

APPENDIX 1. THE EXCAVATED EVIDENCE: NEW WAVERLEY AREAS PA1(A) AND PA1(B)

A.1.1 Introduction

The work in PA1(A) (NGR: NT2632 7357) consisted of the opening of four machine-excavated trial trenches to evaluate its archaeological potential. PA1(A) covered an area of approximately 40m × 10m, which had until recently been used as a car park; the modern ground surface was approximately 42.8m AOD (Illus 125). An unbonded rubble stone well was revealed in one trench, while sterile sand was encountered within the other three trenches below modern overburden.

PA1(B) (NGR: NT2636 7395) was located to the east of PA1(A), north of the foot of Tolbooth Wynd. It was a strip of land approximately 20m × 14m (Illus 126) and, as with PA1(A), had been used as a car park; the existing ground level was approximately 42.9m AOD. The area was bounded on three sides by substantial stone and brick walls associated with buildings that formerly occupied the site. These walls contained features related to earlier buildings, including fireplaces and blocked openings, recorded during a historic building survey in May 2008 (Sproat 2008). Sproat's survey indicated that some of the upstanding walls could relate to buildings visible on mapping of 1784 (Illus 128), although the majority are of 19th-century and later date.

A field evaluation was undertaken by the City of Edinburgh Council Archaeology Service (CECAS) in 1997 within the PA1(B) area (CECAS 1997), revealing remains of late-post-medieval stone-built foundations, cellars and drains. An archaeological watching brief on the excavation of four test pits around the perimeter of PA1(B) recorded layers of sand with occasional fragments of brick and tile (Clements & Scott 2006). The archaeological works conducted in 2008 by AOC Archaeology involved excavation across PA1(B) with a basal excavation area of 154m² (Wilson 2008c), identifying truncated stone walls and drains and a fireplace. All these features overlay sterile sand over bedrock. Artefacts associated with post-medieval/modern occupation of the site were recovered, including fragments of pottery, clay pipes and a small bone tool.

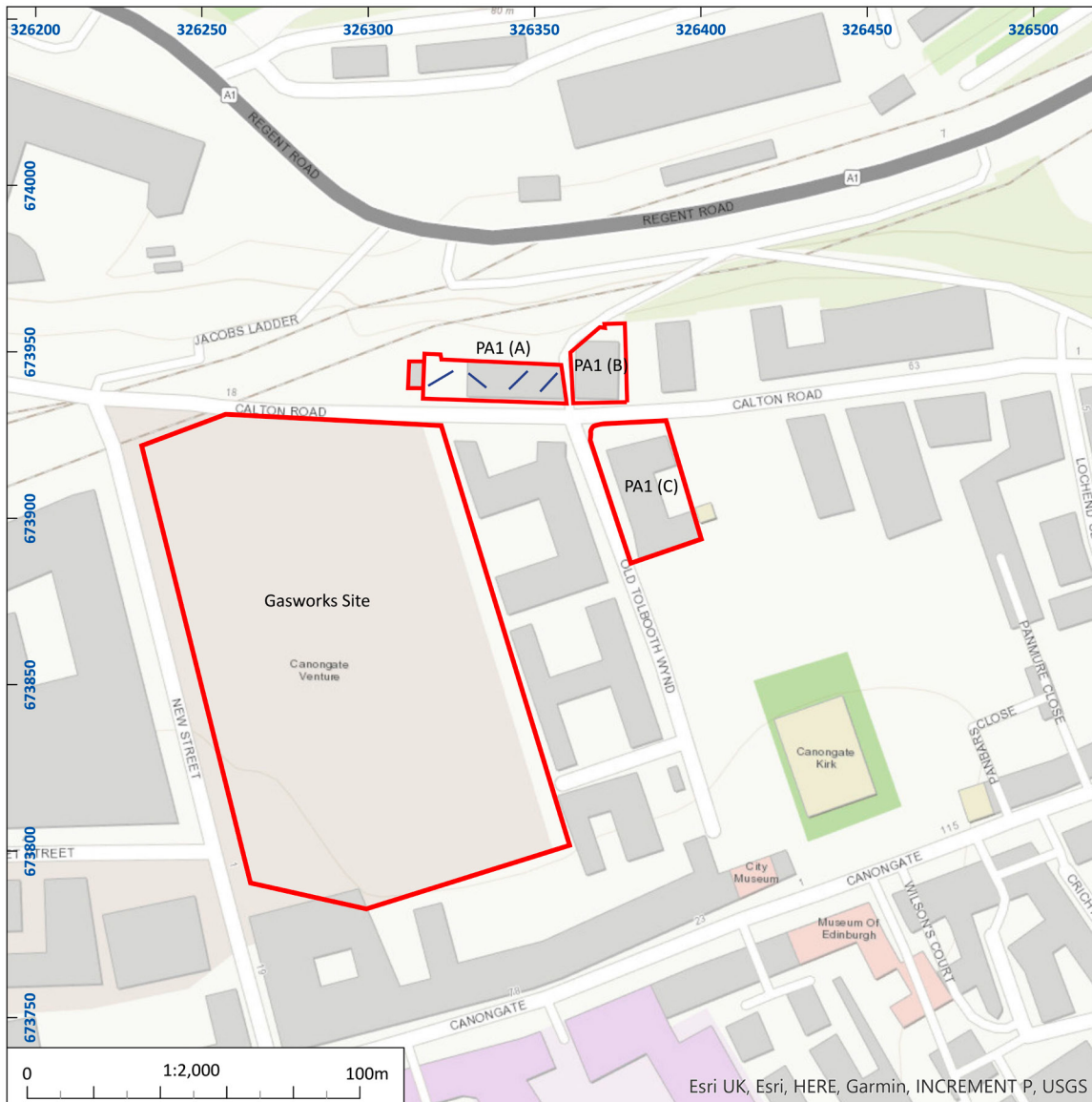
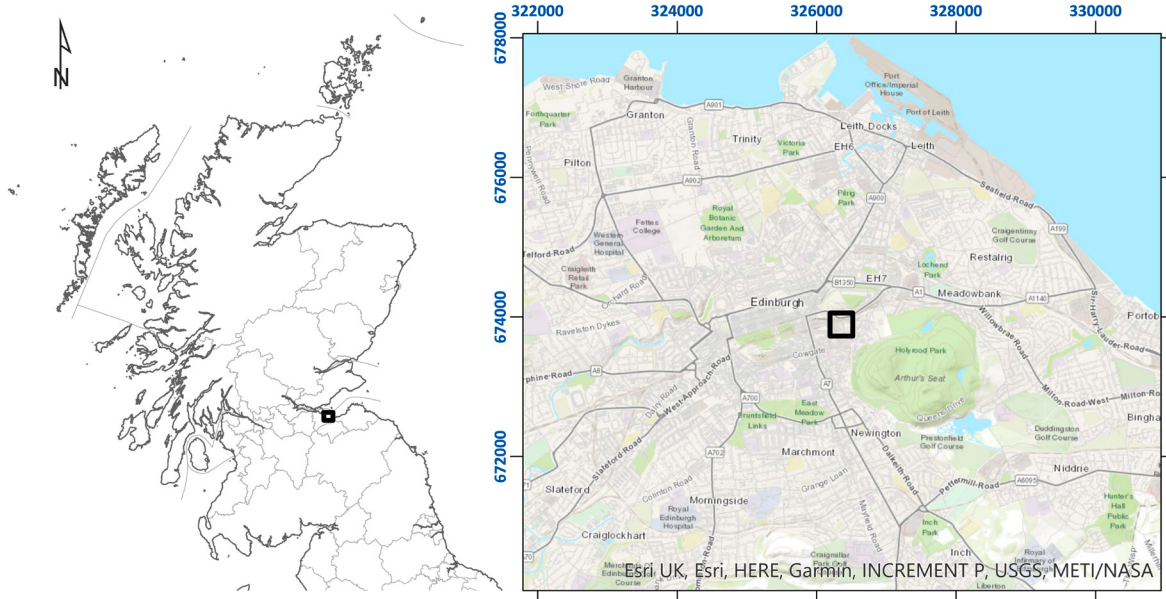
A.1.2 Historic background to PA1(A) and PA1(B)

While the PA1(A) and PA1(B) areas appear to have been undeveloped until the post-medieval period, James Gordon of Rothiemay's map of 1647 (Illus 4) depicts a circular structure in the PA1(B) area. This circular feature appears again on Edgar's map of 1765 (Illus 127), apparently incorporated into the west end of a group of buildings. Kincaid's map of 1784 (Illus 128) depicts buildings across both PA1(A) and PA1(B), indicating that the north side of Calton Road (formerly known as the North Back of the Canongate) below Calton Hill had been largely developed by the end of the 18th century. The buildings north of Calton Road appear to have been reconfigured by the time of Kirkwood's map of 1817 (Illus 129), with the circular structure and an adjacent courtyard no longer evident.

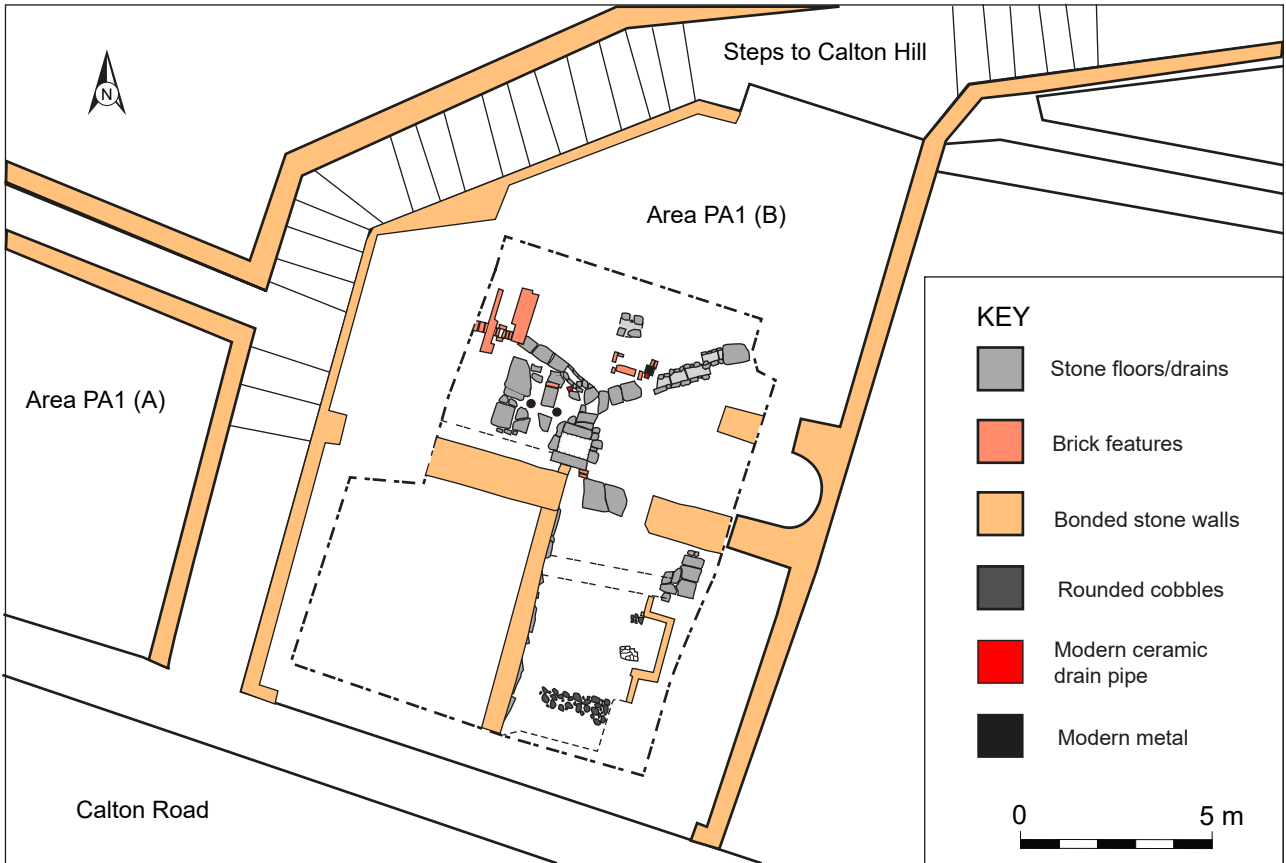
However, it is not until the First Edition Ordnance Survey map of 1854 (surveyed 1852) (Illus 130) that the area is shown in detail. The row of buildings along Calton Road in the areas of PA1(A) and PA1(B) are marked as 'Amphion Place', with the 'Calton Hill Brewery' to their immediate east. The path dividing the two areas is marked as the 'Calton Hill Stairs'. This building layout is also visible on the later Ordnance Survey 1877 edition (Illus 20). Workshops belonging to the papermakers Cowan & Company were established at 1 Amphion Place by the mid-1860s (Scottish Book Trade Index).

A.1.3 Results of the PA1(A) archaeological works

In Area PA1(A) beneath modern hardstanding and overburden, between 0.40m and 0.60m of rubble and mixed deposits overlay 2.1m of yellow sand over the natural bedrock. In Trench 2 were the remains of a stone well (Illus 131) constructed of a single course of undressed rubble with no visible bonding material. It had an internal diameter of 1.7m and was over 3m in depth, its base not being reached during excavation. The well had been infilled with a mixed rubble and clay deposit and its vertical cut through the sand was filled with a brown clayey sand deposit, which contained no artefacts. In Trench 4, at the east end of PA1(A), large blocks of sandstone rubble were recorded within overburden.



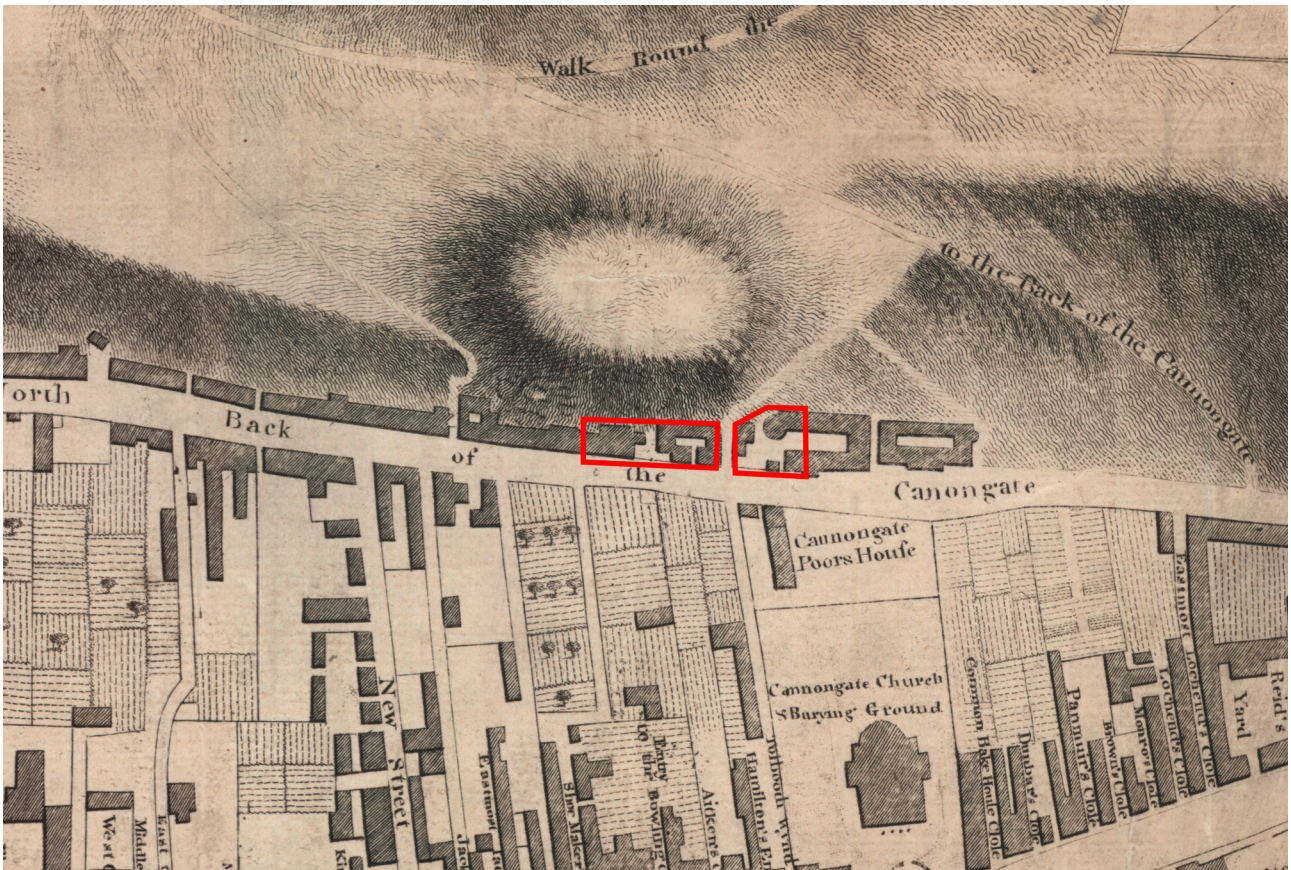
Illus 125 Location of PA1(A) and PA1(B) archaeological works



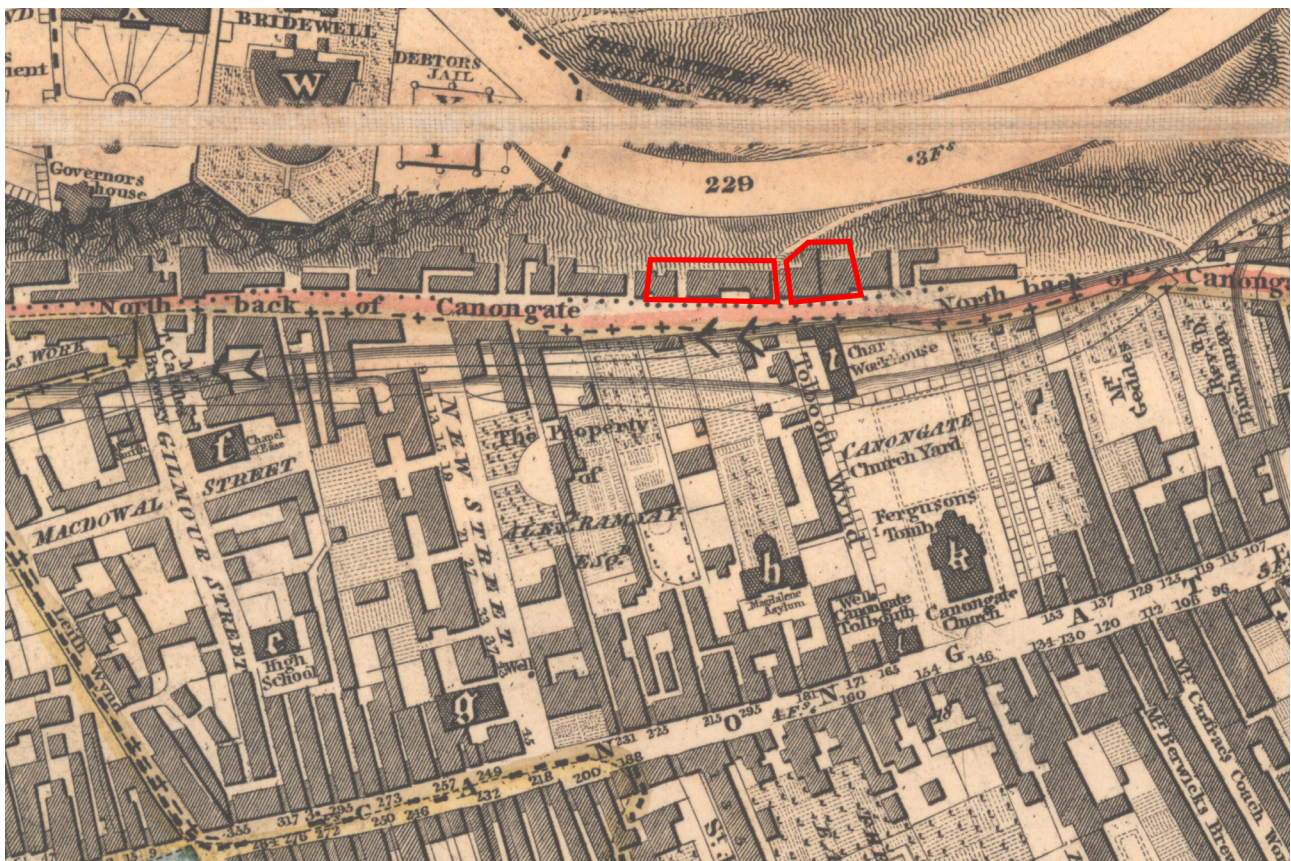
Illus 126 Plan of excavation area PA1(B)



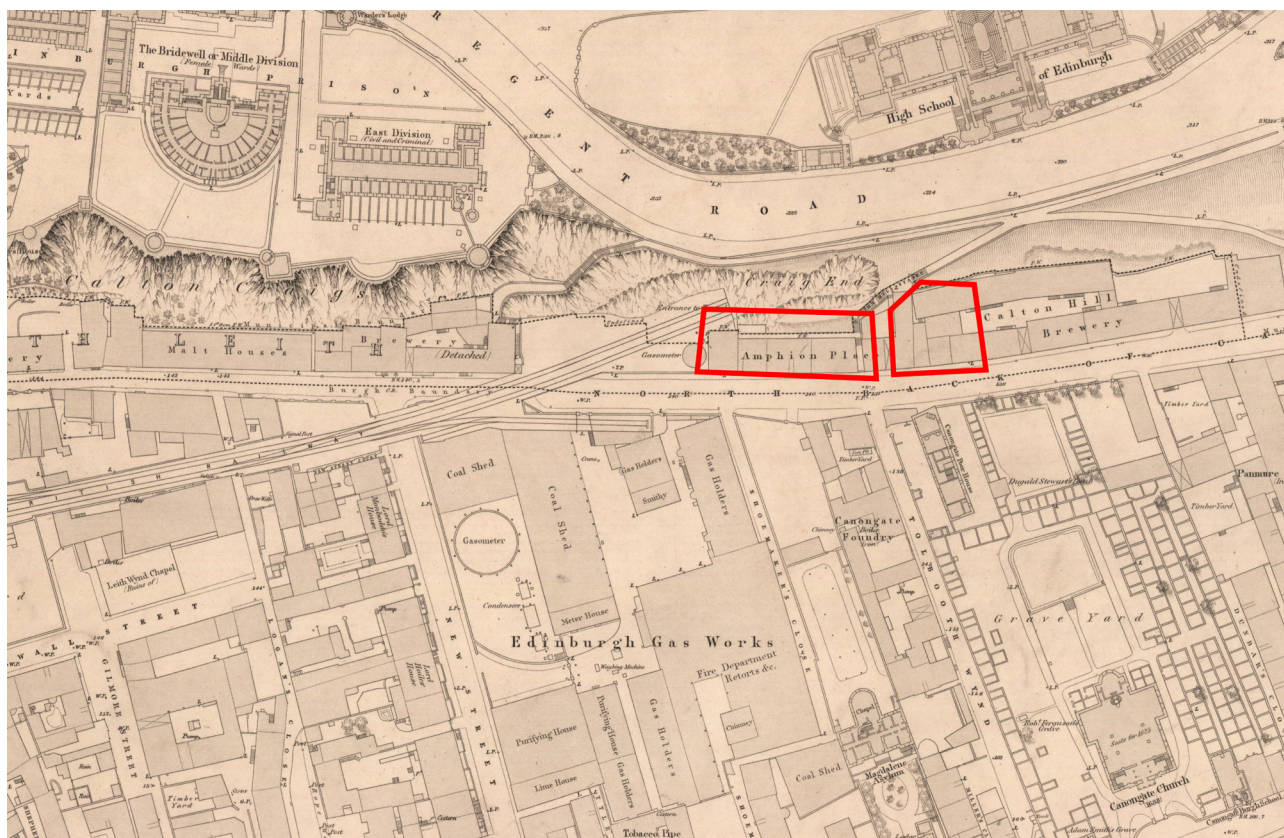
Illus 127 Extract from Edgar's map of 1765



Illus 128 Extract from Kincaid's plan of 1784



Illus 129 Extract from Kirkwood's map of 1817



Illus 130 Extract from Ordnance Survey map, surveyed 1852

A.1.4 Results of the PA1(B) archaeological works

Across PA1(B) modern hardstanding and overburden covered between 0.20m and 0.60m of rubble and mixed deposits overlying significant archaeological features (Illus 132), the earliest of which were cut into the sterile yellow sand (8028) overlying the bedrock, which had been cut back into the hill.

A.1.4.1 Fireplace (8018)

The earliest feature recorded was a stone-built fireplace (8018; Illus 133), with two phases of construction in rubble masonry.

The fireplace was 1.65m wide and stood to a maximum height of 1.4m. The northern element of the fireplace was of significantly higher quality than the southern element, topped by a projecting stone corbel. It was stratigraphically earlier than the poorly constructed southern part, which appeared to mimic the original element, incorporating a stone corbel. The wall line on each side of the fireplace had been truncated, to the north by an east/west cut (8026), which contained a fill of angular stone and

clay (8025). Two fragments of post-medieval pottery (SF5) were recovered from a layer of burnt red sand (8030) below the southern wall of the fireplace. In front of the fireplace were floor surfaces formed of stone slabs and cobbling, including an area of heat-affected stone (8019). To the south of the fireplace was an area of large rounded cobbles (8021).

A.1.4.2 Drainage structures

In the north of PA1(B) was a complex of stone-capped drainage features, (8001) and (8013), cut into sand (8028) and leading into a central sump/silt trap (8029). To the west, drain (8001) was constructed of large capstones over stone rubble side walls and a bedrock base; it ran north-west/south-east before turning towards the south to form a junction with drain (8013) and sump (8029). Drain (8013) (Illus 134), which ran from the north-east towards the central sump to the south-west, was of similar construction to drain (8001) but had a base of irregular flagstones.

The sump (8029) (Illus 135) internally measured 0.83m by 0.60m in plan and was 1.2m in depth. Its



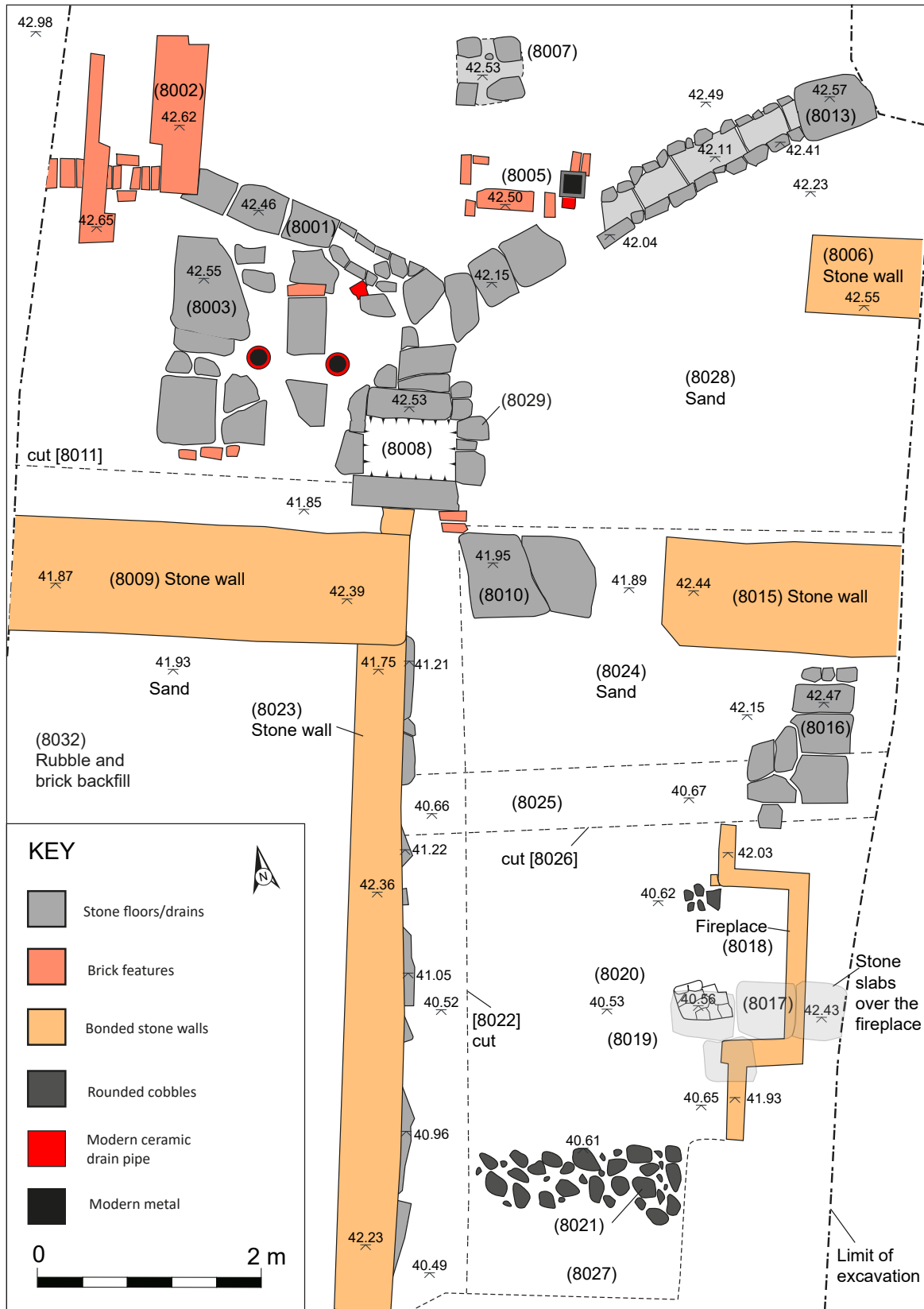
Illus 131 Remains of a stone well in Trench 2, PA1(A) area

north, east and west upper walls were constructed of coursed rubble, bonded with lime mortar, while the south wall comprised a large stone vertical slab. This formed a barrier, 0.55m in height, leaving a gap at the base through which the contents of the drains could flow. The lower section of the sump was constructed of unfrosted red brick. The north wall included a small square opening, approximately 0.25m from the top of the structure, from which the fluid from the drains to the north would have flowed. The base of the sump comprised bedrock to the north and a crushed brick layer to the south.

The brown sandy upper fill of the sump, (8008), contained fragments of clay tobacco pipe, animal bone and ceramic sherds. The lower fill, (8012), a yellow sand with clay lenses, contained fragments of clay tobacco pipe and three small bone tools, SF2a, possibly used in lacemaking (Illus 137, see A.1.6.4 ‘The worked bone’ below).

A.1.4.3 Floor surfaces and walls

To the south of drain (8001), flagstones (8003) may have formed a truncated floor surface above



Illus 132 Plan of the PA1(B) excavation area



Illus 133 Early stone-built fireplace (Context 8018), PA1(B) area



Illus 134 Drain (8013) after excavation, PA1(B) area



Illus 135 Stone-built sump (8029), PA1(B) area

the drains and sand (8028). Further sections of truncated flooring were recorded to the south as (8010), (8016) and (8017). While these separate areas of flooring could not be connected, they were all located at approximately the same level (*c* 42.5m AOD).

Sump (8029) was truncated on its southern side by the remains of a north/south-aligned stone wall, (8023), bonded with coarse grey cement. This feature was at least 7m in length, with a maximum surviving height of 1.25m. Its stone foundation sat over a thin layer of rubble which overlay sand (8028).

The eastern terminal of the base of a later east/west-aligned stone wall (8009) was 1.2m wide and sat above the north end of wall (8023). This later wall was also bonded with cement, and its western end was in alignment with a stone buttress located against the boundary wall, 6m to the west. A 5m gap separated (8009) from a further east/west-aligned, 0.95m wide, stone wall section, (8015), of similar

construction. This was aligned with a buttress supporting the eastern boundary wall and stood over redeposited yellow sand with angular stone inclusions, (8024) above sand (8028). Also overlying (8024), in the gap between the two sections of wall, was truncated flagstone surface (8010). To the north of wall (8015) was a section of less substantial stone wall remnant, (8006), again in line with a stone buttress on the eastern boundary wall.

A.1.4.4 Late features

Later features included an area of brick flooring, (8002), approximately 1.6m × 1.2m in plan, comprised of unfroged bricks bonded with coarse grey cement. This was constructed over a stone-capped drain, (8001). To the east was a further area of bricks associated with a square metal drain cap (8005). A large collection of animal bones (including semi-articulated horse remains) was recovered from rubble infill (8032) bounded by walls (8009) to the north and (8023) to the east.

A.1.5 The historic building recording

Diana Sproat

In conjunction with the archaeological fieldwork in areas PA1(A) and PA1(B), a programme of historic building recording was undertaken (Sproat 2008), the conclusions of which are summarised here. The survey of area PA1(A) recorded a simple west-facing section of wall, identifying a number of blocked features including two fireplaces. The survey of PA1(B) exposed an east-facing and a south-facing section of upstanding wall. The recorded walls contained various features related to buildings that formerly stood on this site, including fireplaces and blocked openings. The earliest phase of the walls possibly dated back to the 18th century, while later additions and alterations occurred during the 19th and 20th centuries.

A.1.5.1 PA1(A)

Buildings on the PA1(A) site were first established between the 1760s and the 1780s, first appearing

on Kincaid's map of 1784 (Illus 128). There appears to have been considerable development by the beginning of the 19th century and by the time of Kirkwood's map of 1817 (Illus 129) a new layout of buildings is apparent, the remains of which were visible during the building recording work. It is not known, however, whether the buildings from the late 18th/early 19th century were incorporated into a larger building plan around the mid-19th century, or if they were completely demolished and replaced.

The main access to the building in PA1(A) was probably in the south wall. A range and a fireplace (Illus 136), identified in the west-facing elevation, probably represent remains of a kitchen area or perhaps a scullery. The building was at least two storeys in height with a bricked-up first-floor window to the north. Ordnance Survey mapping indicates that the buildings were present until at least 1931 (not illustrated).



Illus 136 Detail of the range and fireplace, west-facing elevation

A.1.5.2 PA1(B)

Buildings have stood on PA1(B) since the middle of the 18th century, although a circular structure pre-dates these. However, the recorded structures were probably established no earlier than between 1784 and 1817. In the wall to the west, a buttress was present which marked a division between buildings identifiable on Ordnance Survey maps of 1852 (Illus 130) and 1877 (Illus 20). This also appears to mark separate phases of the building, with the pre-1817 building to the south and the later, mid-19th century, building to the north, incorporating a living space. The wall to the south may have been rebuilt at a later stage, due to drastic changes visible in the stonework, perhaps when the Calton Hill Stairs were established in the early 19th century. The south-facing wall had several phases visible, with the building stepped back against Calton Hill. In the centre of the ground floor there were blocked windows, possibly related to a mid-19th-century structure that was later demolished. A north/south wall could also be seen to the east of this, representing the north/south wall visible on both the 1852 and the 1877 Ordnance Survey maps. A first-floor window, recorded on the west wall of PA1(B), contained a date stone of '1900', which may indicate a reuse of the stonework, or a rebuilding or raising of the structure at first-floor level.

A.1.5.3 Conclusion

The wall remains recorded on the PA1(A) and PA1(B) areas demonstrate multiple phases of the former buildings in the area. In the 1860s, the papermakers 'Cowan & Co' had a workshop at 1 Amphion Place (Scottish Book Trade Index). It is likely, therefore, that these buildings were set up as workshops and commercial premises, although the presence of fireplaces suggests that occupation of some parts of the buildings may have had a more domestic nature, despite the large industrial premises that developed to the east and on the opposite side of Calton Road.

A.1.6 The ecofact and artefact assemblages

A.1.6.1 The animal bone

Jackaline Robertson

A small quantity of animal bone (3.3kg) came from a sump and rubble layer in the PA1(B) area of

excavation and was subject to environmental analysis to identify the bones to species and element, where possible; no animal bone was found at the adjacent PA1(A) site. The methodology used to identify and record the animal bone is outlined in full within the PA1(B) animal bone report included in the site archive.

The faunal assemblage was found to be small, comprising 58 individual bones which were recovered from rubble layer (8032) and from the fill (8008) of sump (8029). Nineteen fragments were identified as the semi-articulated remains of a horse, two as cattle, and a single bone was recognised as sheep/goat. The remaining 36 bones could not be identified to species but are described as large mammal bone. Preservation of the remains varied from poor to excellent but most were of moderate condition.

The horse bones (Q=19) are consistent with the burial of semi-articulated remains within rubble layer (8032). The skeletal elements present include the thoracic vertebra, lumbar vertebra, humerus, radius, ulna, patella, femur, tibia, astragalus and cuneiform. Examination of epiphyseal fusion indicates that this animal was older than three years at the time of death. Also from Context (8032) were part of a cattle skull and horn. A single sheep/goat tibia was recovered from the fill of sump (8029). The proximal epiphyses were unfused, indicating an animal younger than 3.5 years at the time of death.

Little evidence of butchery survived. Two small and shallow cut marks were noted on one of the large mammal bones but insufficient details survive to prove useful and there was no evidence of pathology or trauma affecting any of the bones examined.

The recovery of horse remains from post-medieval and later urban contexts in Scotland generally, and Edinburgh specifically, is not uncommon. Similar evidence has been noted among the faunal assemblages recovered from a ditch on East Market Street (Robertson 2018: 42–3) and Advocate's Close, Edinburgh (Robertson 2017: 53). While it was not possible to establish the cause of death for the horse, the semi-articulated state of burial strongly implies that this animal's carcass was not butchered for secondary products (eg skin, glue etc). Instead, it is likely that this horse was buried fully articulated and its remains were subsequently disturbed during construction works on the site.

In contrast, the cattle and sheep/goat bones are probably discarded food waste which has become reworked and dispersed after incorporation within midden and levelling deposits.

A.1.6.2 The ceramics

George R Haggarty

A small group of post-medieval ceramics was recovered but little can be inferred about these due to their small size and damaged condition, except that the sherds from Contexts (8020) and (8030) are likely to be 17th century in date and a sherd from the rim of a bowl (SF5) is an unusual form and one not local to the Edinburgh area. A possible 15th- or 16th-century import (SF1) from London is also recognised from the PA1(A) area of excavation.

- ▶ **SF1.** One small finely gritted redware body sherd internally glazed and sooted on its exterior. Fabric is not consistent with local or Low Countries ceramics and may have been produced in London; possibly 15th or 16th century. Context (100). PA1(A).
- ▶ **SF3b.** Two sherds indicative of late-19th-century date: One almost complete two-tone ginger beer/stout bottle impressed above its base with [GRAY / ? / PORTOBELLO]; one small white dipped body sherd of standard white earthenware; one small cork closure white dipped bottle probably by Gray's of Portobello. Context (8014). PA1(B).
- ▶ **SF4.** Three sherds, almost certainly 17th century in date: Scottish Post-Medieval Oxidised Ware body sherds, glazed on both surfaces, too small to determine what kind of vessel they derive from. Context (8020). PA1(B).
- ▶ **SF5.** Two sherds, 17th century in date: one very thick Scottish Post-Medieval Oxidised Ware body sherd almost certainly from a large knife-trimmed jug; one internally glazed rim sherd from what looks like a bowl with decoration on its rim. This is in the form of a raised round iron-stained knob which has been impressed with a ring and dot. On either side of this are two bands of wavy line decoration. Context (8030). PA1(B).

A.1.6.3 The glass

Andrew Morrison

A small glass assemblage (94.6g), comprising three sherds of bottle glass, 14 sherds of window glass, and 12 sherds from a bowl with inverted rim, was recovered from PA1(B). These fragments date from around the mid-18th to 19th century and were all retrieved from two secure contexts, the upper and lower fills of a sump (8029). The recovered bottle and window glass represent an assemblage of finds typical of late post-medieval sites in Scotland from around the early 18th century onwards (Murdoch 2011: 100). While some of the green bottle glass recovered may date to the earlier 18th century, its date of deposition could be much later as bottles were often refilled and reused over long periods of time prior to breakage and eventual discard (ibid). Similarly, window glass can see long periods separating its date of manufacture from its date of deposition.

The green bottle glass ranges in colour from light to dark olive green, with another clear glass sherd with frosted band also present. The green bottle glass body sherd (SF1c), and the green bottle glass neck sherd (SF2c) are both hand-blown and are thought to date from around the mid-18th to early 19th century. The clear glass bottle sherd (SF2c) is thought to come from the shoulder of the bottle; a thin diagonal, frosted decorative band is present on the sherd. Twelve fragments from a clear, slightly opaque, hand-blown glass bowl (SF2c) with a rounded, inverted rim were recovered from the bottom fill of the sump. Not enough of the object is represented to accurately assess the diameter, but it has the appearance of a lamp shade or similar. Fourteen sherds of window glass (SF2c) were also recovered, ranging from a light green aqua to completely colourless. Two potential edges are present within the window glass sherds, which are all thought to be 19th century in date.

A.1.6.4 The worked bone

Andrew Morrison

Three worked bone tools were recovered during excavations in the PA1(B) area.

The tools (Illus 137) are probably associated with dressmaking or lacemaking, and are well worn,



Illus 137 Worked bone tools from PA1(B), SF2a, (8012)

showing polishing and reshaping through extended use. Two of the three tools are likely reused, one probably originally a toothbrush, the other probably a utensil handle, repurposed as dressmaking tools. The objects were retrieved from Context (8012), the lower fill of a sump, from which fragments of 19th-century clay tobacco pipe were also recovered. No close parallels for the reused tools have been found, which is likely a reflection of their bespoke production and use.

The Edinburgh Postal Directory of 1879–80 lists a Miss Rae, Dressmaker, as having a residence/place of business at 60 Amphion Place, which corresponds with the location of the archaeological investigation. Miss Rae is recorded as having shared the premises belonging to a Mrs Carroll, a Midwife. The heavy wear on the tools, combined with the repurposing of a broken toothbrush and utensil handle as dressmaking tools, suggests a relative degree of poverty for the owner of these tools.

► **Possible ribbon-trimming tool.** Long, flat, spatulate shape, with worn, rounded ends. One end slightly thicker, one long edge with a slight worn

notch/constriction near centre. Sides are rounded through wear. Thickness tapers towards narrower end. Ends and sides are polished through use, with bifacial offset wear at each end. Object is fractured in two, likely post-depositionally. Likely 18th–19th century. L: 166.6mm; W: 22.7–25.4mm; Th: 2.8–6mm, Mass 26.6g. SF2a. Context (8012).

► **Dressmaking/lacemaking tool.** Long, tapering spatulate shape, highly polished through wear. Flat wide end shows bifacial offset wear. Rounded sides taper inwards to a broken end with a rounded rectangular section. Thickness tapers towards wide end. Broken end is polished from use, showing that the tool was still used post-breakage. The words 'LAIRD' and 'EDINBURGH' are incised in the top face, with the royal coat of arms between the two. Possibly a broken bone handle from a utensil or similar, repurposed as a dressmaking tool. L: 96.7mm; W: 6.5–16.2mm; Th: 3.4–6.5mm, Mass 7.6g. SF2a. Context (8012).

► **Dressmaking/lacemaking tool.** Long, parallel-sided tool, flattened ovoid in section. Rounded/pointed end with offset bifacial wear, straight

parallel sides to a pronounced shoulder tapering into a constricted neck, widening out to a slightly triangular head shaped through offset bifacial wear. Head appears heavily worn, likely saw extended use. Thickness remains fairly constant over length of tool. Possibly a reused bone toothbrush with broken head, repurposed as a dressmaking tool. L: 106.6mm; W: 7.5–13.3mm; Th: 3.4–5.4mm, Mass 10.5g. SF2a. Context (8012).

A.1.7 Discussion

Although no dating material was recovered from the layer of sand that covered bedrock in areas PA1(A) and PA1(B), it may have been deposited prior to any buildings being erected on the north side of Calton Road. This sand deposit was tentatively associated with the 18th-century development of the area north of Calton Road by the excavator (Wilson 2008c), perhaps being deposited to form a stable layer on which construction could take place.

The stone well cut through the sand layer in PA1(A) likely pre-dates the development of Amphion Place, and may therefore date to the 18th century, perhaps being associated with the buildings established by 1784 (Illus 128). No evidence for the buildings visible on late-18th- and 19th-century maps to the north of Calton Road was encountered within area PA1(A).

Cartographic records suggest that, apart from a circular structure depicted on Gordon's map of 1647 (Illus 4), no buildings were present within the PA1(B) area until the later post-medieval period, an interpretation corroborated by the archaeological record. No remains of the circular structure visible on Gordon's map, and later on Edgar's map of 1765 (Illus 127), were present, suggesting that it had been demolished prior to the development of the area as

Amphion Place by the middle of the 19th century (Illus 130).

In Area PA1(B), remains of the fireplace (8018) were stratigraphically early and may therefore be associated with one of the buildings depicted on Edgar's map of 1765 (Illus 127). However, its precise date of construction is unknown. Stone-capped drains (8001) and (8013) were also interpreted as early features, as the associated sump, (8029), had been truncated by the later north/south-aligned wall (8023). The sump may have acted as a silt trap for the associated drains to the north.

The alignments of the later stone wall remnants, commonly lining up with buttresses on the surrounding boundary walls, indicates that they were likely associated with the 19th-century redevelopment of the site. The east/west-aligned walls above earlier wall (8023) appeared to line up with walls depicted on the First Edition Ordnance Survey map, surveyed in 1852 (Illus 130).

Finds recovered from the PA1(B) excavation included many from the fills of the drainage sump (8029). These included fragments of pottery and three bone tools (SF2a), one of which was incised 'LAIRD EDINBURGH'. These may have been associated with lacemaking.

In summary, the surviving archaeological deposits and structures belonged to the later post-medieval period and are associated with 18th- and 19th-century buildings depicted on contemporary maps. Given the location of PA1(A) and PA1(B) close to areas of 19th-century industry, including the New Street Gasworks to the south, the Calton Hill Brewery to the east, and evidence that Amphion Place was occupied by commercial premises, the buildings were perhaps utilised as industrial workshops, supported by the identification of lacemaking tools.