

CHARTERHOUSE, SOMERSET

THE DEVELOPMENT OF A ROMANO-BRITISH MINING SETTLEMENT AND ASSOCIATED LANDSCAPE

SURVEY REPORT

Michael Fradley



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CHARTERHOUSE, SOMERSET: the development of a Romano-British mining settlement and associated landscape

Michael Fradley

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SUMMARY

The archaeological remains at Charterhouse, Somerset, were the focus of a detailed survey and investigation carried out as part of English Heritage's study of the Mendip Hills Area of Outstanding Natural Beauty (AONB). The Charterhouse survey area covers 64 hectares and extant earthwork remains from many different periods were recorded. Some of the earliest features identified include a group of Bronze Age barrows on the higher slopes of Blackdown and a multi-phase monument in Charterhouse Green which originated as a later-prehistoric promontory enclosure. The extensive Romano-British settlement associated with the area's mineral extraction industry was recorded and its extent and morphology recognised for the first time. A series of earthwork remains related to the early post-medieval mining operation were also recorded which include a complex of buildings, water management features and enclosures. Much of the area was enclosed in the late 18th century and features relating to this period of improvement were also identified.

CONTRIBUTORS

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ARCHIVE LOCATION

NMRC, Swindon

DATE OF SURVEY

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CONTENTS

INTRODUCTION	1
Location, geology and land-use	1
The survey	3
HISTORICAL AND ARCHAEOLOGICAL BACKGROUND	4
Historical background	4
Archaeological background and previous research	7
Map analysis	14
THE EARTHWORKS: DESCRIPTION AND INTERPRETATION	17
Great Cowleaze Pasture	17
Plentys	25
Hundred Acre	27
Upper Rains Batch	30
Grays Ground	34
Hill Ground	36
Lower Rains Batch	42
Marthas Lot	46
Charterhouse Green	46
Further Inclosure	49
Further Blackmoor and Hither Blackmoor	50
DISCUSSION	51
Prehistoric evidence	51
The amphitheatre question	51
The Roman fort/enclosure	54
A Roman industrial town?	55
Medieval exploitation	60
Post-medieval industry	62
Post-medieval agricultural improvement	63
CONCLUSION	65
METHODOLOGY	66

ABBREVIATIONS	67
BIBLIOGRAPHY	68
Unpublished Sources	68
Published Sources	68

INTRODUCTION

Earthwork evidence for a substantial Romano-British settlement and mining operation in this area represent one of the most significant surviving sites of this period in the UK. The English Heritage survey of the site has allowed the extent and morphology of the settlement to be recorded and interpreted for the first time, while enabling a range of specific features to be understood within their wider context. In addition it has allowed an appreciation of the surviving multi-period landscape consisting of previously unrecognised prehistoric remains as well as extensive industrial remains dating to the early post-medieval period. The improved understanding of this complex landscape will help inform future management of this important site as well as forming the basis for further research.

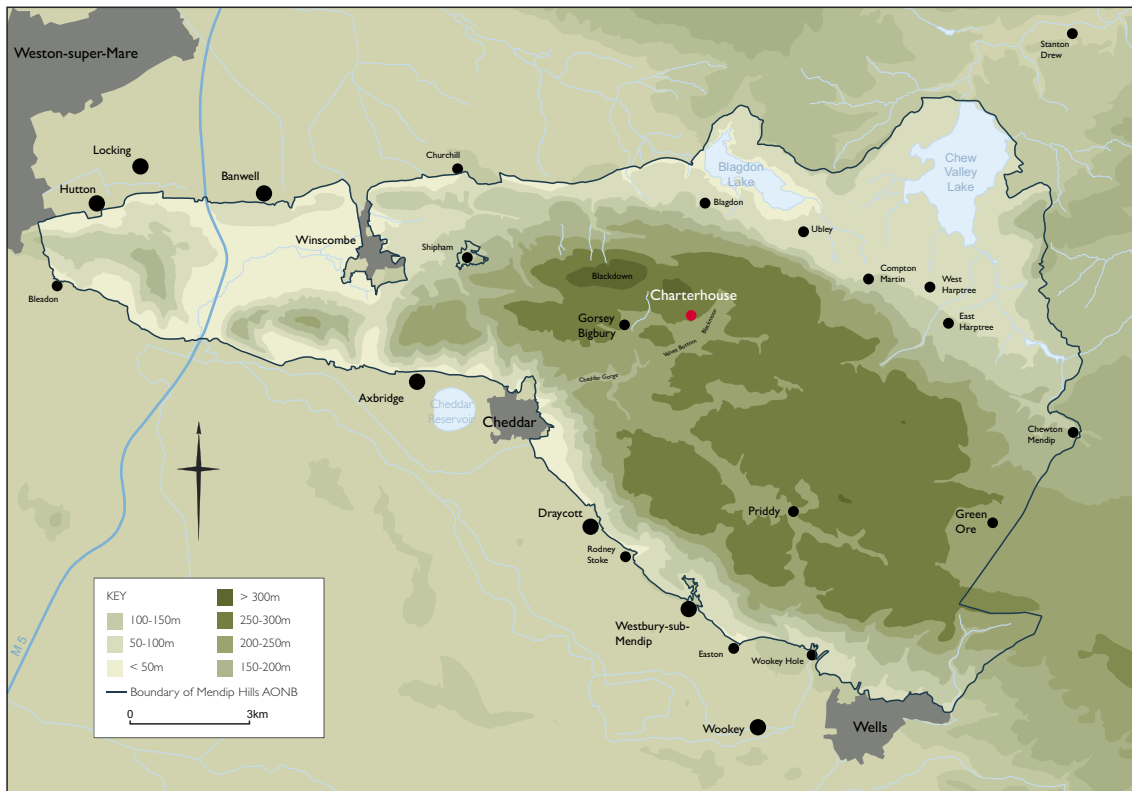


Figure 1. Location plan.

Location, geology and land-use

The hamlet of Charterhouse is situated in the civil parish of Priddy towards the centre of the Mendip Hills AONB, some 4.7km north-east of Cheddar, (centred ST4977455750) (Fig. 1). The survey area lies to the east of the hamlet and is spread across the sheltered south-east slopes of Blackdown and the north and north-west sides of the Blackmoor and Velvet Bottom valleys, lying between 245m and 310m above OD. The site's valley location has resulted in it having a relatively restricted view over the wider landscape, with the exception of the area on the upper slopes of Blackdown. From the higher ground views open out across the Mendip plateau with Pen Hill visible to the south-east and the upper reaches of Cheddar Gorge to the south-west. On the summit of the

hill extensive views to the north are available across the Severn Estuary as far as South Wales.

The southern half of the site lies on Carboniferous Limestone; with the south-east corner composed of Black Rock Limestone and the remainder lying on Limestone and Mudstone of the Avon Group. The higher slopes of Blackdown are Devonian sandstone of the Portishead Formation (British Geological Survey Wells, sheet 280). The mineral galena deposits found in this region incorporate ores of lead, silver, zinc and other exploitable metals.

The survey area covers 9 fields, amounting to nearly 64 hectares, which is currently under pasture, although they have undergone differing levels of improvement and cultivation in the past (Fig. 2). A large proportion of the area is classified as a Scheduled Ancient Monument, which is broken down into four areas. These currently relate to a Roman amphitheatre (SO218); two areas of Roman settlement (SO219a and SO219b); and a Roman camp or fort which has been interpreted as a fortlet (SO220). Beyond this area the industrial remains of Blackmoor and Velvet Bottom, including a small suspected prehistoric enclosure, are also scheduled (SO508), although only the latter enclosure was incorporated into the survey area. The industrial remains within these valley bottoms are of integral importance to the history and development of the area, but within the time-frame of the project a large-scale survey of these remains was considered unfeasible.

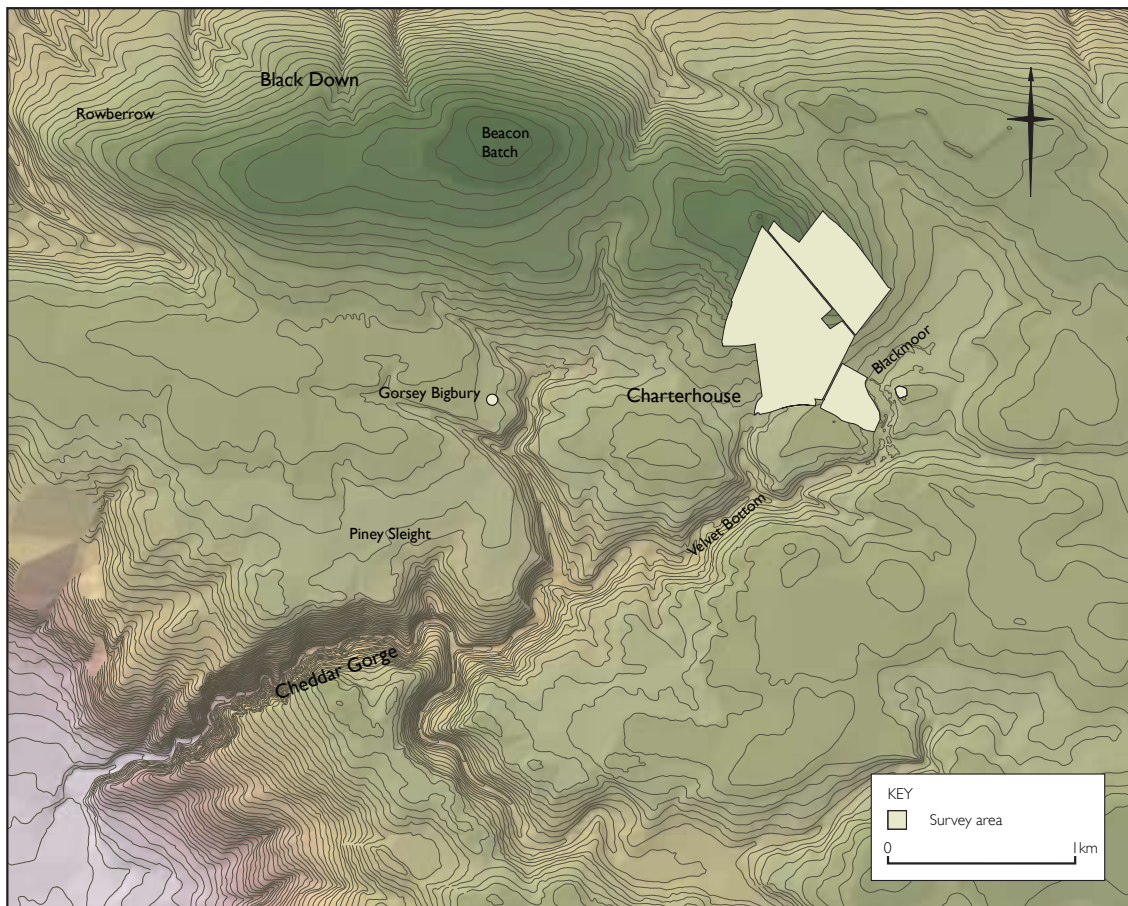


Figure 2. Topographic setting and extent of survey

They are, however, the focus of detailed investigation by the Charterhouse Environs Research Team (CHERT).

The survey

An analytical survey of the archaeological earthwork remains at Charterhouse was undertaken as part of English Heritage's wider study of the Mendip Hills AONB. The survey was undertaken at a scale of 1:1000 between September 2007 and February 2008 by staff from English Heritage's Archaeological Survey and Investigation teams based at Swindon and Exeter.

HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

Historical background

The following outline of the history of Charterhouse and its archaeology will be discussed with reference to a number of different fields within the survey area. Significant confusion appears to have arisen during the past in the use of field names at Charterhouse, and as a consequence the following text will only make direct use of the field names presented in Fig. 3, which may at times differ from names used within referenced sources.



Figure 3. Charterhouse field names.

The Romano-British settlement at Charterhouse has tentatively been identified as *Iscalis* (Millet 1990, 155). However, a contemporary regional name has also been suggested for the Mendip lead mining district as a whole although it is only known in the abbreviated form 'VEB' which was found on the imperial inscriptions of seven lead pigs (Elkington 1976, 194). This interpretation has been challenged by Leach, who suggests that 'VEB' is

an abbreviation of *Vebracum*, which may have been the name given to the Charterhouse settlement rather than the Mendip region as a whole (Leach 2001, 72).

During the medieval period the survey area lay within the manor and parish of Blagdon and formed part of its common land. In 1086 the manor was valued at 20s, significantly less than its neighbour, Ubley, despite similar properties (Thorn & Thorn 1980, 37:1, 42:2). Charterhouse, or Hidon as it was recorded in the medieval period, borders the western fringe of the present study area and was divided from the royal estate of Cheddar and granted to Witham Priory (Carthusian) in 1182, with further charters received for the mining of lead in 1189, 1235 and 1283 (Gough 1928, 94; Blick 1991, 95). Monastic houses appear to have had an important role in this period of growth in Mendip mineral extraction, with the Carthusians at Hinton Charterhouse holding a grange and probably undertaking mining at Green Ore, while in 1235 the Bishop of Bath was licensed to begin explorations for iron and lead in 'Hidun' (Hydon) using timber from 40 acres of woodland at Cheddar (Gough 1967, 50-3).

Mineral extraction was not the only economic activity undertaken at Charterhouse, nor was it necessarily the most important; agriculture, particularly sheep farming was also important. In Blagdon, land was held by the Cistercian houses of Stanley, Flaxley and the St Mary Grace, amongst others, and they may well have utilised pastures around the survey area as a sheep run, in parallel to the common rights of the secular members of the Blagdon community (Collinson 1791, 319; VCH 1909, 461-2; TNA: E 210/10014). The road running up the manorial/parochial boundary between Ubley and Blagdon, towards Blackmoor and the survey area, is still known as Ubley Drove and probably perpetuates the access route used to bring animals up on to the common. The common land within the survey area largely survived until the later 18th century when it was enclosed.

Documentary evidence would suggest that the economic value of mineral extraction in this area had grown to a significant level by the end of the medieval period. The return of the Carthusians of Witham Charterhouse for their grange at neighbouring Hidon in the *Valor Ecclesiasticus* in AD1535 valued the farm of the grange at £40, significantly more than any of their other properties, with the exception of Witham itself and the combined rents of their Bristol properties (Thompson 1895, 192-3). When the property was acquired by Robert Maye on 12 September 1554 it was valued at £784 18s (BRO: 5139/292). The surviving account books of the Maye family at Charterhouse-Hidon dating from 1592-1614 demonstrate unquestionably their involvement in the mining industry in this area (SARO: DD\GB/145).

By the 16th century the mining organisation on Mendip was formalised into four distinct mining districts, or liberties, which had their own privileges and unique law codes (Gough 1967, 69-111). The mining district at Charterhouse was known as the West Liberty, and appears to have included parts of Charterhouse, Ubley and Blagdon although the records are incomplete (*ibid*, 95-6). The lordship of the minery would have been inherited by the secular lords who took on the estate of Witham Priory following the Dissolution, in this case the Maye family. The exact location of the West minery is equally uncertain, although it is presumably lost beneath the extensive debris and consolidation of later periods in the Blackmoor and Velvet Bottom valleys. This is further suggested by the

ruins of a 'cupola or forge' depicted on the Charterhouse estate map of 1761 (SARO: DD\STL/2)

Based on substantial documentary records for the Chewton Minery it is generally assumed that the Mendip lead mining industry reached its peak in the 17th century, although the contrasting lack of records from previous centuries may belie larger scale mineral extraction from this period. It can be conjectured that the West Minery also enjoyed the same success demonstrated at Chewton. The use of gunpowder from the 1680s apparently aided the mining process, while a coal-fired reverberatory furnace at Bristol from 1685 would have improved processing (Blick 1991, 95). However, the mining industry on Mendip started to decline from 1670 as the accessible ore was exhausted and the lead itself was considered an inferior product on the national stage. Records suggest that output from 1700-10 may have been 10% of what it had been in the previous century, although small-scale exploitation and re-processing of slag presumably continued over the next century (ibid). Interestingly, Gough reports an undated 17th-century record of profits from the Charterhouse-Hidon Minery which could produce profits of £50 but this was frequently reduced by the troubles of the time; while this may refer to the impact of the Civil War an alternative possibility is that it implies the decline of the minery itself (Gough 1967, 90). In the early 19th century Skinner reported that in Priddy lead ore had been plentiful within living memory but had by that time become scarce (BL: Add mss 33656).

Lead extraction was revived in the 19th century, and was marked by renewed investment in the exploitation of deeper mineral deposits and the re-smelting of the spoil and material left by previous generations of miners. Reprocessing of the Romano-British and medieval spoil heaps was a viable economic process because inefficient techniques and processing methods during these periods meant that their spoil often contained significant quantities of lead and other minerals which could be more easily won than fresh ore from newly sunk mines. It was this latter process that facilitated the re-discovery of abundant Romano-British material which was uncovered during the excavation of these mineral-rich spoil deposits.

Documentary records show that 19th-century mining and reworking of slags was initially concentrated around the Blackmoor valley on land belonging to Dr Somers, and where speculative mining was begun by the Mendip Hills Mining Company in 1844 (Stanton & Clarke 1984, 35). Dr Somers had been re-working slags on his land from the 1820s and a brick smelter had been constructed in 1824 (Blick 1991, 95), while Skinner also noted miners and their families, already familiar with the local landscape, were reprocessing material in 1819-20 (BL: Add mss 33673). In 1846 Lord Clifden leased his lands and slag grounds around Velvet Bottom to the Mendip Hills Mining Company which then began re-exploiting the older mining waste (Stanton and Clarke 1984, 35). From the 1840s the Cornish miners of the Mendip Hills Mining Company added a reverberatory furnace and buddle pits, the latter of which were designed to concentrate lead ore through washing (ibid). The sinking of new shafts, undertaken from 1844-58, was primarily located on the Ubley and Charterhouse Rakes to the south-east of the survey area. This proved financially disastrous and it was only a refocusing of efforts on reprocessing earlier spoil that pushed the Mendip Hills Mining Company into profit.

The area of slag re-working was expanded, particularly following the sale of the mis-managed Mendip Hills Mining Company to the smelting firm of Treffry & Co of St Austell in 1861 (Blick 1991, 95). Soon after a Pattison plant was erected in the valley to improve recovery of silver deposits (Gough 1967, 194-5). Re-working of earlier mining slags reached Lower Rains Batch and it is this field that has become synonymous with the extensive number of Romano-British finds recovered, but not recorded, during the 19th century, although it is not clear how far exploitation spread or how it was undertaken. As international imports increased and mineral prices tumbled, smelting was finally abandoned at Charterhouse in 1878 although dressed material continued to be sent to Bristol until 1885. The later closure of the St Cuthbert works in 1908 marked the close of industrial lead working on the Mendip Hills (Gough 1967, 177; Blick 1991, 95).

The agricultural landscape also continued to develop alongside the mineral extraction industry during the post-medieval period. The area of Blagdon covered by the present survey had functioned primarily as common land during the medieval period and largely continued to do so until it was enclosed in 1787 (SARO: D\P\blag/20/1/1). The enclosure map shows that parts of the common were recorded as 'Old Inclosures', including the present field of Great Cowleaze Pasture. This may relate to the documented enclosure of common in 1602 by the Maye family at neighbouring Charterhouse-Hidon, possibly indicating that sections of the survey area were purchased at this time (SARO: DD\GB/145; Gough 1967, 80). That the latter manor was also labelled as having old enclosures on the same map bolsters this argument further (ibid, SARO: D\P\blag/20/1/1).

Archaeological background and previous research

The history of documented research and excavation at Charterhouse begins with the work of the Reverend John Skinner and his companion Sir Richard Colt Hoare. Analysis and cross-referencing of Skinner's diaries reveals significant details about the site in the early 19th century and the archaeological material encountered, although there is still ambiguity in many of his statements. The principal area investigated by Skinner was Upper and Lower Rains Batch fields. Precise details of his excavations are lacking, although he did record that he uncovered traces of buildings and materials including brick, dressed stone, nails, hearth stones, tile, flue tiles and mortar, as well as evidence for lead processing of Romano-British date, pottery, charred wood, glass, bronze fibula, worked bronze and burnt bone (VCH 1906, 335). A redundant spring was noted in Upper Rains Batch, while a number of wells were identified by labourers in Lower Rains Batch. Skinner initially saw these latter features as the robbed-out hollows of earlier structures and questioned their interpretation as well-cuts due to a lack of stone revetment; it can be implied that traces of timber revetment may have been missed and that the local workmen were more than capable of identifying a well-cut (BL: Add mss 33,653).

Skinner was preoccupied with the recovery of high-status material, and was therefore frustrated by the lack of mosaics and precious objects. Difficulty was also encountered in identifying buildings themselves; he suggested extensive robbing and proposed that re-used Romano-British structural materials could still be seen in local buildings (BL: Add mss 33,653). However, there is the possibility that he may have missed evidence of timber-framed structures. In Rains Batch (which could presumably indicate either Upper

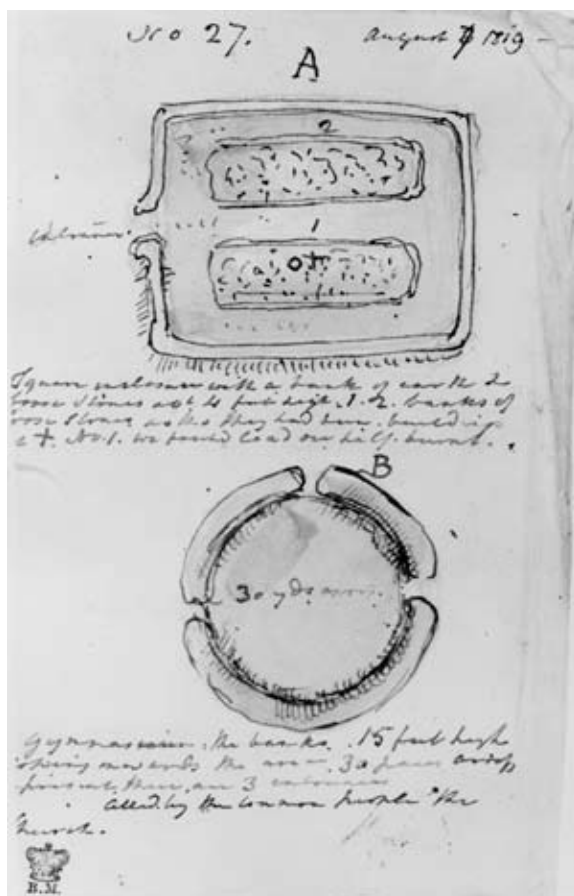


Figure 4. Sketch produced by Skinner showing some of the upstanding earthworks at Charterhouse (reproduced with permission of the British Library).

or Lower Rains Batch) he recorded a house at a depth of 3ft built of dressed stone and cemented with mortar on a site where Samian ware, roofing stones and tiles had been identified on the surface (BL: Add mss 33673).

The scale of earthwork survival was realised by Skinner's companion, Hoare, who noted squares, circles and irregularities on the ground and both he and Skinner produced the first sketches of the upstanding archaeology (BL: Add mss 33,653; Hoare 1821, 42)(Fig. 4). The initial discovery of finds made by Skinner and his contemporaries were recovered amidst early agricultural improvements of this former common land at Charterhouse, a process that would ironically lead to the increasing degradation of the earthwork remains. Skinner and Hoare made little note of the earthworks in Grays Ground and Hill Ground fields except to comment that the settlement appeared to continue east and west of Rains Batch (BL: Add mss 33653, 33673).

Skinner also reported that the local farmer owned 200 acres and wished to purchase 19 more, the greater part of which was covered with Roman enclosures (BL: Add mss 33653). It is not clear whether it was the 200 acres or the 19 acres that were covered with Romano-British remains, although the latter area probably refers to Upper Rains Batch which Skinner also records as 19 Acre Field. This would imply that the earthwork preservation west of the Rains Batch road had been far better in the early 19th century when these antiquarians visited the site, although it may also reflect the areas to which they had access and from which Romano-British material was recovered as it was put under the plough.

Re-working of the Romano-British debris at Charterhouse had been undertaken since at least 1819-20 when Skinner purchased a Roman vessel that had been discovered when an old mine was searched for unprocessed ore. Slags from Lower Rains Batch were apparently re-exploited from 1867-76 where a seam of spoil 2ft thick at a depth of 1.5-2ft below the turf was identified and exploited. Romano-British finds attracted further antiquarian visitors to Charterhouse (Gough 1967, 25, 183, 193-4). In 1873 it was noted that stone building foundations and crude smelting hearths had been uncovered as miners picked over earlier spoil, with finds including quern stones, weapons and an iron

ox yoke (Waldron 1875, 3). Similar finds continued to be recovered, although no attempt was made to record them. This state of affairs characterised the archaeological study of the survey area during the 19th century.

While these artefacts were not recorded on discovery, a number of the assemblages which subsequently became part of museum collections have since been analysed. These include pottery, coins, gem stones, brooches and figurines, as well as more unique items such as a bronze human 'mask' (VCH 1906, 337). Other finds identified include a 78lb lump of smelted lead found in 1875; a hoard of 900 coins dating up to AD284 found in 1846; inscribed stone fragments; mining tools and an oak spade (ibid, 337-8). More general evidence of building foundations, brick, mortar, window glass, furnaces and tile were also noted but not retained, while the identification of well-constructed drains at a depth of 3-4ft has been conjectured as evidence for the presence of a bath house at Charterhouse (ibid, 335; Burnham & Wachter 1990, 208). The number of finds removed from around Charterhouse without any record is unknown and unquantifiable, although it is asserted that the known collections represent only a fraction of what was acquired by antiquarians and collectors.

A number of potential Romano-British burials have also been recorded. Gough mentions cinerary urns and bones recovered, while Scarth records more specifically a single black pot, 15" high containing cremated remains (Gough 1967, 33; Scarth 1874, 190). Fragments of inscribed stone, including one uncovered during the demolition of a building at the northern end of Lower Rains Batch, may have formed part of funerary monuments (Gough 1967, 36). Several cinerary urns were reported from 'near' the settlement remains in 1873, with an inhumation recovered from beneath the old spoil refuse adorned with bronze bracelets and rings about its wrists (Waldron 1875, 3). This may be the same burial as the cist grave containing a possible female burial with a bronze armillae on the arm and covered by two flat stones. These were recorded by a contemporary, although its location was not recorded, nor are the whereabouts of any of the finds known at present (Scarth 1874, 190).

The purported amphitheatre site in Hundred Acre field was the subject to a short period of excavation in the early 20th century (Gray 1909). The monument was recorded in 1858 when the field was cultivated and sown with hemp (Scarth 1859, 153). Interestingly Skinner noted during his investigations in 1819-20 that the amphitheatre was known locally as 'The Church' (BL: Add mss 33,653); this reference perhaps suggests that the monument may have been used as a communal meeting place for early non-conformist groups during the period that they were being persecuted.

Opposed entrances on the eastern and western sides of the oval earthwork were recorded during the excavation, while pottery of Romano-British date was recovered from around the western entrance and the seating bank, apparently confirming its interpretation as an amphitheatre (Wilding 2005, 55). However, significant numbers of Neolithic and Early Bronze Age flints were also recorded during the excavation supporting the counter-argument that it may have been adapted from an earlier prehistoric monument (Todd 1993, 66). This is supported by the identification of a small pit, two phases of stone-lined post holes at the east entrance, and a small gully within

the south bank (Gray 1909, 126, 130). Excavations in 1938 by members of the Bristol Speleological Society found no evidence of an internal ditch at the amphitheatre site but unfortunately the excavation archive was destroyed along with the society museum in Bristol in 1940 (Donovan 1949, 80-81). Question arose as to whether the site was actually post-Roman given the abraded nature of the pottery uncovered in 1909 and the failure to find an internal ditch in 1938 (Burnham & Wachter 1990, 211).

Research directed toward the wider rural settlement continued into the second half of the 20th century. A globular cremation urn, dating to the 1st century AD, was discovered in 1942 when a water channel was dug east of the road between Paywell Farm and Charterhouse; this provided the first relatively accurate location of a Romano-British burial at the site (SHER: 23027). In addition, analysis of aerial photographs revealed the extent and quality of the Romano-British settlement earthworks, highlighting its potential for future research (St Joseph 1953, 92-3). A small trench was excavated across what was interpreted as an area of Roman field enclosures, probably in Hill Ground, which was re-interpreted (below) as the earthwork of a Romano-British track-way and adjoining building enclosures (Boon 1950). Although the exact trench location was not recorded, the available section appears to show that it was flanked by small drainage ditches, while pottery evidence from the primary silting of one of the ditches tentatively dated it to the early 3rd century (Boon 1950, 201-3).

A campaign of small-scale excavations in 1960-7 in Hill Ground aimed to examine the form and date of Romano-British occupation at Charterhouse, although it was abandoned due to fears of poisoning to grazing cattle by lead and other hazardous materials (Budge *et al* 1974, 327). These excavations demonstrated the longevity of occupation across the Romano-British period. Construction material included timber, limestone and sandstone, with metal working debris was identified virtually throughout and, although no full building plans were recorded, a possible stone building with a front corridor was partially excavated in the south corner of Hill Ground field (*ibid*, 330-3). A final trench across the sub-rectangular earthwork in Grays Ground (referred to as the Rains Batch enclosure) led to its interpretation as a probable stock enclosure of post-Roman date due to the presence of an internal ditch and the general absence of Romano-British material (*ibid*, 335-6). Recent analysis, however, has presented the theory that this may in fact be the remains of a Romano-British temple or shrine dating to the later 3rd or early 4th century, although this study did not take account of the excavations from the 1960s (Faulkner 1998, 48-56). The 1960s study also recorded that a water pipeline was laid along the east side of the survey area in 1967.

In 1968, flooding at Charterhouse, particularly in the Blackmoor and Velvet Bottom valleys, exposed significant quantities of pottery dating from AD42-69 (Burnham & Wachter 1990, 208). Large quantities of pottery were believed to have been removed from the flood residues by amateur enthusiasts without record, although probable late-Iron Age pottery was identified and recorded by more conscientious individuals (Clarke 1969, 39). This flooding episode also revealed evidence of masonry structures of possible Romano-British date in the valley bottom including a possible 'turreted' feature, although no detailed record of these built elements survive (SHER: 23023).

A period of survey subsequently interpreted an area of deep-pitting and trench mining south of Charterhouse Green as the remains of Romano-British lead mining, while a large dam feature 700m to the north-east was ascribed a similar date and considered to be part of a water management system created to facilitate the mining and processing of lead (Wilson 1971, 278). Amongst the prehistoric and Romano-British material recovered from Charterhouse Warren Farm Swallet, 1km south of the survey area, was evidence of an auroch, possibly dating to the Iron Age or later, suggesting that this species may have survived in remote upland areas even into the post-Roman period (Everton 1975, 80). Collections of Romano-British material continued to be reported from the area such as the early Romano-British pot recovered by fieldwalking east of Hill Ground in 1979 (Minnitt & Murless 1979, 88; CSMR: 414). Analysis of a relief pattern tile recovered from Charterhouse and produced at Minety (Wilts) has interpreted it as a material ubiquitous to bath house structures and providing further evidence of the presence of a bath house (Gower 1988, 3-5). Around 1990 two lead pigs were recovered at Haydon Grange 2.5km to the south-west of Charterhouse and alongside the route of the known Roman road to Old Sarum (CSMR: 438, 538). More recently in the locality of Charterhouse a metal detectorist recovered a large hoard of gold items and bronze axeheads dating to the Middle Bronze Age, although subsequent excavation failed to recover any context for this deposit (SHER: 18782, 18789).

A survey during the early 1980s of the Blackmoor and Velvet Bottom valleys enabled the detailed reconstruction of the 19th century extraction and processing facilities (Stanton and Clarke 1984, 30, 53). The processing floors were located along the bottom and lower slopes of the valleys where access to water and swallet holes facilitated the dressing and smelting of lead ore and slag, although a dressing floor was also established north-west of the survey area, on Blackdown. Evidence of this industrial landscape still survives today in the form of extensive earthworks and building ruins, although significant elements were damaged during the extensive flooding of the valley in 1968. Casualties included the Pattison plant, while others structures have succumbed to more general decay and neglect (Gough 1967, 194-5; Blick 1991, 85).

A campaign of excavations at Charterhouse between 1993-5 were aimed at clarifying the date and function of several earthworks within the present survey area, including the earthwork enclosure in Charterhouse Green (Todd 2007, 5-6). The earliest material recovered was Mesolithic and early Neolithic flints from two deposits, one of which came from a buried surface during the controlled excavation of a later earthwork enclosure on the east side of the Blackmoor Valley in Further Inclosure field (Todd 2004, 42-4). Concentrations of prehistoric flintwork were also recorded around the Roman fort in Charterhouse Green where a broken Neolithic polished axe was discovered (Todd 2001, 153). Excavation of the mining rakes themselves have so far failed to conclusively identify the site of solely pre-Romano-British mining, although the presence of Iron Age pottery suggests that the mineral deposits were exploited at an earlier date, while the provenance of a fragment of Northamptonshire ware may suggest that metal was traded over long distances in the pre-Roman period (Todd 2003, 53-5; Todd 2007, 63-5).

The excavation of the earthwork enclosure in Charterhouse Green was limited to small

trenches cut across the ramparts which demonstrated that there were two distinct phases to this feature, both consisting of a bank and external rock-cut ditch (Todd 2007, 10-4). The lower fills of the ditch from the first phase sub-square enclosure included large quantities of pottery and rubbish interpreted as having been quickly accumulated as part of a clearing-up process on site dating the period of occupation from AD50-65, which is a uniquely early deposit of Roman material within a 40 mile vicinity of Charterhouse (Todd 2001, 152; Todd 2007, 11-2, 23). The animal bone recovered indicated a high status military diet of predominately cattle and pig which was unexpected at a site so soon after the Roman Conquest (Grant 2004, 374; Todd 2007, 58-9). The military interpretation of the site was strengthened by the recovery of oil lamps from the ditch of the first phase enclosure (Todd 2007, 40-1). One important recovery from the first phase enclosure ditch was a small piece of metallic zinc which is currently a unique find within a Romano-British context (Todd 1993, 66-7). Initially mistaken for a piece of lead, it was previously assumed that the technology was not available to produce pure zinc in the Roman Empire, despite its use in the production of brass (Todd 1995, 78-9). A small section through the second phase square enclosure, which has traditionally been recorded as a Roman fort or camp, revealed no finds beyond a few small fragments of later 1st century Samian ware, alongside a collection of post-medieval material in the accumulated plough soils from the upper layers of the section (ibid, 12-13). Despite this dearth of datable material the enclosure was still interpreted by Todd as late Neronian or early Flavian in date and falling out of use by AD75 (ibid, 14).

Todd also suggested that the enclosures served as a military depot for the storage of mineral products, although there remains the question of where the occupying soldiers were detached from at such an early date given the distance between Charterhouse and the currently known Roman forts at Exeter and Kingsholm in Gloucester (Todd 2001, 152-3). Investigations during the same excavation campaign of Romano-British mining remains to the south of the fort suggest that exploitation was largely limited to easily accessible surface deposits, while other materials such as haematite were also extracted (Todd 2007, 66).

The small earthwork enclosure on the east side of Blackmoor, in Further Inclosure field, was also investigated. The earthwork was interpreted as consisting of two distinct phases; an outer sub-rectangular bank with an internal ditch and a small, later rectangular bank with an external ditch inserted into the south-eastern corner of the original enclosure. Evidence of lead working was recovered by the excavation on the outside of the outer bank, but difficulty appears to have arisen in dating the earthworks, with later Iron Age, Romano-British and medieval material and dates put forward in different discussions, as well as the added possibility that it was reused by the Home Guard during the Second World War (Todd 1993, 58-63; Todd 1995, 76; Todd 2004, 41-2; Todd 2007, 7-11).

Two small test pits were dug in Further Blackmoor near the north-west boundary of the field to test for evidence and stratigraphy of the Romano-British settlement. One trench contained no archaeological features or material, while the second contained an undated stone hearth, leading the excavator to suggest that the Romano-British settlement did not extend into this field (Todd 2001, 153).

An unpublished MA thesis attempted to bring together available evidence relating to the Romano-British settlement at Charterhouse (Faulkner 1998). This project included the detailed earthwork and geophysical survey of the small enclosure in Grays Ground field, as well as a more general analysis of the wider site from aerial photographs. This thesis is not without flaws, and its proposition that the former enclosure represented the remains of a multi-period Romano-British temple is unsubstantiated. However, it does represent the only detailed attempt until the present survey to understand the site as a whole and as part of the wider Romano-British landscape.

An archaeological watching brief monitoring the installation of a new water pipeline on the east side of the survey area in 2002 demonstrated that this may have been the limit of the Romano-British settlement. Although track-ways and ditches continued north-east of Hill Ground, no buildings were uncovered, and a large ditch may have marked the eastern limit of the settlement, while no features at all were identified on the north-east side of Grays Ground (Cullen 2002, 6). Ceramic evidence dated principally to the later 3rd and 4th centuries, although material in the suspected boundary ditch went back as far as the 2nd century (ibid). However, the watching brief was apparently undertaken under difficult conditions, and features and finds may have been missed including a possible cremation urn in the form of a large ceramic vessel containing charcoal later recovered by the landowner (ibid). In addition to this Romano-British material, 22 worked flints from unstratified contexts were recovered dating from the Mesolithic to the later Bronze Age (Cullen 2002, 6).

In 2002 Romano-British pottery of 1st-4th century date and a single sherd of late-Iron Age date were recovered from the surface near the north end of Great Cowleaze Pasture and south end of Plentys field (CSMR: 419). In 2003 Roman tile was discovered and removed from the field wall at the NW end of Lower Rains Batch, while 40 small Romano-British sherds were also collected from the surface of the same field (CSMR: 574, 613).

In 2005 excavations as part of *Time Team's Big Roman Dig* campaign at Charterhouse, under the supervision of Oxford Archaeology, briefly allowed small-scale insights before they were closed down due to excessive ground contamination (Smith & Brown 2006, 79-83). The only significant addition to the understanding of the site was to suggest that the large square earthwork enclosure in Lower Rains Batch dated to the Romano-British period based on the recovery of stratified 1st century pottery, rather than being medieval in date as previously assumed. Flints dating to the Neolithic and Bronze Age periods have been recovered from excavations in Lower Rains Batch (ibid, 86-7). A more general contribution from this work was an effective geophysical survey of Lower Rains and part of Upper Rains Batch and Hundred Acre Field, which has been supplemented by geophysical survey by local amateur archaeologists in Upper Rains Batch and Hundred Acre fields (ibid, 82-3; Foord & Matthews 2007,12).

In Further Inclosure field, immediately east of the enclosure on the east side of the Blackmoor valley, a range of linear cropmarks, first noted in 1977 and resembling an Iron Age field system and settlement, were investigated through geophysical survey and targeted excavation in 2006 (SHER: 23022). These features were revealed to be

fault lines in the underlying geology, although unexpectedly over 200 unstratified flints were recovered dating from the Mesolithic to the Bronze Age, while a pit of proposed Mesolithic date was also identified (Lewis 2007; SHER: 14057). Numerous flint artefacts had been recovered from the field surface in this area previously, although they have not been analysed together and many have since been lost (SHER: 24092). A further flint scatter of 'Mesolithic character' has also been reported in Further Blackmoor field (SHER: 25486)

Excavation by members of CHERT in 2007 uncovered a section of a mortared stone building with plastered walls, flagstone flooring and a Cornish slate roof at the southern end of Great Cowleaze Pasture (Toft 2007, 9). Excavated evidence indicates that the building was c. 3.5m wide and although its overall length is unclear, wattle impressed plasterwork suggests the structure was subdivided internally. A paved surface beyond the north wall of the building was interpreted as a lean-to passage. Finds from the site included pottery, glass, clay tobacco pipes, and animal bone, with ceramic evidence dating occupation from c. 1680-1720 (Toft 2008, 19-43).

In addition to archaeological fieldwork the perception of archaeological remains has benefited from the input of various commentators and the re-analysis of the archaeological evidence. The presence of civilian settlement was noted at an early date when cropmarks could be identified on the ground that bore a strong similarity to those seen at Wroxeter (Scarth 1859, 153). Traditional accounts occasionally noted the industrial character of the site, but it was the ubiquitous Roman elements that have drawn most attention; the suspected amphitheatre site in particular was often the principal reason for Charterhouse appearing in the literature (Frere 1987, 299; Wachter 1978, 92, 258). Recent scholarship has demonstrated a growing appreciation of the importance of the Romano-British settlement at Charterhouse. The abundance of material coming from here suggests a large settlement with possible high-status elements, and it has been characterised as a Romano-British small town (Rivet & Smith 1979, 379; Burnham & Wachter 1990, 208-11).

One aspect that preoccupied Skinner as well as a host of subsequent researchers was the presence of a Roman road at Charterhouse and its continuation west toward the Bristol Channel. While a Roman road has been identified between Old Sarum (Wilts) and immediately south-east of Charterhouse, it has yet to be demonstrated continuing further north. The implication of the theory that the road continued west is that the mineral products from Charterhouse could have been exported by sea from the Bristol Channel, while growing acceptance that such a road does not exist have supported the alternative that goods were transported overland and shipped from Southampton Water (Jones & Mattingly 1990, 184). Unfortunately the undue attention placed on the Roman road has come at the cost of studying the local infrastructure (Rodwell 2001, 51; Scarth 1875; Hoare 1821, 42; BL: Add mss 33,653).

Map analysis

A study of the available mapping gives some indication of the development of the field enclosures system. The enclosure and subsequent agricultural improvement and arable

cultivation of the former common of Blagdon has had a significant impact on the survival of archaeological remains, particularly since 1787. Not surprisingly those fields recorded as under arable cultivation on the Blagdon tithe map of 1842 demonstrate the poorest levels of earthwork preservation (SARO: A\BGT/3).



Figure 5. Extract from the 1787 enclosure award (ref: D\P\blag/20/1/1). Original held at the Somerset Record Office. Used with permission).

The 1787 enclosure award indicates that the southern portion of Grays Ground field was enclosed separately and divided into small allotments with a track-way leading along the northern boundary; these subdivisions were allotted to the poor of Compton (SARO: D\P\blag/20/1/1)(Fig. 5). The allotments had been removed by the time of the 1842 map, while the 'Old Inclosures' in the south-west portion of the survey area were replaced, in part, by a new enclosure layout (SARO: A\BGT/3). A small branching track-way is shown running westwards from Charterhouse Road across the field named Marthas Lot. This track skirts the eastern boundary of the 'Old Inclosures' marked on the 1787 enclosure map and Greenwood's 1822 map of Somerset, but this too had gone by 1842 (SARO: D\P\blag/20/1/1; Harley & Dunning 1981; SARO: A\BGT/3). The 1787 enclosure map records this track-way as 'Steven'sbRoad', the eponymous landowner by 1842 in this part of Blagdon (SARO: D\P\blag/20/1/1, A\BGT/3). These two maps also

record a building and small surrounding enclosure in Charterhouse Green, immediately south of the Roman fort, which survived into the early 20th century.

The 1842 tithe map records two small enclosures within the survey area: one along the western boundary of Great Cowleaze Pasture, and a second near the south-western corner of the field named Plentys (ibid). These enclosures had been removed by 1885 when the 1st edition Ordnance Survey (OS) map was produced and a new enclosure established in the north-western corner of Plentys. The OS 1" map of 1817 depicts a building and small enclosure in the vicinity of Marthas Lot and Lower Rains Batch, but this is not depicted on any later editions nor on the later illustrations by Skinner, while a second building and enclosure were recorded on the west side of Rains Batch Road, near the east corner of Hundred Acre field. This seems likely to be the same cottage sketched by Skinner during his visits to the site in 1819-20 which was illustrated as being in the eastern corner of Hundred Acre field (BL: Add mss 33,653). The same OS map depicts two rectangular enclosures in Charterhouse Green extending from the south-western field boundary, with the latter taking in a large area around the site of the Roman fort.

The OS 1st edition 6" map of 1885 depicts Lower Rains Batch sub-divided into three fields (Fig. 6). The two sub-divisions to the west were recorded as being under rough grass at that time, as was Hundred Acre field. The latter has furze recorded near its south-western boundary, while much more extensive furze is depicted in Grays Ground in an area of extant heavy mining. The map also records the principal archaeological earthworks and location of significant finds. At some point after 1903 the subdivisions in Lower Rains Batch were removed and a new enclosure created towards the eastern side of the field, with a bungalow called Mendip Farm built in the northern corner. Sometime after 1903 a series of subdivisions was inserted across the centre of Hundred Acre Field and the southern portion of Great Cowleaze Pasture, although the latter has subsequently become redundant and only the fence posts remain.

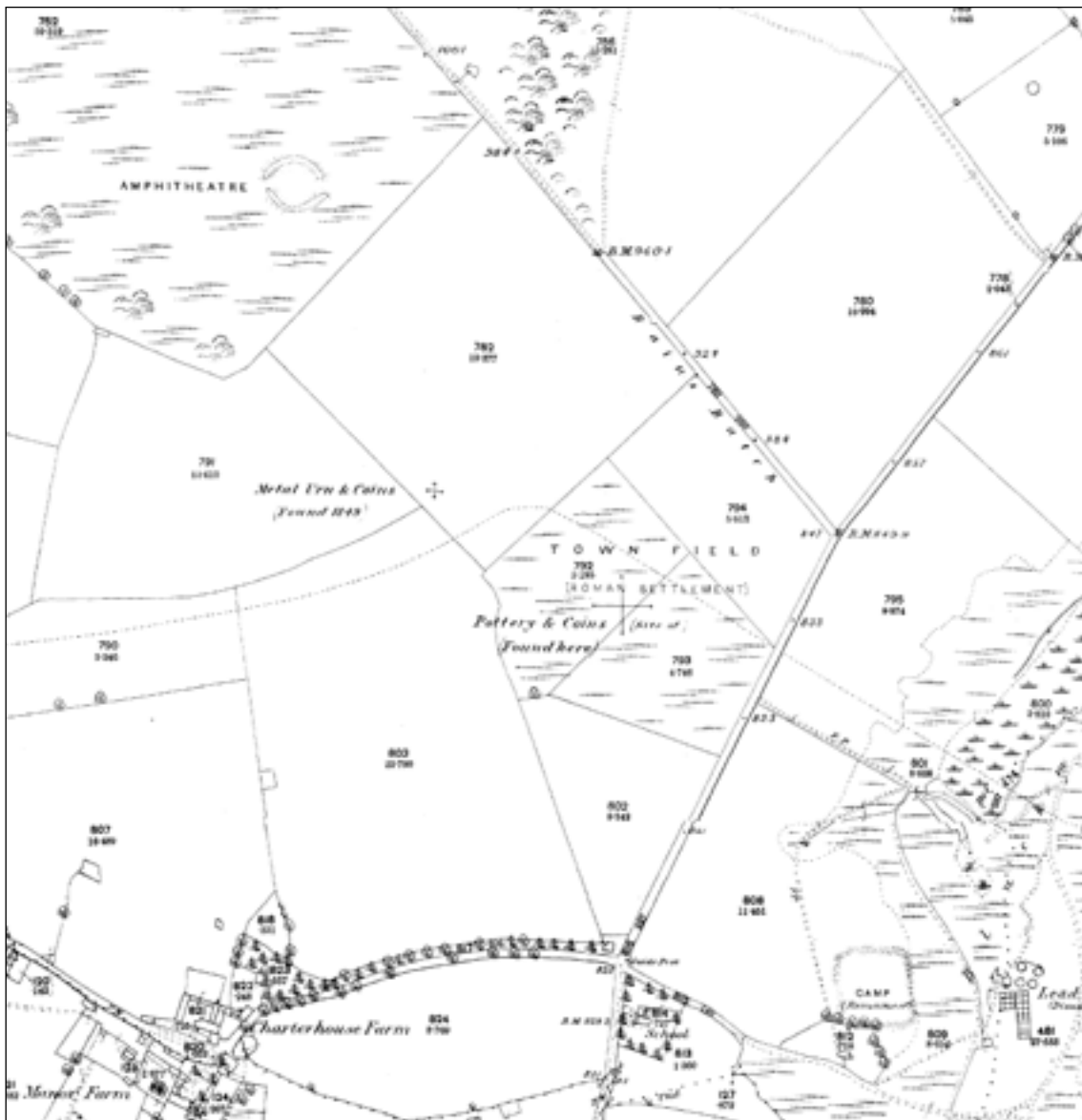


Figure 6. Extract from Ordnance Survey 1885 1st edition map.

THE EARTHWORKS: DESCRIPTION AND INTERPRETATION (Fig. 7)

The following description and analysis of the earthwork remains at Charterhouse will be discussed by reference to the present fields. This approach has been adopted in light of the extent of the survey area. The letters in the text refer to letters on the plans. A summary by period will be approached in the Discussion

Great Cowleaze Pasture (Fig. 8)

The earthworks in Great Cowleaze Pasture field represent several phases of occupation and land use. Some of the earliest features appear to relate to a Romano-British settlement, and are best preserved towards the north end of the field. These remains include a series of boundary features, compounds and platforms which survive as low, grass-covered earthworks. The vestiges of a slight bank standing c. 0.3m high extends north-east/south-west adjacent to the present northern field boundary, and is probably an extension of the broad bank (S9) recorded in Upper Rains Batch field. The bank is partially overlain by a later feature (S25) and where it re-emerges this bank is reduced to only 4m in width. It continues west-southwest where it runs into a large terraced platform which continues the same line. The bank is probably part of the Romano-British settlement, the line of which is followed closely by the modern field boundary, and may represent a track-way.

A sub-rectangular platform (P1) lies at the north-east corner of the field within a small compound, defined to the south and west by a spread, sinuous scarp standing up to 0.4m high. This scarp continues westwards to form the back of a second terraced platform (P2) measuring 16m by 9m. A further small compound, or yard, was identified to the south-east of (P1) defined by an L-shaped scarp standing 0.2m high and enclosing an area approximately 16m². To the south of this feature is another platform (P3) measuring 10m by 8m, with a low scarp running to the north-east.

To the south and west the earthworks are more ambiguous; earlier features are overlain by a post-medieval field system with a number of possible track-ways re-cut and redirected to function as water channels feeding down to an industrial complex to the south. A scarp (S4) lies to the west of (P2), and stands to a maximum of 0.4m high, and possibly forms the eastern side of a compound containing a series of yards and platforms. Towards its southern end (S4) defines the western side of a track-way, which has been later re-cut. The compound is defined on its northern side by a series of linear scarps running north-east/south-west. The most substantial of these is a broad scarp (S5) that stands a maximum of 0.6m high and is 96m in length. To the south lies an L-shaped scarp with a building platform (P5) in its angle. To the south-west of the latter feature are the remnants of an amorphous bank, orientated north/south, which underlies a probable early post-medieval enclosure field system and may form the west side of the settlement compound, or define a sub-division within it.

A further possible terraced compound was identified to the south-east, defined to the north and east by a scarp (S6) which stands 0.3m high. This scarp extends east/west for 55m before turning south for a further 55m, at which point it becomes less regular and is



Figure 8. Great Cowleaze Pasture: English Heritage 1:1000 scale survey (reduced).

overlain by an oval mound measuring 15m in diameter and standing 0.4m high. A parallel track-way, c. 0.4m deep, lies to the east of (S6), which again shows evidence of being re-cut at its southern end to form another water channel (C3). Within the compound are fragments of slight scarps suggesting, perhaps, that this area was sub-divided into

smaller enclosures or yards. A steep curving scarp (S7), measuring c.1m high, defines the southern edge of the compound and has been cut by a later channel (C1). This terrace is similar to (S9) in Upper Rains Batch which implies that it is part of the Romano-British settlement. South of (S9), the remains of slight earthwork scarps defining yards, possible terraced building platforms, and outer compounds are evident. These include at least three building platforms (P6, P7 & P 8), with an area of further much degraded platforms immediately east.

Extending through the centre of Great Cowleaze Pasture is a large channel (C2). On its north side two track-ways (C1 & C3) appear to have been re-cut to feed into this channel. A number of scarps were recorded at right angles from (C2), spaced at intervals of 10-20m, forming small enclosed areas. The orientation of this system is different to the track-ways, enclosures and settlement to the north and south, which follow north/south and east/west alignments demonstrating, perhaps, that the former system laid out around C2 overlies the earlier earthwork layout. The earthwork survey suggests that this secondary layout may have been formed sometime between the Romano-British and post-medieval periods. It is possible that (C2) could have connected to neighbouring hollow-ways in Upper Rains Batch (T2), or to the example running southwards in Lower Rains Batch (T3), as both features appear to head directly towards it.

The interpretation of the area to the south of (C2) is again problematic. Situated on more level ground, the early remains are overlain by traces of ridge-and-furrow cultivation. The probable Romano-British features in this area consist of two parallel sections of hollowed track-way (T4 & T5). The northern track measures 4m in width and up to 0.7m deep; the southern track is 3m wide and up to 0.3m deep. Extending at right angles to (T4) are several slight scarps, possibly representing fragments of small enclosed areas. A small bank overlies the east end of (T4); at its western end the north boundary of the track swings out to enclose a broad platform (P9), measuring 10m by 17m. The track-ways represent the northern and southern boundaries of a substantial sub-rectangular enclosure, measuring c. 64m². Within this enclosure is a shallow ditch with a terraced platform in the north-eastern corner.

The eastern end of (T5) is overlain by a slight sub-oval amorphous platform which continues into Marthas Lot field, with a small channel leading to the south. Towards the western end of (T5) two further track-ways run south and form two sides of a sub-rectangular enclosure approximately 28m² in area. The western track-way (T7), continues for nearly 60m before reaching a complex of later water channels, with an enclosed platform and a rectangular building platform on its west side. The east channel (T6) leads down into a probable small pond (p) which in turn feeds into the water channels to the south. This would suggest that the latter channel was used, or re-used, to feed part of the later water management system, although it is not clear where the source of this water would have been as the east/west channel to the north (from which this channel leads) falls away on both sides and would not have effectively carried water. To the east of (T6) are the remnants of two large amorphous earthworks, possibly linked to the probable post-medieval industrial remains to the south, with the remains of a slight platform visible in the north-east corner.

The interpretation of the features in this area is of some importance given its position at the junction of known Romano-British and post-medieval earthwork remains. The rough grid of track-ways is on a similar alignment to the Romano-British settlement to the north and east, while the topographical position of these features, often running along or against the slope of ground, would indicate that they were route-ways rather than water channels.

At the southern end of the field there is probable evidence of a post-medieval mineral processing centre. The complex consists of several water management features such as ponds, leats, and a large earthen compound containing what can best be interpreted as yards and buildings. One of the primary features of the water management system identified from the earthworks would appear to be a broad channel (C6). The first 90m section of this channel is 7-9m wide and 0.3m deep, with three mounds and a large sub-rectangular platform encroaching on the sides of the feature. Despite the lack of earthwork evidence it seems likely that the channel was fed by a spring in Marthas Lot field. Towards the western end of the channel a section of bank (D1), possibly a dam or sluice, is evident on the north and south sides. At (P61) is a building platform which measures 11m by 6m north-south and 0.2m high; below the platform the level of the channel falls notably. An excavation across this platform confirmed it as a building measuring 5m wide with associated ceramic material dating it to c. 1680-1720. No clear evidence of the building's function was discovered (Toft 2007, 9).

The next 30m section of the channel is much wider, measuring up to 15m in width and 1m in depth. This section represents a definable pond and is marked at its western end by an earthwork dam (D2). This feature stands 0.5m high and has a central break for a sluice gate 4m wide. The earthwork evidence would suggest that the dam is not a primary feature, and the earlier pond may have measured at least 60m in length. The south side of the pond has been heightened and redefined, probably contemporary with the dam, to allow the pond to hold a greater volume of water. Following the construction of the later dam a small leat was cut to the west. This may be contemporary with the dam but is off-centre from the sluice break, indicating it possibly post-dates the use of the dam, and may therefore simply be a drainage channel, as suggested by the up-cast bank on the northern side. Small springs rising from this channel were noted during periods of wet weather and would suggest that elements of a culvert or conduit survive. This small leat is cut by a later channel (C8); a small channel was also cut parallel to the dam on the west side running north-west and feeding in to the same later channel.

Channel C7 may also be fed from a spring in Marthas Lot field. The first 120m of the channel measures up to 10.5m wide, with a depth of 0.2m; a bank runs along the centre effectively dividing it into two. The channel was also fed from the north from two adapted earlier hollow-ways (T6 and T7). At (P62) is a platform measuring 7m by 11m. The channel (T6) has been adapted to include a small collection or header pond (p) which then fed into the larger channel system before emptying into a circular pond which has a stone revetment wall on its inner south-eastern face. This pond appears to overlie the water channel system and was probably a stock pond (Fig. 9). However, it is also feasible that it was adapted from an earlier pond. Excavation in 2007 revealed evidence of a stone culvert which still carried water in the channel, with a pair of drains running



Figure 9. Great Cowleaze Pasture: Stock pond.

parallel on the northern side and overlain with post-medieval pottery (Toft 2007, 9). Given the overall width of the channel it is possible that both the culvert and drains were later additions, possibly installed to reduce the water flow over the field's surface.

To the west of the probable stock pond the channel extends south-west and becomes a single linear hollow (C8), measuring 0.2m deep. Channel (C8) is fed from the south by a small ditch with a further channel (C9) joining from the north. At its northern end (C9) divides into two and becomes less distinct; these two features are unlike the adapted hollow-ways recorded further east. Channel (C8) projects 45m before widening and becoming less distinct. This area is marked by two slight terraces facing south-east. On the south side at the eastern end there is a bank (D3) partly overlying the south side of the channel, which is possibly another former dam. On the west side of the bank is another possible building platform measuring c. 11m by 7m. Near the south-western corner of the field is a small mound standing 0.3m high with a ditch on the east side.

Another channel (C13) is interpreted as the latest of the three to be constructed. Starting near the south-eastern corner of the field, the channel is defined to the north by a bank 70m in length and c. 0.15m high. At its east end the bank turns at right angles and extends 40m before terminating; the end of the bank partly overlies the edge of (C7). The channel appears to have continued on its course for 70m before feeding into (C6). Given that this channel is fed from the east and south it was probably intended to provide additional water into the two earlier channels or to form a by-pass channel. At a later stage a bank (D4) was constructed across the channel diverting the water into a pre-existing hollow-way (T19).

The water management system continues into the scrubby woodland in the south-west corner of the field, with channels feeding in from the north and east. The north-western boundary in this area is defined by a stone revetment wall and outer ditch or water channel. The channel is 2m wide and at its southern end turns at almost a right angle into the enclosed wooded area (S9), before turning again to the south-west. Where the channel exits the survey area fragments of another channel (C10) also join it from the east, possibly carrying run-off from the former hollow-way (T19). A system of channels was noted, but not surveyed, continuing south.

A large sub-rectangular enclosure (E23) lies in the south-west corner of the field, enclosing an area of c. 0.6 hectares and is defined on its south-western and south-eastern sides by a steep scarp up to 1m in height, while the remainder is marked by a bank and ditch. A break in the bank was noted towards the centre of the northern boundary, possibly allowing a former water channel into the compound, while a small 3m wide break in the bank on the north-east face may represent another entrance. It is perhaps significant that this latter entrance leads directly into a small complex of probable buildings and yards constructed along the side of the enclosure bank (Fig. 10). At (P63) is a rectangular building platform, measuring 8m by 10m, with an enclosed yard on its north side. At the southern end of this feature is sub-circular mound, standing 0.5m high, which may be the remains of a chimney stack.

An outer ditch is evident around the compound with the exception of the south-eastern side. To the east of the compound another ditch runs across the north and east sides of



Figure 10. Great Cowleaze Pasture: enclosure containing buildings and yards.

a small associated platform (E24), with a bank 0.3m high forming the north side of the platform. A second platform (E25) measures 11.5m long and 5m wide, with a bank on its south side; a water channel from the large water management system also defines its southern side. The similarity between these two platforms, and their association with adjacent water channels, would suggest a specific industrial function. On the north side of the compound is a larger sub-square platform (E26) with a bank evident along its eastern boundary. Less clear was evidence for external water channels, suggesting they had either been significantly eroded or were simply non-existent.

Compound (E23) was probably an industrial complex associated with the water management system and dating to the post-medieval period. It appears to represent the final phase of an industrial landscape with traces of at least two earlier phases identified from the underlying earthworks. These consist primarily of water channels that appear to have been redeveloped as industrial requirements changed and may have linked to large channels to the north. The large field channels will be discussed first in order to give context to the earlier earthworks within the purported industrial compound. The predominant channel (C2) extends across Great Cowleaze Pasture on a slightly meandering course for at least 150m. It may have originally have been a Romano-British hollow-way that can be seen continuing north-east into Lower Rains Batch field. It is fed on its northern side by two further channels which again may have re-used earlier hollow-ways (C1 and C3). After its initial 150m course the principal channel (C2) becomes degraded due to later cultivation. Although the evidence is ambiguous the channels appears to have originally run in a south-westerly direction but at a later date, when the water management system to the south developed, it was diverted south to supplement the latter system (C7). Following the abandonment of this channel the earthwork remains were subject to increased cultivation which eroded much of their form; a notable depression (S21) between two ploughing scarps may be a fragmentary survivor of the original water channel running south-west. This latter feature may have originally continued through the line of the extant water-carrying ditch which defines the north-west face of the industrial compound, as suggested by the short section of channel recorded on the north side of the industrial enclosure. Either contemporarily or subsequently a channel (C11) was cut, through the enclosure (E23). The channel is 55m long, 6m wide and 0.1m deep and ends in a terminus which is partly overlain by a slight bank on its west side. The terminus may have continued to a short stretch of channel on roughly the same orientation on the south side of the field boundary, where it would have fed into the water management system. From the southern end of (C11) another channel branches off to the south-east before joining a further curving channel. This latter channel emerges from beneath the building platform of the final phase of this industrial compound, and may have originally been fed from the large water management system (C8) that runs along the south side of the present field.

This channel was cut by a subsequent curving channel (C12) which is overlain at its northern end by an amorphous platform. The channel shaves the E side of a possible building platform (P64) which may have been associated with the earlier phase of water channels (C11). At the south-eastern end of the channel the flanking scarps both turn out at right angles and run parallel to the steep south-east boundary scarp of the industrial complex; further evidence that the latter compound re-used a number of earlier features.

The construction of the later industrial compound has again masked exactly where this channel was feeding and why, although again it seems reasonable to assume that it played a role in mineral processing.

The provision of water to this industrial area was of pivotal importance, and the survey evidence demonstrates the impact this had on the wider landscape. The development of the Romano-British settlement would have entailed significant changes in the local hydrology, both in the provision of water for domestic use, as well as channelling water through the inhabited area. Following the decline of the settlement the hydrological system would have adapted and developed around the existing infrastructure. The hollowed track-ways of the Romano-British settlement formed one of the most obvious channels for the post-Roman hydrological system, particularly given that it follows the local contours so closely. Evidence indicates that the system of former hollow-ways was being adapted during the post-medieval period to feed water from this hydrological system for use in the industrial areas at Charterhouse.

A deep hollow-way (T19), dating to at least the medieval period, extends along the south side of the field and measures up to 9m in width and varies in depth from 0.5m to 2m. It appears to have been re-used as a water channel (above) which may have led to a deepening of the hollow-way to the west of the point of diversion. If this industrial complex dates to the 17th-century peak of the Mendip mining industry, it is probable that the hollow-way had been abandoned by this date.

Earthwork features recorded along the western field boundary may represent building stances. A platform (P67), measuring 14m by 10m and standing up to 0.4m high, was identified; on the northern side of the platform two short sections of low bank which probably form part of an attached yard. The latter banks underlie the present field system and therefore predate the 1842 tithe map. The square platform itself is depicted on the tithe map as an enclosure, but this presumably just represents the final phase of the site's use as an animal pen (SARO: A1BGT/3). To the north are a range of further enclosures and platforms which continue into the field to the west (not surveyed). These are presumably contemporary post-medieval features, although elements such as the steep scarp (S22) with a possible building platform immediately north appears out of place and may represent earlier features. The terraced scarp in particular now marks the north side of the approach to a gateway into the field to the west but is excessively large to have been formed simply by farm traffic.

Evidence of a former field system, possibly dating to the later-medieval or post-medieval period, consists of a long linear bank (S23) running from north/south along the west side of the field as far as the purported industrial complex. This bank continues for a distance of around 240m and measures around 5m wide and 0.2m in height. Traces of a ditch on the east side of the bank are visible in some places, as well as a slight parallel bank which may be the remains of an earlier field system or, more likely, a degraded ploughing ridge. At the northern end of the field a branch of the field system runs out to the east, initially as a bank (S24) before reducing to a single scarp which ranges from 0.2-0.5m in height. There is a small break near the centre of this scarp which may represent an access point. In the north-western corner of Great Cowleaze Pasture is part of a rectangular

enclosure (E28) overlying the earlier field system. The enclosure is defined by a bank up to 0.3m high; the western side is marked by a short scarp

A large L-shaped bank (S25) lies inside the north-eastern corner of the field, mirroring the same alignment as the present field boundary. The bank measures up to 0.8m high and again overlies earlier earthworks of possible Romano-British origin. The purpose of this bank is unclear; however, one possibility is that it formed the boundary between 'Old Inclosures' and Blagdon's common land. It may have formed a repair of an extensive breach of the field which could have developed through animal damage, the intervention of Blagdon commoners, or the erosive effect of water flowing into this area from the spring heads recorded in Upper Rains Batch field. Map evidence also suggests that this feature formed one side of the track recorded as 'Steven's Road' on the enclosure map of 1787. The alignments of the northern section of the latter bank, as well as the smaller underlying bank continue the line of a large broad bank in the neighbouring Upper Rains Batch field to the east. The bank in Upper Rains Batch is a product of the Romano-British settlement and marks the southern side of a visible hollow-way. While the banks in Great Cowleaze Pasture field are probably of a later date, it would suggest that an earlier alignment or boundary was re-used and explains the curving northern field boundary of the present field, which contrasts with the straight linear boundaries of the early post-medieval field system that survive as earthworks in the field.

Immediately north of the redundant fence-line posts is a small area of possible ridge-and-furrow cultivation. Two slight ridges measuring 4m and 6m respectively extend north/south for a distance of c. 30m. A number of slight scarps on the same alignment may well be further examples. At the western side of this cultivation are two scarps (S21), which on first inspection appeared to be the possible remnant of a hollow-way. However, in the context of this ridge-and-furrow it appears that the two scarps are the result of ploughing.

Plentys (Fig. 11)

In Plentys field there are several building platforms, compounds and enclosures, the best surviving being towards the eastern corner of the field. These lay outside the area of 'Old Inclosures' recorded on the 1787 enclosure map which perhaps accounts for their survival. The enclosure boundary depicted on this map is now defined as a series of scarps running north-west from the southern boundary of the field and clearly demarcates the quality of earthwork survival.

A sub-rectangular enclosure (E1), measuring c. 70m by 45m is terraced into the field slope along its northern end and defined by a scarp c. 0.5m high. Evidence for a bank along this boundary is clearest at the eastern and western ends which appear to have been reinstated at some point after the complex was first laid out, perhaps due to erosion. The southern end of the complex is defined by a larger terraced scarp, standing 1.1m high, which turns at its south-eastern corner and possibly represents the east side of a causewayed access into the complex. A building platform, terraced 0.5m into the slope, lies in the north-western corner of the large enclosure. Immediately south of the platform lies a series of rectilinear enclosures, possibly small yards. To the east of these

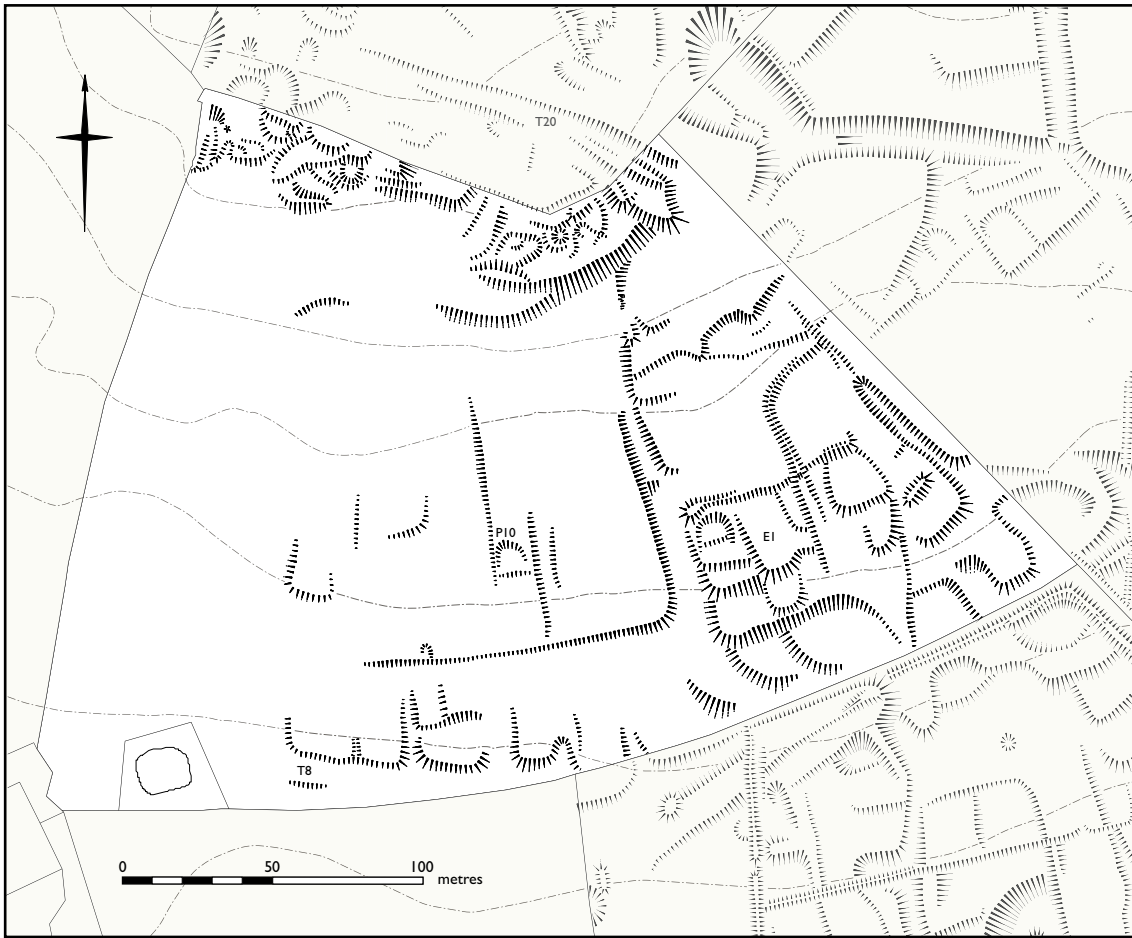


Figure 11. Plentys: English Heritage 1:1000 scale survey (reduced).

yards is a building platform with the partial remains of another large enclosure to its north. There is evidence of more subdivisions within the eastern half of (EI) that are overlain by a spread bank, which is clearly a later boundary bank. Two further terraced enclosures are evident towards the eastern boundary of (EI), beyond which lies a possible track-way running parallel to the existing field boundary.

To the south of (EI) are three slight curving scarps which may be the remains of adjoining enclosures which stand up to 0.5m high and define three sub-rectangular enclosures, the largest of which covers an area of c. 20m². The southern boundary of these enclosures may be defining the north side of a track-way running west from Upper Rains Batch field. To the south-east of (EI) are further fragmentary remains of enclosures that appear to continue east into Upper Rains Batch field, and less obviously south into Great Cowleaze Pasture field.

On the western side of the field there are more fragmentary remains of the probable Romano-British settlement. Overlain by ploughing scarps is a possible building platform (P10) terraced into the field slope. To the west of this feature are the slight remains of two further possible enclosures or platforms,. A significant issue is that post-medieval ploughing scarps in this field are aligned roughly north/south, on a similar orientation to the surviving Romano-British settlement earthworks. This is particularly relevant

in relation to a number of terraced scarps aligned east/west near the southern field boundary. This alignment runs for a distance of around 90m and is up to 0.6m high in places, although the line is not continuous. A slight parallel scarp to the south may suggest that a track-way (T8) may have run along the south side of the terrace. The northern side of the terrace may have been divided into settlement enclosures, with a number of slight scarps recorded running north. However, the alignment of these is similar to that of the identified post-medieval ploughing scarps, and due to the degraded nature of the terrace itself it is not possible to interpret with any confidence which may form original enclosures.

Towards the northern boundary of the field the earthwork features largely represent the ploughed-out remains of mining. The pits and spoil heaps survived into the 20th century but were largely in-filled in the post-war period and now only survive as slight hollows and mounds. Other earthworks in this area include a series of linear scarps extending east/west which are possibly earlier enclosure boundaries.

Hundred Acre (Fig. 12)

The most significant and prominent feature in this field is the large banked enclosure which has been interpreted as a Roman amphitheatre (A) (Gray 1909; Wilding 2005; Wilmott 2008). The monument is formed by a large elliptical bank with opposing entrances to the east and west and measures 69.5m east/west by 61.5m north/south. The basal width is up to 19.5m diminishing to 3.2m at the top. It stands up to 3.3m in height (Fig. 13). Mounds of earth overlying the bank on the south side of the eastern entrance and the north and south sides of the western entrance would suggest that the entrances may have been modified. The western entrance is defined by a gap measuring 2.2m wide, which is level with the exterior ground surface but drops 2.5m into the interior of the monument. The eastern entrance survives as a 1.8m wide gap and drops 0.9m into the interior and 0.9m to the exterior ground level. Internally the ground is slightly concave, with a central raised area measuring c. 11.5m in diameter and 0.2m in height. The earthwork evidence indicates that the interior of the monument has been significantly lowered. Gray's excavations show that this lowering occurred as a second phase of construction and the material from the interior was thrown outwards to raise the height of the bank (Gray 1909, 124-8).

On the southern side there are two undulations on the top of the bank that possibly relate to an undocumented excavation, or, alternatively, could be earlier features. These features are evident on Gray's plan and he suggested that they were the result of ploughing of the monument, but this is unconvincing given the impracticalities of such an episode. There are two significant patches of limestone rubble visible, one in the centre of the amphitheatre and one on the southern bank, which are almost certainly the result of separated backfill from Gray's excavations since both clusters lie alongside Trenches I and II (Gray 1909, 124-8). Evidence for the location of his Trench VI is also evident as an earthwork on the north bank. Interestingly there are no visible track-ways leading to either of the entrances, in sharp contrast to the well-defined tracks visible across the rest of the Romano-British settlement, suggesting that this area has been subjected to concerted agricultural activity.



Figure 12. Hundred Acre Field: English Heritage 1:1000 scale survey (reduced).

Other features in Hundred Acre field include a complex of possible prehistoric monuments. The most noteworthy are three mounds which may represent the vestiges of round barrows (M1, M2 & M3). They lie to the north of the amphitheatre; the most westerly example (M1) has been partially truncated, probably by mining or quarry pits. The feature (M2) lies on the western corner of a rectilinear enclosure (E) which, although not evident as an earthwork, was nevertheless identified on aerial photographs and through geophysical survey (Albert Thompson pers. comm.). All three features have been heavily reduced and measure between 17.5m and 24.5m in diameter and 0.2m and 1.1m in height.



Figure 13. Hundred Acre Field: Amphitheatre site looking south-west.

A series of linear scarps was identified which may represent the remains of pre-enclosure fields (S1, S2 & S3). These scarps, or lynchets, are aligned north-west/south-east and south-west/north-east and measure up to 0.65m high. All three scarps lie parallel to the late 18th-century enclosure boundaries, which could imply the features relate to later agricultural activity. There are however, chronological relationships between some of the earthworks that would suggest separate phases of activity, indicating the later improvements may overlie earlier features.

Several scoops in this field may relate to the fragmentary remains of a settlement. A large building platform (P11) lies south-west of the amphitheatre, and consists of a platform measuring 12m by 5m and terraced 0.7m into the slope. In addition a series of three small terraces lie immediately south of the amphitheatre, as well as a part of a possible raised building platform (P12). A fragment of well-fired ceramic was found on the surface at the east end of this complex which appears to be a piece of tile. At least two slight scarps south-west of the amphitheatre may represent the remnants of small enclosures.

Slight traces of a hollow-way (T23) lie towards the northern field boundary. This feature measures c. 8m wide and up to 0.5m deep. There is little evidence to confirm that it formed part of the Romano-British infrastructure, although interestingly it leads directly to the group of three mounds and is also aligned on the possible lynchets of the 'Celtic' field system.

A concentration of mining pits (D). These features probably date to at least the post-medieval period since they are overlain by a field boundary depicted on the 1887 map.

The fact that some of these enclosure boundaries overlie in some cases significant hollows is a fitting demonstration of the tenacity during this period for those undertaking enclosure to follow the map at every stage, rather than adapting to the inconsistencies of topography. Towards the south-western end of the field lies a short section of terraced track-way (T20) which can be seen to continue on into Plentys field (above). It leads directly into the dense concentration of ploughed-out mining remains, and probably marks an access route.

Remains of a number of probable post-medieval buildings were recorded, the interpretation of which was partly informed by available documentary records. Skinner's drawings from 1819-20 depicted a cottage in the eastern corner of the field which was not recorded by any earlier maps or other documentary source. An enclosure (E27), measuring 23m by at least 8m, was recorded in this location, perhaps representing a short-lived settlement encroachment on the enclosure field system. Near to the centre of the north-east field boundary is another building platform (P66). It is terraced into the hill-side and consists of two adjoining platforms which together measure 23m by 10m. It is uncertain when this feature dates from but based largely on its location, isolated from earlier settlement, and that it adjoins the corner of the large enclosure (E), recorded from aerial photographic transcription, the building platform is possibly medieval in date.

The enclosure (E), measuring approximately 86m by 60m, most probably functioned as a sheep enclosure and may have been associated with a drove route onto Black Down. Similar sites recorded on the Marlborough Downs have been dated through excavation to the medieval period (Smith 2005, 195). Platform (P66) may be the remains of a shepherds hut associated with the sheepfold, with the earthworks towards the northern corner of the enclosure possibly representing the vestiges of a small sheepcote or animal pen. A smaller enclosure also noted during the aerial photographic transcription to the north of (E) appears to correspond with a platform and a 20th century water trough (S26).

Upper Rains Batch (Fig. 14)

The earliest feature identified in Upper Rains Batch field was an oval mound that has tentatively been interpreted as a round barrow (M4). The grass-covered feature measures up to 21m in diameter and stands c. 0.6m high; its north-western side is overlain by a linear bank.

A large number of scoops were recorded terraced into the hillside and representing probable building stances. At least 16 lie in the eastern quarter of the field (P13-29). Many of them have been degraded by later improvement and cultivation and only slight evidence of outer enclosures or compounds associated with the platforms survive. Linear scarps identified running north-west/south-east appear to represent a later phase of cultivation. The platforms range in size from the largest (P13), standing 12m by 10m, to the smallest (P18), which is a deep-cut platform measuring 5m by 4m. The latter also has evidence of a slight hollow-way on its eastern side with possible enclosure scarps leading off at near right angles. The platforms would appear to be arranged in a parallel linear pattern, running north-east/south-west with platforms (P13-15, 19, 20, 26 & 28) all



Figure 14. Upper Rains Batch: English Heritage 1:1000 scale survey (reduced).

aligned on the same axis and forming the clearest row. Adjacent to (P19) are the remains of a possible enclosure; to the north-west, platform (P20), again displays evidence of an attached enclosure with a scarp continuing south from the platform for 6m before turning to the south-east where it continues for a further 10m. A second, higher row of platforms containing (P16, 18 & 21) is also evident with (P16) cut by the present field boundary. The third row contains (P22, 23 & 25), above which lies the small platform (P24). Platform (P27), to the south-west, has no clear linear association with the other platforms but has a slight L-shaped enclosing scarp to its south-east. To the north-east, a small cluster of amorphous earthworks were identified between platforms (P27) and (P26), with the slight remains of a bank recorded to the north; these possibly represent the remains of an associated enclosure or compound. To the north of these features are the remains of a probable building platform (P29) with a later ploughing scarp on its north-western side. To the west of (P29) is a 26m long scarp, possibly representing the

remains of a former enclosure, while to the east is a small cluster of in-filled pits which presumably relate to a small-scale episode of mining or quarrying.

By contrast, the western side of the field presented more complete evidence of enclosures but less visible remains of building platforms. This is presumably a differentiation caused by the changing topography and its impact on the affect of ploughing and cultivation on the earthworks. The complex of compounds and yards identified in Plentys field evidently continue through into the southern corner of Upper Rains Batch field. A sharp L-shaped scarp, 18m by 15m, was identified towards the south-western boundary of the field. It is overlain at its northern end by a broad, steep scarp (S8) which continues east for 80m to form part of an enclosure and building platform. This building platform (P30) measures 8m by 8m and is set at the northern end of a larger terraced enclosure. The enclosed area is set within a larger terraced platform defined to the south and east by a substantial scarp (S9) which stands up to 1m high. The building enclosure appears to post-date the terrace platform on the evidence of two possible track-ways that lead to it from the west and south, the latter of which (T2) cuts through the terrace. The formality of the terrace itself would suggest conscious planning of this complex and could be interpreted as a public or high-status focus within the settlement. The survival of three building platforms on the northern side of the terrace and a fourth adjacent to the south side would suggest that the absence of buildings in this area, at least of the sort recognised elsewhere in the field, is an original feature of the terrace.

A possible building platform (P31) lies to the south of the terrace, with three platforms to the north (P32, P33 & P34). The latter two examples both contained surface water, possibly confirming Skinner's information that redundant springs were located in Upper Rains Batch field. A separate spring was also recorded 40m to the south-west, and these may be of special relevance in explaining these structures and the distinct terraced platform. A large amorphous depression (p) measuring 20m by at least 30m was also found to be wet in its base and may even represent a former pond, although if it originally continued south into Lower Rains Batch where it has been completely in-filled. The presence of springs uncontaminated by the intensive industrial activity in this area would be of particular relevance, although given hydrological changes the original spring heads may have been located further north, as suggested by the post-medieval field drains leading into the latter area. The building platforms, with evidence of springs in their base, may have been constructed to house and protect these springs, possibly even taking on a religious connotation in maintaining this potentially sacred site. The terraced complex to the south may have therefore performed a religious role. A scarp (S10) may have formed the northern extent of the large terraced platform, possibly impinging on and post-dating the former building platforms.

A well-preserved settlement compound lies towards the north-western corner of the field. It comprises an outer enclosure (E2) measuring 27m by 40m, with a building platform set into the western side. Mole hills within this enclosure contained a mixture of Romano-British pottery, bone and charcoal material which contrasted sharply with the general absence of finds seen in mole hills elsewhere during survey work. A second building platform was recorded west of (E2), measuring 8m by 6m, and is cut into a

substantial scarp. The scarp stems at a right angle from a channel to the north-east, implying the platform may be a later structure. Another building platform (P35) lies to the north-west extending as far as the present field boundary.

The western half of the field is cut by a deep channel of probable post-medieval date (T21), and possibly re-uses elements of an earlier feature. At the western end it splits into two branches leading north-west and south-west. The former branch broadens to a width of 12m, and continues as a deep hollow for 45m where it terminates just inside Hundred Acre field. This feature may have originally been a mine or quarry, while two terraced platforms on the western side may be the remnants of associated buildings. Geophysical survey suggests that this track-way continued on a curving course to the south-east toward the present field boundary (Foord & Matthews 2007, 12). This route may have been used for bringing down material from the mines in Hundred Acre field to the processing areas lower down in the valley, but equally could perpetuate the course of an earlier route-way. This channel is joined at the eastern end by another channel running approximately north/south (T22), again possibly re-using earlier features given its relationship with an L-shaped enclosure (E4) on its western side and the possible compound towards its northern end (below). In total three of these L-shaped enclosures were recorded to the west of (T22), consisting of single terraced scarps with no evidence of internal platforms or subdivisions. The scarps (E3, E4 & E5) roughly follow the contours of the hill and vary between 0.2m and 0.7m high. A small building platform (P36) and remnants of another hollowed track (T10), again on a north/south alignment, were recorded to the east and may represent elements of a Romano-British enclosure or compound.



Figure 15. Upper Rains Batch: the slight remains of Romano-British and later features.

Two extensive post-medieval or early modern field drains were also recorded and have been discussed above in the context of spring heads within the Romano-British settlement (Fig. 15). These two features ran roughly north/south for a distance of nearly 200m following the natural slope of the land before emptying into an open drain at the southern end of the field. Cutting across all other features in this field, these drains post-date the 1787 enclosure of the field and may have been installed to drain the remnants of the spring heads. Another distinct agricultural feature is a slight circular ditch (f) located a little distance from the centre of the south-east field boundary. Measuring 10m in diameter this probably represents the former position of a large circular cattle feeder.

Grays Ground (Fig. 16)

The earthwork survey would suggest that a sub-circular mound, overlain by a boundary bank that dates to at least 1787, is a possible round barrow (M5). The feature measures c.11m diameter and stand up to 0.25m high. It is also marked by a central sub-circular hollow with a diameter of 4.5m, potentially the result of an earlier investigation.

Degraded settlement remains, probably dating to the Romano-British period, lie along the south-east field boundary. These features take the form of terraced platforms (P56, P57 & P58), the largest measuring 11.5m by 12m and cut 1.5m into the field slope. The latter two platforms are situated alongside a terraced track-way which continues north from Hill Ground field. A small scarp extends west of the track-way and represents the surviving segment of an enclosure that separated the two building platforms. Aerial photographic transcription has identified further sub-rectangular enclosures surrounding these platforms. A second small section of a hollow-way lies to the south-west (T19), probably continuing the line of a track-way (T18) recorded in Hill Ground, and forming one side of a settlement enclosure or compound. There are several slight scarps in this area that fit well with the pattern of the Romano-British settlement which continues west into Upper Rains Batch field. These features include a possible building platform (P59) now cut by Rains Batch road.

The sub-rectangular earthwork enclosure in the southern corner of Grays Ground consists of a spread sub-square earthwork with an angled cut-away where the south corner would be expected, measuring 46m by 44m and standing a maximum of 0.6m high on the down-slope side. It has been very heavily ploughed and is defined on all sides by a single scarp, except around the north-west face where the slight remains of a 4m wide bank survive. Cultivation scarps orientated north-west/south-east overlie the enclosure. Internally there are fragments of a slight rectangular platform (P60) measuring 10m by at least 22m, but this is unlike building platforms recorded elsewhere within the Romano-British settlement. An outer ditch was identified along the north-east face of the enclosure, with previous excavations revealing the existence of an internal ditch with a steep inner and gentle outer face also along this side (Budge *et al* 1974, 335-6). These excavations failed to provide any dating evidence apart from a few residual finds, on which basis it was interpreted as a medieval or post-medieval stock enclosure (ibid 336). Elsewhere it has been suggested that this enclosure was the site of a possible Romano-British temple (Faulkner 1998, 48-56). The evidence, however, is unconvincing. For instance, the proposed entrance along the north-west face is in fact the remains of



Figure 16. Grays Ground: English Heritage 1:1000 scale survey (reduced).

a trench dug in 1967, an event not even referred to by the hypothesis that this was a temple (Budge *et al* 1974, 335).

The vestiges of mineral extraction lie within the field, with the dense concentration of pits and mounds (C) representing the most coherent remains (Fig. 17). They consist of a large cluster of pits and spoil heaps covering an area of c.1 hectare. The two largest pits are located at the northern end of the complex, measuring 16m² and 22m² in area, with both surviving to over 2m deep. Dispersed mining pits to the north underlie the Enclosure field system which shows that the mining remains predate 1787, and again probably date to the early post-medieval mining industry. On the east side of (C) is a possible building platform with a smaller platform to the west; these features may also be associated with the mining operation.

The remains of the northern boundary of the Compton Poor Allotments and a trackway depicted on the 1787 Enclosure map are still evident (SARO: D\P\blag/20/1/1). The boundary (BI) consists of a bank c. 160m in length, 2.2m wide and 0.3m in height; the track-way survives as a 2m wide terrace defined on its down-slope side by a scarp

standing a maximum of 0.3m high. However, these features do not extend as far to the north-east as depicted on the map. It is possible that they were never fully laid out, or that the north-east section was quickly abandoned and overlaid by a more extensive ploughing regime which is represented by a number of ploughing scarps and a block of narrow ridge-and-furrow ploughing towards the north corner the field.



Figure 17. Grays Ground: mineral extraction pits and mounds.

Hill Ground (Fig. 18)

Hill Ground contains the best preserved Romano-British settlement remains within the survey area. In the western corner of the field a complex of compounds and building platforms are located along the present north-western field boundary, and defined on the south-east side by a curving terraced track-way. The first compound (E13) measures at least 44m by 38m, although it is partially truncated by the later field boundaries. Two adjoining platforms, which are terraced into the hillside, lie in the southern corner. To the north-east lie the remnants of another small terraced platform, while to the north there is a large L-shaped scarp measuring 24m by 6m, which is probably the remains of an enclosed yard. In the west corner of the enclosure a final terraced building platform was recorded which originally continued north into Grays Ground field.

To the east the enclosed compound (E14) measures 60m by c. 40m, although it tapers to the north. It has been truncated by the modern field boundary and originally extended into Grays Ground. The south-west boundary of the compound is partly defined by a low bank standing 0.2m high. This bank fades out towards the west corner of the enclosure where a raised sub-rectangular platform is situated. A substantial rectangular



Figure 18. Hill Ground: English Heritage 1:1000 scale survey (reduced).

building platform is terraced into the southern corner of the compound; to the north of this platform is a dog-legged subdivision within the enclosure and another smaller terraced building platform. Other subdivisions are visible on the north-east side of the compound, although little form is evident in these features.

The south-east face of these two enclosures is defined by a large scarp ranging from 0.5-1.2m in height which forms the side of a terraced track-way. After a distance of 90m, part-way across the face of the second enclosure, this large scarp sub-divides creating a second, higher track-way. The lower track continues for a further 70m before ending

as a definable earthwork, while the higher track follows the natural contour and curves towards the north into Grays Ground (above). The implication is that the second track-way is a later addition to the settlement, and the structures and enclosures on the northern side of it may represent a later expansion. It is possible, therefore, that the north-east side of enclosure (E14) may be an extension of a smaller compound. It may originally have been defined by the small scarp (S13) that terminates at approximately the same position that the second track-way begins. This would result in the original enclosure having been more rectangular. The later division is represented by a stretch of hollow-way (T18) that probably continued in Grays Ground (T19). To the north of this feature there is less explicit evidence of enclosed compounds and internal building platforms. In Grays Ground field only 3 building platforms and a section of terraced track-way survive (above). Within Hill Ground field a number of scarps were identified between the enclosure (E14) and the terraced track-way, but they lack the regularity of internal features seen elsewhere. The predominant feature is two adjoining building platforms terraced 0.6m into the hillside leading from the track-way (P45). Their relationship with the secondary track-way would suggest these features form a separate phase of development, and possibly represent a different function or activity.

To the south of this complex, and on the southern side of the two parallel track-ways, lies another large compound enclosure (E15). It is defined by an outer scarp standing 0.2-0.5m high and measures 50m by 50m. It is bordered by large terraced track-ways to the north-west and south-east, and partial segments of smaller hollow-ways on the remaining two sides. The northern corner of the enclosure is defined by a bank which turns internally and runs north-west/south-east across the enclosure for 30m before turning to the south-west and terminating. This last section defines the south-east side of a building platform terraced into the hillside and measuring 16m by 6m; an entrance is visible along the south-east face. To the rear is a slight hollow-way, suggesting there may also have been access from the north-west side. There are two further platforms to the east and south. This would indicate a series of buildings arranged around a yard, with the most substantial structure orientated along the contour of the slope facing south-east.

Compound (E16), located to the south-west, is significantly larger and includes a number of subdivisions. The compound as a whole is a sub-rectangular feature measuring c. 70m by 60m. On the north-east side there is a hollow-way (T20) which divides the enclosure from its neighbour. The south-eastern section of this track appears to have been encroached upon by a small building platform terraced into the hill, adjacent to which lies a further platform or yard. It is conceivable that these are original features and the track simply provided access into different parts of these adjoining compounds. To the west of the track is a large building platform measuring 20m by 10m with an internal subdivision towards its south-western end. Adjacent to this building is another attached garden or yard surrounded by a 4m wide bank on the north and west sides, with a small ditch or hollow-way forming the south-west side. Beyond this is a second sub-rectangular garden or yard partially defined by a bank and measuring 15m² in area. Towards the south-eastern boundary of the compound lies a cluster of three small irregular platforms, although the first two may represent a single building. The rear scarp of these features continues south to form the south-east boundary of the enclosure. The western half of the enclosure contains a row of three large sub-rectangular terraced platforms, the

largest of which measures 24m by 10m. All three of these features may have been building platforms or yards, although the south platform is the most clearly defined, suggesting it contained a structure. The compound is separated from its neighbour (E17) by a track-way (T21).

Compound (E17) is sub-rectangular and measures 60m by 30m, although it is possibly truncated by the modern road. The compound is defined on its north-east side by a slight bank 1.8m wide and standing 0.3m high, while the remainder is enclosed by a single scarp. The north-western end of the compound contains an enclosed area, probably a garden or yard, measuring 17m² in area. A small semi-circular scarp is located roughly centrally along the south-east face of this enclosed area and may represent a point of access. A second irregular L-shaped enclosed area is located immediately south-east, with several building platforms beyond. These platforms consist of two adjoining terraces cut into the hillside, the largest measuring 12m by 7m. In addition, to the south-west, are two small sub-rectangular terraced platforms.

To the south of the track-ways (T22) and (24) is a further area of settlement, although it is less well defined than those to the north as individual compounds. The first compound (E18) measures 30m by at least 40m with a projecting terraced spur (S14) on its south-east face. Internally there is a small building platform measuring 9m by 4m which appears to be set within a small enclosed yard. On the north-east side, and separated by a narrow terrace, is a similarly-shaped enclosure (E19). The latter example measures 45m by c. 30m and again includes a terraced projection on the south-east face; this projection contains a building platform (S15). A significant difference however, is that the north section of this compound has been overlain by several later features. These include



Figure 19. Hill Ground: large terraced platform.

a massive platform (P46) terraced 1.5m into the slope and demonstrating significant redevelopment of this part of the site. Internal sub-divisions within this platform may imply that it was occupied by a number of smaller structures, or alternatively these may relate to later occupation on the platform (Fig. 19). On the south-west side of the platform is an adjoining linear hollow 10m long and 3m wide, and on the east side is a small projecting spur. This structure overlies another compound, but still fits into the general orientation of the overall Romano-British settlement and may be contemporary. Immediately north of (P46) is another large terrace (S16) cut into the slope; this example is more amorphous and measures c. 1.5m deep and defines an area of approximately 29m². On the south-east face is a slight bank and internally there are two sub-rectangular hollows, the largest measuring 9m by 4m. This terraced feature cuts through the Romano-British track-way (T22), demonstrating that it is probably post-Roman in date.

Five elongated linear enclosures, which may be contemporary with the earliest settlement compounds discussed above, were identified towards the south-east boundary of Hill Ground. The lower limit of these enclosures (S17) may have formed the upper side of a continuation of the terraced track-way (T11) in Lower Rains Batch field. The enclosures measure from 9-16m in width and up to 50m in length. A building platform survives in the central enclosure with a second smaller platform recorded to the south-west. The exact purpose of these features is not clear; they may represent small agricultural enclosures or an earlier settlement layout, while their proximity to the features to the north may imply a more complex role, possibly even fulfilling some specialised industrial function.

A bank, standing c. 0.3m high, lies to the north-east of the linear enclosures. At its western end it forms a sub-rectangular enclosure (E20), measuring c. 25m by 20m. In the centre is a small sub-circular depression and to the south-east a terraced platform. Given how well-defined this enclosure is, the sparse number of internal features, apart from the central hollow, would suggest a more specific function, perhaps of public or ritual focus. To the south-east, and continuing beneath the present road, is a large building platform (P50) terraced into the slope. It has an internal division. This area is separated from the settlement by a substantial hollow-way (T24).

In the southern corner of the field are a number of terraces which continue elements of settlement and track-ways identified at the eastern end of Lower Rains Batch. A branch of hollow-way (T23) extends from the track-way (T11), and continues beyond the survey area. On the north-east side of the track is a building platform (P47) with a slight ditch on the north-east side which may relate to water management in this dense settlement area. Adjacent to this is another building platform (P48). To the north-west is a 4m wide bank and two adjoining terraced platforms (P49) and, since both are aligned roughly with the other features in the southern corner of the field they may be contemporary with the Romano-British settlement.

Two further, well-defined compounds lie to the north-east of the hollow-way (T22). In form, they are similar to those in the south-western half of the field. The sub-rectangular compound (E21) measures 55m by 45m with the northern boundary partly defined by a wide bank which also forms the southern side of a slight hollow-way. This bank turns

at its western end to enclose a large building platform measuring 19m by 12m. Another building platform was identified in the western corner of the enclosure while a number of slight earthworks were recorded around the south-east corner. The adjoining compound (E22) is a sub-rectangular enclosure measuring 57m by 40m. In the northern section of the compound is a small enclosure defined on all but its south-east side by a 6m wide bank and taking in an area 36m by 25m. On the north-west face of this enclosure is a 3m wide entrance gap which leads directly on to a large terrace, with an internal dividing scarp creating two platforms 14m and 8m in length. In the southern corner of the compound is another building platform (P51) terraced into the slope and measuring 14m by 8m. A number of slight internal scarps suggest there may have been further sub-divisions within the compound while on the east side a bank continues south-east.

To the north of these compounds the earthworks are more amorphous, although they still appear to be part of the settlement as suggested by at least two building platforms (P52) and (P53). There is a possible entrance into this area from the track-way (T24) by way of a break in the north-western bank, adjacent to which is another small platform scoop. The function of the associated earthworks, which seem to create fragmentary enclosures, may be explained by their proximity to the suggested north-eastern edge of the settlement. It is possible this area was used for specialist industrial or manufacturing processes; alternatively it may have functioned as a distinct open space for recreational or agricultural use. To the north-east, and parallel to the present field boundary, is a terraced scarp (S18) which probably relates to the water pipeline which was laid across this area in 1967 (Budge *et al* 1974, 329). The north-west side of the open area is defined by the continuing track-way (T24) which at this stage broadens to a width of 8m. At the north-eastern end a central raised spur emerges within the track-way before reaching a terminus, at which stage the upper edge of the track-way turns to the north-west and continues as a broad 3m wide curving scarp, forming a boundary within the settlement area. The function of the spur within the track-way is not clear; it creates ditches on either side and may simply have been part of the settlement's internal drainage system. However, returning to the proximity of the proposed settlement boundary and the presence of a cemetery on the east side of the settlement it may be part of a more formal access point between these two distinct areas.

The area lying on the north-west side of the track-way (T24) is distinct in its general absence of features. There is the suggestion that a branch from the track-way may have led into this area from its southern corner (T25). A number of slight earthworks are visible along the west side of this open space including two building platforms terraced into the slope (P54) and (P55), and a small hollow (S19) whose wet base suggests the presence of another former spring-head. On the north side is further evidence of terraced platforms and activity including a raised platform measuring 17m by at least 14m. To the east, on the far side of the boundary scarp discussed above, is another possible building platform partly cut by the 1967 pipeline. The presence of this large open area is interesting in that it is surrounded on at least three sides by settlement, although analysis of aerial photographs suggest that part of this area may have been sub-divided into an enclosure. Although the ground is sloping in this area the gradient is no greater than elsewhere in the field. The presence of a possible spring may be relevant in explaining this relatively open space, and its function may relate to the similarly unexplained

arrangement in Upper Rains Batch where a number of possible spring heads were identified.

Lower Rains Batch (Fig. 20)

Settlement remains in Lower Rains Batch have been heavily masked by subsequent activity; however, fragments of the settlement are still identifiable, particularly in the small subdivided area on the east side of the field. The predominant feature is a large terraced track-way (T11) which continues for 60m and is terraced 0.5m into the slope. On the north-west side of the track is a subdivided enclosure (E6), possibly with evidence of a drainage feature surviving on the south-west side. To the north-east are a number of slight scarps that may also relate to the Romano-British settlement. Immediately south of the terraced track-way is a small platform (P37) possibly containing evidence for a small building. This platform would appear to overly an enclosure (E7) which contains evidence of internal subdivisions and redevelopment. In the north-east corner of the compound is another possible building platform. To the west of this feature is a raised enclosure containing an oval pond (p), which may be fed by a drain to the west. To the south is another enclosed compound (E8) which continues into the larger section of Lower Rains Batch, with a building platform (P38) terraced into the northern corner. Another enclosure lies to the north-east measuring around 40m by 16m within which lies a further building platform (P39).

The terraced track-way (T11) continues into Lower Rains Batch field, although at this stage the southern terraced scarp becomes a low bank creating a hollow-way. The track-way and the bank are both 4m wide with the bank standing a maximum of 0.4m high. This section of track continues for 30m to the south-west before reaching a junction at which point it appears to split, with one section turning towards the south-east. Tracks may also continue to the south-west and north-west, although evidence for these is less clear. The south-east track survives as a slight, sinuous hollow-way, a characteristic probably enhanced by the water that the track now carries during wet weather. The area to the north-east of the track contains a mixture of settlement earthworks, including a possible track-way continuing to the east (T13), and elements of disturbance, possibly relating to mineral extraction.

Fragments of a track extend for a distance of 110m towards the south-east corner of Lower Rains Batch (T12). The hollowed track-way measures 6.5m in width and is a maximum of 0.5m deep. On the north-west side of this thoroughfare are a succession of small compounds which underlie the large square earthwork enclosure (B) which is discussed below. The two most prominent enclosures or compounds measure 10m by 36m (E9) and 9m by 34m (E10), with a possible platform at the south-east end of the latter. To the south-west is a larger third adjoining enclosure (E11); all these features represent possible Romano-British settlement remains. On the south-east side of the track (T12) are the slight earthwork remains of a possible building platform (P40) running into the south-east field boundary, with an irregular enclosure adjoining the south-west side. Partial evidence of another enclosure was recorded in the southern corner of Lower Rains Batch field and divided by another possible route-way continuing south-east into Charterhouse Green. Fronting on to the track-way (T12), the enclosure consists of



Figure 20. Lower Rains Batch and Marthas Lot : English Heritage 1:1000 scale survey (reduced).

a slight sub-rectangular platform (P41) measuring 19m by 14m which sits within a raised sub-rectangular and partially amorphous enclosure. Internally pits and other oblique scarps within the enclosure suggest it has been quarried during a post-settlement phase.

To the east is a solitary building platform (P42) measuring 7m by at least 6m.

Running through Lower Rains Batch is a large ditch, or channel (C4), which varies in width from 3-7m and runs for over 250m extending into Marthas Lot field. In part it re-uses a section of track-way and other features that could be contemporary with the Romano-British settlement, which are particularly visible at its northern end.

Located 60m to the west of (C4) is a parallel track-way (T14). This track-way extends for a distance of 110m, curving slightly to the north-west at its upper end. There was no evidence that it continued into Upper Rains Batch although this may be due to the extent of cultivation in the latter field. A hollow-way (T15) branches out at a right-angle toward the northern end of (T14) this track-way almost linking it with the channel to the east. This section of track extends for a distance of 60m and measured 8.5m wide and 0.5m deep. A series of parallel scarps running at a right angle to the channel are the remains of probable post-medieval cultivation ridges. To the north of the track slight traces of this cultivation continues along with a possible building platform (P43) which, given its oblique orientation to the surrounding settlement, is probably post-Roman in date. Fragmentary remains of a second platform (P44) were also identified. The area immediately to the south of (T15) is largely covered by cultivation ridges. Surviving to the south of these is a number of amorphous earthworks aligned on the same orientation as the surrounding communication pattern which almost certainly represent fragments of contemporary settlement.

The area east of the re-cut channel (C4) has also been heavily disturbed by possible post medieval cultivation. Slight traces of possible Romano-British settlement can be observed amongst these later earthworks. The line of the track-way running into this area from Hill Ground (T11) can be seen continuing through this section in the form of a number of sharper scarps (S10) which may have formed one side of a continuing terraced track.

The most prominent feature in the field is large sub-square enclosure (B), probably dating to the medieval period (Fig. 21). Enclosing an area of 0.3ha, it is formed by a large earthwork bank measuring 80m south-west/north-east by 65m north-west/south-east and ranging in height from 0.5-1.6m. An entrance is located along the north-east face measuring 9m in width, although this may have been crudely extended on the south-east side where a mound of material appears to have been pushed back into the interior. No convincing evidence of an exterior ditch was recorded, with the linear depression along the north-west face more probably an earlier, underlying feature. The depression of a trench dug as part of the Time Team Big Roman Dig was located on the south-east face, while a large break 4m wide in the north-west face may relate to an unrecorded excavation that was not backfilled. An early medieval date has been put forward for this feature (Ellis 1988, 24-6), although this is entirely speculative and earthwork evidence may indicate a later date for construction. Internally Skinner recorded two wide parallel banks running on the same orientation as the enclosure, while his excavations demonstrated evidence of lead processing (BL: Add mss 33653). While this internal arrangement may have been heavily altered since Skinner's visit, this model seems simplistic and does not tie in well with the present evidence. At the south-west end traces of enclosure banks survive internally which may form part of the Romano-British settlement since they



Figure 21. Lower Rains Batch: air photograph showing a large sub-square enclosure probably dating from the medieval period. Photo NMR 23469.022 © English Heritage.

underlie the enclosure. A number of scarps recorded within the enclosure follow its orientation, but this is also similar to surviving elements of the earlier Romano-British settlement and any subsequent use may have maintained this orientation. It is therefore difficult to attribute these features to any particular period, and likewise it is not possible to conclusively interpret the lead processing evidence obtained by Skinner as linked to the enclosure when it could equally date to earlier or later periods of activity.

As highlighted in Great Cowleaze Pasture field it is apparent that water was re-channelled down former track-ways, in this case to flow into the Blackmoor Valley where the most extensive industrial complex at Charterhouse was located. A large channel was re-cut from the probable fragments of an earlier hollow-way through the centre of Lower Rains Batch (C4), again running north-west/south-east. This feature runs for 235m and is around 11m wide, surviving up to 0.8m in depth. Scarps within the channel indicate that it may have been re-cut on at least one occasion, in some cases creating a narrow channel within the principal feature. When this occurred is not clear and the features may have functioned as track-ways for some considerable time, possibly not being used to carry water until the 19th century.

In the northern corner of the field is a well-defined platform (P65), possibly of post-medieval date. The feature consists of a substantial platform with a pronounced bank along its south-east face approximately 3m wide and 0.3m high. It is located in front of a former enclosure field entrance into Upper Rains Batch; it may represent a barn or other agricultural building rather than a domestic structure.

Large sections of the field are overlain by a series of ridges similar to ridge-and-furrow but more sinuous in their form and direction. The ridges measure up to 5m in width and 0.2m in height, with some examples over 40m in length. Early aerial photography appears to show this ridging in larger, more continuous stretches to the north, east and west of the large square earthwork enclosure (B). The ridges are on the same orientation as the modern field and overlie all other earthworks in this field and probably represent the remains of abandoned attempts to improve the field.

Marthas Lot (Fig. 20)

Settlement evidence in the smaller triangular field of Marthas Lot is ambiguous since the earthworks are much degraded. The hollow-ways (C4 and T14), leading into the field from Lower Rains Batch, have been diverted to the south-west, possibly in the post-medieval period. However, slight scarps (S11 and S12) re-emerging on the west and south sides of the field suggest they may have originally continued on their north/south alignment. These features include a 50m long stretch of a 4m wide hollow-way (T16) and the L-shaped scarp of a possible enclosure (E12). The importance of these features is that if they are Romano-British in date this would provide further evidence that the trackways and enclosures recorded in Hundred Acre field are contemporary. It is clear from map evidence that the boundary of this field has altered over time and some of the slight scarps may represent earlier boundary features. The track (T14) is possibly the remains of 'Steven's Road', recorded on the 18th-century enclosure map crossing Marthas Lot field towards the Blackmoor valley.

Charterhouse Green (Fig. 22)

The most prominent earthwork in this field is the Roman fort which, from the earthwork evidence, is of at least three phases. The principal evidence for the earliest enclosure comes from a short section of ditch (F1) continuing north from the north-east corner of the outer enclosure (F2). This feature suggests the earliest earthwork element may have taken the form of a curving linear ditch and bank which would have cut off the spur of land to the east, creating a promontory enclosure. The ditch measures around 12m in width and survives up 0.4m in depth. It continues for a distance of around 26m and fades out before reaching a deep water channel, a natural feature that presumably demarcated the northern side of the promontory (Fig. 23). The majority of the ditch appears to have been re-used by the later enclosure, continuing south-west before turning south-east and running towards the juncture of the Blackmoor and Velvet Bottom valleys. Where the ditch has apparently been re-used by the later enclosure a counter-scarp bank was identified on its west side, approximately 87m in length and standing no more than 0.2m high, suggesting that parts of the ditch may have been re-cut and increased in size during the second phase of construction.

The second enclosure (F2) is multi-angular, with excavations demonstrating that it consisted of an internal clay bank and an external rock-cut ditch (Todd 1993, 63). The eastern and southern sides of the enclosure have almost completely gone due to later mining and the construction of a post-medieval farmstead. The surviving portions of the enclosure define an area of at least 1ha, with a short section of spread bank along the

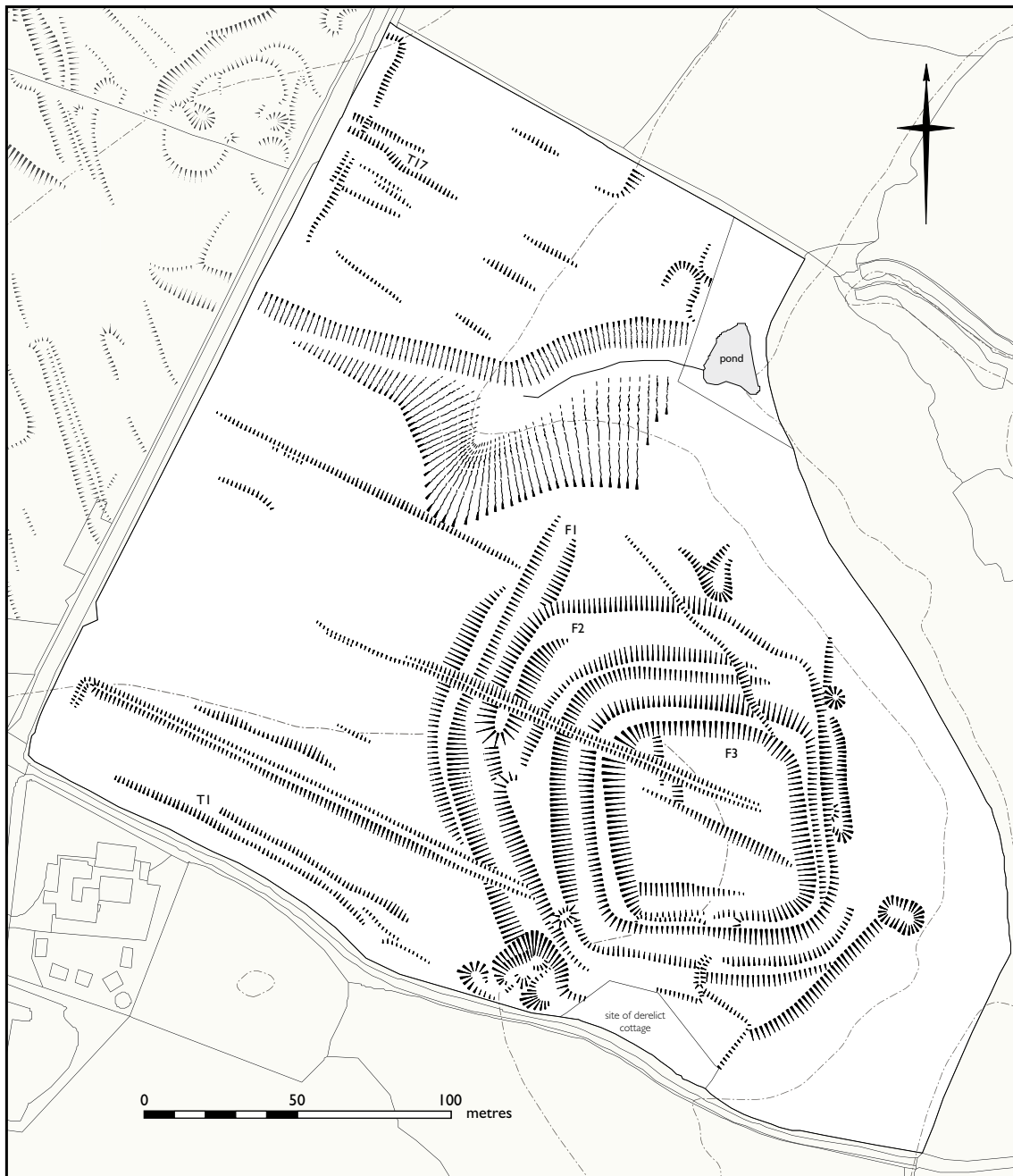


Figure 22. Charterhouse Green: English Heritage 1:1000 scale survey (reduced).

west side measuring 15m in width and standing a maximum of 0.4m high. An entrance is also visible on this side defined by a break in the bank. The enclosure is overlain by a number of scarps and banks on a roughly north-west/south-east orientation which are the result of post-medieval cultivation of the site. The slight scarp cutting across the north side of the enclosures is probably the remains of a minor track-way, perhaps created by grazing animals.

The fort (F3) is an almost square banked enclosure with evidence of a ditch on all sides apart from the east where it has been encroached on by later mining activity. The banks survive up to 14m in width and 0.4m in height, while the outer ditch is around 10m

wide and survives to a maximum depth of 0.5m. On the north side of the outer ditch a section of counterscarp bank was identified, running for 60m and surviving to 5m in width and up to 0.4m in height. There is no evidence of a berm between the enclosure bank and ditch. As discussed above, the fort is located within two earlier enclosures and is the smallest of the three with an internal area of around 0.3ha. The only suggestion of an entrance was recorded towards the centre of the south side of the fort, and measures approximately 7m in width. The section of bank west of the proposed entrance is topped by a post-medieval hedge bank. It is possible to conjecture that the main route to the Charterhouse settlement from the east was across the Blackmoor valley and along the south side of the fort, much as the modern road does at present. The known surviving section of Roman road leading from Old Sarum appears to terminate 525m to the east of the fort and may have originally taken this route. The presence of an entrance on the south side of the fort would bolster an argument that the terraced and hollowed trackway recorded along the southern edge of the survey area (T1 and T19) may also be Romano-British or earlier (below). Interestingly the modern route which runs parallel to (T19) continues west past Lower Farm, a distance of 1.8km from the fort, where several hundred fragments of pottery dating from the 1st to 4th centuries have been recovered from the ground surface alone (CSMR: 229), possibly bolstering the argument for the antiquity of this route.

A slight ploughing bank overlies the north-west corner of the fort and across the interior, aligned north-west/south-east and measuring up to 0.1m in height and 160m in length. A parallel scarp to the south, measuring 3m wide at its greatest breadth and 55m in length, probably relates to the same ploughing regime. Underlying these ploughing remains, within the fort are, traces of earlier earthworks which are on the same orientation as the fort and may therefore be contemporary. In the north-west corner of the fort two parallel scarps were identified running north-south for a distance of 15m and 5m, with both standing little more than 0.1m high. A broader scarp, measuring 4m wide, 35m long and 0.2m high, was recorded running east-west adjacent to the south-west corner of the fort.

The general morphology of the earthworks, in addition to the high status finds recovered during Todd's excavations appear to confirm the monument status as a Roman military



Figure 23. Charterhouse Green: section of ditch forming early enclosure.

site, most probably a fort. It is important when considering its size to take into account the conscious decision to construct it within the bounds of the pre-existing enclosure, which immediately limited the scale at which it could be constructed.

Two post-medieval buildings and adjoining enclosures were depicted on the 1838 tithe map immediately south of the fort, one of which survived into the 20th century. These two enclosures were partially recorded (the surviving cottage building remains were fenced off outside the survey area and under dense vegetation) and consisted of a terraced building platform and boundary remains, part of which re-used the southern boundary of the Roman fort. A handful of mining pits was recorded on the east side of Charterhouse Green which mark the western edge of the extensive post-medieval mining remains still extant in the Blackmoor valley.

Further Inclosure (Fig. 24)

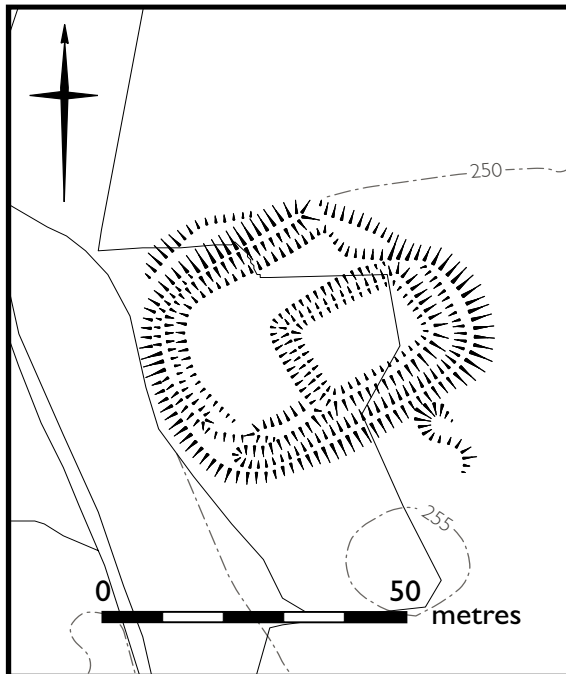


Figure 24. Further Inclosure: English Heritage 1:1000 scale survey (reduced).

A single earthwork feature was surveyed on the east side of the valley, on the western edge of a former enclosure field called Further Inclosure. It is a sub-rectangular feature measuring 55m by 44m with an angled cut-away along its north-east corner. It has been little affected by the plough and survives as a prominent earthwork consisting of an outer bank 0.5m high and an internal ditch 0.4m deep, with a possible 5m wide entrance in the southern corner although this may not be original (Fig. 25). The northern side of the enclosure overlies an earlier mound and, given that Mesolithic deposits were recovered from a sealed deposit beneath the enclosure (although its relationship with the earlier mound is uncertain), this earlier feature may be prehistoric in origin (Todd 2004, 41-3). The level of vegetation within the

enclosure masked any subtle internal features other than a later rectangular banked enclosure with an external ditch inserted into the eastern corner of the rampart was recorded. The latter enclosure measured 30m by 20m with no evidence for an entrance. The feature as a whole is overlain by the present field boundary. Excavations at this inner enclosure failed to provide any conclusive date or function, although a later medieval date was suggested by the final report (Todd 2007, 7). A stone-laid surface with evidence of sheet lead working was uncovered built into the exterior of the east bank of the enclosure, again without producing any dating evidence (ibid 8).

There are some stark similarities between this enclosure and the one recorded in the southern corner of Grays Ground, especially if the degrading affects of the plough on the

latter example are taken into account. The earthworks both have evidence of external banks and internal ditches, one corner cut-away and are of similar dimensions, although the example on the east side of the valley is more elongated. Slight evidence of a possible building platform in the Grays Ground example, combined with finds of charcoal from within the enclosure, bring into question the interpretation that it was simply a cattle enclosure, although a more specialist agricultural function is possible. Excavations to the east of the feature in Further Inclosure field revealed no Romano-British finds, which would suggest the Romano-British settlement was confined to the western side of the Blackmoor valley (Lewis 2007). Based upon the earthwork and available excavation evidence there is no reason to doubt the later medieval or post medieval date attached to these features, and it seems likely that both were constructed for a similar purpose.



Figure 25. Further Inclosure: bank and ditch on southern side.

Further Blackmoor and Hither Blackmoor

Although these fields were not included in the survey, having largely been ploughed flat, investigation was made of the dam feature noted in previous studies (Wilson 1971, 278). It was concluded that the few features that did survive in this area did not constitute a dam, nor was there any convincing evidence that earthworks could be characterised as Romano-British in date.

DISCUSSION

Prehistoric evidence

The density of later development within the area such as the extensive Romano-British settlement, later mining and agricultural improvements, have combined to mask much of the prehistoric landscape at Charterhouse. However, the incidence of worked flint demonstrates that it was far from uninhabited. In addition, analysis of Romano-British small town forms elsewhere has concluded that irregular street plans, like that at Charterhouse, indicate a continuing 'native' tradition in settlement layout and often overlie an Iron Age antecedent (Burnham & Wachter 1990, 25-6; Faulkner 1998, 40-1).

The Mesolithic and early Neolithic evidence is currently confined to the flints and buried land surface excavated on the east side of the Blackmoor Valley, although unstratified flints have been recovered to the west. This presence is not unexpected, and the relatively low vegetation cover of the Mendip plateau may have provided improved hunting grounds as well as access to particular flora, fauna and other resources. The recovery of flints of this date on the side of the mineral-bearing valley may, however, imply a preoccupation with this particular environment. While the mineral deposits were not exploited as a metal, they would have visually marked this area out with surface outcrops of galena and the vegetation species peculiar to this environment creating a texture that prehistoric communities may well have considered distinct. The relatively low melting point of lead would also suggest that this may have been one of the first minerals to be identified as holding 'metallic' properties of melting and solidification, and that these qualities may have long pre-empted its functional use as a metal that we later identify in the archaeological record. Whether this distinction was simply utilised as a way-marker for groups and individuals crossing the Mendip area, or whether it was imbued with more specific properties and understanding that entailed the repetition or continuum of settlement is currently speculative.

Earthwork foci of prehistoric activity were recorded in the form of a number of Bronze Age barrows on the north-west side of the site, while the mound located beneath the enclosure in Further Inclosure field may also be of prehistoric origin.

The amphitheatre question

This argument can be taken further when considering the Romano-British amphitheatre over which the suggestion that it was adapted from an earlier prehistoric feature has never been conclusively disproved. A re-evaluation of the excavated evidence, as presented by Gray, offers further insights into the complexity of the monument although it falls short of providing a conclusive understanding of its origins. The most interesting of these relate to the layer of clay and waste recorded at the base of the bank which was interpreted as evidence of pre-Roman mining waste, although Gray himself voiced uncertainty over the latter identification (Gray 1909, 125). The deposition of this layer does not seem to have been incidental; it occurs as a consistent layer beneath the bank in all the excavated sections but does not continue beyond the bounds of the monument as can be seen in the section on the north side of the earthwork (Fig. 26). In

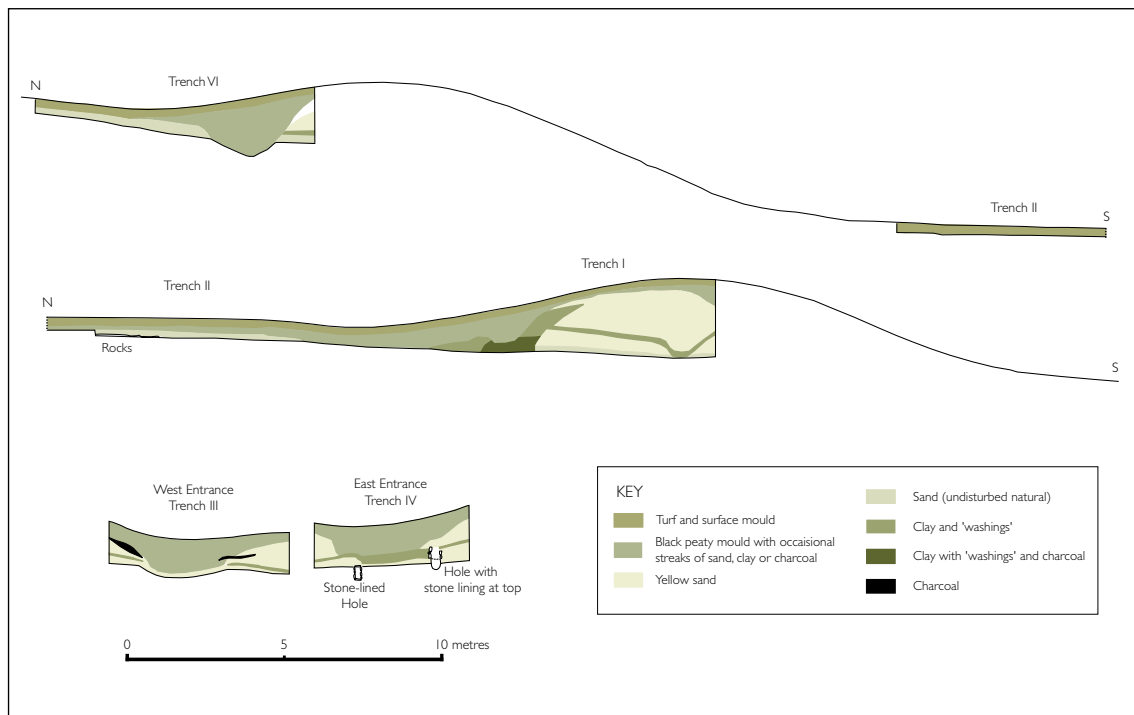


Figure 26. Amphitheatre site: sections through the ramparts (After Gray 1909, plate III).

addition a conspicuously thick layer was deposited across the base of the east entrance, demonstrating that it was laid down as a conscious element within the construction of the larger earthwork. A bank, composed of yellow sand, was then built over this layer which forms the core of the present monument. Based on the earthwork evidence and available excavation plan sections, it appears that subsequent to the build up of the earthwork core a ditch was cut at least on the north side of the feature and the interior surface was excavated down, with the clay and waste layer and earthwork core cut back slightly. Clay waste and other stained material was built up against the interior side of the southern bank, and a stained, black 'peaty' layer built up over the earthwork with thick deposits recorded across the entrances and in the exterior ditch. Gray felt this latter material was largely slumped and would originally have stood on the earthwork crest, and given its high organic level it may be the remnants of turfs used to build up and stabilise the earthwork. Gray's excavations also show that the west entrance was a later addition, as it clearly cuts the clay layer, indicating the monument originally had a single entrance on the east side. The evidence indicates several phases although dating is generally poor; flints and fragmentary Romano-British sherds were uncovered from several layers, but given the poor weather conditions and excavation by labourers, doubt may be cast over the efficacy of these finds.

Gray himself was unhappy with the results of his excavations (Wilmott 2008, 34-5), and subsequent research has failed to provide a conclusive answer as to the nature of this monument. The clay and waste layer is of particular interest in that it is obviously not incidental mining waste, but a layer consciously applied as part of the construction of the earthwork core. There is no practical reason for the application of this layer, except perhaps to mark the dimensions of the planned earthwork, but this is unconvincing. One interpretation is that this foundation was laid during the Romano-British period

itself ahead of the construction of the amphitheatre, possibly as a ritual element. As the material associated with mineral ore, which formed the basis of the settlement's economy, it is conceivable that it was imbued with a religious quality, which would also suggest that the amphitheatre itself was used as the venue of ritual activity.

However, the excavated evidence also suggests that there were at least two phases in the construction of the earthwork with the interior lowered, the external ditch cut, and the west entrance created after the construction of the original core. There is a case, therefore, that the amphitheatre may have been adapted from an earlier monument. Gray appeared uncertain of his definition of the clay layer as mining waste; the suggestion being that this deposit was similar to that left by the washing of the local mineral ore. It is possible that this clay layer was in fact a material which occurred naturally in the area. Soil mapping indicates the nearest deposits of underlying silty clay can be found in the area of Marthas Lot field and Charterhouse Green (Findlay 1965, 54; Soil Survey of England and Wales, sheet 280 Wells). Prehistoric groups may have singled out this area due to its unusual geology and associated flora and fauna and these peoples may have been aware of the distinct visual properties of the natural mineral deposits and soils. These deposits may then have developed a ritual significance and in this context were laid down prior to the construction of a monumental earthwork. This is not to suggest that there was early prehistoric mineral processing, but that the textural uniqueness of the natural deposits had been recognised and imbued with importance.

This study suggests therefore that, although the monument may have been re-used as an amphitheatre in the Romano-British period, it may have originated in prehistory, possibly as a Later-Neolithic henge or Bronze Age disc barrow. The lack of an internal ditch has been highlighted as a ubiquitous feature which was absent, although the excavation of the interior during the second phase of construction could have removed this evidence. It is interesting that, although Gray apparently failed to find an internal ditch, his section drawing shows that the natural sub-soil drops away in the area between the internal platform and the southern bank suggesting, perhaps, the presence of a ditch or deeper stratigraphy at this point. The excavation evidence also indicates that the west entrance was almost certainly a later addition, with the monument originally having a single eastern entrance. It is of note that the henge monuments in the immediate vicinity appear to have a single entrance, although none are east-facing (Lewis 2005, 99). Equally the rise in ground level detectable as an earthwork at the eastern entrance is demonstrated by the excavation to be largely the build up of the organic 'peaty' deposit tentatively dated to the Romano-British period. The overall diameter of the monument (a maximum of 69m) also fits well with it originating as a henge or disc barrow. It shows clear similarities with the possible henge at Hunter's Lodge, which is c. 60m in diameter (this has also been classified as a possible disc barrow (ibid, 75)). From the perspective of the earthwork evidence the site's importance as a communal focus of prehistoric ritual is suggested by the presence of several Bronze Age barrows in the immediate vicinity. In the wider landscape, barrow cemeteries are extant to the west on Black Down and to the south-east in the vicinity of Ubley Warren Farm; Beacon Batch long barrow is located c. 1.5km to the north-west, with Gorsey Bigbury henge lying c. 1.6km to the south-west. Later-Neolithic flints were found to the north of Hundred Acre field and Bronze Age ritual deposits have been discovered to the south-west. The topographic setting is also striking

with the location of former springs lying to the south-east. Water undoubtedly had ritual significance in the prehistoric period, especially on this predominantly dry limestone plateau.

The origin of the amphitheatre earthwork is still open to question but recent speculation has contended that it was contemporary with the fort, and that it was inherited by the mining settlement after the departure of the Roman army (Wacher 1978, 92; Burnham & Wacher 1990, 4). The suggestion has also been made that it may have functioned differently from other known amphitheatres, and more recently a proposal has been made that it was an auxiliary *ludus* for military drills and weapon inspections, and only occasionally used as a public venue (Frere 1987, 299; Wilmott 2008, 38). Other research has noted similarities in scale to examples at Chester and Caerleon (Jones & Mattingly 1990, 165). It has been contended that the earthwork was constructed within a natural depression, a characterising feature of a Romano-British amphitheatre (Wilmott 2008, 128-9); the earthwork survey has shown however that this depression is largely a man-made feature. As discussed below, the amphitheatre is located at a higher point than any other element of the neighbouring settlement which would appear an unusually exposed position for a centre of entertainment and communal gathering, although its position does make it visible from some distance. The site is also separated from the fort by the settlement itself, a distance of nearly 800m.

The Roman fort/enclosure

On the west side of the valley a wide ditch was constructed cutting off a small promontory in the late Bronze Age or early Iron Age. Although this represents the first explicit evidence of a controlling authority in the area, it probably continued a tradition of control and social power that was formerly enacted through ritual and ceremony focused on the barrows and possible henge monument in Hundred Acre field. Interestingly the English Heritage survey of the Mendip AONB has also recovered potential evidence of a promontory enclosure beneath a later medieval castle at East Harptree, another area which developed as a mining focus by at least the medieval period (Brown forthcoming). In turn the promontory ditch at Charterhouse was redeveloped to form the west side of a later enclosure.

Todd based his interpretation of the second-phase enclosure on the recovery of Neronian pottery from the lower ditch fills (Todd 1993, 63). However, the outer enclosure bears little resemblance to other Roman military works from elsewhere in Britain. Morphologically and stratigraphically this enclosure would date more convincingly to the late Iron Age; conjecturally it could have been maintained until its acquisition by the Roman military forces when the fort was constructed and the ditches of the earlier enclosure allowed to infill, hence the Neronian deposits. If this interpretation is correct it would further confirm earlier theories of extensive later prehistoric activity in the Charterhouse area, almost certainly linked to the importance of mineral exploitation given its prime location overlooking the Blackmoor and Velvet Bottom valleys. The creation of such an enclosure and the investment of time and resource in its construction, demonstrate the importance of control over mineral production in this period. The subsequent construction of the Roman fort within the enclosure

bounds, probably without an intervening period of abandonment, gives the impression of immediate and transparent transference of power to the incoming Roman authorities. Evidence of an earlier period of settlement beyond this enclosure has not been recognised with any confidence, but conceivably underlies the later Romano-British settlement.

In this sense the development of the Romano-British settlement, while introducing new features to the landscape and intensifying activity, demonstrates continuity with its predecessor. Beyond the survey area the construction of a Roman road to Old Sarum embodied an important change in the wider political climate and the encompassment of the settlement at Charterhouse within the imperial economy. Mineral products were now channelled directly into the machinery of the incoming Roman authority and transported along its arterial roads. The fact that this road does not appear to continue beyond Charterhouse is evidence of its importance as a source of mineral deposits. It may also imply that the bulk of mineral extraction and processing took place in the Blackmoor and Velvet Bottom valleys which negated the need for a logistically difficult continuation of the Roman Road on to the north-west side of the valley.

A Roman industrial town?

Roman Imperial control at Charterhouse appears to have occurred rapidly following the invasion of AD42, although it has been argued that direct Romano-British lead production from at least AD49 cannot be taken as fact based solely on the evidence of the inscribed ingot discovered at Blagdon in the 16th century (Clement Whittick 1982, 117-8). Lead ingots recovered bearing the 'VEB' stamp have been identified at locations as distant as St Valery-Sur-Somme in northern France, although the majority have come from Mendip itself (Todd 2007, 85). The dating of these ingots continues up until the AD160s when imperial ingot inscriptions appear to stop on Mendip, as well as at other mining regions in Britain and the continental Roman provinces (VCH 1906, 338). Rather than representing an end to industrial production it instead implies a change in imperial economic relationships, and perhaps that these mining operations were taken over by private groups and individuals. The abrupt end of ingot inscriptions at this stage has hindered efforts to understand the development of the mineral industries in the later Romano-British period.

The rapid appropriation of the mining facilities is generally viewed as evidence of the importance of mineral extraction to the Roman administration, particularly obtaining silver from the argentiferous lead (Jones & Mattingly 1990, 165). The level of occupation recognised at Charterhouse seemingly supported by large-scale mineral extraction and processing has been used as evidence to prove that this form of industry was not just seasonally undertaken during the Romano-British period (Dark and Dark 1997, 132). Experimental metallurgy has suggested that the larger lead pigs (100kg) were tapped in a single operation and that large-scale furnaces must have been utilised, although these have not yet been identified archaeologically (Elkington 1976, 195). The majority of known Mendip lead ingots range in weight from 72-90kg, although smaller (34kg) and larger (101kg) examples have been recovered (Todd 2007, 85). In addition to the processing of lead and silver, brooch-making is argued to have developed within the

settlement despite the lack of copper and tin deposits on Mendip, and the identification of pre-Roman brooch forms from Charterhouse may imply that this industry could have originated in the Iron Age (Jones & Mattingly 1990, 184; VCH 1906, 337).

Although our survey has indicated the presence of pre-Roman occupation at Charterhouse, the sprawling, nucleated form of the settlement is distinctive to the post-conquest period. The rise of this type of settlement on Mendip must be attributed to the industrial intensification witnessed during the Roman era. The original number of Romano-British settlements in the area is likely to have been much greater, with many sites destroyed by later land-use such as mining. Aerial photographic transcription undertaken as part of the English Heritage project has identified the remains of a substantial Romano-British settlement, covering an area of as much as 12 hectares, adjacent to the former St. Cuthbert's lead works at Priddy. An excavation in this area carried out in 1951 uncovered masonry walling and the corner of an enclosure, as well as Roman pottery, gaming counters, spindle whorls and pieces of rough lead (Gough 1967, viii). Recent geophysical survey has helped define more clearly the form of the settlement, which comprises a series of track-ways, compounds and possible industrial processing areas (Thompson *pers. comm.*). In addition, evidence of Romano-British settlement close to later mining remains has been identified elsewhere on Mendip. At Green Ore, four lead pigs dating from Vespasian's reign (AD 69-79) were discovered in 1956, and subsequent excavation revealed hut floors and finds of Roman pottery (Ashworth 1970). Close to the Smitham Hill lead works in East Harptree a hoard of nearly 1500 silver coins, dating from between AD 306-383, were discovered in a pewter vessel in the late-19th century (NMR: ST 55 SE 1). Although these coins alone cannot be used as evidence of settlement, they do highlight Romano-British activity in the area and that any settlement may underlie, or has been destroyed by, later mining. It is therefore probable that the four medieval and later mineries on Mendip all had Romano-British antecedents. These sites all appear to have a close association with the network of Roman military roads, affording good transport links, and indicating a military context for the wider industry in the 1st century AD.

The settlement at Charterhouse may be described as a compact, unenclosed settlement laid out along a series of track-ways or 'streets' (Fig. 27). These streets fed outwards to the surrounding area and would have given access to the mineral extraction sites in the Blackmoor valley and the wider landscape beyond. Within the settlement shorter track-ways gave access to embanked, terraced compounds which may have originally been surrounded by a fence, wall or hedging. These units are generally sub-rectangular in form, the largest of which are up to 75m² in area, with some showing evidence of being multi-phased. Within the compounds are located a series of rectangular platforms and terraces, representing the sites of former buildings and yards. Almost without exception the compounds contain several building platforms, ranging in size from 20m to 5m in length. Some of the building platforms show evidence of sub-division and several are grouped together around a yard. Excluding the Roman fort and amphitheatre site, the Romano-British settlement, at a conservative estimate, covers an area of at least 27 hectares, while the inclusion of more ambiguous elements recorded by the survey could take this to as much as 36 hectares. The settlement at Charterhouse would therefore have been comparable with the largest agricultural settlements on Salisbury Plain, such as Charlton



Figure 27. Charterhouse: air photograph showing the earthwork remains of the Romano-British settlement with the amphitheatre beyond. Photo NMR 24331.030 © English Heritage

Down, which covered approximately 25 hectares (McOmish *et al* 2002, 90). The number of probable Romano-British building platforms identified was over 65, although these need not have been occupied contemporaneously, as excavations at the Romano-British settlements on Salisbury Plain have demonstrated (Fulford *et al* 2006, 48-86). Conversely it is highly probable that other evidence of building platforms will not have survived the subsequent development and cultivation of the site. Even in areas like Hill Ground, with relatively good earthwork preservation, former buildings may not be visible, as shown by excavations near the southern corner of the field which revealed evidence of a well-built structure but which did not leave any corresponding earthwork remains (Budge *et al* 1974, 330-3). Evidence from previous investigations, combined with surface finds, would suggest that at least some of the buildings were of stone construction with tiled roofs, although a combination of stone and timber structures is likely (VCH 1906, 335; Waldron 1875, 3). Pottery finds would suggest that the settlement was occupied during the 1st-4th centuries AD.

The lack of modern controlled excavation, and the poor survival of some of the settlement remains, makes a more detailed analysis of the site difficult. It is unknown whether the area represents the maximum extent of occupation at any given time, or is the result of gradual settlement shift. The western extent of the settlement is yet undefined and may have originally continued further into Higher Furze Hill, Home Ground or beyond. The settlement layout shows evidence in places of being carefully gridded, though adapted to follow the contours of the local topography. This adaptation appears to have encouraged the perception that it was of irregular form (Faulkner 1998, 40-1), when in fact the survey demonstrates a significant regularity in layout. The settlement itself extended little beyond the 290m OD contour line, with the exception of the amphitheatre. Particular attention was given to areas around remnants of springs, while the conjectural identification of wells from notes made by Skinner demonstrate the need to maintain a range of water sources which may have been carefully separated based on their industrial or non-industrial use. The survey has highlighted a degree of morphological variation within the settlement, with less ordered plots visible towards the eastern limit of the settlement and smaller compounds towards the north-west. This could indicate the settlement grew over time, reflecting the changing needs and requirements of its inhabitants, and may account for the less formal nature of the street plan.

There is a strong likelihood that even in the Romano-British period the bulk of industrial activity took place in the Blackmoor and Velvet Bottom valleys, the remains of which are now buried beneath later medieval and post-medieval activity. However, the large amount of mineral processing waste recorded within Lower Rains Batch, reports of crude smelting hearths and metal working debris identified within Hill Ground, suggests that processing and metal-working activities were undertaken across the settlement (Budge *et al* 1974, 330-3; Waldron 1895, 3). Various stages were required to extract the valuable metals from the raw ore. It was first washed, then crushed before being melted in furnaces. The metal was then cupelled to separate the lead from the silver, melted once more, before finally being moulded into bullion or pigs (Boulakia 1972, 141). It is therefore possible that variation in settlement form may reflect the differing requirements of this range of industrial activities, as well as the needs of day-to-day domestic life.

A key issue is whether the Romano-British settlement here can be described as a town, or perhaps more appropriately, whether we can characterise it as urban. The evidence of a widespread settlement which may have continued beyond the bounds of the survey area and including a range of other structures within Blackmoor valley coupled with its size and number of building platforms makes Charterhouse comparable with other Romano-British town sites in England; but equally, it is comparable to the large nucleated settlements on Salisbury Plain which are described as villages. A significant difference with the latter examples is that the sites on Salisbury Plain were embedded within an existing extensive field system (McOmish *et al* 2002, 87-108). The economy was based primarily on agriculture and in particular the cultivation of cereals; the recognition of apparently solitary field systems implies that this level of cultivation was massive as would be expected to support these large, nucleated settlements (Fulford *et al* 2006, 205; McOmish *et al* 2002, 100). In stark contrast, at Charterhouse there is no convincing evidence of an associated agricultural system, and what ambiguous features have been recorded are notably small-scale in their form.

That Charterhouse was a dense, nucleated settlement based principally upon a non-agricultural economy during the Romano-British period is evidence of its urban character. Conversely, the presence of a single Roman road linking the site to the east is symptomatic of Charterhouse's peculiar position within the wider imperial economy. While the survey has demonstrated that this road was not the only infrastructure in use, its pre-meditated planning is highly suggestive that Charterhouse functioned as a specialist point of extraction rather than as the focus of a market economy. However, the differentiation in plot and building sizes as well as the available finds evidence which includes a range of wealthy artefacts and materials implies that this was not simply a mining colony, but had access to a wide range of commodities and luxuries. A centralised authority is also visible in the presence of the Roman fort in Charterhouse Green, and it is interesting that despite its relatively low position in the valley virtually the entire settlement is visible from the site of this fortification and its predecessors. The extraction of lead, silver and other minerals was obviously of massive economic importance and in this context created a specialist settlement of urban character, although interestingly comparable settlements have not been recorded at the other known Romano-British lead mining districts in the Peak District, Flintshire and the Stiperstones Hills.

Other issues relating to the industrial development of Charterhouse include access to fuel, primarily charcoal, and water. The management of water in the Romano-British period has already been touched upon and our survey has shown the extent to which this resource was manipulated over many centuries. The requirement of fuel would suggest coppiced woodland represented a significant part of the landscape from the Romano-British period onwards. Wooded combes existed below Manor Farm and Lower Farm, with 60 acres of woodland recorded at Hydon Grange in 1544 (SRO: DD/GB\145). The account of the mining of the Bishop of Bath and Wells indicates that this resource was also brought up from Cheddar in the medieval period. It has been suggested that the Mendip plateau was little wooded from the Mesolithic onwards, resulting in a long-standing reliance on woodland resources from the slopes and valleys (Fowler 1976, 56). It is possible that the Blackmoor and Velvet Bottom valleys were also wooded in the Romano-British period. The lack of environmental evidence makes

any inference on this subject impossible, although fragments of vegetation from Todd's excavations shows tree species such as alder, beech, elm and oak were present in the vicinity of the Roman fort (Todd 2007, 59).

Medieval exploitation

It is generally accepted that the exploitation of lead at Charterhouse diminished significantly following the settlement's apparent decline in the 4th century AD. For the later stages of the early medieval period Todd has highlighted the presence of eight pre-Conquest mints within a 30km radius of Charterhouse, the largest concentration within such an area in England, which may imply the continuation or resumption of silver production on Mendip (Todd 2007, 81). The output of these mints was very small however and they struck intermittently. This has been ascribed to the location of most of them on great royal estates, and may have more to do with marketing and with the payment of royal dues in cash than with the minting of new silver (Maddicott 1989, 45). The royal complex at Cheddar, which had developed to some importance by AD940, included the area of land that would later become the landholding of Charterhouse, although not the survey area itself (Todd 2007, 81). Chewton Mendip was also under royal control in the pre-Conquest period and included the mining areas of Priddy and Green Ore. There is however, little in the way of direct evidence for Anglo-Saxon silver working on Mendip but the connection between royal estate and mints and royal estate and mines is a tantalizing one. The importance of the mineral resources at Charterhouse in the early-medieval period may also be reflected in the land divisions which were formed at this time. Charterhouse lies at the meeting place of three different parishes, possibly reflecting the need for access to the mineral resources of the plateau.

The medieval landscape of Charterhouse has been portrayed as one increasingly dominated by the lead mining industry, although archaeological evidence is lacking. The monks at Witham Priory held extensive upland pastures on Mendip which was farmed from Hydon Grange. By the late 12th century they had confirmation of their right to extract lead from their holdings on Mendip (Blick 1991, 95). The ore would almost certainly have been won from the Velvet Bottom area (which was within their estate) where later industrial activity appears to have destroyed any evidence of medieval workings. Processing activities would also have taken place close by, but archaeological evidence has yet to substantiate this.

Lead was not the only resource exploited by the monasteries who held land on Mendip. The vast tracts of upland offered good summer pasture and grazing (Bond 2004, 61). As the demand for wool grew in the period after the 12th century, the size of the sheep flocks also increased. Field names on the Witham's Hydon estate attest to the importance of sheep husbandry, with *The Great Sheep Slait*, *Long Sheep Slaits*, and *Rams Leaze* indicating the extent of land allocated to sheep farming (although these are later field names they may, nevertheless perpetuate the type of animal husbandry practiced in the medieval period). The Cistercian houses of Stanley, Flaxley, and St Mary Grace all held land in Blagdon and may have pastured sheep on the common land alongside secular members of the community. St Augustine's Abbey, Bristol, also held land in the parish, possibly near Ellick, and was granted additional common pasture for 50 sheep

and 30 mares by William fitzMartin of Blagdon (Neal 1976, 94). By the later 13th century the flocks of lay lords and peasants were exceeding the numbers of sheep on monastic estates and rights of common pasture were fiercely guarded. Monastic flocks were increasingly managed by tenant farmers as demesnes were being leased out during the 14th and 15th centuries (Bond 2004, 61). St Augustine's Abby leased their land at Rowberrow in 1407 to Walter Bevice of Wrington. The abbey retained the sheepphouse and agreed to provide carpentry for its repair while the tenants were to supply straw for its thatching (Neal 1976, 95).

Relatively little research into sheep farming on Mendip has been undertaken and the associated archaeological remains are poorly understood. Sheep farming is a relatively transient activity which often leaves only subtle evidence. The lasting features tend to be the permanent enclosures which were used to separate different types of sheep, to contain sheep, or for activities such as milking and lambing (Smith 2005, 194). There are several enclosures within the survey area which would appear to relate to sheep husbandry. These include the sub-rectangular enclosure within Hundred Acre field. Although no longer visible on the ground, the feature would originally have been defined by a small bank, possibly surmounted by a hedge, and an outer ditch. The dating of such sites is difficult; evidence from the Marlborough Downs has shown them to be medieval, with pottery finds from the enclosure below Morgan's Hill dating from the 13th-14th centuries (Cunnington 1910, 596). The substantial earthwork enclosure in Lower Rains Batch has previously been interpreted as medieval, although more recent work has suggested a Romano-British date for its construction (Smith & Brown 2006, 87). The earthwork evidence however, demonstrates that the enclosure is almost certainly post-Roman since it clearly overlies elements of the Romano-British settlement, many of which survive well within the enclosure. There would appear to be no archaeological evidence to suggest a post-Roman industrial use for the site; therefore it may be interpreted as a stock enclosure.

Elements of a large sub-rectangular enclosure were recorded towards the south-eastern corner of Great Cowlease Pasture. The enclosure encompasses an area of c. 51m² and has a substantial channel running through its centre (C6). It is possible this feature represents an area for washing sheep. Sheep were washed annually prior to clipping or shearing and wash folds can be found adjacent to deep pools or streams (Smith 2005, 198). Earthwork features at Imber, representing a series of enclosures lying astride the Imber Brook, have been interpreted as evidence of wash folds (McOmish *et al* 2002, 117). Water from the spring in Marthas Lot field was evidently diverted through the enclosure in Great Cowlease Pasture, and the bank which forms the western side of the enclosure suggests that there was an attempt to pond the water. The enclosure is located close to the road, on the boundary between Blagdon common and Hydon Grange, and may have been a shared resource between the two estates.

A sub-rectangular earthwork in Grays Ground was interpreted by its excavators as a stock enclosure of medieval or post-medieval date, due to the complete absence of Romano-British material and the presence of small internal and external ditches (Jones & Mattingly 1990, 185; Budge *et al* 1974, 335-6). Despite the extent of ploughing damage over this earthwork it still bears a significant resemblance to the largely upstanding

enclosure recorded in Further Inclosure, and may be of similar date and function. It is likely these again were related to the management of livestock on the common, and were possibly used for penning sheep or cattle.

Post-medieval industry

The post-medieval period saw an intensification of mining activity. The owners of Charterhouse appear to have encroached and enclosed adjoining sections of Blagdon Common in and around Great Cowleaze Pasture, and the industrial activity also increased with extensive mining pits being developed at the northern end of the area, probably during the 16th and 17th centuries. At the southern end of Great Cowleaze Pasture a probable industrial complex developed with associated water management systems. This was almost certainly involved in lead processing and was presumably owned by the occupants of Charterhouse manor located as it is within the area of early encroachment made into Blagdon Common. The complex phasing of the site may suggest that efforts were frequently made to improve its efficiency, or that the difficulties made in obtaining a sufficient water supply, as suggested by the re-working of potential water channels to the north, to process the lead ore and power furnaces necessitated repeated rearrangements of this system. The excavation of a building within the water management complex, with occupation dated to 1680-1720, would seem to tentatively confirm the hypothesis that the Mendip lead mining industry was already in decline by the end of the 17th century. That this area survived as such a well-preserved earthwork despite the expansion of the industry in the 19th century may be due to the poor viability of its water supply and its close relationship with Charterhouse Manor which may have supported it during the earlier post-medieval period despite its ailing productivity.

How lead processing actually took place at Charterhouse in the 16th and 17th centuries is not entirely clear, much of the documentation deals with the administration of the mines and not the 'physicality' of the process; however, from the archaeological evidence and using examples from elsewhere in England, it is possible to suggest how the lead was processed here at Charterhouse (for example, Day & Tylecote 1991).

The site in Great Cowleaze Pasture was almost certainly related to the actual processing, or dressing, of the lead ore, as opposed to extraction. Extraction took place along the Blackmoor and Velvet Bottom valleys, from where it was transported to be processed, ie, the lead ore separated from the stone. This would first have entailed washing the material in order to separate the lead ore from clay and mud, thus reducing the bulk of material to be treated. One possible place where this washing took place was in the low-lying ground, downstream of the dam(s) where buddles could have been constructed. The flat area to the south-west of the dams would have been a suitable location, and any waste washed away.

The enclosure to the north of the dams may also have been linked to the lead processing and may have contained several compounds and buildings including, perhaps, an ore hearth which may have been water powered. The ore hearth was developed on Mendip in the late-16th century and continued in use until the introduction of the reverberatory, or cupola, furnace in the early-18th century (*ibid*, 93). An ore hearth would originally

have been constructed of stone with a tuyere, or air nozzle, at its rear blown by a pair of water-powered bellows. Above the hearth was a hood or wide chimney used for drawing off fumes from the hearth and away from the operators. The hearths were usually contained in a building characterised by large, often open, arches to allow fumes to disperse quickly (*ibid*, 97-8). Ore hearth-type works were not necessarily located on the orefield and were more generally placed close to the source of fuel, in a location with access to water power, and good transport links. Alternatively, the remains in Great Cowleaze Pasture may represent a later reverberatory or cupola furnace, which used coal as the fuel and had a large chimney to provide the draught rather than bellows (*ibid*, 93). Despite the absence of coal here, the size and form of the rectilinear earthwork in the eastern corner of the enclosure may indicate the site of just such a furnace, as illustrated by Day and Tylecote (*ibid*, 103). Without further investigation, the evidence of an industrial complex here is tentative, but nevertheless quite plausible.

Small-scale mining and processing of earlier slag almost certainly continued at Charterhouse into the 18th century, and is confirmed by Skinner's accounts of miners and their families in the early 19th century. The identification of isolated building platforms, for instance those to the south of the fort in Charterhouse Green and the eastern corner of Hundred Acre field, may represent the cottages of these miners who may have also worked as small-holders and agricultural labourers. Evidence of the 19th century expansion of the mining and processing industry was not well-attested within the survey area, and appears to have been concentrated in the Blackmoor and Velvet Bottom valleys. Hollows and amorphous scarps in Lower Rains Batch and elsewhere may relate to the activities of miners exploring for ore to reprocess, but could equally have originated from antiquarian investigations of Skinner and his contemporaries during the same period. The principal impact on the survey area during this period was the agricultural regime, which by the 20th century saw the decline of arable cultivation and increasing concern regarding the possible contamination of the site by past industrial activities.

Post-medieval agricultural improvement

The enclosure of the area in 1787 would have entailed a wholesale change of the landscape and an end to common rights. Generous donations, such as the proposed allotments to the poor of Compton, were quickly abandoned or never even completed as larger scale cultivation became prominent, while areas of pasture were improved. These differing agricultural regimes have had a significant impact on the survival of earthworks. Hundred Acre field and Upper Rains Batch have obviously suffered significantly under arable cultivation when compared to Hill Ground for example, although even the latter has been ploughed.

One area of particular interest is Lower Rains Batch where several agricultural ridges were identified. These ridges have been interpreted as medieval ridge-and-furrow by some studies (Faulkner 1998, 28), but their wavering form has led to a common perception of they are remnants of the documented extraction of Romano-British slag in Lower Rains Batch (Townfield) during the later 19th century. Certain inconsistencies arise with this theory; most prominently is that the relative neatness and regularity of

the ridges is uncharacteristic of any other extraction activity in the survey area, or the immediate vicinity. Another significant point is that the ridges cut across elements of the Romano-British settlement, if these features did relate to the systematic picking over of Romano-British spoil then evidence of the underlying settlement would be expected to be largely destroyed, yet the broad make-up of earlier earthworks is still largely visible. The ridges also cut indiscriminately across features such as hollow-ways which would be the unlikely repositories of spoil. The principal documentary source for the extraction of material in Lower Rains Batch is a short note made by a Mr Waldron who visited the site in the autumn of 1873. His account refers mainly to Romano-British material recovered from the site, but also describes how a 2ft layer of spoil was uncovered 1.5ft below the ground surface by workmen picking through the site (Waldron 1875, 3). Waldron's visit appears to have been brief, perhaps little more than a few hours, and his illustrations of artefacts may relate to items he collected or purchased during this time. His account of spoil deposits is specific, yet his description of the general working practices is contrastingly vague. Waldron may have been providing a simplified, perhaps even second-hand, version of a single spoil heap that was uncovered. From this account it appears there has been a general assumption that massive spoil deposits were located in Lower Rains Batch, when in fact work in this area may have been relatively limited. The bulk of reprocessing is more likely to have taken place amongst the massive spoil deposits in the Velvet Bottom and Blackmoor valleys where Waldron himself alludes to masses of material being recovered (Waldron 1875, 2). The idea that a consistent 2ft layer of spoil existed, 1.5ft below the ground level and visible Romano-British settlement earthworks, seems unlikely, and therefore the theory that the ridges in Lower Rains Batch relate to late 19th century systematic re-working of this material lacks credibility.

A more acceptable interpretation is that these ridges relate to failed attempts to improve the pasture in Lower Rains Batch. It was in the context of early improvement that reports of finds from Charterhouse first drew Skinner and Hoare to the site. The 1842 tithe map records that Lower Rains Batch was under separate ownership from the majority of fields in the survey area and was under pasture (SARO: A\BGT/3). Following enclosure, Lower Rains Batch was converted into improved pasture, although the western section was still recorded as rough pasture by the Ordnance Survey 1st edition in 1885. The ridging would suggest that an attempt was also made to further improve the field through heavy ploughing, represented by the surviving scarps, but that this process was abandoned at an early stage, perhaps because of the difficulty encountered in improving such dense archaeological material, a fact verified by Skinner (BL: Add mss 33,653). The fragmentary nature of the ridges at present may well relate to the fact that they were formed by a short-lived ploughing episode and that, unconsolidated, they have been susceptible to erosion and collapse by later, less intensive re-seeding of the field.

CONCLUSION

The detailed earthwork survey of Charterhouse has, for the first time, identified a range of new evidence as well as bringing together the range of pre-existing data and interpretation relating to the site within the remit of the landscape approach. Significant areas of interest have been identified including ritual and monumental foci from the earlier prehistoric, while continuity of occupation between the later prehistoric and Romano-British periods has been demonstrated at the fort site. The extent of the Romano-British settlement site itself has largely been recognised and analysed along with the variability of its internal form. These include several areas of possible public amenities or high-status occupation which could form key targets of future research. Further work beyond the survey area may further confirm the final ambiguities regarding the settlement's extent. The early post-medieval industrial complex is another key discovery and an area that would significantly benefit from further research.

The survey has allowed the detailed characterisation of the Charterhouse area to be portrayed for the first time, inclusive of both previous research and the current earthwork survey. A notable and significant absence is a survey of the Blackmoor and Velvet Bottom valleys which make up the key zone of activity with regard to the mineral extraction industries. The nature and scope of the English Heritage Mendip Hills AONB project did not permit a comprehensive survey of the entire Charterhouse complex and research was therefore targeted on the Romano-British industrial settlement, one of the most significant sites of its type in the country. However, the survey does provide a solid base on which future research can build, developing new avenues of research and furthering knowledge of this unique landscape.

METHODOLOGY

The majority of the survey was undertaken using Trimble 5700 GPS (Global Positioning System) equipment. The GPS data was processed using Trimble's Geomatics Office software and located to the National Grid using Trimble's OSTN02 transformation. Additional detail was added using a Trimble 5600 total station EDM and the data processed using Trimble Geosite software. The survey plot was completed in the field using graphical survey methods. A digital hachured plan of the survey was produced using AutoCAD software and completed using Adobe Illustrator software. The earthworks were recorded at a scale of 1:1000.

ABBREVIATIONS

BL: Add mss: British Library Additional Manuscript

BRO: Bristol Records Office

CHERT: Charterhouse Environs Research Team

CSMR: Charterhouse Environs Research Team (CHERT) Sites and Monuments Record
(Privately held by

NMR: National Monuments Record (Swindon)

SARO: Somerset Archives and Records Office, Taunton

SHER: Somerset Historic Environment Record

TNA: The National Archives

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Figure 8. Charterhouse, Somerset: English Heritage 1:1000 scale survey (reduced).



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