

**Green Street/London Road, Glasgow:
Archaeological Works**

Data Structure Report

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Rathmell

Archaeology Ltd

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Introduction

1. Rathmell Archaeology Ltd were commissioned to undertake a programme of archaeological works by Scott Bennett Associates (Group 2) Ltd on behalf of The new Housing Association in respect to the proposed plan for development at Green Street/London Road, Glasgow (centred on NGR: NS 603 644).
2. The archaeological works were designed to mitigate the impact on the archaeologically significant remains within the development area. The scope and remit of these works were agreed with the West of Scotland Archaeology Service and Glasgow City Council through a Written Scheme of Investigation (WSI) (Matthews 2009) and addendum (Rees 2009) (hereafter referred to collectively as the WSI).
3. Prior to any archaeological work commencing the area was an overgrown urban plot resulting from the demolition of occupying buildings (Figure 3a). The area was subject to an assessment by GUARD (Glasgow University Archaeological Research Division) in 2008 which identified Christie's Clay Pipe Factory at 16-20 Craignestock Street as the only potential or known archaeological site present within the larger development area (Innes & Murtagh 2008).
4. Christie's Clay Pipe Factory at 16-20 Craignestock Street was contained within a footprint of 11m (street frontage) by 22m (depth from the road). There was believed to be the potential for survival of significant archaeological deposits within the perimeter of the factory building. The intention of their subsequent evaluation was to inform nature and extent of any surviving significant archaeology at the site of Christie's Clay Pipe Factory and to establish the potential for impact of the proposed development on the archaeological resource.
5. Prior to excavation work commencing it was believed that the evaluation work carried out by GUARD had failed to locate the footprint of the factory and this was confirmed during the subsequent on site work. As a result of this no prior archaeological work had taken place within the footprint of the factory and it was necessary to locate and assess any surviving remains at an early stage of the excavation
6. This Data Structure Report presents the results of excavation work carried out on Christie's Clay Pipe Factory from the 24th of April until the 13th of May 2009 according to the criteria and protocols set down in the agreed WSI. These excavations exposed and investigated the significant elements of the factory to elucidate the layout of the factory and its change through time.

Archaeological and Historical Background

7. The content of this report assumes access to prior documentation including the Data Structure Report provided by GUARD concerning Desk Based Assessment and Archaeological Evaluation of the site (Innes & Murtagh 2008). Although some elements of this report will be summarised here the report itself should be referred to for more detailed information.

Historical Context

8. Craignestock Street appears as a named street for the first time on the Ordnance Survey Town Plan of Glasgow (1857-58) (Figure 1b). Individual buildings are clearly marked in the area surrounding the development area. The site of Christie's Clay Pipe Factory can be located on the next edition Ordnance Survey Town Plan (1892-94) (Figure 2a). Although it is not named, it is possible to accurately site the factory by identification of the surrounding buildings and location of the Clay Pipe Factory chimney. The Clay Pipe Factory was known to have been constructed in 1877 at 16-20 Craignestock Street. The second edition of the Ordnance Survey Town plan (1892-94) shows the site of the Clay Pipe Factory with the chimney located in the north-eastern quarter of the factory.

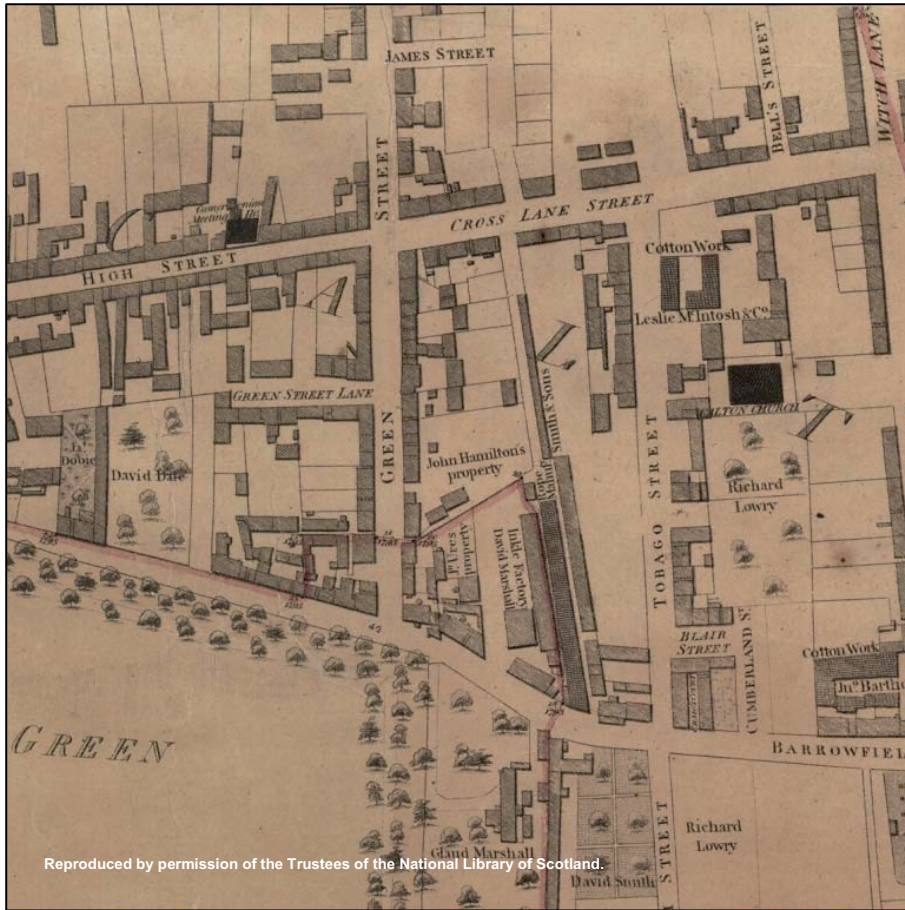


Figure 1a: Peter Fleming 1807



Figure 1b: Ordnance Survey Town Plan 1857-8



Figure 2a: Ordnance Survey Town Plan 1895



Figure 2b: Ordnance Survey Town Plan 1895 - showing trench locations



Figure 3a: Pre-excitation – location of Christie's Factory



Figure 3b: Excavation in progress from the west

9. To the north of the factory is another commercial property (Golden Acre Turning Works) while the Great Hamilton Street Home is depicted to the immediate south. A Rope Walk, with street frontage onto London Road, runs the length of the rear of these properties to their east.
10. The tenements mapped at the western corner of Craignestock Street and London Road are depicted on the historic Ordnance Survey maps (1857 & 1892) as well as the preceding Fleming's plan of 1807 (Figure 1a). This shows an unnamed lane leading north from what is later named London Road in the correct location for Craignestock Street. At the junction of this lane with the road on the east corner Fleming also shows a rectangular structure labelled 'Inkle Factory David Marshall' which remained on the 1st edition Ordnance Survey; as did a long building running behind this 1807 factory, flanking the Rope Walk which was present from 1807 through to the 2nd edition Ordnance Survey.
11. On the 1st edition Ordnance Survey the ground to the north of the 1807 Ink Factory was an enclosed yard with a single, small, structure in the south-east corner. This ground constitutes the western two-thirds of the Christies factory site. The eastern third is covered by the linear building, also present since 1807.
12. Christie's Clay Pipe Factory was established on Craignestock Street in 1877; however the business predates the establishment of the factory. It is believed that manufacturing was undertaken by Christie in the Gallowgate prior to this and the business was actually founded in 1857. It is therefore unlikely that clay pipe manufacturing took place on the site prior to the construction of the factory. This was one of many clay pipe producers in Glasgow at this time. The factory included a large kiln and may also have included a milling machine and other heavy machinery on its ground floor. Christie's factory remained in the Glasgow directory until 1962. Subsequent photographs of the building show it occupied by a plumbers and electrical contractors.
13. Currently the entrance to Craignestock Street is blocked off by bollards and the buildings have been demolished. The old road surface of Craignestock Street remains in place but is in poor repair. The location of Christie's Clay Pipe Factory is readily identifiable from the line of the kerb but the site is currently overgrown and has modern building debris dumped on site. The turn on the kerb is likely to correspond with the double access doors shown of photographs of the factory.

Archaeological Context

14. Prior to the evaluation by GUARD there has been no known archaeological investigation of the development area. The location proposed for Christie's Clay Pipe Factory by GUARD (*Innes, LH & Murtagh, P 2008 Green Street & London Road, GUARD commercial report*) is that identified by Hume (*1974 Industrial Archaeology of Glasgow*) as 16-20 Craignestock Street, Glasgow. Further, that 16-20 Craignestock Street was on the east side of the street to the immediate north of Great Hamilton Street Home (*Ordnance Survey Town Plan 1892-94*).
15. The factory is recorded as being erected in 1877 having steam power for machinery and a large kiln. The dimension of the structure (which is bounded on all sides by neighbouring structures) is some 11m (street frontage) by 22m (depth from road). In these matters we concur with the findings in the GUARD report.
16. An evaluation trench was opened by GUARD to locate and characterise the factory identified as Christie's. We have three problems with linking this evaluation trench to the factory being studied:
 - a. The unscaled location plan (Figure 1, Innes & Murtagh) depicts the trench so far east of Craignestock Street as to appear to lie over a different property. Specifically the trench appears from this location plan to overlie the Rope Walk which stood behind Christie's factory;
 - b. The interpretation of the features identified within the GUARD trench was that all were internal floor surfaces, stances for industrial equipment, internal walls or the

base of a chimney. However, these features spread over 14m (N-S) while the factory is mapped as being only 11m in this dimension and the trench located no exterior walls; and

- c. The surviving remains of a disturbance that appeared to match the orientation and dimensions of the GUARD trench, when located in the course of the excavation works, appeared to be four meters beyond the eastern boundary of the Clay Pipe Factory (Figure 2b).
17. On balance, based on the report presented and site information, it seems reasonable to infer that the evaluation trench was placed over the Rope Walk and not Christie's Factory. The evaluation was only of use in evidencing the potential scale of survival of the area to the east of Christie's Clay Pipe Factory, rather than any of the specifics of built elements of the factory itself prior to the excavation.
 18. Given that the building was occupied subsequent to its use as a clay pipe factory and given the limited working space available on the ground floor we considered it unlikely that there would be the potential for extensive artefact recovery from the site unless it is from a final firing of the kiln.

Project Works

19. The programme of works agreed with the West of Scotland Archaeology Service as detailed in the WSI (Matthews 2009 & Rees 2009) formed the basis for the excavation work carried out on site. According to the terms of the WSI approximately 40% of the footprint of Christie's Clay Pipe Factory was be stripped and the surviving archaeology assessed prior to a meeting attended by Rathmell Archaeology Ltd, Scott Bennett Associates (Group 2) Ltd and West of Scotland Archaeology Service. The results of this meeting determined the need for and character of further stages of on-site work.
20. In the course of the initial 40% strip of the site it became clear that there were no surviving floor levels in the western half of the factory. Conversely the eastern half of the factory, that is the half furthest from Craignestock Street, had intact floor surfaces preserved under less than 200mm of demolition material (from the existing ground level). For this reason the entire footprint of the eastern half of the factory was stripped in order to provide as much useful information as possible when deciding the further scope of on-site works (Figure 2b).
21. In agreement with West of Scotland Archaeology Service and with the permission of Scott Bennett Associates (Group 2) Ltd the on-site meeting agreed that archaeological recording works should continue (Figure 3b). These works focused on:
 - ❖ a T-shaped trench excavated in the western half in order to demonstrate the lack of survival of deposits relating to the Clay Pipe Factory in this area; and
 - ❖ the complete investigation of the eastern half of the site as it related to Christie's Clay Pipe Factory.
22. Stripping of the site was carried out by machine under archaeological supervision. Any archaeology present was recorded according to the terms of the WSI. The excavated area was then backfilled. Deep excavations were not left open overnight and the sides of excavated areas were sloped or stepped, where necessary, to prevent collapse. For reasons of Health and Safety it was necessary to ensure the stability of upstanding remains especially where they had been destabilised by archaeological works. It was possible to observe, as the archaeological works continued, the progressive degrading of the site and the fragility of the surviving brickwork. For this reason it was necessary to carry out the archaeological excavation works quickly and with consideration of the possibility of potential collapse.



Figure 4a: Kiln fire mouth



Figure 4b: Walls (026) (027)



Figure 4c: Cap the flue (031)



Figure 4d: Section through kiln



Figure 4e: Chimney base



Figure 4f: Lintels at south wall



Figure 4g: Cross feature (095)



Figure 4h: Stone block surface (049)

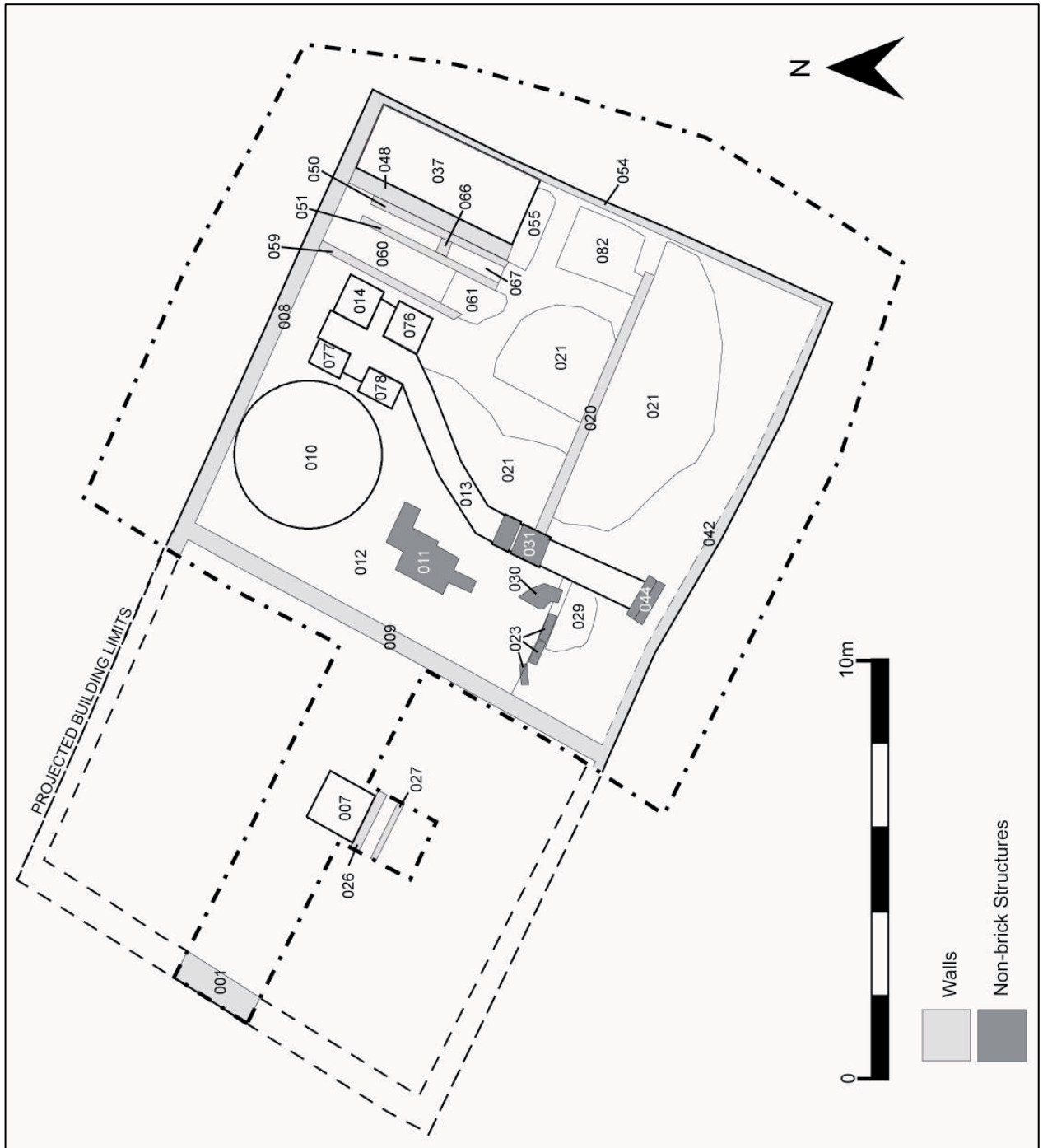


Figure 5: Layout of key contexts at first significant archaeological layer

23. All of the exposed features were investigated in accordance with the terms of the agreed WSI and all works were conducted in accordance with the Rathmell Archaeology Ltd Standard Procedures, the Institute for Archaeologists Standards and Policy Statements and Code of Conduct and Historic Scotland Policy Statements.

Findings

24. For ease of understanding the site will be described by dividing it into a series of areas and looking at the results from these areas in isolation. Of course, any such division of the site is largely a heuristic device and I will try to, where possible, cross reference the information. In the Discussion section of this document I will attempt to bring together the information from the various areas to enable the understanding of the sequence of the site as a whole.
25. The significant archaeological remains are delimited by the outer wall of the factory (Figure 5) which is some 11m broad (street frontage) by 22m deep (depth from road). A broad division of the site is between the western and eastern halves split by an internal wall. I will use the presence of a flue extending south from the chimney base to split up the eastern half of the site, the nature of these features will be made clear below. The areas to be discussed are as follows:
- a. Western Half;
 - b. Area around the Kiln Base;
 - c. Chimney Base and the Flue;
 - d. Southern Third; and
 - e. North-East Corner.
26. Due to the quality of preservation of some of the structures some interpretation of these features will naturally creep into the description of various features, especially where the interpretation is obvious given the context. However, interpretation will be kept to a minimum until the Discussion section.
27. The Appendices at the rear of this document provide details of the registers of contexts recorded (context description, drawing and photographic registers) and materials removed from the site (artefact and sample registers).

Western Half

28. On-site works began with excavation of a linear trench running approximately north-west to south-east along the long axis of the footprint of Christie's Clay Pipe Factory starting at the pavement of the still visible Craignestock Street (Figure 13a). The eastern half of this trench began to reveal the well preserved areas of the factory which will be discussed in due course. The western half of this trench demonstrated the lack of preservation in that half of the factory closest to Craignestock Street. The western half of this trench was initially excavated to a depth of 1200mm below existing ground level. This excavation revealed progressive layers of made ground ((003)(004)(005) and (006)) and three structural features ((001)(007) and (009)).
29. Feature (001) (Figure 7b) was the base of a brick wall (350mm at ground level, 600mm at the base) and its associated foundation at the western end of the trench, adjacent to the pavement of Craignestock Street. As the foundation of the wall went deeper it stepped out and widened; the base of the wall was reached by a small hand excavation at a depth of approximately 1.5m. Wall (001) was composed of red brick to the base and appeared to be bedded on light brown/grey clayey silt (002). This was the only place on the site where potential natural drift geology was reached.
30. At this stage it should be noted that the footprint of the factory was easily delimited by the surviving boundary walls. Even on the south side (042) where uppers courses of the wall had been much more severely degraded. Another substantial wall (009) separated



Figure 6a: Eastern half of factory from the north



Figure 6b: Chimney base and flue from the south



Figure 7a: Brick structure (007)



Figure 7b: Western half of factory



Figure 7c: Metal plates (023)



Figure 7d: Removing flagstones (011)



Figure 7e: Southern end of flue (013)



Figure 7f: Southern end of flue (013)



Figure 7g: One block from (049)



Figure 7h: North-east corner (074)

the eastern and western halves of the factory suggesting a different use for the two areas of the building. All of the bricks used in the construction of the Christie's Clay Pipe Factory were of a similar physical character and when stamped they all identified brickworks in Glasgow. The outer part of the north wall (008) of the factory was of a far poorer construction and a different style of brick suggesting that it may in fact have been the surviving wall of the neighbouring building and only the inner lines of brick related to Christie's Clay Pipe Factory.

31. Another structural feature was uncovered in the centre of the western half of the factory. Structure (007) (Figure 7a) was a roughly 1.2m square brick built structure. The structure was investigated, in agreement with WoSAS, by expanding the trench south-west in a T-shape (Figure 4b). This expansion revealed that Structure (007) continued to the south-west ending in a brick wall (026). A second wall (027) was 300mm beyond (026) running parallel. The cavity between them was filled with grey/brown silt containing large fragments for stone and brick.
32. Surrounding and infilling the space between the structural features was a series of layers of made ground ((004)(005) and (006)). Each of these layers contained angular fragments of brick and stone, (006) also contained fragments of slate, in a matrix of very dark brown sand and silt. Variations in the proportions of inclusions or the compaction made the layering apparent. It was also noted in section that slight tip lines, especially in (006), indicated that deposition may have taken place from the east or from the centre of the factory. The accumulation of these layers; (005) being the lowest, (006) then (004), build up to just below the surviving floor of the factory.

Area around the Kiln Base

33. Of primary interest in the use of the site as a Clay Pipe Factory are the remains of the kiln which was located in the north-west corner of the eastern half of the factory (Figure 5). Demolition work and subsequent use of the site was such that only the base of the kiln had survived; presumably the superstructure of the kiln had been cropped as a part of this process. Portions of the kiln base and the surrounding brick surfaces were covered in a layer of concrete; the underside of this layer contained fragments of construction material, plumbing and internal fittings. There is no doubt that the layer of concrete and other material contributed to the preservation of the kiln base (010) and surrounding features (Figure 10b).
34. The kiln base (010) was circular and 3.6m in diameter (Figure 8). It was composed of concentric rings of red bricks with significant areas lined with yellow bricks of a different variety. Yellow bricks lined four sub-rectangular sunken features, which were equidistant around the circumference of the kiln base; these were most likely the base of fire boxes (Figure 4a). The fire boxes survived to a depth equivalent to three courses of brick (approximately 250mm). The surviving fills of these features ((016)(017)(018) and (019)) were excavated and retained for analysis. They contained small fragments of brick and several pieces of clay pipe. The kiln base survived to a depth equivalent to four courses of brick (Figure 4d) (approximately 400mm) meaning that the base of the fire boxes were only one course of brick deep. The kiln base was constructed on very compact dark grey/brown silty clay with frequent inclusions of brick, coal and sandstone (086).
35. The area immediately surrounding the kiln base (010) was surfaced with red brick (012) similar to the bricks used in the construction of elements of the kiln base (Figure 5). This layer of brick appeared to fit around the kiln base and continue south. Where it approaches the southern third of the factory the preservation of this layer becomes extremely poor and it is clear that, probably as a result of demolition activity, large sections of the brick surface have been removed. In the centre of this brick surface, aligned with the central axis of the building, was an irregularly shaped area of flagstones (011), roughly 1.2m east-west by 2.2m north-south (Figure 7d). This area comprised two large flagstones each 1.1m by 600mm and several smaller associated stones of a similar material. Similar to the kiln (010), this was bedded on backfilled silty clay (086).

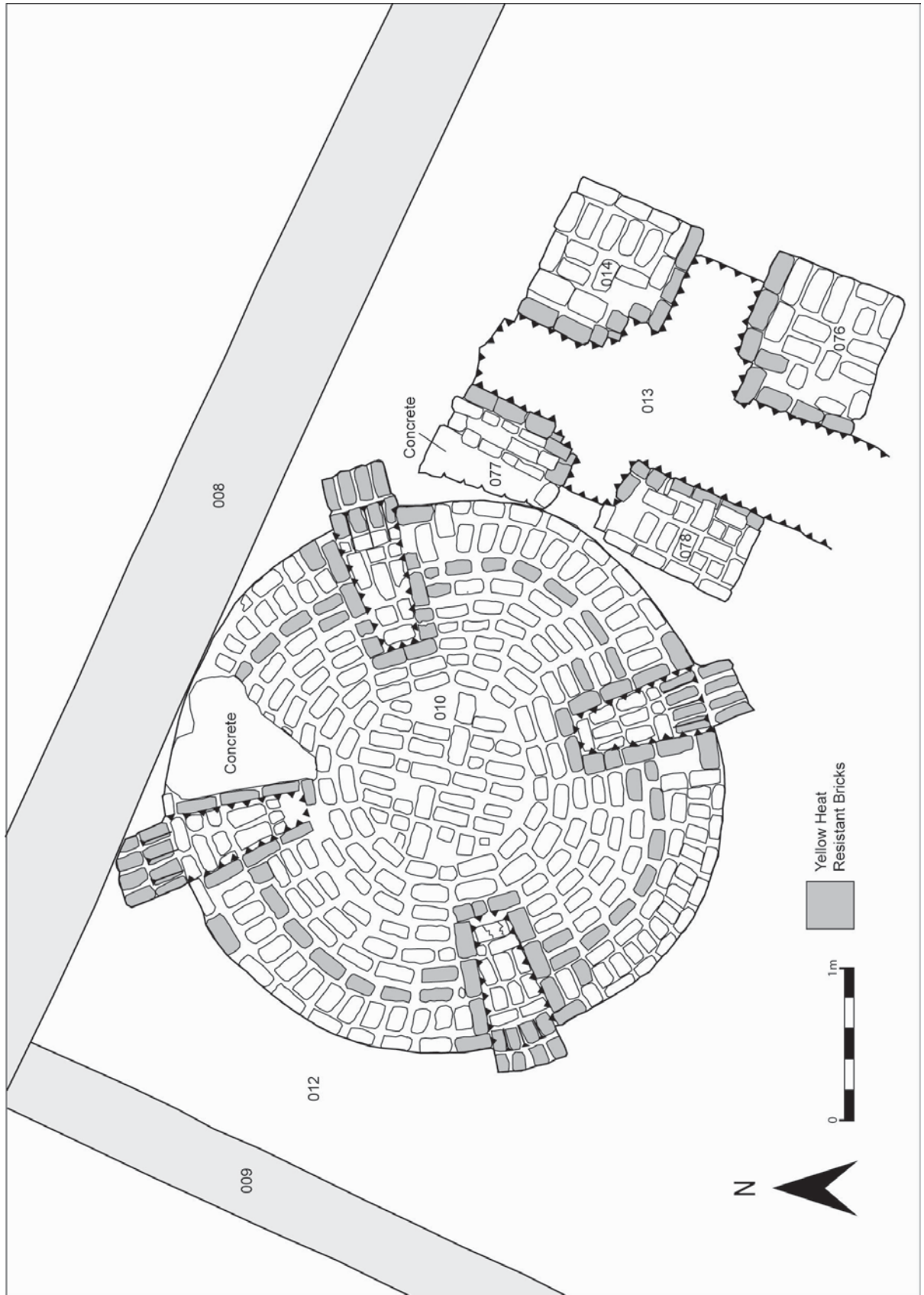


Figure 8: Detail of Kiln (010) and Chimney Foundations (014)(076)(077) and (078)



Figure 9a: North east corner, surface (075)



Figure 9b: North-east facing section through north-east corner

Chimney Base and the Flue

36. The eastern half of Christie's Clay Pipe Factory was bisected by a north-south aligned brick channel, sunken to more than 750mm beneath the floor level, extending beyond the southern boundary of the excavation area (Figure 6b). The channel originates at four large foundation structures ((014)(076)(077) and (078)) (Figure 4e) which stand against the northern wall. Each of these was approximately 850mm north-south by 750mm east-west surviving to a depth of at least 900mm. The foundation structures were south-east and immediately adjacent to the kiln base (010) (Figure 8), each was constructed of red brick but the internal faces of the structures were lined with yellow brick in a similar style to the kiln base (010). Supported by comparison with historic mapping a provisional interpretation of these structures suggests that they are forming the base of the chimney.
37. The four foundation structures formed a cross-shaped space between them. The fill of the intervening space (038) contained black sooty material with building and demolition debris. The only access to the chimney base was to the south between foundations (076) and (078) all other spaces between the foundations were blocked during construction, probably during primary construction. The southern access extended into a brick built channel (013) approximately 400mm wide and a minimum of 750mm deep (Figure 6a). This channel (referred to during excavation works as the flue) extended south west in an S-shape through the centre of the eastern half of the factory, below floor level, and continued beyond the southern wall of the factory.
38. The depth of the flue (013) was established where possible (approximately 500mm at the north end, 750mm at the southern end and more than 1.2m in the centre) however after partial excavation the structure became increasingly prone to collapse. Health and Safety constraints therefore prevented a complete excavation of the interior. The fill consisted of demolition material with large fragments of brick and stone. Inclusion of stone flagstones in the fill suggested that the flue was most likely covered while in use and this is supported by the two large flagstones (031) which remained in place near the southern end (Figure 4c).

Southern Third

39. The southern third of the eastern half of Christie's Clay Pipe Factory appeared to have the poorest preservation. This may have been the result of the natural slope of the ground being lower to the south east; it is also possible that the later demolition of the neighbouring property, Great Hamilton Street Home, contributed to the degrading of this portion of the site. The results of a sequence of targeted trenches were able to provide a picture of the build up of structures and sediments in the southern third of the eastern half of the site.
40. In the south-east corner of the factory a trench was excavated running perpendicular to the south wall to a depth of approximately 1.5m below existing ground level (Figure 10a). Further investigation by hand at the interior face of the southern wall (042) indicated that the foundations continued to a depth of more than 2m and at no point during this excavation was natural soil reached. The south-east facing section of this trench provides a cross section of sediments in this area.
41. The lowest fill reached (073) was an extremely compact sand and silt fill with inclusions of stone, brick and ash. The fills above this all appeared to tip from north to south suggesting that they were deposited from the centre of the factory out. Deposit (072) was composed of rubble and brick which had been loosely dumped. Above this deposit (071) contained elements of brick and stone rubble but in a matrix of silty sand; numerous clay pipes (Figure 12a) were recovered from this fill and all bore the stamp of Christie's at a depth of approximately 500mm. A further deposit of sand (070) overlay this which again contained fragments of brick rubble and clay pipe.



Figure 10a: Section through south-east corner, showing (022)



Figure 10b: Kiln base (010)

42. Three superimposed layers of brick surface ((021)(022) and (034) in sequence top to bottom) were identified adjacent to the southern wall of the factory, bedded onto a levelling deposit (070). These were also investigated in section by the trench described above. Complete removal of (021) and investigation in section demonstrated that surface (022) and (034) only continue a short distance from the southern wall (approximately 1.8m and 1m respectively). Neither (022) nor (034) appeared to be carefully or uniformly laid in contrast to (021) which seemed to be compact and well made. Surface (021) extended north-west until the southern portion of the flue (013).
43. The southern part of the flue (013) was backfilled with compact rubble, similar to the fill of the rest of this channel (Figure 7f). When this rubble was removed it was discovered that the flue sloped downward and through the foundation of the southern wall of the factory. As before, several pieces of flagstone were recovered from the interior fill of the channel suggesting a method of roofing. However, adjacent to the southern wall of the factory the flue was capped with concrete lintels, 600mm by 150mm by 150mm thick. These lintels were composed of crude concrete (containing fragments of brick in its mix) reinforced on the underside by a piece of now degraded metal (Figure 4f). The southern section of the flue was deeper than the rest suggesting that in its original state the capping of the flue may have been as much as 300mm beneath the brick surface but in contrast in the central sections of the flue the capping would have been flush with the surface.
44. The southernmost extent of brick surface (012) abutted a series of rectangular metal plates (023), each 600mm by 150mm, forming a continuous line running parallel with the south wall, offset by approximately 2.8m. These may have been used to reinforce the brick surface as a cart track (Figure 7c). Adjacent and to the east of these was another group of flagstones (030) which were irregularly set between the brick surface (012) and the flue (013). The brick surface continued beyond these features to the south (029) but was in a poor state of preservation. Surface (029) may have originally continued into (021) upon excavation were split by the southern section of the flue. It is likely that the flue was originally constructed beneath a continuous brick surface.
45. A trench was excavated to explore the sediments beneath surface (029) to the west of the flue (Figure 7e). This trench was excavated to a depth of 1.3m. All of the sediments reached in the excavation of this trench were made-ground. The trench did reveal a wall (064) and a ceramic drain (065) running parallel to the south wall of the factory, offset by approximately 1.5m. The location of these structures appears to correspond to a denuded southern section of the central wall (009) and may therefore represent a coherent set of later modifications to the factory, however, their placement did not affect the neighbouring flue nor did the drain access the flue. Hand excavations at the base of this trench demonstrated that the south wall (042) survived at depth greater than 1.7m below current ground level.

North-East Corner

46. The most complex portion of the site was the north-eastern corner of the factory and it also gave the best indication of a sequence of use, modification and reuse (Figure 5). This area was to the immediate east of the foundation structures for the chimney base and so the northern wall of the eastern half of the factory may be split into three adjacent portions; the kiln base, the chimney base and the north-east corner (from west to east). The clearest understanding will be gained by describing the sequence of construction and deposition in this area chronologically beginning with the earliest.
47. A section (Figure 9b) was cut through the north-east corner of the site running parallel with the north wall (008) and reaching from the east wall (054) to the chimney foundations (014). This section demonstrated that after the placement of the foundations for the chimney and the outer factory walls, a lesser foundation structure was established in the north-east corner. This lesser structure comprised two large brick foundations ((048) and (092)) both 800mm width by 500mm height by approximately 2.5m length,

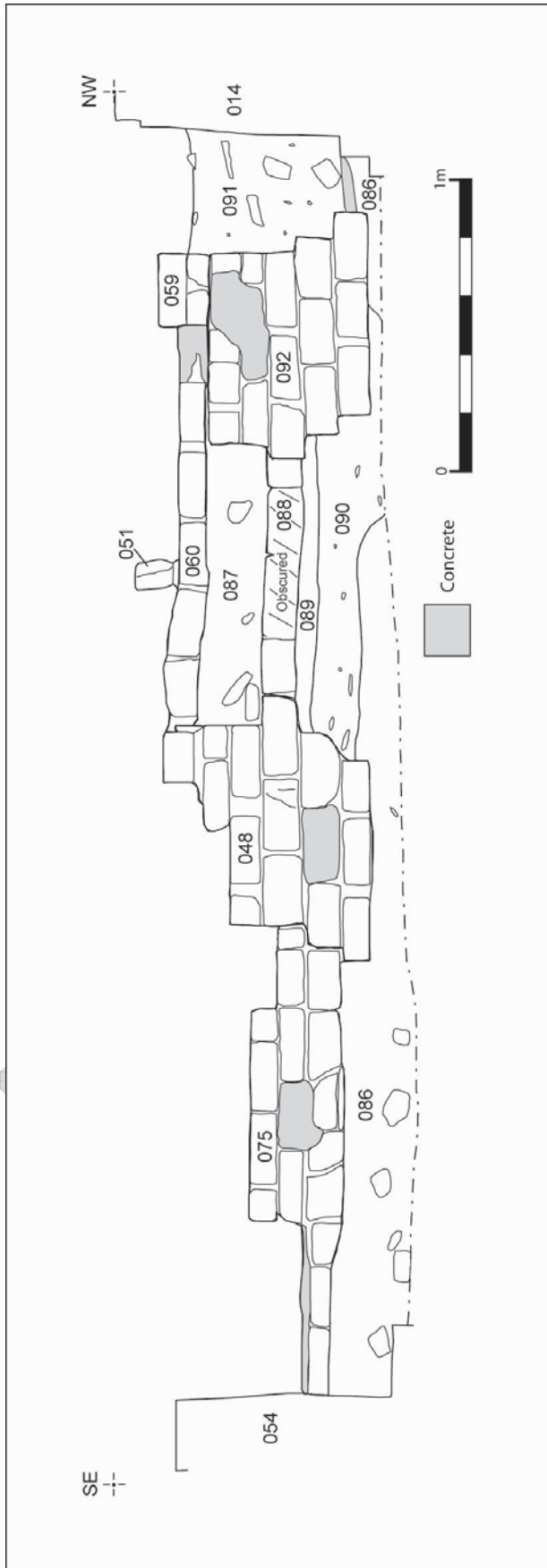


Figure 11: Section through north-east corner

which ran perpendicular to the north wall of the factory with a 0.9m gap between them. In section it was clear that these foundations had been stepped out from a central point to support a substantial load.

48. The area between these foundations was covered with a brick surface (088); using (088) as a surface the space between the foundations was levelled up with fill material (087) and surfaced with brick (060). The upper brick surface (060) was broken in places but expanded to the south ending in a dwarf wall (081) (Figure 11).
49. On top of surface (060) was constructed an H-shaped brick structure ((050)(051) and (066)) the long axis of which ran perpendicular to the north wall (008) of the factory. The location and deliberate shape of this structure suggested that it may have provided a solid base for some form of industrial plant. This H-shaped structure was constructed onto floor (060) directly above the original founds giving a smaller footprint than the original founds ((048) and (092)).
50. The uppermost layer which had survived in this part of the factory was formed of irregular brick rubble and fragments of stone ((039) and (040)) packed together to fill the space between the H-shaped structure and other features (Figure 5). This rubble fill formed the base for a poured concrete floor which survived in patches throughout the north-east corner of the site in a similar fashion to that which had covered the kiln base. Some of the artefacts recovered from this rubble fill were semi-circular ceramic objects which may have been saggars (kiln furniture) (Figure 12b) from the operation of the kiln.
51. Between the foundation structures described above ((048) and (092)) and the eastern wall (054) of the factory an area of approximately 4m by 1.6m had been variously surfaced and resurfaced. The lowermost layer (075) was composed of a brick layer which was between one and three courses of brick deep (Figure 9a). The thicker portions were in the centre of surface (075) and presumably may indicate the purpose of this portion of the factory as a further stance for machinery. Portions of layer (075) were surfaced with a thin layer of concrete.
52. On top of brick and concrete layer (075) the space between structure (048) and the eastern wall of the factory (054) was filled with a layer of large sandstone blocks (049) (Figure 4h & 7g). An area between the sandstone blocks and the north wall was made up of an irregular brick surface which was presumably not load-bearing. Some of the individual sandstone blocks were dressed in places which may indicate that they were reused from another structure. In several places the sandstone had been fitted with metal bolts, presumably to secure machinery to the surface. The topmost layer in this corner of the site was a covering of concrete (037) over the sandstone blocks which kept exposed two of the more central metal bolts.
53. To the south of these structural features, about half way along the eastern wall of the factory, the central part of the factory was in a very poor state of preservation. Only a limited portion of the brick surface had survived in the centre of the building, extending out from the surface at the south wall (012). By removing this surface and the rubble from the area it was possible to expose interior structural elements of the factory such as dwarf walls ((094) and (099)) and a cross-shaped metal structure (095).
54. Several brick features ((047)(063) and (065)) sat on top of other surfaces three of these ran diagonally, north-west to south-east, the reasons for these features was unclear as they were all poorly constructed of single layers of brick. Reduction in this area also exposed potential brick surfaces ((083) and (084)) which survived only in small areas. The lowest brick surface in this area was (074) which extended (075) from the north-east corner of the factory.

Discussion

55. In summarising the findings context by context it has been necessary to allow some interpretation of features. Interpretation of these contexts will now be broadened to include the less obvious features. Included in this discussion will be an interpretation of the construction, use and reuse of the factory building. The variable nature of

preservation within the factory means interpretation of some areas is limited by lack of information. Where appropriate this discussion will be supported by information from historical sources and historical mapping.

Pre-construction Topography and Foundations

56. Only adjacent to the west wall of the factory, by Craignestock Street, was possible natural subsoil (002) reached, but too small a quantity of it was exposed to be sure that this was *in-situ* drift geology. Where it was possible to investigate them it was demonstrated that foundations for the entire building were at least 1.5m below existing ground level (which is comparable to the historic surface of Craignestock Street) and foundation depth at the rear of the building was more than 2m deep.
57. The increase in depth may have been a factor of a pre-factory natural ground slope or a requirement of the greater volume of machinery at the rear of the factory. In either case from the volume of made ground between the foundations it would seem that the entire site had been cleared down to the depth of the base of the foundations and then backfilled following their placement.
58. Prior to the construction of Christie's Clay Pipe Factory historic mapping shows a number of buildings in the corner of Craignestock Street and London Road (Figure 1). Two long linear building on the eastern boundary of the development area probably both relate to the rope works with the easternmost being the rope walk located during the GUARD evaluation works. Prior to the construction of the Great Hamilton Street Home the area was occupied by several factory buildings and workshops the northern most of which partially overlaid the area occupied by Christie's Clay Pipe Factory.
59. The presence of older factory buildings on what became Christie's Clay Pipe Factory may account for some of the sub-surface structural elements which remained beneath the primary factory occupation layer. Fragments of flooring ((083) and (084)) uncovered during excavations in the north-east corner of the factory may relate to earlier use of the site. This would explain their depth in relation to Craignestock Street as the factory interior being made up to one common level. Similarly the drain (065) found in the southern third of the factory could have been an element of an older building on the same site.
60. The notion that the interior of Christie's Clay Pipe Factory was artificially built up to bring it to the level of Craignestock Street goes some way to explaining the depth of made ground found between the foundations of the factory. However, upon consultation with West of Scotland Archaeology Service a further possibility should be considered: It has been common practice in other areas of Glasgow to excavate out the clay subsoil from an area and backfill with building debris. If this had taken place on Craignestock Street it is possible that a considerable depth of made ground may exist on site.

Layout of the Primary Factory Elements

61. An important factor affecting the interpretation of the functional layout of the factory is the apparent difference in the quality of survival across the site (Figure 13a). Best preservation within the factory was in the north-east quarter from the kiln base (010) to the north-east corner. Floor levels and the outer wall in the south-east quarter of the factory were degraded either as a result of the natural ground slope (down from north-west to south-east) or as a result of the later demolition of Great Hamilton Street Home. The fact that no floor layer remained on the western half of the factory could be taken to mean that this half of the ground floor, perhaps without the need to support heavy machinery, had a suspended wooden floor. However, examination of the sediments and the character of the surrounding structure suggest a more likely explanation that the brick floor surface in this area has been removed either during the reuse of the building or during its demolition.
62. A sequence of construction may be interpreted from the main elements which made up the interior of the factory on the ground floor; either simultaneous to or very soon after the establishment of the primary building foundations the foundations for the chimney;

(014), (076), (077) and (078) were also established. In this way the chimney is created as a free standing structure which is not reliant on support from the surrounding building. Similarly it would appear that the kiln base (010) and very likely the kiln itself was constructed in-situ early in the build process perhaps in order to facilitate access for materials. It is very likely that the two internal foundation structures to the east of the chimney; (048) and (092) (Figure 11) were also established as a primary element of the build. In this way the essential elements of the factory are positioned in close proximity along the eastern half of the northern wall of the factory; the kiln, the chimney (Figure 8) and the internal foundations are likely to be for a boiler.

63. The kiln (010) (Figure 10b) survives only at the base level however the plan of the kiln base is remarkably similar to the plan of the Christie's kiln from their Leith factory, a partial reconstruction of which exists in the Huntley House Museum in Edinburgh. A block plan based on a combination of the reconstructed Leith kiln and contemporary photographs allows us to roughly compare the Leith kiln with that recorded at Craignestock Street in Glasgow. At the base level the kilns appear nearly identical. Both kilns are represented as approximately 3.6m in diameter (from the end of opposing fire-mouths), both kilns are represented with four fire-mouths and the interior dimensions of the Leith kiln roughly correspond with the circle of yellow fire-bricks recorded in the base of the kiln at Craignestock Street. Unfortunately, because only the base survived in Glasgow we are unable to answer questions as to the location of the wicket threshold or of the character of the throat arches.
64. The chimney of Christie's Clay Pipe factory can be seen on 1892-94 Ordnance Survey town plans of that part of Glasgow and its location on these plans can be confirmed by the location of the four chimney foundations; (014), (076), (077) and (078) recorded in the course of this archaeological excavation. Unsurprisingly the foundations structure for the chimney is large so as to accommodate a structure more than four stories high; it must have been a notable feature in the surrounding landscape. A surprising discovery was the flue (013) running in an s-shape through the factory and beyond the southern wall. Indications were that the flue was at one time covered and its down slope to the south means that it is unlikely to be anything other than access to the chimney; the walls of the flue were intact and there was no obvious access from within the factory.
65. One possible explanation for the presence of the flue extending south beyond the boundary of the site is that it may tie in with the underground railway which is still in use beneath London Road. This section of railway, referred to collectively in recent times as North Clyde Line, is in fact a rationalisation of two rival systems: The Glasgow City & District (1880) and The Glasgow Central line (1890) (McGregor *pers comm*). Typically these lines were built by the cut-and-cover method and required ventilation. If the ventilation had been tied into the construction of Christie's Clay Pipe Factory chimney the factory would gain in return a through draft of air allowing the chimney to draw. This is of course speculation and a definitive answer would require examination of the schedule and construction plans for the railway.
66. The purpose of the foundation structures; (048) and (092) (Figure 9b), to the east of the chimney is less certain than the other internal elements of the factory. However, another essential element of the factory is likely to have been the boiler. The boiler would have been used to provide power for any machinery operating in the upper floors of the factory it would also have needed access to the chimney. For these reasons it is likely to have been on heavy foundations in the north-east corner. We may continue this supposition to include the surfaces between the boiler foundations and the east wall of the factory; (075), (049), (037). It is likely that this area was the site of machinery used for the transfer of power from the boiler to the upper floors. This being the case and combined with the above information it would seem that all of the heavy machinery of the factory has been placed along the eastern half of the north wall. It should be noted that no location is suggested for a milling machine or other machinery at this stage such a suggestion would be pure speculation.



Figure 12a: Selection of clay pipes recovered.



Figure 12b: Possible saggars recovered from (040)



Figure 13a: Initial investigation – showing differential preservation



Figure 13b: Excavation in progress from the west of site

67. Before the remainder of the factory is examined some attention should be given to the stratigraphic sequence demonstrated by the structural remains in the north-east corner of the site. There appears to be at least three phases of construction and reconstruction in the area of the boiler foundations and two phases in the area of the machinery stance beyond. In both cases there is another phase where the area is resurfaced with concrete. It would appear that during the functional life of the Clay Pipe Factory the boiler base under went two changes and the machine base underwent at least one. This, of course, supposes that the concrete resurfacing relates to the reuse of the factory building by an electrician and plumber. In contrast the kiln base and the chimney appear to have had only one phase of construction.

Layout of the Factory Ground Floor

68. At several points within the interior of the factory variations in the primary surface level suggest structural elements or internal division. Along the central axis (running from Craignestock Street to the rear of the factory) structural features are notable; the area of flagstones (011) to the south west of the kiln base (010) and the cross-shaped metal stance embedded in a brick and concrete structure (095). The use of the flagstones is unclear; there was no obvious place for machinery and no regularity to their size or position. The cross-shaped metal stance (095) (Figure 4g) again has no clear purpose; however, its location (in the centre of the eastern half of the building) suggests it is a structural support perhaps relating to the upper floors of the factory. It is unclear whether or not (095) represents a part of the original build or a later reinforcement. The poor preservation of other remains in this area makes confident interpretation of (095) impossible.
69. The southern third of the eastern half of the factory was delimited in part from the rest of the interior by a wall (020). This was the only evidence of internal division at the ground floor level; however, it did not continue beyond the rear third of the factory. The southern third of the factory appears to have been constructed without stances for heavy machinery. Like the rest of the factory the space between the outer walls has been filled with rubble and sediment. Perhaps due to the differential levelling of this sediment it appears that the floor surface along the southern wall had been repaired several times. The repairs seem to have included building up the area along the wall with roughly laid layers of brick.
70. Similarly the flue has been reinforced at the southern wall with concrete lintels (Figure 4f). This begins to suggest perhaps a more serious threat of collapse such as the construction of the Great Hamilton Street Home in the neighbouring property. Use of the southern third of the factory may be indicated by the metal plates (023) forming a cart track along the southern third of the buildings from the double door which is shown in photographs. This lends greater weight to the suggestion that the western half of the factory must have had a brick floor rather than a suspended wooden floor.

Summary of the Layout

71. In summary it appears that the primary occupation of the factory (concerned with the production of Clay Pipes) has not survived in the western half but has survived in the eastern half where most of the heavy machinery bases seem to have been located (Figure 13b). Along the north wall of the eastern half were preserved the kiln base, the foundations for the chimney, the boiler base and the machinery base for the transfer of power to upper floors. Where the kiln and the chimney do not appear to have been heavily modified, during the use of the factory, the boiler and machinery bases appear to have been modified several times. The southern part of the factory had been surfaced with a brick floor. Part of this has been given over to access for carts, presumably bringing raw materials. Perhaps most strange is the flue running beneath the floor level from outside the south wall and joining the chimney base. The purpose of this feature is unclear. The factory was taken over by an electrician and a plumber and it may have been during this phase that much of the interior was resurfaced with concrete.

Recommendations

72. Rathmell Archaeology Limited would recommend no further on-site work should be carried out and that no significant additional information could be gained from the further examination of the *in-situ* remains of Christie's Clay Pipe Factory. However, a significant body of material and information was recovered during the course of the excavation that would warrant further post-excavation work according to the terms of the WSI.
73. Post-excavation analysis of the site should focus on the analysis of the materials removed from the site to elucidate the industrial processes undertaken and the character of the finished products (in particular whether there are clay pipe forms present which were not previously dated or associated with Christie's manufacture). In general terms the corpus of Christie's material should be subject to the analysis by an appropriate specialist. The results of this analysis should be published within an appropriate academic journal.

Conclusion

74. This Data Structure Report has outlined the work carried out during archaeological excavation works at 16-20 Craignestock Street on the site of Christie's Clay Pipe Factory. Rathmell Archaeology Ltd were commissioned to undertake a programme of archaeological works by Scott Bennett Associates (Group 2) Ltd on behalf of The new Housing Association in respect to the proposed plan for development at Green Street/London Road, Glasgow. The archaeological works were designed to mitigate the impact on the archaeologically significant remains within the development area.
75. The archaeological excavation works uncovered the remains of Christie's Clay Pipe Factory. Floor levels in the western half had not survived the eastern half most of the heavy machinery bases survived including; the kiln base, the foundations for the chimney, the boiler base and the machinery base for the transfer of power to upper floors. Where the kiln and the chimney do not appear to have been heavily modified, during the use of the factory, the boiler and machinery bases appear to have been modified several times.
76. No further on site work is recommended but a programme of post-excavation work should include the examination of the corpus of material recovered which relates to Christie's Clay Pipe Factory and the dissemination of the results of the excavation and post-excavation work in a suitable academic journal.

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Cartographic

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| Ordnance Survey | 1892-94 | Town Plan of Glasgow |
| Peter Fleming | 1807 | Map of the City of Glasgow and suburbs |

Appendix 1: Registers

77. Within this appendix are all registers pertaining to works on-site during the excavation.

Context Register

Context No.	Area/Trench	Type	Description	Interpretation
001		Structural	Wall and foundations consisting of red bricks with purple core measuring approx. 0.11m x 0.11m x 0.22m. Brick has been bonded with light yellow mortar and some patches of light brown and grey sandy mortar. At base of wall bricks step out to form foundations constructed also from the same red bricks as the rest of the wall. Above the lowest layer of bricks there is a layer of sub-circular stones, 0.1m in diameter, and mortar. This layer is 0.12m thick. Above that is a layer of smaller bricks with cross section 0.11m x 0.07m. The wall and foundations survive to a depth of 1.29m (over 12 courses) below the height of the adjacent pavement and to a width of 0.68m. The total length is unknown although presumably runs the entire width of the factory.	External wall of factory on its Western side running along the edge of Craignestock Street
002		Deposit	Compacted light brown/grey clayey silt with frequent rootlets and flecks of charcoal. Unknown extent.	Deposit which abuts wall (001) so is either contemporary or later with it
003		Deposit	Loosely compacted layer of soil, vegetation and rubbish	Topsoil and dumped material
004		Deposit	Light brown sand and silt. Loosely compacted. Fragments of red brick, cement, stone and mortar	Modern made ground.
005		Deposit	Dark brown/black sandy silt. Well compacted. Very frequent coal, slate, stone and charcoal. Some brick.	Modern made ground
006		Deposit	Light brown silty sand. Contains mortar and building debris. Loosely compacted.	Modern made ground
007		Structure	Red brick structure exposed in the edge of the trench.	Brick structure
008		Structure	Northern wall of building, wall demolished to floor level. Red bricks bonded with red/brown sandy mortar. Wall continued west outside area of excavation. Outer three skins of brick may be the wall of building to the north.	North wall of Factory and south wall of adjacent building.

Context No.	Area/ Trench	Type	Description	Interpretation
009		Structure	West wall within building. Build of red brick. Central divide between eastern and western half of building.	Internal factory wall.
010		Structure	Circular structure made of concentric circles of brick with four evenly spaced brick pits equidistant round the circumference.	Base of kiln lined with yellow heat resistant bricks
011		Structure	Flagstones and possible cobbling. Pale grey in colour. Broken stones, no bonding present.	Flagstone and cobble surface.
012		Structure	Red brick surface. Mostly red but occasional yellow bricks laid to make up a surface	Brick floor surface
013		Structure	S-shaped channel running north-south through the centre of the eastern half of the site. Channel is lined with red brick. Variable depth 750mm at north end, 1.2m in centre. Backfilled with rubble including brick and slabs of slate	Flue for chimney
014		Structure	Large angular brick structure. In close proximity to three similar structures forming the corners of a square. 800mm by 500mm by at least 1.1m deep/	Foundation structure of chimney
015		Deposit	Layer of wood and slate in a matrix of silt and sand	Wood and slate deposit abutting cobbles (011)
016		Deposit	Light brown silt, well compacted. Fragments of charcoal and cinder. Frequent brick fragments, slag and vitrified material, inclusions of clay pipe fragments.	Fill of fire mouth
017		Deposit	Light brown silt, well compacted. Fragments of charcoal and cinder. Frequent brick fragments, slag and vitrified material, inclusions of clay pipe fragments.	Fill of fire mouth
018		Deposit	Light brown silt, well compacted. Fragments of charcoal and cinder. Frequent brick fragments, slag and vitrified material, inclusions of clay pipe fragments.	Fill of fire mouth
019		Deposit	Light brown silt, well compacted. Fragments of charcoal and cinder. Frequent brick fragments, slag and vitrified material, inclusions of clay pipe fragments.	Fill of fire mouth
020		Structure	2 rows of bricks running NW-SE across the floor of factory. Starts east of flue and is broken before rear wall.	May be truncated internal wall.

Context No.	Area/Trench	Type	Description	Interpretation
021		Structure	Brick surface surviving in southern third of factory. Red brick	Area of brick flooring
022		Structure	Brick surface surviving in southern third of factory. Red brick. Beneath 022	Layer of brick
023		Structure	Line of three narrow rectangular metal plates. Each 540mm long by 200mm wide.	Possible remains of cart track.
024		Deposit	Brown/grey clay, well compacted. Contains frequent charcoal flecks, coal fragments and lumps of light brown clay.	Backfill abutting 001
025		Deposit	Grey and yellow sand	Possible natural
026		Structure	Red brick wall running E-W. Wall attached to brick structure (007).	Brick wall.
027		Structure	Red brick wall running E-W	Brick wall
028		Deposit	Brown/grey silt, loosely compacted with very frequent brick fragments, stone and some animal bone.	Fill between walls (026) and (027)
029		Structure	Brick surface surviving in southern third of factory. Red brick	Brick floor
030		Structure	Group of pale yellow floor slabs located adjacent to (023).	Floor surface
031		Structure	Two large stone slabs covering the flue (013). One of the slabs appears to be dressed	Reused stone covering of flue.
032		Deposit	Compact pale orange sand. No inclusions.	Levelling deposit for flooring
033		Deposit	Very compact dark grey sandy clay. Inclusions of charcoal, brick, stone and coal.	Made ground below flooring of factory.
034		Structure	Brick surface surviving in southern third of factory. Red brick	Brick layer
035		Deposit	Light brown sand, very compact. Contains small stones and fragments of brick and charcoal.	Levelling from floor (021)
036		Deposit	Black silty sand. Compact. Flecks of brick and charcoal.	Base of brick floor (021)
037		Structure	Large rectangular concrete slab measuring 1.77m by 3.35m. Two metal bolts stick out in the centre. Area is surrounded by line of bricks.	Possible machinery base.
038		Fill	Black sooty deposit. Composed of building and demolition debris. Soot, ash. Interior of the flue.	Material from the use and backfill of the flue.

Context No.	Area/Trench	Type	Description	Interpretation
049		Deposit	Four ceramic slabs. Slightly curved in section. Very fragmented	Possible broken saggars.
040		Deposit	Two ceramic slabs. Slightly curved in section. Very fragmented	Possible broken saggars.
041		Fill	Fragments of stone, brick rubble, and metal in a matrix of dark brown sandy silt. Mostly building debris. Upper fill of (013)	Upper fill of flue.
042		Structure	Red brick wall. Heavily truncated in upper courses.	Main south wall of factory.
043		Structure	Brick surface surviving in centre of factory. Red brick	Brick floor
044		Structure	Concrete and mixed brick cement lintel	Concrete cover for end of flue
045		Deposit	Dark blue sand and mixed demolition debris. Forming a layer of levelling with frequent modern demolition inclusions.	Levelling or demolition
046		Deposit	Mid brown sand with occasional broken red bricks. Vary occasional inclusions of clay pipes.	Levelling or demolition deposit.
047		Structure	Line of five bricks in two lines running diagonal to other structures in NE corner. Only one course deep.	May be support stance for a structure relate to the boiler engine.
048		Structure	Line of two or three rows of mainly red bricks some yellow.	Possible wall or internal division
049		Structure	Layer of bricks and flagstones. In NE corner of factory. Metal bolts in centre.	Stance for machinery.
050		Structure	One course of red brick.	Internal division wall.
051		Structure	One course of red brick	Internal division wall.
052		Deposit	Dark blue sand and mixed demolition debris. Forming a layer of levelling with frequent modern demolition inclusions	Levelling or demolition
053		Structure	Area of red brick and occasional flagstones to the south of possible machine stance. May be a brick surface.	Brick floor surface
054		Structure	Brick wall comprised of red brick.	Outer wall of factory on eastern edge.
055		Structure	Red brick surface	Brick floor
056		Structure	Line of roughly square sandstone flagstones	Possible machinery base
057		Deposit	Inclusions of clay pipe, frequent inclusions of red brick. Mid brown sandy soil. Various inclusions and flecks of small stone.	Levelling layer

Context No.	Area/Trench	Type	Description	Interpretation
058		Deposit	Loosely compacted, dark brown to black sand. Inclusions of building fragments, stone, brick and charcoal.	Levelling deposit
059		Structure	Red brick structure running N-S. Length 2.36m width 0.22m Small rectangular shape of brick on the north side of the structure.	Possible internal wall
060		Structure	Red brick surface. Occasional yellow hear resistant brick. 3.4m length. 1.96m width. Surface divided by wall – appears to be built on existing floor surface.	Brick floor
061		Structure	Red brick surface. 0.22m by 0.11m. Stone slab included in floor surface.	Brick floor
062		Structure	Layer of yellow bricks covered in places by mortar.	Possible machine base
063		Structure	Six red brick in two lines between the chimney foundations and the area of the H-shaped structure. One course deep.	May be related to boiler stance (see 065 and 047)
064		Structure	Red brick 100mm by 220mm three bricks wide. Ceramic drain runs along it's north side. And 250mm depth from surviving upper extent.	Red brick wall – ceramic drain.
065		Structure	Six red brick in two lines between the chimney foundations and the area of the H-shaped structure. One course deep.	May be related to boiler stance (see 063 and 047)
066		Structure	U-shaped structure made of yellow bricks sits on top of floor.	Unknown structural element
067		Structure	Red brick surface. 0.63m by 0.29m. Rectangular in shape.	Possible brick floor surface.
068		Deposit	Mixed dark grey demolition debris. Very compact. On s-side of (064).	Demolition or backfill.
069		Deposit	Mixed demolition debris and silty pale brown clay. Very compact. Occasional charcoal, slate and ceramics. Under (065) drain.	Possible re-deposited natural
070		Layer	Light brown sandy gravel. Layer of whin chips. Fragments of brick. Very occasional clay pipe	Layer of backfill and levelling
071		Layer	Light brown silty sand. Very occasional fragments of brick and charcoal. Occasional clay pipe.	Layer of backfill
072		Layer	Brick and rubble. Fragments of mortar standstone and brick.	Levelling and backfill
073		Layer	Dark brown to black sandy silt. Fragments of brick. Small fragments of ash and charcoal.	Backfill at base of SE corner

Context No.	Area/ Trench	Type	Description	Interpretation
074		Structure	Red brick floor surface. 0.22m by 0.75m. Covered with concrete in places. Mortar bonding material.	Red brick floor.
075		Structure	Layer of bricks. Quite compact. Partially covered with concrete. 1.63m by 2.83m	Compact layer of bricks. Floor or machinery stance.
076		Structure	Sub-rectangular brick structure. 0.84m by 0.73m Composed of red brick. 0.53m high.	Foundation for chimney.
077		Structure	Sub-rectangular brick structure. 0.6m by 0.54m. Composed of red brick. Approximately 500mm deep.	Foundation for chimney
078		Structure	Sub-rectangular brick structure. 0.88m by 0.66m. Composed of red brick. 500mm deep.	Foundation for chimney.
079		Structure	Concrete slabs. 900mm by 600mm. Forming a flat rectangular surface.	20 th century covering of extension of flue
080		Structure	Stone slab faced with concrete. Light grey colour. Metal rods in place. Approximately 0.68m square.	Possible machine stance.
081		Structure	Stone surface 0.22m by 0.11m. Bricks in varying directions are adjoined to cobbled stone surface.	Interior brick flooring
082		Structure	Brick floor surface. Red brick. Degraded.	Interior brick floor.
083		Structure	Red brick surface. Degraded. Part of 082.	Brick floor surface.
084		Deposit	Loosely compacted mid-dark brown sandy clay. 25% rubble, building debris, brick and small stones.	Levelling or backfill.
085		Structure	Large red brick structure	Brick wall foundation.
086		Deposit	V compact dark grey/brown silty clay with frequent stone, brick and coal inclusions.	Made ground or levelling.
087		Deposit	Compact light medium grey clayey silt. Frequent sandstone, brick and coal inclusions.	Made ground or levelling
088		Structure	Brick and sandstone 2m wide by 2.5m long.	Brick floor surface.
089		Deposit	Compact light brown grey very clayey silt. With frequent inclusions of clay, stones and coal.	Bedding or levelling layer.

Context No.	Area/Trench	Type	Description	Interpretation
090		Deposit	Very compact pale grey gritty sand and mortar with frequent inclusions of stone, shale and brick.	Made ground or levelling.
091		Deposit	Moderately compact mid-dark brown silty sand with frequent sandstone, brick and slate.	Backfill between chimney founds
092		Structure	Line of brick founds sitting below flooring 060. Measures 760mm by 580mm. Red brick	Red brick founds
093		Deposit	Area of messily stacked red bricks in a matrix of sand. 0.8m by 800mm.	Area of red brick packed. Backfill or demolition
094		Structure	Red brick structure from three skin to 1 skin, four courses high. Degraded.	Red brick wall.
095		Structure	Iron square structure, measures 0.51m by 0.52m approximately 0.12m in depth. Top surface has a circular shape with a cross embossed. Is 0.18m diameter.	Possible support stance for upper floors.
096		Structure	U-shaped brick structure. Varies from 0.51m to 0.49m. Rubble core.	U-shaped black structure with a sooty fill
097		Structure	One skin wide of bricks. Running along the inner edge of the outer wall.	May represent a later modification to the north wall of the factory.
098		Deposit	Loosely compacted mixed silty sand with patches of clay. Red brick fragments. Small pieces of slate.	Backfill of 096
099		Structure	Formally part of the floor 081 no forms wall to south of 074. Measures 0.35m by 1.85m	Line of walling forming edge of floor
100		Deposit	Rubble deposit sits within gap of square.	Industrial back fill, perhaps from original construction of founds.
101		Deposit	Mid-brown silty sand. Moderately compact. Fragments of brick – glass and ceramic.	Appears to be industrial backfill.

Photographic Register

Image No.	Print		Slide		Digital	Description	From	Date
	Film No.	Neg. No.	Film No.	Neg. No.				
1	-	-	-	-	1	General pre ex site shot showing rope walk	S	27/04/09
2	-	-	-	-	2	General pre ex shot showing area of dumped needles and vials	W	27/04/09
3	-	-	-	-	3	General pre ex shot showing area of dumped needles and vials	W	27/04/09
4	-	-	-	-	4	General pre ex site shot showing rope walk	S	27/04/09
5	-	-	-	-	5	General pre ex site shot showing rope walk	S	27/04/09
6	-	-	-	-	6	General pre ex site shot	S	27/04/09
7	-	-	-	-	7	General pre ex site shot showing Craignestock Street	N	27/04/09
8	-	-	-	-	8	General pre ex site shot	N	27/04/09
9	-	-	-	-	9	General pre ex site shot	N	27/04/09
10	-	-	-	-	10	Working shot	-	27/04/09
11	-	-	-	-	11	Working shot	-	27/04/09
12	-	-	-	-	12	Working shot	-	27/04/09
13	-	-	-	-	13	Working shot	-	27/04/09
14	-	-	-	-	14	Working shot	-	27/04/09
15	-	-	-	-	15	Working shot	-	27/04/09
16	-	-	-	-	16	Working shot	-	27/04/09
17	-	-	-	-	17	E facing section showing wall and foundations of building (001)	E	27/04/09
18	1	1	1	1	18	E facing section showing wall and foundations of building (001)	E	27/04/09
19	1	2	1	2	19	Shot of trench at Western end of site	NW	27/04/09
20	1	3	1	3	20	Shot of trench at Western end of site	SE	27/04/09
21	1	4	1	4	21	SW facing section of trench at W end of site	S	27/04/09
22	1	5	1	5	22	NE facing section of trench at W end of site	ENE	27/04/09
23	1	6	1	6	23	NW facing section of trench at W end of site showing wall (009)	NW	27/04/09

Image No.	Print		Slide		Digital	Description	From	Date
	Film No.	Neg. No.	Film No.	Neg. No.				
24	1	7	1	7	24	Structure (007) in trench at W end of site	ENE	27/04/09
25	1	8	1	8	25	Post ex shot of NW quarter of building showing base of kiln	SW	28/04/09
26	-	-	-	-	26	Post ex shot of NW quarter of building showing base of kiln	SW	28/04/09
27	-	-	-	-	27	Post ex shot of NW quarter of building showing base of kiln	NW	28/04/09
28	-	-	-	-	28	Post ex shot of NW quarter of building showing base of kiln	NW	28/04/09
29	1	9	1	9	-	Post ex shot of NW quarter of building showing base of kiln	NW	28/04/09
30	1	10	1	10	29	Post ex shot of NW quarter of building showing base of kiln	NE	28/04/09
31	-	-	-	-	30	Post ex shot of NW quarter of building showing base of kiln	NE	28/04/09
32	1	11	1	11	31	Post ex shot of NW quarter of building showing base of kiln	SE	28/04/09
33	1	12	1	12	32	Post ex shot of NW quarter of building showing base of kiln	N	28/04/09
34	-	-	-	-	33	General site shot	ENE	28/04/09
35	-	-	-	-	34	General site shot	NE	28/04/09
36	-	-	-	-	35	General site shot	NE	28/04/09
37	-	-	-	-	36	General site shot	N	28/04/09
38	-	-	-	-	37	General site shot	NW	28/04/09
39	-	-	-	-	38	General site shot	NE	28/04/09
40	-	-	-	-	39	Working shot	-	28/04/09
41	-	-	-	-	40	Working shot	W	29/04/09
42	-	-	-	-	41	Post-ex shot of base of kiln	W	29/04/09
43	-	-	-	-	42	Post-ex shot of base of kiln	W	29/04/09
44	-	-	-	-	43	Post-ex shot of base of kiln	W	29/04/09
45	-	-	-	-	44	Post-ex shot of base of kiln	W	29/04/09
46	1	13	1	13	45	Post ex shot of SW quadrant of building	NW	30/04/09
47	1	14	1	14	46	Post ex shot of SW quadrant of building, including flue	W	30/04/09

Image No.	Print		Slide		Digital	Description	From	Date
	Film No.	Neg. No.	Film No.	Neg. No.				
48	1	15	1	15	47	Shot of wall (008)	E	30/04/09
49	1	16	1	16	48	Shot of wall (009)	N	30/04/09
50	1	17	1	17	49	Shot of flag and cobbles (011)	W	30/04/09
51	1	18	1	18	50	Shot of cobbles (001) and (015)	W	30/04/09
52	1	19	-	-	-	Void	-	-
53	1	20	1	19	51	General shot of NE quarter of site	NE	30/04/09
54	1	21	1	20	52	General shot of NE quarter of site	NE	30/04/09
55	1	22	1	21	53	General shot of NE quarter of site	N	30/04/09
56	1	23	1	22	54	General shot of NE quarter of site	ESE	30/04/09
57	1	24	1	23	55	General shot of NE quarter of site (W half)	SSW	30/04/09
58	1	25	1	24	56	General shot of NE quarter of site (E half)	SSW	30/04/09
59	1	26	1	25	57	Detail shot of curved stones in NE quarter of site	WNW	30/04/09
60	1	27	1	26	58	Detail shot of curved stones in NE quarter of site	NNE	30/04/09
61	2	1	2	1	59	Post ex shot of SW rakehole of kiln	SW	30/04/09
62	2	2	2	2	60	General shot of flooring in SE quarter	SSW	30/04/09
63	2	3	2	3	61	General shot of flooring in SE quarter	NE	30/04/09
64	2	4	2	4	62	General shot of flooring in SE quarter	N	30/04/09
65	2	5	2	5	63	Detail of walling (020)	E	30/04/09
66	2	6	-	-	-	Detail of walling (020)	E	30/04/09
67	2	7	2	6	64	Detail of lower flooring (022)	W	30/04/09
68					65	Initial clean of (082)	SW	30/04/09
69					66	Initial clean of (082)	SW	30/04/09
70					67	Initial clean of (082)	SE	30/04/09
71					68	Initial clean of (082)	SE	30/04/09

Image No.	Print		Slide		Digital	Description	From	Date
	Film No.	Neg. No.	Film No.	Neg. No.				
72	-	-	-	-	69	General site shot	NE	30/04/09
73	-	-	-	-	70	General site shot	NE	30/04/09
74	-	-	-	-	71	General site shot	NE	30/04/09
75	-	-	-	-	72	General site shot	NE	30/04/09
76	-	-	-	-	73	General site shot	E	30/04/09
77	-	-	-	-	74	General site shot	E	30/04/09
78	-	-	-	-	75	General site shot	NE	30/04/09
79	-	-	-	-	76	General site shot	NE	30/04/09
80	-	-	-	-	77	Post ex shot of NE rakehole of kiln	NE	30/04/09
81	2	11	2	11	78	Post ex shot of NE rakehole of kiln	NE	-
82	2	12	2	12	79	Post ex shot of NW rakehole of kiln	NW	-
83	2	13	2	13	80	Post ex shot of SW rakehole of kiln	SW	-
84	2	14	2	14	81	Shot of possible cart trackway 023	W	-
85	2	15	2	15	82	Shot of section at W end of trench showing natural (025)	W	01/05/09
86	2	16	2	16	83	Shot of (001) and (024)	E	01/05/09
87	2	17	2	17	84	Western side of chimney base	E	01/05/09
88	2	18	2	18	85	Western side of chimney base	E	01/05/09
89	2	19	2	19	86	Post ex of structure (007), wall (026) and wall (027)	N	01/05/09
90	2	20	2	20	87	Post ex of structure (007), wall (026) and wall (027)	E	01/05/09
91	2	21	2	21	88	Post ex of structure (007), wall (026) and wall (027)	S	01/05/09
92	2	22	2	22	89	Shot of stones (031) from above	NW	05/05/09
93	2	23	2	23	90	Shot of stones (031) in from the side	NE	05/05/09
94	-	-	-	-	91	Shot of floor tiles (030)	NW	05/05/09

Image No.	Print		Slide		Digital	Description	From	Date
	Film No.	Neg. No.	Film No.	Neg. No.				
95	2	24	2	24	92	Post ex shot after flagstones (011) removed showing layer (032)	NE	05/05/09
96	-	-	-	-	93	Void	-	-
97	2	25	2	25	94	Shot of section through kiln (012)	NW	05/05/09
98	-	-	-	-	95	Working shot	-	05/05/09
99	-	-	-	-	96	Working shot	-	05/05/09
100	-	-	-	-	97	Working shot	-	05/05/09
101	2	26	2	26	98	Shot after removing of flagstones (011) with half of (032) removed to reveal (033)	NW	05/05/09
102	-	-	-	-	99	Detail of section showing layer (032) underlying brick floor (012)	SE	05/05/09
103	-	-	-	-	100	Shot of SW facing section from test pit dug through (033) below flagstones (011)	SW	05/05/09
104	-	-	-	-	101	Shot of layer (032) after removal of remaining flagstones (011)	NE	05/05/09
105	-	-	-	-	102	Shot of layer (032) after removal of remaining flagstones (011)	SE	05/05/09
106	2	27	2	27	103	Shot of surface after removal of (021)	W	05/05/09
107	2	28	2	28	104	Shot of area to E of flue and W of (037) after concrete removed	NE	06/05/09
108	2	29	2	29	105	Shot of northern end of flue (chimney) after cleaning – facing NNE	SSW	06/05/09
109	-	-	-	-	106	Shot of northern end of flue (chimney) after cleaning – facing NNE	SSW	06/05/09
110	-	-	-	-	107	Shot of northern end of flue (chimney) after cleaning – facing NNE	SSW	06/05/09
111	-	-	-	-	108	Shot of northern end of flue (chimney) after cleaning – facing NNE - panned out shot	SSW	06/05/09
112	2	30	2	30	109	Shot of northern end of flue (chimney) after cleaning – facing SSW, showing shoots	NNE	06/05/09

Image No.	Print		Slide		Digital	Description	From	Date
	Film No.	Neg. No.	Film No.	Neg. No.				
113	-	-	-	-	110	Shot of northern end of flue (chimney) after cleaning – facing SSW, close up of interior showing east and west shoots	NNE	06/05/09
114	-	-	-	-	111	Shot of northern end of flue (chimney) after cleaning – facing SSW, close up of interior	NNE	06/05/09
115	-	-	-	-	112	Shot of northern end of flue (chimney) after cleaning – facing SSW, showing chimney bases, east and west shoots	NNE	06/05/09
116	-	-	-	-	113	Shot of northern end of flue (chimney) after cleaning – facing SSW, close up of interior of flue, east and west shoots	NNE	06/05/09
117	-	-	-	-	114	Shot of northern end of flue (chimney) after cleaning – facing SSW	NNE	06/05/09
118	2	31	2	31	115	Shot of northern end of flue – facing ESE, showing eastern shoot off of flue	WNW	06/05/09
119	-	-	-	-	116	Shot of northern end of flue – facing ESE, close up of eastern shoot off of flue	WNW	06/05/09
120	-	-	-	-	117	Shot of northern end of flue – facing ESE, showing chimney bases, eastern shoot of flue	WNW	06/05/09
121	-	-	-	-	118	Shot of northern end of flue – showing chimney bases, eastern shoot of flue	WNW	06/05/09
122	2	32	2	32	119	Northern end of flue – showing chimney bases and western shoot of flue	ENE	06/05/09
123	-	-	-	-	120	Northern end of flue – showing western shoot of flue, close up	ENE	06/05/09
124	-	-	-	-	121	Northern end of flue – showing western shoot of flue -chimney bases - eastern shoot	ENE	06/05/09
125	-	-	-	-	122	Northern end of flue – showing western shoot of flue – chimney bases	ENE	06/05/09
126	-	-	-	-	123	Northern end of flue – close up of interior	SSW	06/05/09
127	-	-	-	-	124	Northern end of flue – close up of interior	SSW	06/05/09
128	-	-	-	-	125	Northern end of flue – close up of interior, showing sloping	NNE	06/05/09

Image No.	Print		Slide		Digital	Description	From	Date
	Film No.	Neg. No.	Film No.	Neg. No.				
129	-	-	-	-	126	down of base Northern end of flue – close up of interior, showing sloping of base	NNE	06/05/09
130	-	-	-	-	127	Northern end of flue – close up of interior of eastern shoot	NW	06/05/09
131	-	-	-	-	128	Northern end of flue – close up of interior of western shoot	SE	06/05/09
132	-	-	-	-	129	Aerial shot of N end of flue and middle part of flue, showing extent	SW	06/05/09
133	-	-	-	-	130	Aerial shot of N end of flue and middle part of flue, showing extent	SW	06/05/09
134	-	-	-	-	131	Aerial shot of N end of flue and chimney bases and also middle of flue	SW	06/05/09
135	-	-	-	-	132	Aerial shot of flue	SW	06/05/09
136	2	33	2	33	133	Shot of machinery stance (049) revealed under concrete (037)	NE	07/05/09
137	2	34	2	34	134	Shot of machinery stance (049) revealed under concrete (037)	SE	07/05/09
138	2	35	2	35	135	Shot of machinery stance (049) revealed under concrete (037)	SW	07/05/09
139	2	36	2	36	136	Shot showing middle of flue (013) prior to cleaning	NNE	07/05/09
140	-	-	-	-	137	Post ex of sondage north of (042)	WNNW	07/05/09
141	-	-	-	-	138	General shot of (042) with sondage to north	W	07/05/09
142	-	-	-	-	139	S facing section sondage north of (042) (W side)	SW	07/05/09
143	-	-	-	-	140	S facing section sondage north of (042) (E side)	SW	07/05/09
144	-	-	-	-	141	Concrete lintel over flue at (042)	N	07/05/09
145	-	-	-	-	142	Flue running to (042) and concrete lintel	N	07/05/09
146	-	-	-	-	143	General shot (042) looking up North of flue	S	07/05/09
147	-	-	-	-	144	Brick face of flue (mid-ex) at Whinstone	W	07/05/09

Image No.	Print		Slide		Digital	Description	From	Date
	Film No.	Neg. No.	Film No.	Neg. No.				
148	-	-	-	-	-	Void	-	-
149	-	-	-	-	145	Middle of flue, prior to removal of fill	WNW	07/05/09
150	-	-	-	-	146	Middle of flue, prior to removal of fill – panned out	NW	07/05/09
151	-	-	-	-	147	Middle of flue, prior to removal of fill	NW	07/05/09
152	-	-	-	-	148	Middle of flue, prior to removal of fill	NW	07/05/09
153	-	-	-	-	149	Middle of flue, prior to removal of fill	NW	07/05/09
154	-	-	-	-	150	Middle of flue, prior to removal of fill – close up of interior (eastern)	NW	07/05/09
155	-	-	-	-	151	Middle of flue, prior to removal of fill – close up of interior (western)	SE	07/05/09
156	-	-	-	-	152	Middle of flue, prior to removal of fill – close up of interior (western)	SE	07/05/09
157	-	-	-	-	153	Middle of flue, prior to removal of fill – close up of interior (western)	SE	07/05/09
158	-	-	-	-	154	Middle of flue, prior to removal of fill – showing western interior	SSE	07/05/09
159	-	-	-	-	155	Middle of flue, prior to removal of fill – western interior	SE	07/05/09
160	-	-	-	-	156	Middle section of flue showing N end	WSW	07/05/09
161	-	-	-	-	157	Middle of flue (013) showing N end	WSW	07/05/09
162	3	37	-	-	158	E facing section in SE corner	SE	07/05/09
163	3	36	-	-	159	E facing section in SE corner	SE	07/05/09
164	3	35	3	37	160	Shot of brick flooring (053)	SE	08/05/09
165	3	34	3	36	161	Shot of brick flooring (053)	SW	08/05/09
166	-	-	-	-	162	Shot of brick flooring (053) with (049) in background	SW	08/05/09
167	-	-	-	-	163	Shot of (053) and (049)	WSW	08/05/09

Image No.	Print		Slide		Digital	Description	From	Date
	Film No.	Neg. No.	Film No.	Neg. No.				
168	3	33	3	35	164	Shot of wall (042), and deposits (045) and (046)	SSW	08/05/09
169	3	32	3	34	165	Shot of wall (042), and deposits (045) and (046)	N	08/05/09
170	3	31	3	33	166	Post ex of (062)	S	08/05/09
171	3	30	3	32	167	Post ex of floors (060), (061) and walls (051), (059)	N	08/05/09
172	3	29	3	31	168	Post ex of floors (060), (061) and walls (051), (059)	S	08/05/09
173	-	-	-	-	169	Shot of wall (063)	NE	08/05/09
174	-	-	-	-	170	Shot of wall (063)	N	08/05/09
175	3	28	3	30	171	General shot of (058) (E facing section)	E	08/05/09
176	3	27	3	29	172	Oblique section (E facing) of (058)	ENE	08/05/09
177	-	-	-	-	173	Shot showing bricks after large stone blocks removed in (049)	S	08/05/09
178	-	-	-	-	174	Shot showing bricks after large stone blocks removed in (049)	SE	08/05/09
179	-	-	-	-	175	Shot of largest stone slab removed from (049)	-	08/05/09
180	-	-	-	-	176	Shot of shaped stone with pin from (049)	-	08/05/09
181	-	-	-	-	177	Detail of base of pin in shaped stone from (049)	-	08/05/09
182	3	26	3	28	178	Wall (064) in section	NNW	11/05/09
183	3	25	3	27	179	WSW facing section of wall (064)	WSW	11/05/09
184	3	24	3	26	180	Wall (064) and deposits (045), (046) and (065)	NNW	11/05/09
185	3	23	3	25	181	Shot of flooring (074)/(075) revealed after removal of (049)/(053)	NE	11/05/09
186	3	22	3	24	182	Shot of flooring (074)/(075) revealed after removal of (049)/(053)	SW	11/05/09
187	-	-	-	-	183	Shot of flooring (074)/(075) revealed after removal of (049)/(053) – showing depth against surrounding floor levels	S	11/05/09
188	-	-	-	-	184	Shot of flooring (074)/(075) revealed after removal of	S	11/05/09

Image No.	Print		Slide		Digital	Description	From	Date
	Film No.	Neg. No.	Film No.	Neg. No.				
						(049)/(053) – showing depth against surrounding floor levels		
189	3	21	3	23	185	Shot of SE corner 1.2m deep	SE	11/05/09
190	3	20	-	-	186	Shot of SE corner 1.2m deep	SE	11/05/09
191	3	19	3	22	187	Shot of SE corner 1.2m deep	NW	11/05/09
192	3	18	-	-	188	Shot of SE corner 1.2m deep	NW	11/05/09
193	-	-	-	-	189	Sondage in SE corner	NE	11/05/09
194	-	-	-	-	190	Shot of SE corner 1.2m deep	NE	11/05/09
195	3	17	3	21	191	Aerial shots of site taken from roof of large tenement on the corner	WSW	11/05/09
196	3	16	3	20	192	Aerial shots of site taken from roof of large tenement on the corner	WSW	11/05/09
197	3	15	3	19	193	Aerial shots of site taken from roof of large tenement on the corner	WSW	11/05/09
198	3	14	3	18	194	Aerial shots of site taken from roof of large tenement on the corner	WSW	11/05/09
199	-	-	-	-	195	Aerial shots of site taken from roof of large tenement on the corner	WSW	11/05/09
200	-	-	-	-	196	Aerial shots of site taken from roof of large tenement on the corner	WSW	11/05/09
201	-	-	-	-	197	Aerial shots of site taken from roof of large tenement on the corner	WSW	11/05/09
202	-	-	-	-	198	Aerial shots of site taken from roof of large tenement on the corner	WSW	11/05/09
203	-	-	-	-	199	Aerial shots of site taken from roof of large tenement on the corner	WSW	11/05/09
204	3	13	3	17	200	S end of flue	S	11/05/09

Image No.	Print		Slide		Digital	Description	From	Date
	Film No.	Neg. No.	Film No.	Neg. No.				
205	3	12	3	16	201	S end of flue	E	11/05/09
206	3	11	3	15	202	S end of flue	W	11/05/09
207	-	-	-	-	203	S end of flue	S	11/05/09
208	-	-	-	-	204	S end of flue	E	11/05/09
209	3	10	3	14	205	Flooring (079)	NE	12/05/09
210	-	-	-	-	206	Flooring (079)	NW	12/05/09
211	-	-	-	-	207	Flooring (079)	WSW	12/05/09
212	-	-	-	-	208	Flooring (079) looking up flue	S	12/05/09
213	-	-	-	-	209	Flooring (079) looking up flue	S	12/05/09
214	3	9	3	13	210	Floor (060) section	SE	12/05/09
215	-	-	-	-	211	Floor (060) section	SSE	12/05/09
216	3	8	3	12	212	Floor (060) section	E	12/05/09
217	-	-	-	-	213	Shot of (055) – floating yellow brick wall	WNW	12/05/09
218	-	-	-	-	214	Shot of (055) – floating yellow brick wall	NE	12/05/09
219	3	7	3	11	215	SE facing section showing chimney base (014)	SE	12/05/09
220	3	6	3	10	216	NE facing section through (075), (048) and (060) – NW end	NE	12/05/09
221	3	5	3	9	217	NE facing section through (075), (048) and (060) – SE end	NE	12/05/09
222	3	4	3	8	218	NE facing section through (075), (048) and (060) – entire	ENE	12/05/09
223	-	-	-	-	219	NE facing section through (075), (048) and (060) – detail of wall (048)	NE	12/05/09
224	-	-	-	-	220	NE facing section through (075), (048) and (060) – detail of layer (075)	NE	12/05/09
225	-	-	-	-	221	NE facing section through (075), (048) and (060) – detail of layer (075)	NE	12/05/09

Image No.	Print		Slide		Digital	Description	From	Date
	Film No.	Neg. No.	Film No.	Neg. No.				
226	3	3	3	7	222	Shot of cobbled floor surface (082)/(083)	WSW	12/05/09
227	-	-	-	-	223	Shot of cobbled floor surface (082)/(083)	WSW	12/05/09
228	-	-	-	-	224	Shot of cobbled floor surface directly below (055) – close up (081) (080)	WSW	12/05/09
229	3	2	3	6	225	Shot of cobbled floor surface directly below (055) – close up (081) (080)	WSW	12/05/09
230	-	-	-	-	226	Sot of concrete with embedded metal rods (080)	NW	12/05/09
231	3	1	3	5	227	Shot of floor surface (cobbled) (081)	WSW	12/05/09
232	-	-	3	4	228	Shot of central area	S	13/05/09
233	-	-	3	3	229	Shot of central area	S	13/05/09
234	-	-	3	2	230	Cross stance in central area	S	13/05/09
235	-	-	3	1	231	Cross stance in central area	S	13/05/09
236	4	37	4	37	232	General shot of (060)/(081) after upper divisions removed, with void	NE	13/05/09
237	4	36	4	36	233	General shot of (060)/(081) after upper divisions removed, with void	NE	13/05/09
238	4	35	4	35	234	Shot of flooring (088) and E end of site, final layer	NE	13/05/09
239	-	-	-	-	235	Shot of flooring (088) and E end of site, final layer	SE	13/05/09
240	4	34	4	34	236	Shot of flooring (088) and E end of site, final layer	SW	13/05/09

Drawing Register

Drawing No.	Sheet No.	Area/Trench	Drawing Type	Scale	Description	Drawer	Date
1	1		Section	1:10	E facing section of wall (001) and foundations	JA	27/04/09
2	2		Section	1:10	NE facing section of trench at W end of site	DG + CW	27/04/09
3	2		Plan	1:20	Plan of trench at W end of site	CW + DG	27/04/09
4	3		Plan	1:20	Plan of kiln/west side of site	DG + JA	29/04/09
5	4		Plan	1:20	Plan of south side of site	DG	30/04/09
6	5		Plan	1:20	Plan of rakeholes in kiln post-ex	JA	30/04/09
7	6		Plan	1:20	Plan of SE corner of site	DG	01/05/09
8	7		Plan	1:20	Plan of NE area of site	DG	06/05/09
9	8		Plan	1:20	Plan of (035) and (036)	AM	07/05/09
10	9		Plan	1:20	Overlay of drawing # 8	CW	07/05/09
11	10		Plan	1:20	Overlay of (042) wall with [079] slabs	KS	07/05/09
12	11		Section	1:10	Running section through sondage over concrete lintel [044] along wall [042]	DG	08/05/09
13	12		Section	1:10	SE facing section in SE corner of site (058)	DG	11/05/09
14	13		Section	1:10	WSW facing section of wall [064] and drain (065) with (045), (046)	KS	11/05/09
15	14		Plan	1:20	Plan of NE corner of site, (048) (060)	JA	11/05/09
16	15		Plan	1:20	Mid ex plan of sondage in SW corner [064]	KS	11/05/09
17	16		Section	1:10	NE facing section through (075), (048) and (060)	CW	12/05/09
18	17		Plan	1:20	Plan of (008) to (084)	KS	12/05/09
19	16		Section	1:10	SE facing section showing (093) behind chimney base (014)	CW	13/05/09
20	18		Plan	1:20	Overlay showing (088) floor	KS	13/05/09
21	19		Section	1:10	NW facing section through kiln (010)	JA	05/05/09

Sample Register

Sample No.	Context	Sample Type	Description / Quantity	Excavator	Date
1	016	Bulk	Fill (016) of SW rakehole of kiln	JA	30/04/09
2	017	Bulk	Fill (017) of NW rakehole of kiln	JA	30/04/09
3	018	Bulk	Fill (018) of NE rakehole of kiln	JA	30/04/09
4	019	Bulk	Fill (019) of SE rakehole of kiln	JA	30/04/09
5	032	Bulk	Sandy bedding layer from below (011)	CW	05/05/09
6	033	Bulk	Made up ground below floor in area of (011)	CW	05/05/09
7	010	Bulk	2 red bricks from edge of rakehole	JA	05/05/09
8	-	-	Void	-	-
9	010	Bulk	Red brick from outer course of kiln base	JA	05/05/09
10	010	Bulk	2 yellow bricks from base of internal walls of kiln	JA	05/05/09
11	010	Bulk	1 red brick taken from centre of kiln	JA	05/05/09
12	031	Bulk	Slab taken from capping on flue (013)	JA	05/05/09
13	023	Bulk	Metal track/rail from floor	JA	05/05/09
14	012	Bulk	2 bricks sampled from floor layer (012)	CW	05/05/09
15	008	Bulk	2 bricks from wall (008) external	JA	05/05/09
16	008	Bulk	2 red bricks from internal wall (008)	JA	05/05/09
17	021	Bulk	2 red bricks from floor surface	AM	05/05/09
18	035	Bulk	Sample of layer	AM	07/05/09
19	036	Bulk	Sample of layer	AM	07/05/09
20	038	Bulk	Sample of fill of N end of flue – soot, building debris	DG	07/05/09
21	040	Bulk	1 x CBM slab	JA	07/05/09
22	040	Bulk	1 x CBM slab	JA	07/05/09
23	039	Bulk	1 x CBM slab	JA	07/05/09

Sample No.	Context	Sample Type	Description / Quantity	Excavator	Date
24	039	Bulk	1 x CBM slab	JA	07/05/09
25	039	Bulk	1 x CBM slab	JA	07/05/09
26	039	Bulk	1 x CBM slab	JA	07/05/09
27	041	Bulk	Upper fill of middle part of flue (013) – building debris	DG	07/05/09
28	043	Bulk	2 bricks from floor (043)	JA	07/05/09
29	045	Bulk	Levelling deposit	DG/KS	07/05/09
30	046	Bulk	Sandy deposit, near wall (042)	DG/KS	07/05/09
31	049	Bulk	2 red bricks from (049)	CW	08/05/09
32	068	Bulk	Demolition/tip deposit (068)	KS	11/05/09
33	069	Bulk	Demolition/tip deposit (069)	KS	11/05/09
34	072	Bulk	Backfill	AM	11/05/09
35	071	Bulk	Made ground SE corner	AM	11/05/09
36	073	Bulk	Made ground SE corner	AM	11/05/09
37	048	Bulk	2 bricks from dividing wall	CW	12/05/09
38	075	Bulk	2 bricks	CW	12/05/09
39	053	Bulk	2 bricks	CW	12/05/09
40	060	Bulk	1 yellow heat resistant brick	DG	12/05/09
41	060	Bulk	2 halves of one red brick	DG	12/05/09
42	074	Bulk	2 bricks	CW	12/05/09
43	055	Bulk	2 bricks (stamped)	CW	12/05/09
44	014	Bulk	1 red brick from stance and 1 yellow brick on flue side	KS	13/05/09
45	076	Bulk	1 red brick from stance	KS	13/05/09
46	077	Bulk	1 red brick from stance	KS	13/05/09
47	078	Bulk	1 red brick and 1 yellow brick from stance (yellow brick on flue side)	KS	13/05/09

Sample No.	Context	Sample Type	Description / Quantity	Excavator	Date
48	085	Bulk	1 red brick from wall (interior)	KS	13/05/09
49	081	Bulk	1 red brick from upper floor level	KS	13/05/09
50	082	Bulk	1 red brick from eastern lower floor	KS	13/05/09
51	083	Bulk	1 red brick from western lower floor	KS	13/05/09
52	084	Bulk	084 – deposit adjacent to (085) – wall	DG	13/05/09
53	096	Bulk	From lining 1 yellow brick	KS/AM	13/05/09
54	094	Bulk	Wall 1 red brick	KS/AM	13/05/09
55	088	Bulk	Floor surface	KS/AM	13/05/09
56	098	Bulk	Fill of (096)	DG	13/05/09

Finds Register

Find No.	Context No.	Material Type	Description	Excavator	Date
1	005	Bone	Various disarticulated animal bone	DG/CW	27/04/09
2	005	Ceramic	Various sherds of pottery	DG/CW	27/04/09
3	005	Glass	Glass sherds	DG/CW	27/04/09
4	005	Ceramic	Clay pipe fragments	DG/CW	27/04/09
5	005	Ceramic	1 medieval green glaze pot sherd	DG/CW	27/04/09
6	Unstrat	Ceramic	2 clay pipe stem frags	CW	27/04/09
7	016	Industrial residue	Fragments of slag/vitrified material	JA	30/04/09
8	016	Coal	Piece of unburnt fuel? for kiln	JA	30/04/09
9	016	Ceramic	3 possible pieces of clay from kiln	JA	30/04/09
10	016	Brick	Fragment of light yellow brick	JA	30/04/09
11	016	Wood	4 fragments of worked wooden object	JA	30/04/09

Find No.	Context No.	Material Type	Description	Excavator	Date
12	019	Ceramic	3 clay pipe stems with Christies logo	JA	30/04/09
13	019	Glass	2 glass shards	JA	30/04/09
14	Unstrat	Ceramic	Clay pipe fragment	JA	30/04/09
15	019	Metal	Fe object (nail?)	JA	30/04/09
16	019	Ceramic	10 unfired? clay pipe stems	JA	30/04/09
17	019	Ceramic	6 frags of clay pipe bowl	JA	30/04/09
18	Unstrat	Ceramic	2 pieces of sprue? (clay ceramic)	JA	30/04/09
19	Unstrat	Ceramic	Clay pipe stem	JA	30/04/09
20	019	Coal	Burnt coal?	JA	30/04/09
21	018	Ceramic	Unfired clay pipe stem	JA	30/04/09
22	017	Metal	Fe object	JA	30/04/09
23	Unstrat	Ceramic	Fragments of clay pipe bowls and stems	DG	01/05/09
24	Unstrat – sitting on (049)	Ceramic	10 fragments of clay pipe stems (found below concrete (037) sitting above floor surface (049))	CW/JA	07/05/09
25	Unstrat – sitting on (049)	Metal	1 metal tip/end? (found below concrete (037) sitting above floor surface (049))	JA	07/05/09
26	Unstrat – sitting on (049)	Miscellaneous	5 fragments decorated linoleum (found below concrete (037) sitting above floor surface (049))	JA	07/05/09
27	Unstrat – sitting on (053)	Ceramic	1 clay pipe stem fragment	CW	08/05/09
28	057	Ceramic	Large bag of various clay pipe fragments	AM/DG	08/05/09
29	058	Ceramic	Medium bag of various clay pipe fragments	AM/DG	08/05/09
30	058	Industrial Residue	1 lumps of slag material	AM/DG	08/05/09
31	042	Brick	2 bricks (stamped) from (042)	KS	11/05/09
32	065	Brick	3 bricks from wall (065) (2 red, 1 yellow)	KS	11/05/09

Find No.	Context No.	Material Type	Description	Excavator	Date
33	064	Brick	2 bricks from wall (064)	KS	11/05/09
34	084	Ceramic	1 clay pipe bowl – swan shape	DG	12/05/09
35	084	Ceramic	Large bag – various clay pipes - bag not full	DG	12/05/09
36	087	Ceramic	2 clay pipe fragments (1 bowl, 1 stem)	CW	12/05/09

Appendix 2: Discovery & Excavation in Scotland

LOCAL AUTHORITY:	Glasgow City
PROJECT TITLE/SITE NAME:	Green Street/London Road
PROJECT CODE:	09005
PARISH:	Glasgow
NAME OF CONTRIBUTOR:	Alan Matthews & Claire Williamson
NAME OF ORGANISATION:	Rathmell Archaeology Limited
TYPE(S) OF PROJECT:	Excavation
NMRS NO(S):	None
SITE/MONUMENT TYPE(S):	Clay Pipe Factory
SIGNIFICANT FINDS:	19 th century industrial building and finds
NGR (2 letters, 6 figures)	NS 603 644
START DATE (this season)	24 th April 2009
END DATE (this season)	13 th May 2009
PREVIOUS WORK (incl. DES ref.)	Archaeological Evaluation by GUARD 2008 – Project 2656
MAIN (NARRATIVE) DESCRIPTION: (may include information from other fields)	The archaeological excavation works uncovered the remains of Christie's Clay Pipe Factory. Floor levels in the western half had not survived the eastern half most of the heavy machinery bases survived including; the kiln base, the foundations for the chimney, the boiler base and the machinery base for the transfer of power to upper floors. Where the kiln and the chimney do not appear to have been heavily modified, during the use of the factory, the boiler and machinery bases appear to have been modified several times.
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	None
SPONSOR OR FUNDING BODY:	Thenew Housing Association
ADDRESS OF MAIN CONTRIBUTOR:	Unit 8 Ashgrove Workshops, Kilwinning, Ayrshire KA13 6PU
E MAIL:	contact@rathmell-arch.co.uk
ARCHIVE LOCATION (intended/deposited)	Report to West of Scotland Archaeology Service and archive to National Monuments Record of Scotland.

Contact Details

78. Rathmell Archaeology can be contacted at our Registered Office or through the web:

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79. The West of Scotland Archaeology Service can be contacted at their office or through the web:

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Charing Cross Complex
20 India Street
Glasgow
G2 4PF

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