

SASB/01



SALAMANDER AND BALTIC STREET, LEITH

TRIAL TRENCH EVALUATION

commissioned by Travis Perkins Plc

August 2016

SALAMANDER AND BALTIC STREET, LEITH

TRIAL TRENCH EVALUATION

commissioned by Travis Perkins Plc

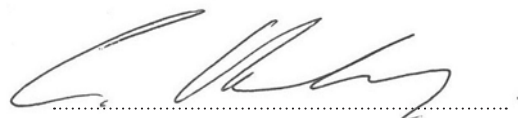
August 2016

project info

HA JOB NO. SASB/01
NGR NT 2753 7642
PARISH Leith
LOCAL AUTHORITY City of Edinburgh Council
OASIS REF. Headland1-259273
ARCHIVE WILL BE DEPOSITED WITH: Historic Environment Scotland

project team

PROJECT MANAGER Candy Hatherley
AUTHOR Anthony Taylor, Matthew Ginnever, Nuala Woodley
FIELDWORK Anthony Taylor, Matthew Ginnever, Nuala Woodley, Steve Roe
GRAPHICS Rafael Maya Torcellly
SPECIALISTS Julie Franklin – Finds
APPROVED BY Candy Hatherley – Project Manager



 **HEADLAND
ARCHAEOLOGY**

© 2016 by Headland Archaeology (UK) Ltd



SCOTLAND

Headland Archaeology
13 Jane Street, Edinburgh EH6 5HE

0131 467 7705

scotland@headlandarchaeology.com

www.headlandarchaeology.com

CONTENTS

1	INTRODUCTION	2
2	SITE LOCATION AND DESCRIPTION (ILLUS 1)	2
2.1	HISTORICAL BACKGROUND (ILLUS 2)	2
	The Edinburgh and Leith Glassworks	2
	The Gasworks	2
3	AIMS AND OBJECTIVES	3
4	METHODOLOGY	3
4.1	SITE WORKS	3
4.2	REPORTING AND ARCHIVES	4
5	RESULTS	4
5.1	TRENCH RESULTS	4
	Keyline site	4
	Tile Giant/Benchmark Site	7
5.2	FINDS ASSESSMENT	10
	Modern pottery	10
	Glass	10
	Industrial waste	10
	Ceramic	10
	Miscellaneous finds	10
	Ceramic building material	10
	Discussion	10
5.3	GENERAL DISCUSSION	11
	Edinburgh and Leith Glassworks	11
	Edinburgh and Leith Gasworks	11
5.4	CONCLUSION	11
5.5	REFERENCES	12
	Cartographic sources	12
6	APPENDICES	13
	APPENDIX 1 SITE REGISTERS	13
	Context registers	13
	Photographic register	17
	APPENDIX 2 DISCOVERY AND EXCAVATION IN SCOTLAND ENTRY	22
	APPENDIX 3 FINDS CATALOGUE	23

LIST OF ILLUSTRATIONS

- Illus 1 Site location
- Illus 2 Historic map progression of the Glassworks and Gasworks
- Illus 3 Plan of Trench 1
- Illus 3A Trench 1 looking NW
- Illus 3B Detail of Wall [1015] brick surface [1016] and drain [1017] looking S
- Illus 3C Detail of drain [1022] after removal of stone cap [1019] looking W
- Illus 3D View of brick surfaces [1008] and [1009] looking E
- Illus 4 Plan of Trench 2
- Illus 4A Trench 2 looking E
- Illus 4B Detail of Walls [2006] and [2007] looking E
- Illus 4C View of structures [2010] [2011] and [2012] looking W
- Illus 4D View of Wall [2008] looking W
- Illus 5 Plan of Trench 3
- Illus 5A Trench 3 looking SE
- Illus 5B View of pad [3013] and associated features in Trench 3 looking N
- Illus 5C Detail of brick floor [3015] looking W
- Illus 5D View of cobbled surface [3016] and associated features in Trench 3 looking W
- Illus 5E Detail of brick floor [3032] and Wall [3029] looking W
- Illus 5F Detail of cobbled surface [1016] wall stub [3023] and brick face [3024] in section of Trench 3 looking S
- Illus 5G View of brickwork [3014] in southern section of Trench 3 looking S
- Illus 5H Detail of stone pad [3011] wall [3030] and brickwork [3014] looking S
- Illus 6 Plan of Trench 4
- Illus 6A Trench 4 looking W
- Illus 6B View of Walls [4006] and [4008] abutting Wall [4007] looking N
- Illus 6C Detail of pipe cut [4009] and Wall [4011] looking W
- Illus 7 Plan of Trench 5
- Illus 7A View of Trench 5 looking W
- Illus 7B View of Trench 5 showing Wall [5013] cobbled surface [5014] Wall [5015] and rail [5020] looking E
- Illus 7C Detail of pillar base [5016] stone pad [5017] pipe [5018] and brickwork [5019] looking W
- Illus 7D Detail of Wall [5011] and brick surface [5009] looking S
- Illus 8 Plan of Trench 6
- Illus 8A View of Trench 6 looking NW
- Illus 8B Detail of brick surface [6003] looking E
- Illus 9 Plan of Trench 7
- Illus 9A View of Trench 7 looking W
- Illus 9B Detail of stone pad [7005] and flue [7006] looking S
- Illus 9C Detail of flue [7007] and possible collapsed flue [7012] looking N
- Illus 10 The neck of a moulded wine bottle of 19th century date, heavily distorted by heat with adhering vitrified ceramic or stone (left). It derives from a bottle of similar form to those found among the glass assemblage (right) and likely to be a piece recycled as cullet.
- Illus 11 Sherd of crucible
- Illus 12 Sherd of crucible

SALAMANDER AND BALTIC STREET, LEITH

TRIAL TRENCH EVALUATION

Headland Archaeology (UK) Ltd undertook a programme of archaeological trial trenching works on a site located between Salamander Street and Baltic Street, Edinburgh. The work was completed to help inform decisions regarding the future use of the land and any planning applications submitted.

The evaluation trenches produced evidence for multiple phases of structures associated with the C18th and C19th Edinburgh and Leith Glassworks and the C19th Edinburgh and Leith Gasworks, including exterior foundation walls and associated interior structures and surfaces. The evaluation trenches demonstrated that the level of preservation across the site is generally good, with the only truncation identified being from concrete footings of mid-20th century sheds.

1 INTRODUCTION

Travis Perkins PLC commissioned a series of trial trenches at a site located between Baltic Street and Salamander Street, Edinburgh. The results of this work will help inform decisions regarding the future use of the land and any planning applications submitted. The trial trenching works were carried out between 4th and 27th July 2016 and this report outlines the results.

2 SITE LOCATION AND DESCRIPTION (ILLUS 1)

The site is located on the north of Baltic Street and Salamander Street, Edinburgh (NGR NT 2753 7642). It comprises two distinct areas. The first is the site of the former Edinburgh and Leith Gas Works located on Baltic Street. This is currently occupied by a number of commercial operations (Tile Giant and Benchmark) and comprises standing buildings, car parks and yards. These buildings include Category B Listed 19th century stone and brick buildings associated with the former Gas Works. Most of the open areas are surfaced with tarmac, used for vehicle access, storage and parking. Historic maps indicate that these open areas were also formerly occupied by Gas Works buildings.

The second area covers the site of the former Edinburgh and Leith Glassworks. The current plot extends along the north side of Salamander Street, bounded on the east by Bath Road. The site is currently occupied by Keyline Civils and Drainage and is covered by an open area of tarmac used for storage racks and a large 20th century industrial shed.

The site lies around 5m AOD and is underlain by sand and gravel Raised Marine Deposits of Flandrian Age (British Geological Survey website; <http://www.bgs.ac.uk>).

2.1 HISTORICAL BACKGROUND (ILLUS 2)

The Edinburgh and Leith Glassworks

Trenches 1–4 on the Keyline site all lie within the boundary of the Edinburgh and Leith Glassworks.

The Edinburgh and Leith Glassworks was founded by glassmaker Thomas Summers on 1st August 1747, with the first cone erected on site by 1751. In 1752 the Glassworks expanded east along the shore with a second cone added at an unknown date, but shown in illustrations from 1777 (Turnbull 2001).

The earliest detailed mapping for the Edinburgh and Leith Glassworks comes from 'The Strangers Guide' of 1805 which shows a series of four cones aligned east-west, flanked by outbuildings along the foreshore to the north

and Salamander Street to the south (Scott 1805). Kirkwood's 1817 map, however, shows that the Glassworks comprised three cones aligned east-west with a fourth cone situated opposite the western cone on the northern foreshore, with a generally similar layout of workshops and outbuildings. This layout of cones remains consistent throughout the later mapping and can be considered definitive.

The 1852 Ordnance Survey Map shows that the Glassworks have been expanded and altered with added workshops and outbuildings surrounding each cone. This period of construction also sees the addition of rail lines to the north along the reclaimed foreshore.

The Ordnance Survey map for 1876 shows the Edinburgh Glassworks at its most expansive, with a line of workshops built up along the northern edge of the site and a number of new rail lines constructed on the foreshore. The easternmost cone has since been demolished and replaced with a series of large square outbuildings.

Between 1876 and 1894, however, there was a significant change in the form and function of the Glassworks. The 1892 OS map shows the demolition of the western cone along with the majority of the associated outbuildings, with only a few structures surviving along the edges of the site. The cone to the north is still standing, however, the outbuildings and workshops associated with it have been demolished and a sole rectangular building remains attached to the north. This area is also labelled 'Gasworks' and it appears that the Gasworks located to the west have expanded east to encroach on the now diminished Glassworks. To the east, the remaining cone is illustrated as extant but there is no indication that the glassworks still functions. Indeed, on the OS map of 1894 the eastern site of the glassworks is now labelled 'Chemical Manure Works' and the Edinburgh and Leith Glassworks can be taken to no longer exist.

The 1944 OS map shows that by this time, the site is occupied by a timber yard. A post 1945 aerial photograph shows that the Keyline site is now occupied by two open sheds running E-W along the frontage and any upstanding cones have been demolished.

From the historical mapping evidence, therefore, it is evident that the Edinburgh and Leith Glassworks underwent a period of expansion between 1805 and 1852 with a further period of growth occurring between 1852 and 1876. By 1876, however, the eastern cone had been replaced with a series of large outbuildings, and it is possible that this indicates a decrease in function of the Glassworks culminating in its eventual disuse and demolition by 1894. By 1945 no upstanding buildings relating to the historic Glassworks remained.

The Gasworks

Trenches 5–8 on the Tile Giant/Benchmark site all lie within the boundary of the Edinburgh and Leith Gasworks. Kirkwood's 1817 map which shows the site as separate

businesses – a naval yard to the west and three unidentified buildings to the east. The Gasworks is known from historical mapping on this site from 1840 with the 1852 OS map showing this area to now be entirely occupied by related buildings. A coal depot and gasometer house occupy the site to the west and railway lines have been extended along the foreshore to the north. Two chimneys are present to the south with additional outbuildings flanking the site to the east.

The 1876 OS map shows the gasworks to have expanded. A single large chimney occupies the site to the south, replacing the two smaller structures present in 1852. Additional coal sheds occupy the centre of the site with rail lines supplying these buildings from an expanded foreshore.

By 1894, the OS mapping indicates that the gasworks has expanded east into the site of the old Glassworks. Additional rail lines extend into the site from the north through arched openings – presumably to coal sheds in the centre of the site. The large chimney to the south is still extant and the buildings flanking the site remain broadly similar. A courtyard range has replaced the former retort house to the south with an office range to the south east.

The Bartholomew town plan from 1907 shows the site as being occupied by the gasworks, however, there are few detailed maps specifically labelling the function of the site after 1907. The 1944 OS map shows that by this time, the site has become a saw mill. Many of the gasworks buildings appear to be extant, including the chimney to the south and the gasometer building and railway lines to the west, though it is likely that their function has changed.

It can be assumed, therefore, that the gasworks ceased to function sometime between 1907 and 1944 and that by 1944 the buildings on this site were being used for a saw mill and timber yard. The courtyard range to the south and office range to the east remain unstanding

3 AIMS AND OBJECTIVES

The purpose of the evaluation was to provide sufficient evidence for confident prediction of the archaeological significance and potential of the proposed development site.

More specific aims of the evaluation included:

- + Establishing the location, extent, nature and date of archaeological features or deposits that were present within the accessible areas targeted for trenching.
- + Establishing the integrity and state of preservation of archaeological features or deposits that were present within the accessible areas.

The results of the evaluation will be used to inform a strategy for further archaeological mitigation if appropriate.

The resulting archive (finds and records) will be organised and deposited in the National Monuments Record of Scotland to facilitate access for future research and interpretation for public benefit.

4 METHODOLOGY

4.1 SITE WORKS

Trenches were opened with a mechanical excavator equipped with a toothless ditching bucket of 1.6 m width. A toothed bucket and a breaker was fitted to remove modern tarmac and concrete overburden across the site. All trenches were excavated by machine under direct archaeological supervision to remove deposits of modern make-up and were excavated in controlled spits. Machine excavation terminated at the top of the natural geology or the first significant archaeological horizon, whichever was encountered first. Spoil was stored beside the trenches. The trenches were backfilled after excavation and recording.

Excavation of archaeological deposits and features required to satisfy the objectives of the evaluation was continued by hand. On completion of machine excavation, all faces of the trench that required examination or recording were cleaned using appropriate hand tools. The stratigraphic sequence was recorded in full in each of the trenches.

All identified features in the trenches were investigated and recorded. Features not suited to excavation in evaluation trenches were investigated in plan only. This typically applied to areas of complex, intercutting features such as structures with *in-situ* floor surfaces, walls and other 'special' features, all of which benefit from open area investigation and suffer when excavated during trial trench evaluations. No features were wholly excavated.

Historic maps of the site were georeferenced in QGIS and used to provide information for the targeting of evaluation trenches over specific features and areas of interest. A trench plan was overlain onto these maps and a dGPS used to locate and mark out these trenches on site.

A site plan including all identified features, areas of excavation and other pertinent information was recorded digitally and accurately linked to the National Grid and heights to OD. Digital recording was undertaken using a dGPS.

Finds were recorded by context and artefacts retrieved during the evaluation were cleaned using appropriate techniques and packaged and stored in accordance with *First Aid for Finds* (Watkinson and Neal 1998).

All aspects of the work were undertaken in accordance with the current relevant Standards and Guidance for the Chartered Institute for Archaeologists.

4.2 REPORTING AND ARCHIVES

The results of the works are presented below. A summary report has been prepared for submission to *Discovery and Excavation in Scotland* (Appendix 2) and the OASIS database (headland1-259273).

The complete project archive will be deposited with the Scottish National Record of Historic Environment Scotland (NRHE) within six months of the completion of the project. The records (paper and digital) will be archived according to best practice guidelines set out by the Archaeological Archiving Forum.

5 RESULTS

5.1 TRENCH RESULTS

Four trenches were located within the Keyline site (Trenches 1 – 4). The location of these trenches was designed to target specific features mapped on the Ordnance Survey Map from 1876 (Method Statement Headland 2016). These included the bases of each of the three glasshouse cones shown on the map and one of the workshops located on the north side of the site. Due to numerous restrictions of undertaking the evaluation within a working site the original size of each trench (designed to each be 10 m x 4 m) and their locations had to be flexible during the evaluation. Therefore the final size and location of the trenches differs from the proposals within the Method Statement (Headland 2016).

A similar situation occurred within the Tile Giant/Benchmark site where the restrictions of excavating trenches within the carpark area of the working site meant that their original size (two 10 m x 4 m and one 5 m x 5 m) and location of the three trenches proposed in the Method Statement (Headland Archaeology 2016) was altered during the evaluation.

Keyline site

Trench 1 (Illus 3)

Trench 1 was situated towards the western edge of the Keyline site and measured 10.00m x 4.00m. The trench was excavated to a maximum depth of 1.20m with an average depth of 0.50m. (Illus 3A)

Summary

Modern concrete footings overlay or truncated all of the features in Trench 1. Earlier brick surfaces and associated partition walls were exposed to the west of the Trench and may be the remains of a later expansion of the Gasworks

into this location. A metal and stone drain cover in the centre of the Trench cut through an earlier brick drain which was associated with a curvilinear wall and brick surface. The curvilinear wall and brick surface were likely the remains of a workshop associated with the Glassworks and represent the earliest phase of construction in Trench 1.

Detail

At the western edge of Trench 1 brick surfaces [1008] and [1009] were exposed at 0.30m depth (Illus 3D). Surface [1008] covered the northern section of the trench and measured 3.0m x 2.61m x 0.17m and abutted Wall [1012] to the north and Wall [1011] to the south. Surface [1008] survived to a single course of very loose unordered unfrogged unstamped machine-made bricks with an occasional orange machine-made brick stamped 'ETNA'. Surface [1008] continued to the north beyond the line of Walls [1011] and [1012] where it was truncated by concrete footing [1013].

Brick surface [1009] covered the southern section of the trench and abutted Wall [1011] to the north and Wall [1010] to the south. Surface [1009] comprised the same materials and construction as [1008] and measured 2.0m x 1.85m x 0.10m.

Wall [1012] ran east-west along the edge of Trench 01 and measured 2.80m m x 0.23m x 0.24m. Wall [1012] comprised a brick structure faced with smooth concrete.

Wall [1011] was exposed 2.00m south of Wall [1012] running east-west between surfaces [1008] and [1009]. Wall [1011] was of the same brick and concrete construction as Wall [1012] and measured 2.65m x 0.25m x 0.18m.

Wall [1010] was located 1.80m south of Wall [1011] running east-west along the southern section and parallel with Walls [1011] and [1012]. Wall [1010] was of the same brick and concrete construction as [1011] and [1012] and measured 3.00m in length and 0.12m in depth. The full width of this feature could not be measured as it extended beyond the limit of excavation to the south.

Concrete footing [1013] ran north-south through the centre of Trench 1 and truncated surface [1008] to the west. Exposed at a depth of 0.50m [1013] measured 3.66m x 1.0m x 0.35m and continued beyond the limits of excavation to the north and south. Concrete footing [1014] ran parallel to [1013] 3.60m to the east and measured 3.66m x 1.0m x 0.67m. Both footings [1013] and [1014] were constructed of rough concrete with occasional brick rubble.

Wall [1015] was exposed below levelling layer (1005) which was sealed by layer (1004) which represented the initial demolition of the earliest structures in Trench 1. Exposed at a depth of 1.20m. Wall [1015] curved north-south along the width of the Trench. Wall [1015] was constructed from stone and roughly faced handmade brick with a lime mortar bonding and measured 4.00m x

0.63m x 0.33m. Brick floor surface [1016] abutted Wall [1015] to the east and was truncated to the south east by a demolition event likely connected to concrete footing [1014] (Illus 3B). Surface [1016] respected the curve of Wall [1015] and comprised a single course of unfrogged handmade bricks laid in rows and sloping down to the east. Surface [1016] measured 4.00m x 0.40m x 0.06m. Drain [1017] abutted Wall [1015] to the west and ran north-south alongside the curve of wall [1015]. Drain [1017] was truncated at its mid-point by cut [1019] for drain cover [1018]. [1017] was constructed of a single course of unfrogged handmade bricks up to five rows wide bonded with lime mortar. Drain [1017] measured 4.00m x 0.40m x 0.06m.

Cut [1019] for drain cover [1018] truncated earlier drain [1017] at its mid-point but appeared to respect the curve of Wall [1015]. A square cut in plan with vertical sides onto a flat base, cut [1019] measured 0.96m x 0.94m x 0.50m. Drain cover [1018] overlay cut [1019] and comprised a large square stone slab with a smaller stone cap into which a metal drain cover was recessed. [1018] measured 1.15m x 0.90m x 0.70m. Removal of [1018] exposed a brick and stone lined chamber [1022] with a drain pipe running into the structure from the south west (Illus 3C). Chamber [1022] comprised a smooth stone base with rougher stone walls surviving to a height of two courses. Occasional bricks had been used at the top level of stone coursing to fill in gaps. Structure [1022] measured 0.86m x 0.85m x 0.50m.

Trench 2 (Illus 4)

Trench 2 was situated towards the western edge of the Keyline site and measured 10.00m x 4.00m. The trench was excavated to a maximum depth of 1.60m with an average depth of 1.30m (Illus 4A).

Summary

Trench 2 contained a modern concrete pad and stanchion. Pre-dating these, the foundation walls of a workshop associated with the Glassworks were exposed, along with associated interior partition walls. A stone found and bases were contemporary, and likely represented pillar bases or an opening within the interior of the building. These features were all exposed beneath deposit (2002) – a brick and stone crush layer which represents the demolition event associated with this building.

Detail

Trench 2 contained a stone foundation Wall [2006] at 0.50m below ground surface measuring 0.90m in width, which ran east-west along the entire length of the northern edge of the trench and extended beyond the eastern limit of excavation. Wall [2006] was abutted at its western extent by stone foundation Wall [2007] running north-south to form a corner and return of the same structure (Illus 3B)

Wall [2007] measured 3.00m x 0.75m and extended beyond the southern limit of excavation. Both walls were made from roughly hewn stone blocks of approximately 0.30m x 0.20m x 0.35m and were constructed of random coursing bonded by lime mortar. Wall [2008] running north-south and measuring 3.00m x 0.60m joined Wall [2006] at a right angle in the southern central area of Trench 2 to create an interior partition wall (Illus 3D). Wall [2008] was of a coarser construction than the exterior walls and comprised roughly hewn unfaced stone, brick and glass slag bonded with lime mortar. A line of bricks at the southern extent of Wall [2008] may also have indicated a floor layer, since demolished.

Wall-stub [2009] ran east-west along the inside of wall [2006] at its eastern extent and measured 0.75m x 0.26m. Wall-stub [2009] was of a similar construction to Walls [2006] and [2007], consisting of roughly hewn stone with random coursing bonded by lime mortar.

At the central western end of Trench 2 foundation wall stub [2012] running north-south was exposed (Illus 3C). Wall stub [2012] comprised roughly coursed stone with brick concrete and glass waste bonded by lime mortar and measured 0.80m x 0.60m. Abutting Wall stub [2012] to the north and south were two concrete and brick square bases [2010] and [2011], measuring 0.60m x 0.38m and 0.70m x 0.68m respectively. Roughly hewn with random coursing and bonded by lime mortar [2010] and [2011] likely represented bases for pillars or similar structures. A brick facing was visible at the northern edge of [2011].

Two modern concrete structures were exposed at the western end of Trench 02 comprising a north-south running stanchion on the inside of wall [2006] measuring 2.70 x 0.50m and an associated concrete pad measuring 1.80m x 1.20m.

Trench 3 (Illus 5)

Trench 3 was situated towards the central southern edge of the Keyline site and measured 6.00m x 3.20m. The trench was excavated to a maximum depth of 1.30m with an average depth of 1.00m (Illus 5A).

Summary

Trench 3 contained three modern concrete pads which overlay or truncated earlier features in this location. The remains of a possible archway and outer wall related to the glassworks were exposed along with later partition walls and interior brick floors, and an exterior cobbled surface. These internal features overlay an earlier foundation wall and robbed out brick surface.

Detail

The northern edge of Trench 3 contained a stone pad [3013] exposed at a depth of 0.65m beneath a black coke and cinder levelling layer (1005) (Illus 5B). Pad [3013] was overlain to the west by a modern concrete block and truncated to the east by cut [3006]. Feature [3013] comprised a rectangular stone pad of roughly tooled

randomly coursed stone bonded with lime mortar and extended to the north beyond the limit of excavation. Pad [3013] measured 1.24m x 1.04m x 0.40m.

Brick floor [3015] abutted pad [3013] to the south and was truncated by cut [3006] to the west (Illus 5C). Surface [3015] comprised a single layer of unfrosted handmade bricks sloping downwards from east to west. The bricks were bonded with lime mortar and laid in rows to form a surface, with the bricks at the eastern extent laid on their sides to form an edge. Surface [3015] measured 1.94m x 1.44m x 0.07m.

Wall [3012] ran east-west through the centre of the trench and was abutted by concrete block [3020] to the south and brick floor [3015] to the north. Wall [3012] comprised roughly faced stone with glass and slag inclusions bonded with a lime mortar and measured 2.60m x 0.35m x 0.50m.

Concrete block [3020] abutted Wall [3012] to the south and prevented the southern face of Wall [3012] from being exposed. Comprised of concrete mixed with brick and stone fragments, concrete block [3020] measured 1.60m x 1.00m x 1.30m

0.35m to the west of Wall [3012] a cobbled surface [3016] was exposed running north-south alongside the eastern edges of Walls [3011] and [3012] (Illus 5D). Set into a deposit of levelling sand (3018) the cobbles were truncated to the south by a modern pipe cut and were only visible in section at the southern edge of the trench (Illus 3F). Surface [3016] comprised a single layer of randomly placed and roughly tooled cobbles and measured 3.40m x 0.50m x 0.20m but likely extended beyond the eastern limit of excavation.

Wall foundation [3029] ran east-west and was exposed at a depth of 1.00m underlying Wall [3030] and pad [3011].

Comprised of roughly hewn stone with random coursing and bonded with lime mortar, Wall [3029] was constructed on natural sands and gravels and measured 2.75m x 1.16m x 0.50m.

Wall [3030] and pad [3011] overlay Wall [3029] and held to a slightly different east-west alignment. Wall [3030] was abutted to the east by pad [3011] and to the south by brick surface [3014]. Wall [3030] was exposed below yellow sand and rubble demolition layer (3009) at a depth of 0.65m. Wall [3030] comprised an irregular roughly coursed stone and slag wall bonded with lime mortar and measured 1.60m x 0.28m x 0.30m. The interior face of this wall had been mortared to form a smooth surface in conjunction with floor layer [3014] to the south. Stone pad [3011] was truncated to the south by a modern pipe cut and abutted by surface [3014] to the south west and Wall [3030] to the west. Feature [3011] comprised a roughly hewn stone and brick rectangular pad bonded with lime mortar and measured 1.16m x 0.70m x 0.70m.

Brick surface [3014] ran east-west and measured 1.80m x 0.28m x 0.30m. Surface [3014] abutted pad [3011] to the east and Wall [3030] to the north and was truncated by a

modern pipe cut to the south. Remains of surface [3014] were also visible in the southern section of the Trench beneath a lime mortar crush layer (3010), and it is likely that this surface continued south beyond the limit of excavation (Illus 3G). Surface [3014] comprised two courses of unfrosted handmade bricks beneath Wall [3030] and a single course in the southern section, both bonded with lime mortar. The bricks abutting Wall [3030] had a hard mortar coating which was bonded to the interior face of Wall [3030] to create a smooth surface.

Stone structure [3023] was only visible in the south section of Trench 2 and was truncated to the north by a modern pipe cut. Comprised of unfinished sub-rounded stone bonded with lime mortar, structure [3023] survived to a height of two courses and measured 0.70m x 0.25m x 0.10m and likely continued beyond the limit of excavation to the south.

Brick structure [3024] abutted [3023] to the west and was truncated by a modern pipe cut to the north. Comprised of handmade roughly tooled unfrosted bricks bonded with lime mortar, structure [3024] survived to a height of two courses and measured 0.28m x 0.24m x 0.20m. The coursing and layout of the bricks suggested an exterior face to stone structure [3023].

Brick structure [3032] was exposed beneath compact silty sand layer (3021) at a depth of 1.00m. (Illus 3E) [3032] abutted [3029] to the south and was truncated by cut [3031] for Wall [3012] to the north. Feature [3032] comprised a single line of unfrosted handmade bricks running north-south with the southernmost brick laid at right angles to respect Wall [3029]. No bonding material was present and the bricks were laid onto hard silty surface (3033). Structure [3032] measured 0.80m x 0.12m x 0.07m.

Wall [3029] represents the earliest phase of building within Trench 3, with the remains of brick structure [3032] indicating a contemporary floor surface since robbed out and truncated. Wall stub [3023] and brick facing [3024] can also be attributed to this phase of construction and are likely the exterior wall of a workshop associated with the cone in this location. Stone pad [3011] overlay Wall [3029] and it is not clear due to truncation whether this structure was keyed into Wall [3029] or a later addition. It is likely, however, that structures [3011] and [3013] were contemporary and formed the stone foundation pads for an arched entrance to the building and can thus be placed within the earliest phase of construction.

The second phase of construction in Trench 3 is represented by Walls [3012] and [3030]. Foundation cut [3031] for Wall [3012] is cut through compact surface (3021) which overlies Wall [3029]. Wall [3030] similarly overlies Wall [3029] and holds to a slightly different angle, indicating that it was a later addition to the main building. The similarities in materials and construction techniques for Walls [3012] and [3030] suggests that they are contemporary, and were likely later interior partition walls. Truncated brick structure [3014] can also be attributed to this phase and represents a brick floor layer associated

with Wall [3030]. The levelling sand (3018) for cobbled surface [3016] was laid directly over compact floor surface (3021) and can similarly be attributed to this phase of expansion. Brick floor [3015] was laid to respect the northern face of Wall [3012] and represents an interior floor layer of the same phase.

The final phase of construction in Trench 3 is represented by concrete blocks in the north east of the trench and by cut [3019] for concrete block [3020] which is cut through the demolition layers for the earlier features in the trench. These features are later modern additions are not contemporary with the earlier extant structures in this trench.

Trench 4 (Illus 6)

Trench 4 was situated towards the northern edge of the Keyline site and measured 5.00m x 4.00m. The trench was excavated to a maximum depth of 1.30m with an average depth of 1.20m (Illus 6A).

Summary

Trench 4 contained structures associated with the Glassworks exposed beneath levelling and demolition layers (1001-1003). The wall of an outbuilding was visible in the northern section of the Trench, with an associated brick surface and interior partition wall. All features were constructed on a levelling layer (4005) containing slag and waste from the glassworks and were exposed to their full depth.

Wall [4007] ran north-south and continued beyond the limit of excavation at each end of the Trench. Exposed beneath brick and rubble crush layer (4002) Wall [4007] survived to three courses and measured 3.00m x 0.80m x 0.50m. Wall [4007] was constructed of roughly tooled and faced rectangular sandstone blocks of approximately 0.60m x 0.30m x 0.20m and bonded by lime mortar.

Directly beneath Wall [4007] and on the same orientation a stone wall foundation [4011] was exposed measuring 3.00m x 1.10m x 0.60m. Pressed into sandy levelling deposit (4005), Wall [4011] comprised roughly tooled rounded granite fieldstone boulders measuring approximately 0.60m x 0.40m x 0.35m bonded by lime mortar. Wall [4011] survived to two courses and represented the foundation structure for Wall [4007]. The construction cut [4012] for Walls [4011] and [4007] was observed in the southern section only and measured 0.50m wide x 0.60m in depth, its length could not be determined.

A pipe cut [4009] filled with brown clay (4010) ran east-west through the base of Wall [4011] and measured 1.30m x 0.25m x 0.30m. The pipe cut was truncated to the east and west, likely as a result of the demolition process and its full extent could not be determined. (Illus 4C)

Wall [4007] was abutted to the east by Wall [4006]. Observed only in section, Wall [4006] ran east-west, with its eastern extent extending beyond the limit of

excavation. Wall [4006] measured 2.10m x 0.10m (in section) x 0.85m and was constructed of roughly tooled rectangular sandstone blocks bonded by lime mortar. Wall [4006] was also pressed onto levelling sand (4005) and survived to four courses.

Wall [4007] was abutted to the west by brick surface [4008] which extended beyond the western limit of excavation. Surface [4008] measured 1.60m x 0.30m x 0.09m and comprised a single course of unfrogged and unmarked handmade bricks running east to west and bonded by lime mortar. Surface [4008] was not keyed into Wall [4007] but was mortared onto it at its eastern extent. (Illus 4B)

Natural beach sands and gravels were observed in Trench 4 to either side of Wall [4007] at a depth of 1.30m. All walls were exposed to their full depth.

The features in Trench 4 appear to be all of the same phase and represent the expansion of the glassworks north into the foreshore (see 5.1 – Discussion). Pipe cut [4009] did not truncate Wall [4011], rather, [4011] deliberately incorporated a void at its southern extent to allow the pipe access, and can be attributed to the same phase of construction. Walls [4011] and [4007] were constructed as a partition wall to divide the building represented by Wall [4006] and surface [4008].

Tile Giant/Benchmark Site

Trench 5 (Illus 7)

Trench 5 was situated towards the north eastern edge of the site and measured 5.50m x 3.70m. The trench was excavated to a maximum depth of 1.20m with an average depth of 1.00m (Illus 5A).

Summary

Trench 5 contained a modern concrete pad to the south and a metal pipe to the east. These features truncated an earlier rail line and associated brick structures that can be attributed the Edinburgh Gasworks in the late C19th. A contemporary cobbled surface to the north-east and a brick wall and floor to the south-west, overlay an earlier possible pillar base and associated structures. These structures represented the earliest phase of construction within the Trench and may be evidence of an outbuilding associated with the Gasworks demolished prior to the construction of the railway line.

Detail

A metal pipe [5021] was exposed at 1.20m depth measuring 3.70m x 0.10m and running north-south beyond the limit of excavation at each edge. Lying beneath a brown sandy clay make up layer (5005) its full depth could not be observed and no clear cut for the pipe could be seen.

1.00m to the west of pipe [5021] a single metal rail [5020] was supported on four cut timber sleepers [5022] which lay on make up layer (5005) at a depth of 0.30m. The rail

[5020] ran north-south into the limit of excavation at each edge and measured 3.70m x 0.05m x 0.12m. The wooden sleepers (5022) were not intact and irregularly spaced. The northernmost sleeper survived to the greatest degree and measured 1.44m x 0.20m x 0.15m with all others heavily truncated.

Wall [5013] was exposed 0.65m to the west of [5020] and ran north-south in parallel to [5020]. Truncated to the south by concrete base [5012] and continuing beyond the northern limit of excavation, Wall [5013] measured 2.20m x 0.55m x 0.65m. Wall [5013] comprised roughly tooled handmade yellowish-grey bricks surviving to a height of seven courses roughly level with rail [5020], with a deliberate drop to two courses in the centre of the trench – likely for an opening or entranceway (Illus 5B).

Wall [5013] was abutted at its western extent by cobbled surface (5014) and at its eastern extent by the remains of a brick wall [5015].

Brick wall stub [5015] had been heavily truncated by concrete slab [5012] at its southern extent and measured 0.55m x 0.30m x 0.26m. Wall [5015] ran north-south and was constructed of handmade unfrosted roughly tooled bricks surviving to three courses.

Cobbled surface (5014) measured 2.80m x 0.80m x 0.25m (as seen) and was exposed beneath a white mortar crush layer (5003) and set into make up layer (5005). The cobbled surface comprised a single layer of smoothly tooled and regularly spaced rounded stones running east-west along the northern edge of the trench and continuing beyond the limit of excavation to the north. Surface (5014) was truncated to the west by cut [5007] and appeared to be truncated along its southern edge – likely by later demolition.

Stone feature [5016] was exposed at the eastern extent of Trench 04 beneath cobbled surface (5014) (Illus 5C). Octagonal in plan and smoothly tooled with rounded edges and a recessed square metal central plate, structure [5016] measured 0.70m x 0.55m x 0.20m and rested directly on stone plinth [5017]. Laid on top of levelling sand deposit (5006), structure [5017] measured 1.00m x 0.35m x 0.30m (exposed) and comprised roughly tooled and randomly coursed stone, bonded by lime mortar and surviving to a height of two courses.

Brick structure [5019] abutted the base of plinth [5017] to the south and consisted of a semi-circular exterior single course of unfrosted handmade bricks with an interior brick lining in the centre. Bonded with lime mortar and surviving to a single course, structure [5019] measured 1.40m x 1.00m x 0.10m and was truncated to the west by pipe [5018].

Pipe [5018] lay within cut [5007] seen only in the east facing section of Trench 4 and continued beyond the limit of excavation to the west. Pipe [5018] measured 0.80m x 0.30m x 0.15m and was constructed of very coarse rusted metal. The pipe truncated brick structure [5019] at its western extent.

Brick wall [5011] ran east-west along the south-western edge of Trench 4 and continued beyond the limit of excavation to the west (Illus 5D). Wall [5011] was truncated to the east by concrete slab [5012] and abutted to the north by brick surface [5009]. Wall [5011] measured 2.30m x 0.50m x 0.40m and was comprised of roughly-tooled unfrosted handmade brick, bonded with lime mortar and surviving to four courses.

Brick surface [5009] abutted Wall [5011] to the north. Truncated to the east by concrete slab [5012] and not surviving at its northern and western extents, surface [5009] measured 1.50m x 0.62m x 0.10m. Set into levelling sand (5010), surface [5009] comprised a single course of handmade frosted and unfrosted bricks bonded with lime mortar.

The earliest phase of construction in Trench 5 is represented by brick structure [5019] and associated plinth [5017] and possible pillar base [5016]. The function of these features is unclear, but it is likely they represent an earlier outbuilding since demolished and overlain by make up layer (5005).

The majority of the features in Trench 5 can be attributed to a later phase of expansion, contemporary with the construction of the rail line [5020] (see Discussion 5.1). Wall [5013] respects rail [5020] and is abutted by cobbled surface [5014] and it is likely that they are contemporary. Similarly, Wall [5013] and brick surface [5009] are contemporary and also constructed on make up layer (5005). These features can be attributed to the construction of outbuildings and floor surfaces contemporary with the expansion of the railway line into the site.

Cut [5007] for pipe [5018] is cut through upper make up layer (5002) down to the levelling sand (5006) where it truncates brick structure [5019]. Pipe [5018] belongs to a later phase of activity and its specific function, age and purpose is unclear. Pipe [5018] pre-dates concrete block [5011] which underlies concrete crush layer (5001) and is the latest feature exposed in this trench.

Trench 6 (Illus 8)

Trench 6 was situated towards the central eastern edge of the site, 2.00m north of the upstanding courtyard range of the Gasworks and measured 4.00m x 2.50m. The Trench was excavated to a maximum depth of 0.30m with all features exposed at this level (Illus 8A).

Summary

Trench 6 contained a cobbled surface, with a brickwork track running north-south at its western extent. Flagstones delineating these surfaces ran along the eastern and southern edges of the Trench. The features exposed were contemporary and may represent an in-situ yard surface relating to a later phase of the Gasworks.

Detail

A cobbled surface (6002) was exposed directly beneath a concrete and rubble levelling layer (6001) at a depth of 0.30m. Surface (6002) measured 2.40m x 1.80m and covered the central and western section of Trench 6 – its depth could not be determined. Surface (6002) was abutted to the south and west by stone flags (6004) and to the east by brick surface (6003).

The cobbles were set into a black clay soil matrix and presumed to continue beyond the limit of excavation to the north and west. The individual cobbles were not of uniform size or shape and were laid in a random pattern with smaller pebbles filling in any larger gaps between stones.

Flag stones (6004) ran east-west alongside the cobbled surface (6002) at its southern and western edge and covered an area measuring 2.40m x 0.70m in total. Four large flags were exposed measuring approximately 0.80m x 0.70m each and continued under the limit of excavation to the south and west.

The individual flags were regularly spaced and laid in a line parallel to the southern edge of (6002).

Brick surface (6003) (Illus 8B) abutted the eastern edge of (6002) and ran north-south. Comprised of evenly spaced lines of three individual bricks laid end to end to form a regular pattern, (6003) measured 2.10m x 0.70m and was abutted the north, east and south by flag stones (6005).

Flag stones (6005) were exposed along the northern, eastern and western edges of brick surface (6003). Rectangular in shape with smoothly tooled rounded edges, the full extent of these flags could not be seen, and it is presumed they continued to the south and east beyond the limit of excavation. The largest exposed flagstone measured 0.65m in length, no other complete measurement could be taken due to the limits of the excavation.

The features in Trench 6 are all of the same phase and represent a yard surface (6002) with a possible brick pathway (6003) delineated by flagstones (6004) and (6005) which may form the entranceways to buildings outside of the limits of excavation.

Trench 7 (Illus 9)

Trench 7 was situated at the north eastern edge of the Travis Perkins site and measured 5.00m x 3.00m. The trench was excavated to a maximum depth of 1.20m with an average depth of 1.00m (Illus 9A).

Summary

A modern pipe ran NE-SW and truncated the majority of features in Trench 7. An earlier brick flue associated with the Gasworks ran north-south, abutted by a contemporary stone pad to east. A collapsed brick structure visible in the western section and walls to the east may also indicate similar flues constructed during the same phase but in a poorer state of preservation. It is likely that these structures were flues leading to a chimney for the Edinburgh

Gasworks known in this location from historical mapping since 1852.

Detail

Wall [7003] was exposed beneath make up layer (7002) at a depth of 0.70m and ran SSW-NNE along the eastern edge of Trench 7. Wall [7003] measured 2.00m x 0.25m x 0.30m and was constructed of handmade unfrogged pinkish-red bricks bonded with lime mortar and survived to a height of four courses. Wall [7004] was keyed into Wall [7003] at its southern extent and truncated by a modern pipe cut [7009] at its northern extent. Constructed of the same bricks as Wall [7003], Wall [7004] ran north-south, measured 0.50m x 0.30m x 0.20m and survived to a height of two courses.

Stone feature [7005] lay 0.65m west of Wall [7003] at the same depth and extended beyond the limit of excavation to the south. Feature [7005] measured 1.50m x 0.70m (exposed) x 0.45m and comprised rough irregular large granite stones (approx. 0.40m x 0.30m x 0.20m) bonded with lime mortar to form a platform. The uppermost surface of feature [7005] evidenced remains of slate tiles mortared together to form a smooth surface.

Feature [7006] (Illus 9B) abutted stone pad [7005] at its eastern extent and was truncated to the north by [7009] pipe cut. Feature [7006] ran north-south and measured 0.75m x 0.70m x 0.40m. It consisted of two separate stacks of unfrogged yellowish-orange heat affected bricks filled by a dark grey sandy clay deposit (7008). The western end of this structure was only visible in the southern section of the trench, with the eastern end extending north beyond the section. Feature [7006] survived to a height of five courses and it is presumed that this feature continued to the south beyond the limit of excavation.

Feature [7007] (Illus 9C) lay 1.60m to the north of feature [7006] below make up layer (7001) at a depth of 0.40m. Feature [7007] comprised a brick arch (seen only in the northern section) filled by dark grey sandy clay deposit (7008) with north-south running walls extending outwards from the base of the arch. Truncated to the south by pipe cut [7009] it measured 1.00m x 1.54m x 0.60m. Feature [7007] was constructed of rough unfrogged yellowish-orange heat affected bricks bonded with a thin layer of lime mortar.

Feature [7012] was visible only in the western section of Trench 7 and abutted feature [7007] at its western extent. Feature [7012] comprised a brickwork structure of a similar construction to [7007] and is possibly an arch which has since collapsed. Bricks from [7012] overlay the westernmost edge of [7007] but there was no evidence to suggest the two were joined or formed one complete structure. Feature [7012] measured 0.25m x 0.60m x 0.60m but likely continued beyond the limit of excavation to the west.

The features in Trench 7 can all be attributed to the same phase, and share distinct similarities in construction and materials. It is likely that structures [7006] and [7007] were

the same flue truncated in the centre by a modern pipe cut and both were filled by deposit (7008). Flue [7006] was built up against stone base [7005] possibly acting as a support or machine base adjacent to the flue. Walls [7003] and [7004] are also contemporary with these structures and it is possible that they represent the exterior of another flue running parallel with [7006] and [7007] though no archway was visible and this cannot be proven without further excavation. Structure [7012] may be the remains of a collapsed flue, since it shares similarities in construction with [7007] but this again cannot be determined.

TR	Pottery		Glass		Ceramic		Ind waste		Misc finds		CBM		Dating
	Count	Wgt	Count	Wgt	Count	Wgt	Count	Wgt	Count	Wgt	Count	Wgt	
1			27	2327g	2	13800g	7	381g	1 leather	429g			19 th
2	2	398g	6	964g			9	2240g	1 charcoal 1 plastic	15g	1	460g	L19th-20th
4	3	272g	2	294g			27	6559g			1	158g	19th
7			1	269g									20th
Total	5	670g	36	3854g	2	13800g	43	9180g	3	444g	2	618g	

Table 1 – Summary of finds assemblage by trench with spot dating

Modern pottery

There were five sherds of pottery, all from stoneware bottles and jars, including a sherd of blacking bottle and two complete inkwells or similar small bottles. They are of 19th or earlier 20th century date.

Glass

The glass assemblage included a number of green wine bottles, various colourless or natural coloured bottles, a brown Bovril jar and the foot of a stemmed drinking vessel. The wine bottles were all moulded and thus all post-dating c1820. The other bottles included a half pint milk bottle from the Edinburgh & Dumfriesshire Dairy Co (E & D Co), a large bottle embossed for Paterson & Co, Glasgow and a large portion of a Roses lime juice bottle with distinctive moulded decoration of fruit and foliage. The Roses factory was nearby in Leith. In general terms the assemblage seems to represent domestic waste of the mid 19th to mid 20th centuries, though it is possible that some of the glass presents products manufactured at the glassworks.

Industrial waste

There were a number of finds of glass waste found in Trenches 1, 2 and particularly 4, including some large lumps. Some clearly derive from mixtures of green and natural coloured glass. The most distinctive piece is the neck of a moulded wine bottle of 19th century date, heavily distorted by heat with adhering vitrified ceramic or stone (Illus 10). It derives from a bottle of similar form to those

5.2 FINDS ASSESSMENT

The finds assemblage numbered five sherds (670g) of pottery, a large piece (13.8kg) of industrial crucible, a collection of glass waste (9.180kg), 36 sherds (3.854kg) of glass, two sherds (618g) of ceramic building material and a handful of miscellaneous finds. All were of modern date, with no finds demonstrably predating the 19th century. Most of the finds derived from made ground and rubble deposits. The finds are summarised by trench in the Table 1, a complete catalogue is given at the end.

found among the glass assemblage and likely to be a piece recycled as cullet.

Ceramic

Two large joining sherds were recovered from the base of a large industrial crucible (demolition 1004 – Illus 11 and 12). The vessel was approximately 390mm in diameter with walls 75mm thick in a coarse stony fabric with a flat base and vertical lower walls and showed clear heat damage to the interior and part of the exterior. It is likely the vessel was used in the glassworks.

Miscellaneous finds

Three miscellaneous finds were recovered, a shoe, an early plastic keyhole escutcheon and a large charcoal stick. All were from made ground or rubble deposits.

Ceramic building material

A sherd of pantile was found in rubble deposit (2003). A sherd of coarse ceramic found in slag and stone layer (4004) might be part of a brick or may have had an industrial use.

Discussion

The main point of interest in the assemblage is identifying any material which can be shown to relate to the glassworks. This is clearly present in Trenches 1, 2 and 4 in the form of glass waste. There was also the large crucible found in Trench 1. It is unclear how much of the glass may have been manufactured there. The most likely candidates

are the remains of four 19th century wine bottles found in drain [1017] (1006). All are of the same size and form and lack the variety that might be expected in a deposit of domestic waste. Interestingly, a heavily heat distorted bottle neck found in made ground (1005) was of the same form of bottle (Illus 10). It is possible that the Roses lime juice bottle (demolition 2005) was also manufactured at the glassworks, due to the proximity of the Roses factory, though to date, there is no historic confirmation of this. Any datable finds among this material were of 19th century date and there appears to be no finds relating to the early years of the glassworks in the second half of the 18th century.

Other finds represent domestic waste and structural demolition material. Some of these, such as the milk bottle, clearly post-date the demolition of the glassworks.

5.3 GENERAL DISCUSSION

Edinburgh and Leith Glassworks

Trenches 1-4 on the Keyline site were each located within the boundary of the Edinburgh and Leith Glassworks.

Trenches 1 and 3 each contained evidence for outbuildings associated with a glasshouse cone, which from historic map evidence are dated between 1817 and 1852. In Trench 1, Wall [1015] follows the curve of an exterior wall of a workshop to the west of the cone, with associated interior surface [1016] and external drain [1017]. Brick surfaces [1008] and [1009] to the west are of a later date. The inclusion of bricks stamped 'ETNA', which originate from the Etna brickworks in Armadale, suggest that these surfaces postdate 1897 which was when the brickworks began operating. These surfaces may represent an external yard or floor surface constructed after the clearance of the buildings associated with the cone.

Trench 3 shows evidence of pads for an arched entrance to the cone [3011] and [3013] with an exterior Wall [3024] to the south. At a later date, but likely still within the same time period, the internal structure of the eastern workshop has been partitioned by Walls [3012] and [3030] with a sloping brick floor [3015] and a cobbled surface [3016] added to the exterior.

Walls [2006] and [2007] exposed in Trench 02 align with the exterior walls of an outbuilding constructed between 1817 and 1852 to the north of the northern cone. There is evidence for internal structures within this building, possibly an entranceway or pillars represented by structures [2010], [2011] and [2012].

Trench 4 contained the walls of an outbuilding running east-west which was built during the period of growth into the foreshore between 1852 and 1876 and represents the latest archaeological evidence for the glassworks. Represented on the 1876 map, this building aligns with

Walls [4006] and [4008] and is partitioned by Wall [4011] running north-south.

Edinburgh and Leith Gasworks

Trenches 5-8 on the Tile Giant/Benchmark site were each located within the boundary of the Edinburgh and Leith Gasworks

Trench 5 shows evidence of the expansion of the rail lines from the foreshore into the gasworks itself between 1876 and 1894. Rail [5020] and associated wall [5013] align with a rail line first illustrated on the 1894 OS map, which enters the site from the north through an arched opening into what is likely an open shed or store. It is possible that the earlier features in this trench [5016] [5017] and [5019] are the remains of a pillar and associated structures of the gasworks which were demolished between 1876 and 1894 for the construction of a new rail line and outbuildings in this area, though their specific function remains unclear.

The cobbled surface [6002], brickwork [6003] and flagging [6004] in Trench 6 is likely a later addition to the site, since the map evidence indicates that there were buildings and rail lines in this area until 1894. It is unclear to which period this surface belongs, however, due to its position within the stratigraphy immediately below the concrete and rubble crush layer (6001) it is likely that this surface is fairly modern – possibly early 20th century- and represents a yard surface in situ before the modern concrete and tarmac surface was constructed.

Trench 7 shows evidence of a flue [7006] and [7007] running north-south in the western end of the Trench. This flue is roughly situated in line with the westernmost of two chimneys shown on the 1852 OS map and is likely associated with these chimney structures. The presence of heat affected bricks within flues [7006] and [7007] further suggests that they were associated with the chimney in this area. It is possible that Wall [7003] to the east and collapsed brickwork [7012] visible in the western section also form parts of flues or similar underground culverts, but their function remains unclear without further excavation.

5.4 CONCLUSION

The evaluation trenches produced evidence for structures associated with the Edinburgh and Leith Glassworks and the Edinburgh Gasworks. Foundation walls for workshops around the cones of the glassworks were exposed, along with walls associated with the expansion of outbuildings on the site, which from historic map evidence occurred between 1817 and 1894. Trenches 1-4 also produced evidence of unmapped glasswork structures (such as partition walls, brick floor surfaces and ancillary structures). Trenches 5-8 contained evidence for early flues associated with a chimney of the Gasworks and also demonstrated the later expansion of the railway lines and outbuildings

on this site identified on the historic maps between 1852 and 1894.

The evaluation trenches demonstrate that the level of preservation across the site is generally very good, with the only truncation identified from the concrete footings of mid-20th century sheds.

5.5 REFERENCES

Headland 2016 *Method Statement for Trial Trench Evaluation at Salamander Street, Edinburgh*. Unpublished client report.

Turnbull, J 2001 *The Scottish Glass Industry 1610-1750*. Society of Antiquaries of Scotland. Edinburgh

Cartographic sources

1805 Scott, R *The Strangers Guide, being a Plan of Edinburgh and Leith exhibiting all the streets principal buildings and late improvements* Edinburgh: Scott

1817 Kirkwood, R *This plan of the City of Edinburgh and its environs* Edinburgh: Kirkwood

1849-1853 *OS Town Plan of Edinburgh*. Sheet 13 (1852-3) 1:1056

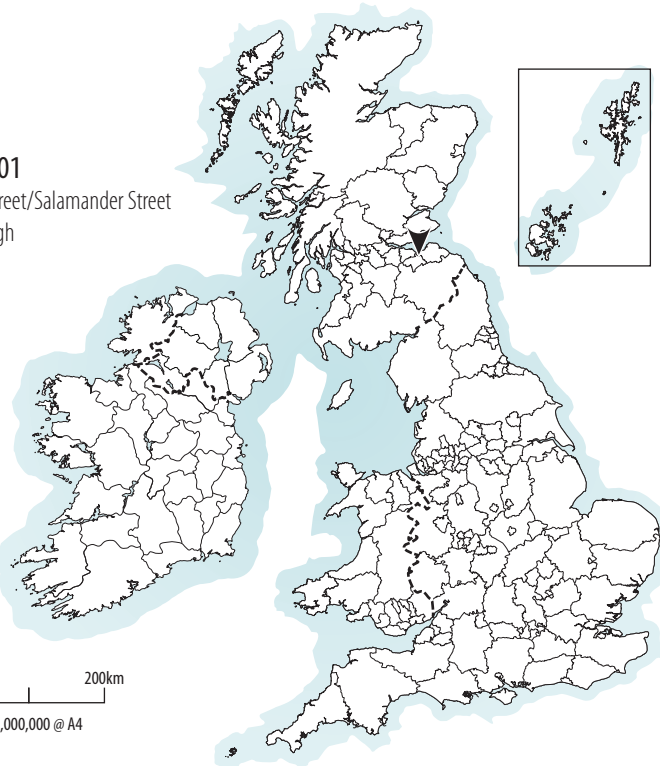
1876-1877 *OS Town Plan of Edinburgh*. Sheet 13 (1878) 1:1056

1893-1894 *OS Town plan of Edinburgh* Sheets 1.16.19 and 1.16.24 (1894) 1:500

1907 Bartholomew, J. G. *Bartholomew's Plan of Edinburgh and Leith with Suburbs Constructed from Ordnance and Actual Surveys* Edinburgh: Bartholomew

1944-1963 *OS Town Plan of Edinburgh* (1944) 1:500

SASB/01
Baltic Street/Salamander Street
Edinburgh



0 200km
1:10,000,000 @ A4

Contains OS data © Crown copyright and database right 2016



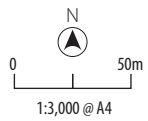
0 50m
1:2,500 @ A4

KEY
 development boundary
 trench location



SCOTLAND

13 Jane Street
Edinburgh EH6 5HE
0131 467 7705
www.headlandarchaeology.com

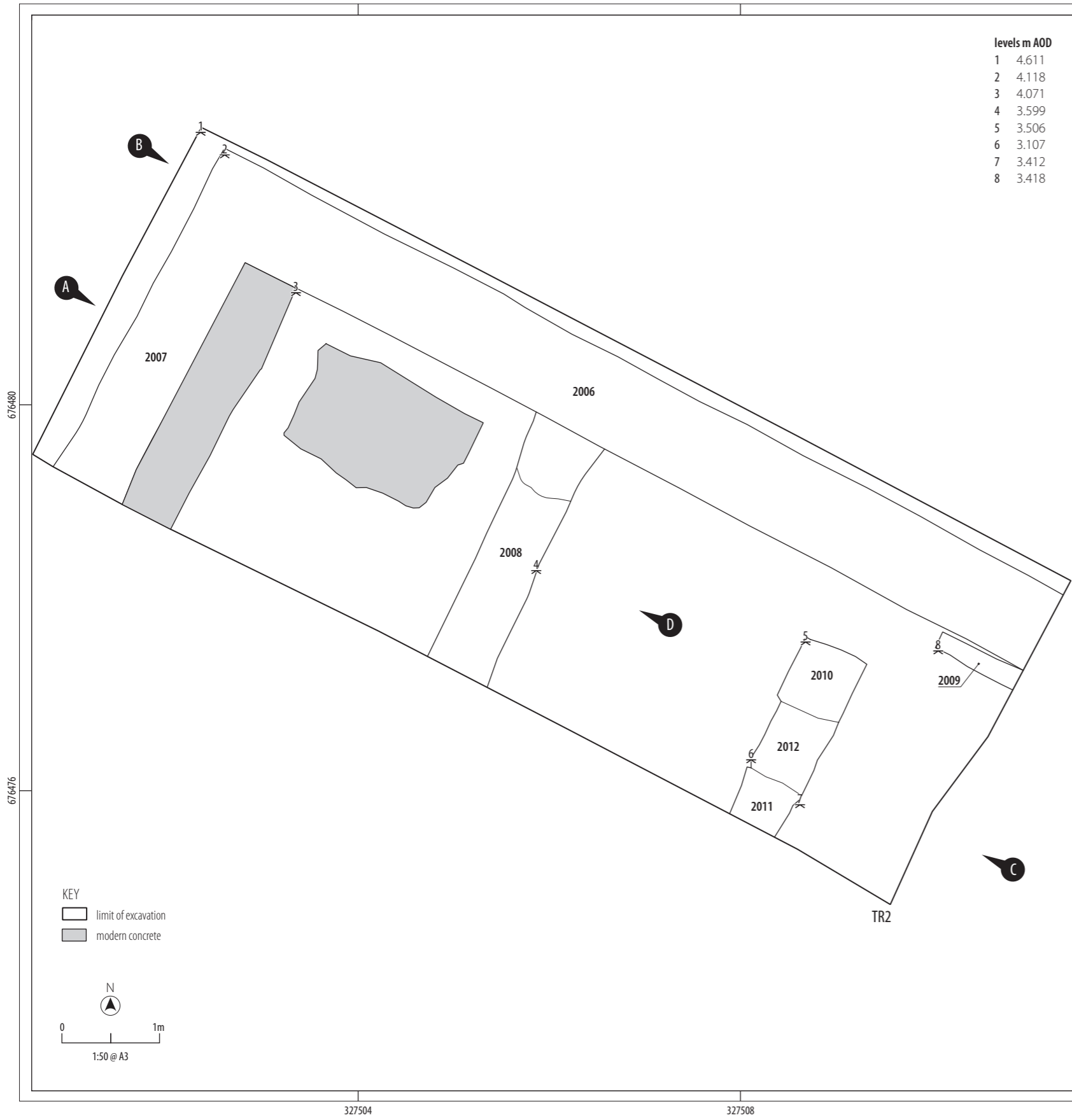


ILLUS 2 Historic map regression of the Glassworks and Gasworks.

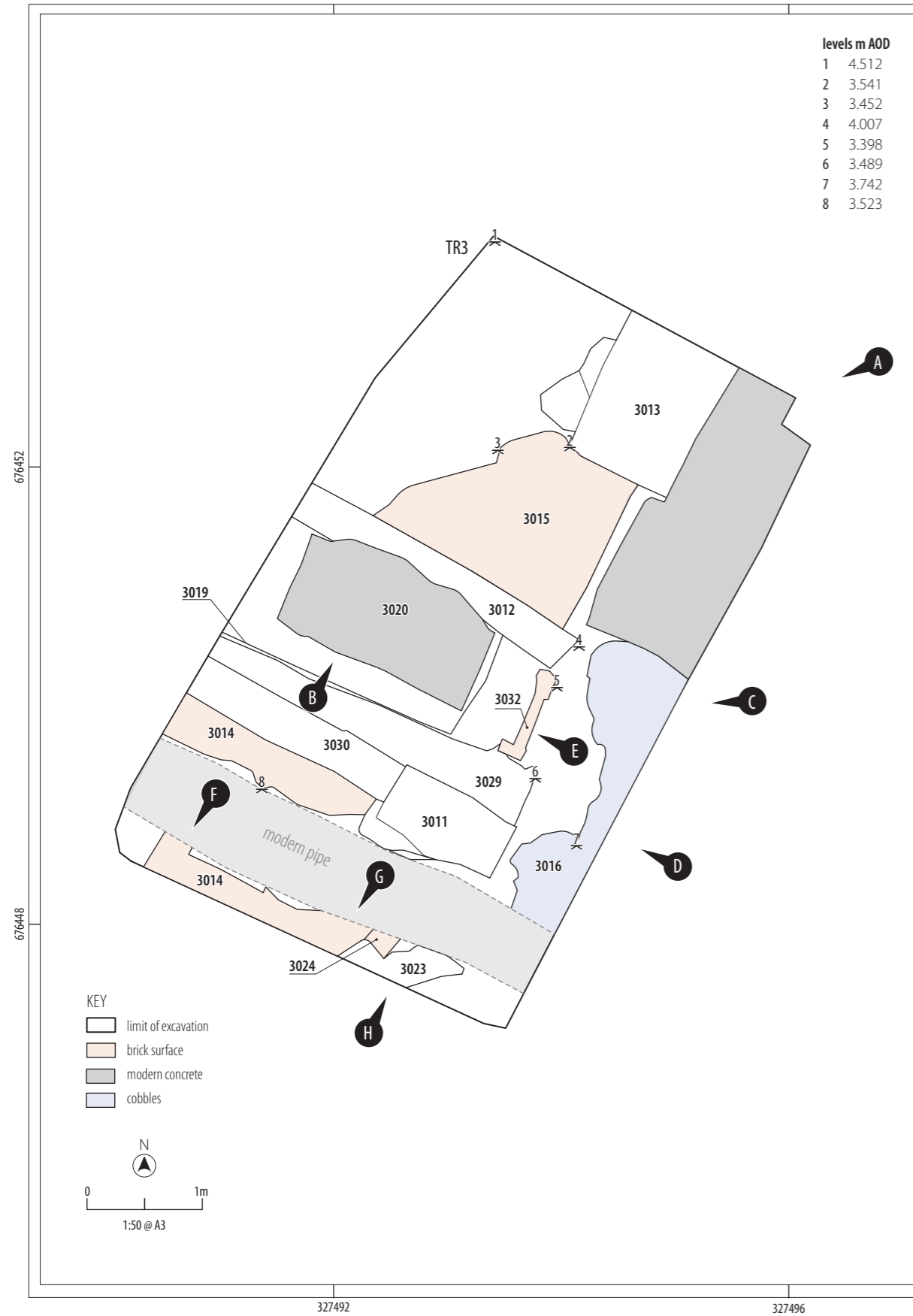
A. Extract from the Ordnance Survey Town Plan of Edinburgh 1852, Sheet 13 B. Extract from the Ordnance Survey Town Plan of Edinburgh 1876, Sheet 13 C. Extract from the Ordnance Survey Town Plan of Edinburgh 1894, I.16.24 D. Extract from the Ordnance Survey Town Plan of Edinburgh 1944, I.16.19 (All maps reproduced by permission of the Trustees of the National Library of Scotland.)



ILLUS 3 Plan of Trench 1
 A. Trench 1 looking NW B. Detail of wall [1015] brick surface [1016] & drain [1017] looking S
 C. Detail of drain [1022] after removal of stone cap [1018] looking W D. View of brick surfaces [1008] & [1009] looking SE

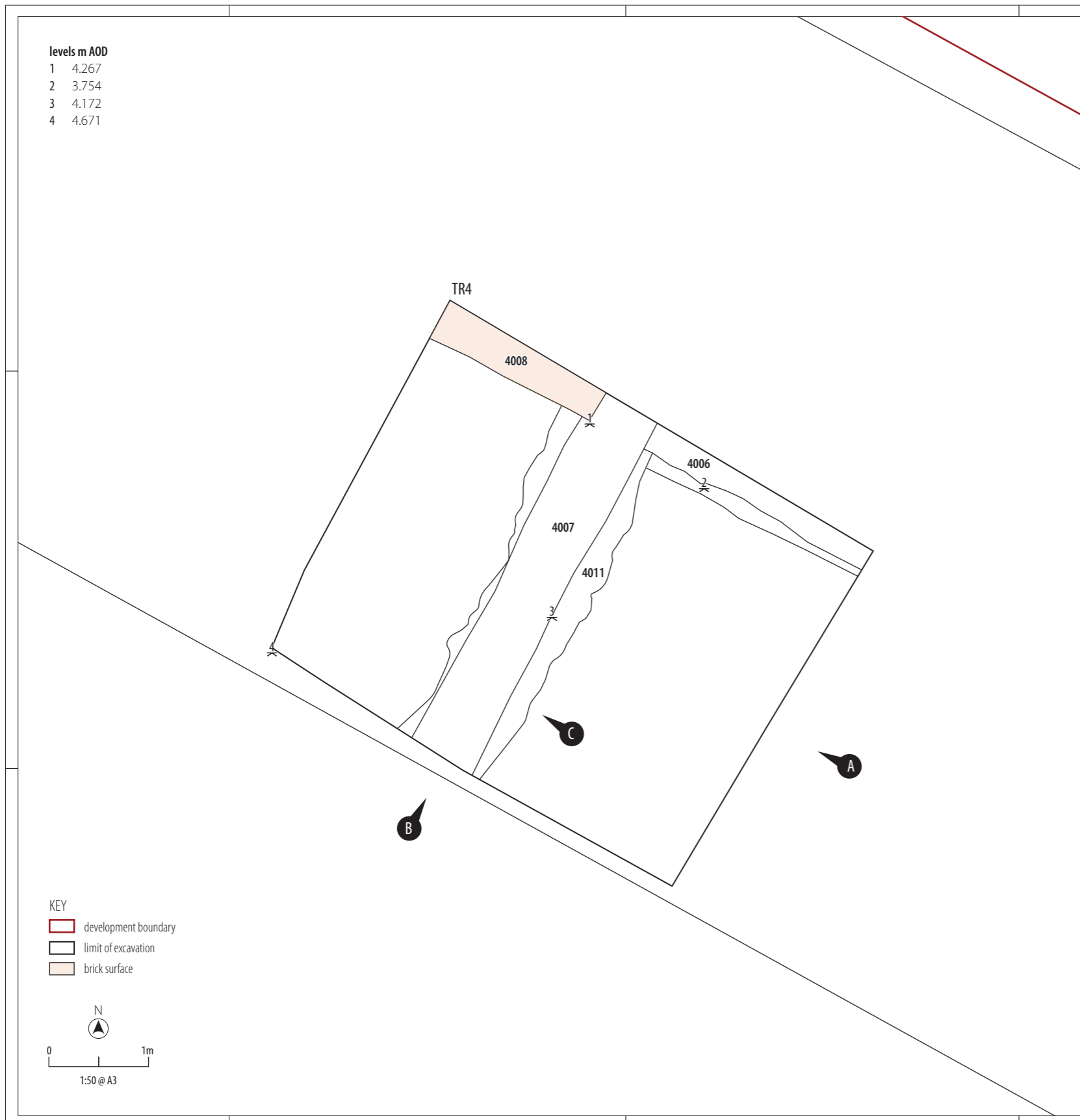


ILLUS 4 Plan of Trench 2
 A. Trench 2 looking E B. Detail of walls [2006] & [2007] looking E
 C. View of structures [2010] [2011] & [2012] looking W D. View of wall [2008] looking W



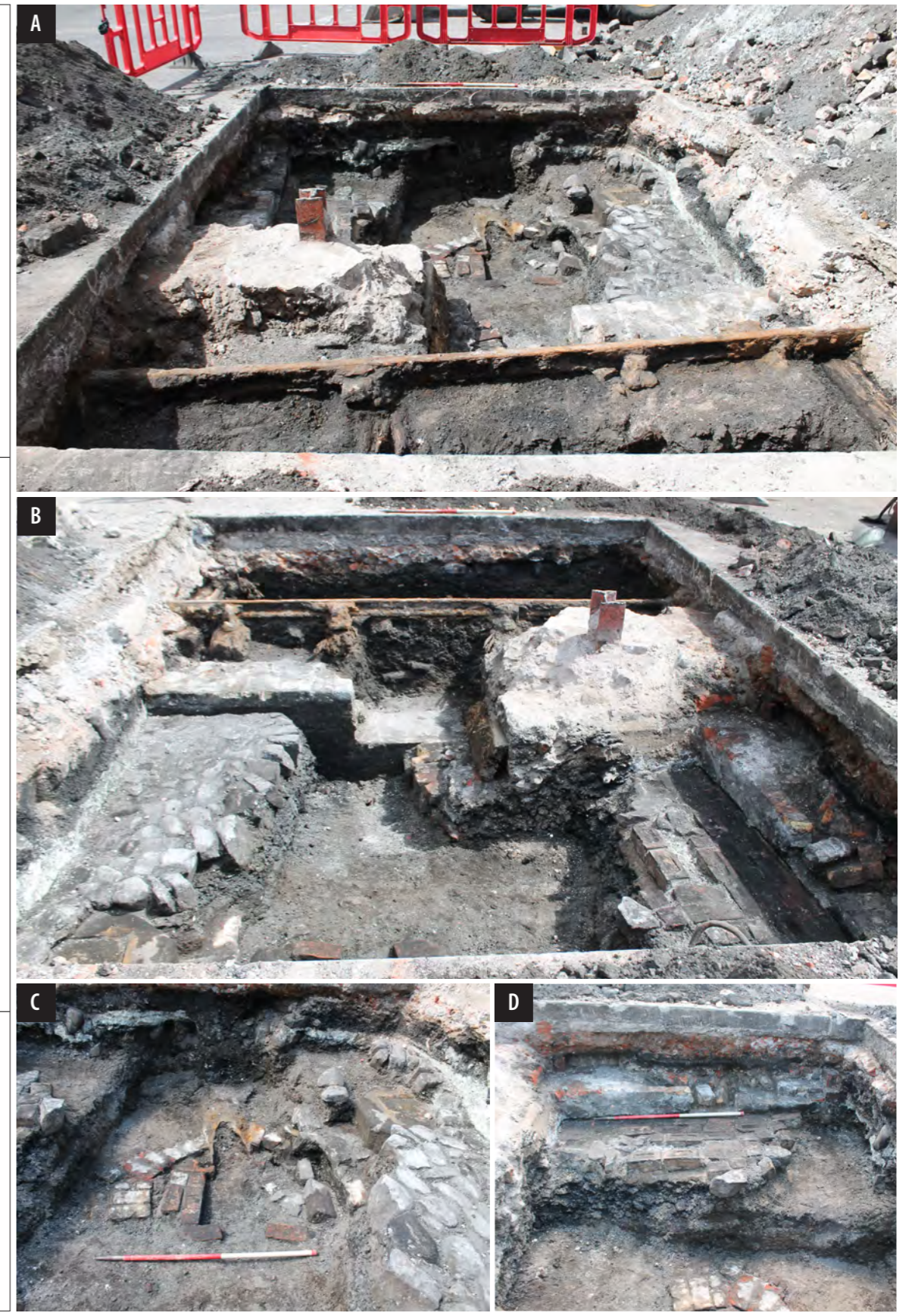
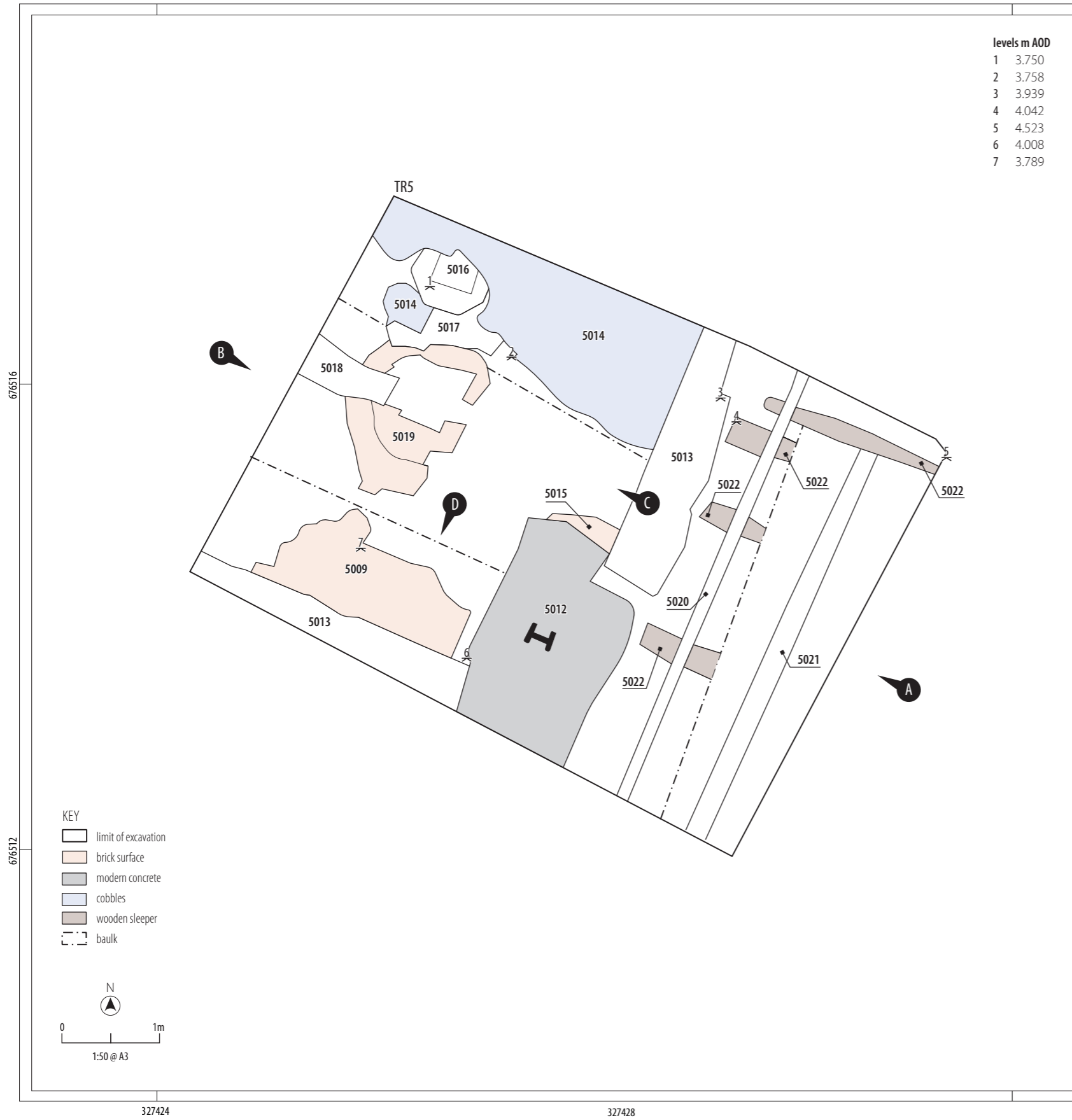
ILLUS 5 Plan of Trench 3

A. Trench 3 looking SE B. View of pad [3013] & associated features looking N
 C. Detail of brick floor [3032] and wall [3029] looking W D. View of cobbled surface [3016] and associated features looking W
 E. Detail of brick floor [3032] and wall [3029] looking W F. Detail of cobbled surface [1016] wall stub [3023] and brick face [3024] in section of Trench 3 looking S
 G. View of brickwork [3014] in southern section of Trench 3 looking S H. Detail of stone pad [3011] wall [3030] and brickwork [3014] looking S



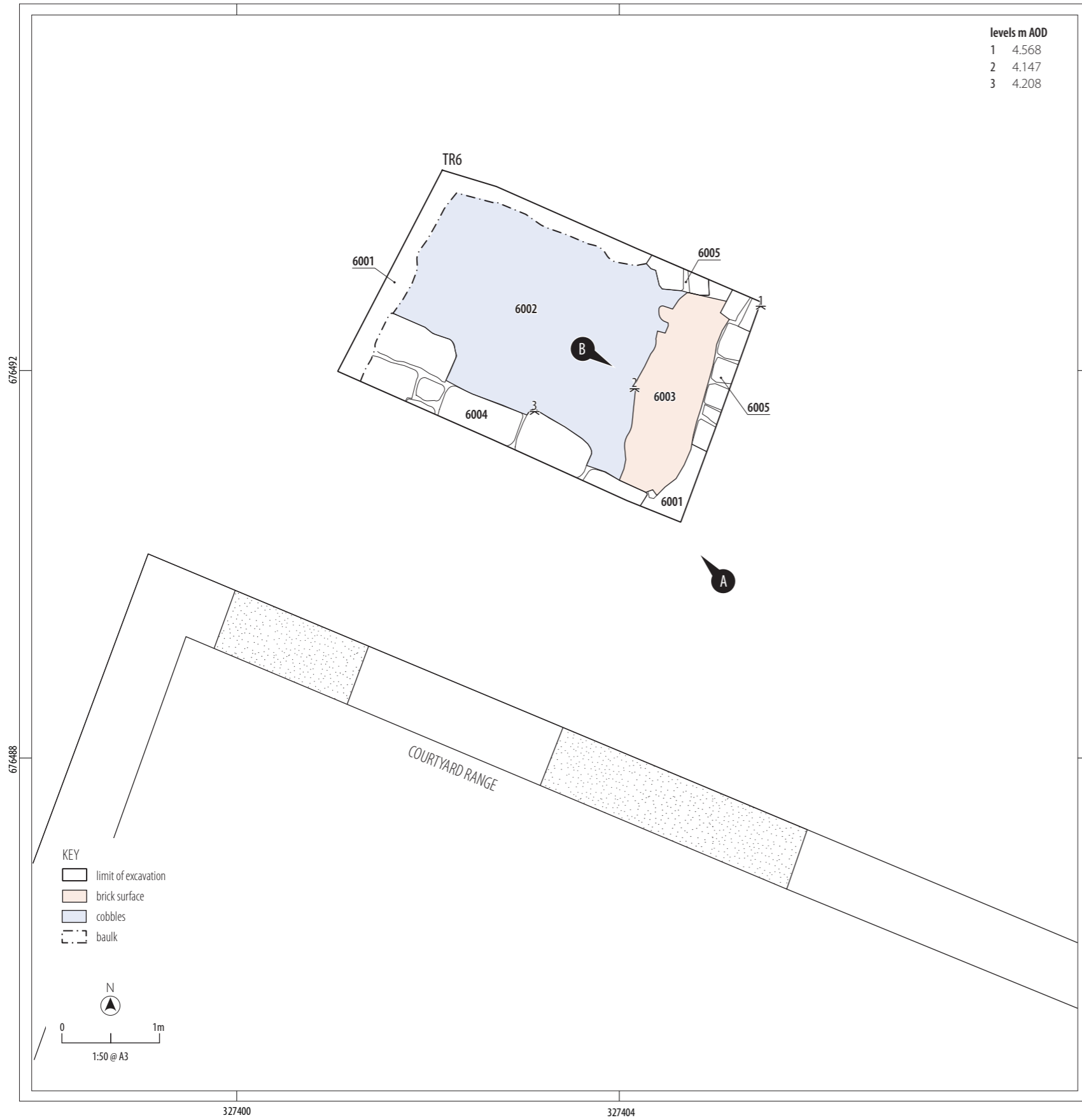
ILLUS 6 Plan of Trench 4

A. Trench 4 looking W B. View of walls [4006] & [4008] abutting wall [4007] looking N C. Detail of pipe cut [4009] & wall [4011] looking W

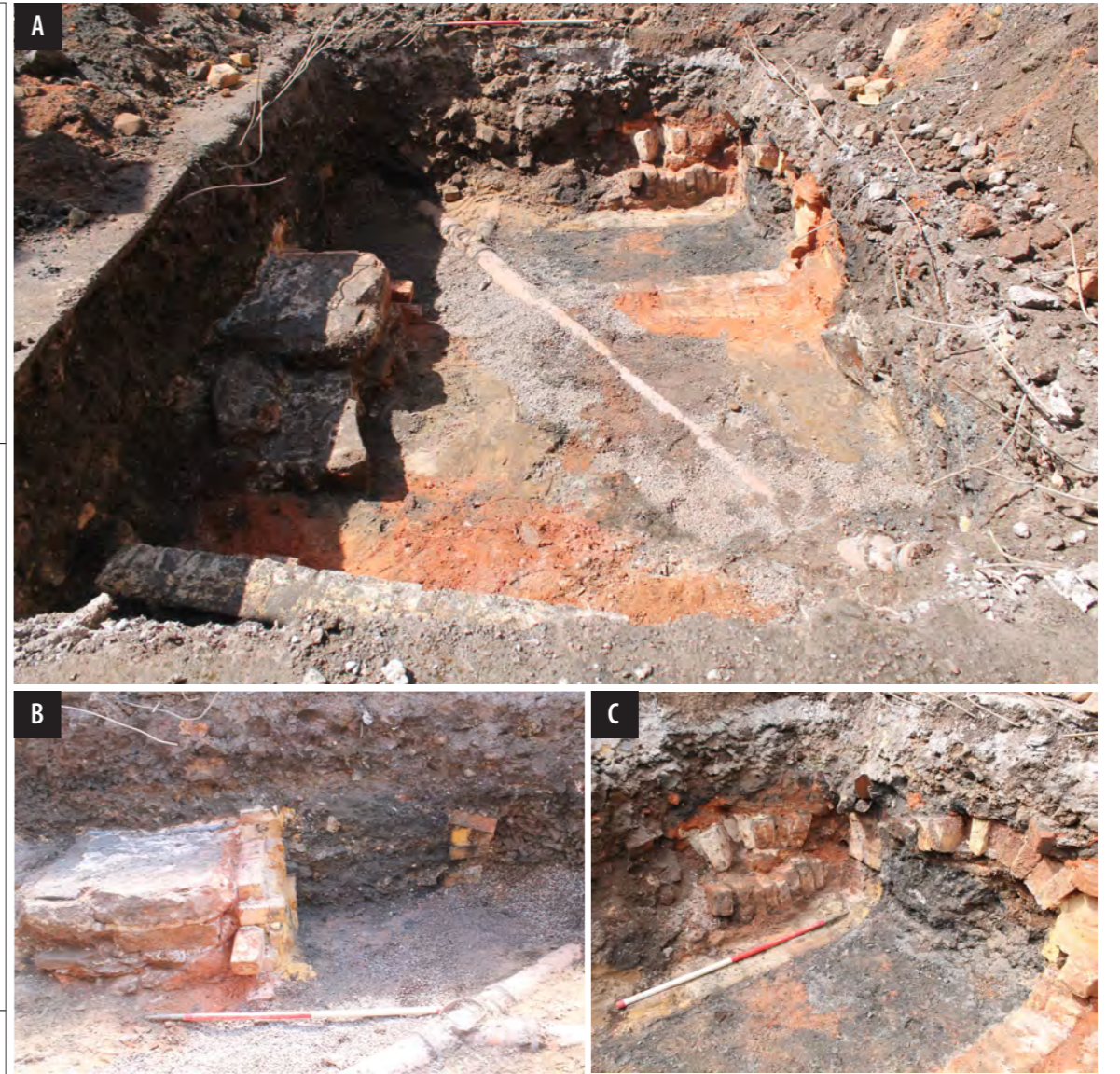
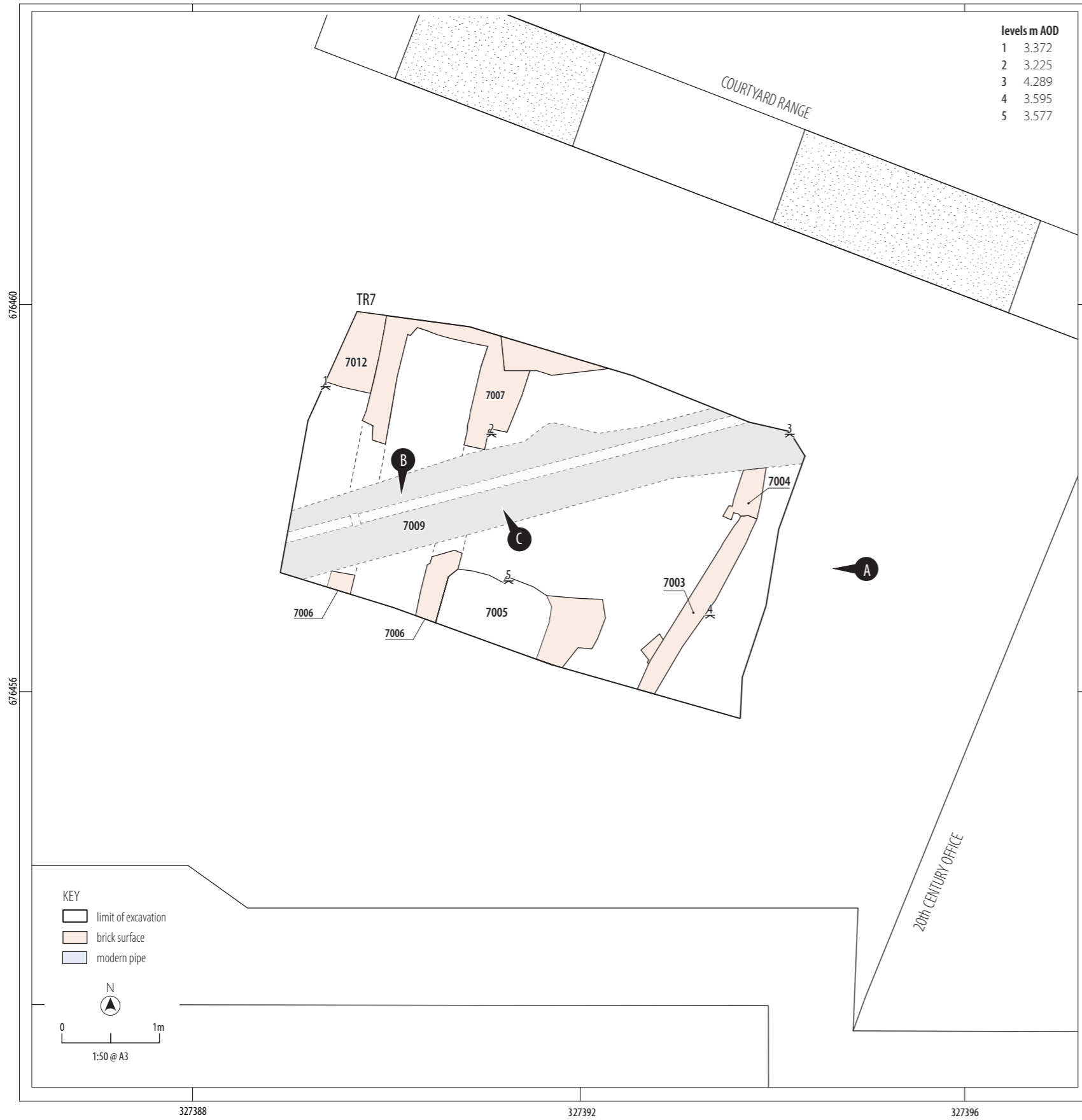


ILLUS 7 Plan of Trench 5

A. Trench 5 looking W B. View of Trench 5 showing wall [5013] cobbled surface [5014] wall [5015] and rail [5020] looking E
C. Detail of pillar base [5016] stone pad [5017] pipe [5018] and brickwork [5019] looking W D. Detail of wall [5011] and brick surface [5009] looking S



ILLUS 8 Plan of Trench 6
A. View of Trench 6 looking NW B. Detail of brick surface [6003] looking E



ILLUS 9 Plan of Trench 7
 A. View of Trench 7 looking W B. Detail of stone pad [7005] and flue [7006] looking S
 C. Detail of flue [7007] and possible collapsed flue [7012] looking NW



0 2cm



0 20cm



0 20cm

ILLUS 10 The neck of a moulded wine bottle of 19th century date, heavily distorted by heat with adhering vitrified ceramic or stone (left). It derives from a bottle of similar form to those found among the glass assemblage (right) and likely to be a piece recycled as cullet. **ILLUS 11** Sherd of crucible **ILLUS 12** Sherd of crucible

6 APPENDICES

APPENDIX 1 SITE REGISTERS

Context registers

Trench 1

Context	Description	Measurements (L x W x D)
1000	Concrete slab layer	10.00m (observed) x 4.00m (observed) x 0.10m
1001	Concrete and brick crush levelling layer for [1000]	10.00m (observed) x 4.00m (observed) x 0.15m
1002	Mid-greyish brown loam and mortar rubble layer - made ground	10.00m (observed) x 4.00m (observed) x 0.15m
1003	Mid-greyish brown sandy silt - made ground	10.00m (observed) x 4.00m (observed) x 0.20m
1004	Light-yellowish grey mortar and brick rubble demo layer	10.00m (observed) x 4.00m (observed) x 0.15m
1005	Black coke and cinder crush layer - made ground	10.00m (observed) x 4.00m (observed) x 0.20m
1006	Dark brown compact loam layer - fill of [1017]	6.00m (observed) x 4.00m (observed) x 0.20m
1007	Hard mortar and tile surface cut by [1017] and [1019]	2.00m (observed) x 4.00m (observed) x 0.06m
1008	Brick floor between concrete wall foundations [1011] and [1012]	3.00m (observed) x 2.61m x 0.17m
1009	Brick floor between concrete wall foundations [1010] and [1011]	2.00m (observed) x 1.85m (observed) x 0.10m
1010	Concrete wall partition running E-W at south-western edge of trench	3.00m (observed) x 0.20m (observed) x 0.12m
1011	Concrete wall partition running E-	2.65m (observed) x 0.25m x 0.18m

Context	Description	Measurements (L x W x D)
	W in centre of trench	
1012	Concrete wall partition running E-W at north-western edge of trench	2.80m (observed) x 0.23m (observed) x 0.24m
1013	Concrete foundation running N-S in centre of trench - parallel to [1014]	3.66m (observed) x 1.0m x 0.35m
1014	Concrete foundation running N-S at eastern edge of trench - parallel to [1013]	3.66m (observed) x 1.0m x 0.35m
1015	Curved brick and stone wall running N-S - worksop associated with cone	4.00m (observed) x 0.63m x 0.33m
1016	Brick floor surface to east of wall [1015]	4.00m (observed) x 1.20m x 0.06m
1017	Brick drain to west of wall [1015] truncated by drain cover [1018] and drain cut [1019]	4.00m (observed) x 0.40m x 0.06m
1018	Stone drain cover truncating [1017]	1.15m x 0.90m x 0.70m
1019	Cut of drain truncating [1017]	0.96m x 0.94m x 0.50m
1020	Sand layer below brick floor [1016] - levelling layer	4.00m (observed) x 1.00m (observed) x 0.06m
1021	Brown slag layer beneath levelling sand (1020)	4.00m (observed) x 1.00m (observed) by 0.38m
1022	Stone and brick chamber lining cut [1022]	0.86m x 0.85m x 0.50m
1023	Light-greyish brown sandy silt fill of [1022]	0.86 x 0.85 x 0.50m

Trench 2

Context	Description	Measurements (L x W x D)
2000	Concrete slab layer	10.00m (observed) x 4.00m (observed) x 0.10m
2001	Crush and rubble layer	10.00m (observed) x 4.00m (observed) x 0.15m
2002	Brick and rubble crush layer	10.00m (observed) x 4.00m (observed) x 0.15m
2003	Dark brown loam and rubble layer	10.00m (observed) x 4.00m (observed) x 0.30m
2004	White mortar rubble layer	10.00m (observed) x 4.00m (observed) x 0.10m
2005	Brick and mortar demolition layer	10.00m (observed) x 4.00m x 0.50m (observed)
2006	Stone wall running E-W - lime mortar bonding	10.00m (observed) x 0.90m x 2.00m (observed)
2007	Stone wall running N-S - return of [2006] in W of trench	3.00m (observed) x 0.75m x unseen
2008	Stone wall running N-S - keyed into [2006]	3.00m (observed) x 0.60m x 0.60m
2009	Stone wall running E-W alongside E extent [2006]	0.90m (observed) x 0.26m x 0.68m
2010	Norther pillar base	0.70m x 0.60m x 0.50m
2011	Southern pillar base	0.60m x 0.38m x 0.60m
2012	Stone foundation wall running N-S beneath [2010] and [2011]	0.85m x 0.60m x unseen

Trench 3

Context	Description	Measurements (L x W x D)
3000	Concrete and tarmac modern surface	6.00m (observed) x 4.00m (observed) x 0.15m

Context	Description	Measurements (L x W x D)
3001	Modern concrete crush - northern section	6.00m (observed) x 4.00m (observed) x 0.35m
3002	Mid greyish-brown silty sand with slag inclusions - northern section	6.00m (observed) x 3.00m (observed) x 0.15m
3003	Post demolition levelling layer of black ash crush - northern section	6.00m (observed) x 3.00m (observed) x 0.25m
3004	Loose stone and brick fill of demolition pit [3006]	2.55m x 1.58m x 0.50m
3005	Brownish-orange clay silt fill of demolition pit [3006]	2.55m x 1.58m x unseen
3006	Cut of demolition pit in NW corner	2.55m x 1.28m x unseen
3007	Brick and stone rubble under concrete (3000) - southern section	3.20m x 3.20m x 0.25m
3008	Pink silty sand crush layer - southern section	3.20m x 3.20m x 0.31m
3009	Yellowish-orange mortar demolition layer	2.20m x 1.20m x 0.20m
3010	Greyish-white mortar and brick layer	2.20m x unseen x 0.21m
3011	Stone pad at southern end of trench	1.16m x 0.70m (truncated) x 0.70m
3012	East-west running wall in centre of trench	2.60m x 0.35m x 0.50m
3013	Stone pad at northern end of trench	1.24m x 1.04m x 0.40m
3014	Brick floor associated with wall [3024] in south of trench	1.80m x 0.28m (truncated) x 0.50m
3015	Brick floor associated with [3012] and [3013] in north of trench	1.94m x 1.44m x 0.07m
3016	Cobbled surface east of all walls	3.40m x 0.50m (truncated) x 0.20m
3017	Levelling sand for brick floor [3015]	1.94m x 1.17m x 0.15m

Context	Description	Measurements (L x W x D)
3018	Setting and levelling sand for cobbled surface (3016)	3.40m x 0.50m (truncated) x 0.25m
3019	Cut of concrete foundation pad	1.60m x 1.00m x 1.30m (observed)
3020	Concrete foundation pad within cut [3019]	1.60m x 1.00m x 1.30m (observed)
3021	Compact black clay silt surface overlying wall [3029]	1.50m x 1.30m x 0.10m
3022	Levelling sand under brickwork [3014]	2.00m x unseen x 0.10m
3023	Stone wall stub in north facing section	0.70m x 0.25m (observed) x 0.20m (observed)
3024	Brick facing associated with stone wall [3023]	0.28m x 0.24m x 0.20m (observed)
3025	Cut in north facing section	unseen x 0.50m x 0.40m
3026	Fill of [3025]	unseen x 0.50m x 0.40m
3027	Deposit between stone pad [3011] and wall [3012]	3.00m x 1.40m x 0.45m
3028	Compact black silty sand overlying cobbles (3016)	3.40m x 0.50m x 0.05m
3029	Wall running WNW-ESE at base of [3011]	2.75m x 1.16m x unseen
3030	East-west running wall overlying [3029]	1.60m x 0.28m x 0.30m
3031	Cut for wall [3012]	0.70m (observed) x (0.38m) observed x 0.20m
3032	Brickwork under deposit (3021)	0.80m (truncated) x 0.12m (truncated) x 0.07m
3033	Compact black silty sand beneath [3032]	0.80m (truncated) x 0.80m (truncated) x 0.05m

Trench 4

Context	Description	Measurements (L x W x D)
4000	Concrete and tarmac slab	5.00m x 4.00m x 0.15m

Context	Description	Measurements (L x W x D)
4001	Concrete and mortar crush - levelling for (4000)	5.00m x 4.00m x 0.25m
4002	Compact red brick rubble layer	5.00m x 4.00m x 0.05m
4003	Black loam ash and rubble make up deposit	5.00m x 4.00m x 0.50m
4004	Light orangish-brown slag and stone layer	5.00m x 4.00m x 0.20m
4005	Light pinkish brown sands and gravels	5.00m x 4.00m x 0.15m
4006	East-west running stone wall found in north of TR04	2.10m x unseen x 0.85m
4007	Upper courses of north-south running stone wall in centre of TR04	3.00m (observed) x 0.88m x 0.50m
4008	Brick wall abutting [4007] in NW end of TR04	1.60m x 0.30m (observed) x 90mm
4009	Cut for lead pipe beneath [4011]	1.30m x 0.25m x 0.30m
4010	Fill of [4009]	1.30m x 0.25m x 0.30m
4011	Granite foundation stones beneath [4007]	3.00m (observed) x 1.10m x 0.60m
4012	Construction cut for wall [4011] and [4007]	unseen x 0.50m (observed) x 0.60m

Trench 5

Context	Description	Measurements (L x W x D)
5000	Concrete slab	5.50m x 3.70m x 0.20m
5001	Crushed brick and concrete levelling	5.50m x 3.70m x 0.20m
5002	Dark brown rubble and mortar make up layer	5.50m x 3.70m x 0.20m
5003	White lime mortar crush	5.50m x 3.70m x 0.13m
5004	Dark greyish brown industrial material	1.70m x 0.70m x 0.17m

Context	Description	Measurements (L x W x D)
5005	Mid brown sandy clay levelling	5.50m x 3.70m x 0.25m
5006	Light brown sand	1.00m x 0.75m x 0.12m
5007	Cut through levelling deposits for pipe [5018]	unseen x 0.50m x 0.65m
5008	Fill of [5007]	unseen x 0.50m x 0.65m
5009	Brick surface	1.50m x 0.62m x 0.10m
5010	Light brown levelling sand beneath [5009]	1.50m x 0.62m x 0.08m
5011	East-west running brick wall associated with [5009]	2.30m x 0.50m x 0.40m
5012	Concrete base	1.50m x 1.25m x 0.90m
5013	Brick wall founds running north-south	2.20m x 0.55m x 0.65m
5014	Cobbled surface associated with [5013]	2.80m x 0.80m x 0.25m
5015	Brick wall stub running east-west	0.55m x 0.30m x 0.26m
5016	Stone and metal octagonal structure / base	0.70m (observed) x 0.50m x 0.20m
5017	Stone base for [5016]	1.00m x 0.35m (observed) x 0.30m
5018	Metallic pipe within cut [5007]	0.80m (observed) x 0.30m x 0.15m
5019	Circular brick structure associated with [5017]	1.40m x 1.00m x 0.10m
5020	Metal rail running north-south	3.70m x 0.05m x 0.12m
5021	Metal pipe running north-south parallel to [5020]	3.70m (observed) x 0.10m x unseen
5022	Wooden sleepers beneath [5020]	1.44m x 0.20m x 0.15m

Trench 6

Context	Description	Measurements (L x W x D)
6000	Concrete surface	4.00m x 2.50m x 0.08m
6001	Crushed concrete and rubble mixed deposit	4.00m x 2.50m x 0.20m
6002	Cobbled surface extending over centre and west of trench	2.40m x 1.80m x unseen
6003	Brick surface at eastern end of trench	2.10m x 0.70m x unseen
6004	Flag stones abutting [6002] at south of trench	0.80m x 0.70m x unseen
6005	Paving stones surrounding [6003]	0.65m x unseen x unseen

Trench 7

Context	Description	Measurements (L x W x D)
7000	Concrete surface	5.00m x 3.00m x 0.10m
7001	Dark brown rubble make up layer	5.00m x 3.00m x 0.40m
7002	Black sandy clay demolition layer	5.00m x 3.00m x 0.20m
7003	SSW-NNE running brick wall	2.00m x 0.25m x 0.30m
7004	N-S running brick wall associated with [7003]	0.50m (truncated) x 0.30m x 0.20m
7005	Stone base at southern edge of trench	1.50m x 0.70m (observed) x 0.45m
7006	Brick structure / possible flue abutting [7005]	0.75m (observed) x 0.70m x 0.40m
7007	Flue exposed in south facing section	1.00m (truncated) x 1.54m x 0.60m
7008	Fill of [7007]	unseen x 0.84m x 0.43m

Context	Description	Measurements (L x W x D)
7009	Cut for modern pipe running NE-SW	5.00m x 0.95m x unseen
7010	Red sand dump deposit	2.00m x 0.70m x unseen

Context	Description	Measurements (L x W x D)
7011	Yellowish brown sand dump deposit	1.00m x 0.45m x unseen
7012	Brick collapse in east facing section of trench - possible flue	0.25m x 0.60m (observed) x 0.60m

Photographic register

Photo	Direction	Description
1000	N/A	Project ID
1001	E	Working shot - breaker
1002	S	General shot of site
1003	SW	General shot of site
1004	W	General shot of site
1005	N	General shot of site
1006	E	General shot of site
1007	NW	General shot of TR02
1008	NW	General shot of TR02
1009	NW	General shot of TR02
1010	NW	Shot of TR02 showing [2006] and [2008]
1011	NW	Shot of wall [2006]
1012	N	Shot of wall [2006]
1013	E	Post ex shot of TR02
1014	E	Post ex shot of TR02
1015	E	Post ex shot of TR02
1016	E	Shot of wall [2006]
1017	S	Shot of wall [2007]
1018	NW	Shot of wall [2006]
1019	W	General shot of TR02
1020	NW	Shot of wall [2006]
1021	E	Shot of wall [2012]
1022	S	Detail of brickwork [2011]
1023	N	Detail of brickwork [2010]
1024	S	North facing section of TR02 - detail

Photo	Direction	Description
1025	S	North facing section of TR02 - detail
1026	S	North facing section of TR02 - detail
1027	W	Detail of wall [2008]
1028	W	Shot of bricks lining wall [2008]
1029	S	Shot of bricks lining wall [2008]
1030	S	Detail of wall [2008]
1031	N	Shot of walls [2007] and [2008]
1032	N	Shot of walls [2007] and [2008] - corner detail
1033	N	General shot of wall [2009]
1034	E	General shot of wall [2009]
1035	E	General shot of wall [2009]
1036	E	Working shot - breaker
1037	N	South facing section of wall [2008]
1038	W	Working shot of TR01
1039	N	Working shot of TR01
1040	SW	Working shot of TR01
1041	S	General shot of concrete foundation [1014]
1042	S	Detail of concrete foundation [1013]
1043	S	Shot of curved wall [1015] and drain [1018]
1044	S	Shot of concrete wall [1010]
1045	S	General shot of concrete wall [1011]

Photo	Direction	Description
1046	N	General shot of concrete wall [1012]
1047	N	Shot of markings 'ETNA' on bricks [1009]
1048	W	Shot of brick floor [1008]
1049	W	Shot of brick floor [1009]
1050	E	Shot of brick floor [1008]
1051	E	Shot of brick floor [1009]
1052	N	Detail of brick floor [1009]
1053	E	Shot of brick floor [1009]
1054	N	South facing section of TR01
1055	W	General shot of TR01
1056	E	Detail of drain cover [1018]
1057	W	Detail of drain cover [1018]
1058	S	Detail of drain cover [1018]
1059	N/A	ID shot
1060	S	General shot of drain cover [1018]
1061	S	North facing section of TR01
1062	NW	Shot of curved wall [1015]
1063	W	Shot of southern end of curved wall [1015] - detail
1064	W	Shot of central section of curved wall [1015] - detail
1065	W	General shot of TR01
1066	W	General shot of TR01
1067	W	Detail of drain cover [1018]
1068	W	Detail of drain cover [1018]
1069	W	Detail of southern end of brick drain [1017]
1070	W	Detail of drain cover [1018]
1071	E	General shot of northern end of brick drain [1017]
1072	E	Shot of curved wall [1015] - detail
1073	E	Shot of curved wall [1015] - detail
1074	W	Shot of northern end of brick floor [1007]
1075	W	Shot of northern end of brick floor [1016]

Photo	Direction	Description
1076	W	Shot of curved wall [1015]
1077	W	Shot of southern end of brick floor [1016]
1078	W	QHSE audit shot
1079	W	QHSE audit shot
1080	W	Detail of southern end of brick floor [1007]
1081	E	Shot of brick floor [1008]
1082	E	Shot of brick floor [1009]
1083	E	Shot of brick floor [1008] and [1009]
1084	W	Shot of drain cut [1019] and stone chamber [1022]
1085	SW	Shot of drain cut [1019] and stone chamber [1022]
1086	NW	Shot of drain cut [1019] and stone chamber [1022]
1087	E	West facing section of test pit through slag deposit (1022) at base of [1014]
1088	W	General shot of TR04
1089	W	General shot of TR04
1090	NE	General shot of TR04
1091	E	General shot of TR04
1092	N	South facing section of TR04
1093	S	North facing section of TR04
1094	W	Pipe cut [4007] in wall [4011]
1095	E	Pipe cut [4007] in wall [4011]
1096	N	Detail of top of wall [4007]
1097	N	Shot of brick floor [4008]
1098	N	Detail of stone wall [4006]
1099	NNE	Detail of wall [4006] abutting wall [4007]
1100	ENE	Detail of brickwork [4008] abutting wall [4007]
1101	N	Working shot of TR03
1102	N	Working shot of TR03
1103	S	Post ex shot of TR03
1104	N	Post ex shot of TR03
1105	N	South facing section of TR03
1106	N	South facing section of TR03

Photo	Direction	Description
1107	S	North facing section of TR03
1108	S	North facing section of TR03 - west end detail
1109	S	North facing section of TR03 - centre detail
1110	S	North facing section of TR03 - east end detail
1111	S	North facing section of Tr03 showing walls [3023] [3024] and cut [3025]
1112	S	North facing section of Tr03 showing walls [3023] [3024] and cut [3025]
1113	S	General shot of north facing section of TR03
1114	S	North facing section of TR03 - west end detail - no scale
1115	S	North facing section of TR03 - centre detail - no scale
1116	S	North facing section of TR03 - east end detail - no scale
1117	N	Detail of walls [3030] and [3014]
1118	W	East facing section of TR03 showing modern pipe cut
1119	N	Shot of stone arch pad [3011]
1120	N	Shot of stone pad [3011] modern pipe and cobbles [3016]
1121	N	Shot of stone pad [3011] modern pipe and cobbles [3016]
1122	S	Detail of wall [3014] in north facing section of TR03
1123	S	Detail of wall [3014] in north facing section of TR03
1124	W	Shot of cobbles [3016] sand (3018) wall [3011] and surfaces (3021) and (3028)
1125	W	Shot of cobbles [3016] and sand (3018) and wall [3011] and surfaces (3021) and (3028)
1126	W	General shot of walls and cobbles at southern end of TR03

Photo	Direction	Description
1127	W	General shot of walls and cobbles at southern end of TR03
1128	S	General shot of walls [3029] and [3030] and stone arch pad [3011]
1129	S	Detail of join between stone pad [3011] and walls [3029] and [3030]
1130	W	East facing section of TR03
1131	W	East facing section of TR03
1132	W	General shot of north end of TR03 showing [3012] [3015] [3006] and (3013)
1133	W	General shot of north end of TR03 showing [3012] [3015] [3006] and (3013)
1134	W	General shot of north end of TR03 showing [3012] [3015] [3006] and (3013)
1135	SE	Detail of brick floor [3015]
1136	S	Detail of brick floor [3015] showing relationship with wall [3012]
1137	E	Detail of stone pad [3013]
1138	E	Detail of stone pad [3013]
1139	N	South facing section of TR03
1140	N	Detail of south facing section of TR03 - west end
1141	N	Detail of south facing section of TR03 - centre
1142	N	Detail of south facing section of TR03 - east
1143	NW	Oblique shot of concrete pad [3020]
1144	NW	Oblique shot of concrete pad [3020]
1145	NW	Detail of concrete pad [3020]
1146	S	General shot of TR03
1147	SE	General shot of TR03
1148	W	Detail of brickwork [3032] and surface (3033)
1149	N	South facing section of TR03 showing cut [3031] for wall [3012]

Photo	Direction	Description
1150	E	West facing section through compacted layers under wall [3021]
1151	E	West facing section of TR03 showing make up and floor layers alongside [3029]
1152	N	South facing section of sondage through (3033) showing base of wall [3029]
1153	E	Pre-condition shot of TR05
1154	SW	Breaking of TR05
1155	NW	Working shot of TR05
1156	W	Working shot of TR05
1157	W	Working shot of TR05
1158	W	Working shot of TR05
1159	W	Working shot of TR05
1160	NW	Working shot of TR05
1161	NW	Working shot of TR05
1162	NW	Working shot of TR05
1163	WSW	Pre-condition shot of TR06
1164	S	Pre-condition shot of TR06
1165	W	General shot of TR05
1166	W	General shot of TR05
1167	E	General shot of TR05
1168	E	General shot of TR05
1169	W	East facing section of TR05
1170	W	East facing section of TR05
1171	W	East facing section of TR05
1172	N	Shot of cobbles [5014] abutting [5013]
1173	E	Shot of cobbles [5014] with pad [5016] wall [5013] and rail [5020]
1174	E	Shot of cobbles [5014] with pad [5016] wall [5013] and rail [5020]
1175	W	Shot of stone base [5017] and [5016] and pipe [5018]
1176	W	Shot of brick surface [5009] with wall [5011] and concrete slab [5012]
1177	S	Shot of brickwork [5015]

Photo	Direction	Description
1178	N	Detail of rail line [5020] and pipe [5021]
1179	N	Detail of stone pad [5016]
1180	SW	Oblique shot of TR05
1181	NW	Oblique shot of TR05
1182	E	Location shot of TR07
1183	E	General shot of TR07
1184	E	West facing section of TR07
1185	SW	Oblique shot of north facing section of TR07
1186	N	South facing section of TR07
1187	W	East facing section of Tr07
1188	SW	Oblique shot of pipe cut [7009]
1189	N	Detail of flue [7007]
1190	N	Detail of flue [7007]
1191	NW	Oblique shot of flue [7008]
1192	ESE	Detail of walls [7003] and [7004]
1193	SSW	Detail of wall [7003]
1194	E	Detail of machine base [7005] and flue [7006]
1195	S	Detail of flue [7006] in north facing section
1196	S	Detail of flue [7006] in north facing section
1197	N	Detail of flue [7007]
1198	E	Detail of east facing section showing [7006] [7005] and [7003]
1199	W	Detail of east facing section with collapsed flue [7012]
1200	NW	Shot of collapsed flue [7012] in relation to flue [7007]
1201	NE	General shot of TR07
1202	E	General shot of TR06
1203	SE	General shot of TR06
1204	W	General shot of TR06
1205	NW	General shot of TR06
1206	E	Detail of brickwork [6003] and paving [6005]
1207	S	Detail of flagstones [6004]
1208	N	Detail of cobbles [6002]

Photo	Direction	Description
1209	S	General shot of TR05 and upstanding buildings
1210	SSE	General shot of TR05 and upstanding buildings
1211	SE	General shot of TR05 and upstanding buildings
1212	SE	General shot of TR05 and upstanding buildings
1213	SE	General shot of TR05 and upstanding buildings
1214	ESE	General shot of TR05 and upstanding buildings

Photo	Direction	Description
1215	ESE	General shot of TR05 and upstanding buildings
1216	SE	Working shot
1217	SE	Post-condition shot of TR07
1218	SSE	Post-condition shot of TR07
1219	NE	Post-condition shot of TR05
1220	NNE	Post-condition shot of TR05
1221	SE	Post-condition shot of TR06
1222	SE	Post-condition shot of TR06

APPENDIX 2 DISCOVERY AND EXCAVATION IN SCOTLAND ENTRY

LOCAL AUTHORITY:	Edinburgh
PROJECT TITLE/SITE NAME:	Salamander and Baltic Street, Leith : Trial Trench Evaluation
PROJECT CODE:	SASB16/001
PARISH:	City of Edinburgh
NAME OF CONTRIBUTOR:	Anthony Taylor
NAME OF ORGANISATION:	Headland Archaeology UK Ltd
TYPE(S) OF PROJECT:	Evaluation
NMRS NO(S):	None
SITE/MONUMENT TYPE(S):	None
SIGNIFICANT FINDS:	Foundations and walls of glassworks and gasworks ,C19th and C20th glass slag and waste
NGR (2 letters, 8 or 10 figures)	NT 2753 7642
START DATE (this season)	July 2016
END DATE (this season)	August 2016
PREVIOUS WORK (incl. DES ref.)	None
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	<p>Headland Archaeology (UK) Ltd undertook a programme of archaeological trial trenching works on a site located between Salamander Street and Baltic Street, Edinburgh. The work was required to help inform decisions regarding the future use of the land and any planning applications submitted.</p> <p>The evaluation trenches produced evidence for multiple phases of structures associated with the C18th Edinburgh and Leith Glassworks and the C19th Edinburgh and Leith Gasworks, including foundation walls and associated interior structures and surfaces. The evaluation trenches demonstrated that the level of preservation across the site is generally very good, with the only truncation identified from concrete footings of mid-20th century sheds.</p>
PROPOSED FUTURE WORK:	
CAPTION(S) FOR ILLUSTRS:	
SPONSOR OR FUNDING BODY:	Travis Perkins PLC
ADDRESS OF MAIN CONTRIBUTOR:	13 Jane Street, Edinburgh, EH6 5HE
EMAIL ADDRESS:	anthony.taylor@headlandarchaeology.com
ARCHIVE LOCATION (intended/deposited)	RCHAMS

APPENDIX 3 FINDS CATALOGUE

TR	Con text	Feature	Qty	Wgt (g)	Material	Object	Description	Spot date
1	1003	made ground	1	15	Glass	Bottle	crudely made decanter-style stopper, natural glass	19th-M20th
1	1003	made ground	9	617	Glass	Bottle	bases and sherds from minimum of three bottles, one dark green moulded wine bottle, two moulded natural bottle, no coherent marks	19th
1	1003	made ground	4	116	Industrial Waste	Glass Waste	small blue glassy pieces, natural coloured linear fragment	
1	1004	demolition rubble	2	13800	Ceramic	Industrial Crucible	two large joining sherds from base of large industrial crucible - walls 75mm thick, diam c390mm, heat damage to interior and part of exterior	19th/20th
1	1005	made ground	1	26	Glass	Bottle	crudely made decanter-style stopper, natural coloured	19th-M20th
1	1005	made ground	6	454	Glass	Bottle	Base of moulded green wine bottle, remains of minimum of three natural bottles, one blob rim, one base with worn moulded lettering	19th
1	1005	made ground	2	229	Industrial Waste	Glass Waste	large dark lump and heat distorted bottle neck	
1	1005	made ground	1	429	Leather	Shoe	sole and part of upper of lace-up shoe or boot, heel iron, toe missing, large size (c size 8 or 9)	19th/20th
1	1006	drain 1017	10	1215	Glass	Bottle	Bases, necks and shoulders from minimum of four moulded wine bottles	1820-1900
1	1006	drain 1017	1	36	Industrial Waste	Glass Waste	dark glass lump	
2	2003	rubble	1	460	CBM	Pan Tile	large corner sherd	17th-present
2	2003	rubble	1	12	Charcoal	Rod	Black solid rod with '***SILESIA***SILES' on one side	20th
2	2003	rubble	1	100	Glass	Bottle	Complete, small brown jar with '2 oz/BOVRIL/LIMITED' on both sides, with 'F22' underneath on only one side	1870s-20th
2	2003	rubble	1	458	Glass	Bottle	Large base sherd from natural bottles, embossed '?N PATERSON & Co', the other 'LASGOW'	L19th-E20th

TR	Context	Feature	Qty	Wgt (g)	Material	Object	Description	Spot date
2	2003	rubble	1	47	Glass	Vessel	foot and short stem from stemmed vessel	19th-present
2	2003	rubble	9	2240	Industrial Waste	Glass Waste	large sherds of black and blue glass waste	
2	2003	rubble	1	3	Plastic	Keyhole Escutcheon	Bakelite or similar dark coloured escutcheon, two screw holes, iron staining on back	20th
2	2003	rubble	2	398	Pottery (Mod)	Stoneware	Two small complete stoneware bottles, one brown salt glazed, the other pale grey. H102, 77	19th/E20th
2	2005	demolition	3	359	Glass	Bottle	Bottle with moulded citrus fruit and leaves, one sherd reads 'ROSE/LEITH/&/?ND??'	L19th-E20th
4	4002	rubble	1	251	Glass	Bottle	base sherd from moulded wine bottle	1820-1900
4	4002	rubble	8	2795	Industrial Waste	Glass Waste	large sherds of black and blue glass waste	
4	4003	rubble make up	6	2939	Industrial Waste	Glass Waste	large sherds of black and natural coloured glass waste	
4	4004	slag and stone layer	1	158	CBM	Brick?	large piece of coarse soft fired ceramic, possibly part of a brick, possibly part of a crucible?	
4	4004	slag and stone layer	1	43	Glass	Bottle	sherd from natural egg-shaped bottle	L19th-E20th
4	4004	slag and stone layer	13	825	Industrial Waste	Glass Waste	various glassy pieces and sherd of part vitrified and slag coated ceramic	
4	4004	slag and stone layer	3	272	Pottery (Mod)	Stoneware	Various brown salt glazed base sherds, one from small blacking bottle, with part of stamp visible (BOTTL?), slightly larger bottle, large jar, from three separate vessels	19th/E20th
7	7001	rubble make up	1	269	Glass	Bottle	Complete clear glass milk bottle, one side reads 'PROPERTY OF/E&D.D. Co./EDINBURGH', the other reads 'CONTENTS 1/2 PT' (Edinburgh & Dumfriesshire Dairy Co)	20th



© 2016 by Headland Archaeology (UK) Ltd

SOUTH & EAST

Headland Archaeology
Building 68C, Wrest Park, Silsoe
Bedfordshire MK45 4HS

01525 861 578

southandeast@headlandarchaeology.com

MIDLANDS & WEST

Headland Archaeology
Unit 1, Clearview Court, Twyford Road
Hereford HR2 6JR

01432 364 901

midlandsandwest@headlandarchaeology.com

NORTH

Headland Archaeology
Unit 16, Hillside, Beeston Road
Leeds LS11 8ND

0113 387 6430

north@headlandarchaeology.com

SCOTLAND

Headland Archaeology
13 Jane Street
Edinburgh EH6 5HE

0131 467 7705

scotland@headlandarchaeology.com

www.headlandarchaeology.com