ARCHAEOLOGICAL OBSERVATION

WATER MAIN REPLACEMENT SCHEME
SPRINGER'S HILL
COLEFORD
SOMERSET

NGR: ST 68320 49695 – ST 67790 48580
REF: BA1238BWSHC

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Border Archaeology Limited
Registered in England and Wales
Company Registration Number 07857388
Registered Office: 45 Etnam Street Leominster Herefordshire HR6 8AE
Midlands and North (Head Office): Chapel Walk Burgess Street Leominster Herefordshire HR6 8DE Tel: 01568 610 101
West & South West Bristol Tel: 0117 907 4735
East Milton Keynes Tel: 01908 933 765
South & South East Winchester Tel: 01962 832 777
Email: info@borderarchaeology.com Web: www.borderarchaeology.com

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REPORT SPECIFICATION
Archaeological Observation: Dan Broadbent BA
Draft Report: Jess Cook BSc
Artwork: Will Logan BA Dip
Editing: George Children MA MIfA
Approved: Neil Shurety Dip. M. GM. Inst.M

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1. Executive Summary

This report details the results of a programme of archaeological observation undertaken by Border Archaeology on behalf of Bristol Water plc during water mains replacement works approximately 0.5km to the W of the village of Coleford Somerset. Work took place intermittently between March 20th 2013 and May 16th 2013.

The route of the pipeline extended 1.63km from the junction of Anchor Road and Farley Dell in Coleford (NGR ST 68320 49695) heading roughly S through fields and water meadows before terminating approximately 180m E of Ham Bridge (NGR ST 6779 4858).

Based on the results of Border Archaeology's Assessment of the study area (BA 2012), it had been determined that the route extended through an area exhibiting low potential for encountering prehistoric, Roman and medieval archaeology but a moderate to high potential for encountering significant archaeology of post-medieval (c. 1540-1900) date in three specific areas. These sections of the route were the focus of the observation.

The first was located on Ham Hill, where the pipeline crossed the former line of the Dorset and Somerset canal; the second was to the N of Beck's Lane, where it fell within the western portion of the Coal Barton colliery site (both dating to the late 18th century) and the third was roughly SE of Ham Hill, where it ran parallel to, or directly upon, part of a millrace supplying power to Ham Corn Mill (dating to the mid-19th century).

The engineering methodology chiefly consisted of directional drilling through the fields, together with pipe-bursting along the roadway, with the excavation of 11 Access Pits (APs) and sections of open-cut trenching (Trench 12 & 13) along the route where necessary. A series of four Test Pits (A-D) were excavated prior to the commencement of the ground works.

The results of this programme of archaeological observation identified a section of the stone rubble millrace in AP 9, excavated N of the access road to Ham Mill. The structure was encountered roughly 15m further N than indicated on the Somerset Historic Environment Record database and was still in use.

Within the remaining pits and the sections of open-cut trenching, no evidence of either the Dorset and Somerset canal or the Coal Barton colliery site, or indeed any other significant archaeology was encountered. All deposits in these pits consisted of natural clays and associated topsoil and subsoil or tarmac deposits.

2. Introduction

Border Archaeology was instructed by Bristol Water plc to carry out a programme of Archaeological Observation during works to the W of the village of Coleford Somerset, associated with a water mains renewal scheme.

The route (approximate total length of 1.63km) extended SW of the junction of Anchor Road and Farley Dell in Coleford village (ST 68320 49695) for 230m before turning sharply S and heading across fields for another 500m to the N end of Beck's Lane (NGR ST 6800 4910). From this point, the pipeline route ran SSE across fields to the E of Beck's Lane for 300m, reaching Springer's Hill (NGR ST 6790 4882) and then turning W to reach the junction with Ham Hill. From there, the pipeline route extended SE along Ham Hill for about 350m to NGR ST 6763 4861, about 30m N of Ham Bridge, from where it traversed E water meadows for another 180m to NGR ST 6779 4858.

Three sections of the route (*fig. 1*) identified for observation based on the results of Border Archaeology's previous Archaeological Assessment (BA 2012) were:

1/ NGR ST 6800 4910 - where the pipeline route crossed the western part of the Coal Barton colliery site, at

2/ NGR ST 67690 48715 - where a section of the pipeline route running along Ham Hill directly crossed the former line of the Dorset and Somerset Canal, at.

3/ NGR ST 67640 48620 to ST 67780 48570 - where a section of the pipeline route ran for approximately 150m in very close proximity to the course of an underground tailrace built as part of a substantial mill race in the mid-19th century to supply water power to Ham Corn Mill.

The aim of this programme of Archaeological Observation was to locate and record any archaeological finds, features or deposits within the ground works area and to confirm that no impact on the archaeological resource occurred during the course of the ground works without the implementation of a programme of archaeological recording. This work was carried out in compliance with Bristol Water's *Code of Conduct.*

Copies of this report will be supplied to Bristol Water plc and Steven Membery Esq Senior Historic Environment Officer Somerset County Council.

2.1 Soils and Geology

The predominant soil type in the vicinity of the route consists of pelo-stagnogley soils of the DALE (712a) series, comprising slowly permeable seasonally waterlogged silty and fine loamy soils and some similar soils with only slight seasonal waterlogging; the underlying geology consists of Carboniferous and Jurassic clay and shale (SSEW, 1983).

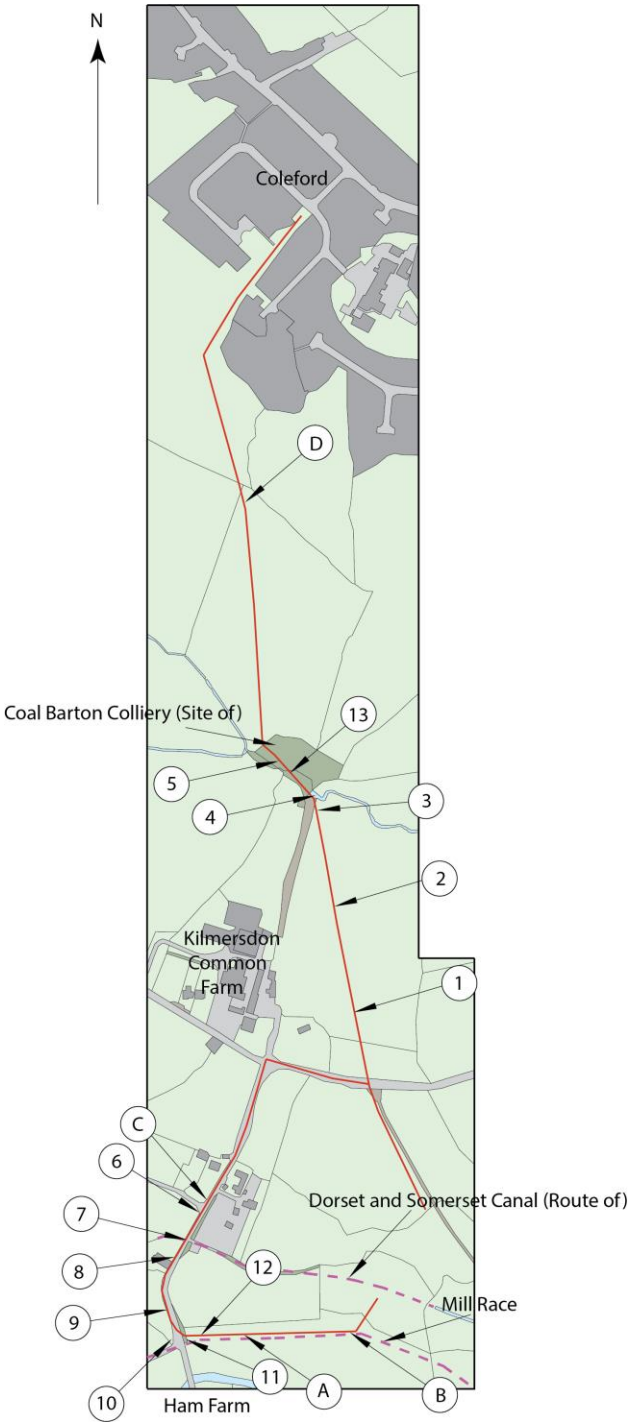

Fig. 1: Plan showing location of observations

3. Brief Historical & Archaeological Background

A very small number of prehistoric sites have been recorded within the wider locality of the route, the nearest being a possible standing stone (The Hurdle Stone) and associated stone alignment in Hurdlestone Wood, approximately 550m SSE of the pipeline route (HER 23740; NGR ST 6769 4804).

The place-name 'Coleford' is usually translated as meaning 'a ford across which coal or charcoal is carried' (Mills, 2003). However, no sites of medieval date have been identified in the immediate locality of the route, although it was considered possible that unrecorded mining features of medieval date might be present in the vicinity of the pipeline.

Evidence of late 18th -early 19th century industrial and transport features have been identified in close proximity to the route in three specific locations:

1/ At NGR ST 6800 4910, at the N end of Beck's Lane approximately 150m NNE of Kilmersdon Common Farm, the pipeline route appeared to cross through the western part of the site of Coal Barton Colliery (HER 23319), a coalmine established in the late 18th or early 19th century (it is first shown on an Ordnance Survey drawing of 1808). The principal colliery buildings (as shown on the 1839 Kilmersdon tithe map) appear to have been located about 100m E of the route.

2/ At NGR ST 67690 48715, a section of the pipeline running NE-SW along Ham Hill crossed the former line of a branch of the late 18th century Dorset and Somerset Canal running from Nettlebridge to Frome (HER 23312).

3/ At NGR ST 67640 48620, opposite the entrance to Ham Mill, the pipeline route left the roadway of Ham Hill and ran ESE through a pasture field roughly parallel to and about 150m S of the line of the Dorset and Somerset Canal. This section of the route appeared to run parallel to, if not directly on, the line of an underground tailrace (the part of a millrace below the water wheel through which the spent water flows) which formed a component of a substantial millrace supplying power to Ham Corn Mill (HER 23697)

Evidence of the tailrace was encountered in the works detailed herein.

4. Methodology

The archaeological programme of work detailed herein was carried out in accordance with recognised sources of professional guidance including *Standard and Guidance for an archaeological watching brief* (IfA 2008), *Standard and Guidance for archaeological excavation* (IfA 2008) and *Management of Research Projects in the Historic Environment* (*MoRPHE*) (EH 2006). Reference is also made to the relevant English Heritage Historic Environment Local Management (HELM) resources. Border Archaeology adheres to the IfA *Code of conduct* (2013) and *Code of approved practice for the regulation of contractual arrangements in field archaeology* (2008) and work was carried out in compliance with Bristol Water's *Code of Conduct*.

The engineering methodology chiefly consisted of directional drilling through the fields, together with pipe-bursting along the roadway, with the excavation of 11 Access Pits (APs) and sections of open-cut trenching (Trench 12 & 13) along the route where necessary. A series of four Test Pits (A-D) were excavated prior to the commencement of the ground works.

Excavations were carried out by a 360° excavator using a toothless grading bucket where possible and were the focus of the observation. Test Pits A to D (*fig. 1*) were examined and recorded archaeologically.

Full written and photographic records were made in accordance with Border Archaeology's Field Recording Manual (BA, 2012). The written record comprised detailed stratigraphic recording using a context numbering system. The photographic record was made using a high-resolution (12 MPX) digital camera, comprising photographs of all excavated contexts and archaeological features and structures. Included in each photograph are appropriate scales and all photographic records have been indexed and cross-referenced to written site records. Details concerning subject and direction of view are maintained in a photographic register, indexed by frame number.

Plans & sections were produced on gridded, archivally stable polyester film at appropriate scales. All drawings were numbered and listed in a drawing register, these drawing numbers being cross-referenced to written site records.

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5. Results

5.1 Coal Barton Colliery (NGR ST 6800 4910) (see *fig. 1*)

The stretch of the route that falls within the area of the former colliery originated on the southern edge of Springer's Hill to the E of the junction with Ham Hill, continued in a northern direction through the fields to the E and N of Kilmersdon Common Farm, running roughly parallel with Beck's Lane for approximately 300m before turning to the NE and crossing the course of a stream for a distance of roughly 100m. Access Pits (APs) 1 to 5 and Trench 13 were excavated within this area. No evidence of structural remains associated with the colliery or any other significant archaeology was encountered in any of these excavations.

Test Pit D

Test pit D was the northernmost of the pits to be dug. It lay some 275m N of the position of Coal Barton Colliery. Three deposits were recorded the Test Pit. The topsoil (401) was a dark brown clay silt, containing moderate stones and grass roots. Beneath it was a greyish-brown silt clay also containing stones (402). The natural clay in the trench (403) was compact and yellow in colour. No deposits of archaeological significance were seen in the test pit which lay outside the colliery and its environs.

AP 1

AP 1 was located approximately 100m N of the existing water main access on Springer's Hill. It measured 3m (N/S) × 1.2m (E/W) and reached a depth of 1m. Prior to the excavation of the pit, a trial-hole measuring 0.9m (N/S) × 1.2m (E/W) was excavated in the same location and immediately backfilled before being incorporated into the pit. The trial-hole was not assigned separate context numbers as the stratigraphic sequence was identical to that of the pit.

The stratigraphic profile consisted of a soft, sterile dark greyish-brown sandy silt topsoil (1000) overlying a mid-greyish-brown sandy silt subsoil (1001) containing occasional small stones. The subsoil overlay (1002) a firm orangey-brown clayey silt with occasional small to medium stones forming a layer of natural silting; in turn, this sealed the natural substrate (1003), a firm mid-buff brown clay with very frequent medium stones.

AP 2

AP 2 lay 100m N of AP 1, measured 4m (N/S) × 1m (E/W) and reached a depth of 1m.

No deposits of archaeological significance were present; deposits recorded were a dark greyish-brown soft sandy silt topsoil, (2000), identical to that seen in AP 1, overlying a sterile mottled light grey and yellow firm clay subsoil (2001) which sealed the natural substrate (2002) a pale grey silty clay.

AP 3

AP 3 was located 100m N of AP 2, measured 3m (N/S) x 1m (E/W) and was 1.2m deep.

The topsoil was a dark greyish-brown soft sandy silt topsoil (3000) similar to that previously encountered in AP 1 and AP 2, but containing rare inclusions of ceramic building material (CBM). Underlying it was (3001), a clean firm orangey-brown silty clay subsoil which sealed the natural substrate. Both (3002) and (3003) were contemporary natural deposits and it is likely that (3002), a compact mid-greyish-blue stone-rich clay, was a lens within (3003), a natural firm mottled greyish-blue and yellow clay with frequent medium stone inclusions.

AP 4

AP 4 lay 5m NW of AP 3, measured 3m (NW/SE) × 1m (NE/SW) and reached a depth of 1m.

There was no significant archaeology present. The topsoil (4000) was similar to that encountered in the previous pits, with occasional medium stones. It overlay a firm, clean mid-yellowish-brown sandy silt subsoil (4001) which, in turn, sealed the natural substrate (4002), a compact sterile mottled yellowish-grey and blue-grey clay.

AP 5

AP 5 was approximately 90m NW and upslope of AP 4 and was intended as a reception pit for the stream crossing, although this was subsequently open-cut (Trench 13). The pit measured 4.1m (N/S) × 2.8m (E/W) and was 2.3m deep.

Plate 1: Re-deposited clay (5001) and brick rubble (5002); view W

Beneath a soft dark greyish-brown sandy silt topsoil (5000) containing occasional charcoal, CBM, modern pottery fragments and small stones, was a firm yellowish-brown clay deposit with moderate small stones (5001) (*Plate 1*). The precise function of this material, a re-deposited natural, is unclear; it is probable that, like the underlying (5002), it was associated with the demolition of the Coal Barton colliery and levelling of the surrounding area. Beneath (5001) was a friable, very dark grey gritty silt (5002) containing frequent charcoal and brick fragments and occasional fragments of coal and slag. A sample taken from (5002) contained clinker, cinder and coal. The alder and bramble seeds found in it were not charred and were thought to be recent intrusions (See *Appendix 1*).

Underlying (5002) was a layer of natural shale and mid-bluish-grey clay (5003) sealing a sterile compact yellowish-brown clay (5004), both of which layers were naturally formed and sealed the sandstone bedrock (5005).

Trench 13

Trench 13 was a stretch of open-cut trenching approximately 90m long between APs 4 and 5, necessitated as a result of the failure of the intended directional drilling. It ran across the course of the stream and resulted in extensive waterlogging. The trench measured 0.8m wide and reached a maximum depth of 2.1m.

Plate 2: Open-cut trenching in colliery area facing ESE

There was no significant archaeology present and the stratigraphic profile seen in AP 4 and AP 5 was present in the trench. At the SE end of the cut, the profile of AP 4 extended for a further 10m, although at this point the subsoil thinned and was not present in the remainder of the trench. The deposits at either end of the trench were seen to slope downwards towards the centre, a result of the waterlogged ground conditions around the course of the stream.

The topsoil (13000) present across the trench was identical to (4000) and (5000) in AP 4 and AP 5, respectively. At the SE end of the trench, the subsoil (13001) was the same as (4001), while the natural clay substrate (13002) was the same as (4002). Throughout the remainder of the trench, the re-deposited clay (13003) was the same as (5001) and the dark grey charcoal and coal-rich layer (13004) was the same as (5002). Natural clays (13005) and (13006) were the same as (5003) and (5004). The sandstone bedrock (13008) = (5005) was present only at the NW end of the trench for a distance of approximately 15m, while, at the base of the trench in the central 65m, a firm sterile mid-greyish-blue clay and shale natural clay was present (13007).

Despite some minor changes in the subsoil and underlying natural clay substrate in this area, the majority of the pits (APs 1 to 4 and the SE end of 13) showed the same stratigraphic sequence. However, within AP 5 and Trench 13, there were several additional layers. These were the result of natural alluvial processes, explaining why they were only present in the locale of the watercourse.

Although no evidence of any structural remains such as shafts or water-management features relating to the colliery were encountered, the charcoal and coal-rich deposits (5002)/ (13004) originated from the colliery site and are likely to represent levelling of the surrounding area following the closure of the colliery and its subsequent demolition.

5.2 Dorset and Somerset Canal (NGR ST 6800 4910)

The pipeline route ran along Ham Hill and at this point crossed the line of the Dorset and Somerset canal, the course of which was preserved by field boundaries and a footpath on either side of the road (see *fig. 1*). Access APs 6, 7 and 8 were excavated within the vicinity of the former course of the canal. No evidence of remains associated with the canal or any other significant archaeology was encountered in any of these excavations.

Test Pit C

The test pit was sited in the lane on Ham Hill, close to 'The Croft' and to the N of the canal crossing.

No deposits of archaeological significance were present in the pit. The existing tarmac road surface (301), a total of 0.10m deep, sealed a compacted mid dark greyish-brown clay silt (305) containing occasional stones, the fill of the cut for the existing water main [304]. The water main cut deposit (302), a 0.25m-deep layer of compacted aggregate, forming the sub-base for the road. The natural yellowish-brown clay (303) with iron staining and blackish patches, both probably resulting from waterlogging, was present at a depth of some 0.80m beneath the existing surface.

AP 6

AP 6 was located on the northern side of Ham Hill, approximately 28m NE of the point where the road crosses the public footpath that follows the line of the canal. The pit was partially in the road and partially in the grassed verge; it measured 3.5m (NE/SW) × 0.7m (NW/SE) and reached a depth of 1.3m.

On the northern side of the pit was a soft mid-greyish-brown sandy silt topsoil with occasional small to medium stone inclusions (6000). Beneath it was (6001), a firm mid-brown silt subsoil with moderate small to medium stone inclusions that overlay a backfill associated with the existing main (6002), a friable mid-greyish-brown gritty silt with frequent stone and gravel inclusions. This backfill sealed the natural substrate (6003), a firm yellow clay with moderate small stone inclusions. On the southern side of the pit, contexts (6000) and (6001) were not present, being replaced by the tarmac road surface (6004) overlying associated levelling material (6005).

AP 7

AP 7 was located on the northern side of Ham Hill, approximately 14m SW of AP 6 and 13m NE of the public footpath. The pit lay partially in the road and partially on the grassed verge. It measured 1.1m (NE/SW) × 0.7m (NW/SE) and reached a depth of 0.7m. On the northern side of the pit, the same sequence of deposits was present as in AP 6. The topsoil (7000) was the same as (6000), the subsoil (7001) was the same as (6001) and the natural clay (7002) the same as (6002). On the southern side of the pit, these deposits were truncated by [7003], the cut of the existing main. This cut was backfilled with (7004), a firm mid-grey sandy silt with frequent small stone and gravel inclusions. Sealing (7004) was the tarmac road surface (7005) and a tarmac repair associated with the insertion of the existing main (7006).

AP 8

AP 8 was located on the northern side of Ham Hill, approximately 12m SW of the public footpath. The pit was situated partially in the road and partially in the grassed verge; it measured 0.85m (NW/SE) × 0.55m (NE/SW) × 1.1m.

The same sequence of deposits was present as in AP 6 and AP 7, with topsoil (8000) the same as (6000), subsoil (8001) the same as (6001) and the natural clay (8002) the same as (6002). On the southern side of the pit, these deposits were truncated by service cut [8003], the same as [7003] and containing the same sequence of deposits. The fill (8004) was the same as (7004), (8005) was the same as (7005) and (8006) was the same as (7006).

All the pits in the vicinity of the Dorset and Somerset Canal contained the same natural clays and overlying silty sub-soils present in the area of the Coal Barton Colliery, although with the addition of the tarmac and aggregate deposits associated with the modern road surface of Ham Hill.

5.3 Ham Corn Mill (NGR ST 67640 48620 to ST 67780 48570) (See *fig. 1*)

Further SW on Ham Hill, a section of approximately 150m of the pipeline route ran in close proximity to the course of an underground tailrace supplying water power to Ham Corn Mill. Test Pits A and B, Access Pits 9 to 11 and Trench 12 were excavated along, and in the immediate vicinity of, this alignment.

Test Pit A

Test Pit A was located some 50m E of the field boundary, close to the presumed line of the millrace (*fig. 1*). It was aligned E/W and was excavated to a depth of some 1.20m.

No deposits of archaeological significance were present in Test Pit A. Two deposits were recorded: the topsoil (101), a fairly clean mid to dark brown silt clay approximately 0.25m thick, with no inclusions other than tree roots. Beneath it was (102), a yellowish-brown clay, natural in origin, with frequent dark patches thought to have been organic or a result of waterlogging.

Test Pit B

Test Pit B was aligned E/W and was excavated to a depth of 1.30m. It lay approximately 120m E of Test Pit A in close proximity to the presumed line of the millrace for Ham Mill. The topsoil (201) was a mid-brown silt clay 0.25m deep, with rooting, similar to topsoil encountered in Test Pit A. Beneath it, (202) was a dark greyish-brown clay silt with frequent fragments of sedimentary rock, apparently the result of disturbance and dumping. No structural remains were present in this material and no finds were recovered from it. However, it cannot be ruled out that the stone rubble was associated with the construction of the millrace. It sealed the natural clay (203).

AP 9

AP 9 was located approximately 19.5m N of the access road to Ham Corn Mill and was excavated after directional drilling encountered an unexpected solid area, which further work revealed to be the millrace. Based on the records of the Somerset HER, consulted for the Archaeological Assessment (BA 2012), the millrace was expected to be encountered in Trench 12; however, its actual location, 15m further N than recorded, necessitated the excavation of this pit. The pit measured 4.6m (N/S) × 0.7m (E/W) × 1.45m and contained an extant and still operating section of the stone-built millrace (9007).

The latest deposit comprised a soft mid-greyish-brown sandy silt topsoil with occasional small stone inclusions (9000), which overlay (9001), the upper fill in [9005], the construction cut for the millrace. Fill (9001) was a loose mid-grey gravelly clay with frequent inclusions of small stones and gravel, occasional charcoal flecks and CBM fragments. On its southern side, it overlay (9004) a loose dark grey gravelly clay with frequent large and small stones. The northern side of the cut had been backfilled with (9002), a firm dark greyish-brown clayey silt with moderate small stones and charcoal inclusions that overlay (9003), a thin lens of firm mid-orange-brown clay with occasional small stones. Only the southern side was the construction cut [9005] visible; it cut (9006) a probable hill-wash deposit of firm dark grey silt with occasional medium stones. The natural clay substrate was not encountered in this pit.

The millrace (9007) was constructed from rough-hewn stones bonded with a white mortar, had a maximum width of 0.7m and was approximately 1.7m deep. Due to the fact that the structure was still in use, it could only be revealed in plan and no further investigations could be made (*Plate 3*).

Plate 3: Millrace (9007) in AP 9, view S

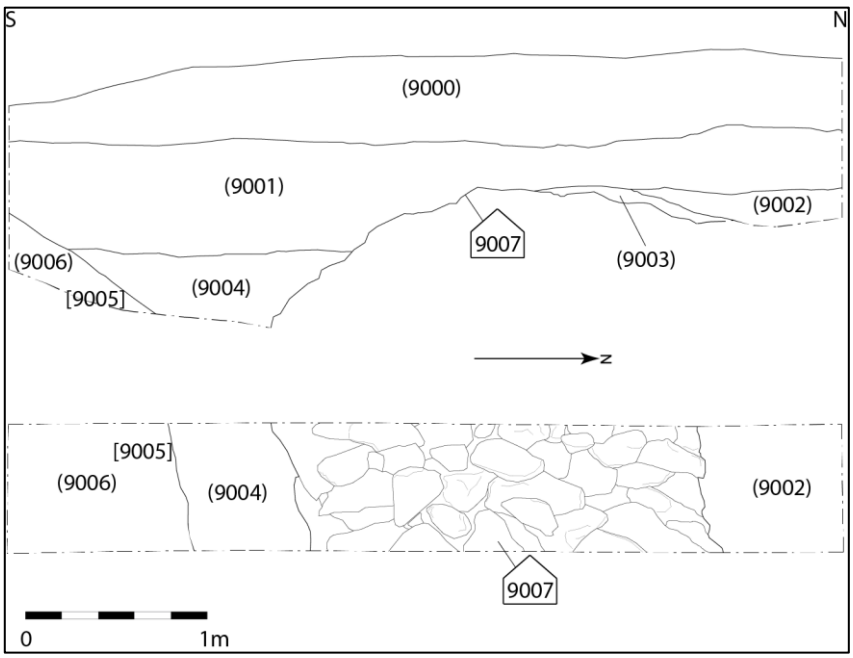

Fig. 2: W Section and plan of the millrace (9007)

AP 10

AP 10 was located on the northern side of the access road to Ham Corn Mill. The pit measured 4m (N/S) × 0.7m (E/W) × 1.5m and contained a modern brick drain.

The topsoil (10001) was the same as (9000) in AP 9 and overlay a soft light grey silt subsoil with frequent small stones (10002). Cutting the subsoil was (10005), a brick drain structure with an elevated metal access that had been in-filled with concrete. The drain contained two fills: (10003), a re-deposited natural composed of firm mid-yellowish brown silty clay with occasional small stones which overlay (10004), a friable dark grey gravelly silt.

AP 11

AP 11 was located opposite AP 10 within the field access, measured 4m (E/W) x 0.7m (N/S) × 1.2m.

There was no significant archaeology present and the stratigraphic profile comprised (11001), a soft mid-greyish brown topsoil with moderate rubble, gravel and CBM inclusions. Underlying it was disturbed subsoil (11002) consisting of soft mid-brown clayey silt with occasional large stones and brick inclusions, as well as a wooden fence post. The subsoil sealed a redeposited firm dark yellowish-brown natural clay with moderate rubble and brick inclusions and charcoal flecks (11003).

All deposits in this pit were heavily disturbed and consistent with the process of in-filling a ditch. Although no cut for a ditch was evident, the location of AP 11 within a field access indicates that this entry point was originally a part of the boundary (demarcated by a ditch and hedgerow) and although it is unknown when the access was created, the presence of modern material (brick, fence posts etc.) within the deposits would suggest it was fairly recent.

Trench 12

Trench 12 was a stretch of open-cut trenching to the E of AP 11. It was positioned based on recorded evidence that the millrace supplying water to Ham Corn Mill would be present. However, the pit contained no significant archaeology and the millrace was subsequently encountered in AP 9.

The trench measured 15m (N/S) x 0.7m (E/W) × 1.7m. The topsoil (12001) was similar to that in AP 11 with inclusions of rubble, brick and CBM associated with the in-filling of the access into the field. Underlying it was (12002), a firm mid-greyish-brown clayey silt subsoil with occasional stones. This subsoil sealed a sterile firm mottled mid-yellowish-brown clay (12003) that, in turn, sealed (12004), a sterile firm mid-greyish-brown clay, both of which were thin layers of naturally formed clays. Underlying (12004) was the natural sandstone bedrock (12005).

All the pits on the alignment of the Ham Corn Mill tailrace comprised the same natural clays and overlying silty sub-soils present across the rest of the site.

6. Conclusions

Whilst the Archaeological Assessment identified three separate areas of potential for encountering industrial and transport features of late 18th-early 19th century date, little evidence for these was uncovered during the observation. These three areas are discussed individually below.

6.1 Coal Barton Colliery

Although the 1839 Kilmersdon tithe map revealed that the principal buildings of the Coal Barton Colliery were located about 100m E of the pipeline route and had been demolished by 1888 (as shown on the OS 1st edition 25 and 6 inch maps of 1886 and 1888), the site had not been fully surveyed so there was the potential for encountering structural remains associated with the colliery in the area N of Beck's Lane.

Five pits (APs 1 to 5) and a stretch of open-cut trenching (Trench 13) were excavated within the bounds of the former colliery site but no structural evidence was encountered within them. Whilst most of these pits showed a sequence of natural clay substrates and overlying topsoil/subsoil, a thin layer of coal- and charcoal-rich material (5002)/(13004) was present in AP 5 and Trench 13. This material probably originated from the colliery and is likely to have been spread across the site, either during the demolition of the colliery or subsequent establishment of the woodland known as the Coal Barton Plantation between the late 1850s and 1888.

6.2 Dorset and Somerset Canal

Despite its course being preserved by field boundaries and a footpath, as well as several intact sections (towards Bennett's Hill Farm to the SE and within Coleford village to the E), no remains of the branch of the Dorset and Somerset Canal were present in any of the three pits within the vicinity (APs 6, 7 and 8). There are two possible reasons for this lack of surviving evidence.

First, it is possible that the section of the canal crossing Ham Hill may not have been fully completed before work on the construction of the branch ceased in 1803. The financial difficulties suffered by the Dorset and Somerset Canal Company meant that only 13km of the 17km total branch length were ever completed (Clew, 1971). Although there is no documentary evidence to indicate which these sections were, historic mapping could be interpreted as showing that the Ham Hill crossing was one.

The earliest map depicting the canal is an 1808 Ordnance Survey drawing of Bath and the surrounding district by E. Crocker (at a scale of 2 inches to the mile), although this has insufficient detail to determine whether the construction had been completed at the road crossing. On the more detailed Kilmersdon tithe map and apportionment of 1839, the line of the Canal appears to stop approximately 20m SE of Ham Hill (despite the towpath continuing and crossing the road). Whilst it may indicate that the canal had not been constructed at this point, it is also possible that this section ran through a tunnel to the opposite side of the road or it had already been backfilled.

Another possible explanation is that the Access Pits may have been located outside the extent of the canal. APs 7 and 8 were the closest to the footpath (situated on the line of the canal) and these were 13m to the NE and 12m to the SW, respectively. It is not known whether the Ham Hill crossing was an overbridge or a tunnel and there are no records to give an indication of the width of the canal. However, the majority of UK canals and waterways constructed in the 18th and 19th centuries are between widths of 7ft and 20ft (2.1m and 6.9m) meaning that the Dorset and Somerset canal and its branch are unlikely to exceed widths of 20ft. Although it is unclear what form of road-crossing was in use, given the 12-13m clearance on either side of the line of then canal, it is highly plausible that the backfilled remains are still present directly beneath the public footpath.

6.3 Ham Corn Mill

Approximately 150m S of the line of the Dorset and Somerset canal, a section of the pipeline ran parallel to, or directly on, the line of the underground tailrace which formed part of the substantial Ham Corn Mill millrace. The line of the tailrace was identified in AP 9.

The tailrace ran underground in a roughly ESE direction for about 0.5km from the mill buildings to the Mells River near Hittits Bridge (S of Bennett's Hill Farm). It was initially believed (based upon the study of historic mapping and documentary evidence) that it would be encountered in the fields roughly opposite the mill access road from Ham Hill. The OS 1st edition 25 and 6 inch maps of 1886 and 1888 show a footpath running E of the mill, believed to roughly correspond to the line of the tailrace.

Trench 12 was situated to expose the tailrace but no evidence for it was present. It was during directional drilling and the subsequent excavation of AP 9 that the tailrace (9007) was revealed, approximately 15m further N than originally expected. The tailrace was constructed from medium to large rough-hewn bonded stones and survived in a good (still functioning) condition. An earthwork bank situated to the W in the grounds of the Ham Corn Mill, on the same alignment as tailrace (9007), also appears to be a part of the mill's water-management system, which suggests that the tailrace is highly likely to survive in its entirety.

7. Copyright

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8.1 Cartography

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OS 1st edition 25 inch map – 1886
OS 1st edition 6 inch map – 1888
OS 2nd edition 6 inch map – 1904
OS 3rd edition 6 inch map – 1931
OS provisional edition 6 inch map – 1961

9. Context Register

TEST PIT A

LOCATION/NGR	CONTEXT	DESCRIPTION	INTERPRETATION
ST 67702 48602	(101)	Soft, dark greyish-brown sandy silt; tree and grass roots, otherwise no inclusions; extends pit wide at average thickness of 0.30m. Overlies (102)	Topsoil
	(102)	Firm, yellow brown clay with dark grey brown patches. Extends to base of trench Underlies (101)	Natural subsoil

TEST PIT B

LOCATION/NGR	CONTEXT	DESCRIPTION	INTERPRETATION
ST 67790 48569	(201)	Mid dark brown silt clay with moderate stones and rooting. 0.25m thick trench wide. Overlies (202)	Topsoil
	(202)	Dark grey brown clay silt with frequent sedimentary rock 0.40m thick. Overlies (203).	Post-medieval dumping
	(203)	Dark brown clay	Natural clay

TEST PIT C

LOCATION/NGR	CONTEXT	DESCRIPTION	INTERPRETATION
ST 67725 48747	(301)	Tarmac and road stone 0.12m thick. Overlies (302)	Existing road surface
	(302)	Aggregate 0.25m thick Cut by [304]	Sub-base for road
	(303)	Yellow brown clay >0.50m thick, extends beneath base of trench	Natural clay
	[304]	Steep sided cut extending beneath depth of test pit. Cuts aggregate (302), filled by (305).	Cut for existing main
	(305)	Mid-dark grey brown clay silt with occasional rounded stones. Fill of [304], underlies (301)	Fill of mains trench

TEST PIT D

LOCATION/NGR	CONTEXT	DESCRIPTION	INTERPRETATION
ST 68075 49421	(401)	Mid dark brown silt clay with moderate stones and rooting. 0.25m thick trench wide. Overlies (402)	Topsoil

	(402)	Grey brown silt clay with moderate stones 0.25m thick trench wide Overlies (403)	Post-medieval dumping
	(203)	Yellow clay >0.75m thick, extending beyond base of trench	Natural clay

AP 1

LOCATION/NGR	CONTEXT	DESCRIPTION	INTERPRETATION
ST 67959 48877	(1000)	Soft, dark greyish-brown sandy silt; no inclusions; extends pit wide at average thickness of 0.24m. Overlies (1001) Same as (2000) (3000) (4000) (5000) (13000)	Topsoil
	(1001)	Firm, mid-greyish brown sandy silt; occasional small stones; extends pit-wide at average thickness of 0.16m; at a depth of 0.24m. Underlies (1000) Overlies (1002)	Subsoil
	(1002)	Firm, mid-orange brown clayey silt; occasional small-medium stones; extends pit wide at average thickness of 0.31m; at a depth of 0.39m. Underlies (1001) Overlies (1003)	Silt layer
	(1003)	Firm, light yellow brown clay; frequent medium stones; extends pit wide at an average thickness of 0.3m; at a depth of 0.7m. Underlies (1002)	Natural substrate

AP 2

LOCATION/NGR	CONTEXT	DESCRIPTION	INTERPRETATION
ST 67981 48969	(2000)	Soft, dark greyish-brown sandy silt; no inclusions; extends pit wide at average thickness of 0.35m. Overlies (2001) Same as (1000) (3000) (4000) (5000) (13000)	Topsoil
	(2001)	Firm, mid-yellow and pale grey mottled clay; no inclusions; extends pit wide at average thickness of 0.4m; at depth of 0.35m. Underlies (2000) Overlies (2002)	Subsoil
	(2002)	Firm, light grey silty clay; no inclusions; extends pit wide at average thickness of 0.25m; at depth of 0.75m. Underlies (2001)	Natural substrate

AP 3

LOCATION/NGR	CONTEXT	DESCRIPTION	INTERPRETATION
ST 68015 49070	(3000)	Soft, dark greyish-brown sandy silt; occasional CBM inclusions; extends pit wide at average thickness of 0.27m. Overlies (3001) Same as (1000) (2000) (4000) (5000) (13000)	Topsoil
	(3001)	Firm, mid-orange brown silty clay; no inclusions; extends pit wide at average thickness of 0.63m; at depth of 0.27m. Underlies (3000) Overlies (3002)	Subsoil
	(3002)	Firm, mid-greyish blue clay and shale; no inclusions; visibly extends 1.2m (E/W) x 1m (N/S) at an average thickness of 0.35m; at depth of 0.9m. Underlies (3001) Part of (3003)	Natural shale lens
	(3003)	Firm mid-grey blue and yellow mottled clay; frequent medium stone inclusions; extends pit wide at average thickness of 0.3m; at depth of 0.9m. Underlies (3001) Includes (3002)	Natural substrate

AP 4

LOCATION/NGR	CONTEXT	DESCRIPTION	INTERPRETATION
ST 68009 49099	(4000)	Soft, dark greyish-brown sandy silt; occasional medium stone inclusions; extends pit wide at average thickness of 0.33m. Overlies (4001) Same as (1000) (2000) (3000) (5000) (13000)	Topsoil
	(4001)	Firm, mid-yellowish brown sandy silt; no inclusions; extends pit wide at an average thickness of 0.32m; at depth of 0.33m. Underlies (4000) Overlies (4002) Same as (13001)	Subsoil
	(4002)	Compact, mid-yellowish grey and bluish grey mottled clay; no inclusions; extends pit wide at an average thickness of 0.35m; at depth of 0.65m. Underlies (4001) Same as (13002)	Natural substrate

AP 5

LOCATION/NGR	CONTEXT	DESCRIPTION	INTERPRETATION
ST 67993 49132	(5000)	Soft, dark greyish-brown sandy silt; occasional CBM, charcoal and small stone inclusions; extends pit wide at average thickness of 0.34m. Overlies (5001) Same as (1000) (2000) (4000) (3000) (13000)	Topsoil
	(5001)	Firm, mid-yellowish brown clay; moderate small stone inclusions; extends pit wide at an average thickness of 0.1m; at depth of 0.34m. Underlies (5000) Overlies (5002) Same as (13003)	Re-deposited natural forming levelling deposit
	(5002)	Friable, dark grey and black mottled gritty silt; frequent charcoal, coal and brick fragments, occasional slag inclusions; extends pit wide at an average thickness of 0.08m; at depth of 0.44m. Underlies (5001) Overlies (5003) Same as (13004)	Colliery waste forming levelling deposit
	(5003)	Firm, mid-bluish grey clay and shale; no inclusions; extends pit wide at an average thickness of 0.33m; at depth of 0.52m. Underlies (5002) Overlies (5004) Same as (13005)	Natural clay and shale layer
	(5004)	Compact, mid-yellowish brown clay; no inclusions; extends pit wide at an average thickness of 0.65m; at depth of 0.85m. Underlies (5003) Overlies (5005) Same as (13006)	Natural substrate
	(5005)	Compact, mid-yellowish brown sandstone; no inclusions; extends pit wide at an average thickness of 0.8m; at depth of 1.5m. Underlies (5004) Same as (13008)	Natural bedrock

AP 6

LOCATION/NGR	CONTEXT	DESCRIPTION	INTERPRETATION
ST 67710 48745	(6000)	Soft, mid-greyish brown sandy silt; occasional small- medium stone inclusions; visibly extends 3.05m (NE/SW) x 0.7m (NW/SE) at an average thickness of 0.14m. Overlies (6001) Same as (7000) (8000)	Topsoil
	(6001)	Firm, light greyish-brown clayey silt;	Subsoil

		moderate small- medium stone inclusions; visibly extends 3.05m (NE/SW) x 0.7m (NW/SE) at an average thickness of 0.14m; at depth of 0.14. Underlies (6000) Overlies (6002) Same as (7001) (8001)	
	(6002)	Friable, mid-greyish brown gritty silt; frequent small stone inclusions; visibly extends pit wide at an average thickness of 0.26m; at depth of 0.28m. Underlies (6001)(6004) Overlies (6003) Same as (7004) (8004)	Backfill of water main
	(6003)	Firm, mid yellow clay; moderate small stones; extends pit wide at an average thickness of 0.76m; at depth of 0.54m. Underlies (6002) Same as (7002) (8002)	Natural substrate
	(6004)	Compact, black tarmac; no inclusions; visibly extends 0.7m (NW/SE) x 0.45m (NE/SW) at an average thickness of 0.08m; at depth of 0.12m. Underlies (6005) Overlies (6002) Same as (7005) (8005)	Tarmac road surface
	(6005)	Compact, black tarmac; no inclusions; visibly extends 0.7m (NW/SE) x 0.48m (NE/SW) at an average thickness of 0.12m. Overlies (6004) Same as (7006) (8006)	Tarmac repair

TRENCH7

LOCATION/NGR	CONTEXT	DESCRIPTION	INTERPRETATION
ST 67684 48726	(7000)	Soft, mid-greyish brown sandy silt; occasional small- medium stone inclusions; visibly extends 0.7m (NW/SE) 0.63m (NE/SW) at an average thickness of 0.16m. Overlies (7001) Cut by [7003] Same as (6000) (8000)	Topsoil
	(7001)	Firm, light greyish brown clayey silt; moderate small- medium stone inclusions; visibly extends 0.7m (NW/SE) x 0.63m (NE/SW) at an average thickness of 0.18m; at depth of 0.16. Underlies (7000) Overlies (7002) Cut by [7003] Same as (6001) (8001)	Subsoil
	(7002)	Firm, mid yellow clay; moderate small stones; visibly extends 0.7m (NW/SE) x	Natural substrate

		0.63m (NE/SW) at an average thickness of 0.36m; at depth of 0.34. Underlies (7001) Cut by [7003] Same as (6003) (8002)	
	[7003]	Linear cut; visibly extends 0.7m (NW/SE) × 0.49m (NE/SW) with a depth of 0.7m; break of slope sharp; sides steep; base not visible; orientation NE/SW. Cuts (7000) (7001) (7002) Filled by (7004) (7005) (7006)	Service trench
	(7004)	Friable, mid-greyish brown gritty silt; frequent small stone inclusions; visibly extends 0.7m (NW/SE) × 0.49m (NE/SW) with a depth of 0.7m; at depth of 0.2m. Underlies (7005) Fill of [7003] Same as (6002) (8004)	Backfill of water main cut [7003]
	(7005)	Compact, black tarmac; no inclusions; visibly extends 0.7m (NW/SE) x 0.45m (NE/SW) at an average thickness of 0.08m; at depth of 0.12m. Underlies (7006) Overlies (7004) Fill of [7003] Same as (6004) (8005)	Tarmac road surface
	(7006)	Compact, black tarmac; no inclusions; visibly extends 0.7m (NW/SE) x 0.48m (NE/SW) at an average thickness of 0.12m. Overlies (7005) Fill of [7003] Same as (6005) (8006)	Tarmac repair

AP 8

LOCATION/NGR	CONTEXT	DESCRIPTION	INTERPRETATION
ST 67669 48714	(8000)	Soft, mid-greyish brown sandy silt; occasional small- medium stone inclusions; visibly extends 0.85m (NW/SE) 0.55m (NE/SW) at an average thickness of 0.08m. Overlies (8001) Cut by [8003] Same as (6000) (7000)	Topsoil
	(8001)	Firm, light greyish brown clayey silt; moderate small- medium stone inclusions; visibly extends 0.85m (NW/SE) x 0.55m (NE/SW) at an average thickness of 0.21m; at depth of 0.08. Underlies (8000) Overlies (8002) Cut by [8003] Same as (6001) (7001)	Subsoil
	(8002)	Firm, mid yellow clay; moderate small stones; visibly extends 0.85m (NW/SE) x 0.55m (NE/SW) at an average	Natural substrate

		thickness of 0.78m; at depth of 0.29. Underlies (8001) Cut by [8003] Same as (6003) (7002)	
	[8003]	Linear cut; visibly extends 0.65m (NW/SE) × 0.55m (NE/SW) with a depth of 1.07m; break of slope sharp; sides steep; base not visible; orientation NE/SW. Cuts (8000) (8001) (8002) Filled by (8004) (8005) (8006)	Service trench
	(8004)	Friable, mid-greyish brown gritty silt; frequent small stone inclusions; visibly extends 0.65m (NW/SE) × 0.55m (NE/SW) with a depth of 0.91m; at depth of 0.21m. Underlies (8005) Fill of [8003] Same as (6002) (7004)	Backfill of water main cut [8003]
	(8005)	Compact, black tarmac; no inclusions; visibly extends 0.65m (NW/SE) x 0.55m (NE/SW) at an average thickness of 0.09m; at depth of 0.12m. Underlies (8006) Overlies (8004) Fill of [8003] Same as (6004) (7005)	Tarmac road surface
	(8006)	Compact, black tarmac; no inclusions; visibly extends 0.65m (NW/SE) x 0.55m (NE/SW) at an average thickness of 0.12m. Overlies (8005) Fill of [8003] Same as (6005) (7006)	Tarmac repair

AP 9

LOCATION	CONTEXT	DESCRIPTION	INTERPRETATION
ST 67629 48650	(9000)	Soft, mid-greyish brown sandy silt; occasional small stones; extends pit wide at an average thickness of 0.4m. Overlies (9001) Same as (10001)	Topsoil
	(9001)	Soft, mid-grey silt and gravel; frequent small stones, occasional charcoal and CBM inclusions; extends pit wide at an average thickness of 0.64m; at depth of 0.4m. Underlies (9000) Overlies (9002) (9004) (9006) 9007 Fill of [9005]	Upper backfill of [9005]
	(9002)	Firm, dark greyish brown clayey silt; moderate small stone, occasional charcoal inclusions; visibly extends 1.16m (N/S) x 0.7m (E/W) at an average thickness of 0.2m; at depth of 1.04m. Underlies (9001) Butts (9003) Fill of [9005]	Backfill of [9005]

	(9003)	Firm, mid orange brown clay; occasional small stone inclusions; visibly extends 1m (N/S) x 0.7m (E/W) at an average thickness of 0.09m; at depth of 1.04m. Underlies (9002) Butts 9007 Fill of [9005]	Re-deposited clay forming backfill of [9005]
	(9004)	Loose, dark grey silt and gravel; frequent large stone and moderate small stone inclusions; visibly extends 1.54m (N/S) x 0.7m (E/W) at an average thickness of 0.42m; at depth of 1.1m. Underlies (9001) Butts 9007 Fill of [9005]	Backfill of [9005]
	[9005]	Linear cut; visibly extends 4.6m (N/S) × 0.7m (E/W) with a depth of 0.58m; break of slope unknown; sides moderate; base not visible; orientation E/W. Cuts (9006) Filled by (9001) (9002) (9003) (9004) (9006) 9007	Construction cut for 9007
	(9006)	Firm, dark grey silt; occasional medium stone inclusions; visibly extends 0.8m (N/S) x0.7m (E/W) at an average thickness of 0.56m; at depth of 1m; Underlies (9001) Cut by [9005]	Natural silting layer
	9007	Rough-hewn stone rubble; varies 0.1m- 0.5m; light chalk mortar bond with charcoal inclusion; visibly extends 2.4m (N/S) x 0.7m (E/W) at an average thickness of 1.7m; at depth of 1.04m. Underlies (9001) Butted by (9003) (9004) Fill of [9005]	Tailrace

AP 10

LOCATION	CONTEXT	DESCRIPTION	INTERPRETATION
ST 67626 48623	(10001)	Soft, mid-greyish brown sandy silt; occasional small stones; extends pit wide at an average thickness of 0.73m. Overlies (10002) Same as (9000)	Topsoil
	(10002)	Soft, light grey silt; frequent small stone inclusions; extends pit wide at an average thickness of 0.12m; at depth of 0.73m. Underlies (10001) Butts 10005	Subsoil
	(10003)	Firm, mid-yellowish brown silty clay; occasional small stone inclusions; visibly extends 3.5m (N/S) x 0.45m	Re-deposited natural clay forming upper backfill of drain 10005

		(E/W) at an average thickness of 0.18m; at depth of 0.85m Underlies (10002) Overlies (10004) Fill of 10005	
	(10004)	Friable, dark grey gritty silt; frequent gravel inclusions; visibly extends 3.5m (N/S) x 0.45m (E/W) at an average thickness of 0.47m; at depth of 1.03m. Underlies (10003) Fill of 10005	Lower backfill of drain 10005
	10005	Bricks; average 0.23m x 0.10m x 0.6m; mortar bonding; visibly extends 3.5m (N/S) x 0.25m (E/W) at an average thickness of 1.25m; at depth of 0.25m. Underlies (10001) Butted by (10002) Filled by (10003) (10004)	Brick drain

AP 11

LOCATION	CONTEXT	DESCRIPTION	INTERPRETATION
ST 67644 48613	(11001)	Soft, mid-greyish brown silt; moderate rubble, CBM and gravel inclusions; extends pit wide at an average thickness of 0.25m. Overlies (11002)	Re-deposited topsoil
	(11002)	Soft, mid brown clayey silt; occasional large stone inclusions and a wooden fence post; extends pit wide at an average thickness of 0.35m; at depth of 0.25m. Underlies (11001) Overlies (11003)	Re-deposited subsoil
	(11003)	Firm, dark brownish yellow clay; frequent charcoal, moderate rubble and brick inclusions; extends pit wide at an average thickness of 0.6m; at depth of 0.6m. Underlies (11002)	Re-deposited natural substrate

Trench 12

LOCATION	CONTEXT	DESCRIPTION	INTERPRETATION
ST 67655 48620	(12001)	Soft, mid-grey sandy silt; occasional small stone, rubble, tile and brick inclusions; extends pit wide at an average thickness of 0.3m. Overlies (12002)	Disturbed topsoil
	(12002)	Firm, mid-greyish brown clayey silt; occasional sandstone inclusions; extends pit wide at an average thickness of 0.44m; at depth of 0.3m. Underlies (12001) Overlies (12003)	Subsoil

	(12003)	Firm, mid-yellow and brown mottled clay; no inclusions; extends pit wide at an average thickness of 0.26m; at depth of 0.74m. Underlies (12002) Overlies (12004)	Natural clay layer
	(12004)	Firm, mid-greyish brown clay; no inclusions; extends pit wide at an average thickness of 0.3m; at depth of 1m. Underlies (12003) Overlies (12005)	Natural Substrate
	(12005)	Compact, mid-yellowish brown sandstone; no inclusions; extends pit wide at an average thickness of 0.4m; at depth of 1.3m. Underlies (12004)	Natural bedrock

TRENCH 13

LOCATION	CONTEXT	DESCRIPTION	INTERPRETATION
	(13000)	Soft, dark greyish-brown sandy silt; occasional medium stone inclusions; extends pit wide at average thickness of 0.3m. Overlies (13001) (13003) (13005) Same as (1000) (2000) (3000) (4000) (5000)	Topsoil
	(13001)	Firm, mid-yellowish brown sandy silt; no inclusions; visibly extends 10m (NW/SE) x 0.8m (NE/SW) at an average thickness of 0.35m; at depth of 0.3m. Underlies (13000) Overlies (13002) (13004) Same as (4001)	Subsoil
	(13002)	Compact, mid-yellowish grey and bluish grey mottled clay; no inclusions; visibly extends 10m (NW/SE) x 0.8m (NE/SW) at an average thickness of 0.5m; at depth of 0.65m. Underlies (13001) Same as (4002)	Natural substrate
	(13003)	Firm, mid-yellowish brown clay; moderate small stone inclusions; visibly extends 15m (NW/SE) x 0.8m (NE/SW) at an average thickness of 0.1m; at depth of 0.3m. Underlies (13000) Overlies (13004) Same as (5001)	Re-deposited natural forming levelling deposit
	(13004)	Friable, dark grey and black mottled gritty silt; frequent charcoal, coal and brick fragments, occasional slag inclusions; visibly extends 80m (NW/SE) x 0.1m (NE/SW); at depth of	Colliery waste forming levelling layer

		0.3m. Underlies (13000) (13001) (13003) Overlies (13005) Same as (5002)	
	(13005)	Firm, mid-bluish grey clay and shale; no inclusions; visibly extends 80m (NW/SE) x 0.8m (NE/SW) at an average thickness of 0.35m; at depth of 0.4m. Underlies (13004) Overlies (13006) Same as (5003)	Natural clay and shale layer
	(13006)	Compact, mid-yellowish brown clay; no inclusions; visibly extends 80m (NW/SE) x 0.8m (NE/SW) at an average thickness of 0.75m; at depth of 0.75m. Underlies (13005) Overlies (13007) (13008) Same as (5004)	Natural substrate
	(13007)	Firm, mid-greyish blue clay; no inclusions; visibly extends 80m (NW/SE) x 0.8m (NE/SW) at an average thickness of 0.5m; at depth of 1.5m. Underlies (13006) Overlies (13008)	Natural substrate
	(13008)	Compact, mid-yellowish brown sandstone; no inclusions; visibly extends 15m (NW/SE) x 0.8m (NE/SW) at an average thickness of 0.7m; at depth of 1.5m. Underlies (13007) Same as (5005)	Natural bedrock

10. Appendix 1 Palaeoenvironmental Report

Archaeological Services
University of Durham

10.1 Summary

The project

This report presents the results of palaeoenvironmental assessment of a single bulk sample taken during archaeological works at Springer's Hill Coleford Somerset.

The works were commissioned by Border Archaeology and conducted by Archaeological Services Durham University.

Results

The assessment provides little information concerning the age or nature of the fill due to the absence of palaeoenvironmental remains. The sample comprised abundant quantities of clinker/cinder and a number of burnt and cracked stones.

Recommendations

No further analysis is recommended on the sample due to the absence of charred or waterlogged palaeoenvironmental remains.

The flot should be retained as part of the physical archive of the site. The residue was discarded following examination.

10.2 Project background

Location and background

Archaeological works were conducted by Border Archaeology at Springer's Hill, Coleford, Somerset. This report presents the results of palaeoenvironmental assessment of a single bulk sample taken from colliery waste that formed a levelling deposit.

Objective

The objective of the scheme of works was to assess the palaeoenvironmental potential of the sample, establish the presence of suitable radiocarbon dating material, and provide the client with appropriate recommendations.

Dates

The sample was received by Archaeological Services on 11th July 2013. Assessment and report preparation was conducted between 19th July and 20th August 2013.

Personnel

Assessment and report preparation was conducted by Dr Carrie Drew. Sample processing was by Cameron Clegg.

Archive

The site code is SHC13, for Springer Hill Coleford 2013. The flot is currently held in the Environmental Laboratory at Archaeological Services Durham University awaiting collection.

10.3 Methods

The bulk sample was manually floated and sieved through a 500μm mesh. The residue was examined for shells, fruitstones, nutshells, charcoal, small bones, pottery, flint, glass and industrial residues, and was scanned using a magnet for ferrous fragments. The flot was examined at up to x60 magnification for charred and waterlogged botanical remains using a Leica MZ6 stereomicroscope. Identification of these was undertaken by comparison with modern reference material held in the Environmental Laboratory at Archaeological Services Durham University. Plant nomenclature follows Stace (1997). Habitat classifications follow Preston *et al.* (2002).

The works were undertaken in accordance with the palaeoenvironmental research aims and objectives outlined in regional resource assessments for South West England (Webster 2007).

10.4 Results

The residue comprised of large quantities of clinker/cinder and burnt coal. Small amounts of semi-vitrified fuel waste were noted. Modern roots, clinker/cinder and coal/coal shale were also present in the flot.

Charred plant remains were absent. A small number of uncharred alder fruits and a single bramble fruit-stone were noted, although the non-waterlogged nature of the site and the presence of modern roots suggest that these are recent intrusions. No material suitable for radiocarbon dating was identified. The results are presented in Appendix 1.

10.5 Discussion

The assessment provides little information concerning the age or nature of the fill due to the absence of palaeoenvironmental remains. The presence of large quantities of clinker/cinder and burnt coal indicates that the sample derives from industrial fuel waste.

10.6 Recommendations

No further analysis is recommended on the sample due to the absence of charred or waterlogged palaeoenvironmental remains.

The flot should be retained as part of the physical archive of the site. The residue was discarded following examination.

10.7 Sources

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10.8 Appendix 1: Data from palaeoenvironmental assessment

Sample	**1**
Context	**5002**
Material available for radiocarbon dating	-
Volume processed (l)	8
Volume of flot (ml)	220
Residue contents	
Clinker / cinder	++++
Coal	+++
Fire-cracked stones	++
Semi-vitrified fuel waste	+
Flot matrix	
Clinker / cinder	++++
Coal / coal shale	++++
Roots (modern)	++
Uncharred seeds	(+)

[(+): trace; +: rare; ++: occasional; +++: common; ++++: abundant]

border archaeology

Document Control

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