# Anglia Ruskin University, Cambridge

An Archaeological Evaluation



Dave Webb



# Anglia Ruskin University, Cambridge: An Archaeological Evaluation

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# **Summary**

The Cambridge Archaeological Unit (CAU) undertook the archaeological evaluation in advance of redevelopment at the Anglia Ruskin University at their campus on East Road, Cambridge. Two trial trenches were excavated within the development area revealing a well preserved street of the Victorian period truncated at pavement level with basements and services. Underlying the street was an earlier, extensive pattern of gravel extraction pits of post medieval origin, no earlier archaeological material or features were noted during the evaluation.

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#### Anglia Ruskin University Campus Redevelopment Scheme Evaluation.

#### Introduction

The Cambridge Archaeological Unit (CAU) undertook the archaeological evaluation in advance of redevelopment at the Anglia Ruskin University at their campus on East Road, Cambridge between 28<sup>th</sup> July and 31<sup>st</sup> July 2009. The evaluation was commissioned by Anglia Ruskin University with the aim of establishing the presence, date, condition and significance of any archaeological remains. The evaluation was carried out in accordance with specification produced by the CAU (Beadsmoore). The project was approved and monitored by Cambridgeshire Archaeology Planning and Countryside Advice team (CAPCA).

#### Location and Topography

The site is located within the Anglia Ruskin University Campus, at TL 458583 to the east of the city centre of Cambridge within an area of largely Victorian terraced housing (Figure 5). The underlying geology is Third Terrace gravel deposits within the Cam Valley (Worssam).

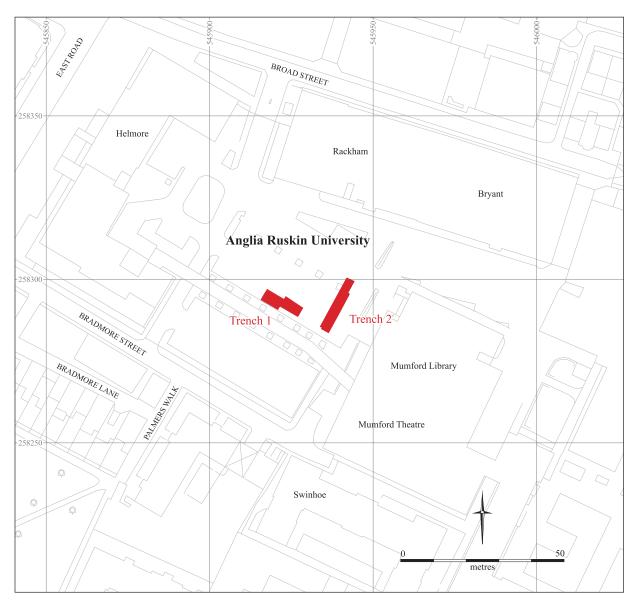
## Archaeological and Historical Background

Until the 19<sup>th</sup> century the development area was largely part of the agricultural hinterland of Cambridge. Only limited evidence of prehistoric activity has been recorded near to the development area, on Warkworth Street, to the west of the site, a Neolithic axe is recorded (HER 05142). Later Roman activity is more frequent with evidence being found to the south (HER 04618, HER 04555). A Roman cemetery was recorded at Barwell (H2303). Saxon material has been recovered to the south of the site (HER 053339), whilst in 1847, Saxon burials were located at the site of Mill road cemetery (HER 04644).

In 1807 a parliamentary act for the enclosure of the Common Fields of East Cambridge including Barnwell was passed which resulted in the redistribution of the land to the east of Cambridge (Hesse). The Barnwell fields were divided into smaller lots and allocated to the previous users, including the collages and private individuals. As a result the land was free to be developed for housing by the owners or developers. By the late Victorian period, the Barnwell Fields had largely become a densely occupied area of terraced housing. 19<sup>th</sup> century coprolite workings have possibly been identified in a recent archaeological evaluation adjacent to the site (MCB18137).

#### Methodology

The objective of the evaluation was to determine the presence or absence and character of any surviving archaeology within the development area, to achieve this aim two 2.0m wide trenches totalling 30.0m in length were excavated at right angles to each other within the campus courtyard. The evaluation trenches were excavated by a tracked 360° machine using a 2.0m wide toothless bucket under archaeological supervision by CAU staff. The initial aim of the evaluation was to cut two 15.0m trenches at right angles to each other, this was modified during excavation to accommodate uncovered services, resulting in Trench 1 being staggered. Any potential archaeological features were investigated and treated in concordance with the specifications drawn up by the CAU (Beadsmoore). The recording was carried out following the CAU modified MOLAS system (Spence) of archaeological site



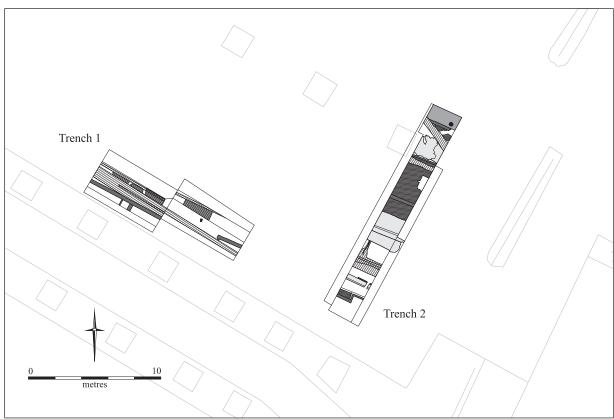


Figure 1. Location map

recording. All work was carried out in accordance with statutory Health and Safety legislation and with the recommendations of SCAUM (Allen & Holt).

The site code is ARU09

#### **Results**

Two evaluation trenches were opened within the development area of the Anglia Ruskin University Campus, both located in the central courtyard. The courtyard comprised of a turfed area with trees, crossed by a pavement and with known services providing power for the lighting (Figure 1). The first trench was aligned north west to south east following the inner edge of the turfed area but had to be staggered to allow for modern services whilst the second trench was aligned south west to north east along the bottom edge of the turfed area.

#### Trench 1

#### Reinstated Levels

Initial stripping revealed a uniform layer of dark brownish grey sandy loam [1] with few small sub angular gravel inclusions beneath a turf lawn. Beneath the top soil was a layer of dark reddish brown sandy silt [2] with occasional lumps of compacted rounded firm sandy material (depth 0.45m). The layers appear to be a sequence of reinstated and made up ground to provide a suitable ground for the quadrangle lawn above demolition levels. Beneath the reinstated levels was a mixed layer (depth 0.45 – 0.65m) of mid to dark grey silty sand [3] with frequent small to medium sub angular gravel inclusions. Other material included brick fragments, tiles, roof slates, tarmac lumps, cobbles, setts and some domestic debris. The material is largely made up of the remnants of a recent car park surface that had served the Anglia Ruskin University Campus and demolition rubble from the structures cleared for the building of the Campus.

Removal of the demolition debris exposed a well defined linear cut [10] of a modern service pipeline (0.90m in width), aligned northwest to southeast. Due to the disturbed nature of the demolition material it was not clear if the pipeline cut through the remnants of the car park layer and was a later service associated with the Anglia Ruskin University Campus or if the pipeline was a service associated with the properties cleared for the development of the campus. Although the pipeline follows a similar alignment to the earlier properties no ancillary pipelines serving the properties were noted and the coincidental alignment may be due to the constructors placing the pipeline in a position to avoid known remnant structures.

### Properties and Street level

Removal of the demolition level uncovered (Figure 3) the truncated façade [F.1] of at least two properties on the south west side of the trench along with a network of services. The façade was aligned in a northwest to southeast direction with a length of 6.0m plus being exposed by the machining. The lower visible foundation course of the facade [11] comprised of a double width of predominantly yellow brick (0.22 x 0.11 x 0.07m) on the outer courses with pale red bricks (0.22 x 0.11 x 0.07m) more frequent on the inner courses. The bond is an English bond which at the lower foundation level formed a continuous structure. The southernmost section of the façade continued in this manner to street level where it was truncated. Two additional interior walls were aligned at  $90^{\circ}$  to the facade in a southwest direction, the easternmost wall [14] formed



a) 19<sup>th</sup> C. Gravel extraction pit



b) Remnant of Setts and Pavement.

Figure 2.

the property division wall comprising a double course of predominantly yellow brick (0.22 x 0.11 x 0.07m) with some pale red bricks (0.22 x 0.11 x 0.07m). The more westerly second wall [15] was a single brick width internal division wall possibly associated with a coal chute or a staircase. The façade of the westernmost property was rebuilt above the lowest foundation level of yellow brick courses with alternating layers of red brick work [12] (0.22 x 0.11 x 0.07m) and dressed clunch stone [13]. The clunch stone was irregular in dimensions although generally of a square or rectangular shape with dressed facing. Both the bricks and clunch where bonded with a coarse yellow gritty mortar. A single brick width internal wall at 90° to the façade possibly formed a coal chute or a staircase. The interior cavity behind the façade was filled with demolition rubble. The cavity initially had most likely formed cellars however the full extents could not be investigated due to unstable ground conditions.

Two further brick structures (Figure 3) are likely to have been associated with the row of properties although they had been truncated by the cut of a recent service pipeline trench. The first feature [F.2] was a circular brick lined soakaway capped by an irregular concrete slab. The soakaway [16] was constructed of yellow bricks (0.22 x 0.11 x 0.07m) arranged in a spiralling form. Aligned to the south west was a double course of bricks with semi circular recesses arranged to form a crude pipeline. The soakaway was located approximately 1.0m from the properties façade, placing it under the pavement area of the street. The second feature, [F.3] a double width course [17] of yellow bricks (0.22 x 0.11 x 0.07m) aligned west to east turning 90° at the northwesternmost end, was again truncated by the same modern services trench. The outer course of bricks was composed of yellow bricks (0.22 x 0.11 x 0.07m) whilst the inner course of bricks was composed of yellow frogged bricks (0.22 x 0.11 x 0.07m), the mortar was a pale sandy lime mortar. The interior of the brickwork was filled by demolition rubble. The feature was on a similar alignment to the properties facade although projecting 0.5m into the presumed pavement area and was most likely a coal chute or possibly delivery chute serving the adjacent property.

In the northwest end of the trench, two well defined shallow linear cuts [6] were aligned northeast to southwest with steep straight sides and concave bases. The fill in both cases comprised of dark grey silty sand [5] with frequent small to medium sub angular gravel inclusions, within the fill were lead services pipes. Similar cuts where repeated at regular intervals along the trench i.e. "down the street". At the southern end of Trench no. 1, where it had been staggered to the east to avoid modern services, the network of lead pipes could be seen to link to a 5" cast iron water main aligned north west to south east, the same arrangement of piping was seen in Trench 2. Although the piping had been truncated by latter services the network of pipes had most likely formed the water supply for the properties. The pipes at the northwest end of the trench cut into a layer of soil mixed with lime plaster and brick rubble, this layer was probably the remnants of construction layers associated with the properties. The relationship of the water main network and the construction layers suggests that the water main was a latter addition to the housing in the street at this point and not part of the initial construction phase of properties and street.

#### **Gravel Pits**

In the few remaining areas undisturbed by the construction of properties and their attendant services were a regular sequence (Figure 3) of well defined cuts, rectangular in plan with steep near vertical sides (the base is unknown as features where not fully

excavated) and fills comprised of sharply defined interleaving lenses of similar coarse sandy gravel material. The gravel pits were cut into yellowish brown sandy gravel natural with bands of finer sands (Figure 2a).

#### Trench 2

#### Reinstated Levels

Initial excavation of Trench 2 revealed the same sequence of reinstated levels and demolition rubble outlined for Trench 1 (Figure 3). Beneath the demolition level the truncated façades of at least two properties was revealed along with the remnants of a road, pavement and services for the properties.

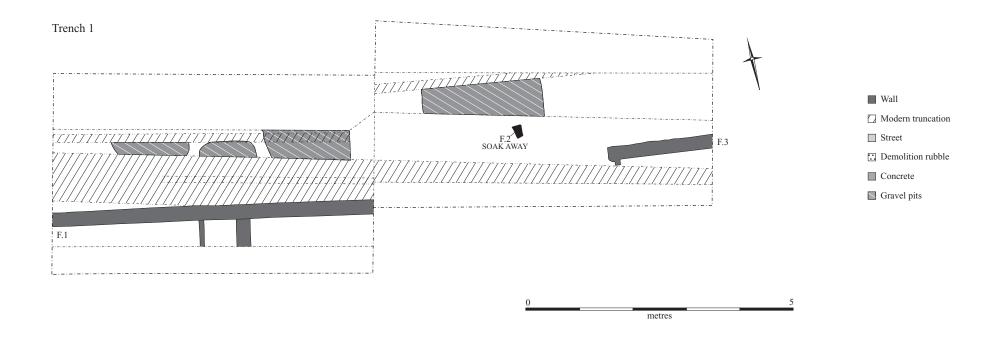
#### South West Property (House with cellar.)

In the southern end of the trench, a northwest to southeast aligned façade [F.4] was exposed, the façade was on the same alignment as the properties façade [F.1] seen in Trench 2 and is presumed to be a continuation of the terraced properties. The facade comprised a double width of yellow brick [18] (0.22 x 0.11 x 0.07m) in an English bond. Below street level the courses were predominantly pale red bricks (0.22 x 0.11 x 0.07m) with occasional yellow bricks (0.22 x 0.11 x 0.07m). The bricks in the lower courses appeared to be of an inferior quality and were frequently damaged. The courses were bonded with a pale brown sandy mortar approximately 2cm's thick. The inner surface of the wall had been treated with a thick layer (3cm) of plaster. The wall extened to a depth of 2.00m below the ground surface with the interior cavity forming a cellar. The floor [19] of the cellar comprised a concrete layer. Another course [20] of double width yellow brick (0.22 x 0.11 x 0.07m) covered with plaster bonded to the façade and aligned at 90° appeared to form the property division wall. The cellar was filled with demolition rubble [21] comprising brick, slate, wood moulding, mortar and a small quantity of domestic debris. The domestic debris included 4 Kilner jars and a Vat 69 whisky half bottle.

The foundation trench [22] for the façade [18] was 0.5m wide along the outer front of the structure. The fill [23] was predominantly lime mortar with some trampled soil and building debris, the material had spread over the adjacent natural and interleaved with top soil contaminated with building debris forming a construction layer. A latter addition to the facade of the structure in the form of a coal chute [24] cut the foundation trench [22]. The chute was constructed of a single width course of yellow brick (0.22 x 0.11 x 0.07m) tightly bonded with little mortar. The course projected 0.5m away from the facade at an angle of 90° before turning parallel to the façade for at least 0.8m. The chute extended to a depth of 0.5m and was filled with the same demolition rubble [21] as the cellar. The chute brickwork only butted up to the façade and was not bonded into it. The brickwork was in good condition. The foundation trench [25] for the coal chute [24] was 0.1m wide along the outer front of the structure; the fill was greyish brown silty sand with small sub-angular gravel inclusions and other construction material.

#### Street and Services

Adjacent to the façade of the south west property a layer [26] of made up ground comprising top soil and some construction rubble was exposed. The layer (1.30m width) occupied the space between the façade of the property and the kerbstone [27] of the street. Prior to truncation by the construction of the latter car park, this layer probably formed the foundation for the street's pavement. The kerb [F.5] on the south



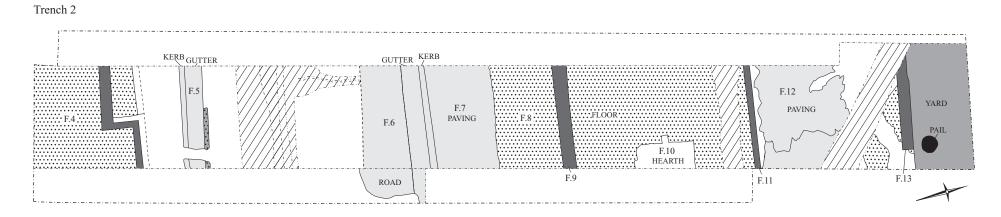


Figure 3. Trench plans

west side of the street was made of a course of large (0.90x 0.35x 0.10m) sandstone slabs [27] placed end on and aligned northwest to southeast. The kerb stone sat on top of some of the construction layers [23] but also butted up to some of the interleaving layers suggesting that the construction of the house and kerb was contemporary. If the house and kerb were contemporary it is most likely that the road itself was constructed at the same time. Butting up against the kerb stones [27] were four courses of granite setts [28] aligned northwest to southeast (Figure 2b). The length of the individual setts varied between 0.12m and 0.18m however the width 0.07m and depth 0.12m were constant. The setts were bonded with a soft cream coloured mortar, segments of the mortar facing into the road appeared to have the impression of further setts suggesting that the setts, as well as forming the gutter formed the road surface.

On the north east side of the road a similar group [F.6] of four courses of granite setts [29] aligned northwest to southeast and butting up against a course of kerb stones [30] was observed. The length of the individual setts varied between 0.12m and 0.18m however the width 0.4m and depth 0.07m were constant. The setts were bonded with a soft cream coloured mortar in places and in other places with coarse pale grey gritty cement. Segments of the mortar facing into the road appeared to have the impression of further setts. The kerb stones were large granite slabs [30] placed end on and aligned northwest to southeast. The mixture of bonding material suggests that the road surface has been rebuilt on occasions. Adjacent to these setts and on the south side of the trench was a remnant of tarmac road surfacing [31] made of several layers of resurfacing. The initial layers butt up to the setts [29] forming the gutter on the northeast side of the road whereas latter layers overlap the gutter in places and butt up to the granite kerb stones [30].

The main central segment (crown) of the road surface had been truncated by the latter construction of the Anglia Ruskin Campus car park and the related levels. The removal of the demolition rubble from this area revealed a network of services cutting into a yellowish brown sandy natural. On the south west side of the road aligned parallel to the kerb and adjacent to the setts [28] a continuation of the modern service pipe trench [32] observed in Trench 1 was noted. The pattern of lead pipes and 5" cast iron water main supplying the properties was also repeated.

Between the kerbside and the property boundary a paved area [F.7] had survived the demolition processes unlike at the south west side of the street. The pavement [33] (width 1.30m) comprised a mixture of large stone slabs and concrete slabs. The concrete slabs had an "antislip pattern" suggesting a latter repair or refurbishment of the streets pavement.

North East Property (House with under floor cavity)
Front Yard

Removal of the upper levels revealed an area [F.8] between the pavement [33] and the façade [35] of the structure on the north east side of the street (Figure 3). The area [F.8] was covered in demolition debris [34] and small sandstone slabs. The small slabs previously mentioned formed a slightly irregular alignment adjacent to the buildings façade suggesting that at least part of the small front yard had been paved. Adjacent to the pavement [34] there was the impression of a line of bricks running parallel with the pavement and the façade. The alignment appeared to only be a single



Figure 4: Trench 2 looking North East (composite image)

width and there was no foundation trench, suggesting that it was only a low wall forming a property boundary separating the area from the street.

#### House

Adjacent to the front yard and parallel to the street (Figure 3) was a truncated double width wall [F.9] (aligned northwest to southeast) with an English bonding. The remaining upper courses above street level comprised entirely of yellow brick (0.22 x 0.11 x 0.07m) bonded with pale grey lime mortar. The wall [35] formed the façade of a structure on the north east side of the street. The interior space "front room" to the north east of the façade was filled with demolition rubble [36] comprising brick, slate, wood moulding, mortar and a small quantity of domestic debris. Removal of the demolition [36] material revealed a deep under floor cavity with an irregular surface formed of construction debris impacted into the natural. The cavity exposed the lower levels of brickwork [35] showing a similar pattern to that observed on the southwest side of the street with the yellow brick work being replaced by a poorer quality red brick (0.22 x 0.11 x 0.07m). The foundation courses continued as a double width wall, with the initial base layer having at least a further brick width course stepping out forming the foundation base. Due to the overburden of demolition rubble the dimensions of the foundation trench on the street side of the façade could not be determined. Against the southeast wall of the room was a centrally located fireplace footing [F.10] comprised of a single width [37] of pale red bricks (0.22 x 0.11 x 0.07m) set on a concrete plinth 1.5m in width and projecting 0.5m into the room. The fireplace had at some point been tiled as a quantity of fire surround tiles were recovered from the demolition debris. Projecting from the fireplace, at a right angle across the room, a single width wall of pale red brick was probably intended to add structural support to the joists and floorboards. A northwest to southeast aligned single width dividing wall [F.11] formed with pale red bricks [38] (0.22 x 0.11 x 0.07m) separated the rear of the property from the front of the property, forming an interior dividing wall. The two walls [35] and [38] formed a "front room" of at least 2m by 3.3m in dimension.

To the northeast of the dividing [38.] wall, demolition rubble was spread over a remnant of concrete flooring [39]. The floor [F.12] was uneven and cracked with red leading surviving in places. Modern services had truncated the floor in several places. A double width wall [F.13] with an English bonding formed the rear wall of the property, the remaining upper courses above street level comprised of yellow brick [40] (0.22 x 0.11 x 0.07m) on the outer surface with the inner surface formed of predominantly pale red bricks (0.22 x 0.11 x 0.07m). The foundation courses of the wall were formed entirely of pale red bricks. The red leaded rear room was most likely the Kitchen or Scullery area of the house. To the rear of the property excavation revealed a concreted back yard [F.14] with a smooth and even surface [41]. The yard was divided by a single course of perforated bricks [42] aligned north east to south west forming a drainage channel for the yard.

#### Gravel Pits

Excavation of the under floor cavity and removal of the construction layer revealed a yellow brown sandy gravel [43] natural with earlier gravel extraction pits [45] similar to those seen in Trench 1.





Figure 5. 1886 1st Edition OS map

#### **Discussion**

The Archaeological Evaluation in advance of development at Anglia Ruskin exposed the remains of a Victorian Street and a series of terraced properties. The street, called South Street, is on the 1886 1<sup>st</sup> Edition OS map of the area (Figure 3), the individual properties have been identified on the map and were either side of the Lord Nelson Public House with F.3 possibly being the coal or delivery chute for the Public House. The street and properties had heavily truncated earlier deposits. Where the underlying geology was exposed, a series of earlier quarry pits were revealed. The street to the north of the Anglia Ruskin site is also on the 1886 1<sup>st</sup> Edition OS map and named as East Street however prior to 1827 the road was named Gravel Pit Road (Standring). Although large swathes of the gravel terraces of the Cam valley were exploited for coprolite mining this did not start until after the 1850's with the main rush occurring between the 1860's and 1890's. The earlier naming of the street as Gravel Pit Road may suggest that the pits were for small scale gravel extraction for building rather than the latter coprolite mining. The quarry pits would have heavily truncated any potentially pre-existing archaeology.

Although little material culture was recovered from the site other than structural material, the variation in road surfacing at the north and south end of the site and the different construction of properties on opposing sides of the same street reflects the building practises of the period after the enclosure act with small plots being brought and developed by different builders. The resulting patchwork of similar but not identical terraced housing can still be seen in adjacent streets to the Anglia Ruskin campus.

#### Acknowledgements

The work was commissioned by Anglia Ruskin University and the site was monitored by Andy Thomas (CAPCA). Emma Beadsmoore was the project manager. Donald Horne surveyed the site, Jane Matthews digitized the plans and prepared the graphics. Shannon Hogan assisted on site. Jerry Shoolbred (Clerk of Works Anglia Ruskin University) provided comments on the history of the site.

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**Appendix : OASIS DATA COLLECTION FORM:** England

OASIS ID: cambridg3-66737

#### **Project details:**

Project name Anglia Ruskin University, Cambridge: An Archaeological Evaluation Short description of the project The Cambridge Archaeological Unit (CAU) undertook the archaeological evaluation in advance of redevelopment at the Anglia Ruskin University at their campus on East Road, Cambridge. Two trial trenches were excavated within the development area revealing a well preserved street of the Victorian period truncated at pavement level with basements and services. Underlying the street was an earlier, extensive pattern of gravel extraction pits of post medieval origin, no earlier archaeological material or features were noted during the evaluation.

**Project dates** 

**Start:** 28-07-2009 **End:** 31-07-2009

**Previous/future work** Not known / Not known

Any associated project reference codes ARU09 - Sitecode

Type of project Field evaluation

Site status None

**Current Land use** Community Service 1 - Community Buildings

**Monument type** TERRACED HOUSING Post Medieval

**Monument type QUARRY PITS Post Medieval** 

Significant Finds NONE None

Significant Finds NONE None

Methods & techniques 'Targeted Trenches'

**Development type** Public building (e.g. school, church, hospital, medical centre, law courts etc.)

**Prompt** Direction from Local Planning Authority - PPG16

**Position in the planning process** After full determination (eg. As a condition)

**Project location** 

**Site location** CAMBRIDGESHIRE CAMBRIDGE CAMBRIDGE Anglia Ruskin University

Postcode CB1 1BD

Study area 50.00 Square metres

**Site coordinates** NGR - TL 545929 258298 LL - 51.9090531781 0.247685906362 (decimal) LL - 51 54 32 N 000 14 51 E (degrees) Point

Height OD / Depth Min: 11.80m Max: 11.80m

**Project creators** 

Name of Organisation Cambridge Archaeological Unit

**Project brief originator** Local Authority Archaeologist and/or Planning Authority/advisory body

Project design originator Emma Beadsmoore

Project director/manager Emma Beadsmoore

Project supervisor David Webb

Type of sponsor/funding body Developer

Name of sponsor/funding body Anglia Ruskin University

**Project archives** 

**Physical Archive Exists?** No

Digital Archive recipient Cambridge Archaeological Unit

**Digital Archive ID** ARU09

Digital Contents 'other'

Digital Media available 'Images raster / digital photography', 'Survey', 'Text'

Paper Archive recipient Cambridge Archaeological Unit

**Paper Archive ID** ARU09

Paper Contents 'Stratigraphic', 'Survey', 'other'

**Paper Media available** 'Context sheet', 'Notebook - Excavation', 'Research', 'General Notes', 'Photograph', 'Plan', 'Report', 'Survey'

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