

**Archaeological Watching Brief
St John's Kirk
Perth
PEX171**



Alder Archaeology Ltd
55 SOUTH METHVEN STREET
PERTH PH1 5NX
Tel: 01738 622393
Fax: 01738 631626
Director@AlderArchaeology.co.uk

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Author David Perry, MA, FSA Scot
Illustrator Tamlin Barton, MA
Editor David Bowler, BA MPhil, FSA Scot, MIfA

ABSTRACT

Hardies Property and Construction Consultants, on behalf of their client, the Trust for St John's Kirk of Perth, commissioned Alder Archaeology to undertake an archaeological watching brief on the renovation and alterations at St John's Kirk, Perth. The work (Alder Archaeology site code PEX171) was undertaken during the period September to December 2010 inside the church, and in April and May 2011 outside the church. Much disarticulated human bone was found inside the church, as well as the partial remains of 11 skeletons. (Where possible, the skeletons were left in situ; all bones found inside the church were reburied inside the church.) A number of architectural stones were found, including pieces of black limestone ('Tournai marble'), as well as medieval pottery, glass, animal bone, nails and a Neolithic flint blade. Foundation scarcements for the N and S walls of the nave and choir survived as well as foundation plinths for the pillars of the N and S arcades of the choir.

Outside the church, in the former graveyard, more disturbed human bones and the partial remains of 16 skeletons were found. The graveyard was found to extend at least as far W as the pavement outside the City Hall and as far N as the entrance to Kirkgate, where it had been extended over the medieval midden of the burgh. On the W side of the church, remains of the W and E walls of the Meal Market were found, as well as of two walls that were cut into the graveyard near the church. On the N side of the church, a former cellar/boiler room for the East Church was revealed as well as a double chamfered scarcement for the N wall of the choir, on one stone of which was a mason's mark.

1 Background

1.1 Introduction

Hardies Property and Construction Consultants, on behalf of their client, the Trust for St John's Kirk of Perth, commissioned Alder Archaeology to undertake an archaeological watching brief on the renovation and alterations at St John's Kirk, Perth. The church is the medieval parish church of Perth, and the present building dates from the 15th century. Over the years it has undergone many alterations and repairs, including subdivision into three churches. It was restored between 1923 and 1926 as a single parish church by Sir Robert Lorimer as the memorial of the burgh and county of Perth for the First World War (Simpson 1958, 34-5; Fawcett 2007, 18). The church is situated in the centre of the burgh (NGR: NO 1195 2353). The work (Alder Archaeology site code PEX171) was undertaken during the period September to December 2010 inside the church, and in April and May 2011 outside the church.

1.2 Aims and Objectives

The main aim of this investigation was to minimise disturbance and destruction of archaeological remains as far as possible, and to ensure that where disturbance could not be avoided, the remains were properly recorded.

1.3 Reporting

The present document has been prepared as the final report on this watching brief. Copies will be sent to the client, The Royal Commission on the Ancient and Historical Monuments of Scotland and Perth and Kinross Historic Environment Record.

1.4 Planning and Curatorial Issues

Although St John's Kirk is a Category A listed building, the proposed renovations and alterations were not subject to Listed Building Consent or planning permission. However, at the request of Perth and Kinross Heritage Trust (PKHT) and subject to their approval, a Project Design was prepared by Alder Archaeology (Bowler 2010) to provide written guidance for the archaeological contractor and all the other professions and trades involved in the renovation project, to ensure that the archaeological implications of the work were dealt with in a satisfactory and responsible way at each stage of the project

1.5 Acknowledgements

We wish to thank Gordon Butt of Hardies, Derek Branton of Laurence McIntosh, Jimmy McGrath and Bob Black, Site Managers, and the late Roddy Young of St John's Kirk for their assistance and guidance throughout this project. The Trust for St John's Kirk of Perth funded this watching brief.

2 Details of Work

2.1 The Site (Illus 1)

St John's Kirk is situated in the heart of the medieval burgh and was formerly surrounded by a graveyard. The graveyard was closed in 1580 when the kirk session ordered that Greyfriars should be the burgh's only burial ground. Since its closure, the former burial ground has become part of the urban townscape of the burgh, although burials and disarticulated human bone have been recorded during building and road works since the 19th century (see below).

2.2 Archaeological Potential

The church of Perth is first recorded between 1127 and 1131 (probably 1128), when it was granted to Dunfermline Abbey by David I (Barrow 1999, no 33). However, none of the existing fabric dates from earlier than the fifteenth century, when a rebuild was implemented in 1440: the majority of the structure is believed to date from this time. The area around the church was occupied by the burgh burial ground until superseded by Greyfriars Cemetery in 1580, since when the churchyard has disappeared, its site incorporated into the streets surrounding the church.

Replacement of gas and water pipes in St John's Place, Kirkside and South St John's Place between 1981 and 2003 ((PEX30, PEX53, PE07, PEX104, PEX160) was archaeologically recorded, and confirmed the presence of burials not far below the modern pavement. Human bones have been recovered since the 19th century in the area around the church (Illus 11).

Two trial trenches (PE42), dug in October 2002 outside the church in St John's Place and South St John's Place, in advance of general repaving and environmental improvements, recorded human bones. An extensive watching brief (PEX164) was maintained on the repaving works themselves during 2003, which revealed various details of the fabric of the church, and recovered a number of quite shallow burials, especially along the S side of the church (Illus 11).

In 1989 a possible foundation plinth for the buttress in St John Street at the NE corner of the church was recorded at a depth of 0.7m (PEX91). Within the church, a watching brief (PEX167) was maintained in November 2004 on repair and stabilisation of a blocked 'oculus' or round window in the S transept gable. (The blocking is clearly visible externally).

2.3 Archaeological Method

The watching brief was undertaken usually by one archaeologist, with additional archaeologists as required. The work outside the church was undertaken in mainly dry weather conditions.

2.4 Results of Investigations

The results of the watching brief are presented in four sections: the nave and the choir inside the church, and Kirkside and St John's Place outside the church. Depths inside the church are measured from the wooden parquet floor of the church; depths outside are measured from the street surface. Numbers in bold within brackets are context numbers. Note: Trench number 18 was used twice, in the Knox Chapel and outside the church in Kirkside. Trench 18 inside the Knox Chapel is renamed Trench 18A.

2.4.1 The Nave (Illus 3, 4)

In the nave, five trenches (Trenches 1-4 and 14) were dug below the floor of the nave for new heating ducts and services for the new toilet and office created at the W entrance, as well as nine steel sockets or foundation pads for the framework of the new toilet and office (SS1-9). In addition, the raised steps and platform at the W door were removed and a new entrance platform created (Area 5). The renewal of the heating pipes in the nave afforded an opportunity to inspect the heating ducts created by Lorimer.

The trenches and steel sockets in the nave revealed the same basic sequence of deposits. The internal soil in the church contained disarticulated human bones and burials in situ. The burial soil was sealed beneath a sequence of Lorimer's four levelling and floor deposits: a levelling deposit of rubble, crushed mortar, ash and clinker; a bitumen damp course; a concrete floor; and the parquet floor of the nave. Trenches 1 and 2 in the SW and NW corners of the nave respectively, were dug to extend the existing heating ducts along the S and N walls of the nave to the W end of the church.

Trench 1

Trench 1, 0.9m wide and 0.62m deep, revealed a stone wall (07) on N/S alignment at right angles to the S wall of the nave; it had a chamfered edge along its W edge. The foundation scarcement (08), 0.3m wide, for the S wall of the nave was revealed at a depth of 0.31m. The scarcement appeared to have been cut by the insertion of wall 07 at its E end; and had been removed by the construction of a 'cellar' at the W end. The 'cellar' was formed by a brick wall (06), rendered on its internal face with cement, which continued along the internal faces of the S and W walls of the nave. The rubble fill of the cellar, which was not fully excavated, contained large amounts of disarticulated human bone. The remains (lower legs) of one in-situ burial (46/SK05), at a depth of 0.65m, had been cut by the cellar. A possible foundation stone (15) for the W pier of the S arcade of the nave was recorded, although the bricks above it (16) suggest that it has either been rebuilt or the foundations strengthened.

Trench 2

Trench 2, 0.9m wide and 0.5m deep, revealed a former brick-built duct (24), presumably for the West Church, whose fill contained fragments of iron pipe; a partially blocked opening in the N wall at the E end of the duct was presumably the intake/outflow for the pipe. The foundation scarcements for the W (79) and N walls of the nave were revealed. Above the latter was a single course of stone and brick foundation with sockets in between for joists of a former timber floor in the West Church. A possible foundation (51) for the W pier of the N arcade had bricks (52) built above it, similar to those in the corresponding pier in Trench 1. Four partial skeletons, children or juveniles (32/SK01, 37/SK02, 40/SK03, 43/SK04), were left in situ at the base of the trench. The flint microblade was recovered from the burial soil (26) in this trench (see below, Lithic Report).

Trenches 3 and 4

Trenches 3 and 4 in the S aisle of the nave were dug for waste pipes for the new toilet but did not extend below the clinker/rubble foundation for Lorimer's floor. In Trench 4 a brick wall (91) continued the line of the brick wall (06) in Trench 1.

Steel Sockets

The steel sockets SS1-9, some 0.45m square by up to 0.38m deep, also did not go below Lorimer's clinker/rubble foundation. Among the rubble recovered from the slots were two fragments of worked stone (89, 90), neither retained. Fragments of paper labels were found in the rubble of SS8.

Area 5

In Area 5 Lorimer's entrance screen was removed; one panel of the screen had been signed by the joiners, 'Robert Weir/William Mackie/Joiners/21st September 1928'. Pasted onto the back side of the roof panels of the screen were cut up fragments of architectural drawings by Charles Menart, architect in Glasgow, relating to St John's

RC Church in Melville Street, Perth; these had probably been used to fill gaps between the panels (Bob Black pers comm). The drawings have been donated to Perth and Kinross Council Archive, which holds related Dean of Guild Plans (DGP/1924/7). The removal of the former entrance steps at the W door revealed that the rubble foundation (**55, 62, 83**) contained architectural fragments, including fragments of black limestone ('Tournai marble'). The foundation for the retaining wall of the steps (**65=77**) had slate pinnings and also contained fragments of black limestone, some of which had mortar adhering, similar to that used in the steps. The removal of the levelling fills revealed the retaining wall (**82**) at the W entrance, constructed after the ground level outside the church had been raised, after the construction of the church. Also revealed were the chamfered bases of the westmost piers (**75, 76**) of the S and N arcades. The N jamb of the door (**64**), below ground level, was revealed as composed of stone blocks with an eroded edge.

Trench 14

Trench 14, 0.41m deep, was dug for electrical services to the new office at the W end of the N aisle of the nave. Disturbed burial soil (**175**), including slag/clinker fragments, was probably redeposited by Lorimer's workmen.

Heating Ducts

The renewal of the heating system for the church allowed the examination of Lorimer's heating ducts. The heating duct in the S aisle of the nave revealed the foundation scarcement (**142**) for the S wall of the nave. This scarcement was used by Lorimer as the foundation for the brick wall forming the S side of the duct. This scarcement was lower than the scarcement (**08**) revealed in Trench 1, suggesting that Lorimer rebuilt a greater depth of the S wall of the nave than at the W end. At the E end of the nave, the scarcement widened to form a foundation plinth for the pier at the corner of the nave and S transept. The scarcement continued along the W wall of the S transept, although the pipework in the duct obscured it, and was visible (**149**) at the S end of the duct at the radiator intake.

No similar scarcement was visible in the heating duct in the N aisle of the nave, apart from that in Trench 2. Lorimer seems to have completely rebuilt the N wall of the nave to the E of the N porch/Halkerston's Tower on a concrete foundation (**171**), which also formed the foundation for the bricks of the N wall of the heating duct. The earlier N wall (**131**) survived under the floor of the N transept, where it was visible in the heating duct under the floor and through a hole for a heating duct in the S wall of the boiler room situated underneath the War Memorial Shrine. The heating duct was cut across the width of the old wall. W of the N porch, Lorimer seems to have rebuilt the N wall of the nave above the scarcement in Trench 2; rebuilt into the wall above Trench 2 was a stone incised with an upside down inscription, 'W.C. 1656'.

The render on the rear wall of the four radiator recesses (**143-146**) in the W wall of the nave was removed revealing the rubble and light brown mortar core of the W wall. The southmost recess (**143**) had red brick fragments inserted as repairs. The recess (**145**) on the N side of the W door had two oyster pinnings visible as well as four apparent quoins on its S side. The two recesses (**144, 145**) on the former raised platform on either side of the W door had their bases lowered by some 0.38m.

2.4.2 The Choir (Illus 3, 5)

The general sequence of Lorimer's flooring in the choir was similar to that in the nave: a bitumen damp course (126), under the concrete floor (100=125), under the wooden parquet floor (109=124=160).

Trench 6

Trenches 6, 7 and 8 were dug in the N choir aisle for pipes for the new toilets and sink under the organ loft. Trench 6 was 4.6m long, 0.5m wide and 0.6m deep. Burial soil (95) contained disarticulated human bones as well as remains of in-situ burials. The highest burial was an infant/child (100/SK06) at a depth of 0.20m below the wooden floor. Below that skeleton was an even younger child (107/SK08) at a depth of 0.41m, below which was another child (113/SK09) at a depth of 0.54m, below which were the left arm, hand, ribs and pelvis of an adult (114/SK10) at a depth of 0.61m. S of these burials, at the base of the trench, were the skull, neck and collar bone of a burial (105/SK07); these were left in situ. A piece of tracheal cartilage (throat) was observed. Below the skull were voids into which disturbed soil disappeared. S of that burial were the legs of another burial (132/SK11) at a depth of 0.46m; below which was observed a thin black line, possibly the rotted remains of a wooden coffin. At the S end of the trench, the burial soil was cut by the foundation trench (135, fill 133) for the concrete foundation (134) for the organ screen. In the burial soil here was a group of human bones (130), possibly disturbed and reburied during Lorimer's work. At the N end of the trench, the burial soil was cut by the foundation trench (96, fill 97) for the brick wall (98) of Lorimer's heating duct. Observed in the E section of the trench, cut into the burial soil, was a rubble-filled cut (148, fill 147), over 0.45m deep (not bottomed) containing disarticulated human bone. Above the burial soil was a rubble layer (94), probably levelling for the concrete floor or for an earlier floor.

Trench 7

Trench 7 was an L-shaped trench; its E/W arm was 1.4m long, 0.4m wide and 0.73m deep; its N/S arm (including part of Lorimer's heating duct) was 2.4m long, 0.3m wide and 0.62m deep. The E/W arm lay parallel to the N wall of the choir and exposed the foundation scarcement (122) for the wall; it followed part of a redundant brick-built heating duct, probably for the East Church. The S wall of the duct was formed of unstamped and unfrogged red bricks (112); at the base of the duct was a cement floor (125), under which was a probable burial soil (195). The duct had been filled in with disarticulated human bones (108). Built on the scarcement was a brick foundation (123) with sockets for the joists of an earlier timber floor, probably for the East Church. At the E end of the trench was a concrete foundation (121) for the organ screen in the N choir aisle. The wall (112) of the old duct and the N wall (113) and S wall (98) of Lorimer's duct were broken through for the course of the new waste pipe. The N/S arm of the trench reused part of Lorimer's heating duct. The concrete floor (194) of the duct was partially removed to accommodate the new waste pipe.

Trench 8

Trench 8, 1.05m long, 0.2m wide and 0.12m deep, was dug for the waste pipe for a new sink. It did not extend deeper than the surface of the rubble layer (94).

Trench 9

Trench 9, 3.5m long, 0.55m wide and 0.6m deep, was dug to replace part of Lorimer's heating duct to the N. At the base of the trench, on the N and E edges were the foundations (157, 158 respectively) for the brick walls (156, 159) of Lorimer's heating

duct. At the base of the W end of the trench was a cement floor (155), above which were redeposited burial soils (154, 153), which contained disarticulated human bones. The foundation trench for Lorimer's duct (152, fill 151) was cut into the upper burial soil (153). Within 151, behind the E wall of Lorimer's duct, was a collection of disarticulated human bones. Above the foundation trench and burial soils was a rubble layer with bitumen, wood and white plaster fragments (150).

John Knox Chapel

Trenches 10-13 and Trenches 17 and 18A were cut to lay new heating pipes in the John Knox Chapel. Each trench was adjacent to a pillar of the N and S arcade of the choir and cut into the stone foundation plinth (164, 165, 166, 178) for the pillar. One of the stones for the foundation (164) of the 'Fullar' pillar in the S arcade was black limestone. One stone of the foundation (178) of the opposite pillar in the N arcade had been damaged during or before Lorimer's work, as his bitumen damp course (177) covered the broken edge. In Trenches 10 and 12 the foundation plinth was observed to rest on a bed of mortar and rubble. In Trench 13 the rubble and mortar bed sealed a possible lower offset foundation scarcement (179). Trenches 17 and 18A were in the raised concrete platform at the W end of the chapel and exposed a lower concrete floor at the base.

Trench 15

Trench 15, 1.85m long, 0.80m wide and 0.67m deep, was in the N choir aisle. The trench was filled with disturbed burial soil (188) with a tar fragment and wood fragments. This was cut by the foundation trench (186, fill 185) for Lorimer's heating duct. The duct comprised a concrete foundation (190) for the brick wall (187) of the duct. A piece of wooden shuttering on edge (189) for the concrete survived.

Trench 16

Trench 16 was dug in the S choir aisle to provide an access ramp for the disabled between the choir and the nave; it replaced Lorimer's steps and a movable ramp. The steps (232) were removed revealing a foundation of large stone blocks (233), with a chamfered edge along the E side. Overlying the chamfered edge at the base of the trench was sand and stones (234). Cut into this layer was the foundation trench (237, fill 236) for the N brick wall (235) of Lorimer's heating duct in the S choir aisle. Above it was rubble (193).

The foundation (238) for the pier at the corner of the choir and S transept was revealed: an ashlar stone with slate underpinnings above rubble and mortar. The foundation plinth of sawn stones (239) for the SE pillar of the crossing appeared to be Lorimer's work.

Steel Sockets

In the N choir aisle, 10 foundation pads or steel slots were dug for the screens for three new offices in the aisle. The slots were some 0.45m square by 0.3m deep. All slots bottomed in a rubble and soil layer. SS10 and SS11 contained nothing of archaeological interest. SS13, SS15, SS16 and SS19 revealed the S side of the brick wall (210) of Lorimer's heating duct for the N choir aisle. SS12, SS14, SS17 and SS18 revealed the roughly dressed stone foundation plinths for three pillars of the N choir arcade. Each slot revealed that the stone plinth sat on an offset rubble and mortar base; in SS12 and SS14 (at the base of the same pillar) oyster pinnings had been inserted

between the plinth and the offset. In SS18 the stone plinth was an ashlar block with vertical chiselled tooling lines.

Heating Ducts

The renewal of the heating ducts in the two choir aisles revealed the foundation scarcements for the N and S walls of the choir. In each of the radiator recesses (**103, 104, 106** in N aisle; **118-120** and **128** in S aisle) in the aisles the scarcements had been cut into for the pipes of the radiators.

The dismantling of the Schomberg Scott screen panels in the N choir aisle, by the N porch, revealed that one panel was inscribed by the joiners: 'MADE IN SCOTLAND/BY LINDSAY & PENNYCOOK/1970/BRAZIL WON THE/WORLD FOOTBALL/CUP'.

2.4.3 Kirkside (Illus 2, 6, 7, 10)

Trenches 18, 19 and 21 were dug in Kirkside to connect the new waste pipe at the W end of the nave with the existing manhole at the SE corner of the City Hall. The general sequence for the roadway was a concrete foundation (**244**), under bedding sand (**262**) for the stone setts of road surface (**243**). Adjacent to the church, the sequence was a hardcore foundation (**314**) for a reinforced concrete foundation (**313**) for the stone slabs of the pavement (**312**). The area outside the church was heavily disturbed by services, both in use and redundant.

Trench 18 (Illus 6)

Trench 18, some 0.8m wide and 2m deep at its S end, was opened from the existing manhole but was abandoned when an unknown service pipe (**253**) was uncovered along much of its length. The trench revealed two burial soils (**252, 251**) under an E/W wall (**246**). Further N was a second stone feature, at first interpreted as a wall (**256**) but on excavation proving to be a stone box culvert (**292**, fill **293**) on E/W alignment. N of wall (**256**) the service pipe (**253**) prevented any deeper excavation.

Trench 19 (Illus 6)

Trench 19 was opened up almost parallel to Trench 18, beginning at the N end with a new manhole, 1.54m deep, proceeding S till it joined the course of Trench 18 on the S side of the culvert (**256=292**). At the base of the new manhole was a burial soil (**267**), in which were the partial remains of five burials (**268/SK12, 269/SK13, 270/SK14, 271/SK15, 272/SK16**), at depths of 1.41-1.52m; of these burials, **270/SK14** and **271/SK15** were left in situ. Above the burial soil was the apparent S end of a stone wall (**259**), comprising two courses of offset foundations under the presumed wall. The lower offset was cut back to be flush with the upper offset to accommodate the new manhole; the rest of the wall was left in situ. Above the two offset courses was a redeposited soil (**263**), under two possible levelling or construction deposits (**261, 260**). Cut into the S edge of the upper deposit (**260**) was the N edge of a rubble-filled cut (**264**, fill **265**), the foundation trench for a N/S stone wall (**273**), some 3m long; the S edge of the cut was noted 0.4m beyond the S end of the wall. Only the E face of the wall was uncovered, although the W side was visible at the N end. The wall had no westward or eastward return at its N end, although a possible westward return was noted c1m from the N end. The E face of the wall was broken out by machine to allow the laying of the new waste pipe. Above the offset foundation for the wall were two redeposited burial soils (**275** under **274**). S of the wall the undisturbed burial soil (**279**) contained six burials (**281/SK17, 282/SK18, 283/SK19, 285/SK20, 287/SK21,**

290/SK22) at depths of 1.15-1.73m. Above the burial soil was a layer of rubble (**294**), cut by a stone box culvert (**292=256**, fill **293**), on E/W alignment, at a depth of c1m. Above the culvert was the disturbance caused by 19th- and 20th-century services. In the W section of the trench, which had been cut back, at a depth of 0.50m, was the N end of the E face of a stone wall (**295**) on N/S alignment, 0.36m thick, at least 0.6m wide (W edge not excavated) and at least 2.5m long.

Trench 21 (Illus 7)

Trench 21 was dug between the W wall of the church and the new manhole. It was 0.80m wide at the church wall, narrowing to 0.50m at 1.8m from the wall, then to 0.30m at 4.2m from the wall; its depth ranged from 1.15m at the church wall to 1.54m at the manhole. The W wall of the church (**334**) was exposed, revealing three scarcements. At the base of the trench was yellowish brown sand (**331**), above which was a burial soil (**315**) within which were the partial remains of three burials (**319/SK24**, **321/SK25** and **322/SK26**), at depths of 0.96-1.10m, as well as disarticulated bones. Cut into this burial soil, at the base of the trench, 1.7m from the church, was a N/S aligned wall (**320**), at a depth of 0.92m, lying on top of which were disarticulated human bones. Above the wall was a soil (**327**) with human bones. Cut into (**327**) was the N end of a N/S aligned wall (**323**), 0.7m from the church, at a depth of 0.54m; it only appeared in the S section of the trench and no stones were excavated from the trench by the machine. At 4.8m from the wall of the church, at the base of the trench, at a depth of 1.04m, was a clay-bonded wall (**335**), 2.08m wide. On the W side of the wall (**320**), and extending over the clay-bonded wall (**335**) was a soil (**330**) with human bones in it, above which was a layer of rubble and mortar (**328**), which was under another soil (**333**). On the W side of the wall (**335**) was a burial soil (**344**) with the partial remains of a burial (**345/SK27**) at a depth of 1.40m. The skull had been removed by the construction of a clay-bonded wall (**346**) on N/S alignment; the wall was 9.7m from the wall of the church, at a depth of 1.37m. Above the burial soil (**341**) was a layer of soil and stone fragments (**343**), which was cut by a cast-iron water pipe (**341**; cut **342**, fill **340**), at a depth of 0.84m, through which had been inserted by pipe-bursting a blue plastic water pipe. The rubble layer (**328**) appeared to seal the cut for the pipe. Cut into the rubble (**328**) was another cast-iron pipe (**336**; cut **337**, fill **338**), at a depth of 0.52m.

2.4.4 St John's Place (Illus 2, 8, 9)

Trench 20, 0.70m wide and from 1.40m deep beside the church to 2.37m deep at the existing manhole, was dug to connect the new toilets in the N choir aisle with the existing manhole at the S end of Kirkgate. The trench was dug in stages: from the existing manhole to a new manhole (2.17m deep); from the church through an old boiler room; from the new manhole to the old boiler room. Because of the depth of the trench, the northern part of the trench was only recorded from the surface for safety reasons.

In the northern part of the trench, between the existing manhole (**302**) and the new manhole, at the base of the trench, at a depth of 2.3m, was clay (**304**), possibly natural, under black organic (smelly) midden material (**303**), which was at a depth of 2.04m. The midden was sealed by a thick layer of clean sand (**301**), at a depth of 1.5m, which contained much human bone, including at least one burial (**310/SK23**); groups of hand/foot bones or ribs retrieved from the machine bucket indicate that other burials may have been present in the sand. Above the sand was clay (**300**), at a depth of

1.16m, above which were two mixed layers (299 under 298), both disturbed by modern services. Cut through the upper layer was the foundation trench (297) for the manhole; from the fill of the manhole was recovered a human skull at a depth of 1.4m. S of the new manhole the sequence of deposits was light brown sand (372) at a depth of 1.76m, under burial soil (371), under modern levelling (370).

Adjacent to the N wall of the choir was a cellar, probably a redundant boiler room. The roof of the cellar was of concrete reinforced with inverted iron T-bars (350); suspended from the roof were two pulleys (one remains in situ). The N (364) and E (352) walls of the cellar were partially exposed, the former being broken through for the new waste pipe. The W wall was formed by the E wall of the N transept, the S wall by the N wall of the choir. The latter wall (351) contained two courses of chamfered scarcements; the chamfered courses had been cut into (362), possibly for the insertion of a pipe (above the cut is an old ventilator grill). The wall face and core below the chamfer had been cut back for a depth of 0.64m from the face of the lower scarcement and had been faced with bricks; the E wall (352) of the cellar extended under the chamfer. Extending NW from the corner of the E and S walls towards the buttress at the corner of the N transept was an iron horizontal I-girder (354), 0.4m wide, on which were built four courses of bricks laid sideways, which appeared to support the undercut N wall of the choir, but which enclosed an iron flue pipe with a ventilator in its side. Underneath the girder was a smaller I-girder (361), set into the E wall (352) of the cellar. In the SW corner of the cellar was a brick-built plinth (357) underpinning the N wall of the choir; two cut-off and sealed pipes, one above the other, protruded from this plinth; the upper pipe faced E towards a bracket attached to the plinth, which presumably supported the extension of the upper pipe. The stone foundation plinth (358) for the buttress of the N transept was at the NW corner of the cellar. On the W side of the flue pipe (354), the face of the plinth (358) was face in red bricks. At the SE corner of the cellar, piled up under the former waste pipe (353), was a loose pile of cinders/clinker (359), from which was recovered a human bone. Below that was a mortar and rubble layer (363), at a depth of 1.34m. The cellar had been partially filled with concrete (360). As a result of the present development, the roof of the cellar was removed and the cellar filled with small rubble and hardcore, before a new reinforced concrete foundation was laid down for the paving slabs. The girders and flue pipe (354, 361) were left in situ.

3 Conclusions

3.1 The Church (Illus 3, 4, 5)

This archaeological watching brief has provided information on the construction and burials inside the church. As was to be expected, given the amount of disturbance to the interior of the church during building alterations over the centuries and especially during Lorimer's restoration of the church as the war memorial for the First World War, there were large amounts of disarticulated human bone. What is surprising is the height of in-situ burials below the floor: 0.40m in the nave (31/SK01) and 0.20m in the choir (100/SK06). The disarticulated bones and burials that had to be removed inside the church in this redevelopment were reburied below the concrete bases for the new trenches within the church or within the redundant Lorimer heating duct under the organ loft.

The medieval walls of the nave were built on a scarcement, which survives below the floor of the church along the S wall, at the W end of the N wall and the N end of the W wall. Lorimer rebuilt the N and S walls of the nave, replacing the original windows at a

new height. The scarcement (**142**) for most of the S wall survives at the base of the heating duct in the S aisle and is lower than that at the W end (**08**), where the heating duct did not extend. This lower scarcement extends round the pier at the corner of the nave and S transept and along the W wall (**149**) of the S transept. Except at the W end, where the scarcement survives, the N wall was rebuilt by Lorimer on a concrete foundation (**171**). Halkerston's Tower or the N porch of the nave had also been rebuilt or underpinned by Lorimer on a concrete foundation laid over a chamfered scarcement (Fyles et al 2005, 24, 25). During the rebuilding, the stone in the N wall inscribed 'W.C. 1656' had been replaced upside down. Presumably the inscription was not seen by Lorimer; it was only observed by chance in this renovation. The earlier wall (**131**) survives beneath the floor of the N transept, although it is not clear whether this is the original medieval wall or an early 19th-century replacement when the medieval projection on the W side of the N transept was removed. He also underpinned, if not rebuilt the two piers of the N and S arcades at the W wall of the nave, where brick facing/underpinning was evident (**16, 52**) above stone foundations (**15, 51**). The purpose of the N/S wall with a chamfered edge (**07**) in Trench 1 is unknown. It may have marked the original W end of the church before the 15th-century rebuilding of the nave, or it may have been built as an internal subdivision of the nave after the Reformation. The 'cellar' at the SW corner of the nave, with its cement-rendered walls, may have been a cistern for the water organ of the West Church (R Young, pers comm.). It is unlikely to have been a boiler room if the brick duct (**24**) in Trench 2 was a heating duct of the West Church as the duct led outside the church to the N; alternatively the duct may have held a gas pipe for lighting the church. The West Church formerly had a timber floor supported by joists in sockets between offset stones of the N wall, laid on the scarcement.

In the choir the N and S walls were also built on a scarcement, evident in Trench 7 and in the radiator recesses. The East Church also had a former timber floor and a heating duct, made redundant by Lorimer's heating system. The pillars of the arcades of the choir are built over offset foundation plinths, which may themselves have a lower offset, evident in the steel slots in the N choir aisle and Trench 13 in the John Knox Chapel. The foundation stones with a chamfered edge (**233**) for the steps at the W end of the S choir aisle may have previously been part of the partition wall between the East Church and the Middle Church.

The fragments of black limestone ('Tournai marble') in the foundations of the former steps at the W entrance of the nave and in the fill of the levelling for the steps were presumably found by Lorimer during his renovations and broken up for reuse in the steps. While some of the fragments of black limestone had a smooth, worn surface, none showed evidence of carving, except for a large corner fragment (**80**) and two small fragments, one with the remains of a hole on one edge (**55N**), the other with a shallow incised band on one surface (**55O**). Only the two latter fragments were retained. Two conjoining black limestone fragments (**61**) recovered from the levelling had mortar along the conjoining edges. This suggests that a larger fragment was smashed by Lorimer's workmen for inclusion in the foundation. Presumably the black limestone had been used as flooring after the Reformation and had no decoration left. Penny (1836, 162) records of the East Church that 'There was no pavement in the church but the ancient tombstones laid flat, many of them of a kind of blue marble stone. One of them has lately been lifted and placed in the east wall, having two human figures engraved thereon' (the Tournai marble tomb slab fixed to the E wall of the N

arcade of the choir). The black limestone in the plinth in the foundation of one of the pillars of the S choir arcade is puzzling. This type of stone was an expensive import from the Low Countries and used for special purposes, such as tombstones or altars. That it was used in the foundation of the pillar suggests that it was either a surplus piece of stone, or a fragment reused from the earlier church when the present choir was built in the 1440s, or that Lorimer strengthened the foundation of this pillar (if not the other pillars of the choir), as he apparently did in the nave (Simpson 1958, 35).

3.2 The Churchyard (Illus 2, 6-11)

The trenches to connect the new toilets inside the church to existing services outside the church were dug through the former graveyard that surrounded St John's Kirk. The streetscape around the church has been heavily disturbed by the digging of service trenches in the 19th and 20th centuries and by the environmental works in 2003 (Fyles et al 2005). Nevertheless, in-situ burials survived as high as about 1m below the present street surface near the W wall of the church and under the roadway. On the N side of the church in St John's Place, the churchyard had been extended over medieval midden deposits (303) of the burgh in the form of a thick sand deposit (301), and extended at least as far as the manhole at the S end of Kirkgate, from the finding of a skull in the backfill (297) for the manhole. The sand may have been laid down to seal the underlying midden or may have been a flood deposit. The cellar/boiler room had been previously revealed during the environmental works in 2003 (Fyles et al 2005, 25) and had apparently been partially infilled with concrete at that time. The two chamfered offset courses on the N wall of the choir (351) were similar to those recorded around the choir in 2003 (Fyles et al 2005, 23, 26-7). The pentacle mason's mark was also previously recorded in 2003 on the S wall of the choir and on the E wall of the S transept (Fyles et al 2005, 23 and 26, Illus 9); this mark is also among those evident inside the church.

On the W side of the church, in Trench 21, the remains of four walls were located. The wall (323) nearest the church only appeared in the S section of Trench 21 and may have formed one side of an entry, possibly through a former enclosure wall round the church, but not the Victorian wall that appears on the OS First Edition of 1860; that wall did not extend round the W end of the church. Wall (323) may have replaced the earlier wall (320) as a boundary. Both walls were cut into the graveyard soil (315) and are therefore presumably post-medieval, dating from after the closure of the graveyard in 1580, but had been removed before the time of the survey for the OS 'First Edition' in 1860. The broad clay-bonded wall (335) was probably the E wall of the Meal Market, which stood on the E side of the Flesh Market. The wall (346) was probably an internal wall of the Meal Market. The Meal Market was probably the tall three-storey building shown to the W of the church in Rutherford's view of St John's Kirk in 1775 (Illus 12) and depicted on his plan of 1774, as well as on other plans of the town before the OS 'First Edition' (Buist 1765, Stobie 1783, Macfarlane 1792, Reid 1809, Wood 1821, Nichol 1841). The rubble layers (343, 328) may have been demolition rubble used as general levelling for the area around the church in the 19th century. The three walls aligned N/S in Trenches 18 and 19 (259, 273, 295) were probably the W wall of the Meal Market serving also as the E wall of the Flesh Market (Illus 10). The gap between the wall (259) and wall (273) may have been an entry leading to the Fleshmarket, but the gap between wall (273) and wall (295) seems to have been caused by the insertion of services for the City Hall in c1910. The S part of the wall (295) had been previously

recorded in 2003 (Hall 2003, Trench R). The stone culvert (**256=292**) may have served the Fleshmarket.

The deposits of sand and gravel (**284**) and clay (**304**) noted in Trenches 19 and 20 at depths of approximately 1.8m (c5.36m above OD) and 2.28m (4.84m above OD) respectively may be natural deposits. If so then the natural ground level around the church is higher than in High Street (3.9-4.2m at PHSAE), South Street (4.48m at the Salvation Army Citadel; Stronach 2003, 77) or Kirkgate (4.34m). This would confirm the suggestion that St John's Kirk was built on an island of slightly higher ground than the rest of the medieval burgh. The sand (**331**) observed at the W wall of the church may be redeposited natural, upcast during the construction of the church.

This fieldwork has revealed that the medieval graveyard (Illus 11; for codes, see Bowler 2004, CD insert, App 8 Gazetteer) extended further W than previously thought, at least as far as pavement at the E end of the City Hall, and on the N side at least as far as the manhole at the S end of Kirkgate (Illus 11). The walls found in Kirkside in 2003, during the watching briefs on the replacement of the water main and on the environmental improvements around St John's Kirk (Fyles et al 2003, 42 and Illus 30) and thought to have been the boundary wall of the graveyard, can now be seen to be parts of the E and W walls of the Meal Market (Illus 10). During excavation for a gas pipe in 1981 human bones were found as far W as 15 St John's Place (PEX30), suggesting the graveyard may have extended underneath the City Hall. On the N side the finding of human bones in building work in St John's Place in 1870 and 1962 suggests that the former graveyard extended under the present building line of St John's Place (CF79, CF15). A further skull was found in 1967 at the Steeple Bar, 3 St John's Place (CF80). The finding of a human skull and jaw outside Brennan's in St John's Street (PMAG96) indicates that the E side of the graveyard may extend as far as the E side of St John Street, which seems to follow the course of the E edge of the former graveyard around the church as depicted on Rutherford's plan of 1774. On the S side, 14 human burials were found in 1991 during the replacement of a water main in South St John's Place (PE07) and further human bones were found in 1992 and 2003 (PEX104, PEX160), and in 1965 human bones were found at the 'back of the Willow Public House near Love's' (ie, King Willow, 47 South Street?) (CF86, CF92). About 1977 a human skull was found during the construction of the former General Accident office in St Ann's Lane (now Perthshire Housing Association office). While it may have come an unknown burial ground associated with St Anne's Chapel, it is more likely to be from the graveyard of St John's Kirk. This suggests that the graveyard may have extended under the building frontage of South St John's Place but, since no human remains were found during the St Ann's Lane excavation in 1975, the graveyard presumably did not extend that far.

4 The Pottery and Tile

Derek Hall

Introduction

This project produced a moderate assemblage of pottery and tile from trenches observed both inside St John's Kirk and outside the building. A grand total of 400 sherds (including 23 tile fragments) ranging in date from the 12th to the 19th centuries was recovered, 125 (including 20 tile fragments) from inside the church and 275 (including three tile) from outside. All the material has been examined by eye and under a x10 hand lens and where possible assigned to a recognised fabric name (Hall 1996). No petrological or chemical analysis has been carried out.

Scottish Redware

The Scottish Redware industry is Scotland's major medieval pottery industry from the late 12th/early 13th century until it is replaced by mass produced Oxidised and Reduced Wares from the 17th/18th centuries onwards. Following a recent study it has been identified as being a locally produced product for all the major Scottish burghs that do not lie in the Scottish White Gritty Ware production zones of Fife, Lothian and the Scottish Borders (Jones et al 2003; Haggarty et al 2011). The 259 sherds in this assemblage are all from splash-glazed jugs with the exception of a single basal angle and a carbonised bodysherd from Contexts 185 and 303 respectively, which appear to be from cooking vessels. The sherd from Context 303 is also slipped white, presumably in an attempt to copy Scottish White Gritty Ware, which appears to have been a more popular choice for cooking vessels. This trait has also been observed in previous assemblages from Perth and it is suggested may date to the 13th or 14th centuries. Context 267 produced a well made thumbled jug base which appears to be an attempt to copy a Yorkshire Type Ware vessel form. Another Redware vessel fragment from Context 274 is from the later end of this industry and appears to be from an internally glazed drug jar or ointment pot dating to the 16th or 17th centuries. There are two sherds from Contexts 327 and 330 which are either from very large vessels or roof tiles. One of them (from 330) is curved and is definitely thrown; in the author's opinion both these pieces seem very thin to be tiles.

Scottish White Gritty Ware

This Scottish pottery industry is recognised as Scotland's earliest medieval industry, probably starting in the mid 12th century and dying out by the 15th century, possibly when the white firing clays had been exhausted (Jones et al 2003). Of the 75 sherds in this assemblage, 74 are small abraded bodysherds from glazed jugs, and there is a good example of a strap handle from Context 39 which is decorated with stabbed holes on its surface. This group is liable to be from the closest production centre for this fabric which is in Fife.

Yorkshire Type Wares

There are five sherds from vessels in these distinctively glazed fabrics, including two fragments from ribbed rod handles in Scarborough Type 1 fabric from Contexts 26 and 344 (Farmer 1979, 28). The vessels from these production centres were very popular imports on the Scottish East Coast in the 13th and 14th centuries and had quite a marked effect on vessel styles in the local Redware industry (Jennings 1992).

Stonewares

There is a single tiny bodysherd in Context 04 from a vessel in Raeren Stoneware and there is a single bodysherd in a very hard fired Proto-Stoneware from Context 344 that may be a Cologne product. Rhenish Stoneware fabrics became popular in Scotland from 1350 and both these sherds are liable to be of that date (Hurst et al 1986; Gaimster 1997, 191).

Unidentified

The 20 unidentified sherds are too small to accurately provenance but include three sherds that resemble London Sandy Type ware (from Contexts 26, 39 and 83) and two sherds that may be Grimston Type Ware (from Contexts 39 and 95); both those fabrics are dated to the 12th-14th centuries (Pearce et al 1985; Jennings and Rogerson 1994, 117). The remaining sherds include unprovenanced Whitewares and micaceous glazed Redwares.

Crucible Fragments

This assemblage includes two possible crucible fragments from Contexts 108 and 369; they are probably associated with precious metal working.

Ceramic Building Material

Of the 22 pieces of tile recovered during this watching brief 13 are all of Post-Medieval/Early Modern date and include eight glazed pieces from the Minton factory in London. These fragments possibly relate to the refurbishment of St John's Kirk in the 19th century. The other nine fragments, from Contexts 62, 175, 275 and 286, may be of medieval date. One drain pipe fragment was also recovered.

Discussion and Conclusions

This small group of pottery contains a representative sample of the types of fabrics that are commonly found in the core of the medieval burgh and there is nothing present to suggest that this group dates to any earlier than the mid to late 13th centuries. It includes a good example of Proto-Stoneware and further evidence for the copying of imported vessel styles in the local Redware pottery industry. The presence of a small group of floor tiles from the Minton factory is of interest and indicates the nature of decoration employed inside the 19th-century church.

Key for abbreviations in tables:

Scot Red = Scottish Redwares
SWGW = Scottish White Gritty Wares
Yorks Typ = Yorkshire Type Wares
Scar 1 = Scarborough Ware Type 1 fabric
Rhen St = Rhenish Stonewares
Raer = Raeren Type Ware
Proto St = Proto Stoneware
LCR = Low Countries Redware
Lon Sand = London Sandy Type Ware
Grim = Grimston Ware
TGE = Tin Glazed Earthenware
Earth = Brown Glazed Earthenware
Unid = Unidentified

Table 1: Pottery and Tile identified inside St John's Kirk

Pottery

Context	Scot Red	SWG	Yorks Typ	Rhen St	Unid	Spot Date (century)
04	4			1 (Raer)		14th
09	2					13-15th
11	2	1			1	13-15th
22	1		1			13-15th
26	13	4	1 (Scar 1)		1 (LCR or Lon Sand)	13-15th
28	1		1			13-15th
39	4	3			2 (Grim + LCR or Lon Sand)	13-15th
55	1					13-15th
62	7					13-15th
83	1				2 (Lon Sand + unid whiteware)	13-15th
95	2	6				13-15th
95	17				2 (1 Grim?)	13-15th
97	4					13-15th
108	4				1 crucible frag?	13-15th
175	3					13-15th
185	3					13-15th
193		1				12-15th
195	1				1 unid whiteware	13-15th
62 or US		1				12-15th
Burial Soil	1	3	1			13-15th
Total	71	19	4	1	10	105

CBM and Tile

Context	Description
55	2 pieces in white fabric brown and brown glazed (1 with 'A' written on back), 1 piece white fabric purple glazed
62	3 white fabric brown glazed and machine moulded; 1 fragment of splash glazed Redware tile; 1 unglazed Redware; 1 drain pipe fragment
83	2 white fabric, brown glazed and machine moulded
153	1 tiny fragment of Redware tile
175	5 splash glazed Redware tile fragments
193	1 green fabric, machine moulded and marked 'Minton' on back; 2 pieces in a red fabric, 1 glazed brown and 1 glazed yellow green with moulding marks on back

Table 2: Pottery and Tile identified outside St John's Kirk

Pottery

Context	Scot Red	SWGW	Yorks Typ	Proto St	TGE	Earth	Unid	Spot Date (century)
248	5	3						13-15th
251	6							13-15th
267	54	16					4	13-15th
263					1			19th
265					2			19th
255	1							13-15th
274	1				2	1		19th
275	8	3			1	1	2	19th
278					4			19th
279	12	5			1		1	19th
286	3	2						13-15th
299	1							13-15th
301	1							13-15th
303	7	5						13-15th
309	21	9						13-15th
315	10	2					2	13-15th
327	1							13-15th
330	1							13-15th
344	14	3	1	1				13-14th
364+365	3							13-15th
367	1							13-15th
369	10	4				1	1	19th
370+371	10				2			19th
373	1	1						13-15th
U/S	17	3						
Total	188	56	1	1	13	3	10	272

CBM and Tile

Context	Description
251	1 Redware with striated surface and spots of glaze
275	1 Green glazed redware floor? Tile
286	1 Green glazed redware floor? Tile

5 The Glass from St John's Kirk, Perth

K Robin Murdoch

5.1 Discussion

The majority of the glass finds from St John's Kirk appear to be relatively late in the history of the church with most appearing to be from the 18th, 19th or 20th centuries, probably reflecting late phases of rebuild/refurbishment.

The late 17th- to 19th-century wine bottle fragments follow the expected colours, condition and shapes for the appropriate periods (Dumbrell 1992). Of the later bottle and container glass recovered only one item is really worthy of comment. The little complete swing-top SF030 from Context 22 clearly indicates how bottles often moved on from their original function because of their versatility as universal containers. Almost certainly manufactured to contain an aerated drink of some description it has been pressed into use for accommodating creosote or similar. Because of the desire to emboss the entire body of utilitarian bottles, the two-piece folding mould came into almost universal use by around 1880. The swing-top was patented in America in 1875 (Lindsey 2011) and the fact that the lip in this item appears to have been integral to the moulding operation indicates that this bottle was made after 1903, the date at which the lip and the body were first moulded as one operation. The elongated blob top shape is typical of a style around the turn of the 19th/20th centuries.

Sadly, while thought provoking, the two small tubular items from Context 193 are not readily identifiable.

Significant numbers of shards of window glass were recovered and these were initially divided into eleven groups based on appearance and condition, starting with what is thought to be the earliest, Group A, through to the latest, Group G. It was possible to have a small number of shards analysed to establish their composition. Recent research by English Heritage on the rough dating of window glass by its composition has come up with some interesting and definitive results (Dungworth 2011). It was not worthwhile attempting to analyse the earliest shards, ie Groups A, A1 or A2, because of their condition. Medieval glass was made using plant-based alkali to reduce the temperature of vitrification and working and is very susceptible to denaturing, especially in a damp buried environment. The denaturing results in the leaching of certain constituents from the glass and any analysis would be skewed by this. Only where original or heart glass remains is analysis meaningful. Groups A, A1 and A2 were completely denatured.

From the results of the analysis it is possible to postulate rough dates for the shards analysed. However, it would be dangerous to assume that all the shards apportioned to a certain group by appearance have compositions similar to the tested ones. Only testing of all the shards could accurately characterize the assemblage. It should also be remembered that while glazing was mainly done on site, as opposed to being prefabricated elsewhere, in most cases we are often unable to assess whether the shards found on site came from completed windows or are waste from glazing activities. In the former case the shards could have been deposited a long time after their manufacture. However, whenever came shadows are present this is a reasonable indication that the shard came from a complete window. Came shadows are narrow borders of differential weathering and result from the enclosure of the edge of the

pane/quarry in the lead came. The presence of moisture within the came groove accelerates the process of denaturing compared with the main area of the pane/quarry.

From the results from the analysis the tested shards can be categorised as follows:

Group B HLLA1 glass, dating to the late 16th century at the latest

Group C HLLA1 glass, similar date to Group B

Group D Kelp-fluxed glass dating to the period c1700-c1830

Group E Synthetic soda glass dating to c1875-c1930

Group F Synthetic soda glass similar date range to Group E

Group G Synthetic soda glass similar date range to Group E

The Group B and C glasses are HLLA1 glasses, high lime (c20% Calcium) low alkali (combined Sodium and Potassium less than 10%). Dungworth (2011) has divided the HLLA glasses into two periods for English glass. This type of glass appears to have been introduced into England by immigrant glassmakers from the continent c1567, the start of the 'modern' era in English glassmaking. Around 1600 the composition was changed slightly and HLLA2 glass was then made until c1700.

At this point alkali derived from kelp started to be used and continued into the early 19th century. The Group D shard is kelp fluxed. Synthetic soda alkali was introduced around 1830 and has continued to this day. However, even the synthetic soda glasses can be divided into dating groups since the composition was changed over time in conjunction with changes in production methods.

Groups E, F and G were obviously made for different uses but have a similar composition which dates them to the period c1875–1930. Groups E and F were probably blown cylinder glass and Group G rolled plate. Automatic drawing of glass commenced around 1930 (ibid).

The Group B and C HLLA1 glass would have been imported since manufacture of glass from raw materials in Scotland did not occur before c1610 (Turnbull 2001). It is likely that importation would have been from the continent rather than England although that possibility cannot be ruled out. If imported from the continent the post-1567 date need not strictly apply. HLLA glass was being made there from the 15th century.

Following the analysis it is possible to postulate possible date periods for the rest of the assemblage remembering that only testing of all the shards could properly characterize them.

<i>Group A</i>	Late 13th/14th century based on condition and thickness
<i>Group A1</i>	Late 14th/15th century based on condition and thickness
<i>Group A2</i>	15th century based on condition and thickness
<i>Group B</i>	16th century HLLA1 glass
<i>Group B1</i>	16th century HLLA1 glass
<i>Group C</i>	16th century HLLA1 glass
<i>Group C1</i>	16th century HLLA1 glass
<i>Group D</i>	Kelp-fluxed glass c1700–c1830
<i>Group E</i>	Synthetic soda blown cylinder glass c1875–1930
<i>Group F</i>	Synthetic soda blown cylinder glass c1875–1930

Group G Synthetic soda rolled plate glass c1875–1930

5.2 The window glass and its analysis

Note: The window glass shards were initially divided into groups based on physical appearance. The alpha references given to them are relevant only for the purposes of this report, they do not refer to any general classification outwith this.

Group descriptions based on appearance and condition:

- A** Totally denatured with dark brown corrosion products, thick at 4.5–4.8mm;
- A1** Similar to A in appearance and condition but thinner at 2.7–2.9mm;
- A2** Similar to A and A1 in appearance and condition but thinner again at 1.4mm;
- B** Very slight green tinge with dense pockets of dark brown denaturing but some translucence surviving, 1.5–2mm thick;
- B1** Similar to B but slightly less dense denaturing;
- C** Slight grey-green tinge, very seedy (gas bubbles), some pockets of denaturing, 1.9–2.1mm thick;
- C1** Similar in colour and condition to C but less seed, 1.6mm thick;
- C2** Similar to C but with flaky moderate to heavy denaturing, 1.2mm thick;
- D** Pale aqua tinge, some light iridescent denaturing, variable thickness 1.4–3mm;
- E** Very pale aqua tinge little denaturing, variable thickness 1.6–3.5mm;
- F** Similar to E in colour and condition but one face frosted (sand blasted?) variable thickness 2.1–3.7mm;
- G** Pale green tinge, rolled plate with grooving on one side, 4.4mm thick.

The following shards were selected for analysis:

- Group B SF032, C234
- Group C SF014, C62?
- Group D SF004, C11
- Group E SF027, C108
- Group F SF013, C55
- Group G SF007, C25

Analysis was carried out by SEM/EDX (Scanning Electron Microscope/Energy Dispersive X-Ray) courtesy of Susy Kirk at The Analytical Research Centre of The National Museums of Scotland, Granton, Edinburgh and by XRF (X-Ray Fluorescence) courtesy of Craig Kennedy at The Technical Labs of Historic Scotland at South Gyle, Edinburgh. Only the SEM results are quoted here; see Table 3.

The XRF methodology still requires refinement.

Table 3 SEM-EDS results (oxide wt %)

	SJK 1 C234	SJK 2 C062?	SJK 3 C011	SJK 4 C108	SJK 5 C055	SJK 6 C025
SiO₂	56.6	58.4	67.5	71.9	71.3	69.8
Al₂O₃	2.9	4.6	2.0	1.5	0.98	1.4
CaO	18.9	20.1	10.3	13.1	14.6	15.2
MgO	4.4	3.3	5.4	0.12	0.20	0.15
Na₂O	2.2	0.96	7.7	11.0	11.5	11.2
K₂O	8.2	7.2	3.6	0.62	0.18	0.57
Fe₂O₃	0.87	0.85	0.69	0.26	0.20	0.22
TiO₂	0.18	0.25	0.10	0.10	0.10	<0.1
MnO	1.0	0.86	0	0	0	0
As₂O₃	<0.1	0	0	0	0	0
SnO₂	0	0	<0.1	0.26	0	<0.1
BaO	0.36	0.45	0.06	0	0.09	0.09
Cr₂O₃	<0.1	0.14	<0.1	<0.1	<0.1	<0.1
P₂O₅	3.4	2.1	1.2	0.26	0.23	0.23
SO₃	0.27	0.25	0.31	0.45	0.28	0.61
Cl	0.47	0.27	0.66	0.13	0.14	0.19
SrO	0	0	0.14	0	0	0

5.3 Glass Catalogue

Note: The catalogue is in finds number order followed by context.

Abbreviations: WG = window glass
WB = wine bottle

SF001, C04 Shard of moulded bottle/jar. Mid to late 19th century.

SF002, C04 Four shards probably from same container as **SF002**.

SF003, C11 Beer bottle neck, internal thread with ceramic stopper 'George Younger & Sons, Alloa'. Late first half 20th century.

SF004, C11 Eleven shards WG very pale green tinge. Eight of these appear to have been deliberately frosted (sand-blasted?) on one side and with some surface dulling on the other. Shard thickness 2.4mm, 2.7mm, 2.9mm x 2, 3.3mm x 2, 3.4mm and 3.5mm. The latter shard had a patch of mortar adhering to it. Group F.

Three further shards WG thinner, similar colour but no frosting, light denaturing, 1.2-1.3mm, 1.5mm and 1.8-1.9mm thick. Group D.

SF005, C11 12 shards moulded bottle. Late 19th–early 20th century.

SF006, C22 Shard WG very pale green tinge, slight dulling both sides, 3.3–3.5mm thick. Group E.

SF007, C25 Two small shards rolled sheet/plate WG, very pale green tinge. Parallel grooves feature one side, pitch 1.3mm, overall glass thickness 4.4mm, light iridescence on plain side. Late 19th/20th century. Group G.

SF008, C25 Shard clear WG, firebright, slightly bluish green tinge, 1.9mm thick. Group E.

Three further shards WG, surface dulling, similar tinge. 1.6mm, 1.7mm and 2–2.3mm. Group E?

SF009, C26 Shard WG pale dull, slightly olive, green tinge, light denaturing, 1.6mm thick. Group C1.

SF010, C26 Three small shard WG, very densely packed pockets of dark brown denaturing, 1.4–1.5mm, 1.5mm and 1.6mm thick. Group B.

SF011, C22 Shard WG frosted one side, 2.7mm thick, two cut edges at 65 degrees (lozenge). Traces of came shadows 4–5mm wide; mortar appears to have been used to bond the quarry within the came. Group F.

Shard WG 3.1–3.3mm thick with frosting, again with mortar bonding in the came 5–6mm wide. Two cut edges at narrow angle, possible edge quarry from lozenge window. Group F.

SF012, C22 Shard WG very densely packed pockets of dark brown denaturing, 2.1–2.7mm thick. Group B.

SF013, C055 Five shards WG, frosted one side, some light iridescent denaturing. One with two cut edges at 115 degrees (lozenge), c5mm came shadow. Dimensions: 3.3–3.4mm x 2, 3.4mm, 3.5mm and 3.6mm thick. Group F.

SF014 U/S (062?) Shard WG very pale dull green tinge, undulating surface, small pockets of dark brown denaturing, very seedy with some elongation. One grozed edge with c5mm wide came shadow, 1.9–2.1mm thick. Group C.

Second shard similar, very seedy, undulating surface, more densely grouped pockets of dark brown denaturing, one grozed edge, 2–2.5mm thick. Group C.

SF015, C062 Three shards WG, frosted one side, some light iridescent denaturing, 3mm, 3.5mm and 3.5–3.6mm thick. Group F.

SF016, C062 Shard WG, frosted one side, plain side dulled, 2.8mm thick. Group F.

SF017, C062 Shard WG, difficult to assess for tinge but not much if any, densely packed pockets of dark brown denaturing, may be seedy. Undulating surface with some curving striations, 1.8–2mm thick. Group B.

SF018, C062 Neck from clear moulded bottle/jar, slight iridescent denaturing. Late 19th/20th century.

SF019, C083 Thirteen shards clear jar or bottle. 20th century.

SF020, C083 Fifteen shards WG, frosted one side, some light iridescent denaturing, evidence of mortared comes and lozenge shapes. 2.1mm, 2.6mm, 2.8mm, 2.9mm x 3, 3mm, 3.1–3.2mm, 3.2mm, 3.2–3.3mm, 3.3mm x 3, 3.5mm and 3.7mm thick. Group F.

SF021, C095 Small shard WG very friable, totally denatured (dark brown) no heart glass left, 4.5–4.8mm thick. Group A. Medieval.

SF022, C095 Small shard WG with very dark brown denaturing, quite stable but may be totally denatured, 2.7–2.9mm thick. Group A1.

SF023, C095 Tiny shard WG, may be totally denatured (dark brown), quite stable, 1.4mm thick. Group A2.

SF024, C097 Six shards bottle. Late 19th/20th century.

SF025, C097 Five shards beer bottle, internal screw thread, ceramic stopper 'Wright, Perth'. 20th century, just possibly late 19th century.

SF026, C108 Shard sheet WG, very pale slightly greyish green tinge, light patchy iridescent denaturing both sides, 2.9mm thick. Group E.

SF027, C108 Shard clear WG, no discernable tinge, dulled both sides, 2.4mm thick. Group E?

Shard clear WG, very pale green tinge, light iridescent denaturing both sides, 4mm wide came shadow. Group E.

SF028, C108 Four shards WG, very pale dull green tinge, light pale coloured denaturing. Evidence of mortar bonding in the comes and lozenge shaped quarries. 1.4mm, 1.5mm, 1.6–1.7mm and 1.8–2mm. Group D.

Tiny shard with orange-brown staining, 1.5mm thick.

SF029, General burial soil Small shard WG totally denatured and disintegrated. Surviving corrosion products indicate probably quite thin and potash fluxed, probably no later than late 16th century. Group A2?

SF030, C022 Complete small swing-top bottle (aerated water) in pale slightly olive green, blown in two-piece mould and embossed 'G.B. Millar, Perth'. Elongated blob top appears to have been part of moulding operation. Ceramic stopper still in place with rusted remains of swing top metalwork. Slight indent on one side of bottle, either manufacturing fault or possibly fire damage. Now contains small amount of oil-based liquid, smells like creosote. Very early 20th century, probably pre-World War 1.

SF031, C234 Shard sheet WG similar to Group E but with less denaturing, only slight dulling one side, 2mm thick. Group E?

SF032, C234 Shard WG possible very slight green tinge, densely packed pockets of dark brown denaturing, relatively smooth surface and not much seed apparent, one grozed edge with c3–4mm came shadow, possible lozenge corner. Group B.

SF033, C193 Enigmatic curved length of possible capillary tube, 75mm long, O/D reducing from 6.5 to 4.8mm. Rather seedy (gas bubbles) pale greenish tinge with lump of unvitrified matter near wider end. At the wider end there appear to be two small capillary apertures but because of the seediness of the piece it is difficult to assess whether or not these extend full length. They may simply be elongated seed (bubbles) within the metal. Difficult to be specific on this piece, it may be a fragment of some pharmaceutical apparatus or a piece of glass waste. Purpose and date unknown but the condition might indicate not earlier than 18th century.

Second small shard of tube, this time authentic. Pale aqua tinge, slightly dulled, O/D 6.5–7mm, I/D c3.5mm, one end sealed by heating. Again purpose unknown but colour might indicate late 18th to 19th century.

SF034, C255 Shard of thin WB very pale green some light denaturing. No later than first half of 18th century.

SF035, C265 Small shard WB base ring, heavy denaturing, gentle curve through base into shallow kick. Late 17th century.

SF036, C274 WB? shard in pale green, moderate flaky denaturing, possible lower body with slight belling. No later than first half 18th century.

SF037, C279 Three shards lower body WB, dull mid green, slight belling, moderate denaturing. 18th century.

SF038, C286 Small shard WB, light iridescent denaturing, prob 18th century.

SF039, C369 Small shard WG, 1.2mm thick with moderate to heavy denaturing. Group C2.

SF040, C275 Part base and lower body WB, pale dull green with moderate denaturing. Original diameter 90–95mm, belling, kick c35mm. Late 18th century.

SF041, C275 Small shard shoulder possible WB, dull olive green, later 18th-19th century.

SF042, C275 Three shards bottle, mainly firebright dark olive, 19th century.

SF043, C275 Six shards WB from at least two different bottles, late 18th-early 19th century.

6 The Lithic Artefact

Torben Bjarke Ballin

6.1 Introduction

In addition to the recovery of many medieval and later finds, one flint artefact was also retrieved. This object is almost certainly a residual piece. The purpose of the present report is to characterize the lithic find in detail, with special reference to raw-material and typo-technological attributes. From this characterization, it is sought to date and interpret the flint to the degree this is possible.

6.2 Characterization of the flint artefact

The piece is based on typical East of Scotland orange flint. The raw material is fine-grained and flawless, and along one lateral side it has remains of the parent nodule's original cortex. The artefact is the unmodified medial section of a highly regular broad blade (21mm x 15mm x 4mm), and it has notable macroscopic use-wear along both lateral sides. The use-wear is mostly in the form of chipping and small flat spin-offs, suggesting that the primary edges of this informal implement were used either for cutting, whittling or sickling, but most likely not scraping. In addition, magnification reveals discrete areas of so-called *gloss* at the distal end of the right lateral side (both faces), supporting the suggested use of the piece (above). Wear of the terminal break facets of the flint indicates that the piece may have been used secondarily for scraping after it broke.

6.3 Discussion

The fact that the artefact is a used broad blade suggests a date either in the Early Mesolithic period, or before (cf Saville 2004), or in the later Early Neolithic/Late Neolithic period (cf Ballin forthcoming; Suddaby and Ballin 2011). The industries of the Scottish later Mesolithic/earlier Early Neolithic period generally focused on the production of very narrow microblades (width = c6–10mm) (cf Saville 2004). Given the highly regular character of the piece, a Neolithic date is most likely. During the Late Neolithic period, grey or dark-brown so-called Yorkshire flint was favoured (cf Ballin forthcoming), suggesting that the present piece probably dates to the later part of the Early Neolithic.

In connection with his discussion of later Neolithic cutting implements with gloss (serrated pieces and scale-flaked/plano-convex knives) the following was concluded: scale-flaked/plano-convex knives were probably used for cutting/sickling grasses or cereals (Dr Randy Donahue, Bradford University, pers comm), whereas serrated pieces probably represent a Neolithic 'non-subsistence related element', such as the refining of fibres, and that they were not used for cutting cereals (Juel Jensen 1994, 68). It is presently impossible to say whether the used, unmodified implement from St John's Kirk relates to one or the other of these two functional groups.

7 The Animal Bone and Mollusc Shell

Catherine Smith

7.1 Introduction

Animal bones recovered from the watching brief at St John's Kirk are logged in the Finds List. A fuller description of the fragments, by species, is lodged in the site archive.

Some of the animal bones, particularly teeth and phalanges (toe bones) which are of distinctive appearance were recovered on site during the watching brief while the remainder were extracted from amongst the excavated human skeletal material prior to reburial.

Preservation of the animal bones was in most cases similar to that of the human remains with which they were found. Most of the bones were yellow to mid-brown in colour and suffered from varying degrees of surface abrasion and friability, with one notable exception. Bones from Context 303, a midden layer beneath the graveyard extension, were black in colour, dense in texture and still retained the characteristic organic odour typically encountered within Perth's medieval middens. Only one other fragment, from Context 373 in the new manhole in the Kirkgate, was similarly preserved.

7.2 Species present

7.2.1 Mammals

Bones from the following mammalian species were recovered: cattle, sheep/goat, goat, pig, horse, dog/fox, cf brown rat (*Rattus cf norvegicus*), cf field mouse (*Apodemus sp*), and small mammal/rodent. In addition bones which could only be attributed to the broad general groupings large ungulate, small ungulate and indeterminate mammal were also found.

The domesticated mammals, particularly cattle and sheep/goat, were the most frequently occurring animals in the assemblage. However, given the disturbed nature of the deposits it is probably unwise to attribute greater importance to either cattle or sheep/goat. Based on the state of epiphyseal fusion of the long bones, adult animals were better represented in the assemblage than younger animals. This may be a factor of preservation at the site: bones of very young animals do not survive as well under adverse burial conditions since they contain relatively more organic material with respect to inorganic and therefore tend to disintegrate more readily than those of older animals.

7.2.2 Birds

Bird bones were not plentiful, unsurprising since their bones are small and easily missed. However a few bones from domestic fowl (*Gallus gallus*), domestic/greylag goose (*Anser anser*) and indeterminate species were recovered.

7.2.3 Amphibian and Fish

Two contexts contained amphibian bones (153 and 185), from frog or toad. Two contexts contained unidentified fish fragments (42, 303).

7.2.4 Mollusca

Molluscan species were few, but this is not surprising given the fragility of some species and the tendency of the shells to dissolve in acid conditions; even the robust oyster shells were flaking and delaminating after excavation.

The dominant species was oyster (*Ostrea edulis*), presumably consumed as food. In some cases the shells were reused as pinning between mortared masonry, as shown by several valves to which mortar adhered (e.g. Contexts 153, 185). It is possible that the flatter upper (right hand) valves were preferred over the more curved lower (left hand) valves for this purpose as they appeared to be slightly more frequent in the assemblage.

One mussel (*Mytilus edulis*) valve was recovered from Context 26, a buckie (*Buccinum undatum*) from Context 62 and a marine bivalve of the family Veneridae (Venus shells) from Context 315. The latter may have been brought to the site in builders' sand used to mix mortar.

7.3 Butchery and worked offcuts

Many of the bone fragments from cattle, sheep/goat, pig and horse bore evidence of butchery marks. The implements used in disjointing appear to have been axes or cleavers: there was no evidence that these had been particularly sharp as in some case several attempts were made to chop long bone shafts across. No evidence of sawing, a relatively modern practice, was found on any of the bones.

Knives were used to fillet the meat from the bones as evidenced by thin cuts on bone shafts. The single horse bone recovered from the site, a proximal metacarpal (Context 309), bore numerous abraded knife cuts on the anterior aspect of the shaft, which had also been chopped across in a medio-lateral direction. These marks may have occurred while skinning out the hide since the lower limb (which contains the metacarpal, or cannon bone) is relatively meatless. Butchered horse bones are a fairly common find at Scottish urban sites of both medieval and post-medieval date (Smith 1998).

A small worked fragment, possibly the broken shaft of a pin, was recovered from Context 185. Measuring 23.4mm by 4.4mm by 1.7mm, the fragment was curved, probably naturally, and appeared to have been manufactured from the lower (distal) part of a sheep ulna shaft. The presence of a bone pin is not surprising as burials were often interred in shrouds woven of wool or linen which required pins to hold them secure. Three other pin fragments, of copper alloy (two with wire-wound heads and one with traces of tinning) were also recovered from the site, possibly for the same reason (Contexts 95, 108, 151).

A small bone offcut with one filed surface, possibly the waste from bone working, was found in Context 328.

7.4 Discussion

Prior to the excavations it was supposed that some evidence of the flesh market, in use in the later 18th and 19th centuries, might have been found, but this does not seem to be the case and the assemblage is more likely to date from an earlier period.

Based on observation both of the size of the bones, particularly the few anatomical measurements which it was possible to make, and the style of butchery, it is without doubt that the animals represented come from an earlier period than the modern one, and are almost certainly of medieval or post-medieval date. The amount of disturbance to which they have been subjected since deposition may only be guessed at but a likely origin for their presence is indicated by the black midden deposit 303, spot-dated to the 13th–15th centuries on pottery evidence and which underlay the graveyard soil in Trench 20 at the S end of Kirkgate. Undisturbed midden material was a primary feature of the excavations at 75–95 High Street, Perth (Perry et al 2010) and a very large assemblage of animal bone and other well-preserved organic materials, dating mainly from the 12th to 14th centuries was recovered from these middens. The bones from St John's Kirk most probably originate from similar middens, disturbed by the

later insertion of burials, which were themselves disturbed by successive later interments in the same graveyard.

The watching brief at St John's Kirk showed that pockets of midden containing undisturbed material, have survived, and may be encountered elsewhere in the vicinity of the church if future works take place.

The presence of both amphibian and small mammal bones, some in the same context, is interpreted as the remains of owl pellets. Tall buildings such as the Kirk might be expected to attract owls which might roost or nest within the tower or roof spaces. Pellets containing the undigested fur, feather and bones from their prey are regurgitated by the birds, to fall on the ground below. Similar deposits have been found in the faunal assemblage from medieval Scone Abbey and the church of Ballumbie, Angus.

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Appendix 1 Context Register

No:	Trench	Description
01	1-4, 14, SS01, SS02, SS06- SS09	Wooden parquet floor of nave, 0.022m thick
02	1, 3, 4 SS01, SS02, SS06	Concrete floor, 0.13m thick; under 01
03	1, 3, 4 SS01, SS02, SS06	Bitumen, damp course, up to 0.03m thick; under 02
04	1, SS01, SS02, SS06	<p>Loose stone rubble, ash, clinker, crushed mortar; under 03</p> <p>Architectural fragments found in SS01:</p> <p>A: fragment with one smooth face, rounded edge and possible fluting on side; 90mm long, 57mm wide, 35mm thick</p> <p>B: possible column/pilaster/surround fragment with fluting, smooth top/bottom surface, other surface broken; 45mm long, 25mm thick, 35mm high</p> <p>Architectural fragments found in Trench 1:</p> <p>C: squared socket on one surface; 235mm long, 190mm wide, 80mm thick; socket – 85mm long, 80mm wide, 40mm deep</p> <p>D: possible corner fragment with groove along edge of one surface; 143mm long, 88mm wide, 57mm thick; groove – 20mm wide, 5mm deep</p> <p>E: fragment of keeled roll, vertical tooling lines on face, smooth top/bottom surface, other surface weathered; 105mm long, 85mm wide, 60mm high</p>
05	1	Wall on N/S alignment at W end of existing Lorimer heating duct; bricks stamped 'BLAIRADAM'; 2 bricks wide, 0.45m high; under 02
06	1	Wall of red bricks on N/S alignment with cement render on W face; N wall of 'cellar' at SW corner of nave; 2 bricks thick, constructed alternately of 'header' and 'stretcher' courses; under 04
07	1	Stone wall on N/S alignment; bevelled edge, 0.06m wide, on W face
08	1	Foundation scarcement for S wall of nave, 0.20-0.34m wide, 0.29-0.40m below parquet floor of church; see context 142
09	1	Sandy loam with some crushed mortar, containing disarticulated human bones; under 04
10	1	As 04; layer within 'cellar' at SW corner of nave; under 03
11	1	Loosely packed large rubble stones in coarse yellow sandy mortar with some fragments of plaster and concrete; one red brick (4.5 x 3 x 8.5 inches); fill of 'cellar' at SW corner of

		nave; under 10
12	1	Cement render on S and W walls of nave within 'cellar' at SW corner of nave; 0.02m thick
13	1	Architectural stone fragment found in rubble 11; one chamfered edge and groove along one side; window surround?; 292mm long, 265mm wide, 92mm thick
14	1	Slate-like fragment found in rubble 11; pencil/charcoal line on one face; 219mm long, 138mm wide, 26mm thick
15	1	Stone in situ with bevelled edge at base of Trench 1; visible dimensions - 0.17m high, 0.46m long, 0.08-0.10m wide; under 16
16	1, 5	3 courses (0.46m high) of thickly mortared black bricks on E/W alignment, with one course visible as N return at E end, extends under foundation of steps 65, where it overlies a possible stone foundation: Lorimer foundation for rebuild of westmost pier of S arcade of nave, or Lorimer refacing of foundation for pier
17	1	Architectural stone fragment found in rubble 11; roughly dressed on one face and three edges; fourth edge has groove or fracture; mortar adhering on dressed edges and both surfaces; 300mm long, 280mm wide
18	1	Architectural stone fragment found in rubble 11; peck marks on surface; 265mm long, 200mm wide, 190mm thick
19	2, 14 SS07- SS09	Concrete floor, 0.10m thick; under 01
20	2, 14, SS07- SS09	Bitumen damp course, 0.03m thick; under 19
21	2	Brick wall on N/S alignment; W wall of Lorimer heating duct; bricks stamped 'BLAIRADAM'; under 19
22	2, 14, SS07- SS09	Loose greyish brown ashy layer, with fragments of mortar stone, clinker and bricks; 0.25m thick; under 27
23	2	Rotted timber, 0.83m long, 0.23m wide; under 22
24	2	Brick-built duct (sides and E end of base; cement scree at W end of base); containing fragment of iron pipe (120mm external diameter, 95 internal diameter) and 10 iron plates, including 3 fused together with iron pipe; under 25
25	2	As 22, fill of 24; contains fragments of plaster (15mm thick) faced on one side and traces of lathes on other; under 22
26	2	Brown sandy loam with small to large stones, and fragments of plaster and mortar; under 23
27	2	Large stone slab, 0.12m thick; under 20
28	2	Hard mortar surface, 0.05m thick, with small stones and occasional mottles of clay; former solum; under 33
29	2	2 flat stones, 0.40m x 0.17m x 0.06m thick, at E end of brick duct 24; under 25

30	2	Clinker layer, 0.05m thick; bedding for duct 24; under 24
31	2	Large stone with rounded corner, pad for floor joist; 0.29m x 0.27m x 0.13m thick; under 22
32	2	Skull, spine, ribs, arms, pelvis and upper legs of a child (SK01), 0.40m below floor surface; left in situ
33	2	Large flat stone, 0.14m thick; under 31
34	2	Fill of grave cut 35; under 28
35	2	Grave cut for child skeleton 32/SK01; over 26
36	2	Loose greyish brown silt with flecks and fragments of mortar, plaster and charcoal and some small to medium stones; fill of grave cut 38; under 28
37	2	Skull, spine, ribs, arms, pelvis and upper legs of an infant (SK02), 0.57m (skull) to 0.70m (pelvis) below floor surface; left in situ
38	2	Grave cut for skeleton 37/SK02; over 26
39	2	Loose greyish brown silt with flecks and fragments of mortar, plaster and charcoal, occasional patches of light greyish brown clay and some small to medium stones; fill of grave cut 41; under 28
40	2	Skull, spine, ribs and upper arms of a juvenile (head of left humerus not fused) (SK03), 0.62m below floor of radiator recess; left in situ
41	2	Grave cut for skeleton 40/SK03
42	2	Loose greyish brown silt with flecks and fragments of mortar, plaster and charcoal and some small to medium stones; fill of grave cut 44
43	2	Skull, spine, ribs and upper arms and pelvis of an infant (SK04), 0.46m (skull) to 0.55m (pelvis) below floor level; left in situ
44	2	Grave cut for skeleton 43/SK04; cuts 49
45	1	Fill of grave cut 47
46	1	Lower legs of a skeleton (SK05), 0.65m below floor surface; rest of skeleton cut by 'cellar' at SW corner of nave
47	1	Grave cut for skeleton 46/SK05
48	2	Brown silt with yellowish brown mortar and stones (not excavated); under 38, 41, 49
49	2	Unexcavated cut (possible grave) at base of trench
50	2	Loose greyish brown silt with flecks and fragments of mortar, plaster and charcoal and some small to medium stones; fill of possible grave cut 49; under 44
51	2	L-shaped foundation scarcement for westmost pier of N arcade of nave and W wall of nave; composed of 2 courses of stones bonded with hard yellowish brown mortar; under 52
52	2	2 courses of bricks on E/W alignment; upper course comprises 3 'headers', lower course

		comprises 'stretchers'; 0.16m high; under 20
53	5	Stone slabs cemented together forming entrance floor at W door of nave, 3 inches (76mm) thick
54	5	Concrete foundation for paving at W doorway of nave, 0.13m thick; under 53
55	5	<p>Stone rubble in silty sand with occasional fragments of glazed ceramic drain pipes, red bricks (handmade), black bricks and slate fragments, old electrical cables; levelling for steps of W entrance; 0.25m thick; under 54</p> <p>13 miscellaneous architectural stone fragments from rubble 55:</p> <p>A – one dressed face, one dressed edge; socket on dressed edge, approx 25mm x 25mm, 20mm deep; possible window/door surround</p> <p>B – one dressed edge, chisel marks on another edge; other edges broken; 125mm long, 93mm wide, 65mm thick</p> <p>C – five parallel lines of chisel blade marks on one surface, one edge dressed; other edges broken; traces of white plaster/mortar on one edge; 123mm long, 102mm wide, 70mm thick</p> <p>D – four dressed faces (one with diagonal tooling); other edges broken; traces of white plaster/mortar on one two edges; 190mm long, 119mm wide, 85mm thick</p> <p>E – round shaft fragment with raised rib; 135mm high, 110mm long, 95mm thick</p> <p>F – chamfered fragment; 127mm long, 120mm wide (including chamfer), 52mm thick</p> <p>G – one dressed surface with vertical tooling lines, other edges broken; 120mm long, 105mm wide, 87mm thick</p> <p>H – chamfered fragment with 3 dressed edges; remains of 'lip' on one edge; 120mm long, 87mm wide, 40mm thick; lipped edge, 9mm deep, 20mm wide; lip 9mm wide</p> <p>I – one dressed surface with diagonal tooling lines, other edges broken; 99mm long, 33mm wide, 25mm thick</p> <p>J – two dressed edges, others broken; 101mm long, 43mm wide, 18mm thick</p> <p>K – two opposite dressed edges; 105mm long, 45mm wide, 33mm thick</p> <p>L – three dressed edges; 22mm long, 114mm wide, 100mm thick</p> <p>M – one dressed edge; 154mm long, 68mm wide, 6mm thick</p> <p>11 miscellaneous fragments of black limestone, mortar adhering to most; all have one smooth/worn surface; includes:</p> <p>N – fragment with remains of hole on one edge; 217mm long, 142mm wide, 38mm thick; hole, 19mm x 19mm (broken), 14mm deep</p> <p>O – fragment with incised band on surface; 189mm long, 100mm wide, 36mm thick; band, 50mm wide, 1mm deep</p> <p>14 miscellaneous fragments of black limestone, mortar adhering to most; all edges and surfaces broken</p>
56	3	As 04; under 03
57	4	As 04; under 03
58	5	Architectural stone fragment from rubble 55; has two flat surfaces and remains of curve on one edge; 360mm long, 215mm wide, 150mm thick
59	5	Architectural stone fragment from rubble 55 – window/door surround?; has vertical tooling lines on one angled surface with horizontal tooling lines on one margin and fragment of a

		ridge/lip on other margin; 210mm long, 235mm high, 270mm thick
60	5	Architectural stone fragment from rubble 55; chamfered edge; mortar adhering to chamfer and surfaces; 345mm long, 280mm wide, 120mm thick
61	5	2 conjoining black limestone fragments from rubble 55; one smooth/worn surface, edges broken; thickly (45mm) mortared on underside; mortar adhering to conjoining sides and traces of mortar on surface; one fragment has two round infilled sockets in surface, 24mm diameter, 0.67m apart; overall length of one edge 620mm, 450mm wide, 110mm thick
62	5	Brown sand with stones and mortar fragments; under 55
63	5	Architectural stone fragment from rubble 55; roughly squared stone with one smooth surface and chisel marks on other surface; one smoothed edge, and chisel marks on another, other edges broken (possible smooth end on one); one corner grooved or broken?; 205mm long, 175mm wide, 103mm thick
64	5	Door jamb on N side of W door of nave; eroded stone block with slightly rounded SE edge
65	5	Retaining wall for steps of W entrance, enclosing 55 and 62; comprises 2 courses of large and small stone blocks, haphazardly set, c1m wide, with yellowish brown sandy mortar and broken roof slate pinnings, under dressed slabs with false joints – sawn to depth of 60mm; E edge of base stones is sealed by concrete floor of nave Three fragments of black limestone from rubble base 65: A – smooth surface, other edges broken; mortar adhering; 457mm long, 318mm wide, 110mm thick B – roughly dressed on one edge; mortar adhering all over; 441mm long, 263mm wide, 90mm thick C – all edges broken; mortared thickly on one edge and surface; 47mm long, 169mm wide, 110mm thick
66	5	Black limestone fragment from rubble base 65; smooth/worn surface, edges broken; mortar adhering to both surfaces; 465mm long, 430mm wide, 110mm thick
67	5	Architectural stone fragment from rubble base 65; has one dressed face with chisel marks; 360mm long, 325mm wide, 205mm thick
68	5	Architectural stone fragment from rubble base 65; has three dressed edges, other edge broken; chisel marks on dressed surface; 200mm long, 135mm wide, 135mm thick
69	5	Possible paving slab from rubble base 65; mortar adhering to surface, thickly mortared on base (20mm) and one side (18mm); 330mm long, 135mm wide, 50mm thick
70	5	Architectural stone fragment from rubble base 65, dressed on four surfaces, both edges broken; chamfered edge on one surface; 370mm long, 32mm wide, 240mm thick
71	5	Black limestone fragment from rubble base 65; smooth/worn surface with circular intrusive break, all edges broken; thickly mortared on base; 600mm long, 355mm wide, 120mm thick
72	5	Architectural stone fragment from rubble base 65; rectangular slab with 3 weathered/rounded edges, other edge broken; one surface smooth, other roughly worked; 660mm long, 384mm wide, 120mm thick
73	5	Architectural stone fragment from rubble base 65; both surfaces broken, but one is flat; three edges broken, fourth is roughly dressed with rectangular socket, 80mm long, 70mm

		wide; 360mm long, 335mm wide, 100mm thick
74	5	Architectural stone fragment from rubble base 65; dressed block; upper surface dressed, lower thickly mortared; chamfered on one edge, possible dressed face remaining on broken edge; roughly dressed on opposite edge; 385mm long, 240mm wide, 145mm thick
75	5	Chamfered base of westmost pillar of S arcade of nave; under 65
76	5	Chamfered base of westmost pillar of N arcade of nave; under 65
77	5	=65
78	1, 5	W wall of kirk on S side of W doorway
79	2, 5	W wall of kirk on N side of W doorway; in Area 5 a vertical oyster pinning was visible in angle of wall and westmost pier of N arcade; in Trench 2 a foundation scarcement, up to 0.16m wide and 0.2m high, sloped down to NW corner of nave
80	5	Black limestone fragment from rubble base 65; smooth/worn surface; two square-cut edges forming a corner, other edges broken; 830mm long, 485mm wide, 160mm thick
81	5	Stone and mortar surface under 62; exposed in a trial slot against westmost pier of S arcade of nave
82	5	Stone wall blocking lower part of W doorway, 0.57m high; sealed by street paving on W edge; W retaining wall for levelling fill 83
83	5	Rubble fill on E side of wall 83; as 55 and 62
84	5	Architectural stone fragment from rubble 83; incised vertical lines on chamfered edge; 130mm long, 130mm wide, 90mm thick
85	5	Mis-shaped cobble from rubble 83; two broken edges and several round indentations (natural?); 180mm long, 130mm wide, 80mm thick
86	5	Architectural stone fragment from rubble 83; almost square block with two dressed faces forming obtuse angle; 210mm long, 13mm wide, 14mm thick
87	SS03, SS04	Compact greyish brown gritty sand; under 62=83
88	SS05	Brown gritty sand with some pebbles; under 62=83
89	SS04	Architectural stone fragment from rubble 83; one flat surface and three flat edges; other edge/surface rounded; 135mm long, 110mm wide, 70mm thick
90	SS02	Architectural stone fragment from cinders/clinker in SS02; fragment of column face with shaft moulding?; 170mm long, 150mm wide, 50mm thick
91	3	Brick wall, 0.25m wide, on N/S alignment; probable continuation of wall 6 in Trench 1; under 56
92		Paving slab from westmost radiator recess in S wall of nave; incised with letter 'N' on one edge; 0.61m x 0.422m x 0.095m
93		Stone wall foundation of N wall of nave in radiator recess below memorial window to 6th Battalion Black Watch; wall is 0.495m wide from back of recess and has been cut into for a depth of 0.24m (one course of stone) below concrete floor (0.10m thick) of nave for

		insertion of old inflow pipe to radiator; wall sealed by bitumen damp course (15-20mm thick); wall face is abutted by brick wall, 0.203m wide, of Lorimer heating duct
94	6, 8	Sand and rubble stones, some with tooling marks, up to 0.13m thick; levelling for concrete floor; under 126
95	6	Grey silty sand; burial soil; under 94
96	6	Cut for brick wall of Lorimer heating duct; cuts 95
97	6	Sandy silt and stones (redeposited 95); fill of 96
98	6	Brick wall, 0.24m wide, on E/W alignment of Lorimer heating duct
99	6	Fill of grave cut 101; redeposited 95
100	6	Skull fragments, ribs, spine, right arm and right side of pelvis of a child skeleton (SK06), 0.20m (skull) to 0.27m (pelvis) below floor surface
101	6	Grave cut for skeleton 100/SK06
102	6	Cut on N side of skeleton 100/SK06; no further information
103		Foundation scarcement, 0.20m wide, for N wall of choir in radiator recess of N choir aisle set into former doorway into Revestry; scarcement was cut to receive radiator pipes
104		Foundation scarcement, 0.16-0.19m wide, for N wall of choir in radiator recess of N choir aisle below Miller memorial window
105	6	Skull, neck and upper ribs of in situ burial (SK07), 0.67m below floor surface; neck and ribs in poor condition – soft and black; voids under skeleton into which disturbed soil flows
106		Foundation scarcement, 0.12-0.16m wide, for N wall of choir in radiator recess at E end of N choir aisle; scarcement cut for radiator pipes
107	6	Right arm, ribs, spine, pelvis and legs of a child (SK08), disturbed by burial 100/SK06; 0.41m below floor surface; lower left leg folded across right leg; left in situ
108	7	Grey silty sand; fill of old Victorian heating duct; under 110
109	6-9, 15	Wooden parquet floor in N aisle of choir, 0.025m thick; =124
110	6-9	Concrete floor, up to 0.23m thick; under 109; =125
111	7	Brick wall on E/W alignment,(bricks stamped 'BLAIRADAM'), bonded with cement, N wall of Lorimer heating duct; under 110
112	7	Red brick wall on E/W alignment, bonded with lime mortar, 2 bricks wide, parallel to 111; bricks not frogged or stamped, 0.218m long, 0.102m wide, 0.08m high; S wall of Victorian heating duct; under 108
113	6	Lower right arm, fingers and ribs of a child (SK09), 0.54m below floor surface, cut by foundation trench 96
114	6	Lower left arm, finger bones and pelvis of a child (SK10), 0.61m below floor surface

115	7	Cement floor, 0.12m thick; under 112
116	7	As 108; fill between walls 112 and 111; under 110
117	6, 7	Concrete floor for Lorimer heating duct, 0.08m thick; under 97, 98, 111
118		Foundation scarcement, 0.18m wide, for S wall of choir in eastmost radiator recess of S choir aisle; cut into for radiator pipes – E duct 0.25m wide, W duct 0.125m wide
119		Foundation scarcement, 0.23-0.27m wide, for S wall of choir in second radiator recess from E in S choir aisle; cut into for radiator pipes
120		Foundation scarcement, 0.23-0.24m wide, for S wall of choir in third radiator recess from E in S choir aisle; cut into for radiator pipes – E duct 0.23m deep, W duct 0.20m deep
121	7	Edge of concrete foundation for organ screen in N choir aisle, over 0.20m wide, over 0.27m high (not bottomed); under 127
122	7	Foundation scarcement, 0.16-0.18m wide, for N wall of choir; coursed rubble, roughly faced on S side, bonded with yellowish brown mortar; under 123
123	7	Red brick foundation, one course high, set on lime mortar 2mm thick; bricks set against N wall of choir; socket for floor joist containing rotted wood fragments adhering to mortar (W side of socket has been narrowed with mortar); possible second joist socket at E end where bitumen 126 has been applied to the N wall of choir; under 126
124	6-9, 15	Wooden parquet floor in N aisle of choir, 0.025m thick; =109
125	6-9	Concrete floor, 0.11m thick; under 124; =110
126	6, 7, 9	Bitumen damp course, up to 0.055m thick; under 125
127	7	Loose light grey sand, bedding for bitumen, 0.015m thick
128		Foundation scarcement, 0.27-0.30m wide, for S wall of choir in westmost radiator recess of S choir aisle; cut into for radiator pipes (E side of W pipe duct is lined with 3 bricks laid as headers)
129		Foundation wall (no scarcement) of E wall of S transept in radiator recess; cut into for radiator pipe
130	6	Group of disturbed human bones within soil 95 in extension of Trench 6 to SW – skull resting on scapula, mandible separate, 2 vertebrae and 2 parallel long bones (lower bones of arm or leg)
131		Stone wall on E/W alignment visible in opening for heating pipes in S wall of boiler room under World War I memorial shrine and in heating duct inside church in N transept/ shrine; wall has been cut through by N/S heating duct; approx 1.16m wide on W side, 1.46m wide on E side; former N wall of church?
132	6	Two leg bones (femurs?) in W side of Trench 6 of an in-situ burial (SK11), at depth of 0.46m below floor level – lower leg bones removed during earlier excavation of Trench 6; black line visible below bones – rotted coffin?
133	6	Grey mortar and stones, fill of 135
134	6	Concrete foundation on E/W alignment for organ screen; over 0.5m deep (not bottomed),

		over 0.33m wide; under 126
135	6	Cut for 134
136		Foundation wall (no scarcement) of E wall of N transept in radiator recess; cut into for radiator pipe – duct 0.275m wide, 0.245m deep
137		W wall of S transept in radiator recess; cut into for radiator pipe – duct 0.227m wide, 0.23m deep; for scarcement, see 149
138		S wall (no scarcement) of nave visible in eastmost radiator recess; cut into for radiator pipes – E duct 0.255m wide, 0.23m deep; W duct 0.165m wide, 0.23m deep
139		S wall (no scarcement) of nave visible in second radiator recess from E; cut into for radiator pipes – E duct 0.24m wide, 0.21m deep; W duct 0.13m wide, 0.21m deep
140		S wall (no scarcement) of nave visible in third radiator recess from E; cut into for radiator pipes – E duct 0.24m wide, 0.20m deep; W duct 0.19m wide, 0.23m deep; E duct has mortar bed with cut into stones for sides
141		S wall (no scarcement) of nave visible in westmost radiator recess (fourth from E); cut into for radiator pipes – E duct 0.30m wide, 0.24m deep; W duct 0.14m wide, 0.23m deep
142		Foundation scarcement for S wall of nave visible at base S wall of Lorimer heating duct; bricks of S wall of duct are built over the scarcement; scarcement is 0.21-0.24m wide and 0.52-0.57m below floor; at E end of wall scarcement expands from 0.26m to 0.56m in width to form plinth base for pier in angle of nave and S transept, at depth of 0.35-0.55m below parquet floor; scarcement has probably been reduced for construction of duct - see context 08
143		Rubble stone and light brown mortar core of W wall of nave after removal of cement render at back of southmost radiator recess; some red brick fragments in cement included
144		Rubble stone and light brown mortar core of W wall of nave after removal of cement render at back of second radiator recess from S; wall face cut into for a depth of 0.38m below base of radiator recess in current building works
145		Rubble stone and light brown mortar core of W wall of nave after removal of cement render at back of second radiator recess from N; wall face cut into for a depth of 0.38m below base of radiator recess in current building works; S side of core has 4 roughly squared quoins/surrounds; 2 oyster pinnings visible in core
146		Rubble stone and light brown mortar core of W wall of nave after removal of cement render at back of northmost radiator recess
147	6	Large rubble stones, mortar and plaster in loose brown sand, fill of 148; under 94
148	6	Cut for 147 in E section of Trench 6; over 0.45m deep (bottom not reached); cuts 95
149		Foundation scarcement, 0.17m wide, for W wall 137 of S transept, only visible at base of W wall of Lorimer heating duct, elsewhere obscured by metal fittings of duct; bricks of W wall of duct built over scarcement; at depth of 0.49m below parquet floor level
150	9	Stone rubble, brown sand, occasional fragments of wood, bitumen, white plaster and oyster; under 126
151	9	Brown sand with abundant redeposited human bones, occasional stone rubble, plaster fragments and crushed mortar; fill of 152; under 150

152	9	Cut for 156, 159; foundation trench for Lorimer's heating duct
153	9	Brown sand, some stone rubble, occasional plaster fragments and crushed grey mortar; cut by 152
154	9	Greyish brown sand with redeposited human bones; under 153; not fully excavated
155	9	Grey cement surface at W end of Trench 9; under 154; not excavated
156	9	Brick wall on E/W alignment; S wall of Lorimer heating duct; adjoins 159
157	9	Stone foundation for brick wall 156; concrete on surface of stones and along base of bricks
158	9	Stone foundation for brick wall 159; concrete along base of bricks
159	7, 9	Brick wall of on N/S alignment; W wall of Lorimer heating duct; adjoins 98 and 156
160	10-13, 16, SS10-SS19	Parquet floor in choir, 0.024m thick
161	10	Concrete floor, 0.11m thick; under 160
162	10	Bitumen damp course, 0.02m thick; under 161
163	10	Greyish brown sand and stones with mottles of greyish brown slightly clayey sand; under 162
164	10	Foundation plinth of second pillar from E of S choir arcade; 2 stone slabs, sandstone to E, black limestone to W; latter stone has been shattered by digging of trench; sandstone slab: 0.75m long, over 0.52m wide, over 0.12m thick, cut into for depth of 0.045m for new pipe; black limestone: 0.93m long, over 0.40m wide, 0.06m thick, rests on bed of yellow mortar with charcoal flecks and stone fragments; plinth projects 0.14m beyond visible octagonal base of pillar
165	12	Foundation plinth for third pillar from E of S choir arcade; sandstone slab, 0.16m thick, cut into for depth of 0.115m for new pipe; slab rests on bed of rubble and yellow mortar; plinth projects 0.14m beyond visible octagonal base of pillar; under 173
166	11	Foundation plinth for third pillar from E of N choir arcade; sandstone slab over 0.35m long, over 0.32m wide and over 0.19m thick; cut into for depth of 0.10m for new pipe
167	11	Brick wall forming E end of existing Lorimer heating duct
168	11	Loose grey sand, cement, coal fragments and stone fragments, backfill behind brick wall 167
169	11	Loose light greyish brown sand and rubble, 0.12m thick; under bitumen
170	11	Compact dark greyish brown sand with mortar fragments, not excavated; under 169
171		Concrete foundation, 0.27m wide, for Lorimer's rebuilt N wall of nave/S wall of World War I memorial shrine, at base of heating duct at depth of 0.46m below parquet floor
172	12	Concrete floor, under 160

173	12	Bitumen, under 172
174	12	Greyish brown sand and stones with mottles of greyish brown slightly clayey sand; under 173
175	14	Loose brown sand with occasional large stone fragments, some small to medium stone fragments, occasional fragments of plaster, daub, slag/clinker and rotted wood; under 22
176	13	Concrete floor, 0.10m thick; under 160
177	13	Bitumen damp course, 0.02m thick; under 176
178	13	Foundation plinth for second pillar from E of N arcade of choir; stone at SE corner of pillar, 1.05m long, over 0.40m wide and over 0.16m thick, has been cut into for depth of 0.09m for new pipe and projects 0.06m to E and 0.125m to S of visible octagonal base of pillar; stone at SW corner of pillar has been previously cut (broken edge covered in bitumen damp course) and projects 0.09m to S from visible octagonal pillar base; under 180
179	13	Mortar and stone foundation for stone plinth 178; possible lower offset stone scarcement, at depth of 0.20m below 178, projects 0.125m to S of edge of 178; under 178
180	13	Loose brown sand, small to large stone fragments, crushed mortar, fragments of plaster and yellow mortar; under 177
181	14	Architectural stone fragment (shaft head?) from deposit 175; 2 dressed faces, tooling marks on end of shaft; 160mm long, 61-110mm wide, 68-105mm thick; shaft is 60mm x 58mm
182	14	Architectural stone fragment from clinker/cinders/rubble 22; one face with raised flat relief panel; one edge with half round hollow, other edges and surface broken; 155mm long, 110mm wide, 115mm thick
183	15	Concrete floor, 0.09m thick; under 124=109
184	15	Bitumen damp course, 0.02m thick; under 183
185	15	Yellowish brown sand with fragments of small to large stones and mortar; occasional fragments of concrete, bitumen (up to 35mm thick), brick (one unfrogged, one stamped 'BLAIRA[DAM]' and wood; fill of 186 and general levelling for Lorimer's floor; at base of layer was thin (10mm) layer of yellowish brown mortar; under 184 Architectural fragment from context 185: A: paving fragment, two flat surfaces, edges broken; 0.132m long, 0.102m wide, 0.038m thick
186	15	Cut for wall 187
187	15	Brick wall on N/S alignment, E wall of Lorimer heating duct
188	15	Loose brown sand with some stone fragments, occasional oyster fragments (not retained), wood fragments, slate fragment (not retained), and a fragment of tar with mortar adhering to one surface and grit particles adhering to the other (not retained); cut by 186
189	15	Wood on edge, 70mm high, 15mm thick; shuttering for concrete 190; fill of 186
190	15	Concrete base of brick wall 187; fill of 186

191	16	Concrete floor, 0.08m thick; under 160
192	16	Bitumen damp course, 0.018m thick; under 191
193	16	<p>Light brown/grey sand with stone rubble and mortar and fragments of ceramic drain pipe and red brick; one large roughly squared stone block, 0.455m long, 0.22m wide, visible at surface; 0.15m thick; under 192</p> <p>2 architectural stone fragments:</p> <p>A: square-cut corner, smoothed on 2 faces, smooth margin with raised (broken) surface on other face (rusticated 'rock-faced' ashlar?); 147mm long, 75mm wide, 60mm high; margin 9mm wide, 'rock-face' 5mm high</p> <p>B: 2 smooth faces, one flat edge; 2 edges bevelled (V-cut?); V-cut on one surface which continues on adjacent edge as a cut line; 2 cut lines continue from bevelled edges; 92mm long, 90mm wide, 52mm thick</p>
194	7	Concrete floor of Lorimer's heating duct
195	7	Moderate brown sandy silt with occasional pebbles; not fully excavated; under 115
196	SS10	Concrete floor, 0.09m thick; under 160
197	SS10	Grey ash, 0.03m thick; under 196
198	SS10	Bitumen damp course, 0.02m thick; under 197
199	SS10	Brown sand and rubble stone fragments, over 0.07m thick (not bottomed); under 198
200	SS11	Concrete floor, 0.12m thick; under 160
201	SS11	Bitumen damp course, 0.01m thick; under 200
202	SS11	Brown sand and rubble stone fragments, over 0.016m thick (not bottomed); under 201
203	SS12	Concrete floor, 0.10m thick; under 160
204	SS12	Bitumen damp course, 0.015m thick; under 203
205	SS12	Brown sand and rubble stone fragments, also slate fragments, some with mortar adhering, over 0.15m thick (not bottomed); under 204
206	SS12	NW corner of foundation plinth for second pillar from E of N choir arcade, projecting 0.13m N of visible octagonal base of pillar; stone roughly squared but W end has been broken during current digging; over 0.19m thick (not bottomed); under 205
207	SS13	Concrete floor, 0.10m thick; under 160
208	SS13	Bitumen damp course, 0.013m thick; under 207
209	SS13	Brown sand and rubble stone fragments, over 0.17m thick (not bottomed); under 208
210	SS13, SS15, SS16, SS19	Brick wall on E/W alignment, forming S wall of Lorimer heating duct; under 208, 216, 219, 230

211	SS14	Concrete floor, 0.10m thick; under 160
212	SS14	Bitumen damp course, 0.016m thick; under 211
213	SS14	Brown sand and rubble stone fragments, over 0.21m thick (not bottomed); under 212
214	SS14	NE corner of foundation plinth for second pillar from E of N choir arcade, projecting 0.11m N and 0.08m E of visible octagonal base of pillar; stone, 0.20m thick, roughly dressed, is covered almost overall in yellowish brown mortar with charcoal inclusions; stone has oyster pinning underneath and sits on bed of small to large stone rubble and yellowish brown mortar, 0.19m wide; under 213
215	SS15	Concrete floor, 0.10m thick; under 160
216	SS15	Bitumen damp course, 0.02m thick; under 215
217	SS15	Brown sand and rubble stone fragments, over 0.14m thick (not bottomed); under 216
218	SS16	Concrete floor, 0.12m thick; under 160
219	SS16	Bitumen damp course, 0.02m thick; under 218
220	SS16	Brown sand and rubble stone fragments, over 0.13m thick (not bottomed); under 219
221	SS17	Concrete floor, 0.12m thick; under 160
222	SS17	Bitumen damp course, 0.02m thick; under 221
223	SS17	Brown sand and rubble stone fragments, over 0.13m thick (not bottomed); under 222
224	SS17	Foundation plinth for third pillar from E of N choir arcade; roughly dressed stone block, 0.19m thick, projecting 0.09m N from visible octagonal base of pillar; stone sits on bed of yellowish brown mortar which covers a lower offset stone foundation, 0.145m wide; under 223
225	SS18	Concrete floor, 0.11m thick; under 160
226	SS18	Bitumen damp course, 0.02m thick; under 225
227	SS18	Brown sand and rubble stone fragments with occasional bitumen fragments, over 0.16m thick (not bottomed); under 226
228	SS18	Foundation plinth for fourth pillar from E of N choir arcade; well faced ashlar block with tooled N face, 0.20m thick, projects 0.09m N from visible octagonal base of pillar; upper surface of block cut by current excavation; block rests on lower offset foundation, 0.145-0.195m wide, of rubble stone fragments and creamy mortar; under 227
229	SS19	Concrete floor, 0.095m thick; under 160
230	SS19	Bitumen damp course, 0.018m thick; under 229
231	SS19	Brown sand and rubble stone fragments, over 0.155m thick (not bottomed); under 230
232	16	Stone steps, two courses high (0.27m) at W end of S choir aisle; false joints between some stones; lower step 0.14m high (stone 0.20m thick)
233	16	Stone foundation for steps 232, at least two courses high; lowest visible course composed

		of three stones with chamfered edge on E side; upper course composed of large roughly dressed blocks, 0.15m thick, with slate pinnings, thickly bonded with yellowish brown mortar; over 1.06m wide (full width of chamfer not exposed); only upper course removed in current excavation; under 232, 234
234	16	Moderate brown sand with stones, over 0.14m thick (not fully excavated); under 237
235	16	Brick wall on E/W alignment, forming N wall of Lorimer heating duct; generally two bricks wide, except against step foundation 233, where only one brick wide; one brick stamped 'BLAIRADAM', others frogged but unstamped; bricks 0.238m x 0.115m x 0.076m; under 193
236	16	Light grey sand; one piece of tar wedged upright against brick wall 235; fill of 237
237	16	Cut for wall 235, 0.03m wide from face of wall 235
238	16	Foundation for pillar in angle of S choir aisle and S transept; stone visible in NW corner of pillar with yellow mortar, above which sits an ashlar block; to E of ashlar block is a fill of rubble stones and yellow mortar – edge of possible earlier step between choir and nave in line with angle of octagonal pillar?; slate pinning under ashlar block
239	16	Plinth for SE pillar of crossing; no specific foundation visible because of step foundation 233; stones at SW base of pier appear to be sawn (modern); stone at corner between S and SW faces of pillar has a chiselled (boasted) face; plinth, cut into for step 232, is 0.25m high above parquet floor of nave and 0.30m high above step 232
240	17, 18A	Concrete floor of raised platform in Knox Chapel, 0.10m thick
241	17, 18A	Small sandstone rubble fragments, levelling for concrete floor; under 240
242	17, 18A	Concrete floor, not excavated, 0.16m thick; under 241
243	18, 19, 21	Stone cassies of roadway in Kirkside, 0.15m thick
244	18, 19, 21	Concrete foundation for cassies, 0.09m thick; under 262
245	18	Grey sand and silt; under 244
246	18	Stone wall on E/W alignment at depth of 0.4m, 0.73m wide, c1m high, composed of large stones bonded with mortar; N and W sides cut by water main 250
247	18	Existing manhole in Kirkside
248	18	Grey clayey loam with abundant stone fragments and human bone fragments, fill of cut for manhole 247
249	18, 19	Cut for water main 250
250	18, 19	Blue plastic water main, on approximately N/S alignment, at depth of 0.82m
251	18	Grey clay and mortar with frequent stone fragments and disarticulated human bones; graveyard soil; under 246
252	18	Mid brown silty sand; graveyard soil at depth of 2m, under 251; over 0.25m thick (not bottomed)

253	18, 19	Cast-iron pipe on E/W alignment, turning to N, at depth of 0.70m; set in cut 280
254	18, 19	Cast-iron pipe on E/W alignment at depth of 0.85m; set in cut 280; under 250
255	18, 19	Grey silty sandy loam with some light brown silty sand mixed in, small stones and some cobbles; fill of 249
256	18, 19	Stone wall on approx SW/NE alignment at depth of 1m, at least 3 courses high (0.39m) (not bottomed), 0.76m wide; one large base stone under smaller rubble stones above bonded with light yellowish brown mortar; =292
257	18	Grey clay and silty clay at W side of wall 256; redeposited burial soil
258	18	Clayey loam and grey clay with human bone fragments; burial soil; below 250
259	19	Stone wall on N/S alignment; composed of 3 offset courses of very large slabs, mortared, with smaller stones as infill; lowest course 0.30m high, offset 0.19-0.23m to S, with smaller stone adjoining to W, offset 0.2m; middle course 0.28m high, offset 0.00-0.23m to S and 0.43m to W; top course is single flat slab, 0.81m N/S, 0.78m E/W and 0.24m high, with yellowish brown mortar adhering to surface; some smaller stones mortared onto surface at N end of trench; no trace of continuation to E; on W side of top course is a smaller stone block, 0.5m E/W, 0.3m N/S with smaller stones on S side and another stone underneath – packing in foundation trench?; lowest course cut back to accommodate new manhole; under 263
260	19	Mixed brown sandy silt and very dark grey/black clayey silt with charcoal flecks and occasional fragments of human bone; slightly overlies edge of wall 259; under 264
261	19	Greyish brown sandy silt with occasional stones, up to 0.25m thick; under 260
262	18, 19, 21	Loose yellowish brown sand, bedding for cassies/setts 243; under 243
263	19	Greyish brown clayey silt with some stones, patches of very light brown/white crushed mortar and patches of brown sand; under 261
264	19	N edge of cut for wall 273; under 244
265	19	Light greyish brown crushed sandy mortar and abundant medium to large stones fragments; fill of 264
266	19	Partially rotted timber cover, 0.09m wide, 0.015m thick, for old electric cables on approximately N/S alignment; timber held over cables by wire
267	19	Greyish brown silty clay with charcoal flecks, slate fragments and stones; graveyard soil; under 259
268	19	Skull and left side of skeleton (ribs, arm, pelvis and part of femur) (SK12); skull 1.42m and pelvis 1.46m below street surface
269	19	Partial skeleton (pelvis, right femur and hand and left hand) (SK13); left femur removed by machine; rest of legs removed by skeleton 268/SK12
270	19	Kneecaps, lower legs and feet of a skeleton (SK14); left in situ; 1.52m below street surface
271	19	Pelvis, legs, feet and hands of a skeleton (SK15); left in situ; 1.49m below street surface

272	19	Right arm, pelvis and femur of a skeleton (SK16) under wall 259; 1.41m below street surface
273	19	E side and N end of a wall, 0.82m wide, on N/S alignment, 0.29m below street surface, set in foundation trench 264; composed of roughly dressed large rubble stones bonded with yellowish brown mortar; N face is 3 courses high (0.85m) above offset foundation (2 visible courses) bonded with brown clay, 0.08m wide to N and over 0.23m wide to E, over 0.46m high (not bottomed); visible base of wall is 1.63m below street surface; no return wall to either E or W at N end of wall, which is the end of the wall; possible return on W side is visible 0.96m from N end; under 275
274	19	Mixed greyish brown sand with pebbles, cobbles, stone fragments and crushed mortar; redeposited fill, 0.69m thick, over foundation offset of wall 273, containing human bones and animal bones; under 266
275	19	Grey silty clay with patches of brown sand, abundant pebbles, cobbles, stone fragments, over 0.27m thick (not bottomed); redeposited graveyard soil over foundation offset of wall 273; under 274
276	19	Mixed greyish brown sand with pebbles, cobbles, stone fragments and crushed mortar on W side of wall 273; visible in W section of trench; not excavated; under 277
277	19	Light yellowish brown sand and crushed mortar with stone fragments, 0.13m thick; bedding for concrete?; under 244
278	19	Greyish brown sand, fill of 280
279	18, 19	Grey silty clay with charcoal flecks, stones and human bones; graveyard soil to S of culvert 256=292
280	18, 19	Cut for pipes 253, 254
281	19	Skull, lower jaw and neck bones of a skeleton (SK17) in E section of trench at depth of 1.15m below street surface; in burial soil 279
282	19	Skull, ribs and both arms of a skeleton (SK18) 1.62m below street surface; pelvis left in situ in E section of trench at depth of 1.58m; in burial soil 279
283	19	Skull, neck and shoulders of a skeleton (SK19), 1.60m below street surface; in burial soil 279
284	19	Greenish beige sand and gravel with loamy silt; under 279; not excavated
285	19	Lower ribs, spine, lower arms, parts of upper arms and pelvis of a skeleton (SK20) at depth of 1.70m below street surface; legs removed by skeleton 283/SK19; in burial soil 279
286	19	Grey loamy clay, burial soil for skeleton 287/SK21
287	18	Partial skeleton (femurs, part of pelvis and finger bones) (SK21), 1.70m below street surface; in burial soil 279
288	18	Cut for grave of skeleton 287/SK21
289	18	Fill of grave for skeleton 290/SK22
290	18	Right ribs and arm, vertebrae, pelvis and femurs of a child/juvenile burial (SK22), 1.73m below street surface; in burial soil 279

291	18	Grave cut of skeleton 290/SK22
292	18	Base, sides and capstones of a stone culvert on E/W alignment (=256); under 250
293	18	Black silt, fill of culvert 292
294	18	Sandstone rubble
295	18	E face of a stone wall, 0.36m high, on N/S alignment visible in W section of trench, 0.50m below street surface
296	20	Paving slabs of road surface and reinforced concrete foundation, 0.31m thick
297	20	Mixed sand and grey loamy clay, fill of cut for manhole 302; skull placed behind wall of manhole; under 296
298	20	Clay and sand with some stones, 0.35m thick; cut by manhole 302
299	20	Mixed sand, sandy loam, sandy clay with small fragments of purple sandstone, 0.50m thick; under 298
300	20	Grey clay, 0.30m thick, under 299
301	20	Clean sand with human bones and in-situ burials, 0.56m thick; under 300, 309
302	20	Manhole, of red bricks, at junction of Kirkgate and St John's Place
303	20	Black gravel and organic (smelly) black clayey silt, with woodchips and twigs, with a lens of grey silt, 0.22m thick; under 301
304	20	Soft malleable, olive-brown clay, under 303; not fully excavated
305	20	Ceramic sewer pipe, live, 0.87m below street surface
306	20	Cast-iron pipe on NE/SW alignment, at depth of 0.47m below street surface, previously broken and repaired; joins 307
307	20	Cast-iron pipe on E/W alignment, previously broken and repaired; joins 306
308	20	Cast-iron pipe on NE/SW alignment, at depth of 1.09m below street surface
309	20	Brown and greyish brown silty clay with occasional large stones, frequent fine pebbles and some charcoal flecks,
310	20	Skull and neck of a skeleton (SK23) in sand 301 in W section of trench at depth of 1.83m below street surface; ribs and arms removed by machine
311	20	Pipe underneath and parallel to 307, at depth of 0.57m below street surface
312	21	Stone slabs of street surface, 0.07m thick
313	21	Reinforced concrete, 0.25m thick; under 312
314	21	Hardcore, 0.25m thick; under 313
315	21	Compact brown silt with charcoal flecks, graveyard soil, 0.45m thick; under 316, 324

316	21	Cut for 317
317	21	Purple plastic duct for light cables for uplights; under 314
318	21	Light brown sand, fill of 317
319	21	Left leg, left arm, left side of pelvis and lower right leg of skeleton (SK24), 0.95-1.10m below street surface; skull and left shoulder removed by wall 320
320	21	Stone wall of flat slabs bonded with yellow sandy mortar, 2 courses high (0.25m), 0.78m wide; under 327
321	21	Pelvis and right femur of a skeleton (SK25), at depth of 0.96m below street surface; left in situ
322	21	Right leg and lower right arm and hand of a skeleton (SK25), at depth of 1.03m below street surface
323	21	Stone wall bonded with yellowish brown mortar, at depth of 0.54m below street surface; N end of wall? – only in S section of trench, no stones removed from trench, does not appear in N section
324	21	Cut for wall 323
325	21	Black moist clayey silt, fill of 326; also occurs between stones of wall 320
326	21	Foundation cut for wall 320
327	21	Compact greyish brown sandy silt with charcoal flecks and fragments, and small and medium stones; under 324
328	21	Stone fragments and mortar, up to 0.13m thick; under 329, 337
329	21	Yellowish brown sand, up to 0.17m thick; under 314
330	21	Greyish brown clayey silt with stones, charcoal flecks, mortar flecks, oyster fragments, on W side of wall 320; under 328
331	21	Yellowish brown sand at base of E end of trench; under 315; not excavated
332	21	Broken lead water pipe on N/S alignment at depth of 0.56m below street surface
333	21	Compact brownish grey silt with stones, charcoal flecks and crushed yellowish brown mortar; under 329
334	21	W wall of St John's Kirk, comprises 3 scarcements; lowest scarcement, 0.05m wide, one course high (over 0.22m); middle scarcement, 0.03m wide, height 0.25m (one course); top scarcement, broken edge, 0.06m wide, height 0.48m (2 courses)
335	21	Clay-bonded wall, 1.04m below street surface, at least 3 courses high (0.44m), 2.08m wide, on N/S alignment?; under 330
336	21	Cast-iron pipe on N/S alignment, at depth of 0.52m
337	21	Cut for 336
338	21	Greyish brown sand, fill of 336; under 339

339	21	Mixed greyish brown sandy silt and brown sand, 0.10m thick; bedding for concrete foundation 244; under 244
340	21	Yellowish brown sand, fill of 342; under 328
341	21	Cast-iron water main with blue plastic pipe inserted by pipe bursting
342	21	Cut for cast-iron water main 341
343	21	Mixed greyish brown silt and light brown sand with abundant stone fragments; under 342
344	21	Compact greyish brown silty clay with charcoal flecks; graveyard soil; under 343
345	21	Ribs, vertebrae and right side of pelvis of a skeleton (SK27) at depth of 1.40m below street surface; head and shoulders removed by wall 346; within 344
346	21	Stone wall bonded with black clay on N/S alignment, 2 courses high, at depth of 1.37m below street surface
347	21	Broken lead pipe on N/S alignment
348	21	Yellowish brown sand, fill of 349
349	21	Cut for lead pipe 347; contained within 339
350	20	Concrete roof, 0.18m thick, of boiler room in angle of N transept and choir, reinforced with iron inverted T girders, 0.08m wide and 0.08m high; 2 iron pulleys suspended from roof (one removed – not retained; other left in situ)
351	20	N wall of choir; two courses of chamfered scarcement; lower course 0.24m high, 0.09m wide; upper course, 0.28m high, 0.09m wide; wall below scarcement has been cut back for 0.64m from face of lower scarcement and faced with brick; scarcement has been built up with stones and mortar to height of 0.10m to support roof 350; pentacle mason's mark on vertical face of lower scarcement; upper scarcement has been cut in the past
352	20	Red brick wall on N/S alignment with stones and mortar in upper course, cut into wall 351; E wall of boiler room; visible height below concrete 0.97m; cut by old toilet pipe 353
353	20	Ceramic drain pipe on approximately SE/NW alignment, with grey plastic pipe inserted as repair; other end of plastic pipe is inserted adjoins cast-iron pipe; cast-iron pipe has been inserted through wall 364
354	20	Iron girder with 4 courses of bricks set sideways (frogging visible, no stamp), 0.59m overall height; bricks enclose an iron flue pipe with a vent in its side, extending from SE corner to NW corner of boiler room
355	20	Electric cable (well insulated!) (power supply for clock and bells); turned off permanently in excavation
356	20	Broken copper pipe, at depth of 0.20m below street surface
357	20	Red brick-built structure in SW corner of boiler room, underneath wall 351; 2 cut-off and sealed pipes visible at W end of N side, one above the other; upper pipe faced E, probably extending as far as iron bracket near E end of 357; lower pipe extended N
358	20	Foundation scarcement for buttress of N transept, extends 0.24m to E and 0.60m to S, capped by flat slabs; under 350; photographs reveal that the foundation is faced with red

		bricks on the W side of flue pipe/girder 354
359	20	Loose black and brown silt, clinker/cinders and rubble in SE corner of boiler room, piled up under pipe 353
360	20	Concrete poured down from old hatch in roof in 2003, flowing S and W from street surface; two fills visible
361	20	'I' girder, 3" wide, on E/W alignment, set into wall 352, extending under 354
362	20	Cut, 0.23m wide, in upper course of chamfered scarcement of wall 351, extending down into lower course of scarcement
363	20	Very light grey mortar and stone rubble with occasional patches of grey silt, at depth of 1.34m; fill of cellar; under 359
364	20	Stone and mortared wall on E/W alignment, N wall of boiler room, pierced by pipe 353 which has dislodged some stones above. 0.62m wide at top, 0.70m wide lower down; 1.40m visible height
365	20	Cut in wall 364 for pipe 353
366	20	Brown sandy silt with human bone fragments, packed around pipe 353; fill of 365
367	20	Purple duct for uplighter cable on E/W alignment; under 296
368	20	Purple duct for uplighter cable on E/W alignment; under 296
369	20	Mixed greyish brown sand, silt and clay with plaster fragments, stones, and human bones (probably some in-situ burials from collections of hand/toe bones); probably more than one layer but trench not investigated for safety
370	20	Compacted stone in sandy loam, levelling for concrete; under 296; = 298
371	20	Very stony silty loam with abundant fragments of disarticulated human bone and occasional modern pottery; under 370
372	20	Light brown sandy silt, at depth of 1.76m below street level; under 369; = 301
373	20	As 369; in new manhole (human bone numbered 400)

Appendix 2 Photographic Register

<i>Image No</i>	<i>Description</i>	<i>View</i>
	Interior	
	1: 15 September 2010	
0001-0003	Trench 1 at SW corner of nave: ash and clinker layer 04	SW
0004	Location of trench	S
0005	Working shot	S

0006-0007	Stone rubble from deposit 04	
0008-0009	Trench 1: Wall 07 with chamfered plinth	E
0010	South aisle of nave and choir	E
0011-0014	Trench 1: Wall 07 with chamfered plinth	E, W
0015-0016	Trench 1: Foundation scarcement for S wall of nave	SW, SE
0017-0019	Trench 1: Brick wall 06	W
	2: 16 September 2010	
0020-0022	Trench 1: Foundation scarcement 08 for S wall of nave	SW, SE
0023-0029	Trench 1: Foundation scarcement 08 for S wall of nave, progressively E to W	S
0030-0031	Trench 1: General of foundation scarcement 08 for S wall of nave	W
0032-0034	Trench 1: Foundation scarcement 08 for S wall of nave	W
0035-0036	Trench 1: Corner of foundation scarcement 08 and wall 07	S
0037, 0040	Trench 1: General of trench	E, W
0038-0039, 0041	Trench 1: Brick wall 06	E, SW, W
0042-0043	Trench 1: Brick wall 06 and rubble fill 11	W
0044-0047	Trench 1: Rubble fill 11	S, E
0048-0049	Dismantled panelling of W entrance	
0050	Joiners' signatures 'Robert Weir/ William Mackie/ Joiners/ 21 st September 1928'	
0051	General of Trench 1	W
0052-0055	Trench 1: Rubble fill 11	W, N, S
0056	Trench 1: Rubble fill 11, detail of stones	S
0057	Stones from fill	
0058-0060	Stone 18 from rubble fill 11 with peck marks and score lines	
0061-0063	Trench 1: Rubble fill 11 part excavated	W, E
0064	Trench 1: Brick wall 06	W
	3: 17 September 2010	
0065-0066	Window stone 13 with chamfer and groove	

0067	Flat stone 14 with charcoal line	
0068-0070	Stone 17 with possible groove	
0071-0072	Trench 1: Large stone in rubble fill 11 (after being moved)	N, W
0073-0075	Stone 15 with rounded edge and brick foundation for W pier of S nave arcade	N
0076-0077	Trench 1: Formation level of trench in rubble fill 11	N, S
0078-0079	Trench 1: Formation level of trench in rubble fill 11, with cement tanking on W wall of nave, progressively N to S	W
0080	Trench 1: Formation level of trench in rubble fill 11, with cement tanking on S wall of nave and brick wall 06	SE
	4: 20 September 2010	
0081-0083	Stone in N wall of nave with inscription 'W.C. 1656', upside down	N, NW
0084	Timber 23 in Trench 2	W
0085-0088	Iron pipe fragment found in fill 23 of brick duct	
0089-0093	Brick duct 24 in Trench 2	W, N
	5: 21 September 2010	
0094, 0095	Working shot of Trench 2 at NW corner of nave	N, W
0096-0098	Trench 2: Stone 31 (wrong context on board)	W, NW
0099	Working shot	N
0100	Dismantling of platform at crossing	NE
0101	General of church interior	E
0102-0103	Old solum 28 and stone 33 in Trench 2	W, NW
0104-0105	Child skeleton 32/SK01 in Trench 2	W
	6: 22 September 2010	
0106	Working shot of child skeleton 32/SK01 in Trench 2	W
0107-0108	Child skeleton 32/SK01 in Trench 2	N
0109	Working shot of skeletons SK02, SK03 in Trench 2	NW
0110	Working shot of Trench 2	W
	7: 23 September 2010	
0111-0112	Child skeleton 43/SK04 in Trench 2	W

0113	General of skeletons, 37/SK02, 40/SK03, 43/SK04 in Trench 2	SW
0114	Child skeleton 43/SK04 in Trench 2	W
0115-0116	Child skeleton 37/SK02 in Trench 2	W
0117	General of skeletons, 37/SK02, 40/SK03, 43/SK04 in Trench 2	SW
0118-0121	Skelton remains, 46/SK05 in Trench 1	W
0122	Skeleton 40/SK03 in Trench 2	W
0123	Three skeletons, 37/SK02, 40/SK03, 43/SK04 in Trench 2	W
0124	General of skeletons, 37/SK02, 40/SK03, 43/SK04 in Trench 2	S
0125	General of skeleton 32/SK01 in Trench 2	E
	8: 24 September 2010	
0126	General of two service Trenches 3 and 4 for new toilet at W end of nave	W
0127	Longer service Trench 3 for new toilet at W end of nave	W
0128	Shorter service Trench 4 for new toilet at W end of nave	W
	9:27 September 2010	
0129-0132	Trench 1 with geotextile layer laid down	W, E
0133-0137	Grave cut 44 with skeleton 43/SK04 in Trench 2	E
0138-0144	Trench 2: mortared stone foundation 51 for W pier of nave arcade	S, W
0145-0146	Trench 1 with wet concrete over geotextile	W
0147-0150	Area 5: starting to remove steps at W end of nave	SW, W, NW
0151-0152	Trench 1 with wet concrete over geotextile	N
0153-0154	Area 5: stone paving partially 53 removed revealing concrete foundation 54	N, S
	10:28 September 2010	
0155-0164	Area 5: removing concrete 54	SW, NW, S, N, W
	11:29 September 2010	
0165, 0167	Area 5: removing concrete 54	NW,
0166	Tent for removal of asbestos from heating duct in S aisle of nave	S
0168-0169	Stone 58 from rubble 55	-
0170-0171	Stone 59 from rubble 55	-

0172-0173	Stone 60 from rubble 55	-
0174-0175	Stone 61 (2 conjoining fragments of black marble) from rubble 55	-
0176-0178	Stone 63 from rubble 55	-
	12:30 September 2010	
0179-0181	Area 5: sand and rubble 62 partially excavated	W, NW, SW
0182-0183	General view of W end	W
0184-0185	Area 5: N jamb 64 of W door	W, NW
0186-0188	Area 5: Rubble 62 under threshold of W door	W
	13:1 October 2011	
0189-0190	Area 5: Working shots of removal of stone steps 65	SW
0191-0192	Area 5: Retaining wall for steps 65	N, S
0193	Area 5: Rubble 62 under threshold of W door	W
0194-0195	Area 5: Working shots of retaining wall for steps 65	NW, NE
0196-0199	Black limestone fragment 66 from wall 65	-
0200	Area 5: Working shot of foundation stones of wall 65	NW
0201	Area 5: Retaining wall 65 and foundation stones	N
0202-0203	Reused stone 67 from wall 65	-
0204-0205	Reused stone 68 from wall 65	-
0206	Reused stone 69 from wall 65	-
0207-0209	Reused stone 70 from wall 65	-
0210-0211	Hoist for removing large stones	N, SW
0212-0213	Area 5: Working shots of excavating retaining wall 65	NW
0214-0215	New heating duct under construction in Trench 1	W, E
	14:4 October 2011	
0216-0217	Black limestone fragment 71 from wall foundation 65	-
0218-0226	Stone from wall foundation 65	-
0227-0235	Foundation stones of wall 65	-
0236-0238	Reused stone 73 from wall 65	-

0239-0241	Reused stone 74 from wall 65	-
	15:5 October 2011	
0242-0245	Working shots of hoist and ramp for removing foundation stones 65	-
0246-0247	Area 5: Chamfered base 75 of pillar on S side of W door	SW
0248-0249	Chamfered base 76 of pillar on N side of W door	NW
0250	View of nave from outside W door	E
0251-0252	W door	E
0253	General view of exterior of St John's Kirk	NE
0254-0258	Unexcavated base course 77 of foundation of wall 65	S, N
	16:06 October 2011	
0259-0263	Reburying human bones in Trench 2	E
0264-0268	Reburied human bones in Trench 2	N, E, W
0269-0271	Exposed lower part of W wall 78 on S side of W door	W
0272-0274	Exposed lower part of W wall 79 on N side of W door	W
0275-0276	Vertical oyster pinning in angle of wall 79 and pillar	NW
0277-0278	Base of Area 5 excavation, wall foundation 65 (=77)	S, N
0281-0283	Base of Area 5 excavation, wall foundation 65 (=77)	SE, E, NE
0284-0286	Area 5: trial slot in context 81, showing brick foundation 16 of W pillar of S arcade of nave	W, N
	17: 7 October 2010	
0287-0288	Laying geotextile in Trench 2	W, NW
0289	New Heating duct in Trench 1 under construction	W
0290-0291	Geotextile laid in Trench 2 (E/W trench)	NW, NE
0292-0293	Geotextile laid in Trench 2 (N/S trench)	NW, W
0294	Removing paving at W door	W
0295	Wet concrete foundation in Trench 2 (N/S trench)	NW
0296	Wet concrete foundation in Trench 2 (E/W trench)	W
0297	Retaining wall 82 at W door	W
0298-299	Stone 84 from fill 83 (=62)	

0300-0303	Stone 85 from fill 83 (=62)	
0304-0305	Wall 82 at W door	W
0306	Corner of Wall 82 and S jamb of W door	SW
0307-0308	Corner of Wall 82 and N jamb of W door	NW
0309	W door and wall 82	W
0310	Stone 86 from fill 83 (=62)	
	18: 11 October 2010	
0311-0314	Black limestone slab 80 from rubble 65	
	19: 13 October 2010	
0315-0316	Steel slot SS03 for new entrance screen at W end of nave	W
0317	Steel slot SS04 for new entrance screen at W end of nave	W
0318	General of SS03, SS04	SW
0319-0320	Steel slot SS05 for new entrance screen at W end of nave	W
0321-0322	Fire tender practice at N choir aisle	SE, SW
0323-0324	Stone 89 from fill 83 (=62) in SS04	
0325-0326	Stone 90 from SS02	
0327-0328	General of SS01, SS02, SS06 and Trench 3 in S aisle of nave	NW, SE
	20: 18 October 2010	
0329-0330	Brick wall 91 in Trench 3	W
0331-0332	Paving slab 92 from westmost radiator recess in S wall of nave, inscribed with letter 'N'	
0333-0338	Geotextile laid down in Area 5	N, S, NW, SW
0339-0341	N wall foundation 93 of nave in radiator recess below 6th Black Watch memorial window (no scarcement)	N
	21: 19 October 2010	
0342-0346	Trench 6: Burial soil 95	SW, NE
0347, 0348	Trench 6: working shot	SE, W
0349-0351	Black limestone (Tournai marble) tombstone on E wall of N choir aisle	E, NE
0352-0353	Trench 6: child skeleton 100/SK06	W

	22: 20 October 2010	
0354-0357	N wall foundation scarcement 103 of choir in radiator recess set into former doorway into Revestry	N
0358-0362	N wall foundation scarcement 104 of choir in radiator recess below Miller memorial window below organ loft	N
0363-0366	N wall foundation scarcement 106 of choir in radiator recess at E end of N choir aisle	N
0367-0371	Trench 6: Burial soil 95 with redeposited human bones	SW, SE
0372-0373	Trench 6: Skull 105/SK07	SW
	23: 21 October 2010	
0374-0376	Trench 6: child skeleton 107/SK08	W, SW
0377-0379	Area 5: new concrete foundation being laid	SW, S
0380	Trench 2 (E/W trench) new heating duct under construction	W
0381-0382	Trench 2 (N/S trench) new heating duct under construction	SW, N
0383-0384	Trench 6: child skeleton 113/SK09	SW
0385-0386	Trench 7: brick wall 112 and concrete floor 115 of old Victorian heating duct	W, N
0387-0388	Trench 6: adult skeleton 114/SK10	E
0389-0391	Trench 6: brick wall 98 of Lorimer heating duct and fill of foundation cut 116	NE
0392-0393	Trench 7: concrete floor 115 of Victorian heating duct	N
	24: 22 October 2010	
0394-0397	Foundation scarcement 118 of eastmost radiator recess in S wall of choir	S
0398-0399	Boiler room	NW
0400	Boiler room: opening for heating ducts into church, showing stone wall behind opening	NE
0401-0402	Trench 7: fill 108 of Victorian heating duct with redeposited human bone	E
0403-0407	Foundation scarcement 119 of S choir wall in 2nd radiator recess from E end	S, SE
0408	Trench 7: fill 108 of Victorian heating duct with redeposited human bone	E
0409-0413	Foundation scarcement 120 of S wall of choir in 3rd radiator recess from E end	S, SE, SW
0414-0415	Trench 7: Concrete floor 115 and concrete wall 121 of old Victorian heating duct (direction arrow wrong)	E, SE
0416	Trench 7: foundation scarcement of N choir wall 122 and brick foundation 123	N

	with sockets for timber floor joists	
0417	Trench 7: Detail of socket for floor joist in brick foundation 123	N
	25: 25 October 2010	
0418-0423	Foundation scarcement 128 in S choir wall in westmost radiator recess	S, SE, SW
0424-0427	Foundation wall 129 of E wall of S Transept in radiator recess (no scarcement)	NE, E, SE
0428-0429	Trench 6: redeposited human bones 130 in burial soil 95	SW
0430-0434	Foundation 131 of former N wall nave in heating duct in angle of N nave aisle and Shrine/N Transept; viewed from opening in boiler room	SE, SW, S
0435-0436	W wall of boiler room, progressively S to N	W
0437-0439	N wall of boiler room with coal chute, progressively W to E	NW, NE
0440	N wall of boiler room with coal chute	N
0441-0442	Trench 6: skeleton 132/SK11 and fill 133 of foundation cut for concrete foundation of organ screen	SW
	26: 26 October 2010	
0443-0449	Foundation 131 of former N wall nave in heating duct in angle of N nave aisle and Shrine/N Transept; viewed from opening in nave/transept	N, NW, NE
0450	Trench 6: concrete foundation for organ screen	SW
0451	Trench 8: excavated depth	SE
0452-0453	Trench 6: excavated depth	SW, NE
0454-0456	Trench 7: excavated depth of E/W trench	E, W
0457	Trench 7: W section	W
0458	Trench 7: excavated depth, N/S trench	N
0459-0460	SS07 for new screen at W end of nave	N
0461-0463	Working shot of excavation of SS08	N
0464-0465	SS08 for new screen at W end of nave	N
0466-0467, 0470	Trench 1: heating duct fitted out (E/W trench)	W, SW, E
0468-0469	Trench 1: heating duct under construction (N/S trench)	N, S
	27: 27 October 2010	
0471	SS09 filled with concrete for screen at W end of nave	N
0472	General of steel slots SS07, SS08, SS09 at W end of N aisle of nave	N

0473-0474	Trench 2: concrete fill in N/S trench	N
0475-0477	Trench 2: concrete fill in E/W trench	E, W
0478-0479	Trench 2: concrete fill in N/S trench	S
0480-0481	Removing render on back wall of radiator recesses in W wall of nave	SW, NW
0482-0483	Foundation wall 136 of E wall of N Transept in radiator recess (no scarcement)	SE, NE
0484-0485	Foundation wall 137 of W wall of S Transept in radiator recess (no scarcement)	W, NW
0486-0492	Foundation wall 138 of S wall of nave in eastmost radiator recess of nave (no scarcement)	S, SE, SW
0493-0499	Foundation wall 139 of S wall of nave in 2nd radiator recess from E end of nave (no scarcement)	S, SE, SW
0500	Working shot, Trench 3	W
0501-0508	Foundation wall 140 of S wall of nave in 3rd radiator recess from E end of nave (no scarcement)	S, SE, SW
0509-0515	Foundation wall 141 of S wall of nave in westmost radiator recess (4th from E end of nave) (no scarcement)	S, SE, SW
0516-0518	Reburying human bones in Trench 3	E
	28: 28 October 2010	
0519-0521	Reburying human bones in Trench 4	W, SW
	29: 29 October 2010	
0522	Rubble core 143 of W wall of nave in southmost radiator recess with red bricks (of Lorimer repair?)	W
0523	Rubble core 144 of W wall of nave in 2nd radiator recess from S, after removal of recess floor	W
0524	Rubble core 145 of W wall of nave in 2nd radiator recess from N after removal of recess floor	W
0525	Rubble core 146 of W wall of nave in northmost radiator recess	W
0526-0530	Foundation scarcement 142 of S wall of nave visible in Lorimer heating duct under bricks at pier angle of nave and S Transept	E, S, SW, SE, E
0531-0533	Detail of bricks (of Lorimer repair?) in rubble core 143 of W wall of nave in southmost radiator recess	W, NW
0534-0535	Possible quoins/surrounds in rubble core 145 in 2nd radiator recess from N in W wall	W, SW
0536	Building new entrance at W door	NW

0537-0540	Foundation scarcement 142 of S wall of nave visible in Lorimer heating duct under bricks	W, S
0541-0542	Oyster pinning in rubble core of 145 of W wall of nave in 2nd radiator recess form N	W
	30: 3 November 2010	
0543-0544	Trench 6: after straightening of sides for new brick lining	NE, SW
0545-0546	Trench 6: rubble fill 147 of cut 148	E
0547	Trench 6: reburying human bones	SW
0548-0549	Foundation scarcement 149 for W wall of S Transept under bricks of heating duct at radiator recess	NW, SW
	31: 15 November 2010	
0550-0552	Trench 9: Redeposited human bones in soil 151 behind Lorimer heating duct	E
	32: 16 November 2010	
0553-0554	Trench 9: Redeposited human bones in soil 154 behind Lorimer heating duct	W
	33: 17 November 2010	
0555-0557	Trench 9: Soil 154 and cement surface 155	W, E
0558	Trench 9: Cement surface 155 and foundation 157 for Lorimer heating duct	W
0559	Trench 9: Soil 154 and foundation 158 for Lorimer heating duct	E
0560-0561	Trench 9: Redeposited human bones in section behind Lorimer heating duct	SE
0562	Trench 10: General location	SE
0563-0564	Trench 10: Foundation plinth 164 for pillar of S choir arcade – black limestone to W	S
0565-0566	Trench 10: Sandstone foundation plinth 164	SW
0567-0568	Trench 10: Black limestone foundation plinth 164	SE
0569-0570	Trench 12: Foundation plinth 165 for pillar of S choir arcade	SW, S
0571-0573	Trench 11: Foundation plinth 166 for pillar of N choir arcade	NW, W
0574-0575	Trench 11: Vertical shot	N
0576	Trench 11: General shot	NW
	34: 18 November 2010	
0577-0578	Trench 12: General shot	SW

0579-0580	Trench 10: Working shot of geotextile being laid	E
0581-0582	Trench 9: new concrete foundation on geotextile; and redundant Lorimer heating duct	W
0583-0584	General view of nave	E
0585	General view of nave	W
0586-0588	Concrete plinth 171 under bricks of Lorimer heating duct in N aisle of nave	E, NE, NW
0589	Trench 12: new concrete foundation on geotextile	W
0590	Trench 11: new concrete foundation on geotextile	W
0591	Trench 10: new concrete foundation on geotextile	SE
	35: 24 November 2010	
0592-0594	Human bones reburied in redundant Lorimer heating duct	W, E
0595-0596	Trench 14 at W end of N aisle of nave	W, E
0597	Trench 13: General shot	E
0598-0599	Trench 13: Vertical shot of foundation plinth 178 for pillar of N arcade of choir	N
0600-0601	Trench 13: Detail of broken plinth 178 sealed beneath Lorimer's bitumen 177	NE
0602	Trench 13: Foundation plinth 178	NW
0603-0604	Trench 13: Foundation plinth 178 and foundation deposit 179 over possible lower foundation offset	N
	36: 25 November 2010	
0605	Trench 13: General shot	E
0606-0607	Trench 13: Vertical shot	N
0608-0611	Architectural stone fragment 181 (corner fragment of the head of a shaft?) from Context 175 in Trench 14	
0612-0613	Architectural stone fragment 182 with fluting from Context 22	
0614	Architectural stone fragments A & B with fluting from Context 04	
0615-0621	Architectural stone fragments A-K from Context 55	
0622-0623	Architectural stone fragments from Contexts 85 and 89	
0624-0625	Architectural stone fragments from Contexts 84 and 90	
0626-0627	Architectural stone fragments L & M from Context 55	
0628-0629	Architectural stone fragments from Context 57	

0630-0631	Architectural stone fragments C, D & E from Context 04	
0632-0633	Architectural stone fragments from Context 86	
0634-0635	Architectural stone fragments from Context 154	
0636-0640	10 Fragments of black limestone from Context 55, including one (N) with drilled hole (not from recent works!)	
0641-0643	Fragment of black limestone (A) from Context 65	
0644-0646	Fragments of black limestone (B & C) from Context 65	
0647-0649	14 Fragments of black limestone from Context 55	
0650-0652	Fragment of black limestone (O) from context 55	
0653	Trench 14: new duct constructed	W
0654	Redundant Lorimer heating duct under organ with geotextile and soil covering reburied bones	W
0655-0656	Black limestone fragments N & O from Context 55	
	37: 2 December 2010	
0657	Trench 15 after removal of Lorimer's concrete and bitumen	E
0658	Trench 13: new concrete foundation on geotextile	E
0659	Trench 13: vertical shot of new concrete foundation on geotextile	N
0660	Trench 15: Soil 188 partially excavated	E
0661	Trench 15: Cut 186 for Lorimer heating duct	S
0662-0663	Trench 15: Wall 187 of Lorimer heating duct with concrete foundation 190 and timber shuttering 189	W
	38: 3 December 2010	
0664, 0666	Trench 16: Rubble 195 after removal of Lorimer's concrete and bitumen	E, W
0665, 0667	Trench 16 Large stone block in rubble 195	E, W
0668-0669	Trench 15 fully excavated	W, E
0670	Trench 15: E section showing mortar surface	E
	39: 6 December 2010	
0671	Reburying human bones in Trench 3	E
0672	Steel slot SS10 in N choir aisle	E
0673-0674	Steel slot SS11 in N choir aisle	E

0675-0677	Steel slot SS12: Foundation plinth 206 for pillar of N choir arcade	E, S
0678	Steel slot SS13 in N choir aisle	E
0679	SS13: Brick wall 210 of Lorimer heating duct	N
	40: 7 December 2010	
0680	General shot of N choir aisle	W
0681, 0683	Vertical shot of N choir aisle	N
0682	Choir from scaffolding	W
0684-0685	Choir at clerestory level from scaffolding	W
0686	Vertical shot of SS10, SS11, SS13, SS14	N
0687-0690, 0692-0693	Steel slots SS12 and SS14 showing foundation plinth of pillar of N arcade of choir	S, E, W
0691	SS12: Foundation plinth 206 of pillar of N arcade of choir	E
0694-0695	SS14: foundation plinth 214 of pillar of N arcade of choir	W, S
0696	Steel slot SS15 in N choir aisle: brick wall 210 of Lorimer heating duct	N
0697-0699	Trench 7: After removal of concrete floors 194 of Lorimer heating duct and 115 of Victorian heating duct; foundation scarcement 122 of N wall of choir and soil 195	N
0700	Trench 7: Detail of foundation scarcement 122 of N wall of choir and soil 195	N
0701-0702	Steel slot SS16 in N aisle of choir: brick wall 210 of Lorimer heating duct	N, E
0703-0705	Steel slot SS17 in N aisle of choir: foundation plinth for pillar of N arcade of choir, with lower offset foundation	S, W
0706-0708	Steel slot SS18 in N aisle of choir: foundation plinth 228 of pillar of N arcade of choir	S, W
0709-0711	Steel slot SS19 in N choir aisle: brick wall 210 of Lorimer heating duct	N, E
0712-0713	Graffiti on panel of Schomberg Scott screen: 'MADE IN SCOTLAND/BY LINDSAY & PENNYCOOK/1970/BRAZIL WON THE/WORLD FOOTBALL/CUP'	
	41: 8 December 2010	
0714-0715	Trench 9: Geotextile in place	E, W
0716	Trench 7: new toilet waste pipe inserted through N wall of choir	N
0717	Trench 15 and SS19 from scaffolding	NW
0718	SS10, SS13, SS15, SS16 from E to W from scaffolding	NE

0719-0720	Reburied human bone in Trench 4	N, W
0721-0725	Trench 16: Stone foundation 233 for Lorimer steps	S, N, W
0726	Trench 16: working shot of lifting lower step 232	SW
	42: 9 December 2010	
0727-0728, 0730-0731, 0733-0734, 0736	Trench 16: Stone foundation 233 for Lorimer steps	S, N, W
0729, 0232, 0735, 0737	Trench 16 Detail of chamfered edge on 233	N W
0738-0740	Architectural stone fragments A & B from Context 193	
0741-0744	Trench 16: Soil 234	W, SW, N
	43: 10 December 2010	
0745	Trench 4: Reburying human bones	E
0746-0747	Steel slot SS14 in N aisle of choir with geotextile and new concrete foundation (board wrongly labelled)	W
0748	Steel slot SS17 in N aisle of choir with geotextile	S
0749-0751	Working shot of concreting SS12	S, W
0752	Steel slot SS12 in N aisle of choir with geotextile and new concrete foundation	S
0753	Steel slot SS17 in N aisle of choir with geotextile	S
	44: 13 December 2010	
0754-0759	Trench 16: Brick wall 235 of Lorimer heating duct and stone foundation 238 for pier at angle of S transept and choir	S
0760-0762	Trench 16: Stone foundation for SE pier of crossing	N, NW
0763-0764	Trench 16: fully excavated to depth, showing soil 234	NE
	45: 16 December 2010	
0765	Trench 4: Reburying more human bone	W
0766-0767, 0769	Trench 16: geotextile and steel reinforcing rods for concrete ramp	W, E, N
0768	Trench 16: new build against pier at angle of S transept and choir	S
	46: 22 December 2010	
0770-0771	Trench 17: Lorimer concrete removed	W

0772	Location of Trench 17	SW
0773-0774	Trench 18: Lorimer concrete removed	W
0775	Location of Trench 18	NW
0776	General location of Trench 18	W
0777	General location of Trench 17	SW
0778	E window through scaffolding	E
	47: 6 October 2010	
0779-0781	Timbers of tower	
0782-0785, 0787, 0789- 0790	Views from the tower	
0786, 0788	Inscriptions on panels of lead roof of tower, 'WILLIAM STEWART, ESQ ^R /LORD PROVOST 1767'; 'HENRY FYFFE/DEAN OF GUILD'; 'THOMAS MARSHALL/JOHN RAMSAY/BAILLIES'; 'JOHN CAW/JOSEPH FORRESTER/BAILLIES'; 'WILLIAM BENNET TREASURER/PETER CRAIGIE CONVENER'; 'TEMPLI HAEC PYRAMIS/REPARATA EST. AB'; 'IOANNE BLAIR FABRO LIGNARIO ET'; 'GEORGIO DOUGLAS PLUMBARIO/ A.D.1767'	
0791	Bartizan belfry	NE
0792	Timbers of tower	
0793-0794	Bourdon bell (cast 1506 at Mechlin by Peter Waghevens); image of St John the Baptist & device of Peter Waghevens	
0795-0796	Nave and W window	W
0797	Chancel arch from the choir	W
	Exterior	
	48: 6 April 2011	
0798-0800	Trench 18: after removal of stone setts	N
0801-0802	Location of Trench 18	NW, NE
0803-0804	Trench 18: top of wall 246 (direction on board wrong)	E, SE
0805	Location of Trench 18	NW
0806	Working shot	SE
0807-0812,	Trench 18: Wall 246	E, N, S

0814		
0813	Trench 18: location of Wall 246	E
0815-0816	Trench 18: Manhole 247, wall 246 and water pipe 250	S
0817-0821	Trench 18: working shots	SW, N, NE
	49: 7 April 2011	
0822-0823	Trench 18: working shots	N
0824-0825	Trench 18: Wall 256, water pipe 250, cast-iron pipes 253 and 254	N
0826-0828	Trench 18: general location	N, NE
0829-0830	Trench 18: General	S, W
	50: 11 April 2011	
0831-0832	Trench 18 working shots	S, NE
0833-0836	Trench 19 (wrong number on board): Top of wall 259	N, W
	51: 12 April 2011	
0837-0838	Trench 19: W section	W
0839-0843	Trench 19: Wall 259	N
0844-0848	Trench 19: Cutting back edge of lowest course of wall 259	E, NE
	52: 13 April 2011	
0849-0850	Trench 19: Skeleton 268/SK12	W
0851-0852	Trench 19: partial skeleton 269/SK13	S
	53: 14 April 2011	
0853	Trench 19: Partial skeletons 270/SK14, 271/SK15	W
0854-0857	Trench 19: Partial skeletons 270/SK14, 271/SK15, 272/SK16	N
0858	Trench 19: Geotextile and new concrete foundation in manhole	NE
0859-0860	Trench 19: Wall 273	S
	54:15 April 2011	
0861-0865	Trench 19: Wall 273	SW, S
	55: 16 April 2011	
0866	Trench 19: Working shot of breaking out wall 273	S

0867, 0869	Trench 19: Wall 273 broken out	W
0868	Trench 19: detail of soil behind wall 273	W
0870-0871	Trench 19: detail of possible westward return wall on wall 273	SW
0872-0873	Trench 19: foundation offset of wall 273	S
	56: 17 April 2011	
0874-0875	Trench 19: Wall 273 (broken out) in line with W side of Flesher's Vennel	S
0876-0878	Trench 19: Wall 273 (broken out)	S
	57: 18 April 2011	
0879-0880	Trench 19: S end of wall 273	W
0881-0886	Trench 19: Wall 256	S, N, W
	58: 19 April 2011	
0887-0888	Trench 19: Skeleton 282/SK18	W
0889	Trench 19: general of skeleton 282/SK18	SW
0890-0892	Trench 19: Partial skeleton 283/SK19 (wrong number on board)	S
0893-0894	Trench 19: Skeleton 285/SK20	W
0895-0896	Trench 19: W section showing cut 264 for wall 273	W
	59: 20 April 2011	
0897	Trench 19: Partial skeleton 287/SK21	W
0898	Trench 19: Partial skeleton 287/SK21 and culvert 292	E
0899-0901	Trench 19: Partial child skeleton 290/SK22	W
0902-0904	Trench 19: Stone culvert 292 (SK22 wrong)	E
0905-0907	Trench 19: Water pipe 250 and old cables 266	SE, S, SW
0908-0910	General shot of Trench 19	SE, S
	60: 21 April 2011	
0911	Trench 20: working shot	NW
0912-0913	Location of Trench 20	NE, NW
0914	Trench 20; Manhole 302	NW
0915-0916	Trench 20: E section (see sheet D25), with burial sand 301	E

	61: 23-25 April 2011	
0917	Trench 20: general	SE
0918	Trench 20: excavated depth at manhole 302 with burial sand and black midden 303	NW
0919	Opening up Trench 21	E
	62: 26 April 2011	
0920-0921	Trench 20: excavated depth at N end	SE
0922-0923	Trench 20: Burial sand 303 in W section with location of skull 310/SK23	W
0924-0928	Trench 21: location of waste pipe in W wall of kirk	E, NE
0929-0930	Trench 21: wall 320	E
0931-0935	Trench 21: wall 320, partial skeleton 319/SK24 and redeposited human bones in graveyard soil 315	E, W
0936	Trench 21: redeposited human bones in graveyard soil 315	N
0937	Trench 21: wall 320 with redeposited human bones	N
0938	Trench 21: wall 320, partial skeleton 319/SK24 and redeposited human bones in graveyard soil 315	E
	63: 27 April 2011	
0939-0940	Trench 21: partial skeletons 321/SK25 and 322/SK26	N
0941-0945	Trench 21 wall 320	W, E
0946-0947	Trench 20: excavating new manhole	SE, NW, W
0949-0950	Trench 20: E section of new manhole	E
	64: 28 April 2011	
0951-0953	Trench 21: wall 323 in S section	S
0954-0957	Trench 21: W wall of kirk with three scarcements	E
0958-0963	Trench 21: E side of partially excavated wall 335	W, E
0964-0965	Trench 20: W section of new manhole with geotextile at base	W
0966	Outdoors tables at Café Tabou with site of window accidentally shattered by machine	SW
	65: 29 April 2011	
0967-0970	Trench 21: N section (see sheet D27)	N

0971-0977	Trench 21: partial skeleton 345/SK27 with wall 346 in background	W, N
0978-0981	Trench 21: wall 335 fully excavated	E, N
	66: 2 May 2011	
0982-0985	Trench 21: wall 335 broken out	E
0986-0988	Trench 20: reinforced concrete roof of boiler room	S
0989-0990	Trench 20: location of boiler room	SW, SE
0991-0992	Trench 20: iron beam with brickwork supporting roof 350	W
0993-0995	Trench 20: N wall of choir 351, chamfered offset partially exposed	S, SW
	67: 3 May 2011	
0996-0997	Trench 20: concrete roof 350 with pulley; also iron beam and bricks 354	NW
0998-1000	Trench 20: chamfered offset 351 with cut 362	E
1001	Trench 21: geotextile in place against W wall of kirk with reinforcing rods	E
	68: 6 May 2011	
1002	Trench 20: removing roof 350 of boiler room	SW
1003-1004	Trench 20: iron flue pipe 354	NW
1005	Trench 20: second pulley in roof 350 with stones of E wall of N transept and bricks of buttress foundation 358 or of flue vent 354	NW
1006-1007	Trench 20: double chamfered scarcement of N wall 351 of choir	S
1008-1012	Trench 20: pentacle mason's mark on lower chamfered scarcement 351	SE, SW, S
1013-1015	Trench 20: cut 362 in chamfered scarcements 351	S
	69: 12 May 2011	
1016-1026	Trench 20: N wall 364 of boiler room (2 phases of excavation)	E, N, W
1027-1029	Trench 20: buttress foundation 358 (with broken down pipe and unfinished purple uplighter duct)	W
	70: 18 May 2011	
1030-1032	Trench 20: backfilling boiler room with new pipes in position	E, SW, W
	71: 23-27 May 2011	
1033	Trench 20: general location of extension to S of manhole, 23 May	NE
1034	Trench 20: new pipe in situ	S

1035	Trench 20: machine-excavating extension, 27 May	S
1036	Trench 20: general location	SW
1037	Trench 20: disturbed soil with human bones 370 (wrong context on board)	NW
1038-1042	Trench 20: working shots	NW, SW, N, S, SE
	72: 26 June 2011	
1043-1044	Architectural fragments D, E (wrongly labelled C) from Context 04	
1045-1048	Architectural fragment from Context 185	

Appendix 3 Drawing Register

<i>Sheet No.</i>	<i>Description</i>	<i>Scale</i>
1	Notes on contexts 01-09; plan of Trench 1	1:20
2	Notes on contexts 10-18; plan of Trench 1 (continued) with Trenches 3 & 4	1:20
3	Notes on contexts 19-35; plan of Trench 2	1:20
4	Notes on contexts 36-61; plan of Trench 2 with skeletons SK02-04; sample E section of W arm of Trench 2	1:20; 1:10
5	Plan of Trenches 1, 3 & 4	1:20
6	Notes on contexts 62-67; plan of W end of church with Trenches 1-5, Area 5 and notes on reburied bones; section in Area 5 showing N jamb 64 of W door	1:100; 1:10
7	Notes on contexts 68-81; notes on reburied bones	
8	Notes on contexts 82-86 and SS07 and SS08; further notes on context 16; location plan of steel pads for new offices at W end of nave (SS01-SS09)	1:100
9	Notes on SS01-SS06, and on contexts 87-93; location plan of wall 91 in Trench 3	1:20
10	Notes on contexts 94-112; plans of Trench 6, 7 & 8	1:20
11	Notes on contexts 113-135; measured sketches of boiler room and wall 131	n/a
12	Notes on contexts 136-146; notes on reburied bones; section of stones in wall 145	1:20
13	Plan of nave with scarcements 08 & 142 of S wall and concrete foundation 171 of N wall	1:100
14	Notes on contexts 147-166; notes on further bones in context 95 and on skeleton 132/SK11; notes on reburied bones; plan of Trench 8	1:20
15	Plan of choir with Trenches 10-13, Trenches 15 & 16 and SS10-SS19	1:100

16	Notes on contexts 167-182; notes on stones 004A-C; notes of reburied bones	
17	Notes on contexts 160 & 183-187; notes on architectural stones 55A-M, 57, 154; notes on black limestone fragments from contexts 55 & 65	
18	Notes on contexts 160 & 188-210; plans of Trench 15 and SS12	1:20; 1:10
19	Notes on contexts 160, 210 & 211-231; plans of SS12, SS14, SS17, SS18	1:10
20	Notes on contexts 232-239; 2 notes on reburied bones; notes on architectural fragments 193A & B; plan of Trench 16	1:20
21	Notes on contexts 240-252; section of Trench 17; measured location of Trench 18; plan of Trench 18; section of Trench 18	1:10; 1:100
22	Notes on contexts 243-260; plan of Trench 18; plan of wall 256; section of Trench 18	1:20; 1:100
23	Notes on contexts 261-269 & 283-284; plan of Trench 19; plan of wall 259; section of Trench 19	1:20; 1:100
24	Notes on contexts 270-294; section of Trench 19 behind wall 273; section of culvert 292 in Trench 18	1:20
25	Notes on contexts 295-304; sketch plans with measurements of Trenches 18 & 19; section of Trench 20 showing cut for manhole 302	1:20
26	Notes on contexts 305-311, 335 & 348-349; plan of Trench 20; plan of wall 335 in Trench 21; plan of boiler room in Trench 20; profile of chamfered scarcements of wall 351 in Trench 20	1:10; 1:20; 1:100
27	Notes on contexts 312-347; plan of Trench 21; plans of walls 320 and 335 in Trench 21; S section of Trench 21 at W wall of St John's Kirk; N section of Trench 21 at 8.80m from W wall of St John's Kirk	1:20; 1:100
28	Notes on contexts 350-369 & 373; plans of new manhole and boiler room in Trench 20; E section of new manhole	1:20; 1:100
29	Notes on contexts 370-372; plans of Trench 20; sample W section of Trench 20	1:10; 1:100
30	Rubbing of mason's mark on lower chamfer course of wall 351	1:1

Appendix 4 Finds Register

Context	Find No	Material type	Details
04		Pottery	1 redware strap handle 5 redware body sherds 1 stoneware body sherd 1 TGE rim sherd
04		Fe	Rectangular ?buckle frame or fastener
04		Fe	Chisel

04		Fe	4 nails; 3 objects
04		Clay pipe	1 stem
04		?rubber/textile/metal wire	Electrical wire fragment (1920s)
04		CBM	3 fragments plaster, each with 1 smooth face (discarded)
04	001	Glass	1 clear vessel/bottle shard
04	002	Glass	4 clear vessel/bottle shard
04		Clinker	1 fragment burnt stone/corroded Fe nail (discarded); 4 fragments burnt stone/slag or cramp (discarded)
04		Stone	4 worked fragments (A, B, D, E); (C discarded)
04		Stone	Sandstone roof tile; broken across peg hole
04		Bone	Mammal rib
04		Mollusc	Oyster: 7 valves, 1 fragment
SS08		Paper, Fe	Degraded printed paper labels with metallic reinforcements
09		Fe	2 nails
09		Stone	Sandstone roof tile; circular peg hole
09		Pottery	3 redware body sherds
09		Mollusc	Oyster: 6 valves
11		Fe	14 nails (1 with wood adhering); 1 nail/object
11		Metal ?Zn	Corroded domed object with hole in centre of upper face. White corrosion product adhering.
11		Pottery	1 SWGW body sherd 1 glazed redware body sherd 1 redware body sherd, slipped white 1 reduced ware body sherd
11	004	Glass	11 clear window shards; moderately denatured (1 thicker shard with mortar adhering to straight edge)
11	003	Glass	1 green bottle neck with black ceramic stopper and rubber washer in situ. Legend on stopper 'GEORGE YOUNGER & SONS ALLOA' around central stylised 'Y'. Moulding marks on neck of bottle
11	005	Glass/Mortar	8 green bottle neck shards with plug of mortar in situ
11		CBM	1 wall plaster fragment with possible painted surface
11		Mollusc	Oyster: 4 valves with mortar adhering; 2 valves without mortar
11		Animal bone	1 sheep/goat ulna 1 sheep/goat upper premolar

11		Burnt ?bone	5 small blackened fragments
14		Stone	Sandstone roof tile
22		Pottery	1 Yorks body sherd 1 redware body sherd
22	012	Glass	1 blackened window shard; heavily denatured; possibly medieval
22	011	Glass	3 clear window glass shards; moderately denatured
22	022	Glass	Complete glass bottle, partly melted by heat, with bitumen adhering and sticky brown liquid contents. Ceramic stopper and wire attachment. Stopper has legend 'G. B. MILLAR. PERTH' in red on white background. Same legend embossed on bottle [George B Millar, aerated water manufacturer, is listed in <i>Leslie's Directory for Perth and Perthshire</i> between 1913–14 and 1921–22; George P Millar in 1923–24; and George & P Millar in 1925–26.]
22		Bitumen	1 lump
22		Clay pipe	1 stem
22		Animal bone	1 large ungulate shaft fragment
22		Fe	1 ?modern nail
22		Fe	5 heavily corroded fragments piping 7 nails, 1 with wood adhering
22		Stone	Sandstone roof tile with peg hole
25		Cu alloy	Buckle frame, rectangular, with horizontal bar bearing 3 pins/spikes. Impressed legend 'SOLIDE' on bar. 19th/20th century, perhaps for webbing/canvas
25		Metal	Modern screw with green corrosion products.
25		?Fe	Flat rectangular plate/boss
25		Fe/wood	Composite Fe knife with wooden handle. Socketed blade. 19th/20th century
25		Fe	Chisel/large nail. Coarse mortar/plaster adhering
25		Fe	1 large tubular pipe with circular flat head or corroded disc with central circular vent/hole. Bent at opposite end to 'head'
25		Fe	7 nail fragments
25		Fe	8 heavy rectangular plates 1 curved pipe fragment 1 rectangular plate with Fe pipe adhering
25	007	Glass	4 clear window shards; slightly denatured
25	008	Glass	2 moulded ridged clear window shards (modern; 1 with

			putty adhering)
25		CBM	4 pieces wall plaster (1 painted red); discarded
25		Ivory	3 fragments of organ/harmonium/piano key
25		Bone	Mammal rib
26		Flint	Lithic. Possibly medial section of flint macroblade in local East of Scotland flint. Probably later Early Neolithic.
26		Pottery	1 redware rim/strap handle 1 ?Yorks rod handle 4 SWGW body sherds 1 redware base sherd 1 redware rim sherd 9 redware body sherds 1 greyware body sherd
26		Cu alloy	Part of D-shaped buckle frame (bar broken off) 2 rolled tube fragments 1 cut wire fragment
26		Fe	1 object 8 nails, 4 fragments 1 small, flat square plate fragment
26		Mollusc	1 mussel valve; 23 oyster valves and 7 oyster fragments
26		CBM	4 plaster fragments (3 painted red-brown)
26	009, 010	Glass	3 blackened (?sooted) window shards; possibly medieval? Moderately denatured 1 clear window shard; slightly denatured
26		Stone	1 ?black marble fragment with thin skin of plaster on one surface
28		Stone	1 fragment roof tile, micaceous sandstone (discarded)
28		Pottery	1 SWGW body sherd 1 redware body sherd
28		Mollusc	3 oyster valves
39		Pottery	1 SWGW strap handle with stabbed decoration 3 SWGW body sherds 4 redware body sherds 1 greyware body sherd
39		Fe	1 object
39		CBM	1 fragment plaster (discarded)
39		Bone	1 fish bone 2 sheep/goat mandible fragments 1 bird ulna 3 mammal fragments
42		Bone	1 fish bone 2 mammal fragments

55		CBM	1 tile fragment
55		CBM	1 fragment ?modern wall plaster
55		CBM	1 fragment drain pipe
55		CBM	3 TGE tile fragments (19th/20th centuries; 2 glazed brown, 1 glazed red)
55		Pottery	1 TGE handle (cup) 1 redware rim sherd
55		Glass	5 clear window shards
55		CBM	1 fragment mortar (discarded) 1 pebble encrusted with mortar (pointing?); discarded
55		Stone	1 slate roof tile; pegged with one small drilled hole in corner (discarded) 1 sandstone roof tile; circular peg hole
55		Stone	Worked fragment (M)
55		Cu alloy/?plastic	Cu wire, double-stranded, with ?plastic outer covering
55		Pb/Fe	Pb object with Fe core
55		Pb	Flattened tube
55		Fe	Slightly curved Fe plate
55		Fe	?knife blade/chisel; coated with mortar
55		Fe	23 nails
62		Pottery	3 redware rim sherds 6 redware base sherds (1 with mortar adhering)
62/us		Pottery	1 ?SWGW body sherd
62		Glass	4 clear window shards 1 blackened/sooted window shard 1 clear bottle rim, neck and shoulder All light-moderately denatured
62/us	014	Glass	2 clear window shards, blackened/sooted
62/us		Flint	4 natural black flint nodules
62		Stone	1 slate fragment with Fe adhering (discarded)
62		CBM	1 ?tile fragment, redware, brown glaze; medieval 2 TGE tile fragments; 19th/20th c
62		CBM	1 piece plaster with paint traces 2 pieces plaster (discarded) 2 pieces mortar (discarded)
62		Fe	Rectangular-bladed implement, possibly masonry chisel, with ring of Pb surrounding tang

62		Fe	Rectangular plate with one curved short end. ?hinge
62		Fe	2 large nails (or possibly chisels?) 46 nails 1 hook/bent nail 1 uncorroded nail, probably modern
62		Pb	Window came?
62		Bone	1 cattle first phalange 1 cattle third phalange
62		Mollusc	6 oyster valves; 1 buckie
65		Fe	1 nail 1 ?nail 1 large chisel, encrusted with mortar
65		Stone	Black marble slab
77		Pb	Tube; probably modern
77		Stone	4 slate roof tile fragments; 2 pegged with drilled holes (discarded)
83		Pottery	2 redware body sherds 1 ?SWGW body sherd
83	020	Glass	15 clear window shards; slight-moderate denaturing
83		Glass	Bottle shards in clear glass: 2 base shards 9 body shards 1 shard with 'CO' embossed 1 shard with '50' embossed
83		CBM	1 piece mortar (discarded)
83		CBM	2 TGE tile fragments; brown glaze; 19th/20th c
83		Cu alloy	Coin; probably halfpenny, corroded
83		Fe	1 large bar, rectangular; one end pinched in and finished with semi-circular head. ?3 small rivets in semi-circular end. 5 circular holes pierced through main part of bar. ?hinge
83		Fe	41 nails 1 ?modern nail
83		Fe	Flat circular disc with circular hole in centre
83		?Zn	Flattened triangular tube with white corrosion products
83		Stone	Slate fragment, roughly square in shape, with remnants of peg hole. Possibly trimmed to form gaming counter, but if so, is very crude and rough.
83		Stone	Sandstone roof tile with peghole
83		Bone	1 cattle tooth 2 sheep/goat mandible fragments 3 sheep/goat teeth

			1 mammal fragment
83		Textile	Decayed woven fragments
95		Pottery	1 redware handle 1 ?redware base (sooted internally) 20 red/grey ware body sherds 1 SWGW rim 6 SWGW body sherds 1 red/greyware sherd with incised wavy lines under green glaze
95	021, 022	Glass	1 very small fragment; heavily denatured; medieval 2 other similar sherds, 1 with sugary texture
95	023	Glass	1 clear window fragment ?modern
95		Cu alloy	Pin. Probably wire-wound head
95		Cu alloy	Domed disc-shaped object. ?dress fitting?
95		Fe	Large nail/small chisel
95		Fe	49 nails 1 flat ?disc shaped object
95		CBM	1 brick/tile fragment (discarded)
95		CBM	1 daub fragment; straw impressions (discarded)
95		CBM	8 mortar/limestone fragments (discarded)
95		Wood	2 bags rotted wood fragments
95		Bone	1 mammal rib
95		Bone	1 cattle tooth (lower M3) 1 small mammal (cf rat) incisor 1 bag small mammal bones (cf mouse)
95		Mollusc	4 oyster valves
97		Pottery	2 redware base sherds 2 redware body sherds
97		Glass	1 green bottle base; moulded 1 green bottle body shard, embossed [E]DINB[URGH] 6 plain green bottle body shards
97	025	Glass and Ceramic	1 green bottle neck and shoulder. Ceramic stopper in situ. Moulded stopper embossed 'WRIGHT. PERTH' [John Wright & Co (Perth) (brewers: 1852–1964)] 1 body shard embossed 'T'
97		Fe	1 nail/rivet with wood adhering 1 nail
97		Metal	1 fragment white/grey corrosion products
97		Bone	1 cattle upper premolar
97		Bone	1 small mammal incisor

108		Pottery	1 body sherd, pink fabric, slipped white 3 body sherds redware
108		?Pottery	1 sherd, heavily gritted 'fabric' with black vitreous glaze inside and out. Heat damaged?
108		CBM	1 piece plaster with ?hair impressions on one surface
108		Stone	Sandstone moulding
108	026, 027, 028	Glass	1 clear window shard; mortar adhering, moderate denaturing 1 thicker clear window shard, slight denaturing 2 intermediate thickness clear window shards; slight – moderate denaturing 3 thin clear window shards (1 with mortar); moderate denaturing 1 very small fragment, stained by Fe
108		CBM	Rough mortar with Fe staining
108		Cu alloy	Pin with traces of tinning?
108		Fe	13 nails 2 nail fragments 3 nails with wood adhering
108		Wood	Pencil fragments Wet wood fragments
133		Mollusc	2 oyster valves
147		Fe	5 nails
150		Fe	3 nails
150		CBM	4 pieces wall plaster 2 ?mouldings
150		Animal bone	Small mammal tibia 4 other mammal fragments
151		CBM	25 fragments plaster (discarded)
151		CBM	2 brick/daub fragments (discarded)
151		Cu alloy	Pin, in 2 fragments, with wire-wound head
151		Animal bone	1 pig tooth small fragments unidentified mammal
151		Fe	4 nails
153		CBM	3 fragments wall plaster (discarded) 1 fragment brick/daub
153		Animal bone	1 rodent tibia 1 amphibian humerus
153		Mollusc	1 oyster valve (mortar adhering)

153		Bitumen	1 fragment
154		Fe	1 nail
154		CBM	1 piece wall plaster (discarded)
154		Animal bone	1 mammal fragment
163		Fe	1 nail shaft
164		Stone	2 black marble fragments from pillar base (sample)
171		Stone	Sandstone roof tile; circular peg hole
175		Fe	3 nails
175		Pb	1 window came (mortar adhering)
175		CBM	1 fragment rough mortar (discarded)
175		Heated residue	1 piece burnt, vitreous material
175		Mollusc	1 oyster valve
175		Stone	1 piece black marble (discarded)
182		Stone	Worked
185		Pottery	1 redware base 1 red/greyware body sherd
185		Pottery/CBM	1 redware sherd, possibly tile
185		Fe	2 nails 1 hooked object 1 corroded object/nail
185		Bitumen	1 piece; mortar adhering to underside
185		Mollusc	5 oyster valves; 1 with mortar adhering
185		Animal bone	2 mammal fragments 1 amphibian fragment
185		Stone	Limestone sample
185		Stone	1 slate phyllite fragment with peg hole on one edge (discarded)
185		Stone	1 stone roof tile with mortar adhering to one surface and peg hole on one edge (discarded)
185	A	Stone	worked fragment
188		Mollusc	1 oyster valve
193		Pottery	1 SWGW body sherd
193		Glass	2 distorted clear glass tubes

193		Fe	4 nails
193		Fe	Rectangular plate with 2 screws attached
193		?Al	Thin triangular plate (Al/Zn)
193		CBM	1 unglazed tile; embossed 'Minton' on reverse 1 unglazed square tile, mortared on reversed 1 broken yellow-glazed modern tile. Distinctive keying pattern on reverse (circles and wavy lines)
193		Stone	1 fragment with smooth face on one broken edge (discarded) 2 worked fragments
195		Pottery	1 ?SWGW body sherd 1 red/greyware body sherd
195		Stone	2 limestone fragments with tool marks
227		Fe	2 nails
227		Mollusc	2 oyster valves
231		Stone	Ovoid ?granite pebble with thin skin of natural calcite/mortar adhering. Possibly slingshot?
231		Mollusc	1 oyster valve
234		Fe	9 nails
234		CBM	5 fragments mortar/plaster (discarded)
234		Stone	1 square tile with two opposite corners clipped
234		Clay pipe	1 stem
248		Mollusc	2 oyster shells
248		Animal bone	1 bird bone
248		Animal bone	1 bag cattle, sheep/goat bones 2 cattle teeth
248		Fe	1 nail 1 ? pipe fragment
248		Burnt material	1 fragment (discarded)
251		Cu	1 small ?coin/disc
251		Stone	1 roof tile fragment bevelled on one edge, micaceous sandstone (discarded)
251		Animal bone	1 bag mammal bone
251		CBM	1 piece mortar (discarded)
255	034	Glass	1 denatured bottle fragment

255		Stone	?broken counter in micaceous sandstone
255		Burnt material	1 small fragment (discarded)
255		Animal bone	1 bag mammal bone 1 sheep/goat tooth
258		Mollusc	1 oyster shell
260		Plastic	1 fragment (discarded)
260		Stone	1 roof tile with peg hole (discarded)e
260		Animal bone	1 cattle tooth 1 cattle bone
263		Animal bone	1 bag cattle and sheep/goat bones
265	035	Glass	1 denatured bottle fragment
267		Pb	Lead window came
267		Stone	5 small fragments abraded flint pebble 2 small pieces ?roof tile 1 bag limestone fragments (discarded)
267		Mortar	1 small fragment (discarded)
267		CBM	1 fragment daub, 1 fragment ?brick (discarded) 2 lumps mortar (discarded)
267		Fe	3 nails 1 corroded fragment with wood impressions
267		Animal bone	2 bags sheep/goat bones 2 bags cattle and sheep teeth 1 small mammal bone
268		Animal bone	1 mammal rib
274	036	Glass	1 denatured bottle fragment
274		Stone	1 fragment with mortar adhering
274		Animal bone	2 bags cattle and sheep/goat bone 1 bag dog vertebrae
274		Wood	1 small fragment (discarded)
274		Mortar	1 piece (discarded)
275		Animal bone	2 bags cattle and sheep/goat bone
275		CBM	1 fragment tile/brick & 1 fragment daub (discarded)
275		Mollusc	Oyster fragments
275		Plastic	1 fragment ?pipe
279		Animal bone	1 bag burnt fragments

			3 bags cattle and sheep/goat bone
279		Mollusc	1 oyster shell
279	037	Glass	3 denatured bottle fragments
279		Stone	1 limestone fragment (discarded) 1 ?worked limestone fragment (discarded)
279		Stone	2 pieces flint pebble
279		CBM	drainpipe fragment found between SK283 and SK285 (discarded)
279		Animal bone	2 mammal fragments found between SK283 and SK285
279		Vitrified material	Stone/Fe (discarded)
286		Stone	1 fragment roof tile
286	038	Glass	1 denatured bottle fragment
286		Animal bone	1 cattle tooth
275	040	Glass	1 bottle base
275	041	Glass	1 bottle fragment, mortar adhering
275	042	Glass	3 bottle fragments
275	043	Glass	6 bottle fragments
248		Pottery	1 SWGW base sherd 6 med body sherds
251		Pottery	9 redware/greyware body sherds
255		Pottery	1 med body sherd
263		Pottery	1 TGE body sherd
265		Pottery	2 TGE sherds (mortar adhering)
267		Pottery	1 SWGW strap handle 1 SWGW rim sherd 15 SWGW body sherds 2 redware base sherds 2 redware strap handle 4 redware rim sherd 1 redware handle junction 4 redware body sherds 1 bag small red/greyware sherds 1 slipped redware body sherd 2 cf Yorks body sherds
274		Wood	1 twig
274		Pottery	3 TGE sherds 1 redware sherd
274		CBM	1 piece plaster, corner on two edges

274		Animal bone	1 cattle mandible
275		Pottery	2 TGE sherds
275		Pottery	3 SWGW body sherds 8 red/grey body sherds 1 redware rim sherd 2 ?shelly body sherds
278		Pottery	4 sherds TGE
279		Pottery	1 sherd TGE
279		Pottery	1 redware body sherd found under SK20
279		Pottery	3 med body sherds found in SK18
279		Pottery	1 SWGW base sherd 12 med body sherds
286		Pottery	5 med body sherds
299		Pottery	1 redware strap handle
301		Animal bone	1 sheep/goat molar 1 bag cattle bones
301		Pottery	1 redware body sherd
301		Stone	1 mortared fragment (discarded)
303		Fe	1 nail
303		Pottery	1 redware rim sherd 13 med body sherds
303		Animal bone	1 bag fish bone 1 bag bird bone 1 bag cattle and sheep/goat bone
303		Burnt material	2 fragments 1 piece charcoal
303		CBM	8 fragments burnt daub
309		Animal bone	1 bag bird bone 1 bag cattle and sheep/goat bone
309		Pottery	1 redware spout/rim sherd 1 redware rim sherd 25 med body sherds
309		Burnt material	2 fragments (discarded)
309		CBM	1 fragment daub (with ?straw impressions)
315		Pottery	14 med body sherds
315		CBM	1 med ?tile sherd 1 small piece mortar (discarded) 2 small pieces painted plaster (red)

315		Pottery	1 redware ?waster
315		Stone	1 small roof tile fragment (discarded)
315		Animal bone	1 sheep/goat molar 1 cattle premolar 1 fragment burnt bone 1 bag cattle bone
315		Mollusc	4 oyster shell 1 unidentified shell
327		CBM	1 redware ?floor tile fragment
327		Fe	1 nail
327		Mollusc	1 oyster shell
327		Animal bone	1 sheep/goat bone
328		Animal bone	1 fragment 1 ?offcut
328		Mollusc	2 oyster shells
330		Animal bone	1 bag cattle bone
330		CBM	1 redware ?pantile fragment
335		Animal bone	1 bag mammal bone
344		Pottery	2 redware body sherds
344		Pottery	3 redware strap handles 1 Yorks rod handle
344		Pottery	1 stoneware body sherd
344		Pottery	10 redware and SWGW sherds
344		CBM	2 lumps daub (discarded)
335		Animal bone	1 cattle tooth
344		Animal bone	3 cattle teeth 1 sheep/goat tooth 1 bag cattle/sheep/goat bone
364 & 365		Pottery	1 redware body sherds
365		Animal bone	2 bags cattle bone
364 & 367		Animal bone	1 bag cattle bone
364 & 367		Vitrified material	Burnt daub fused to glassy burnt material (discarded)
364 & 367		Pottery	2 redware body sherds
364 & 367		Animal bone	2 sheep/goat bones

369		Fe	2 nails
369		Pottery	4 SWGW body sherds
369		Pottery	1 TGE body sherd
369		Pottery	1 vitrified sherd
369		Pottery	1 redware rim sherd 9 redware body sherds
369		CBM/Pottery	1 redware sherd (discarded)
369	039	Glass	1 ?window fragment
369		CBM	1 lump daub
369		Animal bone	1 bag cattle fragments 1 sheep tooth 1 bird bone
370		Fe	1 bar
370		Stone	1 roof tile fragment; micaceous sandstone (discarded)
370		CBM	1 piece ?daub (discarded)
370		Animal bone	2 cattle fragments
370 & 371		Pottery	2 TGE sherds
370 & 371		Pottery	2 redware strap handles 1 redware rim 6 red/greyware body sherds
370 & 371		CBM	1 piece coarse brick (discarded)
370 & 371		Fe	1 nail 1 corroded lump
370 & 371		Animal bone	1 cattle bone
373		Pottery	1 redware rim sherd 1 SWGW body sherd
373		Mollusc	1 oyster shell
373		Animal bone	1 bag cattle bone
373		Fe	1 nail
General burial soil		Pottery	4 SWGW body sherds 1 ?redware body sherd
General burial soil	029	Glass	1 heavily denatured window shard; probably medieval
SS08		Paper & Cu alloy	Fragments of cut up labels, 24-29mm wide, perforations at one end with ring reinforcements; cu alloy stud/nail/pin head; printed script partially legible: 'BROTHERS/ ...LWICH'; [M?]ATION/ [c]cordance

			<p>wi/ LE MAKERS'; '...tect Insulation Re.../... Immersion in .../[...] [electri]fication'; '...ordance wi[th]/ E MAKERS/ [Insulation]/ mersio.../ [elect]'; 'ulation [R?]esio.../ ion in [...] .ificati...'; '...o Insu[l].../ immer.../ ...10 yards/ ...0 Megohm'; [?]ATIO.../ [cordance] with / ...[E]RS'; ' S BROTH/ OOL...'; 'BROTHER/ ...LWICH'; 'Insul[ation] R[?]/ Immer[...]/ & [electrification]/ 10 yards/ ...0 M...' [Siemens Brothers, Woolwich?]</p>
u/s, T20		Pottery	<p>1 redware rod handle 1 redware rim 5 red/grey body sherds</p>
u/s, T20		Animal bone	<p>1 shaft fragment</p>
u/s		Pottery	<p>3 SWGW body sherds 7 redware sherds</p>
u/s		Pottery	<p>1 Yorks body sherd 2 red/greyware sherds</p>
u/s		CBM	<p>1 piece plaster moulding</p>
u/s, T19		Animal bone	<p>1 bag animal bone</p>
u/s		Animal bone	<p>1 bag animal bone</p>

Appendix 5 Discovery & Excavation in Scotland Entry

LOCAL AUTHORITY:	Perth and Kinross
PROJECT TITLE/SITE NAME:	St John's Kirk
PROJECT CODE:	PEX171
PARISH:	Perth
NAME OF CONTRIBUTOR(S):	David Perry
NAME OF ORGANISATION:	Alder Archaeology Ltd
TYPE(S) OF PROJECT:	Watching brief
NMRS NO(S):	NO12SW 41.00
SITE/MONUMENT TYPE(S):	Church, graveyard
SIGNIFICANT FINDS:	Neolithic flint blade; medieval pottery; human bones; architectural fragments, including black limestone ('Tournai marble')
NGR (2 letters, 8 or 10 figures)	Site centred on NO 11942 23546
START DATE	15 September 2010
END DATE	27 May 2011
PREVIOUS WORK (incl. <i>DES</i> ref.)	<i>DES</i> 2003, 111-12; <i>DES</i> 2005, 118
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	<p>Alder Archaeology undertook an archaeological watching brief on the renovation and alterations at St John's Kirk, Perth. The work was undertaken during the period September to December 2010 inside the church, and in April and May 2011 outside the church. Much disarticulated human bone was found inside the church, as well as the partial remains of 11 skeletons. (Where possible, the skeletons were left in situ; all bones found inside the church were reburied inside the church.) A number of architectural stones were found, including pieces of black limestone ('Tournai marble'), as well as medieval pottery, animal bone, nails and a Neolithic flint blade. Foundation scarcements for the N and S walls of the nave survived as well as foundation plinths for the pillars of the N and S arcades of the choir.</p> <p>Outside the church, in the former graveyard, more disturbed human bones and the partial remains of 16 skeletons were found. (Bones found outside the church were reburied in Wellshill Cemetery.) The graveyard was found to extend at least as far W as the pavement outside the City Hall and as far N as the entrance to Kirkgate. On the W side of the church, remains of the W and E walls of the Meal Market were found, as well as of two walls that were cut into graveyard near the church. On the N side of the church, a former cellar/boiler room for the East Church was revealed and a double chamfered scarcement, on one stone of which was a mason's mark. The graveyard was found to have extended over the medieval midden layers of the burgh at the S end of Kirkgate.</p>
PROPOSED FUTURE WORK:	None
SPONSOR OR FUNDING	Trust for St John's Kirk

BODY:	
CAPTIONS FOR ILLUSTRS	Neolithic flint blade found inside St John's Kirk, Perth
ADDRESS OF MAIN CONTRIBUTOR:	Alder Archaeology Ltd, 55 South Methven Street, Perth PH1 5NX
ARCHIVE LOCATION (intended)	NMRS
EMAIL ADDRESS:	Director@AlderArchaeology.co.uk

Appendix 6 Standard Terms of Reference for all Fieldwork

6.1 Recording Methodology

Alder Archaeology employs a Single Context Recording System that allows full cross-referencing of stratigraphy, finds and environmental samples, as well as site-wide phasing. All features will be planned at scale 1:20, and sections drawn at scale 1:10. Sections and profiles will be drawn and all features will be photographed with metric scale included. Environmental samples will be taken from archaeologically significant contexts, if the analysis of these samples would aid significantly in the interpretation of any features identified.

6.2 Human Remains

If human remains are encountered they will be left in situ and the local police will be informed. If removal is required this will take place in compliance with Historic Scotland's Policy Paper *The Treatment of Human Remains in Archaeology*.

6.3 Products and Reporting

A Data Structure Report will normally be prepared within a period agreed within the Written Scheme of Investigation/ Project Design, after the completion of the fieldwork. This forms the basic level of reporting. Further reporting may be required on the basis of discoveries made during excavations.

A copy of the report and the project archive will be deposited in the NMRS. Further copies will be sent to the client, LAAO and others, as appropriate.

6.4 Artefacts

Finds of objects will be subject to the Scots Laws of Treasure Trove and *Bona Vacantia*. We will report such finds, if recovered, with supporting documentation to the Secretariat of the Treasure Trove Panel for disposal to the appropriate museum.

6.5 Discovery and Excavation in Scotland

A brief summary of the results will be submitted to *Discovery and Excavation in Scotland*.

6.6 General Conditions and Health and Safety

We adhere to the Code of Conduct of the Institute for Archaeologists.

Alder Archaeology Ltd has public liability insurance of £2,000,000. Details of this can be provided on request.

We operate a strict health and safety policy and conform to the Health and Safety at Work Act. We undertake Risk Assessments on all fieldwork carried out.

Alder Archaeology representatives will at all times wear protective footwear, high visibility clothing and other appropriate clothing. Hard hats will be worn if there is active plant on site or at all times if the site is deemed a hard hat area.

If lightly contaminated deposits are uncovered disposable boiler suits and gloves will be worn. A source of clean water will be made available for staff to clean hands with. If the health risk posed by site contamination is felt to be too high all further archaeological work will stop in that area.