

**PEARTREE STREET,  
LONDON BOROUGH OF ISLINGTON  
EC1**



**AN ARCHAEOLOGICAL WATCHING  
BRIEF**



**PCA REPORT NO: 11176**

**SITE CODE: PEA11**

**MARCH 2012**



**PRE-CONSTRUCT ARCHAEOLOGY**

DOCUMENT VERIFICATION

PEARTREE STREET  
LONDON BOROUGH OF ISLINGTON

ARCHAEOLOGICAL WATCHING BRIEF

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**An Archaeological Watching Brief on Land at Peartree Street, Islington,  
London EC1, London Borough of Islington**

**Central National Grid Reference: TQ 3210 8250**

**Site Code: PEA11**

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## **1 ABSTRACT**

- 1.1 This report details the results and working methods of an archaeological watching brief undertaken by Pre-Construct Archaeology Ltd on land at Peartree Street, London Borough of Islington. The work was preceded by a field evaluation undertaken between 17<sup>th</sup> and 21<sup>st</sup> October 2011. The watching brief was undertaken between 6<sup>th</sup> and 24<sup>th</sup> February 2012, during groundwork undertaken across the site. The commissioning client was Mount Anvil and the archaeological consultant was Richard Meager, CgMs Consulting.
- 1.2 The archaeological evaluation consisted of two trenches excavated to a maximum depth of 1.2m to target the remains of the former gasworks. The follow-up watching brief consisted of the observation groundwork conducted on the site prior to the drilling of injection wells and piling works. The groundwork consisted of the removal of any below ground structures likely to impede later works (pile probing).
- 1.3 The results of both the evaluation and watching brief suggest that any postulated archaeological deposits pre-dating the later post-medieval period would have been truncated by the combined effects of the construction and demolition of the 19<sup>th</sup> century Chartered Gas Works, although natural deposits were not observed during any of the archaeological investigations.
- 1.4 The earliest deposits encountered during the archaeological investigations were masonry structures associated with the two Retort Houses of the Chartered Gas Works located towards the north and south of the site, as well as a small portion of the largely removed gasometer and associated wells. Following the demolition of the Gas Works a single line of timber piles in the eastern area of the site may represent an intermediary phase of development on the site prior to the construction of a large building recorded across the eastern side of the site and visible on the 1914-16 Ordnance Survey map of the area.

## **2 INTRODUCTION**

- 2.1 An archaeological evaluation was undertaken by Pre-Construct Archaeology Ltd between 17<sup>th</sup> and 21<sup>st</sup> October 2011<sup>1</sup>, in advance of redevelopment of land at Peartree Street in the London Borough of Islington, EC1. This was followed by an archaeological watching brief during the initial groundworks associated with the redevelopment, undertaken between 6<sup>th</sup> and 24<sup>th</sup> February 2012. The central National Grid Reference for this site is TQ 3210 8250, with the site covering an area of approximately 1,700 square metres.
- 2.2 The archaeological watching brief consisted of the observation of remediation works conducted on the site prior to the drilling of injection wells and piling works. The remediation works consisted of the removal of any below ground structures likely to impede later works, a process known as 'pile probing'. Structures were observed by the attending archaeologist across the entirety of the site, at a variety of depths below the modern ground surface.
- 2.3 The commissioning client was Mount Anvil, through their archaeological consultant Richard Meager, CgMs Consulting. The archaeological watching brief was undertaken by Pre-Construct Archaeology Ltd under the supervision of James Langthorne and Aidan Turner and the project management of Tim Bradley. The archaeological investigations were monitored by Kim Stabler, GLAAS, the archaeology advisor to the London Borough of Islington, and Richard Meager, CgMs Consulting, for the client.
- 2.4 The completed archive comprising written, drawn and photographic records will be deposited with the Museum of London LAARC.
- 2.5 The site was allocated the site code: PEA11.

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<sup>1</sup> Bradley & Baxter 2011





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 02/03/12 HB

Figure 1  
 Site Location  
 1:20,000 at A4



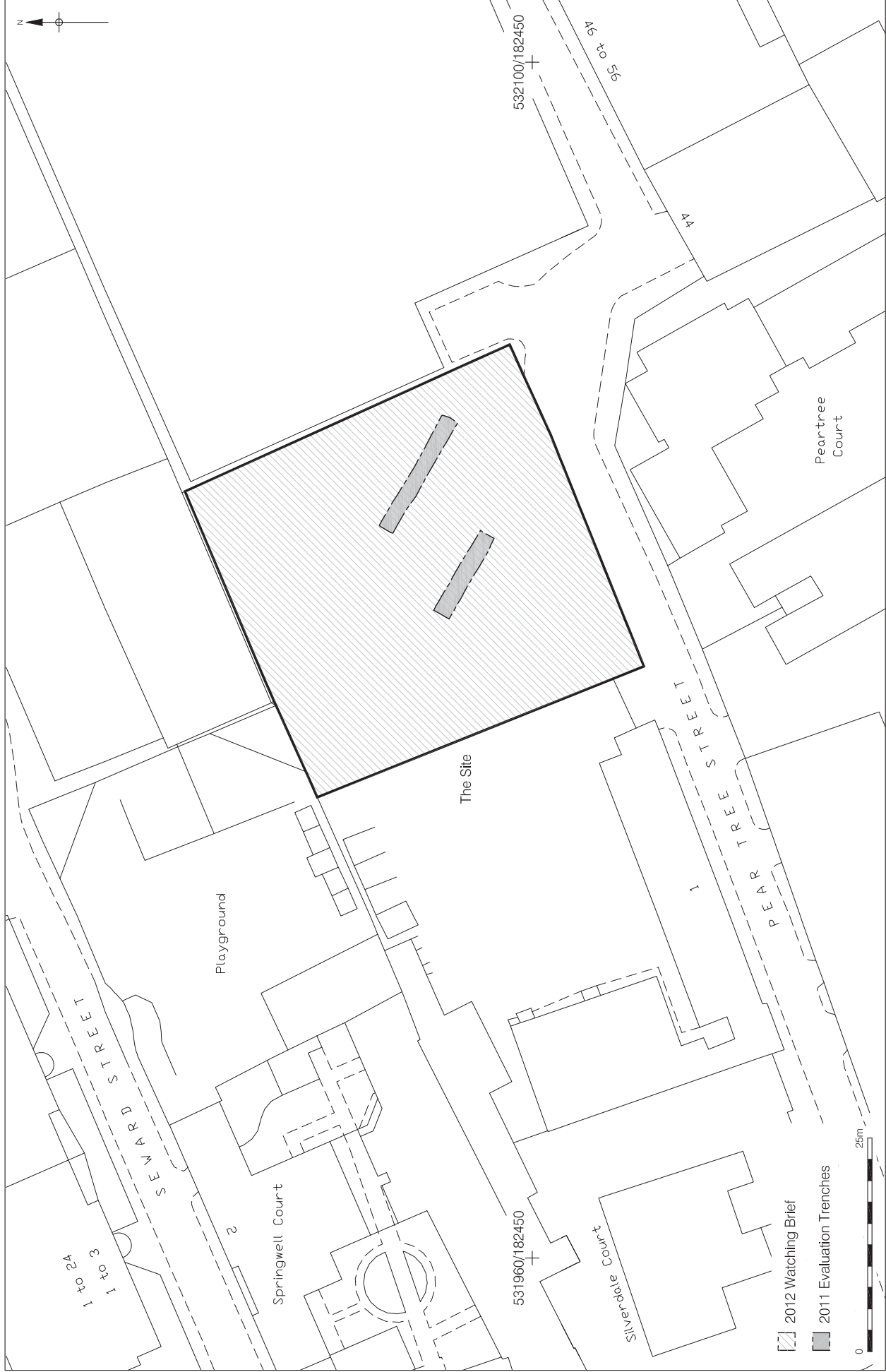


Figure 2  
Area of Watching Brief  
1:625 at A4



### 3 PLANNING BACKGROUND

3.1 The planning background for the Peartree Street site was laid out in full in the Archaeological Desk Based Assessment<sup>2</sup>. The following is a reiteration of the contents of that document:

3.2 In March 2010, the Departments of Communities and Local Government (DCLG) and Culture, Media and Sport (DCMS) jointly published *Planning Policy Statement 5: Planning for the Historic Environment*, providing guidance for planning authorities, property owners, developers and others on the conservation preservation and investigation of Heritage Assets.

3.3 Heritage Assets are defined in Annexe 2 of PPS5 as a building, monument, site, place, area or landscape positively identified as having a degree of significance meriting consideration in planning decisions and as the valued components of the historic environment. In short, government guidance provides a framework which:

- Protects designated Heritage Assets (which include World Heritage Sites, Scheduled Ancient Monuments, Listed Buildings, Protected Wreck Sites, Registered Parks and Gardens, Registered Battlefields and Conservation Areas)
- Protects the settings of these designated assets
- Has a presumption in favour of in-situ preservation of designated and other nationally important archaeological assets
- In appropriate circumstances requires adequate information (from field evaluation) to enable informed decisions, and
- Provides for the excavation and investigation of archaeological assets whose significance can be realised and public appreciation of the asset can be enhanced.

3.4 In considering any proposal for development, the planning authority will be mindful of the policy framework set by government guidance, in this instance PPS 5, by current Development Plan policy and by other material considerations.

3.5 The relevant Strategic Development Plan framework is provided by 'The London Plan, Spatial Development Strategy for Greater London Consolidated with Alterations since 2004' (Feb 2008). It includes the following policy relating to archaeology within central London:

**POLICY 4B.14 ARCHAEOLOGY**

**THE MAYOR, IN PARTNERSHIP WITH ENGLISH HERITAGE, THE MUSEUM OF LONDON AND BOROUGHs, WILL SUPPORT THE IDENTIFICATION, PROTECTION, INTERPRETATION AND PRESENTATION OF LONDON'S ARCHAEOLOGICAL RESOURCES. BOROUGHs IN CONSULTATION**

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<sup>2</sup> Meager 20010

**WITH ENGLISH HERITAGE AND OTHER RELEVANT STATUTORY ORGANISATIONS SHOULD INCLUDE APPROPRIATE POLICIES IN THEIR UDPS FOR PROTECTING SCHEDULED ANCIENT MONUMENTS AND ARCHAEOLOGICAL ASSETS WITHIN THEIR AREA.**

- 3.6 The relevant Development Plan framework is provided by the Islington Unitary Development Plan (UDP) adopted 28 June 2002. The Plan contains the following saved policies which provide a framework for the consideration of development proposals affecting archaeological and heritage features:

**ARCHAEOLOGICAL HERITAGE**

**D43 THE COUNCIL WILL PROMOTE THE CONSERVATION, PROTECTION AND ENHANCEMENT OF THE ARCHAEOLOGICAL HERITAGE OF THE BOROUGH AND ITS INTERPRETATION AND PRESENTATION TO THE PUBLIC. IN PARTICULAR IT WILL SEEK TO ENSURE THAT THE MOST IMPORTANT ARCHAEOLOGICAL REMAINS AND THEIR SETTINGS ARE PERMANENTLY PRESERVED.**

**IMPORTANT ARCHAEOLOGICAL REMAINS**

**D44 THE COUNCIL WILL ENSURE THE PRESERVATION OF LOCALLY AND NATIONALLY IMPORTANT ARCHAEOLOGICAL REMAINS AND THEIR SETTINGS WITHIN THE BOROUGH, WHETHER THESE ARE DESIGNATED AS 'SCHEDULED ANCIENT MONUMENTS' OR NOT. IT WILL TAKE THE NECESSARY STEPS TO SAFEGUARD THE BOROUGH'S ARCHAEOLOGICAL HERITAGE THROUGH THE PLANNING PROCESS AND WILL NORMALLY REFUSE PLANNING PERMISSION FOR APPLICATIONS WHICH ADVERSELY AFFECT IMPORTANT ARCHAEOLOGICAL REMAINS OR THEIR SETTINGS**

**ARCHAEOLOGICAL ASSESSMENT AND EVALUATION**

**D45 WITHIN THE 'ARCHAEOLOGICAL PRIORITY AREAS' SHOWN ON THE PROPOSALS MAP, ALL PLANNING APPLICATIONS LIKELY TO AFFECT IMPORTANT ARCHAEOLOGICAL REMAINS MUST BE ACCOMPANIED BY AN ARCHAEOLOGICAL ASSESSMENT OF THE IMPACT OF THE SCHEME ON THE BOROUGH'S ARCHAEOLOGICAL HERITAGE. THIS SHOULD BE COMMISSIONED BY THE APPLICANT FROM A SUITABLE ARCHAEOLOGICAL ORGANISATION ACCEPTABLE TO THE COUNCIL. THE COUNCIL MAY ALSO REQUIRE AN ASSESSMENT TO BE SUBMITTED FOR OTHER DEVELOPMENT PROPOSALS, WHERE IT IS CONSIDERED THAT IMPORTANT ARCHAEOLOGICAL REMAINS MAY BE PRESENT. SMALL SCALE ARCHAEOLOGICAL FIELDWORK TO DETERMINE THE ACTUAL DEGREE OF ARCHAEOLOGICAL SURVIVAL ON A SITE, (AN 'EVALUATION') MAY BE REQUIRED AS PART OF THE ASSESSMENT.**

**PRESERVATION IN SITU OF ARCHAEOLOGICAL REMAINS**

**D46 WHERE AN ARCHAEOLOGICAL ASSESSMENT AND / OR EVALUATION HAS DEMONSTRATED THE SURVIVAL OF IMPORTANT ARCHAEOLOGICAL REMAINS, THERE WILL BE A PRESUMPTION IN FAVOUR OF THEIR PHYSICAL PRESERVATION IN SITU. THE COUNCIL WILL REQUIRE APPLICANTS TO DEMONSTRATE HOW THIS WILL BE ACHIEVED, AND WILL CONTROL DEVELOPMENT LAYOUT AND FOUNDATION DESIGN ACCORDINGLY.**

**ARCHAEOLOGICAL EXCAVATION AND RECORDING**

**D47 WHERE PHYSICAL PRESERVATION OF ARCHAEOLOGICAL REMAINS IS NOT JUSTIFIED, THE COUNCIL WILL ENSURE THAT NECESSARY MEASURES ARE TAKEN BY THE APPLICANT TO MITIGATE THE IMPACT OF THEIR PROPOSALS, THROUGH ARCHAEOLOGICAL FIELDWORK TO INVESTIGATE AND RECORD REMAINS IN ADVANCE OF DEVELOPMENT WORK, AND SUBSEQUENT**

**ANALYSIS AND PUBLICATION OF THE RESULTS. THIS WILL USUALLY BE SECURED THROUGH SECTION 106 AGREEMENTS.**

- 3.7 Given the archaeological potential of the site, trial trench evaluation was required in advance of the proposed development. The evaluation was undertaken in accordance with an approved Specification<sup>3</sup>, and recorded elements of the Chartered Gas Works and later a later early 20<sup>th</sup> century building<sup>4</sup>.
- 3.8 Following the archaeological evaluation of the site and discussions between CgMs Consulting and English Heritage GLAAS, a decision was made to undertake a mitigation watching brief during the removal of remaining structures. The watching brief was undertaken in accordance with an approved Written Scheme of Investigation<sup>5</sup>, and the results are reported here.

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<sup>3</sup> Meager a2011

<sup>4</sup> Bradley & Baxter 2011

<sup>5</sup> Meager b2011

## **4 GEOLOGY AND TOPOGRAPHY**

The geological and topographical profile of this site has been laid out in full in the Archaeological Desk Based Assessment<sup>6</sup>. The following is a summary of the data from that document, as well as additional data from the archaeological evaluation of the site.

### **4.1 Geology**

- 4.1.1 The solid geology of the site is shown by the Institute of Geological Sciences (IGS 1979) as London Clay deposits forming the London Basin.
- 4.1.2 Further detail is provided by British Geological Survey Sheet 256 (North London: 1994) which shows the site underlain by deposits of Hackney Gravels (defined as 'Post-diversionary Thames River Deposits; gravel, sandy and clayey in part').
- 4.1.3 Boreholes (BH) and trial pits (TP) carried out at the site in February 1997 by Fernlea House Limited revealed extensive quantities of made ground above naturally occurring sands, gravels and clays. 2.8m of made ground was observed in BH4 on the eastern boundary, while TP4-5, 8 and 10 (central and southern areas of site) terminated within the made ground at a maximum depth of 4.6m below ground level. TP9 north of the central part of the site revealed 4m of made ground over gravel. Contamination was noted in almost all of the intrusions.
- 4.1.4 Archaeological observations during the excavation of the trial pits revealed potential archaeological horizons dating to the seventeenth, eighteenth and nineteenth centuries.
- 4.1.5 Further geotechnical investigations (two window samples) were monitored to a maximum depth of 2.6m by PCA in July 2011. These revealed made ground throughout the sequence, with considerably elevated levels of contamination identified in WS101, located in the central eastern area of the site.
- 4.1.6 During the evaluation of the site in October 2011 a sondage was excavated to approximately 2.50m depth at the southern end of the western trench (Trench 2). The earliest deposit encountered within this sondage was a mixed made ground containing gravel and brick rubble - this was seen at a maximum depth of 17.65m OD. This deposit was sealed by a thick layer of late post-medieval/early modern made ground encountered at a height of 20.04m OD. The mixed qualities of both these deposits in terms of composition and cultural material (pottery dating to 1760-1780 and glass dating

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<sup>6</sup> Meager 2010



to the late 19<sup>th</sup> to early 20<sup>th</sup> century) suggested that they were imported and almost certainly related to the infilling after the abandonment of a large Gasometer associated with the Chartered Gas Works, located within the vicinity of Trench 2.

## **4.2 Topography**

- 4.2.1 The site is roughly level with a spot height of 19.5m AOD, positioned immediately north of the junction with Seward Street and Central Street, northeast of the site.
- 4.2.2 No geological or topographical anomalies are known within the vicinity of the site.
- 4.2.3 No watercourses or naturally occurring bodies of water are known within the vicinity of the study site.

## **5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND**

The archaeological and historical background of this site has been laid out in full in the Archaeological Desk Based Assessment<sup>7</sup>. The following is a summary of the data from that document, as well as a short summary of the results of the previous archaeological evaluation.

### **5.1 Introduction**

- 5.1.1 No archaeological finds or features relating to any prehistoric periods have been identified within the study area. It is thought that during these periods the study site lay within open land or woodland.
- 5.1.2 It would appear that during the Roman and Anglo-Saxon periods the site also lay in an area of agricultural land or woodland, and that during the medieval period the site lay in marginal, agricultural land beyond the extent of known medieval settlement and activity outside the City.

### **5.2 Post Medieval & Modern**

- 5.2.1 Development of the area of the site is likely to have commenced in the later post-medieval period. Archaeological observations of geotechnical test pits in 1997 identified possible eighteenth century walls and ground surfaces, at depths of c.1.5-2.5m below ground level.
- 5.2.2 The study site was formerly occupied by the Brick Lane Gasworks, also known as the Great Gas Manufactory, owned by the Chartered Gas Company. It was constructed 1812-1815, and was one of the earliest and most visited gasworks in the world. Much of the technology of the industry was evolved here, including the production and distribution of coal gas. The works were enlarged in 1853-4, before finally closing in 1871. The site was subsequently used as a depot, and also as showrooms and workshops. Some of the gasometers were apparently still present in 1898 (MLO70990).
- 5.2.3 The 1827 Greenwood plan shows the study site lying west of the Gasworks, occupied by a cooperage building, which may relate to the Golden Lane Brewery Company, which formerly lay to the east of the site.

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<sup>7</sup> Meager 2010

- 5.2.4 The First Edition Ordnance Survey map from 1874 shows the study site in some detail, occupied by two retort houses and a gasometer for the Gasworks. Archaeological observations of the geotechnical test pits in 1997 revealed possible gasworks foundations at a depth of c.1m below ground level.
- 5.2.5 The Second Edition Ordnance Survey shows the removal of the gasworks. The study site is shown largely unoccupied. The Third Edition Ordnance Survey (1913) shows the presence of rectangular buildings running north-south across the western part of the site.
- 5.2.6 The 1938 Revised Ordnance Survey shows the western end of a building and a gantry extending eastwards, with open space towards Pear Tree Street.
- 5.2.7 The Bomb Damage map, dated 1946, shows damage to the buildings within the study site. Black signifies total destruction, red signifies serious damage and orange stands for general blast damage.
- 5.2.8 The 1954 Ordnance Survey shows the absence of the destroyed building in the north western corner of the site. The 1960-61 and the 1968-71 Ordnance Surveys show no significant changes.
- 5.2.9 The 1996-7 Ordnance Survey Shows the clearance of the buildings formerly occupying the study site.

### **5.3 Trial Trench Evaluation; October 2011**

- 5.3.1 The archaeological evaluation of the site encountered masonry structures associated with the southern Retort House of the Chartered Gas Works discussed above, which were identified in Trench 3, and the made ground backfilling a gasometer within Trench 2. The heights and differing characters of this made ground indicated truncation associated with the infilling and levelling of the gas works prior to the constructing of the 20<sup>th</sup> century buildings also recorded within Trench 2.

## 6 ARCHAEOLOGICAL METHODOLOGY

6.1 **Archaeological Evaluation:** The excavation of three evaluation trenches was outlined in the Specification for an Archaeological Evaluation<sup>8</sup>. The aims of the evaluation were to address the following objectives:-

- To establish the presence or otherwise of Post Medieval and Modern activity, together with any earlier or later activity, and to define the date and nature of such activity.
- To establish the environmental context of Post Medieval and Modern,
- Together with any earlier and/or later activity.
- Evaluate the likely impact of past land use and development.
- Provide sufficient information to construct an archaeological mitigation strategy.

6.2 Following instructions from the PCA Health & Safety Director Trench 1 was not excavated due to the very elevated levels of certain contaminants. Trenches 2 and 3, excavated to a depth of 1.2m depth, were also located within areas of elevated levels of contamination, and as such additional measures were implemented for the investigations which are detailed in the evaluation report.

6.3 The archaeological watching brief was designed to further map and record the archaeological structures recorded during the evaluation. Following the breaking out the hard-standing with a hydraulic breaker across the area of the site, ground reduction was undertaken in sections across the site until archaeological structures were identified or the required formation depth was attained. Ground reduction was undertaken with a mechanical exactor fitted with a flat-bladed ditching bucket in spits of between 150mm and 200mm, under the supervision of the archaeologist.

6.4 All deposits were recorded on *pro forma* context sheets. Trench plans were drawn at a scale of 1:50 and sections were drawn at a scale of 1:10 or 1:20, depending on which scale was more appropriate. The locations of the structures were surveyed by hand or using a GPS system. A photographic record was also kept in black and white, colour slide and digital formats. Following confirmation to the groundworks contractor that all recording in each section had been completed, the structures were removed by machine to formation depth.

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<sup>8</sup> Meager 2011



- 6.5 A surveyed spot height was established on the site using GPS equipment, which had a value of 20.80m OD.

The research objectives for the archaeological watching brief were outlined in the Written Scheme of Investigation for an Archaeological Monitoring Exercise. The aims of the archaeological watching were to address the following objectives:-

- To record any archaeological artefacts and ecofacts and their context.
- To record any surviving traces of the former gasworks
- To record any other significant archaeological deposits which become exposed during construction works

## 7 THE ARCHAEOLOGICAL SEQUENCE

### 7.1 PHASE 1 – 19<sup>TH</sup> CENTURY

#### THE CHARTERED GAS WORKS (Figs 3 & 4)

7.1.1 Features were identified across the site which relate to the production of coal gas during the sites occupation by 19<sup>th</sup> century Chartered Gasworks, which were constructed between 1812 and 1815 and occupied the site for the majority of the 19<sup>th</sup> century.

7.1.2 Structures and deposits of archaeological significance were given unique context numbers; these are referred to in square brackets throughout the following text.

#### Southern Retort House:

7.1.3 Features identified within the south eastern quarter of the site all appeared to relate to industrial activity associated with the production of coal gas within the southern of two Retort Houses recorded during the archaeological investigations.

7.1.4 These features were identified in both the watching brief and within Trench 3 during the evaluation.

7.1.5 **Arched Outshot Structure:** Two arch supports were record as contexts [7] (located in the west of the Trench 3) and [8] (in the east of the same trench) in the evaluation. The arch supports were topped with bricks angled towards each other .These were part of a series of three arches briefly observed in section during the watching brief [34]. The arched structure formed by [7], [8] and [34] was observed in the northwest corner of the Retort House. The structure appeared be the remains of an outshot of the Retort House, shown on the 1871 Ordnance Survey map. It is possible that this structure was the remains of base of the Retort House furnace, or a bunkering facility for incoming coal.

7.1.6 The three arches bases measured 9m east – west by 2.6m north south, creating bays of 2.1m width.

7.1.7 Arch supports [7] and [8] were recorded at a height of 19.94m OD and 20.13m OD respectively and had a maximum depth of 0.36m as seen. Due to soil contamination in this area no brick sample was taken, but both appeared to be of the same fabric as the brick sample recovered from the northern wall [9] of the southern Retort House.

- 7.1.8 **Northern wall:** The northern wall [9] of the southern Retort House was identified in the evaluation, abutting the arched structure. This was formed of an east-west red brick wall, 0.22m in width and running across Trench 3, returning to the south in the eastern side of the trench. This return, measuring 2.35m in length, probably represents the northern end of a substantial internal wall observed during the watching brief [23]. The north section of the return also acted to support the arch bases. This was found during the evaluation at a level of level of 20.13m OD and to a depth of 0.75m.
- 7.1.9 **Retort House Walls and Foundations:** Brick samples were taken during the evaluation from the main structural wall and foundation [9]. This was constructed of fresh unfrosted post-Great Fire bricks type 3032 (date range 1825-1900), also having some reused 3032 and fresh Yellow London Stock Bricks type 3035, possibly indicative of an alteration or repair, although both were bonded with the same Roman Cement.
- 7.1.10 Directly to the south of [9] was a vertically set iron pipe [17] with a diameter of 100mm, encountered at a 19.80m OD. The pipe probably conveyed gas or heat and is likely to have been related to the masonry structure directly to the north.
- 7.1.11 **Internal walls and foundation:** The foundations of various internal walls and sub divisions were observed during both the evaluation and watching brief stages.
- 7.1.12 During the evaluation masonry walls [13], [14] and [15] were examined in detail, at the southern part of Trench 3. These walls were constructed from type 3032 bricks and bonded with Roman Cement (date range 1825-1850). These walls formed the same east to west internal wall, subdividing the eastern side of the southern Retort House.
- 7.1.13 The internal walls observed in the watching brief [23] were also constructed of red brick bonded with Roman Cement, roughly dividing the Retort House into four quarters, with a separate subdivision observable in the south western quarter. The foundations of these walls appeared mixed in their construction, partially formed of brick and partly of poured concrete. These foundations appeared to extend to a depth of around 4 to 5m below modern ground level, though lack of safe access prevented more accurate measurement of this.
- 7.1.14 Within the internal subdivisions, structural foundations were observed in the eastern half of the Retort House, with a substantial brick base [37] overlying two east-west orientated flues [24] and [25] (see below).

- 7.1.15 **Central Retort Base and Flues:** During the removal of the western wall of the Retort House a brick base [37] and two integral under floor flues , [24] & [25], were observed in section (see Plate 1 below). These were highly truncated by a large modern brick drainage tank. The brick base measured over 11.5m north south and was approximately 1m thick. It may have once spanned the majority of the south eastern quarter of the Retort House. The underlying flues were both 0.9m in diameter, with an internal diameter of 0.45m. These probably carried either fresh air to, or hot exhaust gases from, the furnace to the chimney.



Plate 1; Flues [24] & [25] below Retort Base [37], looking west

**Gasometer Wall and Buttress:**

- 7.1.16 A fragment of curved masonry [20] was observed during remediation works at depths of approximately 5m- 4.5m BGL. This was interpreted as representing the remains of the gasometer wall. Immediately adjacent and partially integral to this was a vertical fragment of masonry. This was located immediately west of the foundations of the eastern wall of southern Retort House. This may represent the remains of underground buttressing used to strengthen the gasometer walls. It is likely that buttressing would have been required to absorb the loading associated with columns.



**Gasometer Wells:**

- 7.1.17 Three brick well-like structures were identified during the watching brief. Two of these were located on the projected perimeter of the gasometer, one on the western boundary of the site [22] and one on the southern boundary [21]. The western well was surmounted by a large cast iron pipe; the southern well had been extensively damaged, probably during the demolition of the gasometer. A third well [33] was located on the eastern side of the site, immediately north of the Southern Retort House. This well contained a large cast iron vessel, formed of pre-cast caisson-like sections.
- 7.1.18 **The western well** (see Plate 2 below) was constructed from red brick 3032 and measured 2.7m in diameter. The well head was surmounted by a large cast iron pipe which returned towards the north immediately below the modern slab level. The well appeared to be approximately 3.5m deep, as a slightly stepped out footing was observed at the base.



Plate 2; Western Gasometer Well [22] looking west

7.1.19 **The southern well** appeared to have been constructed in a similar fashion, out of similar brick and dimensions. The well had been extensively damaged and was backfilled with brick rubble, probably during the demolition of the gasometer.

7.1.20 **The eastern well** contained a large cast iron vessel, formed of pre-cast caisson-like sections. A smaller diameter, vertical pipe was observed, running the full height of the structure, inside the vessel. At least five cast iron sections could be observed which appeared to be approximately 1.2m in height and around 1.5m in diameter. Lack of access prevented closer examination of this structure.

**Northern Retort House:**

7.1.21 This northern Retort House consisted of a large structure covering the northern quarter of the site. This was observed during the watching brief, however lack of access, due to health and safety considerations, prevented close examination of the structure, especially in its central section. Slightly closer observations were possible at the eastern and western ends of the structure. These observations suggested the survival of retort bases. An outshot wall and later stanchions were also observed.

7.1.22 **Eastern retort base:** This consisted of a thick red brick base [28] with the remains of six inverted arches, or troughed bays, built into its upper surface. The observed section of the structure measured 11m east–west and 5.4m north-south and approximately 1 m deep. This may represent the remains of a retort furnace base.

7.1.23 **Western retort bench:** This consisted of bayed structures [31] found close to original ground level in the south western corner of the site. The bays measured between 1.4 and 2.2m across. The narrower western-most structure contained a series of narrow brick piers, placed 0.2m apart, constructed of fire brick and was capped with firebrick slabs. The brickwork appeared fire damaged and the upper surface of the slabs heavily sooted. This structure is likely to be the base of a retort bench, where the coal was heated to produce gas.

7.1.24 The retort bench walls were constructed of refractory or fire brick, of various dimensions but apparently manufactured of identical clay fabric. Several of these bricks were stamped with the makers name COWEN. These bricks are likely to have been manufactured by Joseph Cowen & Co. of Blaydon-on-Tyne, and date to c. 1823-1904.

7.1.25 **Outshot wall:** An east-west orientated wall [26] was observed south of the main northern Retort House structure at around 1.3m below ground level. This was built of red brick and was surmounted by a square column base of the same material. A stone

plinth cap of similar dimensions was observed during excavation, this may have been used to support a cast iron column. The observed section of the wall was greater than 3.2m in length and was 0.8m in width.

7.1.26 This outshot wall was impacted upon by large concrete stanchion bases [30], which supported steel H beams. The differing levels and materials suggest that these are from a later period of the sites use.

7.1.27 **Interior wall base:** This structure [27] was formed of 3032 brick and Roman cement. It measured 8.5m east west by 1.2m north south. Only one course of brickwork survived, the exterior face work laid stretcher to stretcher with the body of the brickwork laid diagonally. The shallow nature of these foundations was unusual which may indicate the alternative interpretation of a brick path; however mortar was observable on the upper faces of the bricks, which lacked any sign of wear which would be expected if this was the case.

## **7.2 PHASE 2 - DEMOLITION OF GASOMETER AND RETORT HOUSE**

7.2.1 **Post demolition deposits overlying the Southern Retort House:** All Gas Works structures were sealed by backfill/demolition deposit recorded as context [16] within evaluation Trench 3. This was encountered immediately below the modern concrete surface recorded at a maximum height of 20.32m OD. The deposit was made up by brick rubble and a clinker-type material. One Kiln/Bat Brick type 3261 (1850-1925) was recovered from this deposit within the vicinity of Structures [9] and [10]. The Kiln/Bat Brick and clinker found within [16] might suggest that associated structures [7], [8], [9] and [10] are close to, if not directly related to, a furnace component of the Retort House.

7.2.2 It should be noted that none of the structures within Trench 3 were excavated to their full extent due to the depth of the trench and observation of all structures and deposits during the watching brief was difficult due to the depth of the pile probing holes.

7.2.3 **Post demolition deposits in Gasometer locale:** This deposit was examined in detail during the excavation of evaluation Trench 2. The deposit was formed by a thick layer of late post-medieval/early modern made ground [6] encountered at a height of 20.04m OD. The mixed qualities of both these deposits in terms of composition and cultural material, (pottery dating to 1760-1780 and glass dating to the late 19<sup>th</sup> to early 20<sup>th</sup> century was recovered during the evaluation) would suggest they were imported and almost certainly related to the infilling after the abandonment of the Chartered Gas

Works Gasometer. Both the Gasometer and the Retort Houses are seen on the 1874 Ordnance Survey map, but not on the 1896 Ordnance Survey map, suggesting these infilling deposits are of a contemporaneous date and formed within this time span.

### **7.3 PHASE 3 - POST DEMOLITION PILES**

- 7.3.1 A series six of timber piles [29] were observed in the south west corner of the site, four of which were in aligned, orientated east-west. These timbers appear to align with the foundations of buildings shown on the later 1914 -16 Ordnance Survey plan. However all but one of these timbers did not appear to have reached the base of the concrete foundations, assumed to represent these later structures, so it is unclear whether or not they are associated, or whether they represent an unknown period of development between the two structures. It is unlikely that they were associated with the gasworks as the demolished gasometer would have been present at that time.
- 7.3.2 Due to the depth of excavations, contamination and the unstable nature of the surrounding deposits, only a cursory examination of the timbers was possible. The piles were of box hearted pine. They measured between 300 to 600mm by 600mm thick and were up to approximately 3m in length.

### **7.4 PHASE 4 – EARLY 20<sup>th</sup> CENTURY BUILDING**

- 7.4.1 The 1914-1916 Ordnance Survey plan shows a series of buildings occupying the north and western areas of the site. One of these structures was identified both in evaluation and watching brief. This consisted of a north-south orientated building with concrete foundations [2], [4] and [18]. During the remediation works observed in the watching brief it was discovered that the concrete foundations encased substantial steel H-beams with tapered flanges. These were no doubt installed due to the soft nature of the ground upon which this structure had been built. Trench 2 of the evaluation revealed the eastern external, north-south orientated concrete foundation [3]=[4] and associated east-west dividing masonry wall [2]. The foundations had a width of 1.15m and continued beyond the eastern and western limits of the trench.
- 7.4.2 Wall [18] was constructed of Fletton Bricks with a concrete type bonding material dating from 1890-1950, the top of which was encountered at 20.19m OD. This wall appears to be the west wall of a rectangular building marked on the 1913 Ordnance Survey map. Directly overlying this wall occurring at a height of 20.34m OD was an east-west



orientated concrete foundation [2], presumably representing an internal wall. Two further east-west internal walls were recorded across the main building footprint during the watching brief, as well as both the north and south external walls of the structure.

- 7.4.3 A similarly constructed, although heavily truncated structure [35] was recorded in the central northern area of the site, which again corresponds closely with a structure visible on the 1913 Ordnance Survey map and is interpreted as representing part of the same phase of activity.

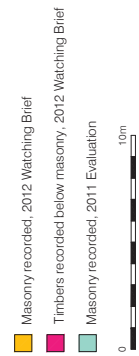
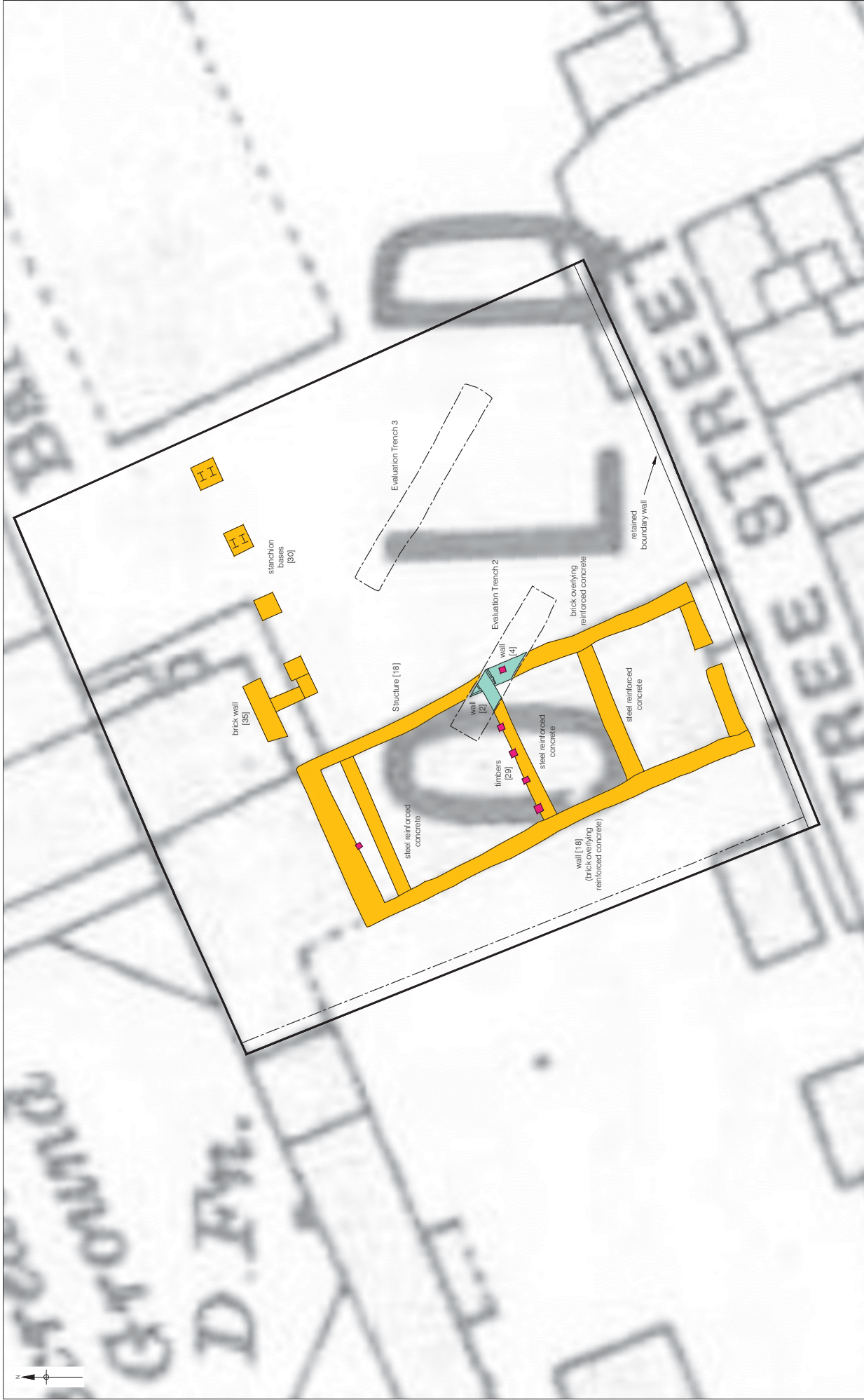
## **7.5 PHASE 5 - LATE 20<sup>TH</sup> CENTURY**

- 7.5.1 The majority of the site was sealed by a modern brick rubble deposit [1], probably associated with the demolition of pre-existing buildings and transformation of the site into the current tarmac car park.









## **9 INTERPRETATION AND CONCLUSIONS**

- 9.1 No natural deposits were encountered in machine excavated sondages within either Trenches 2 or 3 or in the watching brief. The evaluation of Seward Street to the east (site code TDI 09) encountered natural deposits at a height range of between 14.96m OD in the north, 16.71m OD in the east and 15.98m OD in the south, confirming that there were indeed unlikely to encounter natural deposit at the maximum depth reached.
- 9.2 No definitive pre-19<sup>th</sup> century features or deposits were recorded in the course of the archaeological investigations. Structural elements, constructed of concrete and brick, relating to the Chartered Gas Works were recorded and date between 1812 and 1854. In particular, structural elements of the both the northern and southern Retort Houses were revealed within Trench 3 and throughout the watching brief.
- 9.3 Substantial components of the southern Retort House foundations survived including the main external walls, internal sub-divisions and parts of the retort's furnace base, under floor flues and an arch structure which may be the remains of the furnace entrance through which coal was delivered to fire the furnace.
- 9.4 Parts of the northern Retort House also survived, including the furnace base at the eastern end and what is probably the lower part of a retort bench at the western end, on which coal was heated to drive off the gas and tar products produced in the plant.
- 9.5 A series of three brick well structures were observed. Two of these, the western and southern-most wells, are probably directly related to the operation of gasometer, either to release gases or liquids from the holder. The third well, located just to the north of the southern Retort House, was lined with cast iron. This may have represented the location of a condenser through which the hot gas from the plant would have passed and heavier elements such as tar products would have been extracted as the gases cooled.
- 9.6 Although parts of the gas works were anticipated to be located within Trench 2, no structural elements were found during the evaluation. However during the watching brief a small fragment of gasometer wall and associated buttressing was found to have survived what appears to have been a surprisingly thorough demolition of this structure. Extensive and thick deposits of made ground was interpreted as the infilling of the gasometer site.
- 9.7 A series of timber piles found in the western side of the site may represent support for the foundations of the building shown in the 1914 - 1916 Ordnance Survey map, or

could potentially indicate a previously unrecorded structure occupying the site between the second edition 1894-96 Ordnance Survey and the later building.

- 9.8 large portions of a masonry building was recorded within Trench 2 and across the western side of the site during the watching brief, but this building post-dates the Chartered Gas Works and fits almost exactly with that shown in the 1914-1916 Ordnance Survey map.



## **10 ACKNOWLEDGMENTS**

- 10.1 Pre-Construct Archaeology Ltd would like to thank Mount Anvil for commissioning the work and Richard Meager of CgMs Consulting and Kim Stabler of the Greater London Archaeology Advisory Service for monitoring the work. Thanks are also extended to Mount Anvil for their assistance on site.
- 10.2 The author would like to thank Tim Bradley for project managing, James Langthorne for supervising the evaluation and initial watching brief stages and Richard Archer for surveying the site. Thanks also to Hayley Baxter for the illustrations, Sophie White and Chris Cooper for Logistics, Kevin Hayward for dating the masonry samples recovered from the site and Tony Baxter and Ian Cipin for their work on site during the evaluation.

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**APPENDIX 1 – CONTEXT INDEX**

PEA11	3	2	TR2	S1	Masonry	N-S Brick Wall	20thC	2
PEA11	4	2	TR2	S1	Masonry	N-S Concrete Foundation	20thC	2
PEA11	5	2	TR2	S1	Cut	Construction Cut	20thC	2
PEA11	6	2	TR2	S1	Layer	Made Ground	19thC	1
PEA11	7	3	TR3	N/A	Masonry	Brick Arch Base	19thC	1
PEA11	8	3	TR3	N/A	Masonry	Brick Arch Base	19thC	1
PEA11	9	3	TR3	N/A	Masonry	Brick Structure	19thC	1
PEA11	10	3	TR3	S2	Masonry	Brick Structure	19thC	1
PEA11	11	3	TR3	N/A	Masonry	Concrete Foundation	19thC	1
PEA11	12	3	TR3	N/A	Masonry	Concrete Foundation	19thC	1
PEA11	13	3	TR3	N/A	Masonry	E-W Brick Wall	19thC	1
PEA11	14	3	TR3	N/A	Masonry	E-W Brick Wall	19thC	1
PEA11	15	3	TR3	N/A	Masonry	E-W Brick Wall	19thC	1
PEA11	16	3	TR3	S2	Layer	Made Ground	19thC	1
PEA11	17	3	TR3	N/A	Pipe	Iron Pipe	19thC	1
PEA11	18	WB	TR2	N/A	Masonry	Concrete Foundation	20thC	2
PEA11	19	WB	TR3	N/A	Masonry	Brick Well	19thC	1
PEA11	20	WB	TR3	N/A	Masonry	Gasholder & Buttress	19thC	1
PEA11	21	WB	TR3	N/A	Masonry	Brick Well	19thC	1
PEA11	22	WB	TR3	N/A	Masonry	Brick Well	19thC	1
PEA11	23	WB	TR3	N/A	Masonry	Retort House Wall	19thC	1
PEA11	24	WB	TR3	N/A	Masonry	Brick Flue	19thC	1
PEA11	25	WB	TR3	N/A	Masonry	Brick Flue	19thC	1
PEA11	26	WB	TR3	N/A	Masonry	External Brick Wall	19thC	1
PEA11	27	WB	TR3	N/A	Masonry	Internal Brick Base	19thC	1
PEA11	28	WB	TR3	N/A	Masonry	Brick Retort Base	19thC	1
PEA11	29	WB	TR2	N/A	Masonry	Timber Piles	20thC	2
PEA11	30	WB	TR2	N/A	Masonry	Concrete Stanchion	20thC	2
PEA11	31	WB	TR3	N/A	Masonry	Retort Bench	19thC	1
PEA11	32	WB	TR3	N/A	Masonry	Retort House Wall External Wall	19thC	1
PEA11	33	WB	TR3	N/A	Masonry	Brick well, cast iron condenser	19thC	1
PEA11	34	WB	TR3	N/A	Masonry	Brick Arch Base	19thC	1
PEA11	35	WB	TR3	N/A	Masonry	Brick Wall	20thC	2
PEA11	36	WB	TR3	N/A	Masonry	Brick Wall, Chimney Base	19thC	1
PEA11	37	WB	TR3	N/A	Masonry	Brick Retort Base	19thC	1



## APPENDIX 3 – OASIS FORM

OASIS ID: preconst1-120486

### Project details

Project name	An Archaeological Watching Brief on Land at Peartree Street, Islington, London EC1, London Borough of Islington
Short description of the project	An archaeological watching brief undertaken in advance of the construction groundwork following initial trial trench evaluation of the site. The earliest deposits encountered during the archaeological investigations were masonry structures associated with the two Retort Houses of the Chartered Gas Works located towards the north and south of the site, as well as a small portion of the largely removed gasometer and associated wells. Following the demolition of the Gas Works a single line of timber piles in the eastern area of the site may represent an intermediary phase of development on the site prior to the construction of a large building recorded across the eastern side of the site and visible on the 1914-16 Ordnance Survey map of the area.
Project dates	Start: 06-02-2012 End: 24-02-2012
Previous/future work	Yes / No
Type of project	Recording project
Current Land use	Industry and Commerce 1 - Industrial
Monument type	MASONRY Post Medieval
Monument type	MASONRY Modern

### Project location

Country	England
Site location	GREATER LONDON ISLINGTON ISLINGTON Land at Peartree Street, Islington
Postcode	EC1
Study area	1600.00 Square metres
Site coordinates	TQ 3210 8250 51.5254461082 -0.09556766018630 51 31 31 N 000 05 44 W Point

### Project creators

Name of Organisation	Pre-Construct Archaeology Limited
Project brief originator	CgMs Consulting
Project design originator	CgMs Consulting
Project	Tim Bradley



director/manager  
Project supervisor Aidan Turner  
Type of sponsor/funding body Developer  
Name of sponsor/funding body Mount Anvil

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### Project archives

Physical Archive recipient LAARC  
Physical Contents 'Ceramics'  
Digital Archive recipient LAARC  
Digital Media available 'Text'  
Paper Archive recipient LAARC  
Paper Media available 'Context sheet','Plan','Report','Section','Unpublished Text'

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Entered by Tim Bradley (tbradley@pre-construct.com)  
Entered on 6 March 2012

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