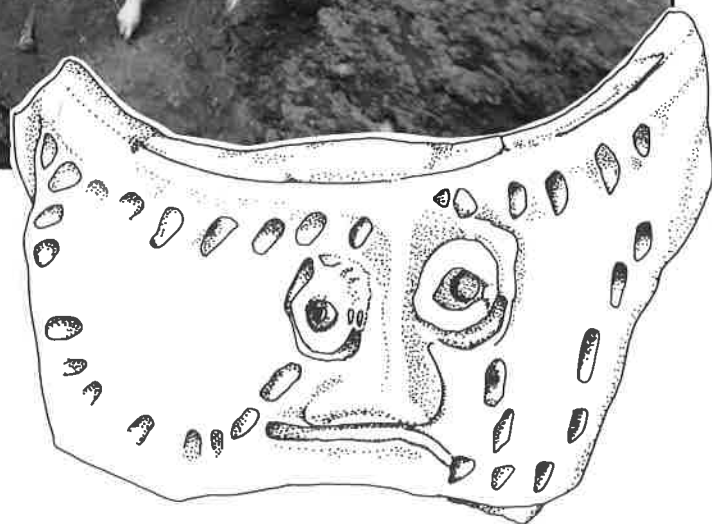


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# GOVAN OLD PARISH CHURCH AND WATER ROW



175.3



*Archaeological excavations for the City of Glasgow  
Planning Department*

*carried out by*

*Glasgow University Archaeological Research Division*

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GOVAN OLD PARISH  
CHURCH AND  
WATER ROW

*by*

Stephen T Driscoll

and

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with contributions by

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1997

Glasgow University Archaeological Research Division

Glasgow

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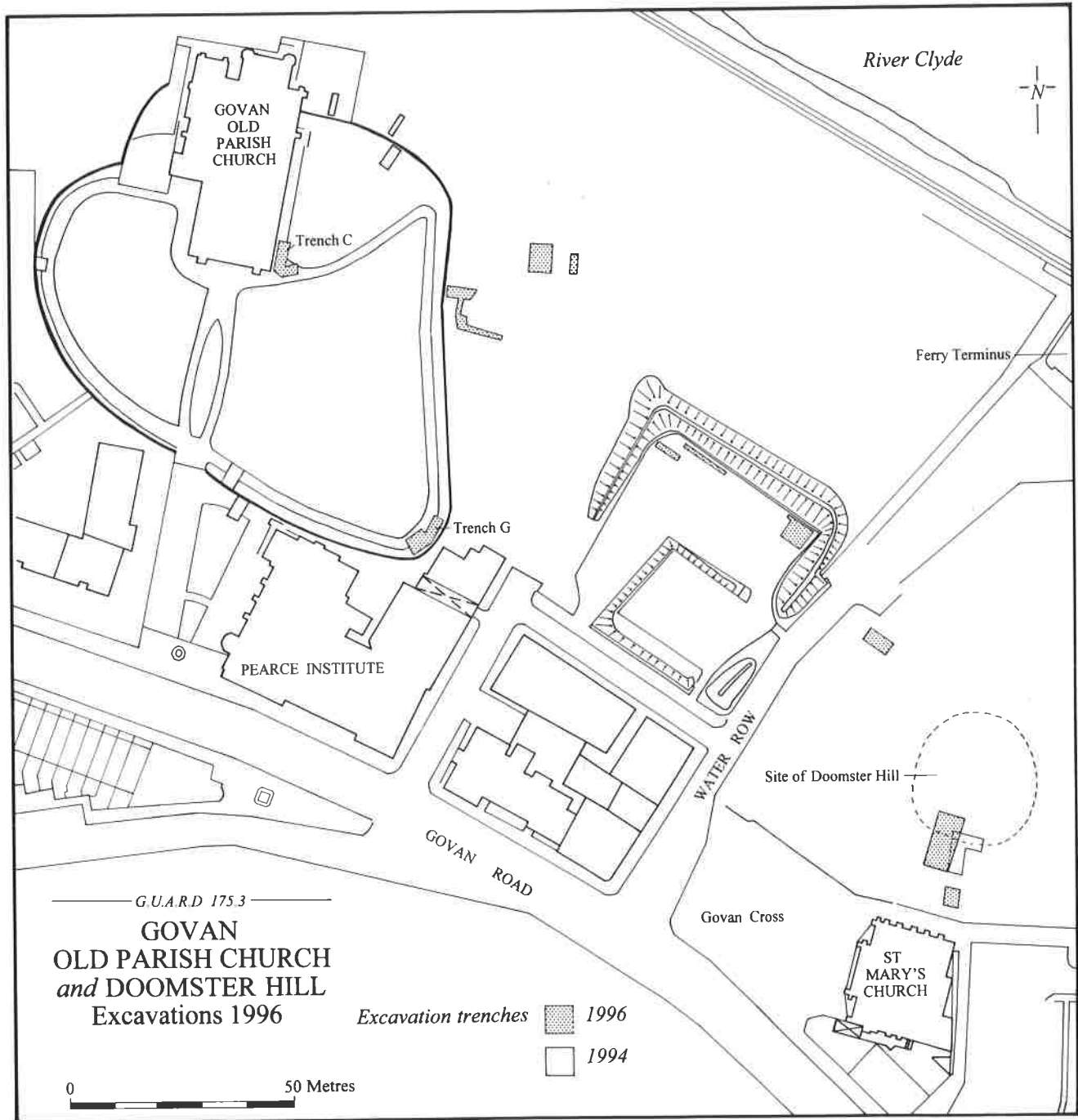
### Cover photograph:

Filming in Trench C for the Time Team programme of the excavation of a post-medieval burial (703) disturbed the demolition of an earlier church.

### **Glasgow University 1997**

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## 1.0 Summary (Figure 1)

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In June 1996 a third season of trial trenching was undertaken in and around Govan Old parish Church. It was timed to correspond with the production of an episode of the Time Team TV programme. The excavations sought to clarify various issues which had been raised by the two phases of investigation. Four areas were targeted for further work: 1) the putative early church site discovered at the SE corner of the present church (Trench C), 2) the SE corner of the churchyard (Trench G), where an early entrance was expected to exist, 3) the interior of the churchyard at the W boundary (Trench H), and 4) the presumed site of the Doomster Hill at Water Row.

## 2.0 Trench C (Figures 2 and 3)

---

The 1994 trench was re-excavated and extended to the NE under the path separating the church from the graveyard principally in order to re-examine the massive dry-stone foundations exposed in the original excavation. As expected there were a number of modern graves present in the trench. Only two undisturbed grave plots (710 and 718) were excavated (720, 750 and 753) the others were identified and avoided.

Figure 1:

*Location of trenches  
excavated in June 1996.*

In addition a mass of bone from a disturbed grave was found in a 18th century robber trench discussed below. In loose association with the human remains (703, see cover) a coin was recovered. This was a relatively unworn Turner of Charles I identified as one of the 1629 issue by Dr Bateson (Hunterian Museum).

A sequence of modern burials was excavated from a single plot (710) in order to expose the dry-stone foundations. Portions of six burials were discovered in this plot. These were all buried in shrouds and coffins and produced a range of 19th century coffin fittings familiar from elsewhere in Glasgow. The density and precision of positioning of the burials within these plots graphically illustrates the well-known problems of overcrowding Govan, which led to the exceptionally detailed survey of the graveyard by Kyle in 1809 (Wilsher 1992 and Cutmore 1996).

Apart from the burials the main modern feature was a massive robber trench (751) running E-W approximately on the line with 1994 Trench C. This occupied much of the south part of the trench and extended into the 1994 excavation. This feature was some 1.5 m deep and cut through all the structural levels down to the natural subsoil (770). The robber trench was only observed in section

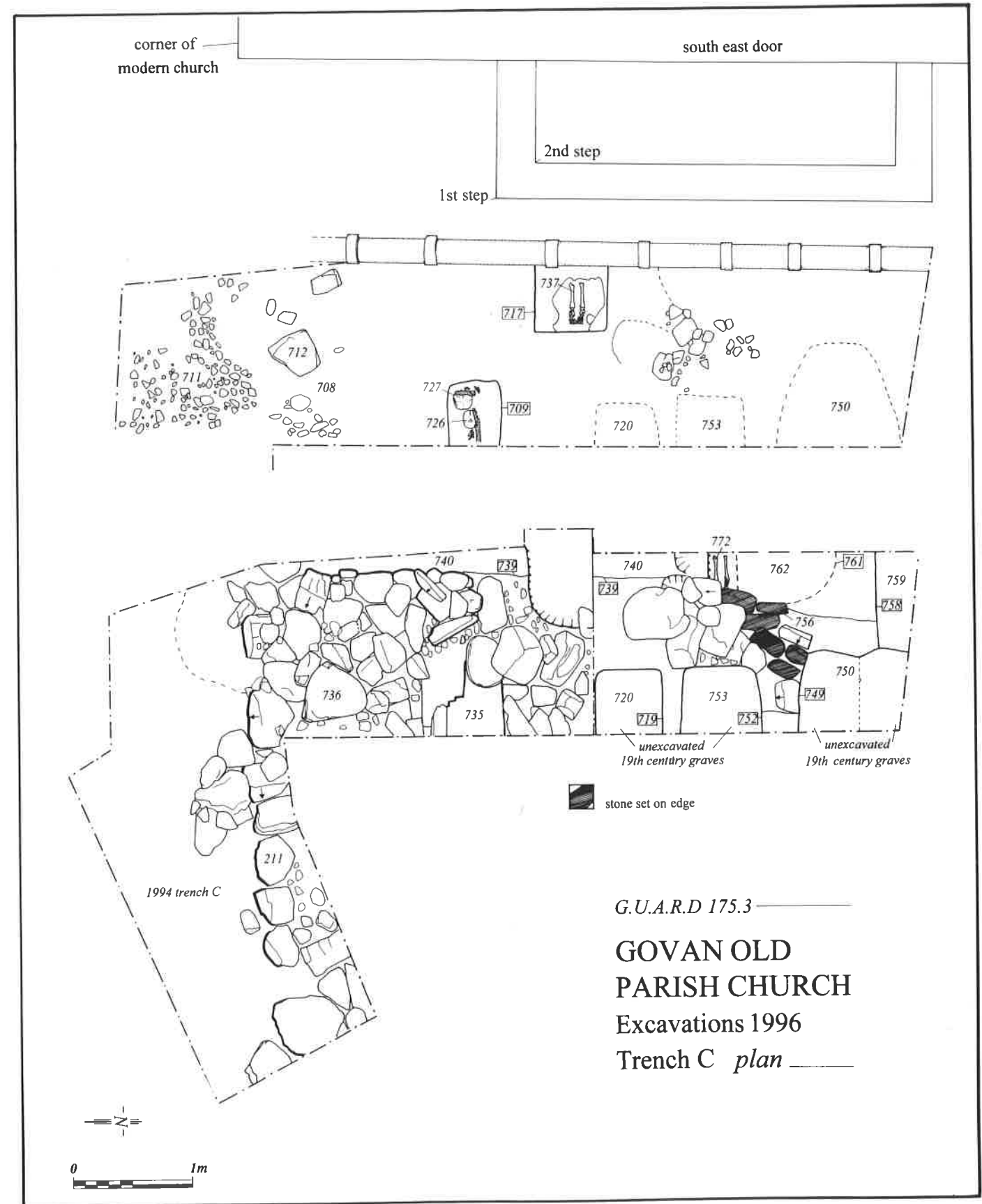
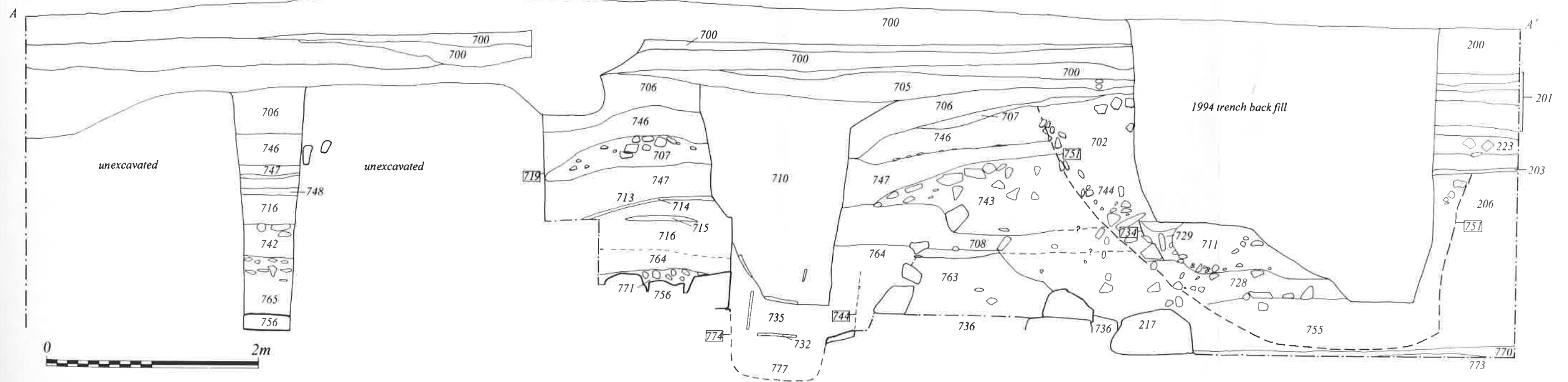


Figure 2:  
Trench C 1996 extension plans.

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GOVAN OLD  
PARISH CHURCH  
Excavations 1996  
Trench C west facing section



during the 1996 excavation (Figure 3, A3 pull-out), because it occupied most of the first trench, it was not recognised in 1994. The robber trench was massive (over 2 m by 2 m) and in places cut into the subsoil. This may also account for the absence of large stones where the SW corner of the drystone foundations (736, see below). The fill of this feature contained many small fragments of roof slates and other small bits of masonry rubble. It seems likely that this represents the 1762 demolition of the ancient (presumably medieval) church as reported by Brochie (1938, 159).

A high medieval phase of burial was represented by a single grave (718), which contained a substantial portion of a 15th century face-mask jug and cut into the stone foundations of what are thought to be part of an early church (736). In this grave no evidence of a coffin was observed, but the grave was only excavated from the knees down.



*Photo 1:*

*The foundations (736/217) in Trench C from the south-west, with the re-opened trench from 1994 to the right and the 1996 extension to the left.*





*Photo 2:*

*The massive dry-stone foundations in Trench C cut by medieval and later graves viewed from the south.*

The dominant feature of the excavation was the massive dry-stone foundation wall (736, equivalent to 217 in the 1994 trench, see Photo 1). The foundations were simply constructed by packing large boulders tightly into a trench (740), the edge of which was seen on the W side of the trench (Photo 2). The trench holding the stone was cut over 0.5 m into the natural sand, from an uncertain original ground surface. In this trench we apparently exposed the SW corner of a building, although only the outside edges



*Photo 3:*

*A portion of an early burial (772) overlain by the drystone foundations (736).*

fell in the trench. During these excavations we exposed the W edge of the foundation cut (740), which corresponds the S edge (219) revealed in 1994. Despite the expanded scale of this season's excavation we were unable to recover the full width of the stonework, so we know only that the foundation walls were over 2 m in width.

Although it has been disturbed by both modern and medieval burials and by the demolition of the later church, the foundations remain substantially intact. As in 1994

trench there was no sign of mortar or other bonding material. Stability was achieved by the tightness of the stone packing. The scale of the footing (a minimum of 2 m wide) implies a large building. The position and orientation, in so far as it can be measured, indicate that this was the site of a church. The absence of mortar implies that this major timber building was constructed prior to the 12th century when mortared masonry became common for important parish churches.

The earliest features in this trench were two burials (772 and 777) which were discovered under that foundations (736). Only portions of the burials were exposed (Photo 3), but both appear to be simple dug graves with no signs of coffins were clearly oriented E-W. The degraded condition of these bones suggests that they are older than those of the 15th century burial (718). Clearly given the uncertainties introduced by such small scale investigations, the radiocarbon dating of these bones will be essential for refining the chronology of the foundation.

The stone foundations share an alignment with and are next to the site of all the documented church at Govan. These are surely the remains of an early church, one which had certainly been long forgotten when the 15th century burial was cut into it. Moreover, the burials below the foundation are evidence of an earlier church and probably takes us back to the time of the carving of the sculpted stones if not earlier (that is to the 9th century, perhaps beyond).

*Figure 4:*

*Trench G plan of road surface*

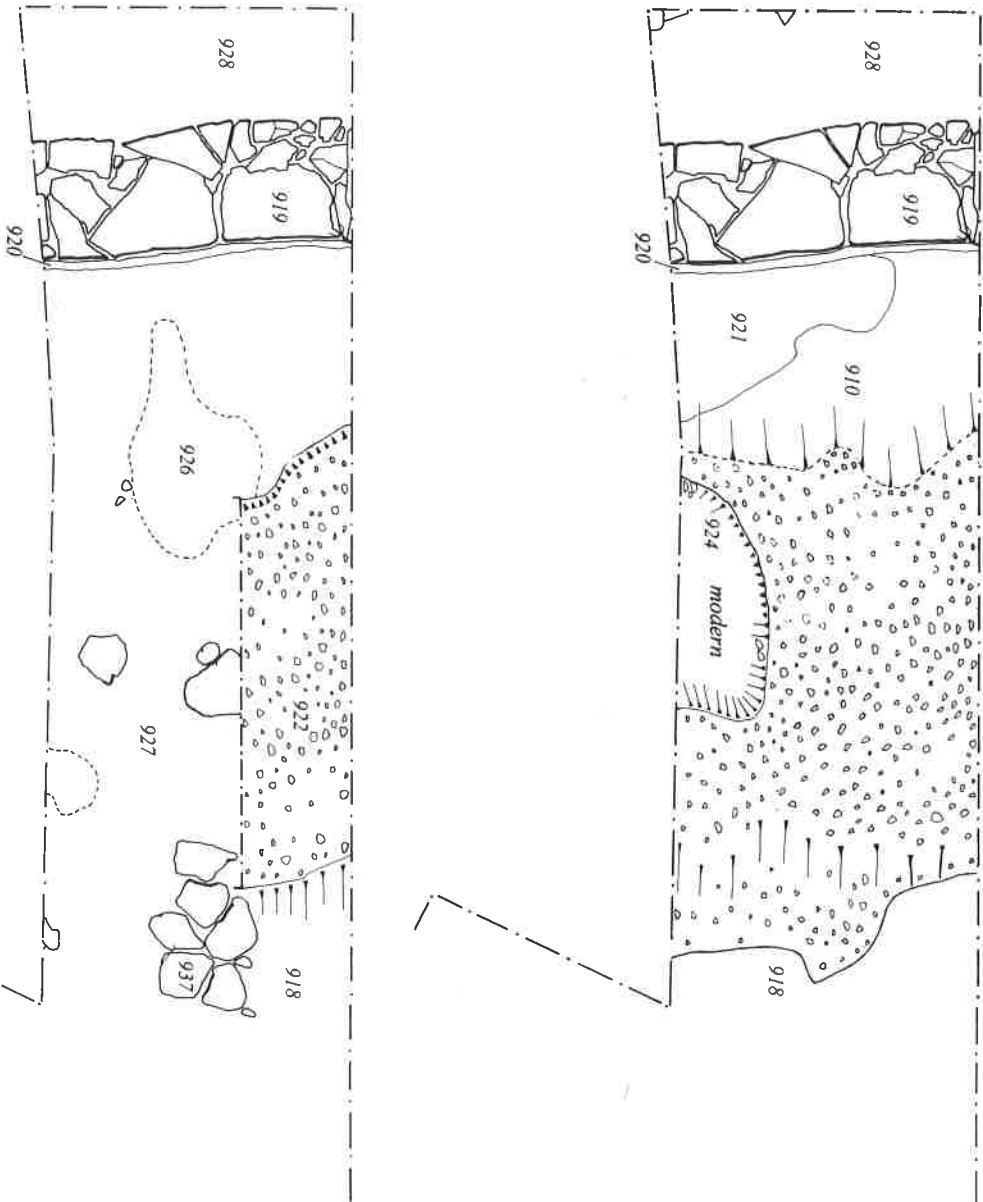
### 3.0 Trench G (Figures 4 and 5)

This trench was located in the SE extreme of the churchyard where the curving walls come to slight point. It was thought that this might indicate the location of an entrance which predated the 19th century reorganisation of the churchyard. Initial investigations in this area were begun in 1994, but little progress was made that season. The original trench was re-opened and the excavation extended mechanically towards the E and the N until the trench came against the foundations of a 19th century burial lair (919). This lair formerly stood against the churchyard wall and had been demolished since the last war, possibly during the demolition of the Harland and Wolff plating shed, when the small gate (shown on Kyle's 1809 plan and other early maps) was blocked.

The excavations exposed the foundations of the burial vault but did not extend into it. A deep layer of top soil (0.4 m) covered the whole area into which a number of modern rubbish pits (eg 924) had been dug. These seem to represent the activity of tidying the churchyard and included temporary funeral furnishings such as vases, but

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GOVAN OLD  
PARISH CHURCH  
Excavations 1996

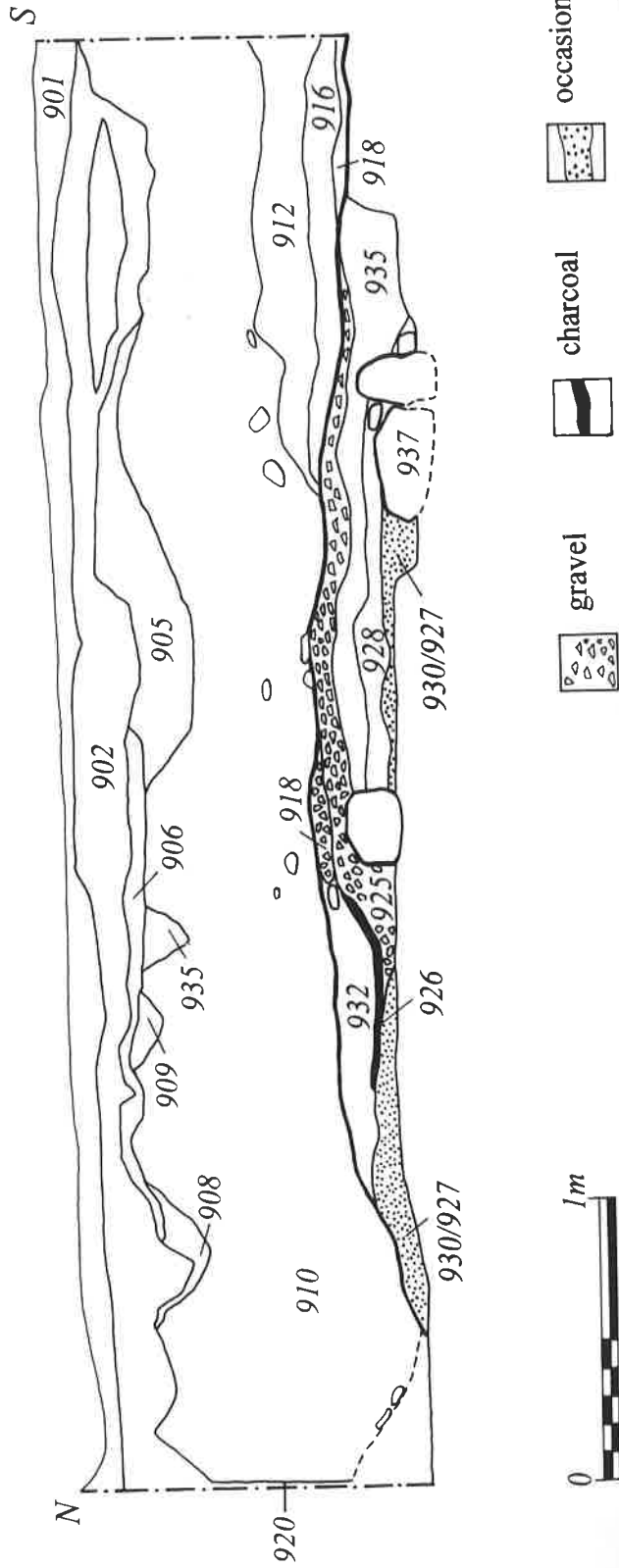
Trench G plan



G.U.A.R.D 175.3

# GOVAN OLD PARISH CHURCH

Excavations 1996  
*Trench G west facing section*



*Figure 5:  
Trench G section through  
road surface.*



*Photo 4:  
The roadway in Trench G seen from the south-west, with a section cut across it.*

no plastic flowers. At a depth of approximately 1.0 m a hard compacted gravel surface (925) was exposed which was about 2.5 m wide and 0.3 m thick. This surface rose to a crown and vestigial drainage channels were present on both sides (Photo 4).

A section through the road surface revealed that it was composed of layers of clay and gravel (Figure 5). The upper layer of gravel (F925) overlay clay that contained charcoal flecks (F936). This in turn overlay deposits of charcoal (F926), which may provide a date for one phase of repair of the road. Below the road surface were *in situ* remains of a masonry structure (F937), consisting of several flat stones set in the natural clay subsoil. This short stretch of walling may have helped to retain the road make-up and may account for the better preservation of the road towards the E side of the trench. This wall may be part of a gate or gatehouse, although too little was exposed to allow any firm interpretation. These discoveries are significant, because they seem to mark the original medieval approach to the church and for the first time give us an idea of the concepts governing the orientation and arrangement of the churchyard.

Judging from the position of this short stretch of the gravel road the entrance led into what is known as Pearce Lane, which runs into Water Row at right angles. Pearce Lane, formerly known as Manse Lane, appears to follow the ancient approach to the Church from Water Row. The current approach from Govan Road which built as part of the construction of the new church in 1826. Although the Pearce Institute now cuts across the line of the road, access to that corner of the churchyard has been retained through a pend in the W wing. Kyle's 1809 plan of the churchyard shows a pedestrian gate at the point where the Manse Lane met the churchyard. This ancient right of way was maintained first to provide access to the Manse grounds after the construction of the 1826 approach to the church. The alignment of Pearce Lane seems to be directly towards the Doomster Hill site. It may well be that the modern road layout preserves an ancient processional way linking the churchyard to the court or moot hill.

#### 4.0 Trench H

---

A small trench (3 by 2 m) was positioned along the interior of the W perimeter of the churchyard, where hitherto there had been no sustained investigation. The intention was simply to determine the nature and condition of any surviving archaeological deposits, as had been done for the S side in 1994. The initial levels were quite disturbed. Deposits of rubbish associated with the tidying up of the graveyard were found to extend to approximately 0.5 m deep. In addition there was considerable root disturbance. Alongside the wall, repeated rebuilding over the past few of centuries had truncated the adjacent deposits.



*Photo 5:*

*The level at which the burnt deposits were encountered in Trench H.*

At a depth of approximately 1.2 m the root damage diminished and evidence for archaeological activity became apparent (Photo 5). This consisted of substantial deposits (1009/1010) of charcoal and scorched earth which indicate that the intense fires were repeatedly built in this place. These burnt deposits in Trench H were not fully excavated (samples were taken to provide material for radiocarbon dating). The evidence for burning was similar in character to the deposits of charcoal and burn soils noted in Trench C in 1994. There because of the presence of fragments of worked shale, the Trench C burning was tentatively interpreted as evidence for a workshop. In Trench H there were no shale fragments or medieval artefacts of any type, so here we can say only that fires were built here probably indoors on a

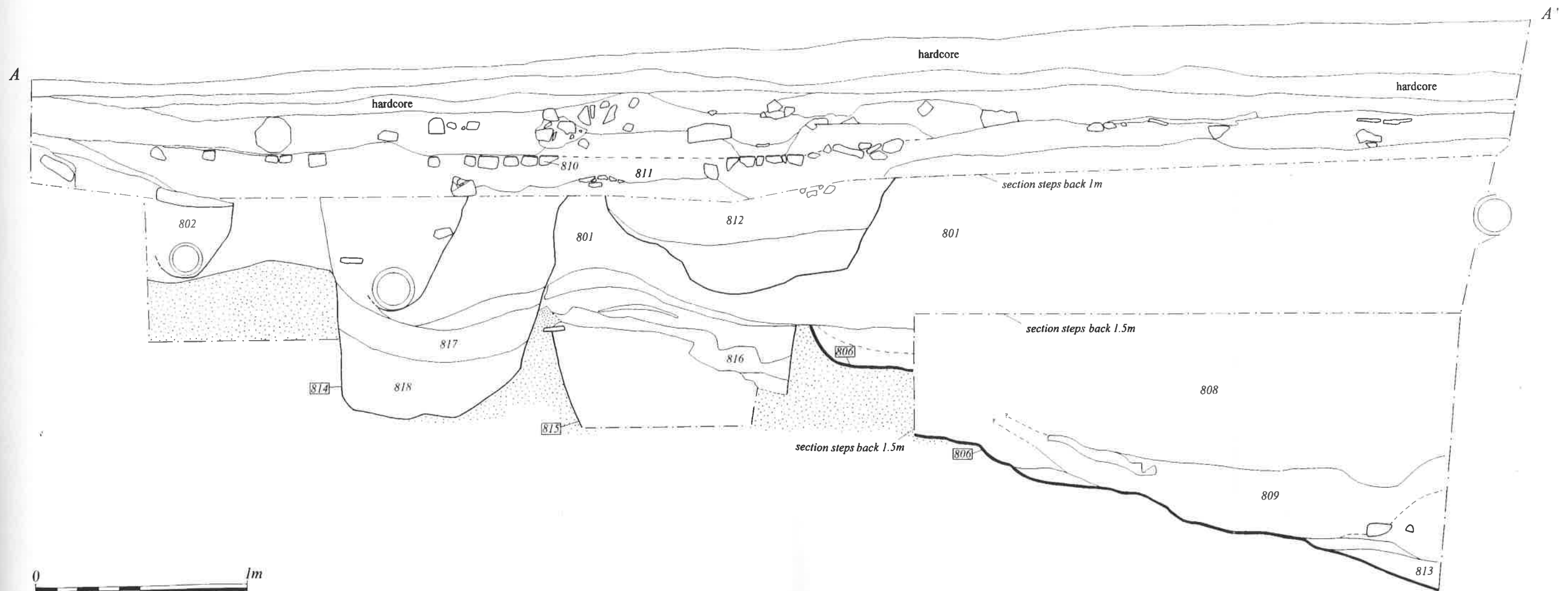


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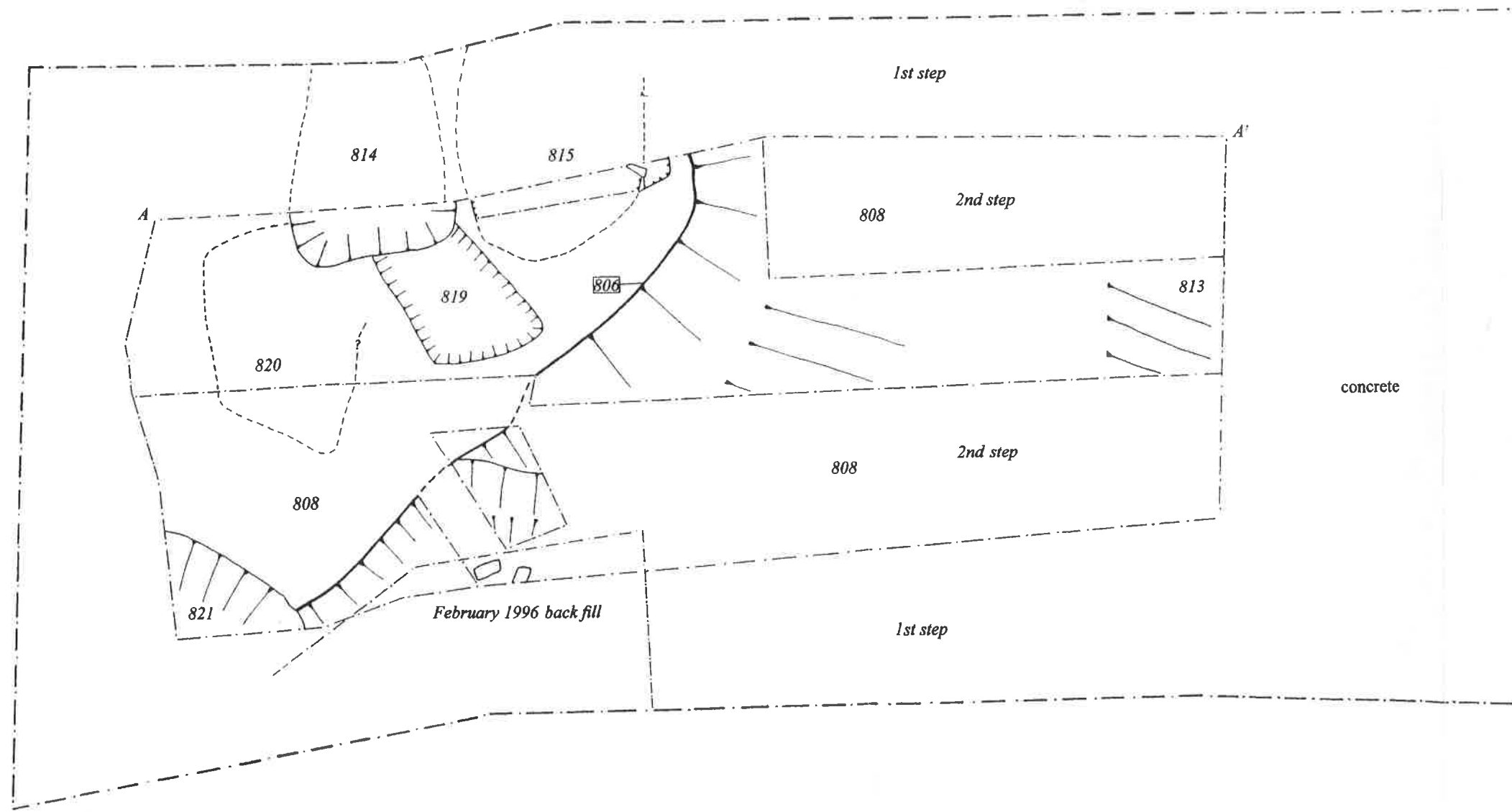
# WATER ROW, GOVAN

Excavations 1996  
Doomster Hill

*West facing section*



G.U.A.R.D 175.3  
WATER ROW,  
GOVAN  
Excavations 1996  
Doomster Hill  
trench plan



0 2m



number of occasions. These burnt deposits point to the presence of a building of indeterminate function. It is hard to say whether they would be contemporary with the functional life of the original boundary, which was a massive bank and ditch (as excavated in 1996). However it would not be surprising if buildings had been set against the bank.

With respect to the question of the survival of archaeological levels in the W perimeter of the churchyard, undisturbed deposits exist below the depth of approximately 1.4 m. Survival here may be poorer than in Trench C, because there seem to be more modern rubbish pits and tree roots in Trench H. The full potential of this W perimeter has not been determined, but significant deposits have clearly escaped damage from modern graves.

## 5.0 *Doomster Hill, Water Row*

*(Figures 6 and 7)*

This trench returned to the site located during the previous excavations conducted in February 1996 (Driscoll and Will 1996). Initially a trench 12 m by 7 m, positioned to overlap with the February trench, was excavated by machine under archaeological supervision. This was reduced in area by two 1 m steps to create a trench 8 x 3 m at a depth of 2 m below the existing ground surface. The material removed from the top 2 m included mixed layers of building rubble, concrete, ash, coal and gravel (800, see Figure 7). This material derived from the shipyard and 19th century tenements and overlay a level of soft brown soil (801), into which several large pits (812, 814, 815) had been dug. These pits relate to the industrial use of the area, probably a dye works to judge from the violent orange colours of the fills (Figure 6, A3 pull-out, Photo 6). Substantial concrete foundations (805) and a ceramic sewer pipe relating to the shipyard limited excavation to the N of the trench.

Once the pre-modern levels had been exposed further excavation was conducted by hand. This homogeneous sandy brown soil was recognised from the February investigations as the fill (012) of a massive feature (Driscoll and Will 1996, Figure 10). This layer (808) was excavated in spits and showed no real change in soil type although the amount of coal decreased as the trench got deeper. Different feature numbers (eg 809 and 813) were allocated to separate the finds from the different spits. The most common finds were of post-medieval and medieval pottery sherds.



*Photo 6:*

*The Water Row trench from the east with the section through the ditch fill opened back to the west section to provide an impression of the profile. Behind the horizontal scales can be seen the industrial pits*

At a depth of about 2 m it was possible to recognise the edge of the ditch (806) against the natural subsoil, a soft pale riverine sand, and a 1 m wide slot was cut through the fill (Figure 7, A3 pull-out, Photo 7). The fill (808) was very uniform and similar to the main brown deposit covering the whole trench. Some silting towards the bottom of the ditch was observed, but this consisted of thin layers and lenses of clean sand. The only finds recovered from the ditch fill were sherds of late medieval pottery including the base of a jug found in the basal layer of the fill (813), which can be loosely dated to the 16th century.

Because of the presence of the industrial pits, the ditch edge was difficult to trace. Two sections and a test pit were excavated in the SE of the trench to establish the line of the ditch and to link this ditch cut with that first observed in the February trench. The main section was positioned running up the centre of the trench for safety reasons,



*Photo 7:*

*The Water Row trench from the south with a section through the centre of the trench to examine the ditch profile.*

which cut across the ditch obliquely. Smaller sections set at right angles to the edge were excavated to give a better indication of the trench profile (Photo 7).

These sections were only able to pick up the upper edge of the ditch, its huge scale prevented us from excavating the full width of the ditch. The edge wavered considerably because of the unstable subsoil and made it difficult to determine the orientation and curve of the ditch.

Estimating the scale of the ditch by assuming that the ditch profile (of steep sides and a broad flat base) is symmetrical gives a minimum width of about 10 m. Depth is more difficult to estimate. The bottom of the ditch is over 3.5 m below the existing ground surface, but the original depth is not clear because the original ground surface from which it was cut was obscured by the later industrial pits. Judging from small pillars of the sand subsoil which survived between the pits (but do not appear in the sections) and from the level of the sand in the S end of the trench, the original depth may have been only about 2 m.

The series of large pits (812, 814, 819) and drains (eg 802) in the south-west corner of the trench represents a period of intense activity presumably associated with the dyeworks which was in operation in the middle of the 19th century. Pits appear to have been cut and filled and then re-cut before being filled again and further disturbed by the insertion of drain pipes and gravel soak-away drains. A separate pit (821) cut from quite a high level into the natural sand was partially excavated in the south-east corner. Here the presence of concrete suggested an association with the shipyard.

We believe that this large feature represents the quarry ditch which provided the material to construct the Doomster Hill. The base of the trench showed some signs of silting, but no more than would be expected from the slumping of an edge cut into soft sand. There was no evidence that the ditch was cleaned out or re-cut, but on the otherhand little silting and no turf line were observed. However, it is clear is that most of the material filling the ditch was placed there in a single event, probably in the the 16th century judging from the pottery in the fill. The uniformity of the infill and the richness of the soil suggests that the filling had a purpose. One possibility is that it was undertaken to expand the backlands of dwellings on Govan Road and Water Row, but this is far from certain. The fill does not seem to have come from the mound itself, which survived into the 19th century. The 1792 engraving of the Doomster Hill from the N by Paul (Ritchie 1994, 3) shows the ditch quite clearly on the side facing the shore, unfortunately the S side is obscured.

This trench has demonstrated that evidence for the Doomster Hill has survived despite the harsh use put the area over the past two centuries. Sadly we still do not know the exact position of the Hill through the excavation. Nor do we know whether any of the make-up of the hill survives.

However these excavations make it abundantly clear that the magnitude of the hill was not exaggerated by early representations (Roy's Map (1750) and Paul's engraving (1792) or the descriptions in the *Old and New Statistical Accounts* (1795, vol 14, 294; 1845, vol 6, 690).

## 6.0 Conclusions ---

These excavations have provided answers to a number of important archaeological questions, all of which point to the survival of archaeological remains of national importance.

- 1) The substantial stone footing is likely to be the remains of an early church, perhaps a very early one. Good dating evidence was recovered which will be used to refine the chronology.
- 2) The original situation of the churchyard within wider Govan was revealed through the roadway discovered in the SE corner. Its position strongly suggests a link with the Doomster Hill site. The stone features associated with gravel road the hold the promise of revealing more of what was probably a formal entrance to the sacred heart of Govan.
- 3) The presence of deeply stratified deposits were confirmed to exist along the W perimeter of the churchyard, in reasonably well-preserved condition.
- 4) The location of the Doomster Hill has been established and we have a much clearer idea of its scale. Most importantly the potential of the surviving archaeological remains is now known to be much greater than was suspected. The potential for learning a great deal more about this enigmatic monument is without question great.

In short, it appears that the key elements of a royal administrative and ceremonial centre of the early medieval kingdom of Strathclyde have been located. The main features of the church can be dated to the tenth century and may be significantly earlier.

## 7.0 Acknowledgements ---

As ever we take pleasure in acknowledging the support and encouragement of many people. Revd Tom Davidson Kelly gave us use of the church and his boundless enthusiasm. The City of Glasgow Planning Department once again sponsored our efforts financially and logistically, in particular by providing introductions for our negotiations with the Estates Department, who facilitated the dig in the midst of the Water Row market.

We found the experience of working with the Time Team stimulating and instructive. In particular, we are grateful to Carezza Lewis for championing Govan to the producers. SGB Youngman's generously loaned us safety fencing for the Water Row trench.

Much of the success of the dig is due to the efforts of the principle supervisors: Susan Bain, Janet Hooper Allan Rutherford and Keith Speller, and the rest of the team. Donal Bateson kindly identified the coins and finally our long suffering illustrator for this project has been Caitlin Evans.



*Photo 8:*

*The newest Govan sculpture carved by Barry Grove for the Time Team*



## 8.0 Appendices

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### Appendix I The Finds

#### Special Finds

- |    |           |  |          |
|----|-----------|--|----------|
| 1. | 807 (WRD) | Coin, forgery of shilling - 1816-20. Spoiled by a square, punched perforation. Traces of silver coloured wash. Poor condition. | Cu alloy |
| 2. | 721 (C)   | Coin - Turner of Charles I -1629, relatively unworn  | Cu alloy |
| 3. | 718 (C)   | Dress pin, wire-wound globular head 4 mm diam, length 62 mm  | Cu alloy |
| 4. | 743 (C)   | Book clasp   | Cu alloy |

Context No	Area	Object Description	
702	C	coffin nails (9)	Fe
702	C	metal (c 10)	Fe
703	C	shale	shale
703	C	coffin fragment	wood
703	C	metal (10)	Ferrous cluster
704	C	shale (3)	shale
706	C	shroud pin	CU alloy
707	C	slag	slag
707	C	shale - rounded, roughly circular	shale
710	C	shroud pin	Ag
710	C	Scrap of worked shale	oil shale
710	C	coffin fitting >25 die stamped sheets up to 5 cm sq	Fe, zinc
710	C	nails (11)	Fe
718	C	metal cluster	Fe
718	C	metal cluster	Fe
718	C	slag (3)	slag
718	C	nails (4)	Fe
718	C	worked shale	oil shale
718	C	burnt wood	wood
718	C	coffin fragments	wood
718	C	coffin fragments	wood
721	C	slate: hole near edge	slate
721	C	coffin fragments	wood
721	C	shroud pin	Ag
721	C	glass fragment	glass
721	C	shroud pins (2)	Ag
721	C	coffin fitting	Fe
724	C	shroud pin	Ag
728	C	ring	Fe
728	C	stone (3), slag (1), broken chert flake (1)	slag, chert
728	C	Unidentified cluster	Fe

Context No	Area	Object Description	
730	C	coffin, 2 handles, 8 nails, 34 Zn die cast sheets with wood attached, 6 wood, 5 concretions	Zn, wood, Fe
730	C	shroud pin (2 frags of 1 piece)	Ag
730	C	Button	Bone
732	C	coffin fitting 1 complete frag, many smaller	Fe with wood
733	C	coffin fitting	Fe
742	C	shale: large piece with rounded corner	shale
742	C	shale (3): 1 piece with rounded edge	shale
744	C	hinge with leather fragments attached bet, 2 plates	Cu alloy
754	C	metal	Fe cluster
755	C	worked ? shale	shale
755	C	Possible worked stone rounded on one edge	sandstone
759	C	wood fragment	wood
760	C	nail	Fe
760	C	worked ? shale (2)	shale
762	C	nail	Fe
762	C	nails (3)	Fe
770	C	worked ? shale	shale
771	C	mortar	mortar
801	WRD	unidentified cluster	Fe
807	WRD	punched token	fe?
808	WRD	melted glass	glass
808	WRD	worked ? shale	shale
809	WRD	unidentified cluster	Fe?
809	WRD	stone	sandstone
809	WRD	worked ? shale (2)	shale
813	WRD	unidentified cluster	fe concretion
924	G	shale(2)	shale
924	G	playing marble	pottery
1010	H	worked shale (6): 4 of the pieces join to make 2 whole	shale
1011	H	stone: convex on one side	pebble
723 or 733	C	coffin fitting	tin dipped Fe?
723 or 733	C	coffin fitting	tin dipped Fe?
902/910	G	worked ? shale (2)	shale
cleaning up?	WRD	slag	slag
unstratified	WRD	spoon	fe?
unstratified	H	glass (4)	glass
unstratified	H	metal cluster	Fe
unstratified	WRD	slag	slag
unstratified	H	glass (3):1 lid, tear shapes w painted flower design, green stems, yellow petals, gold paint 1 round base, light green	glass
unstratified	H	Perforated strip, 11.5 cm x 2.5 cm 14 slots	Fe

## Appendix II - The Pottery and Ceramics

Robert S Will

The pottery assemblage from the excavations at Govan consisted of 383 sherds dating from the medieval to the modern period including several clay tobacco pipe bowls and stem fragments. Many of the contexts were mixed or contaminated with later material but several of the contexts, particularly in the grave yard (Trench C) contain medieval sherds with no later material. Two large groups of sherds (from features 718 and 809 are sufficiently large to allow vessel profiles to be reconstructed.

### Scottish East Coast White Gritty Wares (SECWWG)

139 sherds of Scottish East Coast White Gritty Wares were recovered. This is a large group of pottery which includes a wide range of similar white, quartz-rich fabrics believed to have been made in Lothian, Fife and the Borders. Considerable work has been carried out on this material by Cox and Haggarty for the Borders (1984), by Brooks for Lothian (1980) and by Haggarty and Will (forthcoming) for Fife. The earliest dated assemblage is characterised by distinctive straight-sided cooking pots from Kelso Abbey which are dated to the 12th century (Haggarty 1984). However these fabric are very popular and remain in use possibly as late as the 15th century (MacAskill 1983). Some later examples have flared bases in imitation of German stonewares. The only excavated kiln at Coulston produced a large number of sherds, but few vessel profiles (Brooks 1980). There the production was found to include a mixture of straight-sided, globular and barrel shaped cooking pots. No clear dating sequence was obtained from the excavations. Similarly the work on the St Andrews material has recovered both straight-sided and globular cooking pots without firm dating evidence. In this case the presence of imported ceramics has provided a broad 14th century date (Haggarty and Will forthcoming).

Although described as 'east coast' this white gritty pottery was widely traded and examples have been found as far afield as Trondheim (Reed 1990). White gritty is common throughout the central belt of Scotland and beyond the source areas for white clays. These fabrics seem to be the earliest successful indigenous pottery in Scotland and may explain the wide distribution. Once the local red wares become established in the 14th century the white gritty industry seems to go into decline.

### Scottish Medieval Redwares (SMR)

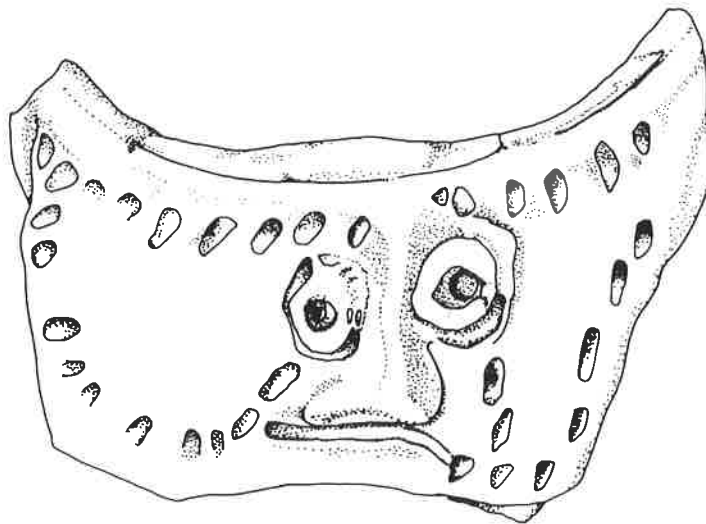
The main medieval fabric group (101 sherds) can be categorised as belonging to the Scottish medieval Redware tradition. This is a general fabric type including red/orange wares that have not been sourced. It is only in areas where large assemblages have been studied that regionally specific forms and fabrics can be used to define local traditions (eg Aberdeen, Perth and Rattray). These fabrics are found throughout Scotland but generally occur outwith the white gritty producing areas and date to the 14th and 15th centuries. One kiln site has been excavated at Rattray, Aberdeenshire where the size of the kilns would suggest small scale production for the local area (Murry 1993). It is highly probable that several kilns were in operation supplying the Glasgow area, but at the moment no kiln sites are known. Possible kiln wasters have been recovered from Hagg's Castle, Pollockshields (Sloan 1972). There is an unpublished kiln known from Stenhouse, near Falkirk which may have been supplying Glasgow. The face mask jug from Trench C is similar to those from Stenhouse.

Three Redware vessels merit further comment:

Two face masks come from a single jug found broken in the fill of grave (718). They probably come from the Stenhouse kiln judging from the distinctive dot and eye face mask with the horizontal lug style handle. This kiln is thought to have been in production during the 15th century.

Of the 101 sherds recovered from the fill of the Doomster Hill ditch (809) 85 are from the same vessel. The sherds are from a jug possibly with two grooved strap handles. The fabric is thick, dark red, and quite soft indicating a low firing temperature. Probably a local product.

The glazed base of a jug recovered from the bottom of the same ditch (813) is also probably local. The fabric is slightly reduced rather than oxidised and could indicate a different kiln source or a later date, perhaps in the 16th century.



*Figure 8:*

*Detail of the face mask jug from grave 718.*

## Scottish Post-Medieval Reduced Wares (SPMRW)

77 sherds of the Scottish Post-medieval Reduced Ware fabric group were recovered. These date from the later 15th century through to the early 18th century and are found throughout Scotland. The only excavated kiln site is at Throsk on the upper Forth near Stirling (Caldwell and Dean 1992). The vessels tend to be jugs with a heavy grey/black fabric and a thick green glaze often with wavy decoration around the shoulders. Semi-oxidised vessels are often found along side the reduced wares suggesting variable firing procedures. The Govan group generally conforms to the norm being dominated by jugs, although a rim from a bowl (808) and a rim from a possible urinal (809) were also recovered.

## Modern Pottery

37 sherds of modern pottery were recovered from significant contexts (considerably more was noted but not collected from the 20th century contexts). These consisted of White Earthen Wares (WEW) with various forms of decoration: transfer printing, hand painting, sponge printing. Four bear maker's marks which will allow detailed sourcing and dating to be undertaken. In addition there were a few sherds of Red Earthen Ware (REW) including some from large slip-lined dairy bowls and a few Brown Glazed Red Earthen Wares (BGREW).

## Ceramics Catalogue

Abbreviations used in the pottery catalogue:

SMR - Scottish medieval redware

SECWGW - Scottish east coast white gritty ware

SPMRW - Scottish post-medieval reduced ware

WEW - White Earthen Wares

WEWtin glaze - White tin glazed earthen wares

REW - Red Earthen Wares

BGREW - Brown Glazed Red Earthen Wares

Context No	Area	Object Description	Date
702	C	sherd: (2) SECWGW	14th C
706	C	sherd: (2) SECWGW 1, SPMRW 1	
706	C	clay pipe: stem	19th C
707	C	clay pipe: stem	19th C
708	C	sherd: SPMRW, highly fired base	
708	C	clay pipe: stem	19th C
710	C	sherd: SECWGW	14th C?
718	C	sherd: (69) SECWGW	14th C
		1 rim sherd, 1 rim sherd from spout, 2 base w albarel (Italo-Spanish cylindrical vessel), 1 base, 2 face mask lug handles, 61 bs (min 3 vessels), 1 daub	
721	C	sherd: 1 SMR	

Context No	Area	Object Description	Date
728	C	sherd: (11)SECWGW (1 v burnt piece); 7 diff types present	14th C
741	C	sherd: (2) SECWGW 1; SPMRW 1	
742	C	sherd: (10) SECWGW 4 (1 base), SMR 3, SPMRW 3	
755	C	sherd: (6) SECWGW - adjoins sherd from 728	
760	C	sherd: SECWGW 1	
762	C	sherd: (88) SECWGW 6 bs; SMR 4 bs, 1 jug rim w thumb strap handle and thumb deco	
763	C	clay pipe: stem	19th C
800	WRD	sherd (50): WEW various designs - transfer, paint and transfer, handpainted, moulded, 2 makers marks: REW slip deco 2, 1 rim (1 mg glaze); SPMRE 1 strap handle, 1 base, 14 bs; SECWGW, 1 base of cooking pot, 11 bs; SMR, 1 base, 1 rim, 4 bs 1 mod fp	
800	WRD	clay pipe	19th - 20th C
801	WRD	Sherd: REW 1 bowl rim slipped; SPMRW 3 bs (largest piece late)	
804	WRD	sherd: slipped decorated earthen ware - dairy bowl	19th C
807	WRD	sherd: (5) SPMRW 2, olive green glaze; SMR, 1 rim, 1 base, 5 bs; SECWGW 1 base, 11 bs - poss bowl, sherd (8) BGREW 1; WEW 2; WEWtin glaze 2; WEW 3	19th-20thC
808	WRD	clay pipe: (5) stem	
808	WRD	sherd: (24) SPMRW 2 jug rim, 1 bowl rim, 21 bs	
809	WRD	sherd: (c 88) SMR 2 bags-same vessel, 43 sherds, 3 rim, 2 handle frags, lg quartz inclusion; SECWGW 3 sherds	14th C
809	WRD	sherd (20): SPMRedW, 1 RIM, 12 BS; SPMRW, 7 bs green glaze + 2 rim, 1 bs from same vessel, 1 complete grooved strap handle, 1 rim - urinal	17th C 19th C
812	WRD	sherd: REW, Mn glaze 1 base	
813	WRD	sherd: (2) 1 wheel made jug base (almost entire), brown-olive glaze, red fabric, highly fired, knife trim, local manuf; 1 bs	
816	WRD	sherd: FEW, white, painted	
819	WRD	sherd: (2) SMR 1 bs; PMRedW 1 bs w dark glaze	
910	G	sherd: SECWGW 1 base	
922	G	sherd: SMR dot and eye decoration 1	19C

Context No	Area	Object Description	Date
924	G	sherd: (7) WEW, 1 base w 4 petal flower stamp: 1 transfer print - black, makers mark: 2 rim sherds, blue sponge printed design: 1 white porcelainesque vase with twisted rope relief pattern and flowers, burnt: 2 industrial stoneware	19th - 20th C
924	G	marble stopper from soda bottle x1	
000	G	clay pipe: (3) bowl 3	19th C
000	WRD	clay pipe	19th C

### Appendix III

#### Environmental Sampling Programme

*Aileen K Maule*

#### Introduction

Bulk environmental samples were selectively taken from important contexts. Apart from the coffin remains, all the samples taken came from charcoal-rich deposits in well-stratified situations. They were taken primarily with radiocarbon dating in mind.

The environmental processing of samples collected during excavations at Govan was conducted during October/November 1996. In total 5 samples from 5 contexts were processed.

Sample No	Area	Context	Purpose
1	G	918	Dating - Charcoal
2	G	910	Dating - Charcoal
3	G	926	Dating - Charcoal
4	H	1009	Dating - Charcoal
5	H	1010	Dating - Charcoal
6	C	723	Post-med Coffin fragments
7	C	723	Post-med Coffin fragments

The aim of this work was threefold:

- i) To enable dating of the site by recovery of charcoal, utilising the radiocarbon 14 method.
- ii) To allow any palaeo-botanical evidence to be recovered and enable the reconstruction of the site's environmental backdrop.
- iii) To aid in the construction of an artefactual record for the site.

#### Methodology

The general method employed focused on the use of twin Sirâf tanks, modified, and rigged with 1 mm mesh and Endicots (500 micron and 1 mm) to maximise recovery of palaeo-botanical evidence. After processing and drying the heavy residues were

separated through a 2 mm Endicot with only the elements larger than 2 mm being hand sorted.

#### Samples and Tabulated Results

In gross terms 33 kg of samples were processed. After wet sieving the net weight remaining for hand sorting totalled 6.327 kg. The weights presented below are percentages of this net weight as the two groups of residues that were obtained, ie sorted (> 2 mm) and unsorted (< 2 mm).

	Weight (kg)	%
Sorted residues (> 2mm)	4.844	76.5
Unsorted residues (< 2mm)	1.483	23.5

Materials recovered during hand sorting are presented below as Table 1 (organic) and Table 2 (inorganic).

Flots (500 microns and 1 mm) which were collected are awaiting specialist processing by *D Aldritt*, (Glasgow University) and have not been included in this data presentation other than for general comment

#### Carbonised Vegetation

Samples individually weighing greater than 5 g were collected from 4 contexts (910;926;1009;1010) which will hopefully be suitable for radiocarbon 14 dating. Only context 918 produced inadequate weights (1.7 g) for the radiocarbon dating procedure. Contexts 910 and 1009 were only partially sorted for carbonised vegetation due to time constraints and additional material could be collected if required.

#### Seed/Grain/Nutshell

3 contexts (926;1009;1010) contained small quantities of hazelnut shell, context 1010s weighed 4.2 g in total and additionally provided seed/grain of < 0.1 g.

#### Bone

Very small quantities of bone were recovered from all contexts except 910. The materials from 926 and 1010 are recorded as being burnt.

#### Other Organic Finds

Context 1010 additionally produced a very small quantity of cinder.

Two almost negligible fragments, tentatively identified as leather and uncarbonised wood were recovered from context 1009.

#### Industrial Waste

Contexts 918, 910 and 1010 produced quantities of industrial waste/slag totalling 275.2 g, with context 918 accounting for 88% of that total.



## Flint

Lithic debris/artefacts were recovered from contexts 926;1009;1010. The only sample which is tentatively described as worked is the single flake from context 1010. The various fragments from context 1009 are described as burnt.

## Other Inorganic Finds

An almost negligible fragment of ferrous material was recovered from context 1009.

## Conclusion

The 1996 environmental processing project has been successful in terms of aim i) to collect adequate quantities of carbonised vegetation for use in RC-14 dating. Additionally, with regard to aim ii) it is hoped that the organic materials recovered during sorting will be complementary to the material in the flot samples and be of value in the reconstruction of the site's environmental background. The presence of industrial waste complements that recovered from the first season's excavation.

## Appendix VI - Human Skeletal Remains from 1996 Excavations

Sarah E King

### Introduction

This report describes human skeletal remains recovered from Trench C in the Old Govan Parish Churchyard during excavations by the Glasgow University Archaeological Research Division in 1996. Other human remains excavated in 1994 are discussed elsewhere (King, 1995).

A total of 9 incomplete burial groups (representing a minimum of 10 individuals) were recovered for analysis. Two of the burials have been dated as Early Medieval (SK777 and SK772), 1 burial as High Medieval (SK737) and 6 burials as modern (SK703, SK704, SK722, SK726, SK727 and SK730). An additional 8 groups of disarticulated bone were also analysed.

### Preservation

The Early Medieval burials and High Medieval burial were poorly preserved (eroded, flaked and/or cracked and fragile) and poorly represented (approximately 5% or less complete). The poor representation of these burials is partially due to poor preservation and partially due to the limits of the excavation trench. The modern burials were generally well preserved, but fragmented. They were also poorly represented (ranging from 5% to 50% complete) as a result of the trench limits. Copper staining was present on 4 burials (SK703, SK722, SK727, SK730), often in association with shroud pins. Hair was preserved on the crania of SK726 and SK730.

### Minimum Number of Individuals

The skeleton numbers assigned in the field predominantly include the remains of only one individual. There is, however, one exception. Skeleton 704 included the remains of both a ?middle adult and a juvenile (c 4-5 years). It is noted that other

subadult remains bagged with SK704 are probably from SK722. There was no evidence to suggest that the groups of disarticulated remains represented separate burial contexts. Thus, the total MNI for the 1996 excavations is 10.

### Age Estimations

Estimations of age-at-death involve the application and comparison of several different ageing techniques, each requiring the preservation and recovery of the appropriate skeletal elements<sup>1</sup>. Even when these techniques can be applied, adult age estimates can only be predicted within broad categories<sup>2</sup>. Very few techniques could be applied to the incomplete skeletons from Govan. In some cases, therefore, age was only estimated as 'subadult' or 'adult' based on the size of the bones and the degree of epiphyseal fusion (fusion of the ends of the bone to the shaft). The following ages were determined:

Period	Skeleton No	Age Estimation
Early Medieval	777	adult
Early Medieval	772	adult
High Medieval	737	adult
Modern	703	adult
Modern	704	?middle adult
Modern	704	juvenile (c 4-5 years)
Modern	722	subadult (11-16 years)
Modern	726	juvenile (2 ± 8 months)
Modern	727	middle adult
Modern	730	middle adult

### Sex Determinations

Sex determinations require the observation of as many sexually dimorphic criteria as possible.<sup>3</sup> As with age estimations, they are most accurate for complete skeletons. The sex of only 3 individuals from Old Govan could be determined with confidence (SK703 - male, SK727 - female, SK730 - male). It is possible that SK737 is female and SK704 may be male based on the size and robustness of the bones.

<sup>1</sup> Dental formation and eruption: Moorees et al, 1963; Ubelaker, 1989; max diaphyseal length of longbones: Sundick, 1978; Ubelaker, 1989; epiphyseal fusion: Buikstra et al, 1994; Ubelaker, 1989. Dental attribution: Brothwell, 1981; cranial suture closure: Meindl and Lovejoy, 1985; sternal ends of ribs: Iscan et al, 1984, 1985; pubic symphysis: Todd, 1920; McKern and Stewart, 1957; Gilbert and mckern, 1973; Suchey et al, 1988; ilium: Lovejoy et al, 1985.

<sup>2</sup> Age categories are based on standards from the University of Bradford: subadult (<18 years), young adult (18-25), middle adult (26/45) and mature adult (45+).

<sup>3</sup> Phenice, 1967; Bass, 1987; Brothwell, 1981; Steele and Bramblett, 1988; Ubelaker, 1979; Sutherland and Suchey, 1991; White, 1991; Buikstra et al, 1994.

## Stature

Where possible, stature (height) was estimated using regression equations for white adult males and females (Trotter, 1970). However, due to the incompleteness of the remains only 2 statures could be determined: a middle adult female (SK727) was  $163.5 \pm 4.45$  cm in height and an middle adult male (SK730) was approximately  $181.3 \pm 4.05$  cm in height.

## Metric Traits

Cranial and post-cranial measurements were taken where possible following Bass (1987) and Brothwell (1981). Very few long bones were present for measurement. The shape of only one cranium (SK727) could be measured and was 'average' or 'medium' in shape.

## Non-metric Traits

Cranial non-metric traits were recorded following descriptions from Berry and Berry (1967) and post-cranial traits were recorded following Finnegan (1978). For each individual, very few non-metric traits could be recorded. Skeleton 727 and two associated burials (SK704 and SK704) had metopic sutures. It has been suggested that the retention of the medio-frontal suture is a result of genetic background (Brothwell, 1981). Skeleton 739 had a supracondyloid process on the left humerus.

## Pathology

### Dental Disease

Five types of dental disease were systematically recorded when present: calculus, caries, dental enamel hypoplasia, periodontal disease and abscess (following descriptions by Brothwell, 1981 and Lukacs, 1989). Dental disease was evident in all adult skeletons with maxillae and/or mandibles present (SK704, SK727 and SK730). In all of these cases there was considerable antemortem tooth loss with alveolar resorption. Large carious lesions and calculus were also observed on the teeth present in these middle adults.

### Spinal Joint Disease

Evidence of spinal joint disease was observed on skeletons 704, 727 and 730. When present, the severity of osteoarthritic lipping was scored following descriptions by Sager (1969). The lumbar vertebrae were affected in all 3 cases. The vertebral columns were incomplete, however, and any patterns of spinal joint disease could not be determined.

### Joint Disease (Osteoarthritis)

Osteoarthritis was present on the pelvis (acetabulum) of one skeleton (SK704). However, many joints from this individual and other skeletons were not present for complete analysis.

## Infection

Evidence of infection was observed on a disarticulated specimen recovered from context 764. A focal area of raised, grey porous new bone formation (periostitis) was present on the shaft of a femur from a subadult. This lesion was active at the time of death.

## Summary

In summary, the remains of at least 10 individuals from 9 burial groups or 'SK' numbers were uncovered at Govan Old Parish Churchyard during the 1996 excavations. These 10 skeletons consisted of 2 Early Medieval adults, 1 High Medieval adult, 1 modern adult male, 3 modern middle adults (2 male and 1 female), 1 modern subadult (11-16 years) and 2 modern juveniles (2+8 months and c 4-5 years). All the burials were incomplete due to the limits of the excavation trench. The earlier burials were poorly preserved (eroded, cracked and fragmented), but the modern burials were in good condition, and in some cases, the remains of hair was present on the crania. Copper staining was also observed on these later burials, often in association with shroud pins.

Stature estimations could be determined only for two modern individuals. They are consistent with results from broadly contemporary skeletons excavated in the Glasgow area (King, 1994). Very few non-metric traits could be observed. However, two individuals buried within the same grave plot (SK703 and SK704) both had metopic sutures, a genetic trait which may suggest they were related.

Very few pathological lesions were observed on the skeletons. This may be due in part to their lack of completeness. Three of the modern skeletons (SK704, SK727 and SK730) suffered from dental disease, resulting in loss of dentition and considerable resorption of the alveolar bone. These individuals were all middle adults, and the loss of teeth may have been a result from both a diet rich in sticky or sugary foods and poor oral hygiene.

Spinal joint disease was observed on at least one lumbar vertebra of these three modern middle adults (SK704, SK727, SK730). Spinal joint disease is often observed in individuals past middle age (Ortner and Putschar, 1985). One of the individuals (SK 704) also suffered from osteoarthritis of the hip. This disease is also more frequently observed with increasing age (Ortner and Putschar, 1985; Rogers and Waldron, 1995).

Although the skeletons were incomplete, some information was gleaned from the remains, particularly from the modern burials. The presence of males and at least one female, juveniles, subadults and adults is consistent with typical churchyard burials.

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