

OGWF19



# OARE GRAVEL WORKS, FAVERSHAM, KENT – GUNPOWDER WORKS, MARSH WORKS

ARCHAEOLOGICAL EVALUATION

PLANNING REF. SW/14/0257

commissioned by The Anderson Group

April 2019



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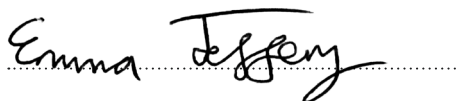
### PROJECT INFO:

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## PROJECT SUMMARY

Headland Archaeology (UK) Ltd undertook an archaeological trial trenching evaluation in the area of the former 'Gunpowder Works' buildings at Oare Gravel Works, Faversham, Kent, between 12th and 14th March 2019. The work was commissioned by The Anderson Group, in advance of a scheme of residential development, change of use of the former gunpowder works (Marsh Works) buildings, and associated landscaping and creation of a country park (Swale Borough Council Planning Ref: SW/14/0257). The remains of structures associated with the gunpowder manufacturing plant known as the Marsh Works were identified in four trenches. This included remains associated with the original (1789) phase of construction of the gunpowder works, two phases of early nineteenth-century expansion of the gunpowder works, and activity associated with twentieth-century development of the site. The structural remains were identified at shallow depths beneath the present ground level.

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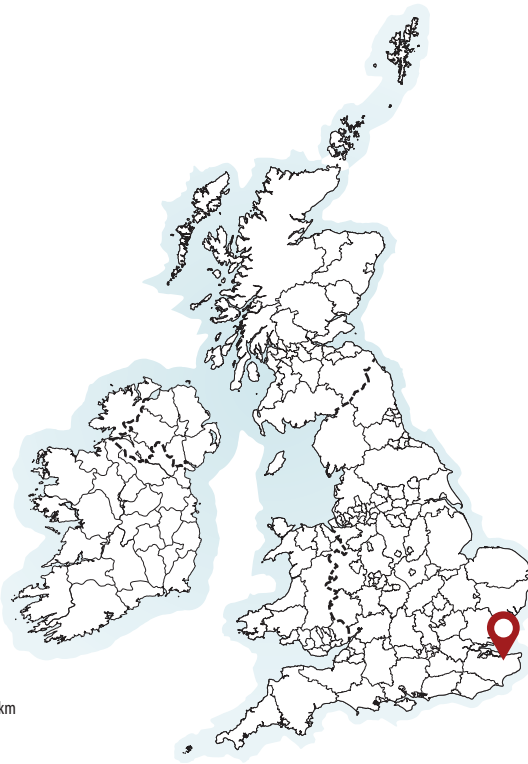
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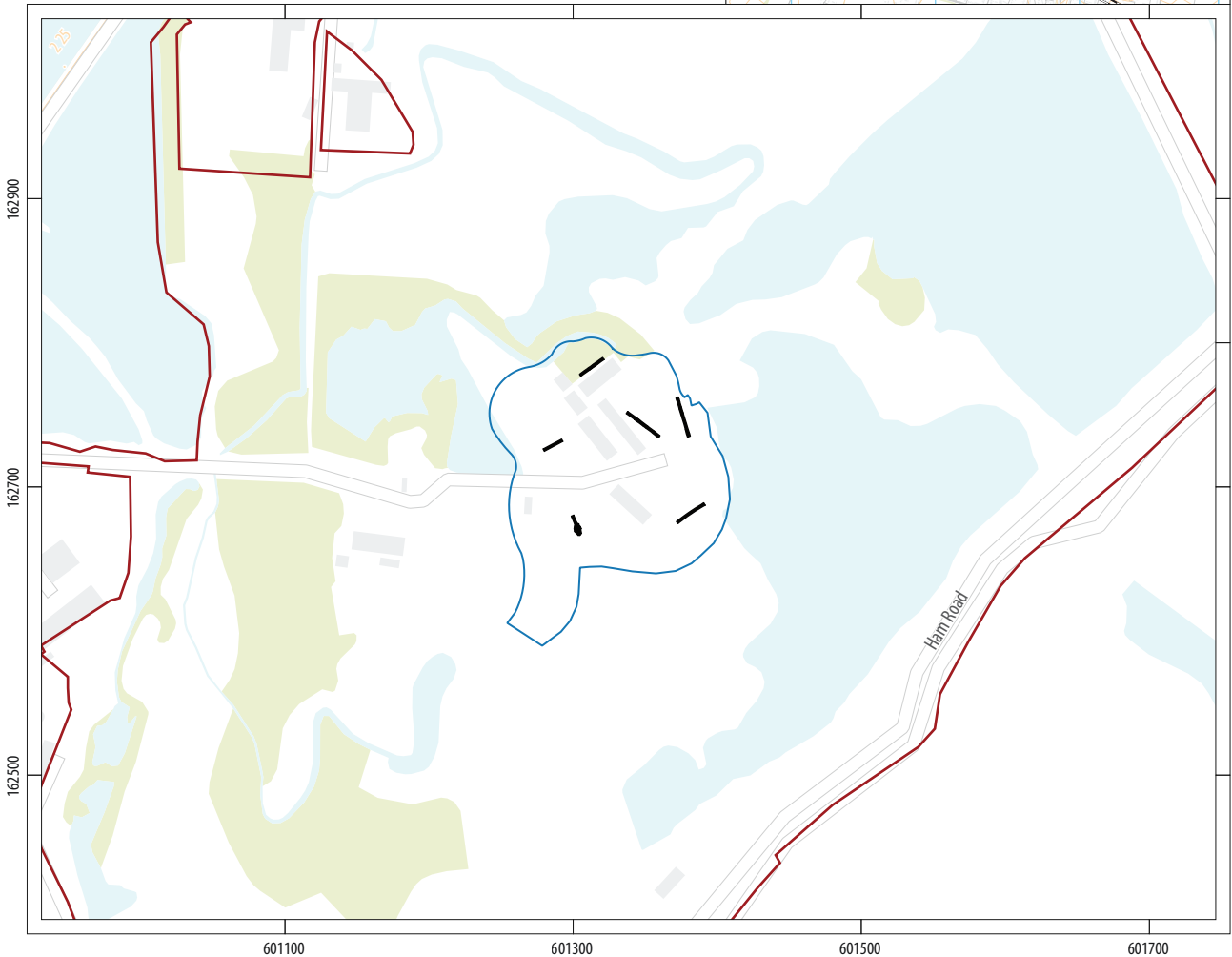
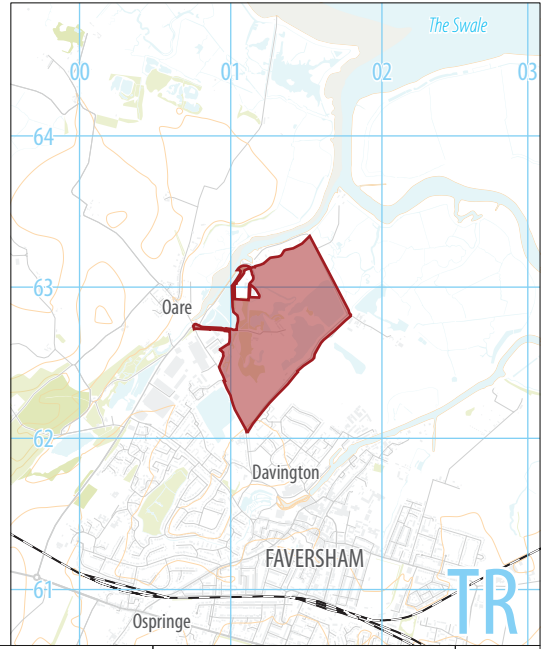
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Oare Gravel Works  
Faversham  
Kent



0 200km  
1:12,500,000 @ A4



0 100m  
1:5,000 @ A4

development boundary
  trench location  
 Gunpowder Works area

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ILLUS 1 Site location



# OARE GRAVEL WORKS, FAVERSHAM, KENT – GUNPOWDER WORKS, MARSH WORKS

## ARCHAEOLOGICAL EVALUATION

### 1 INTRODUCTION

#### 1.1 PLANNING BACKGROUND

Headland Archaeology (UK) Ltd was commissioned by The Anderson Group to undertake a programme of archaeological works in connection with a scheme of residential development, change of use of the former gunpowder works (Marsh Works) buildings, and associated landscaping and creation of a country park (Swale Borough Council Planning Ref: SW/14/0257).

Following a meeting between Headland Archaeology, the Anderson Group, and Kent County Council's Principal Archaeologist (Simon Mason), trial trenching and an assessment of the Palaeolithic and geoarchaeological potential of the site was requested.

Trial trenching was to be undertaken in areas which had not been subject to quarrying and which would be impacted on by development. This comprised the following archaeological work was requested:

- › 10 trenches in the 'Residential Phase 1' area
- › 5 trenches in the 'Residential Phase 2' area
- › 6 trenches in the 'Gunpowder Works' area

Headland Archaeology prepared a Written Scheme of Investigation (WSI) on behalf of The Anderson Group; setting out the proposed strategy for the archaeological work (Headland Archaeology 2019a). The WSI was submitted to and agreed with Simon Mason (Principal Archaeologist of Kent County Council).

This report details the results of the trial trenching evaluation of the gunpowder works (Marsh Works) area. The results of the previous trial trenching evaluations (in the Residential areas) are covered in a previous report (Headland Archaeology 2019b)

#### 1.2 SITE DESCRIPTION

The development area (DA) is located at Oare Mineral Works, Faversham, Kent, centred on TR 01534 60467 (Illus 1). It comprises a large triangular-shaped piece of land, bounded by Ham Road to the east and south, and Oare Road to the southwest. The River Oare runs along the northwestern boundary of the site.

The DA currently comprises 56.6ha. It lies on the slopes overlooking Faversham, with the land gradually rising to the south-west and south. The DA slopes down from its western edge, at c 25m AOD, to its eastern edge (c 15m AOD).

The solid geology of the DA consists of a ridge of the Seaford Chalk formation, with outcrops of Thanet Beds at the western end of the DA (NERC 2019). Drift deposits of head brickearth cover the bulk of the DA, with outcrops of head gravel in the northwestern part of the DA.

The majority of the site has been subject to mineral extraction in the nineteenth and twentieth centuries. Smaller areas, towards the central part of the site, did not appear to have been quarried or disturbed, including the area around the Gunpowder Works.

This trial trenching evaluation was focused on the area around the gunpowder works (Marsh Works), an area of 1.5ha located towards the central part of the site, centred on TR 01343 62731 (Illus 1).



ILLUS 2 Site plan

## 1.3 ARCHAEOLOGICAL BACKGROUND

An archaeological desk-based assessment of the DA was undertaken by the Trust for Thanet Archaeology (2013). This section presents a summary of their findings.

The DA lies within the Ham March at the southeastern end of Oare Creek. Much of the DA is below 5m AOD and has been subject to marshland reclamation.

There was some potential for prehistoric archaeological remains. The area around Oare Creek was occupied in the prehistoric period, as shown by residual artefacts.

There was more potential for Iron Age archaeological remains, as the stabilisation of sea levels led to the development of settlement in the Late Iron Age. Iron Age features have been uncovered close to the Oare, including enclosures and field systems on the northeastern bank.

Further development occurred in the Roman period, with the route of Roman Watling Street following the line of the A2 c 1km to the southwest of the DA, and Faversham developing as a Roman town (Durolevum). Five Roman cremation cemeteries have been identified in the surrounding area.

Saxon settlement developed along Watling Street, the creeks at Oare, and the port at Faversham.

The gunpowder industry developed in Faversham in the sixteenth century. Several manufacturing plants were established by the eighteenth century. The Marsh Works, located within the DA, was established in 1789. The factories were closed in 1934, and many of these buildings remain in the centre of the DA. Cocroft's 'Dangerous Energy' book includes more detail about the history of these works (Cocroft 2000).

Extensive quarrying has taken place over the majority of the DA from the later nineteenth century onwards. A small area, towards the centre of the DA, has not been quarried.

## 2 OBJECTIVES

The methodology followed was outlined in the WSI (Headland Archaeology 2019a) and designed to meet the requirements of the Kent County Council Principal Archaeologist.

In general, the purpose of the investigation was to identify and assess the particular significance of any element of the historic environment that may be affected by the proposal. This was achieved by determining and understanding the nature, function and character of any remains on the site, in their cultural and environmental setting.

The general aims of the investigation included:

- › establishing the depth and character of archaeologically 'sterile' overburden;

- › identifying, characterising and dating any potential archaeological remains within the site;

- › defining any constraints encountered during the evaluation and any potential constraints for further archaeological fieldwork (eg areas of disturbance, service locations, etc).

More specifically, the local and regional research contexts were provided by the (draft) South East Archaeological Research Framework (Kent County Council 2019). These covered issues including:

- › The identification and survey of gunpowder sites and buildings.
- › Iron Age / Roman: Any evidence for activity associated with Oare Creek?

The resulting archive (finds and records) will be organised and deposited in the appropriate registered museum (Dartford Museum) to facilitate access for future research and interpretation for public benefit. An online OASIS form will also be completed (headland4-340095).

## 3 METHODOLOGY

All work complied with the Kent County Council *Manual of Specifications (Part B – Evaluation Requirements), and ClfA's Standard and Guidance for Archaeological Field Evaluation (2014b)*.

Trial trenching in the gunpowder works (Marsh Works) area was carried out between the 12th and 14th March 2019. Six trenches were excavated, targeted on areas of proposed groundworks (eg construction of bunds and car-park areas) (Illus 2).

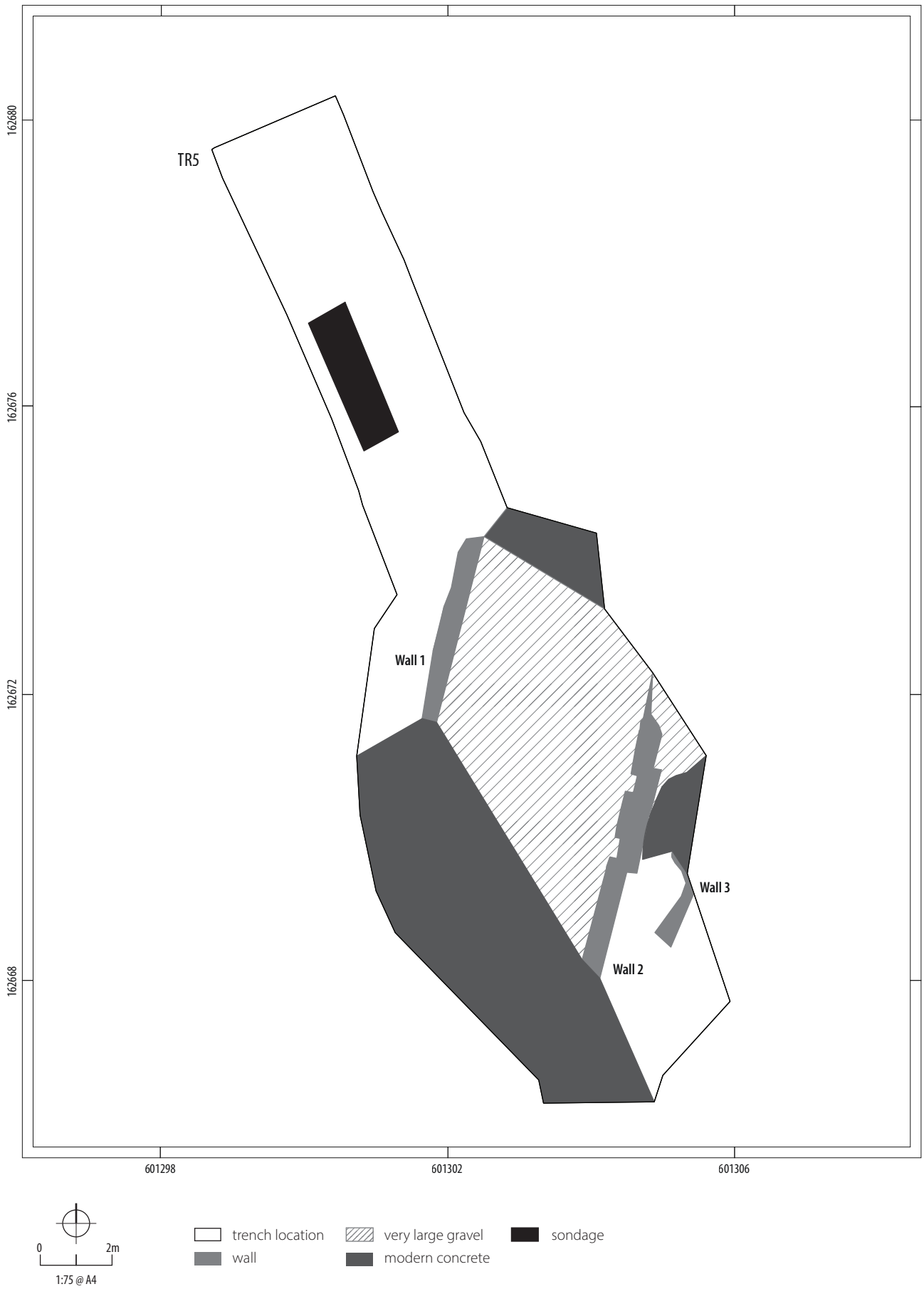
Trench length and positioning were determined by space constraints and the presence of underground services. It was agreed with Kent County Council's Principal Archaeologist that there was flexibility in the positioning of the trenches due to these constraints. Illustration 2 shows the final positioning of the trenches. Trench 1 was repositioned between an overgrown area and the Refining House, and Trenches 4 and 5 were moved to avoid underground services.

The trenches varied between 15m and 30m in length (details in Appendix 1.1) and were all 1.8m wide.

A mechanical excavator equipped with a toothless ditching bucket was used to remove the overburden under direct archaeological supervision. Structural remains were identified in Trenches 1, 2, 3, and 5. The stratigraphy of each trench was recorded in full.

### 3.1 RECORDING

All recording followed the guidance laid down by the Chartered Institute for Archaeologists (ClfA 2014b) and was in line with the approved WSI (Headland Archaeology 2019a). All trenches and contexts were given a unique number. All recording was undertaken on pro forma recording sheets which conform to archaeological standards. All stratigraphic relationships were recorded.



ILLUS 3 Plan of Trench 5 with walls 1–3

A plan of the trenches across the entire site was recorded digitally using a GNSS device.

A full photographic record was taken using digital photography and incorporating black and white print photographs where appropriate. A metric scale was clearly visible in record photographs.

## 4 RESULTS

Full context descriptions and trench descriptions, including dimensions, depths and orientations, are presented in Appendices 1.1 and 1.2. Contexts are identified numerically by trench ie Trench 1: (01001), Trench 2: (02001). Cut features and structural remains are shown as [0100] whilst their fills are expressed as (0101), for example.

Structural remains were identified in Trenches 1, 2, 3, and 5. The eastern half of Trench 4 and Trench 6 were affected by quarrying activities which intruded approximately 1m into the geological substrate. Trenches 1, 2, 3, and 5 contained evidence for activities connected with the gunpowder works.

The natural geology was observed in four of the trenches (not in Trench 5 and only partially in Trench 3). This was variable and comprised large gravel in Trench 6, sand and gravel in Trench 4, light red-brown sandy clay in Trenches 1 and 2, and light brown-grey clay in Trench 3. It was observed at depths of between 0.30m beneath the present ground surface (Trench 4) to 1.1m (Trenches 2, 3, and 6).

Layers of made ground were observed across the gunpowder works area. This resulted from activities connected with the gunpowder production process in Trenches 1, 2, 3, and 5 and activities associated with quarrying in trenches 4 and 6. This comprised layers of gravel, concrete, tarmac, charcoal, sulphur, with potassium nitrate concentrations (Trench 2), bricks, wood, metal, and other demolition waste.

### 4.1 LATE EIGHTEENTH CENTURY (1789 CONSTRUCTION OF MARSH WORKS)

Structure 05 [03008] was located at the southern end of Trench 3 (Illus 7 and 13). It comprised a wall aligned north-west to south-east for 3.9m, before turning 90° to the north-east and continuing for 0.5m into (and beyond) the section. It terminated with a 0.8m wide brick plinth at its northwestern end.

Structure 05 was identified at a minimum depth of 0.35-40m below ground level (BGL). The wall itself was 0.5m wide and was exposed for a height of 0.42m. The structure was buried under a thick layer of a dark greyish black soil.

Structure 05 was made of buff-red bricks (0.21 x 0.10 x 0.07m). Bonding material was a light grey powdery lime mortar. The coursing pattern consisted of alternating rows of stretchers and headers (English bonding). The bricks from this wall were plain and stock-moulded, and likely date from the later eighteenth century or later (see finds assessment below).

Historic maps of the Marsh Works suggest that Structure 05 served as an 'Extracting Kitchen', built in the latter half of 1789 (Cocroft 2000, 37).

### 4.2 EARLY NINETEENTH CENTURY (1803-10 EXPANSION OF MARSH WORKS)

Wall 03 [05009] was observed on a north-east to south-west alignment in the southeastern part of Trench 5 (Illus 3 and 6). The top of Wall 03 was recorded at 0.5m BGL. It was 0.5m long and 0.20m wide (as exposed) and abutted a steal veneer structure filled with cement. It was preserved for a height of 0.60m. It was made of medium brown-red bricks measuring 0.18 x 0.10 x 0.065m. Bonding material was a pink-red soft mortar. The bricks were plain and stock-moulded and likely date from the later eighteenth century onwards (see finds assessment below). Wall 03 may have formed part of the late eighteenth / early nineteenth century 'Earth House'.

Drainage Channel [01006] was aligned north-east to south-west through the middle of Trench 1 (Illus 2 and 14). It was recorded at a depth of 0.7m BGL and was 12m long and approximately 0.5m wide. It was built of light brown-red bricks measuring 0.23 x 0.10 x 0.065m (plan and stock-moulded bricks, of later eighteenth century+ date), bonded with light red-white lime mortar. The channel was vaulted. The channel headed south and probably extended underneath the extant 1803-10 Melting House. It was likely constructed in the same period as this.

Structure 02 [02007] was located towards the southern end of Trench 2 (Illus 7 and 19). It was observed at 0.15m BGL and comprised a north-west to south-east stretch of wall (5.4m long x 0.45m wide), turning to the north-east at both ends (thereby forming an individual room), and continuing beyond the edge of excavation. It was made of brown-red bricks (0.22 x 0.45 x 0.11m; plain stock-moulded bricks of later eighteenth century+ date) bonded with a brown-red lime mortar. At this stage, it is unclear which gunpowder works building this structure formed part of, however, it may have been part of the 1803-10 expansion of the Marsh Works.

Structure 01 [02006] was located towards the centre of Trench 2 (Illus 7 and 9), on the same alignment as Structure 02. It was recorded at a minimum depth of 0.15-20m BGL and comprised a north-west to south-east aligned wall (7m long and 0.65m wide), turning to the north-east at its southeastern end (and continuing beyond the limit of excavation). It was made of brown-red bricks, of similar size to the bricks in Structure 02, and with similar mortar. Structure 01 had a similar orientation as Structures 05 and 02, and likely formed part of the same range of buildings.

Structure 03 [03007] was located at the northern end of Trench 3 (Illus 7 and 11). It was uncovered at a depth of 0.45m BGL. It comprised a north-west to south-east orientated wall (2m long and 0.60m wide). There was a corner at its northwestern end, from where it extended towards the south-west, underneath a modern concrete slab. It was made of light brown-red bricks measuring 0.25 x 0.105 x 0.065m. The bricks were bonded with light grey-red mortar. These bricks were frogged (indicating that they date from the eighteenth century onwards). The depth at which the structure was exposed, and its



**ILLUS 4** Wall 1 in Trench 5. South-east facing side    **ILLUS 5** Wall 2 in Trench 5. North-west facing side

orientation suggest it belongs to the same phase of construction as Structures 01 and 02 (the 1803–10 expansion).

Structure 04 [03006] was located towards the centre of Trench 3 (Illus 7 and 12). It was recorded at a depth of 0.35m BGL. It comprised a north-west to south-east aligned wall (4m long, 0.5m wide), turning to the north-east at both ends (thereby forming a room). The structure was made of frogged brown-red bricks measuring 0.24 x 0.10 x 0.65m, dating from the eighteenth century onwards. Bonding material was a light grey mortar. Structure 04 had a similar orientation

as Structures 03 and 05. It probably dated from the beginning of the nineteenth century (the 1803-10 expansion).

### 4.3 1810–15

Stone Slab Surface [02005] was located in the northwestern half of Trench 2, immediately north of Structure 01 (Illus 7 and 8). The surface was recorded at a minimum depth of 0.20m BGL and covered an area of 1.8m by 2.5m (as exposed). It was made of roughly hewn sandstone slabs which varied in shape and size. The largest slabs measured approximately 0.3 x 0.25 x 0.12m and rested on layers of



**ILLUS 6** Wall 3 in Trench 5. North-west facing side

made ground, including crushed sulphur and crushed bricks. This surface seems to have obliterated the northern extent of Structure 01, suggesting it post-dates the destruction of this structure. It may date from the 1810–15 phase of the Marsh Works (Cocroft 2000: 55; Illus 2.40).

#### 4.4 TWENTIETH CENTURY (POST-GUNPOWDER WORKS)

Wall 01 was aligned north-east to south-west through the centre of Trench 5 (Illus 3 and 4). It was recorded at a minimum depth of 0.45m BGL. It was 2.65m long as exposed and overlain by cemented gravel and concrete. It was preserved for a height of 1m and was made of light red frogged bricks measuring 0.23 x 0.09 x 0.06m. The bricks were arranged in an English bond, bonded with a very hard fine cement. These bricks were machine-made, frogged, and stamped 'SOUTHWATER' (from the Southwater Brickworks in West Sussex, which was in production from 1890–1981). The dimensions of these bricks fit with the British Standard sizes that went into effect after 1969, and so these bricks were likely produced between 1969 and 1981. There was a smooth concrete floor between Walls 01 and 02.

Wall 02 was parallel to Wall 01, 2.77m to the south-east of Wall 01 (Illus 3 and 5). Wall 02 was observed for 4.2m in length and was 0.43m wide. It was made of light red, frogged bricks measuring 0.23 x 0.09 x 0.06m – the same type of bricks as in Wall 01 and likely later twentieth century in date. The coursing pattern consisted of alternating rows of headers and stretchers, as with Wall 01. The northeastern side of the wall had two indentations of uncertain function.

Walls 01 and 02 were almost certainly part of the same structure and relate to the twentieth-century development of the site (after the

gunpowder works closed in 1934). The bricks suggest this structure was constructed between 1969 and 1981, however historic maps do not show any structures in this location at this date. The 1960–1 OS map shows a small structure in this location, so it is possible that Walls 01 and 02 formed part of this.

## 5 FINDS ASSESSMENT

Amy Koonce

The finds assemblage numbered one sherd (37g) of pottery, 140 sherds (27.457kg) of brick and tile and 111g of mortar. These were found in 10 separate features across four different trenches. The post-medieval and modern periods are represented. The finds are summarised by feature in Table 1 and a complete catalogue is given at the end (Appendix 2).

### *Methodology*

The report includes only hand-collected finds as environmental samples were not collected. However, samples of brick and mortar were hand-collected and assigned sample numbers, given in the catalogue at the end of this report. The finds were collected, processed and packaged for long term storage in accordance with professional guidelines (Clifa 2014a; Watkinson & Neal 1998). The finds were each assessed and recorded by appropriate specialists. The resultant data was then drawn together into one MS Access database. A copy of this data is given at the end of the report. The pottery was examined visually, using x20 magnification where necessary. It was recorded according to standards set out by specialist bodies (Barclay et al 2016; Slowikowski 2001).

**TABLE 1** SUMMARY OF FINDS ASSEMBLAGE BY FEATURE WITH SPOT DATING (dating is for finds in the backfill of these features and does not necessarily date the features; small assemblages should be used with particular caution for dating purposes)

TR	FEATURE TYPE	CUT NO	POTTERY (PM-MOD)		CBM		MORTAR WGT (G)	SPOT DATE
			QTY	WGT (G)	QTY	WGT (G)		
1	drainage channel	01006	-	-	2	3,643	-	L18th+
2	surface	02005	1	37	-	-	-	16th – 19th
2	Structure 01	02006	-	-	126	1,759	-	?
2	Structure 02	02007	-	-	2	1,735	-	L18th+?
3	Structure 04	03006	-	-	4	2,009	93	L18th+
3	Structure 03	03007	-	-	1	2,276	-	L18th+
3	Structure 05	03008	-	-	1	2,485	-	L18th+
5	Wall 01	05006	-	-	1	2,840	-	?1969–81
5	Wall 02	05008	-	-	2	7,178	-	?1969–81
5	Wall 03	05009	-	-	1	3,532	18	L18th+
TOTAL		-	1	37	140	27,457	111	-

### Post-medieval to Modern pottery

A single sherd (37g) of post-medieval redware (PMR) was retrieved from surface [02005] and dates from the sixteenth – nineteenth century (MoLA 2014). It is a dish rim, glazed dark brown. It is typical utilitarian pottery for the region.

### Ceramic building material

The majority of the assemblage comprises 140 sherds (27.457kg) of brick and tile. These included five near complete bricks, eight partial bricks and a number of fragments. The bricks were collected as a representative sample from brick-built Structures 01–05, Walls 01–03 and drainage channel [01006].

A single brick from Wall 01 [05006] and at least one, possibly two bricks from Wall 02 [05008] were of the same type. They comprise a medium red fabric, measuring 215 x 102 x 64mm, are machine-made, frogged and stamped 'SOUTHWATER'. The Southwater brickworks, West Sussex, c 55 miles to the southwest, was in production from 1890–1981 (Laker & Andrews 2011). The dimensions of these bricks are exactly in line with the British Standard sizes that went into effect after 1969 (Hammond 2001, 3), and are therefore likely to fall into a later part of that range.

A single brick from Structure 03 [03007] and two fragments, possibly of the same brick, from Structure 04 [03006] are frogged, indicating that they date from at least the eighteenth century onwards (Hammond 2001, 11). It is possible they are stamped with a maker's mark which would help narrow this range; however, a thick layer of mortar obscures any further detail and resisted efforts to remove it. The brick from Structure 03 [03007] is slightly larger than the stamped Southwater bricks (222 x 105 x 64mm), has a smaller frog and a different fabric. The brick fragments from Structure 04 [03006] have a width of 100mm and a thickness of 64mm, with a dark red fabric with possible slag inclusions. Neither fabric is similar to any other bricks in the assemblage. They are probably not Southwater products though their size implies they are similarly modern.

Bricks from drainage channel [01006], Structure 02 [02007], Structure 05 [03008] and Wall 03 [05009] were plain and stock-moulded. The size of these bricks suggests a late eighteenth-century or later date. A brick tax was put in place in 1784 which resulted in thicker (64mm+) made bricks (McComish 2015: 43). The brick from Structure 02 [02007] is broken lengthways, so thickness cannot be ascertained, but it is similar in shape, size and fabric composition to the bricks in drainage channel [01006] and is likely to be of a similar date.

Brick fragments totalling 126 (1.759kg) from Structure 01 [02006] were too small and fragmented to fully measure and date. However, the brick fabrics are consistent with the stock-moulded bricks found within the rest of the assemblage.

A fragment of red roof tile was retrieved from Structure 02 [02007]. It cannot be accurately dated.

### Building material

A total of 111g of lime mortar fragments were retrieved as samples from Structure 04 [03006] and Wall 03 [05009]. The mortar ranged from white to a light pinkish colour. Flecks of flint were also noted in the composition.

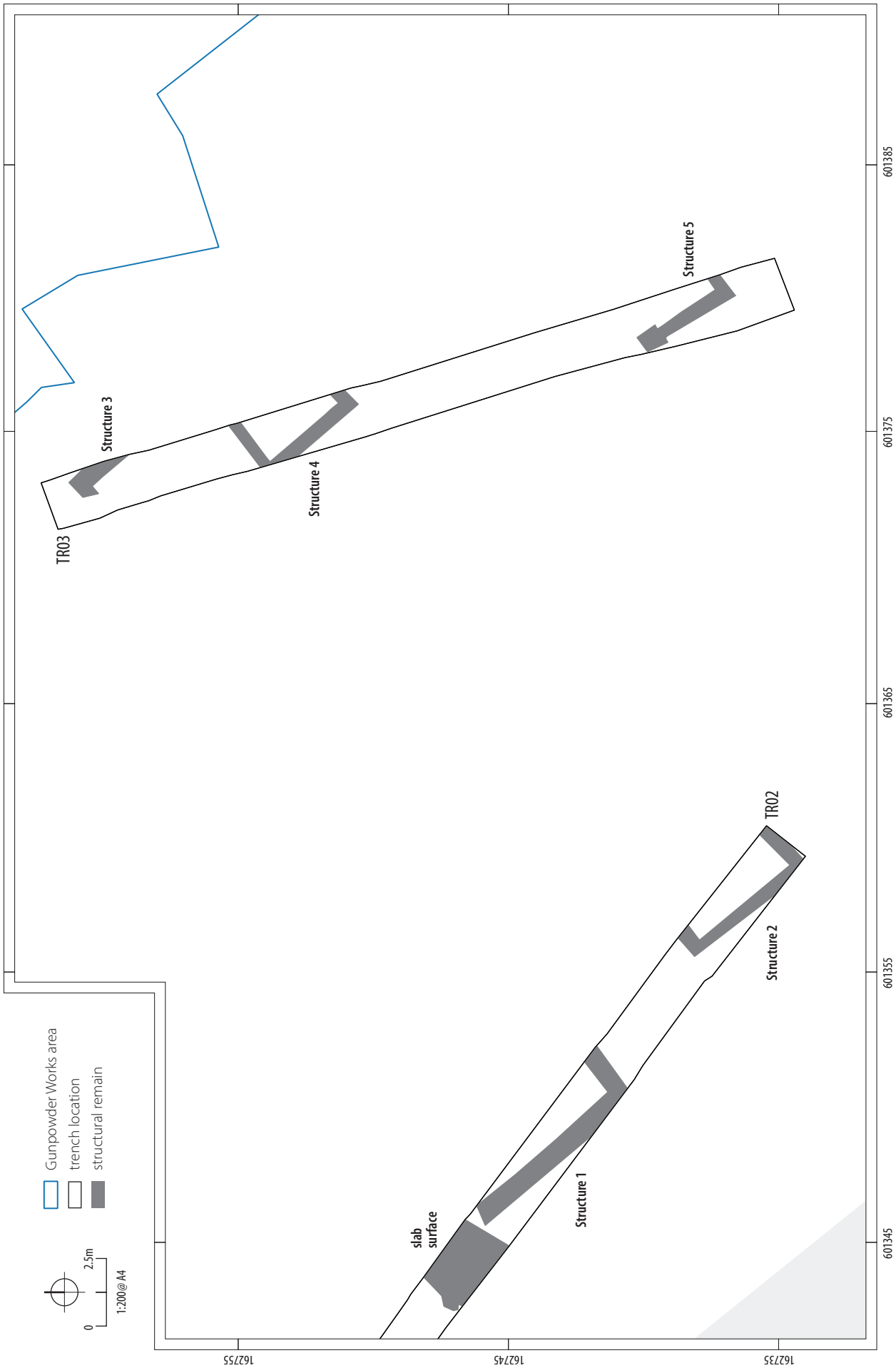
### Discussion

The gunpowder works were built in 1789 and all the finds would comfortably fit either this date or the period post-dating it. The stock-moulded bricks from drainage channel [01006], Structure 02 [02007], Structure 05 [03008] and Wall 03 [05009] might date to its original construction. The Southwater bricks are clearly later and probably relate to later twentieth-century repairs or alterations. The dish sherd may be the remains of a vessel used within the works. Metal dishes would have been avoided due to the danger of creating accidental sparks.

### Recommendations for further work

The finds have low potential for further analysis. Attempts could be made to remove the mortar from the bricks from Structures 03 and 04 to ascertain if they can be more accurately dated but they are likely to be of very recent origin. No further analysis is recommended.





ILLUS 7 Plan of Trench 2 and 3 with stone slab surface and structures 1-5



**ILLUS 8** Stone slab surface. Looking east    **ILLUS 9** Structure 1 in Trench 2. Looking south-east    **ILLUS 10** Structure 2 in Trench 2. Looking north-west

### *Recommendations for archive*

As it stands, the archive is of no further archaeological value and if no further work is undertaken on the site, it is recommended the finds be discarded. If the finds are not wanted by the receiving museum, the Southwater Local History Group may be interested in the stamped bricks (<http://www.southwaterhistory.co.uk/>). The archive has been prepared in accordance with professional standards (AAF 2011).

## **6 CONCLUSION**

The trial trenching evaluation identified the remains of structures associated with the gunpowder manufacturing plant known as

the Marsh Works (established in 1789). Historic maps (Illus 15) have helped identify these remains (Cocroft 2000)

The remains of buildings associated with four phases of activity have been identified – Structure 05 may have been part of the original (1789) phase of buildings; Structures 01, 02, 03, and 04 and Wall 03 may have formed part of the early nineteenth century (1803–1810) expansion of the gunpowder works; the stone slab surface in Trench 2 may have formed part of the 1810–15 phase of development, and Walls 01 and 02 were part of the twentieth century development of the site.

Structural remains were identified in Trenches 1, 2, 3, and 5. They were identified at shallow depths below the present ground-level (a minimum of 0.15m beneath the present ground-surface, within



**ILLUS 11** Structure 3 in Trench 3. Looking south-west

**ILLUS 12** Structure 4 in Trench 3. Looking north-west

**ILLUS 13** Structure 5 in Trench 3. Looking south-west

**ILLUS 14** Drainage channel in Trench 1. Looking east

Trench 2). The proposed development within the March Works area will likely impact on these remains, although the extent of this impact will depend on exact development plans.

No archaeological remains were identified in Trenches 4 and 6. Historic maps demonstrate that there have never been buildings associated with the gunpowder works in these areas. In contrast, both of these trenches had been affected by gravel quarrying.

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ILLUS 15 Plan of structural remains overlain onto OS Six-inch historic map (1877)

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## 8 APPENDICES

### APPENDIX 1 SITE REGISTERS

#### Appendix 2 Trench and context summary

D GD/L = depth to geological deposit/level of archaeological significance

TRENCH 1				
L (M)	W (M)	D GD/L (M)		
		MIN.	MAX.	
15	1.8	0.25	0.95	
CONTEXT	DESCRIPTION	DIMENSIONS (M)		
		L	W	DBGL
01001	Made ground: Greyish brown sand and rubble	-	-	0-0.12
01002	Made Ground: brownish grey gravely sand	-	-	0.12-0.25
01003	Made ground: dark black gravel/tarmac with occasional brick inclusions	-	-	0.25-0.49
01004	Made ground mixed natural: Greyish brown sandy clay	-	-	0.49-0.75
01005	Geological Substrate: blueish mottled brown alluvial clay	-	-	0.75-0.95
01006	Red brick drainage channel	12	0.5	0.78+
01007	Heavy rubble layer comprising of stone, concrete and red brick	-	-	0.25+

TRENCH 2			
L (M)	W (M)	D GD/L (M)	
		MIN.	MAX.
28.5	1.8	0.15	1.05

CONTEXT	DESCRIPTION	DIMENSIONS (M)		
		L	W	DBGL
02001	Made ground: greyish yellow gravely sand	-	-	0-0.25
02002	Made ground: dark black tarmac with brick demolition rubble	-	-	0.25-0.45
02003	Made ground: greyish brown light sand with frequent brick rubble inclusions	-	-	0.45-0.85
02004	Geological Substrate: mid greyish brown clay	-	-	0.85-1.05
02005	Stone slab surface	2.5	1.8	0.10+
02006	Structure 01: red brick wall of structure	7	0.65	0.15
02007	Structure 02: red brick wall of structure	5.4	0.45	0.20+

TRENCH 3			
L (M)	W (M)	D GD/L (M)	
		MIN.	MAX.
30	1.8	0.4	1

CONTEXT	DESCRIPTION	DIMENSIONS (M)		
		L	W	DBGL
03001	Made ground: light greyish white gravely sand	-	-	0-0.18
03002	Made ground: mid yellowish brown gravely sand	-	-	0.18-0.42
03003	Made ground: black gravel/tarmac layer	-	-	0.42-0.80
03004	Made ground: dark greyish brown sandy clay	-	-	0.80-1.00
03005	Geological Substrate: yellow mottled brown gravely sandy clay with moderate medium stone inclusions	-	-	1+
03006	Structure 04: red brick wall of structure with corner	4	0.5	0.5+
03007	Structure 03: red brick wall at north end of trench	2	0.6	0.4+
03008	Structure 05: red brick wall at south end of trench	3.9	0.5	0.45+

TRENCH 4				
L (M)	W (M)	D GD/L (M)		
		MIN.	MAX.	
23.5	1.8	0.3	0.97	
CONTEXT	DESCRIPTION	DIMENSIONS (M)		
		L	W	DBGL
04001	Made ground: yellowish brown gravely sand	-	-	0-0.3
04002	Made ground: greyish brown gravely sand with moderate medium stone inclusions	-	-	0.3-0.5
04003	Made ground: light yellowish brown gravely sand	-	-	0.5-0.73
04004	Made ground: mid brown gravely silty sand with frequent medium stone inclusions	-	-	0.73-0.97
04005	Made ground: greyish yellow fine sand at western end of trench	-	-	0.22-0.95
04006	Demolition dump of moderate rounded stones, plastic, wood and some rubble	-	-	0.97+

TRENCH 6				
L (M)	W (M)	D GD/L (M)		
		MIN.	MAX.	
14.7	1.8	0.9	1.15	
CONTEXT	DESCRIPTION	DIMENSIONS (M)		
		L	W	DBGL
06001	Topsoil: turf layer, dark brown silty clay	-	-	0-0.1
06002	Made ground: dark brown gravely clay with frequent small stone inclusions	-	-	0.1-0.45
06003	Made ground: light yellowish brown sandy clay with occasional brick inclusions	-	-	0.45-0.74
06004	Geological Substrate: dark greyish brown silty clay with very frequent large gravel	-	-	0.74+

TRENCH 5				
L (M)	W (M)	D GD/L (M)		
		MIN.	MAX.	
14.6	1.8	0.56	1.1	
CONTEXT	DESCRIPTION	DIMENSIONS (M)		
		L	W	DBGL
05001	Made ground: yellowish grey sand with frequent gravel inclusions	-	-	0-0.12
05002	Made ground: light yellow sand with gravel inclusions	-	-	0.12-0.26
05003	Made ground: light yellow sand with gravel inclusions	-	-	0.26-0.45
05004	Made ground: tarmac layer	-	-	0.45-0.56
05005	Made ground: concrete	-	-	0.56+
05006	Wall 01: SW-NE orientated red brick wall	2.65	0.43	0.56-1.1
05007	Large gravel backfill between brick walls [05006] and [05008] made up of large stones and grey sand	-	-	0.56-1.1
05008	Wall 02: SW-NE orientated red brick wall	4.2	0.43	0.8
05009	Wall 03: red brick wall at south end of trench	0.5	0.2	0.9+
05010	Concrete surface between [05006] and [05008]	-	-	1.1+

## Appendix 2.1 *Photographic register*

PHOTO	DIRECTION	DESCRIPTION
001	–	ID Film Shot 01
002	SE	TR5 General shot after machining
003	NW	TR5 General shot after machining
004	SW	TR5 East facing section at N end
005	SE	TR5 Concrete LOE at S end
006	SW	TR5 General shot of (05007) between Walls 01 and 02
007	NE	TR6 General shot after machining
008	SW	TR6 General shot after machining
009	NW	TR5 Brick Wall 01 section (05006) with scale
010	NW	TR5 Brick Wall 01 section (05006) without scale
011	SE	TR5 Brick Wall 02 NE facing section (05008) with scale
012	SE	TR5 Brick Wall 02 NE facing section (05008) without scale
013	NE	TR5 Plan shot extent of wall (05008) (Wall 02)
014	N	TR5 Oblique shot SE facing side of Wall 02 (05008)
015	SSE	TR3 General shot after machining
016	–	VOID
017	NNW	TR3 general shot after machining
018	ENE	TR3 WSW Facing section S end
019	ENE	TR3 WSW Facing section S end without scale
020	NNE	TR3 Plan shot Structure 04 pre-cleaning
021	WSW	VOID
022	WSW	TR3 ENE Facing section N end
023	WSW	TR3 ENE Facing section N end without scale
024	SE	TR5 Section shot of top to Wall 02 and 03 and metal object
025	SE	TR5 Section shot of top to Wall 02 and 03 and metal object
026	SE	TR5 Oblique shot of Wall 03 (05009)
027	E	TR5 Oblique shot of Wall 03 (05009)
028	SE	TR5 Oblique shot of Wall 03 (05009)
029	NW	TR2 After machining
030	SE	TR2 After machining
031	SW	TR2 NE facing section
032	SE	TR1 NW facing section
033	SE	TR1 plan shot of drainage channel (01006) central, opened
034	S	TR1 plan shot of drainage channel (01006) central, opened

PHOTO	DIRECTION	DESCRIPTION
035	SE	TR1 plan shot of drainage channel (01006) NE end exposed top
036	SW	TR1 After machining
037	NE	TR1 After machining
038	SW	TR4 After machining
039	NE	TR4 After machining
040	SE	TR4 NW facing section
041	SW	TR3 plan shot of Structure 05 (03008)
042	–	ID Film Shot 02
043	SE	TR6 N facing section partially submerged
044	SW	TR3 Plan shot of Structure 05 (03008)
045	SW	TR3 plan shot of Structure 05 (03008)
046	SSW	TR3 Oblique shot of Structure 05 (03008)
047	NW	TR3 Oblique shot of Structure 04 (03006)
048	SE	TR3 Oblique shot of Structure 04 (03006)
049	E	TR3 Plan shot of Structure 03 (03007)
050	NW	TR5 SE facing section of Brick Wall 01 (05006)
051	NW	TR5 Brick Wall 01 (05006) without scale
052	SE	TR5 Brick Wall 02 (05008) NW Face
053	SE	TR5 Brick Wall 02 (05008) NW Face without scale
054	SE	TR5 Oblique shot of Wall 02 (05008)
055	SE	TR5 Oblique shot of Wall 03 (05009) and metal object
056	N	TR5 General shot of Wall 02 (05008) SE Face
057	N	TR5 General shot of Wall 01 and 02
058	SE	TR5 Oblique shot of Brick Wall 03 (05009) and metal object
059	NE	TR2 Oblique shot of Structure 01 (02006)
060	WNW	TR2 Oblique shot of stone slab surface (02005)
061	SE	TR2 Section shot including (02005)
062	SE	TR2 Section shot including (02005) *Second shot*
063	N	TR2 Shot of Structure 02 (02007) (submerged)
064	W	TR2 Shot of Structure 02 (02007) (submerged)
065	N	TR2 Shot of Structure 02 (02007) (submerged)
066	N	TR2 Shot of Structure 02 (02007) (submerged)
067	NW	TR2 Shot of Structure 02 in section
068	S	TR2 Shot of Structure 01 (02006)
069	S	TR2 Shot of stone slab surface (02005)
070	SE	TR2 Section shot including (02005)

PHOTO	DIRECTION	DESCRIPTION
071	S	TR1 Shot of heavy rubble layer (01007)
072	W	TR1 Shot of drainage channel (01006)
073	–	TR1 Plan shot of concrete plinth location
074	W	Shot of concrete plinth
075	W	TR3 Oblique shot of Structure 03 (03007)
076	W	TR3 E facing section
077	NW	TR4 SE facing section +beginning of demolition dump (04006)



## APPENDIX 3 FINDS CATALOGUE

TR	CONTEXT	SAMPLE	QTY	WGT (G)	MATERIAL	OBJECT	DESCRIPTION	SPOT DATE
1	01006	009	1	1527	CBM	brick	broken, dark red fabric, W 108mm x H 66mm, stock-moulded	L18th+
1	01006	009	1	2116	CBM	brick	broken, mid red fabric, L 222mm x W 106mm x H 64mm, stock-moulded	–
2	02006	007	100	160	CBM	brick	mid red and dark red fabrics, very small to small fragments	–
2	02006	007	26	1599	CBM	brick	small to large fragments, 15 with mid red fabric, 11 with dark red fabric - possibly fragments of two different bricks	–
2	02007	008	1	29	CBM	roof tile	red fabric, 12mm thick, mortar and concrete attached, stock-moulded	–
2	02007	008	1	1706	CBM	brick	broken in half lengthways, mid red fabric, L 220mm x W 108mm, stock-moulded	L18th+?
3	03007	005	1	2276	CBM	brick	nearly complete, not stamped, frogged, mid red fabric, L 222mm x W 105mm x H 64mm	L18th+
3	03006	004	12	9	Building Material	mortar	lime mortar fragments, very abraded	–
3	03006	004	–	84	Building Material	mortar	fine to very small fragments of lime mortar includes fine fragments of retent	–
3	03006	004	4	2009	CBM	brick	two large and two small fragments, large fragments frogged and possibly stamped but mortar obscuring vision, similar dark red fabric with slag inclusions, possibly all from same brick but do not join, W 100mm x H 64mm	L18th+
3	03008	006	1	2485	CBM	brick	nearly complete, dark red fabric, vertical lined staining (fe? grid?), L 220mm x W 105mm x H 70mm, some mortar attached, stock-moulded?	–
2	02005	–	1	37	Pottery (Mod)	PMR	brown glazed, dish, rim sherd	16th–19th
5	05006	001	1	2840	CBM	brick	nearly complete, frogged, stamped 'SOUTHWATER', mid red fabric, L 215mm x W 102mm x H 64mm	1890–1981; 1969–1981
5	05008	002	1	3178	CBM	brick	nearly complete, frogged, stamped 'SOUTHWATER', mid red fabric, L 215, x W 102mm x H 64mm, some mortar attached	1890–1981; 1969–1981
5	05008	002	1	4000	CBM	brick	nearly complete, brick obscured by heavy layer of mortar, frogged, similar in size and makeup to other 'SOUTHWATER' brick in context and likely to be the same, mid red fabric, L 215mm x W 102mm x H 64mm	1890–1981?; 1969–1981?
5	05009	003	50	18	Building Material	mortar	lime mortar fragments, very abraded; some flint fragments present, likely from mortar mixture	–
5	05009	003	1	3532	CBM	brick	two brick fragments mortared together, one mid red and one dark red; mid red brick W 107mm x H 68mm; dark red brick W 101mm x H 67mm, stock-moulded	L18th+







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