Results of an archaeological evaluation at 144-166 Cowgate, Edinburgh

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Summary

An archaeological evaluation involving the excavation of five trenches was carried out on the site of the former Cowgate Nursery School, Edinburgh. The evaluation demonstrated that significant archaeological deposits survived beneath the proposed development site. The earliest were characterised as medieval midden deposits and were identified in all trenches at a minimum of 1 m below present ground surface. It is clear from a previous borehole survey that these deposits are up to three metres thick in the east of the site. Stone walls, surfaces and culverts were constructed on top of these midden deposits at a minimum depth of only 0.35 m below the surface left following demolition of the former nursery. These were likely to have related to buildings constructed on either side of narrow closes, and depicted on maps from the 16th century on. An assemblage of mainly post-medieval artefacts were recovered from the site, although some earlier medieval material was also present.

1 INTRODUCTION

This report is presented in connection with a planning application concerning the site of the former Cowgate Nursery School, Edinburgh. Castle Rock Housing Association has applied to build sheltered housing on the site.

The site is situated on the Cowgate frontage, at the foot of Old Fishmarket Close (NGR NT 2585 7348). The area proposed for development measures 660m² and was formerly occupied by a nursery school with associated playground, an access road, and off-street car parking (Figure 1). The surrounding area is heavily developed and characterised by multi-storey buildings separated by narrow closes.

The City of Edinburgh Council Archaeology Service (CECAS), advising the council as Local Planning Authority, requested an archaeological evaluation to be undertaken on the site, in line with guidance provided in NPPG5 and PAN 42. The archaeological evaluation was carried out in two stages: Phase 1 between the 10th and 11th October 2002 and Phase 2 following demolition works between the 27th and 28th January 2003.

2 ARCHAEOLOGICAL BACKGROUND

The site lies within the historic core of medieval Edinburgh, a UNESCO World Heritage Site. The origins and early development of the High Street are poorly understood but are likely to have focussed on a primary defended settlement, situated on Castle Rock from at least the Dark Ages, possibly earlier. The town was recognised as a royal burgh in the 12th century.

The Cowgate lies at the bottom of the ridge on which the High Street runs, and appears to have been formally laid out in the 14th century. The western boundary of the site is formed by Old Fishmarket Close, which owes its name to the fish market first recorded in the Town Council Minutes of 1539. The site is bounded to the east by Siglo's nightclub, which stands between Bell's Wynd and Stevenlaws Close. The site would therefore appear to cross several medieval properties. Bell's Wynd was first recorded in AD 1500 and is named after the Bell family who owned property in the close from the mid 15th century. The historic town closes of Borthwick's Wynd and Cons Close also cross the development area.

Archaeological work undertaken at the neighbouring Tron Square Nursery (Stronach 2000) revealed foundations associated with the construction of post-medieval tenements beneath Victorian levelling dumps. No medieval material was recovered, suggesting that post-medieval development had involved extensive terracing, which had destroyed earlier remains. Excavations at Old Fishmarket Close (Stronach 2000) revealed a similar pattern of terracing. However further downslope the relatively level ground of the Cowgate may have resulted in the survival of medieval deposits. This was evident during excavations in advance of construction of the Scandic Crown hotel, where a substantial medieval midden deposit reached depths of up to three metres beside the Cowgate (Schofield 1975).

3 OBJECTIVES

The main objective of the evaluation was to determine the location, extent, nature, condition and significance of any buried or upstanding features within the proposed development area. The results of the evaluation can then be used to establish the impact of the proposed development on any surviving archaeological features and to devise an appropriate mitigation strategy.

4 METHOD

Five trial trenches were excavated, a sample equivalent to approximately 10.5% of the proposed development area. These were undertaken in two phases, the first prior to demolition. Phase 1 involved the excavation of two trenches to the front of the former nursery, parallel to the Cowgate, and one to the east (trenches 1-3). A mini-excavator with a toothless ditching bucket was used to remove tarmac and modern overburden. Phase 2 was undertaken after demolition, and two trenches (4 & 5) were excavated within the footprint of the former nursery. The trenches were machine excavated with a JCB fitted with a toothless ditching bucket. Machine-cut sondages were used to investigate archaeological deposits beyond the limit of general excavation (1.2 m). The road and car park on the east side of site could not be examined during the evaluation. However some additional coring has been archaeologically monitored on this side of site.

All identified features were investigated and recorded. The stratigraphy of the trenches was recorded in full using the Headland Archaeology Ltd standard method. All contexts were given unique numbers and finds were collected by context. Soil samples were taken from six contexts. Colour transparencies and colour print photographs were taken. An overall site plan was recorded and tied into the National Grid. Features were planned at a scale of 1:20 and sections/elevations were drawn at 1:20. All recording was undertaken on *pro forma* record cards.

5 RESULTS

A complete description of deposits with surface depths above Ordnance Datum is provided in tabular form in the Appendix. Summary descriptions are provided below. Structural features are shown in Figure 1.

Trench 1

Following removal of the tarmac surface of the playground (08) a number of demolition and infilling deposits (09, 13, 14) comprising rubble, brick and mortar were excavated by machine. These were found to have a maximum depth of 0.7 m in the west of the trench. At the east end one of the make-up deposits was cut by the foundation trench for a wall (04), running north to south and associated with post-medieval pottery. To the east, a layer of faced sandstone blocks (03) appeared to represent a return of the wall. Directly beneath the make-up deposits was a tar or bitumen surface (11), which was contemporary with wall 04. Also sealed by the make-up deposits, at a depth of 0.85m below the ground surface, was a

layer of sandstone slabs (01). This surface overlay an earlier cobbled surface (02), associated with post-medieval pottery.

Under the post-medieval structures was grey clay mixed with shell and animal bone (07). This midden deposit overlay greyish brown clayey silt with sandstone fragments (12). The latter deposit was initially interpreted as subsoil because of its colour, compaction and apparent sterility. However processing of a sample from the deposit recovered small pieces of anthropogenic material (see Appendix 3). A borehole survey on the site suggests that this deposit extends from a depth of 1.2 to 3.2 m and overlies bedrock. It seems most likely that it is a naturally occurring deposit, probably hillwash derived from weathering of the ridge on which the High Street stands. A similar deposit was noted during the excavations preceding the construction of the New Scottish Parliament (Stronach pers comm). Small amounts of midden material in the deposit could have derived from activity further upslope.

Trench 2

Beneath the modern playground surface was up to 0.85 m of rubble and mortar (202). In the east this deposit was shallower and directly overlay stone slabs covering a culvert (204). The construction cut was filled by a deposit associated with modern finds (203). The top of deeper, medieval midden deposits was identified at the limit of safe excavation, 1.2m below the ground surface.

Trench 3

The removal of tarmac revealed a make-up deposit (302), similar to those seen in previous trenches. An earlier sandstone wall (303) ran north to south along the eastern edge of the trench. A sondage was excavated through the make-up deposits, and encountered moist grey clay (306) at a depth of 1.6m below the ground surface. Soil samples from this deposit produced medieval pottery (see Appendix).

Trench 4

Here deposits had been substantially disturbed by construction and removal of a concrete pillar, and most structures and deposits were recorded in the northern section. A layer of modern make-up (401), 0.4m thick and probably deriving from the recent demolition of the nursery, overlay up to 0.45 m of laminated mortar, charcoal and rubble (422). The latter is likely to be an earlier but still relatively modern levelling deposit. Beneath 422 was a dark brown silt loam with charcoal, stone and mortar (406), perhaps representing post-medieval levelling. The trench for a stone culvert (403) had been cut through this material. To the east was a second culvert (410), built from lime mortared small sandstone blocks

Beneath make-up deposits at the eastern end of the trench, at a depth of 0.75m below ground, was wall (414). This ran north to south and was constructed from sandstone slabs and lime mortar. The foundation trench was cut through deposit 406 and the wall may have been contemporary with the culverts. Abutting the wall to the east was a series of associated surfaces. Sandstone flagstones (417) overlay very compact black silt (418). Beneath this was hard lime mortar surface (419), 0.15m thick, which overlay light brown clay loam (420).

Under 406 were dumped deposits of mixed mortar and stone (413) and mid brown silty clay with charcoal (412). In the base of the trench it was established that these overlay earlier structures (not illustrated); at the east end a flagstone surface, laid on top of greyish brown silty clay with charcoal (425) and at the west end a north to south orientated wall (407).

These structures had been built on a medieval midden deposit of dark silty clay with sandstone, shell and charcoal (424). Modern disturbance extended below the level of excavation in the southern half of the trench.

Trench 5 (Figure 2)

Modern levelling (513) relating to recent demolition and an earlier make-up deposit of yellow brown sand and sandstone rubble (514) overlay two sandstone and mortar walls (501 & 506) at a minimum depth of only 0.35m below the surface. Both were orientated north to south and may have been contemporary. Between them was dark clayey silt with frequent charcoal, shell, bone and stone fragments (502). This was not interpreted as an internal surface, although a large sandstone slab (508) immediately west of the wall may have been a remnant of a flagged surface. The slab overlay a curving stone culvert (503), which ran up to the western side of the wall.

To the east, wall 506 was post-dated by a relatively modern dump of clayey silt with brick, stone, glass and mortar (516). Beneath was a compacted deposit of sandstone and clay (515), interpreted as an exterior surface. This overlay dark clay silt with frequent charcoal and shell (509), and an earlier midden deposit (507=510) associated with medieval pottery. These deposits were interpreted as sloping down towards the east, as they were also seen in a sondage at this end of the trench beyond the disturbance caused by a modern foundation. Beneath deposit 510 (equivalent to 507) was light silty clay with bands of charcoal and grey silt (511). This material overlay dark brown clayey silt with oyster shells (512), which extended below the level of excavation (1.9 m), and the water-table at the time of excavation.

6 DISCUSSION

The evaluation has demonstrated that significant deposits survive beneath the development site as little as 0.35 m below the ground surface resulting from demolition. The earliest archaeological remains were medieval midden deposits, consisting of grey and brown clays rich in charcoal and shell. These were identified in each of the trenches at least a metre below the present ground surface. At the time of excavation the deposits were waterlogged approximately 1.5m below the ground surface, although analysis of the samples did not produce evidence for the preservation of organic materials. The full extent of the medieval midden deposits was not ascertained during the evaluation, although it is clear from previous work and the borehole survey that the deposits are up to three metres thick in places. The monitoring of further boreholes should establish the exact depth of these deposits, and whether permanent waterlogging occurs at greater depth. This material was not finely stratified and did not contain any horizons that would suggest structural development. They are most easily interpreted as resulting from the accumulation of domestic waste, probably through deliberate dumping, and deriving from medieval dwellings occupying the slope between the High Street and the Cowgate. Finds from the deposits have the potential to

provide information on the medieval economy of Edinburgh and the daily life of the town's inhabitants. The importance of this material is enhanced by the very scarce preservation of medieval deposits further upslope, closer to the High Street itself.

The stone walls and culverts are all dated to the post-medieval period and are likely to relate to properties laid out either side of the narrow closes, which formerly occupied the site. At least three buildings can be identified from the structures present on the site. The cobbled surface and later slab paving in Trench 1 may have been part of one of the closes between Cowgate and the High Street. Although there has been some truncation of these structures due to demolition and modern disturbance, the recreation of a ground plan should be possible. Some of the buildings may date to the 16th century when maps begin to show development along the Cowgate (Braun & Hogenburg 1574). The buildings appear to have been demolished in the early modern period when the present street layout was created. The structures are considered to be archaeologically significant because they have the potential to provide information on the character of this part of the Cowgate during the post-medieval period.

7 CONCLUSIONS

Medieval midden deposits and later structures survive on the site. The proposed development is likely to have a destructive impact on these remains where intrusive groundworks are proposed. A programme of archaeological excavation and recording, which would preserve the remains by record, can mitigate the impact.

8 ACKNOWLEDGEMENTS

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APPENDIX 1: Site Registers

Context Register

Context No.	Trench	Description	Minimum Depth (m. O.D.)
1	1	Stone slab surface of yellow sandstone, not bonded. Max dimensions of slabs 0.6 x 0.4m.	65.65m
2	1	Cobbled surface comprising small and medium sub-angular cobbles, possibly disturbed.	65.65m
3	1	Sandstone blocks, faced, bonded with lime mortar. Only one course visible. Part of same structure as 4.	66.00m
4	1	N-S wall foundation 1.2m wide. Large sandstone blocks, faced, rubble core, bonded with lime mortar. 3-4 courses visible. Postmedieval.	66.18m
5	1	Loose grey clay and small-medium rubble. Fill of 6.	66.36m
6	1	Linear cut, steeply sided (45°), observed on W side of wall. W: 0.5m, D: 0.8m (max reached). Construction cut for wall.	
7	1	Grey clay with frequent oyster shell and occasional animal bone. D: 0.4m. Midden material.	65.70m
8	1	Modern playground surface of tar and hardcore. D: 0.14m.	66.50m
9	1	Loose rubble and mortar. D: 0.72m. Demolition debris backfilling former close.	66.36m
10	1	Semi-circular brick feature, using modern machine made bricks.	66.00m
11	1	Modern tar surface. D: 0.05m.	66.02m
12	1	Greyish brown clayey silt with very frequent sandstone fragments. Midden.	65.30m
13	1	Loose rubble with frequent lime mortar. D: 0.60m. Late/post-med infill.	66.36m
14	1	Loose rubble and mortar. D: 0.64m. Levelling deposit, related to buildings pre-dating Nursery.	66.36m
201	2	Modern playground surface of tar and hardcore. D: 0.25m.	66.30m
202	2	Loose rubble and mortar. D: 0.85m. Infill/levelling deposit.	65.98m
203	2	Rubble and mortar. W: 0.4m. Fill of 208.	65.70m
204	2	Thick sandstone slabs forming walls, thinner slabs for base, bonded with lime mortar. W: 0.6m, D: 0.4m. Post-medieval box culvert.	65.70m
205	2	Dark grey silt, damp. D: 0.08m. Fill of culvert 204.	65.48m
206	2	Yellow sandstone slabs. Approx 0.1m thick, bonded with lime mortar. W: 0.4m. Lids for culvert.	65.80m
207	2	Loose mortar and sandstone rubble. D: 0.20m. Infill of culvert 204.	65.60m
208	2	Linear cut. Not fully excavated. Cut for culvert.	
301	3	Modern playground surface of tar and hardcore. D: 0.25m.	66.095m 65.845m
302	3	3 Loose soil, stone, mortar and bricks. D: 0.25m. Post-demolition infill.	
303	N-S wall, yellow sandstone blocks, rubble core, bonded with lime mortar. One course visible. W: >0.60m.		65.735m
304	3	Stone slab, probably not <i>in situ</i> . Remnants of slab surface.	65.76m
305	3	Rubble, mortar and demolition debris. D: 0.20m. Infill/levelling.	65.90m
306	3	Moist, slightly organic grey clay. D: >1.90m. Medieval midden.	64.495m
400	4	Unstratified finds.	
401	4	Dark brown clay silt with mortar, stony layers and red sandstone blocks. Layered at W end, loose & more disturbed to E. D: 0.36m. Modern demolition debris.	66.685m
402	4	NNW-SSE linear cut, steep sided (60°). W: 1.0m, D: 0.4m. Cut for culvert.	66.18m

Context No.	Trench	Description	Minimum Depth (m. O.D.)			
403	4	Sandstone slabs, 0.08-0.12m thick. W: 0.65m, D: 0.40m. Box culvert.	66.18m			
404	4	Mid brown loose silt and mortar. D: 0.40m. Fill of 402.	66.18m			
405	4	Greenish black silt, moist, with thin layer of mortar above. D: 0.08m. Fill of 403.	66.04m			
406	4	mortar. D: 0.36m. Make up/demolition layers.				
407	4	N-S wall of sandstone blocks, unfaced, 3 rough courses visible. W: 0.65m. Rubble wall core.	66.08m			
408	4	Red sandstone slabs 0.10m thick. Max dimensions of slabs 0.50 x 0.20m. Truncated slab surface.	65.71m			
409	4	N-S linear cut, near vertical sides to E, unclear to W. W: 0.60m, D: 0.50m. Cut for culvert.	66.23m			
410	4	Sandstone blocks max 0.13m thick, bonded with lime mortar. W: 0.60m, D: 0.50m. Stone culvert.	66.23m			
411	4	Loose dark brown sandy silt and gravel. W: 0.32m, D: 0.34m. Fill of 410.	66.23m			
412	4	Mid brown silty clay and charcoal, slightly organic. D: 0.26m. Midden?	65.89m			
413	4	Mixed mortar and stone. D: 0.30m. Infill/demolition debris.	66.10m			
414	4	Sandstone slabs bonded with mortar. W: 0.90m. N-S wall.	65.89m			
415	4	Loose brown silty sand with mortar. W: >0.40m, D: 0.70m. Fill of 421.	66.20m			
416	4 Loose mortar and rubble. D: 0.38m. Demolition debris/infill.		66.23m			
417	4	Sandstone blocks, one course deep, 0.08m thick. Possible stone surface remains.	65.93m			
418	4	Very hard, compacted black deposit. D: 0.02m. Possible surface.	65.83m			
419	4	Hard mortar surface. D: 0.14m. Possible floor level.	66.81m			
420	4	Mixed light brown clayey loam. D: 0.42m. Midden material?	65.73m			
421	4	N-S linear cut, vertical sides. W: 1.20m. Cut for wall 414.	66.18m			
422	4	Blackish brown silt loam with wood and sandstone blocks and fragments and layers of mortar and charcoal. D: 0.42m. Layers of infill/make-up.	66.35m			
423	4	Sandstone and mortar structural remains. W: 0.70m.	65.70m			
424	4	Dark grey brown mixed silty clay with sandstone fragments, charcoal and shell. Midden material.	65.53m			
425	4	Greyish brown silty clay and charcoal with occasional shell and stones. Midden.	65.51m			
426	4	Mortar and sandstone rubble. W: 0.44m, D: 0.52m. Possible robbed out wall foundation/demolition debris.	66.35m			
500	5	Unstratified finds.				
501	5	N-S wall. Sandstone slabs/blocks bonded with lime mortar, one course, no facing visible, and no cut visible. W: >0.5m.	65.855m 65.55m			
502	Mixed firm dark brownish grey clayey silt with frequent charcoal, moderate sandstone fragments and occasional shell, bone and slate fragments. Unexcavated. Midden.					
503	5	65.61m				
504	5	cement mortar. Beneath 508, part of same building as 506. Mid brown clayey silt with occasional mortar flecks, charcoal and small stone fragments. Unexcavated. Possible occupation debris.	65.70m			
505	5	Loose mid brown sandy silt with frequent mortar and stones. Unexcavated. Infill.	65.71m			
506	5	N-S wall foundation 1.1m wide. Sandstone blocks bonded with lime	65.905m			

Context No.	Trench	Description	Minimum Depth (m. O.D.)		
		mortar, part faced on W side, one course remaining. Abutted by 508.			
507	5	Firm dark grey clayey silt, slightly organic with occasional oyster shell, charcoal, pot and sandstone flecks. Unexcavated. Midden.	65.16m		
508	5	Sandstone and mortar surface, approx 0.08m thick, associated with structures 506 and 503.	65.75m		
509	5	Mixed dark greyish brown clayey silt with frequent red sandstone fragments, charcoal, shell. D: 0.45m. Midden.	65.40m		
510	5	65.12m			
511	5	charcoal, shell and decayed sandstone. D: 0.48m. Midden. Bluish yellow-dark grey silty clay with frequent charcoal bands and flecks throughout. D: 0.12m. Mixed midden and water borne deposits.			
512	5	Moist rich blackish brown organic clayey silt with frequent oyster shells and occasional charcoal. D: >0.48m. Waterlogged midden.	64.40m		
513			66.20m		
514	5	Mortar and sandstone rubble. D: 0.20m. Demolition debris/infill.	66.07m		
515	5	Compacted yellow sandstone, mortar and yellowish brown clay. D: 0.16m. Possible surface.	66.00m		
516	5	Mid-light greyish brown clayey silt with occasional brick, stone, mortar and glass. D: 0.20m. Infill/demolition debris.	66.06m		

Photographic Register

Colour Slide & Colour Print

Shot No.	Facing	Trench	Description	
1	N	-	Car park area looking towards Tron Square	
2	S	-	S part of car park area	
3-4	Е	-	The step at the front of the building partially dismantled to allow	
			access for machine.	
5-6	Е	-	Dismantling the clock	
7-8	N	-	The narrow part of the site parallel to Old Fishmarket Close, too	
			narrow for a trench.	
9-10	N	-	Too little space under the building for a trench.	
11	NW	-	The front of the nursery building	
12-13	W	1	Cobbles 002 and slabs 001 at the W end of trench	
14-15	Е	1	Cobbles 002 and slabs 001 at the W end of trench	
16-17	S	1	N facing section at W end of trench	
18	W	1	Overall view of trench	
19	S	1	Top of wall 004	
20-21	Е	1	W face of wall 004	
22	S	1	N facing section near wall 004	
23-24	Е	1	Overall view of the trench	
25	S	1	W end of trench	
26-27	S	3	S end of trench	
28	S	3	3.5m deep sondage at N end of trench	
29	W	2	W end of trench	
30-32	N	2	Culvert 204 post-ex	
33	N	4	West end of section	
34	N	4	East end of section	
35	NW	4	General shot of walls, paving & culvert	

Shot No.	Facing	Trench	Description		
36	NE	4	General shot of walls, paving & culvert		
37	Е	5	West end, showing walls 501 & 506 and culvert 503		
38-39	N	5	West end, showing walls 501 & 506 and culvert 503		
40	W	5	Wall 506 & culvert 503		
41	N	5	S facing section, E end of trench		
42	W	5	General view of trench		
43	N	5	S facing section at centre of trench		
44	W	5	Wall 506		
45	W	5	Deposit 507		
46	Е	5	Concrete and deposits beneath		
47	Е	5	General shot of E end of trench		
48	NW	-	General shot of site		
49	N	4	View of E end of section		
50	Е	4	General view of trench post-ex		

Drawing Register

Drawing	Description			
No.				
1	1:20 Plan of trench 1			
2	1:20 N facing section of trench 1			
3	1:20 Plan of trench 2			
4	1:20 N facing section of trench 2			
5	1:20 Plan of trench 3			
6	1:20 S facing section of trench 4			
7	1:20 Plan of trench 4			
8	1:20 Plan of trench 5			
9	1:20 S facing section of trench 5			

APPENDIX 2. Finds Register

Context	Quantity	Material type	Object	Spot date		
2	1	Pottery: Reduced ware	Large hollow ware vessel	C15th – early C18th		
2	1	Pottery: Light grey fabric with occasional gritty inclusions and exterior iron wash	Hollow ware vessel	C15th –C17th		
2	1	Pottery: Reduced ware, exterior olive glaze and impressed/incised decoration	Large hollow ware vessel	C15th – early C18th		
5	3	Clay pipe: City stamp on spur (probably Edinburgh), wide bore	Clay pipe	Late C16th – C17th?		
5	3	Pottery: PMR	Hollow ware vessels	C17th – early C18th		
5	1	Pottery: LMO/PMO	Hollow ware vessel	C16th – early C18th		
5	1	CBM: Redware with patchy green glaze on one surface and dark grey reduced core	Pan tile	C13th – C17th		
5	3	Pottery: Redware rims and base with external olive glaze and reduced grey core	Jugs?	C13th – C15th		
5	2	Pottery: Reduced ware sherds with external olive glaze	Unknown	C15th – C17th		
5	1	Pottery: White gritty sherd – mortar attached	Large vessel	C12th – C15th		
203	1	Glass: Mid-blue	Cylindrical bottle	C19th – C20th		
207	1	Pottery: BGRE with internal cream glaze	Hollow ware vessel	C18th – early C20th		
207	1	Pottery: White glazed white earthenware	Hollow ware vessel	C19th – early C20th		
207	2	Clay pipe: Stems, one with glazed mouth piece, narrow bores	Clay pipes C19th – early C			
207	3	Glass: Dark green	Cylindrical C18th – C20th bottles			
207	1	Glass: Royal blue	Facetted bottle	C19th – early C20th		
207	1	Glass: Colourless	Cylindrical C19th – C20th bottle or tableware			
207	1	Glass: Very light green	Facetted bottle	C19th - C20th		
207	1	Glass: Very light turquoise with dull surface	Bottle	C19th – early C20th		

Context	Quantity	Material type	Object	Spot date
207	1	Glass: Milk, translucent, flat	Unknown	C20th
207	1	Glass: Very light turquoise	Window pane	C16th - C20th
207	1	Metal Edward VII		1910
			sixpence	
207	1	Metal: Highly corroded iron, curved rod	Nail	Historic
302	6	Glass: Dark green, some	Cylindrical	C18th - C20th
		sherds have mortar attached	bottles	
302	3	Bone: Double edged comb	Comb	Modern-looks
		made from single piece of		machine made or
		bone		finished.
302	1	Metal: Copper alloy coin (?) with mortar or concrete	Coin	1797
		adhering to rear surface		
		(BRITANNIA 1797)		
400	1	Pottery: Throsk ware	Unknown	C16th- C18th
400	1	Pottery: Green-glazed	Unknown	C16 th - C18th
400	1	reduced grey ware	Chkhowh	C16 C16th
400	2	Pottery: Red fabric with	Unknown	C17th-C18th
		black internal glaze		
400	1	Bone: fragment of animal bone	Unknown	-
400	1	Glass: translucent, slightly curved	Tableware?	C18th-C20th
400	1	Mortar: fragment	From building	Post-medieval?
400	1	Slate: dressed & perforated	Roof tile	Post-medieval?
500	1	Pottery: Black decorated slipware	Unknown C18th-C20th	
506	1	Pottery: White glazed white earthenware	Hollow-ware C19th- early C20t vessel	
507	1	Pottery: Redware handle with reduced core and olive glaze	Jug	C13th-C15th

APPENDIX 3. Assessment of Samples

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METHODOLOGY

Sampling strategy

Six bulk soil samples (10 litres in size) were taken from a number of archaeological features including the fill of one culvert and midden deposits.

Sample processing

The samples were subjected to a system of flotation in a Siraf style flotation tank. The floating debris was collected in a 250 μ m sieve and, once dry, scanned using a binocular microscope. Any material remaining in the flotation tank was wet-sieved through a 1 mm mesh and air-dried. This was then sorted and any material of archaeological significance removed.

RESULTS

The results are summarised in Table 1, contexts being ordered by trench location. Details of the finds recovered from the retents are presented in Table 2 and 3.

Pottery

A mixed assemblage of pottery was recovered from the samples. The majority of pottery recovered indicates a late post-medieval date (18th to 20th century), though one fragment of reduced ware and one of white gritty ware, both from Context 002, gave an earlier medieval date.

Clay pipe

Clay pipe stem and bowl fragments were recovered from Context 205. There were no stamps on the bowl fragments to indicate maker or date; however, one stem fragment was from a glazed mouthpiece and this suggests a 19th to 20th century date.

Building debris

Low concentrations of hard course white mortar were recovered from the majority of samples.

Industrial debris

Fragments of metal slag were recovered from all but one sample, including both non-ferrous and ferrous slag; no hammerscale or other metal working debris was recovered. Concentrations of burnt coal and cinders were also present in the majority of samples.

Animal bone

A mix of large mammal bone, fish bone and bird bone were recovered from the majority of samples; both charred and uncharred bones were present. The quantity of bone recovered was low consisting primarily of small fragments.

Marine shell

Fragments of marine shell were recovered from the majority of samples. The shell included fragments of oyster, periwinkle and mussels.

Carbonised plant remains

Small quantities of charcoal were present in Contexts 002, 007, 205 and 306. No other carbonised plant remains were present.

DISCUSSION

Trench 1

Four samples were taken from features uncovered in Trench 1. A variety of finds were recovered from these samples including pottery, animal bone, marine shell and industrial debris.

Most finds were recovered from the surface of a close that was aligned north–south across the east end of Trench 1. The pottery suggests a late medieval to early 19th or 20th century date for the use of the close. One small fragment of white gritty ware (12th to 16th century) was also present, this is likely to represents earlier debris that has been reworked into later deposits.

The mixed assemblage recovered represents domestic and industrial debris that has probably been dumped in the close or the immediate vicinity and then trampled into the soil matrix surrounding the cobbled surface of the close.

Similar midden material was also recovered from features that are probably contemporary with the close and other earlier deposits. Samples from these deposits indicate that there has been a continuous build up of midden material across the site from the medieval period onwards.

Trench 2

One sample was taken from the fill of a culvert uncovered in Trench 2. The culvert contained a variety of finds. Sherds of white earthenware, clay pipe and glass bottle fragments recovered from the culvert fill suggest a late post-medieval date (18th to 20th century). In addition, a number of artefacts were recovered including a glass bead, copper cross, a coin, and a number of fine copper alloy pins. All finds are indicative of a late post-medieval date.

The palaeoenvironmental remains recovered were varied, with a small assemblage of large mammal bone fragments, fish bone, abraded fragments of marine shell and cinders. This debris represents waste material that has accumulated during and after the use of the culvert.

Trench 3

A midden deposit was uncovered at the base of Trench 3 below demolition debris and the remains of a wall. Small abraded fragments of white gritty ware were recovered suggesting a medieval date for the midden material. The remains of one iron nail/pin and one copper alloy pin were also recovered. Other finds included small fragments of mammal bone, fish bone and industrial debris. The variety of finds and the palaeoenvironmental remains are very similar in composition to other midden material recovered from across the site.

CONCLUSION

- The majority of finds and palaeoenvironmental remains recovered from the samples are postmedieval in date, although one midden deposit uncovered in the base of Trench 3 contained small fragments of white gritty ware suggesting a medieval date.
- Medieval pottery from the close and fill of the wall foundation indicate mixing of later deposits with earlier midden material.
- Both domestic and industrial material was recovered from across the site, with each feature containing a similar composition of finds and palaeoenvironmental remains.

RECOMMENDATIONS

A record of the methodology and results of this assessment should be included in any future published record of the site. No further detailed analysis is recommended.

Sample	Context	Context	Pottery	Clay	Glass	Industrial	Mortar	Mammal	Fish	Bird	Marine	Charcoal	Coal &
no.	no.	description		pipe		debris		bone	bone	bone	shell		cinders
Trench 1													
1	002	Close surface	+			+	+	++	+	+	+	+	+++
2	005	Fill of wall foundation	+			+	+	++	+		+++	+	+
3	007	Midden deposit						+				+	+
4	012	Midden deposit				+	++	+	+		+	+	+
Trench 2													
5	205	Fill of culvert	+	++	+++	++	+	++	++	+	+		+++
Trench 3	Trench 3												
6	306	Midden deposit	+			+	+	+	+			+	+

Table 1. Composition of samples

(Key: + = rare, ++ = occasional, +++ = common and ++++ = abundant)

Context	Sample	Quantity	Material type	Object	Spot Date
no.	no.				
205	5	9	Clay pipe: Stems and small bowl fragments, one stem fragment with glazed mouthpiece	Clay pipes	c19th – early c20th
205	5	1	Glass: Small (length 10 mm) bronze glass rod	Unknown	Unknown
205	5	1	Glass: dark blue glass bead broken at both ends	Glass bead	c19th – c20th
205	5	1	Metal: Corroded copper cross (length 15 mm)	Cross pendant	c19th – c20th
205	5	1	Metal: Corroded copper alloy coin BRITANNIAR:REG	Coin	Historic
205	5	1	Metal: Copper alloy band	Unknown	Unknown
205	5	1	Metal: Copper alloy thistle	Ornament	c19th – c20th
205	5	16	Metal: Fragments of copper alloy pins and one small copper alloy hook	Pins and small hook	Historic
205	5	15	Glass: Dark green	Cylindrical bottles	c18th – c20th
205	5	1	Glass: Colourless with light purple iridescent coating	Possible bottles	c18th – c20th
205	5	1	Glass: Very light turquoise, opaque	Possible bottles or tableware	c19th – c20th
205	5	16	Glass: Very light turquoise, flat	Window pane	c16th – c20th
205	5	6	Glass: Colourless		
205	5	2	Glass: Light blue	Possible bottles	c19th – c20th
205	5	3	Glass: Royal blue	Cylindrical bottles	c19th – c20th
205	5	1	Glass: Very light green	Cylindrical bottle	c18th – c20th
205	5	3	Glass: Light green, opaque		
205	5	2	Glass: Dark blue with metal coating	Unknown Unknown	
205	5	1			c19th – c20th
306	6	1	Metal: Copper alloy pin head	Pin	Medieval to Historic
306	6	1			Medieval to Historic

Table 2: Finds recovered from retents

Context	Sample	Quantity	Pottery type	Spot Date
no.	no.			
002	1	1	Reduced ware	<i>c</i> 15th – early <i>c</i> 18th
002	1	1	White glazed white earthen ware	c19th – early c20th
002	1	1	White gritty	c12th – c15th
005	2	2	Redware	c12th – c15th
205	5	2	White earthen ware with blue transfer and white glaze interior	c18th – c20th
306	6	3	White gritty, two fragments with green glaze	c12th – c15th

Table 3: Pottery recovered from retents



Figure 1 - 144 - 146 Cowgate, Edinburgh: Trench and wall location.

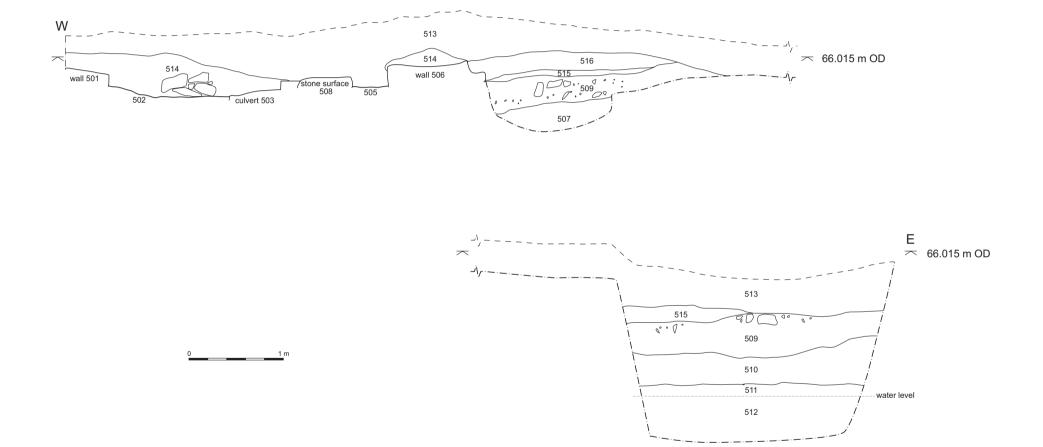


Figure 2 - Cowgate, Edinburgh: South facing section of trench 5.