it aims to achieve the most fruitful partnership between *bona fide* detectorists and archaeologists in the Trust's battlefield survey projects. It should be used in conjunction with any specific method statement prepared for an individual survey. It also represents the Trust's guidance to others as to best practice in battlefield survey.

2.   Project Coordinator
2.1   All battlefield surveys or excavation projects involving metal detector users will have a nominated Project Coordinator, who will have the necessary battlefield archaeology experience and expertise to achieve the best results from metal detector operators in the field.

2.2   The Project Coordinator will be responsible for maintaining a register of nominated detector users involved in the survey; arrange site access; ensure best practice in survey and recording methodology is applied throughout the

survey; seek to ensure appropriate arrangements are made for essential conservation of and deposition of finds in an museum archive; brief the nominated detector users and ensure that they adhere to the principles set out in the written agreement.

2.3   The Project Coordinator will liaise with the appropriate Local Archaeological Officer and the Finds Liaison Officer regarding all relevant aspects of the survey. Where the survey is on a Registered Battlefield the Project Coordinator will advise the Battlefields Inspector of English Heritage.

3.   Nominated detector users
Nominated metal detector users on battlefield surveys must agree to abide by the Policies, Guidelines and Agreements of **The Battlefields Trust** and to follow the specific survey and recording methods defined for the survey.

4.   Written agreements
All such work will be regulated by formal written agreements, signed by the Project Coordinator and the nominated detector users. This is to ensure that all work is carried out in accordance with a set of principles agreed at the outset of the project.

5.   Health and Safety
All those working on a battlefield survey have a responsibility at all times to look after their own welfare and those with whom they work. An outline Risk Assessment for battlefield survey, prepared by the Trust, is appended to this policy document and should be read by all those taking part in a battlefield survey.

6.   Insurance
Nominated detector users will be given free membership of The Battlefields Trust for the duration of their involvement in the survey and will be covered by The Battlefields Trust's insurance while undertaking survey work. This insurance cover comprises Public Liability of £5,000,000, to protect the interests of the landowner and third parties, as well as cover for the volunteers themselves.

7.   Finds ownership
Nominated detector users will be required to sign a written agreement waiving their rights to ownership of all finds so that, subject to landowner agreement, these may be incorporated into the site archive. They will also be required to waive all rights to claim any reward under the Treasure Act 1996, in accordance with section 81 of the *Treasure Act Code of Practice.*

8.   Reporting of Treasure Finds
Treasure must be reported to the coroner for the district in which it is found either within 14 days after the day of discovery or within 14 days after the day it is realized the find might be treasure. The project coordinator, in consultation with the relevant Finds Liaison Officer, should make the report or ensure that a report is made.

9.   Finds covered by the Act:

- A metallic object, other than a coin, that is at least 300 years and of which at least 10 per cent, by weight of metal, is gold or silver. If prehistoric then it is Treasure if any part is gold or silver.
- Two or more metallic objects of any composition of prehistoric date that come from the same find (i.e. found in the same place as, or previously together with the other object).
- All coins from the same find, if at least 300 years old (if containing less than 10 per cent of gold or silver then there must be at least ten of them). They are from the same find if they are:

  - hoards that have been deliberately hidden
  - smaller groups of coins, such as the contents of purses, that may been dropped or lost
  - votive or ritual deposits.

- Any object, whatever it is made of, that is found in the same place as, or had previously been together with, another object that is Treasure.
- Objects that are less than 300 years old, that are made substantially of gold or silver, that have been deliberately hidden with the intention of recovery and whose owners or heirs are unknown.

10.   Access and supervision

10.1   Access times shall be agreed between the Project Coordinator and the nominated detector users.

10.2   No detecting should take place except under supervision of the Project Coordinator or a representative of the Battlefields Trust specified by him.

10.3   Acknowledgement
The role of metal detector users in the project will be acknowledged in all publicity, interim reports, museum displays or final publications arising from it.

Annex 1: Risk Assessment

BATTLEFIELD METAL DETECTING SURVEY RISK ASSESSMENT & MITIGATION GUIDANCE	
The Battlefields Trust	
Prepared: G Foard 26/10/2005	Validated: M Rayner 26/10/2005

A first aid kit will be carried at all times when a project team in the field and information provided as to the nearest A&E department.
A record of any accidents to volunteers or Battlefield Trust officers will be maintained.

- ***Slips & trips etc***

Important to take extra care near trenches and deep ditches, including those with water. Also likely to be exacerbated in icy conditions.
Care to be taken when climbing fences and gates.
Dangers of barbed wire also to be noted.

- ***Digging, pegging etc***

Danger of injury, particularly to feet, from digging and inserting grid markers.
Metal detectorists cannot not wear steel capped boots or similar protective footwear, so particular care must be taken.
Markers for transects to be suitably flagged for visibility
Digging tools to be suitable for the task and well maintained
Metal ranging poles not to be carried vertically within 6m of overhead cables.

- ***Manual handling***

Carrying of heavy or large amounts of survey equipment such as ranging poles, marker flags, detectors and digging tools.
Equipment to be spread between the survey team as far as practicable.

- ***Low temperatures***

Fieldworkers are likely to be in the field for up to 7 hours in very cold conditions in the winter. All should ensure they wear appropriate clothing and footwear.

- ***High temperatures***

Fieldworkers are likely to be in the field for up to 7 hours without cover in the summer. They must ensure to carry plenty of water and to wear suitable clothing, especially a hat to protect against sunstroke.

- ***sharp objects in the ground***

Glass attached to bottle tops and other such items.
Care to be taken in removing objects by hand.

- ***Road traffic***

Fieldwork will involve crossing of roads. Particular care is needed when walking along or crossing roads.
Parking of vehicles by fieldworkers to be in suitable locations where they do not cause a safety hazard.

- ***Stock***

Dangers of stock, such as bulls, to be assessed before entering any field. Also care taken to ensure gates are closed to avoid any incidents caused by stock escaping onto roads etc.

- ***Lone working***

Lone working will not normally be practiced. Metal detecting will normally be conducted with a team of two or more individuals.
Where lone working is unavoidable then a mobile phone will be carried at all times; also the person undertaking the work will report in to the Project Coordinator or other

agreed responsible person as appropriate, when starting work and when completing work on each specific day.

- ***Weil's Disease***

Risk of contracting Weil's desease (Leptospirosis).

Avoid standing or running water where rats may be active. Wash hands before handling food or eating.

Annex 2: Formal Agreement for Metal Detectorists

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FORMAL AGREEMENT FOR METAL DETECTORISTS WORKING ON BATTLEFIELD SURVEYS WITH THE BATTLEFIELDS TRUST

TO BE COMPLETED BEFORE STARTING WORK ON SITE

BATTLEFIELD NAME: …………………………………………………………

I agree, when working on the above survey, to abide by the principles and conditions set out in the Trust's **POLICY FOR METAL DETECTING ON BATTLEFIELD SITES**

I agree to waive all rights of ownership to all finds so that these may be incorporated into the site archive.

I also agree to abide by section 81 of the Treasure Act (1996) Code of Practice[1] and, as such, I hereby waive all rights to rewards for objects discovered that could otherwise be payable under the Treasure Act 1996.

I, (Name in block
capitals)……………………………………………………
have read and understood the above agreement and will abide by its conditions.

Signed:
Detectorist:……..……………………….……..………………….Date:
…../…../…..

Signed:
On behalf of The Battlefields Trust.……..……………….…….Date:
…../…../…..

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[1] Section 81 of the Treasure Act Code of practice:
"Rewards will not be payable when the find is made by an archaeologist or anyone engaged on an archaeological excavation. In cases of uncertainty archaeologists are recommended to require any individuals for whom they are responsible, or to whom they have given, or for whom they have sought, permission to search, to sign a statement waiving their right to a reward. If there is doubt as to whether the finder was an archaeologist (or a person engaged on an archaeological excavation or investigation), the Treasure Valuation Committee shall decide". Treasure Act 1996. Code of practice (Revised) (England and Wales, DCMS, London (2002).

Annex 3: METAL DETECTING SURVEY: FIELD/DAY RECORD SHEET

Battlefield: ……………. **Fieldwork Date:**…………… **Supervised by:**
………………

Field number ………………

Detectorist name	GPS number	Detector make, model and coil type	Non ferrous junk total
STATIC GPS UNIT			

Weather conditions	
Soil moisture	
Ground conditions (rough, level etc)	
Crop conditions (type, height, thickness etc)	
Other significant field conditions	
Signal quality	
Other issues	

ADD SKETCH MAP FOR FIELD
Give accurate location of Static GPS unit

Appendix VII: Guidance on the processing and storage of metal artefacts recovered in battlefield survey

Handling of finds in the field

Cleaning in the field, such as finger rubbing, is common practice by detectorists and is difficult to avoid when large numbers of artifacts are being rapidly assessed to determine whether they should be recorded or discarded. However such treatment should be avoided as far as practicable. It is better to de-accession objects at a later screening phase than risk potential damage to a delicate find.

Processing and storage of metal finds[1]

While it is not generally considered good practice for excavated material, all metalwork from battlefield metal detecting survey will normally be been wet cleaned and air dried prior to recording and storage. This is essential for the efficient and effective processing and analysis of the large numbers of metal finds recovered during most battlefield surveys. *However, potentially significant ferrous artefacts should not be wet cleaned as this is likely to promote increased decay.* Unless exceptional decay has set in, as with the artefacts from the Wareham siege site, lead bullets should be cleaned by gently brushing with a soft toothbrush in water to ensure the whole of the surface, including all holes and indentations, are clear of soil. In addition if impact deposits, such as embedded grains from impact on a masonry surface, appear to be present then these deposits should be assessed prior to cleaning.

On initial processing, all ferrous finds should be extracted for separate storage. Material which is obviously modern should be discarded and the remainder then input into the database. These should then be prioritised for analysis, ensuring as far as possible that recording is undertaken before deterioration sets in, especially with ferrous artefacts.

Collections made by metal detectorist, particularly lead bullets, are often stored together in one or more containers with no subsidiary packing, as for example the box of more than 2000 bullets from Ballymore, now in the National Museum of Ireland. Even substantial collections of bullets from major excavations may be stored in bulk, as with those from the Vasa, which are held loosely in boxes of 100 bullets each and not individually numbered. Ideally the bullets in all collections should be individually bagged and numbered, whether or not originally individually recorded on site, as it enables analysis of each to be attributed to allow future re-assessment.

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[1] This guidance has been prepared in consultation with Rob Janaway of Bradford University and is presented here as applied by the Battlefields Trust in the Edgehill Survey (2004-7) and the Bosworth Survey (2005-8).

Figure 11: Finds are dried in plastic seed tray compartments, each with its Tyvek label. They are then stored in individual bags with a foam support and Tyvek label

Figure 2: Perforated find bag partially labelled plus Tyvek label and foam support

Each find, when fully dry, is stored in a sealable polythene bag with white write-on strips. For most survey finds a 50*60mm bag is adequate. These are pierced towards the top to enable air circulation, and a 3mm thick square of plastozote foam added to provide protection and to enable the bags to be stored standing upright. For lead bullets this is particaurly important as in all other situations abrasion occurs which can remove the important surface evidence of manufacture and use which is often held within the corrosion deposits. The white write-on strips are marked with Staedtler Lumocolor permanent Art Nr 313-5 black pens 0.4mm. Tyvek labels have been placed in each bag and marked with the find number, date, finder and GPS waymark number, using Sakura (XSDK005#49) 0.20mm pen. The individual finds are not normally marked unless they are to be removed for display. The bags are the stored in sealed polyethylene boxes (e.g.: Stewart box 1781 clear: 13 litre) in order by find number in rows separated with corrugated plastic dividers and with a second level of bullets similarly organised in a tray with dividers, again of stapled corrugated plastic. Silica gel in a polyester or nylon netting bag or in a large polythene sealable bag with numerous small perforations (ideally 1 litre of silica gel to a 13 litre box) is also placed in the box to reduce moisture levels, and a humidity indicator strip placed in a visible location at the front of the box to enable monitoring of moisture levels. Ideally the boxes should be as full as possible so the least amount of air is present and so enabling easier reduction of the moisture levels. With large assemblages the

finds are normally stored separately according to metal type, but the bullets are also stored separately from other lead artefacts because of the danger of damage to fragile artefacts by the heavy bullets.

Figure 3: bags in find number order in compartments made from corrugated plastic

Figure 4: Storage in Stewart Boxes with indicator strip to monitor humidity. On left adequate humidity level shown by fully blue strip. The box on the right was recently opened and so temporarily has increased humidity, indicated by pink colour at top of indicator strip

Appropriate Humidity levels

Iron   Below 15% Relative Humidity
Copper alloys   Below 35% Relative Humidity
Lead   Can be stored at 55% RH, but preferably below 35% RH

Discard policy

It would appear that in most circumstances in England, a large proportion of this ferrous material can then be discarded as a large proportion is likely to be of post battle date and of little or no significance. Only if a specific research objective has been identified for the material, such as an assessment of the rates of decay taking part in different areas of the battlefield, is it likely that this material will need to be retained. Unless such discard takes place then the battlefield survey archive will be swamped by a large volume largely valueless ferrous material that will be expensive for museums to conserve in the long term.

Photography of metal detecting finds for record and for publication

Photography is now considered the normal and appropriate form of graphic record for cataloguing and archive purposes, as well as for publication of most metal artefacts recovered in battlefield survey in the UK. Digital imaging has been applied in both the Bosworth and the Edgehill surveys by the Battlefields Trust, in consultation with the Portable Antiquities Scheme, and by GUARD in its Culloden and other battlefield surveys.[2] It is also the normal practice in battlefield investigation in the USA, as for example applied by the National Parks Service. It is also accepted as appropriate for forensic reporting to the Crown Court in the UK.[3] The use of drawing for the recording of metal finds, although still required by some planning archaeologists in England, is now viewed as an impractical, costly and unnecessary anachronism. Only in exceptional circumstances, where it is the only way to effectively convey specific essential detail, is drawing considered either necessary or justified.

The use of scanning of artefacts, rather than high resolution digital photography, is recommended by some Portable Antiquities Project officers for finds recovered in metal detecting survey. It was therefore the method selected for the recording of the finds from the Edgehill survey. While it has proved a quick and easy method to gain a basic image for record purposes of many of the smaller and thinner artefacts, such as coins or buckles, it has not proved ideal. It is thus not recommended here, because of the significant limitations of resolution and quality, not least with thicker objects such as bullets.

In any collection a sample of bullets should be photographed to provide a detailed record of all the types of features recorded in the analysis. At least until the point when adequate reference collections are available, this will provide future researchers with data that they can use to correlate analysis by different persons. A standard metric photographic scale should be included on all images, printed on paper from a file downloaded from:
http://www.vendian.org/mncharity/dir3/paper_rulers/

Archiving

A collection should finally be assessed by a conservation specialist to determine what finds, if any, require basic conservation prior to deposition in a museum archive.

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[2] Information from Dr Tony Pollard, University of Glasgow
[3] Information from Rob Janaway, University of Bradford

Appendix VIII: Working with lead: Health and Safety considerations

The handling of lead finds from metal detecting in general raises only minimal concerns.[4] However, the processing and recording of large quantities of lead bullets could represent a potential risk, and mitigating measures should be taken.[5] The risks arise from contact with the lead material itself, and particularly from corrosion products, such as lead oxide or carbonate, that may have formed on the objects while in the ground or during storage. The present advice is relevant to those working with material over a few days to a few weeks, rather than more prolonged exposure and to situations where minor cleaning (dusting and light brush work) is undertaken. More information about working with lead is covered by the **Control of Lead at Work Regulations 2002**.[6]

Risk assessment should be undertaken in advance of carrying out any recording of lead artefacts. The guidance provided here relates primarily to finds recording work. However, given that the number of bullets likely to be collected in a battlefield survey over an extended period may reach the thousands, the issue should be included in the risk assessment for archaeological metal detecting surveys of battlefields. Advice as to the potential health threats from lead should also be given to detectorists who are collecting lead bullets. As most finds provided by metal detectorist to the Portable Antiquities Scheme for recording are returned to those detectorists, and as ownership of artefacts recovered by metal detecting normally remains with the landowner, who may wish to retain the artefacts, after recording the finds should be returned together with clear advice as to the health and safety risks.

Threats and mitigation

Bullets recovered from archaeological contexts typically have highly oxidised surfaces. This lead oxide has often been subject to mechanical damage in the ground, thus the oxide can become mobile, either as dust when the bullets are dry or as a solution when the bullets are wet. Where held in private or even museum collections, especially if the bullets have been stored in bulk without packing or separate bagging, mechanical damage typically occurs and lead oxide dust builds up, often being found loose in the bottom of storage containers, while the bullets themselves have a coating of dust. Particular care must be taken in handling the artefacts when such dust is present in quantity.

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[4] The Portable Antiquities Project advises the use of gloves when handling lead objects: see http://www.finds.org.uk/conservation/note1.php
[5] This guidance draws upon work conducted by the author for English Heritage/University of Leeds as part of the Fields of Conflict Project (2005-2008), and incorporates information collated by Jim Williams, English Heritage Archaeological Science Advisor for the East Midlands Region, in particular, advice provided by Neil Craig, HM Principal Inspector of Health and Safety, Northamptonshire and Rutland.
[6] http://www.opsi.gov.uk/si/si2002/20022676.htm

Figure 125: Lead dust in the boxes where bullets from the Vasa, an early 17th century wreck in Stockholm, have been carefully stored in controlled conditions but not separately bagged, showing the health and safety threat posed by lead oxide dust

The first action should be to minimise the potential for the creation of mobile particles of lead oxide by ensuring that all new finds of bullets are individually bagged in re-sealable bags, lightly perforated, together with plastozote foam, and boxed to minimise mechanical damage to the bullet surface. Ideally all existing collections not already stored in this way should be individually bagged when recording is undertaken.

Absorption

Absorption directly through the skin, and especially via cuts or abrasions, or via the mouth.

Mitigation:
- Good hygiene is essential. The material should be kept within a defined work area, which on completion of the work should be thoroughly cleaned. All surfaces where the bullets have been handled and all other equipment used such as scales, callipers, pens etc should be wiped down carefully afterwards, to remove all lead oxide as dust or in solution.
- Whenever handling or washing bullets, to minimise lead absorption through the hands, chemical resistant gloves should be worn (eg: nitrile powder free disposable gloves).
- Food should not be kept in the same area as the objects are being handled and no smoking, eating or drinking should take place in the area where the work is being undertaken. Hands should always be washed before eating and drinking.
- To prevent contamination of areas outside where the material is being handled, protective gloves, masks, clothing equipment etc should be stored very close to the work area and remain there when the operative leaves the work area.

If large quantities of dust are present:
- To prevent contamination of clothing by lead dusts, individuals should wear disposable coveralls.

Inhalation

Breathing in the dust is a significant threat if large quantities of dust are present. Particles above 15 microns will rapidly settle as dust; those from 15 – 5 microns will remain in the air sufficiently to get into nose and mouth etc, but will be rapidly

expelled with sneezing and transported with mucous; those of 4 microns and below will generally reach the lungs. It has not been established what range of particles are typically present in the lead oxide dust from bullets, but a precautionary approach should be taken.

Mitigation:

- A particulate respirator conforming to a minimum standard of EN149 FFP1 should be used when handling bullets where lead oxide dust is visible, and especially where dealing with large collections of bullets which had been stored in bulk and where quantities of loose dust is present in the storage containers. (The 3M 9322 is an example of a disposable respirator, meeting the higher requirements of EN149:2001, category FFP2, which has been found to be a comfortable item to use in bullet recording work).
- Where large quantities of dust are produced, researchers should carry out this work using a dust extraction system.

If reasonable precautions are taken then ill effects should not occur from working with or handling lead bullets. It is unlikely that people undertaking recording of such artefacts will exceed greater than half of the occupational exposure limit for concentration of lead in the atmosphere of 15 mg/m3 - so medical surveillance in the form of tests of blood-lead concentrations are not required. However as lead progressively accumulates in the body it may be wise if, in exceptional circumstances, someone is working over an extended period with thousands of bullets and where large quantities of oxide dust is present, for them to have periodic blood tests to check that it is not resulting in unacceptable exposure.

Environmental threats

Lead is a classified waste material. Thus in addition to health threat for those working with the artefacts, there could be environmental threats from the processing of large quantities of lead finds. Whereas the washing of the small numbers of bullets normally encountered in metal detecting may not represent a significant environmental threat, the processing in bulk of many hundreds of bullets from a field of conflict may yield significant quantities of lead oxide in solution, while recording of existing collections of bullets may yield a large quantity of lead oxide as dust.

Mitigation:

- The solution or dust should be disposed of responsibly. Large quantities of dust or solution from large quantities of bullets should not be binned, poured down the drain or onto the ground to soak away. Advice should be sought from the relevant environmental health officer about appropriate disposal.

Appendix XI: Proposal for archaeological survey at Morton Corbet Castle, Shropshire

Background

The English Heritage guardianship monument of Moreton Corbett Castle was a royalist garrison 1643-1645. It fell 8th September 1644 to a rapid assault, but was soon back in royalist hands, being finally abandoned during 1645. Cursory examination of the site, as part of an informal survey of Civil War garrisons across the country, has revealed the existence of substantial numbers of bullet impact scars on the remaining standing walls of the castle and on the adjacent medieval church. In addition at least one possible gunport was identified.


**Figure 126: Section of wall at Moreton Corbett showing bullet impact scars**

Such bullet impact evidence has been recognised on a significant number of Civil War siege sites across England and Scotland, and we are gradually compiling a database of these sites. They include a number of other English Heritage, Cadw and Historic Scotland guardianship properties, such as Ashby de la Zouche, Raglan and Stirling Castles, as well as various medieval churches and country houses that were fortified or used as defensive or offensive positions during the war. It is to be expected that similar evidence also exists on early modern siege sites across Europe.

Figure 127: Detail of bullet impact scar at Moreton Corbett showing the distinctive central cup mark and a serried of radiating fractures. This particular scar is likely to be from a bullet of larger calibre than the typical 12 bore musket.
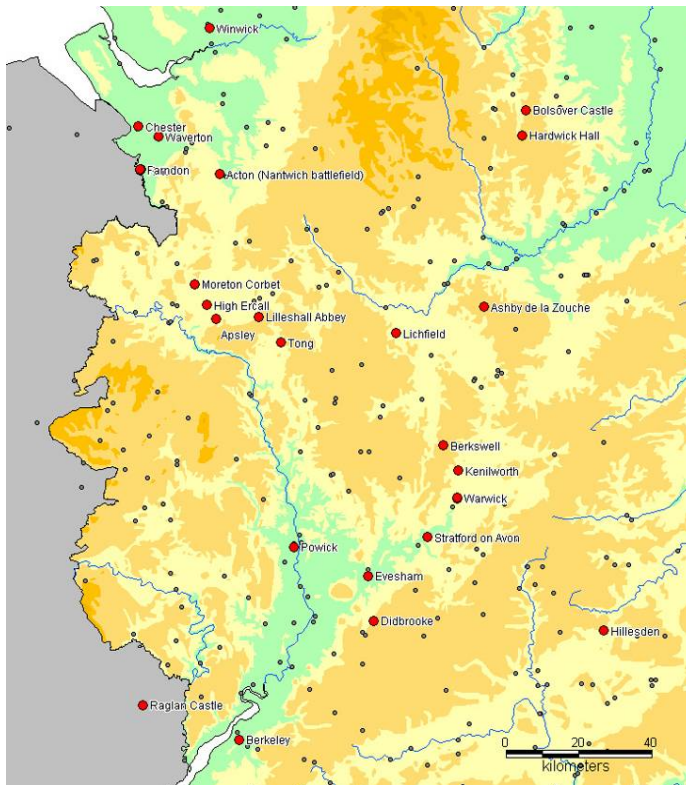
Figure 5: Sites in Midland England listed on the Battlefields Trust Fields of Conflict database as having bullet impact scars
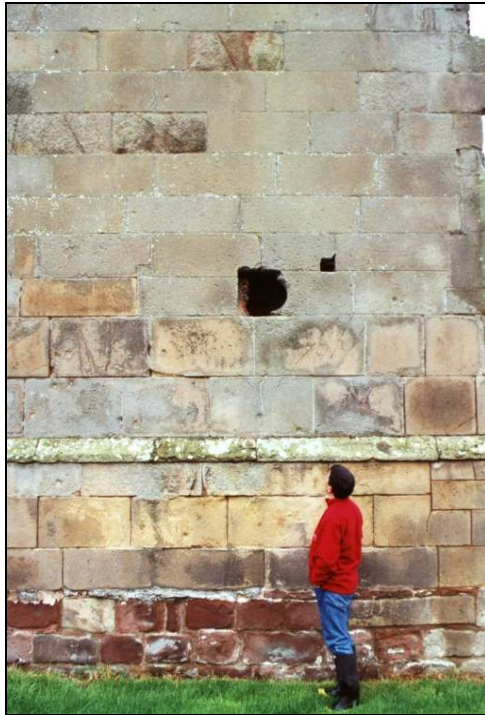
Figure 6: Possible gunport at Moreton Corbet, with adjacent bullet impact scars

We are not aware of any systematic archaeological research that has been undertaken on such evidence on any site in Britain, although comparable evidence from artillery roundshot has been studied, most notably at Chester.[7] It is therefore unclear at present whether such scars might yield significant information. This is worth knowing, not only for what such information might reveal, but because almost by definition such scars are likely be expunged by stonework repairs.
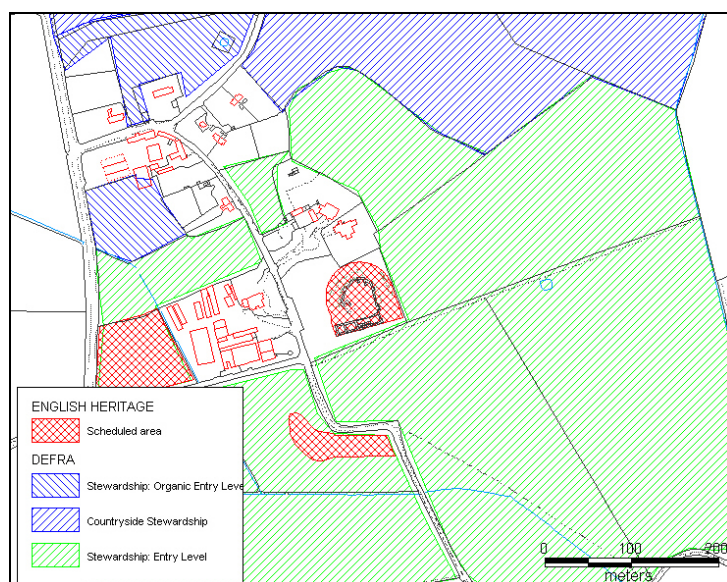
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[7] Foard, in preparation-d; Ward, 1987
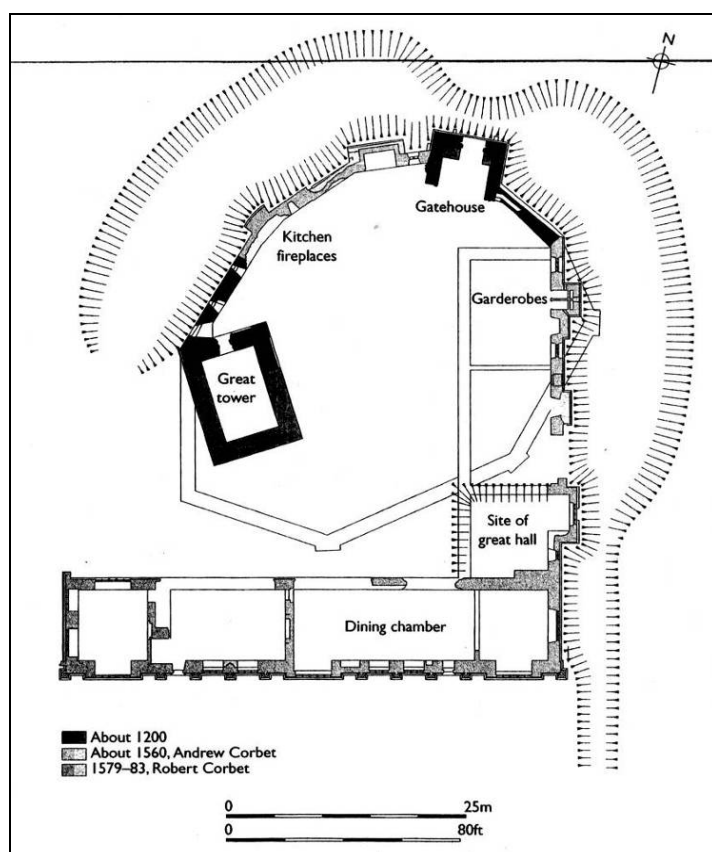
Figure 70: Plan of buildings from English Heritage report

Figure 81: Scheduled and Stewardship areas

Objectives of the present proposal

To establish an effective recording method for bullet impact scars, and to establish whether historically useful information can be recovered from them which should influence future management.

Survey should extend to establishing whether impacted lead bullets survive in or on the land adjacent to the walls which show scars. If they do, then a sample of these

bullets should be recovered for analysis to seek correlation between the calibre / impact damage exhibited by the bullet and the size and character of the impact scars.

Methodology

Using records held by English Heritage and The National Archives, assessment will be made as to change to the fabric and to ground levels especially at the time the ruins were consolidated by the Office of Works.[8]

The University of Leeds's **Godfrey Bingley Collection**, a collection of photographs of English historical monuments taken between the 1880s and 1905, before Office of Works consolidation, will also be consulted.

Impact scars

A photographic record will be made of the lowest 4m or so of the outer face of the castle site. Copies of the images will be annotated with information on the bullet impact scars, each of which will be numbered; and on the petrology of the stone and its surface character including degree of weathering. This is because the character of stone type is expected to have a significant influence on the characteristics and survival of the bullet impact scars. In areas where there is significant impact evidence, accurately-positioned control markers will be fixed in two rows in a grid pattern at 3m intervals to the outer wall face, with accurate levelling of the lower markers. These will be used to enable to enable photo-rectification of a carefully taken second series of images which will be used to prepare an integrated digital drawing of the significant areas of walling showing bullet impact scars. Where excavation is to take place adjacent to an area of wall the impact scars will be individually photographed and detailed drawings will be prepared for each. For each of these scars depth measurements will be taken to allow drawing of two sections of the scar, each set at 90 degrees to the other.

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[8] Guidance prepared by Susan Harrison of English Heritage, following such work at Helmsley Castle and other sites in Yorkshire will for the starting point for this assessment.
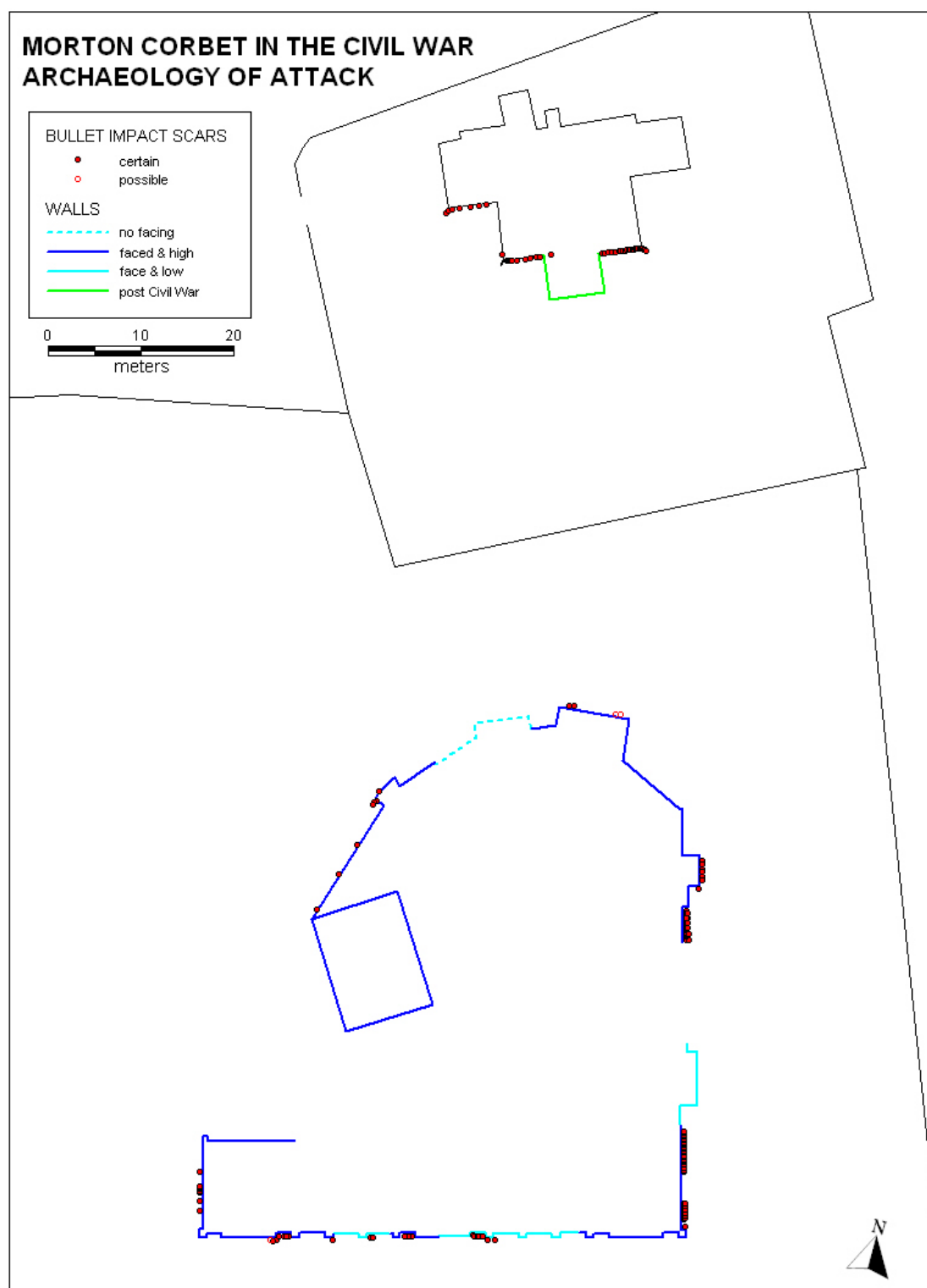
Figure 9: Initial sketch mapping of bullet impact evidence as a guide to distribution of action and to enable selection of potential areas for detailed investigation

Survey by metal detector

Where a wall shows significant scars, the ground surface around the outer face, extending to at least 3m from the wall, will be systematically metal detected at 1.5m spaced transects. This will encompass most of the ground adjacent to the eastern and southern facades of the structure. As the objective is to locate lead bullets the detecting will be undertaken in discrimination mode, to exclude ferrous signals. The speed of survey will be logged using GPS tracking. Subject to the results of this initial survey three locations adjacent to sections of walling showing bullet impact scars will be intensively re-detecting in discrimination mode to identify all potentially significant artefacts, starting with area 6. All relevant signals will be pin-flagged. Based on the signal locations and character, and on the adjacent bullet impact scar distribution, a 2m*3m area will then be selected for initial excavation of the topsoil in area 6. This will then be re-detected in all metal mode to locate and pin-flag all artefacts that should be sought in the excavation.

Turf and topsoil will then be removed across the selected area in c. 5cm spits and all significant artefacts bagged and recorded by taped measurement in three dimensions. The area will then be re-detected, signals flagged and the next 5cm excavated, proceeding thus until the bottom of the topsoil is reached. This intensity of re-detecting is essential if the very small calibre hailshot bullets suggested as having been fired at the possible gunport are to be recovered. If the ground has not been disturbed since the 1640s then it is likely that all the bullets will have migrated towards the bottom of the topsoil.

Subject to the results of this initial trenching, either two more separate areas of identical size will be examined in an identical way adjacent to impact scar concentrations. Alternatively a wider area will be opened up in the initial excavation area, to a maximum of 3m*6m.

All bullets and powder box caps will be retained for analysis. All other finds will normally be returned to the ground in the trench from which they were recovered, with that trench is backfilled, but a photographic record and measurements will first be made of those which might have some archaeological significance. Exceptional finds relevant to the understanding of the military action or to the earlier history of the site will be considered for retention.

All bullets will be cleaned by light brushing in water. All other significant artefacts will be cleaned with minimal brushing when dry. All finds will be individually bagged and stored in controlled conditions. Any bullets recovered will be analysed and a detailed report prepared following the principles defined for analysis of the Edgehill battlefield bullets.[9] The archive will be prepared for deposition in the English Heritage store at Atcham or such other appropriate archive as is required by English Heritage. If significant results are achieved then an article will be submitted for publication in a national journal such s Post Medieval Archaeology, or the Journal of Conflict Archaeology.

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[9] Foard, in preparation-d
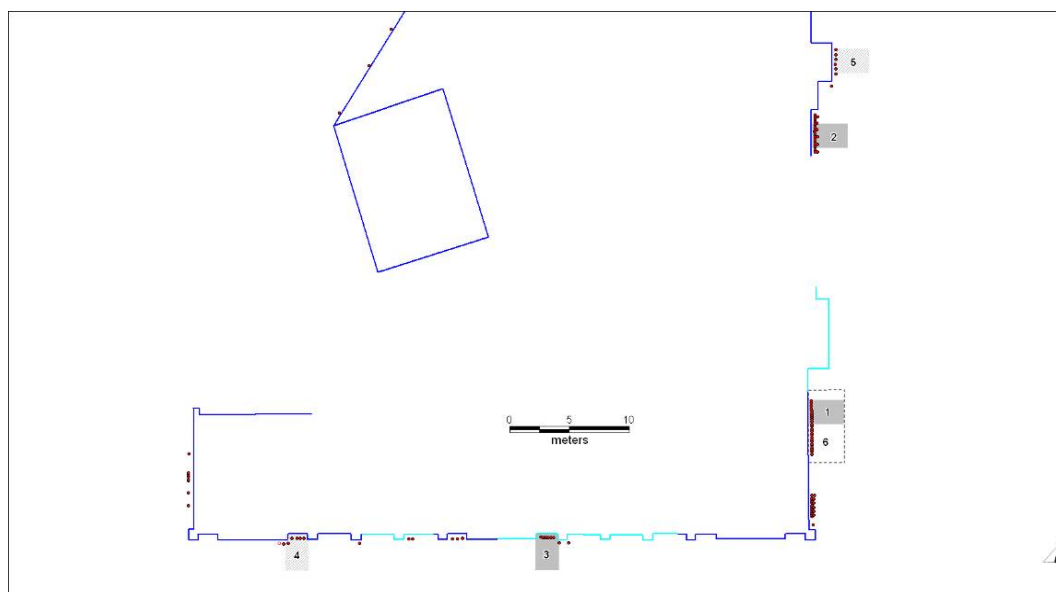
Figure 10: Areas 1-3 are the initial intended areas, subject to the results of initial metal detecting survey, with 4-5 representing fall back locations. Area 6 represents alternative single area of investigation if initial work in area 1 is positive.

Outcomes

As this will be the first study ever undertaken to investigate bullet impact scars in relation to their associated bullet scatters, this enquiry is speculative. It is worth re-stating that its primary aim is to ascertain whether such evidence should in future be systematically catalogued and recorded, and so be available to assist management and repair. It is known that a number of churches not considered here also bear such evidence – yet whether it survives or has anything new to tell us is at present unknown.

What could the work tell us? In addition to improving understanding of the assault on Morton Corbet itself, more wide ranging outcomes should be achieved. These might include the ability to identify distinctive damage characteristics on bullets that have impacted stonework, such that it may allow the identification from bullet scatters the location of lost buildings which had been used as defensive positions on battle and siege sites. Drawing upon associated bullet firing experiments being undertaken in association wit the Defence Academy, analysis of the impact scars may also enable the trajectory and impact velocity of the bullets to be assessed, and may ultimately contribute to the understanding of the efficiency and effectiveness of 17th century small arms.

If the results are positive then a detailed proposal will be prepared for more extensive survey work with a view to developing Moreton Corbett as a type site for such investigation. This would comprise comprehensive recording of the bullet impact scars on both castle and church; wider investigation of the topsoil immediately adjacent to the walls; extensive metal detecting survey of the surrounding land (subject to agreement fro the landowners) to recover the wider pattern of bullet scatters from outgoing as well as incoming fire. There would also be linked experimental research, in collaboration with Cranfield University / The Defence Academy, extending the ongoing programme of experimental firing of both small arms and artillery which is essential to the effective interpretation of the archaeology of attack on site of the 17th century.[10]

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[10] Allsop and Foard, forthcoming; Foard et al., in preparation.

Project team

Excavation adjacent to the structure and background research on the site will be the responsibility of Dr Paul Stamper. Metal detecting and bullet analysis will be the responsibility of Glenn Foard. Geological analysis and related assessment to understand the nature of the influence of geology on the bullet impact scars will be undertaken by Dr Peter Doyle. Recording of the upstanding evidence will be undertaken by all three.

Appendix X: Assessment of literature enhancement

The first stage of the Fields of Conflict project sought conflict sites primarily from published national surveys and from all Historic Environment Records. Following discussion at the Project Advisory Panel, this additional stage of work was designed to see whether interrogation of regional, county and local literature (e.g. county record series, local antiquarian writing, county archaeological and philosophical journals) would identify conflict sites that had not been identified in the first phase of research, and, if so, to what degree they would increase the number of references for actions already identified on the database. A second objective was an effort/benefit analysis, to see whether it would be useful to extend such work to the entire country.

Two areas made up of three historic counties were chosen for the trial: (Cumberland and Westmorland, and the West Riding of Yorkshire.

Cumberland and Westmorland

Method
The bibliographic search was undertaken initially online and then over seven days in the library of the University of Cambridge. An additional two days were spent tabulating the results and entering new conflict sites into the bibliographic and mapping databases.

The search began with listings of antiquarian and local histories found in Currie, C.R.J. and Lewis, C.P. *A Guide to English County Histories* (1997). This provided a fairly comprehensive survey of local histories from antiquarian work to the modern day, and useful descriptions of the scope and content of each source. These helped to identify those sources with the most potential for information on fields of conflict.

Next, online searches were made of COPAC academic and national libraries catalogue and the Royal Historical Society bibliography. The RHS bibliography proved particularly useful for finding article titles, which of course do not appear on traditional library searches. These web searches were accomplished using a variety of keywords likely to produce local history sources, including combining the county names with the following topics: history, civil war, battle, border, Scottish, rebellion, Jacobite, peel, castle, military, siege.

Once in the library, further useful books and articles were found in Hodgson, H.W. *Bibliography of the History and Topography of Cumberland and Westmorland* (1968), in a direct search of the index of the region's primary journal, *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society* (1886-), and through fortuitous finds of other sources.

Once potential sources were located, they were then searched through their indexes, relevant chapter headings, or scanning historical overviews. As more familiarity was gained with the major sieges and battles, index searches for the names of specific sites could also be used. Some difficulties were encountered with

this method, as a number of sources, particularly antiquarian ones, were poorly indexed or not indexed at all. Others were well indexed, but primarily by site or name, rather than subject, so unless specific historical persons or sites of conflict were already known, references to battles could easily be missed. A number of county histories were organized by parish or township, with in-depth historical discussions of each site. However, given the length of time available and the number of parishes in each county, it was impossible to search each of these parish descriptions.

References to military action were recorded by page number, with the site, date, type of action, and a short description of the conflict being noted. Newly-found sources were then entered into the UK Fields of Conflict bibliographic database (in EndNote), and the references to conflicts transferred into the Notes field, taking the form: Site, Year, Action Type, Page Number. References with the short descriptions of the conflict appended were transferred to the Research Notes field, and a note was placed in the Label field to distinguish new sources. For sources that were already in the bibliographic database, but wherein new conflict references had been found, the new references were entered into the Notes and Research Notes fields together with a notation to distinguish new references.

The UK Fields of Conflict database was then updated with all the new actions, excluding the raids, which were entered onto a separate MapInfo table pending a decision on whether such data should be added to the database in the current phase of enhancement.

Discussion

As can be seen from the tabulated results, a large number of new military actions were added. Fifty-seven new actions were found, as were additional references to nine of the 18 previously known actions. Five known events for which no additional references were found are doubtful actions, or actions for which a number of possible locations have been proposed. The number of battles on the database has been doubled from four to eight. The most significant enhancement, however, is with regard to sieges, where 41 are now recorded as against the five previously listed. Of these, 26 were sieges of Carlisle that took place during the Middle Ages, the Civil War and the Jacobite rebellions. The remainder of the new actions are primarily sieges of smaller castles (e.g. Rose, Brough, Brougham, Scaleby, Liddel) or relatively minor skirmishes. In all there are now 30 skirmishes, as against 6 before. The vast majority of new actions found were medieval border raids (110 separate events, not tabulated here). It seems likely that there were substantially more taking place in this turbulent medieval border region.

Such local searching is relatively work-intensive and time-consuming, and due to erratic indexing, it is almost certain that some references to military actions will be missed. A comprehensive search, even for one county, would be a large task taking some weeks. References to actions were found in a wide variety of books and articles, so it is unwise to suppose that certain types of source (e.g. histories of major military conflicts, works on castles and fortified sites) should be prioritized. The high proportion of newly-found actions with three or fewer references (34 out of 57) demonstrates that most medieval and early-modern military actions are not sufficiently well known to be noted in every local history source, but their citation appears highly dependent on the particular subject or focus of the author.

Conclusion

The work has added a large number of fields of conflict to the database and has been valuable in identifying sieges, especially of the medieval period. However, the primary aim of this phase of work concerns battles, and in this respect the new search added only four sites. Of these, three occurred in a single reference and several may actually prove to have been no more than skirmishes. While the cost of

such a search can be justified for the identification of siege sites where important archaeological evidence is to be expected, it has not proven to be cost effective for the identification of battles.

Actions in Cumberland & Westmorland sorted by type and date, excluding raids; multiple dates simplified to earliest

Action Name	Action Type	Date	References		
			existing	new	total
Camlann	Battle	511	8	0	8
DEXASTAN	Battle	603	6	0	6
Solway Moss	Battle	1542	21	12	33
Naworth	Battle/skirmish	1570	0	1	1
Great Salkeld	Battle/skirmish	1644	0	3	3
Arthuret	Battle?	573	3	1	4
Dunmail Raise	Battle?	945	0	1	1
Burgh-by-Sands	Battle?	1031	0	1	1
Triermain Castle	Civil unrest	1340	0	1	1
Cartmel	Civil unrest	1536	0	1	1
Carlisle	Siege	1134	0	1	1
Carlisle	Siege	1135	1	5	6
Carlisle	Siege	1157	1	1	2
Liddel Strength	Siege	1174	0	3	3
Brough	Siege	1174	0	7	7
Appleby	Siege	1174	0	10	10
Carlisle	Siege	1174	0	11	11
Carlisle	Siege	1216	0	8	8
Cockermouth	Siege	1220	0	1	1
Carlisle	Siege	1292	0	1	1
Carlisle	Siege	1296	0	12	12
Linstock Castle	Siege	1314	0	1	1
Rose Castle	Siege	1315	0	3	3
Carlisle	Siege	1315	1	10	11
Rose Castle	Siege	1319	0	1	1
Carlisle	Siege	1337	0	6	6
Carlisle	Siege	1345	0	5	5
Liddel Strength	Siege	1346	0	5	5
Carlisle	Siege	1380	0	5	5
Carlisle	Siege	1385	0	6	6

Carlisle	Siege	1387	0	4	4
Cockermouth	Siege	1387	0	4	4
Brougham	Siege	1388	0	3	3
Carlisle	Siege	1461	0	5	5
Carlisle	Siege	1536	1	13	14
Carlisle	Siege	1596	0	10	10
Bewcastle	Siege	1640	0	1	1
Carlisle	Siege	1643	0	3	3
Carlisle	Siege	1644	2	11	13
Holm House, Longholm	Siege	1645	0	1	1
Scaleby Castle	Siege	1645	0	1	1
Brougham	Siege	1648	0	1	1
Greystoke	Siege	1648	0	2	2
Scaleby Castle	Siege	1648	0	3	3
Cockermouth	Siege	1648	0	4	4
Appleby	Siege	1648	0	5	5
Rose Castle	Siege	1648	0	5	5
Carlisle	Siege	1648	0	10	10
Carlisle	Siege	1745	0	12	12
Carlisle	Siege	1745	0	15	15
Carlisle	Siege/skirmish	1644	0	2	2
Carlisle	Skirmish	1296	0	1	1
Stainmore	Skirmish	1315	0	1	1
Douglas-Ing	Skirmish	1389	1	0	1
Carlisle	Skirmish	1406	0	2	2
Carlisle	Skirmish	1524	0	6	6
Kirkby Stephen	skirmish	1537	0	2	2
Wharton	Skirmish	1549	0	1	1
Geltbridge	Skirmish	1570	1	4	5
Carlisle	Skirmish	1645	0	1	1
Stainmore	Skirmish	1648	1	0	1
Whinfell Forest	Skirmish	1648	0	1	1
Penrith	Skirmish	1715	0	5	5
Thrimby Hill	Skirmish	1745	0	1	1
Appleside Hill, Langwathby Moor	Skirmish	1745	0	2	2
Kendal	Skirmish	1745	0	2	2
Stanwix bank	Skirmish	1745	0	2	2
Penrith	Skirmish	1745	0	3	3
Lowther Hall	Skirmish	1745	0	4	4

Clifton Moor	Skirmish	1745	10	16	26
Whitehaven	Skirmish	1778	1	0	1
Stainmore	Skirmish?	950	1	0	1
Alston Moor	Unclass	0	1	0	1
Barco Hill	Unclass	0	1	0	1
Anthorn	Unclass	0	3	0	3

Actions in Cumberland and Westmorland already on database/bibliography

Action Name	Action Type	Date	Number of References	Number of New References
Alston Moor	Unclass	?	1	0
Anthorn	Unclass	?	3	0
Arthuret	Battle?	573	3	1
Barco Hill	Unclass	?	1	0
Geltbridge	Skirmish	1570	1	4
Camlann	Battle	511	8	0
Carlisle	Siege	1135	1	5
Carlisle	Siege	1157	1	1
Carlisle	Siege	1315	1	10
Carlisle	Siege	1536	1	13
Carlisle	Siege	1644	2	11
Clifton Moor	Skirmish	1745	10	16
DEXASTAN	Battle	603	6	0
Douglas-Ing	Skirmish	1389	1	0
Solway Moss	Battle	1542	21	12
Stainmore	Skirmish?	950s	1	0
Stainmore	Skirmish	1648	1	0
Whitehaven	Skirmish	1778	1	0

New actions identified in Cumberland and Westmorland

Action Name	Action Type	Date	Number of References
Appleby	Siege	1174	10
Appleby	Siege	1648	5
Appleside Hill, Langwathby Moor	Skirmish	1745	2
Bewcastle	Siege	1640s	1
Brough	Siege	1174	7
Brougham	Siege	1388	3
Brougham	Siege	1648	1
Burgh-by-Sands	Battle	1031	1
Carlisle	Siege	1134	1
Carlisle	Siege	1174	11
Carlisle	Siege	1216	8
Carlisle	Siege	1292	1
Carlisle	Skirmish	1296	1
Carlisle	Siege	1296	12
Carlisle	Siege	1337	6
Carlisle	Siege	1345	5

Carlisle	Siege	1380	5	
Carlisle	Siege	1385	6	
Carlisle	Siege	1387	4	
Carlisle	Skirmish	1406	2	
Carlisle	Siege	1461	5	
Carlisle	Skirmish	1524	6	
Carlisle	Siege	1596	10	
Carlisle	Siege	1643	3	
Carlisle	Siege/skirmish	1644	2	
Carlisle	Skirmish	1645	1	
Carlisle	Siege	1648	10	
Carlisle	Siege	Nov 1745	15	
Carlisle	Siege	Dec 1745	12	
Cartmel	Civil unrest	1536-37	1	
Cockermouth	Siege	1220s	1	
Cockermouth	Siege	1387	4	
Cockermouth	Siege	1648	4	
Dunmail Raise	Battle?	945	1	
Great Salkeld	Battle/skirmish	1644	3	
Greystoke	Siege	1648	2	
Holm House, Longholm	Siege	1645	1	
Kendal	Skirmish	1745	2	
Kirkby Stephen	skirmish	1537	2	
Liddel Strength	Siege	1174	3	
Liddel Strength	Siege	1346	5	
Linstock Castle	Siege	1314?	1	
Lowther Hall	Skirmish	1745	4	
Naworth	Battle/skirmish	1570	1	
Penrith	Skirmish	1715	5	
Penrith	Skirmish	1745	3	
Rose Castle	Siege	1315	3	
Rose Castle	Siege	1319	1	
Rose Castle	Siege	1648	5	
Scaleby Castle	Siege	1645	1	
Scaleby Castle	Siege	1648	3	
Stainmore	Skirmish	1315	1	
Stanwix bank	Skirmish	1745	2	
Thrimby Hill	Skirmish	1745	1	
Triermain Castle	Civil unrest	1340s	1	
Wharton	Skirmish	1549	1	
Whinfell Forest	Skirmish	1648	1	

Yorkshire: West Riding

The methodology was as used Cumberland & Westmoreland.

Discussion

Forty-seven actions had already been recorded in the database; 42 more were found. Nearly all of the added actions are sieges and minor skirmishes, and there are also eight recorded raids. Of the 42 new actions, over half took place in the English Civil War. Only one additional battle was found, and that is a probably spurious reference to a 5th-century encounter, referencing a 'tumulus near the castle' which supposedly marks the burial of the Saxon general Hengist, killed in battle by Aurelius Ambrosius, a British prince. Additional references were also found for all but nine of the previously known actions. All of the most well-known battles in the West Riding

(Adwalton Moor [37 references], Boroughbridge [29], Marston Moor [53], Towton [63], Wakefield [47]) were clearly well-referenced before the local history search was carried out, and were also mentioned in almost all of the new sources that were searched. However, as with Cumberland and Westmorland, almost all of the previously unknown actions were only referenced once or a few times.   Thirty-five of the 42 new actions had only one or two references, and none had more than six. In both counties, whether or not these lesser-known military actions were mentioned seems to have been dependent on the particular focus or interests of the author.

With this said, Yorkshire search differed considerably from the exercise carried out in Cumberland and Westmorland. The West Riding was far more active in the Wars of the Roses and the Civil War, and also much less subject to the Scottish wars and raids which characterized so much of Cumbria's military history. When raids are not considered Yorkshire also features far more recorded military actions, perhaps because the county is larger and less remote than Cumbria, but also possibly because it is better-documented. There are many more local history and antiquarian works available for Yorkshire than for Cumberland and Westmorland, making a detailed bibliographic search time-consuming, and the completion of a comprehensive search nearly impossible.

As in Cumberland and Westmorland, the exercise was highly effective in revealing previously unknown sieges and skirmishes, and it has been particularly useful in clarifying the range and frequency of military actions that took place during the Civil War. However, as the chief aim of the exercise was to discover new battle sites would come to light, the pilot studies in both areas have shown that detailed local history searches are unlikely greatly to supplement the battlefield database.

Actions in Yorkshire WR

Name	Type	Date	References		
			Existing	**New**	**Total**
Ackworth	skirmish/battle	1491/2	0	2	2
Adwalton Moor	battle	1643	22	15	37
Allerton Mauleverer	raid?	1642	0	1	1
Bentham church	raid	1314	0	1	1
Blackstonedge	skirmish	1643	0	1	1
Bolton Bridge	Skirmish	?	?	0	?
Boroughbridge	battle	1322	18	11	29
Bradford	Siege/skirmish?	1642	1	11	12
Bradford	siege	1643	0	5	5
Bradford	siege	1644	1	3	4
Bradford	skirmish?	1644	0	2	2
Bramham Moor	battle	1408	9	8	17
Calverley	raid	14th century	0	1	1
Castleford	battle	947	4	0	4
Cawood	siege	1642/3	2	3	5
Cawood	siege	1644/46	0	2	2

Clapham	raid	1314	0	1	1
Conisbrough	battle	488	0	1	1
Ferrybridge	skirmish	1461	2	4	6
Ferrybridge	skirmish	1645	1	4	5
Halifax	Skirmish	1642?	0	2	2
Halifax	siege/skirmish	1642	0	1	1
Halifax	siege	1643	0	1	1
Hatfield Chase	battle	633	8	9	17
Heptonstall	skirmish	1643	0	2	2
Hollins House	skirmish/siege?	1643	0	1	1
Houndshill	Siege	1643	1	0	1
Howley Hall	siege/skirmish?	1643	2	5	7
Hunslet	skirmish/raid?	1644	0	4	4
Hunter Hill	skirmish	1644	0	2	2
Ingleton	raid	1314	0	1	1
Keighley	skirmish/raid?	1645	0	1	1
Knaresborough	siege	1317	0	2	2
Knaresborough	raid	1318	0	1	1
Knaresborough	siege	1318	0	1	1
Knaresborough	Siege	1644?	1	9	10
Leeds	siege	1643	4	12	16
Marston Moor	battle	1644	31	22	53
Monk Fryston	skirmish	1642	0	1	1
Pontefract	siege	1536	0	3	3
Pontefract	siege	1642/43	0	4	4
Pontefract	siege	1644-45	4	12	16
Pontefract	Surprise attack?	1648	0	6	6
Pontefract	siege	1648-49	2	10	12
Rawfolds	Civil unrest	1812	1	0	1
Ripon	raid	948	2	0	2
Ripon	raid	1322/23	0	2	2
Ripon	siege	1569	0	1	1
Ripon	skirmish	1643	1	0	1
River Idle	Battle	617	1	0	1
Rotherham	siege	1643	0	2	2
Sandal	siege	1317	0	1	1
Sandal	siege	1645	2	7	9
Seacroft	skirmish	1643	4	6	10
Selby	skirmish	1643	0	2	2

Selby	Siege/battle?	1644	6	6	12
Sheffield	siege/raid?	1266	0	1	1
Sheffield	siege	1643	0	4	4
Sheffield	siege	1644	3	8	11
Sherburn	skirmish	1642	1	2	3
Sherburn	skirmish	1645	3	5	8
Skipton	siege?	1130s	0	1	1
Skipton	raid	1318	0	1	1
Skipton	siege?	1464	0	1	1
Skipton	siege	1536	0	4	4
Skipton	siege	1642-45	2	11	13
Skipton Moor	No action	1405	1	0	1
Sowerby Bridge	skirmish	1644	0	1	1
Spofforth	siege?	15th c.	0	1	1
Stanley	Skirmish	1643	1	0	1
Stockbridge	Battle?	1141	1	0	1
Tadcaster	skirmish	1487	0	1	1
Tadcaster	siege	1642	0	6	6
Tadcaster	skirmish	1642	3	1	4
Tadcaster	siege	1643/4	1	1	2
Tankersley	skirmish?	1643	3	2	5
Thornhill	siege	1640s	1	2	3
Thornton	skirmish	1439/41	0	2	2
Thornton Hall	siege	1643	0	1	1
Thorpe Moor	skirmish	1645	0	1	1
Tickhill	siege	1193/94	1	3	4
Tickhill	siege	1322	0	1	1
Tickhill	siege	1644	2	3	5
Towton	battle	1461	46	17	63
Undercliffe	skirmish	1642	0	1	1
Wakefield	battle	1460	31	16	47
Wakefield	siege	1643	6	11	17
Wetherby	skirmish	1642	2	5	7
Winwaed	battle	655	7	8	15

Yorkshire WR actions already in the database

Ackworth	skirmish/battle	1491/2	0	2	2
Adwalton Moor	battle	1643	22	15	37
Blackstone Edge	skirmish	1643	0	1	1
Bolton Bridge	Skirmish	?	?	0	?

Boroughbridge	battle	1322	18	11	29
Bradford	Siege/skirmish?	1642	1	11	12
Bradford	siege	1644	1	3	4
Bramham Moor	battle	1408	9	8	17
Castleford	battle	947	4	0	4
Cawood	siege	1642/3	2	3	5
Ferrybridge	skirmish	1461	2	4	6
Ferrybridge	skirmish	1645	1	4	5
Hatfield Chase	battle	633	8	9	17
Houndshill	Siege	1643	1	0	1
Howley Hall	siege/skirmish?	1643	2	5	7
Knaresborough	Siege	1644?	1	9	10
Leeds	siege	1643	4	12	16
Marston Moor	battle	1644	31	22	53
Monk Fryston	skirmish	1642	0	1	1
Pontefract	siege	1644-45	4	12	16
Pontefract	siege	1648-49	2	10	12
Rawfolds	Civil unrest	1812	1	0	1
Ripon	raid	948	2	0	2
Ripon	skirmish	1643	1	0	1
River Idle	Battle	617	1	0	1
Sandal	siege	1645	2	7	9
Seacroft	skirmish	1643	4	6	10
Selby	Siege/battle?	1644	6	6	12
Sheffield	siege	1644	3	8	11
Sherburn	skirmish	1642	1	2	3
Sherburn	skirmish	1645	3	5	8
Skipton	siege	1536	0	4	4
Skipton	siege	1642-45	2	11	13
Skipton Moor	No action	1405	1	0	1
Stanley	Skirmish	1643	1	0	1
Stockbridge	Battle?	1141	1	0	1
Tadcaster	skirmish	1642	3	1	4
Tadcaster	siege	1643/4	1	1	2
Tankersley	skirmish?	1643	3	2	5
Thornhill	siege	1640s	1	2	3
Tickhill	siege	1193/94	1	3	4
Tickhill	siege	1644	2	3	5
Towton	battle	1461	46	17	63

Wakefield	battle	1460	31	16	47
Wakefield	siege	1643	6	11	17
Wetherby	skirmish	1642	2	5	7
Winwaed	battle	655	7	8	15

New Actions in Yorkshire WR

Allerton Mauleverer	raid?	1642	0	1	1
Bentham church	raid	1314	0	1	1
Bradford	siege	1643	0	5	5
Bradford	skirmish?	1644	0	2	2
Calverley	raid	14th c.	0	1	1
Cawood	siege	1644/46	0	2	2
Clapham	raid	1314	0	1	1
Conisbrough	battle	488	0	1	1
Halifax	Skirmish	1642?	0	2	2
Halifax	siege/skirmish	1642	0	1	1
Halifax	siege	1643	0	1	1
Heptonstall	skirmish	1643	0	2	2
Hollins House	skirmish/siege?	1643	0	1	1
Hunslet	skirmish/raid?	1644	0	4	4
Hunter Hill	skirmish	1644	0	2	2
Ingleton	raid	1314	0	1	1
Keighley	skirmish/raid?	1645	0	1	1
Knaresborough	siege	1317	0	2	2
Knaresborough	raid	1318	0	1	1
Knaresborough	siege	1318	0	1	1
Pontefract	siege	1536	0	3	3
Pontefract	siege	1642/43	0	4	4
Pontefract	Surprise attack?	1648	0	6	6
Ripon	raid	1322/23	0	2	2
Ripon	siege	1569	0	1	1
Rotherham	siege	1643	0	2	2
Sandal	siege	1317	0	1	1
Selby	skirmish	1643	0	2	2
Sheffield	siege/raid?	1266	0	1	1
Sheffield	siege	1643	0	4	4
Skipton	siege?	1130s	0	1	1
Skipton	raid	1318	0	1	1
Skipton	siege?	1464	0	1	1
Sowerby Bridge	skirmish	1644	0	1	1

Spofforth	siege?	15th c.	0	1	1
Tadcaster	skirmish	1487	0	1	1
Tadcaster	siege	1642	0	6	6
Thornton	skirmish	1439/41	0	2	2
Thornton Hall	siege	1643	0	1	1
Thorpe Moor	skirmish	1645	0	1	1
Tickhill	siege	1322	0	1	1
Undercliffe	skirmish	1642	0	1	1