

Powick Weir Powick Worcestershire

Archaeological Metal Detecting Survey



for
Team van Oord

on behalf of
The Environment Agency

CA Project: 6680
CA Report: 18565

November 2018



Powick Weir Powick Worcestershire

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CONTENTS

SUMMARY	2
1. INTRODUCTION.....	3
2. ARCHAEOLOGICAL BACKGROUND.....	4
3. AIMS AND OBJECTIVES.....	5
4. METHODOLOGY	6
5. RESULTS (FIGS. 2-3).....	6
6. THE FINDS (FIG. 4).....	7
7. DISCUSSION.....	7
8. CA PROJECT TEAM.....	8
9. REFERENCES.....	8
APPENDIX A: THE FINDS.....	10
APPENDIX B: OASIS REPORT FORM.....	11

LIST OF ILLUSTRATIONS

- Fig. 1 Site location plan (1:25,000)
- Fig. 2 The site, showing area of metal detecting survey and archaeological watching brief areas (1:2500)
- Fig. 3 The metal detecting survey area, showing location of finds (1:500)
- Fig. 4 Finds photographs

SUMMARY

Project Name: Powick Weir
Location: Powick, Worcestershire
NGR: 383422 252307
Type: Watching Brief
Date: 19 October 2018
Location of Archive: To be deposited with Worcestershire County Museum
Site Code: PWP 18

An archaeological metal detecting survey was commissioned by Cotswold Archaeology as part of a programme of archaeological works associated with the partial removal of the weir and construction of a temporary site compound and material handling area at Powick Weir, Powick, Worcestershire. The metal detecting survey was carried out on an area previously impacted upon by the removal and deposition of spoil during an earlier phase of work to the east of the weir near Powick Old Bridge, by the Environment Agency.

Sixteen metal artefacts were recovered which comprised ferrous objects, ironworking slag, lead objects and copper alloy objects. The ironworking slag provides additional evidence for metalworking thought to have been undertaken at Powick Mills in the early 17th century. A zone of ferrous contamination, which may be indicative of an associated waste disposal site, was also identified.

A copper alloy ferrule or chape dating to the late medieval or post-medieval period was recovered. This find could be associated with one of two Civil War battles known to have taken place immediately to the east of the site in 1642 and 1651.



1. INTRODUCTION

1.1 In October 2018 Archaeological Surveys (AS) was commissioned by Cotswold Archaeology (CA) to carry out an archaeological metal detecting survey for Team Van Oord on behalf of the Environment Agency (EA) at Powick Weir, Powick, Worcestershire (centred at NGR 383422 252307; Fig. 1). The metal detecting survey formed part of a programme of archaeological work undertaken at the site during the partial removal of the weir and construction of a temporary compound and materials handling area. The development scheme falls within the EA's Permitted Development Rights and the programme of archaeological works, which also included a watching brief, was agreed in discussions between the EA, Historic England, Worcestershire County Council Historic Environment Team, James Dinn, Archaeological Officer, Worcester City Council (WCC), and Aiden Smyth, Archaeology And Planning Advisor, Wychavon and Malvern Hills District Councils (hereafter referred to as the Local Authority Archaeological Advisors). This document comprises the results of the metal detecting survey; a separate report on the results of the watching brief has been compiled.

1.2 The metal detecting survey was carried out in accordance a detailed *Written Scheme of Investigation* (WSI) produced by Royal HaskoningDHV and approved by the Local Authority Archaeological Advisors (Royal HaskoningDHV 2018).

The site

1.3 Powick Weir is situated on the River Teme c. 700m north of Powick village and c. 300m south-west of the suburbs of Worcester. The weir feeds Powick Mill Leat which joins the Laughern Brook c. 260m to the north and then extends eastwards towards Powick Mills. The land immediately around the weir is the floodplain of the River Teme and is currently under rough pasture which is crossed by a network of footpaths. The A440, Worcester bypass (Hams Way) runs c. 60m to the south-west of the weir (Royal HaskoningDHV 2018). The site lies at approximately 15m AOD and is relatively flat.

1.4 The underlying bedrock geology of the area is mapped as Sidmouth Mudstone Formation of the Triassic Period with superficial alluvial deposits of clay, silt, sand and gravel of the Quaternary Period (BGS 2018).

- 1.5 Previous work undertaken by the EA close to the scheduled Powick Old Bridge (HE List Entry Number: 1005268) and within the bounds of the registered Battlefield of Worcester (HE List Entry Number: 1000042) involved the excavation of a platform to enable safer access to the upstream face of the bridge. No archaeological mitigation was carried out in association with this work at this time, and so it has been agreed with Historic England that a metal detecting survey should be undertaken on the area impacted upon by the removal and deposition of spoil during the previous works (see location on Fig. 2). This area totals approximately 0.4ha in extent.

2. ARCHAEOLOGICAL BACKGROUND

- 2.1 The site has previously been the subject of a Cultural Heritage Desk-Based Assessment (CHDBA; Connolly 2015), with the addition of a recent addendum (Dean 2018). A brief summary of the results of these studies is outlined below:
- 2.2 There is a general lack of evidence for prehistoric and Roman activity within the vicinity of the site. From the early medieval period through to the early post-medieval period the area is likely to have lain within a broadly agricultural landscape. From the early 17th-century there is evidence to suggest the presence of metalworking and milling in the area, probably associated with the Powick Mills complex to the north of the site (Dean 2018).

The Civil War (1642 - 1651)

- 2.3 During the 17th-century Worcester was an important political, economic and religious centre and was the site of two battles during the English Civil War; the skirmish at Powick Old Bridge on the 23rd September 1642 and the Battle of Worcester on 3rd September 1651 (Dean 2018). The Battlefield of Worcester (containing the earlier action at Powick Old Bridge), which is included on the Register of Historic Battlefields (HE List Entry Number: 1000042), is located immediately to the north-east of the survey area (see Fig.2).
- 2.5 Whilst the site lies outside the bounds of the Registered Battlefield there remains potential for the presence of previously unrecorded elements of both the 1642 skirmish and the 1651 battle to exist within the site.

Powick Weir

- 2.6 The weir and mill leat at Powick are likely to have been associated with the complex of mills which developed on the north bank of the River Teme during the 18th-century. A non-intrusive study in advance of previous EA work on the weir identified at least three phases of structure (Cook 1996). It's also believed an earlier wooden structure is likely to have been present in this area during the late medieval period, however no physical evidence for this structure was identified in the channel bed as part of that study (*ibid.*).
- 2.7 A watching brief maintained during works associated with the partial demolition and replacement of the weir in 2000 (Edwards & Cook 2000) confirmed the 18th-century construction date and recorded the presence of 183 timber piles, roughly shaped and each fitted with an iron shoe (to facilitate its driving into the riverbed). Furthermore, ten complete hearth bottoms, one half bottom and five smaller fragments were recovered during the dismantling of the weir. This waste material is likely to have derived from the nearby metalworking processes which would have provided a ready source of construction materials for the weir (*ibid.*). The general reuse of hearth bottoms as road make up, building foundations or walls supporting the banks of watercourses was common practice in the 19th century (*ibid.*).

3. AIMS AND OBJECTIVES

- 3.1 The objectives of the metal detecting survey were:
- to locate, record and investigate archaeological evidence associated with the Battles of Worcester, inform our understanding of the wider action and the potential for similar evidence to survive elsewhere in the vicinity;
 - to locate, record and investigate archaeological evidence associated with the development of a metal working industry in the area around Powick Mills during the medieval and post-medieval period;
 - to prepare a fully illustrated report on the results of the metal detecting survey that is compliant with all relevant regulations, policy, guidance and good practice; and
 - to archive all documents, material and digital records created as a result of the archaeological investigations with an appropriate local museum service and to provide information for accession to the Worcestershire and Worcester City Historic Environment Record (W&WCHER).

3.2 The principal aims of the metal detecting survey were to:

- undertake a methodical and targeted metal detecting survey across an area of land close to the Scheduled Powick Old Bridge
- to recover and map metallic archaeological material and objects present within the topsoil.

4. METHODOLOGY

4.1 The fieldwork followed the methodology set out within the WSI (Royal HaskoningDHV 2018).

4.2 The survey area and transects were set out using a survey grade GPS receiving RTK connections and accurately tied to the OS National Grid. Grid transects were located on the ground to an accuracy of +/- 10 cm (as a minimum) and all location information was fully georeferenced. Plastic orange pegs or wooden canes with hazard tape attached were used to mark out the survey area and survey transects.

4.3 The survey was conducted along transects spaced at 2m intervals to ensure close to full survey coverage of the specified area.

4.4 The surveyor moved along transects collecting artefacts as they progressed until each transect was complete within the survey area. All artefacts identified had their 2D location plotted using GPS, and were then be bagged individually with a unique identifying number assigned to them. Depth information was not recorded for all items as they lay within the topsoil or the layer of industrial material recorded within the survey area (Fig. 3), but unusual information was noted.

4.5 Not all areas of the proposed survey area, as outlined within the WSI, were accessible during the survey due to vegetation coverage and the proximity of the banks of the River Teme.

5. RESULTS (FIGS. 2-3)

5.1 Sixteen metal objects were recovered during the survey in the locations shown on Figure 3. The finds comprised three ferrous objects, five pieces of ironworking slag,

three lead objects and five copper alloy objects. The finds were concentrated in the north-western part of the survey area. A zone of industrial material with high levels of ferrous contamination associated with metalworking slag was also identified (see Fig. 3). Metal detector discrimination was used in this zone in order to locate non-ferrous targets.

6. THE FINDS (FIG. 4)

- 6.1 The recovered items of metal or metallurgical waste (numbered 1-16) are listed in Table 1 (see Appendix A). The metallurgical residues consistently comprise dense ironworking slag, which probably relates to iron smelting activity. The very large slag lump (no. 4) is of unusual 'structure' with elongated prills/runnels (Fig. 4) suggestive of its forming in a semi-liquid state, which again is consistent with iron smelting. The size and 'intact' condition of no. 4, which was recorded at a depth of more than 0.3m, suggests it has not been subject to significant disturbance.
- 6.2 The remainder of the assemblage comprised objects which were either fragmentary or otherwise of indeterminate function, although not thought to be of any great antiquity. These items were all found within 0.2m of the current ground surface. The single coin (no. 11) is a bronze penny of Victoria, date marked 1860. Copper alloy object no. 16 is a conical ferrule or chape made from thin sheet (Fig. 4). It features two rivet holes below its upper edge and simple decoration at this level consisting of a band of incised lines. It is similar in form to dagger chapes of later medieval type (Ottaway and Rogers 2002, 2904-2905), although a later (post-medieval) date is also possible.

7. DISCUSSION

- 7.1 The fragments of ironworking slag recovered during the survey provide additional evidence for metalworking thought to have been undertaken at Powick Mills in the early 17th century (Dean 2018). The zone of industrial material with high levels of ferrous contamination could be indicative of an associated waste disposal site. The relatively intact nature of ironworking slag fragment no. 4 is suggestive of a lack of disturbance at over 0.3m below present ground level, at least within that part of the site. It is not clear if the item was deposited here or was brought in from elsewhere, but the possibility that further evidence for metal working may survive within the

area, and which may not have been impacted upon by the previous EA groundworks, cannot currently be ruled out.

- 7.2 The copper alloy ferrule or chape (no. 16) dates to the late medieval or post-medieval period and could be associated with the 1642 skirmish at Powick Old Bridge or the 1651 Battle of Worcester.

8. CA PROJECT TEAM

- 8.1 Fieldwork was undertaken by Archaeological Surveys. The report was written by Charlotte Haines. The finds report was written by Ed Mcsloy. The illustrations were prepared by Aleks Osinska. The archive has been compiled by Monica Fombellida and prepared for deposition by Hazel O'Neill. The project was managed for CA by Richard Young.

9. REFERENCES

- BGS (British Geological Survey) 2015 *Geology of Britain Viewer* <http://mapapps.bgs.ac.uk/geologyofbritain/home.html> Accessed October 2018
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- Edwards, R. & Cook, M. (2000). *Watching Brief at Powick Weir, Powick, Lower Wick, Worcestershire*, Worcestershire Archaeology Report ref: **776**
- Ottaway, P. and Rogers, N. 2002 *The Archaeology of York, The small finds 17/15: Craft, Industry and Everyday Life: Finds from Medieval York* York, York Archaeological Trust/Council for British Archaeology

Royal HaskoningDHV 2018 *Powick Weir, Powick, Worcester: Written Scheme of Investigation for Metal Detecting Survey and Archaeological Watching Brief*. Report ref: **PB5753I&BRP18051716**



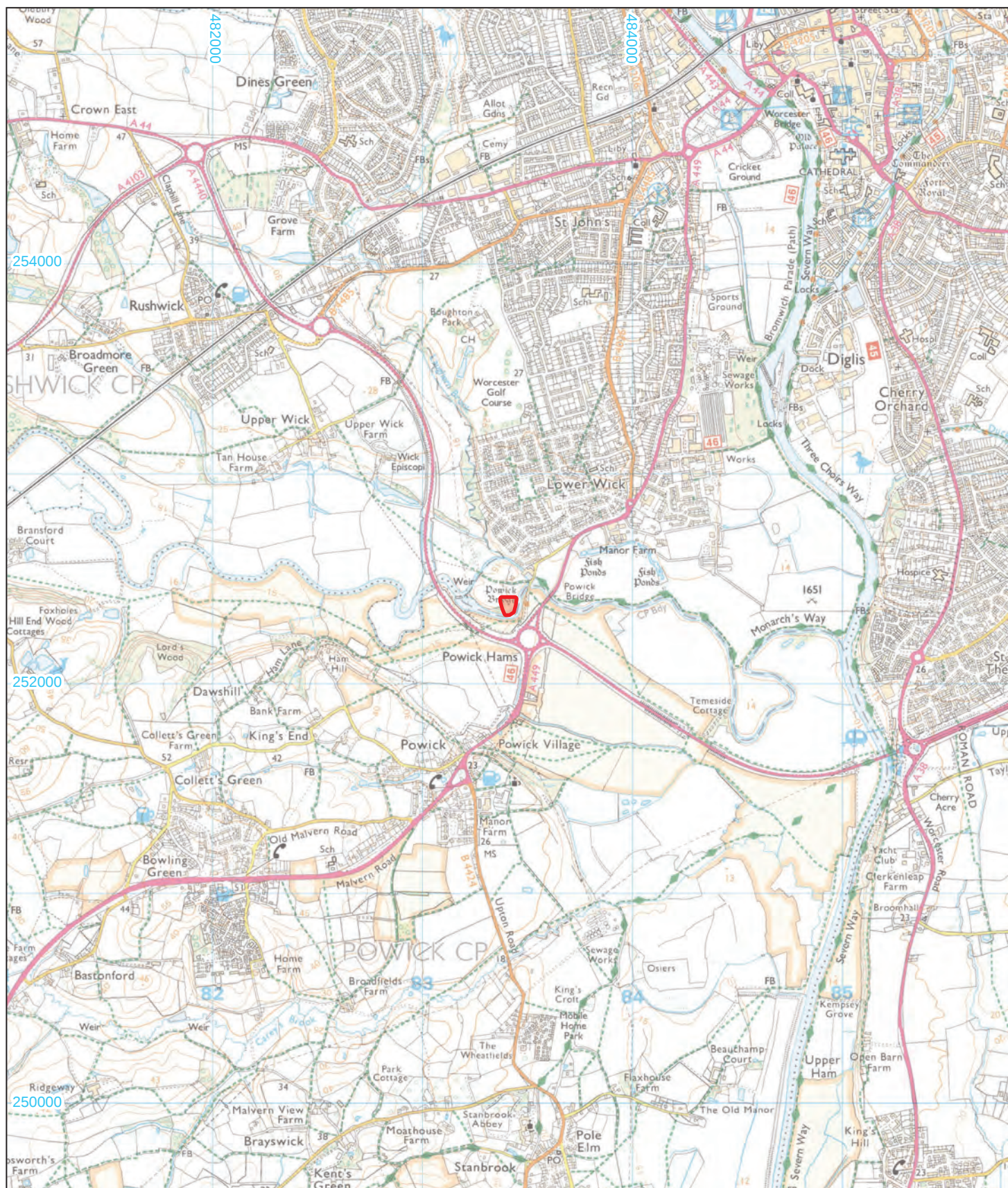
APPENDIX A: THE FINDS

Table 1: artefactual summary

Object no.	Material	Description	Date
1	Fe.	?cast iron fixing	modern
2	Fe.	Object/fragment; very corroded	
3	Fe.	Object/implement ?chisel; very corroded	
4	slag	Large lump (c. 10kg) dense ferrous slag	
5	slag	Small lumps (281g) dense ferrous slag	
6	slag	Lumps (1450g) dense ironworking slag	
7	Pb.	Tongue-shaped strip fragment	
8	Cu al.	Padlock	modern
9	slag	Lump (1500g) dense ironworking slag	
10	slag	Lump (2930g) dense ironworking slag	
11	Cu al.	Coin. Penny of Victoria	1860
12	Cu al.	Fitting. Thin (pressed) metal	modern
13	Cu al.	rivet	
14	Pb.	Sheet/tube	
15	Pb.	Offcut/window lead	
16	Cu al.	Chape/endcap	Medieval?

APPENDIX B: OASIS REPORT FORM

PROJECT DETAILS		
Project Name	Powick Weir, Powick, Worcestershire: Archaeological Metal Detecting Survey	
Short description	An archaeological metal detecting survey was commissioned by Cotswold Archaeology as part of a programme of archaeological works associated with the partial removal of the weir and construction of a temporary site compound and material handling area at Powick Weir, Powick, Worcestershire. The metal detecting survey was carried out on an area previously impacted upon by the removal and deposition of spoil during an earlier phase of work to the east of the weir near Powick Old Bridge, by the Environment Agency. Sixteen metal artefacts were recovered which comprised ferrous objects, ironworking slag, lead objects and copper alloy objects. The ironworking slag provides additional evidence for metalworking thought to have been undertaken at Powick Mills in the early 17th century. A zone of ferrous contamination, which may be indicative of an associated waste disposal site, was also identified. A copper alloy ferrule or chape dating to the late medieval or post-medieval period was recovered. This find could be associated with one of two Civil War battles known to have taken place immediately to the east of the site in 1642 and 1651.	
Project dates	19 October 2018	
Project type	Metal Detecting Survey	
Previous work	Watching Brief (WAAS 1996) Watching Brief (WAAS 2000) Watching Brief (CA 2018) DBA (WAAS 2015) Addendum DBA (EA 2018)	
Future work	Unknown	
PROJECT LOCATION		
Site Location	Powick Weir, Powick, Worcestershire	
Study area (M ² /ha)	0.4ha	
Site co-ordinates	383422 252307	
PROJECT CREATORS		
Name of organisation	Cotswold Archaeology	
Project Brief originator	N/A	
Project Design (WSI) originator	Royal HaskoningDHV	
Project Manager	Richard Young	
Project Supervisor	Dave Sabin (Archaeology Surveys)	
MONUMENT TYPE	None	
SIGNIFICANT FINDS	None	
PROJECT ARCHIVES		
	Intended final location of archive	Content
Physical	Worcestershire County Museum	Metal objects
Paper	Worcestershire County Museum	Survey Sheets
Digital	Worcestershire County Museum	Database, digital photos survey data
BIBLIOGRAPHY		
CA (Cotswold Archaeology) 2018 <i>Powick Weir, Powick, Worcestershire: An Archaeological Metal Detecting Survey</i> CA typescript report: 18565		



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PROJECT TITLE

Powick Weir, Powick, Worcester

FIGURE TITLE

Site location plan

0 1km

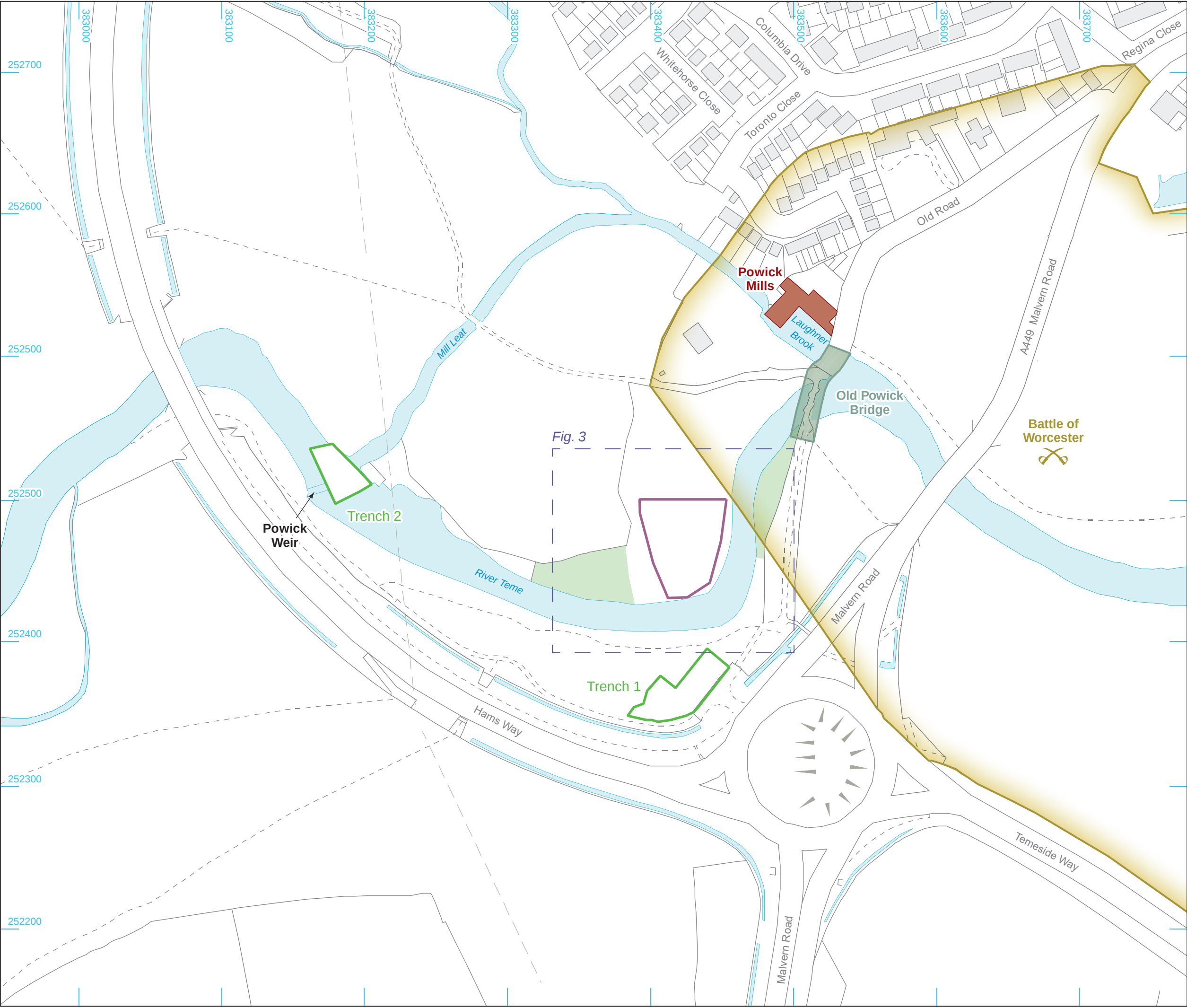
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CHECKED BY DJB
APPROVED BY REY

PROJECT NO. 6680
DATE 31/10/2018
SCALE @A4 1:25,000

FIGURE NO.

1



- Metal Detecting Survey Area
- Archaeological Watching Brief Areas
- Registered Battlefield
- Scheduled Monument
- Grade II* Listed Building

0 1:2,500 100m

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PROJECT TITLE
Powick Weir, Powick, Worcester

FIGURE TITLE
The site, showing area of metal detecting survey and archaeological watching brief area

DRAWN BY	AO	PROJECT NO.	6680	FIGURE NO.
CHECKED BY	DJB	DATE	31/10/2018	2
APPROVED BY	REY	SCALE@A3	1:2500	





Find no. 4: Large slag lump with elongated prills/runnels



Find no. 16: Conical copper alloy ferrule or chape



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PROJECT TITLE

Powick Weir, Powick, Worcester

FIGURE TITLE

Photographs

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 CHECKED BY DJB DATE 29/01/2019
 APPROVED BY REY SCALE@A4 Not to scale

FIGURE NO.

4

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