

# *Discovery and Excavation in Scotland*

Updated on 15/06/2007

<b>LOCAL AUTHORITY:</b>	Glasgow, City Of
<b>PROJECT TITLE/SITE NAME:</b>	Glasgow Cathedral
<b>PROJECT CODE:</b>	HSCO-90150-2010-01
<b>PARISH:</b>	Glasgow, City Of
<b>NAME OF CONTRIBUTOR:</b>	Paul Fox
<b>NAME OF ORGANISATION:</b>	Kirkdale Archaeology
<b>TYPE(S) OF PROJECT:</b>	Watching Brief
<b>NMRS NO(S):</b>	NS66NW 17.00
<b>SITE/MONUMENT TYPE(S):</b>	Cathedral
<b>SIGNIFICANT FINDS:</b>	Human remains
<b>NGR</b> (2 letters, 8 or 10 figures)	NS 6027 6560
<b>START DATE</b> (this season)	10 August 2010
<b>END DATE</b> (this season)	13 August 2010
<b>PREVIOUS WORK</b> (incl. <i>DES</i> ref.)	
<b>MAIN (NARRATIVE) DESCRIPTION:</b> (May include information from other fields)	A watching brief was maintained during the excavation of a trench to locate and remove a blockage within the waste pipe serving the toilets in the Treasury/Sacristy. Human remains were encountered, and although the ground was much disturbed it was still possible to identify two discrete burials, at least one of which had been previously disturbed. There was evidence that when these burials were interred, a path (as it still does today) ran E-W round the N side of the Cathedral, and that other landscaping, possibly during the establishment of the New Burial Ground, had altered portions of the Old Burial Ground.
<b>PROPOSED FUTURE WORK:</b>	
<b>CAPTION(S) FOR ILLUSTRS:</b>	
<b>SPONSOR OR FUNDING BODY:</b>	Historic Scotland
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<b>ARCHIVE LOCATION</b> (intended/deposited)	Archive to be deposited in NMRS

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

# **Glasgow Cathedral: Pipe Blockage Watching Brief August 2010**

**HS PIC Index Number: 90150  
Project Code: HSCO-90150-2010-01**



**10<sup>th</sup>-13<sup>th</sup> August 2010  
Kirkdale Archaeology**

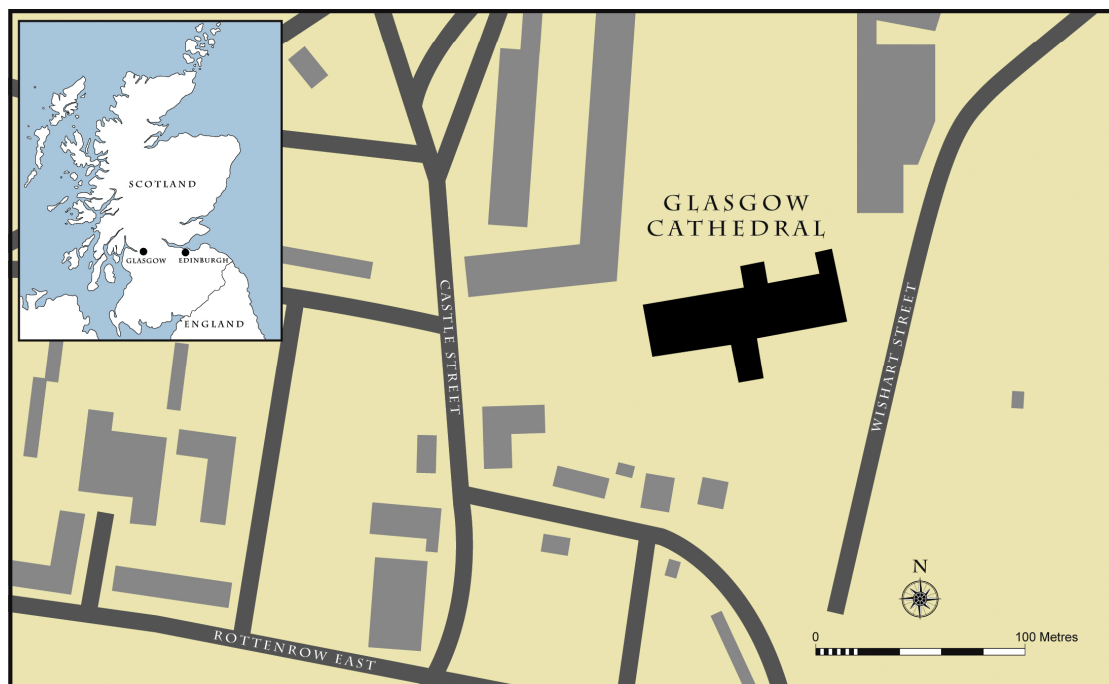
<b><u>Site</u></b>	St Mungo's Cathedral, Glasgow.
<b><u>N.G.R</u></b>	NS 603 656.
<b><u>Project Description</u></b>	Watching Brief during the excavation of a trench to locate and remove a blockage within the waste pipe serving the toilets in the Treasury/Sacristy.
<b><u>Project Code</u></b>	HSCO-90150-2010-01.

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## 1.0 INTRODUCTION

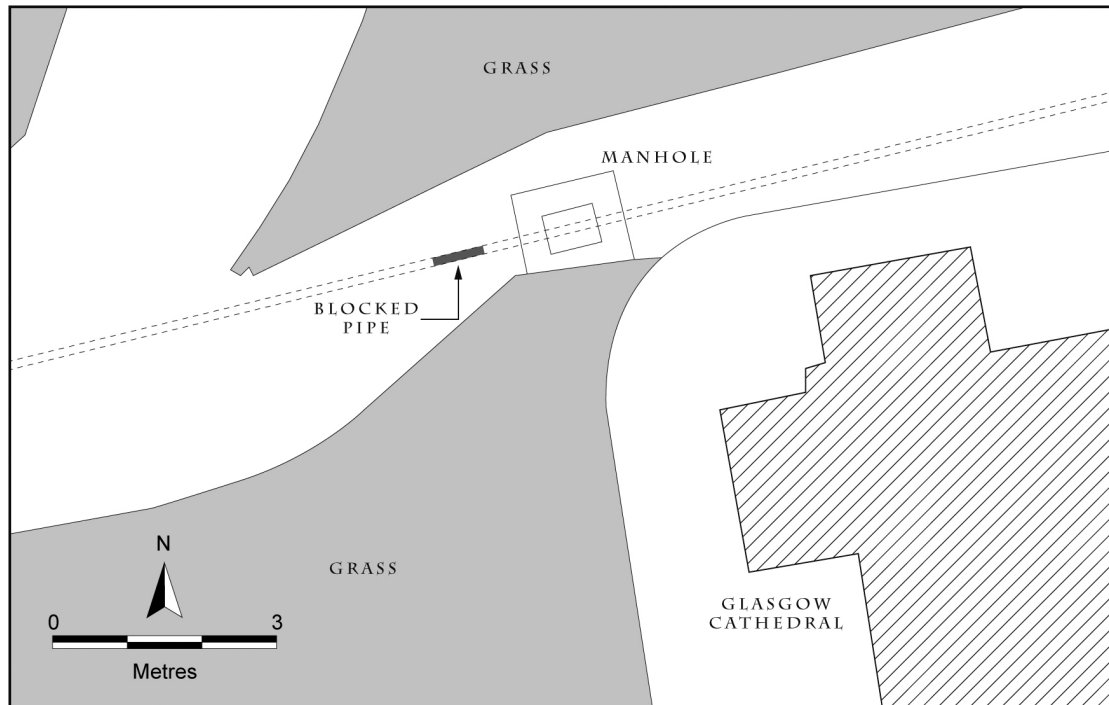
Under the terms of its PIC call-off contract with Historic Scotland, Kirkdale Archaeology was asked to undertake an archaeological watching brief during an excavation to repair a blocked/burst waste pipe lying beneath the path on the N side of St. Mungo's Cathedral, Glasgow (see Figures 1 and 2). The toilets in the Treasury/Sacristy had been out of use for some time and camera probing of the pipe seemed to suggest that there had been a collapse in the pipe below the area of granite setts to the NE of the Chapter House. The object of the exercise was to locate and repair the damage while recording anything of interest within the sections. The proximity of the trench to the Cathedral and its location within the original, or 'Old,' burial ground suggested that there was high potential for encountering features outwith the cut and fill of the waste pipe. The pipe itself had been installed c.1990.



**Figure 1:** Location map of Glasgow Cathedral.

The pipe ran W/E from the Treasury/Sacristy down to a manhole on the path at the NE corner of the Chapter House. It was through this manhole that the probes seemed

to establish that a collapse had taken place. In the event this was shown to be incorrect, with instead a blocked pipe being at the root of the problem.



**Figure 2:** Location map of the blocked pipe.

The Old Burial Ground refers to areas to the N, S and E of the Cathedral where internments took place within the confines of the precinct walls. By the 1830's a New Burial Ground had been established to the N of the N Precinct Wall on the former site of the Hall of the Vicar's Choral, an area which also housed the Chanter's, Subchanter's, Prebender's and Vicar's manses, crofts and yards. When these buildings were removed is not clear, but a view of the Cathedral looking S by Robert Paul in 1768 (See Figure 3) shows this area cleared of any buildings. There are fields and haystacks in the foreground with the Cathedral separated from 'Fir Park' (now the site of the Necropolis) by the Molendinar Burn. To the N of the Cathedral, the former site of the Vicar's Choral is divided into hedge-lined rectangular plots containing shrubs and trees. The only building present is a single storey cottage to the W.





**Figure 3:** A view of Glasgow Cathedral from the N by Robert Paul, 1768 (University of Glasgow Special Collections)

To the S of these plots lay the N portion of the Old Burial Ground. It was therefore clear that this was an archaeologically sensitive area to be working in. As a result it was agreed with Historic Scotland that all deposits would be excavated manually and that an appropriate photographic and drawn record would compliment the numbered feature descriptions.

One definite and one possible burial were uncovered during the works. These were found at the extremes of the necessary excavation footprint and as such were recorded *in situ* but were avoided in terms of excavation as there was no need to disturb them. One section of a detached coffin plank was retained for possible dating purposes, while the *in situ* remains were recorded, protected by terram and then carefully re-covered as part of the excavation backfill.

The work took place between the 10<sup>th</sup> and 13<sup>th</sup> August 2010.

## 2.0 DESCRIPTION AND INTERPRETATION

The dimensions of the trench (see Figures 4 and 5) were 2m wide N/S to the W, 1.2m wide N/S to the E, 2.85m long N/S and up to 1.2m deep.

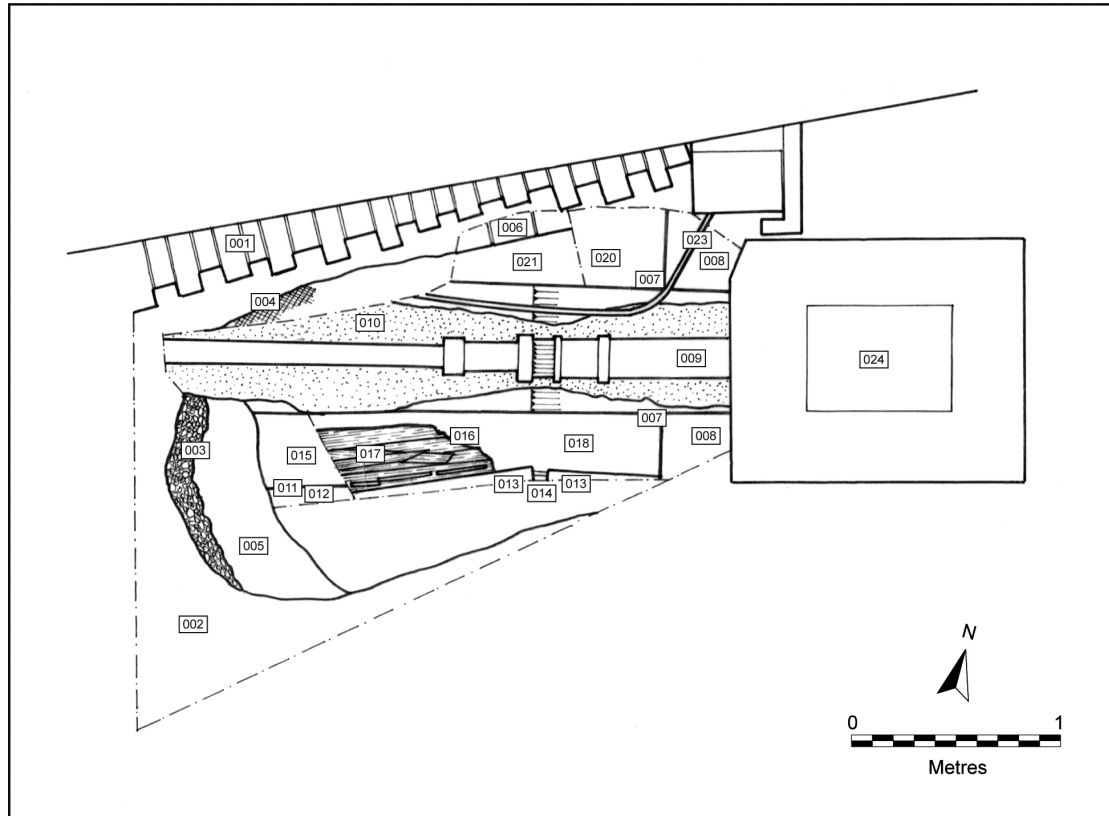
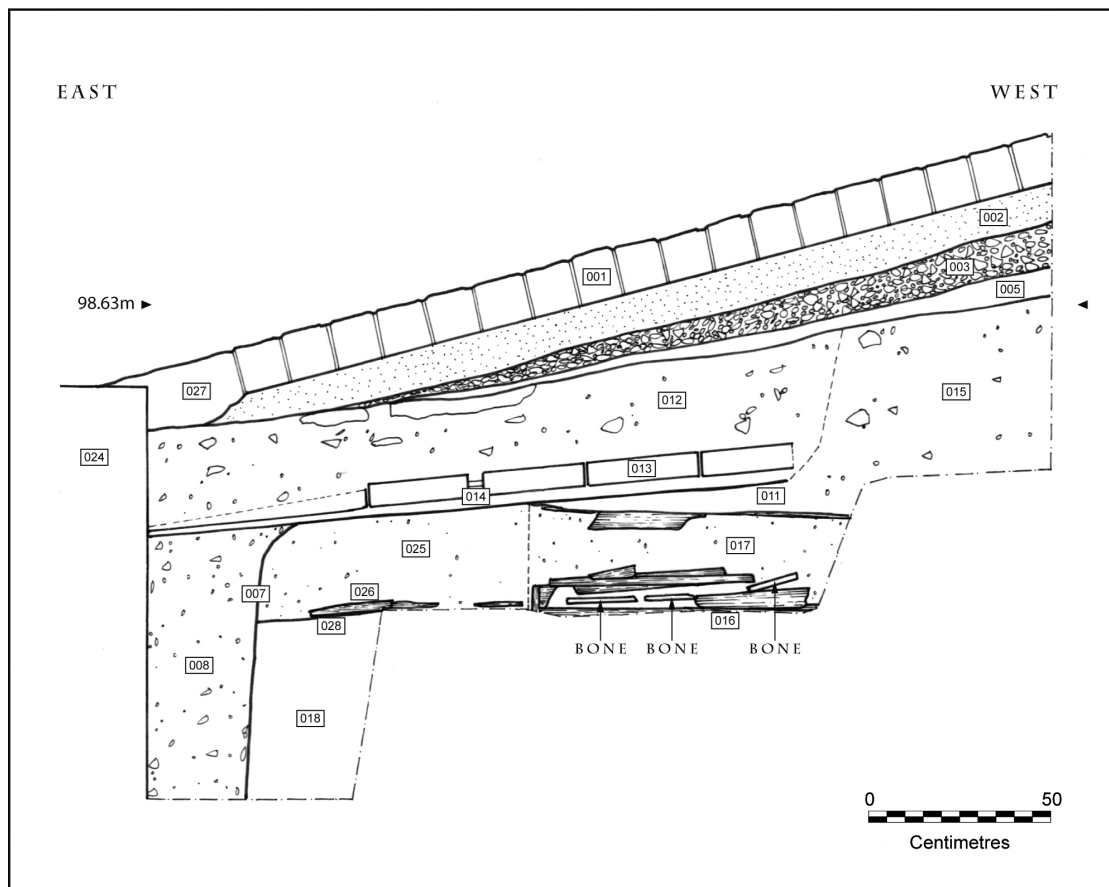


Figure 4: Post-excavation plan of the trench.

In advance of the excavation, the current path of granite setts (001) had been partially cleared, leaving only a line of them along the N kerb so that they could be set back into place. The setts were of rectangular grey granite, generally 130mm deep and of varying dimensions. These were set on a base of whin dust and cement (002) generally 120mm thick with a sub-base of Type 1 crushed whin stone with finings (003) up to 100mm deep. On the N side of the trench (003) sat on a mixture of terram and plastic mesh (004). The terram sat over a layer of tar macadam (005) up to 70mm thick. Layers (001) to (005) represented the re-instatement of the path after the insertion of the various services that were uncovered. To the E of the setts was a

small layer of turf and sand landscaping (027) some 150mm thick. A further discreet section of make-up consisted of a row of three granite setts (006) on the N side of the trench, and these lay over a live lead water main (023). The water main respected and fed into the main cut for the waste pipe and manhole. Although a cut number (022) was initially assigned to the water main, it transpired that it was likely to be part of the larger insertion of services characterised by cut (007). On the S side of the trench sections of a further pipe (013) were uncovered.



**Figure 5:** N-facing section through the trench.

It would appear from the consistency of the path fills overlying (013), (023) and the large main cut (007) for the waste pipe (009) and manhole (024) that these services were inserted at the same time. The cut (011) for the insertion of electricity pipe (013) was 390mm beneath the tar macadam (005). The cut disappeared in section as it was



heading towards the SW. It had been backfilled with a re-deposited mixed mottled fill of yellowish-brown silt and clay (012). The most notable cut was that for the insertion of the waste pipe and manhole, (007). This was 0.6m wide N/S for the waste pipe itself, opening out to at least 1.30m N/S for the manhole (though it was not fully exposed). The cut reached a depth of at least 1.10 m to the E. The cut had been backfilled with a re-deposited mixed mottled fill of yellowish-brown silt and clay full of red bricks (probably waste from the building of the manhole) (008). After removal of the backfill, the waste pipe (009), set on a bed of concrete (010), was exposed. This (009) was composed of ceramic pipe sections of graduated size. To the E was a 4 inch diameter ceramic pipe which jointed into a section of 6 inch ceramic pipe. This took a practically vertical drop down into an 8" pipe which then ran straight towards the brick-built manhole (024). The result was a pipe which had a tight 90 degree bend near to its outlet. When the pipe was smashed, the bend contained solid waste which had not been allowed to flow out due to the presence of two large stones and a piece of slate.

An examination of the sections of pipe showed that these relatively modern interventions (within the last 20 or 30 years) had truncated, at least partially, an earlier sequence of activity. Within the S-facing section a series of individual homogenous clay layers could be seen. These had been truncated to the S by the modern interventions. Context (021) was a layer of compact pinkish clay 150mm thick immediately below the tar macadam (005). This was likely to have been truncated in its upper portion by the preparation of the ground when the services were inserted. Below (021) was a slightly more elastic layer of greyish clay (020) c.150mm thick, overlying a distinctive layer of compact olive-brown clay (019), again c.150mm thick.

The basal layer was compact dry bright yellow clean clay (018), not fully bottomed but exposed to at least 500mm depth. It could therefore be seen that a sequence of natural clay deposits had survived at least partially undisturbed in the Old Burial

Ground of the Cathedral. The reason for this may well be that the existing path follows the course of a much older predecessor, destroyed by the insertion of the services.

The same upper sequence of clay layers could not be seen in the N-facing section. Instead, two graves had been cut through them onto the top of clean yellow clay (018). To the W, cut (016) was at least 850mm E/W but was not fully exposed. Within the cut was (017) a collapsed coffin of plain wooden planks (although no associated metal work could be seen). To the E, three sections of leg long bones were observed.



**Figure 6:** Clay natural (018), grave cut (016), coffin (017) and pipe cut (007) [Photograph No. 26].

Cut (017) had been backfilled with a mottled pinkish-grey clay backfill (015) which had been truncated by an electricity cable cut (011) to the E, and the main cut (007) for the insertion of the waste pipe to the N - which had obviously disturbed the

coffin at the time. A detached section of coffin planking was kept for possible dating. It was also noted during the excavation of the backfill of the main waste pipe cut, that pieces of human bone had been thrown back in with the fill. These may have come from coffin (017) or possibly from further disturbed burials to the E or W. The backfill (015) of the coffin may have been a re-deposited mixture of the clays (019) to (021). To the E of coffin (017), a further cut (028) had been made in the upper part of the yellow clean clay (018). Although not as clearly defined as (017), wood could be seen at the base of cut (028), suggesting that a further burial (026) (characterised by the presence of the wood) had been placed here. Over the burial was a mottled pinkish-grey clay backfill (025) 300mm deep, which had been truncated by the electricity cable cut (011) in its upper portion. A relationship between the two burials could not be established.

As the trench had reached the required width and depth it was decided that a policy of minimal disturbance was the most appropriate way of dealing with the burials. As such they were planned, photographed and quickly covered by terram and carefully resealed with a little backfill.

Having located the blockage in the pipe and recorded the necessary details, a small amount of grading was required to allow a new section of pipe to be fitted at the appropriate angle to prevent future blockages.

### **3.0 CONCLUSIONS**

In terms of the blocked waste pipe, the blockage was caused by poor pipe engineering and the rather more difficult to explain presence of stone and slate within the problematic bend.

The poor weather during the excavation meant that it was extremely difficult to see anything within the muddy trench. Even though the ground was highly disturbed it was still possible to identify two burials, show that at least one of them had been previously disturbed, and provide potential evidence that when these burials were interred, a path (as it still does today) ran W/E round the N side of the Cathedral. The highly truncated nature of the sections made it difficult to say too much about the historic topography of the site, but it seems clear (due in part to the relatively shallow depth of the burials) that landscaping, possible due to the arrival of the New Burial Ground, has altered portions of the Old Burial Ground.

The highly sensitive nature of the site means that any further ground-breaking works should be similarly monitored.

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

No.	Description	From	Date
01	Pre-excavation shot of Trench	E	10/8/2010
02	Pre-excavation shot of Trench.	W	10/8/2010
03	Pre-excavation shot of Trench.	W	10/8/2010
04	Pre-excavation shot of Trench.	E	10/8/2010
05	Work in progress.	NE	10/8/2010
06	Work in progress, Trench inundated.	N	10/8/2010
07	View inside manhole (024) of waste pipe inlet (009).	E	10/8/2010
08	Manhole (024) and Trench.	E	10/8/2010
09	Manhole (024) and Trench.	E	10/8/2010
10	Work in progress.	E	10/8/2010
11	Work in progress.	W	10/8/2010
12	Pipe cuts (011), (007) and clay (015).	E	10/8/2010
13	Pipe cuts (011), (007) and clay (015).	E	10/8/2010
14	Waste pipe (009).	E	10/8/2010
15	Waste pipe (009).	E	10/8/2010
16	Waste pipe (009) and inundation.	W	10/8/2010
17	Vertically angled bend on waste pipe (009).	E	10/8/2010
18	Work in progress.	E	10/8/2010
19	Pipe (009), Trench and manhole (024).	W	10/8/2010
20	S-facing section.	SW	10/8/2010
21	Work in progress.	W	11/8/2010
22	Electricity cable pipe (013) in N-facing section.	NW	11/8/2010
23	Working shot of S-facing section.	SW	11/8/2010
24	Clay natural (018), grave cut (016), coffin (017) and pipe cut (007).	E	11/8/2010
25	Clay natural (018), grave cut (016), coffin (017) and pipe cut (007).	E	11/8/2010
26	Clay natural (018) and pipe cut (007).	E	11/8/2010
27	N-facing section and coffin (017).	N	11/8/2010
28	N-facing section and coffin (017) W end.	N	11/8/2010
29	N-facing section and coffin (017) E end.	N	11/8/2010
30	Coffin (017).	E	11/8/2010
31	Coffin (017).	NE	11/8/2010
32	N-Facing section and coffin (017).	NE	11/8/2010
33	Clays (018) to (022) in S-facing section.	S	11/8/2010
34	Clays (018) to (022) in S-facing section.	S	11/8/2010
35	Leaking effluent in Trench.	E	11/8/2010
36	Work in progress.	E	11/8/2010
37	Work in progress.	NE	11/8/2010



No.	Description	From	Date
38	S-Facing section and water main (023).	SE	11/8/2010
39	S-Facing section and water main (023).	SE	11/8/2010
40	N-Facing section.	N	12/8/2010
41	N-Facing section E end.	N	12/8/2010
42	N-Facing section W end.	N	12/8/2010
43	N-Facing section.	N	12/8/2010
44	General shot of Trench.	E	12/8/2010
45	General shot of Trench.	E	12/8/2010
46	General shot of Trench.	E	12/8/2010
47	Exposed E section of waste pipe (009).	E	12/8/2010
48	Exposed waste pipe (009).	E	12/8/2010
49	Exposed waste pipe (009).	W	12/8/2010
50	Exposed waste pipe (009).	NW	12/8/2010
51	Disarticulated bone recovered from (008).	-	12/8/2010
52	Disarticulated bone recovered from (008).	-	12/8/2010
53	Disarticulated bone recovered from (008).	-	12/8/2010
54	S-facing section E end.	S	13/8/2010
55	S-facing section W end.	S	13/8/2010
56	E-facing section.	E	13/8/2010
57	Post-excavation shot of Trench.	W	13/8/2010
58	N-facing section E end.	N	13/8/2010
59	N-facing section W end.	N	13/8/2010
60	General shot of Trench and Treasury.	E	13/8/2010
61	General shot of Trench and Chapter House.	NW	13/8/2010
62	General shot of Trench and Chapter House.	W	13/8/2010
63	General shot of Trench and Chapter House.	W	13/8/2010
64	General shot of Trench and Chapter House.	SW	13/8/2010

## 5.0 APPENDIX 2: LIST OF CONTEXTS

No.	Description
001	Granite setts.
002	Whin dust and cement bed for (001).
003	Type 1 stone base for (002).
004	Terram and mesh over (005).
005	Tar macadam surface.
006	Lower setts to w end of tar macadam (005).
007	Cut for waste pipe (009 and manhole (024).
008	Fill of cut (007), mixed silt, clay and red brick.
009	Ceramic waste pipe.
010	Concrete bedding for (009).
011	Cut for electricity cable pipe.
012	Fill of 011, mottled mixed silt and clay.
013	Electricity cable pipe within (011).
014	Electricity cable within (013) (exposed in sections).
015	Mottled pinkish-grey clay backfill over coffin (017).
016	Cut for coffin (017).
017	Collapsed plank coffin within (016).
018	Compact yellow clay natural.
019	Olive-brown clay over (018) (in s-facing section).
020	Elastic greyish clay over (019) (in s-facing section).
021	Mottled pinkish clay over (020) (in s-facing section).
022	Cut for water main.
023	Lead water main.
024	Manhole box and cover.
025	Backfill of possible grave cut over (026).
026	Possible remains of coffin (truncated to w by 016).
027	Turf and sand to e of (001).

## 6.0 APPENDIX 3: LIST OF DRAWINGS

No.	Description	Scale
001	Post-excavation plan of Trench 1	1:20
002	N-facing section of Trench 1	1:10