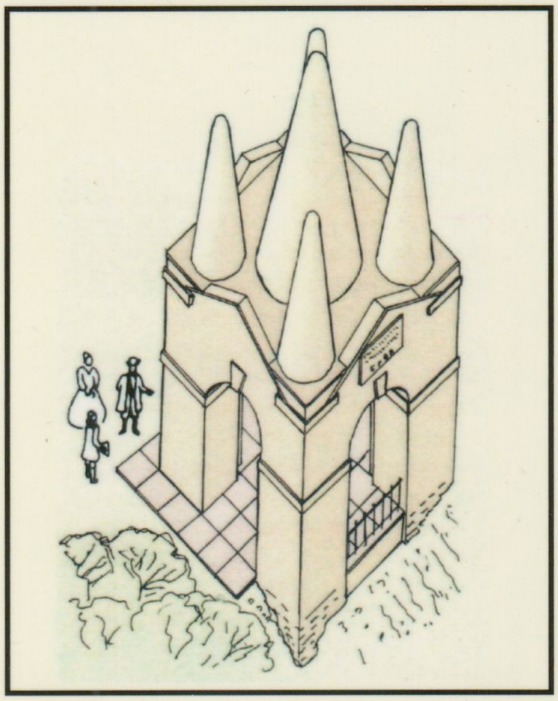
BRISTOL & AVON ARCHAEOLOGY



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Cover: *Reconstruction sketch of the 'Tomb of the Horatii' located at Stoke Park, Bristol. (James Russell).*

CONTRIBUTIONS

All articles are subject to peer review. Authors are welcome to discuss possible papers for publication in the Journal with the Editor. Statements in the journal reflect the views of the authors, and not necessarily those of the Society or Editor.

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ARCHAEOLOGICAL WORK AT NEWFOUNDLAND CIRCUS, ST PAUL'S, BRISTOL 2017–2020

By Jocelyn Davis and Kevin Potter

SUMMARY

The site known as Newfoundland Circus remained undeveloped and beyond the bounds of the City of Bristol into the mid-18th century. By the time of Roques c.1750 survey, it had been enclosed, with Mathew's survey of the same date showing the south-west portion developed for housing, but the rest of the site remaining open. At the beginning of the 19th century, the Howland's Burial Ground was established, a privately owned and administered burial site that formed a north-east to south-west orientated rectangular plot extending between Newfoundland Street and Wilson Street. Approximately the southern third of the burial ground fell within the bounds of the study site. To the south-east of the Howland's Burial Ground, in the south-eastern corner of the site, the Gideon Congregational Chapel was established in 1819. Ashmead's 1828 plan shows that much of the site to the west of the Howland's ground was, shortly afterwards, taken over by more housing tenements. The Gideon Chapel was demolished in 1930, to be replaced by a joinery workshop. By the time of the 1951 Ordnance Survey, a number of the houses had been demolished, with others recorded as ruins. By 1971, all housing on the site had been demolished, to be replaced by industrial premises.

The archaeological data recovered from a series of interventions which form the subject of this paper, accompanied by documentary evidence, elucidate in detail the development and decline of this area of 18th and 19th century expansion of the City of Bristol. Further, the excavation of an important assemblage of burials provides an important addition to a nationally significant corpus of 19th century osteological data within the city, and has allowed examination of the health, deaths and lives of the (likely poor) urban population living in the locale of the site and wider city.

INTRODUCTION

This report is concerned with the history and buried archaeological remains of a 2560m^2 rectangular plot of land, fronting Newfoundland Circus, located in the St Paul's area of Bristol, bounded by Orange Street to the north, the M32 to the south, a petrol station to the east and No. 55 Newfoundland Circus to the west (Fig. 1; NGR ST 5961 7367). The site is located at the western terminal of the M32, where it becomes Newfoundland Circus, and approximately 1 kilometre north-east of Bristol City Centre.

Circumstances of the Project

The works that form this project were commissioned by Vastint Hospitality BV. They encompass an initial desk-based assessment conducted in 2016, followed by archaeological evaluation in 2017. These two exercises formed the pre-determination stage of archaeological works requested by Bristol City Council, for a proposal to develop a new hotel on the site. Planning permission was granted and, by condition of planning consent, a programme of archaeological excavation and recording was imposed, comprising: excavation of an area in the south-east of the site; a site-wide watching brief and excavation of burials from within the former Howland's Burial Ground (Fig. 1).

At the time of the project, the site was a level brownfield site, all former buildings having been demolished. Following the pre-determination works, the excavation of the area to the south-east of the site was undertaken in 2018, shortly followed by watching brief monitoring, which included excavation of burials within the former Howland's Burial Ground, during ground preparation works. The final stage of fieldwork was conducted in 2019 during the development under watching brief conditions, and involved a second phase of burial excavation within the former Howland's Burial Ground site.

The project as a whole was managed by Andrew Young of Avon Archaeological Unit Limited. Fieldwork, with the exception of the evaluation, which was led by Andrew Young, and conducted by Avon Archaeology Limited, under the supervision of Kevin Potter.

Geology and Topography

The site gradually declines to the south-east from the crest of a low ridge at a height of 14m aOD on Wilson Street, to 10m aOD on Newfoundland Circus. This surface topography appears to represent the lower terrace of the Lower Frome Valley, of which the drift geology comprises estuarine alluvium (OS 1962).

The British Geological Survey records the underlying geology of the site as 'Redcliffe Sandstone Member – Sandstone. Sedimentary Bedrock formed approximately 200 – 251 million years ago in the Triassic Period. Local environment previously dominated by rivers' (BGS online, 2017). No superficial deposits are recorded on the site.

Prior to this development, the site contained five structures fronting Newfoundland Circus, as well as the former Police Station. The remaining area was used for car parking.

Fig. 1 Site location map with excavation area and burial plots.

THE HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

BRO = Bristol Record Office
BRSMG = Bristol City Museum and Art Gallery

The following archaeological and historical background is extracted from the 2016 desk-based assessment by Donna Young (Young 2016).

The study area lies within the Domesday manor of Barton Regis and medieval out-parish of St. James. The earliest depiction of the site, a 1610 map of Kingswood Forest, locates it within an extensive area of unenclosed, possibly agricultural, land close to the 'Earles Meade' meadows. By *c*.1750, when Rocque compiled his survey, this area had been enclosed as orchards and market gardens that extended part way along the northern side of Newfoundland Lane (Fig. 2 – Rocque *c*.1750). The study area remained beyond the city bounds until the late 18th century, when the city expanded rapidly and led to the subdivision of St. James' parish and the creation in 1794 of St. Paul's parish, in order to better serve the increased population.

Mathew's plan of the same date shows the study area straddling the limits of this expansion, as the south-west portion had been developed for housing, whilst the north-eastern half remained open. The study area had been fully incorporated into the city by the mid-1820s, when

Fig. 2 Extract from Rocque's c.1750 map.

contemporary surveys record the resulting change of road name from Newfoundland Lane to Newfoundland Street, with new terraced housing on the Orange and Newfoundland Street frontages and the Gideon Congregational Chapel (founded 1819) erected at the north-east end (Fig. 38). A footpath ran alongside the chapel, and a rectangular area of land extended between the rear of properties on Newfoundland Street and Wilson Street to the north. This

Fig. 3 Extract from Ashmead's 1828 map.

plot of land was Howland's Burial Ground, a privately owned and administered cemetery established some twenty years earlier. The cemetery was one of many in the city closed by Act of Parliament in 1854, in order to regulate the disposal of the dead in urban environments in response to public health concerns. The burial register revealed that one thousand, three hundred and thirty-nine individuals were interred in the period between 1804 and 1854. In 1999, an archaeological evaluation undertaken over the northern portion of the burial ground, just outside the present study area, confirmed the presence of human burials at that location.

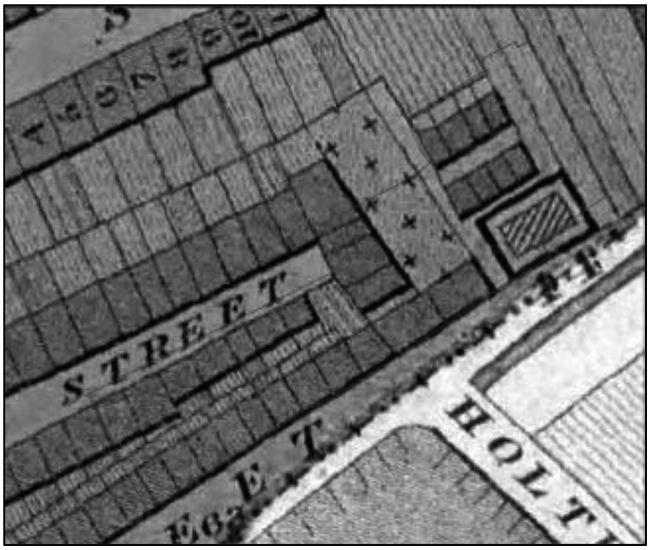

Fig. 4 Extract from Ashmead's 1874 map.

Subsequent surveys of the city record some infill building within the study area, including the erection of a Sunday school to the rear of the chapel, but no significant change (Fig. 4). By the time of the 1881 Ordnance Survey Town Plan, the burial ground had become a garden, with a new building constructed in the south-east corner, within the study area (Fig. 5). The Bristol trade directories of the period indicate the beginnings of a gradual change in the character of the wider St Paul's area, moving increasingly from residential to industrial, as several premises were occupied by small businesses at that time. Little had altered on the Second Edition Ordnance Survey plan of 1903; thereafter the first significant change within the study area occurred in 1930, when the Gideon Congregational Chapel was closed and demolished, and a joinery works erected. The study site was unaffected by World War II bombing raids that destroyed many properties in the area. By 1951, the Ordnance Survey plan showed substantive change, with a number of properties on Newfoundland and Orange Streets having been demolished and others denoted as ruins. Further significant change occurred within the study area thereafter, as, by 1971, the residential properties on Newfoundland Street had been entirely replaced with industrial premises, and those on the south frontage of Orange Street were cleared. The joinery works in the north-east of the study area subsequently were demolished, and replaced with the police station prior to 1994, and this, and the remainder of the buildings continue largely unchanged to the present day (Fig. 1).

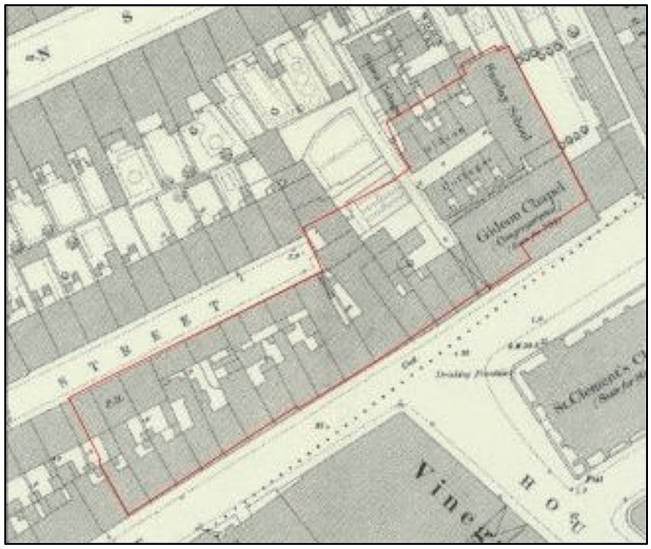

Fig. 5 Extract from 1881 Town Plan.

The study area abuts the south-east boundary of the Portland and Brunswick Square Conservation Area. Whilst no listed or otherwise designated buildings are recorded within the study area, several lie in very close proximity to the north and west. The assessment has identified a number of recorded and previously unrecorded heritage assets within the study area, including Howland's Burial Ground (BHER 1181M) and the Gideon Congregational Chapel and Sunday School (BHER 1083M and 5085M respectively). Parry's 1999 excavations to the immediate north, demonstrated the survival of the burial ground and human interments, and also identified structures and deposits related to the original late 18th and early 19th century terraced housing at that location. This, and extant remnants of earlier limestone masonry that form part of the boundary at the rear of No. 83,

attest to the possible preservation of subterranean structures and deposits of similar form and date within the study area. Finally, it has been proposed that the route of a Roman road between Bath and Sea Mills, Ivan Margary's proposed Road M54, which has been proven archaeologically elsewhere in the city, ran close to or through the study area in a north-west to south-east direction.

THE EVALUATION

The evaluation conducted in 2017 comprised six archaeological trenches (Fig. 6), sited to target specific features identified by the desk-based assessment. These included the southern end of the Howland's Burial Ground, part of the footprint of the former Gideon Chapel, and areas formerly occupied by housing tenements.

Trench 1 was located in the north-west corner of the site, and targeted two ranks of housing tenements shown on Ashmead's 1828 plan. No remains of the tenements were identified, with modern disturbance evident throughout the trench. Remnants of a stone drain were recorded towards the north of the trench, the only surviving archaeological structure in this location. A layer of clay silt was interpreted as possibly reflecting post-medieval garden soil.

Trench 2 was located in the eastern corner of the site, targeting the footprint of the former Gideon Chapel, as depicted by Ashmead in 1828. Again, evidence of modern disturbance was present throughout the trench. Only fragments of masonry relating to the chapel survived. They were built atop post-medieval garden soil deposits, indicating that 19th century housing tenements probably extended into the area prior to the chapel's construction. Deposits of charcoal indicated that the demolition of the chapel in 1930 was accompanied by fire.

Trench 3 was located towards the centre of the site, and targeted the southern end of the Howland's Burial Ground. It did not encounter any human remains, but did define the southern wall of the burial ground. Again, modern disturbance was evident throughout the trench.

Trench 4 was also sited to investigate the Howland's Burial Ground and was joined at 90° to Trench 3. It recorded no archaeological features or deposits pre-dating the modern period, instead finding deeply stratified modern disturbance throughout the trench, interpreted as possibly reflecting the presence of cellars.

Trench 5 was located towards the southern side of the site, targeting a rank of housing tenements fronting Newfoundland Street (now Newfoundland Circus). It was also situated perpendicular to the putative route of a Roman road. No evidence of the Roman road or Roman archaeology was found. The trench did, however, identify substantial post-medieval structures consistent with the recorded tenement buildings.

Trench 6 formed an L-shape, connecting to Trench 5. It found evidence of garden soils contemporary with

Fig. 6 Plan of the Evaluation trenches.

the housing tenements. It also recorded evidence of later medieval activity, in the form of pottery sherds, and a (buried) pit lined with flat stones.

THE EXCAVATIONS

Two areas within the site were excavated (Fig. 7). The Excavation Area was a defined area that was excavated under formal excavation conditions. A second area within the former Howland's Burial Ground was effectively excavated (in two phases) but as a product of a watching brief condition.

Excavation Area

A sub-rectangular area of 2250m^2 located towards the centre-west of the site was initially required for full excavation as a condition of planning consent (Fig. 7). The excavation area targeted features, including possible medieval deposits, identified during the evaluation.

The Archaeology by Phase

The features and deposits recorded in the excavation area reflect 3 broad phases of activity.

Phase 1

Phase 1 encompasses contexts (1049), (1060), (1081), (1083), (1091) and (1126/1128) and reflects medieval deposits found towards the base of the excavation. All were silty deposits overlying the natural geology, which most likely represent medieval cultivation soils. Pottery from these contexts was predominantly medieval, mostly of 12th to 13th century date, though sherds from (1128) dated to between the 11th and 15th centuries. A small amount of Roman pottery was also retrieved but was likely residual.

Phase 2

Phase 2 consists mainly of stone and brick walls forming the foundations and cellars of four buildings, A-D, which fronted onto Newfoundland Street, likely reflecting remnants of a housing tenement (Fig. 7). They include: Wall (1013) running north-west/south-east, and a return at its north-western end, wall (1015), aligned south-west/north-east, forming Building A; Wall (1057) running north-west/south-east, and its return (1056) running south-west/north-east, forming Building D. Wall (1064), running north-west/south-east, was part of Building B; and north-west/south-east aligned walls [1114] and [1118] represented Building C.

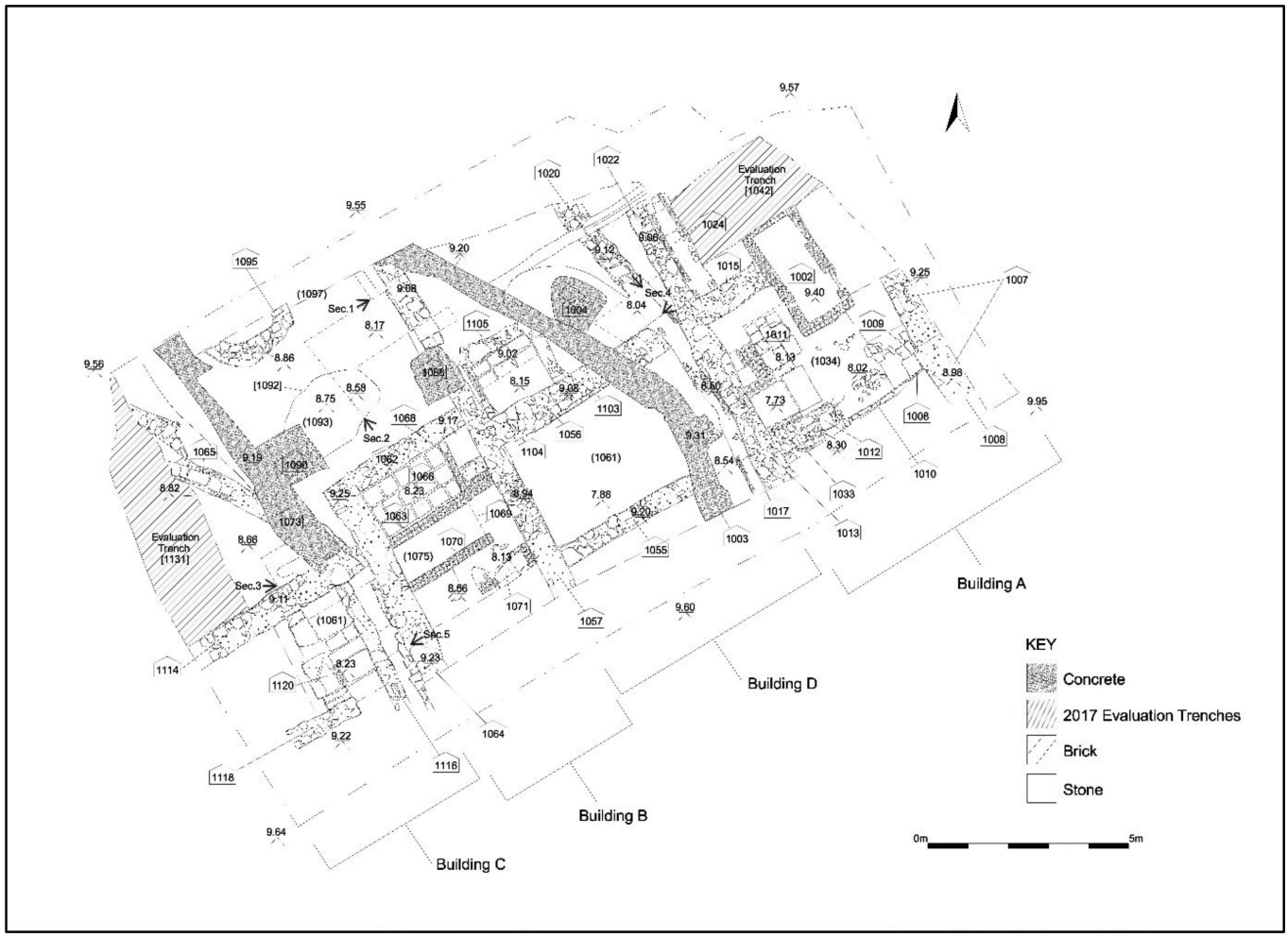

Fig. 7 Plan of the Excavation Area.

Walls (1056) and (1015) reflect the rear walls of the houses, with Walls (1013), (1057) and (1064) representing the party walls between the buildings. Wall (1057) continued north of (1056), probably as a continuous boundary. It is known that these buildings were constructed prior to 1828, as they are shown on Ashmead's map of that date.

Several sub-phases of these buildings are likely. Pennant flag surfaces (1009) and (1011), and brick surface (1010) formed parts of the cellar floor of Building A, which appears to have been laid and re-laid a number of times. A stub wall (1012), probably part of a later internal partition of Cellar A, projected from the eastern face of wall (1013).

Wall (1022), butting on to the northern end of wall (1013) is a later extension to the rear of Building A; this was presumably built between 1828 and 1855, as it appears to be shown on Ashmead's map of 1855. A culvert (1023) lay adjacent to and parallel with this wall, and terminated at wall (1015).

Wall (1062) seemed to represent a later extension of Building B, post-dating 1855, as the more northerly position of this rear wall is first shown on the First Edition Ordnance Survey. Walls (1063) and (1070) were later divisions of Cellar B, with (1063) forming a septic tank to the north of the cellar, which was lined with waterproofing material. The septic tank was itself backfilled by rubble deposit (1067), which was later truncated by Cut [1111] for the insertion of Walls (1068) and (1069), which formed a passageway for steps (1072).

Wall (1055) probably formed an internal division of Building D, while to the north of Wall (1056), Walls (1103)/(1104)/(1105) make up a septic tank which was a later (post-1855) addition to this structure.

To the rear of Building B (in the north of the main excavation area), cut into probable cultivation soil (1091), was a pit (Structure 1092/1093) filled with demolition and industrial waste, and a well (1095). Overlying these was a dark greyish-brown clayey silt (1097), which appeared to represent post-medieval garden soil. Well (1095) appeared to have remained in use for some time, as the garden soil was built up against it, and the well had been back-filled at a later date.

To the rear of Building D, a dark grey clayey silt (1036/1110), probably representing the same post-medieval garden soil as (1097), was truncated by the construction cut for a stone and brick culvert (1017/1020), running south-east/north-west. This was in turn truncated by (1006), a cut for a copper pipe, which also truncated Wall (1022).

To the rear of Building C, a drain (1065) constructed of Pennant flags and rubble, and running north-west/south-east, cut through two dump deposits (1124 and 1125) which had built up against the walls of Building C.

Phase 3

Phase 3 groups together modern features. A concrete drain (1003) cut through walls (1055) and (1056) of Building D. Pillar bases (1004), (1088) and (1090) comprised the remains

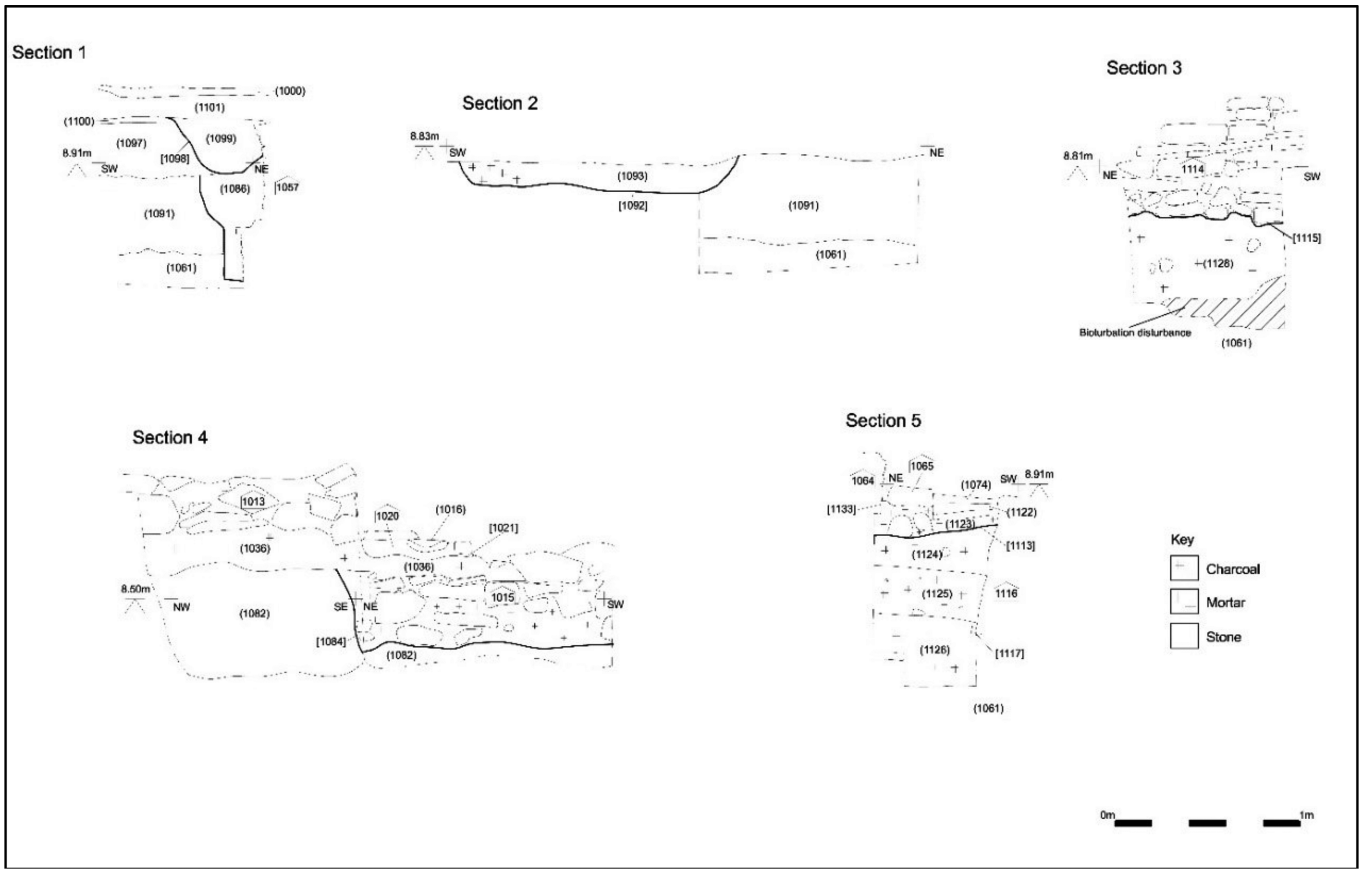

Fig. 8 Section drawings.

of the building occupying the site prior to demolition, with the foundation cut for (1090) truncating the fill of pit (1093) mentioned above. Concrete drain (1073) may have replaced or repaired drain structure (1065), and the foundation cut for a brick structure (1002) cut through the backfill of Cellar A. These structures were all associated with the 20th century development of the site.

Excavations within Howland's Burial Ground

Two adjacent areas within the former Howland's Burial Ground were excavated, under both formal excavation and, later, watching brief conditions. During the excavation work, one hundred and twenty seven articulated skeletons were exhumed, along with an assemblage of disarticulated remains from the area. A detailed account of the burials, following osteological study, can be found below. The following is a description of the deposits and stratigraphy encountered, and the layout of the burial plots.

Combined, the two areas excavated within the burial ground encompassed an area of 70 square metres, within which 26 burial plots were excavated (Fig. 10). Most burial plots contained multiple graves, burials interred atop each other and occasionally one truncating another. Unfortunately, in most cases, traces of individual grave cuts within each plot were not preserved, having been truncated by the continuous re-digging of graves within a restricted area, throughout the functioning life of the cemetery.

The Archaeology by Phase

Three phases of activity were recorded. Phase 1 refers to the period prior to the establishment of the Howland's Burial Ground, from which a stone drain was the only surviving feature. Phase 2 reflects the period during which the burial ground was in operation. Phase 3 encompasses features \and deposits, including early 20th century truncation that date to after the closure of the burial ground and into the modern period.

Phase 1

The earliest deposit encountered was an undisturbed clay deposit (4172), encountered at a maximum height of approximately 8.65m aOD. This deposit was cut by the construction trench [4170] for a roughly north to south orientated stone drain [4172] bonded with re-deposited clay silt (4171), which was likely derived from context (4169 – see below). The drain was filled by a deposit (4174) of mid-brown clay, containing occasional small stones and charcoal flecks. No dating evidence for the drain was found, but the presence of a red brick within its structure indicates that it is of later post-medieval origin. Surrounding the drain were patches of sandstone stone debris [4173], which no longer retained structural form, although the presence of pink-brown, lime flecked, sandy mortar does suggest a former structure.

Phase 2

The grave plots were cut into a deposit (4169) of dark brown compact but friable clay silt. Although it was the baulk into which graves were excavated, and therefore stratigraphically earlier than the burials themselves, continuous cutting for graves had effectively disturbed the entire deposit. A total of twenty-six burial plots were identified within the excavated areas, each encompassing numerous grave cuts, which it was not possible to individually identify. The

Plate 1 Excavation of grave plots within Howland's Burial Ground.

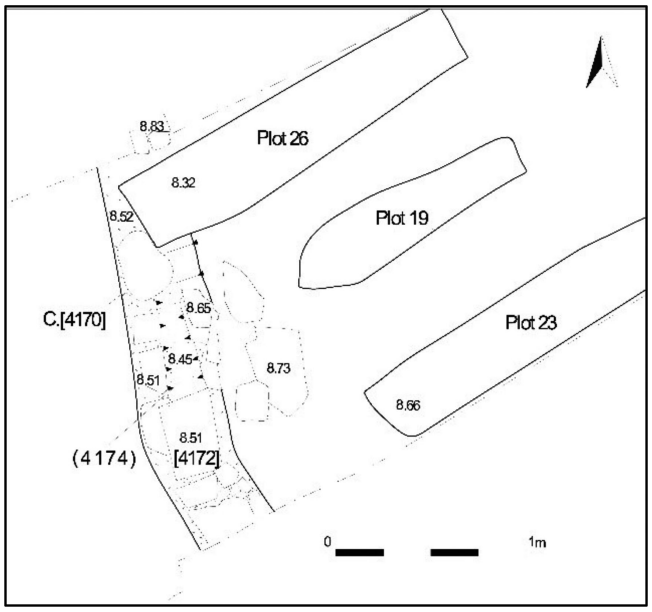

Fig. 9 Plan of Drain (4172).

plots were set out in ordered rows as shown in (Fig. 10) Unlike an ecclesiastical graveyard, the plots were aligned to respect the orientation of the Howland's burial ground, rather than observing the standard east to west alignment observed in most Christian graveyards. In this case, the plots were orientated south-west to north-east. Below is a table recording the skeletons contained within each plot, listed in chronological order within each plot, from the last to the first interment (bracketed numbers shared the same grave).

Phase 3

The grave plots were sealed by a layer of grey-brown compact clay silt (2000), which was very similar to deposit (4169). It contained frequent disarticulated human remains, mortar, charcoal and stone rubble, indicating that it probably reflects modern disturbance of the upper deposits of the burial ground, including the graves. Deposit (2000) also partially sealed a collapsed cellar (contexts [4199] and [4201]) recorded in the western portion of the burial excavation area. The cellar was built from red brick, with a Pennant flagstone floor [4200], which probably belonged to a tenement fronting Orange Street. Unfortunately, it was not considered safe to clean and excavate the cellar in detail.

The Watching Brief

A watching brief was maintained during all intrusive groundworks across the site. During the watching brief, numerous structures were recorded, as summarised below,

Fig. 10 Plan of the burial plots excavated within Howland's Burial Ground.

Plot Number	Skeleton Numbers
1	(SK45, SK46), SK47
2	SK20
3	SK1 (SK2, SK3), SK4, SK5, SK8, SK9, SK10, SK11, SK21
4	SK23, SK22, SK37
5	SK6, SK13, SK14, SK18, (SK26, SK32), SK27, SK31, SK49, SK53, SK60
6	SK28, SK50, SK51, SK58, SK62, SK63
7	SK29, SK30, SK35, (SK40, SK41)
8	SK61
9	SK7, SK12, SK15, SK16, SK17, SK19, SK24, SK25, SK33
10	SK34, SK36, SK39, SK38, SK42, SK43, SK44, SK48, SK52
11	SK54, SK55, (SK56, SK57), SK59
12	SK101, SK102, SK103, SK104, SK105
13	SK106, SK107, SK111, SK116, SK129, SK130
14	SK109, SK113, SK123
15	SK108, SK110, SK112, SK114, SK115, SK118
16	SK120, SK125, SK135, SK136
17	SK117, SK121
18	SK119, SK122, SK124, SK127, SK128, SK131, SK132, SK133, SK137
19	SK126, SK134, SK149, SK152
20	SK138
21	SK141
22	SK139, SK140, SK142
23	SK144, (SK147, SK146), SK150, SK154, SK155, SK159
24	SK143, SK151, SK153, SK156, SK158, SK157, SK162
25	SK148, SK160, SK161
26	SK145

Table 1 List of burial plots with skeleton numbers in order of excavation.

and presented in plan (Fig. 11). Owing to the nature of the groundworks, most features identified were isolated and cannot therefore be accurately presented in a phased manner. However, it is clear that most of the structural features identified relate to the development of the site for housing tenements in the 19th century.

Again, archaeological deposits across the site had been severely truncated by more recent disturbance and by the foundation cuts for the 18th and 19th century buildings on the site.

Depositional Sequence

The natural substrate, consisting of a red sandy silt (3015, 3029, 3040, 3055 and 3083) was recorded intermittently over the site, at a minimum depth of 1.7m below the pre-development ground level. This was overlain at the eastern end of the site by a clean yellowish-orange silt deposit, less than 500mm thick, at a minimum depth of 2m below the pre-development ground surface. This, in turn, was overlain by a thick reddish-brown sandy silt cultivation deposit (3013, 3039, 3044, 3054 and 3090), recorded intermittently over the site at a minimum depth of 1.3m below the pre-development ground surface, ranging between <500mm and 1.1m thick. This cultivation deposit was overlain by a dark grey/black sandy silt loam, likely a garden soil of probable 19th century date (3012, 3019 and 3037), which varied in thickness between 500mm and 800mm.

These earlier deposits had been truncated over much of the site by more modern disturbance in the form of foundation cuts for buildings. Elsewhere, particularly at the north-west edge of the site, a layer of redeposited decayed red sandstone, up to 1.1m thick (3053), was recorded, which may have represented a post-medieval levelling layer.

Structural Features

Along the southern boundary of the site, several north-south aligned walls were recorded, relating to the 19th century properties fronting the former Newfoundland Street. All were of Pennant sandstone rubble construction, with some brick elements, bonded with a grey lime mortar. In a few cases, elements of walling continued to the north, reflecting the alignment of the formerly continuous property boundaries running between Newfoundland

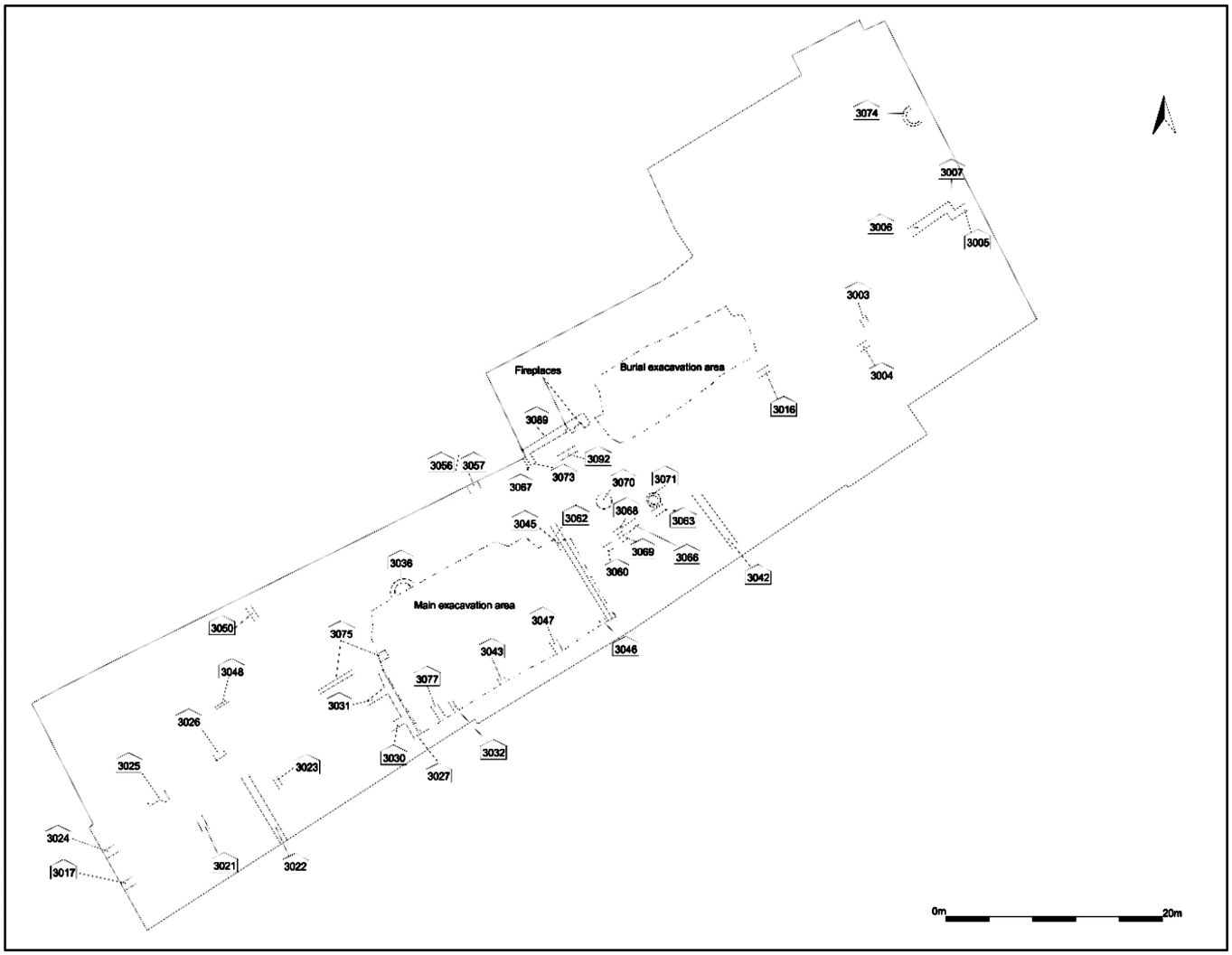

Fig. 11 Features recorded during the watching brief.

Street and Orange Street. In one case, a remnant Pennant sandstone flagged floor was revealed at a depth of some 1.4m below the pre-development ground surface, indicating the location of a former cellar, and further evidence of extensive cellaring was revealed in brick vaulting recorded in one location along the northern edge of the site, and again, in a second example recorded towards the centre of the site, immediately to the north-west of the main excavation area. A smaller number of cross-walls were recorded, likely reflecting rear walls of properties fronting either Newfoundland Street or Orange Street, or possibly delimiting the backyards of these properties.

Towards the eastern edge of the site, excavation revealed three conjoining walls, probably relating to the Sunday School building constructed to the rear of the Gideon Chapel in the late 19th century (between 1855 and 1885) and demolished in 1930 (Young 2016, 9). A further wall, also to the east of the burial ground, likely formed the southern party wall to the small terrace of housing shown on maps of 1828 onwards, and recorded as "Gideon Place" on the Ashmead town plan of 1855 and "Gideon Cottages" on the OS 1:500 plan of 1885 (Bristol Sheet LXXII).

Immediately to the west of the burial excavation area, excavation revealed an 8m length of brick masonry continuing the alignment of the front walls of properties fronting the southern side of Orange Street. The masonry extended up to 2m below the pre-development ground surface, and contained within it three fire-places and at least two returns to the south-east. The fire-places were situated up to 1m below the pre-development ground surface, indicating that the ground level had been substantially raised over this area of the site.

Four wells were recorded, all of Pennant sandstone construction, two with upper courses bonded with grey lime mortar, the remainder apparently of drystone construction. A small number of finds of 19th century date, comprising pottery, glass and a pipeclay doll's arm, were retrieved from the backfill of Well (3036), recorded at the northern edge of the main excavation area (see Finds, below). All four wells were of similar dimensions, measuring 1m internal diameter, with the deepest extending to over 4.6m, revealing standing water at a depth of 3.6m. On the 1828 Ashmead, three out of the four wells are shown located within the back-yards of properties, but by the late 19th century, as shown on the 1:500

town plan (Bristol Sheet LXXII, surveyed 1881, published 1885) it is more than likely that the wells had fallen out of use, as three out of the four are shown subsumed within later development.

A very small assemblage of disarticulated human bone was retrieved during the watching brief from the extreme western edge of the Howland's Burial Ground area.

HUMAN REMAINS FROM HOWLAND'S BURIAL GROUND

By Dr Heidi Dawson-Hobbis and Jocelyn Davis

Introduction

Sixty-three burials (numbered 1–63) were excavated on the site of Howland's Burial Ground, Bristol in 2018, followed by a further sixty-three burials (numbered 101–163) excavated in 2020, as well as a large quantity of disarticulated material from both areas. These were analysed by the authors for this report. The cemetery was in use from AD1804 to AD1854 (Young 2016).

Methods

The information recorded for each individual skeleton included: preservation, age at death, sex of the individual, metric and non-metric data, and evidence for palaeopathology. Each skeleton was recorded on a separate recording form and this information will be entered into a database to be kept with the archive.

Preservation was recorded as very good, good, medium or poor and the percentage of the skeleton present was recorded as <25%, 25–50%, 50–75% or >75% complete.

The sub-adults were aged by dental formation and eruption and epiphyseal fusion. The tooth formation stages of Moorrees *et al*. (1963a, 1963b) as modified by Smith (1991) were used where possible, along with the dental eruption chart of Schour & Massler (1941). Epiphyseal fusion and ossification age stages were obtained from Scheuer & Black (2000). Perinate remains were aged by measuring the long bones (Scheuer & Black 2000). Whereas sub-adult ageing can be fairly precise if the dentition is present, due to the development of the dentition taking place gradually from before birth until late adolescence, the ageing of adults relies on degenerative changes to the skeleton which will be less precise. The methods of ageing used for each adult skeleton (where possible) were age related changes of the pubic symphysis following the Suchey-Brooks method (as cited in Buikstra & Ubelaker 1994), age related changes of the auricular surface of the os coxae using the methods of Meindl and Lovejoy (as cited in Buikstra & Ubelaker 1994) and Chamberlain and Buckberry (2002), cranial suture closure using the method of Meindl & Lovejoy (as cited in Buikstra & Ubelaker 1994) and age related changes to the sternal rib ends using the method of Iscan (as cited in Bass 1995). Each adult skeleton was placed into one of four adult age categories: young adult 18–25 years, young-middle adult 25–35 years; middle aged adult 35–50 years; and old adult 50+ years.

Assigning sex to adult skeletons is relatively straightforward when the most sexually dimorphic elements of the skeleton are present such as the pelvic bones, skull and mandible (Mays 1998; Schwartz 1995; Buikstra & Ubelaker 1994; Brothwell 1981). When these are not present, it is possible to assign sex from measurements taken on certain elements, as size can also be an indicator of sex (Bass 1995; Chamberlain 1994). Sex has been assigned as male or female when the features present are certain, or probable male and probable female where sex is probable but not entirely certain. The definite and probable male and female categories will be pooled for the analysis. None of the sub-adult individuals have been assigned sex, as the techniques being developed need to be tested on other collections of sub-adults of known sex before they can be used with confidence on archaeological material (Mays *et al*. 2007, 92).

Metrical data was recorded for the crania according to Wright (2012) and postcrania according to Buikstra & Ubelaker (1994) and Brothwell (1981). Cranial non-metrics were scored as Berry & Berry (1967) and Hauser & De Stefano (1989) and postcranial non-metrics were scored as Finnegan (1978). Stature estimation was calculated using the prediction equations of Trotter & Glesser as cited in Brothwell & Zakrzewski (2004, 33). These equations should be used with caution, however, as they were devised using American samples.

Each bone was analysed for any evidence of abnormality, and comparisons were made to the literature on palaeopathology. The standard texts referred to were Ortner (2003), Waldron (2021), Aufderheide & Rodriguez-Martin (1998), and Roberts & Manchester (1995). Cribra orbitalia and porotic hyperostosis were scored as Stuart-Macadam (1991). Dental calculus and periodontal disease were scored as Brothwell (1981).

The disarticulated material was recorded on an Excel Spreadsheet with age, sex, pathology, metrics and non-metrics recorded. Each bone was assigned side (where possible) and the portion of the bone present was noted. This was done to ensure that bones could not be overcounted when calculating the Minimum number of Individuals (MNI). This was calculated for each plot using whichever bone (and portion) was most frequently represented, ensuring bones were sided (if from the appendicular skeleton). Age and sex were taken into account and a list of individuals with age and sex determination noted (where possible) was created for each of the plots.

Results

Demography

A total of 126 burials were recorded during the excavation. Two individuals were present in burial 24, and 127 skeletons were recorded altogether, although it is noted that SK38 and SK39 may be the same individual, as may SK111 and SK116.

Seventy-three burials were of sub-adults (57%) and 54 were of adults (43%); Chart 1 illustrates the spread of age

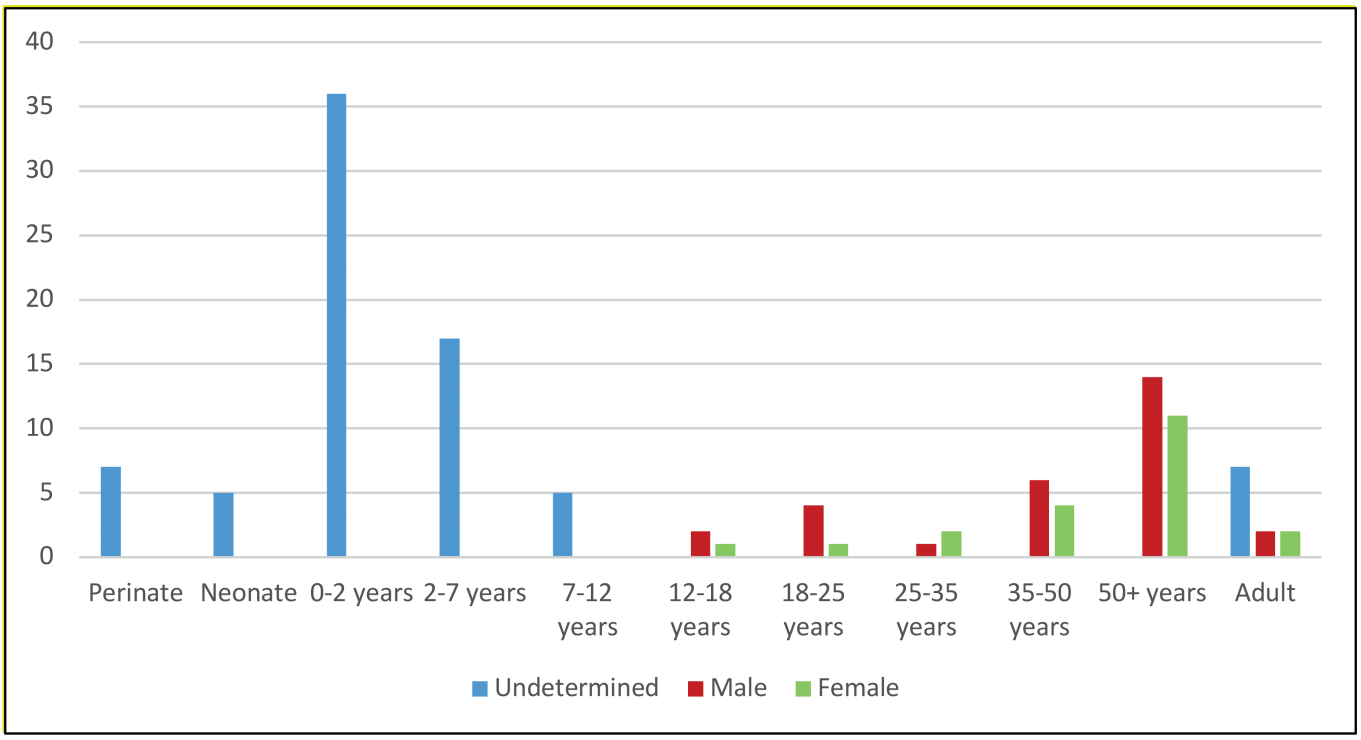

Fig. 12 Age and sex of the individuals.

categories, as well as sex determination for the adults. Across the age ranges there were a total of 29 adults identified as male (M or M?) and 21 as female (F or F?), with 7 adults undetermined.

The completeness of the remains was generally good, with 51% of the burials consisting of at least 75% of the skeleton, and only 14% of the burials having less than 25% of the skeleton present. The preservation of the remains was mostly good, with 72% of the burials classed as very good or good and only 4% as poor.

The disarticulated material gave a minimum number of individuals (MNI) for the site of 204, consisting of 23 perinates/neonates, 36 infants (0–2years), 46 children, 11 adolescents and 88 adults. Sub-adults account for 57%, and adults 43% of the disarticulated bones, which exactly matches the proportions of articulated burials above.

Estimated stature

Of the 54 adult burials, 19 females and 25 males had long bones present which could be measured to estimate stature. The mean female stature was 157cm (5' 2") with a range of 145-165cm (4' 9" to 5' 5"). The mean male stature was 169cm (5' 6.5") with a range of 162-178cm (5' 3" to 5' 10").

PALAEOPATHOLOGY

Dentition

Of seven sub-adults and 28 adults with permanent teeth present, two sub-adults (16–18 years and 14–15 years) and 23 adults had caries. Six of these adults also had a periapical lesion (dental abscess) present. A further 26 adults also showed evidence for some antemortem (before death) tooth loss, with two elderly (50+ years) females having lost all of their teeth during their lifetime with resulting reduction of the alveolar bone of the jaw. Six adults and two sub-adults (16–18 years and 5–7 years) had evidence for enamel hypoplasia on the permanent dentition (23%). Enamel hypoplasia is the term used to describe defects on the teeth caused by a disruption to the growth of the enamel during the period of formation of the tooth. Disruption to the growth of the tooth enamel can be caused by nutritional deficiency, childhood illness (Hillson 2003, 7), and even emotional stress (Roberts & Manchester 1995, 164).

Forty-one sub-adults had deciduous teeth present, and, of these, seven had evidence of caries (dental decay) and 2 of hypoplastic defects; one of the sub-adults with caries (SK58, 3–5 years) also had a periapical lesion present. Pipe facets were present on SK137, SK142 and SK145, all adult males, and SK146, an adult female; a possible pipe facet is present on SK61 (a 50+ male) but the teeth of this individual are generally very worn. Pipe facets have been noted at other 19th century Bristol collections including St Catherine's Court and St George's, Bristol (unpublished data, Dawson-Hobbis).

Metabolic/deficiency disease

Out of 62 skeletons which could be scored, 17 sub-adults and 8 adults had evidence for cribra orbitalia (40%). Cribra orbitalia manifests as porosity within the orbits of the skull and is the result of marrow expansion for increased red blood cell production, associated with iron deficiency anaemia (Lewis 2007, 111) and /or vitamin B12 deficiency Walker *et al*. (2009).

Twelve sub-adult individuals and one adult had evidence for skeletal lesions associated with deficiency of vitamin D (rickets in childhood) and/or vitamin C (scurvy). The middle-aged adult male (SK22) displayed healed rickets in the form of bowing deformities to the leg bones (femora, tibiae, and fibulae), as well as thinning of the bone on the iliac fossa on both sides of the pelvis, and two areas on the occipital bone. This may suggest that, as well as suffering from childhood rickets, he also had a vitamin D deficiency into adulthood (osteomalacia) (Brickley & Ives 2008). Of the sub-adults, SK11 had a bowed left ulna; this individual also had various developmental anomalies including early fusion of the coronal suture on the left side causing asymmetrical bulging to the right side of the skull (which looks enlarged), crowding of the dentition, and spina bifida occulta (unfused neural arches) on the sacrum. The dens of the axis (the second cervical vertebra) is unfused, and an extra articular surface is present on the atlas, with eburnation (polishing where two bones rub against each other due to the breakdown of soft tissue within the joint indicative of osteoarthritis); this could possibly also be a developmental defect, and instability of this region of the neck has been associated with Down syndrome (Ali *et al*. 2006). With Down syndrome, skeletal development is often delayed and individuals often have an increased fracture risk (Lacombe & Roper 2020). Other interpretations could be due to traumatic injury around the age of fusion of this element.

Flaring and expansion of the long bone metaphysis (ends) was seen in SK26 (6 months of age) and this may be associated with rickets. SK53 (*c*.18 months) had expanded and porous cortical bone on all long bones with expanded ends and exposed trabecular structure, expanded ribs with flared ends, both ilia and the mandible were 'fat' looking (consisting of an expanded cortex due to extra layers of bone growth), and the femora, left tibia, and ulnae show bowing deformities indicating rickets. SK110 (*c*.6 months of age) also displayed expanded and porous sternal rib ends, along with linear bone formation and porosity in the left orbit, and some porosity on the occipital and parietal. SK161 had some porosity on the parietal and occipital around sutures, as well as periosteal new bone at the metaphyses of both ulnae and the left tibia (both proximal and distal), and both distal humerii, the bone appearing swollen and enlarged, which could indicate either rickets or scurvy. The other seven sub-adults displayed marked woven bone in the orbits which, alongside porosity of the sphenoid and maxilla in three of these, could indicate scurvy. Of these, SK13 also has 'fat' looking bones including the mandible, humeri, radii and ulnae. The humeri are also bowed, and the distal radius has a flared end, possibly indicating rickets. It is likely that the deficiency diseases are often seen together, as indicators of more general malnutrition. SK102 also had porous new bone on the frontal and parietal, with expanded cortical bone of the humerus and ulna. SK25 has expanded and

Plate 2 SK53 showing evidence of possible rickets.

Joint	Right	Left
Temporomandibular joint (TMJ)	2	2
Shoulder	1	1
Clavicle/manubrium/acromial	6	5
Elbow	2	1
Ulna/radius-carpals	3	1
Carpals-carpals	0	3
Carpals-metacarpals	3	2
Metacarpals-metacarpals	0	1
Metacarpals-phalanx	2	4
Phalanx-phalanx	1	2
Hip	6	5
Knee	3	3
Tibia-talus	0	0
Tarsal-tarsal	0	0
Tarsal-metatarsals	0	0
Metatarsals-phalanx/sesmoid	2	3

Table 2 Joints with osteophytes and porosity and/or eburnation present.

porous cortical bone on all long bones, with expanded ends and exposed trabecular structure, as well as enlargement of the cortical bone and trabecular structure exposure across all areas of the skeleton including the ribs, scapulae and ilia. This may be suggestive of infantile cortical hyperostosis (Caffey's disease) which is an uncommon condition, that comprises of swelling of the soft tissues associated with thickening of the periosteum and profuse new layers of bone formation, which has both its onset and resolution in infancy (Lewis 2007, 143) This could also be a possible secondary diagnosis for SK53.

SK122 exhibits widespread thickening of various bones, including both right and left claviculae, humeri, ulnae and femora, as well as thickening of the diploe on the frontal and parietal bones, with porosity on frontal and parietal endocranial and ectocranial surfaces. The zygomatic bones are also swollen and porous. The left fibula is enlarged at the distal end of the shaft and, where it is broken, the medullary cavity is filled with thickened/sclerotic trabecular bone. The left tibia has some striated bone on the shaft, but otherwise appears normal and quite gracile. The clavicles are slightly thickened, and there is some extra bone growth on the acromion process of the left scapula. This is all suggestive of Paget's disease of bone, a metabolic condition characterised by abnormal and excessive bone remodelling, with prominent cortical thickening and enlargement of bone (Waldron 2021, 195–7). This individual also had some new bone formation on several ribs suggestive of some sort of pulmonary infection (see section on infectious disease).

Joint Disease

Twenty-six adults displayed degenerative joint disease (DJD) associated with the spine, 10 of these having more severe eburnation indicating osteoarthritis. Twelve males over the age of 35 years, seven females over the age of 50 years and one undetermined adult have evidence for osteoarthritis (OA) elsewhere on the skeleton, diagnosed as osteophytes (OP) and porosity both present and/or the presence of eburnation. SK22 (one of the males noted) has osteochondritis dissecans (a detached circular area of bone within the joint) on the right distal humerus. The area has eburnation within it, suggesting the detached portion of bone may have still have been present in the body, causing rubbing of the bone surface. Table 2 shows the number of joints affected from these 26 individuals.

Diffuse idiopathic skeletal hyperostosis (DISH) was seen on four male individuals SK43, SK47, SK142 and SK162 (all aged over 40 years). DISH is an extreme condition of bone forming which is diagnosed in skeletal remains by the fusion of the vertebral column with a flowing 'candlewax' type of bone formation (Roberts & Manchester 2005, 160). This is caused by the ossification of the anterior longitudinal ligament, and tends to be present only on the right side of the vertebral bodies, and is most commonly seen on the thoracic vertebrae. The left side may be spared due to the presence of the aorta descending along the left side of the thoracic vertebrae (Ortner 2003, 559). The intervertebral disk spaces remain normal. Although the presence of 'candlewax' ossification of the spine along with enthesophytes present on other elements of the skeleton is indicative of DISH, a diagnosis for DISH can only be made when at least four contiguous thoracic vertebral bodies are fused together along the right anterior side, and there is the presence of enthesophytes elsewhere on the skeleton (Aufderheide & Rodriguez-Martin 1998, 97; Waldron 2021, 134). Rogers *et al*. (1987, 188) suggest that while in clinical practice the diagnosis of DISH is only made under these circumstances, it is likely that palaeopathologists will be aware of the early changes associated with DISH, and Waldron (2021, 134) suggests a diagnosis of early DISH when fewer than four vertebrae are fused; this is the case for SK43. DISH is a disease often associated with obesity and diabetes, and is most often found in males over 50 years of age (Roberts and Manchester, 2005). A large calcified mass measuring 78.2mm in length was recovered with SK43 and this appears to be a large kidney stone (Morris and Rodgers 1989).

Infectious disease

Evidence for tuberculosis is present on SK137, with complete destruction of the body of the third thoracic vertebra (T3) which was fused to the fourth thoracic vertebra (T4), with the bodies at a marked angle (kyphosis) due to the collapse of the spine. The fifth thoracic vertebra (T5) was also fused to T4 at the inferior/superior articulations. This individual also had enlarged and porous ribs showing expansion of the cancellous bone. Flat plates of dense bone were found with the ribs, which were smooth with small nodular growths protruding from the surface; these are probably calcified pleural tissue (Walker 2012, 67). Although there is periosteal woven and lamelar bone on the left tibia, this may be unrelated, and is classed as non-specific infection. Evidence for tuberculosis was also identified on SK5, with

near complete destruction of the body of the twelfth thoracic vertebra (T12) and some destruction of the eleventh thoracic (T11) and first lumbar vertebrae (L1). T11 is fused to T12 at the inferior/superior articulations, and also show kyphosis. There is some woven bone formation present on the visceral surface of the proximal ends of both the left and right ribs nine and ten, and a lytic (destructive) lesion is present on the superior surface of the proximal end of left rib eleven. Destruction and collapse of the vertebrae can be caused by tuberculosis or Scheuermann's disease (Ortner 2003), but the rib lesions make the diagnosis of tuberculosis more likely. SK17 (18–25 years) has wedge-shaped vertebrae in the thoracic region, and severe Schmorl's nodes indicate Scheuermann's disease (a congenital circulatory disorder) causing kyphosis of the spine and associated degenerative joint disease (DJD) at a young age.

SK155 (18–20 years) has some pathological lesions on the vertebral bodies; the lower six thoracic vertebrae (T6-T12 and the first two lumbar vertebrae (L1-L2) have lytic lesions of varying sizes and depths on the anterior margin of the inferior surface, with T6, T8, T11-12, and all lumbar vertebrae (L1-5) also having lesions on the anterior margin of the superior surface. The position and gross morphology of the lesions were similar to the pathological bone alterations observed in infectious diseases such as tuberculosis and brucellosis; however, slight new bone formation in the area of some of the lesions is a feature of brucellosis (Waldron 2021, 161), and makes this diagnosis more likely. Brucellosis is a disease of animals (usually cattle or goats) that is readily passed to humans by handling or consuming infected blood, meat or milk (ibid.). This individual also has deformation of the left femoral head, with prolific bone formation across the proximal joint surface. The head of the femur has also been shifted forwards and there is slight widening of the neck. The acetabulum (hip joint) appears quite wide, but of normal depth, with slight marginal bone formation. The bone changes caused by both brucellosis and tuberculosis can include degeneration of other joints, especially the hip and knee (Roberts & Manchester 1995, 216), but the flattened 'mushroom' appearance of the femoral head and thickening of the neck is suggestive of Legg-Calve-Perthes disease, caused by a disruption to the blood supply during childhood which leads to an abnormal shape of the femoral head, due to the involvement of fracture to the weakened area. Other possible diagnoses could include disruption to the joint due to trauma (possibly dislocation), and slipped femoral capital epiphysis. The latter tends to show downward displacement of the head of the femur and little extra bone formation,

Plate 3 Kidney stone from SK43.

neither of which apply and therefore rule it out in this case. SK155 also has a cortical defect of the humerus, at the insertion of the pectoralis major muscle.

SK122, in addition to Paget's disease of bone (described above) displayed some new bone formation on the proximal ends of several ribs (four lower left and two lower right), suggestive of some sort of pulmonary infection (e.g. tuberculosis, pneumonia etc.).

Periosteal new bone formation (periostitis) can be an indication of non-specific infection where there is no evidence for trauma. Active woven bone was seen on the tibiae of three adult individuals (SK54, SK55 and SK146), more organised lamellar bone with thickening of the shaft on the tibia of SK51 an elderly (50+ years) female, and porous and striated bone on seven other adults. Of the sub-adults, one individual (SK48) had active woven bone on the right tibia, and six others, all under the age of 7 years, had porous bone on the medial surface of the tibia; this may however be associated with normal growth in young children (Lewis 2007; Dawson 2014). SK15 (around 6 years of age) had a single lesion on the sternal end of the eighth rib, with both destruction and formation of bone. No other pathology was noted. SK16, a female aged 35–50 years, had bone formation suggestive of maxillary sinusitis. This individual had also had a post-mortem autopsy performed (see section on autopsy).

Trauma

Trauma to the skeleton is seen in 14 individuals. Four males have healed fractures to the ribs; ribs 9–11 (SK20 and SK151), rib 9 (SK22) and rib 12 (of 13, SK109). SK20 also has a healed fracture of the proximal left fibula with slight misalignment. Two elderly males (SK142 and SK162) have trauma to the right femoral head/neck area. In the case of SK142, the right femoral head is deformed in shape, with prolific bone formation across the proximal joint surface and considerable widening of the neck. The acetabulum (hip joint) appears quite wide, but of normal depth, with slight marginal bone formation. The joint may have been disrupted, due to trauma (possibly dislocation), with the prolific bone formation across the proximal femur being created to stabilise the joint. The joint shows osteoarthritis in the form of eburnation on the femoral head. SK162 has a fracture to the right femoral neck which has failed to heal (non-union), with the femoral head still present, and with new bone formation and considerable eburnation on the surfaces of the fractured ends, suggesting that the individual had survived for several years after the incident. This individual also had an area of heterotopic ossification on the left femur, probably caused by soft tissue trauma to the quadriceps or tensor muscle.

SK135 (male) has a healed fracture to the right clavicle with considerable misalignment, and healed fracture of the distal left fibula with slight misalignment, and some new bone formation on the distal left tibia. SK63 (male) has a healed fracture to the right distal fibula; there is no misalignment and the tibia appears not to have been involved. SK61 (male) appears to have a crush fracture of the right fifth metacarpal (MC5). A small piece of bone that articulates with MC5 is present and indicates that the finger bones were amputated either in an accident or surgically; the area has healed. No other phalanges are present with this finger and as they are all present for the rest of the hand this also indicates that this finger was lost in an accident. The right fifth proximal phalanx on the foot (toe bone) also appears to have a healed fracture with the bone shortened compared to the left side, as if the bone has impacted; there is also extra bone on the distal end. One female (SK51) has evidence for trauma of the left elbow joint. The olecranon process is completely detached and fully healed, but with some bony lipping around the articular surface. This type of injury is likely to have occurred in childhood and can often occur due to hyperflexion of the joint (Lovell 1997). Among the disarticulated material, an adult humerus from plot 19 was found to have a healed fracture of the distal end, while from plot 16 an adult male femur had evidence of a healed amputation. A disarticulated adult female skull from plot 3 had a possible depressed healed fracture of the right side of the frontal; and there was a well-healed rib fracture from plot 1.

Another condition that deserves a mention in this section on trauma is that of a type of vertebral fracture termed spondylolysis. This is a stress fracture at the site of the upper and lower joint surfaces of the neural arch, almost always in the lumbar region, which is generally considered to be a consequence of repetitive habitual or strenuous movements such as bending or lifting, with contributary environmental or inherited factors (Waldron 2021, 140). The lack of healing (fusion) is thought to be due to the site being continually used (Roberts & Manchester 1995, 78). Spondylolysis of the fifth lumbar vertebra was present in three males of various ages (SK22, SK155 and SK157) and an elderly female (SK62), and of the fourth lumbar vertebra in SK27 (an elderly female), potentially indicating strenuous occupations for both males and females within this cemetery population.

Three elderly females (SK27, SK30 and SK144) and one female aged only as 'adult' (SK121) have morphological changes to the ribs that could suggest corsetry.

Autopsy evidence

A craniotomy had been performed on SK16 (a probable female); this is where the top of the skull is sawn through, so that it can be removed to provide access to the brain. The manubrium (breast bone) of this individual may also have been cut in half, although there is no clear saw-mark, and this may be taphonomic damage. SK22 (a male) has also had a craniotomy, as well as dissection of the spine, where the spinous processes have been cut away and removed to reveal the spinal cord from the fifth cervical vertebrae to the first thoracic (C5-T1). Saw-marks are also present on the fourth cervical vertebrae and from the second to fourth thoracic vertebrae but without removal of the process. This type of procedure is quite rarely found in cemetery collections, with examples seen at Christchurch Spitalfields (Molleson & Cox 1993) and Cross Bones (Brickley *et al*. 1999). This individual, aged at 35–50 years at death, also

had healed rickets, a healed rib fracture, and the sacrum and pelvis were beginning to fuse together at the auricular surface. SK125 (a female) has also had a craniotomy, as well as a transection of the left clavicle, which is suggestive of a thoracotomy (Mitchell et al. 2011, 93), although none of the ribs show cut-marks. A craniotomy had also been performed on SK 159, a sub-adult of approximately 3–4 years. A further craniotomy was also noted on an adult skull among the disarticulated material from plot 22.

Congenital anomalies

The child aged between 8–12 years with a possible case of Down's syndrome (SK11) has been discussed in the metabolic/deficiency disease section, and further research will be carried out, as this would be a rare case from an archaeological collection. Other congenital anomalies noted included lumbarisation of the first sacral vertebra, which was seen in four individuals (SK17, SK21, SK42 and SK146), and sacralisation of the fifth lumbar vertebra in

Plate 4 Evidence of autopsy carried out on SK22.

three individuals (SK2, SK130 and SK150). A supernumeric vertebra was present in SK109, an extra vertebra at either the thoraco-lumbar or lumbo-sacral junction. Six lumbar vertebrae is more common (Waldron, 2021, 146); there is also a 13th rib on the right side, with no costal facet on the 7th cervical vertebra to suggest it is a cervical rib; however, there is also no costal facet on the 1st lumbar vertebra to suggest it could actually be a 13th thoracic. This individual had considerable DJD throughout the spine, with fusion of three cervical and two thoracic vertebrae, as well as severe Schmorl's nodes, especially in the lower thoracic/upper lumbar vertebrae, possibly as a result of the extra vertebra and resulting destabilisation of the vertebral column. There is also evidence for pseudo-articulations on the vertebral spinous processes of the third to sixth lumbar vertebrae, pathognomic of Baastrup's or 'kissing spine' disease, which may also be related, and is a common cause of lower back pain (Waldron, 2021, 142). There is a possible cervical rib present with SK50, but there is no seventh cervical vertebra present to compare.

SK125 displayed a congenital anomaly of the posterior arch of the atlas (C1), failure of posterior midline fusion of the two hemiarches, described as Type A by Currarino et al. (1994, 253). This is the most common type of non-fusion of the atlas, and is often asymptomatic.

From the disarticulated material, of note are a number of bones from a single context (4122; plot 21), which appear to be from a single individual with *osteogenesis imperfecta*. All the bones are much reduced in size and deformed in morphology, with marked bowing deformities of the legs and lower arms, but also deformation of shape to the pelvis and scapulae. The pelvis has a tiny auricular surface which is porous and dense and would suggest an older age adult (who could, however, appear older due to pathology); sex determination is also difficult, as the sciatic notch is quite narrow and more male-looking, but this could be due to deformity of the pelvis.

The deformities, along with the reduction in size stature of this adult individual, would seem to rule out healed rickets. The deformities seen in OI are due to defective formation of collagen and frequent fractures that can occur from infancy. There are several types of this condition: Type I tends to have normal size bones; type II tends to be fatal in infancy; either type III or IV is the most likely diagnosis here, as these forms can cause severe deformity, with dwarfing of bone, with survival to adulthood (Waldron 2021, 272). Again, this would be a rare case from an archaeological assemblage.

Discussion

Osteological evidence

The Howland's Burial Ground assemblage represented a densely used plot, with burials intercutting one another, and bones from one disturbed burial replaced into the backfill of another. Despite this, the preservation and condition of the skeletal remains was mostly good. The assemblage consisted of both sub-adults and adults; however, the proportion of children below the age of 18 was perhaps unusually high, at 57%, in comparison to other urban sites of a similar period (e.g. 42% at St Peter's, Wolverhampton (Adams & Colls, 2007, 81); 30% at St Martin's Birmingham (Brickley et al. 2006, 99); 26% at St Pancras (Emery & Wooldridge, 2011, 112). Infant mortality at the site was very high, with 66% of the juveniles having died before the age of two. This may be a product of the fact that the site was a private burial ground with fees cheaper than those at parish graveyards, and there is the possibility that children were buried here disproportionately; however, the burial register suggests that at least some of the plots were used repeatedly by the same family, burying both children and adults. It may simply reflect very high infant mortality rates within the population using this burial ground. Among the adults, the largest groups represented were middle aged and older individuals. The adults aged 50+ represented 20% of the total assemblage – this is similar to the 17% aged 45+ at St Pancras (op cit, 112). Although more males than females were identified, this may simply be due to the relatively small sample size. Due to poor preservation, it was impossible to determine the age or sex of a number of adults. The average stature for males was 169cm, and for females it was 157cm, very similar to the average heights for this period found at other sites (Galofré-Vilà 2018, 29; Roberts & Cox 2003, 391; Brickley et al. 2006, 101).

Overall, the demographic structure, oral and skeletal health within the assemblage are consistent with a less affluent population. Evidence for a broad variety of pathological conditions was observed, including a high number of interesting pathologies associated with malnutrition, injury and infectious disease. Especially noteworthy is the high prevalence of metabolic diseases, particularly among the juveniles, such as anaemia, rickets and scurvy, which occur as a result of poor diet and living conditions, contributing to a high rate of infant mortality.

Trauma and joint disease, some of the latter secondary to the traumatic conditions, were frequently present. Trauma, affecting more males than females, was most prevalent in the ribs and fibulae. The number of cases exhibiting ante mortem fractures in at least one bone was 13 individuals, which corresponds to 24% of the total adult population assessed (a higher percentage than found in the assemblage at Wolverhampton, which was 19.5% (Adams and Colls, 2007, 79). Five of the 13 exhibited multiple fractures; all of these individuals were male. The study of trauma was characterised by a high frequency of rib fractures – perhaps a consequence of work-related accidents or interpersonal violence. The similarly high rate of spondylolysis may point to strenuous occupations.

Historical records identify numerous infectious diseases with which the population of Bristol would have come into regular contact. Many of the big killers of the time, such as cholera, typhus and scarlet fever, are acute conditions and therefore osteologically invisible. While a total of 23 individuals (18% of the assemblage) displayed the skeletal manifestations of infectious disease, most of these could not be assigned to a specific cause. Two individuals had skeletal changes sufficient to allow a diagnosis of tuberculosis;

this disease spread significantly in the 19th century due to crowded environments and poor living conditions, and became the principal cause of death in the Victorian period (Aufderheide and Rodriguez-Marin 1998, 130). However, two other individuals showed rib lesions suggestive of chronic pulmonary infection which may also represent tuberculosis, or other infections such as chronic bronchitis, which were common in urban environments due to increased air pollution.

FINDS REPORT

By Sarah Newns

Ceramics

A total of 1,111 sherds of pottery were recovered during the various stages of fieldwork at Newfoundland Circus, weighing a total of 5,609g. In addition, a total of 200g of medieval and modern ceramic building material (CBM) was recovered. The assemblage was assessed by ceramics specialist Alejandra Guttierez (see project archive for her full report).

The majority of the pottery consisted of modern, commonly found (post-17th century) domestic wares, mostly earthernwares of the late 17th and 18th centuries, including local glazed wares, tin-glazed wares, North Devon gravel-tempered wares, creamwares, and also porcelain and white stonewares. Nineteenth-century pottery included yellow ware, over-glaze printed porcelain, mauve-printed pearlwares and blue-sponged pearlwares. However, a significant number of sherds (91) were of medieval date – most of these being residual. The medieval sherds largely ranged in date between 12th and 15th centuries, and comprised mainly local wares e.g. Ham Green (BPT 26 &32), Redcliffe ware (BPT 67) and Minety ware (BPT 18), also including imports commonly found on excavations in Bristol, including Saintonge-type green glazed ware (BPT 40) (Ponsford 1988 and 1998). Most of the sherds were from household items, and included one with a hole pierced through the vessel wall. Five sherds of glazed medieval roof tile were also recovered, dating *c*.1250–1500. There were also six sherds of Romano-British date, again, residual within later contexts.

A large salt-glazed stoneware jar, retrieved from the backfill of one of the cellars, bore the legend, "WM RADAMS/MICROBE KILLER", with a transfer-printed image of a suited man threatening a towering skeleton with a club (Plate 5: 1). Radams was a notorious quack doctor, peddling his wares in both Britain and America in the late 19th century, before being exposed for fraud in the American courts (Science Museum Catalogue no. 1985–2030).

Animal Bone

A relatively small assemblage of animal bone was recovered during the project(s), comprising 95 items, weighing a total of 582g. The collection was examined and assessed by specialist Jocelyn Davis (see project archive for her full report). The material was generally in poor condition, often fragmentary and heavily abraded, and as a result only 16% of fragments could be identified to species and skeletal element. Of the fourteen identifiable fragments, sheep/goat bones were common, and it is thought that the assemblage represented waste from both butchery and consumption. There were, in addition, a few cattle and pig bones, and a similarly small number of small mammal (rabbit, rat or mice) bones. By comparison with, for example, the much larger animal bone assemblage retrieved during excavations at nearby Cabot Circus, the marked feature of the present assemblage appears to be the relative lack of cattle bone, which is surprising, given the relative importance of cattle both as a source of protein and for industrial processes (Warman 2013, 269, 279–80).

Glass

A very small glass assemblage was recovered, comprising four near-complete vessels and twenty shards, weighing in total 727g. The collection was examined by the writer. All the glassware was domestic in nature, and dates from the 18th century onwards, including two 19th century pharmaceutical bottles and one miniature scent bottle.

Clay Tobacco Pipe

Ninety-nine fragments of clay tobacco pipe were retrieved, weighing a total of 240g. The assemblage was examined by the writer and includes 71 stem fragments and 28 bowls or bowl fragments, of which six were decorated or bore makers' marks.

Eight of the bowls were diagnostic, five being of 17th/18th century date, and two from the 19th century. Two commonly found Bristol makers were represented – Henry Edwards and Robert Tippett, both prolific pipe manufacturing families of late 17th/mid-18th century date (Jarrett 2013, 221, 224–5; 230–1). It is likely that the majority of the pipe fragments were residual within later contexts.

Metalwork

The metalwork assemblage was examined by the writer and comprised a small number of items of iron and of copper alloy.

The ironwork assemblage comprised three probable nail/bolt fragments, all less than 50mm long, a large spike or bolt, a small fragment of curved iron plate, and a small sub-spherical object, possibly a decorative finial/terminal, possibly from an item of cutlery (for parallels, see PAS database NLM-8836DF and LON-2CDD070). All the ironwork was very heavily corroded, and all the objects were retrieved from contexts of either 19th century or modern date.

Copper alloy objects comprised a small copper alloy mustard spoon, a possible bronze halfpenny (dated 1860 onwards) and a cuff-link of probable later 19th century date, with incised image of running fox, and legend, "TALLI HO" (Cox 1996, 56). See Plate 5: 2).

Other Finds

Approximately 200g of shell was retrieved during the project, mainly comprising oyster shells, but other species represented included winkles, cockles, a possible saltmarsh snail and one cowry shell (Wallace 2012), all recovered from 19th century or later contexts and reflect waste from domestic consumption (Haslam 2013, 317).

Non-metallic small finds comprised a worked bone toothbrush-handle of late 19th /early 20th century date, three buttons: one of worked bone, one of shell, and one of vitreous material, two worked stone marbles, and a pipe-clay doll's arm from a composite fabric and ceramic doll of probable late 19th/early 20th century date (a sideline for pipe-manufacturers faced with a fall in demand for pipes (Higgins 2007, 685, plate 5: 3).

Plate 5 Other finds.
1. Late 19th century stoneware jar (SF 302) marked "RW RADAMS/MICROBE KILLER", retrieved from cellar backfill (3082) (Science Museum cat.no.1985–2030).
2. Hunting-themed copper alloy cuff-link, probable late 19th century date (SF 4) (Context 1125), with running fox and legend, "TALLI HO" (Cox 1996, 56).
3. Pipe-clay doll's arm from composite fabric/pipe-clay doll of probable late 19th/early 20th century date (a sideline for pipe manufacturers faced with a falling demand for pipes (Higgins 2007, 685).

Grave furniture/goods

Coffin furniture forms the largest assemblage of finds retrieved during the project (with the exception of the skeletal material). In total, approximately 1kg of coffin fittings were retrieved, including decorative tin plate fragments, coffin handles or "grips", and nails, screws and tacks. There was also a lesser number of dress items retrieved from within the graves, including buttons, shroud pins and a very small number of jewellery items. Although mostly poorly preserved, this forms a substantial assemblage, and one which bears comparison with the locally excavated contemporary assemblage from St George's Hall, Brandon Hill (Newns 2017), and from published examples such as Christ Church, Spitalfields (Janaway 1993), St George's, Bloomsbury (Boston *et al* 2009), St Pancras, London (Miles 2011), St Marylebone's, Paddington Street (Henderson *et al* 2015), St Marylebone Church, St Marylebone School (Miles *et al* 2008), the Quaker burial ground, Kingston-upon-Thames (Richmond 2007) and burial excavations in Sheffield (Mahoney-Swales *et al* 2011). (Endnote 1)

By this period, in the mid-19th century, the funeral profession was split between numerous professional bodies including undertakers, coffin manufacturers, coffin furnishers etc (Janaway 2013, 94; Miles *et al* 2008, 46–9). The client was left with little individual choice, but was offered sets of grave clothes, coffins and coffin furniture, on a sliding scale proportional to their means (*ibid*.; Hoile 2018, 210–211; 217–8). Where present, the material from the present site would appear to be entirely representative of material from such "sets", and would fall towards the lower end of this scale, in contrast to the more elaborate fittings retrieved from the contemporary burial ground at St George's, Brandon Hill (Potter 2017, 36ff.).

The Assemblage

A total of 126 graves were excavated, many of which were stacked burials, and coffin furniture was retrieved from approximately one quarter of these. It must be noted that this is by no means unusual, and that coffins excavated from e.g "poor ground" graveyards would have had no external metalwork decoration (Hoile 2018, 210–1). Survival was generally poor, as the coffins themselves had generally decayed, and none of the burials were within vaults (in contrast to a number of the St George's burials, which were housed in brick-lined family vaults, which allowed for much greater preservation). The surviving furniture comprised coffin handles ("grips"), decorative plate fragments, and structural fittings i.e. nails, screws and tacks. Dress items comprised copper alloy (shroud) pins, copper alloy button loops (from composite buttons), copper alloy buttons, worked bone buttons and a single gold ear-ring.

a) Coffin furniture

The majority of the furniture retrieved (by weight) consisted of fragments of embossed tin plate, (5,023.5g), which would have decorated the outside of the coffin. Common contemporary motifs were present e.g. angels/cherubs, scrollwork, ropework, stylised foliage and some Latin mottoes (Hoile 2018, 211, 213–5, 218; Boore 1998, 73). (Plate 6). The platework was, in general, very poorly preserved, being largely of iron and heavily corroded. A small number of the fragments showed remnants of black, or occasionally white paint/lacquer (the latter likely associated with juvenile/infant burials (Hoile 2013, 1.1.1).

In contrast to the probable higher status burials of St George's, Brandon Hill, no decorative copper alloy studs ("upholstery pins") (used to secure a decorative fabric covering to the outside of the coffin) were retrieved from the Newfoundland inhumations (e.g. Boston 2009, plate 8.8), and only two fragmentary "depositum plates" (plates of iron or tin bearing the deceased's name and age at death). The lack of such may be a result of differential preservation, relating to ground conditions, but it is also likely an indicator of social standing, as many of the St George's burials were

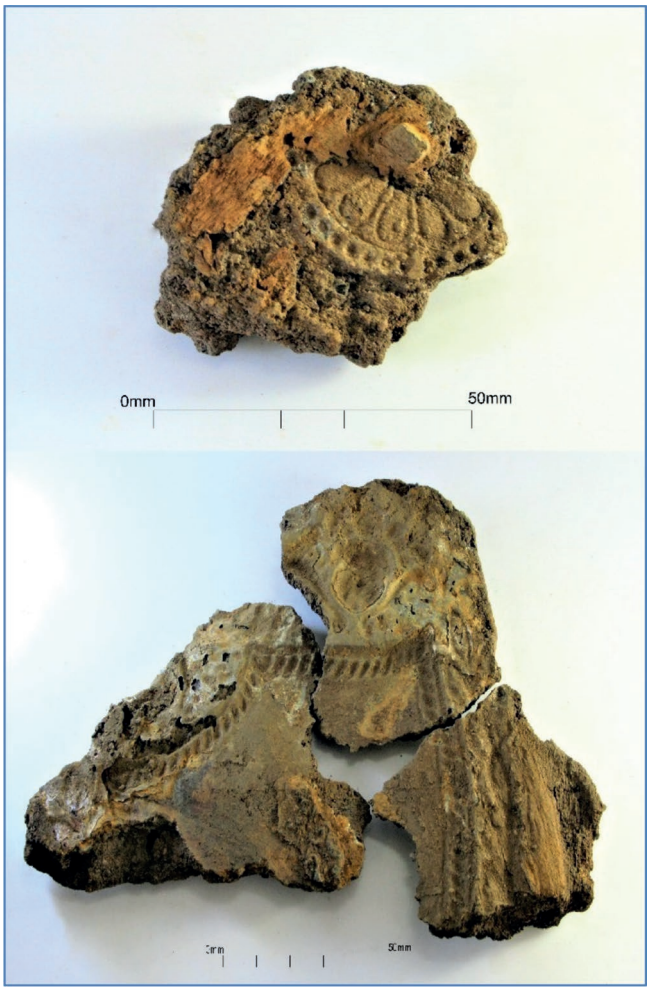

Plate 6 Top, Rosette-style tin-plate decorative grip attachment from coffin of Sk.24 (2038). Bottom: Conjoining tin-plate coffin decorative fragments, showing shield cartouche and possible cherub head, from, Sk.42.

of the wealthier inhabitants of Clifton (Davis in Potter 2017, 28–35), some of whom were buried in family vaults.

Other metalwork elements which may have been present along the sides and at each end of the coffin comprised the "grips" (not carrying handles, as such, but, by the mid-19th century, a largely decorative fitting (Richmond 2018, 126)). The grips fell into two categories, D-shaped and ring-shaped, and were also largely of iron (only four of the ring grips being of copper alloy), and therefore heavily corroded (Plate 7). In total, 32 D-shaped grips were retrieved, and 38 ring grips, weighing a total of 4284.5g. The largest number of D-shaped grips retrieved was from the burial of a juvenile (Sk. 53), which contained six grips in total, probably a complete set, which would have been arranged two down each side of the coffin and one at each end (Richmond 2018, 126). The largest number of ring grips (five) was retrieved from an adult inhumation (Sk. 37). One burial only contained both types of grip, (two of each type) (Sk. 49, a juvenile).

Structural metalwork retrieved comprised some 450 iron nails/nail fragments, from 36 of the total 126 burials, weighing a total of 1,416g. The majority of the nails were heavily corroded, and many retained fragments of adhering

Plate 7 Selection of decorative ring-grips from coffins.

mineralised coffin wood. Where discernible, the form of the nails was typical of that of post-medieval nails i.e. square sectioned shanks and flattened heads. One burial only (Sk. 13, a juvenile) yielded six copper alloy screws.

Provenance of the coffin furniture is likely to be local, or possibly Birmingham, which was a major centre for the industry in the 19th century (Miles *et al* 2008, 56; Newman Brothers archive passim). A brief search through Bristol trade directories revealed one manufacturer of coffin furniture: Capenhurst and Leigh, who were working in Jacob Street between 1825 and 1870 (Matthew's Directory).

b) Dress items

The number of dress items found was relatively few in number, suggesting that the deceased were likely buried in funeral garments (shrouds and/or winding sheets), rather than their own clothes (Janaway 1993, 94–6; 106, endnote 2).

A total of 38 buttons were retrieved, most of which were plain worked bone discs with a central perforation, of a type not generally retrieved from domestic contexts (Plate 8). Eight buttons only were of white metal, copper alloy, or copper alloy/fabric composite, and are likely to derive from the deceased's own clothing. Again, this is in contrast to the St George's Chapel burials, in which a larger number of buttons per burial were retrieved (although still only 316 out of a total of 384 burials), and also included buttons of different materials not found at the present site, including many of a white vitreous material and several of mother of pearl.

A considerable number (50) of copper alloy pins were also retrieved (Plate 9), approximately one quarter of which were located around the head area, and these are likely

Plate 8 Buttons from various contexts.

Plate 9 Examples of copper alloy pins.

related to head coverings worn by the deceased (Janaway 1993, 108–9). Pins found elsewhere with the burials may be related to either funerary clothes/shrouds, or to the various fabric coverings which were used for lining the coffin (Janaway 1993, 95–6).

Only one item of personal jewellery was found, a gold/composite, domed and dimpled ear-ring (SF 420), retrieved from the burial of SK141, who was identified as probably an elderly female (Plate 10).

This is in slight contrast to the St George's Chapel site, where there was a slightly larger (proportionally) number of jewellery items per burial, including both rings and ear-rings, but evidence from other contemporary sites suggests that

Plate 10 Ear-ring from SK14.

burial of the deceased with their own personal items of jewellery was not common practice, even amongst higher status populations (e.g. Boston 2009, 170; Egan 2008, 65; Egan 2011, 179).

c) Small Finds

A very small number of small finds was retrieved during the project – four copper alloy coins or tokens and two dominoes.

The coins comprised one George II/III halfpenny (Spink 2000, 355; 364–5), two further possible halfpennies of the same date, and a smaller unidentifiable coin or token, of probable early 18th/mid-19th century date. In addition, two of the copper alloy buttons (see above) may have been fashioned from coins or tokens.

The two dominoes (Plate 11) are amongst the more interesting finds from the site, and are of probable 18th/19th century date. One is of worked bone, and the other of ivory, and both have a larger number of pits than would be usual for a modern gaming piece (8 and 4; and 9 and 7). Parallels exist on the Portable Antiquities Scheme database (e.g. Kent-57759D; LANCUM-OF9CD7). The game was introduced from France in the late 18th century, and quickly became popular in inns and taverns (first referenced in Sheridan's

Plate 11 Dominoes.

'Dictionary of the English Language', 1797).

It is more than likely that the small finds were chance losses, although deliberate placement within graves cannot be ruled out.

d) General Finds from the Burial area

Fourteen sherds of pottery were recovered during the burial excavations, ranging in date from medieval to 19th century – the majority being commonly found domestic wares of post-medieval date,. Two medieval sherds (Ham Green/ Redcliffe ware and Minety ware) were both residual within grave fills.

Worked bone objects comprised a probable cutlery/tool handle and a toothbrush, both unstratified, and both likely to be of late 19th/early 20th century date.

Pipeclay objects comprised one pipe stem fragment, one complete bowl (BRST 15(a), late 17th-mid-18th century) (Jarrett 2013, 221) and one pipeclay wig-curler, stamped "IB", with three-pointed crown above. Similar examples are known from London and dated c.1800 (Le Cheminant 1978, 192), but it may, instead, be a local product.

CONCLUSIONS

The Excavation Area

The archaeology revealed in both the excavation area and the site-wide watching brief reflects buildings that were developed on the site from the 19th century, which included housing tenements, later industrial buildings and foundations related to the former Gideon Chapel. The recorded excavation phasing corresponds with the changes on the site recorded on cartographic sources from Ashmead's 1828 map onward.

Broadly, this reflects an initial period of residential occupation and the establishment of the Gideon Chapel in 1819, along with the establishment of Howland's Burial Ground. Residential development continued at the site into the later 19th century, with the site fully developed with housing by the time of the 1881 town plan. Residential occupation was, however, short lived, with homes beginning to be replaced by industrial concerns from the early 20th century onward. Demolition of the housing tenements began in the 1950's and by the 1970's none remained, having been replaced with industrial buildings.

No evidence for the Bath to Sea Mills Roman road was identified. The only archaeological deposits that do not reflect *c*19th century urbanisation, were the probable medieval cultivation soils found towards the base of the excavations.

Future Study – Howland's Burial Ground

It is intended that the osteological study presented here will be examined in comparison with an osteological assemblage of over 380 skeletons excavated at St George's Church, Bristol in 2016, which is currently being studied by Avon Archaeology Limited. The results of the combined study will be published as a Council for British Archaeology monograph.

The two sites are both 19th century urban burial grounds, but with distinct characteristics and, based upon initial results, demographics. Whereas the Howland's site was privately owned, the St George's site was a city parish burial ground. It seems likely that the Howland's site served the lower socio-economic strata of the city, whereas St George's displayed a mixed demographic that includes high status individuals buried in privately owned vaults. It is interesting that the burials examined at Howland's are heavily weighted towards children and infants, and it seems fair to speculate that this may correlate with the relative socio-economic status of occupants by comparison with the St George's Chapel individuals. Post-mortem dissection appears to have been more common within the St George's burial ground. This may reflect closer proximity to the Bristol Royal Infirmary, or the slightly later 19th century date of the St George's burial site, when the practice may have become more common. However, it is worth considering the possibility that post-mortem dissection may have been a privately funded activity not available to poorer families.

Whilst the burial ground at St George's would have taken burials largely from within the parish of St Augustine (for which it served as a chapel of ease, and in whose control the section of excavated burial ground remained, even after the establishment of St George's parish), the private nature of the Howland's Burial Ground means that it may well have taken burials from a wide area of the city. Unfortunately, unlike at St George's, none of the burials excavated at Howland's could be identified through surviving ledgers or coffin plate, and it is therefore not possible to compare the two sites in terms of social historical records.

The forthcoming publication will compare the pathologies present in each assemblage, in order to compare and contrast the health and mortality of the two distinct demographics represented. It is hoped that this exercise will enable valuable observations to be made about the lives and health of Bristol's urban population and the relative fortunes of its inhabitants, depending upon socio- economic circumstance.

END NOTES

(1) Further examples of locally recorded burial material, particularly from within vaults, are listed in Boore 1998, 73.

(2) Contrary to what might be expected, evidence from the Spitalfields excavation, London, which yielded significant quantities of preserved textiles, suggests that the deceased being buried in their own clothes was not necessarily a sign of wealth (Janaway 2013, 108). It was also found that the deceased could be buried in any combination of winding sheet, shroud or the deceased's own clothes (ibid.).

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GATCOMBE AND ITS WALLS, A ROMANO-BRITISH SMALL TOWN

By Bev Knott

ABSTRACT

This paper sets out to address some of the challenges in understanding the Roman remains at Gatcombe, North Somerset, specifically the nature of the site and of its encircling walls. Firstly, a general description is offered of the main investigations of Gatcombe, concentrating on the conclusions and issues arising, and covering the excavations of Solley, Cunliffe, and Branigan, and the geophysics surveys of Smisson. There follows a discussion of the issues around the nature of the site, rejecting the proposals of it being a villa or state institution, and arguing it is best described as a small town. Since neither an individual nor the state seem plausible originators of the buildings and wall appearing around the 270s A.D., it is suggested that the local Civitas of the Belgae could be a prime mover together with the resources from euergetism. The state of the third century North Somerset economy is considered in order to estimate if such a major building project makes sense within the pertaining financial environment.

A town requires communications and it is suggested that a major road linked the small Roman town at Sea Mills in Northwest Bristol with the Gatcombe site, and then proceeds to the important roadside settlement discovered recently south of Banwell, in North Somerset. Other roads are proposed.

As for the purpose of the town walls it is suggested no hostile threats had existed in the first two centuries of Roman Britain in this area and that none existed when they were built. The walls could be intended as a statement of the town's importance and prestige, and evidence and examples are produced to support this idea. The wider environment of the building of town walls in Roman Britain is considered in terms of dating and modes of construction.

Lastly it is proposed, faute de mieux, that the excessive width of the walls surrounding the Gatcombe settlement derives from an extravagant idea on the part of the builders with regard to the importance of the place.

So it is concluded that the Gatcombe site represents a small town surrounded by walls intended to demonstrate an extreme vision of its status.

INTRODUCTION

Roman Gatcombe is a challenging enigma. Surrounded by massive walls, it defies straightforward interpretation. Those parts, only a small proportion of the whole site, which have come to light each pose problems. This paper will describe what has been discovered so far and seek to understand the site.

Ashton Watering, an old name for the spot, which survives on ordnance survey maps, is just west of Long Ashton in North Somerset, not far from Bristol. It lies at the bottom of the slope from the Failand plateau. The probably rechanneled small stream of the river Land Yeo flows through its southern part. Some of its area consists of open fields; some is occupied by buildings, principally Gatcombe Court and the complex of structures of Gatcombe Farm. A modern road, the Weston Road, runs east to west through the middle, paralleled just to the south by the deep cutting of the main line of the railway from Bristol to Taunton and the West.

It was in this deep railway cutting, dug out in the 1830s, that the first major discoveries were made, and then mostly destroyed without any proper excavation or recording. What seems to have been unearthed were the vestiges of a high status building. Only a bare account of well-made foundation walls and a few items, now to be found in Bristol Museum, survive. More detail of this discovery will be discussed below.

Summary of Excavations

T W J Solley 1954

The first significant excavation was conducted by T W J Solley in 1954 (Solley 1967). His report tells us, "*a low grass-covered mound flanking the site on the north and east was cut through in a section, and the base of a wall was revealed. This was no less than 15 feet thick, 10 feet of which consisted of a core of large blocks of undressed lias, contained between two walls of which the outer faces only were dressed. The core was packed with red clay and the wall stood directly on solid rock.*"

Five further trenches uncovered lower parts of two buildings together with a number of finds.

Of the coins most were of the fourth century, but in trench D dates ranged from late second century, then third century, to the fourth century. These were found in a rubbish layer, unfortunately not stratified which "*was probably turned over more than once*". Two carved stone slabs were identified as probable table tops.

An introduction by C M Sykes suggests that the southern boundary was possibly destroyed when the railway was built in 1838 to 1839. He concludes, "*It is probable that the full extent of this walled settlement will never be known.*"

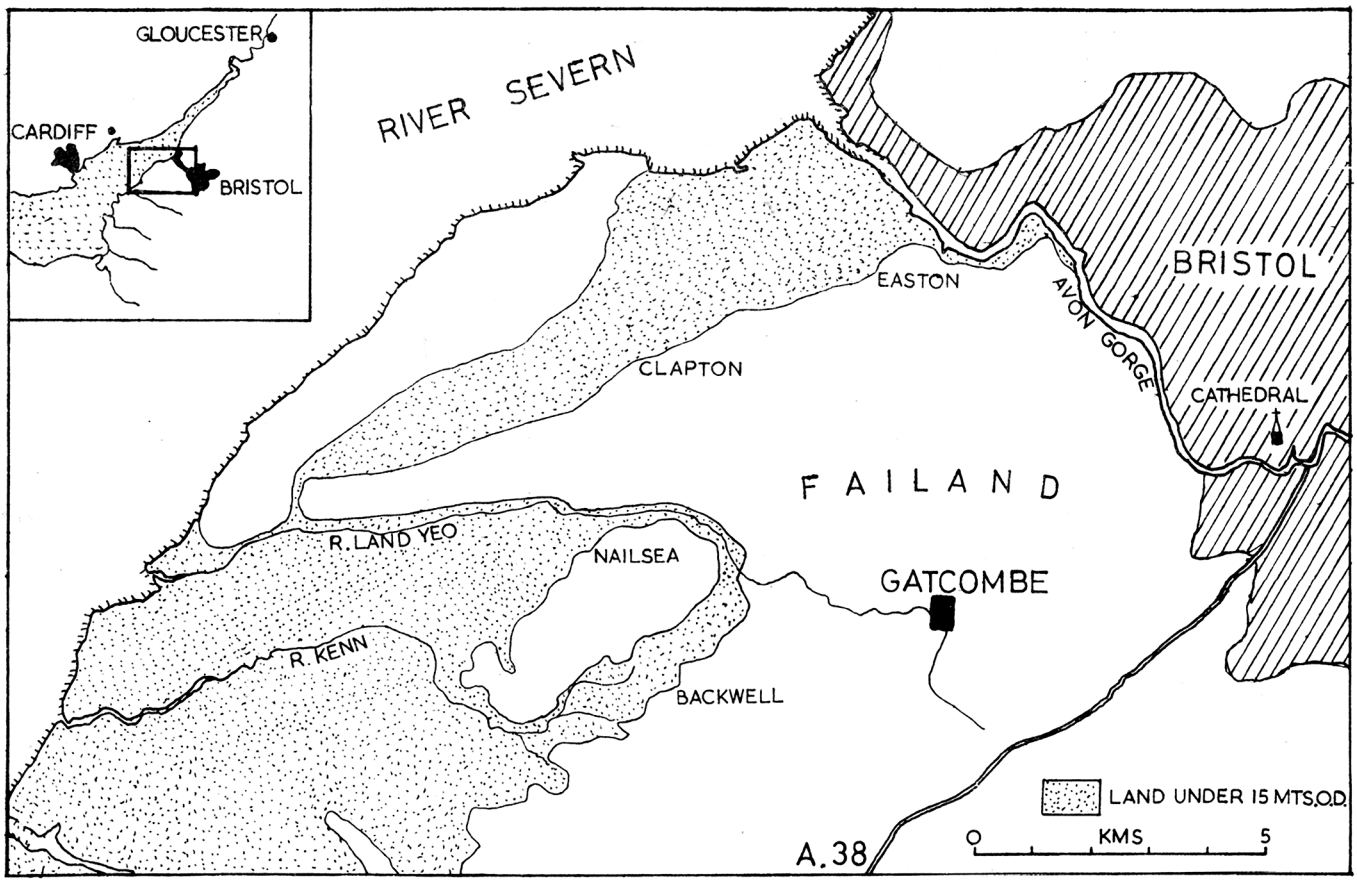

Fig. 1 Location of Gatcombe just to the west of Bristol.

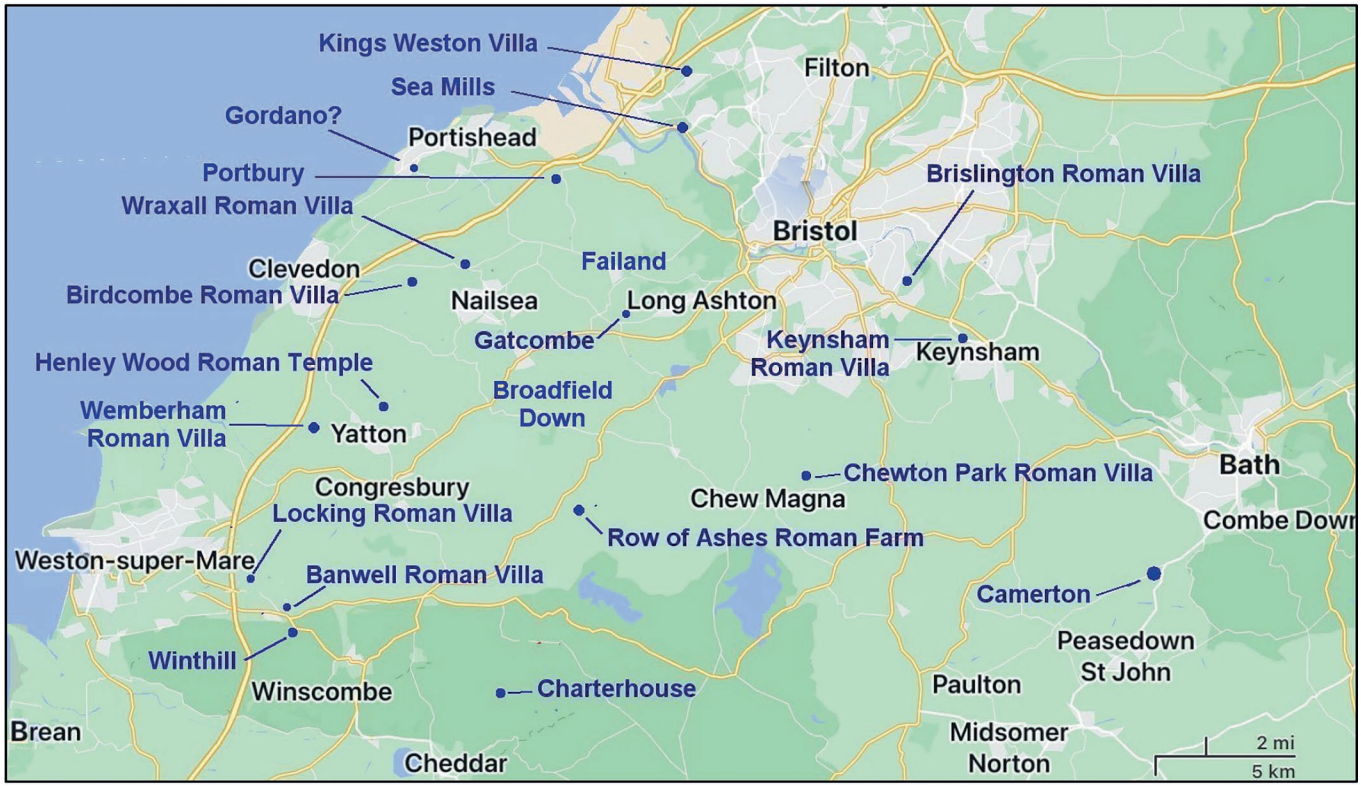

Fig 2 Map showing Gatcombe and other local places mentioned in the paper.

Barry Cunliffe 1965–6

Cunliffe directed two short student digs in the summer of 1965–6. He did not progress a great deal further than Solley but did offer some general ideas about the site (Cunliffe 1967, 158). He stated that *"Occupation began as early as the middle of the first century A.D. and that habitation seems to have continued, if only sporadically, through the second century and into the third century."* He then goes on to speculate: *"That such a limited excavation should chance upon these features may well be an indication that the early settlement was moderately extensive at least by the second century."*

This idea about the extent of the pre-3rd century settlement conflicts with Branigan's view, as will be seen, and of course Branigan's excavations were on a much larger scale. Cunliffe does suggest this earlier settlement might have had a centre elsewhere than in the northern area, which was dug by Brannigan in the 1970s.

With regard to the surrounding wall, ...*"a section was cut across the line of the east wall. It showed that the wall was built on a massive foundation, 16 feet wide, constructed of courses of Carboniferous limestone blocks pitched on end and packed tightly together; the foundation alone was more than 3 feet deep."*

Cunliffe does discuss the surrounding wall and this will be included in the section below about the walls.

Keith Branigan mid-1970s

In the mid-1970s, Brannigan conducted a number of excavations, summed up in his British Archaeological Reports volume (Branigan 1977). This is not the place for a regurgitation of the archaeological data; these can be found in his 1977 BAR volume. Rather, his interpretations and conclusions will be set out and examined.

To begin with, he describes the first four phases, lasting from mid-first century to 270 A.D. A building with dry stone foundations in phase 2 is described as ...*"small and flimsy"*. In phase 1 he talks of an isolated farmstead, and by the end of phase 4 he says, ...*"nothing in the finds to suggest anything more than a small farmhouse"*. Of course he has covered much more ground than Cunliffe, but even so does seem to oppose Cunliffe's postulation of the possibility of ...*"a moderately extensive settlement by the second century"*.

Branigan's main phase.

This phase differed completely from what had gone before. Branigan tells us the defence wall and buildings that arrived in the third quarter of the third century were all part of a single phase of activity, *"Excluding the late occupation of two buildings and the contemporary building of two more, all of the stone buildings belong to a single era; during the main phase no building was abandoned, or demolished and built over by a secondary structure. Furthermore, there is a certain degree of planning in the situations of most buildings inside the walls which does suggest they are all broadly contemporary."*

Coin evidence *"means we have an initial period of building probably spread over about 20 years which saw the erection of most buildings, with a secondary phase about 50 years later. The initial period may have been briefer"*.

The defence wall, built in the same materials and techniques as the buildings inside it, would appear to be contemporary with the initial phase of construction. Cunliffe was able to show the wall was built some time, probably considerable, after the emperor Commodus, whilst excavation in 1967 suggested that the wall was built sometime after the mid-third century (Cunliffe 1967, 130).

With regard to the function of the buildings, some do not provide sufficient evidence for identification, but Branigan proposed the following:

Buildings 1, 3, 12, 16 for which he says ..."their corporate purpose, I suggest, was the processing and storage of grain. Buildings 1 and 3 may have been used primarily for storage purposes and possibly for milling. Buildings 12 and 16 possibly for parching grain, but more likely as simple bakeries using the flour stored and milled in buildings 1 and 3. A final point in support of our identification of this complex of buildings as involved with the storage, milling, and baking of grain/flour is the distribution of quernstones on the site. Of sixteen querns found at Gatcombe, twelve come from this area, including all four complete examples; I suggest this is more than a coincidence."

Building 5: "This building is confidently identified as a smithy".

Building 6: "It is possible that either this building or building 10 served as pottery store".

Building 9: "All its features suggest that this was a cold store which could be kept cold and clean for the storage of perishable food. There is a probability that it was used for the storage of meat in view of its proximity on the same terrace to building 11".

Building 10: possible pottery storage.

Building 11: "Is identified as a slaughterhouse".

Building 17: ..."an industrial function of some sort"

Building 18: "Evidence suggests it is associated with building 5, for which it acted as an outbuilding".

Building 19: "It is suggested that smelting was carried out in and around building 18 and that the iron produced was then used in the two smithies 5 and 19".

Building 21: ..."the furnace against the outside face of its west wall was certainly used for pewter working."

Building 24: "bathhouse is the more likely interpretation".

"The picture which emerges of the excavated buildings at Gatcombe, therefore, is one in which workshops of various kinds predominates."

"One question which arises is that of where the people who worked here lived. There is the possibility that they lived in the buildings in which they worked….It is worth noting that every building which has been substantially excavated at Gatcombe has produced personal belongings and effects, some of which are not the sort of object which would be worn and lost by accident, such as cosmetic equipment, mirrors, needles, and spoons. The spindle whorls found in buildings 5, 16, and 19 are unlikely to represent craft activities associated with the primary functions of the buildings (baking and metalworking), and

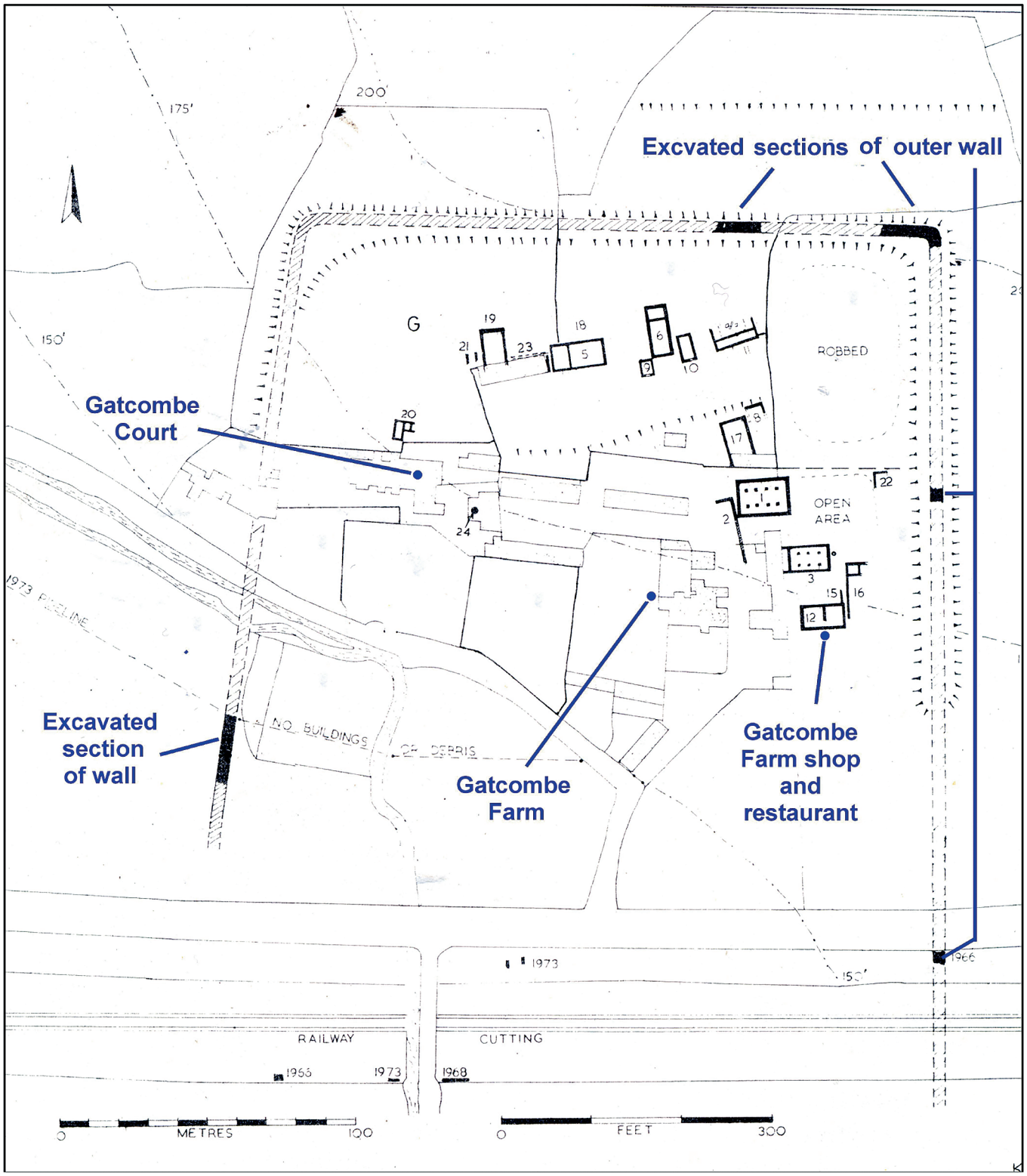

Fig. 3 Branigan's excavations, showing the buildings excavated by him and excavated sections of the walls (reproduced with kind permission of British Archaeological Reports).

glass cosmetic bottles from buildings 5, 12, 16, and 19 are hard to explain if one rejects domestic occupation of these buildings. Furthermore, some of the rings and bangles found in the buildings have diameters suggestive of female, and sometimes child, owners. For the most part we believe the people who work inside Gatcombe lived where they worked".

If these workers were slaves or poor labourers who lacked their own homes, this would emphasise the intensive nature of the industrial activities of Gatcombe.

Branigan continues, *"There seems little doubt (from the coin evidence) that the occupation of all these buildings ceased at approximately or precisely the same time and that this event took place circa 370–380 A.D. The abrupt abandonment of a whole settlement, strongly defended and still apparently in a good state of repair, is an anomaly."* This issue of the apparent sudden end will be further discussed later in the paper.

"The topography of the site and the distribution of known buildings suggest no system of streets which even approximated to a grid system. No metalled road surfaces have been found in excavation, the only two possible roads being cleared rock surfaces west of buildings 6 and 17 most probably along the terraces on which the excavated buildings stood and these east–west tracks may have been linked by a circuit road inside the defences. Certainly excavated and surface indications suggest a clear space immediately inside the defence wall."

"On the upper slopes the layout of buildings was largely determined by the lie of the land. Buildings 21, 19, 5, 6, 10 and 11 stand in a rough line along the edge of a terrace which falls away sharply to the south. Building 9, which was a late addition to this row, projects forward from this line because it was deliberately dug down and back into the terrace. Buildings 17 and 8 suggest a second row on the next terrace down, and building 2 may even represent a third row on a still lower terrace, which might also have housed building 24. In contrast, buildings 1, 3, 12, 16 and 20 do form a group of their own on a different alignment to the buildings on the terraces, and they might be considered to form either a functional or chronological group of their own."

"At the south end of the site (the site that Branigan new) *the pipeline of 1973… full time observation showed that the flat, low-lying ground at the foot of the hill contained no building The Roman level here consisted of 10–15 cm of rich humus, looking rather like fine cultivated soil. Analysis of this soil* (Curtis, L F, as quoted in Branigan 1977, 141) *showed that it was somewhat richer in nutrients than was any similar soil found and sampled to the west of the defence wall in the same area. Further south, beyond this zone there were apparently no buildings."*

Branigan next considers the type of settlement represented by the Gatcombe site. He discounts the ideas of a town or a government facility, and this will be examined later in a general discussion of the function of this whole site. He feels compelled therefore to move to the idea of ...*"an agricultural estate in private ownership, which on this scale must be a villa"*. It needs to be stressed here that he was working on the assumption that the walled area did not extend further south than the railway cutting.

Of course his characterisation of the site as being a villa complex depends on there being a villa building. He proposed that this would have been found in the area whose archaeology was largely destroyed by the digging out of the railway cutting in the 1830s, and although he did not excavate in this area, his BAR volume outlines what was found and recorded at the time. Nothing like a proper archaeological excavation was undertaken then. However a few clues to the building do exist:

"What of the Villa building itself?" he asks.

Firstly, a number of finer stone items, such as baluster bases and blocks of worked Bath Freestone have been built into or found near the latest structures, perhaps during the reoccupation phase. Secondly, in the railway cutting area, ...*"foundations which are extremely well built...and...part of the capitals of two columns"* (Felix Farley, Bristol Journal, February 9, 1839).

"*In 1968, in the railway cutting*, Mr Butler (of Gatcombe Farm) *saw a length of wall of exceptional quality for Gatcombe exposed in a landslip"*.

Finally, there is the tentative testimony of the mosaic panel in Bristol City Museum (catalogue no. 381) the find circumstances of which are discussed later.

Branigan continues, "*The plan of Gatcombe would make sense as a villa compared to villas such as Anthée, Chiragan, Montmaurin, Fliessen (all in Roman Gaul), at least in layout and possibly in size. These are villas which are fronted by a garden and are separated from the business end of the complex by a wall which runs from one side of the complex to the other. There is nothing at Gatcombe to suggest a building on the lavish scale of Chiragan or Montmaurin, although it may belong as an estate in the same category, but Anthée and Fliessen provide good parallels to Gatcombe. At both, the Villa building is well furnished but moderate in size and architectural embellishment. The outer enclosure contains about 20 buildings at Anthée, and possibly 10–15 at Fliessen. The total area enclosed at these two sites, about 11 ha at Anthée and 4 hectares at Fliessen, compares well with Gatcombe at about 9 ha."* (the latter of course is the area known to Branigan).

Next he explores when the Villa might have been built and states that no evidence exists to support a suggestion it was built earlier than the wall and the north-east corner buildings.

Seven hundred and five coins were found at Gatcombe; only 19 were minted before 250 A.D. Several that were found where early phase remains were found amount to 19 coins covering the four phases from about 50 A.D. to about 270 A.D. This supports an interpretation of a small and simple farmstead. The few architectural fragments and the mosaic belong to this period.

Finally, Felix Farley (Bristol Journal, 9 February, 1839) tells us ..."*numerous coins principally of the reign of Constantine have been dug up*." We should note that the evidence from buildings 19 and 3 suggests a date of about 270–80 A.D.

"*The late third century foundation accords well with that obtained from other recently excavated villas in the Canton* (as Branigan calls the Civitas*). Atworth (near Melksham), Chew Park, Frocester Court, Kings Weston, Wraxall, Banwell, and Nunney all seem to be founded in this period. Even more significant, perhaps, is that Kings Weston and Frocester Court provide sufficiently good evidence for construction to be more precisely dated to 270–80 AD*."

Robert Smisson

The Britannia Journal 45 (Smisson R, 2014) contains the report of a geophysical survey by Smisson and Groves of large areas of the Gatcombe location which examined the extent of the walls and the density of occupation. It was established that the walls and therefore the size of the settlement extended well to the south of the railway cutting, and suggested significant amounts of structures in parts not excavated by Branigan. This paper will not discuss the technical geophysics reports (which can be found in Britannia 45) but will concentrate on their interpretation and significance.

The walls

Tracing the south and west walls, the Roman walls appear in Gatcombe Court Upper Orchard as earthworks, verified by excavation.

"*The defensive wall appears here with massive resistivity responses. This may well suggest the wall had stone faces with rubble infill. That the high resistance stonework is over 1m below the ground level explains why this feature does not show up well or clearly on the resistivity survey.*"

The wall could be traced through Gatcombe Court's garden to a location where the garden wall diverges towards the west. The garden level is over 2m above the lane outside, with dense resistivity consistent with masonry, all suggesting the wall survives in the garden, leading down to a west gate on the course of the present road.

The wall could be traced through the car park area (the car park for Gatcombe Court, a field south of the road), where a section of the wall had been exposed during previous excavation, confirming a change of direction at the west gate. This alignment, when extrapolated, would pass under the Birches farmhouse south of the railway. The Birches farmhouse and farm sit on an elevated mound contiguous with and extending south from, the spoil heaps of the railway cutting. A resistivity pseudo–section recorded 9m of the wall south of the farmhouse, indicating that the farm straddles the west wall of the settlement. This demonstrates the west wall extends into the fields south of the railway beyond the accompanying spoil heaps that now host a copse of trees. A further series of resistivity electric pseudo-section showed the same feature extending into the field to the south.

A resistivity survey performed at the location nominally indicated by the magnetometry results to be the south-west corner of the enclosure suggests that the west wall extends south of the power-lines, and turns with a rounded corner towards the east.

To further trace the south wall, a caesium gradiometer was used in the central field south of the railway. The results of two surveys both suggest it continues across the area to the east, with the south gate possibly being the high response feature on the line of the modern public footpath.

Unfortunately, further survey work to fix the location of the wall in the east field was precluded by flooding there at the time of the surveys.

A resistivity survey of the field to the east of the settlement revealed the east wall of the alignment previously established by excavation, together with the route of the road leaving the settlement to the east.

Buildings

"*A resistivity survey of Gatcombe Court upper orchard illustrates the density of occupation within the walls of the Roman settlement.*"

Branigan excavated the eastern part of this Orchard but did not explore the western area. Surface earthworks in the unexplored western area include a hollow-way leading into the settlement from the north-west corner, the walls, and a number of building platforms.

Section number one in the upper Orchard suggests the visible surface hollow-way, located from 4m to 7m along the section, has a standing wall over 1m in height on the eastern side, with a floor abutting it to the east. The west side of the hollow-way also has a wall with possibly 0.5m surviving, and a floor or hard surface, all consistent with this being a building as suggested by the resistivity survey.

To determine how far south the settlement extends, a magnetometry survey was carried out of the western three fields south of the railway. The result, although complicated by a response from power-lines crossing the area, shows intense magnetic response activity in the field bounded to the west and south by the probable alignment of the west and south walls.

The area south of the Gatcombe Court's gardens was surveyed using radiometry and magnetometry. The results suggest that not only had there been intense activity in the area of the car park, inside the settlement, but also outside the walls, with buildings and enclosures indicated in the field to the west called 'How Mead'.

The geophysical survey in the car park field revealed a pattern of rectilinear features on the same alignment as the building in 'How Mead' as well as the hollow-way in the upper Orchard, suspected to be evidence for a road system. The different alignment of the west wall, truncating this system, suggests the wall came later, or to put it another way that the buildings were there before the wall was built.

A watching brief on a sewer crossing this area in the 1920s recorded the trench crossing several building platforms in 'How Mead' and a car park; the latter under a layer of black earth sealed by more than 600mm of river silt (Curtis L F, as cited in Brannigan 1977, 141). It is known that this area has a long history of flooding so it is likely that any archaeology is protected under such silts over the complete area, although this does not inhibit their results from the geophysical survey.

Conclusions of the Geophysics Survey

"*This extensive geophysical survey indicates that instead of the site being a fancy villa, all the evidence suggests that Gatcombe was an Iron Age centre taken over and Romanised, with trade links to Bath and the Severn. It is suggested that Gatcombe was located on a road linking Bath to Portbury or Pill and that the road was south of the river, so that Gatcombe was not in an isolated location away from a known Roman road.*"

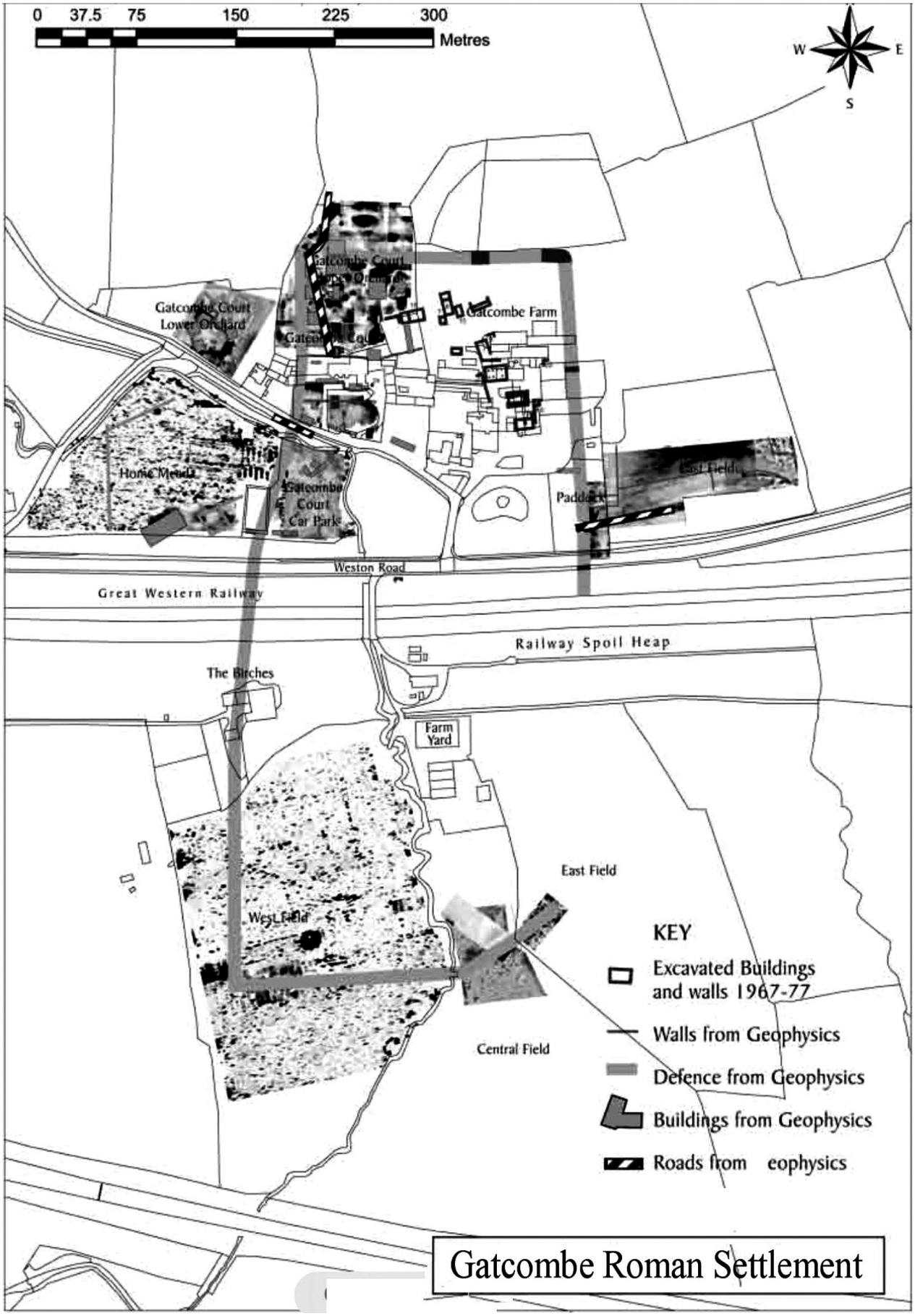

Fig. 4 Smisson's geophysical survey of the whole Gatcombe site (reproduced with kind permission from Cambridge University Press).

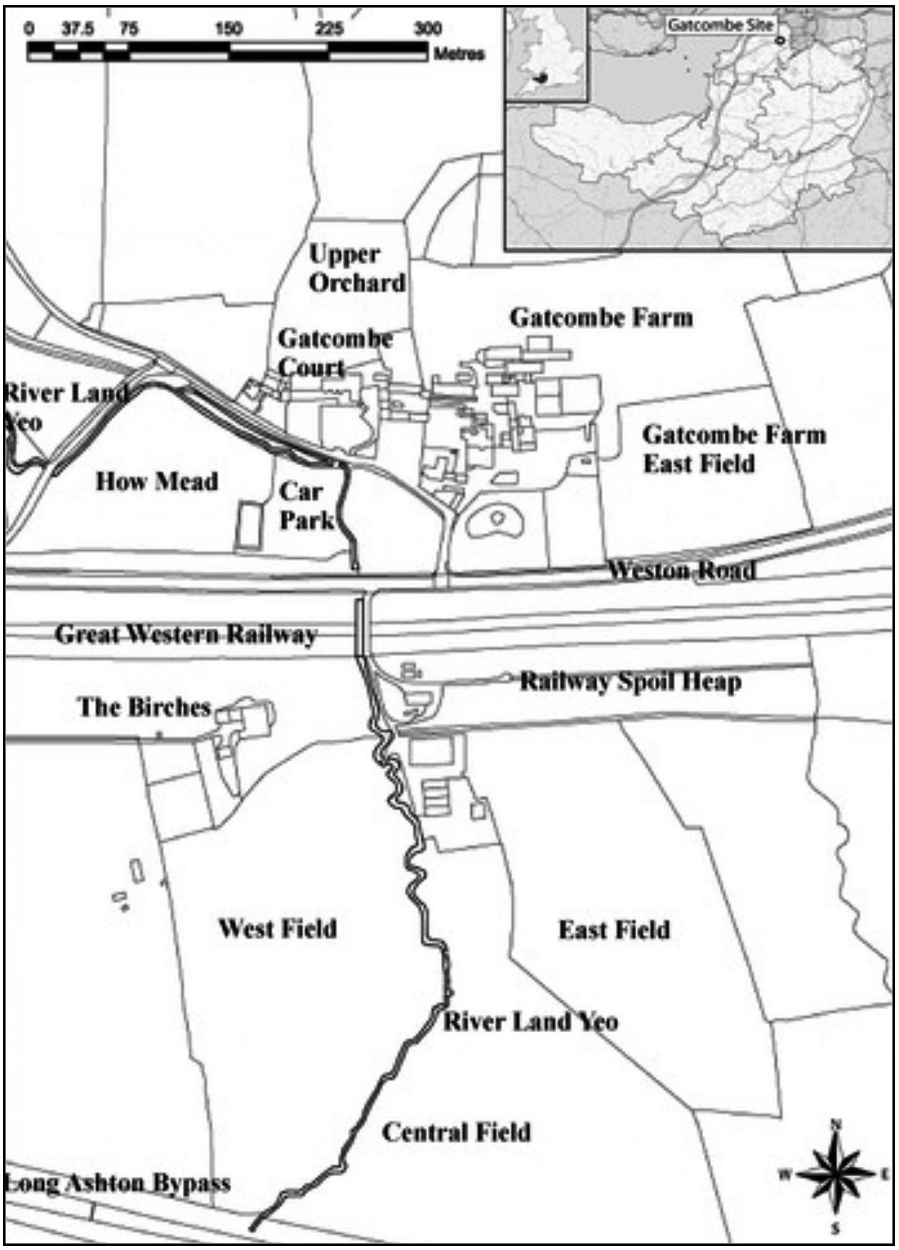

Fig. 5 Smisson's geophysical survey showing areas of the Gatcombe site mentioned in his report (reproduced with kind permission from Cambridge University Press).

Finds of late pre-Roman Iron Age material shows that the site was occupied before the arrival of Rome and although the excavated area of the northern part of the site had been extensively re-developed in the late third century and fourth century, the coin evidence is sufficient to show this was an area occupied through the complete Roman period. Individual coin losses indicate that this was a commercial centre; pottery types demonstrate trade links from a very wide area.

Geophysical evidence of buildings outside the walls suggests Gatcombe once had a fairly dispersed population. The sheer 5m thick size of the walls and the sheer 14.5 ha size of the area enclosed demonstrate, according to Smisson, that this site represents not a grand villa but a small town.

However this interpretation also poses problems and these will be addressed in the next section.

Historic England

The Gatcombe site was listed as a Scheduled Monument in 1955 (SAM No 1011978), with the most recent amendment from 27 November 2014. It is described as *"of national importance"*.

The official list entry accepts the interpretation of the site as *"a Roman small town"*. It says *"Coin and pottery finds are numerous and confirm the site as being commercial with very wide trade links"*.

However, there is a problem in this document. It includes the Smisson and Groves paper of 2014 in its bibliography and quotes from it, e.g. ...*"geophysics surveys in 2006 and*

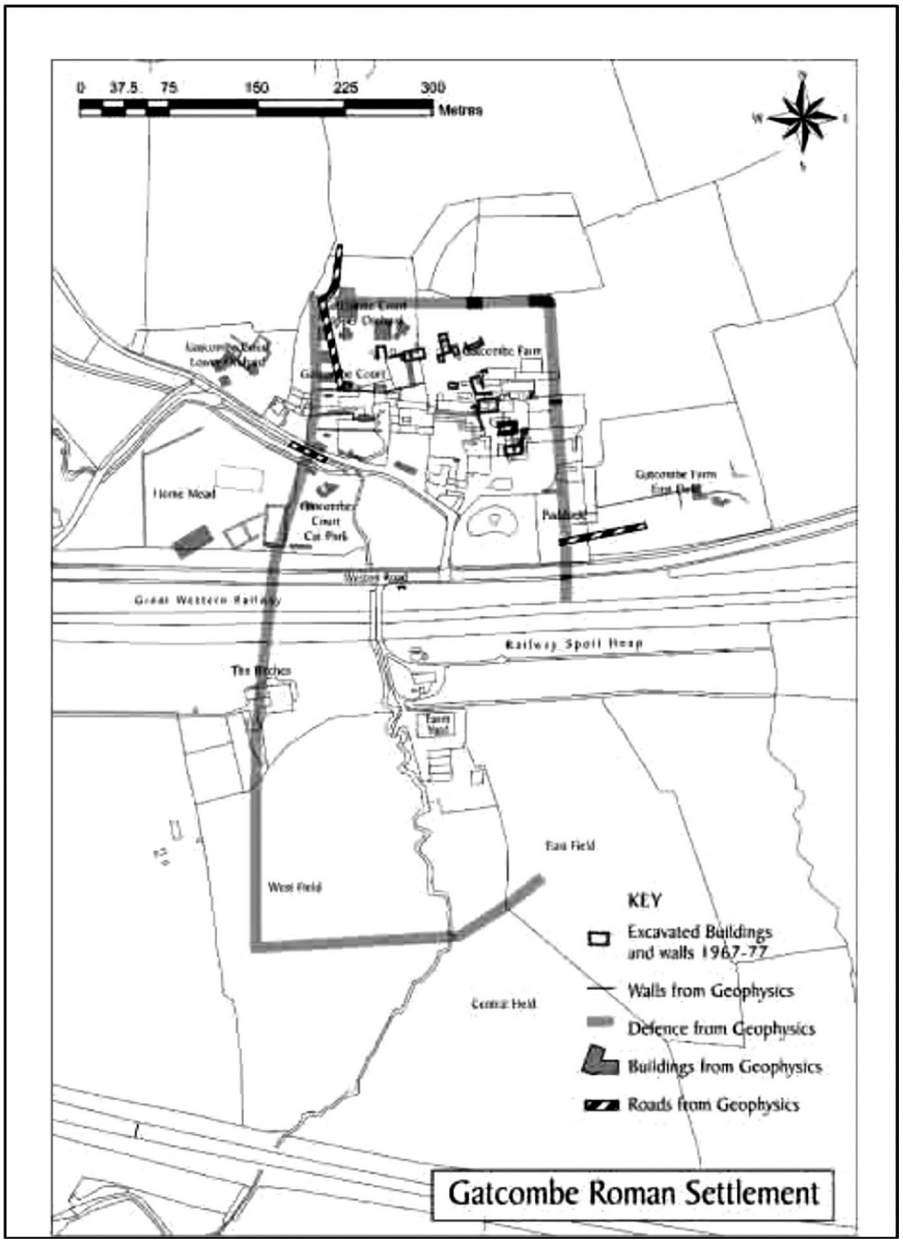

Fig. 6 Interpretations of the geophysics survey (reproduced with kind permission from Cambridge University Press).

2009/10 established there had been a dense population within the settlement walls as well as significant numbers of extramural buildings".And yet it does not mention the very important finding set out in the Smisson and Groves paper that the walled site extends well south of the railway cutting thus making the Gatcombe site one of the largest small towns in Roman Britain. Indeed it states ...*"a wall up to 5m thick was constructed, enclosing an area of 7ha"*. This latter is the area known to Branigan as set out in his 1977 report, and absolutely not the full area of 14,5ha established in the Smisson and Groves Paper of 2014. This obviously needs to be clarified.

Finally, one of the reasons for designation as a Scheduled Monument states, ...*"the site has a high potential for adding to our understanding of the contemporary agricultural and industrial methods and the social and economic changes that the Roman conquest brought"*. This paper's writer couldn't't agree more. It must be remembered that only the north eastern corner area has been excavated, leaving large areas that are not overlain by buildings needing excavation. Only then can we get a true picture of this important site.

A town or not a town?

Branigan considers the possibility of a town being the best identification for the Gatcombe site. He says reasonably enough, that ...*"in examining a Romano British settlement of 15–20 acres (8ha), surrounded by a defence wall and containing a considerable number of stone buildings, it will be a reasonable assumption that we are looking at the remains of a small town"*. (Branigan 2014, 187). He then presents some strong and some not so strong arguments against the identification as a town and these must be addressed.

One of the strongest is the assertion that no major Roman road runs through the site. Branigan more or less accepts the possibility of a few minor roads as postulated by Tratman (Tratman 1962, 150–176). This paper will propose that this objection can be met.

Branigan rightly considers Gatcombe's economic function. He suggests that there is not much of a hinterland for a market centre for it to service, in that *"No more than a handful of villas could have looked to Gatcombe as a market centre and that most villas were better served by Sea Mills, Bath, Camerton, Charterhouse."* No examination is made of need and capacity; a comparison might be made with medieval or very early industrial revolution market centres on these terms. Here are a few quick comments which must suffice for now.

Sea Mills : very little is known of this to provide details of the town. Its main function may well have been restricted to that of a sea crossing link on the strategic route from London to South Wales.

Bath: A major religious and spa centre, probably more concerned with incoming supply for consumption than local distribution.

Camerton: Its character changed to a small industrial centre at about the same time as the Gatcombe main phase, producing for example pewter which seems more likely to have found a market at nearby Bath than in local villages and farmsteads.

Charterhouse: No proper excavating has been carried out here but its position on top of Mendip makes it a very unlikely market centre. As a large mining town, it needed incoming supply for its workers rather than distributing silver and lead ingots to the local district. None of these has much of the character of a market town.

Lack of streets: Branigan describes only basic tracks among the buildings he excavated. Many small towns do have at least some sort of street system, but not all. In any case Smisson's geophysics survey does suggest some possibility of streets and it has to be remembered that only a small area of Gatcombe has been excavated.

Interior layout does not conform to the sites of other small towns: it is not clear what kind of layout could qualify for the use of the word *"conform"*. What is clear from Burnham & Wacher (1990) and from Smith & Fulford (2019) is that the morphology of small towns presents quite a range of variety.

Zoning: Branigan's theoretical site plan comprises three distinct zones, i.e. A high status building or villa, a cultivated strip of ground perhaps a garden and an industrial area at the top of the site. If this is correct, then the identification as a town seems unlikely. However Branigan of course did not know of the area south of the railway, and the area designated as a possible garden and devoid of buildings needs to be examined again, in the light of Smisson's survey. Nevertheless an open area, perhaps cultivated, inside a walled town is also possible.

Certain types of workshop are grouped together: Branigan says ...*"this is a hint of a level of organisation not seen in other Romano British towns"*. Does the word *"hint*" provide sufficient argument here? That even if Branigan's description contains more than a hint, other possible examples of apparently deliberate concentration of individual workings could be found, such as at Holditch, near Newcastle under Lyme. However, this is a subject that could do with more investigation.

No shops: Certainly a feature of a number of Romano-British small towns is the location of buildings along side streets, which contain both workshops and shopfronts, and also often living quarters, arranged in strips leading back from a frontage on the street. This kind of commercial activity is entirely lacking in the buildings excavated by Branigan. The first thing to say is that both Burnham and Wacher and Smith and Fulford stress the considerable variety of the configuration and make up of Romano-British small towns. Secondly, if the buildings and layout suggested by Smisson's geophysics is validated by excavation, then shops might yet be found.

Branigan's final issue with Gatcombe being a town is that ...*"abruptness of foundation and abandonment argues a settlement …determined by the circumstances, demands, or whims of a single authority"*. This argument of Branigan carries weight. Against it are the comments of Cunliffe about indications of a settlement prior to Branigan's buildings and the evidence of Smisson's geophysics. However the former were made after only a small excavation and the latter need to be examined by excavation, which might show that these proposed buildings are subject to the same timescale as those of Branigan. Nevertheless, Branigan's conclusion of a sharply delineated beginning and end needs further consideration, which will be pursued later.

Branigan continues, *"The massive defence wall, the rather spartan buildings and the enormous amount of labour required to build both is perhaps suggestive of government involvement"*. One possibility he says *"is a Fabrica, an arms and munitions factory for the military"*. He then says that there is no evidence in Gatcombe for the production of arms and armour, and indeed that there is not a scrap of evidence from 10 years of excavation at Gatcombe for any military presence on site. And this counts against the site being an agricultural estate run by a procurator for the state, because some military presence is to be expected, as shown on sites which are much smaller (Applebaum 1966, 102). This is equally relevant for the idea that Gatcombe might have been a centre for collecting taxes, and especially the annona for the military. The idea that Gatcombe's function was to act as a collection centre for taxes either via agricultural surplus or other valuables is certainly not sustainable for several reasons. Most importantly such an activity is inconceivable without military and state administrative presence, and there is not the slightest sign of either. In any case, the only evidence we actually have is a significant number of buildings of a light industrial character and a high quality building, that might be a townhouse; any possible taxation centre idea could only be part of the story at best and far from being the town's sole function of a walled area of 14.5 ha with more buildings outside the area.

So, having disposed of the idea that Gatcombe performed some kind of government function, we must return to Smisson's assertion that the site must be a small town rather than a villa. To reprise the argument, no villa site has such thick walls or an area of 14.5 ha. But if 14.5 ha is far too large for a villa, how does it compare with other Romano-British walled small towns? It is in fact among the very largest, with regard to actual area surrounded by walls. Indeed the walled area does not include buildings outside of walls which certainly existed at Gatcombe and very much so in some other cases, especially at Water Newton. To add to this is the assertion of this paper that a road did connect Gatcombe with Sea Mills to the north-east and with Winthill in the Southwest; this will be developed later.

However if it is to be accepted as a small town, there is still the possibility that small walled towns in general were developed or at least promoted as a matter of state strategy.

Smith and Fulford (2019, 139) provide a map showing that if a 30 km radius circle is drawn around the major cities and walled small towns, pretty much all of southern England and the Midlands are covered. Presumably this is to suggest a system of mutually supporting security but no argument is developed to demonstrate a centrally directed system. It is noticeable, and remarked upon by the authors, that the most densely covered area is, as noted above, the central area of Britannia. This is mostly the area at least risk and also the most prosperous. The north where most trouble was to be expected has much less dense cover. The authors note that the reasons why particular settlements became defended, i.e. acquired walls, were undoubtedly diverse and complex as reflected in their varied scales, methods of construction and chronologies. This variety is very marked and seems very unlikely to represent overall state strategy. If this diversity is analysed, the unlikeliness of a centrally directed policy becomes even more pronounced.

Firstly "The Small Towns of Britain" (Burnham & Wacher 1990) divides them up into broad categories:

- potential cities, such as Carlisle and Water Newton,
- minor towns, such as Catterick and Irchester,
- religious, such as Bath and Nettleton,
- industrial, such as Charterhouse and Holditch,
- minor defended settlements, such as Ancaster, Wall,
- Undefended settlements, such as Camerton, Staines.

But fitting sites neatly into these categories is not always easy, e.g. Water Newton is a major industrial site as is Camerton on a smaller scale, the former of which has a town wall while the latter does not. And an important function of Catterick was as a military supply node and so forth.

Next the sheer range of shapes and sizes argue against a central imposition or guided direction, as is seen in the relative uniformity of public buildings, e.g. forums or basilicas. Perhaps the most telling point is the chaotic profusion of the actual defensive structures: thickness of walls, walls which are backed by ramparts or not, towers which are square, or round, regularly or irregularly spaced, or more like bastions, or non-existent; gateways of different designs and positions in the wall. Contrast this with the near uniformity of design of military installations and the difference in function is clear. This is not surprising since there is little or no trace of the military in the small towns.

The final argument against government involvement in the construction of small towns' walls is the huge range of time over which they were built. The first ones were built around 200 A.D. and the last about 360 A.D.(Smith & Fulford 2019, 135). No imperial policy could be steadily followed coherently over such a passage of time. Circumstances, personalities, threats, capacities, ideas were in constant flux. As Esmonde Cleary says,"*The wide date ranges argues against a response to a crisis (i.e. a military threat) being a major cause of construction"* (Cleary 2019, 77–78) and so*" the conclusion therefore to be arrived is at that the central state was not the originating driver for the small towns acquiring walls is clear"*.

To return to Branigan's analysis, the evidence presented by the *archaeology ..."argues a settlement…determined by the circumstances, demands, or whims of a single authority"* (Branigan1977, 188). Having decided that the single authority was not that of the central state, he proposed that it must by elimination be an agricultural estate in private ownership, that is, some kind of Villa. However, this solution is not credible to the writer of this paper for reasons given above and he suggests the following idea: a third possibility of a single authority is now proposed, which will address the various diversities discussed above, that is to say, the local Civitas.

Civitas

"Civitas is a term of Roman administrative law referring, like the Greek polis, to any freestanding community, and specifically in the imperial period, to the lowest grade of autonomous member–community of the cellular provincial empire.

In areas of the empire newly under Roman rule (as frequently in Gaul, Britain, Spain, and Africa in the early Empire) such a Civitas formed from a local ethnic or social unit, had a citizenry, council, and magistrates (executive officers, not legal officials), and a set of procedural rules adaptable to local custom. In many cases there was also encouragement to form a city to provide a physical setting for the new institutions. The Civitas could be relied on to carry out the census and collect taxes, and its officials became the connection with the representatives of the Roman res publica, i.e. the central state, such as governors and procurators" (Purcell 2015).

Gatcombe was in the Civitas of the Belgae, an administrative district stretching from Hampshire to the Bristol Channel, with its capital at Winchester (Venta Belgarum). That this local council might want to promote or organise the development of Gatcombe is entirely a matter for speculation, as are the ideas of the site being a super villa or a government institution. However if it is accepted that Gatcombe has some of the characteristics of a small town and so might be included in the category of the small towns of Roman Britain, so it can be included in the discussion above

about the variety of types and functions and chronologies of these towns. It is clear from this discussion that they arose organically responding spontaneously to local needs and stimuli, and that the local Civitas could be involved in this process.

Did the Civitas have the power to initiate such development? Examples of Civitas activities are not easy to come by, so a few will have to suffice.

A late fourth century shipwreck off the coast of Armorica in Northwest France contained lead ingots some of which were stamped with the names of the Iceni and the Brigantes, which surely designate those two Civitas areas, apparently showing they took part in trading and perhaps in mining (L'Hour 1987, 113–131).

As another example, members of the Council ratified (ex decreto Decurionum , *"by decree of the Decurions"*) the expenditure of funds donated by an individual for the construction of 3 miles of road, showing that the Civitas could be involved in road building (ILS 5878.This inscription not from Britain).

Also there are strong indications that the local authorities were responsible for law and order, even for the suppression of bandit gangs. In the year 180 AD the Emperor Commodus publicly thanked the council (the local senate or Ordo whose members possessed the title of Decurions and the people of the town of Bubon in North West Lycia, for the zeal and energy with which they had hunted down, attacked, and defeated local bandits, taking some prisoner and killing others (Schindler 1972, 11–23).

Founding new towns or developing existing ones was common in the Hellenistic and Roman eras, while the Greeks created new towns as colonies, the medieval period saw new towns such as Alresford in Hampshire, and today new urban entities such as Milton Keynes have been planned and built on new sites. If not a villa or a government entity, then only the Civitas has the heft.

Third century North Somerset economy

Was there enough prosperity in this part of the Civitas of the Belgae to sustain the huge investment of labour and materials to build Gatcombe? Unsurprisingly, no records survive of economic activity in what was to be northern Somerset; everything perished in the wreck of Empire. So we will have to take as a proxy the archaeological evidence from that period, i.e. the second half of the third century, to see if they give us any pointers.

Firstly, the villas: ..."*the late third century foundation date for Gatcombe accords well for recently excavated villas in the canton of the western Belgae: Atworth, Chew Park, Frocester Court, Kings Weston, Wraxall, Banwell, and Nunney all seem to be founded in this period.*" (Branigan 1977, 40–1) and ..."even more significant perhaps is that Kings Weston and Frocester Court provide sufficiently good evidence to allow their construction to be placed more precisely at 270–280 A.D.." (Branigan 1977, 192).

Other local villas and high status buildings have been dated to this period: Wemberham, Gordano, Keynsham, Locking, Birdcombe Court, and Brislington. Altogether an explosion of elite building occurred. The economics behind this are obscure, but the manifestation is clear.

Not many farmsteads are known in any detail near Gatcombe, but 8 miles away to the south an excavated example tells the same story as the villas. Its main period, sporting sub-rectangular buildings, starts from about 270–280, so fitting in with the same date trend of villas, and of course Gatcombe (Fowler 1968).

The small town of Sea Mills has not seen large-scale excavation but the excavation of 1965–8 revealed buildings which acquired stone reconstruction in the third and fourth century (Ellis 1987, 15–18).

Local temples also fit into this trend. Pagans Hill is given an earliest possible date of 268 A.D.(Rahtz 1989), and Henley Wood's major phase 3 construction from 270–290 AD (Greenfield 1996).

All this building activity must have meant boom time for construction industries, especially quarrying and also fabrication of building materials, not just stone masonry but many others such as tiles production, mosaicists, furniture makers and not least of all transportation. Stone also supported agriculture; petrological analysis has identified three main sources of Old Red Sandstone (Forest of Dean, Bristol area, Mendips) that was used extensively for quern production from which examples have been found across large parts of South Wales and central and southern England (Shaffrey 2016, 199).

Salt production represented a major industry in the region during this period: ..."*evidence… would suggest that the dominant period of salt production in this area occurred during the mid to late Roman period, when it may have become one of the major producers, coinciding with the floruit of late Roman settlement in the west of England*" (Smith 2017, 212).

Iron production is evident in the North Bristol coalfields, parts of North Somerset, and Mendip. Ore extraction occurred on Broadfield Down, as well as smelting and smithing at Gatcombe itself (*op. c*it. 179).

There were a number of sites engaged in copper alloy working but perhaps not making a major contribution to the local economy (*op. cit,* 197)

Another relatively small industry in volume but probably not small in terms of value involved pewter production; evidence for this exists at Gatcombe itself. *"Most manufacturing sites have been located in the west country, with particular concentration around Bath* (Smith 2017, 197). *"The major expansion of pewter production during the third and fourth century was due to the much greater accessibility of tin"* (Lee, 2009, in Smith 2017,197). There was even some tin working locally although on a small scale at the late farmstead on Kenn Moor (Smith 2017, 197).

Pottery production at Congresbury was important locally although not comparable in reach or volume or quality to the great centres such as the Nene Valley, south Dorset, or Oxfordshire. Its range of 10 different types represents a level of quality above coarsewares for menial tasks but not of a high grade, with very little decoration. Nevertheless significant quantities have turned up at many local sites

including Gatcombe, extending over about 50 miles from north-west Somerset to north Bristol.

Lead on Mendip had been of major supra-regional importance. However although production may have continued until the fourth century, it was less extensive than before (*op.cit*. 192). Nevertheless it will still have made a contribution to the North Somerset economy.

All in all, the economy of the region around Gatcombe seems to have been particularly vibrant in the second half of the third century and probably for the period leading up to it. Major expenditure of resources at Gatcombe in this period seems in tune with the times.

Roads

One of the objections raised by Branigan against the idea of Gatcombe being a town was that there were no roads, maybe some tracks, but no important road. This is a critical objection and must be met. In this writer's paper in BAA 28 (Knott 2021, 1–25) he proposed and detailed a number of roads leading to Gatcombe, especially one coming from Sea Mills and proceeding onwards to Winthill, where an important roadside settlement has recently been discovered (Knott 2021, 1–25).

These three settlements must be linked but there are only two pieces of hard archaeological evidence: in the Sea Mills to Gatcombe stretch there is one short length of excavated road at Abbots Leigh, and in the Gatcombe to Winthill stretch another short length in the grounds of Iwood Manor which shows up in a geophysics survey. Apart from these two items, there is a range of indications, some pretty strong, others only quite strong. A number of sections show no clues at all. For full details and discussion of the whole proposed route from Sea Mills to Gatcombe to Winthill, see Knott 2021.

The proposed route has much to commend it but more hard evidence would be helpful. So this goes some way, indeed quite a long way, to dismissing the claim of Gatcombe's isolation.

There are other possibilities. A probable Romanised trackway lies along the crest of the Tickenham ridge (Knott 2021, 21–22). Also an entirely undiscovered route ought to proceed along the south side of the river Avon to the small settlement at Somerdale, Keynsham, and thence to Bath, but this of course is an entirely circular proposition– if Gatcombe is a town then it must have a road to another settlement, and so if a road can be envisaged then Gatcombe must be a town.

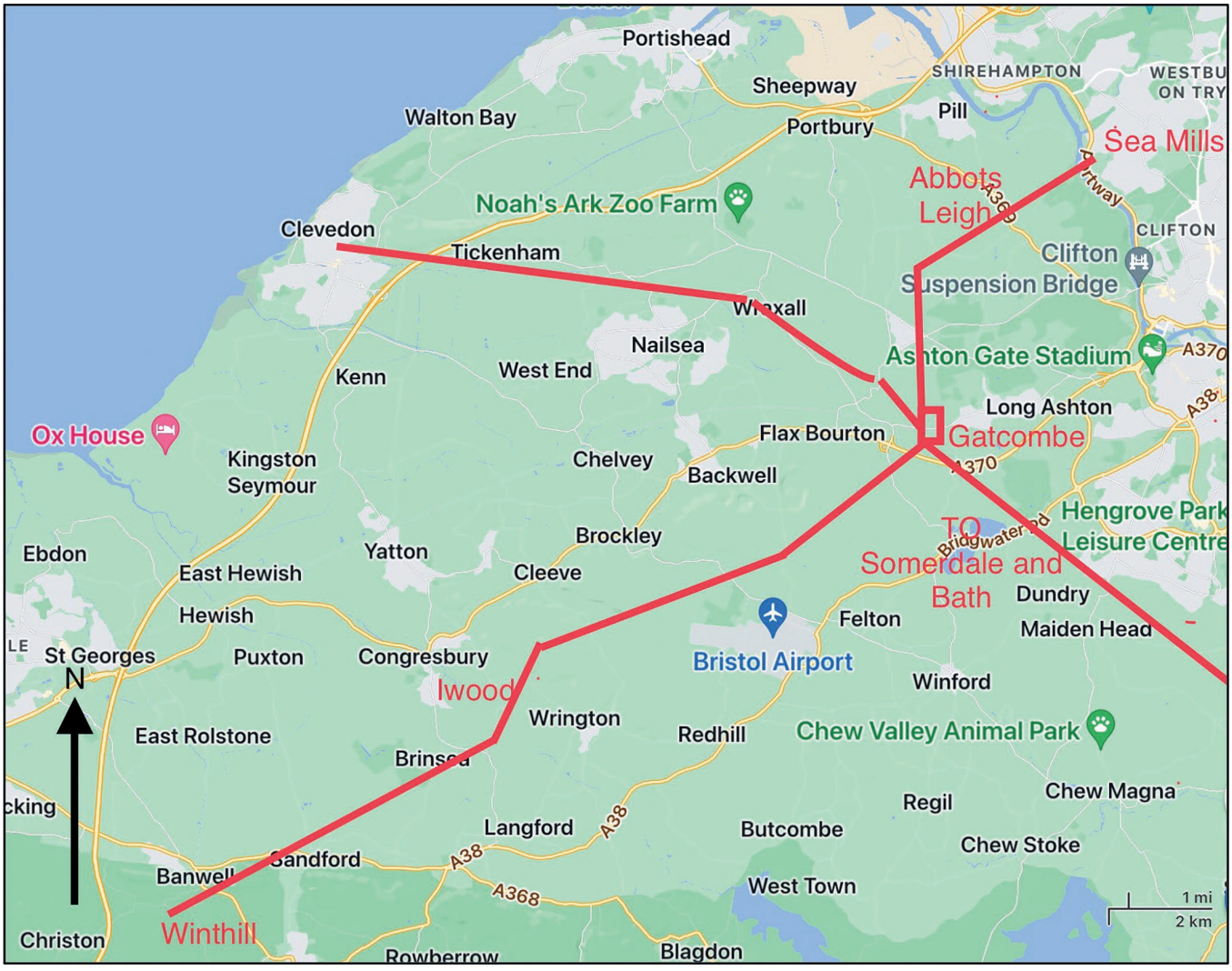

Fig. 7 Proposed roads from Gatcombe.

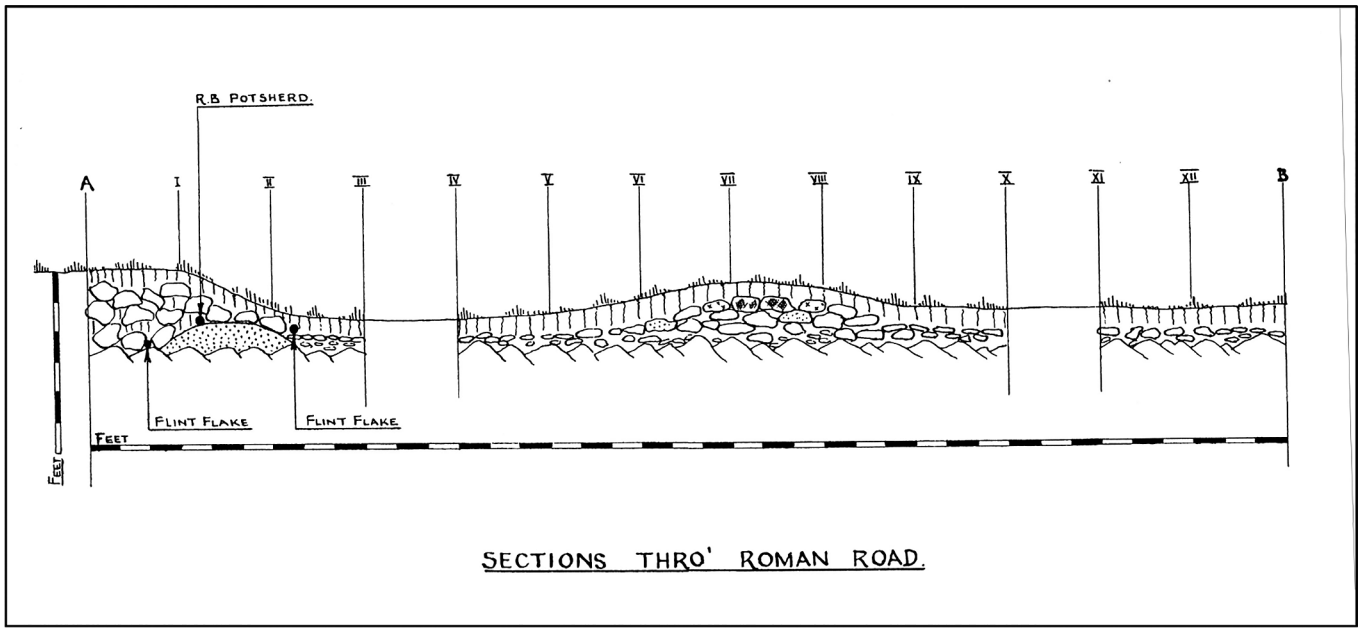

Fig. 8 Section across the Roman road from Gatcombe to Sea Mills excavated at Abbot's Leigh (Gardner 1998).

There are other theoretical proposed routes, some parts examined, but much remains to be done. Nevertheless there is confidence that Gatcombe does fit into the Roman road network.

The purpose of the walls

Before discussing the purpose of the walls surrounding the settlement of Gatcombe, it is necessary to see what the two main excavators of the site have to say.

First of all, Cunliffe (1965/66, 130) tells us ..."in 1965 a section was cut across the line of the east wall, represented now by a sizeable ridge of grass-covered rubble. It showed that the wall was built on a massive foundation, 16 feet wide, constructed of courses of Carboniferous limestone blocks pitched on end and packed tightly together; the foundation alone was more than 3 feet deep. Of the superstructure of the wall only the front facing survived, the rest having been robbed; sufficient remained, however, to show that this outer "facing wall" was built of coursed Lias limestone blocks, reducing in width by two offsets, its inner side being brought to a rough but reasonably regular finish. Presumably the inner "facing wall" would have been similar in structure and the space between the two filled with pitched rubble: this at least was the method used in the construction of the better-preserved north wall.

The wall had been built on land which sloped down slightly to the west. This meant that although the top of the footings on the outside was level with the contemporary surface, inside the footings projected almost a foot above ground. To protect them from weathering they were subsequently covered, to a depth of almost 2 feet, by a spoil dug from the foundation trench. The redeposited marl was as might be expected, almost barren of finds, but from the underlying old ground-surface came a coin of Commodus (A.D.186–192) and a sherd of late second-early third century colour-coated beaker, showing that the erection of the wall in all probability post-dated the early third century. No further dating evidence was obtained.

Although the excavation extended for a distance of 12 feet in front of the wall, no ditch was found. Surface indications however suggest the existence of a wide flat ditch, as was the fashion in fourth-century defensive works, lying some way in front of the wall. It is hoped that the future excavations will examine this problem.

No trace of bastions is evident, but extensive robbing may account for this."

Next, Branigan (1977, 50) says that… "in How Mead (see Fig.5) an area 9m x 4. 5m was opened up and excavated to examine the immediate surroundings of the wall in this area and hopefully to obtain further dating evidence for the wall. The wall proved to be built on a bank of gravel, apparently of natural formation, which stood about 75cms above the height of the gravel areas to both east and west. In an area liable to flooding this may well have been an attractive enough elevation to determine the line of the wall. The wall foundations were here are 4.55m wide, narrowing above the foundation course on each face to give a width of 4.20m.

Both the inside and outside faces were of lias ashlar, and each face consisted of a wall 0.6m wide built in this technique. The area between the two facing walls was filled with a mixture of lias and carboniferous limestone, which in places was very clearly set diagonally. The west (outside) face survived to a maximum of six courses (including the foundation course), a height of 0.65m. At the rear, the east face survived to 7 courses, a height of 0.90m (see Fig.9).

In front of the outer face, along the edge of the foundation course, a small square-sectioned drainage channel had been cut, and in the fill of this were 12 sherds of pottery, including a large piece of mid-fourth century black-burnished pie dish. This adds nothing to our knowledge of the wall's dating. Similarly, a thin occupation deposit found on the slope

of the gravel bank inside the wall produced only a few indeterminate sherds and a bronze pin (Cat.No.516)."

Brannigan continues later (1977, 179–81), "The most outstanding feature of the site (is) the defences……. Gatcombe's wall is impressive and unusual, for its footings are 4.5m wide, and in places the foundation of pitched stone is as much as 4.85m in width. Above the footings, offsets to both the interior and exterior faces reduce the width of the wall to 4.15m. We assume it was carried up at this width to its full height; the greatest surviving height recorded is 1.5m, but there would be little point in constructing such a massive wall unless it were to be carried up to a height of at least 3-4m. It has been suggested by Mr C Sykes (pers. comm) that the wall was never completed, and certainly one must wonder where the massive quantity of stone present if the wall stood, say, 3.5 m high, has since gone to. Even a cursory glance at many older farm buildings in the area, however, suggests that the site served as a convenient quarry for the district for centuries, and Mr Butler of Gatcombe farm certainly recalls the removal of cartloads of stone from the north defence wall by his father.

The wall was built on different foundations according to its location; on the east it stood on pitched stone, at the north-east it was laid directly on bedrock, and at the south-west it stood on a natural bank of gravel. It seems likely that it was the desire to utilise this elevated feature as the wall foundation in an area liable to flooding which determined the alignment of the west wall. Above the footings the wall was built in three parts. Outer and inner faces were erected, in ashlar lias limestone, and the space between filled with lumps of carboniferous limestone. The latter was probably quarried on the site (and some evidence for this was found in 1968 at the northeast corner), but the lias appears to have been brought from the nearest source of large, easily worked slabs, about a kilometre to the southeast.

Three important queries still remain unanswered. No gates have yet been found nor are there any good surface indications as to where they might be. Secondly there is no evidence for any towers or bastions, and the one area where surface indications suggest a possible bastion was proved negative by excavation. Finally there is no evidence of a ditch system beyond the wall. Excavations on the north and east walls have failed to reveal the lip of a ditch within 6m of the wall, and on the west the pipeline dug in 1973 showed there was no ditch anywhere to the west of the wall. Possible surface indications of a wide, flat-bottomed ditch on the east side (Cunliffe 1967, 130) were shown by a resistivity survey conducted by Dr C Gill of the Department of physics, University of Bristol, (11.5.68) to be natural features.

The defences of the site are therefore unusual in several respects. They are the widest defence walls known in Roman Britain, matched only by those of Mildenhall, Wiltshire, and half as wide again as Hadrian's wall. They are almost certainly late third century in date, but they bear only a superficial resemblance to contemporary defences in Britain, whether military or civilian. The bastions and ditch systems so common to 4th century defences are missing and the gateways are embarrassingly notable for their continued absence."

Of course it must be remembered that Smisson's geophysics did propose gateways, and he also proposed one and perhaps two bastions. However it must be accepted that only two bastions for such a lengthy wall is, so far as I know, unique. Furthermore, Smisson's work also revealed the remarkable fact that the walls enclosed a larger area than the great majority of walled small towns.

The outer walls at Gatcombe provoke two questions: what was their purpose, and why so massive? The obvious answer about the purpose is that they are intended for defence against hostile attack.

And it is also obvious that this answer has to be applicable to very many cases. For example the town walls of Northwest and central Gaul went up after the disastrous German invasion of 270 A.D.; in other words they constituted

Fig. 9 The outer face of the Gatcombe west defence wall, facing to the right, with part of the inner core of the wall behind the face extending to the left of the picture and beyond (drawn from a very poor photographic image by Charmaine Hawkins, after Branigan 1977).

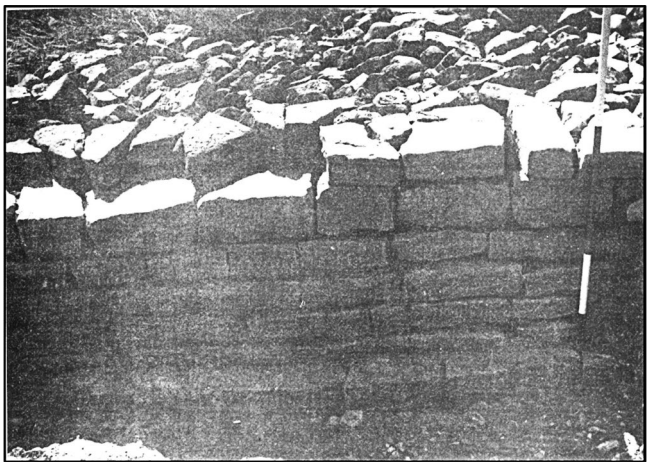

Fig. 10 The inner face of the west defence wall, with the rubble core behind (reproduced with kind permission of British Archaeological Reports).

a response to attack, not a preparation against it. Gatcombe had experienced no such attack or threat; it was a long way from such German attacks. So why Gatcombe? Had local or even general threats been experienced in the Southwest of Britannia? The answer is no, they hadn't. And yet, as we shall see in the next section, by the time of the building of Gatcombe's walls, a number of towns in Britannia did in fact receive surrounding walls, despite the lack of any hostile threat

The first two centuries

Way back, 30 or 40 years after the invasion of 43 A.D. all military bases in the south-west were decommissioned and all army formations left the area, never to return. Even in the last days of Roman control of Britannia, no forts reappear, no evidence of military units stationed in places like Gatcombe, Ilchester or Sea Mills.

As Goldsworthy says in his Pax Romana, "*After Boudicca, there is no evidence for any significant revolt in lowland Britain until the end of Roman rule more than three centuries later. Most of this area shows every sign of stability and prosperity"* (Goldsworthy 2016, 197). Other historians such as Patricia Sutherland and also archaeological evidence give the same picture. And yet, as we shall see in the next section, by the time of the building of Gatcombe's walls, a number of towns in Britannia did in fact receive surrounding walls, despite the lack of any hostile threat.

The towns of Gaul

Gaul also had experienced profound peace and prosperity for 200 years. Then came the German invasion across the Rhine into Gaul in 270 A.D. No town or city was provided with defences throughout the whole north-west and centre of Gaul and there was therefore widespread devastation. After this disaster, dozens of towns were provided with walls.

Just like in Britannia, a number of towns did already at this time have walls. Some, unsurprisingly, were along the Rhine frontier facing the German tribes. But others, counterintuitively, were in the deep south of Gaul far from any discernible threat and they had possessed these walls since the time of the Emperor Augustus. These latter, wealthy and long romanized cities (a Roman province since the late second century BC) had built their walls for no discernible defensive need. Even now the German invasions did not reach them.

To provide one example of these very early walled towns, the inscription above the Porte d'Auguste in Nîmes commemorated the construction of walls and gates in 16 BC (Igolen 1935), 20 years after the end of the civil wars and 30 years after Caesar's conquest of Gaul had concluded. It was a period when Augustus dedicated the Ara Pacis (the altar of peace) and boasted in his Res Gestae that the doors of the temple of Janus had been closed to signify peace an unprecedented three times. The predeliction of Roman culture for monumentalism shows itself many times in Nîmes, not least in the awe-inspiring nearby Pont du Gard

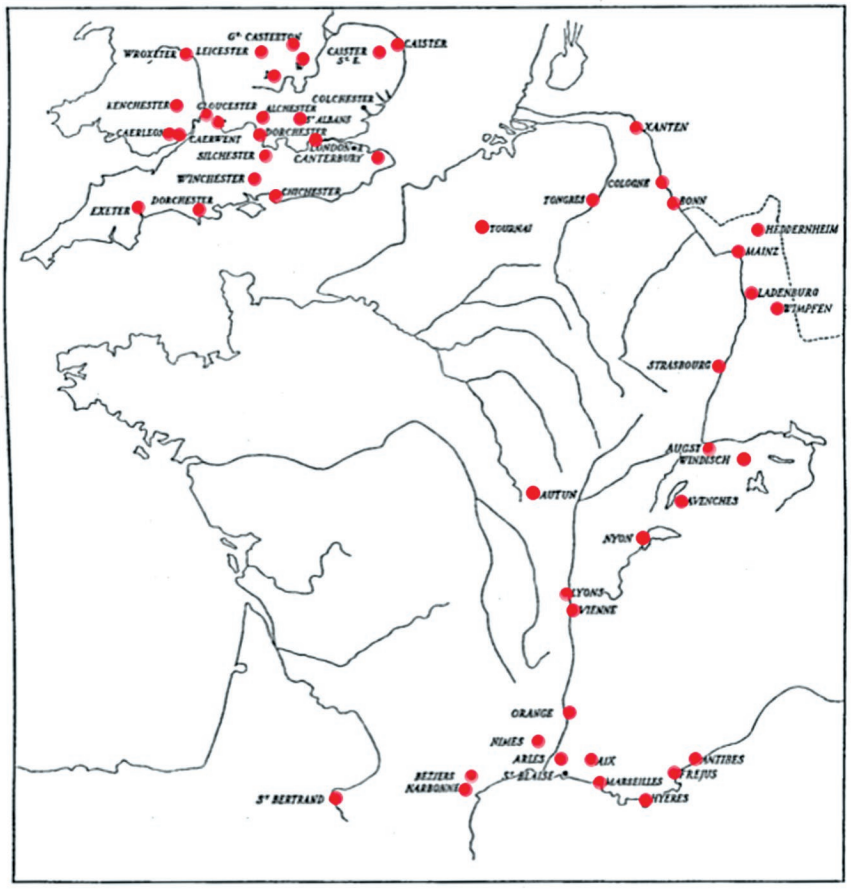

Fig. 11 Towns and forts in Gaul with stone with stone walls built before AD 260(Drawn by Trevor Welsman after Butler 1959, Fig 1).

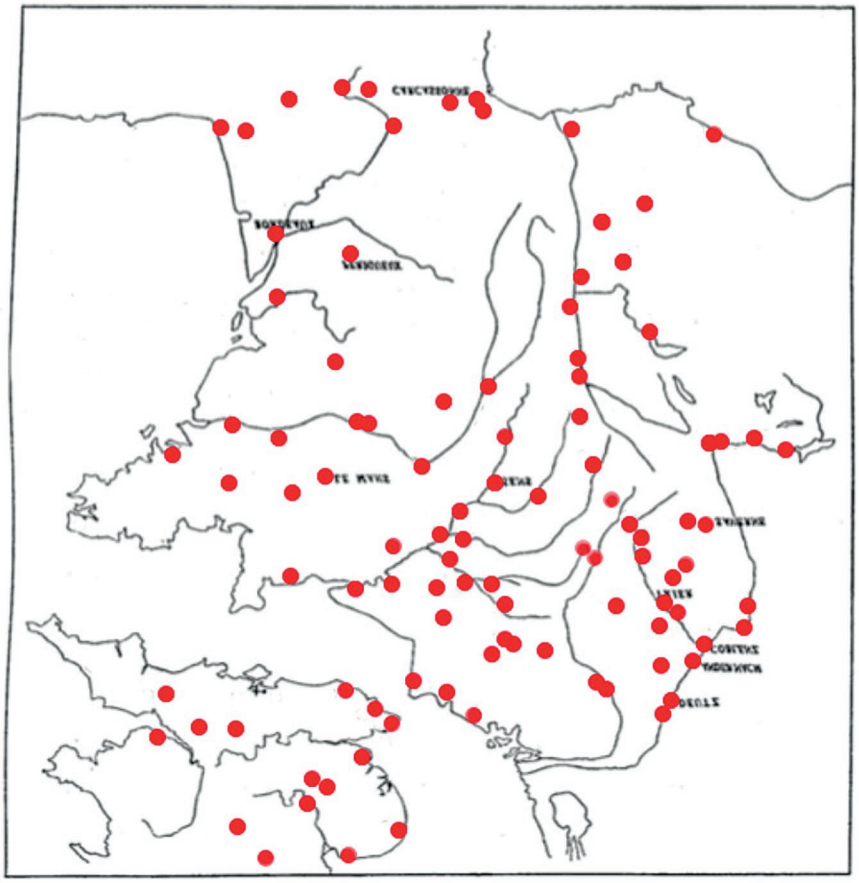

Fig. 12 Towns and selected forts in Gaul with stone walls built after AD 260. (Drawn by Trevor Welsman after Butler, 1959, Fig. 2).

aqueduct. Rebellions such as that of Julius Civilis (69 A.D.) occurred later, in the first century, but like Boudicca, that proved the end of any unrest. It surely seems odd that these cities built town walls while experiencing such profound peace, and yet most of Gaul had no town walls at all. The early town walls of Lyon are also surely linked to its importance and prestige rather than to the need for defence.

Another and perhaps the most striking observation about the period of the German invasion of 270 A.D. into Gaul is the seeming disconnect between wall building in Gaul and in Britain. At this time the towns and cities of the whole of Northwest and central Gaul had no walls, and it was only after 270 A.D. that widespread construction began (Butler 1959, 25–50). However by contrast in Britain many cities and towns already possessed walls before 270 A.D. Notably they include all the Civitas capitals, the three Colonias, the Municipium, and London, in other words all the high prestige places and all built without apparent hostile threat. The list also includes nine other towns; this list will have to wait for analysis but the writer's immediate guess is that all were prosperous at an early date and were on the trunk roads. Interestingly, none of the ports of Kent are in the early list, e.g. Dover, Richborough, even though it might be felt that they were the nearest to the troubles in Gaul. Yet despite this, some towns in both provinces had already received walls, which must have been built for some other purpose, and this will have direct relevance for the provision of walls for Gatcombe.

To sum up so far, the south of Britannia and all of Gaul had experienced a peace that vitiated the need for town walls intended for a defence against hostile threat.

Irish raids

So, if the walls of Gatcombe did not reference a need for defence in the past, what about the present, i.e. the time when they were built? Was there a threat requiring to be met? How about raids from the Irish? Recent research shows that the early centuries of Roman Britain reveal an amicable and productive relationship with Ireland. Roman commercial products penetrated widely and a trading post seems to have been set up near Dublin (Wilson 2014). However as the Roman Empire in the west began to disintegrate and descend towards oblivion, there certainly were Irish raids experienced in the south-west and south Wales. Could these be the reason for Gatcombe's walls? Let us see what scholars and archaeologists have to say.

Some writers point to the period of the walls' construction.
1. Aston and Iles, The Archaeology of Avon 1987, page 69: *"The fourth century was also a time of increasing danger for the empire. Through the late third and fourth centuries Britain faced a growing threat from barbarian*

nations outside the Empire and the Bristol channel offered easy access to the Avon region for piratical raids from Ireland…….. The years 350–70 A.D. were a period of great unrest, although the sequence of events in Avon has not been accurately dated. Much of the destruction evident to villas has been attributed to the barbarian conspiracy of A.D. 367, but the available dating evidence is not sufficiently precise to ascribe all cases of destruction to a single year…… it is likely that around this time and quite possibly in A.D. 367, Irish raiders penetrated the Avon Valley……..Evidence of these raids is strong at three of the finer villas, all close to the river and that's directly in the path of the attackers: at Kings Weston the west Wing was burned down and the massive portico demolished, the house at Brislington was damaged by fire, and at Keynsham the roof of the triclinium burned down and a wall collapsed, killing one of the occupants" (Aston and Iles 1987, 69).

The *"late third century"* is mentioned above, but without specific reference to the Avon area and may well refer to Saxon raids on the east coast. When this passage moves on to specific comments about the Avon Valley, the dates all refer to the second half of the fourth century. This does not square with the idea of Avon area Irish raiding in the second half of the third century.

2. The West Country, Brannigan and Fowler 1976, 138ff , *"the case for a raid up the river Avon at the time of the great conspiracy of 367AD: Kings Weston , Brislington, Keynsham, Combe Down villas have destruction damage and, with some , loss of life. There is no smoking gun for the perpetrator, but if there was a raid it has to be the Irish. No towns show evidence of being attacked, even those without walls, such as Sea Mills. Many villas continued but in less wealthy fashion and in a more work-a-day process."*

Again, this is all 100 years later than the building of Gatcombe's walls. There is no mention of earlier raids or the presentation of evidence for them.

3. Ken Dark's only comment on this period is, "*there was peace in western Roman Britain. There was no fortification of villas at even the most luxurious of them. A minority of villas were fortified elsewhere in Europe, but not here. There was relative security as is shown by the lack of troops in the area."* (Dark 2002).

4. Frere comments *"after the death of Magnus Maximus in 388…… Irish continued to raid, no doubt with relative impunity…… By the end of the fourth century, the Irish tribe Deisi is recorded in Pembrokeshire and Gower."* (Frere 1967, 406)

5. Attacotti, Deisi, and Magnus Maximus: the case for Irish federates in late Roman Britain, Philip Rance 2001, Britannia **32**:
"*Conclusion: the relatively brief appearance of the Attacotti in Roman authors as a threat to Britain in the 360s, and the presence of units of the Attacotti among the continental comitatenses by 395 A.D. corresponds to the late fourth century raiding and settlement of certain Attacotti from Munster, attested in Irish and Welsh literature, and to some extent supported by the distribution of Roman artefacts in Ireland. This connection offers a new dimension to various aspects of late Roman Britain, especially to earlier speculation about the date and nature of the Irish settlements in south Wales. The evidence that the settlements were officially sanctioned is relevant to the role of barbarian troops in the defence of the late Roman Diocese."*

There is no mention here or in the rest of the paper of Irish raiding before 360s A.D.

6. Epiphanius of Salamis and the Scotti: New evidence for the Roman/Irish relations, Philip Rance 2012, Britannia **43**. There is likewise no mention of Irish raiding before the 360s AD.

7. The Coleraine hoard (Northern Ireland) and Romano–Irish relations in late antiquity, Peter Crawford, Classics Ireland, 2014/15, passim:
Page 46, "*Irish raids in the fourth or fifth century included enslavement , e.g. Patrick*."
Page 59, "*the earliest datable coin in the hoard is an issue of Constantius II produced at Arles between 353 and 355AD*."
Page 60 "*the latest coin is of Honorius*."
Page 63, "*Something of a consensus of the burial of Coleraine hoard around 420–425…… could even be 430s or 440s*."
Page 72, "*Primary sources hint at Irish raids from late third century through to early fifth century. However, while there is a dim awareness of a potential but apparently not pressing threat posed to Britannia"* (Rance, 2012,) for the first hundred years of that period of proposed Irish raiding, the sources give no direct mention of the Irish being culprits".
Page 73. "*The first properly documented Irish incursion into Roman Britain not before 360."*
Page 75. "*Prosper Tiro records Magnus Maximus in the 380s dealing with Pictish and Scottish raids with the Irish focusing on Cumbria, Wales, West Country*".
Page 79. "*Attacotti first appear in the "Barbarian conspiracy*" of 367.

But it is not certain who they were. Notitia Dignitatum records 4 units of Attacotti serving in the Roman field armies, two in Italy, two in Gaul. As silver was a significant part of a Roman soldier's pay, in terms of coins, ingots, even hacksilber, the Coleraine hoard may be a result of Irish military service.

Crawford is clear that there were no evidenced Irish raids before 360 A.D.

7. Higgins, The History of the Bristol Region in the Roman Period, 2005, Bristol branch of the Historical Association.

Page 20, *"It is these factors (collapse of the Gallic empire in 284 and economic chaos) as much as the raids of the*

Hiberni from Ireland which encouraged the burying of coins in Bristol (several hoards dated to this period)."
Page 22. "*By 296, Constantius….. resumed strengthening defences against…. the marauding Scotti from Ireland.*"
Page 31. *"(The great conspiracy of 367 A.D.)….the Attacotti from the Isles, The Hibernian Scotti from Ireland….. Strong evidence of damage or destruction of the villas of Kings Weston, Brislington, Keynsham, and possibly beyond"*.
Page 34. *"By 395 A.D. seaborne incursions from Ireland had resumed, in which the entire west coast of Britain suffered including the Bristol region*".

This is confused. There is mention of raids from Ireland around 284AD, for which the only evidence seems to be coin hoards in the Bristol region and again in 296 (where the reference could just as easily be against Western coasts of Britannia to the north of the Southwest), but the more specific evidence seems to be around much later dates of the next century. Generally, the weight of evidence presented suggests known Irish raids only from the second half of the fourth century onwards. Even if there were early raids, presumably small-scale and exploratory at first (as suggested by the total lack of documentary or archaeological evidence), it wouldn't be necessary to build the thickest walls in Britannia to keep them out!

8. Cunliffe says "*The archaeological evidence shows that sometime after the beginning of the third century a massive 15 foot thick defensive wall was constructed…..…... The purpose of the wall is not immediately apparent…..…..There is no suggestion in anything that has yet been found that the site was of a purely military nature. Although superficially the wall resembles those of the Saxon shore forts, its size and inland position contrast sharply with others of the series."*

He suggests "*an economic significance as a market-centre than to imply a purely defensive role. At present, then, Gatcombe seems to be one of a group of small settlements scattered throughout the country which during the fourth century defended themselves with a wall, perhaps as a response to growing unrest. The nearest and most impressive parallel is Mildenhall in Wiltshire."* (Cunliffe, 1967, 157).

It is now thought that these defended small towns received their walls over quite a long period of time, so cannot be lumped together as a purely fourth century phenomenon, a period when indeed unrest might be more expected. Thus Mildenhall cannot be cited as a comparison since its walls were built nearly a century later than those of Gatcombe. Cunliffe clearly doubts that the walls were intended simply as a defensive feature.

So it is reasonable to say that as far as textual evidence goes it is very unlikely that the walls of Gatcombe were built because of Irish raiding.

The archaeological evidence is much less clear. Apart from Gatcombe, there were no fortifications in the Somerset coast area; the walls of Ilchester date to a century later. But along the coastal area of the North Severn estuary there were new fortifications at this time, principally the fourth Roman fort at Cardiff. "This fort appears to be third century in origin…..And was occupied until the 370s A.D." (Glamorgan Gwent Archaeological Trust, accessed online 14.1.23). It could conceivably have been constructed to address Irish raids earlier in the third century, but in the absence of any archaeological or textual evidence, this seems unlikely. Moreover for the fort to have ceased operations in the later fourth century when Irish raids were beginning to become a significant factor makes any connection very unlikely. It might have been intended as a replacement for the Caerleon legionary fortress which was abandoned around 300 AD when the "second Augustan Legion left it for good, with many of the main buildings being demolished" (Museum of Wales online, accessed 14. 1. 23). The departure of the Legion from the area does not suggest significant military force was needed locally at this time.

Also the re-occupation of the Roman fort at Loughor needs to be addressed. There had been a fort from "73 to 74 AD..…… And its abandonment about 120 AD. There was a subsequent reoccupation between 260 and 310 A.D." (Coflein.gov.uk). So it was abandoned finally long before Irish raiding became serious.

Another wall construction, though not military, occurred around the middle of the third century at the Civitas capital at Caerwent, but this seems much more likely to be part of the current fashion for monumentalising town wall surrounds, (cf. town walls at Leicester built at a very similar time and at a location far from any contemporary hostile threat) and much more to do with the wealth of the later town of Caerwent, as evidenced by its number of very well appointed townhouses at this time. The addition of towers about 100 years later may however actually be a reflection of growing threat at this later time, and probably also the blocking of the south gate. However it remains odd that if defence was a prime objective of these towers, they were only provided on the south and north walls.

There is no archaeological evidence to suggest Irish raids in south Wales at the time of the building of the Gatcombe walls, apart from the possible inferences to be drawn from the Cardiff and Lahore forts and the walls of Caerwent, but it has been argued above that any connection between these and Irish raids is far from likely.

Aggrandisement

Can it be that the walls were not built primarily or even at all for defence? A brief look at some other town walls suggest other motivation. For example, the walls of Roman London were built at a time of peace, around 190–220 A.D. Boudicca's assault was long gone and no other successive uprising in the south is attested by document or archaeology subsequently. A paper in Britannia 2021 on London's Roman walls hinted that these new walls perhaps fulfilled some other idea: *"purpose could be primarily defensive or related to civil prestige"* (Barker 2021,317) and *"The use of freshly quarried stone rather than reused material suggests benefaction and civic pride"* (ibid 282). Likewise, English Heritage: *"not only provided defence but also represented the status of the city itself"*. Much later, after actual Saxon raids, a wall was built along the riverside, and this arguably really was needed for defence.

At the other end of the scale, London's walled area of 130 ha dwarfed the 6 ha of Mildenhall (Cunetio), yet the latter boasted thick walls (not much less than Gatcombe), 17 towers and a monumental South gateway (Wessex Archaeology 2011). It was a much later build than London, but, situated 50 miles from the Severn estuary and much further from the east coast, was hardly threatened by Irish or Saxon raids. It did however experience prosperity in the later third century and by the early fourth century had become a hub of local villas, reflected in the complexity of some of the buildings excavated within the walls.

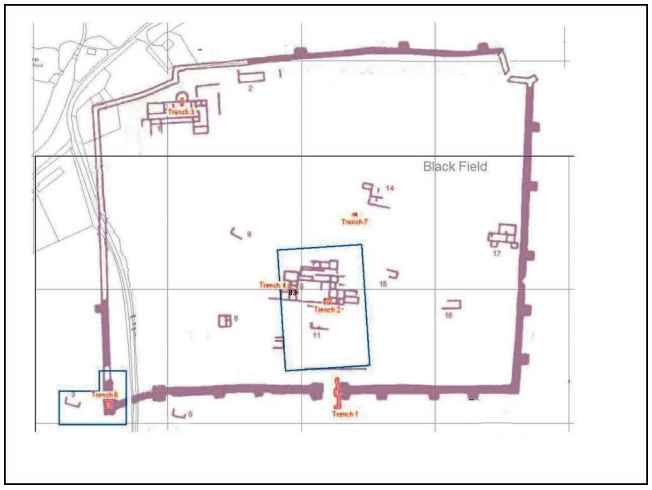

Fig. 13 The fortifications of the small Roman town of Cunetio (Mildenhall). (Reproduced with kind permission from Wessex Archaeology).

This idea that town walls have been built for purposes other than defence can be illustrated from the mediaeval period of the city of Bristol. An archaeological history of Bristol (Baker et al 2018, 282 and 217) tells us "by the mid-13th century, when the medieval defences had achieved their maximum extent (with inner walls and outer walls)…… the function of these (outer) walls is debatable. A solely defensive purpose is questionable……. Civic identity was certainly a factor long after any military necessity had ceased – as the rebuilding of the Redcliffe and Temple gates in the 1730s amply demonstrates (Creighton and Higham 2005, 235)…….. The Marsh Wall (built before 1313 (Fuller 1894–5, 226) could never have been wholly effective as a military defence… though it may have been wholly effective in making a statement of the importance and power of the town to mariners arriving at its quays " (Baker et al 2018, 154). All this does not refer to the original tightly drawn Norman walls of Bristol but to the outer circuit of walls. Only one gate survives from this inner circuit and a picture from earlier days shows it was meant to impress as well as manage movement. This notion of raising grand but unnecessary pseudo defences has persisted. And this is demonstrated above with regard to Bristol's walls of the High Middle Ages.

Not far from Bristol, a quick glance (as my first one was) might believe that Banwell Castle (just outside the village of that name) presents a proper baronial fortress; but no, it dates from the early 18th century (Fig. 13). As does an even grander edifice, Eastnor Castle in Herefordshire, and if it is objected that in the latter the windows give it away, the same could be said for Warwick Castle, which was in fact the real thing, but has now been made habitable.

Fig. 14 Banwell Castle, and 18th-century mock Gothic castle. (Photograph of the author).

Even to this day, people with money and a fancy build elaborate "castles" for their homes, presumably to impress their visitors or perhaps just to please themselves. For example, this writer came across an advertisement online for a new home looking just like a mediaeval castle; however it was located in New York State, USA!

Gerrard (2013) has no doubt that the town walls of Roman Britain were not primarily intended for defence: *"Town walls in Britain seem poorly designed as purely defensive installations... The failure of Roman Britain wall circuits to be modified to reflect the conditions experienced in Gaul further weakens the notion that there was a substantial military threat to late Roman Britain.... The addition of projecting towers to existing wall circuits is another phenomenon that has arguably been misunderstood. The desire to link these architectural changes to the provision of artillery is surely an error. It seems unlikely that the late Roman army could ever have provided enough trained men and machines to man all these projecting towers. Furthermore it is difficult to see what use these towers would have been if they were not constructed around the entirety of the towns walled circuit (as at Caerwent).*

It is better to view them as architectural embellishment that brought the defences "up to date", a case of style being more important than function.... City walls and projecting towers were either constructed by the state, or they were built by local initiative. In the former case the construction campaigns were seen as an imperial response to military threat, whereas the latter perspective emphasised the importance of walls and projecting towers as statements of civic status and power. The artistic depiction of cities in late antiquity as walled and turreted suggests that such accoutrements were vital in defining a town's status.

Contradictory motives in a local town competing with the neighbouring town, a governor interested in self aggrandisement and an emperor promulgating an ideology of defence allow for a more nuanced view. A military threat or explanation is unnecessary and an explanation of the phenomenon can be found in the broad understanding of antique society".

We have seen how the town walls of Gaul present a complex picture in terms of purpose. The same can be said of Spain.

Kulikowski (2004) proposes that the town walls of third and fourth century Spain were not intended so much for defence as for display with rivalry between cities being a prime motivation for imposing levels of construction. He suggests *"Status competition among cities is both a plausible explanation and one that the evidence can sustain. Indeed late Imperial wall building might in some cases be an extension of older forms of monumental construction, a city finding that the absence of a town wall might derogate from its prestige, particularly if a more prominent neighbour had one. Walls were something new over which cities could compete"*. Further on he declares, "*Town walls, regardless of the practical ends they may also have served, belong to the same world of civic display and construction as the old monuments of the early empire. But they were a new fashion in monumentalism"*.

We have seen how the cities of prosperous southern Gaul, long a part of the Roman Empire, received their city walls quite early, as for example Nîmes during the time of Augustus. It will be interesting to see if there is the same pattern in Spain, and it seems the walls of the Roman city of Seville were constructed while Julius Caesar was quaestor there in the late 60s BC and then expanded and refined under Augustus due to the growth of the city (this is taken from Wikipedia which has no citation for these comments, and so needs further validation, which is beyond the scope of this paper). However to the north of Seville, but still in southern Spain, the Roman city at Merida certainly had walls of the time of Augustus, after investigative work has been done, "confirming the Augustan construction of the walls and the gates," (De Man, 2020, 23) This phenomenon of important cities being granted permission to build surrounding walls irrespective of any need for defence and in order to promote status has been discussed more generally with regard to major towns like Merida: a renewed perception of "the value and meaning of the urban wall (which) took place at the end of the Republic and during the Principate of Augustus……from this moment on, a new notion of "urban fortification" is coined, linked not only to defensive issues but also to symbolic and religious aspects…… In fact, the wall and its *pomerium,* the sacred strip of land beyond the walls, including the doors, are established as *res sanctae,* a legal status that implies they cannot be modified without running the risk of receiving a *sanctio o*r punishment from the city authorities (Gaius, Digest, 1.8.1)…… they (the walls) acquire a liminal character, clearly marking a limit within which certain activities, such as burial and dumping of "polluting" waste, are forbidden, but which are allowed on the other side of the wall. The existence of the wall also implies some kind of interaction between both sides. The walls also become a space that authenticates the need for the social cohesion of the town, and they become a symbol that the Colonia or Municipium is in possession of certain rights that differentiated them from others. It is an indication of the quality and distinction of a city founded according to the sacred rules of Rome. This is seen also in the quality of its construction, its decoration, and its embellishment, which reinforce the prestige and status". (City walls of late antiquity…) (Fernández-Ochoa C & Morillo A 2020).

The wider context in Roman Britain

We have seen in Gaul and in Spain, that it is not always a clear-cut matter as to whether the walls surrounding a town or city are intended for defence or for display, sometimes one, sometimes the other, and no doubt sometimes one becoming the other. Is there a pattern to the construction of these kinds of walls in Roman Britain? The data for the discussion below are all taken from The Defended Vici of Roman Britain by Smith & Fulford 2019, 133.

Settlement	Latin Name	Date of Wall
Alcester	Alauna	360
Alchester		200
Ancaster		220
Bath	Aquae Sulis	220
Bitterne	Clausentum	350
Caistor		300
Cambridge	Duroliponte	300
Catterick	Cataractonium	275
Chesterton- on- Fosse		320
Dorchester on Thames		270
Godmanchester	Durovigutum	275
Great Casterton		200
Great Chesterford		350
Horncastle	Bannovallum	300
Ilchester	Lindinis	350
Irchester		200
Kenchester	Magnis	300
Little Chester	Derventio	275
Mancetter	Manduessedum	300
Mildenhall	Cunetio	360
Rochester	Durobrivae	200
Thorpe	Ad Pontem	300
Towcester	Lactodurum	175
Wall	Letocetum	300
Walter Newton	Durobrivae	200
Wilton Lodge	Bannaventa	300

Fig.15 The small towns of Roman Britain with known or proposed dates of town wall construction. (Compiled by Stephen Hastings after Smith & Fulford 2019).

At the same time in the 270s A.D., as Gatcombe was putting up its walls in Somerset, so were a number of other small towns elsewhere in Britannia, including: Catterick in Yorkshire, Godmanchester, near Cambridge, Little Chester, in Derbyshire, Dorchester on Thames, between Oxford and Reading. If all of these locations were responding to the

same threat, it must have been pretty widespread, in fact just about province-wide. Yet it has left no trace!

In fact, small town wall building seems to have gone in phases. The first took place in the early years of the 200s A.D., 50 years before Gatcombe and its contemporaries. The towns concerned were also widespread although not quite so much as later in the 270s - Kent, the route from London to Lincoln, Oxfordshire, and Somerset. And all of them reached a good level of prosperity quite early, so perhaps there is some correlation between attaining prosperity and wall building.

The third phase came about 25 years later than Gatcombe and its contemporaries, with eight sets of walls built around 300 A.D., and one in 320 A.D. Five of these are very small, from 2 ha to 3.2 ha and may represent examples of one of the ideas in Fulford and Smith (Britannia 2019), i.e. that the walls of some small towns served to guard stores of grain assembled for annona or export. Altogether there are 14 mini towns listed by Fulford and Smith as less than 3.5 ha; one of these occurs in the 270s group, one in the 350s group, five in the 300s group, and the rest have no date. The geographic spread is more constricted, confined to the Midlands and Norwich, an area which makes sense for grain storage and movement either to the military or to export abroad.

The fourth and last grouping relates to the 350s and 360s A.D. and comprises five towns in the south and south Midlands. Only one is very small, i.e. less than 3.5 ha. Turbulent times were beginning for Britannia and perhaps defensiveness was becoming more of a motivation; however, while Bitterne is on the coast and not far from the Saxon Shore fort at Portchester, and Ilchester could be accessed up the river Parrett and so attacked by Irish raiders, the other three were all well inland and so less presumably susceptible to external raiding.

It must be stressed that the analysis above derives from datable evidence that is sometimes rather soft and even open to challenge. New knowledge continually arises. For example, recent investigation at Caistor, near Norwich, shows that its presumed latish walls encompassed an area substantially smaller than that within an earlier rampart and ditch, and that streets and buildings had existed outside this later walled precinct. Nevertheless despite the previous paragraph, some broad outlines can be discerned from providing a context into which Gatcombe can be placed.

Firstly the building of town walls clearly stretched over a long period, and so it seems unlikely that they were the expression of an overall imperial strategy. Next, the need for defence against attack seems to have figured very little. Construction dates may well have been confined to four specific phases, each with significant geographic spread, and at first confined to the south and south Midlands, then expanding as far North as Yorkshire, finally contracting back to the south and south Midlands.

Gatcombe‘s walls should be seen as part of a much wider phenomenon than in a purely individual context.

To sum up, defensive structures are often, probably usually, intended for defensive purposes. They usually have an air of grandeur, power, and even menace about them. So in order to impress and even cow onlookers, they can be copied in structures which have no need of defence but do wish to express identity, self-importance, pride, status, and influence feelings of respect and admiration.

Gatcombe had no need for defence when its walls were built. Nearby towns such as Ilchester (up the river Parrett from the Bristol channel) did not build walls for nearly 100 years later than Gatcombe, and Bath’s walls date from at least 50 years earlier, whereas Sea Mills/Abona, the most vulnerable of all, did not possess walled defences at all. Nor, so far as could be seen without excavation, did Charterhouse with all its silver and lead! So any conceivable threat to Gatcombe was improbably localised both in time and place.

Perhaps being situated so far from its Civitas capital of Winchester, it was felt that a statement needed to be made more locally, although it is not obvious for whose benefit. However local authorities (and certainly national governments) do commit errors of judgement, as for example Croydon council in recently going bankrupt after the ill-judged purchase of a local hotel.

The thickness of the walls

So perhaps Gatcombe is some kind of Croydon in terms of unnecessary and ill-judged extravagance. But there is a further problem. Even if some earlier entirely non-evidenced Irish raid frightened the people into building the walls, that doesn’t explain their excessive thickness. 15 feet thick walls cannot be justified by a hypothetical minor raid that left no other trace and did not put the brakes on the construction and development of a flowering of local undefended villas in the area at this time. This unprecedented width exceeded even that of the walls of London or Hadrian‘s Wall itself. The chief point of a wide base (which is all that survives) is to support the erection of an imposing height of wall above it. This obviously exceeds any defensive need against piratical raids from Ireland.

So what could be the thinking behind such massiveness? “Thinking” might not be the best word; even if defensiveness were the motivation, this width must be irrational. If so, and defence is not actually the purpose, then the intention must be to impress and make a striking statement, perhaps not to the usual arrivals at the town but to other towns. Such emulation and rivalry and self-promotion is conceivable as a general idea, but evidence exists of such motivation in the ancient world.

We have seen in Kulikovski’s discussion of the Spanish cities how he proposed a sense of rivalry as a spur toward building (Kulikovski 2004) . In the province of Bithynia, many years earlier, two cities, Nicaea and Nicomedia, had long been rivals (Stefanidou,) but matters came to a head during the reign of Trajan who sent out Pliny the younger to sort out the problems that had arisen (as well as, to be fair, other problems in the area), Pliny Letters book 10. Both cities had undertaken ambitious and extravagant construction projects which were threatening to get out of hand. Nicomedia had spent large sums on two aqueducts, both of which had come to nothing, while Nicaea had already spent a huge sum on a new theatre which was still unfinished and presenting major

building challenges, and had also embarked at great expense on replacing a gymnasium destroyed by fire with a much larger and more extensive structure which had also run into difficulties. (Radice 1963, Book 10, letters 37 and 39).

So far as Gatcombe is concerned, the decision was a matter for the Civitas Ordo at Winchester (even as the construction of the Aurelianic walls of Rome was controlled by its own citizen body, which probably also applies to London's walls). Perhaps local Decurions from North Somerset pressed for a scheme to rival that of Bath, not so much in terms of its grand bathing and religious establishment as in the sheer size of Gatcombe's encompassing walls.

This idea is predicated on the assumption that the project had been generated by local authority rather than imperial initiative. In the first place, despite the size of its walls, Gatcombe's importance was minor in the imperial scale of things. In any case, the sheer cost of providing empire-wide walls for cities and towns and even small populations such as Mildenhall/Cunetio surpassed the central resources of the empire, great though they were. But the range of time of the wall constructions presents a stronger argument against Imperial involvement.

All in all the pattern of wall building in Britain lends itself to the interpretation that this activity was the outcome of local authorities making their own decisions and having the necessary resources at a particular time, and that their decisions were on occasion overblown and unrealistic, such as the very thick walls of tiny Cunetio or the 15 foot wide walls of Gatcombe, and that at least some did not entail defensive purpose but were intended to display civic pride and an expression of the importance of their town.

Conclusion

Branigan considered three possibilities for the function of the Roman site of Gatcombe. His final conclusion proposed that we are looking at the remains of a villa. He conceded that this would be a most unusual villa for which no parallels exist in Britannia. However, he subscribed to the theory that the German invasion of Gaul in the 270s AD impelled some of its Villa owners to decamp to the south-west of Gaul's neighbouring and peaceful province, and that one of these might have set up a villa at Gatcombe in a manner that resembled some of the grand villas of Northwest Gaul, such as the Villa Anthée. This does not really work because the villas in questions have main residences that easily outstrip in opulence the remains, such as they are, that are known of a possible main villa building at Gatcombe. It is true that they possess a number of specialised light industrial structures that can roughly be compared to the excavated remains of the Gatcombe's north-east corner. But there is nothing like the massive wall that surrounds Gatcombe. Branigan does not sufficiently address the enigma of the excessively thick wall, "insanely" thick, as one scholar says.

But the main stumbling block to his interpretation, and one of course he didn't know about, is this sheer size of the area enclosed within these walls, as proposed by Smisson after his wide–ranging geophysical survey. He only thought of the site as covering about 9 ha, whereas Smisson shows it to have extended over 14.5 ha, which is far too large to be explained as a villa, however grand.

Another idea Brannigan explored entailed the site fulfilling some kind of state purpose. He himself quickly dismissed this idea, because the notion of a Fabrica (a government factory for military equipment), falls against a complete lack of any military evidence on site. This latter point also thwarts the possibility of a procurator's headquarters for an agricultural estate because some military is to be expected at such an institution.

Further, it seems to this writer that the profusion of variety exhibited by the walled small towns of Roman Britain does not bear the stamp of a tendency to uniformity that characterises state institutions. Even more to this point, the range of years over which walled small towns appeared, a span of 160 years, simply does not suggest such a strategic policy that could be maintained by so many emperors through so many different circumstances.

Branigan rejected the idea of Gatcombe being a small town for a number of reasons. Some of these seem reasonable but only in the context of the size of the site that was known to him at the time, and also if the excessive thickness of the walls were to be ignored. His argument about the lack of a hinterland as a market centre falls for two reasons, firstly that a place of this size, larger, with Smisson's extensions, than most other small towns, could easily serve an area from the Keynsham villa to the sites in northern North Somerset and as far as Weston-super-Mare. Secondly, all the other possibilities for a market are much less suitable anyway, as argued above.

The lack of street systems in the area excavated, lack of shops, and apparent unusualness of light industrial buildings being clumped together all make less impact with an extended area which might well answer these objections.

One of Branigan's objections that needs careful consideration is his interpretation of the evidence as suggesting both an abrupt start and an abrupt end of the use of the buildings he excavated. At the beginning of this period, construction of the great enclosing wall must be added as a factor to take into consideration. Whether or not investigations on the rest of the site turn out to show similar development at this time, the sudden arrival of these buildings of the north-east corner and of the enclosing wall predicates a massive undertaking with large implications for resources and expenditure. It would stretch the capacity of all but the very richest individual, but surely seems much more possible with the support or involvement of the local Civitas of the Belgae. Perhaps a decision was taken at the Civitas capital at Winchester for political or economic reasons and it could have been at the urging of wealthy and influential locals of the general North Somerset area. To enter the realms of speculation it might be that these locals felt their area needed a counterweight to the long-standing magnificence and prestige of Bath, or perhaps that Bath was all very well as an international spa and religious centre, but what was needed was a much more workaday industrial and commercial entity. Further, given the apparent contemporary growth of the economy of the area, it might

have been felt that the undertaking should be prosecuted in a suitably grandiose style.

The enclosing wall could be intended to demonstrate the importance and ambition of this development. It is argued that no significant military threat justified such a construction on this scale. Even if the later Irish raids had been preceded by an unrecorded and archaeologically unidentified raid, a five metre thick wall seems a completely unwarrantable reaction. Examples have been provided for the notion of erecting such pseudo-defences as an expression of stature and importance. A thickness greater than any other defensive type structure in Britain cannot be explained in purely military terms and is much more likely to be in tune with the widespread opulent construction of the mid to late third century in the West country.

In conclusion, with the thickest walls in Britannia encompassing one of the most extensive areas of all small towns and a local explosion of resource–hungry construction, which cannot reasonably be explained either by a single very rich individual or by a likely state institution, the explanation for this phenomenon must surely emanate from the authority and capacity of the local Civitas, that of the Belgae, and have probably been funded by numbers of wealthy people of the area following the euergetistic expectation and culture of the time, together with taxation and resources from the local Civitas.

We badly need to know far more about this site. At present only three parts are known: the surrounding wall, the buildings of the north east corner, the high status building found in the railway cutting. This leaves large parts unexplored by excavation, both north of the railway and especially south of it. It is impossible to properly characterise the site with only this amount of knowledge. To understand this important site a considerable amount of investigative work ought to be done. The site is listed as a scheduled monument and described as of "national importance". This designation has not been taken seriously enough. It should be

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ARCHAEOLOGICAL FIELDWORK AT GATCOMBE FARM, FLAX BOURTON, NORTH SOMERSET, 2019–2022

By George Nash

Gatcombe Farm is located southwest of Bristol, between the villages of Long Ashton and Flax Burton, and is incorporated within the Scheduled Monument area of Gatcombe Roman Settlement (NHLE 1011978) (Fig. 1).The farmhouse (and its curtilage) is designated a Grade II Listed Building (LEN 1129843) and dates to the 17th century (Plate 1).

Between December 2019 and October 2022, Dr George Nash was involved in a number of archaeological projects within the northern section of the farm complex at Gatcombe Farm. The former owner of this section of the farm complex decided to sell individual plots that were originally former farm buildings that were associated with poultry and cattle.

The majority of the archaeological projects comprised watching briefs on trenching for the mains services which currently run through the main access to the buildings within the northern section of the farm and observations on Plots 4. 5, 6, 7 and 9 (Fig 2). Prior to undertaking the fieldwork, Historic England and North Somerset Council requested that an archaeological heritage statement be undertaken before any fieldwork commenced. The heritage statement would allow the monitoring authorities to make informed decisions concerning the setting of existing historic buildings and structures. The heritage statement provided the baseline for the fieldwork and was completed in March 2019.

The watching brief programme focused on the groundworks phase of all plots and their respective service trenching. All excavations were machine-excavated to proscribed depths (depending on the personal design requirements of the plot owners). A Written Scheme of Investigation (WSI) was submitted to Historic England and North Somerset Council for each plot.

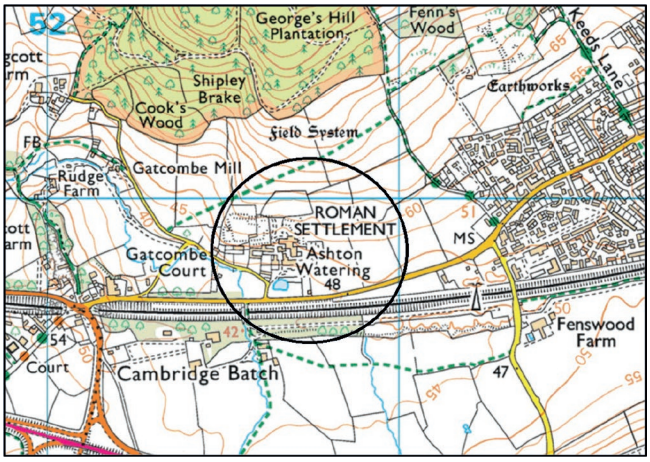

Fig. 1 Location of Gatcombe Farm.

Plate 1 The Grade 11 Listed Building of Gatcombe Farmhouse.

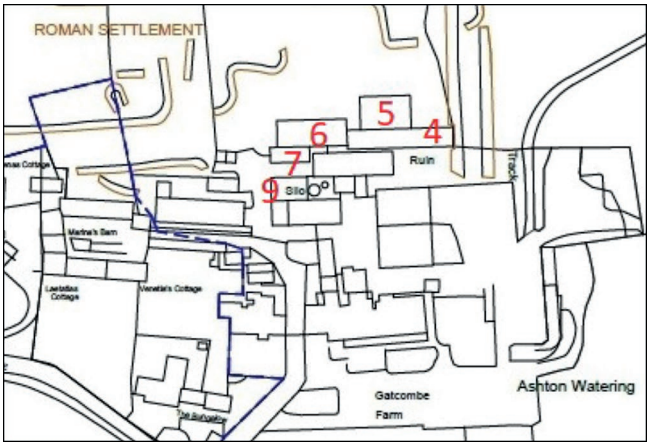

Fig. 2 Location of the archaeological watching briefs over various plots (no scale).

Based on correspondence with Historic England and North Somerset Council, the development programme may have potential direct impacts on subsurface archaeological remains that were associated with Gatcombe Roman Settlement. The Scheduled Monument area, including many of the plots, was extensively excavated between 1954 and 1977 (Clevedon Archaeological Society 1954; Cunliffe 1966; Solley 1967; Brannigan 1977). These excavations were undertaken before the erection of the majority of the current agricultural building stock that currently occupies the northern section of the farm complex. An archaeological evaluation was also undertaken by R.A. Broomhead in 2005 (Broomhead 2006).

LOCATION

Gatcombe Farm is located on a south-facing slope, above George's Hill Plantation, at a mean altitude of around 55m AOD (the base of the slope of the hill is 48m AOB and the top of the ridge immediately above the farmyard is 65m AOD). To the south of the site is the course of the Land Yeo (river). Within its recent history, the course of this river was diverted/channelled during the mid-19th century to make way for an east-west section of the Bristol to Weston-Super-Mare railway line and the western section of Weston Road.

GEOLOGY

Based on information supplied by the British Geological Survey (BGA), the underlying geology within the majority of the area of the farm comprises a Mudstone and Halite Stone units deriving from the Mercia Mudstone Group. Located to the northeast of the Gatcombe estate is a Carboniferous limestone from the Oxwich Head Limestone Formation.

The overlying soil across the farm and the surrounding landscape comprises a Whimple 1 association and is a stagnogleyic argillic brown earth. This substrate consists of a reddish, fine, loamy over clayey soil with slowly permeable subsoil and slight seasonal waterlogging (Soil Survey of England and Wales, 1983). This substrate was identified within all trenching across the site.

BRIEF CONTEXTUAL HISTORY

Based on previous archaeological investigations within the latter part of the 20th century, Gatcombe Roman site was originally an Iron Age settlement and became Romanised around AD 50–80. The settlement grew to become an important agricultural centre that traded with the nearby centres of Bath and Portbury. Archaeological evidence suggests that several building phases are recognised across the site, the final phase being the desertion of the settlement. A wall up to 5m in thickness was constructed during the late third or early fourth century, enclosing a settlement area of c. 7ha (Plot 4 stands several metres from this distinct earthwork). During the same period, the northern part of the site was extensively redeveloped. As a result of the wall, a once-dispersed population occupying the hinterland of the Gatcombe settlement area probably retreated behind this defensive wall in times of political and economic instability. The recovery of coinage shows that the site was occupied throughout the Roman period.

The Gatcombe Roman site was discovered as a result of the excavation of a railway cutting in 1838–39, and later, further archaeological remains were uncovered by the late Mr Butler, owner of Gatcombe Farm. Uncovered were the stone foundations of a number of buildings, as well as oak coffin burials and coinage. Excavation revealed evidence of several phases of development. The site is generally considered to be a Romano-British settlement. There was also evidence of a farmstead standing outside the settlement walls. Geophysical surveys were undertaken in 2006, 2009/10, and 2018 which revealed a dense settlement (as reflected in the significant numbers of extramural buildings).

Long after the Romans had ceased to administer Britain, the site appears to have been in use for at least 400 years, before its abandonment during the 8th century. This may have coincided with the onset of a major plague outbreak in Britain between AD 540 and 560 (and there afterward). To the north-east, a Romano-British field system possibly associated with Gatcombe is scheduled separately, alongside a deserted medieval settlement (SM 22849).

The archaeological fieldwork undertaken in 2012/13 to the east of Gatcombe Farm confirmed that the land had been divided into a series of fields or enclosures. These features were in use by the first or second century AD, with pit-like anomalies containing industrial waste (probably from metalworking) that are most likely associated with these enclosures. Many of the features were identified using geophysical survey techniques.

Based upon a summary by Broomhead (2006), the farmyard comprised a number of Roman buildings and associated archaeological features (Fig. 3). Initial archaeological investigations were undertaken by the Clevedon Archaeological Society during the 1950s when the northern section of the current farmyard was not inhabited by farm buildings. Excavations within the northern section of the site continued until the early 1970s, under the direction of Keith Branigan. Uncovered was a complex series of agricultural and industrial buildings of Roman date. This building activity stood west of a large north-south defensive stone wall and included possibly nine buildings/structures (Branigan 1977). Recent fieldwork, including an extensive geophysical survey of the settlement and the surrounding landscape, revealed a complex settlement that had agriculture as its main economy (e.g., Smisson 2010; Archaeological Surveys Ltd. 2018).

According to the results of an evaluation by Broomhead (2006), there was good survival of archaeological remains in areas that were previously considered to be sterile.

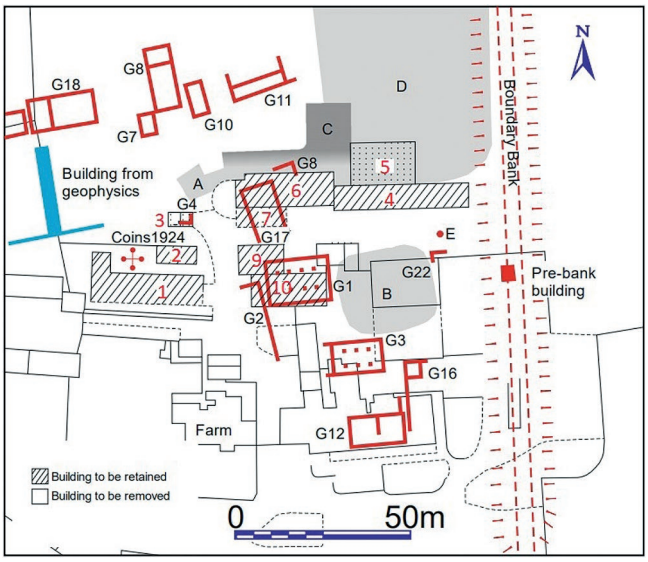

Fig. 3 Location of Roman buildings, as identified through excavations by Cunliffe (1967) and Brannigan (1977) and reported in Broomhead (2006).

In terms of the surfaces around this section of the farmyard, the stratigraphy reveals a >0.20m thick concrete yard surface and associated subbase material. At the northern section of the farmyard were exposed areas of bedrock. The bedrock is also exposed as floor surfaces in several redundant farm buildings to the northeast (Plots 4/5). According to the former owner, Mr Butler, much of the concrete yard surfaces were laid down during the 1980s/90s. The trenching for services (undertaken in November 2020) revealed no evidence of any *in situ* archaeological deposits associated with the Roman settlement. However, a narrow band of colluvium with Roman pottery and fragments of daub was identified downslope, south of Gatcombe Farmhouse, with the western section of the car park (Plate 2).

Based on the observations made during watching briefs across the site, Roman buildings (labelled G1 to G22) no longer exist; probably destroyed following the excavations by Branigan (1977) and Cunliffe (1967), when farm buildings were constructed across the site.

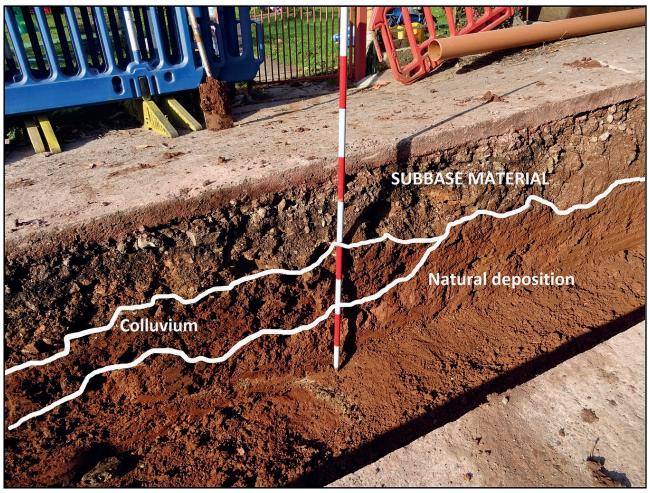

Plate 2 Section of the service trenching showing colluvial deposition and the extent of Roman activity (Image: G.H. Nash).

SUMMARY OF RESULTS

Service Trenching

Prior to the watching brief regime on the various plot areas, archaeological observations were undertaken on the service trenching which extended from a lane, immediately south of Gatcombe Farm, across the main entrance to the farm, northwards up the main farmyard track, running east of Gatcombe farmhouse and feeding into individual plots. A total of c. 160 linear metres of machine trenching was excavated. The trenching across the site measured 0.90m in width and extended to a mean maximum depth of 1m. The trenching regime was organised into four sections (Sections 1 to 4). The majority of the trenching revealed little in the way of significant archaeology.

Section 1. This trench section extended across an enclosed yard (with stable) and the SW corner of the main approach into the farmyard. The maximum depth of the trenching did not exceed 0.60m below the existing ground level. The section was waterlogged, due to its close proximity to a drain and stream that stands to the southern side of a narrow lane. Excavation revealed buried building debris, mainly 20th-century brick and mortared stone. No archaeology associated with pre-Roman, Roman and post-Roman activity was recorded.

Section 2. This trench section extended from the SW corner of the main approach into the farmyard to the SE corner of the garden belonging to Gatcombe farmhouse and revealed ten contexts, two of which were associated with the current yard surface (concrete surface and subbase material), with a further two associated with an historic gatepost (marking the arbitrary intersection between Section 2 and 3 of the trenching regime).

Below the surface, subbase material at NGR ST 52653 68797 was a short intermittent colluvial deposit that contained a small assemblage of Roman pottery. This deposit appears to be a re-deposited material that once extended across much of the yard area but has historically been removed in order to model the surface of the farmyard approach. Within the colluvium deposit, was a small assemblage of Roman greyware pottery (all sherds belonging to the same vessel), four sherds belonging to a large Roman amphora jar and fragments of [friable] daub (Plate 3).

Plate 3 Artefacts recovered from the colluvial deposit (Roman greyware pottery [1], post-medieval tile [2], Roman amphora fabric [3] and Roman(?) daub fragments [4]) (Image: G.H. Nash).

It is not known when the recent remodelling of the yard occurred, but it is probable that substantial sections of the colluvial deposit were removed. Immediately below this colluvial deposit was a sterile tightly compacted clayey reddish-brown natural substrate that contained no archaeological remains. This natural deposit extended to the base of the trench.

Section 3. This trench section extended from the SE corner of the garden belonging to Gatcombe farmhouse to the northern extent of the farmyard, immediately west of the NW corner of Plot 9 and revealed ten contexts, two of which were associated with the current yard surface (concrete surface and subbase material), with a further four contexts

associated with a redundant mid- to late-19th or early 20th century domestic drain section. Retrieved from the drain fill were three sherds of glazed pottery and one sherd of glass; the artefacts were roughly contemporary with the use of the drain. Immediately below this structure was a sterile tightly compacted reddish-brown natural substrate that contained no archaeology. This deposit extended to the base of the trench and along its length. This trench section revealed no significant archaeological deposits, features or structures.

Section 4. This trench section extends from the far northern section of the farmyard, immediately west of the NW corner of Plot 9 to the southern elevation of Plot 6. Revealed within this trenching section were two contexts: a compacted earthen surface with building rubble material beneath. The latter deposit extended to the base of the trench. This trench section revealed no significant archaeological deposits, features or structures.

Plot 4/5

Plot 4/5 stands in the far north-eastern section of the farmyard and was the site of a large two-storey poultry shed (Plate 4). A total area of c. 31.6 x 6.4m^2 was excavated by a mechanical excavator and included the removal of a debris-strewn floor that occupied the internal space of the building (Plot 4). It should be noted that only the southern plot is currently under development. Prior to the groundworks phase, the owner indicated that the northern plot – Plot 5 will not be developed for the foreseeable future and will remain a workshop.

Plate 4 The poultry shed (prior to groundworks), located in the NE part of the farmyard, looking northwest (Image: G.H. Nash).

Exposed within the eastern section of the internal space of Plot 4 was the bedrock which sloped from north to south (following the natural contour of the hill). The initial groundworks for the proposed floor level extended within the footprint of the existing building, with a mean depth of 0.50m below the existing ground level. Strategically placed across the floor space and extending to an existing breeze-block wall foundations of the former poultry shed, fourteen rectangular trenches were excavated. The deepest trench extended to a depth of 1.8m (located within the SW section of the plot). In all trenches, the original concrete foundations of the poultry shed, comprising a near-continuous concrete beam were exposed, along with disturbed modern deposits above and below exposed concrete foundation blocks.

The original concrete footings of the poultry shed were laid on the northern and southern sides of the building to a considerable depth, especially within the western section. All substrate deposition above this depth was associated with the foundations and subbase of the poultry shed.

Based upon the Historic England description of the site, it was expected that Roman remains may have been uncovered. The Plot stands between an eastern [N-S] town boundary wall and Roman Buildings G1, G8 and G17. However, the watching brief revealed that a significant section of the slope that includes this plot and neighbouring Plots 6, 7 and 9 had been heavily truncated. Based on observations made by the author in 2020, at least 2.5m of deposit has been removed and it is therefore likely that the archaeology uncovered by Cunliffe (1967) and Branigan (1977) would have stood above the current surface levels of the northern section of the slope on which the plot is located.

The watching brief revealed no significant archaeological deposits, features, structures or artefacts. The substrate that underlies the concrete footings for the poultry shed was archaeologically sterile. All deposition above the original concrete footings of the building was associated with the construction and use of the former poultry shed.

Plot 6

Plot 6 stands in the far northern section of the farmyard. The footings trenching extended to a maximum depth of 1m below the existing floor level of the former building. The development of Plot 6 involved the conversion a farm shed into a dwelling. The superstructure of the building is timber framed. According to the former owner – Mr William Butler – the timber-framing (trusses, posts, wall-frame sections and Crittall-type window casements) originated from billets at the former Royal Flying Corps training base of Yatesbury in Wiltshire and as such these historical architectural elements were incorporated into the design of the dwelling (Plate 5).

Plate 5 Roof section of Plot 6 showing the timber roof section of a former WW 2 billet, looking west (Image: G.H. Nash).

Much of the current concrete floor surface across the site remained *in situ*. The northern trench stratigraphy was uniform throughout, comprising a concrete floor section (measuring up to c. 0.30–0.35m in thickness), and sub-base material (measuring to a maximum thickness of c. 0.20m). Underlying the sub-base was a sterile tightly compacted clayey dark red to a brown natural substrate. There were no inclusions (natural or otherwise) recorded within this deposit. The substrate extended to the base of all trenching activity.

Excavated within the southern side of the plot was an 8m x 4m concrete block which extended to a depth of 1m below a concrete floor surface. Encountered within the base of the trench was a second concrete floor surface that probably belonged to a building that predates the section of the demolished building within this part of the plot. The internal service trenching was cut into this existing floor surface where the extant western section of the building stands. Recovered from both trenching regimes were no archaeological deposits, features, structures or artefacts.

Based upon Historic England's description of the site, it was expected that Roman remains would be uncovered. However, initial inspection of the surrounding ground levels, especially those located north of the plot, reveals that a significant section of the slope that includes this plot and Plots 4/5 and 9 have been heavily truncated. Based on observations made by the author, at least 2.5m of deposit has been historically removed. It is therefore likely that the archaeology uncovered by Cunliffe (1967) and Branigan (1977) would have stood above the current surface levels of the northern section of the slope on which the plot is located.

Plot 7

Plot 7 stands in the far north-western section of the farmyard. A total area of c. 75m^2 was excavated by machine and included the removal of a concrete floor that occupied the internal space of the building. The excavation extended within the footprint of the existing building, with a mean depth of 0.30m below the original surface of the concrete floor. A service trench was also excavated to a depth of 0.50m below the original surface of the concrete floor and was positioned within the central section of the building.

Following the removal of the concrete floor, a thin sub-base layer was encountered and comprised mainly of modern building rubble (including brick fragments and stone). Underlying the subbase material was the natural substrate on the northern side of the floor area (comprising an orange to brown derivative soil), whilst on the southern side was made-up ground that formed a wedge-shaped deposit, the base of which may have followed the natural contour of the hillslope (although the depth of this interface was not reached). The concrete floor and the various underlying deposits probably date to the latter part of the 20th century.

Initial inspection of the surrounding ground levels, especially those located within the northern section of the plot, revealed that a significant section of the slope that includes this plot and Plots 4/5 and 6 have been heavily truncated. Based on observations by the author, at least 2.5m of deposit in and around Plot 7 had been removed. It is therefore likely that any Roman remains had been removed, along with a substantial underlying substrate deposit.

The watching brief revealed no significant archaeological deposits, features, or structures. The substrate underlying the concrete floor levels were identical to those found within the service trenching (identified in November 2020) and within Plots 6 and 9. The substrate within these plot areas was considered naturally formed and sterile in terms of archaeology. The watching brief did not identify any *in situ* traces of the building G17 or the archaeological deposits in which the building once stood.

Plot 9

The plot stands in the north-western section of the farmyard. A total of c. 42 linear metres of machine trenching was excavated for footings. The trenching extended around the perimeter of the plot and went to a maximum depth of c. 1.25m below the existing ground level. It was decided that the current floor surface across the site should remain *in situ*. The trench stratigraphy was uniform throughout, comprising a concrete floor (measuring c. 0.25m in thickness across the site), followed by sub-base material (measuring to a maximum thickness of c. 0.30m). It was deduced that the sub-base material on the eastern side of the plot (and recorded in section) may be building material from a Roman building (possibly Building G1) (Plate 6). Underlying the sub-base material was an archaeologically sterile tightly compacted clayey dark red to brown natural substrate. There were no inclusions (natural or otherwise) recorded within this deposit. The substrate extended beyond the base of the trenching.

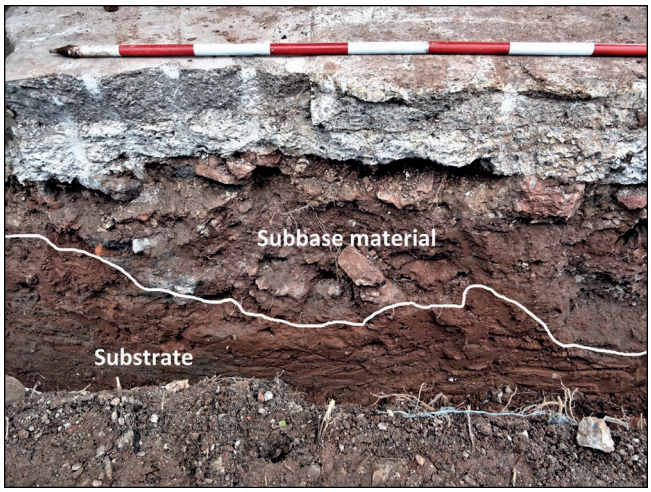

Plate 6 Possible Roman building stone within the subbase deposit, located within the eastern footings of the plot, looking west (Image: G.H. Nash).

The watching brief revealed no significant archaeological deposits, features or structures. The only possible archaeology associated with the Roman settlement occurred within the NE corner of the plot, comprising two small Roman pottery sherds – probably Severn Valley ware. The sherds were found within the sub-base deposit and are

therefore residual, probably originating from up-slope or from former disturbed deposits that once extended across the plot.

It is more than likely that the relatively recent development of the farmyard removed much of the potential archaeology that was once present and exposed during archaeological excavation activity (between 1954 and 1977), in particular, two archaeologically excavated buildings – G1 and G17 which once lay within the curtilage of the plot; the watching brief did not identify any *in situ* traces of either building (see Broomhead 2006). Subsequent development, including the erection of the shed (with deep silo foundations) probably removed all archaeology associated with these two buildings and surrounding archaeological deposition.

CONCLUDING REMARKS

Between 2019 and 2022, a total of seven projects were undertaken by Dr George Nash (Nash Survey & Environmental) that included several heritage statements and five watching briefs; all projects were supported by a written scheme of investigation (WSI) and submitted to Historic England and North Somerset Council for comments and approval. Each project observed guidance set within the *South West Archaeological Research Framework: Research Strategy* (Grove & Croft [eds.] 2012) and the Chartered Institute of Field Archaeologists' *Standards and Guidance for an archaeological watching brief* [revised October 2020].

Overall, the survival of archaeological remains within the northern section of the farmyard is considered disappointing. Subsequent development, including the erection of at least nine farm buildings, removed much of the Roman remains that were identified by Cunliffe (1967) and Brannigan (1977). Inspection of the northern boundary of Plots 4 and 5 revealed the severity of the deposit that has been removed – up to c. 2.5m below the surface of the slope of the hill (Plate 7). As a result, all plots that were archaeologically observed revealed nothing of the Roman building activity that was identified by previous archaeological investigations.

The only surviving remnant deposit that contained any Roman activity was a sealed colluvial deposit that was present in Section 2 of the trenching regime for the mains services to each plot (undertaken in December 2019). Much of this deposit comprised a distinct, thin lens that had been heavily truncated by the current carpark surface.

Plate 7 The rear section Plot 5 and the cut into the hillside made for its construction, looking west (Image: G.H. Nash).

ACKNOWLEDGEMENTS

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THE RESULTS OF AN ARCHAEOLOGICAL EVALUATION WITH TARGETED EXCAVATION ON LAND OFF YOUNGWOOD LANE, NAILSEA, NORTH SOMERSET

By Bryn Morris and Phoebe Scrivener

SUMMARY

This report presents the results of three small area excavations carried out by South West Archaeology Ltd. on land off Youngwood Lane, Nailsea, North Somerset, which followed an earlier evaluation of the site. The work took place in advance of a residential development and in compliance with a planning condition.

The site covers c.24.5ha, but the geophysical survey (Sumo 2017) and the 39 × 50m evaluation trenches only identified three areas of archaeological significance. In Trench 28 a pit containing Late Iron Age/early Roman and Saxo-Norman pottery was excavated; in Trench 32 Late Iron Age and Roman pottery was recovered from a ditch; and in Trench 35, which targeted a circular geophysical anomaly, Late Iron Age/early Roman pottery was recovered from two sections of curving ditch. Three small open area excavations were undertaken. In Area A, a ring ditch c.10m in diameter with a north-facing entrance was fully excavated, producing more Late Iron Age/early Roman pottery, but no other features (postholes etc.) were identified. Apart from the unusual position of the entrance, nothing about the ring ditch or its finds assemblage would suggest this was anything other than domestic in function. In Area B the Late Iron Age and Roman pottery was determined to come from the ditch of a field boundary removed in the 20th century, but a separate small pit with Late Iron Age/early Roman pottery was excavated. In Area C the pit containing Late Iron Age/early Roman and Saxon-Norman pottery was determined to be a pair of intercutting pits, associated with several other undated pits and a spread of material that produced both Late Iron Age/early Roman pottery and *modern material*.

INTRODUCTION

South West Archaeology Ltd. (SWARCH) was commissioned by Taylor Wimpey Plc. to undertake an archaeological evaluation followed by targeted excavation to form part of planning application 16/O/1677/OT2, a residential development of up to 450 dwellings, with associated infrastructure works, access, footways, cycleways, and community infrastructure including public open space and landscaping. This work was undertaken in accordance with a Written Scheme of Investigation (Boyd 2020) drawn up in consultation with Cat Lodge (Senior Archaeologist, North Somerset Council) and in line with best practice and CIfA guidelines (2014). This paper contains a synopsis of the archive report (Brown & Scrivener 2022).

TOPOGRAPHICAL AND GEOLOGICAL BACKGROUND

The site covers a total area of *c*.24.5ha, and slopes from *c*.30m AOD to the north to *c*.10m AOD to the south-east; there is a very slight combe to the western part of the site. The land drops to the River Kenn which runs east-west just beyond Youngwood Lane. The soils of the site are the well-drained fine loamy soils often over rock of the Neath Association (SSEW 1983); this overlies the sandstones, with two identified bands of mudstone, siltstone, and sandstone, of the Downend Member (BGS 2022). The evaluation identified numerous outcrops of sandstone with near-horizontal bedding planes, known locally as Nailsea flat rock.

HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

A heritage assessment for the site was carried out by Cotswold Archaeology (2015). This established the heritage baseline for the site and was followed by a gradiometer survey (Sumo 2017). The North Somerset Historic Environment Record (HER) records only three entries for the site: a historic quarry site 120m west of Bizley Farm (MNS6267), an area of possibly ridge and furrow as identified by the geophysical survey (MNS8983), and the curving line of a mineral tramway built after 1840 and redundant by the 1880s (MNS2973). The Nailsea tithe map shows the site as made up of irregular fields of varying size, some of which may be derived from medieval strip fields. In 1844 most of the fields belonged to Bizley Farm. In the second half of the 19th century there was coal mining in the area, and the long curving section of tramway running through the western part of the site shown on the 1st edition Ordnance Survey map; this linked West End Colliery to the main rail network. During the evaluation it was determined the cuttings for the tramway had been infilled during the later 20th century, and two small but well-built stone culverts survived along its route. During the second and third quarters of the 20th century Nailsea golf course had several holes on the western part of the site, and their clubhouse was located in the corner of the south-western field. A number of field boundaries were removed during the late 19th century. A quarry, now infilled, operated from the northern part of the site in the 1970s, and the historic orchard to the centre of the site had been planted on earthwork ridges (either deliberate orchard banks or relict ridge and furrow) *c*.6m wide.

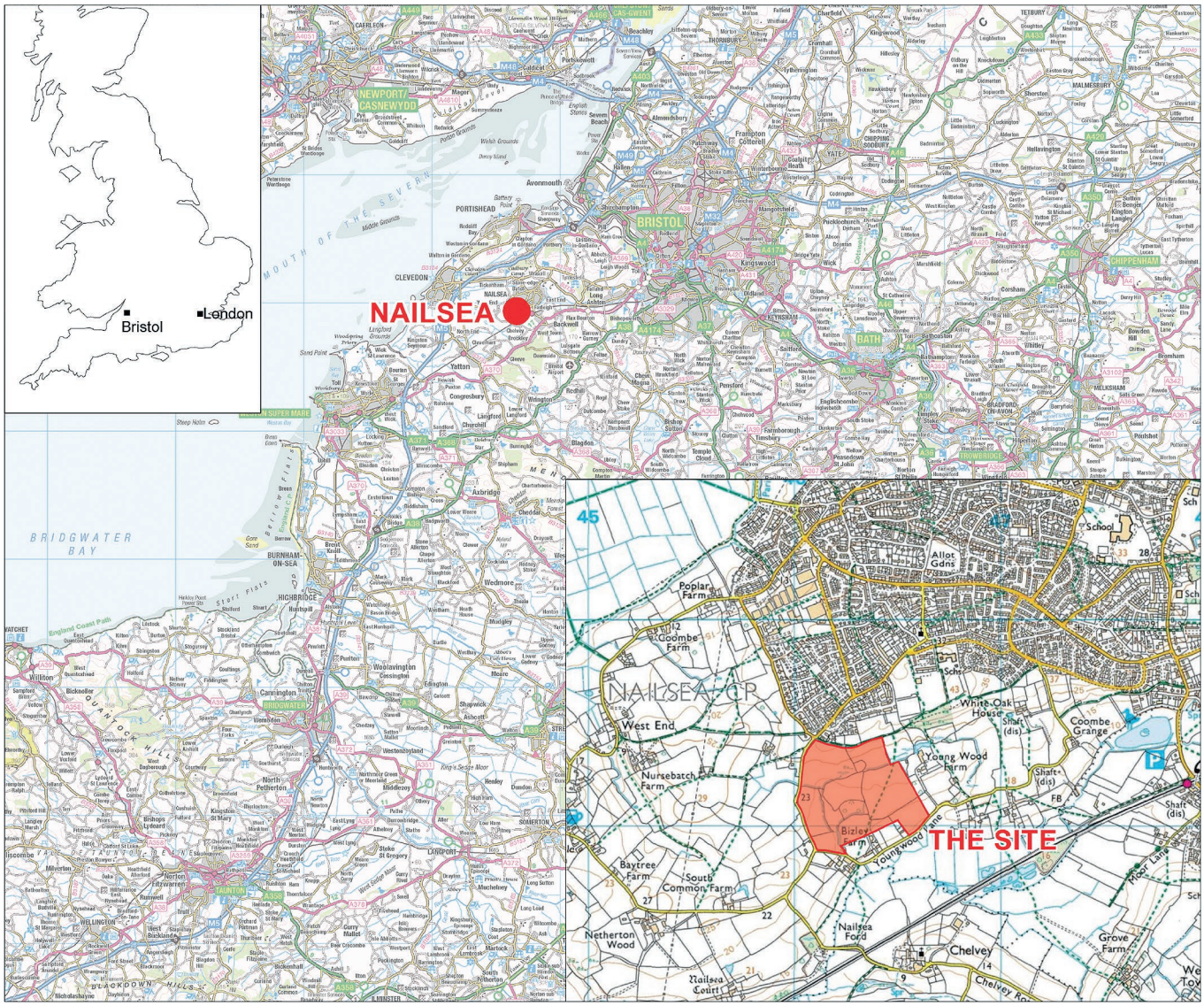

Fig. 1 Site location.

The geophysical survey detected a few features of probable archaeological origin. These were limited to the fragmentary remains of relict field boundaries, the line of the tramway, and a possible ring ditch just to the east of Battens Farm. However, the geological responses from the sandstone across most of the site were very strong and could obfuscate or conceal archaeological responses.

Methodology

The archaeological evaluation was conducted in accordance with a Written Scheme of Investigation (WSI) (Boyd 2020) drawn up in consultation with the Local Planning Authority and in line with CIfA guidelines (2014). 39 trenches, each 1.60m wide and totalling *c*.1920m, were laid out with a Leica dGPS. The trenches targeted geophysical anomalies and blank areas in the survey, while avoiding three sets of overhead power lines, four buried water mains, four badger setts, and a footpath. The trenches were opened by tracked mechanical excavator to the depth of weathered natural using a toothless grading bucket under archaeological supervision. Exposed archaeological deposits were excavated by hand and in accordance with the WSI and CIfA guidelines. The archaeological evaluation took place in March 2021. The three area excavations were opened in April -May 2021. Area A targeted ring ditch [3507]; Area B targeted ditch [3209] which had produced Late Iron Age and Roman pottery; Area C targeted pit [2803] which had produced Late Iron Age/Roman *and* Saxo-Norman pottery.

Deposit Model

The composition of the topsoil and subsoil was broadly similar across the site, but the character of the natural substrate did vary. The thickness of the topsoil and subsoil varied but generally each layer was appreciably thicker to the downslope ends of each trench. Broadly speaking, the topsoil was *c*.0.18–0.50m thick and the subsoil *c*.0.16–0.42m thick. Topsoil across the site was generally a loose to firm dark brownish-grey sandy silt with occasional small (10-100mm) sub-angular stones. The subsoils were firm mid-reddish brown sandy silts with occasional to

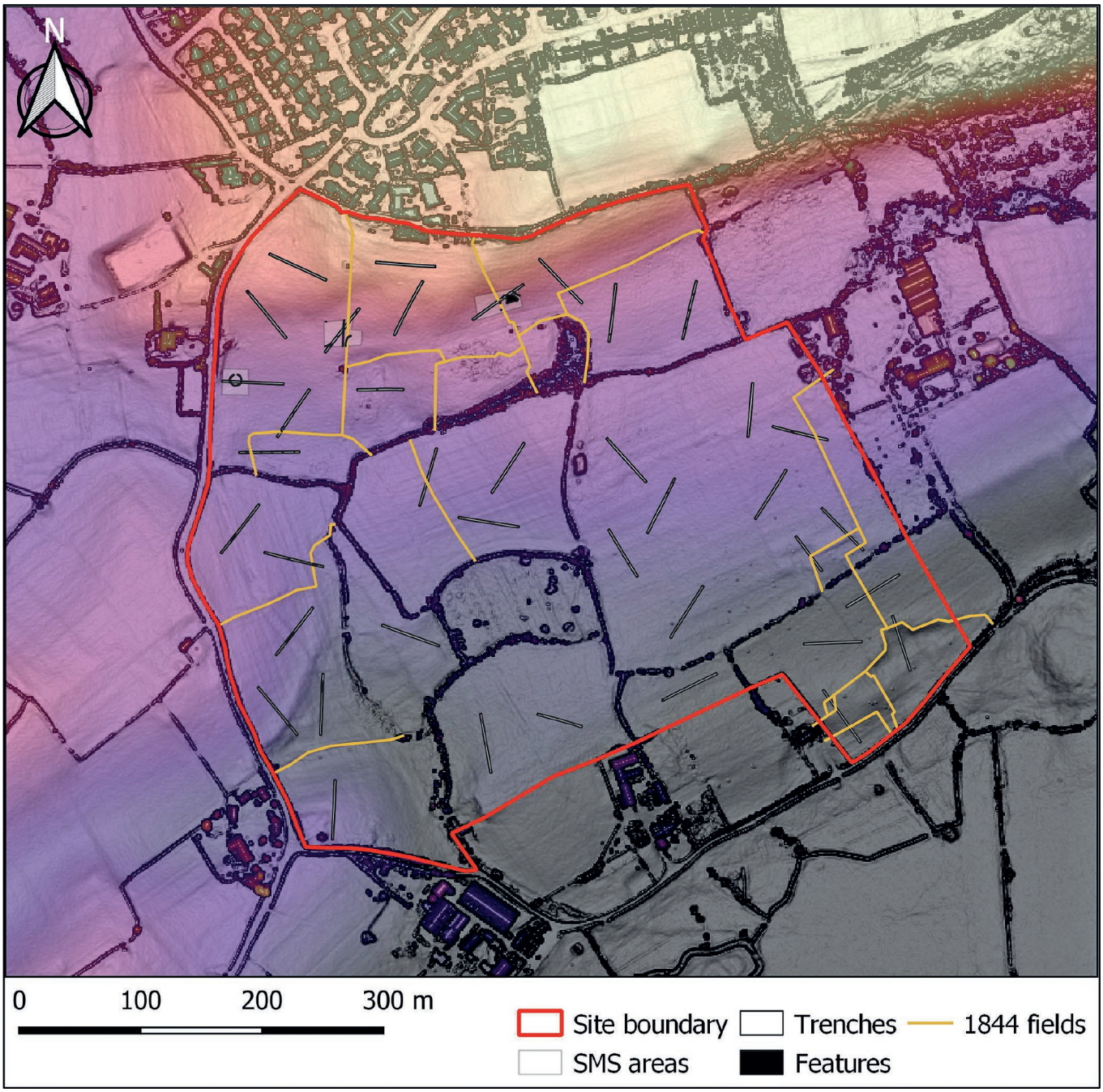

Fig. 2 Site plan showing the whole site and the evaluation trenches. Base map derived from Environment Agency 2017 1m DSM LiDAR data (processed with QGIS v.3.16; slope analysis with 3.0 vertical exaggeration overlain by basic colour ramp, dark to light representing 15m to 35m AOD). Contains data used under the Open Government Licence 3.0.

frequent small and medium sized (10-150mm) sub-angular stones. In those trenches in the lower-lying areas, seasonal waterlogging had resulted in gleying. The weathered natural varied between light-to-mid red silty sand with either no inclusions or frequent large (0.25m+) subangular stone inclusions. In some parts of the site the natural substrate consisted of hard fractured sandstone (*Nailsea flat rock*); in others it was a moist light grey clayey sand with yellow mottling.

Area A

Area A was located at the western end of the northernmost field on the site. An area 21m × 21m across and centred on the two sections of curving ditch located in the evaluation was subject to a strip-map-sample exercise.

During the evaluation the two sections of curving ditch (features [3503] and [3505]) were *c*.5m apart. The fill of ditch [3503] produced 3 sherds (17g) of Late Iron Age /early Roman pottery, two co-joining sherds from a wheel-finished jar or possible hooked rim; the fill of ditch [3505] produced 4 sherds (22g) of Late Iron Age/early Roman pottery. As the

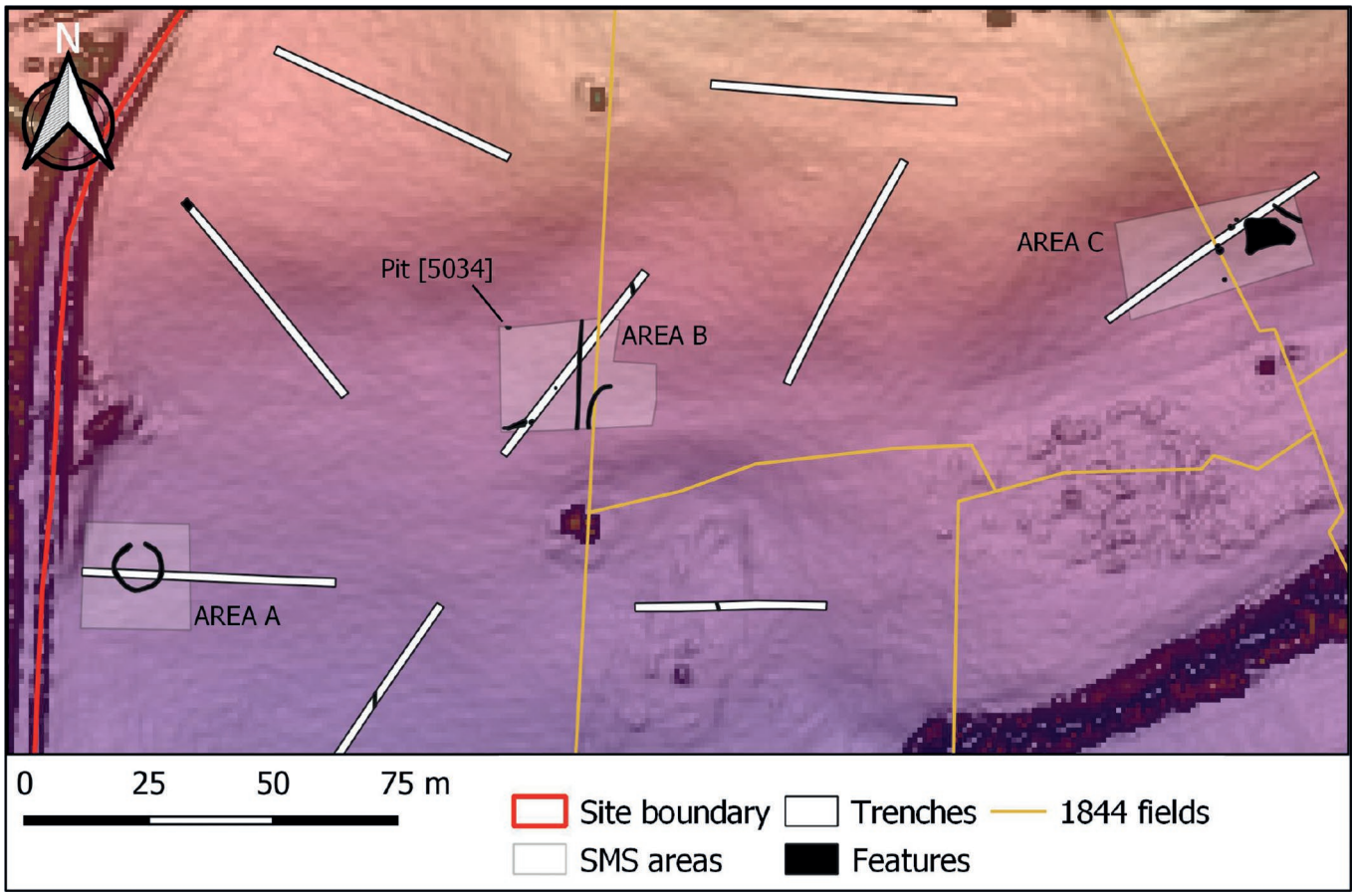

Fig. 3 Site plan showing the location of the three excavated areas. Base map derived from Environment Agency 2017 1m DSM LiDAR data (processed with QGIS v.3.16; slope analysis with 3.0 vertical exaggeration overlain by basic colour ramp, dark to light representing 15m to 35m AOD). Contains data used under the Open Government Licence 3.0.

trenching had confirmed the presence of the ring ditch, an area 21m × 21m across was stripped to expose the full entire footprint of the feature.

The ring ditch [3507] described a somewhat irregular circle *c*.10m in diameter with a wide (*c*.2m) entrance facing north. The ditch varied slightly in width, from 0.6m to 0.9m, and in depth, from 0.2m to 0.38m, generally with steep sides and a concave base. The two termini and five other slots were dug and recorded, then the remaining fill was removed. The ring ditch contained a single fill, a friable sandy silt for the most part, which varied slightly in colour between mid-to-dark grey and mid-to light reddish-brown. The fill contained common to frequent medium to (occasionally) large sub-angular stones and occasional charcoal. The ditch was narrower (0.6m) and shallower (0.24m) towards the south-west, and the highest concentration of artefacts was located along the western edge. In total 68 sherds (486g) of Late Iron Age/early Roman pottery came from the ring ditch, and charcoal from slot 1 was C14 dated to 107 cal BC – 68 cal AD (94.8% probability) (Beta-641460).

The ring ditch was the only feature to be identified. No postholes, pits, gullies, or field ditches were observed within the excavated area. In all probability this was – as the pottery would suggest – a domestic site, so presumably the normal suite of structure elements (internal post ring, ring gully, porch etc.) simply do not survive. However, the fact the entrance faces north is unusual, as the doors of roundhouses usually face east or south-east, and the charcoal from slot 1 (a terminus) was unusual in that it was derived entirely of oak.

Area B

Area B was located towards the centre of the northernmost field on the site. An area 21m × 31m across and centred on ditch [3209] was subject to a strip-map-sample exercise. Five features had been identified in the evaluation: a pit [3203]; a posthole [3205]; and two ditches [3207] and [3209]. The trench was also crossed by a ceramic land drain. The excavation exposed four additional features: a curving section of ditch [5022]; two short sections of ditch [5026] and [5028], and another pit [5034].

The features excavated in this area were fairly shallow and scrappy, and it is telling that the trigger for this excavation – ditch [3209] and the Late Iron Age and Roman pottery – came from the ditch of a field boundary removed after 1902. How this material came to be in this ditch is unknown, but it is not impossible it was imported to the site from elsewhere when the hedgerow was grubbed out. The only feature of interest here was pit [5034], which would appear to be an isolated feature.

Pit [5034] was located up against the northern section of Area B. It appeared to be 1.43m in diameter and 0.21m

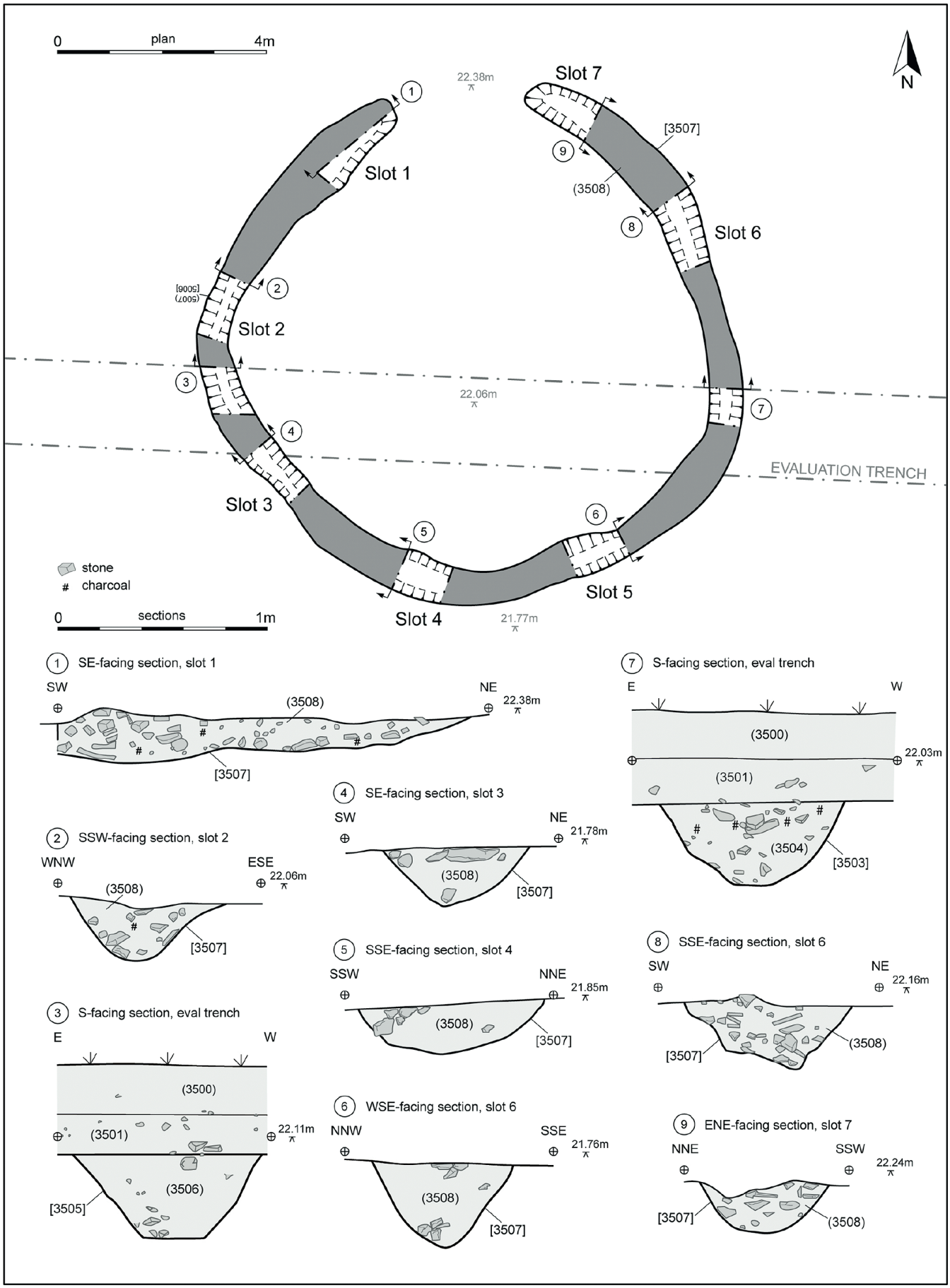

Fig. 4 Plans and sections of ring ditch [3507].

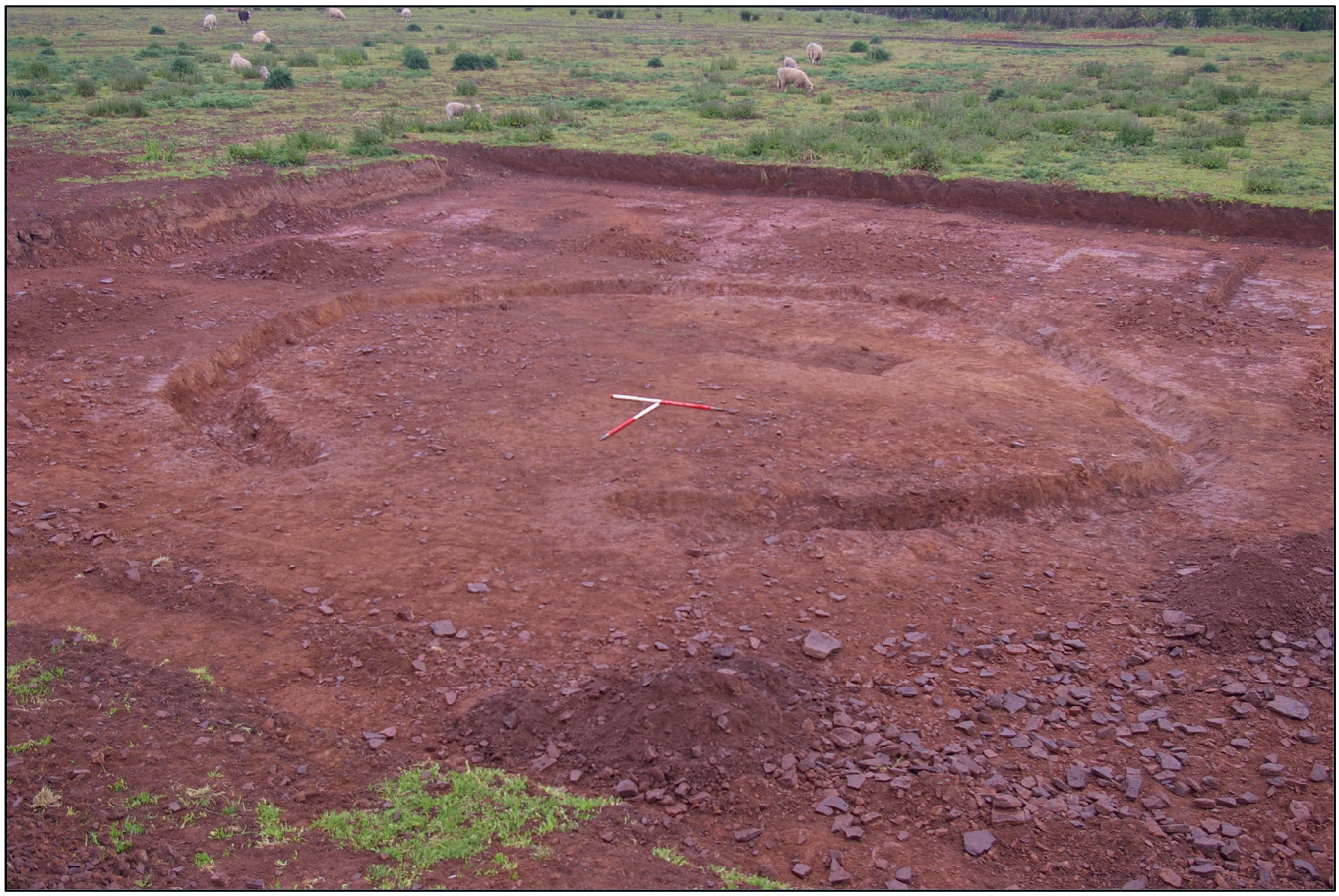

Plate 1 Ring ditch [3507] fully excavated, viewed from the north (1m scales).

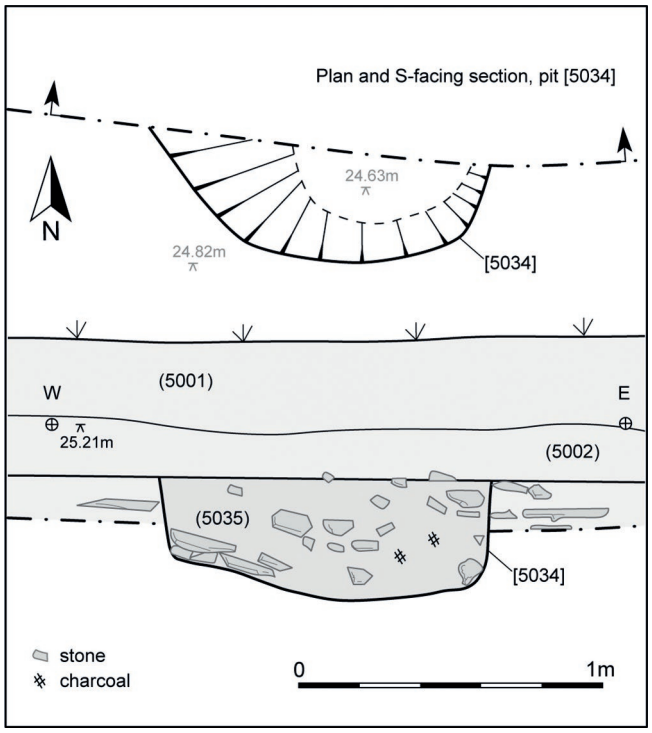

Fig. 5 Plan and section of pit [5034].

deep, with asymmetric sloping sides dropping to a broad, flattish base. It contained two fills: lower fill (5036), a friable mid yellowish-brown sandy silt with rare charcoal flecks; and an upper fill (5035), a friable mid yellowish-brown silty sand with occasional medium-sized sub-angular stones and occasional charcoal flecks. 13 sherds (96g) of Late Iron Age/early Roman pottery were recorded from this feature. Charcoal from context (5035) was C14 dated to 162 cal BC – 17 cal AD (95.4% probability) (Beta-641461), and contained the usual range of fuelwood taxa.]

Area C

Area C was located to the eastern side of the northernmost field on the site, close to the site of the 1970s quarry and a large badger sett. An area 37m × 18m across and centred on pit [2803] was subject to a strip-map-sample exercise. Six additional features were exposed: a large irregular hollow [5037], four pits [5039], [5041], [5043], and [5048], and a shallow ditch [5054].

Pit [2803] cut the subsoil (2801) and contained three fills. The feature had steep sides and a concave base. It was 1.5m wide, 0.55m deep and extended beyond the edge of the trench to the north-west. Basal fill (2805) was a loose reddish-brown silty sand with frequent medium sub-angular stones. Four sherds (32g) of Late Iron Age/early Roman pottery were recovered from this context. Overlying this was fill (2806), a firm dark grey/black silt charcoal-rich/

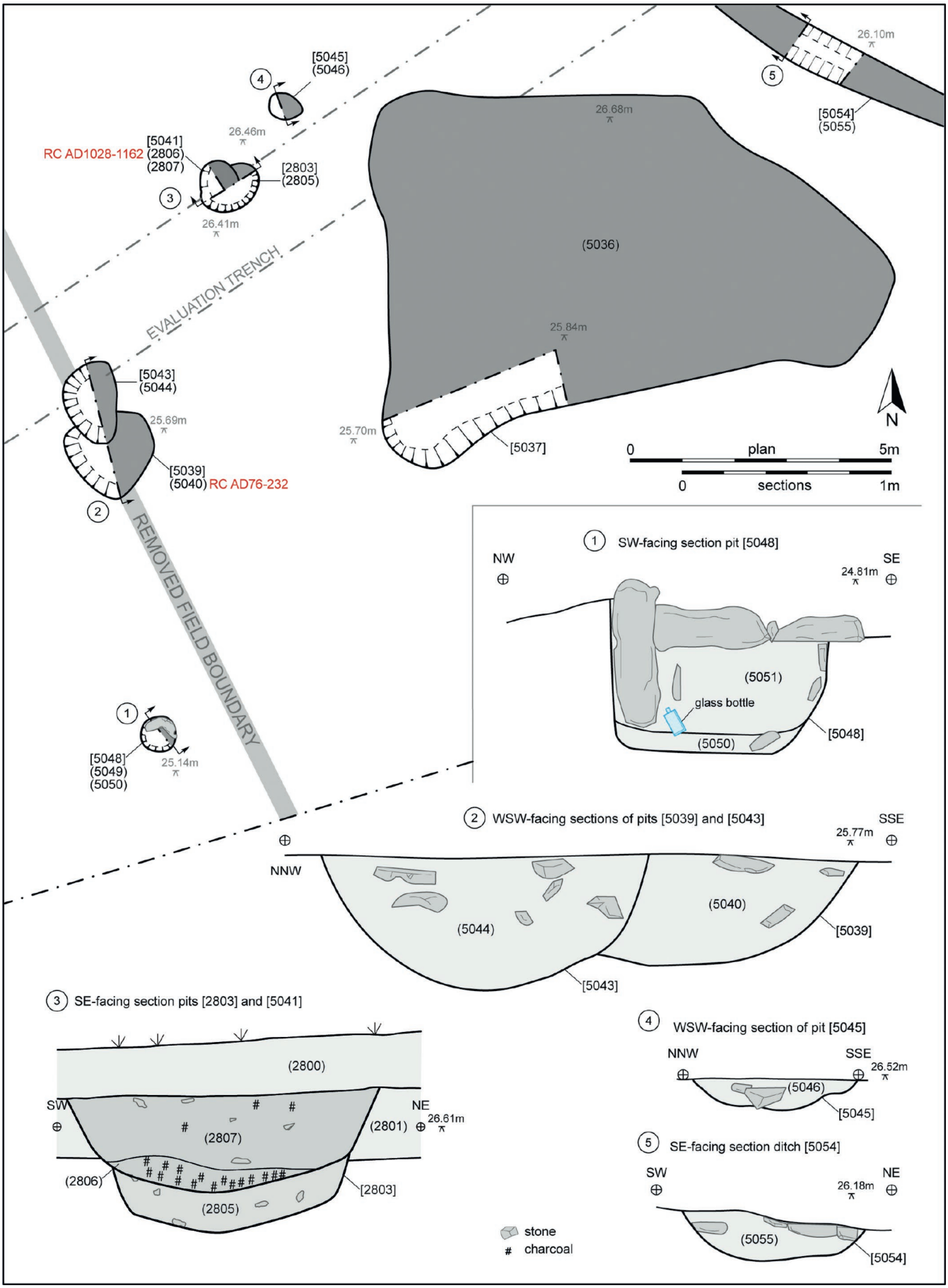

Fig. 6 Plans and sections of Area C.

humic layer, containing a further five sherds (192g, mostly from one large rim) of pottery. Confusingly, these were from a Saxo-Norman globular jar. The upper fill of the pit (2807) consisted of a mid-reddish-brown firm sandy silt with occasional charcoal flecks. The size and shape of this feature, together with the unusual juxtaposition of finds of differing date, prompted the excavation. However, when this pit was re-excavated it was found to comprise a pair of features: pit [2803], an earlier elongate feature 1.5m long by 0.55m wide and 0.58m deep, which contained fill (2805); and pit [5041], a later sub-circular pit *c*.0.55m in diameter and 0.42m deep that contained fills (2806) and (2807). The charcoal from (2806) was C14 dated to 1028–1162 cal AD (95.4% probability) (Beta-641463), and was dominated by oak, perhaps implying a specific fuelwood purpose.

Hollow [5037] was vaguely sub-rectangular and measured *c*.9.0m × 5.5m across by *c*.0.3m deep. It had no clear cut, gently sloping sides, and an undulating flat base. It contained a single fill (5038) a mid-to-dark grey sandy silt with frequent medium sub-angular stones and occasional charcoal flecks. The fill of this feature produced 47 sherds (418g) of largely early Roman pottery with some Late Iron Age material, but also modern plastic.

Around hollow [5037] to the west and north was a partial arc of pits. Pit [5048] was located *c*.6.6m to the south-west of hollow [5037]. It was sub-circular, 0.95m in diameter and 0.4m deep, with steep sloping sides and a gently concave base. It contained two fills: lower fill (5050) was a friable/loose dark greyish-brown silty clay 0.05m thick; upper fill (5049) was a reddish-brown silty-clay, probably redeposited natural. There appeared to be large sub-angular packing stones in these fills. Upper fill (5049) produced most of a 19th century clear glass bottle.

Intercutting pits [5039] and [5043] were located *c*.5.0m to the west of hollow [5037]. Pit [5039] was the earlier feature. It was oval, 1.42m long by 0.92m wide and 0.64m deep. Its sloping sides dropped to a flat narrow base. Pit [5039] contained a single fill (5040), a soft mid greyish-brown silty sand with occasional medium-sized sub-angular stones and occasional charcoal, which was C14 dated to 76–232 cal AD (95.4% probability) (Beta-641462). Pit [5039] was cut by pit [5043]. This feature was roughly circular, 1.35m in diameter and 0.55m deep, with sloping sides that drop to a concave base. It contained a single fill (5044), a friable mid-to-dark brownish-grey silty sand with frequent small- to medium-sized sub-angular stones and frequent charcoal flecks.

Pits [5039], [5043] and [5048] were on the line of a removed field boundary and approximately 5m (12”) apart. It is possible they could be postholes for gateposts, given the 19th century glass found in [5048]. Pit [5045] was located *c*.1.3m to the north-west of hollow [5037]. It was sub-circular, 0.45m in diameter and 0.08m deep, with gradual sides and a concave base. It contained a single fill (5046), a thin lens of soft mid greyish-brown silty sand with occasional small sub-angular stone. There were no finds from this feature.

Plate 2 Pits [2803] and [5041] partly excavated, viewed from the west (1m and 0.4m scales).

Approximately 1.6m to the north-east of hollow [5037] was a shallow ditch [5054]. This was orientated north-west to south-east, 0.63m wide and 0.2m deep, with a gentle concave profile. It contained a single fill (5055); this was a soft mid reddish-brown silt sand with common small- and medium-sized sub-angular stone, not dissimilar to the subsoil.

It is unclear what this group of features represents. Hollow [5037] seems more likely to be a natural hollow than a deliberate creation. Its relationship to the pits appears intentional but could equally be fortuitous. The pits themselves appear deliberate but are of different dates (and one is demonstrably modern), so the appearance of contemporaneity is probably illusionary.

Discussion

Given the size of the site, very few archaeological features were encountered. The 'Historic Landscape Characterisation' for the area identifies these fields as "*post-medieval irregular fields enclosed from anciently-reclaimed inland moors"*, but that does not quite ring true, as the whole dryland peninsula occupied by Nailsea falls into the same category. However, it is surprisingly devoid of archaeology, and the archaeological potential of most of the site would appear to be *low*.

Those trenches where significant features were encountered or signposted by the presence of Prehistoric or Roman pottery were targeted for area excavation. The results of these excavations are mixed: in Area A the entire footprint of a ring ditch was exposed, and more Iron Age pottery was recovered, but no other related features were identified. In Area B, the ditch that produced the Roman and Iron Age pottery was determined to have belonged to a hedgerow grubbed out in the 20th century, and it is possible the pottery was imported to the site from elsewhere. The few other features here were undated. In Area C the confusing juxtaposition of Iron Age and Saxo-Norman pottery was resolved into two intercutting features, and three of the other postholes lay in line with a 19th century field boundary. The infilled hollow produced abraded Roman pottery but appeared natural, perhaps a sediment trap containing material that would have been destroyed if it remained in the active ploughsoil.

In general, only the ring ditch proved to be a demonstrably significant archaeological feature. With a diameter of *c*.10m it is in the ballpark for a roundhouse, but no structural postholes or penannular gullies were identified, and the entrance faces north. The recovery of domestic pottery from the fill of the ring ditch would indicate it was domestic and it was occupied, and dates it to *circa* the first century AD but little else. The charcoal from slot 1 was dominated by oak

CONCLUSION

Broadly speaking, the evaluation determined the archaeological potential of the site was *low*. Twenty-one of the 39 trenches were blank, and eight of the other trenches contained but a single feature. The excavated features produced very little artefactual evidence, and very little was recovered from the topsoil or subsoil, either during the machining or subsequently from the spoil. Numerous field boundaries removed after 1844, some of which were identifiable as earthworks, were not visible in the trenches. The cutting for a 19th century tramway was identified in four trenches and found to be backfilled with later 20th century material.

Of the three area excavations, the only demonstrably significant feature was a ring ditch dated to about the first century AD, but no internal or external features were associated with it. Pottery from the fill of the ditch indicates it was domestic in character, but unusually the entrance faces north and the sampled charcoal was dominated by a single species, oak. The other two area excavations exposed features of different date but restricted significance. The Iron Age and Roman pottery in Area B came from the ditch belonging to a hedgerow removed after 1902.

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APPENDIX 1

Pottery

By Dr Imogen Wood

Summary

This assessment report has identified Late Iron Age, Romano-British and medieval pottery from land north of Youngwood Lane, near Nailsea, North Somerset. The small assemblage consisting of 140 sherds weighing 1302g have been quantified and analysed to understand the nature and period of activity on this site.

Methodology

140 sherds from 13 contexts were subjected to detailed analysis of form and fabric in accordance with the current guidelines for the later prehistoric pottery (Prehistoric Ceramics Research Group (PCRG) 2010). Each sherd examined macroscopically to assign a fabric group based on the most frequent or most obvious inclusions type. Other variables such as surface treatment, decoration, firing, internal charring, and evidence of use were also recorded.

Quantification
The assemblage is composed of Late Iron Age to Romano-British and medieval pottery.

Period	No of sherds	Weight (grams)
Late Iron Age Early Roman	85	616
Romano-British	50	507
Medieval	5	180
TOTAL	**140**	**1302**

Table 1 Quantification of pottery sherds by period.

Condition of the Assemblage
The small assemblage is in moderately good condition with most of the abrasion being level 2 with some level 3 very abraded sherds. The only sherds with no abrasion is possibly due to the hardness of the fabric. This abrasion profile of this assemblage is typical of secondary deposits in pits and ditches and does not suggest many sherds were in their primary contexts.

Fabrics
The Late Iron Age fabrics are predominately *vesicular*, suggesting a calcareous temper was used possibly limestone or calcite that burnt out during firing. The mica- and quartz-rich fabrics could have derived from a similar area.

Results
The ceramic assemblage from Land North of Youngwood Lane is typical of Late Iron Age/ Romano-British sites in this region roughly dating to between 150 BC and AD 200. The pottery is mostly from secondary deposits suggesting brief occupation between the Late Iron Age and Romano-British periods as suggested by the mixed LIA and RB vessels in contexts (3210) (3504) and (5038).

The Late Iron Age pottery assemblage is characterised by high shouldered bead rim forms in a vesicular fabric and a small number of burnish vessels. The forms suggest a range of high shouldered jars with bead rims (JC3/4 Cadbury form), (2805), (3508) 260mm rim diameter, a necked jar with bead rim and high shoulder (5015) 100mm and a slightly shouldered jar with flattened rim (JB4 Cadbury form) (5035) and a jar with upstanding everted rim 220 mm diameter (JB2 Cadbury form) (5017). A very fine wheel finished high shouldered vessel from (3504) has a burnished exterior surface and fine incised bands of horizontal lines. One sherd from (5038) in a vesicular fabric has internal charring.

These forms are common throughout Somerset and Dorset and correspond to forms characterised in the Cadbury Castle type series (Barrett et al. 2000), they are broadly dated to the 1st century AD. Comparable local examples of these forms can be found at Yatton, Somerset where a small amount of in-turned rim fragments belonging to Cadbury type JC4 in a locally produced vesicular fabric have been dated to 1st century BC to mid/late 1st century AD (Brook 2019). Although a little earlier, there are also parallels with forms from Whitegate Farm, Bleadon (Young 2007) and Late Iron Age phases of Brent Knoll Hillfort (Brook 2017).

There are three sherds in hard reduced fabric with sparse quartz inclusions in a micaceous clay matrix which are poorly constructed with uneven surfaces, one with grass impression on the exterior (5035). There are only two body sherds and one flared everted rim sherd all from context (5035) and most likely from the same vessel deposited along with vesicular sherds. Sandy micaceous fabrics are equally typical of this area and could represent another local fabric, but the poor production quality and the flared rim suggests a vessel brought from elsewhere.

The nineteen sherds from (3508), slot 2, are all from one vessel, as is the case in other contexts suggesting only a small original assemblage which was broken prior to or during the postdeposition process.

The Romano-British pottery is a typical mix of BB1, Grey Ware, SWBBW and a few fine ware sherds, which are all represented in context (5038), with only a couple of Grey Ware sherds from (3504) and (3210).

The common BB1 forms present are a full profile of Dog dish bowl, rims from everted jars and basal sherds with external incised scrolling decoration all from (5038) suggesting a date no later than AD 200. The oxidised fine ware, one with black internal and external slip could also be within this date range. A basal angle Grey Ware sherd (3210) is typical of this period, as are the forms of the sandy locally derived coarse SWBBW ware vessel imitating the BB1 style, and two sherds from a hard fired vessel with oxidised exterior and interior and a reduced core.

The medieval pottery sherds from (2806), are all part of the same handmade globular cooking jar with slightly everted neck and flat-topped everted rim. These plain medieval earthenware vessels are found throughout the region and are indicative of utilitarian cooking and storage vessels of 11th to 12th century. Comparable examples can be found at Whitegate Farm, Bleadon (Young 2007). This seem to be the only in-situ ceramic deposit in pit (2803), the Late Iron Age bead rim sherd in the context above (2805) must be residual.

Conclusion
This small assemblage offers further insights into occupation in this part of North Somerset, adding to current evidence of homogeneity in ceramic styles throughout Somerset and Dorset in this period. It is typical of assemblages of this date in the region and is therefore of limited significance.

Context	Count	Wgt	Abrasion	Fabric	Date	Comments
2805	4	30	1	Ves	LIA-ER	rim sherd of bead rim jar, reduced and burnished
2806	5	180	2	Quartz	M C11/12	1 rim sherd 4 body sherds
3210	1	5	3	Ves	LIA-ER	1 foot ring base or cordon
3210	1	38	2	Grey Ware	LIA RB	1 basal angle wheel made jar
3504	1	4	1	Q Mudstone	LIA-ER	1 pedestal base
3504	2	11	2	Grey Ware	LIA RB	2 con-joining sharp shoulder sherds wheel made,
3506	4	20	2	Ves	LIA-ER	4 body sherds
RD slot 1 5005	1	11	2	Ves	LIA-ER	Body sherd oxidised interior, exterior
RD slot 2 5007	2	4	3	Ves	LIA-ER	2 undiagnostic sherds
RD slot 7 5009	13	95	2	Ves	LIA-ER	1 basal angle, 1 base sherd, 11 body sherds
RD slot 3 5011	19	181	2	Ves	LIA-ER	3 con-joining rim sherds rolled over bead rim jar, 5 shoulder sherds, 11 body sherds
RD slot 5 5015	18	117	2	Ves	LIA-ER	2 con-joining rim sherds, fine necked Jar burnished, 1 sharp shoulder sherd, 14 Body sherds, 1 basal angle
RE slot 6 5017	8	43	2	Ves	LIA-ER	2 rim sherds jar, 6 Body sherds
5035	10	34	2	Ves	LIA-ER	3 conn-joining rim simple upright sherds, 1 rim sherd with internal groove behind bead rim, 6 body sherds
5035	1	11	1	mica	LIA-ER	1 reduced burnished shoulder of jar
5035	1	19	2	Ves	LIA-ER	Body sherd interior charring
5035	1	32	2	mica	LIA-ER	1 Shoulder sherd of burnish jar with exterior grass marking
5035	7	22	2	Ves	LIA-ER	Body sherds
5038	1	10	2	mica	LIA-ER	1 shoulder sherd jar burnished
5038	18	132	2 - 3	BB1	RB	5 rims, one is for a dog dish, th rest are body sherds
5038	6	67	3	Grey Ware	RB	2 Rims, the rest are body sherds
5038	2	15	1	N Somerset	RB	1 rim and 1 body oxidised interior and exterior with reduced core, hard fired
5038	3	7	3	Fine ware	RB	1 rim, 1 body with black slip, 1 fine body all oxidised
5038	17	187	2	Q Mudstone	RB	SW BB some burnished not BB1 fabric but BB1 forms and decoration flared out rims
posthole cleaning	1	50	2	Grog	LIA-RB	1 Rolled out rim sherd coarse ware jar grey grog pellets

Table 2 Detailed breakdown of the pottery.

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APPENDIX 2

Charcoal

By Dana Challinor

Introduction

Following assessment and selection of suitable charcoal for radiocarbon dating, further analysis was undertaken on three samples: from late Iron Age pit (5035), late Iron Age/early Roman ring ditch (3508) and early medieval pit (2806). The assemblage from early-mid Roman pit (5040) was too sparse and scrappy to merit further analysis but the assessment results are included in this report. The purpose of the analysis was to provide additional species identifications with which to characterise taxonomic composition in these assemblages and provide an insight into domestic-type fuel use.

Methodology

Standard identification procedures were followed using identification keys (Hather 2000, Schweingruber 1990) and modern reference material. Charcoal was fractured and examined at low magnification (up to ×45), with representative fragments examined in longitudinal sections at high magnification (up to ×400). Between 30 and 50 fragments, depending upon diversity, were examined. Observations on maturity and other features were made where appropriate. Classification and nomenclature follow Stace 2019.

Results

Charcoal was generally well preserved, with moderately abundant assemblages and good fragment sizes (up to 20mm), with one notable rich assemblage from pit (2806). Condition was variable; the charcoal from ring ditch (3508) was notably poorer than others, soft and with heavy sediment inclusions. Some vivianite staining was also noted (especially in samples 1 and 2), indicative of deposition in waterlain or seasonally waterlogged conditions.

Eight taxa were positively identified, all of which were consistent with native taxa (Table 1):

ROSACEAE: *Prunus* sp., blackthorn/cherry/plum, including some *P. spinosa,* blackthorn
Maloideae, comprising genera *Malus,* apple; *Pyrus*, pear; *Sorbus,* service tree/whitebeam/rowan and *Crataegus,* hawthorn
FAGACEAE: *Quercus* sp., oak
BETULACEAE: *Alnus glutinosa*, alder
SALICACEAE: *Populus*/*Salix*, poplar/willow
ACERACEAE*:* *Acer campestre,* field maple
OLEACEAE: *Fraxinus excelsior,* ash
ADOXACEAE: *Sambucus nigra,* elder

Maturity data was limited (to a normal extent) by fragment size and condition. However, there was a significant quantity of roundwood fragments of small diameter recorded in the assemblage from pit (5035). There was also a fair quantity of heartwood noted in pit (5046) and fragments of roundwood

	Period	LIA	LIA/ER	E-MR	EMED
	Feature type	Pit	Ring ditch	Pit	Pit
	Context no.	(5035)	(3508) (slot 1)	(5040)	(2806)
	Sample no.	1	2	3	4
Prunus spinosa L.	blackthorn	9 (r)			
Prunus sp.	cherry type	15 (r)		+r	
Maloideae	hawthorn group			+r	
Quercus sp.	oak	6r	26 (hsr)		30 (hsr)
Alnus glutinosa Gaertn.	alder	10 (r)			
Populus/*Salix*	poplar/willow	5 (r)	3 (r)		
Acer campestre L.	field maple	2r			
Fraxinus excelsior L.	ash		1		
Sambucus nigra L.	elder	1			
Bark					+
Indeterminate		2			

r=roundwood; s=sapwood; h=heartwood; +=present; brackets=recorded in some fragments only

Table 1 Charcoal results; showing fragment count (except for sample 3, which was assessed only).

in that sample were relatively wide; with one piece of roundwood, with pith and cambium, of 23 years' growth.

Discussion

Late Iron Age pit (5035) and, to a more limited extent, early-mid Roman pit (5040), produced charcoal assemblages that are typical for domestic type activities, representing a range of diverse taxa dominated by small roundwood. This reflects the exploitation of a range of habitats: hedgerow/scrub (blackthorn, Maloideae group, elder), riverside or wet ground (alder, poplar/willow), woodland (oak, field maple, ash) - admittedly, with the caveat that many trees populate diverse habitats. The strong presence of roundwood indicates that much of the wood came from fairly narrow stems or branches, which is consistent with the gathering or supply of firewood from brushwood, woodland (understorey), scrub or perhaps timber/coppicing offcuts. This type of fuel provides a high, but relatively fast heat, which is appropriate for most domestic activities (especially if supplemented with some larger trunkwood logs). The assemblage from ring ditch [3507] (slot 1) contrasted with the other assemblages as it was dominated by oak. The use of oak in not unusual in this period, but exclusive use of a single taxon is often an indication that preferential fuelwood selection had occurred. Oak, especially the dense heartwood and if well-seasoned, provides a highly calorific fuel. The use of such valuable fuel is sometimes necessitated by a specific activity, but there was no evidence here for funerary or industrial activities that commonly use oak as wood or charcoal fuel. Moreover, the ring ditch context suggests that the assemblage most likely derived from domestic debris associated with occupation, and although the assemblage is not typical for cooking/heating hearths, the case should not be overstated. In any event, oak was clearly a practical and locally available fuel.

The assemblage from pit (2806) was hugely abundant and consisted of fragments of oak, including heartwood, sapwood and (wide) roundwood. No other taxa were observed. Similar to that from ring ditch [3507], the assemblage is not typical of domestic spent fuelwood that usually comprise a greater diversity of taxa and more roundwood, especially in later periods. In the later medieval and post-medieval periods, Nailsea was part of a thriving glass-making industry (Webster 2007, 236), and it may be that the charcoal assemblage from pit (2806) represents the remains of fuel from an earlier craft or manufacturing activity.

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THE 'TOMB OF THE HORATII' AT STOKE PARK, BRISTOL

By John Hunt and James Russell

From Bristol to the M4 at Hambrook, the M32 drives south-west to north-east through the now Grade II* listed landscape of Stoke Park, separating the southern entrance to the estate at the Duchess' Gate (1762) from which the former coach drive now passes underneath the M32, across open ground and up to the 16th century walled plateau on which sits the Dower House (1563). It was remodelled in two phases (1749–52 and 1760–64) by Thomas Wright, also known as "The Wizard of Durham" (1711–1786).

The basis for much of this paper is that by John Hunt and James Russell published under the above title by the Avon Gardens Trust [AGT] in their Journal No. 4, Summer 2009. In this there is a reference to the work done by John Hunt and his group in 2008 to elucidate the position and survival of the remains of this garden feature in Stoke Park. We are grateful to the Avon Gardens Trust for permission for it to be used. The descriptions of the work of the team in 2008/9 led by John Hunt, transcribed from his original manuscript notes by Julie Bassett, are included in this paper in order to provide a record of this important work. The details incorporated in Fig. 7 are derived from the very detailed measured plans and sections drawn by Sue Flint during that later period. These are in manuscript and would not readily transfer into this paper, but would be available for reference on application to the Editor.

This paper is to recognise the work done for the Bristol and Avon Archaeological Society (BAAS) by both the late James Russell, a very gifted archaeologist and draughtsman, author of a number of papers on Stoke Park and elsewhere, as well as Treasurer to the Society, and by John Hunt, a dedicated and indefatigable archaeologist who has done a lot of work across the Society's area over many years. They are therefore credited as joint authors. The following report was compiled by Andrew Smith from an initial draft provided by John Hunt.

INTRODUCTION

Between 1738 and 1768 the landscape of Stoke Park on the northern outskirts of Bristol was transformed through the joint efforts of the landowner Norborne Berkeley, Lord Botetourt (1717–70) and his architect, the eccentric polymath Thomas Wright of Durham (1711–1786). For a general account of the history and archaeology of Stoke Park see Lambert & Harding 1989 and Russell 1989., Wright designed and erected a number of "garden" buildings and monuments within the surrounding landscape. These included the Rotunda (1754/6); the Obelisk, the Tomb of the Horatii, Simms Hill Bridge and Duchess Gates, the latter four all built in 1761/2.

Fig. 1 Location of Bristol with Stoke Park indicated.

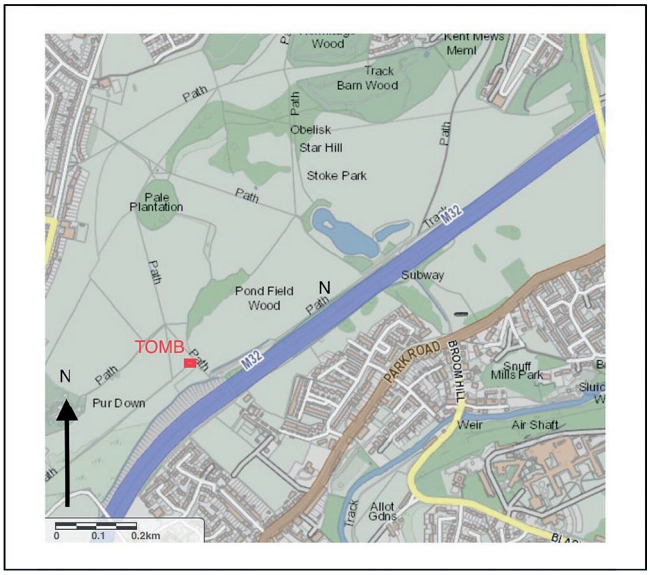

Fig. 2 Tomb of Horatii indicated just north of M32.

In the 1980s, the writer [JH] assisted other members of BARG [Bristol Archaeological Research Group] in excavating and surveying of both the Rotunda and Tomb of the Horatii sites. Of the various garden buildings and monuments which were created to fill this landscape none can have been more extraordinary than the now-vanished 'Tomb of the Horatii and Curiatii'.

The origins and significance of the Stoke Park 'Tomb' were ably explored in a [then, 2009] recent article by Rosemary Harriott (2005). It was based on an ancient mausoleum at Albano near Rome, familiar to English visitors on the Grand Tour and consisting of a square base

supporting an array of five masonry cones (Colvin 1991, 73–74, Fig 66). Although in reality it is unlikely to have been built before the 1st century BC, the mausoleum was traditionally associated with a legendary duel said to have taken place some 600 years earlier, between two sets of triplet brothers, the Roman Horatii and their rivals from Alba Longa, the Curiatii. Only one of the six participants survived the fight, the others, it was supposed, being commemorated by the five cones on the mausoleum.

There are doubts whether the fifth, central, inverted cone was in fact added. Perhaps Thomas Wright realised the weight of five cones would be too heavy for the structure to support, the fifth cone being the largest and heaviest. It could be Wright's three sketches were proposals or suggestions before, not after, construction, given that he made two different designs for the Oval Garden and three different designs for the Stable Hill Plantation.

The Stoke Park 'Tomb' was one of three English garden buildings inspired by this ancient prototype, the others being the so-called 'Sugar Loaves' at Werrington Park, Devon (Jones 1974, 301–2) and the 'Devil's Chimney' at Studley Royal, North Yorkshire (National Trust 1998, 46). It was located at the south-western end of the park, 1000 metres from Stoke House, in a prominent position on the edge of the Purdown ridge (Fig. 2). The 200ft. (61m) contour ran through the North Base, (Grid Ref ST 61477658) and to the south-east of the West Base (F3.) area (Fig. 7).

However in the 1980's just the prominent East Base (F1.) and "L" shaped edge of the North Base (F2.) were visible; there was no sign of the West Base (F3), while it was thought at the time that the South Base (F4.) had been wholly quarried away in the 19th century.

The Stoke accounts (Gloucestershire Record Office D2700 QP 3/6/6, Bundle 7) indicate that the Tomb was built in 1761–2; an initial reference in November 1761 to *'helping the carpenters raise the broken temple in the Park*' is followed by entries relating to the provision and preparation of stone for the 'new temple in the Park' between January and August the following year.

Visiting in 1764, Bishop Pococke describes it as,

> *"a model of the Monument of the Horatii at Albano, with four round Obeliscs [sic] upon an arch'd building adorn'd with a Pediment every way. On the frieze round the four sides is this Inscription: Memoria Virtutis Heroicae SPQR [In memory of heroic valour; the Senate and People of Rome]; on the side on which the epitaph is inscribed, the Monument has scarce any access to it, which may have some particular meaning"(Lambert & Harding 1989, 76, 81–2).*

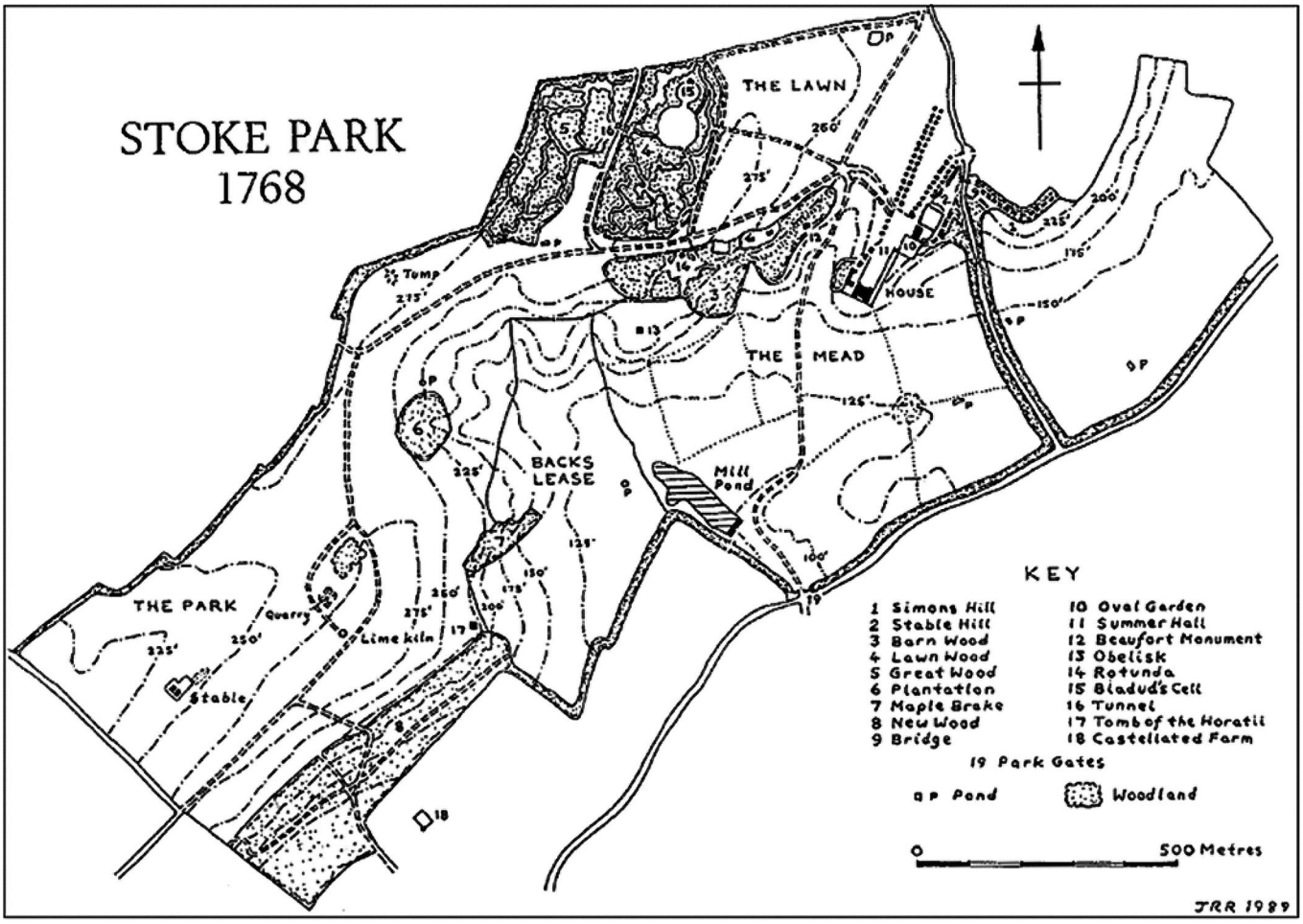

Fig. 3 Reconstructed plan of Stoke Park, 1768, (James Russell, from BAA Vol. 8, 38, 1989).

[See Fig.4], below. There appears to be a contradiction in the above quotation between 'round the four sides' and 'on the side…'.]

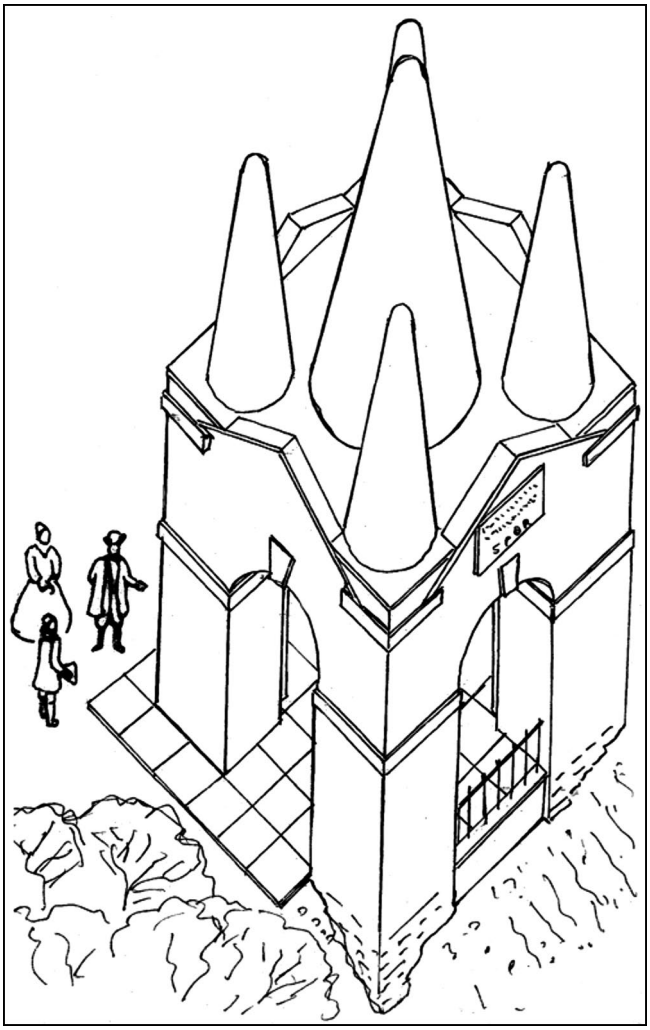

Fig. 4 Reconstruction sketch of the 'Tomb' looking north. The tips of the five cones are here shown as complete but may in fact have been left deliberately 'ruined'. (James Russell, AGT, 2009).

It seems likely that the inscription recorded by Pococke was placed on the south-east side of the building, which had a steep drop below it. The three surviving sketch designs for the 'Tomb' by Thomas Wright all seem to show that in addition to the four corner 'Obeliscs' mentioned by Pococke it possessed, like its antique original, a fifth central cone, as indicated in the accompanying reconstruction.

It is to be hoped that further pictorial records of the 'Tomb' as built will eventually come to light to settle the point. One of the Wright designs shows the tips of the cones left incomplete or 'ruined', explaining perhaps the reference in the accounts to a 'broken temple'. An alternative reconstruction by James Russell is included as Fig 8 in his paper 'The Archaeology of Stoke Park, Bristol', Bristol and Avon Archaeology, Vol. 8, 1989. This is reproduced as Fig. 5 and is dated by 'JRR 1990' in the bottom right-hand corner.

As shown in Fig. 7 and reported elsewhere, the structure originally had four pier bases.

However in the 1980's just the prominent East Base (F1.) and "L" shaped edge of the North Base (F2.) were visible; there was no sign of the West Base (F3). It was thought at the time the South Base (F4.) had been wholly quarried away in the 19th century.

In March 2008, partly exposed on the steep slope, a piece of white Lias limestone (30cm long×5–8cm thick with yellowish mortar attached (the same as bonded the East Base (F1.) was noted. This single stone was part of a jagged line two meters long (terminated at each end by semi-mature, multi-trunked, hawthorns); the line of slabs were horizontally level with the already exposed layers in the East Base (F1) which are above the lowest five splayed foundation layers. Probing higher up-slope, other "stones" were detected at 41cm and 61cm, so South Base (F4.) was not completely quarried away, just the splayed foundation layers.

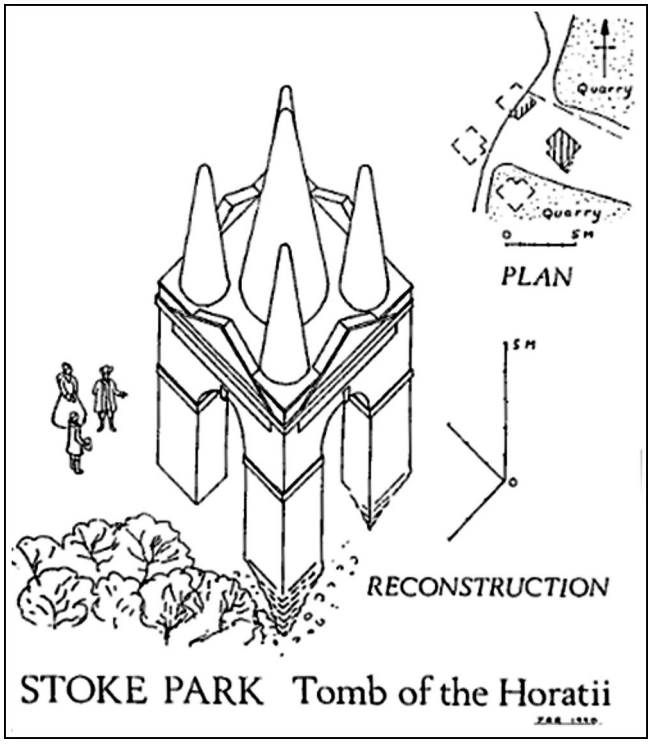

Fig. 5 Plan and reconstruction (partly conjectural) of the "Tomb of the Horatii". (James Russell, from BAA Vol. 8, 38, 1989).

Apparently conceived as an artificial ruin, the 'Tomb of the Horatii' had by the late 19th century become a genuine one, the almost total collapse of its heavy stone structure being doubtless accelerated by its precarious location on the edge of a geologically unstable clay escarpment. All that survived was the south corner pier, depicted on the 1st edition 1:2500 OS map of 1879/80 as a small square hemmed in to north and south by disused quarry pits. An early 20th century sketch by Loxton shows this fragment, described as 'The Old Owl House', standing, despite an ominous lean, to a considerable height, preserving an almost complete profile of the building's elevation, Fig. 6, below.

F.C. Jones, writing in February 1928, refers to,

...“*a gaunt tower of white stone, around which divers theories have gathered. Its lower half is four-sided, but the tip is conical, and out of line with its base by many inches. So fragile it looks that one expects its crumbling masonry to topple over in every wind, but old men state it has not changed since they were boys*.”

The original newspaper version of this article by Jones has a photograph of the pier taken from the west. This forms a useful complement to the Loxton drawing [Fig 6, below] as it shows the interior of the pier, while Loxton’s sketch is taken from a viewpoint further south and depicts only its outer face.

Fig. 6 Sketch by Samuel Loxton of The Old Owl House c1900 (courtesy of Bristol Central Reference Library). [Fig.25, AGT, 2009].

According to information supplied in the late 1980s by a local resident, Mr G. Cotterell, this vulnerable fragment finally met its end during World War II, when it was blown up as an ‘exercise’ by bored army personnel attached to the nearby Purdown anti- aircraft battery.

For much of the 20th century, from 1916 onwards, Stoke Park was used as a mental institution. Largely inaccessible to the general public, it remained one of the least known of the great estates surrounding Bristol. During the 1980s however, matters began to change. At a national level the pioneering studies of Dr Eileen Harris had already created new interest in the work of Thomas Wright, highlighting his activities at Stoke Park and demonstrating the importance to his career of his friendship with Norborne Berkeley. Further archival research and vigorous campaigning by Stewart Harding and David Lambert now began to raise the Park’s profile locally, promoting its preservation and restoration, in 1987–88 an archaeological survey of the Park was undertaken by volunteers from the Bristol and Avon Archaeological Society (BAAS). In the course of this, the remains of the ‘Tomb’ were discovered, concealed in a hawthorn thicket.

Of the four corner piers which once supported the structure only the footings of the east pier were fully visible, along with one edge of the north pier. These remains were surveyed and provisional plans and reconstructions published. No excavation was however possible at this time due to the supposed presence of badger setts in the immediate vicinity.

It may be of interest that the ‘Four conical obelisks’ element also appears on each side of the west gateway to the Castle Semple estate at Lochwinnoch, Renfrewshire, from the 19th century (Pers comm. A F Smith).

THE 2008 EXCAVATIONS

In March 2008, while plentiful evidence for rabbit occupation was noted, there were no longer any indications of badger activity. Work was therefore resumed on the site of the ‘Tomb’ by a small team of BAAS volunteers led by John Hunt. It was found that since 1988 the boundary of the hawthorn thicket, which formerly ran diagonally across the site of the monument and consisted of a wire fence supported on concrete posts, had been replaced by a belt of blackthorn bushes running a metre or so to the west.

Between March and October 2008 the footings of the ‘Tomb’ were fully exposed, planned and photographed by John Hunt and his team, before being back-filled for protection. The resulting site plan (Fig. 5, below) shows that the structure was just over 6 metres square, with arched openings between 2 and 2.5 metres wide giving access to a central space some 3 metres square which must originally have been vaulted to support the great weight of the cones on the roof. The piers were constructed of flat slabs of local Lias limestone bonded with yellow mortar; this was crudely applied with lumps of surplus mortar protruding from many of the joints. It will be seen from the plan that the building was by no means accurately set out, each of the four L-shaped corner piers (F1–F4) having slightly different dimensions. Given that Thomas Wright was interested in mathematics and rustication, did he actually design them to be informal, or was it due to incompetent builders?

As already mentioned, the ‘Tomb’ was located on the very edge of an escarpment sloping steeply away to the south-east. While the north-western half of the monument, incorporating the north and west piers (F2 and F3), was located on fairly level ground the south-eastern side was built out over the hill slope.

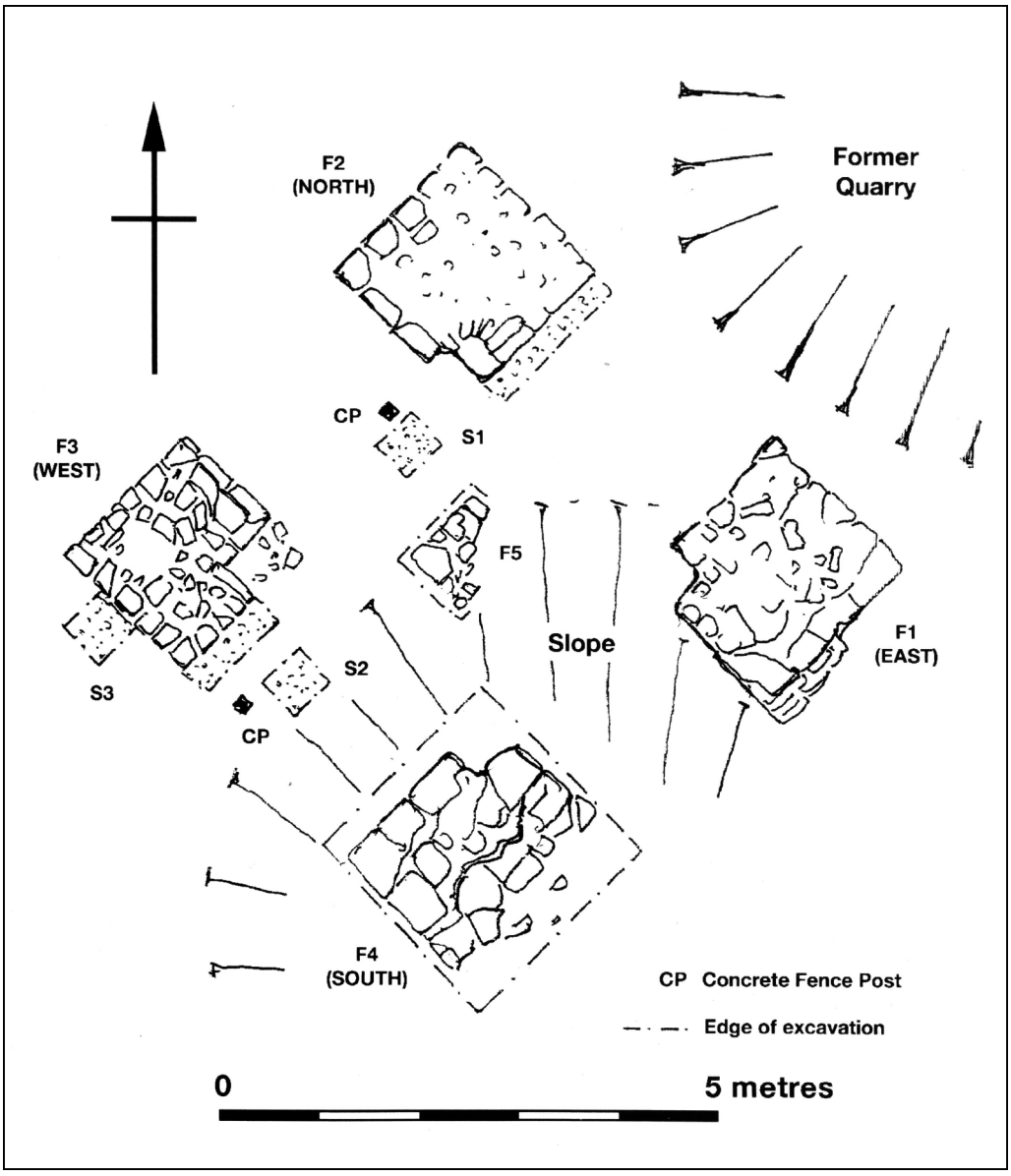

Fig. 7 Excavation Plan of the 'Tomb', 2008 (compiled by Mike Baker, Laurie Bingle, Sue Flint and John Hunt) [Fig.26, AGT, 2009].

DESCRIPTION OF THE SURVIVING ARCHAEOLOGY

The following paragraphs are mainly taken from the excavator, John Hunt's original notes and while we have been generally referring to 'piers' it is mainly only the vestiges of the footings/foundations remaining and while the original text uses the geographical description as well as the base 'F n' identifiers (see Fig. 7), only the latter will be used here.

BASE F1

The most visible of all four bases (since 1980s) it had the full outline showing and the faces of three sides. Across the top a few strands of ivy trailed over a thin layer of topsoil, with fragments of stones and crumbling yellowish mortar.

The footings of F1 are relatively well-preserved, with parts of at least 11 courses of stonework surviving above ground; at its south-east corner the massive slabs forming the

Plate 1 Pier base F1. View looking north east across the site of the 'Tomb'; the east pier (F1) is visible to the right and the central foundation (F5) in the left foreground. Scale 2m [Fig.28, AGT,2009].

lowest five courses are splayed outwards to give additional stability on the steep slope.

The north-east full-length, top edge is up to 7cm above ground level. The north-west edge and face, because of the sloping ground, was part exposed at the west recessed corner, with the south-west face showing five layers and the north-west face showing seven layers of slabs.

The south-west face already exposed thick slabs up to eleven layers high (122cm); the lowest three layers full length, next four layers ending short of the south corner in a vertical line. In the top four layers some slabs were missing.

The south-east face already exposed thick large slabs, the lowest five layers are the splayed foundations, the sixth layer full length, the seventh to ninth layers are truncated by an ash tree growing at the east corner, while the south corner resembles "steps", the top two layers as fragments and crumbling yellowish mortar.

F1 base face lengths: north-east 188cm × north-west 158cm × south-west 163cm × south-east 203cm.

West recessed corner: facing north-west 46cm × south-west 41cm.

BASE F2

A concrete post with barbed wires attached was embedded adjacent to the south-west edge. At right angles to the post were two concrete bracing struts, one with its "foot" through topsoil and resting on the surface of the base. After temporary removal along with ivy and soil, 13cm to 15cm deep, and nearby blackthorn, the complete surface of F2.was exposed, although the outlines of individual stones were obscured by a thin spread of mortar over most of the surface. A "proud" line of yellowish mortar along the top of north-east and north-west edges was noted. Near the inner south recessed corner, several stones were missing along part of the south-west edge and along the east edge which exposed a lower layer.

F2 base lengths: north-east 187cm × north-west 190cm × south-west 198cm × south-east 163cm. South recessed corner: south-west facing 63cm × south-east 30cm.

BASE F3

On flat ground (as with base F2.) due to easier access within the blackthorn thicket, probing within the approximate area of base F3 and removal of topsoil to a depth of 8cm, revealed the whole outline of a flat surface, with some slabs missing from the central area, filled with topsoil. Slabs along north and east sides were noted, with edges of white Lias and those to the west (partly) and south had edges of blue Lias; both types had fossil inclusions.

The removal of a blackthorn at the north-east edge revealed the top layer is set in from the lower layer and the two edges of the east corner (which is recessed; in addition the "proud" lines of yellowish mortar were still extant, set in from, and parallel with, the recessed east corner, the north-west edge and the south-west edge.

F3 base lengths: north-east 150cm × north-west 176cm × south-west 166cm × south-east 117cm.

Plate 2 The northern side of the 'Tomb' after excavation, 2008, looking north east; the west pier (F3) in the foreground, the north pier (F2) behind. Scale = 1m [Fig.27, AGT,2009].

East recessed corner: south-east facing 74cm × north-east 48cm.

BASE F4

As we have seen above, the south pier (F4) survived as the 'Old Owl House' well into the 20th century, and Loxton's drawing shows that it had a similarly splayed base. When excavated, the total removal of topsoil and loose stones revealed the remnants of white Lias limestone slabs of the south base which resembled "steps". Many slabs were missing on the downward slope of the south-east edge, where layers of splayed foundation slabs were also missing. The outline of the base and individual slabs remained; layers were eight high at top 61cm. Two "splits" or fissures between north-east and south-west edges existed. That through the lowest layer was 2cm wide at the north-east edge, but was 8cm wide at the south-west edge. The higher fissure, through the second layer from top at 33cm from the north-west edge meandered for 66cm towards the north-east edge. Space between hawthorn tree and the south corner limited a "keyhole" sondage 30cm along the south-west

edge × 15cm below a layer of blue Lias flakes/three layers of splayed foundation.

F4 base lengths: north-east 112 cm × north-west 147cm × south-west 183cm × south-east 200cm.

North recessed corner: north-east facing 29cm × north-west 56cm.

(Plinth?)BASE F5 (Fig. 7)

This was revealed in the centre of the monument, on ground sloping toward the south-east, as a number of partly exposed stones which were thought at first to be possible demolition debris. Removing the topsoil revealed five layers high of stones at the west corner, with four stones along the north-west edge, bonded with white (lime?) mortar, with charcoal inclusions. The layers tapered to one layer of two stones at south corner, while a large portion forming the eastern corner was missing, possibly due to many years of erosion and uprooted by an adjacent mature hawthorn tree.

Plinth size was originally 90cm square.

Further work conducted in 2008

Being relevant to the interpretation of the whole site this was recorded separately from that for the bases.

Adjacent to the south-east edges of both F2 and F3, topsoil was removed along the whole length of each to a depth of 11 cm. The cut was 30 cm wide for F2, revealing mortar and compact soil. It was 40cm wide for F3, and revealed compact yellowish mortar and small stones.

In both cuts mortar was smeared across joints and stone edges, which led to the comment asking if the "slapdash" mortar effect was because it and the stones were either covered by soil or a stone floor? An alternative might be the possibility that the whole structure was covered by a yellowish (lime?) 'mortar' render to match the Dower House.

There were three sondages separately identified as S1, S2 and S3, see Fig. 7 above.

S1: 70cm south-west from south corner of F2, a 50cm square cut, soil removed to a depth, 15–7cm, a layer of tightly packed stones.

S2: 50cm square cut, out 65cm in a south-eastern direction from the south-east face of F3, depth 5–0cm and 8–0cm, due to sloping ground, revealed tightly packed small stones.

This further work in the interior of the building identified the same layer in each case, which would appear to be the bedding for a paved floor, probably of flagstones. This floor level was presumably maintained across the entire interior of the monument; on the south-east side of the building it would have been raised nearly a metre above the natural hill slope and would almost certainly have required support from a retaining wall or revetment built across the base of the archway between the east and south piers.[See Fig 4 above.]

No trace of this revetment has however survived and across the entire south-east quadrant of the building the floor bedding has been completely eroded away. This erosion may have been partly due to 19th century quarrying on the hillside to the south of the monument, although trampling by livestock around the ruined south pier may also have been a contributory factor.

S3: along the south-west edge of F3, 50cm from the west corner and 65cm from the south corner, a 50cm square cut revealed both top layers at a depth of 13cm consisting of compacted mortar and small stones.

The similarity of the bedding layer in this case to those above suggests that a band of paving may have been extended round the exterior of the building on its northern side, where the ground surface is relatively level.

The only small finds from this further work came from S3. These were i) one 30mm long piece of a clay smoking pipe stem at the mouth grip end, and ii) one piece of a 'D' shaped half bottle base in pale green glass,30.5mm × 22mm, with a concave outer and convex inner.

No small finds were recorded from F1–F5 inclusive.

On completion the three sondages were covered with plastic bags and soil.

Although modest in scale, the 2008 excavations were successful in recovering the full ground plan of the 'Tomb' as well as locating the previously unsuspected central foundation (F5) and providing apparent confirmation of the fate of the south pier (F4).

Work resumed in 2009

In 2008, in the area near Bases F2 and F3 surfaces of tightly packed stones and compacted mortar had been found. Was it made up ground to support a stone floor?

In 2009 four sondages were opened as follows:

No. 1: Adjacent to F3. From the west corner, 50cm along the south-west edge and out 150cm (in south-west direction to depth 13cm, mortar spread to 70cm then earth.

Small Finds: On the mortar surface, i) a small piece of blue and white transfer ware, ii) a tiny piece of clear glass, iii) a small piece of slag and iv) two nails, both with square shanks and tapered.

No. 2: West Base (F3). From the south corner, 50cm along south-west edge and 100cm out in a south-west direction. In the topsoil were three random stones set on edge; these were removed. Below was a wooden post stump in situ, 38cm from south-west edge; a mortary spread to the post, earth beyond. Soil was removed to 50cm depth, exposing five layers of splayed foundations; the top layer 4cm to 5cm thick, the lowest 18cm thick which was vertically 10cm out from top layer.

No. 3: North Base (F2). 50cm (in south-west direction) × 100cm (in north-west direction) to depth 15cm to 18cm: mortar spread stops at 80cm then earth to 100cm.

The area between North and West Bases being approximately 400cm square was divided into A, B, C and D, going anti clockwise from the westernmost corner of F2.

No. 4: North Base (F2). 80cm squared from south recessed corner, mortary spread, below were small stones, above larger stones.

There was apparently a fifth sondage opened in 2009, as follows: F2, North Base (Area A). From West corner, 100cm along south-west edge × 100cm towards West Base × 10cm depth "thin spread of mortar along north-west and north-east

edges, with a jumble of stones along a "central" ridge lying on mortar."

Areas B, C, D.: When the topsoil was removed from areas B and C, it revealed that the "ridge" of stones from area A continued to the north-east edge of West Base (F3). Near the southern recessed corner were three layers of splayed foundations. The whole area between North and West Bases was covered with rubble bags, then topsoil, for future protection.

CONCLUSION

Although modest in scale, the 2008 excavations were successful in recovering the full ground plan of the "Tomb of Horatii," as well as locating the previously unsuspected central foundation (F5) and providing apparent confirmation of the fate of the South Pier (F4).

ACKNOWLEDGEMENTS

I wish to say thanks to fellow BAAS members for assisting in this work; the late Mike Baker, Laurie Bingle, Chris Walker and, in particular, Sue Flint, under my leadership. My thanks also to the late James R. Russell for help and encouragement and for information, via various publications, and for compilation of various site plans and, finally, to Andrew Smith for making sense of my notes and drawings. Also to L. U. C. Publications and to Rosemary Harriot and Andy Buchan.

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THORNBURY: GATEWAY TO THE LORDSHIP OF GLAMORGAN? THE MYSTERY OF THE THORNBURY CANAL

By David R Evans

"An't please your lordship, I hear his majesty is returned with some discomfort from Wales."

Shakespeare Henry IV part II

One of the more obscure references in the South Gloucestershire Historic Environment Record alludes to a canal built between Thornbury and the River Severn by, or at least started by, the third Duke of Buckingham before his execution in 1521 (Guise 1877). The note was made during a visit by the BGAS to Thornbury in 1873 but published four years later. The reference implies that the canal had its origins near the centre of Thornbury, or perhaps, adjacent to the Castle. The original reference is hardly more enlightening and no source is cited for the remarks, but it is clear that the suggestion of the canal caused no surprise to the audience. The reference has two elements, first an historic written account of the Duke of Buckingham beginning to construct a canal in 1517, incomplete at his death, and second the physical remains of the canal. However, Cherry & Wise (2022) make no mention and the writer is unable to trace any record they might have missed. Therein lies the mystery. Can topographical study or landscape help? What evidence on the ground or on historic mapping indicates its presence? A number of straight stretches of stream, especially in the vicinity of the former workhouse at Morton and near the coast at Oldbury have been noted as possible routes for the canal. The straight stretches may be natural, may be slight realignments to aid drainage, or in the case of the line near the coast simply a result of post medieval attempts to help with flood prevention, perhaps after the 1607 flood. (The flood has been much discussed but the original source can be read here:-http://website.lineone.net/~mike.kohnstamm/flood/jonespamphlet/godswarning.html). The cutting for the supposed canal dock are noted as 60 feet wide which would take the Newport ship twice (Jones & Stone 1978) but is this simply part of the unfinished ditch of Thornbury Castle? The barge would not need to turn as it could be rowed, or towed, in either direction. On such a scale it could certainly double as a dock.

A radar transect carried out by Stratascan in 1992 (Bell 1992) indicated a filled in channel, some distance from the castle wall (possibly not defensive?) and, perhaps of more interest, an area of hard standing which might be a dock – surely worthy of further investigation. I hope to unravel the canal mystery if not solve the conundrum entirely. The main problem with the route of the canal lies in the area of Park Farm where we might expect a smooth curve but instead have a sinuous route. Perhaps this is the incomplete section indicated in the Historic Environment Record entry, perhaps Park Farm rather than Thornbury Castle itself was the origin of the canal?

Plate 1 View of the Outer Court, Thornbury Castle showing the Pithay.

While the physical evidence for the canal must remain in limbo the major problem with the canal is motivation, why put the huge effort into cutting a canal on this scale, as there is a considerable difference between a canal intended to take a barge used to transport goods to Oldbury for transhipment, or a river vessel such as the Severn Trow, similar to the Magor Pill boat, (Nayling 1998) and seagoing vessels, even those as small as Cabot's Matthew or as large as the Newport ship (Jones &Stone 2018).

When we think of barges we often imagine the narrow boat but Tudor and later noble barges are much more elaborate than one would expect from a narrow boat, remember that Tudor monarchs used the barge along the River Thames and we are fortunate to have a later example that of William Kent's barge built for Frederick Prine of Wales, son of George II. William Kent is, perhaps better known as a garden designer and architect) which is on display at Greenwich Maritime Museum, and the boat envisaged for the Thornbury canal would have been similar if less resplendent. Edward Stafford certainly travelled by barge if only to his own arrest in 1521 (Cherry & Wise 2022, 35).

Would there be any major problem in crossing the Severn in a barge; well first check the tides. The Severn (and the Usk) has the second (or third) highest tidal range in the world, (behind the Bay of Fundy between Nova Scotia and New Brundswick). In these car-obsessed times rivers are thought of as barriers to trade and communication but

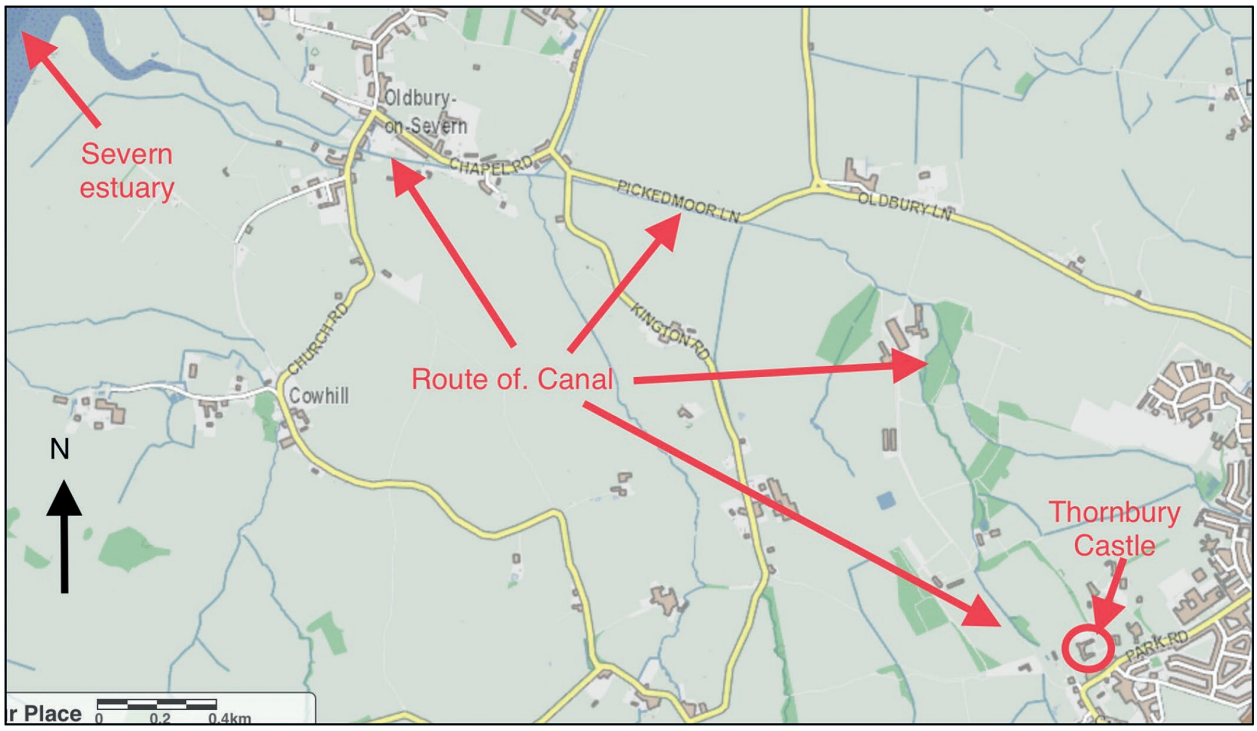

Fig. 1 Possible route of Thornbury Canal in South Gloucestershire.

Plate 2 Barge built in 1732 by Williams Kent for Frederick Prince of Wales, son of George II (image kind permission of Greenwich Maritime Museum, and the Royal Collection).

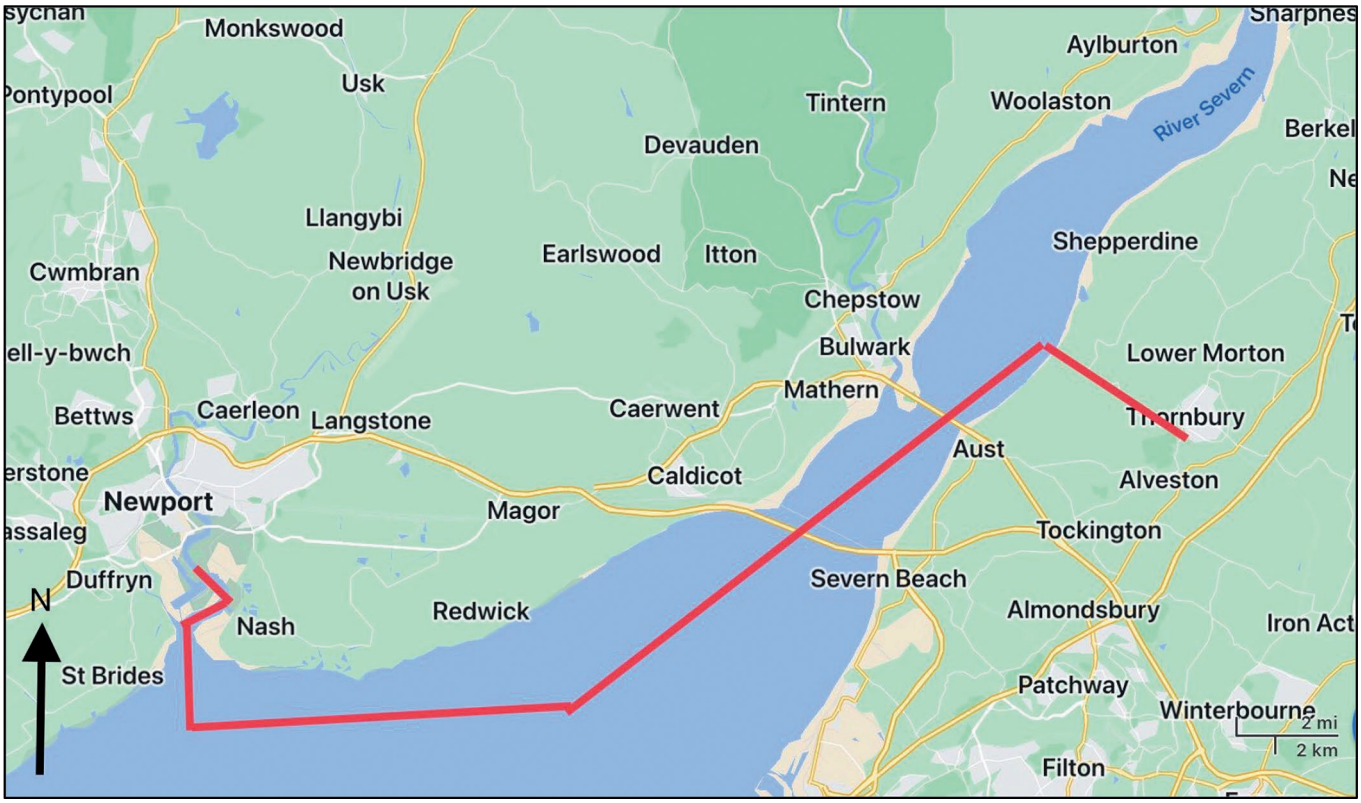

Fig. 2 Suggested route for a barge travelling from Thornbury to Newport.

in more enlightened tines they were crucial to life. Early civilizations in Egypt, the Indus Valley and China were centred around rivers. And don't forget that the Severn had a cross channel ferry service from 1827–1966 (https://en.wikipedia.org/wiki/Aust_Ferry). It is worth mentioning that John Cabot had "discovered" the North American mainland in 1497 so maritime engineering was not a factor.

We now come to Newport and its castle, the castle hemmed in by the railway, traffic and less so by the River Usk is, perhaps the saddest castle in Wales (Knight 1991, Trett 2007) but recent research (Davies, undated) indicates that it was as important as Caernarvon built by Edward III to overawe the Welsh. Was there a connection? But there are otther possibilities.

Was the intention to turn Thornbury into a major port or was ducal ambition more the focus of the work. It would appear that the answer lies at the rather glum remains of the Castle in South Wales. The current remains consist of three towers, including an elaborate watergate, with connecting ranges hemmed in between the railway and road bridges and very little else. Surprisingly the medieval appearance appears to have been very similar. Compared with the elaborate river front; on its landward side the castle was completed with a simple curtain wall probably with simple gates to the town and the countryside. The dating of the castle is difficult and not fully established but a later thirteenth century date for much of the surviving work seems most likely. Work was certainly carried out at Newport (see Trett 2007 for details). For parallels for the thirteenth century see the Traitors Gate at the tower of London and the north lake dam at Caerphilly which have similar features and are of similar dates. It becomes clear that the whole castle was intended as a splendid set of reception rooms for the lords of Glamorgan and their guests to be used as a gateway, in its broadest sense, to the lands and lordship of Glamorgan, especially a gateway approached by water.

This 3rd Duke of Buckingham, Edward Stafford (with, like his predecessors an equal claim to the throne as the Tudors, or the Yorkist Kings) was also the Lord of Glamorgan (not a choice position as violent death was the lot of all previous Lords in the fifteenth and early sixteenth century). It would appear to be highly probable that the Thornbury canal was intended as a way of propelling the ducal barge towards his South Wales properties, it may have led to his death as well. Newport Castle (as in its earlier De Clare guise) formed a magnificent entrance to the lordship. It should also be remembered that his father, Henry Stafford the 2nd Duke who rebelled against Richard III in 1483 was trapped in South Wales due to flooding, a barge and canal could have come in useful! It is recorded (Knight 1991, 29) that the castle was '*attacked*' and records burnt, perhaps by supporters of Richard III or more likely by locals trying to destroy tax accounts.

Was there a canal at all? I am not convinced that archaeological excavation would prove anything – there are as I said other reasons why canal-like features are present in South Gloucestershire. After Henry VIII took over Thornbury Castle in 1521 he visited his lordship of Glamorgan on a number of occasions: perhaps from Thornbury, perhaps by boat!

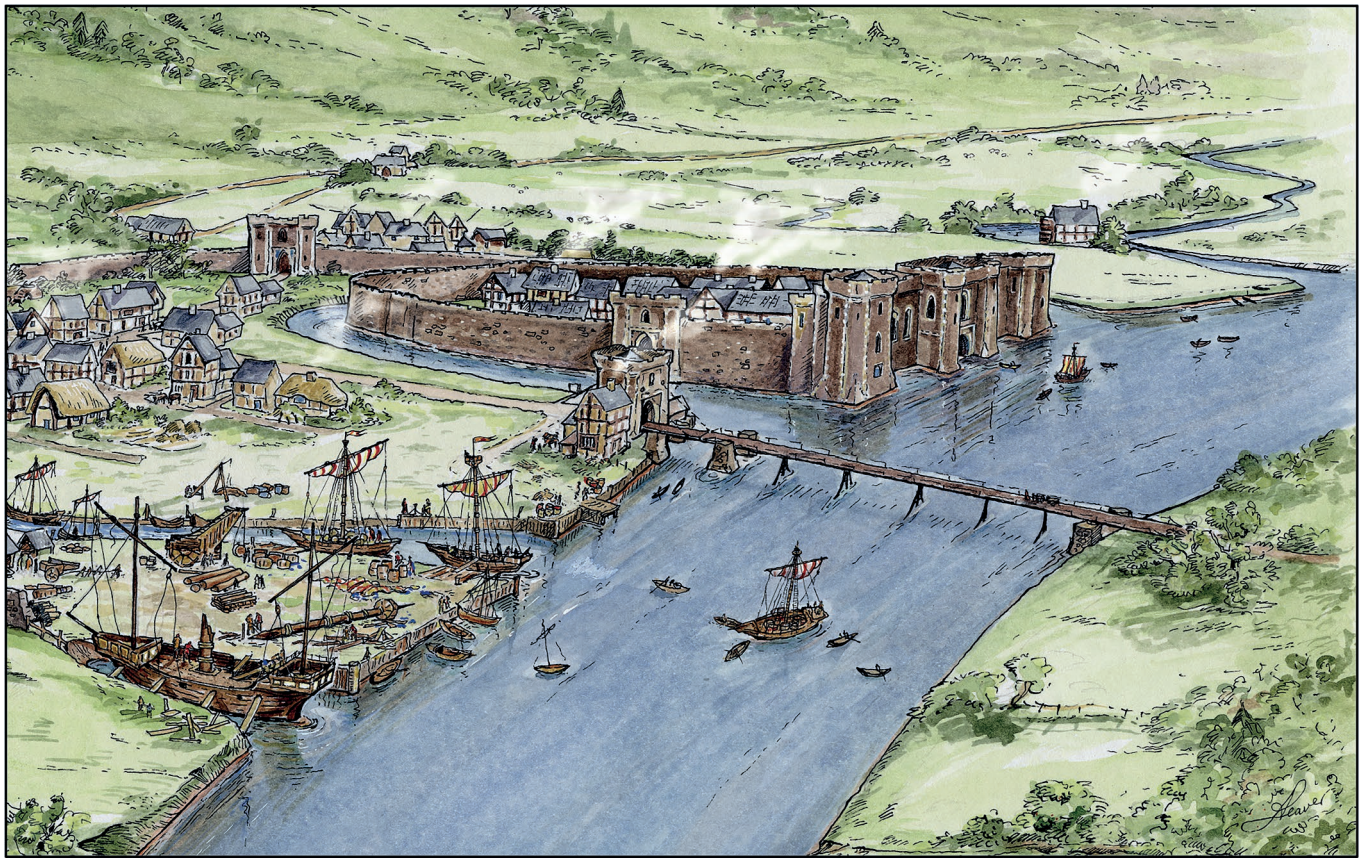

Fig. 3 Newport Castle painting reconstruction (reproduced with kind permission of Anne Leaver).

A survey of Newport Castle shortly after 1521 shows the castle somewhat in decline, but parts, particularly the prison under the gate (gate unspecified) were certainly in use (Knight 1991,27).

Why was the canal forgotten, assuming it was not just a vanity project aiming to support the Duke's, clandestine bid for the throne. Events overtook it? While Henry VIII retained the lordship until his death the Laws in Wales Acts of 1535 and 1542 effectively abolished the privileges of the Lordship of Glamorgan, and Wales merged with England, until devolution in 2006.

While the canal itself is unproven the writer can see no reason why barges carrying their semi-royal cargo from Oldbury Nate or Park Farm to Newport would not have been a reality. I declare Thornbury Castle to be the gateway, to the gateway at Newport Castle.

ACKNOWLEDGEMENTS

Thanks must go to Will Davies of CADW, for opening my eyes on Newport Castle; to Oliver Blackmore for help with illustrations; to Jean Grey of the Friends of the Newport Ship, to Anne Leaver for permission to reproduce her reconstruction painting of Newport Castle, to Paul David Driscol, archaeologist with South Gloucestershire council, and to all my former colleagues there. I would also like to thank the editorial committee of Monmouth Antiquary for providing a valuable source, and finally to Greenwich Maritime Museum, and the Royal Collection for Kent's barge.

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ROUNDUP FOR THE AVON PORTABLE ANTIQUITIES SCHEME 2017–2021

By Kurt Adams

The Portable Antiquities Scheme (PAS) was set up with the principal aim of recording archaeological artefacts that were found by members of the public, which would otherwise go undocumented and therefore effectively lost to history. At the time of writing, we have now recorded over 1.5 million objects, a figure that increases daily, all of which is accessible on the PAS database at www.finds.org.

In 2017, possibly one of the most important hoards discovered in the region (though not in Avon) was reported to the PAS. Found by two metal detectorists, the hoard consists of a variety of broken copper alloy items, including a large amount of sheet copper alloy strips (thought to be bands and lock plates from large wooden chests), ornate handles from large vessels, fitting fragments from various furniture items, remains of small votive figurines and 20 broken pieces which would form about 10% of a life size female statue.

Without a doubt, the most striking element of the hoard is a 30cm long standing dog (Fig 1). The dog is unique not just within Roman Britain, but within the whole of the Roman world. Standing on all fours with erect ears, an open mouth that has a protruding tongue and an alert expression, there has been much speculation to its nature and symbolism, but current theory points to it being a hunting dog. A comparison can be drawn with a stone carving found at the temple of Nettleton Shrub, Wiltshire, where a representation of a female, thought to be Diana the Goddess of the hunt is seen standing with a hound at her side, this dog has long pointed ears and is looking up at its master, not dissimilar to the Gloucester example. This possible association with Diana is also reflected in some of the other artefacts found within the hoard. One of the votive figurine fragments appears to be a Faun or Satyr (Fig 2) who is a spirit of nature, plus the large female statue (Fig 3) has drapery that is comparable with other representations of the goddess.

Fig. 1 Standing dog from the Gloucestershire hoard.

Fig. 2 Possible faun or satyr from the Gloucestershire hoard.'

This assemblage would be classed as a 'founders hoard', a collection of metal that has been broken up ready to be re-smelted for other uses. We cannot be completely certain where these items came from, but many of the objects such as the figurines, vessel fittings and even the folded chest bands and locking plates would not be out of place in a temple, so it is compelling to suggest that this material was collected from a temple of Diana. Dating evidence from some of the artefacts, such as a 4th century spoon and a single coin, the hoard looks to have been deposited in the mid-4th century; a period when Christianity was rising to its dominance and looking to replace much of the pagan iconography of the past.

Fig. 3 Several pieces of drapery from the statue of a female.

Of national importance, the hoard is currently held in Bristol Museum and Art Gallery, where it is hoped to go on display from the end of 2022.

Other interesting finds, recorded from 2017 to 2021 are detailed below.

Prehistoric

GLO-0DB7BB Lower Palaeolithic Handaxe: Priston

A Lower Palaeolithic, chert 'ficron' type handaxe, belonging to the Middle Acheulian tradition. The axe is sub-triangular in plan, with slightly concave sides and a rounded butt; the forward edge would have narrowed to a pointed tip, but is unfortunately truncated. There are multiple large flaking scars covering both the dorsal and ventral sides with finer flake removal along the edges.

Most Acheulian period finds of this type date from 500,000–250,000 years ago. This corresponds to a period of warmer climate which allowed many animals to migrate to this country, such as bison and deer as well as our early ancestors *Homo Heidelbergensis,* who would have produced this highly skilled and complex tool. This extremely rare find is the only example of its type recorded on the PAS database from this region.

Fig. 4 Flint handaxe.

GLO-93265A Serrated Flint Tool: City of Bristol

A flint serrated implement possibly dating from the Mesolithic to Neolithic. A tertiary flake with two ridges on the top side and a low bulb of percussion on the underside. Fine, short retouch runs along the left side's length creating a serrated edge as well as a possible inverse retouched notch at the top of the right side.

Fig. 5 Serrated flint tool.

Although this flint tool is a fairly rare find, its location makes this artefact stand out. Discovered during the first

Covid lock down in 2020, it was dug up in an allotment in the centre of Bristol.

Bronze Age

GLOB2DAA9 Socketed Knife: Portbury

A copper alloy Thorndon type socketed knife. The base has a sub-rectangular socket, with an oval aperture (15mm, 9mm) for the handle and a single rivet hole which passes through both sides (this would have secured the knife onto a wooden shaft). The socket's sides gently taper to the blade, which is short, thin and terminates in a point. The blade's spine is flat with bevelled sides that form the cutting edge.

Traditionally, these knives had a distribution perceived as being concentrated in Southern England. However, as more of these finds have come to light through the Portable Antiquities Scheme, we can see three particular zones of activity, a small group in the north east of England, followed by a larger distribution in East Anglia. However, the biggest concentration is seen in the west of the country, from Worcestershire, down to Somerset and into South Wales.

Fig. 6 Socketed knife.

GLOA988FD Palstave Axe: Dundry

A copper alloy palstave axe with a wide, curved blade and bevelled forward cutting edge. The blade's sides are concave and taper to the middle of the axe where there is a large transverse stop ridge on both sides; from here, tapering flanged sides extend towards the rear of the axe.

An early palstave axe classed as a Group I: Primary Shield Pattern type dating to the Middle Bronze Age (1600-1400BC), represented a huge leap in technology and understanding of the metalworking process when compared to the more simple flat axes of the Early Bronze Age. Flat axe production involved pouring metal into a simple hollow, such as the stone block mould from Hurbuck, County Durham and now held at the British Museum (British Museum reference number WG.2267 [mould; axe | British Museum, 2022]). These simple moulds would not allow complex shapes to be formed and could lead to weaknesses in the metal due to uneven cooling. However, the complex shape of the palstave axe necessitated a more advanced two piece mould which could be made from clay or even bronze such as the example from Hotham Carr in Yorkshire (British Museum reference number WG.1851. [mould; palstave | British Museum, 2022])

The British Museum. 2022. mould; axe | British Museum. [online] Available at: <https://www.britishmuseum.org/collection/object/H_WG-2267> [Accessed 6 April 2022].

The British Museum. 2022. mould; palstave | British Museum. [online] Available at: <https://www.britishmuseum.org/collection/object/H_WG-1851> [Accessed 6 April 2022].

Fig. 7 Palstave axe.

Iron Age

GLO- FD3948 Vessel mount: Sodbury

A copper-alloy late Iron Age to Roman zoomorphic mount depicting the forward half of a boar, consisting of the top of the back, forelegs and head of the animal. The head is formed from a solid and undecorated cone that narrows to the snout .

Two large, upright oval ears have flat faces and slightly convex rears. They flank a large, undecorated and upright crest or mane, that runs form the top of the beast head and down its back. The legs are made from a simple slender rod with a hoof at the base.

Rebecca Ellis (University of Hull Phd student) (pers comm, 2020)comments that boar/ pig representations are the fourth most popular animal realistically portrayed in the La Tène art of England and Wales. A high proportion of these are presumed to be vessel fittings, and all found so far are made from copper alloy. Most of these items are metal detector finds, which means there is no secure dates for any of them; stylistically, however, they appear to date from the first century BC to the first century AD. It is not always easy

to tell between a portrayal of a domestic boar or pig, with only two examples showing clear 'domestic' characteristics.

This example belongs to BP Group 3 – a group of 'front half' fittings which may mean to imitate leaping boars, or at least some form of animation in the movement of the animal. This group is split into two sub-groups; the first characterised by their minimalist decoration and streamlined appearance which cluster around North Yorkshire (3a). Despite its semi-streamlined nature, the Bristol Boar more closely resembles the detailed and often more robust items of group 3b. The 'ring hole' in the mouth may indicate that these were used as vessel handles, but not all fittings have this so there is no way of knowing for certain.

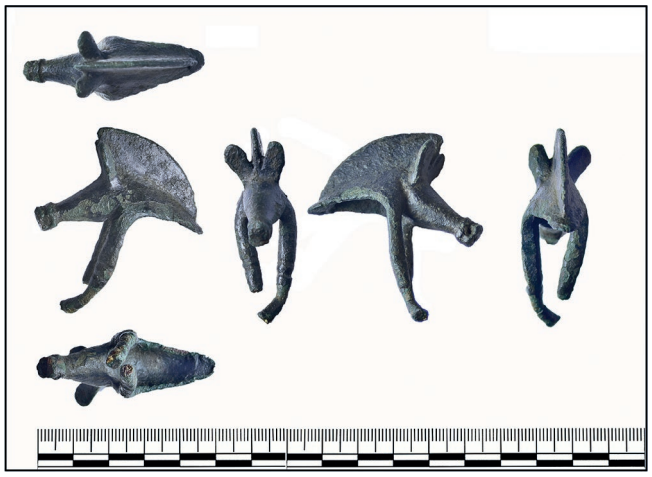

Fig. 8 Vessel mount.

GLO-32B241 Coin: Alveston

An uninscribed British Iron Age gold stater of the southern region / Belgae, "Chute" type dating to *c*. 80–50BC.

Obverse: Abstract head of Apollo right

Reverse: Stylised horse left, 'crab' below, 12 pellets above in three rows of 3/4/5pellets in each consecutive row.

Coins of this type are associated with the Belgae tribe who are thought to have controlled an area covering parts of modern Dorset-Wiltshire and Hampshire. Within this area, we see a marked concentration of these coins, helping us to understand and better define the extent of tribal control. Outside of this area, and as we enter into neighbouring tribal territories, their distribution becomes very sparse. Moreover, this coin is the only one of its type recorded on the PAS database from the Gloucestershire or Avon area, which was controlled by Dobunni.

Fig. 9 Iron Age coin.

Rudd, C. 2010, *Ancient British Coins*, Norwich.

Roman

GLO-A05C63 Folding knife: Saltford

A Roman openwork copper alloy folding knife handle depicting a hound chasing a hare. The hound has well-moulded fore and hindquarters and a slender, narrow waist. The dog's head is elongated with flat, triangular ears behind and a narrowed snout that touches the hare's tail. The hare's well-moulded, thin limbs and slender, narrow waist angle downwards from back to front. Large triangular ears rest along the animals back, but the head of the hare is truncated. A thin, grooved panel runs along the length of the knife under the animals, with a slot running down the centre where the folded blade would have fitted.

Folding knives appear to have been fairly popular in Roman Britain with over 160 examples recorded on the PAS database so far. These range from simple hollow handles to house blades, to more complex variations depicting figures or animals with representations of the hunt being a common theme on 106 examples recorded to date.

Fig. 10 Folding knife.

GLO-481969 Erotic folding knife: Tickenham

A highly ornate Roman folding knife that depicts an erotic scene.

The sub-rectangular handle is of openwork construction, with a corroded iron blade in its folded position within a handle's slot. The remnant of the blade, as well as the length of the slot, implies that the blade would have been approximately 67mm long.

The bi-facial handle depicts a standing male figure engaged in sexual intercourse with a woman whose lower legs are supported on the male's shoulders, with her feet behind his head. The woman is seated on the bent shoulders of a kneeling smaller third person who is probably a slave and is shown with their head bent forwards and hands clasped in front at their waist. The group is set on a largely plain square pedestal. The woman and the kneeling figure

Fig. 11 Erotic folding knife.

are naked, whilst the standing male is shown to have folds for a robe at waist height and is adorned with a ribbed phallus top of his head.

Unlike the previous example, this is a very uncommon form of handle with only six PAS examples recorded so far. Excavated examples from the Verulamium theatre (Frere 1984, 56–59; ref. 217, Plate III) represent one of the only other contextual examples found, coming from a 4th century dark soil deposit.

Frere S, 1984, *Verulamium Excavations, Volume III*, Oxford University School of Archaeology

Early Medieval

GLO2E6C4F Harness Mount: Yatton

An early medieval (6th century Anglo-Saxon) incomplete cast copper horse harness mount.

The mount has an inverted semi-circular terminal at its base, with slightly upturned corners. Emanating centrally form the flat edge of the semicircle is an elongated gilded oval panned that is decorated with two quatrefoils in the centre and a face mask at either end. The other end is truncated but would have most likely terminated in a loop.

A similar pair of pendants found as part of a complete bridle set were recovered from grave 4119 at Eriswell, Suffolk that contained the remains of an adult male, horse and associated items within a ring ditch and dated to *c*.525–*c*.550 (Fern 2005, 44, 53, fig. 5.1.6 and fig. 5.9.9).

Other 6th century examples recorded on the PAS database can be found at DUR-0FE339, NMS-EBA108, NMS-15EEC7 and ESS-D57A57.dated to the 6th century.

Fern, C., 2005, The archaeological evidence for equestrianism in early Anglo-Saxon England, *c*.450–700, (in) Pluskowski, A. (eds) *Just Skin and Bones? New Perspectives on Human-Animal relations in the Historical Past Archaeopress* BAR international series **1410**, Oxford.

Fig. 12 Horse harness mount.

GLO2D61D8 Buckle: Saltford

A copper alloy D-shape buckle with a complex moulded frame. The expanded front of the buckle forms a sub-triangular panel that has a moulded animal head in the centre.

Flanking this and forming the curving sides of the buckle are two further beasts that have arching backs with heads that back towards the rear of the buckle that gripped the strap bar in their mouths. This buckle is in the Ringerike style, similar to an example found in London from the Thames which has been dated to the 11th century (Wilson 1964, 143–144). The 11th century saw Viking influence extend over the whole of England following Cnut's conquest in 1016. This led to a rise in the number of Anglo-Scandinavian artefacts that were manufactured in this country and adorned by various art styles, which Ringerike proved to be one of the more popular.

Wilson D M, 1964, *Anglo-Saxon Ornamental Metalwork 700–1100*, British Museum.

Fig. 13 D-shape buckle.

GLOFAB593 Coin: Sodbury

An early-medieval gold tremissis of the Merovingian 'National' series, *c*.AD580-670, struck at Quentovic (France) by the moneyer Dutta (Prou 1126). Ref: Prou 1892: 246.

Obverse: Diademed bust facing right.

Obverse inscription: +VVICCO FIT

Reverse: Cross standing above two steps.

Reverse inscription: DVTTA mONET

One of the earliest coins adopted by Anglo-Saxon society, the gold tremissis was originally imported from continental Europe, with the majority of these coins found on the eastern side of the country. Although rare finds, this particular coin is the only example of its type recorded on the PAS database throughout the South Western region.

Prou, M, 1892, *Catalogue des monnaies francaises dans le Bibiotheque Nationale: les monnaies merovingiennes*, Paris

Fig. 14 Anglo-Saxon coin.

Medieval

GLO8C3C42 Coin Weight: North Stoke

A copper-alloy uniface coin weight for the "masse d'or" of Philippe IV of France (AD1268-1314), dating to AD 1296–1310.

The weight is a thick copper-alloy disc, with a enthroned figure engraved at the top, wearing long robes and a crown and holding a sceptre. This is surrounded by the inscription BERTELIn LOM.BART

Fig. 15 Coin weight.

During the medieval and post-medieval period, coin forgery was a particular problem. Usually made from copper alloy and covered in a thin coating of gold, fake coins were manufactured to a high standard to make them indistinguishable from their official counterpart. As a result, these weights were used to verify that precious metal coins were not tampered with or forged and therefore below their legal weight limit; a simple folding balance scale would be used with the weight at one end and the coin on the other.

GLO-AF1375 Folded coin: Wickwar

Silver penny of Edward I (AD 1272–1307) this is a Class 3c, dating to 1280–1281

Obverse: crowned bust facing forwards EDWA R ANGL DNS HYB

Reverse: long cross with three pellets in each angle CIVITAS LONDON

Folded in two, the fold is formed by a gentle curve as if it was wrapped around something, possibly a cord but which is subsequently lost.

Although the coin was a common penny during the medieval period, the act of folding it in two would have taken it out of circulation as a monetary item converting it to a different purpose. There are several reasons why a penny would be bent; documentary sources tell us that pennies can be bent to ask a saint or monarch for healing, or a pledge by a pilgrim to a particular saint pledging to undertake a pilgrimage and depositing the token at the saint's shrine upon completion. As a result, these coins could be viewed as a pilgrim or prayer token.

Fig. 16 Folded silver penny.

GLO-03558D Ampulla: Wraxall and Failand

A lead ampulla with a circular hollow chamber and long rectangular neck.

These chambers would be filled with water that had been blessed from the shrine where they were purchased, with each ampulla decorated with iconography and imagery from that shrine. In many cases, the neck would be ripped off in an effect to access the water inside, possibly to use the holy water to bless fields where crops are being grown, which may explain the many examples found by metal detectorists

in farmers' fields away from known habitation. The liquid inside could also be perceived to have healing properties.

St James is depicted on one side with a bearded head surrounded by a halo, wearing calf length robes which are draped over his right arm raised in blessing. He holds a pilgrim staff in his left hand, with a scallop shell suspended from the top of the staff. To the left of the figure is a large hand, referring to the holy relic of the hand of St James that was held at Reading Abbey. On this side, the inscription on the external band reads + IMAGO . SCI . IACOBI . APLI . DE . RADINGIIS +

St Philip is depicted on the opposite side, also shown in calf length robes draped over a raised left arm, this time holding a staff that is surmounted by a cross. Held in his right hand is an unfurled scroll that reaches to the ground. To the right of the saint is the head and shoulders of St Philip viewed in profile depicted as a beardless young adult, referring to the holy relic of the skull of St Philip that was also held at Reading Abbey. On this side the inscription on the external band reads + IMAGO . SCI . PHILIPPI . APLI . DE . RADINGIIS +

Reading Abbey was a popular pilgrim destination in the medieval period, becoming the cult centre for St James. Pilgrims visiting the shrine would have been offered water which the saints hand had been dipped in, believing that healing properties would have been bestowed to the liquid (Spencer 62). Even today, the ruins of Reading Abbey still play a vital role in the pilgrimage to the shrine of St James at Santiago de Compostela in North Spain, with the abbey forming the beginning of the journey that leads to Southampton where the pilgrim will depart by ferry to northern Spain to take up the leg of the journey known as the English Way (Pilgrimage–Visit Reading, 2022). Visit-reading.com. 2022. Pilgrimage–Visit Reading. [online] Available at: <https://www.visit-reading.com/ideas-and-inspiration/itineraries-and-breaks/pilgrimage> [Accessed 16 March 2022].

Fig. 17 Lead ampulla.

Post-Medieval

GLO-0848AD 17th century token: Saltford

A copper alloy trade token farthing produced at Langport, Somerset, by the portreeve John Michell in 1667.

Obverse: The initials L E / 1667, A LANGPORT FARTHING

Reverse: A portcullis between I M, MADE BY THE PORTREEVE

This 17th century token existed when there was a lack of official base metal small change being issued by the mints around the country, which led many private tradespeople to issue their own unofficial tokens to fill this gap. These tokens would name the issuer and their town of origin and often have an image on one side that would indicate the issuer's profession.

Fig. 18 Trade token.

GLO4D8F15 Cloth Seal: Sodbury

A probable 17th–18th century uniface cloth seal with the outer surface depicting a skirted angel holding a palm leaf and sceptre. Lettering encircling the outer border reads 'GLORIA IN EXCELSIS'

Cloth seals are two conjoined disc that are folded and riveted to the end of a bolt of cloth. Often recording the point of origin and quality of the cloth, these seals would have been a form of quality control and regulation. Cloth seals bearing a facing angel are issued from London, where the angel is a symbol of the city's pious optimism for stable

Fig. 19 Cloth seal.

and lasting trade (Egan 1994, 41). Parallels are published from the British Museum (ibid, nos. 64, 67–69).

Egan G. 1994; Lead Cloth Seals and Related Items in the British Museum; British Museum Occasional Paper 93

GLO18A67E Knife: Westerleigh

A rare complete post-medieval iron knife handle and blade dated to AD.1500–1600. The knife blade is thin with a low curved blade on one side and thick spine on the other, although this is heavily corroded it still retains its original shape. The handle is circular in section (8mm, near the blade expanding to 11mm near the terminal). The terminal is formed from a globular base, then a flanged collar and finally a lozenge shape tip.

A similar all iron construction can be found recorded on the PAS database; LON-C21A9C and LON-7B8302

Iron objects are uncommon finds on the PAS database, partly because of poor survivability of iron in most archaeological environments, but on a large part this is due to a combination of the abundance of background of iron in the soil and the large quantity of farm machinery elements lost over time that leads most metal detectorists to set their machine to avoiding ferrous signals. As a result, it is not only rare to see a complete knife of the 16th century, but the level of preservation is remarkable.

Fig. 20 Iron knife.

REVIEWS

John Bryant, *Excavations at Minster House, Bristol, 1992*, (BAR British Series, 669, 2021). 156 pp., 88 figs., 11 tabs., Cardcovers, £39 [ISBN: 9781407316383].

It is good to have this long-awaited report on the excavation of the site of a late-medieval building which occupied an area south-west of the church of the Augustinian abbey which later became Bristol cathedral. The excavation was carried out in 1992 under the direction of Eric Boore. John Bryant has produced a thorough and clearly-written account of the work with copious illustrations, plans and detailed analysis of the finds. He has been a leading figure in archaeological work in Bristol and the region for many years and was involved in the 1992 excavation as site-surveyor. His book provides much more than a record of the archaeology, since he has made good use of the cathedral's documentary sources to give a full account of the history of the building and its successive residents. He has also used the remarkable collection of plans, drawings, paintings and photographs to show how the building and the adjacent areas of the cathedral developed. This adds a great deal to our knowledge of the abbey and cathedral and will be essential reading for anyone wishing to understand the complex history of the site in the future.

The Augustinian abbey was founded in 1140 by Robert Fitzharding and was endowed with numerous properties in Bristol and estates in Gloucestershire, Somerset and Wiltshire. This made it a wealthy institution, well able to engage in lavish building work on its church, cloisters and domestic buildings. The house which was the focus of the 1992 excavation was built as the lodging for the Prior of the abbey and was later to be known as Minster House. It was erected during the time of Abbot Newland (Abbot 1481–1515). Newland was also known as Nailheart from his rebus or badge of a heart pierced by three nails. He was responsible for a great deal of work on the abbey and his rebus appears on many parts of the building. The house consisted of a two-storey structure with a hall or principal room on the first floor giving a view of the abbey gatehouse. It included a kitchen, buttery, parlour, two chambers, a study and a garden. From his lodging the Prior could supervise the reception of goods delivered to the abbey and stored in the nearby cellarium. Details of the history of the area south and west of the abbey were revealed by the excavation. To the north of the site was a parlour or room in which the Augustinian canons could meet with people from outside such as relatives. There was a thirteenth-century bell tower which was later demolished. There were numerous drains and cess-pits, pits where bells had been cast and a kiln in which tiles had been produced. To the south was the back of the western cloister range which had been rebuilt in stone during the early fourteenth century.

The purpose-built house for the Prior served its intended function for only a few decades. In 1539 the abbey, like all others throughout the country, was suppressed by Henry VIII. Three years later in 1542 it was chosen as the cathedral of the newly-created diocese of Bristol, one of six new dioceses created by the King, with a bishop, dean, six secular canons or prebendaries and six minor canons. This was the last of Henry VIII's dioceses and was poorly endowed. Few bishops, deans or canons stayed long before they sought more lucrative offices in the Church elsewhere. The cathedral of the new diocese lacked a nave, since the twelfth-century nave of the abbey had been demolished in preparation for rebuilding. The Prior's lodging became a house for one of the secular canons and became known as Minster House. Cathedral clergy and staff quickly occupied houses elsewhere in the precinct and houses were built on the site of the demolished nave.

This situation continued until the campaign to rebuild the nave in the later nineteenth century. George Edmund Street, the architect of the new nave found it necessary to demolish the eastern part of Minster House in order to accommodate the south-western tower. This work was carried out in 1869–70. After Street's death in 1881 his successor, John Loughborough Pearson, advocated the complete removal of Minster House in order to present a clear view of the whole of the west front of the cathedral. There was some opposition to the destruction of an ancient and attractive building, but in spite of these protests Minster House was demolished in 1883. The excavation of the site and surrounding area in 1992 was undertaken because of a proposal to create a visitor centre on the south-west side of the cathedral. Later, this ambitious project was abandoned when a main sponsor withdrew the promised finance.

Several specialists have contributed accounts of the finds made during the excavation. They reflect the materials discarded over such a long period of occupation by prosperous residents. There was a great deal of pottery, much of it from the Ham Green and Redcliffe kilns. Other material showed the extent of goods brought down the Severn and the widespread trade of Bristol with Europe and further field. There were roof tiles from Minster House and medieval floor tiles. Animal and bird bones provided evidence of diet and butchery methods. Other material included shells, glass vessels and bottles, a quantity of coins and tokens and objects of copper-alloy, iron and lead. Numerous clay pipes and pipe fragments were found, witnessing to the fact that Bristol was a major pipe-producing and exporting centre, some pipes were foreign and a few were beautifully-decorated in

spite of their fragility. Expert examination of the bell-pits provided information on the development of bell-casting methods. The book contains a full bibliography of published work on the subjects covered.

This is an important and well-researched book which will be of interest to anyone concerned with the history of Bristol and with the former abbey and splendid cathedral which dominate part of the central area of the city.

JOSEPH BETTEY
Chairman of Bristol Cathedral Fabric Advisory Committee (1989–2014)

REVIEW OF ARCHAEOLOGY
2021
Edited by Bruce Williams

Abbreviations

AA	Avon Archaeology
AAL	Avon Archaeology Limited
ACA	AC Archaeology
ASL	Archaeological Surveys Ltd
BCAS	Bath and Counties Archaeological Society
CA	Cotswold Archaeology
COHA	Context One Heritage and Archaeology
HA	Headland Archaeology (UK) Ltd
HPS	Heritage Planning Services
LPA	L-P Archaeology
MHHC	Michael Heaton Heritage Consultants
MOLA	Museum of London Archaeology
WA	Wessex Archaeology

The review of archaeology is arranged alphabetically and covers the four unitary authorities of Bath and North-East Somerset, Bristol, North Somerset and South Gloucestershire, formerly Avon County. If no author is indicated then a report on the fieldwork has not been received by the HER.

BATH AND NORTH-EAST SOMERSET

Bath

Abbey Churchyard, ST 74974 64786. Investigation works were carried out in the Georgian basements at the Roman Baths Museum. The trial trenching component of the project required the re-excavation of two trenches initially recorded by Barry Cunliffe in the 1960s, to ascertain the depths of the Romano-British archaeology and record the in-situ remains. Three other areas were subject to watching brief. From these, the remains of the temple precinct outer wall and inner colonnade were observed, along with a floor, possible drainage gully and a spread of potential in situ painted plaster.

L-PA

Avon Street Carpark, ST 749 643. Seven trial pits were monitored in advance of proposals to reroute a sewer. Most of the pits showed only disturbance by recent service trenches but cobbled surfaces and a wall were recorded in two of them. No dating evidence was recovered.

AC Archaeology

Bath Quays Proposed Sewer Diversion, ST 74918 6499 – ST 74932 64391. Archaeological monitoring was undertaken during the excavation of a series of trial pits along the A367, on the north and east side of the Avon Street Car Park, in Corn Street and The Ambury. The area under investigation lies within the City of Bath World Heritage Site. Two areas of cobbled surface exposed are for a road and yard associated with The Ambury and these, and an adjacent stone wall for a building, are shown on the 1886 1:500 Ordnance Survey map indicating a post-medieval date.

Vince Simmonds ACA

Combe Hay Lane, ST 73478 61391 An archaeological strip, map and sample excavation was carried out on one of three land parcels comprising the Sulis Down development. The excavation revealed the corner of a Romano-British enclosure located during the previous evaluation, together with a double burial of two individuals, one of whom was successfully Radiocarbon dated to the late 4th century, and thus likely contemporaneous with the enclosure. There would be a slight change to the setting of the monument based on current design proposals. However, this slight change is considered to be of less than substantial harm and is deemed acceptable.

L-PA

46 Great Pulteney Street ST 756 651. Workers extending the tarmac of a small carpark up to the back wall of the garden disturbed a well cover. The well was a soundly constructed of dry stone construction approx. 4 feet in diameter with a water level at approximately 10 feet below ground level. The well is 6 metres from the corner of the wall of the alley heading NE. The well is up against and slightly under the garden wall. No dating material was seen.

Hampton Row, Cleveland Swimming Baths, ST 759 658. Limited demolition and groundworks associated with renovation of Cleveland Pools indicated that the existing pool structures are set into deep terraces cut into the clay bedrock, from which all pre-existing subsoils have been removed, and that the observed structures are of a single early 20th century phase of construction. No pre-20th century deposits or earlier phases of pool construction were observed.

MHHC

Corn Street, ST 748 644. Six trenches were excavated recording alluvial deposits to the W and SE of the area. These was overlain by a series of well-preserved C18 to C19 walls, surfaces and levelling deposits, which correlate closely to residential, industrial, and commercial premises shown on

historic mapping. The site was sealed by a uniform spread of demolition material and modern surfacing.

CA

Lawn below the Royal Crescent Ha-ha, ST 744 653. The lawn below the Royal Crescent Ha-ha was part of an archaeological investigation in 2002 for a Time Team television programme on Channel 4. In this they confirmed the route of, and excavated a known Roman road across this lawn, and also revealed and excavated a ditch containing Bronze Age remains. Previous work extended the geophysical part of this work, and obtained some results indicating other possible developments in the area. The 2021 survey was a continuation of this work. This showed a linear high resistivity feature extending from the north-west towards the south east under the lawn, appearing at depth beyond the proposed Roman road line. This was adjacent to and parallel to a very deep and wide low resistivity volume crossing the area. The results also indicated differential resistivity results at depth below the soil. These may have indicated that these areas may have been filled or levelled over time, a process either manmade or following down-slip from the hillside, with subsequent development on the new ground level.

BCAS

Prior Park, Cold bath house or Pineapple House, ST 762 629. Further excavation aided by mechanical digger followed in 2021 to reveal much of the north side of the building together with the Bath cavity. Remains matched the Ralph Allen Estate Plan of the Cold Bath except for the central doorway. Finds were largely Victorian, probably from elsewhere and used to landscape the area after the Building's demolition. Fragments of mid-18th century delft tiles found in situ showed evidence of bath and wall tiling. A culvert discovered under the bath floor acted as an overflow from the spring water source to the bath and as a probable drain. Examination of the Prior Park School Sports Pavilion confirmed the rearrangement of the two separate east and west end sections shown on the Plan by joining them, together with adjustments to the windows.

BCAS

Bathwick

Sydney Place, ST 75656 65420 A Level 3 Historic Building Recording Survey of Georgian townhouses and outbuildings and an archaeological watching brief groundworks was undertaken. An original vaulted cellar belonging to no. 34 was located within the site boundary. This was surveyed and incorporated into the report. Overall, the survey found that whilst some of the original fabric of the shell of the buildings remained, they had been subject to widespread alteration in terms of form and fabric over six broad phases of reconstruction. The remains of a former stable building was identified during the watching brief element of the works. This corresponded with a building on the 18th century mapping.

L-PA

Charlcombe

Church of St Mary, ST 748 673.Reports of masonry within a grave cut in 2020 were confirmed and, on desktop investigation found to be part of an earlier churchyard wall, superseded in the mid twentieth century. A few months later, masonry was observed in a second grave which did not lie on the line of any previously recorded wall. A geophysical survey using resistivity profiling (the only method possible in this very full churchyard) confirmed the presence of masonry, but without any pictorial evidence it was not possible to identify or date it.

BCAS

Weston Spring Farm, ST 71600 67712. Detailed magnetometry was carried out by Archaeological Surveys Ltd ahead of an orchard planting scheme at Weston Spring Farm near Bath. The results of the survey indicate the presence of a group of anomalies within the south western corner of the site which correspond to a low, circular mound situated in the field. Although the mound may be suggestive of a Bronze Age round barrow, this type of monument is generally associated with an external ring ditch. The geophysical data do not show a ring ditch, but instead the results indicate a negative zone, with associated discrete negative responses to the south and magnetic enhancement to the west. The negative zone could be consistent with scraping of the soil, subsoil and stone to form a mound, with the discrete negative responses associated with stones, and the magnetic enhancement associated with anthropogenic activity. However, it is not possible to provide a confident interpretation on the geophysical results alone. The survey also located several linear or rectilinear anomalies that may indicate former boundary ditches.

Kerry Donaldson, David Sabin, ASL

Playing Field, Lansdown, ST 721 698. Playing Field on Lansdown contains the western half of an enclosure known as 'Lansdown Camp' and also as the 'Ovate Enclosure'. The enclosure is bisected by the main road over the plateau. The eastern half in 'Paddock Field' has already been surveyed. Playing Field was subject to geophysical survey in June/ July 2021, using magnetometry, magnetic susceptibility, twin-probe resistance, and resistivity profiles. The enclosure was a simple bank and ditch, with no apparent defensive properties, which had been split by the road. If the road was Roman, as seems most likely, then the enclosure was prehistoric. Magnetic susceptibility revealed a large magnetic disturbance just to the west of the enclosure although this did not show clearly using other techniques. The survey could not determine what process had caused this disturbance.

BCAS

Chew Magna

6 Madam's Paddock, ST 575 629 An archaeological watching brief during groundworks for a new dwelling

found no archaeology, perhaps because site levels were reduced in the 1960's.

AAL

Claverton Down

Flatwood Camp, ST 775 633 Flatwood Camp was used from 1892 until 1899 as the location for the 28 day summer camp of the 4th Battalion The Prince Albert's (Somersetshire Light Infantry) sited in a field of that name on Claverton Down, southeast of Bath. Permanent buildings are shown on the 1904 25" Ordnance Survey map and a geophysical survey was carried out in August 2021 using magnetometry and resistivity equipment. No clear results were realised except in one area suggesting most buildings were wooden. Possible fireplace evidence was found. Metal detecting in and around the survey areas produced items from the 18th to 20th century with only coins, corrugated iron and a military button that could possibly be linked to the camp. A buried water pipe network once linking a windpump to the camp buildings and a later reservoir was also discovered.

BCAS

Hallatrow

Hallatrow Business Park ST 630 567. A watching brief showed that ground levels had been reduced by about 2.5m at some time in the recent past and that archaeological deposits were unlikely to survive. Excavation showed only natural ground below the surface.

HPS

Keynsham

Pixash Waste Transfer Site, ST 67183 68217. A geophysical survey, comprising detailed magnetometry, was carried out over 1.75ha on land east of Pixash Lane in Keynsham ahead of a proposed development of a waste transfer site. The surveyed area had been used as a plant nursery since at least the 1880s and the majority of the anomalies are associated with former cultivation and land divisions as well as material derived from dumping and demolition. A small number of short positive linear and discrete anomalies have been located; however, they lack a coherent morphology and cannot be confidently interpreted.

Kerry Donaldson, David Sabin, ASL

Land off Minsmere Road, ST 66515 67585. Detailed magnetometry was carried out to the east of Keynsham in Bath & North East Somerset by Archaeological Surveys Ltd. The results indicate the presence of a number of positive linear and discrete responses that although lacking in a clearly defined morphology, could relate to cut features with archaeological potential. A zone of magnetic enhancement appears to have been truncated by ridge and furrow, although the source of the enhancement is uncertain. Negative linear anomalies could be associated with land drainage and magnetic debris indicates widespread dumping and/or burning primarily in the northern and western parts of the site.

Kerry Donaldson, David Sabin, ASL

Manor Road, ST 730 661. An archaeological watching brief during groundworks for a new housing development revealed no archaeology present.

AAL

Midsomer Norton

Langley's Lane. An initial watching brief was carried out during works to improve and rejuvenate the historic park. Archaeology pertaining to the Georgian and Victorian iterations of the pleasure grounds were observed, including an area of hard standing for equine use known as The Ride. Excavation was then undertaken following the discovery of a Romano-British stone sarcophagus. During excavation around the sarcophagus, other burials were discovered; Five inhumations and two cremations. In the stone sarcophagus itself, two sets of human remains were found. The original occupant can be broadly dated to the 4th century AD based on the presence of glass beads interred with her. She was displaced to the foot of the sarcophagus.

MOLA

Weston

All Saints Church, ST 730 663. Archaeological monitoring and recording during geotechnical ground investigation work was undertaken as part of an archaeological condition placed on planning consent for the construction of a single-storey extension with associated landscaping works. The main phase of archaeological work was carried out prior to development groundworks. Previous archaeological investigation undertaken through trial trenching ascertained the presence of burials with earth-cut, brick vaulted and stone constructed examples of vaults being present. Surprisingly there was no evidence for intercutting graves or historic episodes of disturbance save for the very few instances of disarticulated bone encountered, revealing a less crowded burial space than anticipated.. The ground investigation locations were chosen to avoid known burials within the churchyard. The trial pit excavations exposed the depth and formation of the existing foundations, a remnant pathway, and mixed deposits relating to the expansion of the church in the late 19th and early 20th centuries. Other investigative work within the wider graveyard area revealed a series of accumulated grave soils interspersed with discrete dumps of limestone and mortar probably associated with the church extensions as well as the possible subterranean remains of a non-extant stone tomb. Overall, the monitoring appeared to confirm the results of the archaeological evaluation, that the graveyard was not intensively used and the burials that are present have been subject to very little in the way of historic disturbance.

COAS

Whitchurch

Land at Church Lane, ST 608 669. In March 202 9 trenches were excavated to determine the significance of anomalies identified in a previous geophysical survey of the land, and in this regard it was successful. The conclusions of the geophysical survey suggested that the anomalies may

represent a high-status Roman structure, possibly a coin mint. The evaluation was able to confirm that this was not the case. Several features and deposits were identified that contained Late prehistoric pottery. These included parts of a dark occupation layer found in sporadic patches across the site. With the exception of modern gullies in trench 1 and possibly trench 5, the features are either capped by the occupation layer or contain fills very similar in form to this layer. Environmental samples taken from the occupation layer suggest that the deposit is indicative of hearth waste. The lack of in-situ burning across the site means that the deposit was most likely derived from activity close to the site, probably washed in from the raised ground to the south-west while most of the features were still open or partially silted up Using the geophysical results we can tentatively phase the features identified by the evaluation. Ditches 602 and 707 appear to form part of the same Late prehistoric rectilinear enclosure system. This appears to be truncated by the large south-west/north-east ditch running across the site, identified in trenches 2, 4 and 5, as ditches 203, 403 and ditch 505. Ditch 802 forms part of a separate rectilinear enclosure of which the western extent is missing in the geophysical survey. It seems probable that ditch 709 is a continuation of this enclosure ditch. Although it is hard to draw any firm conclusions from the evaluation results, because of the poor dating material recovered, it is clear that there is not a high-status building of any period on site. The lack of finds from the majority of features suggests that the archaeology that is present, is most likely agricultural in nature. The enclosures and boundaries they form are most likely associated with the settlement activity shown in the geophysics to the northwest and possible activity on the higher ground to the south-west.

CA

BRISTOL

Brislington

Brislington Meadows ST 362639 171085. An evaluation identified Roman enclosure ditches broadly datable to the 2nd to 4th centuries. The presence of industrial waste, including a crucible fragment and an assemblage of glass beads and glass waste may indicate small-scale industrial activity on the site.

Christopher Leonard, CA

Knowle

Inns Court Avenue, ST 58674 69243.An archaeological watching brief demonstrated that the site had suffered a significant degree of horizontal truncation associated with the construction of buildings in the early 1970s. This was most evident along the southern and eastern edges of the site, though the presence of a probable buried topsoil in two of the test pits monitored suggest that the western half of the site may be relatively unaffected by this later disturbance. No finds or features were observed.

WA

Old Market

2 Unity Street, ST 59703 73157. Two archaeological trial trenches were excavated in anticipation of future development of the site for a gas-powered standby electricity generator. No archaeological features were observed. Only two pieces of worked flint were recovered from the subsoil.

L-PA

St George

Whitehall Road, ST 61758 73956. An archaeological watching brief revealed that the site had been subject to extensive horizontal truncation, which probably occurred during the clearance of fire-damaged buildings in 2009–10. The only archaeological feature of note was a stone-lined well that was probably constructed between 1806 and 1841 to provide water for a cottage fronting Whitehall Road. By 1884, a further four houses, known as Tyler's Terrace, had been constructed on the site; these probably made use of the same well until a mains water supply was connected in the later 19th or 20th century.

WA

St Pauls

Franklyn Street, ST 59707 74291 This watching brief was conducted during the demolition phase of the former factory building and during the excavation of footings at the site prior to construction. No archaeological levels or features were observed.

Mola

NORTH SOMERSET

Abbots Leigh

Land at 21 Church Road, ST 354264 173907. An intermittent archaeological watching brief was undertaken at this site as it was located in an area that had been identified as having potential for archaeological deposits relating to medieval occupation of Abbots Leigh. However, No archaeological deposits were identified relating to medieval occupation of the area.

Langford

Saxon Street, ST 46727 60623. The initial objective of the archaeological work was to excavate remains of an 18th century merchants house that was encountered during previous archaeological evaluation trenching at the site. No remains pertaining to the building were uncovered. Due to numerous constraints, the scope of works was then altered to that of an archaeological watching brief. A small area of surviving archaeological remains was eventually discovered, including well sequenced phases of rural and then sub-urban agricultural activity dating from the medieval period into the post-medieval period. Overlaying this was a series of structural elements dating from the late Georgian to the late Victorian Period.

Weston-super-Mare
Land off of Ebdon Road, ST 3632 6474. An archaeological trench evaluation provided mostly negative results, although a drainage channel close to the eastern boundary is likely to be related to a large drainage feature visible in the field. No finds were recovered from the excavated trenches or spoil heaps.

Vince Simmonds ACA

Winscombe
Combe Farm, ST 41975 58347. An archaeological evaluation of a 3.2 ha parcel of land located at Coombe Farm was undertaken. Six trenches measuring 50m x 2m targeted on the results of an earlier geophysical survey. The evaluation identified a limited number of archaeological features within the site, with features revealed in one of the excavated trenches. Four parallel drainage gullies were identified in Trench 2. The gullies were post-medieval in date, functioned as land drainage and correspond with land drains recorded by the preceding geophysical survey. Modern made ground deposits were encountered in Trenches 2 and 3.

WA

Yatton
Land at Arnold's Way, Phase 3, ST 4198 6685. An archaeological watching brief was undertaken. A previous trench evaluation of the Phase 3 area found some limited evidence to indicate that a Romano-British settlement extended in to this area. The watching brief returned negative results. The sterile nature of the deposits and lack of even stray finds indicates that no archaeological remains survived in the monitored area.

Paul Rainbird ACA

SOUTH GLOUCESTERSHIRE

Alveston
Land west of Alveston, South Gloucestershire, ST 362460 188240. Detailed magnetometry was carried out over 17ha on land to the west of Alveston in South Gloucestershire. The eastern part of the site contains the remains of a scheduled round barrow, later used as a moot in the medieval period, and the survey located associated anomalies relating to a slightly oval-shaped ring ditch that appears to have been truncated and eroded by agricultural activity. Internally there appears to be some magnetic enhancement and a negative curvilinear response. To the west the survey has located responses associated with an oval enclosure with a restricted, west-facing entrance leading onto other features and its morphology is consistent with an Iron Age banjo enclosure. Much of the site contains numerous responses which appear to relate to naturally formed features within the underlying geology. In the south western part of the site there are a number of very weakly positive responses, but their weak response, lack of coherent morphology and overlying widespread magnetic debris has resulted in poorly defined anomalies that cannot be confidently interpreted.

Kerry Donaldson, David Sabin, AS

Hinton
Bridehill Stables, Land South of Feltham Road, ST 72131 76594).

An archaeological watching brief was undertaken during the formation of an all-weather equestrian arena with perimeter fencing and subterranean drainage. There are no records of any previous archaeological activity on the site although it lies within a known area of Romano-British settlement, and within the wider extents of a recognised prehistoric landscape. Most significantly, cropmarks and occupation debris have been identified in the field immediately south of the site and another known area of Romano-British settlement lies to the north. The South Gloucestershire Historic Environment Record also identifies a range of multi-period heritage assets in the wider environs of the site with remains of prehistoric and medieval occupation being particularly noteworthy.

Historic map regression assessment indicates that the Site was part of a pasture field from at least the first half of the 19th century and examination of LiDAR data has shown no indication of potential buried remains. This was borne out by the present project, with no archaeological features or deposits observed and a notable lack of cultural material that would normally be associated with agricultural manuring. As such, not only did the Site lie beyond the extent of Romano-British settlement but it is likely to have always been pasture. This is not surprising given the shallowness of the underlying bedrock and the high proportion of stone within the subsoil; indeed, nearby field names include the term 'chessels' meaning 'land with heaps of stones'.

Cheryl Green, COHA

Oldland
St Anne's Church, ST 366869 171168. An archaeological watching brief during the exhumation of burials from the church ground was undertaken. The burial ground was in use from the 18th century, but no evidence for medieval burials was found. However, a small assemblage of 10th to 13th century finds indicates some activity in this location, possibly a high status building.

HPA

Stoke Gifford
Fox Den Road. ST 61829 79035. An archaeological evaluation of a 1.72 ha parcel of land was undertaken. A total of fourteen trenches measuring between 19m and 30m each identified a limited number of archaeological features within two of the trenches. Two artefactually undated pits were observed sealed by the subsoil. Modern deposits were revealed along the eastern and northern site margins and relate to refuse disposal and landscaping features.

WA

Thornbury
Crossways, ST 65270 90429
Thirty evaluation trenches each measuring 25m by 1.7m were excavated across a 7ha parcel of land and identified

eight features exposed in six of the thirty trenches. This revealed one post-medieval ditch, three modern ditches and four undated features. All but one of the features are related to former field boundaries or drainage. Ceramic and gravel stone land drains, relating to recent drainage activity were also identified.

WA

Warmley

St Barnabas House, Church Avenue. ST 367468 173246. A watching brief recorded no features or deposits of archaeological interest.

Daniel Sausins, CA

Winterbourne

Elm Park Primary School, ST 65433 80950, Archaeological evaluation uncovered a number of probable man-made ditches which may be prehistoric or Roman in date. Further work will be undertaken soon.

AA

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