

Archaeological investigations of the Biomass Boiler works, Hanbury Hall, School Lane, Hanbury, Worcestershire

Worcestershire Archaeology
For the National Trust

April 2022



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HANBURY HALL SCHOOL ROAD, HANBURY WORCESTERSHIRE

Archaeological watching brief report



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SITE INFORMATION

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Local planning authority: Wychavon District Council

Planning reference: 21/01890/FUL

Central NGR: SO 94385 63825

Commissioning client: The National Trust

WA project number: P6196

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Archaeological watching brief at Hanbury Hall, School Lane, Hanbury, Worcestershire

By Graham Arnold and Tom Vaughan

With a contribution by Rob Hedge

Illustrations by Graham Arnold

Summary

An archaeological watching brief was undertaken at Hanbury Hall, School Lane, Hanbury, Worcestershire (NGR SO 94385 63825). It was commissioned by The National Trust, in advance of a proposed biomass boiler building, with associated landscaping and an underground heat main pipe to Hanbury Hall, replacing the existing oil heating. Planning permission has been granted subject to a programme of archaeological works.

Monitoring in the area of the biomass boiler building footprint revealed drainage structures and boundary walls for the adjacent game store. In the service pipe trenching walls and brick and cobble surfacing of the former stables on the north-west side of the extant stable block were also exposed and recorded, which are visible on the 1st edition 1885 Ordnance Survey map and subsequent editions of 1903 and 1927.

In the area adjacent to the south-west side of the stable block and crossing the courtyard a series of wall footings and a drain were recorded, dating to the early 18th century and shown on the map of 1732. The majority of the trenching followed existing modern services in order to mitigate disturbance of archaeological deposits.

There were no archaeological deposits or structures exposed, or in situ finds recovered pre-dating the establishment of present Hanbury Hall in the 1700s, with no evidence of the possible moat to the west of the Lower Yard, the holloway to the north-west or of a medieval manor house.

Report

1 Introduction

1.1 Background to the project

An archaeological watching brief was undertaken by Worcestershire Archaeology (WA) from December 2021 to February 2022 at Hanbury Hall, School Lane, Hanbury, Worcestershire (NGR 394385 263825). This comprised the observation of the footings for a new biomass boiler building, with associated landscaping and service trenches. The project was commissioned by The National Trust. Planning permission had been granted subject to a programme of archaeological works (planning reference 21/01890/FUL).

The Archaeology and Planning Advisor to Wychavon District Council considered that the development had the potential to impact upon specific heritage assets, registered on the Worcestershire Historic Environment Record and Historic England's National Heritage List, notably:

- WSM 02186: the courtyard of Hanbury Hall Grade I listed buildings, dated 1701-1706 (NHLE: 1350164)
- WSM 05800: the 18th C Grade II registered park and garden (NHLE:1000883)
- WSM 35762: the 18th C Grade II listed coach house, stables, attached wall and archway (NHLE: 1000883)

A geophysical survey within the Service Yard has identified services and probable remains of earlier structures and surfaces within the courtyard, at 0.35m and 1.10m and 0.25m depth respectively (SUMO 2018). Subsequent evaluation in 2019 identified the remains of a late 19th century service building (kitchen and servants' quarters), including two north-west to south-east aligned walls, a well-preserved tiled floor and a brick culvert below the floor on the same alignment as the walls (WSM 71334; BA 2019).

The Biomass watching brief was undertaken at the same time as a strip, map and sample excavation of the footprint of a new café building along the south-west side of the Service Yard, also undertaken by Worcestershire Archaeology (WSM 77991; Arnold and Vaughan, forthcoming).

No formal brief was provided but a written scheme of investigation (WSI) was prepared by Fearn Heritage and Archaeology (FHA 2021b), updated by Worcestershire Archaeology (WA 2021) and approved by the Archaeology and Planning Advisor to Wychavon District Council. The watching brief also conforms to the industry guidelines and standards set out by the Chartered Institute for Archaeologists in the *Standard and guidance: for an archaeological watching brief* (CIfA 2014a).

1.2 Site location, topography and geology

Hanbury Hall lies within open parkland c 3 miles from Droitwich Spa. The site is located to the north-west of the extant stable block, and within the Service Yard to the west of Hanbury Hall. The site of the boiler was being used as waste ground and storage and was situated west of the game larder, to the south-west of a playground and to the north-west of the hall. The service trench routes followed along the verge of the road to the north-west and south-east of the stables, with one spur diagonally across the Service Yard to the hall, and another along a grassed bank between the Service Yard and Lower Yard towards Long Gallery to the south-west (Fig 2).

The site is situated on relatively flat ground. The Biomass site and Lower Yard are at c 69m AOD, rising to 70.10-70.30m AOD in the Service Yard.

The underlying geology comprises mudstone bedrock of the Branscombe mudstone formation, with no superficial deposits recorded (BGS 2022).

2 Archaeological and historical background

2.1 Introduction

An archaeological impact assessment of the site was undertaken by Fearn Heritage and Archaeology, on behalf of the National Trust. This identified the archaeological and historical background to the site, and the summary is included below (FHA 2021a, 6).

The first Hanbury Hall was completed in 1706. There were several buildings in the Service Yard and lower yard areas, as shown on the [Donald Insall projected] 1706 layout plan (Figure 3). In the early 18th century a kitchen block was added to the south west side of the Service Yard which joined the main house with the Long Gallery. In the late 18th century there were major alterations to the main house which included infill between the kitchen block and house, extension to the rear of the west wing and infill next to the east wing in the Service Yard.

The Tithe Map of 1830 shows the detached buildings in the Service Yard and lower yard have been demolished, and by the late 19th century there have been major alterations to the service buildings around the Service Yard (Figure 3). The kitchen and rear of the house are extended into the yard and a large stable block has been built on the north east side. It is at this time that the Trackway from Becks Farm (WSM 76981) is created (Figure 2).

By the early 20th century the stable block has been reduced and in the mid-20th century the kitchen block was demolished.

There has also been a recent building recording and Heritage Impact Assessment of Hanbury Hall as a whole, which specifically discusses the development of the buildings, including the stable block (DIA 2021).

2.2 Previous archaeological work on the site

The following is from the archaeological impact assessment (FHA 2021a, 7).

In 2018 a geophysical survey (GPR and electromagnetic) was carried out in the Service Yard to identify services. The survey also identified probable remains of earlier buildings and shallow modern surfaces (SUMO 2018). The buildings in the centre and south of the yard were between 0.35m and 1.10m below ground level (BGL); the modern surfaces were in the east of the yard at c 0.25m BGL. No building remains were identified in the north of the yard or outside the yard towards the game larder [to the north-west].

In 2019 two trenches were excavated by Border Archaeology [WSM 71334; BA 2019]. Trench 1 was positioned at the west corner of the Service Yard. It showed modern gravel and builders sand overlying rubble, which was probably from the mid-20th century demolition. Natural mudstone deposits were found 0.70m below the ground level.

Trench 2 was positioned in the south of the [Service] Yard over an area of buried building remains located in the 2018 geophysics survey. The trench revealed the remains of the late 18th/early 19th century addition to the kitchen block. They consisted of the stubs of two north-west to south-east aligned brick walls at 0.35m BGL, enclosing a well-preserved tiled corridor surface at c 1m BGL. On the north side was a blue brick yard surface at c 0.35m BGL. A brick culvert was noted running, underneath the corridor (NW – SE) at c 1.10m BGL.

It appears that the walls had been demolished to the level of the blue brick yard (0.35m BGL), and then the area was backfilled with rubble, overlain with modern builders' sand and tarmacked to create the current Service Yard surface. The culvert was not identified on the geophysics survey as a service, but appears to be the same construction as the corridor and follows the same north-west to south-east alignment. The two brick walls either side of the corridor were clearly identified in the geophysics survey.

In 1999 a watching brief was undertaken by Worcestershire Archaeological Service of landscaping works within the Service Yard (WSM 29232; Hurst 2000). This revealed the footings of the late 19th century service building along the south-west side, although the constraints of the groundworks prevented detailed recording.

3 Project aims

The aims of the investigations are as defined in the Worcestershire Archaeology and Fearn Heritage and Archaeology WSIs (WA 2021, 2; FHA 2021b, 5):

1. to record and to determine the extent, condition, character, and date of any archaeological remains present;
2. to assess the significance of any archaeological remains revealed, placing them within their local, regional, and national context;
3. to enable, where appropriate, the preservation in-situ of any archaeological remains revealed.

The specific aims are to ensure that any *in-situ* structural remains associated with the early hall within the yard areas are not impacted adversely by the development.

4 Project methodology

Written Schemes of Investigation (WSI) were prepared by Worcestershire Archaeology (WA 2021) and Fearn Heritage and Archaeology (FHA 2021b). Fieldwork was undertaken between 9 December 2021 and 10 February 2022.

The groundworks observed included the footprint of the biomass boiler and landscaping of the surrounding area (Trench 1) amounting to 170m² in area in total, and associated service trenches (Trenches 2 - 5), 0.50m wide and 0.80m deep, amounting to 169m² in total length, excavated across the site. Trenches 1-3 and 5 were observed under standard watching brief conditions. Trench 4 across the Service Yard was undertaken as a formal excavation under the supervision and control of WA. The location of the trenches is indicated in Figure 2.

Deposits considered not to be significant were removed under constant archaeological supervision using a 360° tracked excavator, employing a toothless bucket. Subsequent excavation was undertaken by hand when structures were revealed and trenches were accessible.

Observation of excavated areas was undertaken during and after machine excavation. The exposed surfaces were sufficiently clean to observe well-differentiated archaeological deposits, though any less clear may have not been identified. Any exposed structures of archaeological deposits were cleaned by hand. Access to deep trenches was not made for safety reasons.

Deposits were recorded according to standard Worcestershire Archaeology practice (WA 2012) and trench and feature locations were surveyed using a GNSS device with an accuracy limit set at <0.04m.

All fieldwork records were checked and cross-referenced. Analysis was undertaken through a combination of structural and artefactual evidence, allied to the information derived from other sources.

The project archive is currently held at the offices of Worcestershire Archaeology. It is intended that the archive will be deposited with Museums Worcestershire, in accordance with their deposition policy.

5 Archaeological results

Areas were split into different Trenches as listed and discussed below. The trench context summary descriptions are in Appendix 1.

5.1 Trench descriptions

Trench 1 – Biomass boiler building footings and adjacent trench

(Figures 2 and 3; Plates 1-9)

The Biomass boiler building was located in an area that had been subject to dumping of ash and waste from the house for a long time, so the ground level had been made up and consisted of a series of ash rich deposits, redeposited clay and turf. The Biomass Boiler footprint measured 12.50m x 6m. The trenches were between 1.00m BGL at the north-east end and 2.20m BGL at the west corner, with deeper sections of up to 4m BGL in the south corner to span a brick-built drainage chamber (108; Plates 3 and 4), 2.4m square, 0.60m BGL and backfilled with rubble.

The circular drainage chamber entrance had been capped with a quern stone (Plate 5), reused from elsewhere on site. A series of associated walls were visible to the west aligned north-east to south-west, surviving at between 1.20m and 1.50m, extending down to 2.20m BGL, with 9" x 4" x 3" bricks (106 and 107; Plate 2). These structures are considered to be contemporary with the late 19th century stable block marked on the 1st edition Ordnance Survey map.

A double-skin brick wall was recorded in the north-east corner of the site (109) on a north to south alignment, with similar bricks and mortar. This is recorded on the 1st 2nd and 3rd edition Ordnance Survey maps as a boundary wall for the adjacent Game Larder to the east. During the groundworks, another boundary wall (111, Plate 8) was exposed to the south, aligned north-east to south-west and recorded on the 2nd edition OS map. This was further exposed and recorded to a depth of 0.80m+ in Trench 2.

A brick and tile drain was recorded at a depth of 1m BGL north of 106-8 and recorded in plan (110 Plate 9), which may be associated with drain (209) towards the former stable block to the south-east.

The natural geology for observed within the trench to the south-east at c 0.30m BGL.

Trench 2 – across access road to the Service Yard

(Figures 2-4; Plates 10-17)

Natural deposits were recorded at 0.40m below ground level, overlaid by modern road surfacing, former stables and topsoil.

This trench uncovered the footings of the former stables (204), on the north-west side of the current stable block. This measured 20m in length and 8m wide. The footings and features were visible on the ground surface adjacent to the current stables, with a section of cobbling and brick surfacing 8m in length (205), two internal brick walls (206 and 207) and the outer wall of the stables. A clinker deposit 0.40m below the ground surface also demonstrated the original ground surface of the stables, underlying the cobbles (205) and running along the length of the stable block. There was also a brick and tile drain (209) recorded in the north of the trench, 0.60m below ground level aligned north-west to south-east towards the drainage chamber. This was of similar construction as the drain (110) observed in Trench 1.

As the trench followed the verge along the south-west side of the existing stable block, modern services were followed, with frequent modern services truncating the deposits. A small wall footing (210) was recorded (Plate 17). The bricks were 9" x 3" x 2 1/2", bonded with lime mortar. Only one course was extant, having been truncated by modern drainage and services. It is considered to relate to an early 18th century former building recorded on the Dougharty map of 1732.

Trench 3 – north-west of the Biomass boiler footings

(Figures 2 and 3)

This service pipe trench lay on an irregular south-west to north-east alignment across the playground from the to an existing electric pylon. A developed topsoil, subsoil profile was observed, with the natural undisturbed geology at 0.60m BGL. No archaeological features, layers, structure or horizons were present, or artefacts recovered.

Trench 4 – across the Service Yard (45m in length)

(Figures 2 and 4, Plates 18-21)

The trench followed an existing modern water pipe and drainage along the stables verge, until turning and running diagonally across the Service Yard to the Hall. A series of three wall footings (409, 410, 412), were revealed at between 0.35m and 0.70m BGL. They comprised bricks 9" x 4-4 1/2" x 2 1/2" laid in lime mortar, cut into the natural. They had been previously truncated by the modern water pipe which lay a 0.70m BGL.

A brick drain or boundary wall (405), 0.40m wide, with lime mortar at the centre, two brick courses deep, parallel to the existing stable block was also recorded at a depth of 0.35m BGL towards the northern end of the trench.

Walls (409, 410 and 412) appear to relate to the former 1706 buildings indicated on the 1732 plan, whilst the drain or boundary wall 405 is considered to be of late 19th century date.

Trench 5 – between the Service Yard and Lower Yard (30m in length)

(Figures 2 and 5; Plates 22-28)

This trench ran parallel to the existing hedge between the Service Yard and Lower Yard towards the Long Gallery to the south-west. It was dug to a maximum depth of 0.80m. This revealed that the bank between the two yards consisted of modern made ground and landscaped topsoil, overlying mixed rubble from the mid-20th century above the natural at 0.60m BGL (Plate 22).

Towards the south-west end of the trench a brick culvert (503; Plates 25-28) was exposed at 0.35m BGL, overlain by a modern concrete drain. A camera revealed that the culvert had been bricked up immediately to the north-west, possibly due to modern drainage in the vicinity, but was intact to the south-east (Plate 26). The culvert was 0.60m wide and 1.20m deep internally, and c 1.00m wide externally. It had an arched top, constructed of a double skin of bricks, in cement mortar. The base was lined with slate. This structure had been identified in the 2019 evaluation (BA 2019) and was again in the excavation of the service block by Worcestershire Archaeology which ran concurrently with the Biomass watching brief (Graham and Vaughan forthcoming). The drainage culvert was mapped and its outflow is visible to the north-west, bricked up with a pipe (Plate 28).

At the south end of the trench a wall footing was noted in the north-west section (501; Plate 24). The footing was 2m in length, of 9" x 4" x 2 3/4" bricks, laid into the natural with at least 5 extant courses. It appears to relate to a small building off the north-west side of the late 19th century service block.

Within the middle of the trench one further brick structure was observed in the trench base at 0.80m BGL (506; Plate 23). This comprised a wall footing, aligned north-west to south-east, c 0.35m and three bricks wide, laid directly onto the natural. It was sealed by modern dump deposits. It appears to relate to a boundary wall within the Service Yard recorded on Donald Insall's projected 1706 plan, the 1st, 2nd and 3rd edition Ordnance Survey maps.

6 Artefactual evidence

By Rob Hedge, MCIfA

Recovery of artefacts was undertaken according to standard Worcestershire Archaeology practice (WA 2012).

Made ground and backfill deposits in Trench 1 contained a wide variety of domestic refuse, mostly comprising ceramic and glass bottles. These were photographed and remained on-site for public display by the National Trust. Several 'torpedo' and 'Codd'-type bottles dated to the late-19th or very early-20th century. The remainder were mostly of early-20th century date.

A small quantity of building material was recovered from Trench 4. A roof tile fragment from atop structure (405) was in a hard-fired sandy fabric. A later medieval or early post-medieval (c 1400-1700) date is most likely, so it was probably residual within that context.

Two brick samples from wall (410) were hand-made in a coarse fabric containing abundant rounded dark iron-rich nodules. In width, they ranged from 4⁵/₈ to 4³/₄, and they were 2³/₈ to 2¹/₂ thick: the variability appeared to be due to distortion during firing. Parts of one were overfired and almost vitrified. They are consistent with locally-made bricks of 17th or early-18th century date. Both were covered in extensive traces of lime mortar, including over the broken edges, suggesting that they were broken before laying.

7 Environmental evidence

Environmental sampling was undertaken according to standard Worcestershire Archaeology practice (WA 2012). In the event, no deposits were excavated which were considered to be suitable for environmental analysis.

8 Discussion and conclusions

The structures observed in Trenches 1 and 2 around the Biomass Boiler date to the late 19th century and are visible on the 1st edition Ordnance Survey map of 1885, and subsequent editions of 1903 and 1927. The brick lined drainage and chamber are considered to be associated with the former stable block while boundary walls relate to the area surrounding the extant game larder.

In the Service Yard the wall footings in Trench 4 generally correlate well with the separate structures visible on the 1706 map and Dougharty plan of 1732, which had been demolished by the Tithe Map of 1832.

Trench 5, between the Service Yard and Lower Yard, revealed a wall which appears to relate to a boundary projected to be present in 1706 on Donald Insall's plan, and extant through to 1927 Ordnance Survey map. The brick culvert to the south-west relates to the late 19th century culvert along the north-east side of the service building, found during the 2019 evaluation. The adjacent wall footing appears to form the south-east side of a discrete building off the north-west side of the service block, also of late 19th century date.

A single later medieval or early post-medieval (c 1400-1700) roof tile fragment recovered in Trench 4 in association with a late 19th century brick wall or drain, so is considered to be residual. All other finds were of late-19th or early-20th century date (and left on site).

There were no archaeological deposits or structures exposed, or *in-situ* finds recovered pre-dating the establishment of the present Hall in the 1700s, with no evidence of the possible moat to the west of the Lower Yard (WSM 71007), the holloway to the north-west (WSM 23739) or of a medieval manor house (WSM 70972).

The methods adopted allow a high degree of confidence that the aims of the project have been achieved. Conditions were suitable in all of the trenches/areas to identify the presence or absence of

archaeological features. It is considered that the nature, density and distribution of archaeological features provides an accurate characterisation of the development site as a whole.

9 Project personnel

The fieldwork was led by Graham Arnold, PCIfA.

The project was managed by Tom Vaughan, MCIfA. The report was drafted by Graham Arnold and completed by Tom Vaughan. Specialist contributions and individual sections of the report are attributed to the relevant authors throughout the text.

10 Acknowledgements

Worcestershire Archaeology would like to thank the following for the successful conclusion of this project: the staff of Ledbury Construction Ltd, Stuart Robertson (Managing Director, NerG Ltd), Chris Jenkins (Project Manager, The National Trust), Janine Young (Archaeologist, The National Trust), and Aidan Smyth (Archaeology and Planning Advisor, Wychavon District Council).

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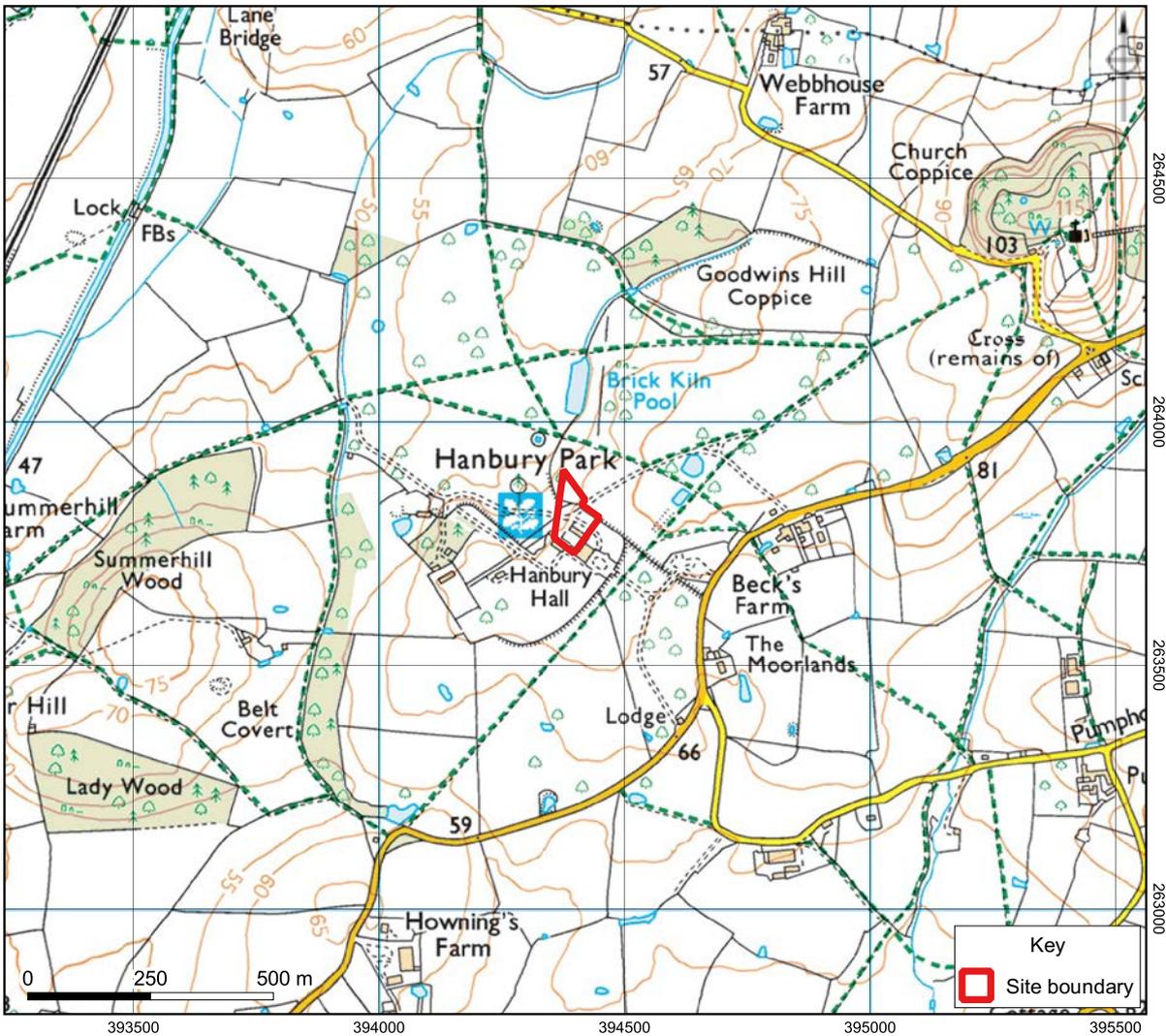
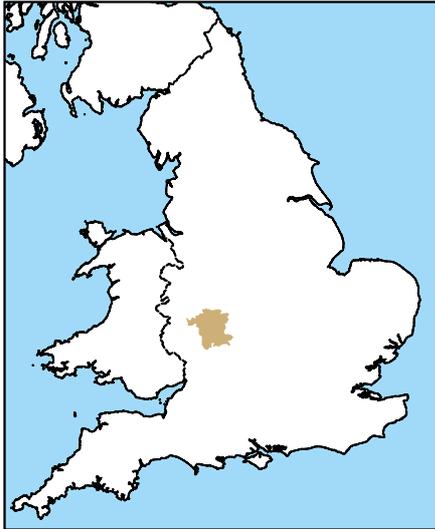
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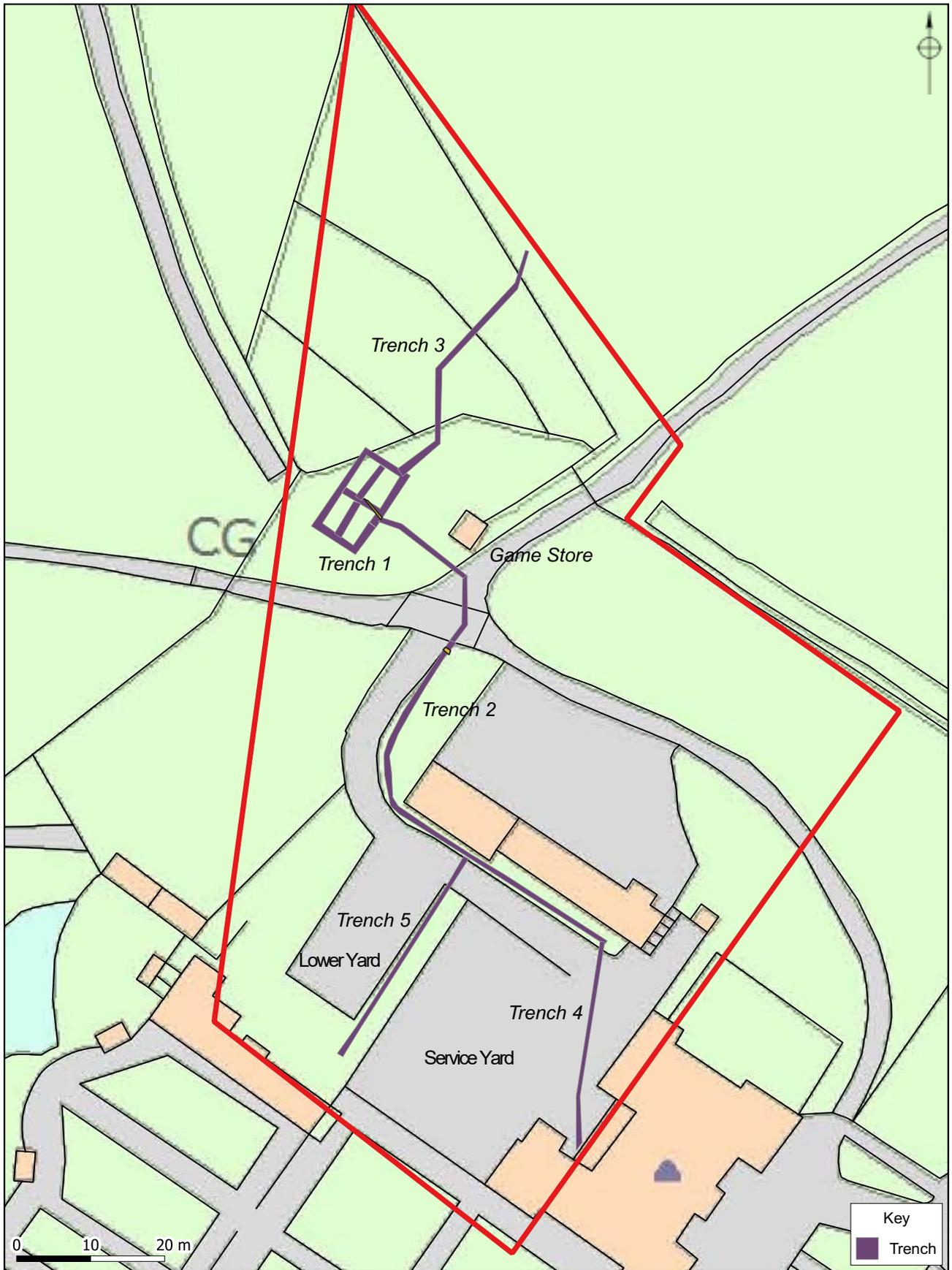
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Figures



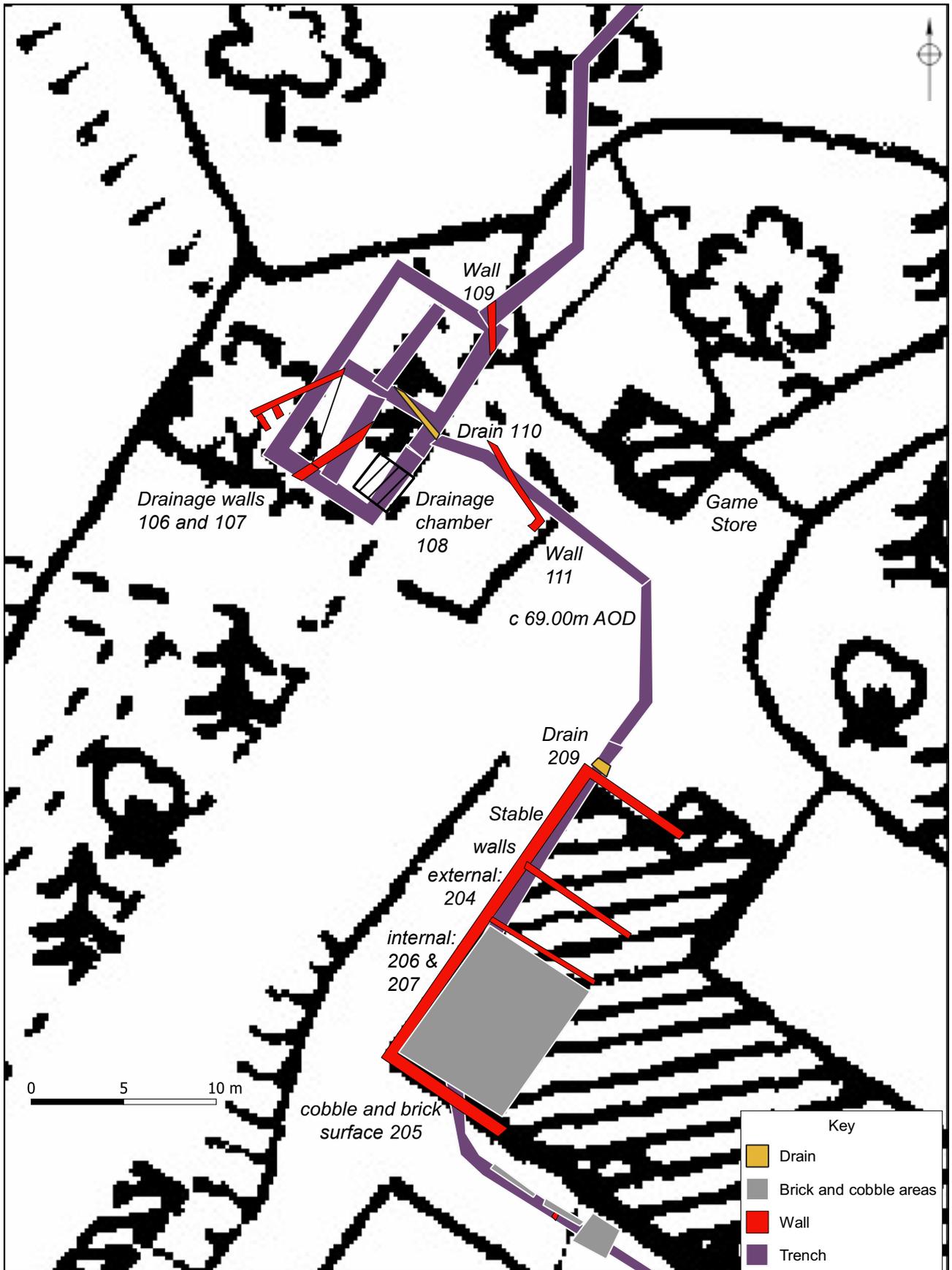
Location of the site

Figure 1



Trench location plan

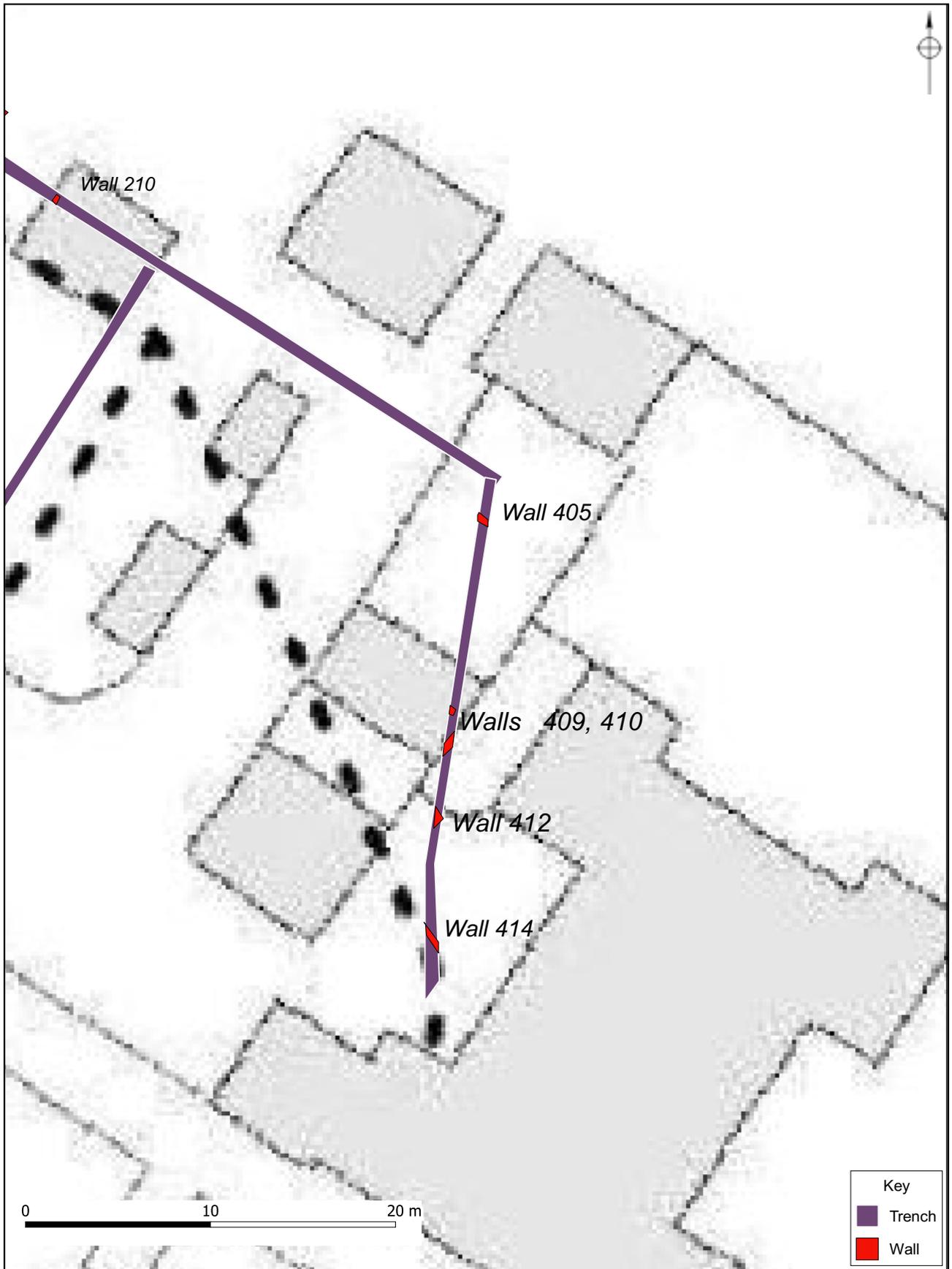
Figure 2



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Trenches 1, 2 and 3 overlaid on 2nd edition OS map (features indicated in colour were visible in trenches, at the surface or after vegetation clearance)

Figure 3



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Trenches 2 and 4 in the Service Yard overlaid onto Donald Insall's projected 1706 plan Figure 4



Trench 5 overlaid onto the 2nd edition Ordnance Survey map

Figure 5

Plates



Plate 1: The site of the Biomass boiler (Trench 1) prior to excavating footings; view south-east towards game store, no scale



Plate 2: Trench 1 drainage walls and loose ash dump deposits with 20th century refuse, glass bottles and jars; no scale



Plate 3: Trench 1, drainage chamber (109) in south-west corner; 1m scale



Plate 4: Trench 1, drainage chamber (109) in south-west corner; 1m scale



Plate 5: Trench 1, quern stone capping drainage chamber (109); no scale



Plate 6: Trench 1, selection of 1920s glass bottles and jars from ash backfill deposits; 1m scales



Plate 7: Trench 1, boundary wall of game store area (109) in north-east corner, view north; 1m scale



Plate 8: Trench 1, boundary wall of game store area (111) at entrance close to game store, view west; 1m scale



Plate 9: Trench 1, brick drain (110) aligned north-west to south-east, at 1m depth, view north; no scale



Plate 10: Location of game larder and Trench 2 across the access road, view north-east; no scale



Plate 11: Trench 2, brick and cobble yard surfacing at west end of former stable block, view north-east towards game larder; no scale



Plate 12: Trench 2, brick wall (204) at north-east corner of former stable block, partially removed, and drainage channel that ran into drain (209), heavily truncated by modern BT cable services; view south-east; 0.40m and 1m scales



Plate 13: Trench 2, internal wall (206) within stable block and black clinker former surface in northwest facing section following removal, view south-east; 0.40m and 1m scales



Plate 14: External wall and footing (204) of former stable block, cut by modern drain, with internal wall (206), brick and cobble surface (205) in background, view south-west; 1m scale



Plate 15: Trench 2, brick and cobble yard surface (205) at west end of former stable block, viewsouth; 0.40m and 1m scales



Plate 16: Trench 2, brick surface of blacksmiths path, view north-east; 1m scale



Plate 17: Trench 2, brick wall (210), with lime mortar and sandstone footings, truncated by modern drainage, view north-east; 0.40m and 1m scales



Plate 18: Trench 4 along north-east side of Service Yard with modern water pipe and disturbed ground, view east; 1m scale



Plate 19: Trench 4 across Service Yard, boundary wall of drain (405), view west; 0.40m scale



Plate 20: Trench 4 across Service Yard, wall footings (409) and (410) cut by modern water pipe, view south-east; 1m scale



Plate 21: Trench 4 across Service Yard, wall (412) overlaid by modern water pipe, view south; 1m scale



Plate 22: Trench 5 adjacent to hedge between Service yard and Lower Yard, view south-west; no scale



Plate 23: Trench 5, wall footing (506) 0.80m below ground level, cut into natural clay mudstone, view south-east; 0.4m scale



Plate 24: Trench 5, brick wall of service block (501) directly under turf, cut by modern drainage to the south-west, view north-west; 1m scale



Plate 25: Trench 5, top of brick culvert arch (503), overlain by modern drainage and turf, view south-east; 0.40m and 1m scales



Plate 26: Trench 5, location of brick culvert (503), view south-east towards Service Yard and Hanbury Hall



Plates 27a and b: Views inside brick culvert (503) from Trench 5, showing (a) pipes and intact condition to south-east; (b) bricked up to north-west, possibly due to modern drainage (502); no scale



Plate 28: Outlet of brick culvert (503) at north-west edge of Lower Yard, view south-east; 1m scale

Appendix 1: Trench descriptions

Trench 1

Context	Brief description	Max depth (m)	Depth from ground surface (m)	Comments
100	Modern surfacing	0.20	0.00	Gravel and pea grit hardcore surfacing
101	Made ground	0.40	0.20	Firm mid brown humic silty clay and redeposited natural reddish brown clay with dumps of ash, brick and mortar
102	Made ground	2.20	0.40	Loose brick ash and rubble dumping layers with frequent glass bottles, jars from fireplace and tipping dating to the 1920s onwards.
103	Former topsoil	0.30	0.00	Humic dark greyish brown topsoil with frequent tree rooting
104	Brick rubble sealing drainage chamber	0.40	0.60	Firm dark grey and red-brown clay with medium sub-round cobbles. Mixed re-deposited natural material.
105	Natural substrate	0.30+	1.03	Firm red-brown clay. Mercian mudstone geology.
106	Brick wall	2.20	1.00	NE-SW aligned brick wall, parallel to 107 and adjoining drainage chamber
107	Brick wall	2.20	1.20	NE-SW aligned brick wall, parallel to 106. Thought to be contemporary drainage works associated with 108 and former early 19 th century stables on site.
108	Drainage chamber	4.00	1.00	Silt trap soakaway for drains from stables. 2.4m square, triple brick thickness with iron drainage pipes. 4m+ deep. Sealed by quern stone and brick rubble.
109	Brick wall	-	0.20	Boundary wall of Game store area, listed on the OS maps with 9" x 4" x 3 1/2 " bricks and lime mortar, orientated north-south
110	Brick and tile drain	-	1.00	Brick and tile drain running
111	Brick wall	0.80	0.10	Boundary wall on 2 nd Edition OS Map, 0.40m wide, double brick thickness. Visible on surface when working in the area and further exposed in trench 2 works.

Trench 2

Context	Brief description	Max depth (m)	Depth from ground surface (m)	Comments
200	Turf	0.10	0.00	
201	Made ground	0.40	0.20	Dark greyish brown silty clay
202	Natural substrate	0.40+	0.40	Firm red-brown clay. Mercian mudstone geology.
203	Brick surfacing		0.10	Blue engineering bricks. 9" x 4" x 3" 6m long Continuation of black smith path
204	Stable block outer wall	0.40	0.60	0.40m wide wall, 1m + depth. 9" x 4" x 3" red brick,
205	Cobble and brick surface	0.30+	1.03	8m length and 9" x 4" x 3" bricks
206	Brick wall	2.20	1.00	Internal wall, 0.80m depth.
207	Brick wall	2.20	1.20	Internal wall, 2 courses,
208	Black clinker spread under cobbling and former yard floor	4.00	1.00	Silt trap soakaway for drains from stables. 2.4m square, triple brick thickness with iron drainage pipes. 4m+ deep. Sealed by quern stone and brick rubble.
209	Drain	0.80	0.60	At northeast end of stable. Brick and tile drain, same construction as 110, orientated northwest southeast.
210	Brick wall	-	1.00	0.25m wide wall orientated northwest-southeast with 9" x 3" x 2 1/2 " walls. Recorded on former building on 1732 plan. Cut previously by modern drainage pipes
211	Tarmac road surface	0.20	0.00	Tarmac road surface
212	Layer	0.40	0.20	Gravel and brick hardcore in dark brown silty clay matrix
213	Natural substrate	0.40	0.40+	Same as 203 underlying 211 and 212 crossing road

Trench 3

Context	Brief description	Max depth (m)	Depth from ground surface (m)	Comments
300	Topsoil	0.40	0.00	Humic loose dark brown silty clay with frequent trees roots and vegetation
301	Subsoil	0.20	0.20	Mid orangey brown silty clay with occasional rounded stones
302	Natural	-	0.60	Firm reddish brown clay marl, weathered mercian mudstone

Trench 4

Context	Brief description	Max depth (m)	Depth from ground surface (m)	Comments
400	Topsoil	0.20	0.00	Turf and topsoil of grass verge
401	Made ground	0.20	0.20	Type 1 gravel and mixed rubble soil and red sand. Service trench backfill for modern drain and water pipe
402	Natural	-	0.40	Firm reddish brown clay, weathered mudstone
403	Layer	0.20	0.00	Tarmac
404	Layer	0.40	0.20	Road stone hardcore
405	Drain / Boundary wall	0.70	0.35	Brick lined drain or boundary wall parallel to existing stable block orientated NW-SE, 3 courses thick, 0.40m wide with 9" x 4" x 2 ½ " bricks and lime mortar. 1 st Edition OS map drain or boundary wall
406	Modern truncation	1.00	0.00	Concrete filled modern service adjacent to 405
407	Modern truncation	1.00	0.00	Modern drain
408	Modern truncation	1.00		Modern service
409	Brick wall	0.30m	0.70m	NW-SE orientated wall footing with 9" x 4 ½" x 2 ½" bricks with lime mortar and limestone block footing of early 18 th C wall recorded on 1732 plan
410	Brick wall	0.60m	0.40m	NW-SE orientated return of wall 409, with 9 " x 4 ½ " x 2 ½ " bricks, lime mortar and recorded on 1732 plan
411	Modern truncation		0.70m	Cut of modern water pipe

Context	Brief description	Max depth (m)	Depth from ground surface (m)	Comments
412	Brick wall footing		0.70m	NW-SE orientated wall footing, with 5 ½ " x 4 ½ " x 2 ½ " bricks, lime mortar and recorded on 1732 plan
413	Backfill of modern drainage		0.20m	Brick rubble backfilling modern drainage
414	Brick wall	-	1.00m	NW-SE orientated wall footing, 0.40m wide, 9"x 4" x 3" bricks and lime mortar

Trench 5

Context	Brief description	Max depth (m)	Depth from ground surface (m)	Comments
500	Topsoil	0.50	0.00	Humic loose dark brown silty sand of modern bank and grounds
501	Brick Wall	0.20	0.05	19 th century wall of running northeast-southwest, 2m exposed,
502	Natural	-	0.60	Firm reddish brown clay marl, weathered mudstone. Cut by modern drains crossing road.
503	Brick culvert	1.60	0.40	1.00m wide, 1.20m deep brick culvert with vaulted ceiling, internal slate. With ;lead pipe from roof. Runs nw-se from main house along corridor of former service block West wing. Broken by modern concrete drainage on top
504	Layer	0.20	0.27 – 0.50	Redeposited disturbed natural with frequent brick rubble, mortar and plastics. 1990s landscaping
505	Layer	0.20	0.60m	Demolition rubble of loose brick and mortar, on southwest end of trench, near service building.
506	Brick Wall	-	0.80m	Wall footing 0.40m wide,
507	Tarmac	0.20	0.00	Road surfacing, same as 403
508	Road stone	0.20	0.20	Same as 404 crossing road

Appendix 2: Summary of project archive

TYPE	DETAILS*
Artefacts and Environmental	(residual and 20 th century material retained by National Trust for on-site display)
Paper	Context sheet, Correspondence, Diary (Field progress form),
Digital	Database, GIS, Images raster/digital photography , Spreadsheets, Survey, Text

**OASIS terminology*

The project archive is currently held at the offices of Worcestershire Archaeology. Subject to the agreement of the landowner it is anticipated that it will be deposited at Museums Worcestershire.

Appendix 3: Summary of data for HER

WSM 77814

Environmental

No environmental samples taken

Artefactual

Wide variety of domestic refuse, mostly comprising ceramic and glass bottles; dated to the late-19th or very early-20th century; a later medieval or early post-medieval (c 1400-1700) roof tile fragment; two locally-made bricks of 17th or early-18th century date

All finds recorded and left on site, or returned to the National Trust on completion of the project.