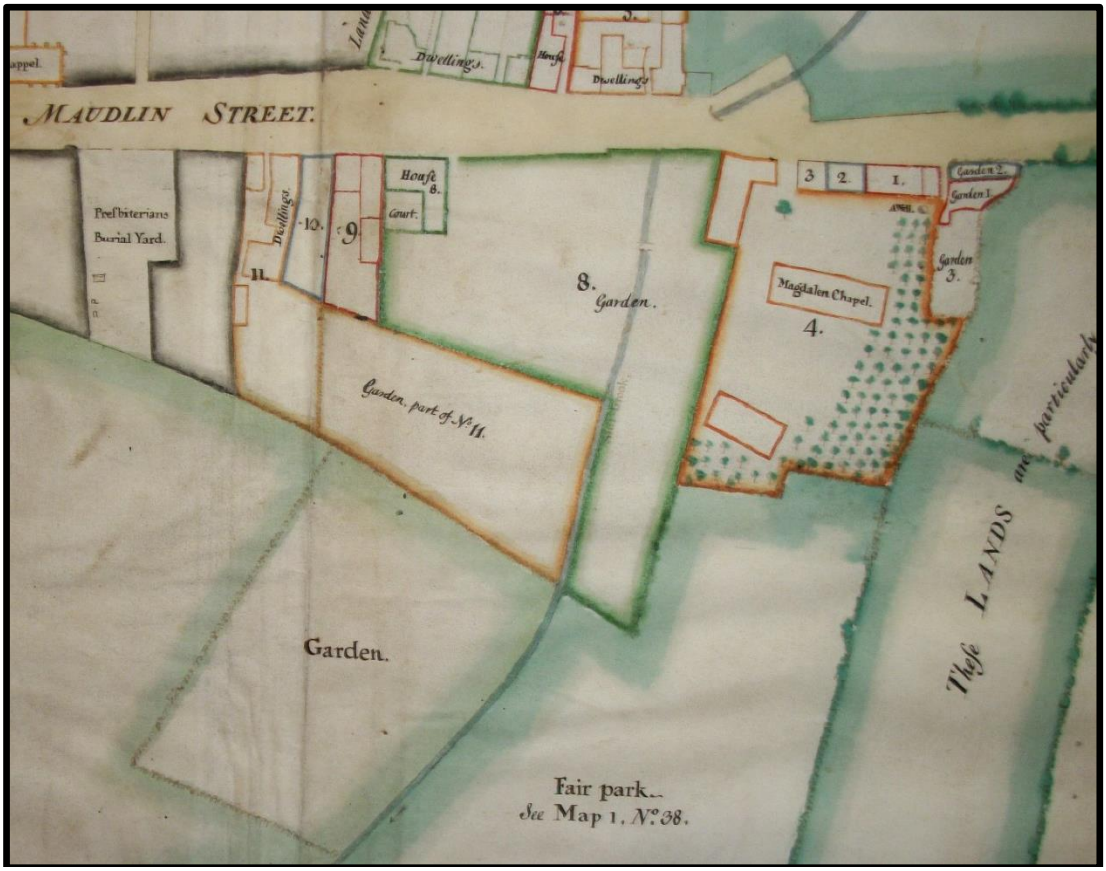
OAKFORD ARCHAEOLOGY

Archaeological monitoring and recording at Bull Meadow Park, St Leonard's, Exeter



on behalf of
the client

Report No. 23-04

Project No. 1884

February 2023

OAKFORD ARCHAEOLOGY

Archaeological Groundworks and Historic Buildings

44 Hazel Road,
Wonford
Exeter,
Devon
EX2 6HN
tel: 07834 591406
e-mail: info@oakfordarch.co.uk
web: www.oakfordarch.co.uk

AUTHOR

MFR Steinmetzer and H Wootton

WITH CONTRIBUTIONS BY

John Allan and Marcie Weeks

Report No 23-04

Revision: 01
Date: February 2023

Contents

Summary
1 Introduction 1
1.1 The site 1
1.2 Archaeological and historical background 1
2. Aims 3
3. Methodology 3
4. Results 4
5. Finds 5
5.1 Introduction 5
5.2 Pottery 5
5.3 Ceramic building material 7
5.4 Glass 7
5.5 Clay pipe 10
5.6 Worked bone 10
5.7 Miscellaneous 10
5.8 Faunal remains 11
6. Conclusions 11
7. Project Archive 12

Acknowledgements
Bibliography

Appendix 1: Method statement
Appendix 2: Context descriptions by trench
Appendix 3: Finds quantification
Appendix 4: Faunal remains

List of illustrations

Fig. 1 Location of site.
Fig. 2 Detail from the 1746 Exeter Chamber map book
Fig. 3 Detail from the 1841 Tithe map for the Parish of Holy Trinity, Exeter.
Fig. 4 Detail from the 1890 1st edition Ordnance Survey Map Devonshire Sheet LXXX.6..
Fig. 5 Detail from the 1905 2nd edition Ordnance Survey Map Devonshire Sheet LXXX.6..
Fig. 6 Detail from the 1932 Ordnance Survey Map Devonshire Sheet LXXX.6.
Fig. 7 Plan showing area subject to watching brief and location of observations.
Fig. 8 Plan and sections.

List of plates

Plate 1 General view of site. Looking southwest.
Plate 2 Close-up of stone rubble wall foundation (108) abutting brick wall revetment (107). Looking southwest.
Plate 3 General view of brick revetment wall (107). Looking southwest.
Plate 4 General view of the pipe trench looking towards the Magdalene Street Viaduct. Looking northeast.
Plate 5 Collection of 18th and 19th century glass bottles from the excavations.

Summary

Archaeological monitoring and recording was carried out by Oakford Archaeology between June and July 2022 in Bull Meadow Park, Exeter (SX 9246 9229). The work comprised the monitoring of works associated with repairs to the Shutebrook culvert.

The excavations revealed a sequence of buried colluvial subsoils and topsoil towards the base of the excavations. These were cut by the substantial boundary wall for No. 11 Maudlin Street shown on the 1746 Exeter Chamber Map Book. Following the construction of the brick culvert in 1838-9 the area to the east of the wall was extensively infilled and levelled to create Bull Meadow Park. The brick wall was probably replaced by a new stone rubble following the northward development of Temple Road in the late 19th century.

The finds recovered from the site largely consisted of post-medieval pottery, glass and clay tobacco pipe fragments, although three worked bone artefacts, and a small assemblage of medieval pottery were also recovered.

1. INTRODUCTION

A programme of archaeological monitoring and recording was carried out by Oakford Archaeology (OA) between June and July 2022 during repair works to the Shutebrook culvert, Bull Meadow Park, Exeter (SX 9246 9229). The work was required by Exeter City Council (ECC), as advised by Owen Cambridge, the ECC Principal Project Manager (PPMH).

1.1 **The site**

The site (Fig. 1) lies 400m to the east of the historic core of Exeter within Bull Meadow Park and the now culverted Shutebrook. It lies at a height of c.23-5m AOD on gently sloping ground between the Dissenter's graveyard to the west and Fairpark Road Almshouses to the east. The underlying geology of the area consists of the Alphington Breccia Formation, a sedimentary bedrock formed between 298.9 and 252.2 million years ago during the Permian period. [1]

1.2 **Archaeological and historical background**

The site lies in an area where extensive evidence for prehistoric activity has been previously identified, in particular underneath the site of the Magistrates Court and Southernhay east car park located to the north-west of the site. Investigations by Exeter Archaeology identified features, deposits and finds relating to Iron Age settlement and agricultural activity. Features recorded include ring ditches, postholes, enclosures and linear ditches associated with field systems in the area. The pottery assemblage recovered from the site consisted entirely of South-West Decorated Ware, also known as Glastonbury Ware, which was in use in Devon from the 3rd or possibly 4th century BC until at least the 1st century AD. The site provided the first indication of settlement in Exeter in the period preceding the arrival of the Romans. [2]

The proposed development lies on the southern edge of Magdalen Street, which probably lies on the approximate route of the Roman Road from London. However, no archaeological evidence for this has yet been identified. Several nearby excavations have produced evidence of activity outside the limits of the Roman legionary fortress and the later Roman city of *Isca Dumnoniorum*. Generally, although the above-mentioned sites produced medieval and later material, showing that development gradually extended along the street, evidence for extramural activity before the 13th century is limited to a number of rubbish and cess pits, several ditches and a possible structure. [3] In addition, Exeter grants and deeds from the same period usually refer only to 'pieces of land' in this area, with the term 'tenements' becoming more common by the end of the century. Over the 14th and 15th centuries, the properties along Magdalen Street are referred to as 'messuages', 'houses' and 'cottages'. [4] However, these were very often associated with gardens, and it seems unlikely that the area was heavily built up. The 1587 Mao of Exeter by John Hooker probably reflect a fairly accurate picture of the extent of development, with large tracts of land shown as open fields and meadows. This view is supported by a perambulation of Holy Trinity parish made in 1613 which refers to 'a little brooke w^ch^ parteth the Maudlin and other gardens',[5] which suggests that development stopped short of the stream by the outbreak of the Civil War. The original street from Exeter sloped down to the Shutebrook and remains visible today in the split-level pavement in front

[1] www.bgs.ac.uk.
[2] Stead, P.M. and Quinnell, H. 2004 Archaeological Excavations at the former Southernhay East Car Park.
[3] Features principally from excavations at the Acorn roundabout site 1988-89 and the Valiant Soldier 1973-74.
[4] Exeter Archaeology: archive of transcriptions of Exeter medieval deeds (various).
[5] DRO Glebe Terriers, Holy Trinity Parish.

of Nos. 63 and 64 Magdalen Street (now Magdalen House), while on the opposite side of the road a section of the old road remains in front of the Dissenter's and Jew's cemeteries.

The land immediately to the east of the site was the location of the Magdalen Leper Hospital, established in the early 12th century on the further bank of the Shutebrook valley. [6] The Shutebrook, variously known as the *Sutebrook* and *Shytebrook* derives its name from the corruption of the Old English 'shyte' because it was apparently used as a conduit for human sewage. The Shutebrook rose in Chute Street and flowed past the lower end of Paris Street, crossed Magdalen Street and flowed into the Exe at the bottom of Coleton Hill. Thus, while the extent of early medieval extramural settlement is uncertain, a remote location would have been chosen for such a hospital and there was presumably no great desire for development to spread far in this direction. [7] An evaluation in 2021 by Oakford Archaeology exposed the remains of possible medieval and post-medieval buildings and a leat, as well as parts of a contemporary graveyard, although the western boundary of the site was not identified. .

The area of low-lying ground known as Bull Meadow Park was named after the Bull Inn. First mentioned in 1487 it was situated on Magdalen Street. In the 16th-18th century, Bull Meadow, along with parts of Friernhay, was used as rack fields. In the period following the Civil War the expanding cloth trade ushered in a period of unprecedented prosperity for Exeter. This period saw the expansion of a new suburb up to the western edge of the Shutebrook valley. The site is shown for the first time on the 1746 Exeter Chamber Map Book (Fig. 2). Immediately to the west of the Shutebrook is the large garden of No. 11 Maudlin Street. To the north is a large roughly square parcel of land, described simply as a *Garden*, to which belongs a narrow strip on the eastern bank of the brook, with the former Maudlin Hospital to the east. To the south is a further garden on the west and the Fair park on the eastern bank of the Shutebrook. Following the demise of the cloth industry at the end of the 18th century Bull Meadow was leased out by the City Chamber.

Occasional attempts had been made to improve the road through the valley in the 16th-18th centuries but matters remained unresolved by the early 19th century. A letter in the Exeter and Plymouth Gazette described the drop into the valley as *"… it is more the character of a ravine, than a road, and a principal approach to the city should certainly be made safe. This, however, cannot be said to be the case; this sharp hill is the terror of all nervous and fat people journeying this way in gigs, phaetons and the like, while for carts, waggons, &c. of which they are now becoming numerous in conveying heavy building materials, &c. To and from this neighbourhood, it is really distressing for cattle to drag up over it…"*

However, due to the expanding building of middle-class housing in Exeter in the first half of the 19th century, most notably in Southernhay and St Leonards, plans for the construction of a viaduct were once more considered in 1834. A model of the proposed viaduct, partly paid for by Mr Hooper who was developing St Leonards and would greatly benefit from the works, was shown to the Turnpike Trust in August 1838. The following month it was resolved by the Exeter Improvement Commissioners 'that Magdalene Hills be improved', provided that the Turnpike Trustees paid £600 towards the cost and that the Trustees of the Magdalene Charity were agreeable to their land being acquired. [8]

[6] Hoskins 1960, 48.
[7] Dymond 1873, 1.
[8] DRO ECA Book 581, Improvement Commissioners Minutes for 30.8.1838.

The first stone of the viaduct was laid in late December 1838 by Samuel Kingdon. The work of filling the valley to a maximum height of six metres was completed during 1839, involving the excavation of 15,000 cubic yards of earth from fields in the vicinity. The contractor William Dawe was paid £1,400 for the works. [9] An arch was constructed at the eastern end to allow the Shutebrook to flow through.

The tithe survey of Holy Trinity took place in 1841 (Fig. 3) showed that the layout had remained much as before, although the rear garden of No. 11 Magdalen Road was now occupied by buildings. By the early 1880s the area had been earmarked by the Council as suitable for housing. However, following local opposition, a plan was submitted in September 1883 suggesting that the 3½ acres of land become a public park. The Public Health Act of 1875 required Councils to provide recreation grounds and a month later the Council agreed to the proposal. However, negotiations dragged on for a further six years. A new road was created in 1888, joining Holloway Street to Magdalen Road, and a further half an acre was lost from the original scheme. It took until February 1889 for the park to be designated as a Recreation and Pleasure Ground and 40 trees were planted at a cost of £7 in December 1890. [10]

The area was surveyed by the Ordnance Survey (Fig. 4) immediately prior to the conversion, showing existing boundaries and the encroaching housing around Temple Road to the south. By the early 20th century (Fig. 5) the southern part of the park has been fully laid out, with no formal footpaths shown in the northern half. However, Temple Road has been extended northward with terrace housing on the eastern side, while a new boundary wall seemingly defines the western side of the road from the park. The area remained remarkably unaltered throughout the inter-war period (Fig. 6), although the boundary wall between the southern and northern part of the park had been removed by this time, and the latter had been incorporated fully into Bull Meadow Park.

2. AIMS

The principal aims of the archaeological work were to preserve by record any archaeological features or deposits that were present on site and impacted upon by the development, and to report on the results of the work as appropriate.

3. METHODOLOGY

The work was undertaken in accordance with a Written Scheme of Investigation prepared by OA (2022), submitted to and approved by the ECC PPMH. This document is included as Appendix 1.

Machine excavation was undertaken under archaeological control using a 360º mechanical excavator fitted with toothless grading bucket. Topsoil and underlying deposits were removed to the level of either natural subsoil, or the top of archaeological deposits (whichever was higher). Areas of archaeological survival were then cleaned by hand, investigated and recorded.

[9] DRO ECA D2/1611, contract and specifications of 25.1.1839; the accompanying plans have not been located.
[10] http://www.exetermemories.co.uk.

The standard OA recording system was employed; stratigraphic information was recorded on *pro-forma* context record sheets and individual trench recording forms, plans and sections for each trench were drawn at a scale of 1:10, 1:20 or 1:50 as appropriate and a detailed black and white print and colour (digital) photographic record was made. Registers were maintained for photographs, drawings and context sheets on *pro forma* sheets.

4. RESULTS

Relevant detailed plans and sections are included as Figs. 7-8 and context descriptions for the works are set out in Appendix 2. The excavations were approximately 57m long, 3m wide and 5m deep. Due to the depth of the excavations and the unstable nature of the ground, temporary shuttering was used along the entire length, restricting observations and the level of recording.

A new manhole was built at the northern end of Temple Street, connecting the existing with the new section of the culvert. The excavations at this point were approximately 4m wide and exposed a mid to dark reddish brown silty clay (119) at a depth of 3.26m below current ground level. Interpreted as a colluvial subsoil, this was in turn overlain by a 0.23m thick mid reddish brown silty clay (115). Slightly lighter than the underlying deposit this is nonetheless interpreted as an almost identical colluvial subsoil. This was in turn sealed underneath a 0.24m thick mid reddish brown clayey loam (123) with rare, degraded breccia fragments. A former subsoil this was in turn overlain by a 0.29m thick mid to dark reddish brown clayey silt (122) topsoil. This was cut by the roughly NE-SW aligned foundation trench (129) for a substantial brick wall (107). Sloping slightly towards the east the wall was bonded with a light greyish white lime mortar. The remains of a former boundary and revetment wall defining the back garden of No. 11 Maudlin Street this is likely to be early-mid 18th century in date.

The former ground surface to the east of the wall was cut by a large, approximately NE-SW aligned construction cut (101) for the Shutebrook brick culvert, built in 1838-9 prior to the construction of the new road. This was deliberately backfilled with a mid to dark reddish brown silty clay (102) with frequent cbm fragments, occasional stone rubble and rare inclusions of gravel and roofing slate fragments. These deposits were subsequently sealed underneath a 0.17m thick mid yellowish brown sandy silt and gravel (124), which was in turn underneath a 0.34m thick Mid brown clayey silt. Both deposits are interpreted as 19th century deposits of made ground, sealed underneath a 1.9m thick relatively homogeneous dark greyish brown silty clay (109) with frequent cbm and roofing slate fragments. Although unstratified, the excavations recovered 521 sherds of pottery, glass fragment, clay tobacco pipe, floor- and roof tile fragments and miscellaneous metalwork from these historic made ground deposits. Although they span the period between the late Middle Ages and the early modern period all the finds were residual within 19th or 20th century deposits.

This deposit was cut along the western edge of the trench by a NE-SW aligned linear foundation trench (130), approximately 0.6m wide and 1.23m deep, for a stone wall (108). This consisted of volcanic trap rubble and light greyish green limestone bonded with mid reddish brown clayey silt. Interpreted as a former boundary wall between Bull Meadow Park to the west and Temple Road to the east, this had been demolished above ground sometime in the 20th century. Sealed underneath a mid reddish brown silty clay (100) with rare roofing

slate fragments and charcoal flecks, this probable levelling deposit was located underneath a 0.1m thick dark brown black clayey silt (128) topsoil. To the east of the former wall the road was cut into the underlying made ground to a depth of c.0.45m with a 0.37m thick layer of mid to dark black brown sandy silt, gravel and frequent stone rubble (125). This sub-base was overlain by a 0.08m thick layer of tarmac (127).

Towards the centre of the excavations the work exposed a mid to dark reddish brown silty clay (119) colluvial subsoil at a depth of 3.26m below current ground level. This was in turn sealed underneath a further, 0.58m thick layer of mid reddish brown silty clay (115) deposit of colluvial subsoil. This was cut by the NE-SW aligned construction cut (101) for the Shutebrook brick culvert and deliberately backfilled with a mid to dark reddish brown silty clay (102) with frequent cbm fragments, occasional stone rubble and rare inclusions of gravel and roofing slate fragments. These deposits were sealed underneath a 0.54m thick dark brown black sandy silt (116), which was in turn underneath a 0.26m thick mid reddish brown silty clay (117) with frequent stone rubble and cbm fragments, and occasional mid yellowish grey lime mortar. The result of deliberate infilling of redeposited natural subsoil and demolition deposits, these were underneath a 0.97m thick mid greyish brown sandy silt (118), which was in turn sealed underneath a 0.07m thick black silty sand (114) with frequent inclusions of charcoal flecks and soot. This was overlain by a 0.38m thick mid reddish brown silty clay (112) with frequent stone rubble and cbm fragments, and rare inclusions of mid yellowish grey lime mortar, which was in turn sealed underneath a 0.08m thick dark brown black clayey loam (111). This was underneath a 0.11m thick layer of mid reddish brown silty clay (106) with rare inclusions of small mudstone fragments, and both deposits were in turn sealed underneath a 0.1m thick dark brown black loam (110). This deposit of historic made ground was in turn underneath a 0.24m thick dark reddish brown silty clay (104) and a subsequent 0.74m thick dark greyish brown silty clay (109) with frequent cbm and roofing slate fragments. This was overlain by a 0.3m thick mid reddish brown silty clay (100) with rare roofing slate fragments and charcoal flecks, which was in turn located underneath a 0.1m thick dark brown black clayey silt (128) topsoil.

5. FINDS

By John Allan and Marcie Weeks

5.1 **Introduction**

This is an interesting assemblage from a relatively unique setting on the edge of the historic city. The assemblage is composed of late medieval and post-medieval finds, with some interesting imports. All of the finds come from unsealed contexts related to the construction of the Shutebrook culvert and the creation of the pleasure grounds in the mid-late 19th century. The finds are briefly described below and itemised in Appendix 3.

5.2 **Pottery**

The pottery assemblage comprises 335 sherds and ranges in date from the Saxo-Norman to early modern period. A number of diagnostic vessel forms are recognisable. Where applicable, fabrics are given their unique code as designated by Allan (1984), Hume (1969) and Oswald (1975).

Coarsewares

The coarseware sherds are mostly small body sherds and display few diagnostic features. The earliest is a single rim sherd with a sand tempered fabric from a jug or tripod pipkin, dating the 12th -13th century. This was recovered from the historic made ground overlying the culvert and is possibly from Dorset. In addition, a single 16th-17th century North Devon gravel tempered body sherd and one 16th-17th century Totnes-type sherd were also recovered.

The majority of the post-medieval coarseware assemblage is dominated by South Somerset fabrics. The recognisable local fabrics include 45 sherds of South Somerset red ware (or derivatives of) including 36 sherds with brown or green glaze and eight sherds with brown and yellow sgraffito and decorated slipwares.

Stonewares

One sherd of Frechen stoneware with mottled glaze dating to the 15th-16th century, one 16th-17th century Cologne or Frechen partial stoneware bottle and three sherds of salt-glazed 16th-18th century Westerwald were recovered from the excavations. By the end of the 1490s Rhenish stonewares were imported to Exeter in large quantities from Raeren and Frechen, and at a later date Westerwald material, representing nearly half of the cities imports throughout this period (Allan 1984). Stonewares were gradually replaced in the early 17th century with the arrival of tin-glazed Delftware and imported porcelain. [11]

In addition, 40 sherds of 18th-19th century English stoneware were also recovered, including one sherd from a stoneware ginger beer bottle with brown salt glaze. It has a black stamp "ERSWELL & G" with man and animal motif. The bottle would have been a Kerswell and Grafton 'registered Exeter' bottle, and it is possible that it was produced before the company started to produce aerated water in Codd bottles in the late 19th century. Finally, a single sherd of a cider flagon with the stamp "ISROL" (Bristol) and a stylised X symbol was also found. This is possibly the manufacturing mark of Price, a pottery company that ran from 1809 as 'Price & Read' to 1961 as 'Price, Powell & Company', with several other name changes in the intervening 155 years. This bottle was probably produced while the company was operating under a variant of Price & Son(s) and is likely to date to the early 19th-20th century.[12]

Tin-glazed wares

Excavations across the South West since the 1970s indicate that by the early 17th century porcelain and other fine tin-glazed wares become increasingly common with the gentry, professional gentlemen, the wealthier tradesmen and members of the growing bourgeoisie. [13] Throughout the late 17th and early 18th century these items are increasingly listed in probate and other inventories by both upper society and those of the growing middle classes, being not only collected for display but also increasingly used for dining and the taking of tea. [14] Originally regarded as high-quality decorative items, the three sherds of 17th-18th century Chinese porcelain correspond with the adoption of tea-drinking and increasing imports of porcelain. [15] In addition, a further nine sherds of 18th-late 19th century English porcelain were also recovered. Finally, one English porcelain bulldog figurine with orange enamel and which would have been sat on a green ash tray or pipe stand was recovered by the works. This style of dish was common in the febrile nationalistic atmosphere of the late 19th -20th century.

[11] Allan, 1984, 115.
[12] Jackson, 2016
[13] Allan 1984, 105; Watson *et al.* 2010, 182.
[14] Watson *et al.* 2010, 182.
[15] Allan 1984, 108.

By the beginning of the 16th century the Dutch produced tiles and pottery using a new manufacturing technique, Delftware, the term describing earthenware with a lead glaze to which tin oxide has been added. The first Delftware factory in England was established in Norwich in 1567 although production soon moved to London. The earliest Dutch potters settled in Aldgate and Southwark, but by the mid-1600s a flourishing industry developed in Southwark and Lambeth. This industry thrived throughout the 17th-18th century, although it began to decline by *c.*1760, when it was overtaken by cream-ware, a cream-coloured earthenware produced in Staffordshire and across England. [16] A total of two sherds of English tin-glazed pottery were recovered from the excavations. These had hand-painted blue decoration and were probably both made in London or Bristol.

English wares
By far the largest proportion of pottery was composed of industrial wares, represented by 207 sherds of late 18th-19th century Staffordshire white earthenware, including shell edge ware, mocha ware, blue-and-white transfer print, hand painted pearl ware and cream ware.

5.3 **Ceramic building material**

A total of 50 pieces of ceramic building material, mainly roof tile, has been recovered to date from the excavations. The vast majority of this material has been found in stratified contexts and dominating the assemblage are roof tile, accounting for 84 per cent of the total. The 19th-20th century wall tiles included a single tile with transfer print decoration, four plain glazed tile and two sherds of hand finished decorated tile. The latter used a transfer printed design finished with detailed hand painting. It was popular in the 19th century as it decreased production costs associated with completely hand painted tiles.

Finally, the roof tile consist of 42 sherds of 19th-20th century redware tile, including 12 sherds of curved roof tile, 13 sherds of black glazed tile and 15 sherds of miscellaneous or undiagnostic tile.

5.4 **Glass**

Most of the glass from the site is fragmentary, coming from the historic made ground of the mid-late 19th century. The glass has been dated on stylistic grounds, although with the fragmentary nature of the assemblage in mind identification and interpretation may be tenuous.

English Green Bottle Glass
A total of 33 sherds of English Green Bottle Glass were recovered from the excavations, including seven complete or nearly complete bottles.

These included three possible champagne bottles, including two early 19th century bottles with kick-up base and applied neck ring, c.250mm tall, and one 300mm tall bottle with kick-up base and applied neck ring. The latter is similar in profile to Hume's 1800 bottle. [17] The increasing popularity of champagne in the late 17th and 18th century relied on the production of new types of bottles, in particular from the late 18th century onwards with the discovery of coal-fired glassmaking, that were able to withstand the pressure of the carbon dioxide gas better during the secondary fermentation.

[16] Allan, 1984.
[17] Hume 1969, 68.

A total of seven wine bottle fragments were recovered. In addition to five bases and a single neck fragment, two complete bottles were also found. These included one bottle with a kick-up base and a slight tapering of the profile of the bottle body, suggesting it is either Hume's 1788 or 1798 bottle,[18] and one wine bottle with an applied lip, turn moulded, slightly raised flattened base, suggesting a date *c.*1840-1870 or 1865-90).

A small number of Beer, ale and cider bottle fragments and one complete bottle were found. The latter was late 19th-mid-20th century in date and was embossed with the phrase "THE CITY BREWERY EXETER" around the bottom of the body and "F C C" on base. The bottle had an internal screw top lid for a vulcanite stopper. The stopper was also found and was embossed with "EXETER THE CITY BREWERY". In addition, one bottle base with the underside embossing of "P R & B" with a central motif of a circle with a line through it was found. This makers mark is indicative of Powell & Ricketts of Bristol, who produced mostly beer bottles.[19] The company, initially established by the Rickett Family in 1789, partnering with Powell in 1857 and closing in 1923.[20] Finally, two almost flat bottle bases contained a "J" stamp and applied lip. These were likely used for beer, cider or a similar beverage, and date to the early 20th century.

Aqua glass

A total of 21 sherds of aqua glass, including eight complete or nearly complete examples, were recovered by the work. This type of glass, dating from the 19th to the early 20th century, had a variety of uses, including for beverages, pharmaceutical and other domestic products.

As with champagne, other carbonated drinks became increasingly popular from the late 17th century onwards. However, a persistent problem was the inability to effectively seal bottles or prevent them from exploding if the pressure was too great. The problem was finally resolved in 1872 when Hiram Codd designed and patented a bottle specifically for carbonated drinks. Known as Codd bottles these were designed and manufactures with thick glass to withstand internal pressure, a glass marble and a rubber washer in the neck. [21] The excavations produced four Codd bottle sherds, including two almost complete examples. Both of these belong to 'J. Kerswell, Exeter' bottles. They have identical, detailed, front embossed designs. The wording "J. KERSWELL" "REGISTERED TRADE MARK" "EXETER" surrounded by an embossed shield motif with the central figure of a man with his hand raised and an animal. This motif is a representation of The Deer Stalker statue by Edward Bowring Stephens (1815-82) located in Northernhay and used by Kerswell on all their bottles. Around the figure, the shield has the embossing "SAINT THOMAS AERATED WATER WORKS EXETER". Both also have the embossed initials "J.K" on the underside of the bases. Kerswell operated their waterworks from Okehampton Street in St Thomas, merging in the late 19th century to become Kerswell and Grafton. [22] In addition, one of the bottles has the embossing "REDFEARN BROS BOTTLE MAKERS BARNSLEY" on the back and which operated in Barnsley between 1862-1967. [23] The other bottle was embossed with "KILNER BROS LTD MAKERS LONDON" on the back. The Kilner Brother's glass company, originally known as John Kilner & Co. produced bottles from 1842 until the late

[18] Hume 1969, p.68
[19] Lockhart et al. 2019a, 237
[20] Lockhart et al. 2019a, 271.
[21] Talbot, 1974, 40, 46-47.
[22] Devon County Council, SLR Consulting & AC Archaeology, 2021
[23] Lockhart et al. (B) 2019, p.218

1930s. [24] Finally, a small fragment from an aqua bottle base was embossed with "J.K" on the base and the start of the phrase "KILNER BROTHERS MAKERS DEWSBURY" on the back of the body, while another fragment was embossed with "RUSTONS & Co" and "EXETER" vertically on body, and "KILNER BROTHERS MAKERS DEWSBURY". These are variants of the Kilner Brother's aerated water Codd bottle, although the exact date of these is hard to ascertain. The company went by "Kilner Bros Dewsbury and London", as bottles were made in Dewsbury and sold in London, and "Kilner Brothers Glass Co, Thornhill Lee's" or "Kilner Bros / Maker / Thornhill Lees", which was noted to be "near Dewsbury" in advertisements, [25] suggesting the bottle was produced at the Thornhill Lee site between 1873-1922.

Other beverage bottles included a complete square-based bottle with the embossing "PATERSON'S", "GLASGOW", "ESS" "CAMP COFFEE" "& CHICORY". Coffee and chicory was a popular 19th -20th century beverage and production by Paterson's started in 1876, ending in 1974 when the company merged to form Paterson Jenks plc. The bottle also has the original wooden stopper in two pieces. In addition, a large, round based aqua bottle with the embossing "STARKEY KNIGHT & FORD LTD" and "TIVERTON" on the body and "T B M" on the base was also recovered. It had a screw neck lid and would have been used for ale or stout. The company went by this name between c.1895-1906 and were based in Tiverton. [26] Finally, a sherd from a bottle for mineral water was also found. The bottle has some embossing present including "XETE" (EXETER) and "mar" (Trade mark), as well as a central badge with a signature formed of a "CH". This bottle is a C. Ham, Exeter bottle. It broadly dates to the 19th century and other complete known examples of these bottles were produced by Powell and Ricketts, Bristol.

A total of five pharmaceutical aqua bottles were found, including a complete circle-based bottle with the embossing "ASHTON & PARSONS" around the neck and crown motif on the underside of the base. This was a teething powder bottle dating to c.1860s. [27] A further example includes a bottle with a rectangular base and the cork still present in the neck of the bottle. This is embossed on the front panel with "MILTON & SON EXETER" and "TABLE SPOONS", with table spoon measurement marker lines vertically along the bottle body. This was a medicine bottle with dosage markers, a common bottle type in the 19th century. A another complete 19th century bottle has an irregular octagonal base and an embossed "B", the bottle perhaps relating to pharmaceutical or cosmetic use. Finally, one complete late 19th or early 20th century bottle with an oval base and a series of vertical embossed lines on the front face of the bottle, and the phrase "POISONOUS NOT TO BE TAKEN" embossed onto the front of the bottle was recovered.

The remains of a single mid-late 19th century complete aqua glass bottle, square based with an applied double collar and slightly kick-up base and for condiment storage such as brown sauce or similar, was also recovered.

Clear glass

[24] Lockhart et al. 2016, p.153,169
[25] Lockhart et al. 2016, p. 161,170
[26] Boak and Bailey, 2013, pp.2-4
[27] Bayes, 2019

A total of nine clear glass fragments were recovered from the excavations, including six complete or partially complete glass bottles. One partially complete clear glass bottle for mineral water was embossed with "KERSWELL EXETER" vertically down the bottle body. The bottle was likely produced as the sill variety of the J. Kerswell, Exeter, aqua glass Codd-bottles and dates to the mid-late 19th century. In addition, three complete 19th century pharmaceutical or cosmetic bottles were also found, including one bottle with a rectangular base and double collar, and one with a circular base, embossed with "TEA SPOONS" and measurement marker lines vertically along the bottle body. The latter is a medicine bottle with dosage markers. The third bottle had a rectangular base, double collar and the stamp "UGB" on the base's underside, suggesting it was manufactured by the United Glass Bottle Ltd. in the 19th- early 20th century. Finally, one complete glass jar, perhaps for condiments or pickled food, and one complete clear glass ink bottle were also recovered.

Coloured glass
Seven fragments of coloured glass, including two sherds of late 19th-early 20th century white or "milk" glass, three sherds of mid-19th-early 20th century brown glass, including one sherd with the embossing "ETER" (EXETER) and "LTD", possibly from an Exeter Brewery beer or cider bottle, and a single sherd of 19th-early 20th century dark blue glass.

5.5 **Clay pipe**

35 clay pipe fragments were found during the excavation, including a stem fragment with a partial bowl base. The stem was very thick and irregular in nature and had a step-down thinning which could possibly indicate the pipe was a short stem "nose warmer" style pipe, or the step down could have accommodated an additional handle such as a horn handle. The pipe had a crude "J" stamp on the underside of the stem near where the foot would start to project. Some ribbed decoration was also visible at the base of the bowl. The dating of this pipe is difficult as the stamp location and thickness of the pipe would suggest a late 17th – 18th century date. However, the letter "J" was not used as a maker's mark, manufacturers instead using "I" until the 19th century. Another fragment of clay pipe bowl had a ribbed surface and leaf moulding on the seams. The spur of the pipe had the initials R and C, possibly R(ichard) Chapple, a pipe maker from Newton Abbott (1866-1873). [28] Finally, a total of 30 pipe stems, dating to the 17th-19th century, were also recovered.

5.6 **Worked bone**

Three worked bone items were recovered from the excavations, including one 18th-19th century bone knife handle, with the remains of an iron tang broken off inside. The working suggests there was originally a metal cap on the tapered end and around the base of the metal blade. In addition, two 19th century toothbrush handles of worked bone were also found, one of which was complete with some bristles still present in the head and the phrase "TOM TIT" stamped into the handle. The first mass produced toothbrushes in the UK were manufactured in the late 18th century, and typically used animal bone for the handle until the 20th century when synthetic materials started to be used.

5.7 **Miscellaneous**

A total of 31 miscellaneous metal items were recovered from the work, including two damaged enamel cups or bowls. Until the 1930s, all enamel applications to metal required two coats, an undercoat and the finish coat. The under coat was always blue in this process. The metal sheets and cup all have evidence of blue enamel suggesting they date to pre-1930.

[28] Oswald, 1975, p.166

In addition, 20 iron objects were found including one complete horseshoe, one possible door pintle, 11 nails, two spikes with bent rectangular head projections, one flat ring, one iron strip which was slightly twisted, flat and rectangular in cross section, one object, possibly half of a flat-based, slightly domed circular disc with central hole, or semi-circular flat based object with domed top and central semi-circular indent, one slightly twisted metal narrow hollow pipe-like object and finally one semi strip-like, (broadly rectangular in cross section) object.

5.8 **Faunal Remains**

By Hol Wootton

A small assembly of degraded animal bone fragments were recovered. All bar three fragments could be identified to element with a further nine fragments not identifiable to species. Species present included cow, sheep, goose and chicken with the majority of the elements present representing meat-bearing cuts. Many of the fragments exhibited signs of butchery, including three instances of sawing, suggestive of later period consumption. Also present amongst the assembly were gnaw-marks from both dog and rat which is highly suggestive of an open domestic midden.

None of the findings are unexpected given the context, except that so little material was recovered from the excavations. Given the large quantity of material required to infill the former Shutebrook valley at this point it is clear that no new large scale domestic waste found their way into the deposits, rather the assemblage is on balance likely to have been residual within the imported materials.

6. CONCLUSIONS

The excavations have provided a limited exposure of the original ground level of this part of the Shutebrook valley prior to the encroachment of 18th century back gardens, the culverting of the former stream in the late 1830s and the creation of Bull Meadow Park. A full understanding of the exact date, profile, extent, and inter-relationship of these deposits is hampered by a number of factors, notably the depth of the excavations and a lack of secure dating evidence. No features, deposits or artefacts associated with nearby Romano-British or medieval activity was identified within the site.

The work has nonetheless exposed a sequence of archaeological deposits and artefacts demonstrating activity on the site from the late post-medieval period. Extensive deposits of colluvial subsoil at the base of the sequence suggest that the valley had formerly a more pronounced and steeper profile, while an overlying sequence of subsoil and topsoil was identified in several places. This sequence was cut by a sloped brick wall defining the eastern end of the former rear garden plot and is consistent with the boundary wall depicted on the 1746 Chamber Map Book. The site remained largely undeveloped until the 1830s when the Shutebrook was culverted immediately prior to the construction of the Magdalene Street viaduct. The ground level to the south of the new road was deliberately raised with imported material, both redeposited soils from the neighbouring fields and demolition deposits from the city and its suburbs. This contained large quantities of residual largely post-medieval artefacts.

The identification of these archaeological deposits and artefacts shows that even small-scale modern observations in areas of high disturbance are useful in furthering knowledge about the archaeological resource.

7. PROJECT ARCHIVE

Due to the limited nature of the findings a project archive will not be produced. A summary of the investigations has been submitted to the on-line archaeological database OASIS (Online AccesS to the Index of archaeological InterventionS - oakforda1-420802).

ACKNOWLEDGMENTS

This project was commissioned by James West and Tom Claydon (both R&M Utilities) on behalf of the client and managed for Oakford Archaeology by Marc Steinmetzer. The fieldwork was carried out by Jonathan Martin and Hol Wootton; the illustrations for the report were prepared by Marc Steinmetzer and Hol Wootton. Thanks are hereby recorded to Owen Cambridge (PPMH) who provided advice and support throughout the project and John Allan and Marcie Weeks (Oakford Archaeology) for the finds analysis.

BIBLIOGRAPHY

Unpublished sources

Map 5 from the Exeter Chamber Map Book: Lands from St Mary Magdalen's Chapel to South-gate, including a Tenement on Holloway, in the Parish of Holy Trinity surveyed by John Richards (1746). Portion 4 on the map is described as "The Chapel, Chapel-yard and Hospital of St Mary Magdalen." (1746) SWHT ECA Book 58

Plan of the city and suburbs of Exeter surveyed by Charles Tozer [St Mary Magdelene's Chapel marked with an S] (1792) SWHT OM B/EXE/1793/TOZ

Ordnance Survey County Series 1st Edition Sheet LXXX.6. (1890)

Ordnance Survey County Series Sheet LXXX.6. (1932)

Devon County Council, SLR Consulting & AC Archaeology. 2021. *Archaeological Excavations of the A382/A383 Connection Road, Bi-Weekly Journal of the Excavations and Post-Excavation Updates.*

Steinmetzer, MFR 2022. *Archaeological monitoring and recording at Bull Meadow Park, Exeter.* Written Scheme of Investigation.

Published sources

Allan, J.P. 1984. Medieval and post medieval finds from Exeter 1971-1980, *Exeter Archaeological Reports 3,* Exeter City Council and the University of Exeter.

Attard, R. and Azzopardi, R. 2014. *Early German stoneware*.

Bayes, N. 2019 *Ashton & Parsons: Trusted for generations*.

Boak, J. and Bailey, R. 2013. Starkey, Knight and Ford, *The Brewery History Society Journal*, 154, pp.2-4

Hoskins, W.G. 1960 *Two thousand years in Exeter*.
Hume, I.N. 1969. *A guide to artifacts of colonial America*, University of Pennsylvania Press: Philadelphia
Jackson, R. 2016. *Bristol potters and potteries*.
Lockhart, B. Lindsey, B. Schriever, B. and Serr, C. 2016. *The Kilner Glass Companies*,
Lockhart, B. Lindsey, B. Schriever, B. and Serr, C. 2019a. *Redfearn Bros.*
Lockhart, B. Lindsey, B. Schriever, B. and Serr, C. 2019b. *The Ricketts Family Glass Firms*.
Stoyle, M.J. 1994 'Whole Streets Converted to Ashes: Property Destruction in Exeter during the English Civil War', *Southern History* **16**, 67–84.
Stoyle, M.J. 1995 *Exeter in the Civil War*, Devon Archaeology No. **6**.
Oswald, A. 1975. Clay Pipes for the Archaeologist, *British Archaeological Reports*, British Series 14, Oxford, pp.116-129.
Talbot, O. 1974. The Evolution of Glass Bottles for Carbonated Drinks, *Post-Medieval Archaeology*, 8:1, 29-62.
Watson, S., Pearce, J., Davis, A., Egan, J. and Pipe, A. 2021 *Taverns and other entertainments in the City of London? Seventeenth- and 18th-century finds from excavations at Paternoster Square*. Post-medieval Archaeology 44/1, pp.172–208.

Fig. 1 Location of site.

Fig. 2 Detail from the 1746 Exeter Chamber map book.

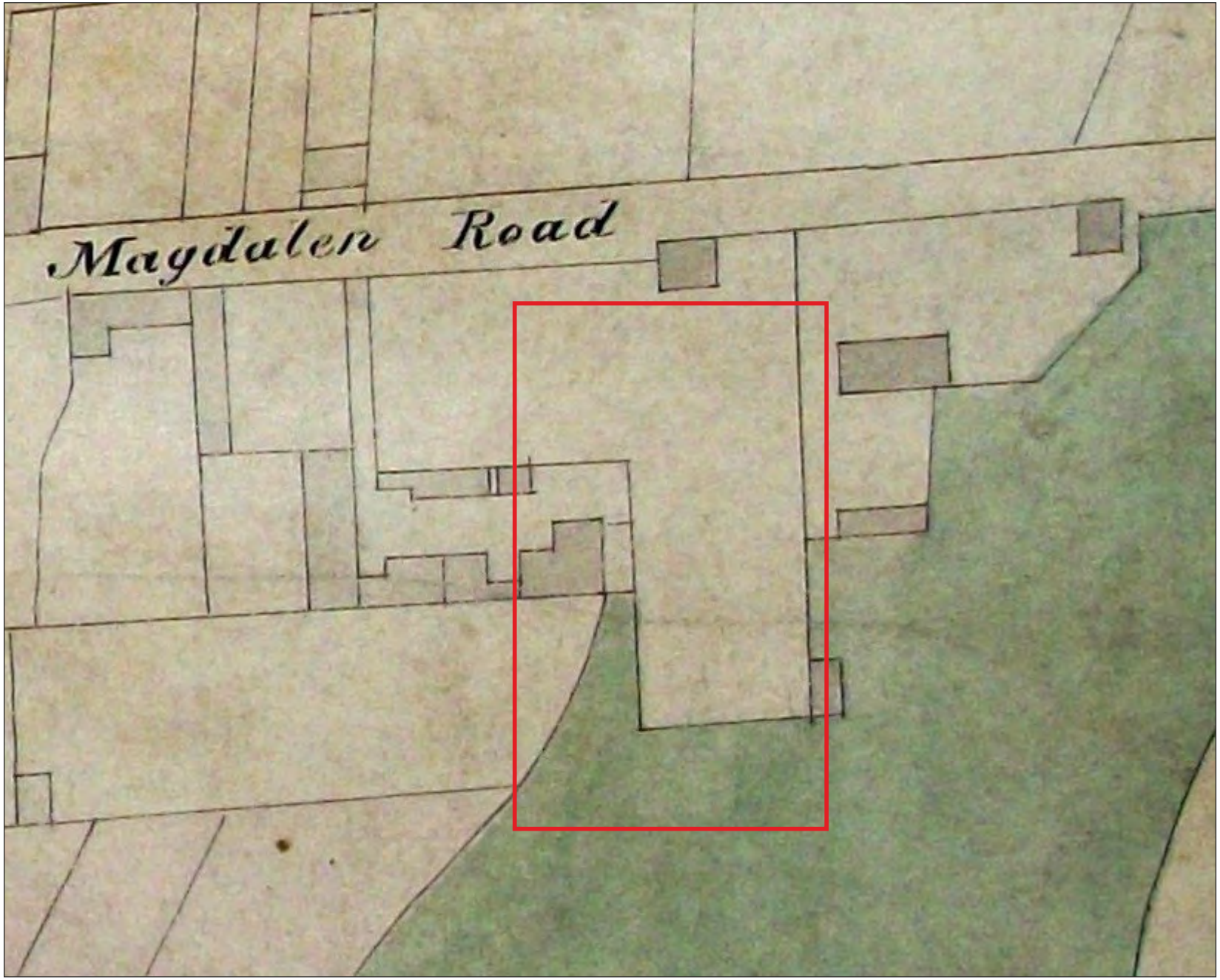


Fig. 3 Detail from the 1841 Tithe map for the Parish of Holy Trinity, Exeter.

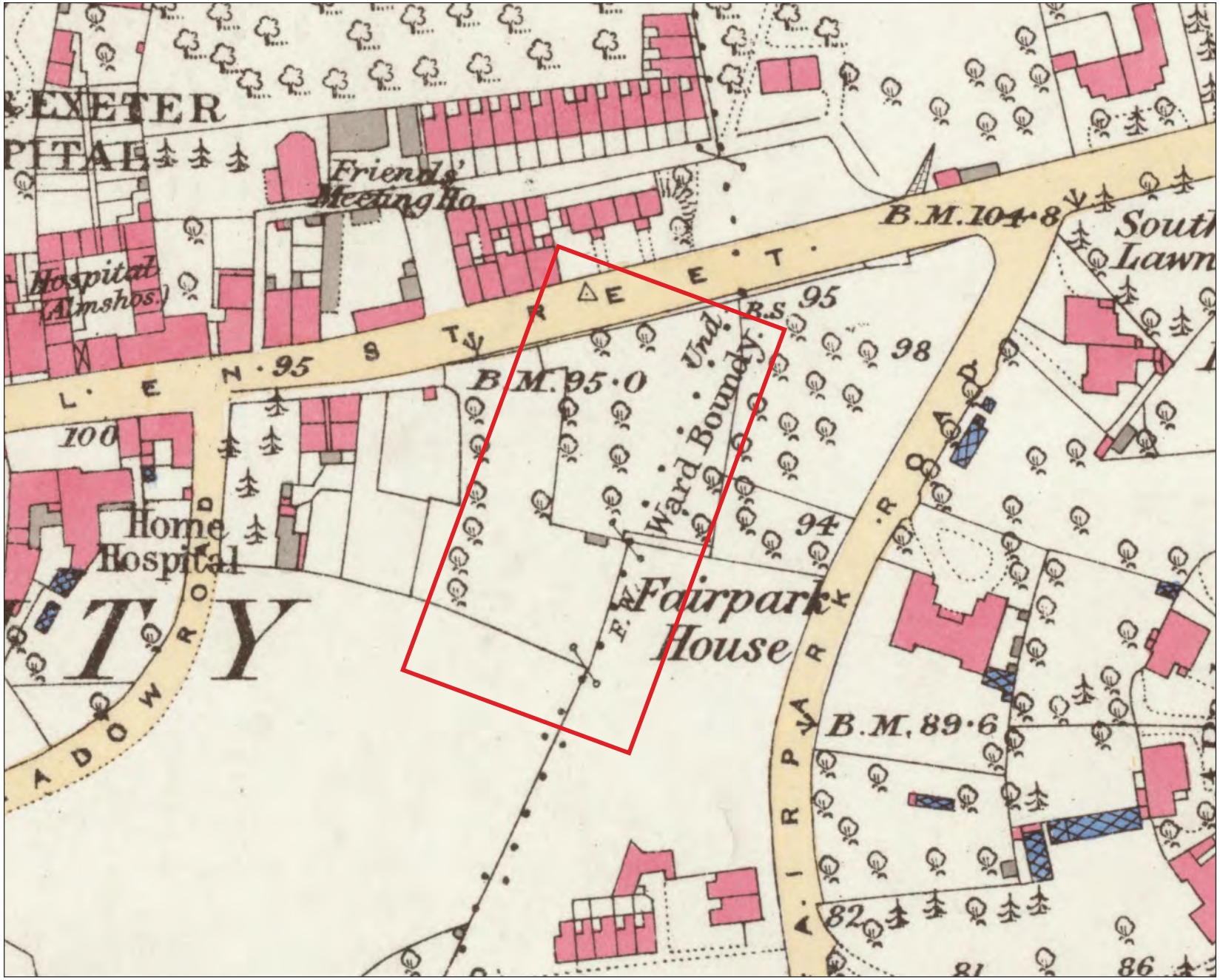


Fig. 4 Detail from the 1st edition 1890 Ordnance Survey Map Devonshire Sheet LXXX.6.

Fig. 5 Detail from the 1905 2nd edition Ordnance Survey Map Devonshire Sheet LXXX.6.

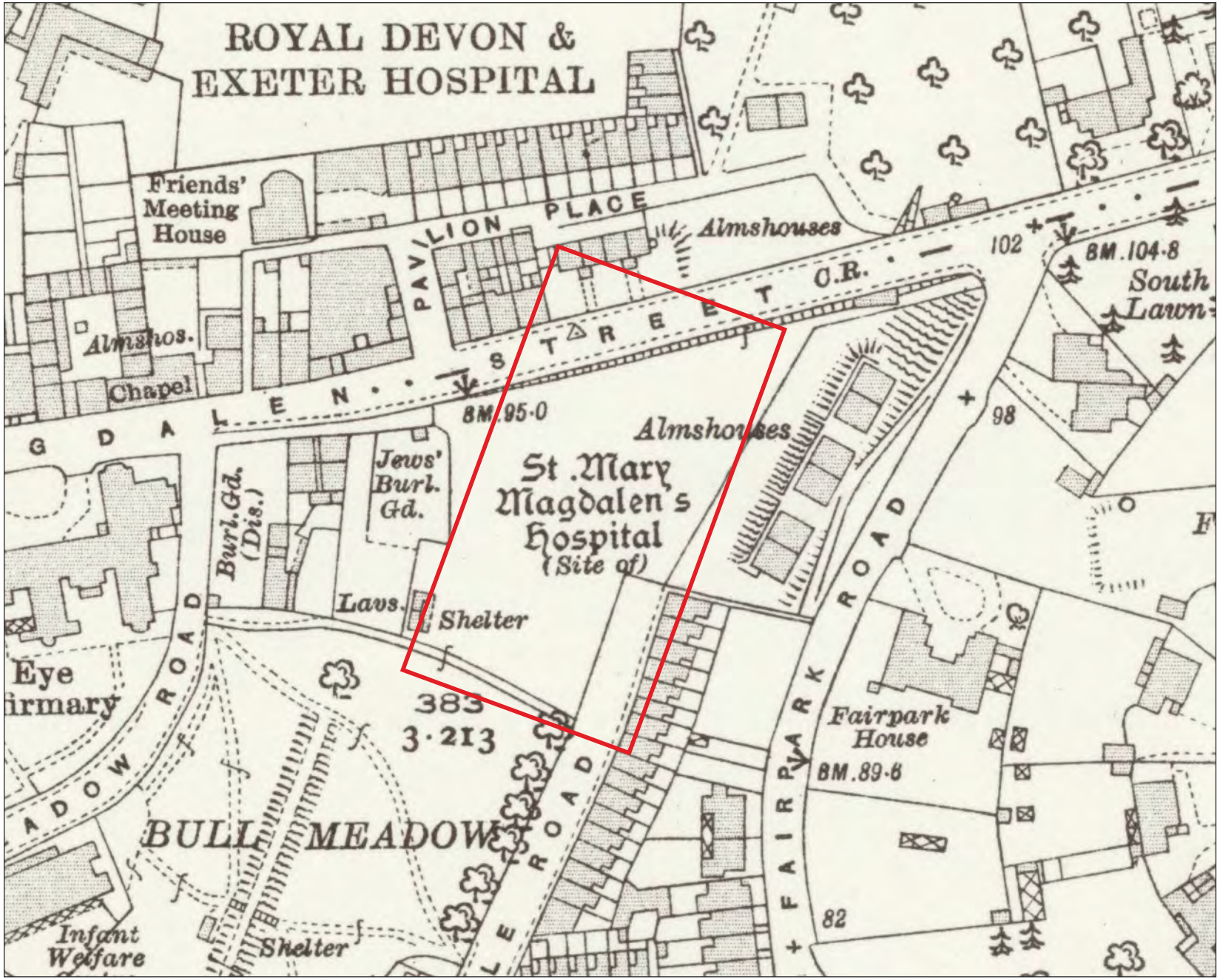


Fig. 6 Detail from the 1932 Ordnance Survey Map Devonshire Sheet LXXX.6.

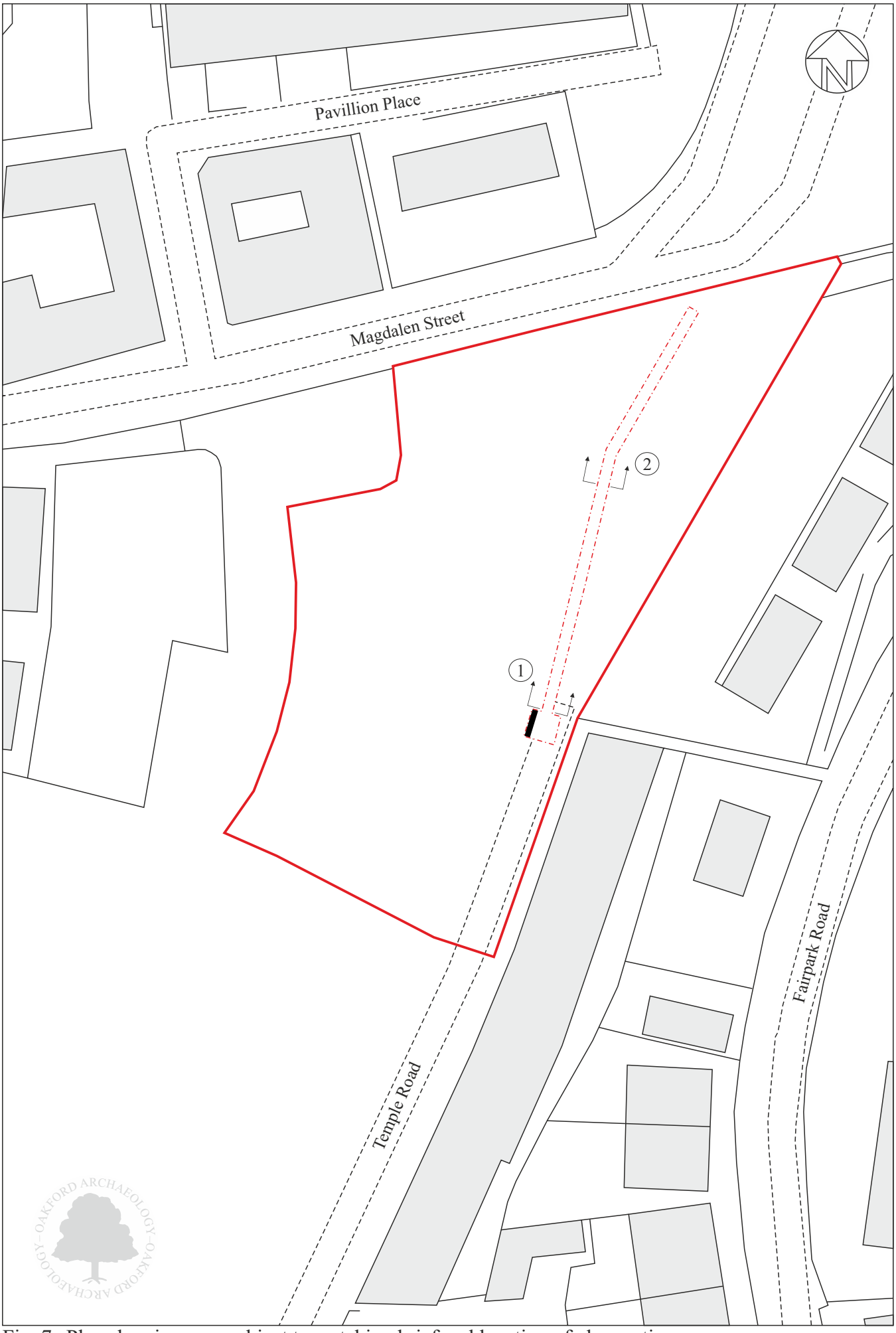


Fig. 7 Plan showing area subject to watching brief and location of observations.

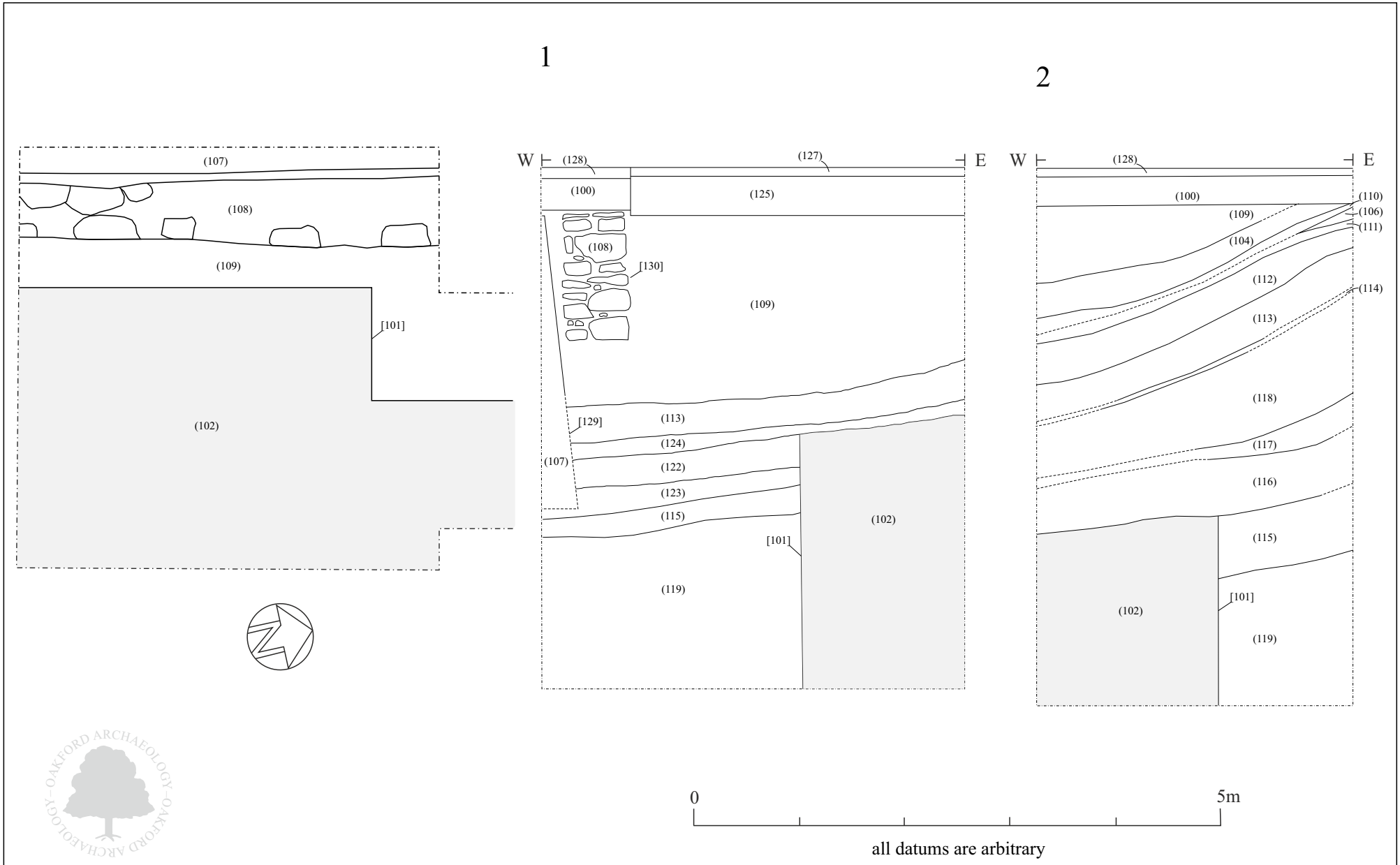


Fig. 8 Plan and sections.

Pl. 1 General view of site. Looking southwest.

Pl. 2 Close-up of stone rubble wall foundation (108) abutting brick wall revetment (107). 1m scale. Looking southwest.

Pl. 3 General view of brick revetment wall (107). Looking southwest.

Pl. 4 General view of the pipe trench looking towards the Magdalene Street Viaduct. Looking northeast.

Pl. 5 Collection of 18th and 19th century glass bottles from the excavations.

Appendix 1:

Written Scheme of Investigation for Archaeological works

1. BACKGROUND

1.1 This document has been produced by Oakford Archaeology (OA) for the client and sets out the methodology to be used during monitoring and recording at Bull Meadow Park, Exeter (SX 9246 9229). This document represents the 'Written Scheme of Investigation' required for repair works to the Shute Brook culvert. The work is required by Exeter City Council (ECC), as advised by Owen Cambridge, the ECC Principal Project Manager (PPMH).

1.2 The proposed work (Fig. 1) lies within an area where extensive evidence for prehistoric activity has been previously identified, in particular underneath the site of the Magistrates Court and Southernhay east car park located to the north-west of the site. Investigations by Exeter Archaeology identified features, deposits and finds relating to Iron Age settlement and agricultural activity. The site provided the first indication of settlement in Exeter in the period preceding the arrival of the Romans. [1] Immediately to the east Oakford Archaeology identified the remains of a 12th century leper hospital and later post-medieval poorhouse during an evaluation in 2021. [2] It is possible therefore that the proposed groundworks have the potential to expose and destroy archaeological and artefactual deposits associated with prehistoric and later activity in the area.

2. AIMS

2.1 The aim of the project is to investigate and record any buried archaeological deposits exposed during groundworks associated with the development, and to report on the results of the project, as appropriate.

3. METHOD

The PPMH has required that a watching brief be undertaken during all groundworks, and monitoring will take place on all excavations that are likely to expose archaeological deposits (Fig. 1).

3.1 Liaison will be established with the client and their contractor prior to the works commencing, in order to obtain details of the works programme and to advise on OA requirements. If a good working relationship is established at the outset any delays caused by archaeological recording can be kept to a minimum. However, localised delays to site operations may be caused and time should be allowed within the main contractor's programme for the adequate investigation and recording of archaeological material.

3.2 All machining will be carried out under direct archaeological control, using a mechanical excavator equipped with a toothless grading bucket. Machining will proceed in spits and will cease if archaeological deposits are exposed in order to allow those deposits to be investigated, excavated and recorded. This may cause localised delays to the groundworks programme, although every effort will be made to keep

[1] Stead, P.M. and Quinnell, H. 2004 Archaeological Excavations at the former Southernhay East Car Park.
[2] Steinmetzer 2021.

any such delays to a minimum. If no such deposits are present then, once natural subsoil has been confirmed, or formation/invert level reached, across the whole of the development area, archaeological monitoring will be terminated. Similarly, if it can be demonstrated that there has been significant modern truncation, then archaeological monitoring will be terminated in these areas.

3.3 If archaeological features are present, then hand-excavation will normally comprise:

- The full excavation of all deposits and/or features within the excavations to formation level (restricted under condition no. 9 to 300mm below current ground level);
- Spoil will also be visually examined for the recovery of artefacts during the excavations and scanned by a suitably accredited metal detectorist.

Should the above percentage excavation not yield sufficient information to allow the form and function of archaeological features/deposits to be determined, full excavation of such features/deposits will be required. Additional excavation may also be required for the taking of palaeo-environmental samples and the recovery of artefacts.

General project methods

3.4 If environmental deposits are encountered during the works, these will be assessed on site by a suitably qualified archaeologist, with advice as necessary from Allen Environmental Archaeology or the Historic England Regional Science Advisor, to determine the possible yield (if any) of environmental or microfaunal evidence, and its potential for radiocarbon dating. If deposits potential survives, these would be processed by Allen Environmental Archaeology (AEA) using the current HE guidance and Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (Historic England, second edition, August 2011), and outside specialists (AEA) organised to undertake further assessment and analysis as appropriate.

3.5 Initial cleaning, conservation, packaging and any stabilisation or longer-term conservation measures will be undertaken in accordance with relevant professional guidance (specifically 'First Aid for Finds' Watkinson, D and Neal V, (London: Rescue/UKICAS 2001) and CI*f*A 2014 'Standard and guidance for the collection, documentation, conservation and research of archaeological materials') and on advice provided by A Hopper-Bishop, Specialist Services Officer, RAM Museum, Exeter.

3.6 Should artefacts be exposed that fall within the scope of Treasure Act 1996 and The Treasure (Designation) Order 2002, then these will be removed to a safe place and reported to the local coroner, Exeter City Council, the Devon Finds Liaison Officer, and HE, according to the procedures relating to the legislation. The location of treasure items will be recorded with an EDM (as per 4.1 above), and, where removal cannot be effected on the same working day as the discovery, suitable security measures will be taken to protect the finds from theft.

3.7 Should any articulated human remains be exposed; these will initially be left *in situ*. If removal at either this or a later stage in the archaeological works is deemed necessary, these will then be fully excavated and removed from the site subject to the compliance with the relevant Ministry of Justice Licence, which will be obtained by OA on behalf

of the client. Any remains will be excavated in accordance with the CI*f*A Standards for Recording Human Remains (Piers D Mitchell and Megan Brickley, CI*f*A 2017). Where appropriate bulk samples will be collected.

3.8 The project will be organised so that specialist consultants who might be required to conserve artefacts or report on other aspects of the investigations can be called upon (see below). The client will be fully briefed and consulted if there is a requirement to submit material for specialist research.

3.9 Health and Safety requirements will be observed at all times by archaeological staff working on site, particularly when machinery is operating nearby. Personal protective equipment (safety boots, helmets and high visibility vests) will be worn by staff when plant is operating on site. A risk assessment will be prepared prior to work commencing.

3.10 The PPMH will be informed of the start of the project and will monitor progress throughout on behalf of the planning authority. A date of completion of all archaeological site work will be confirmed with the DCHET, and the timescale of the completion of items under section 5 will run from that date.

4. ARCHAEOLOGICAL RECORDING

4.1 The standard OA recording system will be employed, consisting of:

- standardised single context record sheets; survey drawings, plans and sections at scales 1:10,1:20, 1:50 as appropriate;
- colour digital photography;
- survey and location of finds, deposits or archaeological features, using EDM surveying equipment and software where appropriate;
- labelling and bagging of finds on site from all excavated levels, post-1800 unstratified pottery may be discarded on site with a small sample retained for dating evidence as required.

5. REPORTING AND ARCHIVING

5.1 The reporting requirements will be confirmed with the PPMH on completion of the site work. If little or no significant archaeology is exposed then reporting will consist of a completed ECC HER entry, including a plan showing location of groundworks and of any significant features found. The text entry and plan will be produced in an appropriate electronic format suitable for easy incorporation into the HER and sent to the PPMH within 3 months of the date of completion of all archaeological fieldwork.

5.2 Should significant deposits be exposed the results of all phases of archaeological work will be presented within one summary report within six months of the date of completion of all archaeological fieldwork. Any summary report will contain the following elements as appropriate:

- location plan and overall site plans showing the positions of the excavations and the distribution of archaeological features;
- a written description of the exposed features and deposits and a discussion and interpretation of their character and significance in the context of the known history of the site;
- plans and sections at appropriate scales showing the exact location and character of significant archaeological deposits and features;
- a selection of photographs illustrating the principal features and deposits found;
- specialist assessments and reports as appropriate.

5.3 A .pdf version of the report will be produced and distributed to the Client and HE on completion of sitework. A copy of the .pdf version will also be deposited with the Archaeology Data Service (ADS).

5.4 An ordered and integrated site archive will be prepared with reference to *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide* (2015) upon completion of the project.

The archive will consist of two elements, the artefactual and digital - the latter comprising all born-digital (data images, survey data, digital correspondence, site data collected digitally etc.) and digital copies of the primary site records and images, compiled in accordance with the ADS Guidelines for Depositors (2021).

The digital archive will be deposited with the Archaeology Data Service (ADS) within 6 months of the completion of site work, while the artefactual element will be deposited with the Royal Albert Memorial Museum (RAMM 22/41). The hardcopy of the archive will be offered to the Royal Albert Memorial Museum and if not required will be disposed of by OA.

OA will notify HE upon the deposition of the digital archive with the ADS, and the deposition of the material (finds) archive with the Royal Albert Memorial Museum.

5.5 A .pdf copy of the updated summary report will be submitted, together with the site details, to the national OASIS (Online AccesS to the Index of Archaeological investigationS) database within three months of the completion of site work (oakforda1- 506974).

5.6 A short report summarising the results of the project will be prepared for inclusion within the "round up" section of an appropriate national journal, if merited, within 12 months of the completion of site work.

5.7 Should particularly significant remains, finds and/or deposits be encountered, then these, owing to their importance, are likely to merit wider publication in line with government planning guidance. If such remains are encountered, the publication requirements – including any further analysis that may be necessary – will be confirmed with the PPMH, in consultation with the Client. OA, on behalf of the Client, will then implement publication in accordance with a timescale agreed with the Client and the PPMH. This will be within 12 months of the completion of all phases of archaeological site work unless otherwise agreed in writing.

6. COPYRIGHT

6.1 OA shall retain full copyright of any commissioned reports, tender documents or other project documents, under the Copyright, Designs and Patents Act 1988 with all rights reserved, excepting that it hereby provides an exclusive licence to the client for the use of such documents by the client in all matters directly relating to the project as described in this document.

7. PROJECT ORGANISATION

7.1 The project will be undertaken by suitably qualified and experienced archaeologists, in accordance with the Code of Conduct and relevant standards and guidance of the Chartered Institute for Archaeologists (*Standards and Guidance for an Archaeological Watching Brief,* 2014, revised 2020, the *Standards and Guidance for Archaeological Excavation*, 2014). The project will be managed by Marc Steinmetzer. Oakford Archaeology is managed by a Member of the Chartered Institute for Archaeologists.

Health & Safety

7.2 All monitoring works within this scheme will be carried out in accordance with current *Safe Working Practices (The Health and Safety at Work Act 1974*).

BIBLIOGRAPHY

Steinmetzer, M. 2017 *Archaeological desk-based assessment of land at Hurst Almshouses, Fairpark Road, Exeter*. Oakford Archaeol. Report No. 17-07.

Steinmetzer, M. 2021 *Archaeological evaluation of land at Hurst Almshouses, Fairpark Road, Exeter*. Oakford Archaeol. Report No. 21-28.

ADDITIONAL INFORMATION

Specialists contributors and advisors
The expertise of the following specialists can be called upon if required:

Bone artefact analysis: Ian Riddler;
Bird remains: Matilda Holmes;
Dating techniques: Scottish Universities Environmental Research Centre;
Charcoal identification: Dana Challinor;
Diatom analysis: Nigel Cameron (UCL);
Environmental data: AEA;
Faunal remains: Lorraine Higbee (Wessex);
Finds conservation: Alison Hopper-Bishop (Exeter Museums);
Fish remains: Hannah Russ, Sheila Hamilton-Dyer;
Faunal remains: Michael Wootton;
Human remains: Charlotte Coles, Mandy Kingdom;

Lithic analysis: Linda Hurcombe (Exeter University);
Medieval and post-medieval finds: John Allan, Marcie Weeks;
Metallurgy: Gill Juleff (Exeter University);
Numismatics: Norman Shiel (Exeter);
Petrology/geology: Roger Taylor (RAM Museum), Imogen Morris;
Plant remains: Lisa Gray;
Prehistoric pottery: Henrietta Quinnell (Exeter);
Roman finds: Paul Bidwell & associates (Arbeia Roman Fort, South Shields);
Others: Wessex Archaeology Specialist Services Team

MFR Steinmetzer
24 May 2022
WSI/OA1884/01

Appendix 2
Context descriptions by trench

Table 1: Trench

Context No.	Depth (b.g.s.)	Description	Interpretation
100	0.01-0.4m	Mid reddish brown silty clay with slate fragments (2-3%), charcoal flecks (1-2%)	Levelling deposit
101	2.16m+	NE-SW aligned linear cut	Shutebrook culvert cut
102	2.16m+	Mid to dark reddish brown silty clay with cbm fragments (5-10%), gravel (2-3%), stone rubble (5%), slate fragments (5%)	Backfill of Shutebrook culvert [101]
103	0.4-0.62m	Dark blackish brown sandy loam with stone rubble (5%) and cbm fragments (5-10%)	Historic made ground
104	0.4-0.72m	Dark reddish brown silty clay	Historic made ground
105	0.62-0.98m	Light greyish brown silt with small grey mudstones (2-3%)	Historic made ground
106	0.4-0.64m	Mid reddish brown silty clay with small mudstones (5%)	Redeposited colluvial subsoil
107	0.4-3.24m	NE-SW aligned brick wall bonded with light greyish white lime mortar and sloping east face	Boundary/revetment wall
108	0.4-1.64m	Volcanic trap and light greyish-green limestone bonded rubble with mid reddish brown clayey silt	Boundary wall
109	0.5-2.26m	Dark greyish brown silty clay with cbm fragments (5-10%), slate fragments (5%),	Historic made ground
110	0.36-1.62m	Dark brown black clayey loam	Historic made ground
111	0.5-1.7m	Dark brown black clayey loam	Historic made ground
112	0.58-2.06m	Mid reddish brown silty clay with stone rubble (10-15%), cbm fragments (10-15%) and mid yellowish grey lime mortar (5%)	Demolition deposit
113	2.16-2.64m	Mid brown clayey silt	Historic made ground
114	1.16-2.48m	Black silty sand	Historic made ground
115	3.02-3.5m	Mid reddish brown silty clay	Colluvial subsoil
116	2.48-3.48m	Dark brown black sandy silt	Historic made ground
117	2.16-3.04m	Mid reddish brown silty clay with stone rubble (10-15%), cbm fragments (10-15%) and mid yellowish grey lime mortar (5%)	Demolition deposit
118	1.18-2.96m	Mid greyish brown sandy silt	Historic made ground
119	3.26m+	Mid to dark reddish brown silty clay	Colluvial subsoil
120	0.16-0.32m	Concrete	Concrete
121	0.65-0.87m	Light greyish brown silty sand	Historic made ground
122	2.52-3.06m	Mid to dark reddish brown clayey silt	Buried topsoil
123	2.84-3.38m	Mid reddish brown clayey loam with degraded breccia (1-2%)	Buried subsoil
124	2.44-2.58m	Mid yellowish brown sandy silt and gravel	Historic made ground
125	0.08-0.45m	Mid to dark black brown sandy silt and gravel	Modern sub-base

126	0.45-0.65m	Mid reddish brown silty clay	Historic made ground
127	0-0.08	Tarmac	Tarmac
128	0-0.1m	Dark brown black clayey silt	Topsoil
129	0.4-3.24m	NE-SW aligned foundation trench for wall 107	Foundation trench
130	0.4-1.64m	NE-SW aligned foundation trench for stone rubble wall 108	Foundation trench

Appendix:3
Finds quantification

Context	Feature	Spot date	Quantity	Weight	Notes
unstrat.			521		1 sherd rim sherd sandy tempered fabric, poss. Dorset fabric type from a jug or tripod pipkin (12th -13th century); 1 sherd North Devon gravel tempered ware, base sherd (16th -17th century); 1 sherd ?Totnes ware (16th -17th century); 3 sherds South Somerset redware with brown glaze: 1 sherd bowl base with rim, yellow sgraffito swirls; 1 sherd vessel rim with vertical striped yellow glaze, ?bowl; 1 vessel rim, ?dish (17th- 19th century); 1 sherd South Somerset redware with green glaze, body sherd (18th century); 8 sherds ?South Somerset fabric redwares. Including 1 base and 2 rims. All glazed in brown on one side. One rim sherd from a large vessel with a decorated thumb pushed oval band around the rim (18th-19th century); 26 sherds miscellaneous glazed redwares 5 bases, 4 rims. Glazed in shades of brown and green (18-19th century); 8 sherds brown and yellow sgraffito and decorated slipware type redware, ?South Somerset type. Two bases and two rims. Decoration includes lines and more complex swirled patters (17th -19th century); 10 sherds miscellaneous unglazed redware, including two base sherds (18th -20th century); 1 sherd redware, gravel free calcareous ware. Base sherd of a bowl, brown glaze on inner surface (18th -19th century); 1 sherd stoneware with light green glaze on internal surface; 2 sherds unidentified redware of unknown fabrics; 6 sherds unidentified glazed redwares and coarse wares. 1 sherd handpainted blue and white English delftware rim sherd (London or Bristol) (17th -18th century); 1 sherd blue and white English delftware (London or Bristol) (17th -18th century); 2 sherds Chinese import porcelain, blue and white. One base sherd, likely saucer (17th -18th century); 1 sherd Chinese import porcelain, orange-pink foliage and possibly is part of ?famille rose type (mid-18th century); 1 almost complete English porcelain saucer with yellow enamel and gilded edges (late 18th – late 19th century); 8 sherds English tin glazed porcelain, three base sherds (two tea cups, one saucer), two rim sherds both with gilded stripes and two sherds, one rim and one body with the faint remains of enamel flowers (18th -19th century). 1 sherds Raeren stoneware, jug neck sherd (15th -16th century); 1 partial German stoneware bottle, ?Cologne or Frechen. Similar in style to the English salt glazed stoneware ink bottles (16th –17th century); 3 sherds Westerwald stoneware, including 2 base sherds and 1 rim sherd

					(16th -18th century); 2 sherds English stoneware marmalade jars with vertical line decoration (18th-19th century); 1 sherd English stoneware marmalade jar with vertical line decoration and brown glaze decoration (18th -19th century); 3 sherds English stoneware marmalade jars with vertical line decoration. Three separate vessels indicated from different sized lines (18th -19th century); 1 sherd English stoneware white glazed preserves jar rim (18th -19th century); 13 sherds miscellaneous English stonewares, salt glazed, including 2 base sherds one from a very large vessel likely storage for cider or similar and one body sherd possibly is from this same vessel, and 1 bottle neck (18th -19th century); 1 sherd stoneware cider flagon with stamp "ISROL"(Bristol), possibly Price Bristol marked with a stylised X symbol (early 19th -20th century); 1 complete English stoneware jar, salt glazed with brown rim and neck and cream body (19th century); 1 complete English stoneware jar, salt glaze, white (19th century); 1 sherd English stoneware bottle neck, internal screw type neck, brown salt glaze on external surface, flagon (19th century); 9 sherds white and yellow stonewares, vessel type unknown. One sherd appears to be a rim which has been folded in (19th century); 1 complete English salt glazed stoneware bottle with line decoration near the neck and upper portion of the body, multiple fingerprints visible in the glaze, ?ink bottle (19th century); 3 sherds glazed stoneware cider flagons/jars, including two handles of different sizes and 1 rim (18th – 20th century); 1 sherd stoneware ginger beer bottle with brown salt glaze, black stamp reads "ERSWELL & G" with man and animal motif. Kerswell and Grafton registered Exeter bottle (late 19th century). 1 sherd tea pot spout, dark brown glaze, ?Jackfield type (?17th century); 5 sherds hand painted whitewares and English porcelain, four separate designs are present (17th-early 20th century); 1 sherd mocha ware (late 18th – 20th century); 2 sherds creamware, likely from the same vessel, one sherd base and the other rim with partial handle. ?jug (19th -20th century); 2 sherds whiteware, both base sherds, similar or the same vessel, flat base, ?jug or jar with blue horizontal stripe decoration (19th -20th century); 6 sherds industrial whitewares, blue and white transfer print. Various vessels including jug, bowls, plate, saucer/tea cup (19th -20th century); 1 sherd blue and white transfer print (19th -20th century); 80 sherds plain industrial whitewares and creamwares. Vessel types include plates, bowls, cups and saucers (18th -20th century); 90 sherds industrial white wares, blue and white transfer prints. Including: 1 tea pot lid, 1 rectangular dish, plates, bowls, teacups and saucers (18th -20th c.); 1 sherd mocha ware (late 18th – 20th century); 11 sherds industrial whiteware transfer prints in non-blue and white colours including: brown, green, purple, purple and gilding, and teal. Vessels includes plates, dishes and saucers (19th -20th century); 3 sherds industrial earthenware jar bases with plain white glaze, one with stamped lettering which is very worn, possibly includes the letters "MALP" "18" "NEWCO". Another sherd has a stamped "D" on the base (18th -20th century); 2 sherds teal transfer print rim sherds (19th -20th century); 1 sherd redware ?brown betty tea pot rim with brown, green and white glaze (late 19th -20th century); 1 sherd purple thistle Chelsea lustre ware plate or dish (19th century); 1 English porcelain bulldog figurine with

					orange enamel, would have been sat on a green ash tray or pipe stand (late 19th -20th century). 1 English green bottle glass base, wine bottle, kick-up base, slight tapering in the profile of the bottle body above the base, most like the profile of Hume's 1788 or 1798 bottles (1969, p.68) (Late 18th century); 1 English green bottle glass base, lighter green, slightly kick-up base, irregular with bubbles (?late 18th – early 19th century); 4 sherds English green bottle glass bases, all with kick-up bases of different degrees (18th -19th century); 11 sherds English green bottle glass, undiagnostic, 3 olive green (18th -20th century); 2 English green bottle glass bases, one with more remaining body. ?wine bottles, slightly kick-up bases, mostly flat. One has an embossed circle and central dot, the other just has an embossed dot, same diameter of 79.3mm (19th century); 2 English green bottle glass bottles, one complete, one almost complete. Appear to be the same bottle. Kick-up base and applied ring neck, 250mm champaign (early 19th century); 1 English green bottle glass base, ?wine bottle, kick-up base, irregular underside surface with embossed central dot (?early 19th century); 1 nearly complete English green bottle glass bottle, kick-up base, applied ring neck, most like the profile of Hume's 1800 bottle (1969, p.68), champagne, 300mm tall (early-mid 19th century); 1 complete English green bottle glass bottle, embossed "THE CITY BREWERY EXETER" around the bottom of the body, "F C C" on base. Internal screw top lid, screw vulcanite stopper present. Embossed with "EXETER THE CITY BREWERY" on stopper (Late 19th – mid 20th century); Two separate vessels, one complete base and one with a partial base (18th - 19th century); 1 complete English green bottle glass wine bottle, "applied blob" lip, turn moulded, slightly raised flattened base (1840-1870 or 1865-90); 1 English green bottle glass rim, applied double collar (mid-late 19th century); 2 English green bottle glass bases, olive green, very flat, 93.4mm diameter (?19th century); 1 English green bottle glass base, flat base with embossing "P" "R" and "&" "B" and a central circular mark. Powell & Ricketts, Bristol (1856-1923); 1 sherd English green bottle glass, ?base sherd, vessel form uncertain, flat portion with rounded glass ball surface (19th -20th century); 1 complete English green bottle glass bottle, olive green, with an almost flat base "J" stamp, and applied lip ?beer bottle (?early 20th century). 1 aqua bottle base, kick-up base, very thin and cylindrical with flat top, most like the profile of Hume's 1783 bottle (1969, p.68) (late 18th -19th century); 1 sherd light aqua-green glass. Embossed lines on base, squared corners, object type unknown (19th century); 1 aqua glass larger vessel with kick-up base. Underside embossed with: "4800" and a maker's mark motif formed of an ornate "T" with a possible "I" and "B" "P" "R" or "K". Maker not identified (19th century); 1 complete aqua glass bottle stop with embossed "8" on the top (19th century); 1 aqua glass bottle base, slightly kick-up base, embossed with "640" (19th century); 1 aqua bottle base, irregular octagon embossed "B" on base, possibly pharmaceutical in use (19th century); 1 sherd aqua glass bottle, embossed "XETE" "Mar" and a badge with a signature formed of a C and H is partially visible. C. Ham Exeter bottle, with the words "Trade Mark"

					embossed either side of the signature, possibly for mineral water (19th century); 1 complete aqua glass pharmaceutical bottle, rectangular base, cork present in neck. Embossed front panel with "MILTON & SON EXETER" and "TABLE SPOONS" with table spoon measurement marker lines vertically along the bottle body. Medicine bottle with dosage markers (19th century); 1 complete aqua glass bottle, square based, applied double collar, slightly kick-up base, ?condiment bottle (mid-late 19th century); 1 neck sherd, aqua glass Codd-neck, carbonated drink bottle (mid-late 19th century); 1 aqua bottle neck with applied double collar rim, beverage bottle (mid-late 19th century); 1 aqua glass bottle neck with broken rim, applied round band, ?pharmaceutical bottle (mid-late 19th century); 1 complete aqua glass bottle, circle base, embossed with "ASHTON & PARSONS" around bottle neck and a crown motif on underside of base teething power bottle (c.1860s); 1 almost complete aqua glass Codd bottle, embossing "J. KERSWELL" "REGISTERED TRADE MARK" "EXETER", the center of the body has an embossed shield motif with central figure of a man and animal, ?man shearing or wrestling a sheep or other animal. Around the figure, the shield has the embossing "SAINT THOMAS AERATED WATER WORKS EXETER". On the back of the bottle the embossing "REDFEARN BROS BOTTLE MAKERS BARNSLEY". Underside of the bottle has the embossing "J.K" (1862-1967); 1 complete aqua glass bottle, square base, wooden stopper present in two pieces. Embossed with "PATERSON'S", "GLASGOW", "ESS" "CAMP COFFEE" "& CHICORY" (1876-1974); 1 almost complete aqua glass bottle. Embossed with "STARKEY KNIGHT & FORD LTD" and "TIVERTON" on body and "T B M" on base. Screw lid neck. Ale or stout bottle (1895-1906); 4 sherds "JAMES KEILLER & SON'S DUNDEE MARMALDE" jars. Two rim sherds from separate vessels, two body sherds one with the date 1889 visible (late 19th century); 1 sherd aqua glass bottle, embossing shows the letters "EX" and "REGIS" as well as a corner of a central motif. Underside of the bottle has the embossing "J.K" and "3540". The bottle is almost certainly a J. Kerswell Codd-necked carbonated water bottle, Saint Thomas Aerated Waterworks (19th – early 20th c.); 4 sherds English green bottle glass, flatter bases (19th – early 20th century); 1 almost compete aqua glass bottle, embossed with "RUSTONS & Co" and "EXETER" vertically on body, and "KILNER BROTHERS MAKERS DEWSBURY" (late 19th – early 20th century); 1 almost complete aqua glass Codd bottle, embossing "J. KERSWELL" "REGISTERED TRADE MARK" "EXETER", the center of the body has an embossed shield motif with central figure of a man and animal, ?man shearing or wrestling a sheep or other animal. Around the figure, the shield has the embossing "SAINT THOMAS AERATED WATER WORKS EXETER". On the back of the bottle the embossing "KILNER BROS LTD MAKERS LONDON". Underside of the bottle has the embossing "J.K" (Late 19th -20th century); 1 complete aqua glass bottle with ovel bottle, embossed with "POISONOUS NOT TO BE TAKEN" and a series of vertical embossed lines on front face of bottle body (early 20th century); 6 sherds aqua glass, various thicknesses, undiagnostic (19th -20th century).

					1 complete clear bottle, round flat base, machine made ink bottle (late 19th century); 1 complete clear glass bottle, rectangular base, double collar, pharmaceutical (19th century); 1 sherd clear glass bottle with multiple sides, ?pharmaceutical (19th century); 1 sherd clear glass bottle neck with frosted inside, possibly from a glass stopper, ?pharmaceutical (19th century); 1 incomplete clear glass vessel with a circular base and join for a handle, ?jug (?19th century); 1 complete clear glass bottle, circular case, embossed with "TEA SPOONS" and with tea spoon measurement marker lines vertically along the bottle body. Medicine bottle with dosage markers (19th century); 1 complete clear glass jar, likely for condiments or a pickled food, flat base, slight remains of paper label on surface (19th -early 20th century): 1 partial clear glass bottle, embossed with "KERSWELL EXETER" vertically down the body bottle. The bottle had the remains of a cork inside. Mineral water bottle (19th – 20th century); complete clear glass bottle, rectangular base, seamed bottle, double collar, stamped "U G B" on base ?pharmaceutical (19th -20th century). 1 sherd brown/amber bottle glass with embossing "ETER" and "LTD" (Exeter Ltd.) (19th - 20th century); 2 sherds brown bottle glass (19th-20th century); 1 sherd dark blue glass (19th-20th century); 1 sherd light blue glass bottle neck (19th-20th century century); 2 sherds white glass (late 19th – early 20th century). 1 pipe stem with partial bowl base, very thick and irregular in nature, pipe has a step-down thinning, possibly a short stem "nose warmer" pipe or to accommodate an additional handle such as a horn handle, crude "J" stamp on underside of stem near were the foot would start to project. Some ribbed decoration visible at the base of the bowl (1680-1780- due to stamp location BUT J was not typically used until the 19th c. and instead an I would be used); 30 pipe stems, including 1 with partial spur and 1 with spur and partial bowl (late 17th-19th century); 1 fragment clay pipe bowl with ribbed surface and leaf moulding on the seams. The spur of the pipe has the initials R and C, possibly R. Chapple, pipe maker from Newton Abbott (1866-1873). 2 sherds hand finished/hand filled decorated tile, transfer and hand painted floral pattern, underside has pen and pencil markings and a ridged surface (19th century); 1 sherd transfer printed tile. Floral pattern, underside has pen and pencil markings and a ridged surface (19th century); 1 plain glazed white tile, non-square, with nail perforations (19th-20th century); 2 sherds white glazed tiles, ridged underside with embossing. One has "M.L" and the other "A1" with 5 dots (19th – 20th century); 2 sherds sandy coarse black tile (19th-20th century); 1 sherd yellow cream glazed tile (19th -20th century); 13 sherd redware tile with black glaze (19th -20th century); 1 white fabric brown glazed rectangular tile with circular ridge in back (19th -20th century); 12 sherds redware tile, curved possible roof tile including 1 nub tile (19th -20th century); 15 sherds miscellaneous redware tile (19th-20th century).

					1 complete bone tooth brush handle with some bristles still present in the head, “TOM TIT” stamped into the handle (19th century); 1 bone toothbrush handle, no head present (19th century); 1 bone handle with iron tool broken off inside, working suggests a metal cap on the tapered end and around the base of the metal implement. 2 fragments of flat steel with clear finished rimmed edges and dark blue enamel on one surface and white enamel on the other. Possible enamel cup, bowl or other kitchen ware. Industrial porcelain enamel (mid-19th century); 1 near complete but damaged steel industrial porcelain enamel cup or mug, white enamel two sherds of ceramic were found inside (1 brick and 1 pottery) (mid-19th century); 1 fragment slate roof tile with peg/nail hole; 11 iron nails of various sizes; 2 iron spikes with bent rectangular head projections; 1 flat iron ring; 1 complete iron horse shoe; 1 steel button; 1 iron strip, slightly twisted, flat and rectangular in cross section; 1 iron object, possibly half of a flat based slightly domed circular disc with central hole or semi-circular flat based object with domed top and central semi-circular indent; 1 slightly twisted metal narrow hollow pipe like object; 1 metal strip with concave under surface, possible rivets on underside and 1 rounded end, thin and narrow; 1 unidentified iron object, semi strip like, broadly rectangular in cross section; 1 bent metal rod in arch shape; 1 screw; 1 copper ornate decorative piece with leaf motif and curled shapes, use unknown; 1 iron ?door pintle; 1 ?steel tubing which narrows to a closed point, possible cap for a handle; 1 unidentified metal residue (all undated).

Where possible I.N. Hume (1969) “A guide to artifacts of colonial America” has been used to date green bottle glass bottles
Oswald, A. (1975) Clay Pipes for the Archaeologist, British Archaeological Reports, British Series 14, Oxford, 207pp.

Appendix 4
Faunal Remains

Unstratified

Species	Element	Portion	Side	Alterations	Other
Sheep	M. carpal	Whole	Left		
Cow	M. carpal	Distal		Post-dep. Break	
UnID	Scapula	Proximal		Greening and chop-marks	
Sheep	Tibia	Proximal	Left	Chop-mark	Unfused
Sheep	Radius	Distal	Left	Chop-marks	
Chicken	Femur	Distal	Right		
UnID	Rib fragments	x8			
UnID	Fragment			Sawn both ends, inc. 2x false starts.	Heavily rodent-gnawed

(102)

Species	Element	Portion	Side	Alterations	Other
Sheep	Ulna	Proximal	Left	Dog-gnawed	
Sheep	Femur	Distal	Left	Sawn	Unfused
Goose	Humerus	Proximal	Right	Dog-gnawed	
Cow?	Pelvis			Chop, cut and saw marks inc. abortive starts.	
UnID	Fragments	x3			