

PAISLEY ABBEY DRAIN EXCAVATION

DATA STRUCTURE REPORT



PROJECT 2773

carried out
on behalf of
Renfrewshire Council

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Cover Plate

Paisley Abbey and excavation.

GUARD



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PROJECT 2773

by
Bob Will

This document has been prepared in accordance with GUARD standard operating procedures.

Approved by: Date: 15 December 2009



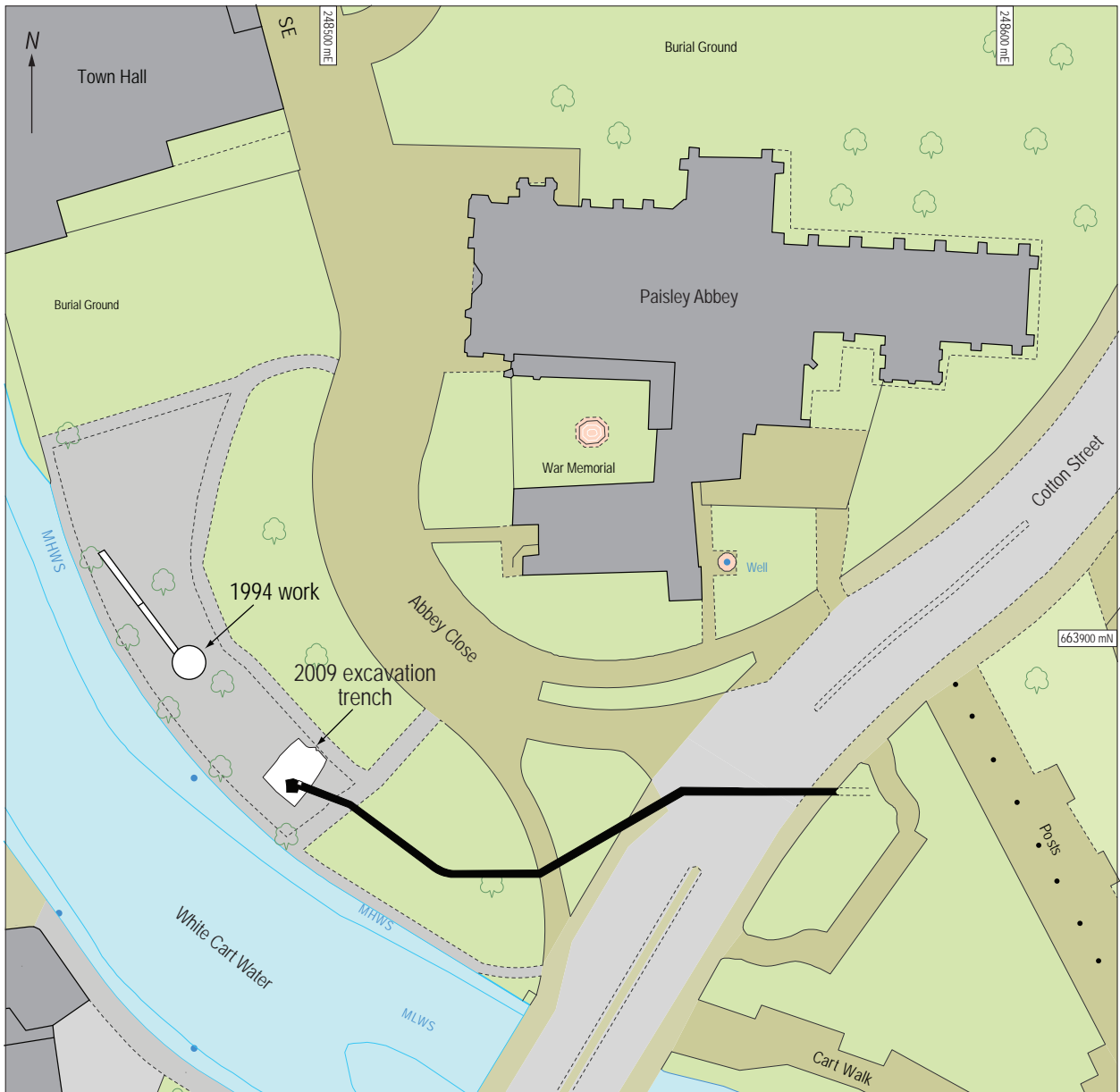
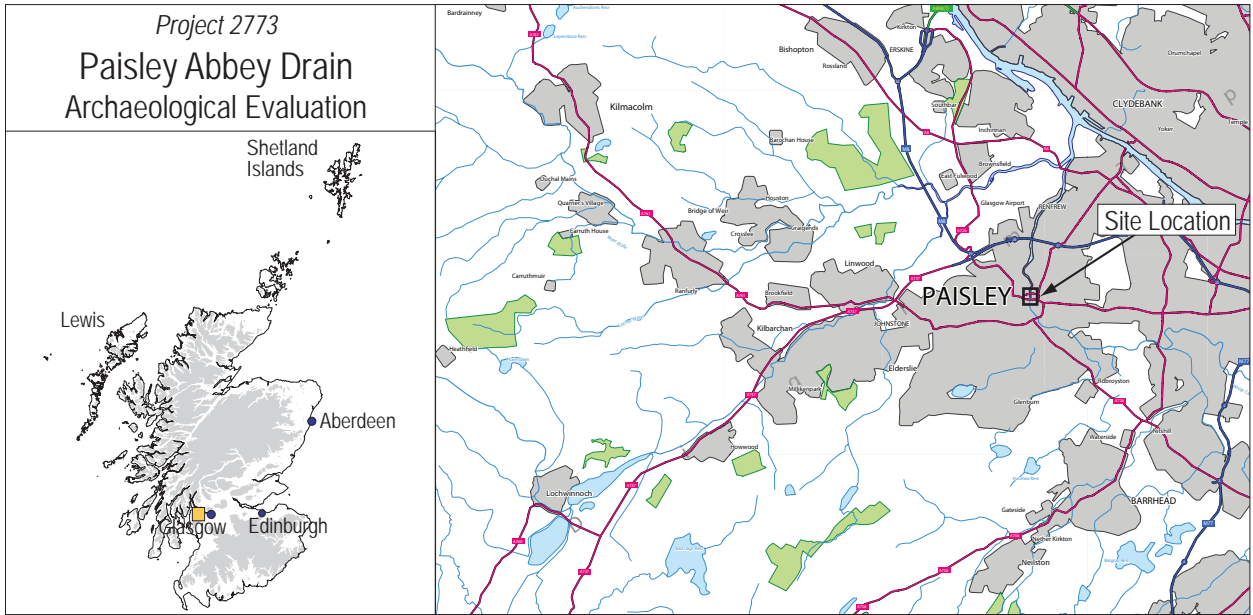


Figure 1: Site location.

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1.0 Executive Summary

A limited archaeological excavation was carried out by Glasgow University Archaeological Research Division (GUARD) in September 2009 on the site of major medieval drain at Paisley Abbey in Paisley. The project was funded by Renfrewshire Council and was supported by Renfrewshire Local History Forum who provided both funds and eager volunteers. Previously work on the drain had concentrated on the archaeological deposits and artefacts recovered from inside the drain so this was the first excavation to investigate the construction of the drain and the deposits surrounding the drain. Although deep demolition layers and recent levelling deposits were identified over most of the trench, there were areas of undisturbed archaeological deposits especially in the deeper sections of the trench. The remains of masonry wall and stone foundation were uncovered to the north-west of the trench that appear to be contemporary with the drain and could therefore be part of the monastic precinct. Part of the roof and north exterior wall of the drain were also exposed: two distinct sections of stonework suggest that the drain may have been built in two phases or was possibly repaired. Previous investigations on the architecture of the drain itself had demonstrated different phases of building. In addition to the medieval structures and deposits relating to the drain there were also more recent structures and walls from the buildings and tenements that occupied the site in the 19th and early 20th century.

2.0 Introduction

This report details the results of a limited archaeological excavation undertaken by GUARD, on behalf of Renfrewshire Council, on the site of Paisley Abbey medieval drain to the south of the Abbey. The fieldwork was carried out between 3 -16 September 2009 and was organised to coincide with Paisley Doors Open Day on Saturday 12 September to maximise publicity and to give visitors the opportunity to visit the excavation. In addition the excavation ran over two weekends to allow volunteers to participate. The project was developed with Renfrewshire Council and Renfrew Local History Forum whose members volunteered on the excavation in addition students from Kibble School, Paisley also volunteered over several days.

This project resulted from a series of meetings between various interested parties including Renfrewshire Local History Forum and Renfrewshire Council who met to discuss various means to promote Paisley Abbey and the town as part of the 2010 Cluny Anniversary celebrations. One obvious candidate for further work was the Abbey drain both in terms of post-excavation work on the existing artefact assemblage and for further work including archaeological excavation and historical research. GUARD and the Department of Archaeology at the University of Glasgow were then invited to these meetings due to the previous work that we had undertaken on the drain. Following discussions it was decided to undertake a small excavation to evaluate the deposits at the 'mouth' of the drain with the long term aim of making the drain more accessible to visitors possibly by building a viewing room at the mouth of the drain.

In addition over the summer a post-graduate MLitt student from the Archaeology department for her dissertation studied the pottery recovered from the drain in 1991. This was possible due to Paisley Museum agreeing to loan the pottery to the University and the work was undertaken in the department of archaeology laboratory and involved volunteers from the Renfrewshire Local History Forum who helped catalogue and record over 13,500 sherds of pottery.

As part of the overall project Tony Grace of the Department of Media Language and Music at The University of the West of Scotland was approached to film the various parts of the project for a dvd on Paisley Abbey.

3.0 Site Location, Topography and Geology (Figure 1)

The site is located in a small grassed municipal park and garden area with trees and flower beds to the south of Paisley Abbey next to the River Cart (NGR NS4849 6388). The present banks of the River Cart have a stone-built retaining wall with iron railings at the top with a footpath next to the wall and then a row of trees and grass. The trench was located on the grass behind the trees next to a circular flower bed. It is thought that the present retaining wall replaced an earlier wall and that the original river bank was further east in ground that has now been built up behind the retaining wall. In addition a major modern sewage pipe was inserted next to the retaining wall therefore the area immediately south of the trench was known to have been heavily disturbed relatively recently.

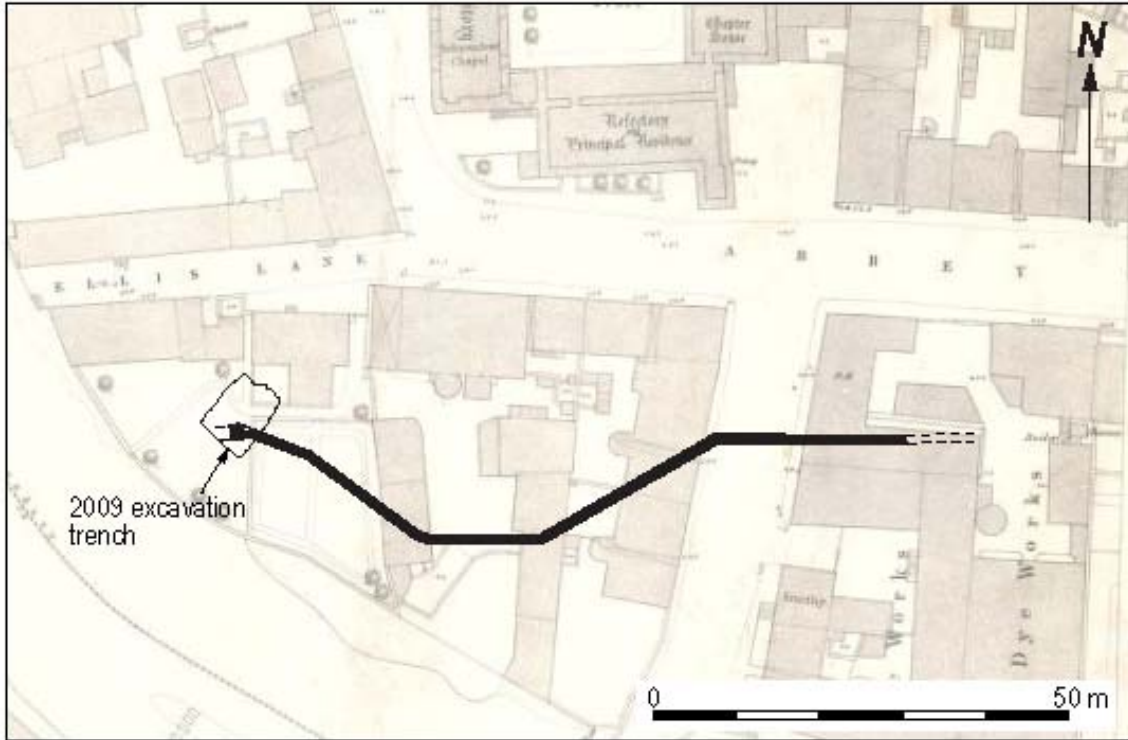


Figure 2:
1st edition map showing drain.

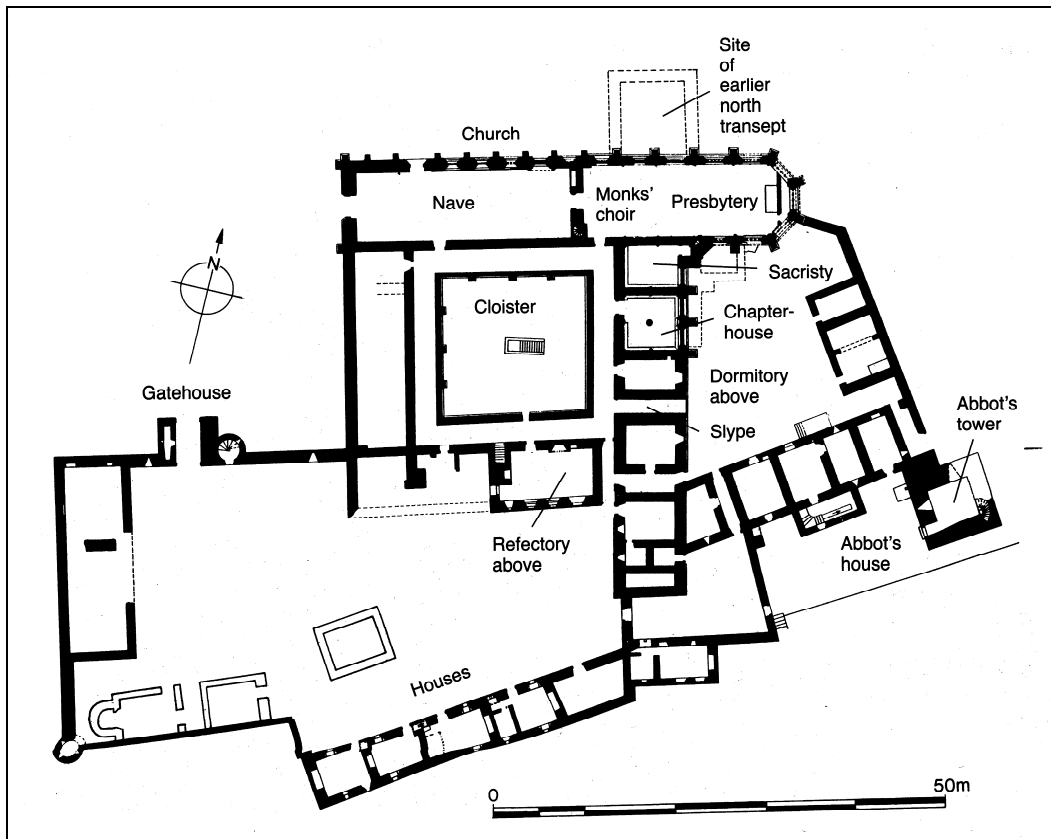


Figure 3:
Comparative plan from Crossraguel Abbey.

The park area had been built over with tenements with streets and lanes (Abbey Street and Ellis Lane) but these had been demolished and the area landscaped in the early 20th century to create an open space round the Abbey and Town Hall (Figure 2).

The underlying drift geology consists of sand and gravel overlying glacial till boulder clay (<http://digimap.edina.ac.uk/>).

4.0 Historical and Archaeological Background

The Cluniac Abbey of Paisley was founded as a priory at its present location in the late 1160s and became an abbey in 1219. The Abbey and its estates was one of the richest Cluniac foundations in the country. The Abbey suffered during the Wars of Independence and was burned in 1307. The Abbey underwent an ambitious building programme in 1450's under the direction of the Abbot Thomas Tervas but the abbey was burned again during the Reformation in 1561. Much of the Abbey as it survives today is the result of various renovations and re-builds from the 19th century based on the surviving walls and foundations although the Choir is largely original.

Only the Abbey church and part of the cloistral ranges remains today but it would have stood at the heart of the monastic precinct that enclosed the area next to the Cart. The layout of monasteries were fairly standardised but did vary depending on the local topography and available land, the River cart to the south would have formed a natural boundary. Crossraguel Abbey in Ayrshire was the daughter house of Paisley and here the monastic precinct survives intact and it may provide a model for the layout at Paisley. At Crossraguel the Abbey was to the north with the Abbot's house to the east and various buildings to the south and west (Figure 3).

Previous archaeological work around the Abbey has been quite limited: trial trenches to the north east side of the Abbey, to the south of the south transept and east of the 'Place' (remains of the east range) were excavated to a depth of 1.9 m, and uncovered mainly 19th and 20th century demolition and landscaping layers (McBrien 1991). More encouragingly an archaeological watching brief during 1994 some 25 m to the north-west of the drain during the construction of a large and deep sewer that went under the River Cart uncovered the remains of a stone built platform and revetment possible a jetty or wharf behind the present retaining walls along the river bank but these deposits were over 2.5 m below the present ground level (CFA 1994).

The major archaeological discoveries relate to the drain itself when it was re-discovered in 1990-92 (Malden 2000), at this time a large amount of silts were mechanically removed from the drain and carefully sieved for artefacts. During this operation a huge number and variety of artefacts were recovered including pottery, animal bone, lead seals, bone objects and a variety of other objects and materials. In addition a small excavation was carried out inside the drain further to the east where the drain was much smaller and completely silted up. Here it was possible to determine that there were securely stratified deposits within the drain that contained artefacts and important botanical remains (Johnston & Driscoll 1991). Subsequent analysis of the botanical remains has recovered a wide range both food and medicinal plants (Dickson 2000).

5.0 Aims and Objectives

The general aims of the project were two-fold:

- to assess the survival of archaeological deposits adjacent to the drain that may also provide information regarding the construction of the drain and the medieval monastic precinct
- to investigate the archaeological deposits in an area that can be used to improve access to the drain.

The aim was to obtain as much information regarding the construction of the drain and the surrounding deposits while causing the least amount of disturbance to these deposits. To ensure that this was the case excavation started in area of known disturbance to the west of the manhole. It was known that the manhole was approximately 1 m above the top of the drain. Previous work also established that the drain was blocked immediately to the west of the manhole with little indication as to how the drain continued towards the river.

6.0 Methodology (Figure 1)

The archaeological works consisted of a small open excavation initially over an area c 8 m by 6 m with the manhole in the south east corner but this was stepped in by 1 m for safety reasons and the area available for excavation reduced.

Once the turf had been removed by Renfrewshire Council Parks department the topsoil and overburden was removed by machine under close archaeological supervision and then excavation continued by hand. Topsoil and spoil from the excavation was stored on top of polythene sheets in the area of the main footpath to the west of the trench within the site compound.

Exposed surfaces and deposits were cleaned by trowel. Archaeological features were recorded in plan by measured drawing at a scale of 1:20 and by digital and monochrome print photography. Features were half-sectioned, with fills removed and sampled where appropriate. Sections were recorded by photograph, by measured drawing at a scale of 1:10 or 1:20 and by written description.

Conditions for the work after an initial couple of very wet days were generally very good.

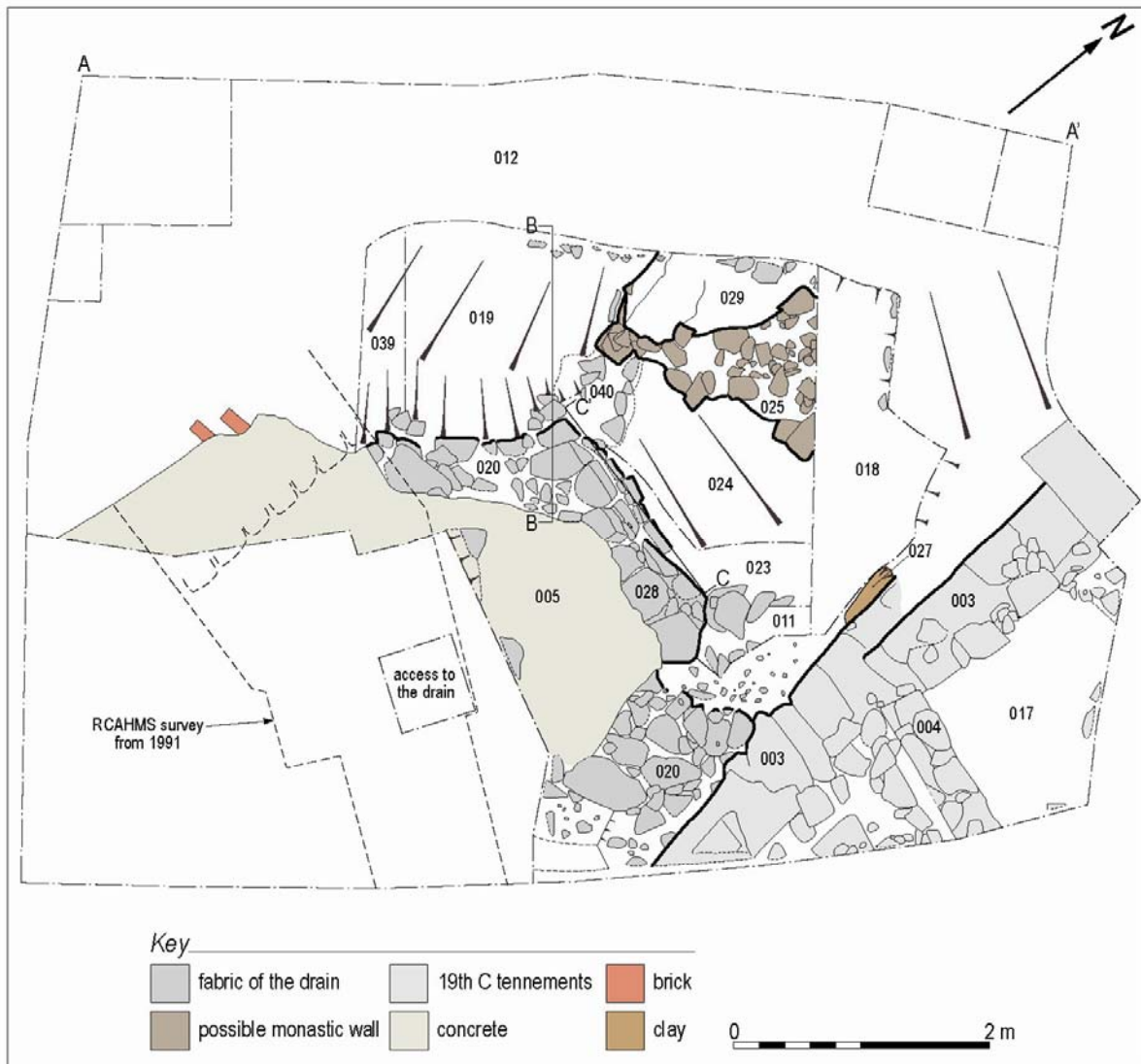


Figure 4:
Excavation trench plan.

7.0 Results (Figure 4)

First Step

The trench was located to the west and north of the manhole currently used to access the medieval drain, the trench was 8 m north/south by 6 m east/west with the manhole in the south-west corner. Based on the results of other work in the area it was known that there had been a lot of disturbance and landscaping on the site when the 19th century tenements were demolished and the area landscaped. Therefore the decision was taken to remove the overburden from the landscaping by machine under archaeological supervision.

Work started at the southern end of the trench closest to the river, a one metre wide strip was left due to the proximity of the trees and this section was hand excavated to minimise disturbance to the root systems. The topsoil (001) was only 0.2 m thick and was removed to reveal light brown heavy clay (002) that covered most of the southern and western side of the trench and was 0.4 m thick. In the southern half of the trench the clay layer (002) overlay a deep deposit of cinders and ash with occasional large angular stones (006) again up to 0.4 m thick, these two layers may have been brought in as levelling material when the landscaping took place.

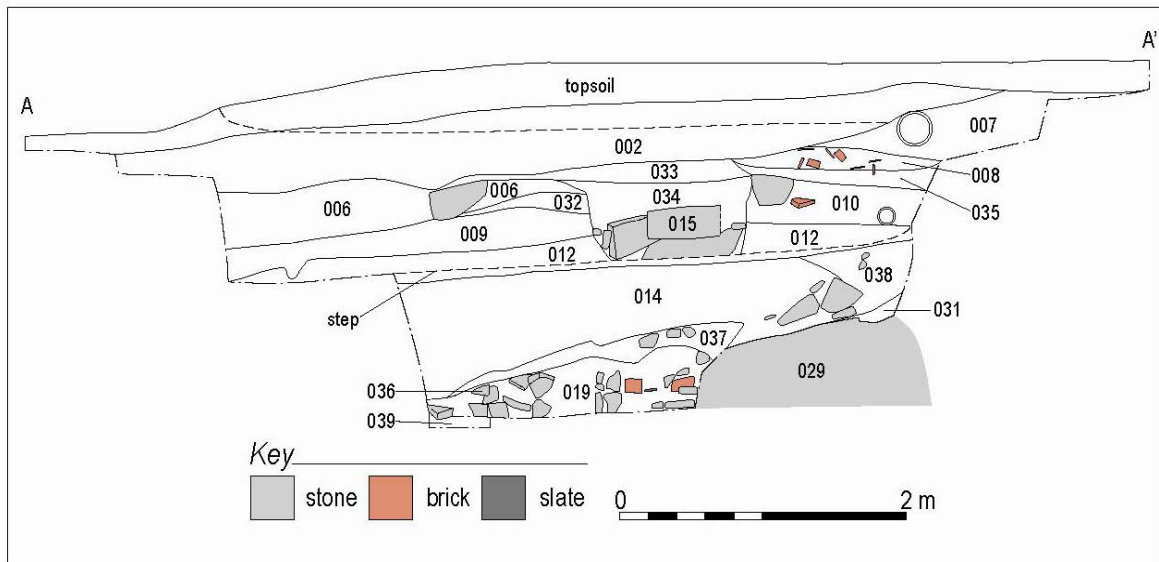


Figure 5:

SE facing section through trench.

To the north the upper layers were more disturbed and consist of demolition material and the remains of service trenches. Here the clay layer covered a more mixed layer 0.35 m thick containing bricks, roofing slate and rubble as well as fragments of a ceramic sewage pipe (007). Beneath 007 was a discrete layer of brick and roofing slate up to 0.25 m thick. The remains of a masonry wall were exposed in section (015) the foundation trench for this wall had been cut from a higher level and had been sealed by clay layer 002. The remains of the masonry wall had been covered by a layer of silt and ash (034) which in turn was covered by a layer of sand (033), these layers presumably relate to the demolition of the wall. To the north of the wall below layer 008 was a thin deposit of sand (035) that sealed a service trench (010) containing a cast iron pipe that ran diagonally across the trench towards concrete base (005), the pipe had been broken before it reached the concrete so it was not possible to determine whether the pipe had originally ran into the drain/manhole.

To the south of wall (015) the ash layer (006) sealed an thin deposit of silty sand (032) this sealed an extensive deposit of black silt with few inclusions (009) up to 0.4 m thick that covered the whole of the southern half of the trench, again this may be a deliberate levelling deposits. Below this was an extensive layer that covered most of the western half of the trench and seemed to mark the end of modern

disturbance. This layer (012) was 0.2 m thick and consisted of grey/brown silt with inclusions of sand and mortar with occasional fragment of tile or brick along with bottle glass and nineteenth century pottery.

In the north-east corner of the trench the upper deposits were quite different from the south-west part of the trench, a stone built wall (003) was uncovered immediately below the topsoil and appeared to continue beneath the footpath to the north, another wall (004) joined 003 at right angles and ran under the eastern baulk leaving the small corner of a building within the trench. The material contained by these two walls (016) consisted of demolition debris including bricks, slate mortar and rubble and was 0.3 m thick. Below this was a more compact grey/black silt layer (017) that contained several sherds of orange ceramic flower pots, due to constraints of time no further work was done in this area. The area to the west of wall 003 along the north trench edge was quite restricted as this side was also stepped in for safety reason but the main upper demolition deposits (007) and (010) extended over this area where it overlay a mid to dark brown silt layer (018). The foundation courses of wall 003 were cut into this layer and it may have been a garden soil. A deposit of bright orange burnt clay or possibly daub was uncovered immediately adjacent to and parallel to wall 003 and was initially interpreted as some kind of foundation course but further investigation revealed that this material was actually within 018 and not directly joined to wall 003 although it could still be part of the ground preparation for the wall or a type of damp course.

As excavation continued next to the manhole that provides access to the medieval drain it was revealed that the manhole was built on top of a large concrete base (005) that had been re-enforced with steel beams, looking down the inside of the manhole confirmed that the steel beams were sitting directly over the masonry roof of the drain and confirmed that the concrete had been applied directly over the medieval masonry. The concrete was exposed on two sides of the brick manhole and extended out from the manhole for approximately 1 m. A section of concrete forming the north-west corner of the base was broken and it was possible to remove this by machine to allow further investigation of the deposits below.

Second Step

As the level of layers 012 and 018 which covered most of the trench and the concrete base of the manhole were at a depth of approximately 1.2 m for safety reasons a one metre wide step was left along the south, west and north trench edges while along the east trench edge walls 003 and 004 meant that little further excavation could take place and they formed the safety step. Therefore further excavation was restricted to an area in the centre of the trench 3.2 m north/south by 2 m east/west. Initially a baulk was left in the middle of this area to maintain stratigraphic control and to allow excavation to continue to the south while features 011 and 013 were investigated.

This central area was cleaned and excavated by hand, immediately to the north of the manhole the concrete base overlay a large area of flat mortared stones (020) and a very loose deposit of white sand (011) that contained a few fragments of stones further cleaning to the west revealed a mixed deposit containing red and orange sand silt (013) that had possibly been burnt, this layer overlay (018) and the white sand (011). The extent of the burnt material was uncovered to reveal a sub-oval feature 1.10 m by 0.5 m this was half sectioned. Excavation revealed that the deposit was very mixed and a maximum of 0.18 m thick. Due to the mixed nature of the deposit the edges were not always very clear and patches and thin lenses of burnt material were uncovered in the deposits below. Although a fragment of roof tile with a knob for hanging the tile was recovered from (013) along with a small sherd of medieval pottery these deposits probably represent demolition and levelling.

Once 013 was excavated the remainder of layer 012 and 018 was removed to the south and east to reveal the full extent of the white sand (011) this seemed to curve in an arc and did not extend to the south of the central baulk (located to the north of section line B-B' on plan) where excavation had not encountered the sand apart from a small area next to the baulk. Further excavation revealed that several stones exposed below (013) were in fact part of a much larger block of mortared masonry (025) that marked the extent of the white sand to the west. As the sand was removed it revealed the full extent of the masonry. The sand was filling a cut (041) that was visible mainly at the eastern extent where it had been cut through silt deposits (023) against the outside wall face of the medieval drain and into the underlying deposits (024) below the sand. Deposit 024 was largely confined to the area between 025 and the drain (028/030) and consisted of grey/brown silt with sand and mortar and was similar to deposits 021/023. Animal bone, shell, tile and one sherd of medieval pottery was recovered from the upper material of this deposit as due to time constraints this was not fully excavated.

To the west of the sand was the exposed masonry (025) this consisted of a large sub-triangular fragment of mortared masonry 1.35 m east/west by 1.7 m north/south and was up to 0.35 m thick. The masonry

had been built on a large flat masonry foundation slab (029) that extended 0.8 m to the west of the masonry and ran into the baulk. This foundation to the west of the masonry fragment was covered by a thin layer of sand and mortar (031) which in turn was covered by a deep deposit of mid brown silt (038) with mortar similar to 014 but with patches of orange burnt material that may be part of (013), this deposit was sealed by the main layer 012. The masonry (025) comprised a loose light brown mortar with large angular stones up to 0.4 m by 0.3 m by 0.25 m and may be the core of a wall where the facing stones had been robbed and re-used. The survival of masonry and foundation at this depth would suggest that this may be the remains of a wall or structure that formed part of the monastic precinct rather than the later tenement buildings.

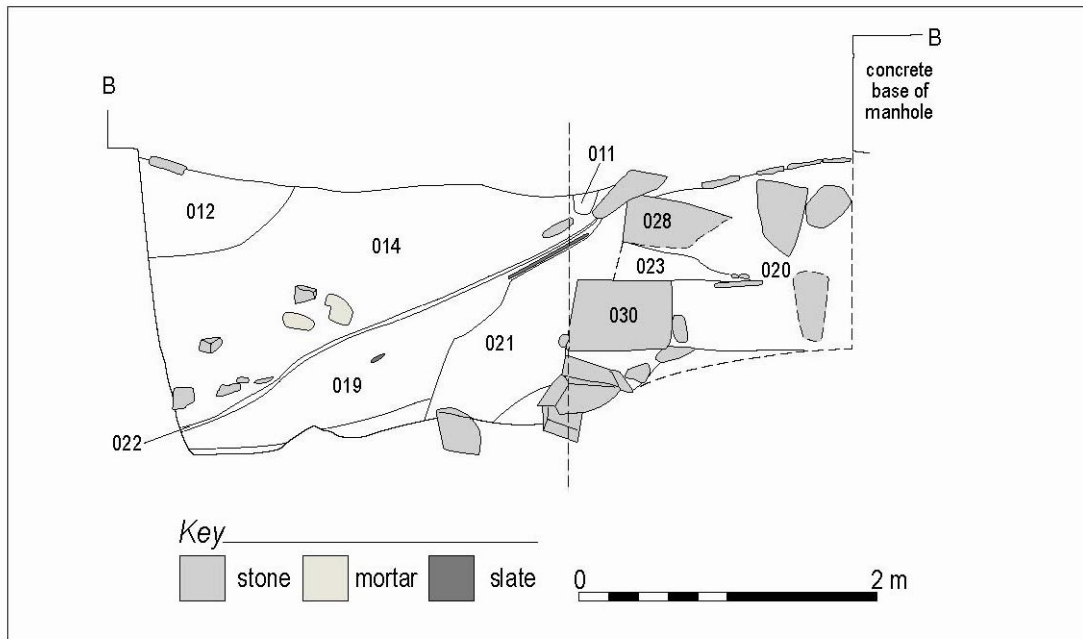
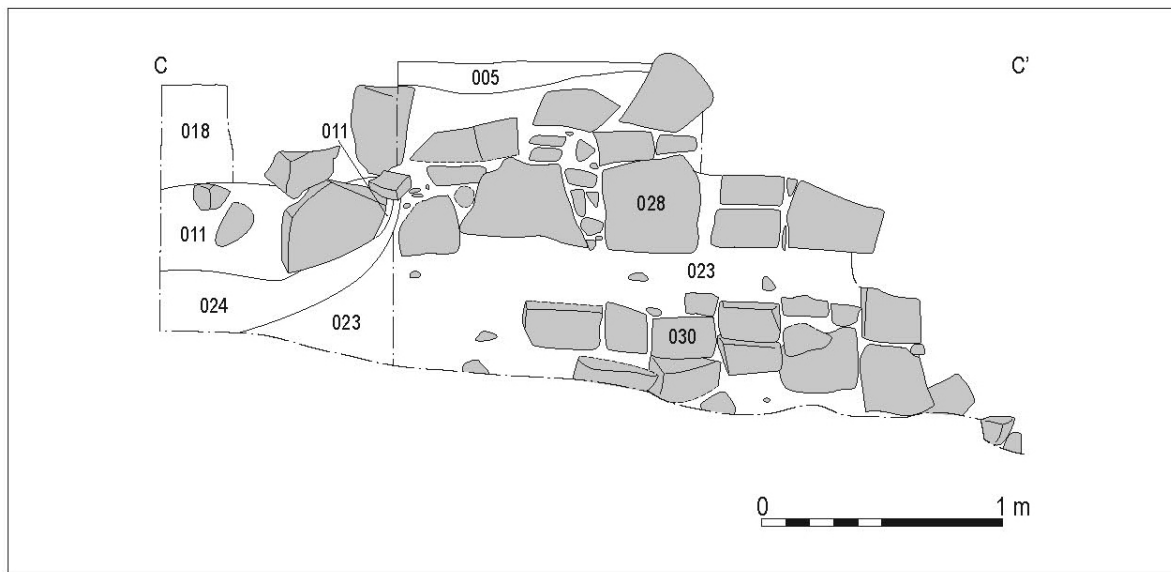


Figure 6:
South facing section of central baulk.

To the south of the central baulk (Figure 6 section line B-B' on plan) layer 012 was excavated to reveal a similar deposit consisting of an extensive mixed layer of dark grey/brown silt (014) up to 0.8 m thick with frequent inclusions of mortar, slate, animal bone and late 18th or 19th century artefacts including pottery and glass. Below this was another layer of similar material (019) up to 0.4 m thick with occasional fragments of charcoal as well as brick and tile. Before the baulk was removed a thin lens of orange/red silty sand (022) was visible in section and this may be the southern extent of deposit 013 although this lens dipped to a much lower level possibly tipping down from the masonry 025. (fig.). Once the baulk was removed and the western sections cleaned it became apparent that there was a layer between 014 and 019 identified by a much higher concentration of light brown mortar (037) but otherwise very similar. This layer appeared to be tipping down to the south again possibly from wall/masonry 025. At the limit of excavation of layer 019 next to the masonry (025) there was a small patch of orange/red burnt material (026) approximately 0.25 m in diameter and 0.04 m thick, no artefacts were present but the material was sampled for analysis. As all these layers contained high concentrations of mortar it is likely that they represent demolition layers.

As the excavation proceeded more of the structural remains of the medieval drain were exposed, the large flat mortared stones (020) that were uncovered below the concrete on further investigation were revealed to form the main body of the roof and north wall of the drain. Excavation of the loose sand (011) uncovered the facing stones (028) of the north wall. Two courses of squared stones the largest up to 0.3 m by 0.3 were uncovered and appeared to be partly built over a deposit of mid-brown silt (023) that had been cut by the sand deposit 011, a medieval pottery strap handle from a jug, a fragment of slag, possibly furnace lining and several fragments of tile were recovered from 023. Excavation of 023 revealed further courses of masonry (030) 0.2 m below the first. Again two courses were exposed but this time the stones

were smaller (0.2 m by 0.1 m). The deposit 023 changed too and became lighter in colour with more mortar fragments (021). Layers 023 and 021 appear to be contemporary with the construction of the drain.



*Figure 7:
Elevation of north wall of drain.*

In the south east corner of the trench excavation revealed a section of the in situ fabric of the medieval drain where the facing stones and part of the rubble core had been removed (fig). At this point it was possible to investigate the relationship between deposit 023 and the core of the wall. The deposit 023 extended into the core of the wall and narrowed to a thickness of only 3-4 centimetres. Therefore the gap in the facing stones filled by 023 may be the result of subsidence and partial collapse of part of the drain or it may reflect different phases of construction, certainly the previous investigations inside the drain has demonstrated different phases of building.

In the south east corner closest to the intact medieval drain the deposits were slightly different in that they were tipping to the west as well as to the south. Layer 014 sealed 019 but also partly sealed a layer of loose brown mortar with angular stone rubble (021) that extended 1.2 m west into the trench and was up to 0.2 m thick. This in turn sealed a layer of mortar rich rubble (036) that was tipping down to the west where the stones in the rubble were larger up to 0.2 m by 0.15 m. As the excavation was finishing a small slot trench 0.4 m wide was excavated against the south baulk at the deepest point of the excavation to further investigate deposit 036. At this point there were far fewer stones and the deposit consisted of mainly light brown mortar and sand along with several flat stones (039). These deposits relate to the demolition of the drain at this point as there was no surviving in situ masonry. Unfortunately it was not possible to fully investigate these deposits.

As the excavation was coming to an end and the final cleaning and recording was underway several angular stones were uncovered within a reddish brown silty clay (040) in the narrow strip between the wall of the drain 030 and the masonry foundation 025/029 between deposits 019 and 024. The wall of the drain was stepping out as the excavation got deeper it may be that this material was associated with the foundations of both structures and if continued they would have met approximately 0.8 m to the south.

On completion of the excavation the deeper sections of the trench and the possible medieval features were protected with geotextile prior to backfilling. The trench was backfilled with the material that had been excavated and stored next to the trench. The Parks department then re-laid the turf

8.0 Artefacts

Most of the artefacts recovered from the excavation date to the late 18th or 19th centuries with very few medieval or late medieval pottery sherds. Generally the medieval pottery sherds were recovered alongside

later material from mixed deposits although the deposits uncovered at the end of the excavation did not appear to be disturbed (contexts 019, 023, and 024). What was unusual about the artefacts from these deposits was the large amount of roof tile

<i>Artefacts</i>	<i>No</i>	<i>Description</i>
Modern pottery	31	Includes flower pots, transfer printed, sponge printed, slip-lined and slip trailed
stoneware	2	1 modern sherd and 1 heavily abraded sherd possibly Rhenish
Late medieval/ post-medieval pottery	20	Includes a rim of a bowl & 2 handles from jugs
Plaster	29	Includes moulded fragments from 19 th century deposits
Tile	69	Includes 1 unstratified fragment of yellow glazed floor tile probably medieval and a roof tile with a knob
Brick/tile	14	Includes one fragment with a finger impression
Slate	21	Roofing slates with peg holes
Glass	24	Mainly from bottles including late 18 th /19 th century wine bottles & modern window glass
Clay tobacco pipes	2	Fragments of stems
Iron	29	Mainly nails
Bone artefacts	2	The base of a bone brush and a 4 hole button 19 th Century
Organic	3	Sample 3 small bags with large fragments of charcoal
slag	1	1 fragment of possible furnace lining
Mortar	1	Sample
Coal	3	Sample
Animal bones	227	See summary & catalogue
shells	63	Mainly oyster shell

8.1 *Assessment of Animal Bone*

by Edouard Masson-Maclean

Summary:

- The faunal assemblage is composed of 258 bone fragments, most of which are in good or very good condition showing almost no signs of weathering or burning. Carnivores and rodents were not a significant taphonomic agent.
- Mammals, birds and fish are all represented in the assemblage which is highly dominated by mammals (95%). Species present are Cattle, Sheep/Goat (probably mostly sheep though goat might be present), Canis sp. (probably domestic dog), Hare/Rabbit, Pig, Deer and Equus sp (probably Horse). Birds include Domestic fowl, Corvids (Crow family) and Anatidae (Duck/Goose). Molluscs were also noted but not recorded at present and include mainly oyster shells.
- Ribs and vertebrae recorded as large mammal are probably cattle but could also be horse or deer.
- Ribs and vertebrae recorded as medium-sized mammal are probably caprine (sheep/goat), but could also be dog or pig.
- It seems that all body parts are present in the assemblage and all age groups are represented (juveniles, sub-adults and adults).
- Approximately 50% of the specimens came from context 19.
- Butchery marks, including chop marks, cut marks and fractures, were observed on a number of specimens. Implement used were metal, probably a cleaver and knife. Some marks thought to be saw marks could in fact be the result of the use of a cleaver with a damaged or poor quality blade (Jennifer Miller pers com). Should the absence of saw marks be confirmed, this could suggest that these specimens are the result of pre-Victorian butchery as the saw, currently much used, was not in earlier times the tool of (first) choice (Audoin-Rouzeau 1987, p.35).
- All bones were fully recorded including measurements when possible.

Class	Taxa	1	11	12	14	16	19	22	23	24	Grand Total	%
Mammals	Mam	2	3	13	5	1	31		16		71	27.52%
	Lmam	1	4	8	9	1	29	1	2		55	21.32%
	MMam			1	10	5	3	25	4		48	18.60%
	Cattle	1	1	4	5	1	10		4	2	28	10.85%
	Sheep/Goat			1	3	4		9			17	6.59%
	Canis					2		6			8	3.10%
	Hare/Rabbit	6					1				7	2.71%
	Pig				1			2		2	5	1.94%
	Cattle ?	1						2			3	1.16%
	Cervidae							1			1	0.39%
	Canis ?							1			1	0.39%
	Equus							1			1	0.39%
Mammals Total		11	10	38	31	7	117	1	28	2	245	94.96%
Birds	Dom. Fowl			2			1				3	1.16%
	Corvidae						3				3	1.16%
	LBird						1				1	0.39%
	Bird						1				1	0.39%
	Anatidae						1				1	0.39%
Birds Total				2			7				9	3.49%
Fish	Fish						3				3	1.16%
Fish Total							3				3	1.16%
Ind	Ind						1				1	0.39%
Ind Total							1				1	0.39%
Grand Total		11	10	40	31	7	128	1	28	2	258	

9.0 Discussion

This limited excavation confirmed the presence of deep deposits of demolition material and landscaping as was expected particularly to the west of the manhole where the drain was known to be blocked. What was not expected was the survival of walls relating to the recent tenements that occupied part of the site in the 19th century as earlier attempts to locate these walls had failed and it was presumed that these foundations had been grubbed up during the demolition and landscaping of the site in the early 20th century. More importantly the excavation revealed the masonry foundations of a wall or building to the north of the drain that may be contemporary with the drain and relate to the monastic precinct.

Parts of the exterior of the monastic medieval drain were also uncovered and this was the first time that these had been exposed and recorded. Although the interior of the drain adjacent to the excavation trench consists of a well made pointed arch the exterior of the drain had a flat top and slightly stepped vertical sides where they were partially uncovered on the north and west side, suggesting that the exterior drain formed a square masonry block. The outside face of the wall to the north had two distinct types of facing stone with a silt deposit separating them suggesting two periods of building or possibly of repair. To the west of the manhole where the drain is known to have been blocked the upper surface of the drain was missing to reveal the mortared masonry core that would have formed the thickness of the wall and arch. Due to the reduced area due to the depth of the excavation the trench was probably located over the thickness of the wall rather than fully over the blocked arch at the mouth of the drain certainly the deposits in this area appeared to be tipping to the south and west and consisted of compacted mortar rich silts with a few small angular stones. Apart from part of the outer face and masonry core uncovered closest to the manhole no medieval structural remains were uncovered although the deepest deposits (036 & 039) did contain more frequent and larger stones and rubble but nothing that could be described as building stone for an arch or interior facing stones. As the location of the trench was over the fabric of the wall rather than the inner wall face mortared rubble for the wall core would have been more likely. As the floor of the drain is approximately 3.9 m below ground level the deepest point in the excavation would still have been approximately 1.5 m above floor level. At this level if the drain had continued as a pointed arch 2.2 m high and 1.9 m wide (taken from RCAHMS survey) it may have been expected to find walls surviving or collapsed stones from them the fact that no large faced/dressed stones were recovered at this depth would suggest that the drain had been demolished facing stones had been robbed for re-use in the same way that the masonry (025) had no facing stones.

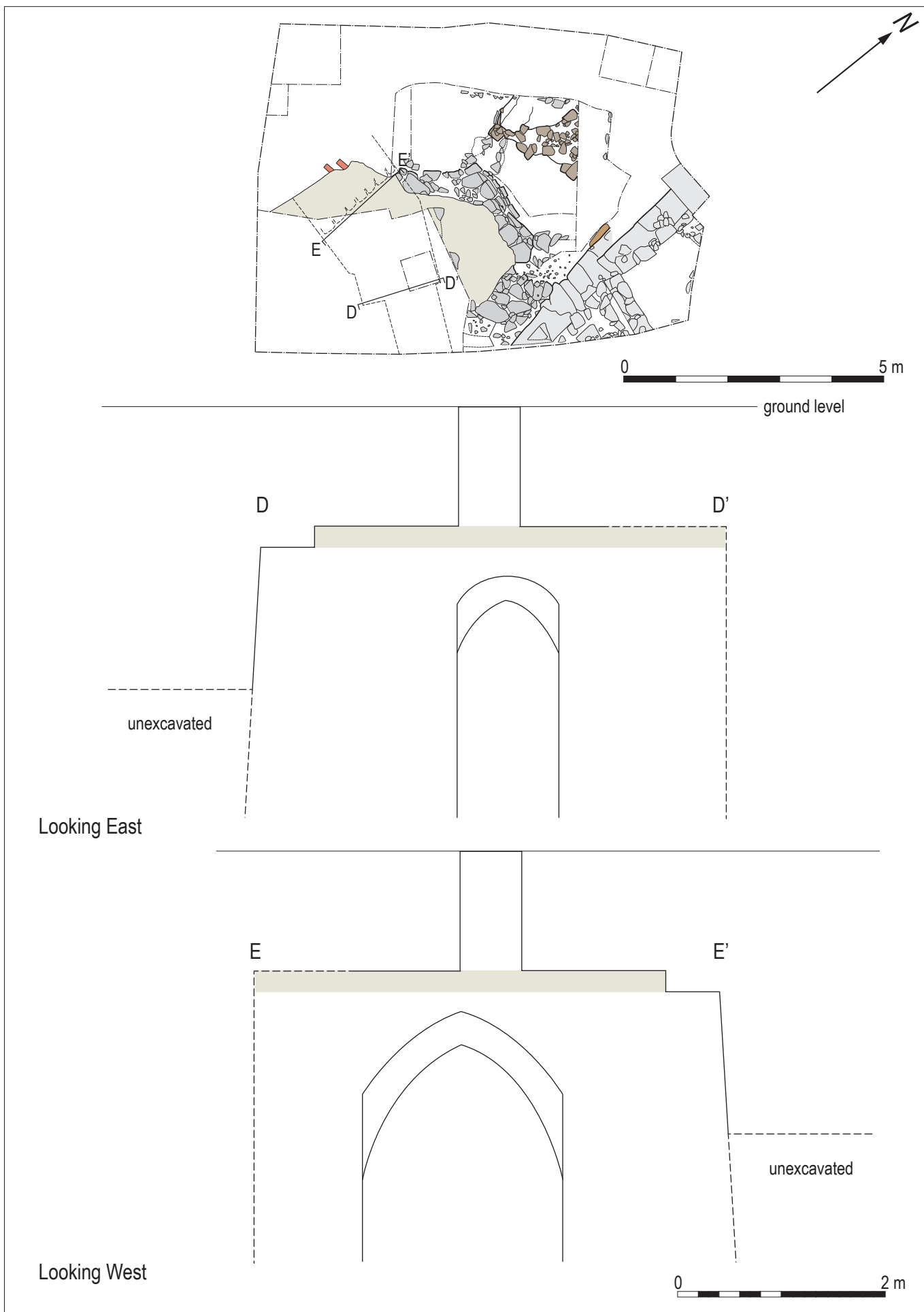


Figure 8: General plan with suggested profile of drain.

10.0 Conclusions

This limited excavation that ran over two weeks was able to:

- Reveal and investigate the exterior of the medieval drain and to define the extent of the structure
- Uncover masonry foundations from a wall or building that may be contemporary with the drain and relate to the monastic precinct.
- Confirm the presence of medieval deposits associated with the drain and precinct
- Confirm the presence of deep deposits of demolition material and landscaping over much of the site protecting the deposits below
- Uncover walls relating to the recent tenements that occupied part of the site in the 19th century
- Identify areas for further work.

In addition the project

- Established a good working relationship between various interested groups that allowed many people to become involved with and participate in the project.
- Received a great deal of support and interest from the local community and beyond, including the local MSP and other politicians.
- Held a very well attended press call which generated a great deal of media interest including STV, BBC Radio Scotland, The Herald, The Paisley Daily Express and other newspapers as well as websites featuring Paisley and/or archaeology.

11.0 Future Work

There is still much to discover about the Abbey, drain and monastic precinct and future work could take several forms:

- To seek funds to complete the post-excavation analysis artefacts recovered from the drain in 1991 (an application was made to Historic Scotland in early October 2009 under their research budget)
- To publish the results of the analysis of artefacts from the drain.
- To build on the recent excavation and develop a large long term research project and training excavation.

12.0 Acknowledgements

Thanks go to Anne Phillips and Nigel Lack of Renfrewshire Council, Susan Jeffrey from Paisley Museum, Frank Snow of On-Site and all the members of the Paisley Abbey Drain sub-committee who have spent the last year organising and setting up the project. Advice on health and Safety was provided by Ernest Hasler of Renfrewshire Council The director was assisted in the field by Edouard Masson-Maclean, Ross Cameron, Kevin Mooney, Kirsty Bennel and Sabrina Gillman. In addition there were several willing volunteers from the Renfrewshire Local History Forum whose help and commitment was much appreciated: Kay Bowman, Stephen Clancy, Andrew Eadie, Hilda Hoey, Ken Hoey, John Maxwell-Geddes, Sarah-Jane Moffat, Ethel Parker, Margery Parker, Gordon Phillips, Susanne Rooney, Michael Rooney and Pat Shearer. Thanks to the students from the Kibble Education and Care School, Paisley who volunteered on site Sean Gray and Jordan Khan and staff members Ewan Turnbull, Ann Haughey and Neil Govan. In addition the project was filmed by Tony Grace of the Department of Media Language and Music of The University of the West of Scotland with the aim of producing a dvd on Paisley Abbey and the drain.

Project Management for GUARD was by Beverley Ballin-Smith. Aileen Maule and John Kiely provided technical assistance. The report was edited by Stephen Driscoll, illustrations were produced by Gillian McSwan. Jen Cochrane and desk-top published the report.

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*Plate 1:
19th century tenement walls.*



*Plate 2:
Central baulk during excavation.*



*Plate 3:
Exterior of Medieval drain.*



*Plate 4:
Detail of North wall of drain.*



*Plate 5:
North wall of drain and masonry wall.*



*Plate 6:
South-east facing section and masonry wall.*



*Plate 7:
Working shot with volunteers.*



*Plate 8:
Press call.*

14.0 Appendices

14.1 *List of Contexts*

<i>Context</i>	<i>Description</i>
001	Topsoil
002	Light brown clay covering SE corner of trench
003	NE/SW stone wall – 19 th C tenement
004	SW/NE stone wall forming a corner with 003
005	Concrete base for manhole
006	Loose coal/ash layer along northern half of trench
007	Mortar rubble layer at NE corner
008	Brick and slate rubble below 007
009	Grey/black silt layer below 006
010	Cut & fill for cast iron pipe in NE corner
011	White sandstone rubble
012	Grey/brown mortar layer below 009
013	Patch of red/orange possible burning , over 011
014	Mixed brown deposit below 012
015	Masonry foundation in north section
016	Rubble fill -modern
017	Compact grey/black layer below 016
018	Mid brown silt – possible garden soil
019	Grey/brown silt with angular stones below 014, 037
020	Structural rubble core of medieval drain
021	Silty clay band with mortar next to 020
022	Thin lens of red/orange burning possibly part of 013
023	Brown silt containing brick/tile against 028
024	Mixed grey/brown silt below 011 - LOD
025	Masonry foundation –separate from drain
026	Discrete patch or orange/red burning? Below 019 - LOD
027	Daub/tile bedding layer beneath 003 but separate
028	Upper facing stone of drain – external face to core 020
029	Foundation for masonry 025
030	Lower facing stone of drain – external face to core 020
031	White sand to E of 025
032	Brown silt lens cut by 015 in N section
033	Lens of sand seals 015 in N section
034	Lens of silty ash seals wall 015
035	Lens of brick & roofing slate in N section
036	Concentration of stones below 019
037	Lens of mortar between 014 & 019
038	Mid brown silt seals 025 in NE corner
039	Mortar & stone layer associated with 025
040	Possible stone structure below 025
041	Cut for sand 011

14.2 *List of Small Finds*

<i>No</i>	<i>Context</i>	<i>No of Pieces</i>	<i>Material</i>	<i>Description</i>
001	001	10	Glass	-
002	001	8	Shell	-
003	001	12	Metal-Iron	-
004	001	12	Bone	-
005	001	16	Pottery	Modern, includes slip decorated, sponged & transfer printed
006	001	7	Iron	-

<i>No</i>	<i>Context</i>	<i>No of Pieces</i>	<i>Material</i>	<i>Description</i>
007	001	1	Clay Artefact	Tobacco pipe stem
008	001	2	Bone Artefact	Brush & button
009	001	6	Pottery	2 late medieval
010	001	1	Tile	Modern
011	001	4	Plaster	Moulded
012	001	4	Tile	-
013	019	86	Bone	-
014	011	8	Shell	-
015	011	11	Bone	-
016	011	1	Pottery	-
017	012	44	Bone	-
018	012	12	Shell	-
019	012	8	Glass	Bottles
020	012	2	Slate	-
021	012	3	Pottery	1 tin-glazed earthenware?
022	012	7	Pottery	6 abraded reduced wares & 1 abraded stoneware
023	012	1	Tile/brick	-
024	014	23	Shell	-
025	014	11	pottery	Abraded tin glazed white earthenware, 1 sherd of modern stoneware, 3 late med reduced wares
026	014	33	Bone	-
027	014	1	Plaster	-
028	014	5	Slate	-
029	014	7	Brick/Tile	1 with finger impression
030	012	2	Brick/Tile	-
031	016	19	Plaster	-
032	016	5	Iron	-
033	016	8	Bone	-
034	016	13	Pottery	2 late medieval, 8 flower pot
035	016	5	Brick/Tile	-
036	016	1	Ceramic	Tobacco pipe stem
037	016	1	Glass	-
038	016	4	Shell	-
039	u/s	1	Tile	Medieval floor tile with yellow glaze – handed in by Abbey staff
040	018	2	Tile	-
041	014	5	Glass	Includes wine bottle neck with rim
042	014	5	Iron	-
043	013	1	pottery	Medieval
044	013	1	Tile	With knob
045	022	1	Bone	-
046	006	2	Brick/tile	2 complete bricks with impressed maker's mark
047	019	5	Plaster	-
048	019	7	Shell	-
049	019	14	Slate	-
050	019	2	Pottery	Medieval
051	019	10	Tile	-
052	019	3 Bags	Organic	-
053	024	1	Shell	-
054	024	3	Coal	-
055	024	3	Bone	-
056	024	11	Tile	-
057	023	29	Bone	-
058	023	37	Tile	-
059	023	7	Mortar	-
060	024	1	Pottery	Late medieval

<i>No</i>	<i>Context</i>	<i>No of Pieces</i>	<i>Material</i>	<i>Description</i>
061	023	1	Pottery	Medieval strap handle
062	023	1	Slag	Possible furnace lining

14.3 *List of Drawings*

<i>Drawing No</i>	<i>Sheet No</i>	<i>Subject</i>	<i>Scale</i>
1	1	Pre-excavation plan of central area	1:20
2	1	South facing section of feature 013	1:10
3	2	Overlay plan of east end of trench	1:20
4	3	South facing section of central baulk	1:10
5	3	North facing section of central baulk	1:10
6	1	South facing section, lower step section includes 011 & 025	1:20
7	4	North & west facing section/elevation 011, 028, 030	1:10
8	5	East facing section of trench upper	1:20
9	5	East facing section of trench lower	1:20
10	5	North facing section	1:20
11	5	Profile of 028 & 030	1:10
12	6	Final plan of whole trench	1:20

14.4 *List of Samples*

<i>Sample No</i>	<i>Context</i>	<i>Bag</i>	
<i>SML</i>	<i>Reasons fro sampling</i>		
1	013	L	Botanical
2	019	L	Botanical
3	011	L	Botanical
4	024	L	Botanical
5	021	L 1/2	Botanical
6	026	L 1/2	Botanical
7	027	L 1/2	Daub
8	040	L	Botanical
9	018	L	Botanical
10	023	L	Botanical

14.5 *Digital Photographic Record*

<i>Frame</i>	<i>Context No</i>	<i>Subject</i>	<i>Taken From</i>
1	-	Initial machining	W
2	-	Initial machining to west of manhole	W
3	-	Initial machining next to manhole concrete foundations and metal pipe	W
4	-	Initial machining removed part of concrete base	W
5	-	Initial machining to N of manhole with concrete base	W
6	-	NE corner with concrete and tenement foundations	SW
7	-	NE corner with concrete and tenement foundations	N
8	-	Site record with abbey in background	S
9	-	NE corner with concrete and tenement foundations	W
10	-	NE corner with concrete and tenement foundations- cleaned	N
11	-	NE corner with concrete and tenement foundations - detail	N
12	-	NE corner with concrete and tenement foundations - cleaned	NW
13	-	West half of trench after machining	N
14	-	West section after machining	E
15	-	General working shot with volunteers	N
16	-	West side after hand digging/cleaning	E
17	-	West side after hand digging/cleaning	N
18	-	Trench after cleaning	NW

<i>Frame</i>	<i>Context No</i>	<i>Subject</i>	<i>Taken From</i>
19	-	NE corner after cleaning	NW
20	-	Trench after cleaning	N
21	-	Working shot with volunteers in the rain	SW
22	-	Cleaning next to concrete, walling appearing - wet	W
23	-	Volunteers starting to dig second step in the rain	N
24	-	Volunteers – the rain has stopped	NE
25	-	Second step started and cleaned	W
26	013	Second step with baulk and 013 half sectioned – mottled shadows	W
27	013	Second step with baulk and 013 half sectioned – mottled shadows	SW
28	013	Detail of 013 half section - shadows	S
29	013	Detail of 013 half section - shadows	S
30	013	Detail of 013 half section	S
31	013	Detail of 013 feature and half section	W
32	013	Detail of 013 half section	S
33	003/004	Tenement walls in NE corner	SW
34	003/004	Rubble to S of 004	SW
35	-	Working shot	SW
36	011	Detail of central area	N
37	011	Detail of central area	W
38	011	Central area	S
39	028/029	Mortared stones by E baulk	N
40	025	Working shot	S
41	025	Working shot	S
42	025	Central area, section of baulk	S
43	011/025/020	Central area, baulk still in situ	W
44	025/020	Central area	S
45	005/011/029	Eastern side of concrete	SE
46	019/21	Detail of section of central baulk	S
47	019/021	Detail of section of central baulk	S
48	020/	Detail of S part of central area	W
49	019/020	Detail of S section of central area	N
50	023/028/025	North half of central area	N
51	011/025	N facing section of central baulk	N
52	023/028/011	N facing section and N half of trench	N
53	011/025	S facing section of central area –shadows	SE
54	Void	-	-
55	Void	-	-
56	Void	-	-
57	Void	-	-
58	Void	-	-
59	011/025	S facing section of central area	S
60	011/019	Central baulk	W
61	028	Central baulk removed, precarious stone	W
62	028	Central baulk removed, precarious stone	E
63	018/028	Detail of E baulk & top of drain	S
64		Detail of E section between manhole & baulk	N
65	003/028/005	Relationships with drain & tenements	N
66	005/028	Relation ship with drain & tenements – from above	E
67	005/028	Relation ship with drain & tenements – from above	S
68	011/028/023	Central area	NW
69	025/028/020	Central baulk removed	W
70	020/028	Detail, central baulk removed	SW
71	Void	-	-
72	Void	-	-
73	Void	-	-
74	Void	-	-
75	Void	-	-

<i>Frame</i>	<i>Context No</i>	<i>Subject</i>	<i>Taken From</i>
76	void	-	-
77	Void	-	-
78	Void	-	-
79	Void	-	-
80	Void	-	-
81	Void	-	-
82	Void	-	-
83	Void	-	-
84	Void	-	-
85	Void	-	-
86	Void	-	-
87	-	Graffiti on site hut door	-
88	-	Graffiti on site hut door	-
89	-	Site recognition for film 2	-
90	026	detail	N
91	-	Central area- dappled with shadows	S
92	025/028	Central area	N
93	025/028/ 020	Central area	W
94	023/028	Central area	NW
95	-	Central area W section	E
96	025/030	Detail stones between 025 & 030	S
97	-	Posters in Abbey	-
98	-	Posters in Abbey	-
99	-	Posters in Abbey	-
100	-	Posters in Abbey	-
101	-	Posters in Abbey	-
102	-	Posters in Abbey	-
103	-	Posters in Abbey	-
104	-	Posters in Abbey	-
105	-	Posters in Abbey	-
106	027/018/ 003	Daub	S
107	027/018/ 003	Detail from above	S
108	-	W section of central area after cleaning	E
109	025	N half of central area & w section	E
110	-	Final clean over – central area	S
111	025/011/ 030	S facing section	S
112	025	Detail – final clean	E
113	025	Detail final clean	N
114	-	Test pit to S of concrete	W
115	-	Location of test pit	W
116	003/018/ 027	Detail of daub	S
117	011/025	Detail of relationship between sand & masonry	S
118	025	Detail of s facing section of 025	S
119	-	Detail of s section	N
120	020/030	Detail of profile of external drain wall	S
121	020/030	Detail of profile of external drain wall	S
122	-	Detail of cobbled surface associated with tenements	N
123	018/027	Section through 018	SE
124	018/027	Section through 018	S
125	-	Detail of S section after cleaning	N
126	-	Detail of lowest layer at S section, from above	W
127	020/030	Detail of E section under concrete	W

<i>Frame</i>	<i>Context No</i>	<i>Subject</i>	<i>Taken From</i>
128	-	Working shot – limit of excavation	SW
129	-	North half of trench - final	E
130	003	NE corner - final	SE
131	-	NW corner - final	E
132	-	SW corner - final	NE
133	-	Teram down - backfilling	E
134	-	Back filling complete	NE
135	-	Backfilling complete	SW
136	-	Final clean up area where spoil heaps were	W

14.7 *Discovery and Excavation in Scotland*

LOCAL AUTHORITY:	Renfrewshire
PROJECT TITLE/SITE NAME:	Paisley Abbey Drain Excavation
PROJECT CODE:	2773
PARISH:	Paisley
NAME OF CONTRIBUTOR:	R Will
NAME OF ORGANISATION:	GUARD
TYPE(S) OF PROJECT:	Limited excavation
NMRS NO(S):	NS46SE 2.05, NS46SE 2.00, NS46SE 2.07
SITE/MONUMENT TYPE(S):	Medieval Abbey precinct
SIGNIFICANT FINDS:	
NGR (2 letters, 8 or 10 figures)	NS4849 6388
START DATE (this season)	3 September 2009
END DATE (this season)	16 September 2009
PREVIOUS WORK (incl. <i>DES</i> ref.)	
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	A limited archaeological excavation was carried out by GUARD on the site of major medieval drain at Paisley Abbey. The project was funded by Renfrewshire Council and was supported by Renfrewshire Local History Forum who provided both funds and eager volunteers. Previous work on the drain had concentrated on the archaeological deposits and artefacts recovered from inside the drain so this was the first excavation to investigate the deposits surrounding the drain. Although deep demolition layers and recent levelling deposits were identified over most of the trench there were areas of undisturbed archaeological deposits especially in the deeper sections of the trench. The remains of masonry wall and stone foundation were uncovered to the north-west of the trench that may be contemporary with the drain and could therefore be part of the monastic precinct Part of the top of the roof and north exterior wall of the drain were also exposed two distinct sections of stonework suggest that the drain may have been built in two phases or was possibly repaired certainly investigations within the drain itself had demonstrated different phases of building. In addition to the medieval structures and deposits relating to the drain there were also more recent structures and walls from the buildings and tenements that occupied the site in the 19 th and early 20 th century.
PROPOSED FUTURE WORK:	
CAPTION(S) FOR ILLUSTRS:	
SPONSOR OR FUNDING BODY:	Renfrewshire Council, Renfrew Local History Forum
ADDRESS OF MAIN CONTRIBUTOR:	GUARD, Gregory Building, Lilybank Gardens, University of Glasgow, Glasgow, G12 8QQ
EMAIL ADDRESS:	r.will@archaeology.gla.ac.uk
ARCHIVE LOCATION (intended/deposited)	Archive to be deposited in NMRS. Report lodged with WoSAS SMR and NMRS