

Cambridge University Department of Engineering, Cambridge

An Archaeological Evaluation



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CAMBRIDGESHIRE:**

Archaeological Evaluation

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September 2014

Report No. 1276

Summary

The Cambridge Archaeological Unit (CAU) undertook the archaeological evaluation of land at Royal Cambridge Hotel and Cambridge University Dept. of Engineering, Cambridge, Cambridgeshire in advance of construction work at the site between 15th to 16th September 2014. Several pits probably associated with the 19th c. Scroope Terrace and one earlier feature pre-dating the establishment of the mid 19th c. property boundaries were recorded. An additional watching brief was carried out on the 9th October 2014 following the digging of a pipe trench for services and foundations.

Introduction

The Cambridge Archaeological Unit (CAU) undertook the archaeological evaluation of the proposed development area at the Royal Cambridge Hotel and Cambridge University Department of Engineering, prior to development of the site for construction of an extension to the Baker Building and other ancillary works. The monitoring was commissioned by Cambridge University Department of Engineering, with the aim of establishing and recording the presence, date, condition and significance of any archaeological remains. The monitoring was carried out in accordance with a specification produced by the CAU (Beedsmoore 2014).

Location and Topography

The development area is centered at National Grid Reference TL 4505 5766 and located on the north side of the Fen Causeway with the Cambridge University Department of Engineering Baker Building to the east and the Royal Cambridge Hotel building (formerly Scroope Terrace) to the west. The development area currently functions as access routes and car-parking for the Department of Engineering and the Royal Cambridge Hotel. The area is characterised primarily by a combination of urban settlement (terraced homes to the south and west, with a flat complex to the north), primary roads (Trumpington Street) and Coe Fen to the west. The underlying geology is Gault with overlying deposits of 2nd river terrace sands and gravel (British Geological Survey. 1978). The local topography is flat at c. 16m OD.

Archaeological background

The desk based assessment (Brittain 2014) for the site contains a comprehensive summary of the archaeological background of the location and will only be summarized here. No known Prehistoric, Roman or Saxon activity is recorded within the development area with only a sparse scattering of artefacts and features, confined to a few examples of Roman, Medieval and post-Medieval pottery and occasional features in close vicinity to the development area (Brittain 2014).

Evidence for the Saxon period in Cambridge is centered on the area of Castle Hill and Magdalene Bridge however recent work at the Institute of Criminology on the University's Sidgwick site indicates the settlement pattern of Saxon Cambridge may have been more widely dispersed (Armour et al. 2003) and in view of the presence of a pre-Conquest church at Little St Mary's and mill at Mill Lane to the north of the development area, a Saxon presence in the landscape may be a possibility.

The Medieval development of Cambridge is better known and to the north of the development area excavations have revealed the former sites of the Friars of the Sack and priory of the Gilbertine or White Cannons (CHER 04876, DCB 7633). Human remains discovered at the Judge Institute may belong to the Gilbertine Priory's graveyard (CHER 11912). The former hospital of St Anthony and St Eloy is recorded to the east of the development area (CHER 04861). Agricultural activity in the form of ridge and furrow is noted to the east of the development area (MCB 15464). Cartographic sources suggest (Brittain 2014) the development area was in agricultural use and was divided into furlongs during the medieval period, indicating that structures are unlikely but residual traces of middens, manuring, and agricultural activity for the period may be encountered.

Post-Medieval activity within the study area and development area consists primarily of listed buildings and properties of local interest and significance. Cartographic evidence for the period suggests the development area was used for horticulture and grazing purposes from the 17th century onwards until the 19th C. period when the land became incorporated into the properties facing onto Trumpington Street.

Methodology

The objective of the evaluation was to determine the presence or absence and character of any surviving archaeology within the area of investigation. The excavation by machine operatives was carried out under archaeological supervision by CAU staff. Any potential archaeological features were investigated by CAU staff and treated in concordance with the specifications drawn up by the CAU (Beedsmoore 2014). The recording was carried out following the CAU modified MoLAS system of archaeological site recording (Spence 1990). All work was carried out in accordance with statutory Health and Safety legislation and with the recommendations of SCAUM (Allen & Holt 2002). In total an area of approximately 78 square metres (trench dimensions; length 26m width 2.8m) was investigated.

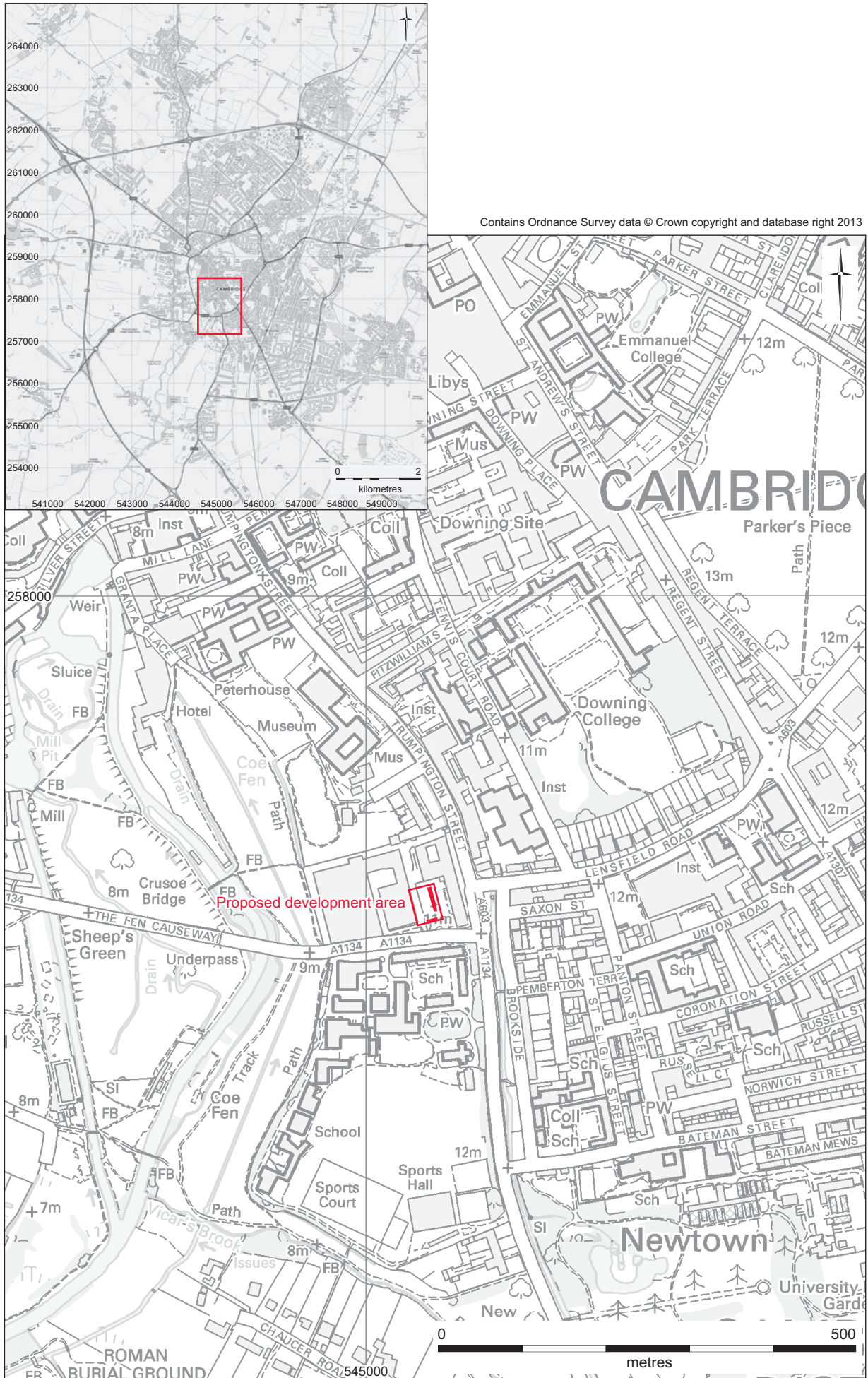


Figure 1. Site location



Figure 2. Trench location

Site Code ENG14

Results

Excavation of Trench 1 (26m x 2.8m) was carried out by a 360° machine equipped with 1.8m toothless bucket (initial break up of car park surface was carried out with a toothed bucket) and revealed a build-up of tarmac layers (0.00m-0.20m) forming the car park surface, these overlay layers of compacted gravel and rubble (0.20m – 0.40m) all of recent 20th c. origin. Beneath the car park construction layers, the truncated remnants of the 19th C. gardens were exposed, these belonged to the range of properties along Scroope Terrace (currently forming the Royal Cambridge Hotel) to the east of the site. The garden soil (0.40m – 0.60m) comprised a very dark grey sandy clay loam heavily contaminated with brick rubble and other 19th and 20th C. garden debris. Further stripping revealed a yellowish brown sandy clay natural with a moderate frequency of well sorted, small to medium sub-angular gravel inclusions, several intrusive cut features were exposed which are discussed below.

Feature 1

Dimensions; diameter 0.60m depth 0.90m

A small circular pit with cut [002] sloping concave sides and a concave base. The cut originates from the garden soil layer. The pit was filled with [001] a very dark grey sandy clay with very frequent small to medium sized, poorly sorted, angular gravel inclusions. Some of the gravel inclusions exhibited signs of scorching. Also noted were occasional iron fragments and red brick fragments.

A small pit containing a dumped deposit of 19th C. material.

Feature 2

Lower courses [003] of an east to west aligned double width yellow brick (22.5cm x 11cm x 8cm) wall, located within a shallow vertical sided, flat based foundation trench [004]. Depth 0.90m. The wall is truncated by the car park construction layers.

Probable former garden wall, two other similar walls (F.5 and F.7) were revealed on the same alignment, the walls align with structural divisions visible to the east, that previously formed property boundaries within Scroope Terrace the range of buildings now currently forming the Royal Cambridge Hotel. The northern segment of Scroope Terrace was built in 1839 with the southern section being constructed in 1864. Extensions were made to nos. 6-12 in the late 20th c. (EH List entry Number: 1049092).

Feature 3

Dimensions; depth 4.70m x 2.80m⁺ (extends beyond limits of excavation) 1.40m

Underlying F. 2 was a large spread [005] of dark greyish brown sandy clay, sub rectangular in plan and extending beyond the excavated limits of the trench. In section the cut [006] of the feature exhibited shallow sloping slightly concave sides with a concave base, the sandy fill contained a moderate frequency of poorly sorted small to large sub-angular gravel inclusions and exhibited distinctive tip lines. Large animal bones (cattle) were also recovered. The feature overlays F. 4 with a sharply defined interface between the two features.

Feature 4

Dimensions Width/diameter 1.30m depth 1.90m

A sub-circular cut [007] feature with steep near vertical side to the south and a steep sloping side to the north with a slightly concave near flat base. The fill [008] of the feature was comprised of a dark grey silty clay with occasional small to medium sized sub-angular gravel inclusions and occasional highly degraded large bone fragments. The pit would appear to have been water logged on occasions.

Feature 4 may have served as a soak-away (its shallow depth would probably preclude it from serving efficiently as a well), the upper spread of material forming F. 3 probably capped F. 4 after it fell into disuse. The capping of the feature and its location beneath the boundary wall of the Scroope Terrace properties would suggest a date prior to 1864 possibly relating to late or medieval activity however no material was recovered from the feature to confirm this or give a more precise date.

Feature 5

Lower courses [009] of an east to west aligned double width yellow brick (225 x 11 x 8) wall, located within a shallow vertical sided, flat based foundation trench [010]. Depth 0.90m. The wall is truncated by the car park construction layers.

As F. 2.

Feature 6

Dimensions; full extent is beyond the limits of excavation – maximum width 3.00m.

A large semi-circular pit in plan extending beyond the excavated limits of the trench. The cut sides [011] of the feature were straight and vertical in profile with the full extents of the feature extending beyond the depth limit of excavation. The cut of the feature originates within the garden soil layer. The upper fill [012] consisted of a pale yellowish grey sandy silt with frequent poorly sorted angular small to medium sized gravel inclusions and frequent large patches of bluish grey clay. The lower fill [013] comprised a layer of very dark grey sandy clay with frequent small to medium sized gravel inclusions. Both layers contained extensive quantities of brick rubble, reinforced concrete and other 20th C. building debris.

Feature 6 appears to have been deliberately back filled with demolition rubble perhaps from the clearance of garden features when the range of properties was converted to a single use and the property boundaries amalgamated to form the hotel. The dimensions and profile of the feature suggest it may have functioned as a soak-away or well, no material was recovered to suggest a construction date although its backfilling with 20th c. material suggests it was at least open during this period if not functioning and most likely dates to the domestic phase of the use of Scroope Terrace with a late 19th to early 20th C. date.

Feature 7

Dimensions; width 2.20m length 2.80m (full extent is beyond the limits of excavation) depth 1.30m.

A broad linear feature on an east to west alignment extending beyond the limits of excavation. In profile the cut [014] sides of the feature were straight and near vertical with a flat base. The cut of the feature originates within the garden soil layer. The fill [015] comprised a very dark grey sandy clay with a moderate frequency of poorly sorted small to medium sized sub angular gravel inclusions, occasional fragments of brick rubble, slate and glass were recovered. The base of the feature contained a ceramic drain pipe running in an east to west alignment on the northern side of the cut, beneath this was a thin lens of yellowish brown sandy gravel. On the west side of the trench the feature overlay F.no 8.

A 20th c. service pipe trench.

Feature 8

Dimensions; width 1.10m depth 1.90m plus (full extent is beyond the limits of excavation).

A small sub-rectangular pit with full extents extending beyond the limits of excavation, in profile the cut [016] sides of the feature were straight and near vertical. The depth of the pit extended beyond the depth limit of excavation. The pit was cut by F 7. The fill [017] comprised a dark grey sandy clay with a moderate frequency of poorly sorted small to medium sized sub angular gravel inclusions, occasional fragments of brick rubble, slate and glass were recovered.

A small pit containing debris including a clay pipe fragment and bottle glass with embossed lettering (ELY) dating to 19th or early 20th c.

Feature 9

Dimensions; width 0.90m depth 1.30m.

A small semi circular pit in plan with full extents extending beyond the limits of excavation. In profile the cut [018] sides of the feature were moderate sloping and slightly concave with a concave base. The cut originates from the garden soil layer. The fill [019] comprised a dark grey sandy clay with a moderate frequency of poorly sorted small to medium sized sub angular gravel inclusions, occasional fragments of brick rubble, slate and glass were recovered.

A small pit containing debris dating to 19th or early 20th c.

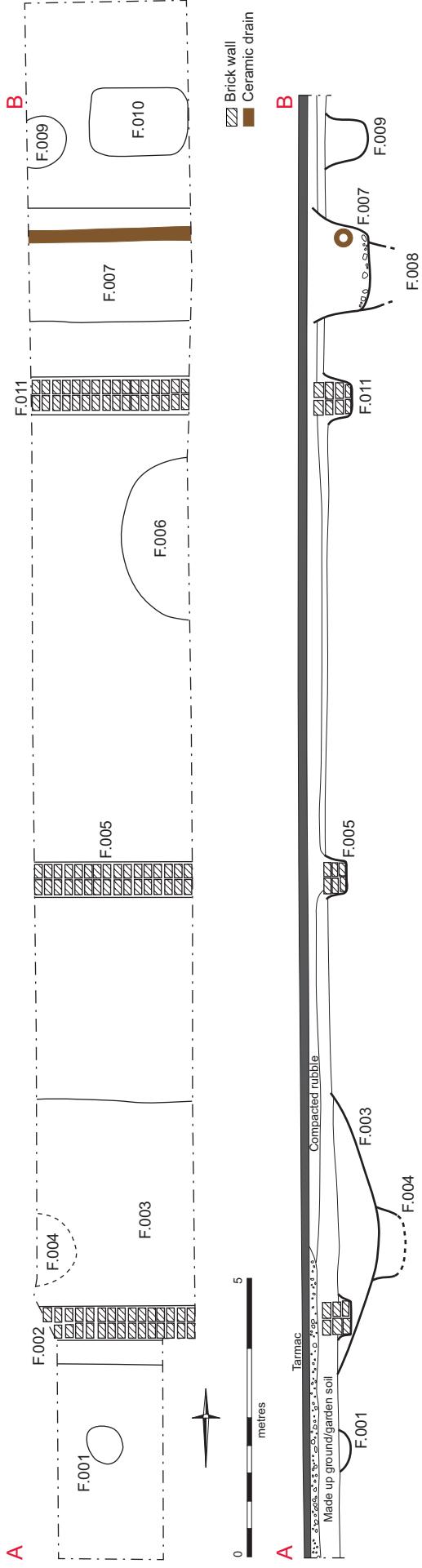


Figure 3. Plan of Trench 1, section and photograph selection

Feature 10

Dimensions; 1.70m x 1.20m depth 1.30m.

A sub rectangular pit in plan, in profile the cut [020] sides of the feature were straight and near vertical with a flat slightly irregular base. The cut originates from the garden soil layer. The fill [021] comprised a greyish brown sandy clay with a moderate frequency of small to medium sized poorly sorted angular gravel inclusions, occasional fragments of flower pots and brick fragments were recovered.

A small pit containing debris dating to 19th or early 20th c.

Feature 11

Lower courses [022] of an east to west aligned double width yellow brick (225 x 11 x 8) wall, located within a shallow vertical sided, flat based foundation trench [023]. Depth 0.90m. The wall is truncated by the car park construction layers.

As F2.

Conclusions

The majority of the features encountered would appear to date to the late 19th C. to early 20th C. use of the land as back-gardens belonging to the Scroope Terrace properties constructed in 1864. The only feature's (F.no's 3 and 4) that belong to an earlier period could not be precisely dated, however it is most likely that they belong to the medieval or post medieval period rather than any earlier period. Other than Features 3 and 4 the surviving remnants of the 19th c. gardens and associated features overlay the natural without any traces of earlier buried soils or activities.

The sparsity of material and features predating the construction of Scroope Terrace suggests little previously occurred within the development area other than agricultural activity and that this has to some extent been truncated by the creation of gardens for the properties.

Acknowledgements

The work was commissioned by the Department of Engineering, Emma Beadsmoore was the project manager acting for the Cambridge Archaeology Unit. Vikki Herring digitized the plans and prepared the graphics. The contractors were Morgan Sindall. Dan McConnell of Cambridgeshire Historic Environment Team monitored the project.

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(EH List entry Number: 1049092)

<http://list.english-ritage.org.uk/resultsingle.aspx?uid=1049092>

Watching brief at the Cambridge University Department of Engineering, Cambridge (October 2014) Simon Timberlake

A watching brief was carried out on the 9th October 2014 following the digging of a 11m long and 0.6m wide pipe trench (Trench 2) for services and foundations along the south side of the footprint for the new extension to the Baker Building. The base of this trench was up to 2.2m below the road level, but the sides of this had been stepped back and the trench also laddered for safe access and working conditions.

No archaeological features were identified, either in section or within the floor of the trench. Instead a complex dump stratigraphy consisting of re-deposited gravel, sand, organic silt and garden soil was encountered, this seemingly deposited from the south and eastern sides of what was presumably once a large excavation dug into the underlying natural (which here consists of a pale-coloured coarse grain sand and gravel, presumably part of the 2nd river terrace sands and gravels (BGS 1978)). Given the small size of Trench 2, and the quite different type of evidence from Trench 1, the depth of disturbance and re-deposition here was not easy to explain, as was its age. Whilst brick and mortar occurred in some abundance higher up in the section, this was altogether rarer within the lensed garden soil, sand and gravel occurring below 1-1.2m depth. Nevertheless, some fragments of abraded 18th century red brick were recovered from the very base of the cut into the natural, the clearly re-deposited nature of this brick suggesting that the large and deep excavation in this area was later, and possibly associated with gravel extraction in advance of the construction of houses as well as back gardens on Scroope Terrace circa. 1864. The uneven nature of the truncated gravel base supports the idea that this area on the east side of this site (i.e. fronting Fen Causeway) was quarried, yet no defined edge to this cut could be seen. However, the excavation into the gravel did appear to be deeper towards the western end of the trench, here being between 2.2-2.4m deep. Higher up in section there was altogether clearer evidence for made-up ground in the form of modern rubble layers which consisted of 19th and 20th century crushed brick, mortar and sand.

Trench 2 (north-facing section)

- 0- 5 cm: tarmac
- 5- 40 cm: crushed brick rubble
- 40- 60 cm: grey silt and clay with modern brick (in part)
- (25) – 70 cm: yellow sand and gravel (re-deposited)
- (50) – 90 cm: crushed 19th + 20th C brick rubble layer
- 90-140 cm: pale sand and gravel (re-deposited) mixed with crushed (modern) brick
- 120 – 200 cm: (East end) a mixed dark grey to mid-brown silty sand with much admixed gravel, plus occasional lenses of brown-reddish sand
- 160 – 220 cm: (Middle trench trench) dark grey-black silt with lenses of re-deposited natural (pale yellow coarse sand and fine gravel)
- 100 – 200 cm: (West end) a dump layer of re-deposited brown-grey silty sands and gravel
- 160- 220 cm: (West end) darker brown silts and gravel with rare brick and abraded lump coal above the truncated gravel base
- 160-240 cm: (across floor of trench) unevenly truncated top of gravel (NATURAL)

Conclusion

No finds were recovered from this watching brief. The different and deeper stratigraphy in Trench 2 attests to the probability that this area was quarried during the early part of the 19th century in advance of house building and the creation of gardens to the rear of Scroope Terrace around 1864. No earlier archaeological features survived the truncation of the gravels in this area, yet the deep backfill sequence associated with levelling across the southern end of this site contains small amounts of re-deposited 18th century brick, and above this 19th and 20th century brick rubble associated with building and levelling work dating to the 20th century.

OASIS DATA COLLECTION FORM: England

OASIS ID: cambridg3-204772

Project details

Project name Cambridge University Department of Engineering, Cambridge

Short description of the project The Cambridge Archaeological Unit (CAU) undertook the archaeological evaluation of land at Royal Cambridge Hotel and Cambridge University Dept. of Engineering, Cambridge, Cambridgeshire in advance of construction work at the site between 15th to 16th September 2014. Several pits probably associated with the 19th c. Scroope Terrace and one earlier feature pre-dating the establishment of the mid 19th c. property boundaries were recorded. An additional watching brief was carried out on the 9th October 2014 following the digging of a pipe trench for services and foundations.

Project dates Start: 15-09-2014 End: 09-10-2014

Previous/future work Not known / Not known

Any associated project reference codes ENG14 - Sitecode

Type of project Field evaluation

Site status None

Current Land use Industry and Commerce 2 - Offices

Monument type PIT Post Medieval

Significant Finds BONE Post Medieval

Methods & techniques '''Targeted Trenches'''

Development type Large/ medium scale extensions to existing structures (e.g. church, school, hospitals, law courts, etc.)

Prompt Direction from Local Planning Authority - PPS

Position in the planning process Not known / Not recorded

Project location

Country England

ite location Cambridge University Dept. of Engineering

Postcode CB2 1PX

Study area 1500.00 Square metres

Site coordinates TL 4505 5766 52.1976373239 0.122559662318 52 11 51 N 000 07 21 E Point

Lat/Long Datum Position derived from charts

Height OD / Depth Min: 16.00m Max: 16.00m

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 Landowner

Name of sponsor/funding body Cambridge University

Project archives

Physical Archive Exists? No

Digital Archive recipient Cambridgeshire County Archaeology Store

Digital Archive ID ENG14

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

Paper Archive recipient Cambridgeshire County Archaeology Store

Paper Archive ID ENG14

Paper Media available ''Context sheet'', ''Notebook - Excavation', 'Research', ' General Notes'', ''Plan'', ''Report'', ''Section''

Entered by Dave Webb (dww25@cam.ac.uk)

Entered on 2 March 2015