

**Historic Scotland  
Properties in Care  
Minor Archaeological Works 2010**

**Holyrood Palace:  
South Garden Trench Excavation  
And Watching Brief  
November / December 2010**

**HS PIC Index Number: 90131  
Project Code: HSCO-90131-2010-03**



**10<sup>th</sup> November - 14<sup>th</sup> December 2010  
Kirkdale Archaeology**

**Site:** The South Garden, Holyrood Palace, Edinburgh.

**N.G.R.:** NT 265 732 – NT 285 721.

**Project Description:** Excavation and Watching Brief.

**Project Code:** HSCO-90131-2010-03.

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## 1.0 INTRODUCTION

Historic Scotland commissioned Kirkdale Archaeology to monitor the excavation of a long track being dug around the gardens on the S side of Holyrood Palace (see Fig.1 and Fig. 2). The track was designed to carry a service pipe from the S gate around the W side of the S gardens.

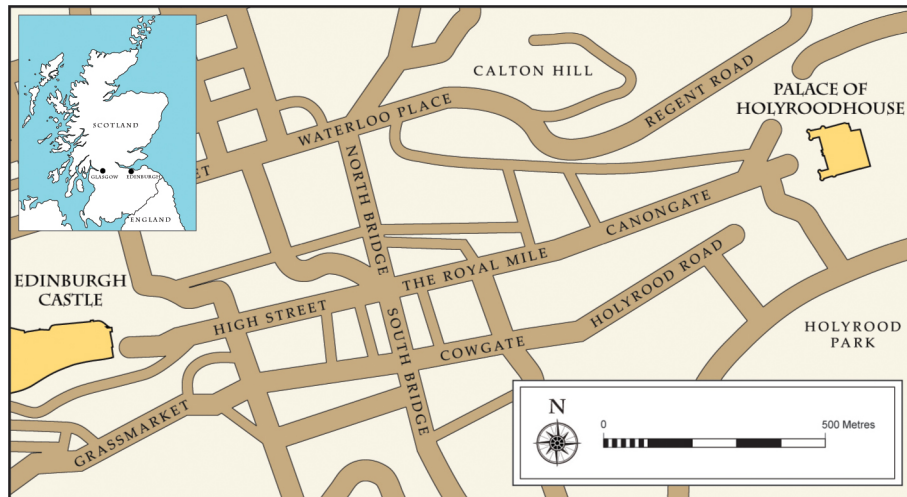


Figure 1: Palace of Holyroodhouse, location map.

The late nineteenth century gardens at Holyrood are surrounded by a wall, with soil banked up against its inner face to create a Haw- Haw. A track runs from the S gate that pierces this wall along the top of the Haw- haw to the W, before curving round in a broad arc to run N towards the Palace. Internal to this track is a flat grassy area, broken by a few trees with a further shorter track leading N from the S gate into this.

The trenches excavated totalled 265 m in length, with much of this following the course of these two tracks. Where the excavation followed these routes it was dug using a small mechanical excavator, while where it ran across the grass it was hand dug by the Palace garden staff. Due to the stony nature of much of the deposits encountered a toothed bucket was used by the excavator. This meant that there is some variation both in width (c 300- 500 mm) and depth (300 to a maximum of 700

mm) in these stretches, while the hand dug stretches tended to be much more uniform (300 mm wide and deep).

The trench was divided into four discrete areas, although all connected, based principally on the order in which they were dug, with the hand dug trenches finished before the longer machine excavated stretches.

Trench 1 followed the outer edge of the path running around the W and SW sides of the garden. The main section measured 165 m long and ran N- S along the W stretch of the track, before following its curve to run E towards the S gate. This stretch followed an existing gas pipe, running along the outer (W and S) edge of the trench. At the N end of this section a hand dug section ran in a "zigzag" manner roughly NW into the flower beds for a further 14 m, terminating at an extant electricity junction box. At the SE end of the main part of trench 1 it turned and crossed the track, running NNE for 5 m, before joining the SW end of trench 2. Trench 1 was almost entirely dug by machine, except for the NW end running through the flower beds, which was hand dug.

Trench 2 ran SW- NE down the slope of the Haw- haw at an oblique angle for 16 m, with a short (1.5 m long) stretch at its SW end running SSW- NNE to connect to trench 1. At its NE end a wall (206) was found, which caused a larger area to be opened to attempt to avoid it. This was an irregular shape, but measured up to 2 m NW- SE by 2.15 m SW- NE. The trench then continued as a narrow slot for a further 4 m from the NE corner of this larger area towards the NE, running across the shorter N- S track to connect to trenches 3 and 4. This trench was dug across the grass (except for its extreme NE end), and so was hand dug.

Trench 3 ran from its junction with trenches 2 and 4 up the central N- S track for c. 40 m, curving with this road to run NW- SE for its S end, before swinging round to run N- S at its N end. This stretch was almost entirely machine dug.

Trench 4 ran SE from its junction with trenches 2 and 3 for 19.5 m. It was hand dug across the grass, with its SE end running up the Haw- Haw on the E side of the main gate.

A series of 10 man holes were also opened up at regular intervals along the length of the trench. These averaged 800 mm square, and were excavated to the same depth as the rest of the trench.

Most of the excavation work was monitored, but the extreme length of the trench meant that only limited areas could be examined in more detail. The entire trench system was planned at a scale of 1:200, with only select areas subject to more detailed drawings in plan and section. Few finds were recorded by context, most being simply classified as un- stratified, having been removed by the machine.

## **2.0 DESCRIPTION (see Fig. 2)**

The results will be considered on a trench by trench basis, with the account often based around the horizontal sequence along the trenches, rather than the vertical stratigraphic one, for ease of description. Most of the modern services encountered are not described here, except where these affect other features, but form part of the site archive.

### **2.1 TRENCH 1**

The NW end of trench 1 ran in a zigzag manner to avoid shrubs roughly NW, away from the N end of the main N- S stretch of the trench. It was some 14 m long, and being hand dug was narrower and shallower than the rest of this trench.

Two electricity cables (007) ran along the N side of this stretch of trench at its SE end, after 4 m basically filling the trench at its NW end. These were dug through 029, dark grey clayey silt rich in rounded pebbles, mortar flecks and coal and blaze fragments.

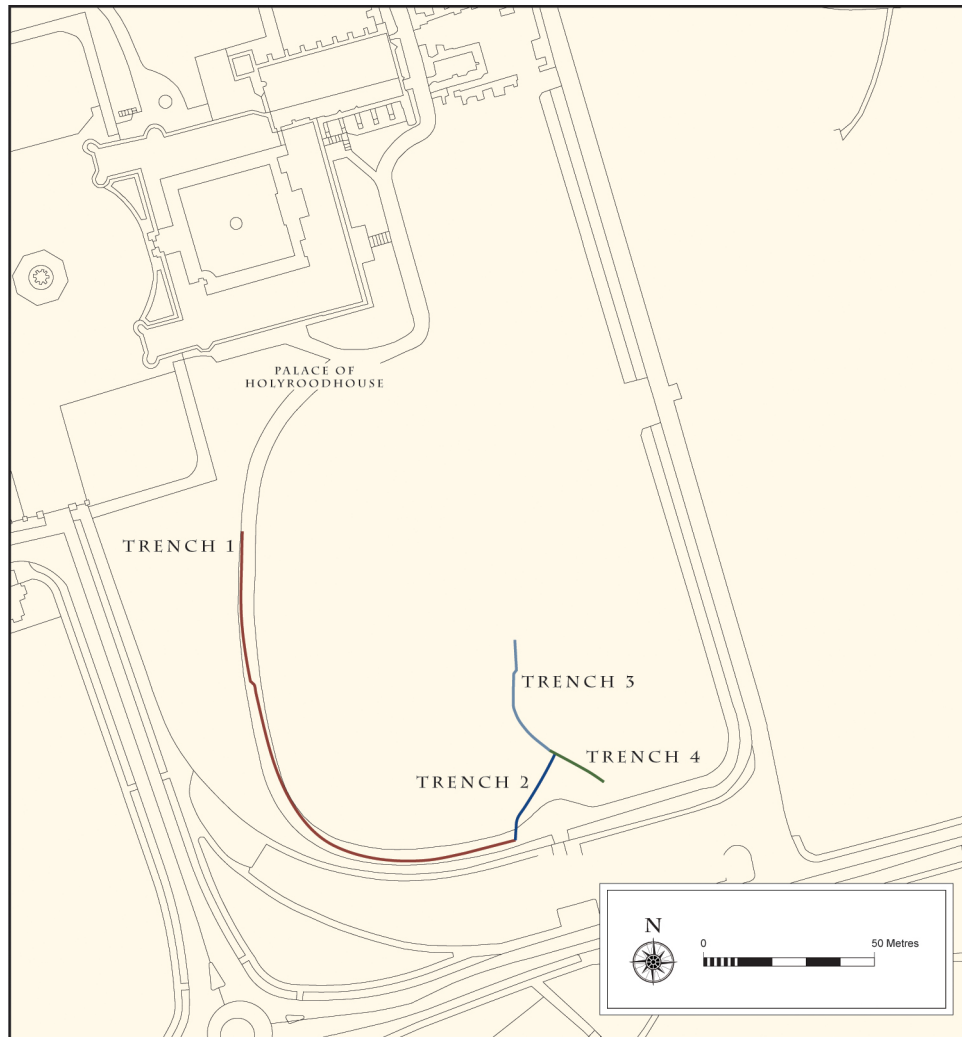


Figure 2: Trench location map.

This was at least 450 mm deep, and near the SE end of this stretch it sealed masonry 006. This was 900 mm wide and crossed the trench roughly SW- NE, making it at least 800 mm long. It was built of slabs of stone (principally sandstone) laid on their edges, vertical towards the central line of the feature, and sloping outwards on both sides away from this. This was all bonded by hard fine white mortar. 006 was at least 150 mm high and not bottomed, and was found some 400 mm below the present ground level.

Right at the junction of the NW- SE and the N- S sections of trench 1 manhole **018** was dug down through **029**. To the E of **018** (but with their relationship outside the trench) was a lagged pipe **009**. This ran down the W side of the trench for c 25 m, before turning to the E and crossing the trench.

Context **009** had been cut by a further lagged pipe **008**, also running along the W side of the trench. This was the gas pipe the trench was intended to follow, and it was tracked for some 164 m, before continuing out the trench to the E at its SE end. **008** obscured most of the upper part of the outer (W and S) section of trench 1.

A thin deposit of small angular red gravel chips **002** formed the surface of the track, with hints of silt and rounded gravel **019** suggesting an earlier surface. This directly overlay substantial mixed loose deposit **003**. This comprised 70% rubble, mostly angular dolerite chunks of all sizes, up to c. 1 m long, but also some sandstone, occasionally with mortar attached, including two finely carved fragments of roll moulding. This was mixed in with dark grey sandy silt rich in mortar and charcoal flecks and rounded pebbles, frequently of flint. This deposit was traced along the length of trench 1, where it followed the track (c 164 m), not being noted in the section to the NW dug through a flower bed, and was some 300- 400 mm thick. Fragments of white china were recovered from **003**.

At roughly the point where the track curved to run E towards the S gate, and rises up over the Haw- haw **003** sealed **030**. This deposit comprised dark grey silt mixed in with small flint chips and proved to be at least 500 mm thick, without bottoming it, and was traced along the elevated section of the track, a distance of perhaps 60 m, continuing into trench 2 as **202**. As the ground level rose up over the Haw- haw **030** formed the basal deposit to this stretch of the trench.

At the W end of **030** it was found to overlie an apparent cut, with different numbers given to its N (**023**) and S (**031**) sides, but with an overall width of some 4.5 m. Little

excavation was carried out on this feature, but it had two fills, **022** to the N and **035** to the S. These were both a mix of brown silty sand and rubble, apparently exclusively sandstone, often with mortar attached all rich in mortar and charcoal flecks. These were separated by an apparent stretch of masonry **034**, which may mark the base of the cut. **034** was poorly defined, but seemed to be 1.6 m wide by at least 200 mm high, and to cross the trench E- W. It was built using angular blocks of dolerite, with some evidence for larger facing stones, bonded by a fine pale brown mortar.

Contexts **023/ 031** had been dug down through compact dark grey silty clay very rich in mortar and charcoal flecks **004**. This extended up the N- S section of the trench near its base, and continued to the S of **031** for a short distance before running under **030**. In total it was traced for around 100 m, although frequently interrupted by service cuts, and measured 150- 250 mm thick.

Appearing intermittently at the very base of the trench, where the excavation went through **004**, was **005**. This was a compact mid grey silty clay, very rich in mortar and charcoal flecks, and with frequent stones throughout. **005** is of unknown thickness.

## **2.2 TRENCH 2**

This hand dug trench ran down the N face of the Haw- Haw SW- NE, with its NE end excavated across the central roadway. Below topsoil **200** a plastic pipe **213** at the SW end of the trench separated it from trench 1. To the NE of this a shallow cut **205** was recorded dug into the slope of the Haw- Haw.

Context **205** had been dug through **202**, a substantial deposit seen only at the SW end of the trench, where it coincided with the area of the Haw-Haw. **202** consisted of dark grey silt very rich in small chips of flint. It was traced for 5 m, continuing to the SW in trench 1 as **030**, and was up to 500 mm thick to the SW (where it was not bottomed), tapering off to the NE.



**205** sealed **201** 70- 80 mm thickness of dark grey clayey silt. This was very similar to topsoil **200**, and was only really obvious where **205** separated these deposits. To the SW **201** ran on under **205** as the ground level rose, while to the NE it was just visible along the length of trench 2 under **201**, until the NE end, where gravel path **218** truncated it.

Context **201** overlay two deposits separated by an earlier wall line **206**, with **215** to its SW and **216** (which continues into trench 3 as **302** and trench 4 as **413**) to its NE. Both were compact pale grey silty clays rich in charcoal and mortar flecks and oyster shell fragments. **215** was not bottomed, while **216** proved to be 200 mm thick and overlies **217**. This was an unexcavated layer of pale grey silty clay, with large amounts of pale yellow mortar chunks throughout, with its SW end banked up against **206** and running out the bottom of the trench to the NE.

Context **206** comprised a roughly E- W wall line, around which a larger area was opened up in an attempt to bypass it. The wall was at least 1.9 m long (continuing both ways) , 800 mm wide and was exposed to a height of 400 mm. **206** was built entirely of dolerite with no evidence for coursing or larger facing stones, and was bonded by fine pale yellow mortar.

### **2.3 TRENCH 3**

This trench ran up the central track leading N from the S gate. It angled to the NW at its S end, before curving back to run N- S for its Northern half. Below the red gravel path **301** this trench presented a fairly straightforward sequence, ignoring the modern services.

Context **303** comprised a stone rich dark grey silty clay found in a stretch 10.5 m long at the N end of the trench, and proved to be 100- 150 mm thick. Below this **302** consisted of compact grey silty clay with frequent charcoal and shell fragments

throughout. This was 300- 400 mm thick, and ran the length of the trench, continuing into trench 2 as **216**, and into trench 4 as **413**.

At the N end of the trench **302** was the lowest deposit encountered, however 8 m S of the N end of the trench **309** was exposed, running from here S for c. 11 m at the base of the trench. **309** was formed by compact yellowish brown clay.

As well as the usual service cuts, a single flat bottomed cut **311** was recorded 10.5 m S of the N end of the trench. It was dug through **302** (truncated by **301**) and filled by **311**, dark brown silty peat.

#### **2.4 TRENCH 4**

Trench 4 ran SE from its junction with trenches 2 and 3. It was hand dug across the grass, and its SE end rose up over the Haw- Haw. To the NW it was filled by a mass of services that made earlier features hard to examine, and some relationships obscure.

Below topsoil **401** at the SW end of the trench **417** comprised dark grey silt rich in flint chips, found only where the ground level rose over the Haw-Haw. At the extreme SW end this was the lowest deposit recorded, but to the NE, as it thinned and disappeared, it could be seen to overlie **413**, silty clay rich in flecks of shell and charcoal. This ran the length of the trench, where not removed by later cuts, and was 300- 400 mm thick.

Context **413** sealed three apparent structural remains: **408**; **409** and **418**, and a wide cut **411**. The N edge of **411** was 8.2 m S of the NW end of trench 4, and only c. 100 mm of its fill **412** was removed, comprising yellowish brown silty clay, with discrete patches of pale greenish sand and frequent stones throughout.

900 mm NW of **411** structural remains **409** crossed the trench, with its S face running NE- SW. **409** consisted of a thin line of dolerite blocks bonded by pale yellow mortar, separated by a slight gap from **408**, built in the same manner and probably the same feature, damaged by gas pipe **415** running over them. Their combined width is 1.3 m, and they stood at least 200 mm high.

Just 400 mm NW of the N face of **408** apparent wall line **409** was recorded, mostly obscured by later cement platform **407** built over all but its SE corner. Although only seen in a small area **418** seemed to have a good S face, orientated E- W, and a good match for the line of the S face of wall **206** in trench 2, which would make it at least 9 m long.

### 3.0 CONCLUSIONS

This trench stretching around the S gardens of Holyrood Palace has exposed long and often remarkably consistent sequences. The earliest evidence would seem to consist of a lower ground surface, perhaps 500 mm below the current level, with possibly associated structural remains. Within trench 1 in particular **004** was thought likely to represent a buried ground surface.

The relationships between the various structural remains simply cannot be determined in the limited, often damaged areas examined. Wall **206** in trench 2 is almost certainly the same as **418** in trench 4, making it at least 9 m long. The cut **023/031** in trench 1 bottomed on an apparent wall **034**, making it most likely a robber trench. **034** is significantly wider than **206**, but could represent footings to the same feature. This would make it at least 80 m long. The S end of the gardens was extended in the nineteenth century, and this wall line would make a good candidate for this earlier boundary.

Wall line **408/ 409** lay just to the S of **418** in trench 4, but their relationship was obscured by later cuts. **408/ 409** could represent a structure just outside the gardens. The major cut **411** to the S of these walls seemed to be backfilled with re-deposited natural boulder clay. This implies a feature dug to a considerable depth, with a major drain known to run on roughly this course being a good candidate for this feature, again just outside the original Palace enclosure wall.

Returning to the NW end of trench 1 the structural remains orientated NE- SW **006**, resemble the top of a vaulted roof, with its edge set, sloping stones. This is again most likely a well built drainage channel.

These structures and possibly associated ground surface were then sealed over by substantial deposits. Under the main roadway **003**, a rubble rich deposit, is likely to represent a hardcore under pinning for the track. Much of this was dolerite,

including some enormous blocks, likely to have been freshly quarried from Arthur's seat (quite possibly from Salisbury Crags directly overlooking the site), but it included some sandstone demolition/ construction rubble. Finds indicate a late nineteenth century date for this operation.

Context **003** seems to post- date the construction of the Haw-Haw, although they may well be contemporary operations. Wherever excavation was carried out over the Haw-Haw its make up was found to be rich in flint chips, presumably introduced as drainage.

Away from the Haw-haw and main track dumps of soil such as **215** and **216** seemed to have been used to seal structural remains and raise the ground level generally. The operation was presumably intended to prevent flooding of the low lying area of the gardens, and indicates a massive landscaping operation.

#### 4.0 APPENDIX 1: LIST OF DIGITAL PHOTOGRAPHS

No.	Trench	Description	Facing	Date
1	1	General view of N end of Trench 1	S	10/11/10
2	1	General view - work in progress	S	10/11/10
3	1	Structure F006	SW	11/11/10
4	1	Structure F006, showing section	SW	11/11/10
5	1	Structure 6	SE	11/11/10
6	1	Structure 6	SE	11/11/10
7	1	Structure 6	NW	11/11/10
8	1	Structure 6	NW	11/11/10
9	1	Structure 6	NE	11/11/10
10	1	Structure 6, showing section	NE	11/11/10
11	1	Structure 6 and manhole F018, section	SW	11/11/10
12	1	General view of trench	S	11/11/10
13	1	General view - work in progress	S	11/11/10
14	1	General view - work in progress	W	11/11/10
15	1	N end of N/S section , pipes 008 and 009	N	12/11/11
16	1	NW end of trench - general view	W	12/11/11
17	1	Junction of N/S trench and NW end of trench	NW	12/11/11
18	1	Cable 010	E	12/11/11
19	1	Cable 010	E	12/11/11
20	1	Cable 011	E	13/11/11
21	1	Cable 011	E	13/11/11
22	1	Trench 1 - general view	N	13/11/11
23	1	Trench 1 - general view	N	13/11/11
24	1	Cable 012	E	15/11/11
25	1	Cable 012	E	15/11/11
26	1	E-facing section between cable 016 and cut 017	W	15/11/11
27	1	E-facing section between cable 016 and cut 017	W	15/11/11
28	1	E-facing section between cable F016 and cut F017	W	15/11/11
29	1	E-facing section of S end of N/S section of Trench 1	W	16/11/11
30	1	E-facing section of S end of N/S section of Trench 1	W	16/11/11
31	1	E-facing section of S end of N/S section of Trench 1	W	16/11/11
32	1	E-facing section of S end of N/S section of Trench 1	W	16/11/11
33	1	E-facing section of S end of N/S section of Trench 1	W	16/11/11
34	1	E-facing section of S end of N/S section of Trench 1	W	16/11/11
35	1	E-facing section of S end of N/S section of Trench 1	W	16/11/11
36	1	E-facing section of S end of N/S section of Trench 1	W	16/11/11
37	1	E-facing section of S end of N/S section of Trench 1	W	16/11/11
38	1	E-facing section of S end of N/S section of Trench 1	W	16/11/11
39	1	Cut 023 through 004	S	16/11/11
40	1	Cut 023 through 004	S	16/11/11

No.	Trench	Description	Facing	Date
41	2	Wall 206 as first exposed	NW	16/11/11
42	2	Wall 206 as first exposed	NW	16/11/11
43	22	Section on S side of wall 206	NW	16/11/11
44	2	Section on N side of wall 206	NW	16/11/11
45	2	N face of 206	NW	16/11/11
46	2	Wall 206	SE	16/11/11
47	2	N face of wall 206	SW	16/11/11
48	2	SE-facing section of NW end of Trench 2	NW	17/11/11
49	2	SE-facing section of NW end of Trench 2	NW	17/11/11
50	2	SE-facing section of NW end of Trench 2	NW	17/11/11
51	2	SE-facing section of NW end of Trench 2	NW	17/11/11
52	2	SE-facing section of NW end of Trench 2	NW	17/11/11
53	2	SE-facing section of NW end of Trench 2	NW	17/11/11
54	2	Wall 206 fully exposed	E	18/11/10
55	2	Wall 206 fully exposed	E	18/11/10
56	2	Wall 206 fully exposed	S	18/11/10
57	2	Wall 206 fully exposed	N	18/11/10
58	2	Wall 206 fully exposed	W	18/11/10
59	2	Wall 206 fully exposed	W	18/11/10
60	2	Wall 206 fully exposed	E	18/11/10
61	3	Work in progress	S	18/11/10
62	3	Work in progress	S	18/11/10
63	3	Work in progress	NW	18/11/10
64	3	Work in progress	S	18/11/10
65	2	S-facing section to E of wall 206	N	18/11/10
66	3	Work in progress	N	18/11/10
67	3	Work in progress	S	18/11/10
68	3	N end of Trench 3 , E-facing section	W	19/11/10
69	3	N end of Trench 3 , E-facing section	W	19/11/10
70	3	N end of Trench 3 , E-facing section	W	19/11/10
71	3	N end of Trench 3 , E-facing section	W	19/11/10
72		General view	S	21/11/10
73		General view	S	21/11/10
74	4	General view of NW end of Trench 4	SE	22/11/10
75	4	NW end of Trench 4	SE	22/11/10
76	4	NW end of Trench 4	SE	22/11/10
77	4	NW end of Trench 4	SE	22/11/10
78	4	General view of masonry 408, 409, 418	SE	26/11/10
79	4	Concrete 407 and masonry 418	SE	26/11/10
80	4	Masonry 408 and 409	SE	26/11/10
81	4	Deposit 414 and NW end of cut 411	SE	26/11/10
82	4	Wall 418, under concrete 407	N	26/11/10

No.	Trench	Description	Facing	Date
83	4	Wall 418 and masonry 408	NE	26/11/10
84	4	Masonry 408	NE	26/11/10
85	4	Masonry 408 and 409	NE	26/11/10
86	4	Detail of N edge of cut 411	NE	26/11/10
87	4	Section between 418 and 408	NE	26/11/10
88	4	Section over masonry 408	NE	26/11/10
89	4	Section over masonry 409	NE	26/11/10
90	4	Section of cut 411	NE	26/11/10
91	3	Cut 310 in E-facing section of Trench 3	W	26/11/10
92	4	General view of cut 411	SE	26/11/10
93	4	N edge of cut 411, against 414	SW	26/11/10
94	4	General view of fill 412 in centre of 411	SW	26/11/10
95	4	S edge of cut 411	SW	26/11/10
96	4	SW-facing section of S edge of cut 411	NE	26/11/10
97	1	General view of area of wall 034	S	14/12/10
98	1	Detail of wall 034	W	14/12/10
99	1	Detail of E-facing section of wall 034	W	14/12/10
100	1	Detail of W-facing section of wall 034	E	14/12/10

## 5.0 APPENDIX 2: LIST OF DRAWINGS

No.	Description	Scale
1	Location plan of trenches 1, 2 and 3	1:200
2	Plan of junction of trenches 2, 3 and 4	1:200
3	Plan of wall 206	1:20
4	Plan of NW end of Trench 4	1:20
5	SE-facing section at SW end of Trench 2	1:10
6	Plan of drain 106	1:20
7	E-facing section of cuts 023 and 031	1:20
8	Plan of area of cuts 023 and 031	1:20

## 6.0 APPENDIX 3: LIST OF SMALL FINDS

Context	Trench	Type	Description
Unstratified	3	Ceramic	3 sherds of greyware and green glaze, 3 sherds crockery
		Clay pipe	4 fragments
003	1	Glass	1 fragment of vessel glass (clear)
Unstratified	1	Ceramic	c.30 miscellaneous sherds of greyware and white gritty



Context	Trench	Type	Description
			ware, c.20 miscellaneous sherds of crockery
004	1	Clay pipe	2 stem fragments
		Ceramic	3 sherds of crockery
004	1	Ceramic	1 sherd of crockery
		Clay pipe	1 stem fragment
		Glass	1 fragment of vessel glass (clear)
Unstratified	1	Glass	4 fragments of vessel glass - 3 green , 1 clear
		Iron	1 piece of wire
Unstratified	2	Ceramic	2 sherds of crockery
302	3	Ceramic	2 sherds of crockery
Unstratified	4	Ceramic	5 sherds of grey ware and green glaze, 2 sherds of crockery
Unstratified	1	Clay pipe	9 pipe stem fragments and 1 bowl fragment
		Ceramic?	Dummy round ? - 'Martini Henry' ?