

# Strood Academy, Strood, Kent

## A Report on Monitoring Geotechnical Works

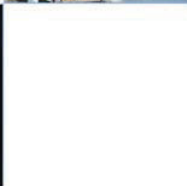
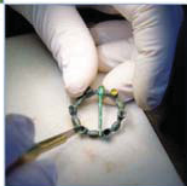
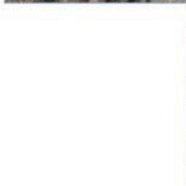
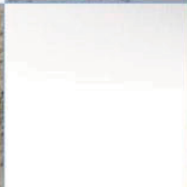
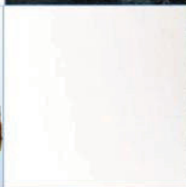
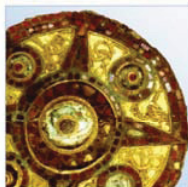
Planning Application: MC10/1555

National Grid Reference Number: TQ 7162 6926

AOC Project No: 30865

Site Code: CNS 10

Date: November 2010



ARCHAEOLOGY

HERITAGE

CONSERVATION

# Strood Academy, Strood, Kent: A Report on Monitoring Geotechnical Works

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**On Behalf of:** DHA Planning  
Eclipse House  
Eclipse Park  
Sittingbourne Road  
Maidstone  
Kent  
ME14

**National Grid Reference (NGR):** TQ 7162 6926

**AOC Project No:** 30865

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

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## Non-Technical Summary

*This report details the results of a watching brief on geotechnical and service check works undertaken in advance of the construction of a new school building at Strood Academy, Strood. In total seven service check trenches, thirteen window sample geotechnical test pits and three filtration test pits were monitored during the watching brief.*

*The investigation achieved its aims in establishing the absence of archaeology in geotechnical investigations that were monitored. A study of the observed stratigraphy indicated that much of the north and west of the site had undergone significant horizontal truncation during the construction of the school.*

*The presence of natural sand and orange clay deposits indicated that stratigraphic units, which could be Head Deposits are present within the footprint of the proposed new building. If these are Head Deposits then there is a potential for there to be palaeolithic artefacts present within these deposits.*

*No evidence for archaeological features or artefacts was noted during the monitoring of the geotechnical investigations. The watching brief did, however, identify that the south and west of the site have the most potential for containing archaeological remains. In these parts of the site there were in places very thick deposits of made ground sealing buried soils, which in turn overlay probable Head Deposits.*

## 1. Introduction

- 1.1 This report documents the results of an archaeological watching brief on geotechnical works at Strood Academy, Carnation Road, Strood, Kent (Figure 1).

### Site Location

- 1.2 Strood Academy (formerly Chapter Girls School) is located in Strood within the district of Medway, Kent. The school site is situated on the western side of Carnation Road, centred on national grid reference TQ 7162 6926 (Figure 1).
- 1.3 The school site is approximately 9.82 ha in size and is defined by Watling Street to the north and residential properties fronting onto Carnation Road to the east, Bligh Way to the south and School Rise, Yantlet Drive and Copper House Road to the west (Figure 2).
- 1.4 The school buildings are clustered in the centre of the school site with asphalt playground / sports courts and a car park to the south and south-east of the buildings (Figure 2). The majority of the southern half of the site is given over to grass playing fields with further playing fields occupying the northern section of the site. The proposed new school buildings will be built on the open grassed area to the north of the existing school buildings (Figure 3).
- 1.5 Works comprised the monitoring of 13 geotechnical window sample pits, three test pits and seven service check trenches.

### Planning Background

- 1.6 The local planning authority is Medway Council. Archaeological advice to the district is provided by Ben Found of Kent Heritage Conservation Group.
- 1.7 There are no World Heritage Sites, Scheduled Monuments, Registered Parks and Gardens or Registered Battlefields within the site boundaries or within the 1km of the school. One area of Ancient and Semi-Natural Woodland, Great Wood was located c.400m to the south-east of the school. The site was not located within or within the immediate vicinity of any designated Conservation Areas.
- 1.8 Consultation with Ben Found, Archaeological Officer for Kent Heritage Conservation Group, indicated that there were no areas or sites of archaeological priority / importance (as designated by Kent County Council or detailed in the Medway Local Plan) within, or within the immediate vicinity of, the school.
- 1.9 In 2009 AOC undertook a desk-based assessment (AOC 2009) to identify the archaeological potential of the site and to identify any potential impacts upon the heritage resource. This report recommended that the next stage of the archaeological scheme for the proposed new school development should be monitoring of any geotechnical investigations to be undertaken in advance of the development.
- 1.10 Archaeological monitoring of the geotechnical investigations and service check trenches on the site was required as a condition on the granting of the Planning Application for the site (C/08/1819); this is fully in accordance with Policy Planning Statement (PPS5): Planning for the Historic Environment (DCLG 2010).
- 1.11 The next stage in the planning process was the creation of a written scheme of investigation (WSI), detailing the methodology for recording, and including some background history of the site (AOC 2010). This methodology was approved by Ben Found of Kent Heritage Conservation Group.

## 2. Geology and Topography

- 2.1 The development site lies on the northern side of the Medway Valley, where human activity has been recorded dating from the prehistoric period onwards.
- 2.2 The site lies at the head of a dry valley in a location that may have encouraged early settlement. River valleys were attractive areas due to the utilisation of their natural resources, their use in trade and communication and as sites for settlement, ritual and industrial activity.
- 2.3 The Kent Historic Environment Record indicates that the underlying geology of the development site is primarily formed of a chalk deposit comprising undifferentiated Lewes Nodular Chalk Formation, Seaford Chalk Formation, and Newhaven Chalk Formation (Kent County Council 2009), which was laid down in the Late Cretaceous Period between 93 and 71.5 million years ago (British Geological Survey 2009).
- 2.4 The geological mapping shows superficial head deposits of clay, silt, sand and gravel are extending into the eastern site boundary. Such deposits were laid down during the Quaternary Period (1.8 million years ago onwards) and can yield preserved archaeological remains of palaeolithic human activity (British Geological Survey 2009).
- 2.5 Consultation with Ben Found, Archaeologist with Kent Archaeological and Heritage Service, indicated that there may be a potential for a dry stream bed of prehistoric date to exist within the site. The head deposits shown on the KHER geology map may be an indication of the river valley associated with this.

## 3. Archaeological And Historical Background

- 3.1 The archaeological and historical background given below is taken from the desk-based assessment prepared for Strood Academy (AOC 2009).

### **Prehistoric (c. 500,000 BC – AD 43)**

- 3.2 The proposed development site lies on the northern side of the Medway Valley, which has been subject to human settlement from the prehistoric period onwards. River valleys were attractive areas due to the utilisation of their natural resources, their use in trade and communication and as sites for settlement, ritual and industrial activity.
- 3.3 Some of the earliest remains of human activity have been recovered in Kent and many examples of Palaeolithic stone hand-axes have been recorded across the Medway area, including an Acheulian Handaxe recovered from Strood Hill, c. 350m to the east of the proposed development site.
- 3.4 Within the wider landscape there is the potential for additional preserved Palaeolithic evidence within the river terrace gravels of the Medway Valley, although the nature and extent of this evidence is not known. Evidence of Mesolithic, Neolithic, Bronze Age and Iron Age activity, and the natural environments of these periods, may survive within alluvial and peat deposits in this area and could inform on the utilisation of the marshy, flood plain environments that existed along the river valley.
- 3.5 Two undated ring ditches are recorded c. 600m to the north of the site. No dating evidence has been recovered from these features, but similar ditches are known to date to the later prehistoric periods. Some seven hundred and thirty-nine ring ditch cropmarks have been recorded in Kent, including

those located on the high ground of the Medway region. It is thought that the majority of Kentish ring ditches are likely to represent round barrows dating to the Bronze Age (Hart 2006).

- 3.6 By the Iron Age there is evidence of a potential settlement situated on the Rochester side of the river, to the east of the site. It is not known if there was a similar settlement on the Strood side of the river; there may, however, be evidence related to the utilisation of the wider area by inhabitants of the Rochester settlement.

### **Romano-British Period (AD 43 – AD 410)**

- 3.7 During the Roman period, a substantial Roman town named *Durobrivae* grew up around the bridge head of Rochester, c. 2.5km to the south-east of the proposed development site. The town was probably the administrative centre for the surrounding area and its presence undoubtedly encouraged the establishment of farms and villa estates in the Medway Valley. Villa sites include those at Cobham, Frindsbury, Hoo and Fort Amherst (Kent County Council & English Heritage 2004).
- 3.8 Roman settlement activity in the Strood area is thought to have likely been clustered around the site of the bridge head, c. 2.1km to the south-east of the site and archaeological remains have been recorded at a number of sites along the High Street. Funerary activity has also been recorded including a Romano-British cremation cemetery and an extensive Romano-British and Anglo-Saxon cemetery discovered in 1888-9, c.1.6km to the south-east of the proposed development site.
- 3.9 Watling Street forms the northern boundary of the proposed development site; this route originated as a Roman road leading from Rochester (*'Durobrivae'*) to London (*'Londinium'*) and was a major route for trade, travel and communication. The road has been widened in the 20<sup>th</sup> century, with the route of the post-medieval road (potentially close to the original alignment) c. 25 - 30m from the proposed development site's northern boundary.
- 3.10 Excavations at Springhead Nurseries, c. 300m to the east of the proposed development site exposed up to 8m of this road, which was constructed with a gravel metalled surface and lined by roadside ditches. Numerous archaeological discoveries have been made in Kent along the line of Watling Street; many suggesting areas of roadside settlement.

### **The Early Medieval (AD 410 – AD 1066) and Medieval (AD 1066 – AD 1536) Periods**

- 3.11 It has been suggested that the continued use of Roman cemetery sites into the early medieval period indicates that settlement activity in the Strood area continued with little or no periods of abandonment (WA Heritage 2007). However, excavations at Zoar Chapel on the High Street indicated that there was no evidence for occupation on the site after the 3rd – 4th century AD until the medieval period (WA Heritage 2007), which may suggest that early medieval settlement was located elsewhere – possibly away from the riverfront due to an increase in flooding during the early medieval period.
- 3.12 Whilst there is no direct physical evidence of early medieval activity in the immediate vicinity of the proposed development site, documentary and physical evidence indicates settlement activity in the wider surrounding area and landscape. Documentary sources refer to Rochester from AD 604 onwards with further documents referring to the Royal Manor of Wicham, later Temple Manor – the south-west of modern day Strood, in 764 AD (CgMs 2008).
- 3.13 It is likely that any settlement would have been founded on the Strood side of the river, probably close to the bridge head c. 2.1km to the south-east of the proposed development site. There is no evidence of significant activity within or within the vicinity of the proposed development site itself

during this period; it may have been part of the agricultural hinterland of the settlement of another nearby manor.

- 3.14 During the medieval period Strood was known as *Strode* or *Strodes* (Smetham 1899) with documentary sources indicating that it comprised of at least three manors; the Manor of Boncakes, alias Newark, the Manor of Goddington, and the Manor of Stroud, alias Temple Manor (Hasted 1797).
- 3.15 There is a greater amount of physical evidence related to Strood during the medieval period, including occupation activity alongside the site of Newark/St. Mary's Hospital with probable associated burials on Strood High Street and the site of the medieval Rochester Bridge.
- 3.16 There is, however, no evidence to suggest any form of medieval settlement activity in the area of the proposed development site and it is probable that this area was still undeveloped or agricultural land at this time.

### **The Post Medieval (AD 1536 – AD 1900) and Modern (AD 1900 – Present) Periods**

- 3.17 As with many towns and settlements, Strood developed and expanded through the post-medieval periods. Cartographic evidence shows the study area remained predominantly rural up until the mid-20<sup>th</sup> century, when urban growth caused the settlement of Strood to expand westwards towards the site.
- 3.18 During the Victorian period, the local cement industry flourished due to the local abundance of natural resources. Portland cement was in high demand due to its property of being able to set under water; the key components for this mixture comprised mud and chalk that could be dredged from the banks of the Medway or dug out of the adjacent hills (Medway Council 2009).
- 3.19 Evidence for quarrying activity has been recognised close to the proposed development site in the form of a small chalk quarry, c. 100m to the north. This quarry was shown on the first edition Ordnance Survey map (c.1858-73).
- 3.20 The original school built within the proposed development site was called 'Rede School' and was opened by Margaret Thatcher on Wednesday 7<sup>th</sup> July 1971. Rede School ceased to admit pupils after August 1991 and it was closed in August 1993. Chapter Girls School, which had been established in 1939 on another site, moved into the renovated premises previously occupied by Rede School in the new academic year beginning September 1993 (Medway Archives and Local Studies Centre 2009).
- 3.21 In September 2009, Chapter Girls School (with Temple School) became Strood Academy, admitting a mixed Year 7 group to be educated together at the Academy Campus at Carnation Road (Strood Academy 2009).

## **4. Aims of the Investigation**

- 4.1 The aims of the archaeological watching brief were defined as being:
  - To establish the presence/absence of archaeological remains within the site.
  - 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 archaeology advisor to Medway Council 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.



4.2 The specific aims of the watching brief were:

- Determine the potential of the site to contain evidence for palaeolithic activity.
- Determine whether a dry valley lies within the confines of the site.
- Determine the potential for there being deposits that may contain evidence for prehistoric to medieval activity within the site.
- Assess the degree and extent of truncation of earlier deposits by late post-medieval and modern buildings on the site.

4.3 The final aim was to make public the results of the investigation, subject to any confidentiality restrictions.

## 5. Methodology

5.1 Site procedures were defined in the written scheme of investigation (AOC 2010).

5.2 The site code CNS 10 was generated by AOC, and used for all fieldwork.

5.3 All work was carried out in accordance with local and national guidelines:

- Archaeological Guidance Paper (AGP) 3: *Standards and Practises in Archaeological Fieldwork* (English Heritage 1998)
- Institute for Archaeologists – *Standard and Guidance for Archaeological Field Evaluation*. (IfA 2009).
- Institute for Archaeologists – *Code of Conduct* (IfA 2010).
- Museum of London's *Archaeological Field Manual* (MoL 1994).
- United Kingdom Institute for Conservation – *Conservation Guidelines No.2* (UKIC 1983).
- United Kingdom Institute for Conservation – *Guidance for Archaeological Conservation Practice* (UKIC 1990).

5.4 A continuous unique numbering system was employed. For each test pit/trench, a block of numbers in a continuous sequence was allocated.

5.5 Written descriptions, comprising both factual data and interpretative elements, were recorded on standardised sheets.

5.6 The monitoring was undertaken by Project Supervisor Ian Hogg under the overall direction of Alan Ford, Project Manager. The watching brief was monitored by Ben Found, Archaeologist with Kent Heritage Conservation Group.

## 6. Results of the Watching Brief

### Service Check Trenches

- 6.1 Seven service check trenches were excavated, to check for gas, electricity and water services (Figures 3 and 4).

#### Trench 1

Context	Depth (BGL)	Thickness	Description/Interpretation
100	0.00m	0.40m	Dark brown clay-silt topsoil
101	0.40m	0.30m	Mid brown clay-silt. Subsoil
102	0.70m	0.10m	Mid orangey brown, clay-silt. Natural

- 6.2 Trench 1 was located in the northeast corner of the site to find a gas main. The trench measured 3.50m x 2.00m and was orientated east-west.
- 6.3 Natural mid orangey brown clay-silt (102) was observed at a depth of 0.70m, this was overlain by 0.30m of firm, mid brown clay-silt subsoil (101). The trench was sealed by 0.40m of soft dark brown clay-silt topsoil. No archaeological features or finds were encountered in this trench.

#### Trench 2

Context	Depth (BGL)	Thickness	Description/Interpretation
200	0.00m	0.20m	Soft Dark brown silt. Topsoil
201	0.20m	0.12m	Firm white chalk. Made ground
202	0.32m	0.30m	Mid brown clay-silt. Made ground
203	0.62m	0.18m	Firm white chalk. Made ground
204	0.80m	0.19m	Dark brown clay-silt Buried topsoil
205	0.99m	0.20m	Mid brown clay-silt. Subsoil
206	1.19m	0.10m	Mid orangey brown, clay-silt. Natural

- 6.4 Trench 2 was also located to find the gas main in the east of the site; it ran north-south and measured 3.50m x 2.70m. Mid orangey brown clay-silt (206) was observed at a depth of 1.19m; this was overlain by mid brown clay silt subsoil (205), 0.20m thick; and dark brown clay-silt buried topsoil (204) 0.19m thick.
- 6.5 The natural soil formation was overlain by deposits of made ground; evidence of the levelling for the school playing field. The buried topsoil was overlain by firm white chalk made ground deposit (203) 0.18m thick, this was overlain by mid brown clay silt deposit (202) 0.30m thick. A second deposit of chalk made ground (201) 0.12m thick sealed (202) and was overlain by 0.20m of dark brown silt topsoil (200).
- 6.6 The sequence of made ground consisted of deposits similar to the subsoil and natural chalk seen in other parts of the site and was probably imported from the west of the site where the ground was significantly reduced for the playing field.

#### Trench 3

Context	Depth (BGL)	Thickness	Description/Interpretation
300	0.00m	0.60m	Soft Dark brown silt. Topsoil
301	0.60m	0.40m	Firm white chalk. Made ground
302	1.00m	0.50m	Dark brownish grey, silty clay. Made ground

303	1.50m	0.55m	Firm white chalk. Made ground
304	2.05m	0.20m	Dark brownish grey, silty clay. Made ground

- 6.7 Trench 3 was located in the southeast of the site, on the line of the gas pipe; it was orientated north-south and measured 3.50m x 2.00m. The natural deposit was not observed in this trench. The earliest deposit exposed consisted of dark brownish grey silty clay made ground (304) which contained occasional modern ceramic building material (CBM); this was 0.20m thick. The made ground was overlain by a deposit of hard white chalk made ground (303) 0.55m thick. A second deposit of brown grey silty clay made ground (302) 0.50m thick overlay the chalk. This was in turn sealed by a second chalk made ground deposit (301) 0.40m thick.
- 6.8 The trench was sealed by 0.60m of soft dark brown silt topsoil (300). The depth of this trench reinforces the idea that the site previously sloped significantly from northwest to southeast and was levelled for the playing field. The surrounding area sits upon terraces of varying heights, the school to the south on a lower terrace, the houses to the east and west upon higher ground, implying that much of the area and not just the playing field, was landscaped during the 20<sup>th</sup> century.

#### Trench 4

Context	Depth (BGL)	Thickness	Description/Interpretation
400	0.00m	0.20m	Soft Dark brown silt. Topsoil
401	0.20m	0.10m	Firm white chalk. Made ground
402	0.30m	0.30m	Pale grey concrete slab
403	0.60m	0.50m	Dark brownish grey, silty clay. Made ground

- 6.9 Trench 4 was located to the south of Trench 3 and ran east-west and measuring 2.00m x 0.70m; this trench was also targeted on the gas main. The natural deposit was not observed in this trench. The earliest deposit consisted of dark brownish grey made ground (403) 0.50m thick, this was overlain by a 0.30m thick concrete slab (402). The slab was sealed by a 0.10m thick deposit of white chalk made ground (401) which was sealed by 0.20m of dark brown silt topsoil (400).

#### Trench 5

Context	Depth (BGL)	Thickness	Description/Interpretation
500	0.00m	0.20m	Soft Dark brown silt. Topsoil
501	0.20m	0.50m	Dark brownish grey, silty clay. Made ground
502	0.70m	0.20m	Firm white chalk. Made ground
503	0.90m	0.70m	Dark brownish grey, silty clay. Made ground

- 6.10 Trench 5 was located along the southern boundary of the site and was aligned north-south; it measured 2.00m x 0.70m. Once again the natural deposit was not exposed in this trench. The earliest deposit encountered was dark brownish grey silty clay made ground (503) 0.70m thick; this was sealed by 0.20m of white chalk made ground (502). The chalk was overlain by a made ground deposit (501) similar to (503) and 0.50m thick, this was sealed by 0.20m of dark brown silt topsoil (500).

#### Trench 6

Context	Depth (BGL)	Thickness	Description/Interpretation
600	0.00m	0.20m	Soft Dark brown silt. Topsoil

601	0.20m	0.90m	Hard, white chalk. Natural
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- 6.11 Trench 6 was located in the southwest of the site and was aligned east-west. This trench measured 2.00m x 0.70m and targeted a water main. Natural hard white chalk (601) was observed at a depth of 0.20m; this was overlain by dark brown silt topsoil. This trench shows a stratigraphic sequence indicative of previous levelling of the site for the playing fields.

### Trench 7

Context	Depth (BGL)	Thickness	Description/Interpretation
700	0.00m	0.30m	Soft Dark brown silt. Topsoil
701	0.30m	0.40m	Firm white chalk. Made ground
702	0.70m	0.30m	Soft, dark brown clay silt. Buried topsoil
703	1.00m	0.70m	Hard, white chalk. Natural

- 6.12 Trench 7 was located in the south of the site, targeting an electrical cable and measured 6.00m x 0.70m on a north-south alignment. Natural hard white chalk (703) was observed at a depth of 1.00m, this was sealed by buried topsoil deposit (702), which was 0.30m thick. The buried topsoil was overlain by 0.40m of compact white chalk made ground (701), which was in turn sealed by 0.30m of soft dark brown silt topsoil (700).

### Window Sample Pits

- 6.13 Thirteen window sample pits (WS1-13) were excavated on the site (Figure 3) in addition to three previous boreholes (BH 1-3). The pits were excavated using an 80mm Dynamic Window Sampler .

#### Window Sample Pit 1

Context	Depth (BGL)	Thickness	Description/Interpretation
800	0.00m	0.35m	Soft Dark brown silt. Topsoil
806	0.35m	1.60m	Hard, white chalk. Natural

- 6.14 Window Sample Pit 1 was located in the southwestern corner of the site. Natural chalk (806) was overlain by 0.35m of dark brown silt topsoil (800).

#### Window Sample Pit 2

Context	Depth (BGL)	Thickness	Description/Interpretation
800	0.00m	0.25m	Soft Dark brown silt. Topsoil
805	0.25m	2.45m	Pale greenish grey grading through pale green to orange brown. Natural sands grading to clay (Head Deposit)
806	2.70m	0.90m	Hard, white chalk. Natural

- 6.15 Window Sample Pit 2 was situated in the west of the site. Natural chalk (806) was observed at a depth of 2.70m, it was overlain by 2.45m of firm brownish grey sand natural (805), which is likely to be a Head Deposit; this was in turn sealed by 0.25m of topsoil (800).

#### Window Sample Pit 3

Context	Depth (BGL)	Thickness	Description/Interpretation
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800	0.00m	0.25m	Soft Dark brown silt. Topsoil
803	0.25m	0.70m	Mid brown clay-silt. Subsoil
805	0.90m	0.05m	Stiff orange brown gravelly clay grading to chalk gravel. (Head Deposit or Solifluxion)
806	0.95m	1.00m	Hard, white chalk. Natural

- 6.16 Window Sample Pit 3 was located in the south of the site. Natural Chalk (806) was overlain by 0.05m of gravelly clay and shattered chalk gravel (805); this deposit may be a Head Deposit or evidence of solifluxion across the chalk surface. This was in turn overlain by 0.70m of mid brown clay-silt subsoil (803), which was sealed by 0.25m of topsoil (801).

#### Window Sample Pit 4

Context	Depth (BGL)	Thickness	Description/Interpretation
801	0.00m	0.50m	Mixed white chalk and mid brown clay. Made ground
804	0.50m	1.00m	Stiff pale brown sandy clay with flint (Head Deposit)
805	1.50m	0.75m	White chalk gravel in pale brown sandy silt (Head Deposit or Solifluxion)
806	2.25m	1.00m	Hard, white chalk. Natural

- 6.17 Window Sample Pit 4 was located in the centre of the site. Natural chalk (806) was overlain by 0.75m of shattered chalk gravel in a silty deposit (805), which may be a Head Deposit or evidence for solifluxion across the chalk surface. This was in turn overlain by 1.0m of sandy clay (804), which may be a Head Deposit. Over this was 1.20m of modern made ground (801), which was in turn overlain by modern topsoil (800) 0.30m thick.

#### Window Sample Pit 5

Context	Depth (BGL)	Thickness	Description/Interpretation
800	0.00m	0.30m	Soft dark brown silt with gravel and brick. Topsoil/Made Ground
804	0.30m	0.60m	Mid orangey brown clay-silt. Natural (Head Deposit)
805	0.90m	0.60m	Stiff orange brown gravelly clay grading to chalk gravel. (Head Deposit or Solifluxion)
806	1.50m	2.00m	Hard, white chalk. Natural

- 6.18 Window Sample Pit 5 was located in the centre of the site. Natural white chalk (806) was overlain by 0.60m of stiff orange gravelly clay with chalk (805), which may be a Head Deposit or evidence for solifluxion across the chalk surface. This was overlain by 0.60m of mid orangey brown clay (804);, which is probably a Head Deposit; this was in turn sealed by 0.30m of topsoil (800).

#### Window Sample Pit 6

Context	Depth (BGL)	Thickness	Description/Interpretation
800	0.00m	0.20m	Soft Dark brown silt. Topsoil/Made Ground
801	0.20m	1.80m	Mixed white chalk and mid brown clay. Made ground
804	2.00m	1.50m	Friable brown silty sand/clay

			grading to greenish grey silty clay. Natural (Head Deposit)
806	3.50m	0.50m	Hard, white chalk. Natural

- 6.19 Window Sample Pit 6 was located in the south of the site. Natural chalk (806) was observed at a depth of 3.65m; it was overlain by 1.45m of natural brownish orange clay (804), which may be a Head Deposit. The clay was sealed by 2.00m of modern made ground (801), which was in turn sealed by 0.20m of topsoil and made ground (800).

#### Window Sample Pit 7

Context	Depth (BGL)	Thickness	Description/Interpretation
800	0.00m	0.30m	Soft Dark brown silt. Topsoil/Made Ground
801	0.30m	1.75m	Mixed white chalk and mid brown clay. Made ground
804	1.85m	0.50m	Mid orangey brown silty sand/clay Natural (Head Deposit)
805	2.75m	1.00m+	Orange brown clayey silt/sand grading to greenish sand (Head Deposit)

- 6.20 Window Sample Pit 7 was located in the centre of the site. Natural brownish grey sand (805), which is probably a Head Deposit, was observed at a depth of 2.30m and was overlain by another probable Head Deposit, comprising of 0.50m of brownish orange clay (804). The clay was sealed by 1.50m of modern made ground (801), which was in turn sealed by 0.30m of topsoil and made ground (800).

#### Window Sample Pit 8

Context	Depth (BGL)	Thickness	Description/Interpretation
800	0.00m	0.20m	Soft Dark brown silt. Topsoil
801	0.20m	0.50m	Mixed white chalk and mid brown clay. Made ground
803	0.70m	0.20m	Mid brown clay-silt. Subsoil
804	0.90m	1.00m	Firm brown grading to greenish silty sand/clay. Natural (Head Deposit)
805	1.90m	0.30m	Mid brownish grey. Natural Sands (Head Deposit)
806	2.20m	0.80m	Hard, white chalk. Natural

- 6.21 Window Sample Pit 8 was located in the centre of site. Natural hard white chalk (806) was observed at a depth of 2.20m and was overlain by 0.30m of sand (805), which may be a Head Deposit. This sand was sealed by another probable Head Deposit, comprising of 1.00m of orangey brown clay (804). The natural clay was overlain by 0.20m of mid brown clay-silt subsoil (803), which was sealed by 0.50m of modern made ground (801) and 0.20m of topsoil (800).

#### Window Sample Pit 9

Context	Depth (BGL)	Thickness	Description/Interpretation
800	0.00m	0.20m	Soft Dark brown silt. Topsoil
801	2.30m	2.30m	Mixed white chalk and mid brown clay. Made ground
804	4.30m	2.00m	Mid orangey brown clay-silt. Natural (Head Deposit)

806	6.30m	2.00m	Hard, white chalk. Natural
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- 6.22 Window Sample Pit 9 was located in the southeastern corner of the site. Natural chalk was observed at a depth of 6.30m and overlain by 2.00m of mid orangey brown clay (804), which may be a Head Deposit. The clay was sealed by 2.30m of modern made ground (801), which was in turn overlain by 0.20m of topsoil (800).

#### Window Sample Pit 10

Context	Depth (BGL)	Thickness	Description/Interpretation
801	0.00m	0.20m	Soft Dark brown silt. Topsoil
801	0.20m	1.80m	Mixed white chalk and mid brown clay. Made ground
804	2.00m	1.35m	Mid orangey brown clay-silt. Natural (Head Deposit)
806	3.35m	0.60m	Hard, white chalk. Natural

- 6.23 Window Sample Pit 10 was located in the east of the site. Natural chalk (806) was seen at 3.35m below ground level and was overlain by 1.35m of mid orangey brown clay (804), which may be a Head Deposit. This deposit was overlain by 1.80m of modern made ground (801), which was in turn overlain by 0.20m of topsoil (800).

#### Window Sample Pit 11

Context	Depth (BGL)	Thickness	Description/Interpretation
801	0.00m	0.40m	Soft Dark brown silt. Topsoil
804	0.40m	0.15m	Mid orangey brown clay-silt. Natural (Head Deposit)
805	0.55m	3.00m	Mid brownish grey. Natural Sands (Head Deposit)

- 6.24 Window Sample Pit 11 was located in the east of the site. Natural chalk was observed at a depth of 0.55m and was overlain by 0.15m of natural orange brown clay (801), which may be a Head Deposit. This was in turn overlain by 0.40m of topsoil (800).

#### Window Sample Pit 12

Context	Depth (BGL)	Thickness	Description/Interpretation
800	0.00m	0.30m	Soft Dark brown silt. Topsoil
801	0.30m	0.60m	Mixed white chalk and mid brown clay. Made ground
804	0.90m	0.20m	Mid greenish grey silty clay. Natural (Head Deposit)
805	1.10m	1.60m	Mid brownish grey. Natural (Head Deposit)s

- 6.25 Window Sample Pit 12 was situated in the east of the site. Natural sand (806, which may be a Head Deposit) was observed at a depth of 1.10m and sealed by another probable Head Deposit, comprising of 0.20m of natural orange clay (804). The natural sequence was sealed by 0.60m of modern made ground (801) and 0.30m of topsoil (800).

#### Window Sample Pit 13

Context	Depth (BGL)	Thickness	Description/Interpretation
800	0.00m	0.20m	Soft Dark brown silt. Topsoil
801	0.20m	1.20m	Mixed white chalk and mid brown clay. Made ground
805	1.40m	1.40m	Mid greenish grey. Natural Sands (Head Deposit)
806	2.80m	0.80m	Hard, white chalk. Natural

- 6.26 Window Sample Pit 13 was located in the east of the site; Natural chalk (806) was observed at a depth of 2.80m and sealed by 1.40m of sand (805), which may be a Head Deposit. This was overlain by 1.20m of modern made ground (801) which was overlain by 0.20m of topsoil (800).

### Filtration Test Pits

- 6.27 Three test pits were excavated in the west of the site (Figures 3 and 4). All three showed evidence of the ground reduction associated with the construction of the playing field; Natural hard white chalk (901), (1001), (1101) was overlain by 0.20m of dark brown sandy silt topsoil (900), (1000) and (1100), in all test pits. No archaeological features or finds were observed.

## 7 Finds

- 7.1 No finds were retained from the site, the only finds noted during the works were small fragments of modern CBM present in the made ground deposits.

## 8 Conclusions and Interpretation

- 8.1 The investigation achieved its aims in establishing the absence of archaeological features in the trenches and pits; and in indicating that much of the north and west of the site had undergone significant horizontal truncation during the construction of the school. The presence of natural sand and orange clay deposits also clearly indicates that stratigraphic units, which could be Head Deposits, are present within the footprint of the proposed new building. If these are Head Deposits then there is a potential for there to be palaeolithic artefacts present within them.
- 8.2 The stratigraphic sequence varied greatly across the site with most of the northern and western investigations showing a sequence of natural chalk occasionally overlain by natural sands or clays all sealed by topsoil. This sequence illustrates the horizontal truncation which has taken place in this area with much of the natural soil sequence missing. The investigations also showed that significant undulations exist within the chalk deposit, with up to 2.45m of sand being present in hollows within the chalk.
- 8.3 The investigations also clearly showed the thickening of the made ground deposit towards the south and east. In some places the subsoil was still preserved beneath the made ground but across much of the site little evidence of the natural soil formation remains.
- 8.4 The south and west of the site provided more potential for archaeological remains with occasionally very thick deposits of made ground sealing buried soils, which in turn overlay head deposits. However due to the thickness of the overlying made ground deposits it is expected that the development will only have a limited impact on any archaeological remains present.
- 8.5 Despite the terracing of the surrounding landscape, it was still possible to see some evidence of a valley; filled in part with possible Head Deposits of clay and sands, which appear to slope down to the south. The presence of deposits across parts of the site that have a potential to contain



archaeological remains will be a factor in any decision made as to the requirement for, and nature of follow on archaeological evaluation and/or mitigation.

## **9 Publication**

- 9.1 Due to the nature of the project, publication is expected to be limited to a summary in the Kent Archaeological Review's Annual Archaeology Round-up and publication via the Archaeological Data Service (ADS) (Appendix B).

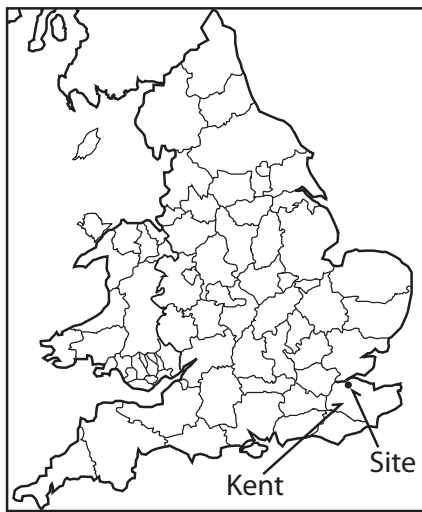
## **10 Archive Deposition**

- 10.1 The archive, consisting of paper records, drawings, and digital photographs, will be deposited with the Kent Museums Services (TBC).

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Approximate Site Location  
Within England & Wales

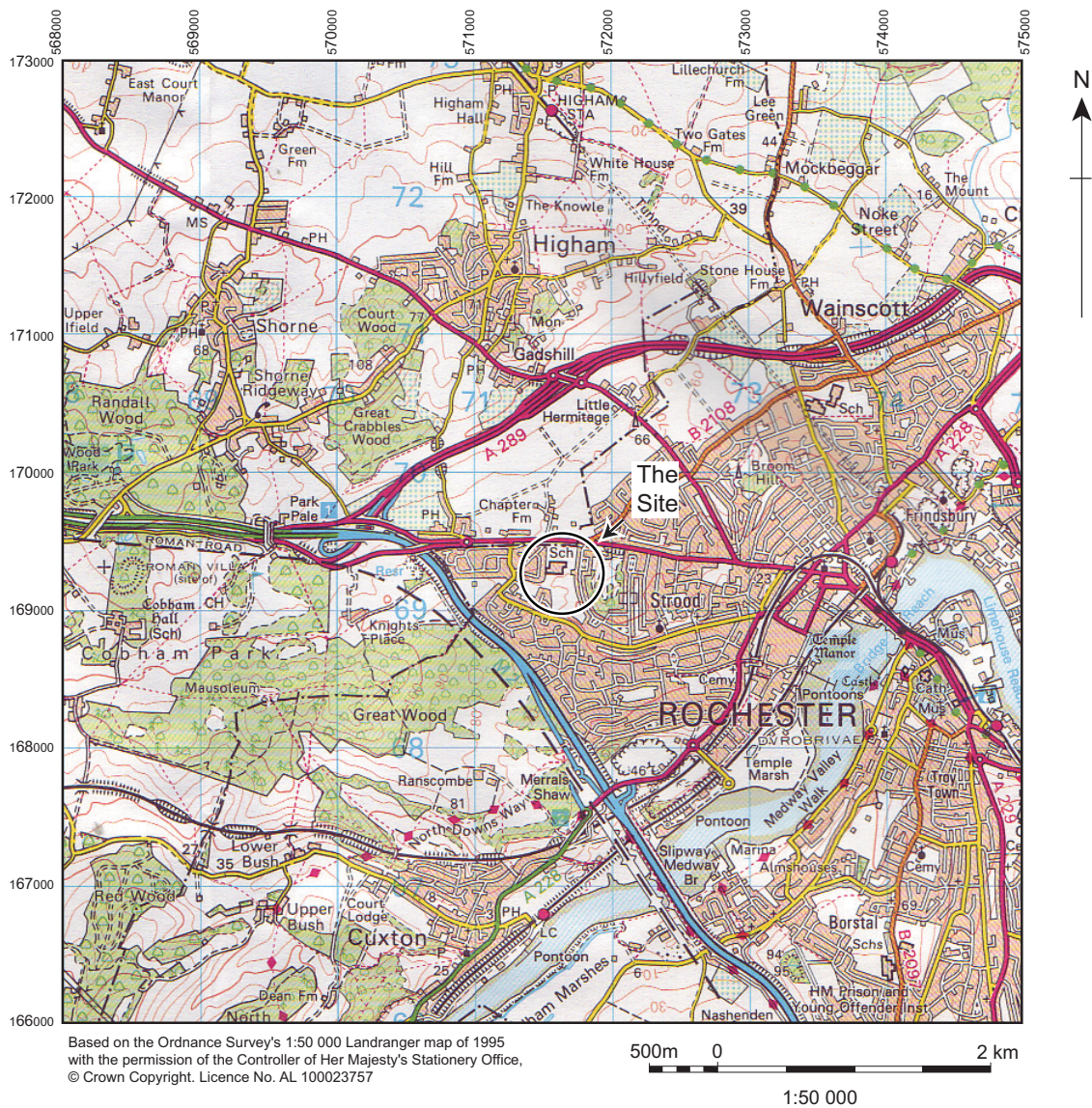
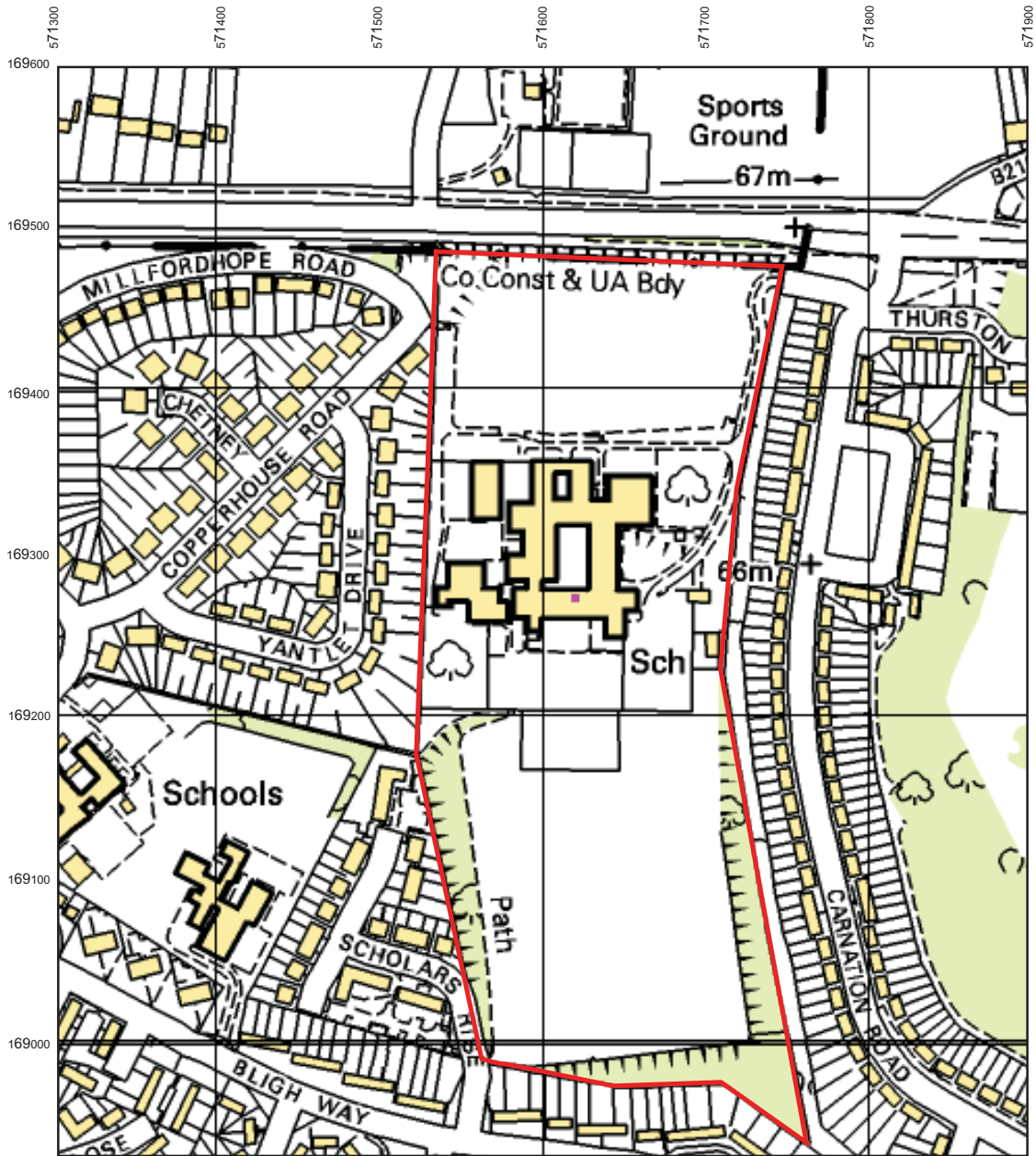
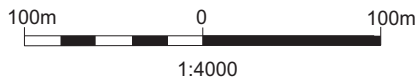


Figure 1: Site Location



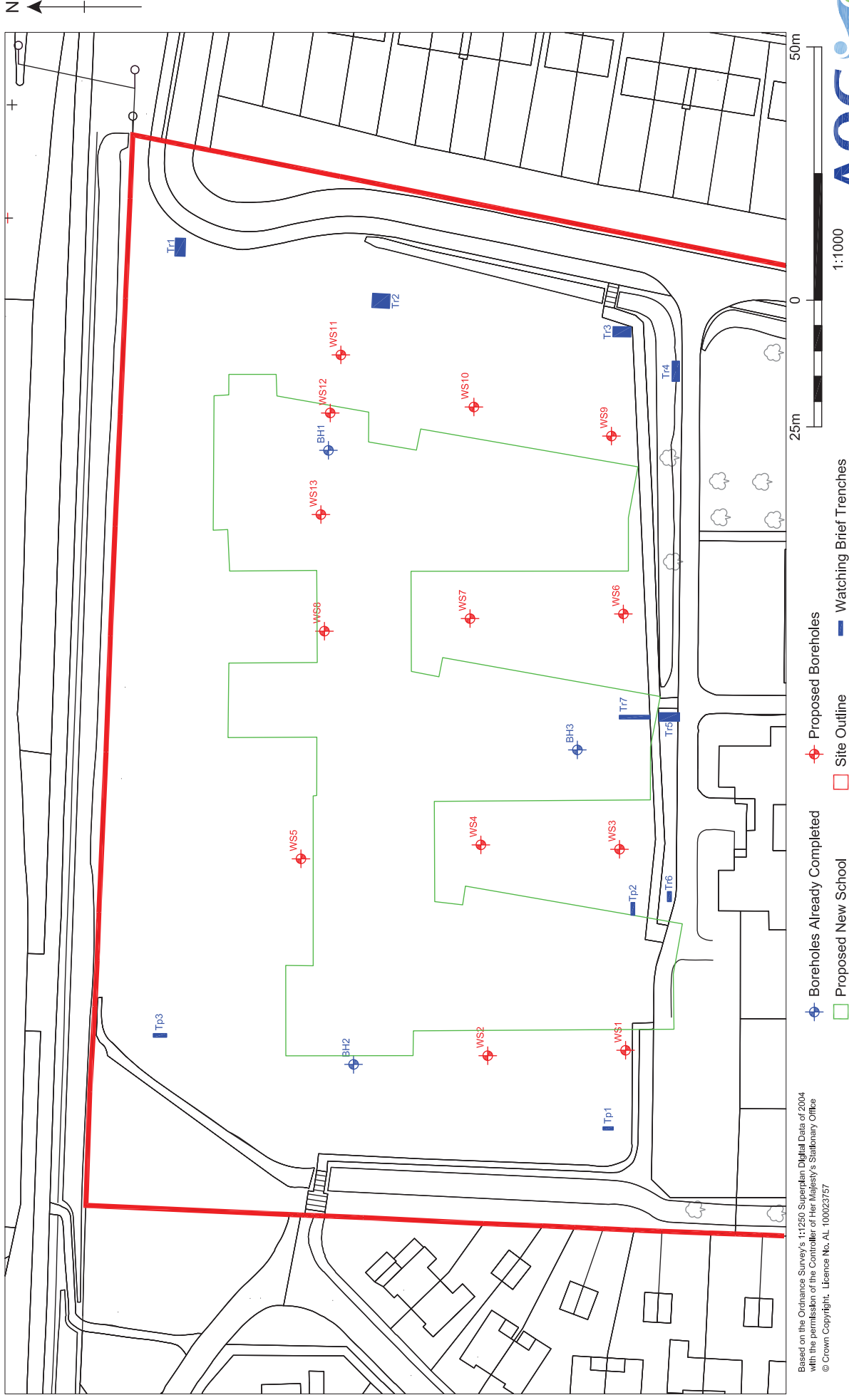
Based on the Ordnance Survey's 1:10,000 map of 2009 with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright. Licence No. AL 100023757

Outline of the Site



**Figure 2:** Detailed Site Location

STROOD ACADEMY, STROOD, KENT: A REPORT ON MONITORING GEOTECHNICAL INVESTIGATIONS



Based on the Ordnance Survey's 1:1250 Superplan Digital Data of 2004 with the permission of the Controller of Her Majesty's Stationary Office © Crown Copyright. Licence No. AL 100023757

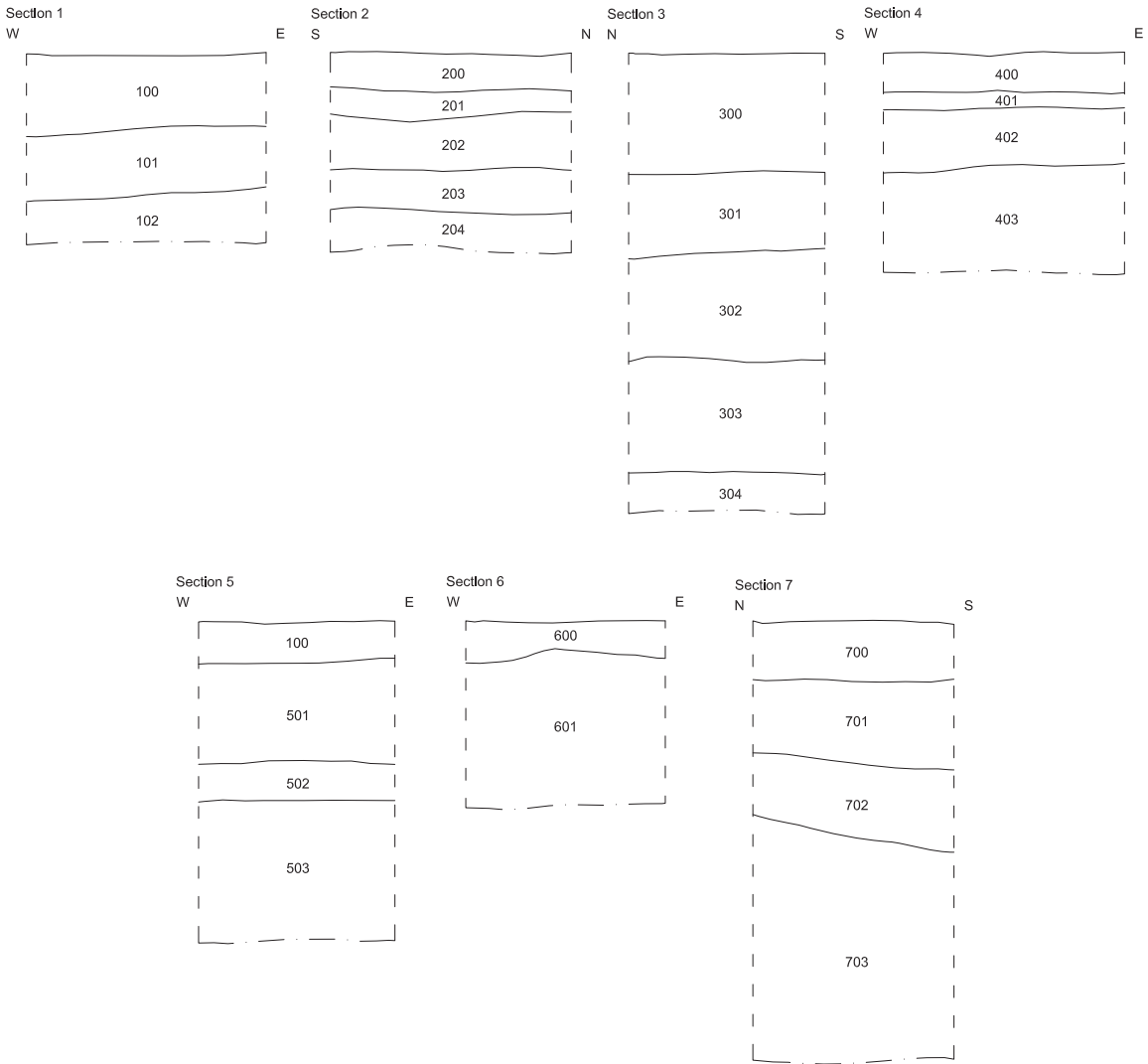
- Boreholes Already Completed
- Proposed Boreholes
- Proposed New School
- Site Outline
- Watching Brief Trenches

**Figure 3:** Detailed Borehole & Watching Brief Location Plan

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Trench Sample Sections



Test Pit Sample Sections

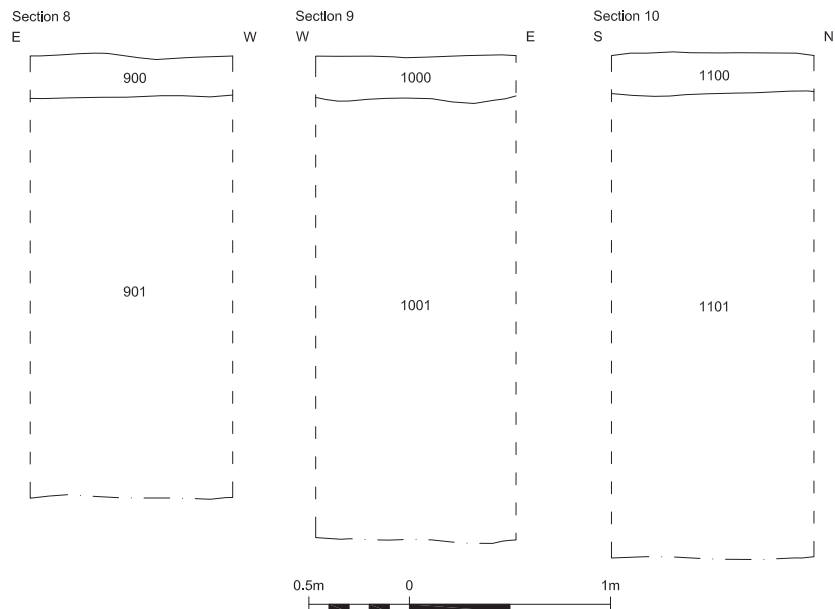


Figure 4: Trench and Test Pit Sample Sections

## Appendices



## Appendix A- Context Register

Context	Description	Length	Width	Depth	Findings
100	Topsoil and made ground: Soft dark brown clayey Silt	3.50m	2.00m	0.40m	None
101	Subsoil: Firm mid brown clay Silt	3.50m	2.00m	0.30m	None
102	Head Deposit: Firm mid orange clay Silt	3.50m	2.00m		None
200	Topsoil and made ground: Soft dark brown loamy Silt	3.50m	2.70m	0.20m	None
201	Made ground: Firm white chalk rubble	3.50m	2.70m	0.12m	None
202	Made ground: Mid brown clay Silt with chalk fragments	3.50m	2.70m	0.30m	None
203	Made ground: Firm white chalk rubble	3.50m	2.70m	0.18m	None
204	Buried topsoil: Soft dark brown clayey Silt	3.50m	2.70m	0.19m	None
205	Buried subsoil: Firm mid brown clay Si	3.50m	2.70m	0.20m	None
206	Head Deposit: Firm mid orange clay Silt	3.50m	2.70m		None
300	Topsoil and made ground: Soft dark brown loamy Silt	3.50m	2.00m	0.60m	None
301	Made ground: Firm white chalk rubble	3.50m	2.00m	0.40m	None
302	Made ground: Dark brownish grey silt Clay with chalk rubble and CBM	3.50m	2.00m	0.50m	CBM
303	Made ground: Firm white chalk rubble	3.50m	2.00m	0.55m	None
304	Made ground: Dark brownish grey silt Clay with chalk rubble and CBM	3.50m	2.00m		CBM
400	Topsoil and made ground: Soft dark brown loamy Silt	2.00m	0.70m	0.20m	None
401	Made ground: Firm white chalk rubble	2.00m	0.70m	0.20m	None
402	Concrete slab	2.00m	0.70m	0.30m	None
403	Made ground: Dark brownish grey silt Clay with chalk rubble and CBM	2.00m	0.70m		CBM
500	Topsoil and made ground: Soft dark brown loamy Silt	2.00m	0.70m	0.20m	None
501	Made ground: Dark brownish grey silt Clay with chalk rubble and CBM	2.00m	0.70m	0.50m	CBM
502	Made ground: Firm white chalk rubble	2.00m	0.70m	0.20m	None
503	Made ground: Dark brownish grey silt Clay with chalk rubble and CBM	2.00m	0.70m		CBM
600	Topsoil and made ground: Soft dark brown clayey Silt	2.00m	0.70m	0.20m	None
601	Natural Chalk	2.00m	0.70m		None
700	Topsoil and made ground: Soft dark brown loamy Silt	6.00m	0.70m	0.30m	None
701	Made ground: Firm white chalk rubble	6.00m	0.70m	0.40m	None
702	Buried topsoil: Soft dark brown clayey Silt	6.00m	0.70m	0.30m	None
703	Natural Chalk	6.00m	0.70m		None
800	Topsoil and made ground: Soft dark brown loamy Silt			0.20 – 0.40m	None
801	Made ground: Mixed chalk rubble in clayey Silt			0.10 – 2.00m	None
802	Buried topsoil: Soft dark brown clayey Silt			0.20m	None
803	Buried subsoil: Firm mid brown clay Silt			0.20m	None

<b>Context</b>	<b>Description</b>	<b>Length</b>	<b>Width</b>	<b>Depth</b>	<b>Finds</b>
804	Head Deposit: Firm mid orange clay Silt			0.10m – 1.50m	None
805	Head Deposit/Thanet Sand: Firm mid brownish grey silty Sand			<1.00m	None
806	Natural Chalk				None

## Appendix B – OASIS Form

### **OASIS ID: aocarcha1-84822**

#### Project details

Project name           Strood Academy

Short description of the project           A watching brief was conducted on geotechnical works at Strood Academy; these included: service check trenches, window sample pits and filtration of testing pits. The north and west of the site had been heavily truncated during the construction of the playing field; the material stripped from this area had been deposited on the south and east of the site to level it. No archaeological remains were found.

Project dates           Start: 20-10-2010 End: 29-10-2010

Previous/future work Yes / Not known

Any associated project codes           reference 30865 - Contracting Unit No.

Any associated project codes           reference CNS 10 - Site code

Type of project           Recording project

Site status           None

Current Land use           Community Service 1 - Community Buildings

Monument type           NONE None

Significant Finds           NONE None

Investigation type           'Watching Brief'

Prompt           Direction from Local Planning Authority - PPS

## Project location

Country England  
Site location KENT MEDWAY ROCHESTER Strood Academy

Postcode ME2 2SX

Study area 9.82 Hectares

Site coordinates TQ 7162 6926 51.3958401404 0.467246353936 51 23 45 N 000 28 02 E  
Point

## Project creators

Name of  
Organisation AOC Archaeology

Project brief  
originator Kent County Council

Project design  
originator AOC Archaeology

Project  
director/manager Alan Ford

Project supervisor Ian Hogg

Type of  
sponsor/funding Developer  
body

Name of  
sponsor/funding DHA Planning  
body

## Project archives

Physical Archive  
Exists? No

Digital Archive  
recipient Kent Museum Service TBC

Digital Contents 'none'

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

Paper recipient Archive Kent Museum Service TBC

Paper Contents 'none'

Paper available Media 'Context sheet','Plan','Report','Section','Unpublished Text'

Project bibliography  
1

Publication type Grey literature (unpublished document/manuscript)  
Title Strood Academy, Strood, Kent: Desk Based Assessment

Author(s)/Editor(s) Nick Carter and Chloe Smith

Date 2009

Description Desk Based Assessment

Entered by Ian Hogg (ian.hogg@aocarchaeology.com)

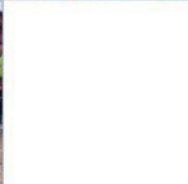
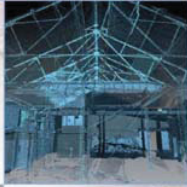
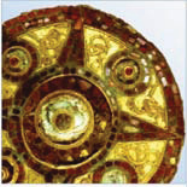
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## OASIS:

Please e-mail [English Heritage](#) for OASIS help and advice

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