

Exe Bridges Retail Park, Cowick Street, Exeter

NGR SX 9150 9198

Results of an archaeological excavation

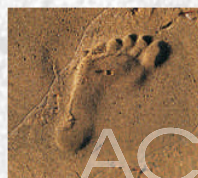
Exeter City Council planning reference 09/2050/03

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On behalf of:
CGP Investors LLP

Document No: ACD259/2/1

Date: April 2012



archaeology

EXE BRIDGES RETAIL PARK, COWICK STREET, EXETER

NGR SX 9150 9198

RESULTS OF AN ARCHAEOLOGICAL EXCAVATION

Exeter City Council planning reference 09/2050/03

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Summary

An archaeological excavation was carried out by AC archaeology during November and December 2011 in advance of a redevelopment at Exe Bridges Retail Park, Cowick Street, Exeter (SX 9150 9198). Previous investigations to the south and east of the site had uncovered medieval features along Cowick Street, a late medieval leat, and a 16th/17th century bronze foundry that produced bells and cauldrons.

A length of the leat, probably of late 15th or early 16th century date, was exposed. After construction, it was soon infilled with large quantities of waste mould from the adjacent foundry. In the late 18th century the leat was narrowed, with new stone-lined walls constructed, one of which was exposed within the site. The leat was infilled in the third quarter of the 19th century.

Limited excavation within the tenement west of the leat revealed a medieval subsoil, but no evidence of foundry deposits. The latter, which comprised dumps of broken-up mould and charcoal, was confined to deposits infilling the medieval leat.

1. INTRODUCTION (Fig. 1)

1.1 An archaeological excavation was carried out by AC archaeology during November and December 2011 in advance of a redevelopment at Exe Bridges Retail Park, Cowick Street, Exeter (SX 9150 9198; Fig. 1). This report presents the results of the excavation. The work was commissioned by CPG Investors LLP, and was required by Exeter City Council (ECC) under condition 10 of the grant of planning permission (no. 09/2050/03). Guidance on the scope of the archaeological work was provided by the ECC Archaeology Officer. The site lies adjacent to a 16th- and 17th-century bell foundry, which has been the focus of several excavations since 1978 (Blaylock 2000). This site is usually referred to as the Cowick Street foundry.

1.2 The site is situated within Exe Bridges Retail Park along the south-eastern edge of Cowick Street and to the northeast of Exeter St. Thomas rail station. The redevelopment occupies an area of c. 200m² and involves the demolition of the current library building and its replacement with a two-storey structure located roughly on the same footprint, although extending slightly to the southwest. It lies at around 8.50m aOD on the floodplain of the River Exe, with the underlying geology comprising Permian Sandstone of the Whipton Formation overlain by alluvium of clay, silt, sand and gravel (British Geological Survey website). This alluvium is between 1-1.5m deep and provided the raw material for mould making at the foundry (Blaylock 2000, 9).

2. ARCHAEOLOGICAL BACKGROUND

2.1 Excavations were carried out in 1978 and 1984 prior to the construction of the former Sainburys' store, and a new library (now demolished as part of this scheme). The area excavated in 1984 included the northeast part of the library footprint as far as the course of a former leat that formed the south-west boundary of the foundry property. Significant remains were found, including a medieval leat; later medieval structures, which were once located along the former Cowick Street frontage, and a late 16th-century foundry where the manufacture of bronze items such as skillets and bells was undertaken. Numerous clay quarry pits filled with foundry waste and broken moulds were also recorded.

- 2.2** In 1999-2000 further work in the immediate area was carried out in relation to the development of the current retail units (Blaylock 2000, Stead & Blaylock 2000) that replaced the earlier Sainburys' store. An evaluation trench excavated to the south of the library in 1999 identified the an earlier and wider leat channel, partly filled with foundry mould waste, as well as modern disturbance.

3. AIMS

- 3.1** The principal aim of the excavation was to establish the presence or absence, extent, depth, character and date of any archaeological features, deposits or finds within the site, and to carry out any subsequent mitigation as required by the ECC Archaeology Officer. A secondary aim was to monitor other groundworks associated with landscaping and temporary alterations to the retail park car park that lay outside the footprint of the library.

4. METHODOLOGY (Fig. 2; Plate 1)

- 4.1** The excavation was undertaken in accordance with a brief provided by the ECC Archaeology Officer (Pye 2010) and a subsequent project design prepared by AC archaeology (James 2011) and submitted and approved under the planning condition. It comprised the machine excavation of a roughly rectangular area which measured approximately 15m long by 7m wide that was located within the footprint of the south-western extent of the new library. The work was carried out using a mechanical excavator fitted with a toothless grading bucket and working under constant archaeological supervision. The location of the excavation area and footprint of the new library building is shown on Figure 2. The extent of the excavation was limited to the footprint of the new building unaffected by existing services.
- 4.2** The site was recorded in accordance with the AC archaeology *pro-forma* recording system, comprising written, graphic and photographic records, and in accordance with AC archaeology's *General Site Recording Manual, Version 1*. All plans were drawn at a scale of 1:50 and sections at 1:10 or 1:20, as appropriate. All levels have been related to Ordnance Datum.

5. RESULTS (Figures 3-4; Plates 2-8)

- 5.1** The excavation area was initially reduced to a depth of up to 1.26m below ground level through modern overburden and demolition layer (119) onto the concrete foundations of the now demolished library (100). Given the extent of modern disturbance within the site, further excavation works were limited to those areas offering the greatest potential for the survival of archaeological deposits. A total of three north-west to south-east aligned trenches located along the south-western (Trenches 1 and 2) and north-eastern edge of site (Trench 3) was excavated in-between the concrete library footings (Fig. 3).

5.2 Trench 1 (Figs 3 and 4a; Plate 2)

This trench measured 5.30m long by 0.60m wide and was excavated to a depth of 1.25m below initial excavation level into light grey sand and river gravels (104), present at a depth of 6.48m aOD. The overlying layer sequence comprised 0.80m of the concrete footings for the now-demolished library (100) over a mixed late 20th-century demolition layer (101). This overlay an isolated and truncated pocket of light grey brown silt clay post-medieval subsoil (105), measuring 0.40m thick, over 0.25m

of light grey sand clay alluvial layer (106). This in turn overlay clay sand (102) and clay (103) alluvial layers with a combined depth of 0.35m.

5.3 Trench 2 (Figs. 3 and 4b; Plate 3)

This trench measured 3.50m long by 0.60m wide and was excavated to a depth of 0.90m below initial excavation level onto river gravels (104), present at a depth of 6.50m aOD. The overlying layer sequence comprised 0.70m of the concrete footings for the now-demolished library (100) over the mixed late 20th-century demolition layer (101). This overlay 0.43m of a post-medieval mid red-brown silt clay layer (107), over a 0.15m thick mixed dark brown and dark grey brown charcoal rich clay layer (108) that contained frequent foundry mould fragments. This overlay 0.03m of light grey alluvial clay (103).

5.4 Trench 3 (Figs 3 and 4 c-d; Plates 4-8)

This trench measured 10m long by approximately 3.50m wide and was excavated to a depth of 0.60m below initial excavation level, through demolition layer (101) onto the top of archaeological deposits, present at a depth of around 7.30m aOD. Within the trench the western wall of a north-west to south-east aligned leat (F110) was exposed. This measured 0.70m wide and was constructed of large Heavitree Breccia with occasional volcanic trap stone sub-angular blocks that measured between 0.10-0.40m long. The stonework was mud bonded, with traces of possible degraded render present within the inside face. This inside elevation consisted of larger faced blocks, as opposed to the smaller, roughly hewn blocks forming the outer edge of the wall. The leat was infilled with a mixed dark brown and dark grey loose clay silt (109) containing abundant medium-large stones and 19th/20th century finds including pottery, glass, and iron objects, as well as demolition material such as brick and mortar fragments. On its south-west side, the outer edge of the leat wall was abutted by a post-medieval levelling and infilling layer (107) of re-deposited alluvial clay.

5.5 Two hand-dug sondages were excavated through layer (107) to a depth of between 0.60-0.75m below initial excavation level onto alluvial clays and river bed gravels (103), present at a depth of 6.72m aOD.

Sondage A

Sondage A measured 2m long by 1.60m wide. The recorded layer sequence comprised layer (107) which measured 0.50m deep and abutted leat wall F110. The leat wall had been cut into the upper fill (114) of an earlier, late medieval leat (F115) that had been deliberately infilled. The upper fill (114) measured up to 0.35m deep and comprised dark grey-black sand silt with abundant charcoal flecks and containing moderate small-medium sized sub-angular stones and mould fragments. This overlay lower fill (111) which measured up to 0.35m in depth and comprised dark orange brown baked silt clay containing abundant medium-large mould fragments throughout. The leat (F115) was aligned northwest to southeast and cut into an alluvial clay layer (103). The only surviving remnant of the western edge of the leat was present within the southern corner of the sondage, where it comprised a near vertical-sided edge onto a gently sloping base. To the northwest, the edge of the leat had been truncated by the construction of the library footings.

Sondage B

Sondage B measured 2m long by 1m wide. Below 107 there were a series of four main fills within the leat. The upper layer, 117, measured 0.20m deep and comprised mixed light grey-brown and light orange-brown silt clay with common charcoal. The leat wall F110 had been constructed onto or into this layer. Fill 117 overlaid a dump of light grey brown silt clay (112) with occasional charcoal that as present in the north

corner of the sondage. Below 112, and within the north and east part of the sondage, was a 0.10m thick layer of mid-light grey brown silt clay with common charcoal (116). This overlaid a small deposit of mid orange brown silt clay (118) which contained similar quantities of charcoal, and was only present in the west corner of the sondage. This in turn overlaid fills 114 and 111, both of which are described in sondage A; these had a combined depth of 0.40m. There was no evidence for the western edge of the leat, although the base of the channel sloped gently down towards the northeast.

- 5.6 A watching brief was maintained in the area to the west of the new library during excavation to locate buried services. No archaeological features or deposits were exposed, with all deposits comprising either late 20th-century levelling, backfills of service trenches and imported topsoil associated with the 1980s landscaping.

6. THE FINDS by Kerry Kerr-Peterson (Plates 9 and 10)

6.1 Introduction

All finds recovered on site have been retained, cleaned and marked where appropriate, then quantified according to material type within each context. The assemblage has been scanned by context to extract information regarding the range, nature and date of artefacts represented, with this information is briefly discussed below. Finds totals by material type are given in Appendix 1, Table 1. All finds that post-date c. 1750 will be discarded unless they have intrinsic archaeological value.

6.2 The foundry mould

A total of 1,048 pieces (107.6kg) of foundry mould was recovered. The majority were recovered from context 111, the lower fill of the leat (Sondages A and B, Trench 3). The mould assemblage (Appendix 1, Table 2) consists of pieces from the production of skillets or cauldrons such as core fragments, the inner part of the mould which was formed in one piece and is usually oxidised on the exterior, and reduced on the interior casting surface which usually displays either cloth or brush lines where it has been smoothed over (Blaylock 2000, 40). There are also fragments of cope, the outer part of the mould normally produced in two pieces. The core fragments are usually grey as they are more reduced due to the interior of the moulds being packed with a stabilising material such as earth (*ibid.*, 41). There were also fragments of mould used to produce the legs and an example of the sprue cup created for pouring the molten metal into the mould. Many of the mould fragments show evidence of the clay being mixed with an organic tempering material such as grass or chaff. A total of 329 undiagnostic mould pieces were discarded after initial analysis.

Sampling strategy

Previous excavations revealed that features on and adjacent to the foundry site such as clay quarry pits and the earlier medieval leat had been backfilled with used and broken mould fragments and so it was expected that large quantities of mould fragments may be encountered during the present excavation phase. Bearing in mind the extensive analysis previously carried out on mould material from the Cowick Street site (*ibid.*, 36-71), the aims of the sampling strategy were to obtain a representative sample of the mould material present from the features located within the development area and determine the diagnostic pieces within the assemblage once it had been quantified. The material was inspected and any pieces of interest were identified and are discussed below. All of the material was recovered from the infilling of the medieval leat. No foundry features were found.

Plain Mould fragments

As well as diagnostic pieces of mould fragments, there were also a large number of fragments that did not have any diagnostic features and that formed part of the body of either the cope or the core moulds. A total of 328 pieces of plain cope mould (21767kg) were recovered, mostly from lower leat fill (111). There are a total of 235 fragments of core mould pieces (65110kg) that did not have any diagnostic features. Most of these once again came from the lower leat fill (111).

Diagnostic mould fragments

There are a total of 139 fragments of foundry mould that were considered to have diagnostic features. The number and type of features are broadly summarised in Appendix 1, Table 3.

The majority of the diagnostic mould fragments, a total of 57 pieces, were recovered from context 111 and include cope mould fragments that represented rounded corners of the mould, such as the corner at the rounded base of the vessel. There were also corner fragments from the base of the mould where the rim would have been attached. There is a point of weakness in this area and so it is rare to find the rim attached (*ibid.*, 44). There are also 29 fragments of cope mould fragments from context 111 that display incised moulding wire lines. These are moulded lines that extend around the circumference of the vessel, seemingly as a form of decoration. The examples that were recovered display a single moulded wire line, whereas vessels have been known to have as many as three lines (Butler *et. al.* 2009, fig. 1). Only two pieces of cope mould were recovered from context 111 that have incised scored marks. One piece has a very faint vertical line scored into it but the other has a more clear mark possibly representing the roman numerals IX or the letter 'M' or 'W' formed from two intersecting 'V's. This mark is very similar to marks found previously on mould fragments from the earlier excavations at the site (Blaylock 2000, 44-45). There are eight fragments of cope mould that are part of the very base where the rim joins the rest of the mould (context 111). These pieces have a flat surface on which the mould would have stood during the casting process. One core fragment from context 111 has three small sub-circular impressions, possibly of the chaplets. These were small pieces of metal that would have been used as spacers to keep the two pieces of the mould at the correct distance apart (Butler *et. al.* 2009, figs 1 and 2). Another fragment from context 111 is a piece of cope mould representing the corner angle, or elbow of a cauldron handle, which was the only evidence for handle mould fragments within the assemblage.

A total of 28 of the mould fragments represent pieces of leg moulds with ribbed or ridged decoration. These types of legs can have up to five ribs and a collar towards the base from where the ribbed foot splays out. Most of the ribbed legs within the assemblage appear to have five ribs, which is the most common form (Stuart Blaylock, pers. comm., March 2012). Context 111 also produced 13 pieces of flat mould fragments. It seems likely that these represent the flat cope part at the base of the mould that the vessel cast would have stood on during the casting process.

The most diagnostic piece is an intact piece of sprue cup from context 111 (Plate 9). This has a circular hole with a diameter of 250mm running the entire length of the fragment. It has a reduced surface on the interior and an oxidised surface on the exterior. There are several patches of concretion on the interior surface which are likely to represent the remnants of metal residue.

There were also three pieces of core from context 111 that appear to have incised lines similar to the mould wire lines on the cope fragments, although it is uncertain what the function of these may have been.

Discussion

The analysis of the foundry mould fragments has identified that the type of vessels represented by the assemblage was exclusively cauldrons as skillet strip handles are not present. Additionally, the rim fragments are quite wide and suggest a substantially thick rim of the vessel which is more typical of cauldrons than of skillets. The form of the cauldron vessels is the same as those previously identified from the site, that is, low-bellied forms with the widest part at the base of the vessel. This form of vessel is characteristic of the 16th-17th centuries (Blaylock 2000, 22, plate 7). It is possible to deduce that all of the vessels produced from the mould fragments within the assemblage would have had clustered rib legs with mostly five ribs and splayed feet. It is also possible to deduce that they would have had angular handles and a single mould wire line around their circumference. Some of them would also have had scratched line decoration probably representing a maker's mark.

6.3 Kiln furniture and fired clay

There were four fragments of diagnostic fired clay fragments (38grams); these co-join, and are likely to be pieces of kiln furniture (Plate 10). They have a rounded edge and both surfaces are flat – the upper surface has finger impressions where it has been flattened out. The larger fragment part has a central circular foot-type appendage that has a shallow indentation at the end. These pieces may have been spacers used during the multiple casting of the cauldron vessels.

The rest of the fired clay assemblage consists of 136 fragments of undiagnostic fired clay (4956kg). These pieces have no identifiable features, and are likely to be either parts of the very outer oxidised cope mould or of furnace lining. Several of the pieces have a slightly vitrified effect to the outer surface suggesting that they were exposed to considerable heat which makes those particular pieces likely to be furnace lining.

6.4 Ceramic building material

A total of four pieces of ceramic building material were recovered from contexts 107 and 112. These are all fragments of hand-made red bricks dating to c. 18th century.

6.5 The pottery

A total of six sherds of medieval pottery (149 grams) was recovered from contexts 107, 109 and 111. These include three hand-made, buff-fawn sherds with micaceous fabric with an off-white exterior slip. One of the sherds appears to have a slanted, finger nail incised decoration and another has a pinched band decoration. These sherds are likely to be an Exeter-derived fabric, possibly fabric 102 and date to the later part of the 15th century (Allan 1984, 7). Another is a sherd from a Raeran stoneware jug dating to the early 16th century (Alan and Langman 2000, 78-79). The sherd from context 107 represents a ribbed jug of 16th century date. The sherd from context 109 is a fragment of Frechen stoneware 'Bartmann' type jug with decoration in a circular cartouche dating to the later part of the 16th century.

The rest of the pottery assemblage, a total of 31 sherds (1,641 grams) is post-medieval, dating to the 18th/19th century. These include South Somerset coarsewares, North Devon Gravel Tempered and Gravel Free wares and several sherds of post-medieval Exeter fabrics including fabric 42. There are also examples of English Delft ware, Staffordshire stoneware, industrial white ware and blue and

white transfer printed wares. These post-medieval wares are present in contexts 105, 107, 109, 110 and 112.

6.6 Animal bone

A total of 22 fragments of animal bone (322 grams) was recovered from contexts 107 and 112. The bone is fairly fragmentary and undiagnostic but is likely to come from domestic animals such as cattle, sheep and pigs. Several of the bones display butchery marks in the form of cut marks caused by a metal blade. A small horn core was amongst the bone recovered from context 112.

6.7 Glass

A total of 5 pieces of glass (41 grams) was recovered from context 112. These represent a sherd of clear window glass, one piece of clear glass from a bottle and three pieces of green glass from another bottle including the rim and part of the neck. These are 18th/19th century in date.

6.8 Utilised Stone

One piece of utilised stone (88 grams) was recovered from context 107. This is a square fragment of slate roof tile that has one small, circular nail hole located in one corner of the tile, there is also part of another circular nail hole along one edge of the tile suggesting that it may have been re-used.

6.9 Iron and copper alloy objects

Two iron objects were recovered from context 111 (20grams). These are two parts of a broken nail (SF 7). The nail has a straight shaft with a sub-circular profile and a large sub-rounded head. This object is heavily corroded.

A total of ten copper alloy objects (172grams) were recovered from context 111. These include two flat, sub triangular copper alloy sheets which are broken fragments of objects whose function is unknown (SFs 2 and 5). SF 4 is an elongated object with a widened out end and a flat rounded end, again of an unknown function. There is also a copper alloy nail with a cylindrical profile and a circular head (SF 3). SF 6 is a small copper alloy object, possibly a nail or a stud with a circular profile shaft and a flat sub-square head. The other objects are more corroded and consist of 2 lumps of corrosion with the flat edges of broken copper alloy objects visible. It is possible that these are part of the same object (SFs 9 and 10). SF 1 is an elongated piece of copper alloy. It may represent an object such as a cauldron leg fragment or it could be a piece of scrap metal. SF 8 is heavily corroded and is broken into four pieces. It is clear in profile that the lump of corrosion contains a ridged, flat elongated object which may be a cauldron leg fragment.

7. DISCUSSION

- 7.1** The investigations at Exe Bridges Retail Park has established that much of the site has been previously disturbed following a programme of demolition works of the Cowick Street frontages carried out in the 1960's and 1970's, and during the subsequent construction in the 1980s of the recently-demolished library building (cf Blaylock 2000, 13). Selective excavation works carried out in-between the concrete foundations of the former library did, however, expose surviving deposits associated with the 16th century foundry site located to the northeast. The main exposed feature was a late-medieval open leat, dated by Blaylock to the late 15th or early 16th century (*ibid.*, 31). An 18th-century stone-lined wall constructed during a later narrowing of the leat was also exposed, along with associated landscaping deposits. These features and deposits were present below up to 1.40m of modern overburden.

The outcome of the excavation was consistent with the results from the 1999 evaluation (Blaylock 2000, 31-33, fig. 13), but, due to the larger area of the leat investigated, did provide greater detail of the development and character of the leat.

7.2 The outer edge of the medieval leat (F115) was partially exposed within the southern corner of Sondage A and consisted of a near vertically-sided edge cut into an alluvial clay layer (103). The leat had a gently sloping base, visible within both sondages. The leat was constructed as an open channel on a north-west to south-east alignment, and was either partly infilled shortly after its construction, or following a period of cleaning out (since no natural silts were present), with waste deposits associated with the adjacent foundry. Within both sondages, these deposits included a basal fill (111) that contained abundant quantities of broken mould fragments, which was directly overlain with a distinctive charcoal-rich fill (114). Both deposits were clearly deposited within a short space of time, reflecting the dumping of broken-up mould material and subsequent clearing out of the foundry fire pit. Additional but more mixed dumping deposits were also observed within sondage B. The presence of foundry deposit 108, observed within the base of Trench 2, albeit less substantial, was probably the equivalent of leat fill 114 observed within Trench 3. Further evidence of the medieval leat within this trench had been removed by modern foundations and services. The absence of waste deposits within Trench 1 indicates that waste foundry material was not dumped beyond the leat which formed the southwestern boundary of the foundry site.

7.3 By the late 18th century the leat was rebuilt with stone sidewalls, on the same alignment, but with a narrower channel (*ibid.*, 33). The western edge of this later leat was exposed within the present excavation. It was constructed within the channel of the medieval leat and cut into the foundry waste deposits, with levelling and infilling material (107) banked up against the rougher outside edge of the leat wall as part of its construction. The leat remained open until the third quarter of the 19th century. It had gone out of use by 1876, and there is a reference for it to be 'dispensed with' back in 1850 (*ibid.*, 9, Fig. 4).

8. CONCLUSION

8.1 The archaeological investigation carried out at this site has established that, despite the extent of modern disturbance, important surviving deposits and features associated with the foundry and the adjacent medieval and later post-medieval leat survive. The leat itself marks the westernmost boundary of the tenement occupied in the 16th and 17th century by the Birdall family foundry. Within the foundry tenement, features encountered during previous investigations included quarry pits containing backfilled broken-up mould, casting pits, furnaces and other associated structures. No such features were observed during the course of this investigation, which included part of the adjacent tenement.

The recorded layer sequences observed are broadly consistent with those observed during the 1999-2000 investigations. This includes a sequence of river gravels overlain with alluvial clay into which an open channel leat was cut in the late 15th or early 16th century. Whilst the full extent of this leat could not be established, previous excavations indicate an initial width of 6m. The leat was subsequently infilled with large quantities of waste mould. The stone-lined leat built in the late 18th century represents the narrowing of the leat and was constructed within and respecting the course of the medieval channel. The earlier leat was evidently still partially 'open' since a large deposit of imported material was dumped into the channel as levelling

and packed up against the outer rough edge of the leat wall as part of its construction.

The finds assemblage recovered from this phase of excavation at Cowick Street is broadly very similar to the assemblage identified from the site during previous work (Blaylock 2000, and specialist finds reports within). The pottery assemblage supports previous conclusions about the date of foundry production from c. 1500 through to the early part of the 17th century when John Birdall II died. The mould fragments also support this date for production due to the style of cauldron being produced on the site being typical of the 16th-17th centuries. The finds assemblage also suggests a considerable amount of activity on the site during the 18th and 19th centuries. This is represented archaeologically by the construction of the stone-lined leat and its subsequent infilling. The recovery of three sherds of possible late medieval Exeter fabric 102 pottery is notable since only a relatively small amount of this pottery has been identified previously.

9. OASIS ENTRY AND ARCHIVE

- 9.1** An entry to the OASIS (Online AccesS to the Index of Archaeological investigationS) database has been completed, and has the identifying code 122769.
- 9.2** The paper and digital archive and finds are currently held at the offices of AC archaeology Ltd, in Unit 4 Halthaies Workshops, Bradninch, Nr Exeter, Devon, EX5 4LQ, but will ultimately be deposited under the relevant accession number at the RAMM, Exeter, at the earliest in 2013 when the current museum non-acceptance policy will be reviewed. A temporary reference number from the museum is 12/17.

10. ACKNOWLEDGEMENTS

- 10.1** The excavation was managed for AC archaeology by Tanya James and Andrew Passmore. The site work was carried out by Richard Sims, Paul Jones, Elizabeth Patkai and Kerry Kerr-Peterson, and the illustrations for this report were prepared by Elizabeth Patkai. The finds and mould fragments were analysed and recorded by Kerry Kerr-Peterson and Andrew Passmore. The advice of Andrew Pye, ECC Archaeology Officer, was gratefully received.

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Internet source

British Geological Survey online
www.bgs.ac.uk/opengeoscience

Appendix 1

Finds Quantifications

Appendix 1: Finds quantifications

Context	Description	Medieval Pottery		Post-medieval pottery		Glass		CBM		Fired Clay		Animal Bone		Utilised Stone		Iron		Cu Alloy	
		No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt
105	Buried soil			1	19														
107	Levelling layer trench 2	1	1	7	84			1	38	2	39	19	229	1	88				
109	Fill of Stone leat	1	81	21	1444														
110	Leat wall			1	82														
111	lower fill of an open channel leat	4	67													2	20	10	172
112	Infilling of channel leat			1	12	5	41	3	289			3	93						
114	Upper fill of open channel leat F115							3	1140										
Totals		6	149	31	1641	5	41	7	1467	2	39	22	322	1	88	2	20	10	172

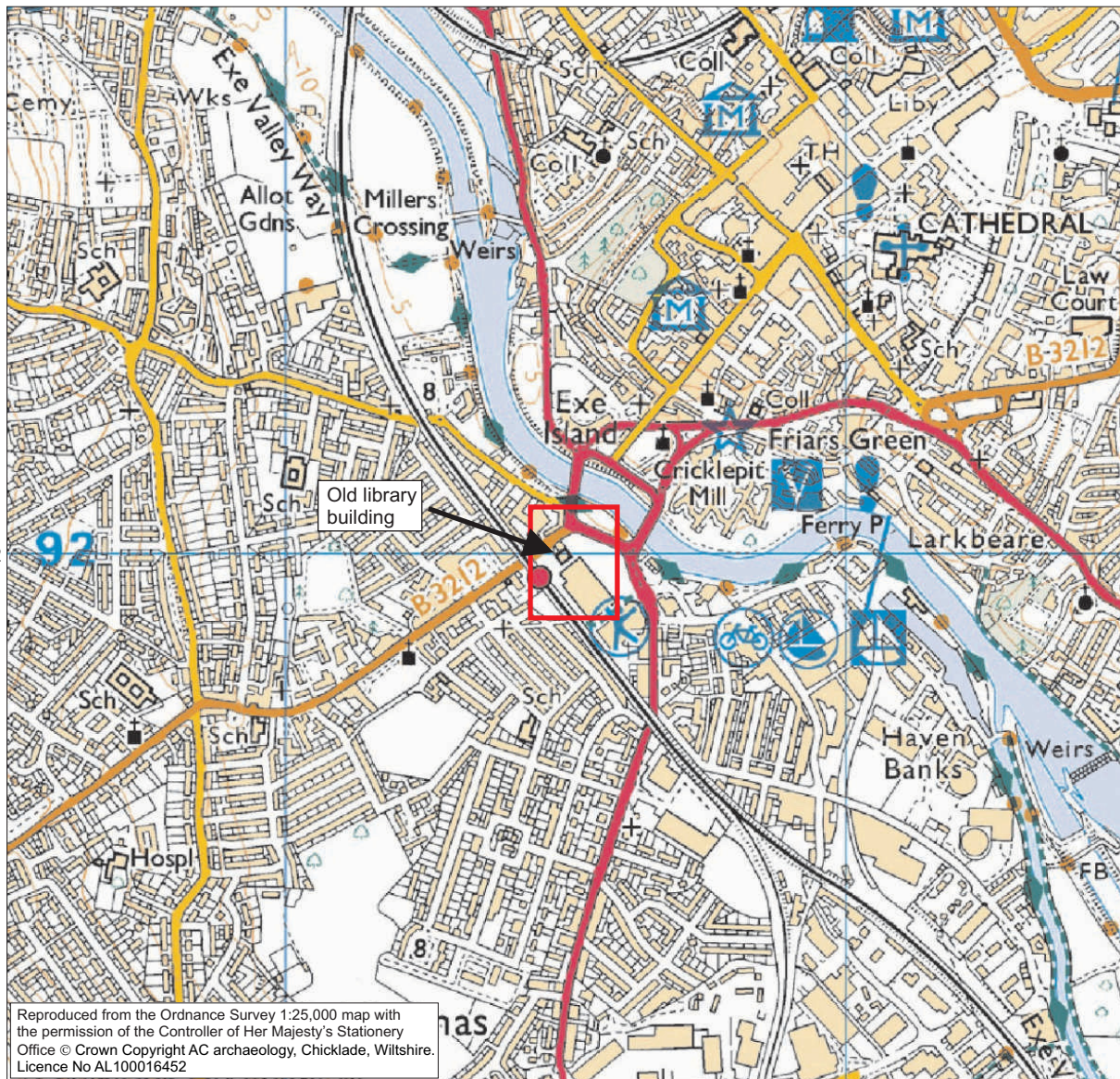
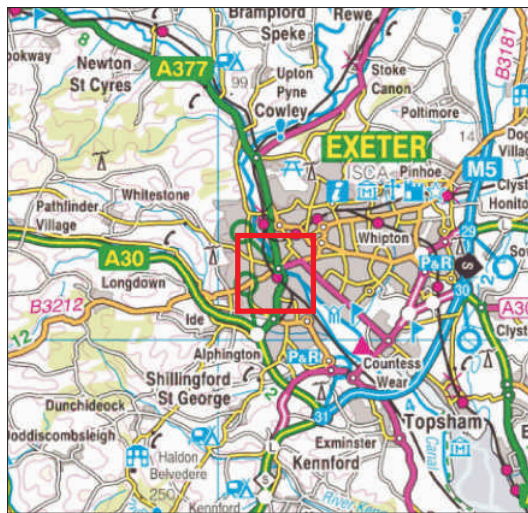
Table 1: Summary of the finds quantification by material type.

Context	Plain cope fragments		Diagnostic cope fragments		Plain core fragments		Diagnostic core fragments		Handles/ leg fragments		Sprue Cup		Undiagnostic fragments		Fired Clay		Flat open mould fragments	
	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt
107					3	38							5	151				
108	16	468			10	472							177	1896				
111	304	20982	93	13351	235	64549	3	126	28	1653	7	460	138	2669	133	4692	12	550
114	4	56	1	16	1	51												
116	4	261							1	45			9	136	3	264		
Total	328	21767	94	13367	249	65110	3	126	29	1698	13	680	329	4852	136	4956	12	550

Table 2: Summary of mould fragment quantified by type.

Context	Description	Cope corner fragments	Cope fragments with incised moulding wire lines	Cope fragments with scored marks	Rim fragments	Possible Chaplet impression fragments	Handle fragments	Cluster Rib leg fragments	Flat mould fragments	Sprue cup
		No	No	No	No	No	No	No	No	No
111	Lower fill of an open channel leat F115	57	29	2	8	1	1	28	13	1

Table 3: Summary of the types of diagnostic features of the foundry mould fragments



SX

91

92

0

500m



Scale 1:12500@A4

PROJECT

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TITLE

Fig 1. Location of site



AC archaeology



Area not previously investigated. Groundworks subject to archaeological monitoring and excavation



Previous archaeological investigations.



Excavation area.



Footprint of new building

0 25m
Scale 1:500@A4

PROJECT

Exe Bridges Retail Park, Cowick Street, Exeter

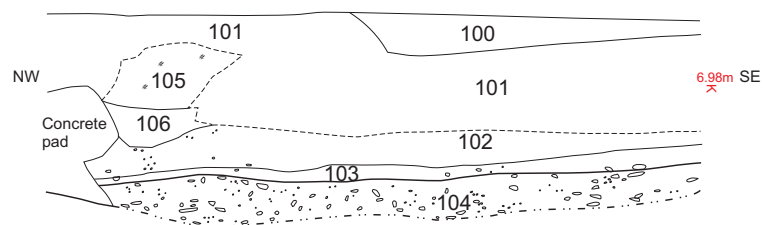
TITLE

Fig. 2: Plan of previous and current archaeological excavations

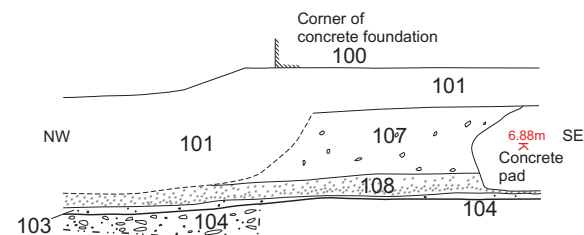


AC archaeology

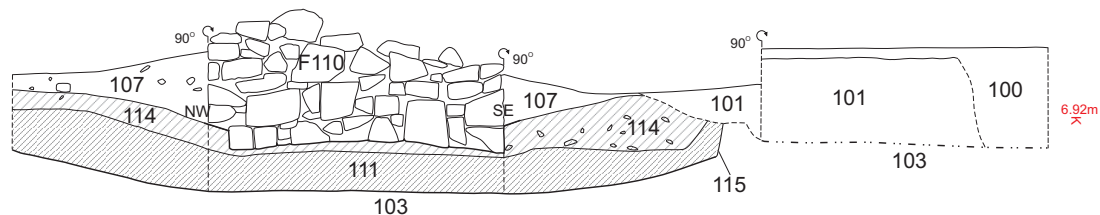
a) Representative section, Trench 1



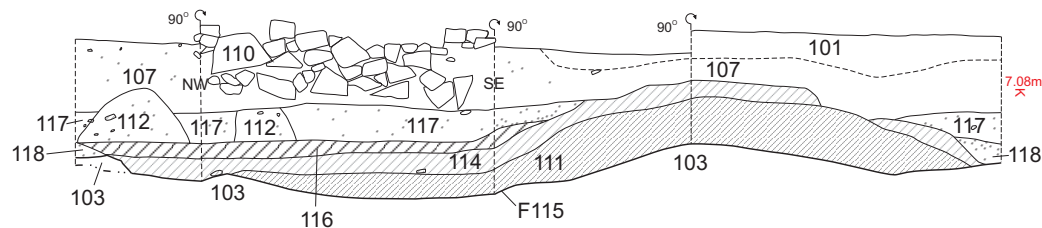
b) Representative section, Trench 2









c) Composite section of sondage A, Trench 3



d) Composite section of sondage B, Trench 3



Key

-  Stone/gravels
-  Charcoal
-  Clay mould layer 111
-  Clay mould fragments
-  Charcoal foundry layer 114
-  Charcoal foundry layer 116



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Fig. 4: Sections



Plate 1: General view of site, facing southwest



Plate 2: Trench 1 section, facing east. Scale 1m



Plate 3: Trench 2 section, facing north. Scale 1m



Plate 4: General view of Trench 3, facing northwest



Plate 5: Sondage A, Trench 3, facing north. Scale 1m



Plate 6: Medieval leat channel F115 within Sondage A, Trench 3, showing its eastern edge, facing southeast. Scale 1m



Plate 7: Sondage B, Trench 3, showing infilling with foundry deposits and later levelling above, facing southeast. Scale 1m



Plate 8: View of Trench 3 showing leat wall F110 and excavated sondages, facing southeast. Scale 2m



Plate 9: The sprue cup. Scale 5cm



Plate 10: The kiln furniture. Scale 5cm

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