Non-Invasive Archaeological Investigations for the Aberdeen Western Peripheral Route (AWPR Package)

Project code: AWPR-002

Employer: AWPR Managing Agent

Consultant: Jacobs UK Ltd

















ABERDEEN WESTERN PERIPHERAL ROUTE PACKAGE (FASTLINK)

Metal-Detector Survey Hill of Muchalls Battlefield (Site 411)



Report Authors: Julie Franklin Report Reference No: AWPR-FL-018

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Metal-Detector Survey

Hill of Muchalls Battlefield (Site 411)

Contract: Non-Invasive Archaeological Investigations for the

Aberdeen Western Peripheral Route (AWPR

Package)

Employer AWPR Managing Agent

Consultant Jacobs UK Ltd

Contractor Headland Archaeology (UK) Ltd

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Schedule

Fieldwork November 2012
Report November 2012

Summary

Headland Archaeology undertook a metal-detector survey on the Hill of Muchalls Battlefield (Site 411) as part of a programme of archaeological non-invasive investigations to facilitate the construction of the Aberdeen Western Peripheral Route and associated schemes (AWPR). The site surveyed was located on the Fastlink section of the AWPR.

The Hill of Muchalls battlefield was the site of a skirmish between Covenanting and Royalist armies in June 1639. The approximate area of the battlefield is shown on Roy's Military Survey of Scotland (Illus 2). Part of this area transects the road corridor. A metal-detecting survey of this area revealed four potentially 17th century finds, two of which have military connections. Though none in themselves are definitive proof of the Battle of Muchalls, all were clustered in the same general area (Illus 10). Other finds relate to agricultural use of the fields in the 19th and 20th centuries.

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1 Introduction

1.1 General

- 1.1.1 This document is submitted as the report on the metal-detector survey of the Hill of Muchalls Battlefield site (Site 411) where it crosses the corridor of the proposed Fastlink section of the Aberdeen Western Peripheral Route (AWPR). The metal-detecting survey is part of a programme of archaeological non-invasive investigations to facilitate the construction of the Aberdeen Western Peripheral Route and associated schemes. The work was undertaken in accordance with a specification prepared by Jacobs UK Ltd within the Invitation to Tender (ITT) (Aberdeen City Council 2012).
- 1.1.2 The AWPR is proposed as both a bypass and a distributor road around the City of Aberdeen. The route envisages the construction of a wholly new dual carriageway some 34.6km long around Aberdeen, together with a link to Stonehaven some 11.5 km long, and includes associated side roads and junctions. The AWPR is divided into three sections; the Northern Leg, Southern Leg and Fastlink.
- 1.1.3 The Employer is the AWPR Managing Agent, administrator of the Commission on behalf of Aberdeen City Council (ACC) and its funding partners. The Consultant is Adam Brossler of Jacobs UK Ltd. The Contractor is Headland Archaeology (UK) Ltd, the archaeological organisation appointed by the AWPR Managing Agent to carry out the work reported here. Historic Scotland provides advice, supervision and oversight of the content, conduct and quality of archaeological aspects of the Contract, acting in support of Transport Scotland.
- 1.1.4 On the 10th of November 2012 Headland Archaeology undertook a metal detecting survey on Site 411 (Hill of Muchalls Battlefield) located on the Fastlink section of the proposed AWPR. This project was managed by Russel Coleman (Contract Manager) and Sorina Spanou (Project Manager). The fieldwork and reporting was overseen by Julie Franklin (Finds Manager, Headland Archaeology), assisted by Alison Cameron (Cameron Archaeology), Don Wilson (surveyor, Headland Archaeology) and volunteer metal detectorists (The Doric Diggers metal detecting club).

1.2 Background to the Project – Aberdeen Western Peripheral Route

1.2.1 Desk-based assessment undertaken in support of the cultural heritage chapter of the Environmental Statement (ES) identified a total of 316 sites of cultural heritage significance along or close to the route (Jacobs UK Ltd 2007). Chapters 13 (Northern Leg), 28 (Southern Leg) and 43 (Fastlink) (Cultural Heritage and Archaeology) of the ES for the scheme recommends measures to be undertaken to evaluate or mitigate

potential impacts of the scheme on the cultural heritage resource. These recommendations include both invasive and non-invasive archaeological evaluation followed by archaeological mitigation.

- 1.2.2 Based on the requirements of the ES and the results of subsequent dialogue with Historic Scotland, the following non-invasive archaeological investigations are required across all sections of the scheme:
 - topographic survey;
 - palaeoenvironmental assessment;
 - geophysical survey;
 - field walking;
 - metal detector survey; and
 - building recording
- 1.2.3 The present report deals with the metal-detector survey of Site 411 (Hill of Muchalls Battlefield) on the Fastlink section of the AWPR.

1.3 Aims and Objectives

- 1.3.1 The general aim of the archaeological non-invasive investigations is to identify the extent and character of known and unknown archaeological remains in order to enable a programme of mitigation to be designed. More specific aims and objectives are as follows:
 - to identify, investigate and record any such archaeological remains to the extent possible by the methods put forward in the ITT Specification (Aberdeen City Council 2012);
 - to define the extent of the Hill of Muchalls Battlefield (Site 411) within the scheme footprint in order to inform the requirement for further investigation;
 - to disseminate the results through deposition of an ordered archive and a detailed report at the National Monument Records of Scotland (NMRS), and publication at a level of detail appropriate to the significance of the results.
- 1.3.4 The results of the non-invasive investigations will enable a more accurate assessment of the potential impact of the scheme on archaeological remains and the design of any further evaluation works and an appropriate programme of mitigation works (if necessary). Such works will form part of a separate contract.

1.4 Site Location and Description

- 1.4.1 The site is located on the Hill of Muchalls (Illus 1), c. 5km to the north of Stonehaven and 2.5km west of Bridge of Muchalls (Illus 1). It is centred on NGR NO 87730 91000, with an average height of 111m OD.
- 1.4.2 The survey area covers approximately 10 hectares and is a gently undulating area of farmland. At the time of the survey (November 2012) the site was predominantly under pasture, with one field used for arable cultivation and other areas overgrown with scrubby vegetation (Illus 4-7).

1.5 Scope of Work and Limitations

- 1.5.1 Most of the survey area was pasture with easy access. Some areas on the western side of the survey area however could not be accessed (Illus 3).
- 1.5.2 The southern part of the survey area (c 1 ha) was heavily vegetated with scrub, long grasses, gorse bushes and was, in places, boggy (Illus 4). Access was extremely difficult and the limited range of metal-detectors meant that no useful results would have been gained from attempting to survey these areas.
- 1.5.3 To the north of the abovementioned area, c. 0.6 hectares, lay within a pasture field containing cows, including calves and young bulls (Illus 5). Due to health and safety considerations the survey was not undertaken within the livestock field.

1.6 History of the Site

Hill of Muchalls Battlefield (Site 411) was the site of a skirmish between the Covenanting and Royalist armies in June 1639 during the Civil War. After occupying Aberdeen, the Royalist army marched on Stonehaven and camped on Muchalls (Jacobs 2007, Chapter 43, p 5). They were defeated by an army led by Earls Marischal and Montrose and driven back to Aberdeen (Marren 1990). The approximate area of this battlefield is shown on Roy's Military Survey of Scotland 1747 – 1755 (Illus 2). There are historical records of ditches and embankments that extended over the Hill of Muchalls before it was enclosed and cultivated, probably in the early 19th century (Jacobs 2007, Figure 43.1c). No trace of these features was identified during the walkover survey undertaken for the ES.

1.6.2 The area has also been posited as a possible location for the Battle of Mons Graupius (Watt 1992). The Battle between Romans and native Caledonians was recorded by Tacitus in AD83, but its location has been lost. Sites in Perthshire, or Kincardineshire or other parts of Aberdeenshire have also been suggested.

2 Survey Procedure and Methodology

- 2.1 The metal-detector survey was carried out as per the specification outlined in the ITT (Aberdeen City Council 2012, p. 59-60) and as per the following outline scope:
- 2.2 Staff consisted of seven volunteer metal-detectorists under the supervision of three professional archaeologists. Five of the metal-detectorists were supplied by the Doric Diggers, a metal-detecting club for the Aberdeenshire area. The archaeologists on site consisted of: Alison Cameron (Cameron Archaeology), Don Wilson, surveyor; and Julie Franklin, finds manager and post-medieval finds specialist.
- 2.3 The survey was undertaken in linear transects tied into the National Grid through instrument survey (accurate to ±0.01m relative to established control). Transects did not extend beyond the scheme boundary. Each transect was 10m apart and marked on the ground using dGPS and canes.
- 2.4 The location of each metal detector reading where an object was recorded and/or where the object was still buried beneath topsoil was also recorded to Ordnance Survey datum and National Grid (accurate to ±0.01m relative to established control) using a dGPS.
- 2.5 High performance metal detectors, which have a discrimination mode to allow non-ferrous, ferrous or all metals to be targeted, were employed for the duration of the survey. All readings were investigated but any object potentially buried at a lower depth than the topsoil was not recovered.
- 2.6 Each object that was recorded was allocated a unique ID number prefixed SF. The unique ID number sequence was controlled by Headland's surveyor. The consecutive point numbers were recorded on the finds bags.
- 2.7 All artefacts recovered were retained and removed from site for assessment. Objects collected as finds erroneously were discarded. These were pieces of coke, used to power early tractors and frequently found scattered in agricultural fields. They give a false metal signal to detectors and are often recovered during metal-detector surveys, but do not fall within the accepted definition of small finds.

- 2.8 All recording, cleaning, storage and conservation of finds was in accordance with the Institute for Archaeologists Standard and Guidance for the collection, documentation, conservation and research of archaeological materials (2008) and in accordance with the requirements of the recipient museum. In all cases finds will be reported to the Treasure Trove Panel by Headland.
- 2.9 The methodology did provide an even coverage of the field and accurate finds spots.

3 Results

3.1 Finds Assessment

- 3.1.1 A total of 204 finds were recovered during the survey (Illus 8). The majority of these were of very recent origin with the exception of four finds of possible 17th century date. Unfortunately, none of the 17th century finds can be accurately dated due either to their condition or to their long period of use.
- 3.1.2 Two finds which could conceivably relate to 17th century military action were recovered though they do not provide definitive evidence for the Battle of Muchalls. Lead shot, (SF 85) (Illus 9), is a musket ball of 20mm diameter. Firearms would have been in common use by 1639, but round lead shot continued in use into the mid 19th century; thus it cannot be definitively tied to the battle. Another piece of potential ammunition was possible diced shot (SF137) (Illus 9). This was a triangular piece of solid cast iron of similar shape and size (46 by 40 by 34mm, 122g) to a number of finds of diced shot from the 17th century military assemblage at Carrick Castle, Argyll (Franklin 1998, 968; Caldwell 1981, 128). These chunks of iron could be coated in lead to make round shot, or fired as they were as grape shot.
- 3.1.3 A further two finds of possible 17th century date were also recovered. One copper alloy coin, (SF46) (Illus 9), is potentially of 17th century date, though unfortunately is very worn and no surface detail is visible. Its appearance and size (diameter 17mm) however are consistent with 17th century 'Stirling' turners of the reign of Charles I (Holmes 1998, 60). Lastly, a possible button, (SF103) (Illus 9), may also be of 17th century date. It is of copper alloy, rounded and hollow, 10mm in diameter, with a hole on one side and damage to the other. It is not unlike 17th century hollow buttons (e.g. Bailey 2004, 39), though again, its identification is not certain.
- 3.1.4 Of the remaining finds, the majority are of iron (140 finds). Few of these are identifiable, most probably relating to farm machinery such as bolts, nuts, fragments of machine teeth, plough shares etc, or farm-related fixtures and fittings such as nails, chains, wire, draw bolts and strap hinges. Notable iron finds included a folding knife (SF13), a large plumb bob (SF92, weighing 1.7kg) and two heel irons from sturdy boots (SF19, SF189). Unusually, very few horseshoes were found, only one possible fragment (SF138).

- 3.1.5 Notable non-ferrous finds included: five later 19th or 20th century gun cartridges; and twelve copper alloy buttons of 18th or 19th century date, as well as a possible ornate buckle fragment (SF162). There were also six further coins, all of 19th and early 20th century date.
- 3.1.6 No finds of Roman date or any other periods were recovered (see section 1.6.2).

3.2 Distribution patterns

- 3.2.1 The four finds that could potential date to the 17th century were found in the same general area (Illus 10). While none can be definitively dated to the 17th century, and the identification of some remains speculative, taken as a group they might be tentatively tied to the events of 1639.
- 3.2.2 None of the other finds showed any meaningful distribution patterns. Finds in general were widely scattered, and plotting finds by type or material did not produce any notable concentrations.
- 3.2.3 While various finds of waste lead might be related to shot production, these finds were widely scattered, with no concentration around the find spots for the other potentially 17th century finds.

4 Conclusions

- 4.1 The extent of the Hill of Muchalls Battlefield (Site 411) cannot be reasonably judged from only four finds of possibly 17th century date. However, there is a suggestion that there may be a concentration of material relating to the event towards the centre of the survey area (Illus 10).
- 4.2 Most of the finds recovered relate to 19th to 21st century agricultural land use.

5 References

5.1 Bibliographic Sources

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Jacobs Engineering 2007 Aberdeen Western Peripheral Route - Environmental Statement: Chapter 43 - Cultural Heritage

Institute for Field Archaeologists 2008 Standard and Guidance for the collection, documentation, conservation and research of archaeological materials

Marren, P 1990 *Grampian Battlefields: The Historic Battles of North East Scotland from AD84 to 1745*, Aberdeen University Press

Watt, A 1992 Highways and Byways Round Stonehaven, Stonehaven Heritage Society, Stonehaven

5.2 Cartographic Sources

Roy Military Survey of Scotland – 1747-55

6 Appendix 1: Finds Catalogue

SF	Material	Quantity	Object	Description	Spot Date
1	Iron	1	Bolt		
2	Iron	1	Bolt and Nut	small	
3	Iron	1	Nail		
4	Iron	1	Nail		
5	Iron	1	Shaft	curving both ends, possibly part of a chain link	
6	Iron	1	Bolt	large thick bolt	
7	Iron	1	Wire		
8	Iron	1	Nail		
9	Copper Alloy	1	Object	small sub-rectangular plate with surface detail	
10	Iron	1	Nail		
11	Iron	1	Spike	long spike with hooked end	
12	Iron	1	Rod		
13	Iron	1	Folding Knife	poor condition, corroded, handle scales possibly missing	
14	Iron	1	Screw and Nut	small screw with square nut attached	
15	DISCARDED		Coke		
16	Iron	1	Rod	L-shaped	
17	Lead	1	Lump	small piece	
18	Iron	1	Tool	pointed tool, possibly a gauge or augur	
19	Iron	1	Heel Iron	half a U-shaped plate	
20	Iron	1	Plate	thick sub-rectangular, possibly a machine part	
21	Iron	1	Bolt	head, thick shaft	
22	DISCARDED		Coke		
23	Metal	1	Object		
24	Iron	1	Strip		
25	Iron	1	Bolt		
26	Iron	1	Nut	small, square	
27	Copper Alloy	1	Gun Cartridge	base, no marks visible	
28	Copper Alloy	2	Coins	two halfpennies, very worn, probably Victoria	1837-60
29	Iron	1	Nail		
30	Iron	1	Lump		
31	Iron	1	Staple	U-shaped	
32	Iron	1	Rod		
33	Copper Alloy	1	Gun Cartridge	base, diameter 17mm	

SF	Material	Quantity	Object	Description	Spot Date
34	DISCARDED		Coke		
35	Iron	1	Nut	small, square	
36	Iron	1	Lump	large chunk, possibly a machine part	
37	Iron	1	Nail?	head, square	
38	Iron	1	Lump		
39	Iron	1	Plate	possible butt hinge	
40	Iron	1	Strip		
41	Iron	1	Fitting	large shaft with round loop at one end	
42	Iron	1	Plate	curving plate sherd	
43	Iron	1	Nut	hexagonal	
44	Copper Alloy	1	Gun Cartridge	base, no marks visible, diameter 22mm	
45	Iron	1	Lump		
-	Copper Alloy		Coin	thin, uneven edge, diameter 17mm	17th?
47	Metal	1	Sheet	thin light white metal	
48	Iron	1	Nail		
49	Copper Alloy	1	Button	disc and loop	
50	DISCARDED		Coke		
51	Iron	1	Nail		
52	Iron	1	Chain Link?	two fragments from possible oval chain link	
53	Aluminium	1	Ring Pull		
54	DISCARDED		Coke		
55	Iron	1	Lump		
56	Iron	1	Fragment	semi-circular	
57	Iron	1	Machine Tooth	hooked end	
58	Iron	1	Object	long, curved at one end, possible knife	
59	Iron	1	Nail		
60	Iron	1	Object	knob or cap	
61	Iron	1	Fitting	T-shaped	
62	Iron	1	Nail		
63	Iron	1	Object	long object	
64	Iron	1	Bolt		
65	Iron	1	Plate	small rectangular	
66	Iron	1	Machine Tooth	ovoid, pointed, slightly curved at tip	
67	Iron	1	Object	L-shaped object	
68	Iron	1	Strip	thick strip, tapering towards one end	
69	Iron	1	Machine Tooth	chisel ended	I.

SF	Material	Quantity	Object	Description	Spot Date
70	Lead	1	Fitting	plate with two bifurcated ends and nail hole towards centre	
71	Iron	1	Fitting	thick plate, bent into U-shape	
72	Iron	1	Plate	large rounded plate	
73	Iron	1	Nail		
74	Copper Alloy	1	Button	thin disc with two holes in centre	
75	Copper Alloy	1	Fitting	small T-shaped	
76	Iron	1	Nail		
77	Iron	1	Plate	rectangular	
78	Copper Alloy	1	Sheet	thin	
79	Metal	1	Rod	square sectioned curving	
80	Metal	1	Foil		
81	Iron	1	Fitting	shaft with ring at one end	
82	Copper Alloy	1	Coin	George V farthing 1919	1919
83	Iron	1	Nail		
84	Iron	1	Plate	large, triangular	
85	Lead	1	Shot	approximately half a musket ball, irregular break, diameter 20mm, weight 26g	
86	Metal and Plastic	1	Gun Cartridge	used, base diameter 21mm	
87	Aluminium	1	Rod	round sectioned	
88	Iron	1	Lump		
89	Iron	1	Fitting	L-shaped	
90	Iron	1	Bolt		
91	Iron	1	Plate	curving pipe sherd	
92	Iron	1	Plumb Bob	large conical object with loop at top, length 168mm, weight 1725g	
93	Iron	1	Plate	strip	
94	Iron	1	Strip		
95	Iron	1	Plate	thick, curving, possibly a machine part	
96	Iron	1	Ring	oval ring, possibly a chain link, or buckle frame	
97	Copper Alloy	1	Coin	George V halfpenny	1910-36
98	Iron	1	Chisel	round sectioned tapering to flat blade, expanded head	
99	Iron	1	Plate	curving pipe sherd	
100	Iron	1	Nail		
101	DISCARDED		Coke		
102	Iron	1	Plate	curving pipe sherd	
103	Copper Alloy	1	Button?	rounded hollow sphere, with a round perforation on one side (possibly the back, with missing loop) and damaged on the reverse, diameter 10mm	
104	Copper Alloy	1	Button	disc and loop, gilded, possible maker's mark on back	

SF	Material	Quantity	Object	Description	Spot Date
105	Iron	1	Rod	rod with pointed end	
106	Iron	1	Plate	rectangular, hole towards one corner	
107	Iron	1	Lump		
108	Copper Alloy	1	Nail		
109	Iron	1	Strip	clenched, pointed end	
110	Iron	1	Plate	large curving pipe sherd	
111	Iron	1	Bracket?	long object, appears to have an L-shaped section, though obscured by corrosion	
112	Iron	1	Draw Bolt	L-shaped with knop at end of short arm	
113	Iron	1	Nail		
114	Iron	1	Machine Tooth	expanded chisel end	
115	Iron	1	Plate	oval plate with large rivet	
116	Iron	1	Plate	irregular shaped	
117	Iron	1	Plate	large triangular plate, machine part?	
118	Iron	1	Nail		
119	Iron	1	Strip		
120	Iron	1	Washer	large square plate with central hole	
121	Copper Alloy	1	Button	disc and loop	
122	Copper Alloy	1	Bracket		
123	Iron	1	Plate	small, rectangular	
124	Metal	1	Fitting		
125	Copper Alloy	1	Strip	small, narrow, riveted at one end	
126	Iron	1	Draw Bolt	near identical to SF112	
127	Iron	1	Ring	possible fitting	
128	Iron	1	Fitting	T-shaped	
129	Iron	1	Rod	square sectioned	
130	Iron	1	Strip		
131	Iron	1	Fitting	thick shank with shaped flange at one end	
132	Lead	1	Lump	irregular lump of lead	
133	Iron	1	Fitting		
134	Iron	1	Strip		
135	Iron and Metal	1	Fitting	iron shaft, with grey metal head	
136	Iron	1	Wire		
137	Iron	1	Diced Shot?	large triangular piece of thick cast iron, (possibly diced shot) length 46, width 40, thickness 34mm, weight 122g	
138	Iron	1	Horseshoe?	heel fragment	
139	Iron	1	Plate	rounded, two large holes in either side	

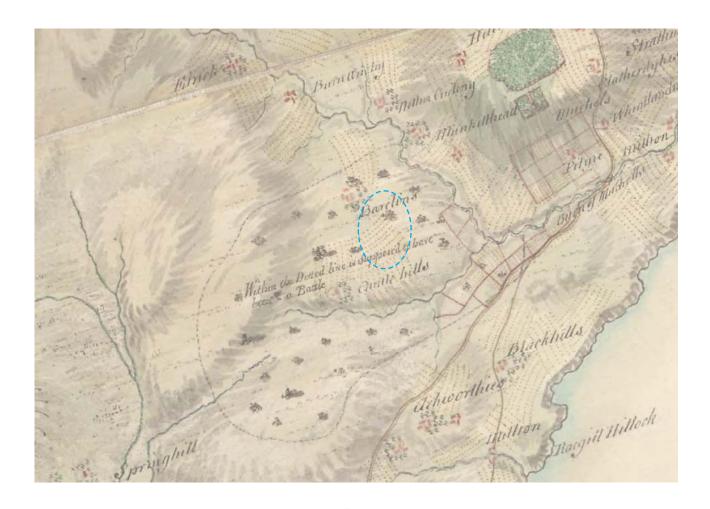
SF	Material	Quantity	Object	Description	Spot Date
140	Metal	1	Strip/Cap	strip, rolled into ring	
141	Iron	1	Nail		
142	Copper Alloy	1	Button	disc and loop	
143	DISCARDED		Coke		
144	Metal	1	Eyelet	large tent/tarp eyelet	
145	VOID				
146	Iron	1	Plate	small	
147	Copper Alloy	1	Object	small shaft, bifurcated at one end, loop at other	
148	Iron	1	Tube	large ferrule?	
149	Iron	1	Rod	thick rod or tool, expanded at one end	
150	Iron	1	Object	flat, round with central knob	
151	Iron	1	Tool?	large T-shaped object, probably part of some machine tool	
152	Iron	1	Hinge Strap		
153	Copper Alloy	1	Ring	thin ring, bent into ovoid shape	
154	Lead	1	Lump	flattened	
155	Copper Alloy	1	Coin	penny, George V, 1931	1931
	Iron	1	Nail		
	Iron	1	Nut	large, square	
158	Iron	1	Strip	curving	
159	Metal	1	Shaft	small object	
160	Iron	1	Plate	rectangular	
161	Iron	1	Chain Link	oval	
162	Copper Alloy	1	Buckle?	strip bent into ornate { shape, possibly ornate Georgian type shoe buckle	
163	Lead	1	Lump	small, flattened	
164	Lead	1	Lump	small piece	
165	Iron	1	Fitting	possibly a brake lever	
166	Iron	1	Ring	ring fitting with shaft off circumference	
167	Iron	1	Wire	long piece of thick wire, distorted	
168	Iron	1	Plate	triangular, curving	
169	Lead	1	Lump	small, irregular	
170	Copper Alloy	1	Button	disc and loop	
171	Iron	1	Object	large thick triangular chunk of cast iron	
172	Copper Alloy	1	Machine Part	cog wheel with attachments on rim	
173	Iron	1	Nail		
174	Iron	1	Object	ovoid object, obscured by white deposit, possibly mortar	
175	Iron	1	Nail		

SF	Material	Quantity	Object	Description	Spot Date
176	Iron	1	Nail		
177	Iron	1	Key?	shank and part of bit of large key?	
178	Copper Alloy	1	Screw Fitting	round head, screw thread with nut attached	
179	Copper Alloy	1	Gun Cartridge?	small cylindrical object, base diameter 7mm	
180	Iron	1	Plate	square	
181	Iron	1	Fitting	heavy case iron loop fitting	
182	Lead	1	Lump	flat, irregular shaped lump	
183	Copper Alloy	1	Hinge	small butt hinge	
184	Iron	1	Strip	long object	
185	Lead	1	Lump	small irregular shaped lump	
186	Iron	1	Plate	small, triangular	
187	Iron	1	Plate	irregular shaped, flat	
188	Iron	1	Fitting	n-shaped fitting	
189	Iron	1	Heel Iron	small piece	
190	Iron	1	Plate	small, irregular shaped	
191	Copper Alloy	1	Button	disc and loop, domed	
192	Copper Alloy	1	Button	disc and loop, illegible makers mark	
193	Iron	1	Plate	rectangular	
194	Iron	1	Tool	large square sectioned object, tapering to point, probably machine tooth	
195	Copper Alloy	1	Screw Fitting	head, screw thread, nut	
196	Lead	1	Lump	small irregular piece	
197	Copper Alloy	1	Coin	very worn, no detail visible, probably old penny 1860-1970	1860-1970
198	Copper Alloy	1	Button	disc and loop, gilded, illegible London makers mark on back	
199	Copper Alloy	1	Button	disc and loop, slightly domed	
200	Copper Alloy	1	Tack	asymmetrical domed head	
201	Copper Alloy	1	Button	disc and loop, small	
202	Iron	1	Spike?	with loop towards top	
203	Copper Alloy	1	Lock Plate	front plate from lock with keyhole and loop on front	
204	Iron	1	Hook	shaft with hooked, pointed end	
205	Copper Alloy	1	Object	Plate, curving	
206	Lead	1	Lump	large lump	
207	Iron	1	Nail		
208	Iron	1	Object	thick round sectioned rod, bent to form three sides of a square	
209	Iron	1	Plate	sub-triangular	
210	Iron	1	Rod	long rod, distorted	

SF	Material	Quantity	Object	Description	Spot Date
211	Metal	1	Point	possible survey arrow tip	

7 Appendix 2: Illustrations





Illus 2Detail from Roy's Military Map, 1747–1755, showing battlefield area and approximate location of Hill of Muchalls Battlefield (Site 411)

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Illus 4 Overgrown field, south-west of site



Illus 5 Livestock field, west of site

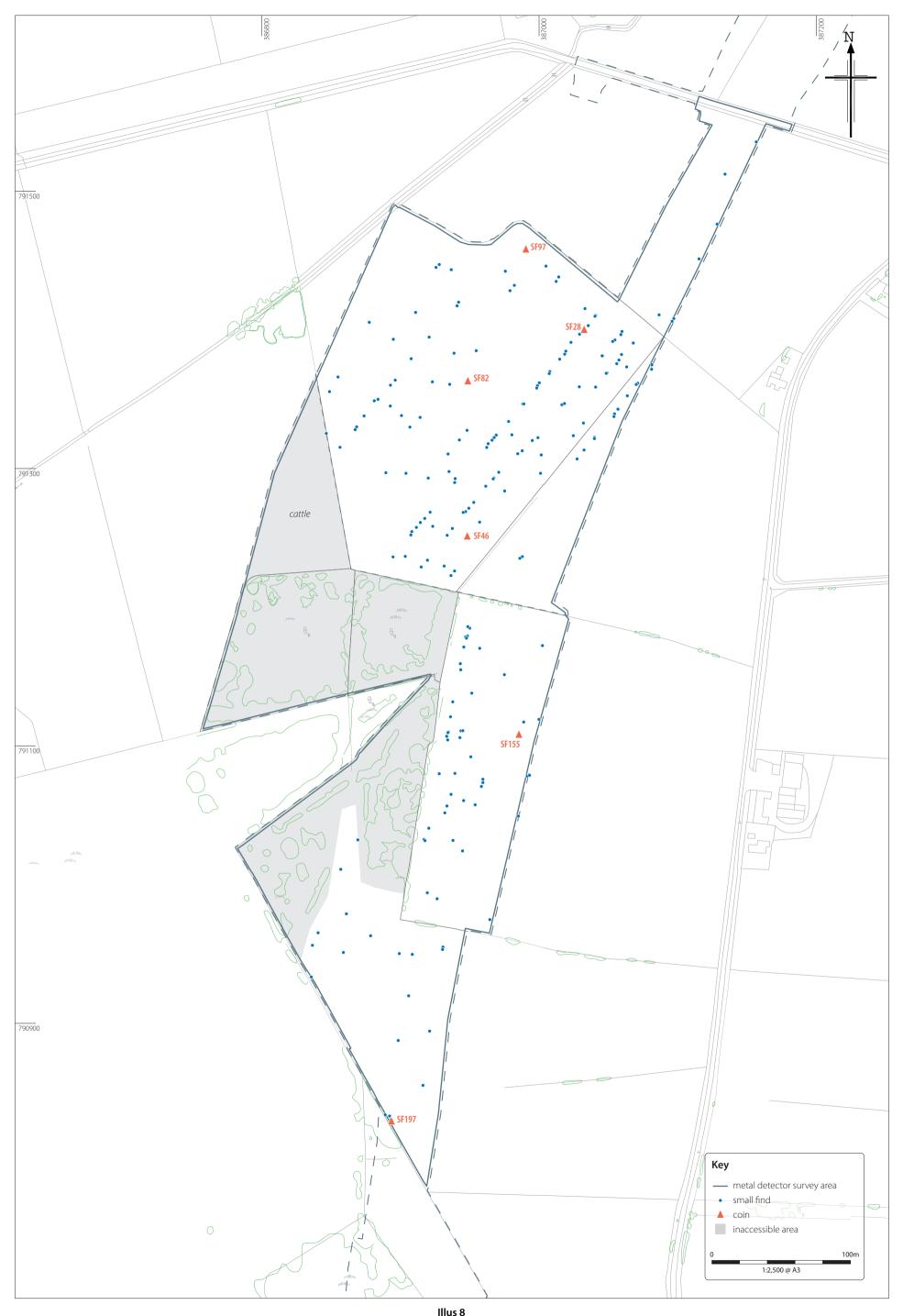


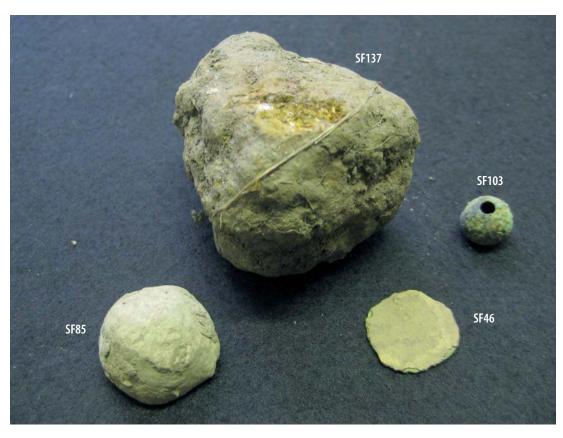


Illus 6 Metal-detecting



Illus 7 Investigating a signal





Illus 9 Finds potentially relating to Battle of Muchalls



Illus 10Plan of Hill of Muchalls Battlefield (Site 411) showing distribution of small finds potentially relating to Battle of Muchalls



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