

Site of Proposed New 6fe Secondary School, Chiltern Road, London Borough of Sutton: An Archaeological Evaluation Report

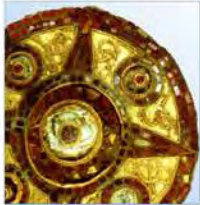
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ARCHAEOLOGY

HERITAGE

CONSERVATION

Site of Proposed New 6fe Secondary School, Chiltern Road, London Borough of Sutton: An Archaeological Evaluation Report

On Behalf of: London Borough of Sutton
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Surrey
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National Grid Reference (NGR): TQ 2589 6248

AOC Project No: 33342

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

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Non-Technical Summary

In September 2016 an archaeological evaluation was carried out by AOC Archaeology on land at the former Sutton Hospital site, Chiltern Road, Sutton, (NGR 525890 162480) (Figure 1). Five trenches were opened during the course of the evaluation, each measuring 20m by 1.8m. The work was commissioned by Sutton Borough Council.

The remains of an air raid shelter were identified roughly in the centre of the site. The walls of the shelter were constructed of reinforced concrete and remain intact to a depth of at least 1.4m below the current ground surface, but the roof has been demolished and the interior filled with concrete and brick rubble.

No other features of archaeological or historic interest were observed.

The archaeological advisor to the borough council has specified that further work will be required on the air raid shelter should development of the site propose to impact upon it. If the remains will not be affected by site development, no further work on that monument will be required at this time. It is not recommended that any further archaeological works be undertaken on the rest of the site, but the final decision rests with the archaeological advisor.

Should no further work be required, publication of the findings of the evaluation will involve a short summary of the fieldwork submitted to the local fieldwork roundup. An OASIS form has been completed and an electronic copy of the evaluation report will be deposited with the Archaeological Data Service (ADS). The site archive will be prepared in accordance with local and national guidance and will be deposited with the London Archaeological Archive and Research Centre (LAARC).

1. Introduction

1.1 Site Location

1.1.1 This document details the results of an archaeological evaluation carried out by AOC Archaeology prior to construction of a new 6fe Secondary School on the site of Sutton Hospital, Chiltern Road, Sutton (NGR 525890 162480) (Figure 1). The site is situated at the junction of Chiltern Road and Cotswold Road. The five evaluation trenches were opened in an area formerly used as a garden and for car parking, to the immediate south of Chiltern Road, on level ground approximately 90 metres above ordnance datum (AOD).

1.2 Planning Background

1.2.1 The local planning authority is the London Borough of Sutton. Archaeological advice to the council is provided by Laura O’Gorman, Archaeological Advisor at the Greater London Archaeology Advisory Service (GLAAS) – part of Historic England’s London Local Office.

1.2.2 The proposed development involves demolition of the existing buildings (this had largely been carried out by the time of the archaeological evaluation) and construction of a new sixth form secondary school and associated facilities.

1.2.3 There are no World Heritage Sites, Scheduled Monuments, Historic Battlefield or Historic Wreck designations within the site boundary. Within 1km of the site, there are three Listed Buildings and one Scheduled Monument. The Scheduled Monument is a milestone dating to 1745 located on Brighton Road (**MLO4508**), while the Listed Buildings are Sutton Lodge (**MLO92577**), Clapham Lodge (**MLO92504**) and Christchurch (**MLO92550**) (all Grade II listed).

1.2.4 A desk based assessment (DBA) was completed for the project by AOC Archaeology in July 2016 (AOC 2016a). The DBA found records of a Second World War air raid shelter on the site, which had been identified in a previous geotechnical investigation (Arcadis EC Harris 2014). The report indicated low potential for archaeological remains beyond that of the air raid shelter, but it is understood that substantial ground reduction may be required to create acceptable construction areas for the new development; as a result, large areas of the site may have to be levelled and it is likely that any remains of the air raid shelter will be removed.

1.2.5 A written scheme of investigation (WSI) for five evaluation trenches, each measuring 20m by 1.8m, was produced by AOC Archaeology in August 2016 (AOC 2016b) and approved by Laura O’Gorman, Archaeological Advisor at GLAAS. The WSI was designed in accordance with current best archaeological practice and local and national standards and guidelines, including:

- Historic England – Management of Archaeological Projects (HE 2015a).
- Historic England – Archaeological Guidance Paper 3: Standards and Practices in Archaeological Fieldwork (HE 2015b).
- Chartered Institute for Archaeologists – Standard and Guidance for an Archaeological Evaluation (CIfA 2014a).
- Chartered Institute for Archaeologists – Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives (CIfA 2014b).
- Chartered Institute for Archaeologists – Code of Conduct (CIfA 2014c).

1.2.6 The evaluation was designed to inform the local planning authority on the character of any surviving archaeological remains as part of the planning application.

1.3 Geology and Topography

- 1.3.1 The British Geological Survey indicates that the solid geology of the site is comprised of undifferentiated Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation. The chalk was formed 71 to 94 million years ago in the Cretaceous Period, when the local environment would have been dominated by warm seas. No superficial geological deposits are recorded within the site boundary (BGS online, accessed July 2016).
- 1.3.2 The development area is an urban site, bounded by Chiltern Road to the north, Cotswold Road to the west, extant hospital buildings to the south, and residential properties to the east. The overall size of the evaluated site is approximately 1.62 hectares.
- 1.3.3 The site slopes downhill from south to north but the trenches themselves were placed on level ground, at approximately 90m AOD.
- 1.3.4 No watercourses or naturally occurring bodies of water are known to exist within 750m of the site.

2. Historical and Archaeological Background

The following information has been extracted from the desk-based assessment prepared by AOC Archaeology (AOC 2016a).

2.1 The Prehistoric Periods

(Palaeolithic c. 500,000 – 10000 BC; Mesolithic c. 10000 to 4000 BC; Neolithic c. 4000-2200 BC; Bronze Age c. 2200-700 BC and Iron Age c. 700 BC - AD 43)

- 2.1.1 There is a general paucity of known prehistoric remains within 1km of the site. A solitary find of a Bronze Age palstave axe has been recorded 'near Sutton' (MLO23085), and Banstead Road follows the alignment of a reputed ancient trackway (MLO25471) – presumably of prehistoric date – which leads to Carshalton.

2.2 Roman (c. AD 43 - 450)

- 2.2.1 The only Roman find within 1km of the site is a Roman coin from the reign of Trajan, reportedly found in a garden in a garden off Pelton Avenue in 1923 (MLO4418). By itself, this is not greatly indicative of Roman settlement or activity within the vicinity, but there is a local story that the builder of the California Public House found a pot of Roman coins, which he used to join the Californian gold rush and – returning wealthy – built the inn on the site of his find: in Pelton Avenue (<http://www.bsra.com/history.html>).
- 2.2.2 There are more numerous remains of Roman date to the east of Sutton, with the Roman villa at Beddington the primary site of this date within the borough.

2.3 Early Medieval (AD 410 – AD 1066) and Medieval Periods (AD 1066 – AD 1536)

- 2.3.1 Sutton was probably established as a small settlement or farmstead during the 6th or 7th century AD (Weinreb *et al* 2008). The manor of Sutton formed part of a gift to the Abbey of St Peter in Chertsey during the late 7th or early 8th century (Malden 1912) and appears to have still been held by the abbey at the time of the Domesday Book, where it is referred to as 'Sudtone' (Mills 1991) or 'Sudtuna' (Weinreb *et al* 2008) – the meaning of which may have been 'south farmstead or village' (Mills 1991).
- 2.3.2 A crouched inhumation burial was found in 1996 c. 775m to the southwest of the site (MLO71230). A single flint flake recovered from the grave fill was considered to be residual and the burial has been assigned to the Early Medieval (Saxon) period, but this form of burial was also utilised during the prehistoric periods and the dating of it is somewhat tentative.

- 2.3.3 At the time of the Domesday Survey, the manor of Sutton was worth £15 to the lord and contained 21 villagers, two slaves and four cottagers; the manor had land for 15 ploughlands: two lords' plough teams and 13 men's plough teams. There were also two churches, two acres of meadow and 10 swine render.
- 2.3.4 Documentary sources relating to Sutton note that vineyards were growing within the manor during the 12th century. These were grown by the Prior and Convent of Merton and were used as collateral for a loan in 1154 AD (Cluett 1995).
- 2.3.5 The extent of the manor was described by the Abbot Thomas Pigot in 1496 (see Malden 1912). It remained in the hands of Chertsey Abbey until the Dissolution of the Monasteries by Henry VIII in 1537 AD.
- 2.3.6 There are no recorded sites of Medieval date within 1km of the proposed development, which is unexpected, given that Sutton, Cheam and Carshalton were all extant settlements during that period.
- 2.3.7 The archaeological potential of the site for this period was defined by the DBA (AOC 2016a) as low.

2.4 Post-medieval (c.1485 - modern) and modern

- 2.4.1 Following the Dissolution of the Monasteries, Henry VIII granted the manor of Sutton to Sir Nicholas Carew, who held the manor for two years (until Henry VIII executed him) (Cluett 1995). The manor then passed to the Honour of Hampton Court, but by 1554 AD had been returned to the Carew family. The manor subsequently went through a number of hands and, by 1716, belonged to Henry Cliffe, a captain of the East India Company (Cluett 1995). Henry passed the manor to his two sons, one of whom died heirless; the manor was thus inherited by the daughter and son-in-law of the other, and in 1822 passed to their son, Thomas Hatch.
- 2.4.2 The manor expanded slightly in the 17th century, when the Banstead Downs became a sports racing arena for London aristocracy; Sutton was the closest place for refreshments and the Royal horses were stabled at Belmont (Smith 1962). The construction of the Brighton Road in 1755 caused the manor to grow further, as traffic south utilised the new route and public houses and other industries took advantage of the increase in travellers.
- 2.4.3 The GLHER records two sites of post-medieval date within 1km of the development. These are a mill, depicted on Ordnance Survey mapping c. 600m to the southwest of the site but demolished in 1890 (MLO4490), and the site of Belmont Hospital (MLO106867). The hospital was built in 1853, originally an orphanage, but became a school providing training for poor children of Greenwich, Camberwell and Woolwich. It changed use several times during the 20th century, becoming a workhouse, a hospital for German prisoners of war during WWI, a workhouse again, an emergency hospital during WWII and, finally, a psychiatric centre. The site of the hospital is now primarily occupied by residential housing, although a care centre survives.
- 2.4.4 The first historic map of Surrey and Sutton is Christopher Saxton's map of 1579. This was, however, highly stylised and contains insufficient detail for it to be of use in determining features or structures with regard to the development site. Subsequent 16th, 17th and early 18th century maps (produced by John Norden in 1594, Pieter van den Keere in 1605, John Speed in 1610, John Ogilby in 1675, John Seller in 1690 and Herman Moll in 1724) are of a similar style.
- 2.4.5 The earliest map showing any detail is that by John Senex in 1729 AD. This map shows the road layout in some detail (although probably still somewhat stylised,) with dwellings and structures shown lining the main routes within Sutton. The map is not sufficiently detailed to make out the proposed development site.

- 2.4.6 John Rocque's map of Surrey from 1768 depicts the area of the proposed development site in greater detail than previous maps. The only feature of note, however, is 'Little Hell', which is now the site of Sutton Lodge. Little Hell was reportedly a venue for drinking, gambling and other activities of a salubrious nature, which members of the Royal family visited, along with others *en route* to the Epsom races. Rocque's map suggests that Little Hell was closer to the junction of Brighton Road and Sutton Lane than Sutton Lodge (which is thought to have been built in 1762), but the scale of the mapping makes its precise position unclear.
- 2.4.7 The 1810 Enclosure Map of Sutton by Cheam shows more detail than any prior to it. It is possible to make out the site and surrounding field boundaries and road network, albeit still lacking Chiltern Road. The plot of land within which the proposed development is located belonged at this time to Thomas Hatch, husband of Margaretta Eleanora Cliffe, who had inherited the manor of Sutton from her father. Thomas Hatch also owned the land to the south. The land to the east was owned by Thomas Miller, and the land to the west by Thomas Hatch and James Sutton, with a triangular patch of land between Brighton Road and Sutton Lane described as gravel allotments. The land to the north, including Sutton Lodge, was in the hands of Rev M. Thomas, with some small fields belonging to M. Andrews. No structures are shown within the field proposed for development. The strip fields to the south may be remnants of pre-enclosure farming.
- 2.4.8 The 1842 Tithe Map is similar in layout to the 1810 Enclosure Map and the accompanying Apportionments describe the owners and tenants. In general, the site and surrounding area had remained unchanged. The strip fields to the south appear to have been partially removed, with a series of buildings located there. The land was owned by Rev Thomas Hatch, son of the former owner; the occupier was a William Wilson, who appears to have leased several fields from Reverend Hatch, and the plot of land was described as arable. There is not a separate valuation of the land, with all of William Wilsons tenancies under Reverend Hatch being grouped together.
- 2.4.9 The 1877 Ordnance Survey (OS) Map shows the land as remaining undeveloped. A possible quarry pit or extraction area is shown to the northeast of the site boundary. A guide post is shown to the west of the site at the junction of Brighton Road and Sutton Lane. Chalk pits are shown to the south. No development is shown within the site boundary. The railway line was located to the west of Brighton Road.
- 2.4.10 The 1895 OS Map shows Sutton Hospital as a series of buildings interlinked with wings to the west and east. The hospital is set some distance to the south of the proposed development site boundary, however, and a small number of semi-detached dwellings are shown between the two. No significant changes had been made within the site itself and no development is indicated within its boundaries.
- 2.4.11 On the 1913 OS map, a new building is shown to the east of the Sutton Hospital but, otherwise, the area remains unchanged from 1895.
- 2.4.12 The OS Map of 1935 shows that, by then, the Sutton and Cheam Hospital had expanded into the area of the development site. Chiltern Road and Heath Drive had also been constructed, with a number of detached residential dwellings alongside both. The 1930s layout of the hospital remained as the main core of the building until its demolition.
- 2.4.13 The 1957 OS Map shows a markedly different landscape compared with previous maps. The entirety of Brighton Road is lined with prefabricated residential dwellings, while the area to the north of Chiltern Road is lined with semi-detached dwellings. The houses to the south of Chiltern Road and east of the proposed development site have expanded up to the site boundary. There is relatively little change within the site boundary itself, aside from a curved embankment within the eastern portion of the site.

2.5 Previous Work:

- 2.5.1 A decontamination survey of the site carried out in 2014, by Arcadis EC Harris, records a backfilled but observable air raid shelter – probably dating from the Second World War – within the grassed area to the north of the former hospital buildings. The level of preservation or extent of any subterranean chambers was not known.
- 2.5.2 The GLHER records no previous intrusive archaeological investigations within the site. A five-trench archaeological evaluation undertaken by AOC Archaeology c.300m to the southeast of the development site in 1999 (ELO8467) found evidence of widespread and substantial landscaping associated with construction of the hospital, which would have either completely removed or heavily disturbed any potential archaeological remains. The only other works recorded in the vicinity are an investigation at 22 Pelton Avenue which recovered a Roman coin (as previously mentioned) (ELO5756/MLO4418), a desk-based assessment carried out for the site of the Royal Marsden Hospital (ELO11054), and Historic Building Recording of Sutton Lodge (ELO12755).

3. Strategy

3.1 Aims of the Archaeological Investigation

- 3.1.1 The general aims of the archaeological evaluation were defined as being:
- To establish the presence/absence of archaeological remains within the site.
 - To determine the extent, condition, nature, character, quality and date of any archaeological remains encountered.
 - To record and sample excavate any archaeological remains encountered.
 - To assess the ecofactual and environmental potential of any archaeological features and deposits.
 - To determine the extent of previous truncations of the archaeological deposits.
 - To enable the archaeological advisor to the London Borough of Sutton to make an informed decision on the status of the condition, and any possible requirement for further work in order to satisfy that condition.
 - To make available to interested parties the results of the investigation
- 3.1.2 The specific aims of the archaeological evaluation were defined as being:
- To determine the preservation, character and extent of any archaeological remains and how they would be affected by the proposed development.
 - To determine the preservation, character and extent of the probable World War II air raid shelter, which could be of some significance.
- 3.1.3 The final aim is to make public the results of the investigation, subject to any confidentiality restrictions.

3.2 Methodology

- 3.2.1 The evaluation comprised the excavation of five trenches, each measuring 20m x 1.80m (Figure 2).

- 3.2.2 The WSI prepared by AOC Archaeology (AOC 2016b) defined the site procedures for the archaeological evaluation. All work was carried out in accordance with local and national guidelines (ClfA 2014, HE 2015). A unique site code for the project (CIT 16) was issued by the LAARC. This has been used to identify the site on all records produced. The archive will be ordered and deposited using the same identifier in accordance with LAARC deposition guidelines.
- 3.2.3 The evaluation was conducted by the author with assistance from Lee Waters, under the overall management of Catherine Edwards, Project Manager. The site was monitored by Laura O’Gorman of GLAAS.
- 3.2.4 The trenches were opened using a 13 ton tracked mechanical excavator fitted with a flat-bladed (toothless) ditching bucket, and machining was carried out under constant archaeological supervision. The location of the evaluation trenches is shown on Figure 2.
- 3.2.5 Service plans were consulted and site was visually inspected prior to the commencement of machine excavation. The area was CAT scanned before excavation and Trench 1 was broken into two separate sections to avoid a detected service.
- 3.2.6 Records were produced using *pro-forma* context and trench record sheets compatible with those published by the Museum of London (MoLAS 1994). A full indexed photographic record was maintained using a digital SLR camera to produce digital RAW images. Plans and sections of features were drawn at a scale of 1:10 or 1:20, as appropriate.
- 3.2.7 No environmental samples were collected due to a lack of suitable deposits.
- 3.2.8 Upon completion of the evaluation, and with the permission of Laura O’Gorman, archaeological advisor to Sutton Borough Council, the trenches were backfilled and compacted with the machine bucket.

4. Results

4.1 Trench 1

Table of the stratigraphic sequence in Trench 1

Context Number	Depth	Height of Deposit (AOD)	Description/Interpretation
1001	0.30m-0.46m	89.00m	Modern (tarmac) surface and hardcore/brick rubble underlay.
1004	0.22m-0.25m	88.56m	Fine, mid-dark brown sandy silt. Topsoil-like layer beneath (1001) in western half of trench.
1002	0.57m-0.70m	88.70m	Redeposited chalk layer with bands of clay mixed in. Made ground.
1003	>0.50m	88.00m-88.13m	Mid-orange-brown sandy silt with moderate chalk and occasional CBM. Made ground.
1005	0.30m	88.31m-88.34m	Mid-orange-brown layer with moderate chalk and flint in western half of trench. Possibly same as (1003) (in eastern half).
1006	0.15m-0.23m	88.00m-88.04m	Very fine, mid to dark grey-brown sand. Buried topsoil?
1007	0.75m	87.80m	Fine, mid to light brown-orange sand with moderate to frequent chalk inclusions.
1008	-	87.05m	Chalk bedrock. Natural geological deposit.

- 4.1.1 Trench 1 (Figure 2, Plate 1) was located in the north-eastern corner of the site, in an area formerly used as a car park, and was oriented north-west to south-east (Figure 2). The trench was 1.8m wide.
- 4.1.2 The trench location was scanned with a cable avoidance tool prior to excavation and a service was detected running north-south through its middle. A buffer zone was left around this service and the trench was excavated to either side of it. The eastern section of the trench measured 11.8m in length and the western 6m. The stratigraphy in these two trenches was different, with the eastern trench composed entirely of made ground deposits (Plate 2), while in the western trench made ground could be seen to over-lie old topsoil and subsoil layers (Plate 3).
- 4.1.3 In the eastern trench (Plates 1 and 2), three deposits were identified. These were all 'made ground' layers. The deepest, (1003), was a mid-orange-brown silty sand with moderate chalk inclusions and occasional modern CBM, at least 0.5m thick. For safety reasons, excavation stopped at 87.7m AOD, 1.3m below the current ground surface, and the base of this deposit was not exposed. Overlying it was another thick made ground layer comprising chalk with a greyish clay mixed into it (1002). This was 0.57m-0.7m thick and appeared at a depth of approximately 88.7m AOD (0.3m below the current ground surface). The uppermost deposit was formed of a modern surface layer of tarmac and supporting rubble underlay (1001). The area around the trench had been used as a car park and was roughly level, with an existing ground surface of 89m AOD.



Plate 1: Trench 1 (looking north-west)



Plate 2: Deposits in the eastern part of Trench 1 (looking south-west)

- 4.1.4 Chalk bedrock (1008) was identified at the base of a sondage excavated into the western trench (Plate 3), at a height of 87.05m AOD. The chalk (1008) was overlain by a 0.75m thick layer of fine, light brown-orange sand with moderate chalk inclusions (1007), the surface of which appeared at approx. 87.8m AOD. Over this was a layer of very fine mid to darkish grey-brown sand 0.15m-0.23m thick, which had the appearance of a buried topsoil (1006). This was capped by a layer of presumably redeposited subsoil, in the form of mid-orange-brown sand containing moderate amounts of chalk and flint (1005). This was thought to be the same deposit as the made ground layer (1003) in the eastern part of the trench.
- 4.1.5 At the eastern end of the western trench, a thin layer of the made ground chalk deposit (1002) could be seen overlying (1005). Over this and the rest of deposit (1005) was a second layer with the appearance of topsoil (1004); this was a mid-darkish brown fine sandy silt 0.22m-0.25m thick and was presumably a made ground layer of redeposited topsoil. Immediately above it was the rubble underlay and modern surface (1001) that ran across both sections of the trench; this had patches of chalk at its base and was 0.4m-0.46m deep with an upper surface of 88.9m-89.0m AOD.



Plate 3: Deposits in the western part of Trench 1 (looking south-west)

- 4.1.6 No archaeological remains were uncovered in Trench 1. It is possible that the deeper made ground deposits at the eastern end of the trench represent backfill of an old quarry pit, but the whole of this car parking area appears to have been raised by made ground above its original level which was presumably at approximately 88m AOD (the surface of buried topsoil deposit (1006)).

4.2 Trench 2

Table of the stratigraphic sequence in Trench 2

Context Number	Thickness	Height of Deposit (mOD)	Description/Interpretation
2010	0.25m	90.50m	Topsoil used to cover the infilled air raid shelter.
2007	0.5m-0.75m	92.28m	Bank material. Redeposited layers.
2001/2008	0.12m-0.22m	91.24m-92.16m	Topsoil / Buried topsoil.
2002	0.20m	90.25m	Subsoil
2009	-	90.04m	Natural geological deposit. Varies from chalk bedrock to light orange clay silt.

4.2.1 Trench 2 (Figure 2, Plate 4) was located roughly in the centre of the site, across a bank of material on the south side of the lawn, where the ground sloped steeply up to the area formerly occupied by buildings (Figure 2). The trench measured 20.4m in length by 1.8m in width and was oriented north-south. The ground sloped downwards towards the north.



Plate 4: Trench 2 (looking north)

4.2.2 Chalk bedrock (2009) was exposed at the north end of the trench at a height of 90.04m AOD. This was overlain by fine, sandy subsoil approx. 0.2m thick (2002) and dark brown silty topsoil 0.25m thick (2001).

- 4.2.3 In the centre of the trench, to the immediate north of an earthen bank, remains of a concrete structure [2003] were uncovered beneath the topsoil. This was the air raid shelter previously recorded as existing on the site.



Plate 5: The air raid shelter [2003] (looking west)

- 4.2.4 The shelter appeared to have been cut into the natural chalk and clay silt (2009). The construction cut [2005] was just visible in places, where the concrete had been moved out of place by demolition, but the liquid concrete would have been poured between the bare earth and a shuttered construction, and would originally have been flush with the cut. A layer of compacted chalk (2006) – remnants of which still remained – appeared to have then been laid around (and presumably over the roof of) the shelter. It is likely that this was then topped by a bank of earth.
- 4.2.5 Exposure of the remains of the shelter [2003] showed it to have been partially demolished. The roof of the shelter had been torn off and the interior filled with brick and concrete rubble (2004) (Plates 5 and 6). An attempt was made to establish the depth of the shelter beneath the ground, but excavation of the infill caused loose rubble to collapse in from the sides of the trench, so this was abandoned. It was, however, established that beneath the current ground surface the walls stand to a height of at least 1.35m.



Plate 6: The air raid shelter [2003] after removal of some of the rubble (looking north)

4.2.6 The bank to the south of the shelter (2007) (Plate 7) was presumably comprised of material which had originally covered the air raid shelter but which was removed prior to demolition of the structure and deposited adjacent to it. At the base of the bank were layers of subsoil (2002) and buried topsoil (2008). A demolition cut [2011] could be seen truncating deposit (2008); this was also visible on the north side of the shelter, cutting topsoil (2001) and subsoil (2002). Layer (2008) was then overlain by the material (a mixture of topsoil, subsoil and chalk) that had previously covered the shelter (2007). A final capping layer of redeposited topsoil (2010) covered the north face of this material and the rubble infill of the air raid shelter (2004) (Figure 3).



Plate 7: Cross section through the bank to the south of the shelter (looking east)

- 4.2.6 A post-hole [2012] approx. 0.4m in diameter was excavated to the immediate south of the air raid shelter. This was 0.32m deep and mostly filled with dark brown silty sand (2013), with a thinner upper fill of fine chalk lumps and silt (2014). A lump of metal and a fragment of modern brick were found at the base of the hole, however, and although it is possible that it might relate in some way to the air raid shelter, it is thought more likely that this was a much more recent post-hole for a sign relating to the hospital (such as the sign-post which was found lying on the ground adjacent to Trench 2).
- 4.2.7 No other features of archaeological interest were identified in Trench 2.

4.3 Trench 3

Table of the stratigraphic sequence in Trench 3

Context Number	Depth	Height of Deposit (mOD)	Description/Interpretation
3001	0.20m-0.25m	89.90m-89.98m	Dark brown sandy silt with turf. Topsoil.
3002	0.12m-0.17m	89.70m-89.73m	Mid-brown sandy silt with occasional chalk. Subsoil
3003	0.12m- \geq 0.20m	89.56m-89.58m	Red-brown silty sand.
3004	>0.15m	89.45mm-89.56m	Chalk bedrock. Natural geological deposit.

- 4.3.1 Trench 3 (Figure 2, Plate 8) was located to the north-east of Trench 2 and oriented roughly north-west to south-east. The position of the trench was amended slightly from that proposed in the WSI due to a large tree close to its north-western end. After excavation, the trench measured 19m by 1.8m. Chalk bedrock (3004) was exposed across much of the trench at a height of 89.55m AOD (0.32m BCGS). In the centre of the trench was a natural geological deposit of red-brown silty sand (3003) >0.2m deep and thinner patches of this sand (approx 0.12m-0.15m deep) appeared across the trench. Overlying the sand and chalk was an - again patchy - layer of mid-brown sandy silt subsoil 0.12m-0.17m thick (3002) and, above that, a layer of topsoil 0.2m-0.25m thick (3001).
- 4.3.2 A narrow linear feature [3005], 0.46m wide and 0.11m deep, running north-north-west to south-south-east across the trench appeared in section to be a plough furrow (Plate 9). It was filled with an orange-brown silty sand (3006) very similar to the natural sand deposit (3003), from which no artefacts or datable materials were recovered. Parallel ploughscars were visible in the surface of the chalk at the west end of the trench.
- 4.3.3 A small pit [3007], 0.94m by at least 0.52m and 0.55m deep, which cut the subsoil and was filled with a stony topsoil-like deposit, was also investigated but proved to be modern in origin, with brick and concrete at its base.
- 4.3.4 There were therefore no features of archaeological interest in this trench.



Plate 8: Trench 3 (looking south-east)



Plate 9: Plough furrow [3005] in Trench 3 (looking south-south-east)

4.4 Trench 4

Table of the stratigraphic sequence in Trench 4

Context Number	Depth	Height of Deposit (mOD)	Description/Interpretation
4001	0.10m	89.15m-90.00m	Friable, mid-grey-brown silty sand with occasional flint. Topsoil.
4002	0.10m-0.13m	89.05m-89.90m	Soft, light grey-brown silty sand with occasional flint. Subsoil.
4003	0.13m-0.40m	88.95m	Soft, mid-red-brown clayey sand with frequent flint. Natural geological deposit.
4004	-	88.92m	Chalk bedrock. Natural geological deposit.

4.4.1 Trench 4 (Figure 2, Plate 10) was oriented north-east to south-west and was 19.5m long by 1.8m wide. It was located towards the north-west corner of the site. The trench was on a slight slope, with the ground surface at the southern end 0.85m higher than at the northern end.



Plate 10: Trench 4 (looking north-east)

- 4.4.2 Bedrock geology (chalk) (4004) was identified at the south-west end of the trench at 89.16m AOD and at the north-eastern end at 88.92m AOD.
- 4.4.3 A modern service trench crossed the trench to the south-west of centre (this was investigated in Trench 5 and found to contain a ceramic pipe).
- 4.4.4 No finds or deposits of archaeological interest were identified in this trench.

4.5 Trench 5

Table of the stratigraphic sequence in Trench 5

Context Number	Depth	Height of Deposit (mOD)	Description/Interpretation
5001	0.20m	88.87m-89.94m	Dark brown crumbly sandy silt with turf cap. Topsoil.
5002	0.15m	88.7m-88.74m	Mid-brown sandy silt with occasional chalk. Patchy across trench rather than continuous. Subsoil.
5003	0.10m-0.55m	88.55m-88.60m	Mid-red-brown silty sand occurring at intervals across the trench. Varies greatly in thickness/depth. Natural geological deposit.
5004	>0.15m	88.40m-88.48m	Chalk bedrock. Natural geological deposit.

- 4.5.1 Trench 5 (Figure 2, Plate 11) was oriented east-west and was 19.8m long by 1.8m wide. The position of the trench was amended slightly from that initially proposed as a service was detected at its western end.
- 4.5.2 Bedrock geology (5004) was exposed at a height of 88.40m to 88.48m AOD, with natural patches of red-brown silty sand of varying depths (5003) occurring across the trench. Subsoil (5002) was also patchy across the trench and only up to 0.15m thick. These layers were capped by the same dark brown crumbly topsoil present across the site (5001).
- 4.5.3 A previous geotechnical test pit was visible on the ground surface in the middle of Trench 5. A band of red-brown silty sand running north-east to south-west across the trench in the vicinity of the geotechnical test pit was found to be of shallow and irregular depth and was interpreted as a natural feature. A second linear band further to the east appeared to be a plough furrow.
- 4.5.4 The trench was also cut by a modern service (a ceramic pipe) which continued into Trench 4.



Plate 11: Trench 5 (looking east)

4.5.5 This trench and geotechnical investigation. No archaeological features were apparent.

5. Finds

5.1 The only finds recovered from the site were a George VI half penny from 1929 recovered from the buried topsoil layer (2008) (this could presumably have still been in circulation when the air raid shelter was constructed and/or in use); a fragment of an English stoneware bottle (mid 19th to early 20th century date) from deposit (1006); and a small fragment of 19th century refined white earthenware from deposit (1003). There were no finds pre-dating the late post-medieval period, which is consistent with the site having remained undeveloped until 1930.

5.2 The items are recommended for discard.

6. Conclusion

- 6.1 The only feature of archaeological interest uncovered during the course of the evaluation was the Second World War air raid shelter in Trench 2. This was constructed of reinforced concrete but its roof has been demolished and the interior filled with rubble. The full depth of the air raid shelter could not be established due to the looseness of the rubble infill, but it is known to be at least 1.35m deep. Figure 3 shows the section of the air raid shelter cutting through layer 2009 at a height of 90.04mOD. AOC established in the evaluation that the air raid shelter walls can be traced to a depth of at least 1.35m below 90.04mOD and continue down. The proposed development incorporates a courtyard which is located in the area of the shelter with a design level of 89.10m AOD and it is our understanding that the proposed reduced dig in this area for a large soak away would be around 87.80mAOD which appears to be 4.5m below the top of the remaining parts of the shelter. This will require the remnant part of the air raid shelter to be removed to implement the proposed design. An overlay of the proposed development in relation to the air raid shelter has been provided by the London Borough of Sutton (Figure 4) and demonstrates that the development will impact on this asset.
- 6.2 The majority of the deposits recorded on site were interpreted as natural geological deposits or garden topsoil. Deep layers of modern made ground were present in Trench 1 but this was located in an area formerly used for car parking, to the east of the other trenches. The 1877 Ordnance Survey (OS) Map shows a possible quarry pit or extraction area to the northeast of the site boundary. It is possible that this extended into the north-eastern corner of the site and that the deep deposits of made ground identified at the eastern end of Trench 1 relate to the backfilling of this quarry.
- 6.3 A layer of buried topsoil at the western end of Trench produced earthenware of 19th to 20th century date. As elsewhere on the site, this topsoil overlay a natural geological deposit. Evidence of ploughing was visible in the surface of the chalk in several of the trenches – most notably in trenches 2 and 3.
- 6.4 This evaluation found that the foundations of the air raid shelter still exist as a buried structure. Whilst the preference is for the archaeological asset to be preserved in situ, the condition of this particular feature and the record made of its existence in this report may mean that preservation in situ is not required in this instance. However, this was not a full excavation record of the feature and so it has not been fully assessed to date. The final decision with regard to the need for further work rests with Laura O’Gorman, the GLAAS archaeologist for the London Borough of Sutton. Ms O’Gorman has stated that, with regard to the air raid shelter, further work is likely to be required if the development will have an impact on its survival.

7. Publication and Archive Deposition

- 7.1 Copies of the evaluation report will be issued to the client, the Archaeology Advisor to Sutton Borough Council and – ultimately – the local studies library, on the understanding that it will become a public document after an appropriate period of time. A digital copy of the report will also be submitted to the HER and NMR. A summary of the findings will be submitted to the Archaeological Data Service (ADS) (Appendix C).
- 7.2 The archive, consisting of paper records, drawings and digital photographs, will be collated and deposited with the London Archaeological Archive and Research Centre (LAARC).

- 7.3 The archive will be prepared in accordance with guidelines for the preparation of excavation archives for long-term storage (UKIC 1990) and (Brown & AAF 2007). The archive will be security copied and a copy deposited with the National Archaeological Record (NAR).

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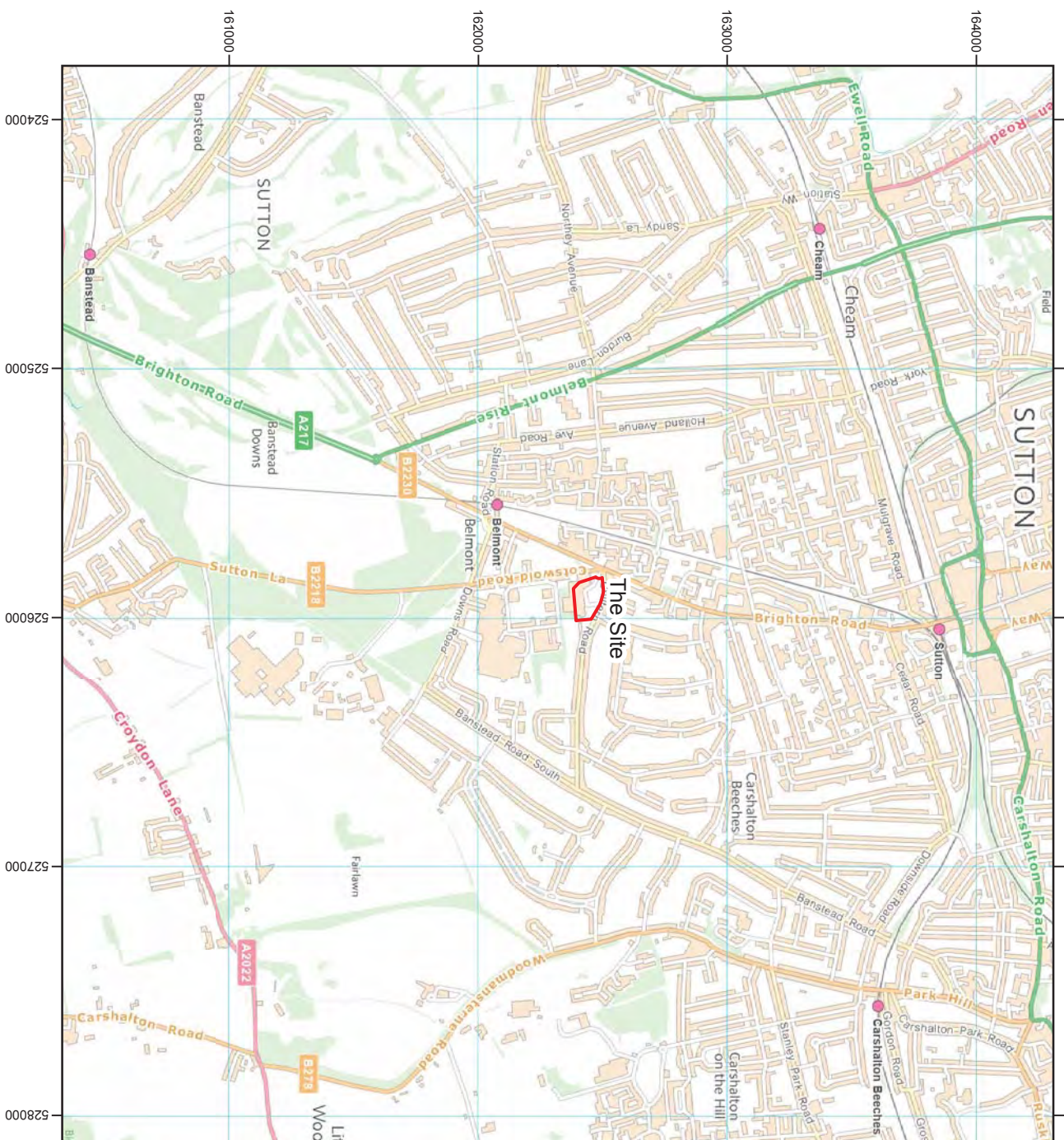
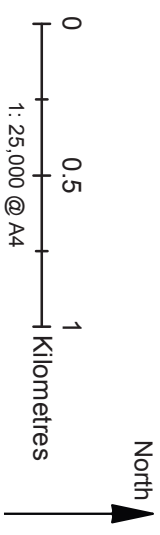
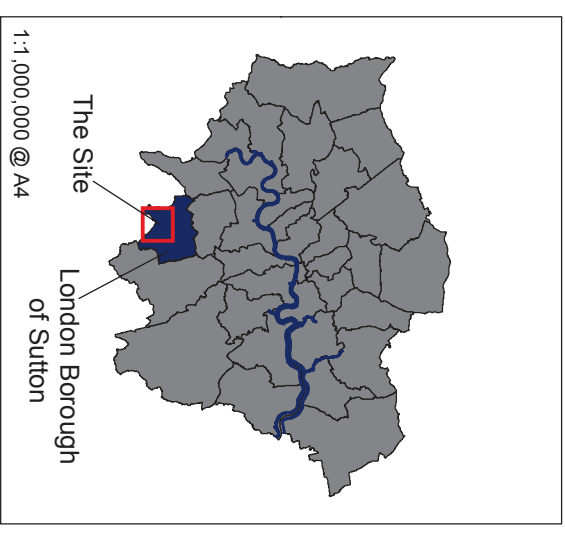


Figure 1:
Site Location



Contains Ordnance Survey data
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database right [2016]



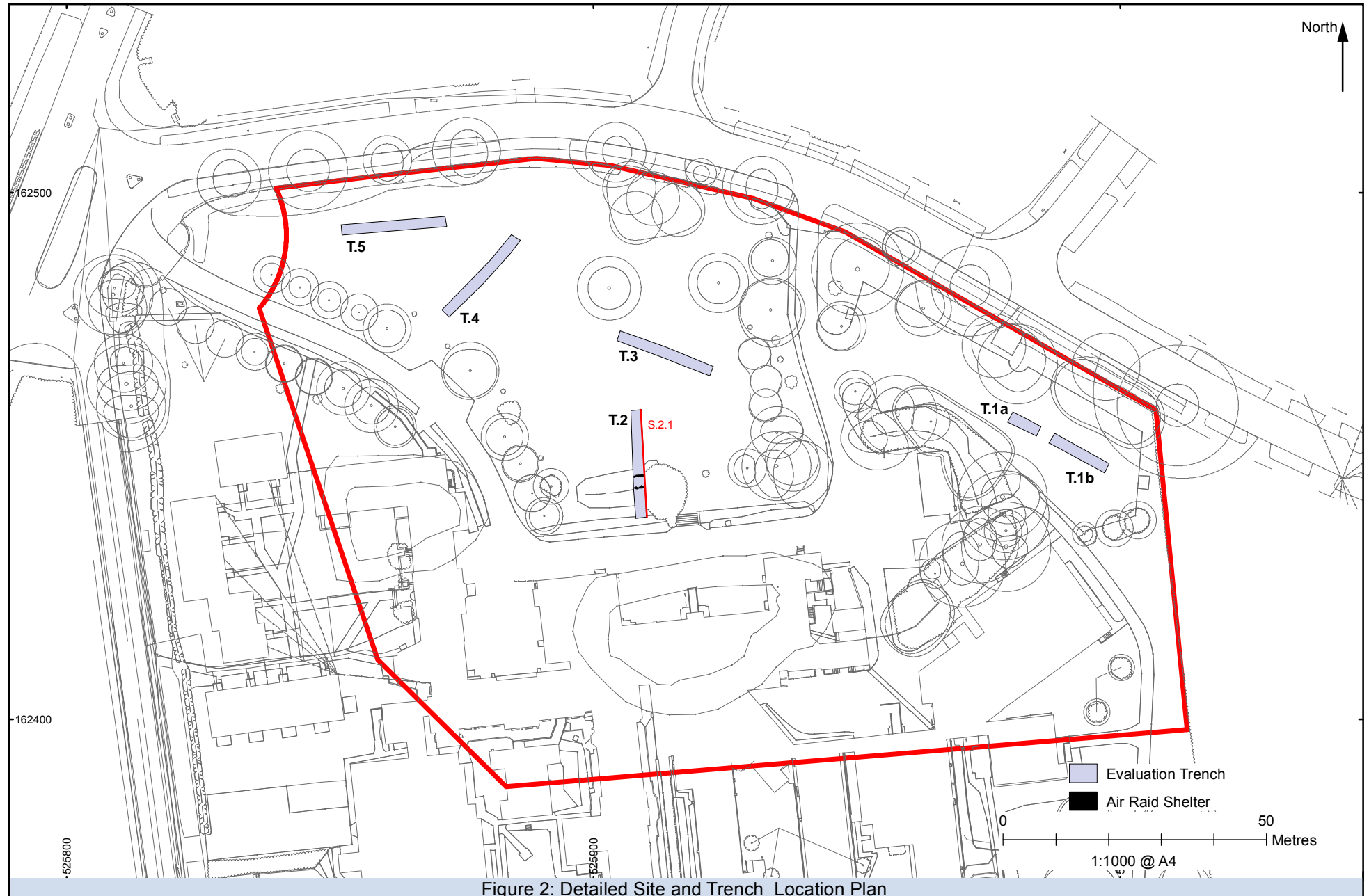


Figure 2: Detailed Site and Trench Location Plan

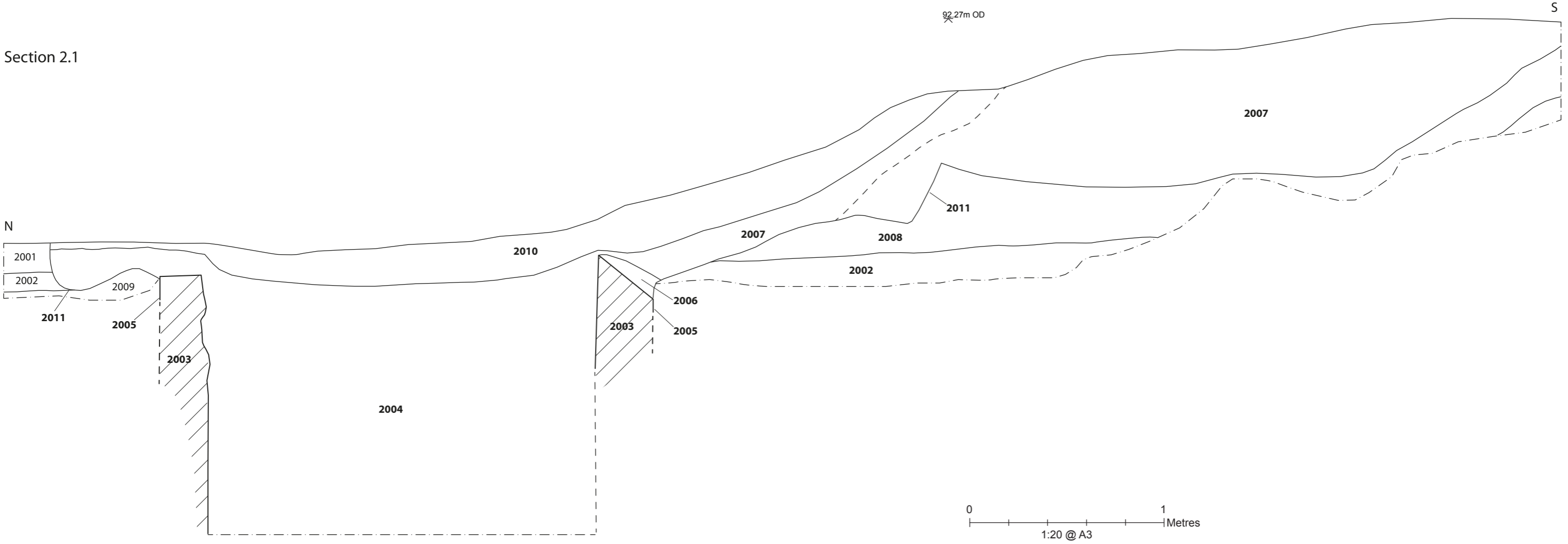


Figure 3: Section across the air raid shelter [2003] in Trench 2

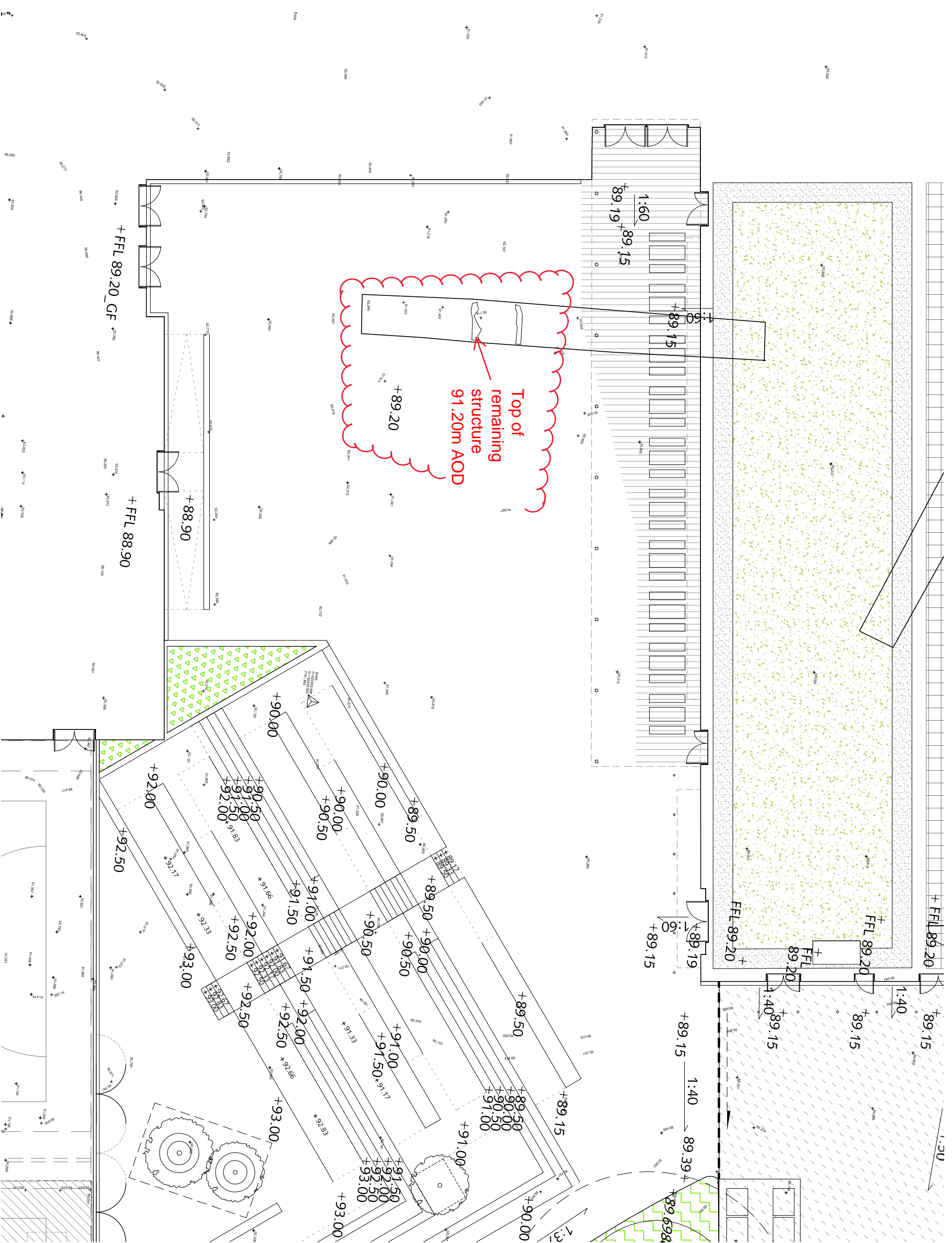


Figure 4
 CLA 435sk161202_01
 Existing location of remnant air raid
 shelter shown on proposed courtyard
 layout.

Appendices

Appendix A – Context Register

Context	Context Description	Length	Width	Depth
1001	Modern (tarmac) surface and hardcore/brick rubble underlay.	Trench	Trench	0.30m-0.46m
1002	Redeposited chalk layer with bands of clay mixed in. Made ground.	>12m	Trench	0.57m-0.70m
1003	Mid-orange-brown sandy silt with moderate chalk and occasional CBM. Made ground.	>12m	Trench	>0.50m
1004	Fine, mid-dark brown sandy silt. Topsoil-like layer beneath (1001) in western half of trench.	>6m	Trench	0.22m-0.25m
1005	Mid-orange-brown layer with moderate chalk and flint in western half of trench. Possibly same as (1003) (in eastern half).	>6m	Trench	0.30m
1006	Very fine, mid to dark grey-brown sand. Buried topsoil?	>6m	Trench	0.15m-0.23m
1007	Fine, mid to light brown-orange sand with moderate to frequent chalk inclusions.	>6m	Trench	0.75m
1008	Chalk bedrock. Natural geological deposit.	NFE	Trench	NFE
2001	Topsoil	Trench	Trench	0.25m
2002	Subsoil	Trench	Trench	0.20m
2003	Concrete walls of air raid shelter.	>1.8m	0.28m	>1.35m
2004	Rubble infill of air raid shelter.	>1.8m	1.96m	>1.35m
2005	Foundation cut for air raid shelter.	1.8m	2.55m	>1.35m
2006	Compacted chalk around walls of air raid shelter.	patchy	0.28m	0.05m
2007	Bank material. Redeposited layers.	Approx. 10m	6m	Max 0.76m
2008	Buried topsoil.	-	5.5m	0.14m-0.32m
2009	Chalk bedrock. Natural geological deposit.	Trench	Trench	NFE
2010	Modern topsoil layer overlying the demolished air raid shelter	4.7m	>1.8m	0.2m
2011	Demolition cut (for demolition of the air raid shelter)	4.6m	>1.8m	0.25m
2012	Cut for post hole	0.45m	>0.3m	0.32m
2013	Primary fill of post hole [2012]	0.45m	>0.3m	0.2m

Context	Context Description	Length	Width	Depth
2014	Upper fill of post hole [2012]	0.45m	>0.3m	0.12m
3001	Dark brown sandy silt with turf. Topsoil.	Trench	Trench	0.20m-0.25m
3002	Mid-brown sandy silt with occasional chalk. Subsoil.	Trench	Trench	0.12m-0.17m
3003	Red-brown silty sand.	Patches	Patches	0.12m- ≥0.20m
3004	Chalk bedrock. Natural geological deposit.	Trench	Trench	>0.15m
3005	Cut of plough furrow.	>2m	0.46m	0.11m
3006	Fill of plough furrow [3005].	>2m	0.46m	0.11m
3007	Modern feature	0.94m	0.52m	0.55m
4001	Friable, mid-grey-brown silty sand with occasional flint. Topsoil.	Trench	Trench	0.10m
4002	Soft, light grey-brown silty sand with occasional flint. Subsoil.	Trench	Trench	0.10m-0.13m
4003	Soft, mid-red-brown clayey sand with frequent flint. Natural geological deposit.	Patches	Patches	0.13m- 0.40m
4004	Chalk bedrock. Natural geological deposit.	Trench	Trench	NFE
5001	Dark brown crumbly sandy silt with turf cap. Topsoil.	Trench	Trench	0.20m
5002	Mid-brown sandy silt with occasional chalk. Patchy across trench rather than continuous. Subsoil.	Patches	Patches	0.15m
5003	Mid-red-brown silty sand occurring at intervals across the trench. Varies greatly in thickness/depth. Natural geological deposit.	Patches	Patches	0.10m- 0.55m
5004	Chalk bedrock. Natural geological deposit.	Trench	Trench	>0.15m

NFE = Not fully excavated

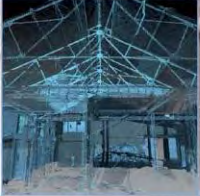
Appendix B – OASIS Form

OASIS ID: aocarcha1-260725

Project details

Project name	Sutton Hospital
Short description of the project	In September 2016 an archaeological evaluation was carried out by AOC Archaeology on land at the former Sutton Hospital site, Chiltern Road, Sutton, (NGR 525890 162480) (Figure 1). Five trenches were opened during the course of the evaluation, each measuring 20m by 1.8m. The work was commissioned by Sutton Borough Council. The remains of an air raid shelter were identified roughly in the centre of the site. The walls of the shelter were constructed of reinforced concrete and remain intact to a depth of at least 1.4m below the current ground surface, but the roof has been demolished and the interior filled with concrete and brick rubble. No other features of archaeological or historic interest were observed.
Project dates	Start: 15-08-2016 End: 30-09-2016
Previous/future work	Yes / Not known
Any associated project reference codes	33342 - Contracting Unit No.
Any associated project reference codes	CIT16 - Sitecode
Type of project	Field evaluation
Current Land use	Community Service 1 - Community Buildings
Monument type	AIR RAID SHELTER Modern
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	Not known / Not recorded
Project location	
Country	England
Site location	GREATER LONDON SUTTON SUTTON AND CHEAM Sutton Hospital/School
Postcode	SM2 5NF
Site coordinates	TQ 25890 62480 51.346926005944 -0.192164763486 51 20 48 N 000 11 31 W Point
Project creators	
Name of Organisation	AOC Archaeology Group
Project brief originator	London Borough of Sutton
Project design originator	AOC Archaeology Group

Project director/manager	Catherine Edwards
Project supervisor	Suzie Westall
Type of sponsor/funding body	Borough Council
Name of sponsor/funding body	London Borough of Sutton
Project archives	
Physical Archive recipient	LAARC
Digital Archive recipient	LAARC
Digital Media available	"Images raster / digital photography", "Survey"
Paper Archive recipient	LAARC
Paper Media available	"Context sheet", "Drawing", "Notebook - Excavation", "Research", "General Notes", "Report", "Section", "Unpublished Text"
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	Site of Proposed New 6fe Secondary School, Chiltern Road, London Borough of Sutton: An Archaeological Evaluation
Author(s)/Editor(s)	Westall, S.
Date	2016
Issuer or publisher	AOC Archaeology
Place of issue or publication	London



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