

GREEN STREET & LONDON ROAD  
(CHRISTIE'S CLAY PIPE FACTORY),  
CITY OF GLASGOW  
ARCHAEOLOGICAL DESK-BASED ASSESSMENT  
& FIELD EVALUATION  
DATA STRUCTURE REPORT



PROJECT 2656

carried out  
on behalf of  
SBA Geo-Environmental

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by

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and  
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This document has been prepared in accordance with GUARD standard operating procedures.

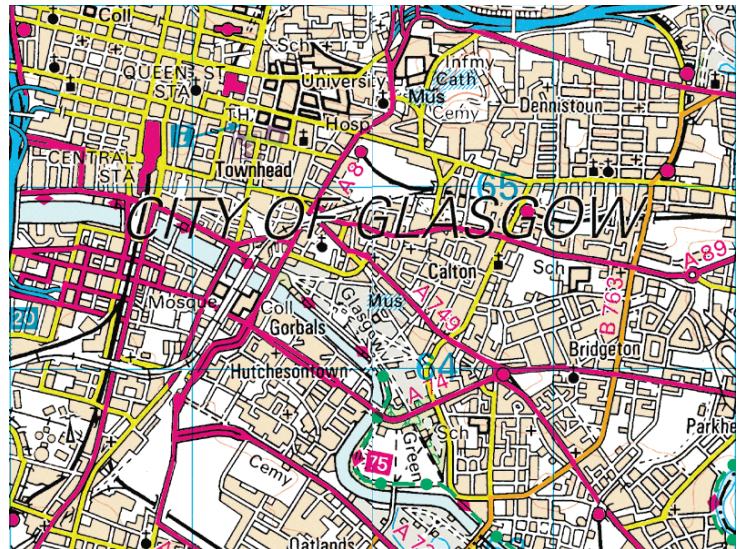
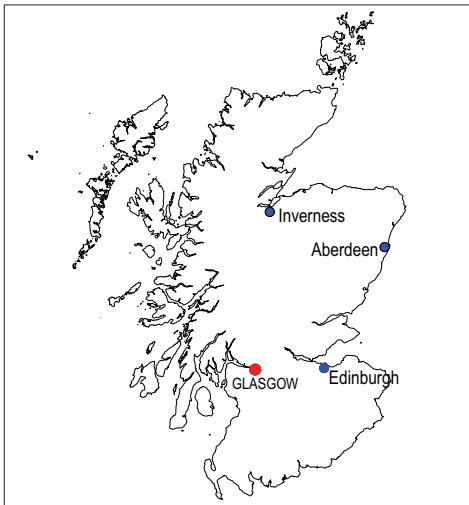
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Dr John Atkinson

Date: 4 September 2008



Project 2656  
Green Street, Glasgow.  
Archaeological Evaluation.



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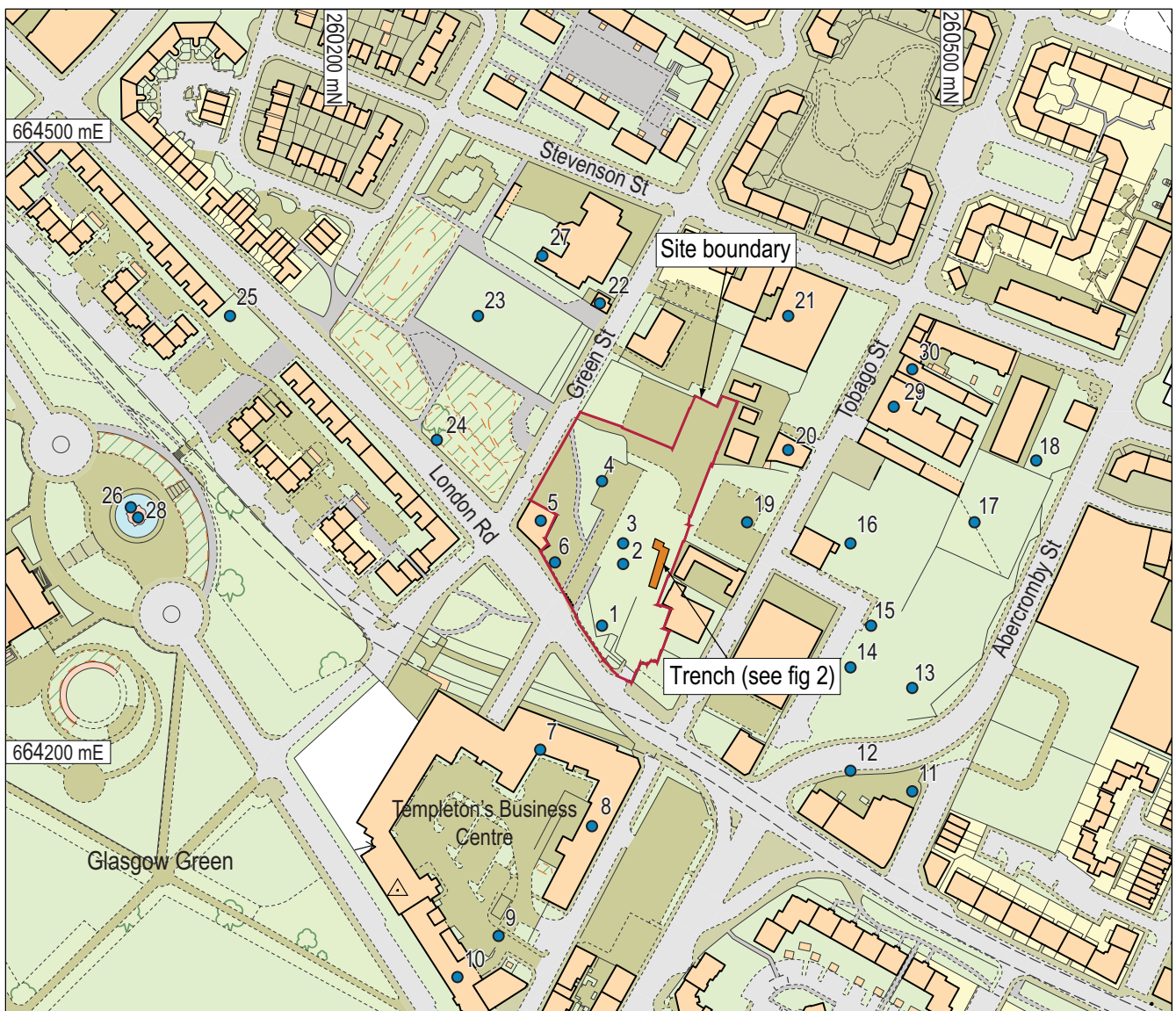


Figure 1: Location of Proposed Development Area  
& Archaeological Trenches.



## 1.0 Executive Summary

Glasgow University Archaeological Research Division (GUARD) was commissioned by SBA Geo-Environmental to conduct a rapid archaeological desk-based assessment and field evaluation of an area proposed for development to the east of Green Street, off London Road in the east end of the City of Glasgow. The assessment sought to determine the nature and extent of past human use of the site, with specific reference to the site of Christie's Clay Pipe Factory, and to establish the potential for impact of the proposed development upon the archaeological resource.

The desk-based assessment was conducted in late April and early May 2008 and identified six previously known archaeological sites within the area proposed for development, including that of the clay pipe factory.

Following a delay of several weeks, to allow trees to be removed from the location within the proposed development area identified by the desk-based assessment as the likely site of the clay pipe factory, and specifically the part of the factory thought likely to be nearest to the kiln, an archaeological field evaluation was carried out by GUARD in June 2008 with the intention of locating and assessing the degree of survival of the remains of Christie's Clay Pipe Factory. This involved the excavation of an evaluation trench in the suspected location of the factory. Significant archaeological deposits were identified within the trench which seem likely to represent the remains of Christie's Clay Pipe Factory. On that basis, GUARD would recommend that further archaeological work will be necessary to mitigate the impact of development, should this take place on this site. This recommendation is intended for guidance only. The final decision regarding any requirement for further mitigation rests with the planning authority.

## 2.0 Introduction

This report comprises the results of an archaeological desk-based assessment and field evaluation undertaken by GUARD, on behalf of SBA Geo-Environmental, on a site proposed for development at Green Street, in the east end of Glasgow. The desk-based research was undertaken in late April and early May 2008 and the fieldwork was carried out in June 2008 over a three-day period. The latter resulted in the excavation of a large trench over the eastern part of the anticipated location of a clay pipe factory. The desk-based assessment was conducted by Lorna Innes, the field evaluation by Paul Murtagh.

## 3.0 Site Location and Topography

The site is centred at NGR: NS 603 643 around Craignestock Street to the north of London Road and east of Green Street (Figure 1). The site is currently mainly wasteland, a result of the demolition of buildings which previously occupied the site. At the time of the field evaluation work reported on here, much of the site was covered with demolition rubble and hardstanding (concrete/tarmac etc), with a grassy area directly to the rear of the Calton Bar, while at the time of the desk-based assessment part of the eastern side of the proposed development area was also covered in trees; these were subsequently removed prior to the field evaluation taking place. Figure 1 identifies the proposed development area (bordered in red), including the location within it of the evaluation trench, and an assessment zone of approximately 200 m around the proposed development area with a note of the locations of sites of archaeological interest recorded on the Pastmap database.

The underlying drift geology consists of Raised Tidal Flat Deposits Of Late Devensian Age (RTFDD), while the solid geology consists of Lower Coal Measures (Scotland) (LCMS) (Edina Geology Digimap <http://digimap.edina.ac.uk>).

## 4.0 Context and Aims of the Assessment

### 4.1 Planning Policy Context and Guidance

The importance of the cultural heritage, including archaeological remains, is recognised in legislation as well as local and national planning policy. This assessment has been carried out within the context of relevant government policy as outlined in *National Planning Policy Guideline 5: Archaeology and Planning* (NPPG 5), *National Planning Policy Guideline 18: Planning and the Historic Environment* (NPPG 18), *Scottish Historic Environment Policy (SHEP) 1: Scotland's Historic Environment*, *Scottish Historic Environment Policy (SHEP) 2: Scheduling - Protecting Scotland's Nationally Important Monuments* and *Planning Advice Note 42: Archaeology – the*

*Planning Process and Scheduled Monument Procedures (PAN 42)*, all of which are particularly relevant to Scotland, and local policy, in the form of the Glasgow and Clyde Valley Joint Structure Plan and the Glasgow City Council City Local Plan. The assessment also takes account of more general government policy on cultural heritage, as outlined in *Planning Policy Guidance 15: Planning and the Historic Environment (PPG 15)* and *Planning Policy Guidance 16: Archaeology and Planning (PPG 16)*.

Some monuments are deemed to be of national importance and are therefore given legal protection through the *Ancient Monuments and Archaeological Areas Act 1979* (Scheduled Ancient Monuments), and through planning legislation (Listed Buildings), including the *Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997*, the *Town and Country Planning (General Development Procedure) (Scotland) Order 1992*, the *Town and Country Planning (General Development Procedure) (Scotland) Amendment (No 2) Order 1994* and the *Memorandum of Guidance on Listed Buildings and Conservation Areas*. Further advice on the treatment of the cultural heritage is given in various planning guidance on the historic environment and archaeology, Listed Buildings and, where relevant, Conservation Areas. The primary concern of this assessment is with the preservation of archaeological remains, however, if appropriate Listed Buildings, Historic Gardens and Designed Landscapes (HGDs) and Conservation Areas within and/or adjacent to the assessment area will also be considered.

The significance of the cultural heritage and its proper treatment in the planning process is outlined in *NPPG 5*, which states:

Archaeological remains are a finite and non-renewable resource, and should therefore be regarded as a part of the environment to be protected and managed. The primary policy objectives are that they should be preserved wherever feasible and that, where this proves not to be possible, procedures should be in place to ensure proper recording before destruction, and subsequent analysis and publication.

(paragraph 4)

Scheduled ancient monuments are of national importance and it is particularly important that they are preserved *in situ* and within an appropriate setting. Developments, which would have an adverse effect on scheduled monuments or the integrity of their settings, should not be permitted unless there are exceptional circumstances.

(paragraph 17)

The guideline goes on to point out that not all nationally important remains are yet scheduled, and that

many significant archaeological sites may not merit scheduling under the criteria for national importance but may nevertheless be of importance in a regional or local context. Such sites should be defined and justified through development plan policies with priority also given to their preservation within an appropriate setting, although the strength of protection will not be as high as that given to sites of national importance.

(paragraph 17)

*NPPG 5* further states that:

The preservation *in situ* of important archaeological remains is always to be preferred, particularly in relation to nationally important sites. Where this is not possible, an archaeological excavation incorporating the recording and analysis of remains and publication of the findings, together with the deposition of the artefacts in an appropriate museum and the records in the National Monuments Record of Scotland, may be an acceptable alternative.

(paragraph 18)

These general statements are re-iterated in *PAN 42*. They are also augmented by the provisions of the *Town and Planning (General Development Procedure) (Scotland) Order 1992* and the *Town and Country Planning*



*(General Development Procedure) (Scotland) Amendment (No 2) Order 1994*, which extend statutory consultation with Historic Scotland to development proposals which may affect the setting of a Scheduled Ancient Monument.

Following a desk-based assessment, where the collection of existing documentary information can aid the assessment of the potential impacts of a development, site investigations may subsequently be required to yield further information on the type and extent of the features identified. It is also possible that where little or no evidence of archaeological activity exists within an area because there has been no known previous work to disturb it in the recent past, further and more detailed investigation may be required. These investigations are normally in the form of an archaeological evaluation, in which sample excavation or other archaeological survey can be required. The local authority archaeologist, acting on behalf of the planning authority, can request further site investigation to inform the planning application in consideration of the legal requirements and guidance noted above.

The Glasgow and Clyde Valley Joint Structure Plan and the Glasgow City Council City Plan both highlight cultural heritage as an important aspect of the environment. The Glasgow and Clyde Valley Joint Structure Plan has, as one of its aims, the protection and enhancement of environmental resources including the historic environment and archaeology (G&CVJSP 3, 11), with a general presumption in favour of safeguarding the quality and extent of environmental resources, including cultural heritage resources (G&CVJSP 75). Strategic resources in this context include those of international importance (including proposed or designated World Heritage Sites) and national importance (including grade A Listed Buildings, Scheduled Ancient Monuments, and locations identified in the Inventory of Historic Gardens and Designed Landscapes). Other strategic resources include resources identified in the Sites and Monuments Record. Developments which have an adverse effect upon the quality and viability of Scheduled Ancient Monuments and other archaeological sites and landscapes, Listed Buildings, World Heritage Sites, Conservation Areas, or Historic Gardens and Designed Landscapes will not accord with the Structure Plan.

The Glasgow City Council City Plan presents “a city-wide vision for the physical development of Glasgow”. It contains development proposals, and policies, that will influence the planning decisions taken in every part of the City. These relate to, amongst other things, new housing, major transport proposals and other infrastructure needs, the safeguarding and enhancement of the City’s green spaces and architectural heritage. The City Plan, therefore, is a key consideration in determining the location, scale and nature of physical change throughout the City, which, in turn, has wider ranging economic, environmental and social implications. Within it, environmental policy designations cover the built and natural heritage of Glasgow. These areas are important because of their environmental quality, biological diversity and/or their historic, architectural or archaeological significance and contribute positively to the quality of the environment, image and diversity of the City.

#### 4.2 *Aims and Objectives of the Desk Assessment*

The aims of this assessment were to identify and examine the known and potential archaeological resource within the proposed development boundaries, to assess the likely impact of the development upon it and to recommend a strategy for mitigating any such impacts upon this resource.

The specific objectives of the assessment were:

- to identify any previously known archaeological monuments present on the site and within a 200 m radius, through a search of the National Monuments Record of Scotland and other documentary sources;
- to identify any previously unknown archaeological sites through the examination of documentary and cartographic evidence and a site visit;
- to establish the presence or absence, character and extent, date, integrity, level of preservation and relative quality of archaeological sites within the proposed development area where possible;
- to evaluate the archaeological significance of these sites in terms of their local, regional and national importance;
- to assess the potential impact of the development on the archaeological resource, taking into account its varied significance, and

- to suggest appropriate mitigation measures for the protection of the archaeological resource or, where necessary, the investigation and recording of any sites likely to be affected by the development where preservation *in situ* cannot be achieved.

### 4.3 *Aims and Objectives of the Field Evaluation*

The aim of the evaluation was to attempt to locate on the ground, through trial trenching, the location of the clay pipe factory.

The objectives of the evaluation were to establish the extent, nature and degree of preservation of any significant archaeological remains, especially those relating to William Christie's Clay Pipe Factory, in order to provide information about any constraints on development of the site linked to the archaeological significance/potential of the proposed development area.

## 5.0 Methodology

### 5.1 *Desk-Based Assessment*

The desk-based assessment covered the area of the proposed development and that within a radius of approximately 200 m from the site boundary (referred to throughout as the assessment area). This wider survey was deemed necessary in order to build up an overall picture of the local archaeological landscape, including indications of the sorts of archaeological material which could potentially survive within the proposed development area.

The desk-based assessment employed the following methodology.

- A review was carried out of policy considerations and the current legislative framework.
- The National Monuments Record of Scotland (hereafter NMRS), maintained by the Royal Commission on the Ancient and Historical Monuments of Scotland (hereafter RCAHMS), was searched for any known archaeological or historical sites within the proposed development area, as well as within a 200 m radius of its boundary. The NMRS was searched remotely through the online database CANMORE through PASTMAP which is available through the RCAHMS website <http://www.rcahms.gov.uk>. Relevant NMRS entries were identified through the NMRS CANMAP facility, which allows the definition of a search of the NMRS by area.
- Records held and maintained by Historic Scotland were searched for information on Scheduled Ancient Monuments (hereafter SAMs), Listed Buildings and Historic Gardens and Designed Landscapes (HGDLs) within the assessment area.
- Pre-Ordnance Survey (hereafter OS) maps of the area of interest, held by the National Library of Scotland (hereafter NLS), were identified and examined. These maps are accessible online through the NLS website at <http://www.nls.uk>. Relevant maps range in date from the sixteenth to the early twentieth century. The Roy Map was examined remotely on the Scran website at <http://www.scran.ac.uk>
- First editions, town plans and subsequent revisions of relevant OS maps of the proposed development area were examined online at digimap <http://digimap.edina.ac.uk> and again through the NLS website. These OS maps date from 1857-8 to the present.
- Readily accessible primary and secondary historical sources on the area were consulted for information on its history and past land use.
- The local Sites and Monuments Record, maintained by the West of Scotland Archaeology Service (hereafter WoSAS) was consulted remotely.

### 5.2 *Site Visit*

The site visit to the proposed development area was carried out on 29 April 2008 in dry but overcast weather. The visit involved visual assessment of the proposed development site in advance of trial trenching.

### 5.3 Field Evaluation

The evaluation trench was excavated by machine with a flat-bladed ditching bucket clearing the demolition rubble down to the first archaeological horizon or natural subsoil. Exposed surfaces were cleaned first by hoe and then by trowel. Archaeological features were recorded in plan by measured drawing at a scale of 1:20 and by colour print, digital and monochrome print photography. Profiles were recorded by photography, by measured drawing at a scale of 1:20 and by written description.

Conditions for the work were generally good, though as the site had been used for fly-tipping over a sustained period of time, debris and general detritus made conditions under foot quite hazardous.

## 6.0 Results

The results of the desk-based assessment, the field inspection and the field evaluation are presented below.

### 6.1 Monuments Record

The NMRS was searched through its on-line facility, Pastmap. A search was conducted for the site of the proposed development and for the area within a 200 m radius. These results were compared with those of searches of the local Sites and Monuments Record and the on-line databases of Listed Buildings and Scheduled Ancient Monuments maintained by Historic Scotland.

Table 1: Sites Listed in NMRS and SMR Within the Proposed Development Site

Site No	NMRS No	Wospin	Other Information	Name	NGR	Scheduled / Listed	Within Site Boundary
1	NS66SW 756	48356	Demolished – one time warehouses etc	449 London Road	6033 6426	No	Yes
2	NS66SW 720	47953	Pipe factory	16-20 Craignestock Street	6034 6429	No	Yes
3	N/A	47952	Rockbank works	22 Craignestock Street	6034 6430	No	Yes
4	NS66SW 755	48357	Cabinet maker	31 Craignestock Street	6033 6433	No	Yes
5	NS66SW 429	N/A	The Nationalist Freehouse	Public house, 415-419 London Road	6030 6431	No	Yes
6	NS66SW 757	N/A	-	Public House 423-431 London Road	6030 6429	No	Yes

Table 2: SMR Sites Within 200 m of the Proposed Development Site

Site No	Wospin &/Or HB No	Other Information	Name	NGR	Scheduled / Listed	Within Site Boundary
7	47951	Industrial Building	Glasgow, London Road, Stone and Brick Shed/ Craignestock Street And Tobago Street	603 642	No	No

<i>Site No</i>	<i>Wospin &amp;/Or HB No</i>	<i>Other Information</i>	<i>Name</i>	<i>NGR</i>	<i>Scheduled /Listed</i>	<i>Within Site Boundary</i>
8	9487 HB Num 33857	Factory	Glasgow, 62 Templeton Street, Templeton's Carpet Factory/London Road/Templeton Business Centre	6030 6415	Yes Cat A 1996	No
9	47108	Health	Glasgow, Greenhead Street, Greenhead Public Baths and Washhouses/ Monteith Row	6028 6411	No	No
10	47474	Health, Public Services	Glasgow, Glasgow Green Washing House/Public Washinghouse	6026 6409	No	No
11	48639	Industrial Warehouse	Glasgow, 352-372 Abercromby Street, Warehouse	6048 6418	No	No
11a	Ev3157	Archaeological Event Record	Desk Based Assessment for proposed East End Regeneration route, Glasgow	N/A	No	No
12	47954	Industrial Warehouse	Glasgow, 41-43 Arcadia Street, Warehouse	6045 6419	No	No
13	50432	Workshop	Glasgow, 328-332 Abercromby Street, Workshop/James Meighan And Son	6048 6423	No	No
14	47955	Warehouse, Stables	Glasgow, 13-19 Arcadia Street, Warehouse and Stables	6045 6424	No	No
15	47956	Industrial Workshop	Glasgow, 1-9 Arcadia Street, Workshop	6046 6426	No	No
16	47957	Tramway Depot	Glasgow, 58-72 Tobago Street, Tramway Stables/Drake Street, Blackfaulds Tram Depot	6045 6430	No	No
17	48638	Industrial, Bakery	Glasgow, 274 Abercromby Street, Bakery	6051 6431	No	No
18	45691	Industrial, Foundry	Glasgow, 246 Abercromby Street, Calton Brass Foundry	6054 6434	No	No

<i>Site No</i>	<i>Wospin &amp;/Or HB No</i>	<i>Other Information</i>	<i>Name</i>	<i>NGR</i>	<i>Scheduled / Listed</i>	<i>Within Site Boundary</i>
19	45691	Industrial Works	Glasgow, 45-51 Tobago Street, Calton Works	6040 6431	No	No
20	47138 HB Num: 335858	Store, Stable	Glasgow, 75-77 (odd Nos) Tobago Stree, Store and Stable	Not recorded – Figure 1	Yes Cat C (s) 1993	No
21	48359	Industrial Warehouse	Glasgow, 220-234 Stevenson, Grocery Warehouse/ Andrew Cochrane	6042 6441	No	No
22	52594 HB Num 33843	Lodge	Glasgow, 88 Green Street, St James' Primary School, Janitor's Lodge	6032 6441	Yes Cat B 1993	No
23	48358	Industrial Factory	Glasgow, 41 Bankier Street, Aerated Water Factory/Risk Street	6027 6441	No	No
24	46631	Industrial Leather Industries	Glasgow, 381 London Road, Pleasance Leather Works	6025 6435	No	No
25	47096	Religion	Glasgow, 290-302 London Road, First Reformed Presbyterian Congregation/ Great Hamilton Street/ Great Hamilton Free Church, McMillan Calton Church of Scotland	6015 6441	No	No
26	47735	Fountain	Glasgow, Glasgow Green, James Martin Memorial Fountain and Canopy	6010 6432	No	No
27	HB Num: 33843	School	88 Green Street, St James Public School including janitor's house and railings (Glasgow, 88 Green Street, St James' Primary School)	Not recorded – Figure 1	Yes Cat B 1993	No

<i>Site No</i>	<i>Wospin &amp;/Or HB No</i>	<i>Other Information</i>	<i>Name</i>	<i>NGR</i>	<i>Scheduled /Listed</i>	<i>Within Site Boundary</i>
28	HB Num: 33836	Fountain: Elaborate terracotta fountain by A E Pearce of Doulton's for 1888 Glasgow Empire Exhibition; re-sited here 1890.	Doulton Fountain	Not recorded – Figure 1	Yes Cat A 1970	No
29	HB Num: 33859	1868-9. 2-storey, 7-bay, classically detailed former court and police station. Ashlar with polished dressings, channelled ground floor and quoins.	92-106 (Even Nos) Tobago Street (Glasgow, 92 Tobago Street, Calton Police Building)	Not recorded – Figure 1	Yes Cat B 1988	No
30	HB Num: 33859	1868-9. 2-storey, 7-bay, classically detailed former court and police station. Ashlar with polished dressings, channelled ground floor and quoins.	92-106 (Even Nos) Tobago Street (Glasgow, 92 Tobago Street, Calton Police Building)	-	-	No

These records provide the local archaeological and historical context for the area. There are six sites recorded on Pastmap within the proposed development site (Table 1). The most archaeologically significant of these sites, based on current knowledge, is the clay pipe (tobacco) manufacturing site, which once stood at 16 to 20 Craignestock Street (Figure 1, site 2). The other five sites comprise a group of warehouses, workshops and stores (Table 1, site 1), a rockbank works (Table 1, site 3), a cabinet maker's workshop (Table 1, site 4) and two public houses (Table 1, sites 5 and 6).

The clay pipe factory on Craignestock Street was a substantial concern, built in 1877 by William Christie. According to Hume it was producing 9000 clay pipes a day in 1891 (Hume, J R 1974, 54). The factory is described as:

*'a plain three story and attic, 6 bay red and white brick building, with cast iron columns supporting wooden joists and floors. At the rear is a square-section brick chimney'.*

(Hume, J R 1974, 192)

Hume also records the presence of sites 1 and 3 as entries 65 and 67 on page 192 of his book. Site 1 is recorded as being built for J. B Herbertson and William Bremner by the architect John Gordon. The building comprised four storeys and an attic, a sandstone-fronted structure in a Renaissance style with a mansard roof. This is the structure that was subsequently occupied as a model lodging house (as recorded on the Glasgow town plan (1892-4) (Appendix C). The rockbank works (Figure 1 & Table 1, Site 3), were located at 22 Craignestock Street and were constructed in 1867 for a James Hill. This was a two-storey structure and attic and was brick built (red and white) but there was also a four-story back building. A photographic image of the building can be found on the SCRAN website.



The records for the surrounding area provide a broader illustration of the past use of this part of Glasgow, though the majority of the sites listed are Later Medieval at the earliest, and more commonly early Modern or Modern, all reflective of the city's growth and industrial development in more recent centuries.

## 6.2 Cartographic Sources

Historic and recent maps were consulted in order to establish the presence or absence of past structures and landscape features not included within the NMRS and SMR (Appendix 11.2). Several historic maps held by the NLS were accessed on-line through their website, and past and present OS maps were also consulted. The OS maps range in date from the First Edition Town Plan of the City of Glasgow (1857-8) (Appendix C) to the present day. Roy's map (The Military Survey of Scotland, 1747-1755) was also accessed and viewed online at <http://www.scran.ac.uk>.

Several other cartographic sources were examined during the course of the desk-based assessment for the proposed development (Appendix 11.2 for a full list). Those with relevant information are noted here.

The settlement of Glasgow or 'Glasco' is clearly illustrated by Pont on the north side of the River Clyde. A bridge over the river leads to Bridgend and, to the east, Rutherglen is clearly marked. Detail of the layout of the city is not apparent from this map; however, it shows the city to be a significant settlement, although small by comparison with its extent today.

Roy's map (The Military Survey of Scotland, 1747-1755) suggests the city is growing eastward at this time. The settlements of Calton and the Gorbals are clearly recorded however details of specific streets and buildings are less clear.

Charles Ross's *'Map of the shire of Lanark'* (1773) contains a detailed insert of the city (Appendix C). Green Street may be depicted but this is unclear; streets in the area are not named and they have increased in number and changed in other ways too since 1773, so positive identification is difficult. Even if Green Street is not on the map, the general area seems to be developing at this time. Ross's map does not detail the nature of the structures represented on the map.

Thomas Richardson's *'Map of the town of Glasgow and country seven miles around'* (1795) is of interest but limited in value as once again the street names are not included and the area of the proposed development cannot be identified clearly. The map illustrates the general layout of the city but there is little detail relating to the structures and individual buildings. The map does not record any of the street names, but it does again serve to illustrate increasing development in the city.

Fleming's map of 1807, entitled *'Map of the city of Glasgow and suburbs'* is very detailed and clearly demonstrates the growth of the city at this time, and of the proposed development area; significant development, including the area within the proposed development site, is apparent by this date (Appendix C). This would seem to suggest that the area saw considerable growth and development between 1795 and 1807, though it is possible that earlier maps, such as Richardson's and Ross's, simply failed to record the growth of the area in sufficient detail from an earlier date. Fleming's map shows numerous buildings lining the east side of Green Street, to the rear (east) of which the land is recorded as belonging to John Hamilton (to north) and John Ure (to south). Beyond the latter again, to east, an 'Inkle Factory' (which relates to a form of weaving) belonging to David Marshall is depicted. Beyond this again (to east), toward the eastern edge of the proposed development area, a 'rope manufactory' is shown, readily recognisable by its long, narrow plan.

In 1820 John Thomson published a map called *'Northern part of Lanarkshire. Southern Part'* with a detailed insert of Glasgow attached (Appendix C). This includes a depiction of the proposed development area. Though broadly in accordance, Thomson's map is more schematic than Fleming's, and provides no information regarding building function or land ownership (though the long rope works building remains apparent), so it is not clear to what extent the situation had changed in the intervening 13 years. Thomson's map does not record any details relating to ownership of the buildings, nor their purpose.

James Clelland produced a map of the city in 1822 but it does not add further information to the overall understanding of the area from previously considered cartographic sources. It does however show the street names of Great Hamilton Street and Barrowfield Road which later became Great Hamilton Street and Canning Street (as seen on Bartholomew's map 1912) and subsequently London Road (the current street name).

A map published in 1842 by Thomas Kyle (*'Map shewing the estate of Milton'*) does show Green Street at the very edge of the map, though the land within the boundaries of the proposed development area is largely missing and the map as a whole is of limited value when looking at the Calton area.

The Ordnance Survey Town Plan of Glasgow (1857-58), as anticipated, provides detailed information. The proposed development site is illustrated on sheet VI.15.3 and reveals clearly the ground plans of individual buildings, yards, lanes and streets, though for the most part these are not named (Appendix C). Craignestock Street is however named on a map for the first time. Various changes, and indeed similarities, in the layout of the proposed development site can be noted to have occurred between 1807 (Fleming) and the production of the OS Town Plan (1857-58) half a century later. While some structures clearly appear on both maps (the rope works again being an obvious example), many seem to have been redeveloped or altered in some way.

By comparison with the OS Town Plans, the OS County Series maps (1:2500 and 1:10650) of this period are of limited value, supplying no further detail relating to the proposed development site or the wider assessment area.

The next edition (1892-94) of the OS Town Plan of Glasgow once again shows the area in some detail (Appendix C). The 'Reformed Presbyterian Mission Church' shown to the north of the development site on the 1857-58 OS Town Plan, is now recorded as a girls and boys 'Day Industrial School'. Within the site itself, the stores/workshops and warehouses built for Herbertson and Bremner recorded by John Hume (GUARD Site No 1, Fig 1) have become Great Hamilton Street Home model lodging house, which extended up into Craignestock Street on its east side. North of that an unidentified building with a chimney is depicted, though by a process of elimination - including identification of flanking buildings by their street numbers and the presence of the chimney - it would seem that this must be the location of the clay pipe works, which are known to have been built in 1877 at 16-20 Craignestock Street. The neighbouring building to the north is identified on the OS Town Plan 1892-94 map as the Golden Acre Turning Works, assumed to be GUARD Site 3, the 'rockbank works' described by Hume (1974, 192) as having been constructed for James Hill, a turner, in 1867. Three separate public houses are recorded, though not named, within the proposed development site, two of which (on London Road) may relate to GUARD sites 5 & 6.

Recent maps of the area examined on digimap (<http://digimap.edina.ac.uk>) depict the frontages of various structures onto London Road. The structures on the east side of Green Street appear for the most part to have been demolished, with the exception of the Calton Bar on the corner of London Road and Green Street. The area appears generally as a waste ground today with concrete footings and areas of grass and trees.

### 6.3 *Archaeological Background and Previous Investigations*

There are no known previous archaeological investigations within the development area and only one archaeological investigation is recorded within a 200 m radius of the site boundary: a desk-based assessment for the proposed East End regeneration route (WoSAS Event 3157 - Table 2, no 11a above).

### 6.4 *Documentary Sources*

The First and Second Statistical Accounts of Scotland (SAS) were examined for information relating to the assessment area. These proved to be of value in providing a general overview of the growth, development and general flavour of the city in the late eighteenth and mid-nineteenth centuries respectively.

#### 6.4.1 *General Historical Background*

Much of the following account of the development of Glasgow is drawn from unpublished GUARD reports by Dalglish (2002) and Duffy (2006), which in turn draw heavily on Stevenson & Torrie's report for the Scottish Burgh Survey, *Historic Glasgow: the Archaeological Implications of Development* (1990, 42-57). The WoSAS entry relating to the burgh of Glasgow has also been used to inform the general historical background.

Tradition traces the origin of Glasgow back to Saint Kentigern, or St Mungo, and the late sixth or early seventh century. Kentigern is said to have founded a monastery where Saint Ninian had earlier consecrated a cemetery, though there is scant evidence to substantiate these claims. The bishopric of Glasgow was firmly established in the twelfth century and in 1136 the new cathedral was consecrated.

The bishop of Glasgow (Bishop Jocelin) was granted a burgh between 1175 and 1178. The association of the area with the saint and the construction of a great cathedral probably encouraged the growth of a small settlement nearby. The area south of the cathedral seems to have been judged unsuitable for laying out a planned burgh, and the new burgh plots were laid out on the flat ground west of the Molendinar Burn, near its confluence with the Clyde. Medieval Glasgow therefore had two nuclei: a commercial centre at the junction of Saltmarket and Trongate/Gallowgate, developed close to the Clyde which was becoming increasingly important to the cities' economy; and an ecclesiastical centre near the cathedral. The two centres were linked by the High Street.

The most important streets in the medieval burgh were Saltmarket, Trongate, and Gallowgate, the latter first being recorded by this name in 1350 (McUre 1830 in Baker 2003, 42). By 1300, development had taken place along the southern part of High Street and on Bridgegate. Further development took place through northward expansion along Stockwell Street and High Street. Development in the ecclesiastical centre was much slower, but those parts of Rottenrow, Drygate and Castle Street which adjoined the Cathedral Square area were substantially built up by the end of the fifteenth century. Important medieval foundations within the burgh were a thirteenth century Dominican friary and a Franciscan friary in the fifteenth century. In 1451 the University was founded by a Papal Bull of 7 January 1451. Glasgow increased in prosperity through the fifteenth and sixteenth centuries and was emerging by the latter as one of the wealthier of Scotland's burghs, being ranked eleventh in 1535 and fifth by 1583. Much of this wealth was generated as the Clyde became increasingly important as trade and commerce developed. A Water Bailie was established as early as 1579 in order to control the trade and tax of the river on behalf of the city. Expansion in the later medieval and early modern periods was limited, new buildings being erected on the backlands of properties in the commercial centre. There was little development in the former ecclesiastical centre after the Reformation. From the Act of Union in 1707, commerce and trade within the city developed on a previously unseen scale. New trade markets were opened up and Glasgow's affair with sugar and tobacco began in earnest. It was in the later eighteenth century that the city expanded beyond its medieval limits for the first time.

Through the eighteenth century, the town expanded rapidly to the west, and this process continued through the nineteenth century with the initiation of projects such as the new town at Blythswood. The creation of such residential areas at a distance from the Medieval core of the town and the industrialisation of the economy had a profound effect on the original core of the city and the areas to the east of it. The east of the city became an area of industry and associated slum residences with numerous public houses being established too. As the map evidence shows (Appendix C) the area of the proposed development site and its surroundings developed considerably through the nineteenth century, with various factories emerging and being replaced and extended over time.

Christie's Clay Tobacco Pipe Factory was established on Craignestock Street in 1877, though it is believed that previous manufacturing was undertaken by Christie on the Gallowgate prior to this, the business actually being founded in 1857 (Gallagher in Davey 1987, 101-2). Christie was one of many clay pipe producers within the City of Glasgow at this time, the origins of the industry being in England or Holland and dating to the end of the sixteenth century. Gallagher suggests that pipe-making began in Glasgow sometime after 1651, although pipes were known and used in the city prior to this time. At least two pipe makers were operating in Glasgow by 1667: James Colquhoun and Alexander Watson, and by the 1670s there were various requests for licenses to dig for pipe clay. Over the years various family names rose to prominence in Glasgow pipe making, including Colquhoun, Hyndshaw, Aitken, and Finnie.

#### 6.4.2 Site-specific Historical Background

Cartographic evidence demonstrates that the proposed development once supported various buildings, including factories and public houses and presumably also residential accommodation. None of these buildings and features can be demonstrated to be of any great antiquity; there are no known Medieval sites within the proposed development site boundary and indeed the area lies beyond the limits of the Medieval Burgh of Glasgow. One of the later buildings known to have occupied the site is, however, of archaeological interest: William Christie's Pipe Factory, built in 1877 according to Hume (1974, 192). This factory was described in Stratten's *Glasgow and its Environs* which was originally published in 1891 and helpfully reproduced in 1987 by Davey. Stratten informs us that the factory was:

*One of the most celebrated in Scotland, and enjoys a widespread reputation. The business was founded in 1857 by Mr William Christie. The pipe factory is to the front and consists of four flats fitted up with every*

*appliance for preparing, moulding, and firing pipes. Steam power is used for driving machinery, and some forty hands find employment in several departments. A large cupola, or kiln, constructed on the most approved plan, forms one of the most striking features of the place, and it is equal to a turn out of 54,000 pipes per week. Mr Christie, in addition to his large business as a pipe manufacturer, carries on an immense trade in his New Patent Household Cleaning Stone, which seems destined to completely supersede the natural and unprepared clay, which was hitherto the sole material available ... Mr Christie, in both sections of his enterprise, enjoys a valuable home and foreign connection and keeps three travellers constantly on the road. The business is ably conducted and is certain to be extended in the by no means distant future.*

(Stratten, 1891, 180 in Davey, 1987, 66-67)

Christie's factory apparently remained in the Glasgow directory until 1962 (Gallagher in Davey, 1987 67), and photographs of the building were taken by John Hume only a few years later, when it appears to be serving as a base for plumbers and electrical contractors (RCAHMS Archive Nos SC662373-4, SC685214-5, SC718070). Of interest is, a valuable internet publication called 'The development of the clay tobacco pipe kiln in the British Isles' by Allan Peacey (1996) ([http://intarch.ac.uk/journal/issue1/peacey\\_index.html](http://intarch.ac.uk/journal/issue1/peacey_index.html)), which records a plan of the kiln in Christie's Leith factory (1900-1962)

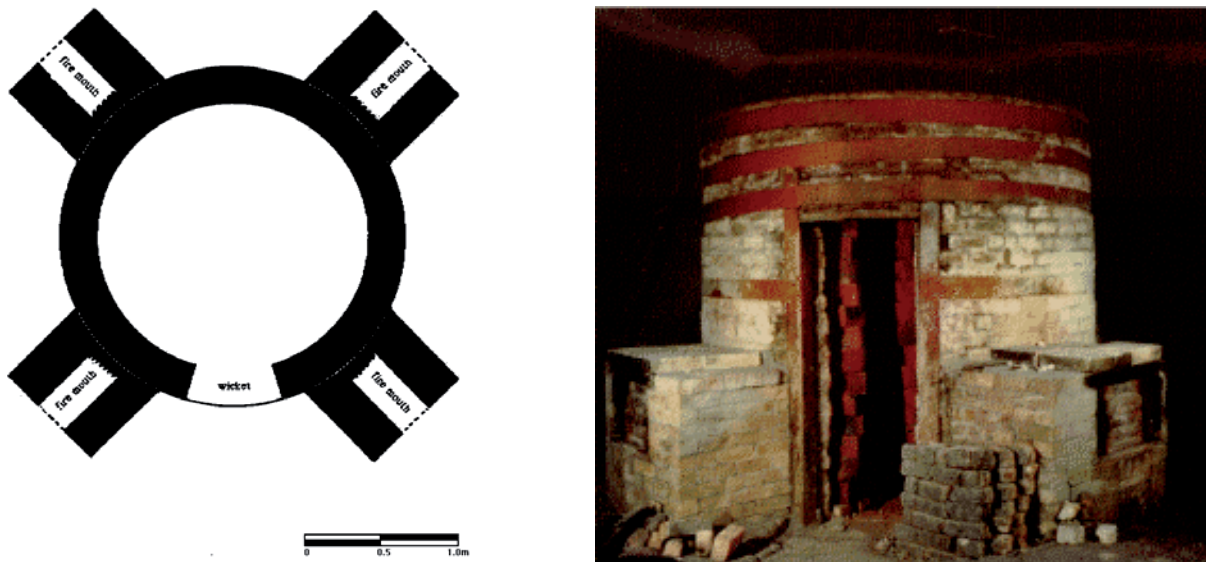


Plate 1:

*Clay pipe kiln display at the Huntly House Museum, Edinburgh.*

In addition to the block plan of the kiln (Plate 1, left), the Huntly House Museum in Edinburgh displays a section of the feature to the public (Plate 1, right).

While nothing can be taken for granted given the difference in dates (Glasgow 1877 and Leith 1900), it is possible that the kilns at Craignestock Street would have been very similar in plan and elevation to those at the Leith factory. However, there are various known kiln layouts/plans, any of which might be the model for whatever kiln or kilns were employed on the Craignestock Street site.

## 6.5 Site Visit

The site was first visited on 29 April 2008 and was confirmed to be largely undeveloped at this time, comprising concrete footings from demolished structures, urban scrubland and grassland. There was some debris across the site where dumping had occurred in the recent past. A subsequent site visit, following completion of the desk-based assessment and prior to the field evaluation, established that the area within the proposed development site targeted for intrusive investigation lay beneath a small belt of well established trees. The field evaluation was thus postponed for several weeks, to allow time for the trees to be felled and removed from the site.



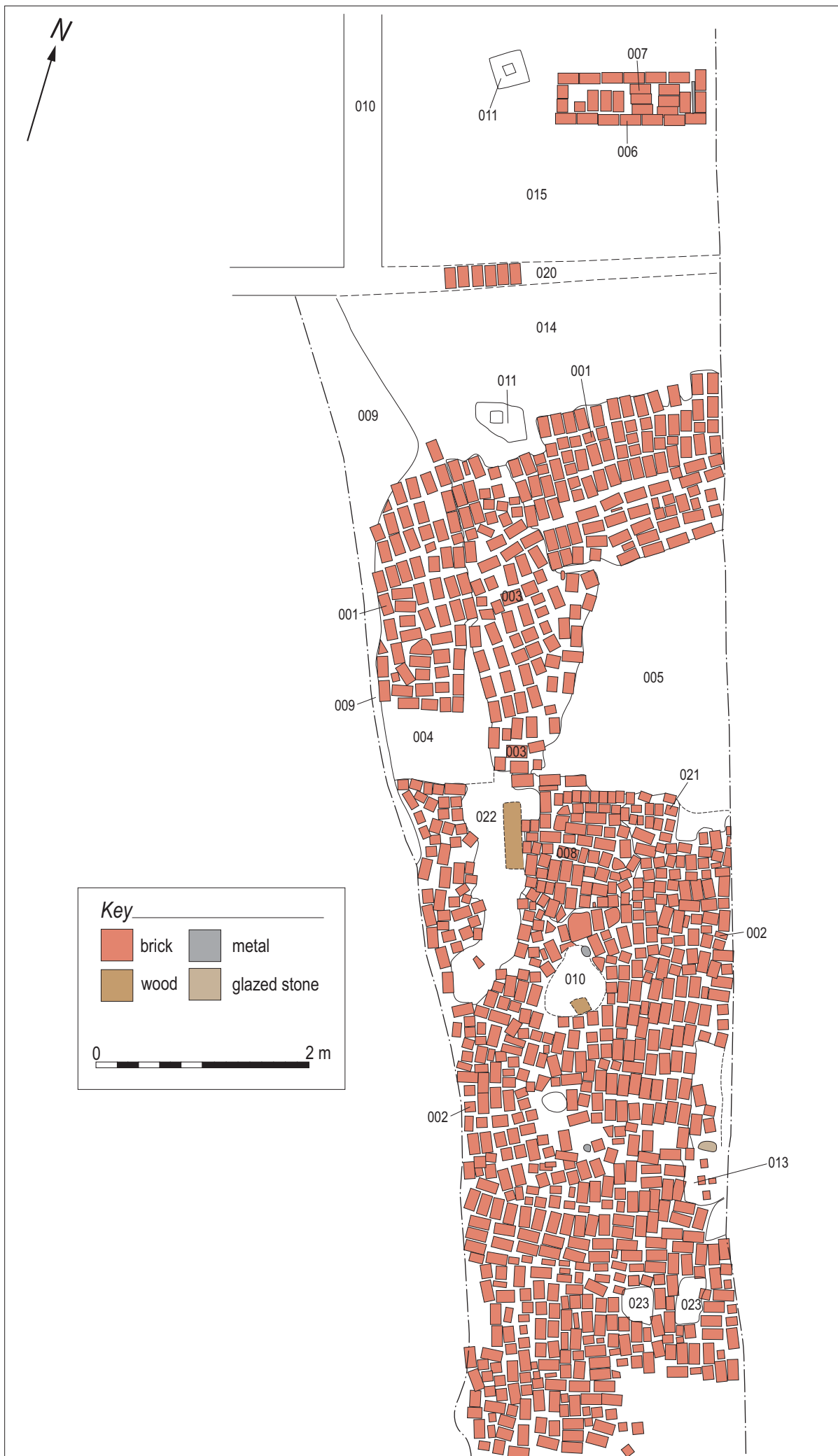


Figure 2: Plan of brick surface/kiln.

## 6.6 Field Evaluation

One evaluation trench was excavated on the site (Figure 2 and Plate 2), orientated N/S and measuring c 19 m long by c 5 m metres wide at the northern end and 3 m wide at the southern end. It was 0.8 m deep along the eastern side and 1.5 m deep on the western side, due to the presence of a significant layer of overburden.



Plate 2:

*General view of factory surface from the N.*

The trench was dominated by a brick surface (001, 002 & 003), c 10 m in length N/S and c 3 m wide at the widest extent of the trench. It appeared to continue below the baulks of the trench to both the east and west so the overall dimensions of the feature could not be determined. This surface was located 0.8 m below the current concrete surface and 0.6 m of made ground material (017), which was dark grey in colour and composed of a moderately compacted clinker and ash-like material. Directly below the made ground deposit was a layer or surface of severely heat-affected material (009), which covered the northern 5 m of the brick surface, especially the area over (001 & 003) as well as the possible features (004 & 005; see further below). This slag-like deposit was between 0.3 m and 0.1 m thick, thinning out toward the southern edge of its extent, black in colour with mottled patches of orange, and consisted of severely heat-affected brick, metal, wood and other debris. Context 009 sat on top of a well compacted, dark-grey, ash-like deposit (018), which covered the entire brick surface, to a thickness in some places of 0.1 m. The majority of finds recovered from the site came from this layer (SFs 1 - 15), including clay pipes marked with “Christie” and “Glasgow” (SFs 14 & 15).

There appeared to be three fairly distinct areas of brick in the surface (001, 002 & 003), in terms of layout, orientation, consistency and therefore presumably use. The bricks were all hand made and most were unstamped, save for a small number which were marked “Patent, Wilson & Son, Glasgow”.

Context 001 appears to be the outer edge of the surface. It consists of a double-skinned alignment of bricks, measuring c 1.6 - 2 m in width, with the outer edge of bricks orientated N/S and the inner line orientated E/W, running roughly NE/SW across the trench.

Context 003 represents an area of bricks which appear to have been disturbed or truncated in the past. This group of bricks measures c 1 m by 3 m and is orientated NNW/SSE. Although this group of bricks



appears to have been disturbed, they seem to have been replaced in roughly their original positions and orientations, and may therefore represent a repaired surface.

The majority of the brick surface (002), in the southern half of the trench, covered an area  $\approx$  6.5 m in length and 3 m in width. The bricks in this area were much more densely packed than in (001), were less well ordered, were of different shapes and sizes, and were laid out in an apparently more random arrangement. Although some patterns can be discerned in their layout no deliberate arrangement can be recognised, apart from what appears to be a “border” aligned roughly E/W toward the south end of the trench. Three features which can be identified comprise a deliberately-faced area, 1.4 m in length (013), and two small, slot-like features (023) on the southern edge of (002) which measure respectively 0.45 by 0.25 m and 0.3 x 0.35 m.

On the northern edge of surface (002) was an area of heat-affected bricks (008). The bricks were bright pink in colour and appeared to be slightly degraded. The area they occupied was roughly oval in plan, measuring  $\approx$  1.5 m N/S and 2 m E/W. No clear edge or deliberate pattern could be made out in this area, suggesting this may not be a deliberately constructed feature. It may instead define an area where hot material has been placed or dumped.

Directly to the south of the heat-affected bricks was an ash-like deposit (019 - not illustrated),  $\approx$  0.7 m long and 0.5 m wide. This was very loosely compacted, creamy white in colour and had large wooden plank inclusions within it, as well as a possible unfired clay pipe bowl (SF 16). The deposit originally spread across the surface E/W but was truncated by the machine on excavation. Its presence was however still apparent in both the E and W sections of the trench.

In the NE corner of (002) a small square area, where no bricks are present, and measuring  $\approx$  0.5 m by 0.4 m, was found to be bonded with mortar (021). This was the only area of mortared bricks within the surface, and may accordingly represent a significant feature.

Three areas or gaps where no bricks are present were recorded between (001) and (002), and to either side of (003). It is not clear whether these gaps were deliberate, possibly representing the locations of ash pits, or represent areas where fixtures for a kiln or machinery fittings have been removed when the factory went out of use. The most deliberate looking of these features was (004), which measured 0.7 m wide by 0.9 m long and continued beyond the western edge of the trench. It is rectangular in plan and edged by what appear to be deliberately-faced bricks on its N and S sides. In the SE corner of this feature an area of what appeared to be a less deliberate and more disturbed or truncated feature (022) was apparent. Measuring  $\approx$  2 m by 0.4 m, the edges of this feature appeared to be less well structured and faced, though in plan these two features combined (004 & 022) create a fairly regular arc, which may suggest that a circular feature, possibly relating to the kiln, was removed from this area. The third and largest of these gaps (005) measured 2.6 m N/S by 1.4 m E/W as exposed and ran off under the eastern edge of the trench. Like (004), the sides of this feature appeared to be well faced and deliberate, suggesting that it relates to a constructed feature.

The brick surface was packed on top of or set into a firm yet friable dark-grey, silty-ash material (014/015/016). These deposits, though separated by the various features described above, were essentially the same in colour and character, and together probably represent made-ground which was deliberately laid in order to provide a secure base for the construction of the clay pipe factory.

A rectangular, brick-built structure (006), which may have been an ash pit or furnace, was located  $\approx$  3.5 m to the north of the brick surface (001). It was aligned E/W and was 0.5 m wide externally (0.35 m internally) and 1.5 m long. The bricks appeared to be of the same style and fabric as those in the floor surface. Bright pink-orange in colour and soft and degraded, they were bonded with mortar and had been severely heat affected. The interior of this feature appeared to have been deliberately filled with bricks (007), probably after the feature had gone out of use, as these bricks had not been heat affected. A metal bar lined the eastern edge of the structure.

Two sandstone plinths or foundations (011) were located to the north of the brick surface, some 3 m apart from each other. They each measured  $\approx$  0.35 m by 0.35 m, with internal holes  $\approx$  0.1 m by 0.1 m, and seem likely to represent the bases for supports for some sort of foundation or machinery. The southernmost plinth appeared to have been partially covered by the made ground (014), rather than set or dug into it like the other features described above.

At the N end of the trench a possible chimney (010) was discovered, which measured 4 m long and 2.5 m wide with a thickness of 0.35 m. This position coincides with the location of a square chimney belonging

to the building taken to represent the clay pipe factory depicted on the OS Town Plan of 1892-94. The outer face of the chimney was 0.5 m high, which was the depth at which the possible brick surface and the made ground material (014/015) was discovered. The interior of the chimney was full of debris, including large pieces of wood, metal and fairly modern brick. Running off this chimney was a thin wall (020), c. 0.35 m (one brick) wide, which crossed the trench from E/W and which survived to a height of 0.5 m (three to four courses).

## 7.0 Discussion

### 7.1 *Summary of the Fieldwork Results*

Archaeological features and deposits, which seem likely to relate to Christie's Clay Pipe Factory, were discovered during the field evaluation and may be said to be in a reasonably good state of preservation. The brick surface (001, 002 & 003), though it has suffered a degree of truncation towards the south, survives relatively well and probably represents the working floor of the clay pipe factory. Finds of clay pipes, china and glass, which came from between the bricks of the surface and in the layer directly above the bricks (018), suggest a late nineteenth or early twentieth century date for this surface.

The features identified within the surface (023 & 013) represent either internal structures, or fittings and fixtures for machinery, or possibly divisions of work areas for specific activities within the factory.

Although no evidence for the clay pipe kiln was discovered, it is possible that the area of the brick surface where no bricks are present, represents the location from which the kiln has been deliberately removed. Clay pipe kilns were often rather small and it is possible that the kiln may have been located in the area of (004, 005 & 022). The ash deposit (019) which originally spread across the brick surface from E/W may represent an unfired dump of material from the kiln, or the waste products of successive firings, though the presence within it of what appears to be an unfired clay pipe bowl perhaps suggests that it may be from an unsuccessful firing. It may also represent evidence of the last firing of the kiln, as in general the number of finds from the brick surface was relatively small, suggesting that it was kept relatively clean, which makes this deposit potentially quite significant. If it was common practice to dump waste products from the firing of the kiln on the surface then one would expect to find a large number of artefacts, rather than the small deposit which was discovered.

The heavily fired structure (006), to the north of the brick surface, was constructed with the same type of hand-made brick and is therefore presumably broadly contemporary with it. It had been severely heat affected, probably over a long period of time, and possibly represents a furnace, chimney or ash pit. The factory was steam powered so it is possible that some sort of boiler room might be present on the site.

The chimney (010) and wall (020) which run off it were constructed of more modern, non-hand made bricks, compared to those used in the construction of the factory surface (001, 002 & 003) and the possible ash pit (006), and would therefore seem likely to be later in date. The relationship between the surface and the chimney was not determined, and it is therefore difficult to prove whether or not they were in use at the same time.

The severely heat-affected surface or layer (009) which overlay the brick surface and was the first indication of the possible presence of significant archaeology, could represent a slagged surface, which was a common by-product from clay pipe kilns.

### 7.2 *Interpretative Issues*

Potentially significant information concerning the Christie's Clay Pipe Factory was gathered during the evaluation, though due to the limited nature of the investigation, a number of questions remain unanswered.

No hard evidence for the presence of a kiln was discovered during the evaluation, though some circumstantial evidence exists which may infer its former presence, including: the slagged surface, commonly found on other clay pipe factory sites; a number of clay pipes with "Christie" and "Glasgow" stamped on them; the presence of heat-affected bricks; and a possible waste deposit containing unfired clay pipes. Also the areas within the brick surface where gaps in the brick work appear could have supported a kiln structure which was removed when the factory went out of use. It remains possible that a kiln may lie somewhere in the unexcavated parts of the site. Against that, although some clay pipe fragments were recovered from the site, the number encountered seems small for the site of their manufacture. A number of the smaller and clearly deliberately-created features within the brick surface

also raise unanswered questions as to their purpose, the proposal that they were used to support machinery or work areas being only one possible explanation.

Further questions arise as to the nature of the ash deposit (019). The presence within it of what appears to be an unfired clay pipe bowl is potentially quite significant, as it may represent waste material dumped after the firing of the kiln. However, if this was the case, then a lot more of this type of material would be expected across the entire site, and especially the brick surface, rather than being restricted to a fairly narrow band. A possible interpretation may be that it represents the remains of the last firing of the kiln, which were dumped before the factory floor and kiln was abandoned, but it remains uncertain what this dump represents and more work would be required in order to clarify that matter.

The reason for the creation of the slagged surface (009) is also uncertain. It covered a fairly large area of the brick surface, though did not sit directly on top of it, and contained wood, brick, and metal. This deposit may, as suggested, have been the result of successive firings of the kiln, but it could equally represent evidence of a more catastrophic and unintentional incident, such as a fire.

The relationship between the chimney and the brick surface also remains unclear. The chimney was constructed with more modern bricks than the floor surface and was bonded with cement rather than mortar, suggesting that it was constructed at a later date than the surface.

Overall, it seems likely, on the basis of the cartographic, documentary and archaeological evidence, that the remains encountered relate to the site of the clay pipe factory, though the precise character of those remains is still unclear on a number of levels.

## 8.0 Conclusions and Recommendations

The desk-based research has demonstrated that there is low potential for the survival of significant archaeological remains of Medieval or earlier date on the site, though one must set against that the lack of previous archaeological work on the site to provide direct evidence for guidance purposes.

By contrast, the desk-based research and field evaluation have shown that there are reasonably well-preserved surviving archaeological remains, almost certainly relating to Christie's Clay Pipe Factory, which are therefore of archaeological significance in relation to our understanding of the industrial development of the east end of Glasgow in the post-Medieval and early Modern periods. On that basis, GUARD would recommend that further mitigation work would be required in the event that development of the site is proposed.

In line with current legislation and government policy, preservation of those remains *in situ* would be the favoured option. However, as the full extent and character of surviving archaeological deposits remains unclear, especially in the western portion of the site, it is unlikely that a suitable scheme of avoidance could be achieved without further intrusive fieldwork to elucidate these issues. Should avoidance of these remains be deemed a feasible option within the context of any development proposal, GUARD would recommend that a further programme of archaeological evaluation be conducted to investigate, define and characterise the remainder of the site. In the event that avoidance is not feasible, preservation by record may be an acceptable alternative, in which case the full excavation of the site of the clay pipe factory, including a programme of post-excavation analysis and leading to the publication of the results within an academic journal would be required. GUARD would note that these recommendations are intended for guidance only. The final decision regarding any requirement for archaeological works in the context of planning applications for development rests with the planning authority.

## 9.0 Acknowledgements

Thanks are extended to Alan Leslie, who project managed and copy-edited this project for GUARD, and to Gillian MacSwan and Ingrid Shearer, who produced the illustrations. Thanks are also extended to Christine Rennie, who assisted in the field, Jen Cochrane for desk-top publishing the report, and Aileen Maule, John Kiely and John Carroll for administrative and technical assistance during the course of the project.

## 10.0 Appendix A: Sources Consulted

### 10.1 *Bibliographic, Documentary and Online Sources*

#### 10.1.1 *Planning Advice*

*Planning Advice Note PAN 42 – Archaeology: The Planning Process and Scheduled Monument Procedures.* The Scottish Office Development Department.

*National Planning Policy Guideline NPPG 5 – Archaeology and Planning (Scotland).* Crown Copyright.

*Planning Policy Guideline PPG 15: Planning and the Historic Environment.* Crown Copyright.

*Planning Policy Guideline PPG 16: Archaeology and Planning.* Crown Copyright.

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(<http://intarch.ac.uk/journal/issue1/peacey/ch7a.html>)

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#### 10.1.3 *Online Resources*

<http://www.rcahms.gov.uk>

<http://www.nls.uk>

<http://www.wosas.net/smr.html>

<http://www.scran.ac.uk/>

<http://edina.ac.uk//stat-acc-scot>

\*<http://intarch.ac.uk>

### 10.2 *Cartographic Sources*

<i>Mapmaker</i>	<i>Year</i>	<i>Map Name and Scale</i>
Douglas	1775	Plan of sundry streets in Glasgow relating to a road dispute between the College and Inhabitants
Fleming P	1807	Map of the City of Glasgow and suburbs
Kyle, T	1842	Map shewing the estate of Milton
MacArthur J	1778	A plan of the city of Glasgow, Gorbals and Calton from and actual survey by J MacArthur
Ordnance Survey	1857-8	Town Plan of Glasgow, sheet VI.11.17 & VI.11.18
Ordnance Survey	1892-94	Town Plan of Glasgow, sheet VI.11.17 & VI.11.18
Ordnance Survey	1861	1:2500, Lanarkshire, 73NS59, 64, First Edition
Ordnance Survey	1896	1:2500, Lanarkshire, 73NS59, 64, First Revision

<i>Mapmaker</i>	<i>Year</i>	<i>Map Name and Scale</i>
Ordnance Survey	1912	1:2500, Lanarkshire, 73NS59, 64, Second Revision
Ordnance Survey	1933	1:2500, Lanarkshire, 73NS59, 64, Third Revision
Ordnance Survey	1989	1:10000, NS56SE
Pont T	1583-1601	Pont 33, Detail of Glasgow
Richardson T	1795	Map of the town of Glasgow & country seven miles ...
Ross C	1773	A map of the shire of Lanark (inset of Glasgow)
Roy W	1747-55	The Military Survey of Scotland, 1747-1755
Smith, Clelland & Wood	1822	This map of the ten parishes within the Royalty and the parishes of Gorbals Barony of Glasgow
Thomson J	1820	Northern Part of Lanarkshire. Southern Part (inset)

## 11.0 Appendix B: Evaluation Concordances

### 11.1 *List of Contexts*

<i>Context</i>	<i>Description</i>	<i>Interpretation</i>
001	Brick surface consisting of a double skinned alignment of bricks, measuring 1.6-2 m in width, with the outer edge of bricks orientated N-S and the inner line orientated E-W, running E-W across the trench.	Possible northern edge of factory floor surface.
002	Brick surface measuring 6.5 m in length and 3 m in width. The bricks in this area are much more densely packed than in (001), and are less well ordered.	Main area of factory floor surface.
003	Area of disturbed bricks measuring 1 m by 3 m, orientated N-S.	Possible repaired area of the factory floor surface.
004	Possible feature between the areas of brick (001) and (002), measuring $\approx$ 0.7 m wide by 0.9 m long and continuing below the W edge of the trench. Rectangular in plan and edged by what appear to be deliberately-faced bricks.	Possible deliberate feature within the floor surface.
005	Possible feature between (002), 2.6 m N-S by 1.4 m E-W running into the eastern edge of the trench. Sub-rectangular in plan with deliberate faced sides.	Possible deliberate feature within the floor surface.
006	Rectangular, brick-built structure, aligned E-W, 0.5 m wide externally (0.35 m internally) and 1.5 m long. The bricks were bonded with mortar and had been severely heat affected. They were bright pink-orange in colour & soft & degraded.	Possible ash pit, furnace or chimney, severely heat affected.
007	Brick fill of 006, comprising non heat affected bricks	Fill of 006, comprising non heat affected bricks
008	Heat-affected bricks, bright pink in colour. The area is roughly oval in plan, $\approx$ 1.5 m N-S by 2 m E-W.	Heat-affected bricks possibly caused by the dumping of hot material rather than a deliberately constructed feature.
009	Possible kiln lining/heat-affected surface. Between 0.3 m and 0.1 m thick, thinning out toward the southern edge of its extent, black in colour with mottled patches of orange, consisting of severely heat-affected brick, metal, wood and other debris.	Possible kiln lining/slaggered surface.



<i>Context</i>	<i>Description</i>	<i>Interpretation</i>
010	Feature measuring 4 m long by 2.5 m wide, with a thickness of 0.35 m. Filled with debris, including large pieces of wood, metal and fairly modern brick. The outer face of the chimney survived to a height of 0.5 m.	Probable chimney; relates well to location as depicted in cartographic sources.
011	Two sandstone plinths 3 m apart from each other, each c 0.35 m by 0.35 m, with holes 0.1 m by 0.1 m in the middle of them. The southernmost plinth appears to have been partially covered by the made ground (014).	Possible foundation bases for machinery/roof.
012	N/A	-
013	Feature indicated by deliberate edge of bricks, c 1.4 m in length.	Possible ash pit within floor surface.
014	Firm yet friable dark-grey, silty-ash material; made ground deposit into which brick surface is set	Made ground into which brick surface is set; same as 015, 016.
015	Firm yet friable dark-grey, silty-ash material; made ground deposit into which brick surface is set.	Made ground into which brick surface is set; same as 014, 016.
016	Firm yet friable dark-grey, silty-ash material; made ground deposit into which brick surface is set.	Made ground into which brick surface is set; same as 015, 014.
017	Made ground 0.6 m in thickness, dark grey in colour of a moderately compacted clinker and ash-like material.	Made ground, later than factory.
018	Bonding material of bricks, dark-grey, silty/ash-like deposit of hard compaction.	Bonding or deposit surrounding the brick surface. The majority of small finds were recovered from this layer.
019	Ash deposit, very loosely compacted, creamy white in colour, with wood inclusions, as well as a possible unfired clay pipe bowl: SF 16. The deposit measured 0.7 m in length and 0.5 m in width.	Possible remnants of the firing of the kiln. Unfired clay bowl recovered from this context.
020	Internal wall 0.35 m wide running across the trench east to west, surviving to a height of 0.5 m of three to four courses.	Wall relating to the probable chimney 010.
021	As small square area of mortared bricks in the NE corner of (002) measuring 0.5 m by 0.4 m.	Area of mortared bricks - potentially significant as it is the only area of mortared brick in the floor.
022	Disturbed area between (002) measuring 2 m by 0.4 m. Sub-rectangular in plan. The edges of this feature appear less well structured and faced than 004/005.	Possible deliberate feature within floor surface, with wooden planking.
023	Two slot holes on the southern edge of (002) measuring 0.45 x 0.25 m and 0.3 x 0.35 m.	Holes possibly for supporting machinery.



## 11.2 *List of Finds*

<i>Find No</i>	<i>Context No</i>	<i>No of Pieces</i>	<i>Material</i>	<i>Description</i>
1	018	12	Ceramic	Brown glazed body, base & handle china
2	018	3	Ceramic	Yellow glazed body handle & rim
3	018	2	Ceramic	Jar base & body
4	018	2	Ceramic	White glazed body & base china
5	018	2	Ceramic	Terracotta glazed rim & body sherds
6	018	8	Ceramic	Blue/white glazed china body sherds
7	018	12	Ceramic	White glazed china rim body & base sherds
8	018	1	Ceramic	Cream glazed body sherd
9	018	1	Ceramic	Cream stoneware storage vessel, base
10	018	1	Metal	Iron nail/pin
11	018	2	Ceramic	Stone ware bottle stoppers
12	018	8	Glass	Various glass sherds
13	018	1	Glass	Green bottle base
14	018	16	Ceramic	Clay pipe stems and bowls
15	018	3	Ceramic	Clay pipe stem
16	019	3	Ceramic	Possible unfired clay pipe bowl
17	009	3	IW?	Possible floor deposit
18	017	4	Ceramic	Brown stoneware storage vessel, base body & rim

## 11.3 *List of Drawings*

<i>Drawing No</i>	<i>Sheet No</i>	<i>Subject</i>	<i>Contexts</i>	<i>Scale</i>
1	1	Plan of surface & kiln	001, 002, 003, 006, 007, 004, 005, 008, 010, 011, 013, 014 015, 019, 020, 021, 022, 023	1:20
2	2	East-facing section	001, 002, 009, 017, 018, 019	1:20

## 11.4 *List of Photographs*

<i>Frame</i>	<i>Context No</i>	<i>Subject</i>	<i>Taken From</i>
1	-	ID Shot	-
2		General pre-ex shot	W
3		General pre-ex shot	SW
4	010	General shot of possible chimney	N
5	001, 002, 003	View of kiln and surface	S
6	001, 002, 003	Close up view of kiln and surface	S
7	001, 002, 003	View of kiln & surface from SW	SW
8	001, 002, 003	View of kiln and surface from SW	SW
9	001, 002, 003	View of kiln and surface from N	N
10	001, 002, 003	View of kiln and surface from the N	N
11	006, 007	View of possible ash pit	W
12	010	View of chimney and overburden from the East	E
13	021	Mortared bricks	W
14	019	Ash deposit	N
15	022	Wooden plank	S
16		East-facing section	E
17		Wilson & Son brick	S

11.5 *List of Digital Photographs:*

<i>Frame</i>	<i>Context No</i>	<i>Subject</i>	<i>Taken From</i>
1	-	ID Shot	-
2	-	General Pre-ex shot	W
3	-	General Pre-ex shot	SW
4	010	General shot of possible chimney	N
5	010	General shot of possible chimney	-
6	001, 002, 003	General shot of the trench after day 1, possible kiln & surface	-
7	001, 002, 003	General shot of the trench after day 1, possible kiln & surface	-
8	001, 002, 003	General shot of the trench after day 1, possible kiln & surface	-
9	001, 002, 003	General shot of the trench after day 1, possible kiln & surface	-
10	001, 002, 003	General shot of the trench after day 1, possible kiln & surface	-
11	001, 002, 003	General shot of the trench after day 1, possible kiln & surface	-
12	001, 002, 003	General shot of the trench after day 1, possible kiln & surface	-
13	001, 002, 003	General shot of the trench after day 1, possible kiln & surface	-
14	010	General shot of Chimney	-
15	001, 002, 003	General shot of the trench after day 1, possible kiln & surface	-
16		General shot of Trench sondage, E facing section.	E
17	001, 002, 003	General shot of the trench after day 1, possible kiln & surface	-
18	009	Large piece of slag/heat affected surface.	-
19	001, 002, 003	View of kiln and surface from S	S
20	001, 002, 003	Close up view of kiln and surface from S	S
21	001, 002, 003	View of Kiln and surface from the SW	SW
22	001, 002, 003	View of Kiln and surface from the SW	SW
23	001, 002, 003	View of Kiln and surface from the SW	SW
24	001, 002, 003	View of Kiln and surface from the N	N
25	001, 002, 003	View of Kiln and surface from the N	N
26	001, 002, 003	View of Kiln and surface from the N	N
27	006, 007	View of possible ash pit	W
28	010, 020	Possible chimney & overburden	E
29	021	Mortared bricks	W
30	019	Ash deposit	N
31	022	Wooden plank	S
32	001, 002, 003, 009, 017, 018	East-facing section	E
33	-	Wilson & Son Brick	N
34	-	Wilson & Son Brick	-
35	-	General view of back filling	N
36	-	Back filled trench	

## 12.0 Appendix C: Selected Maps

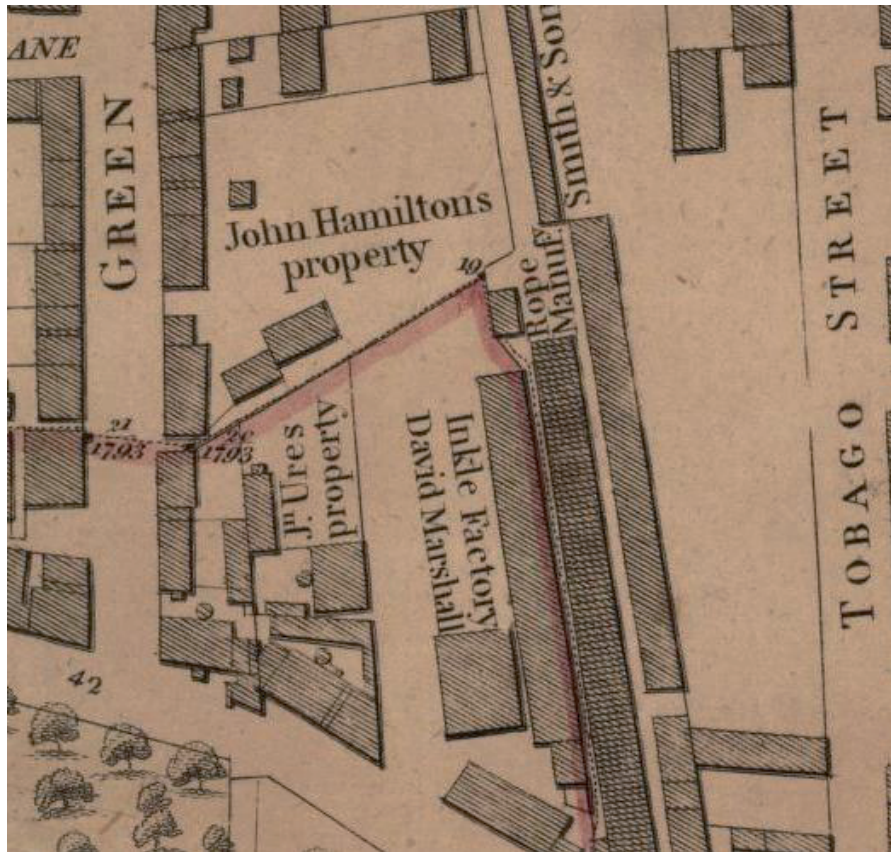


*Ross, Charles, 1722-1806 Title: A map of the shire of Lanark. 1773.*



*Thomson, John, Title: Northern Part of Lanarkshire. Southern Part. 1820.*

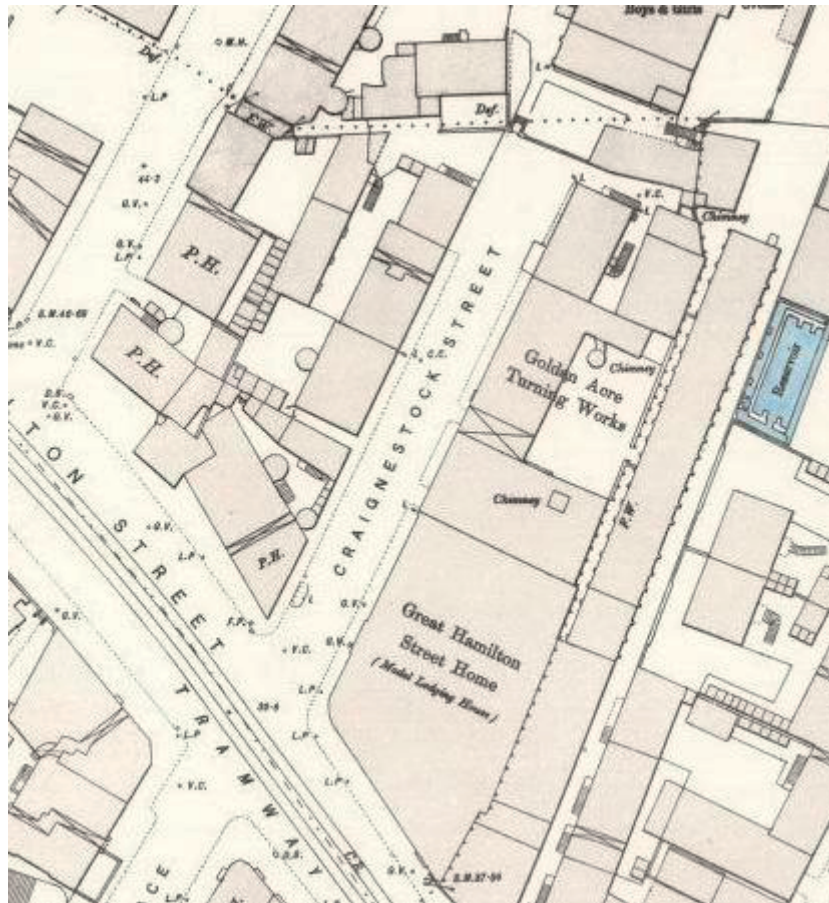




*Fleming, Peter, Title: Map of the City of Glasgow and suburbs. 1807.*



*OS Town Plan of Glasgow (south centre part) Surveyed: 1857-8*



*OS Town Plan of Glasgow (south centre part) Surveyed: 1892-94*

## 13.0 Appendix D: DES Report

<b>LOCAL AUTHORITY:</b>	City of Glasgow
<b>PROJECT TITLE/SITE NAME:</b>	Christie's Clay Pipe Factory/Green St, Glasgow
<b>PROJECT CODE:</b>	2656
<b>PARISH:</b>	Glasgow
<b>NAME OF CONTRIBUTOR(S):</b>	Paul Murtagh
<b>NAME OF ORGANISATION:</b>	GUARD
<b>TYPE(S) OF PROJECT:</b>	Evaluation
<b>NMRS NO(S):</b>	NS66SW 720
<b>SITE/MONUMENT TYPE(S):</b>	Clay pipe factory
<b>SIGNIFICANT FINDS:</b>	Structural remains of factory; 19 <sup>th</sup> /20 <sup>th</sup> small finds
<b>NGR:</b>	6034 6429
<b>START DATE:</b>	16 June 2008
<b>END DATE:</b>	19 June 2008
<b>PREVIOUS WORK:</b>	-
<b>MAIN DESCRIPTION:</b>	<p>An archaeological evaluation was carried out by Glasgow University Archaeological Research Division (GUARD) in June 2008 on waste ground off Green St and London Road, in the east end of Glasgow, with the intention of locating and assessing the survival of Christie's Clay Pipe factory. This project was carried out on behalf of SBA Geo-Environmental.</p> <p>One evaluation trench was excavated on the site, orientated N-S measuring 19 m in length by 5 m metres in width at the northern end and 3 m in width at the southern end. It was 0.8 m in depth along the eastern side and 1.5 m in depth on the western side.</p> <p>The remains of a well preserved brick surface, probably relating to the factory floor, was discovered, measuring 10 m N-S, and extending below the trench edges to the E and W. The bricks were all hand made. No concrete evidence as to the presence of a kiln was discovered during the evaluation. Although some circumstantial evidence was recovered; such as a slagged surface, commonly found on other clay pipe factory sites, a number of clay pipes with "Christie" and "Glasgow" stamped on them, the presence of heat affected bricks, as well as a possible waste deposit containing unfired clay pipes.</p> <p>The discovery of the remains of Christie's Clay Pipe Factory, is potentially of significant importance, especially in relation to our wider understanding of the industrial development of the east end of Glasgow.</p>
<b>PROPOSED FUTURE WORK:</b>	-
<b>SPONSOR:</b>	-
<b>ADDRESS OF MAIN CONTRIBUTOR:</b>	Gregory Building, Lilybank Gardens, University of Glasgow, Glasgow, G12 8QQ.
<b>E-MAIL ADDRESS:</b>	p.murtagh@archaeology.gla.ac.uk
<b>ARCHIVE LOCATION:</b>	Archive to be deposited with WoSAS & NMRS.