Archaeology South-East

ASE

An Archaeological Evaluation at St. Mary the Virgin Church, Stone, Kent

NGR: 557647 174810
(TQ 576748)

Project No: 3656

Site Code: SMV 09
Report No: 2009060

OASIS ID: archaeol6-58471

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Abstract

Between 31st March and 6th April 2009 Archaeology South-East, commissioned by Molyneux Architects, undertook a programme of archaeological work in advance of a proposed new Church Hall at St Mary the Virgin Church, Stone, near Dartford, Kent (centred NGR 557647 174810).

Eleven c.1m² test-pits were hand-excavated within the churchyard to assess the archaeological potential of the site and the impact of the proposed development on this potential. Although hand-excavation ceased at a depth of 1m, hand-auguring was undertaken beyond this depth to establish the depth of natural geology within the grounds.

Moderate disarticulated human bone and coffin fittings were uncovered during the work. Unmarked articulated burials were encountered at a minimum depth of 0.5m below ground surface at the south of the site. Redeposited natural chalk was uncovered in the southwest corner of the site overlain by a made ground dump, which was dated by a button to the mid 19th or early 20th century AD. More recent graves cut through these deposits and truncate the underlying garden soil, which suggests that this part of the site was outside of the original graveyard and has been incorporated into the present day cemetery within the last two-hundred years. Artefactual evidence, although predominantly residual, dated from the 10th century AD through to the 20th century AD.

Natural chalk bedrock was encountered at a maximum height of 25.03m AOD in the southern part of the site, but had been truncated in most areas during the excavation of graves in the north. Hand-auguring indicated that the natural bedrock in the north of the site is likely to be at least 2.5m below the ground surface.

CONTENTS

1.0 INTRODUCTION

1.1 Project Background

1.1.1 Archaeology South-East (ASE), the contracting division of the Centre for Applied Archaeology at the Institute of Archaeology, University College London, was commissioned by Molyneux Architects to undertake a programme of archaeological work in advance of a proposed new Church Hall at St Mary the Virgin Church, Stone, near Dartford, Kent (centred NGR 557647 174810) (Figure 1), hereafter referred to as 'the site'.

1.1.2 The site was deemed to have archaeological potential due to its position within a graveyard. In brief, the proposed development could potentially disturb human remains or other archaeological remains and deposits. Any evidence of structural remains associated with earlier phases of the church may also be at threat of disturbance during the construction of the proposed development.

1.2 Planning Background

1.2.1 An application was made to the Diocesan Advisory Committee (DAC) and the Local Planning Authority (LPA) in order to obtain the relevant consents for the proposed scheme. It is anticipated that the LPA and DAC will require information on the presence/absence of archaeological deposits within the footprint of the scheme prior to granting consent in addition to assurances that extant grave markers are not removed from their context without proper records being made. It is further anticipated that a condition of the consent will be that an archaeological watching brief should be maintained during intrusive ground works associated with the development.

1.2.2 A *Written Scheme of Investigation* (ASE 2008) outlining the requirements of the archaeological work was submitted and duly approved by the Diocesan Archaeological Advisor. The *WSI* outlined the specific aims and methodology to be used during the evaluation and subsequent watching brief phases of work. All work was carried out in accordance with this document (unless otherwise specified below) and the relevant *Standards and Guidance* of the Institute for Archaeologists (IfA).

1.3 Aims and Objectives

1.3.1 The specific aims of the evaluation as outlined in the *WSI* (ASE 2008) were as follows:

- Establish the depth of burials in relation to known graves markers that exist within the footprint of the proposed development
- Establish whether unmarked graves are present within the development footprint and establish the depth at which such remains exist

- Establish whether vaults/tombs or similar burial structures may be present
- Establish the presence, character, quality, date and extent of any structural remains that may be associated with earlier phases of the church
- Establish whether any evidence of activity pre-dating the foundation of the church exists

1.4 Scope of the Report

1.4.1 This report presents the findings of the evaluation undertaken at this site between 31st March and 6th April 2009 by Kathryn Grant (Archaeological Field Officer) with the assistance of Rob Cole (Surveyor), Liane Peyre, Lesley Davidson, Michelle Statton, Chris Russel and David Honess. The project was managed by Neil Griffin (Project Manager) and Dan Swift (Post-excavation Manager).

2.0 ARCHAEOLOGICAL BACKGROUND

2.1 Geology and Topography

2.1.1 The working area of the site is located on largely flat land at a maximum height of 25.99m AOD in the Southwest sloping off to 24.69m AOD in the North.

2.1.2 The British Geological Survey (1:50000 series, Sheet 271 for Dartford) illustrates that the underlying geology of the site comprises of Upper Chalk (white chalk with bands of flint).

2.1.3 The village of Stone is situated along the south bank of the River Thames in the county of Kent. In fact St. Mary's Church was known as the "Lantern of Kent" from its beacon light known to all sailors on the river (Web Source 2).

2.2 Historical and Archaeological Overview

2.2.1 Relevant information from Kent County Council Historic Environment Record (HER) has been obtained and is summarised by period below, plotted on Figure 1 and tabulated in the Appendix (Table 2). Only represented periods with relevant records for the local vicinity have been discussed.

2.2.2 *Prehistoric*

Several find spots which have been dated to the Palaeolithic period have been recorded within the surrounding area. Some Beaker pottery and a Palaeolithic implement (1: TQ 57 SE 71) dating from the lower Palaeolithic to the Late Bronze Age (500,000 BC to 701 BC) were found north of Beechin Wood Cottages in 1931. A cordate hand axe (2: TQ 57 SE 75) measuring 4.25 inches was recovered from an unknown location in Stone and is now stored in Dartford Museum. Part of another Acheulian hand axe (3: TQ 57 SE 173) was found in topsoil during an evaluation by Pre-Construct Archaeology at Waterstone Park in Stone. During the course of an archaeological evaluation in 2008 (by AOC Archaeology Group), two late prehistoric flint implements (4: TQ 57 SE 246) were discovered. Records exist for three Neolithic axes (5: TQ 57 NE 30) from the River Thames and a forth was recorded at Horn's Cross gravel pit (7: TQ 57 SE 60). Neolithic/Bronze Age flint finds have also been made within the village of Stone (6: TQ 57 SE 40 and 8: TQ 57 SE 172). A Bronze Age spearhead (9: TQ 57 SE 15) was found at Stone Court in Greenhithe and a Bronze Age Ring Ditch (10: TQ 57 SE 207) at Waterstone Park. Records for the Iron Age period comprise a pit found at Stone castle (11: TQ 57 SE 48), 1st Century AD 'thistle' brooches found at Greenhithe (12: TQ 57 SE 55) as well as a possible farmstead and inhumation at Waterstone Park (13: TQ 57 SE 178 and 14: TQ 57 SE 208).

2.2.3 *Romano-British*

Two Romano-British cemeteries have been recorded within Stone (15: TQ 57 NE 10 and 16: TQ57 SE 6) in addition to an early 2nd Century cremation (21: TQ 57 SE 62) and associated pottery found at Horn's Cross. Other Roman

pottery sherds were recovered from Martin's Pit (17: TQ 57 SE 17) during gravel digging in 1916, at Stone Court (18: TQ 57 SE 58) and Palmer's Pit at Stone Court (19: TQ 57 SE 59). A Roman fibula brooch (20: TQ 57 SE 61) was also found at Stone.

2.2.4 *Late Medieval/Post Medieval*

Stone Court (referenced in previous records) is recorded as a 19th Century house on the site of a medieval archbishop's manor house (22: TQ 57 SE 5). Possible salt mounds (23: TQ 57 NE 1041) lie within the area and are recorded as earlier than 1946. A Cesspit and man-made watercourse (24: TQ 57 NE 108) is recorded at Station Road in Greenhithe, a post-medieval ditch is recorded at Waterstone Park (26: TQ57 SE 210) and a Grade II listed building, the Woodlands (main construction periods 1780 to 1820), is recorded at Greenhithe (25: MKE25494).

2.3 The Church

2.3.1 As the church itself is the focal point of the site and has had an interesting record of development, its history provides pertinent background to the sites activity over several centuries and has consequently been summarised here with all due acknowledgment to the relevant sources.

2.3.2 The Bishops of Rochester had a manor at Stone and the church was in their patronage. Surviving elements of the 13th century church include a three bay nave, rib-vaulted chancel and chancel wall arcading - the spandrels of which are identical to similar arcading in Westminster Abbey in the Choir Chapel - which indicates a date of circa 1260, and that Westminster masons built the church at Stone. The north aisle also has remains of late 13th century wall paintings. The west tower is early 14th century and there is a Perpendicular north chapel of circa 1527. The church was restored circa 1859-60 and the roof dates from this time (Web Source 1).

2.3.3 The Church at Stone is an impressive example of early English church architecture, but no record of its benefactor survives today. It is unlikely that the small population of the parish at the time of the church's construction would have had the means to commission such a grand development project. Although it is not clear who undertook the 13th Century construction of the church, the quality, scale and similarity to that seen in Westminster Abbey has led most writers to suggest that the same stone masons constructed both buildings. It is thought that the impetus for building the church arose because at that time pilgrims were using the nearby Watling Street to follow the murder of Thomas à Becket at Canterbury in 1170 (Web Source 3).

3.0 ARCHAEOLOGICAL METHODOLOGY

3.1 The Test-Pits (Figure 2)

3.1.1 A total of eleven test-pits averaging 1.0m² were hand-excavated, positioned to assess the archaeological potential of the site and to ascertain the threat posed by the development on any archaeological remains present. The work provides a representative sample of the redevelopment area whilst targeting specific areas within the new-build footprint.

3.1.2 All of the test-pits were hand-excavated by ASE staff and were sited primarily to inform on the archaeological potential of the site with the specific objectives of determining the presence or absence of articulated burials (complete human skeletons) and their depth below ground surface, to establish the depth of natural chalk bedrock and to inform on any other archaeological remains that were present. Two of the test pits (2 and 8) were situated adjacent to the extant boundary wall and were hand-excavated chiefly for the purposes of inspection by the consulting structural engineer, but also to establish the potential for any archaeological remains present. These test pits were to inform on the character and depth of the existing foundations.

3.1.3 The test-pits were numbered 1-11. Test-pit 6 was extended by half a meter to the south in order to investigate an anomaly recorded on the GPR survey (see 3.2.1 below). In addition, a small test hole was excavated a little further to the south to investigate a clear depression in the ground surface. These results are discussed in 4.6 of this report.

3.2 Methods Employed

3.2.1 Prior to arrival on site, a Ground Penetrating Radar (GPR) survey had been carried out across the working area (Figure 3). This was intended to provide information on the possible location of graves in addition to recording any other anomalies within the vicinity of the proposed development.

3.2.2 Due to the limitations of the 1m² test-pits, it was considered unsafe to exceed a depth of 1m. Since natural had not been identified in most of the test-pits at this depth, further excavation was carried out in small test holes in the corner of Test-pits 5, 7 and 11. At this stage, a hand-augur was also used to assist with these investigations.

3.2.3 The test pits were located using a Global Positions System (GPS) and were also off-set from fixed points within the area of investigation to reduce potential inaccuracies between the Ordnance Survey (OS) plan and the client's architectural plan. At the end of the programme of work, the test-pits were planned and levelled using the GPS in addition to hand-drawn, scaled plans and sections.

3.2.4 The working area was secured by 'Heras' fencing and covered with fabric sheeting/mesh netting to prevent the public from observing the excavation of human remains when exposed. Signs were attached to the fencing to

indicate that archaeological work was taking place.

3.2.5 Turf was removed carefully and placed on plastic sheeting next to each test pit. The test-pits were hand-excavated to the top of archaeological deposits (in this case articulated burials), to the base of existing foundations, or to the natural chalk bedrock.

3.2.6 It was necessary to trim the branches of a hedgerow along the boundary wall in the location of Test-pit 9 to make the working area accessible for excavation. Permission for this was obtained prior to the commencement of work within this area. The size of some of the test-pits was limited due to onsite constraints (e.g. existing service cable in TP3 and tree rooting/avoiding tree canopy in TP7).

3.2.7 On completion of excavation, any present archaeology was examined and recorded by hand. All disarticulated human remains were bagged and re-interred within the base of the test-pit from which they were found. All articulated burials uncovered during these works were left *in situ*.

3.2.8 The client and structural engineer were informed of new findings throughout the programme of work. On the completion of records and the approval of the structural engineer, each test pit was manually backfilled and compacted with the turf neatly reinstated. The site was left in as tidy a condition as possible prior to vacating the site.

3.2.9 No deposits suitable for sampling were encountered.

3.3 The Site Archive

3.3.1 The site archive is currently held at offices of ASE. The contents of the archive are tabulated below for reference in this report (Table 1).

3.3.2 **Table 1:** Quantification of the Site Archive

Number of Contexts	70
No. of files/paper record	1 file
Plan and sections sheets	3
Bulk Samples	None
Photographs	1 Black & White Film 1 Colour Film 160 digital colour
Bulk finds	1 Box

4.0 RESULTS

4.1 **Test-Pit 1** (Figure 4), measuring 1.00m³, was located in the northern part of the proposed development. Six contexts were revealed within the test-pit (see Table 2) and these have been summarised below.

4.1.1 **Table 2:** List of Recorded Contexts in Test-Pit 1

Number	Type	Description	Deposit Thickness	Max Height m AOD
1/001	Deposit	Topsoil/turf	0.25m	24.66
1/002	Deposit	Cemetery Soil	0.65m+	24.41
1/003	Deposit	Block of Chalk	-	23.76
1/004	Grave Cut	Grave for young juvenile	-	24.41
1/005	Grave Fill	Backfill in [004]	-	-
1/006	Skeleton	Young juvenile/neonate skeleton	-	23.66

4.1.2 Summary of Contexts

A rectangular-shaped block of chalk [1/003] was encountered at 0.90m below the ground surface (at 23.76m AOD). Its function is not clear but a small grave [1/004] containing the skeletal remains of a neonate [1/006] was uncovered south of this block at 23.66m AOD. The idea that the block was some sort of grave marker was considered but it is more likely that this chalk is all that remains of the natural chalk bedrock into which this grave and other have been cut (each time truncating the natural bedrock further). A mixed cemetery soil [1/002] comprising loose whitish grey-brown loam with occasional inclusions of flint nodules, chalk flecks, fragments of ceramic building material (CBM) (spanning 12th – 20th centuries), a glass wine bottle sherd (17th – 18th centuries), clay tobacco pipe stem fragments (17th-19th centuries) and occasional disarticulated human bone, was the main deposit encountered within this test-pit. It was present from below topsoil to the limit of excavation (c.0.65m thick). A layer of loose, friable mid greyish brown clayey silt topsoil [1/001] covered all of the deposits within this test-pit.

4.2 **Test-pit 2** (Figure 5), measuring 1.10m north-south and 0.70m east-west with a maximum depth of 1.00m, was located along the western boundary wall of the churchyard at the northern end of the proposed development. Four contexts were revealed within the test-pit (see Table 3) and these have been summarised below. No datable finds were uncovered within this test-pit.

4.2.1 **Table 3:** List of Recorded Contexts in Test-Pit 2

Number	Type	Description	Deposit Thickness	Max Height m AOD
2/001	Deposit	Topsoil/turf	0.50m	24.69
2/002	Deposit	Cemetery Soil	0.50m+	24.19
2/003	Masonry	Brick wall foundations	-	-
2/004	Deposit	Block of chalk	-	23.94

4.2.2 Summary of Contexts

A block of chalk [2/004] was encountered at 0.75m below the ground surface (at 23.94m AOD) underlying the foundations of the boundary wall. The block was roughly square, but its function is not clear. As with the block found in the base of Test-pit 1, it is possible that this is part of the natural that has been left in-situ (potentially to add support to the wall foundations), but it is also worth considering the possibility that this block has been deposited. A mixed cemetery soil [2/002] comprising loose whitish grey-brown loam with occasional inclusions of flint nodules, chalk flecks, and fragments of CBM, was the main deposit encountered within this test-pit. It was present from below topsoil to the limit of excavation (c.0.50m thick). The base of the wall foundations [2/003] were encountered at a depth of 0.80m below ground surface (at 23.89m AOD) and comprised even course of bricks arranged in alternate header and stretcher bonds and bonded with yellowish grey sandy mortar. A layer of loose, friable mid greyish brown clayey silt topsoil [2/001] covered all of the deposits within this test-pit.

4.3 **Test-Pit 3** (Figure 6), measuring 0.80m² with a maximum depth of 1.00m, was located in the northern part of the proposed development east of Test-pits 1 and 4. Five contexts were revealed within the test-pit (see Table 4) and these have been summarised below. A service cable (marked clearly with hazard tape) was uncovered in the northern corner of this test-pit and the position of the test-pit was adjusted accordingly to avoid disturbance.

4.3.1 **Table 4:** List of Recorded Contexts in Test-Pit 3

Number	Type	Description	Deposit Thickness	Max Height m AOD
3/001	Deposit	Topsoil/turf	0.25m	24.74
3/002	Deposit	Cemetery Soil	0.75m+	24.49
3/003	Grave Cut	Grave (no skeleton)	-	24.49
3/004	Grave Fill	Upper backfill in [003]	0.30m	24.49
3/005	Grave Fill	Lower backfill in [003] With iron coffin fittings present	0.45m	24.19

4.3.2 Summary of Contexts

Natural chalk bedrock was not encountered within this test-pit. A mixed cemetery soil [3/002] comprising loose whitish grey-brown loam with occasional inclusions of flint nodules, chalk flecks, fragments of CBM (spanning 13th – 18th Centuries) and occasional disarticulated human bone, was the main deposit encountered within this test-pit. This deposit was present from below topsoil to the limit of excavation (c.0.75m thick). It also contained clear/yellow glazed Borderware potsherds (mid 16th-17th centuries), three pottery sherds from English tin-glazed vessels (17th century), pottery sherds from a pale early Yellow ware bowl (late 18th – early 19th centuries), a glass wine bottle body-sherd (19th – early 20th centuries) clay tobacco pipe stems (17th – 19th centuries) and a clay tobacco pipe bowl inscribed with the makers mark (17th – 19th centuries: RF <4>). A grave [3/003] was present to the north of this test-pit, evidenced only by a hollow observed in the northern

section and the presence of iron coffin fittings (e.g. nails, bolts and a handle) falling out of the grave fill [3/004] towards the base. A fragment of ceramic roof tile dating from 13th-16th centuries was recovered from this grave fill. No articulated skeletal remains were uncovered within the test-pit. A layer of loose, friable mid greyish brown clayey silt topsoil [3/001] covered all of the deposits within this test-pit.

4.4 **Test-Pit 4**, measuring 0.80m² with a maximum depth of 1.00m, was located in the northern part of the proposed development south of Test-pit 1. Two contexts were revealed within the test-pit (see Table 5) and these have been summarised below. No articulated skeletal remains were uncovered within this test-pit although a slight hollow in the south-western section suggests that a grave may be present to the southwest.

4.4.1 **Table 5:** List of Recorded Contexts in Test-Pit 4

Number	Type	Description	Deposit Thickness	Max Height m AOD
4/001	Deposit	Topsoil/turf	0.20m	24.69
4/002	Deposit	Cemetery Soil	0.80m+	24.49

4.4.2 Summary of Contexts

Natural chalk bedrock was not encountered within this test-pit. A mixed cemetery soil [4/002] comprising loose whitish grey-brown loam with occasional inclusions of flint nodules, chalk flecks, fragments of CBM (spanning 12th – 18th centuries) and frequent disarticulated human bone, was the main deposit encountered within this test-pit. This deposit also contained green glaze Borderware pottery sherds (mid 16th-17th centuries) and redware pottery sherds with all over black or 'metallic' glaze (17th century). A layer of loose, friable mid greyish brown clayey silt topsoil [4/001] covered all of the deposits within this test-pit and contained a blue glass facetted cylindrical bead (RF <1>).

4.5 **Test-Pit 5** (Figure 7), measuring1.00m³, was located in the northern part of the proposed development slightly northwest of Test-pit 6. Five contexts were revealed within the test-pit (see Table 6) and these have been summarised below.

4.5.1 **Table 6:** List of Recorded Contexts in Test-Pit 5

Number	Type	Description	Deposit Thickness	Max Height m AOD
5/001	Deposit	Topsoil/turf	0.20m	25.02
5/002	Deposit	Cemetery Soil	0.80m+	24.82
5/003	Grave Cut	Edge of extant marked-grave	-	24.82
5/004	Grave Fill	Upper backfill in [003]	0.3m	24.82
5/005	Grave Fill	Lower backfill of [003] containing wooden coffin fragments at 24.32m A OD	0.5m+	24.52

4.5.2 Summary of Contexts

A hand-augured test-hole in the northwest corner of this test-pit revealed possible natural chalk bedrock at a depth of approximately 2.50m below ground level (at 22.52m AOD). Since this deposit could not been observed or properly recorded it was not assigned a context number. A mixed cemetery soil [5/002] comprising loose whitish grey-brown loam with occasional inclusions of flint nodules, chalk flecks, fragments of CBM (spanning 12th – 20th centuries) and frequent disarticulated human bone, was the main deposit encountered within this test-pit. This deposit also contained clear/yellow glazed Borderware potsherds (mid 16th-17th centuries), three pottery sherds from English tin-glazed vessels (17th century) and clay tobacco pipe stem fragments (18th century). In the northeast corner of this test-pit a cut was observed for the southwest corner of a marked grave [5/003]. The grave contained two backfills ([5/004] and [5/005]), the lower of the two [5/005] revealing the corner of the wooden coffin. No articulated skeletal remains were uncovered within the grave or elsewhere in the test-pit. A layer of loose, friable mid greyish brown clayey silt topsoil [5/001] covered all of the deposits within this test-pit.

4.6 **Test-Pit 6** (Figure 8), measuring 1.50m north-south and 1.00m east-west with a maximum depth of 1.00m, was located in the northern part of the proposed development slightly southeast of Test-pit 5. Five contexts were revealed within the test-pit (see Table 7) and these have been summarised below. This test-pit was extended by 0.50m from the standard 1.00m² to investigate an anomaly depicted at a depth of c.0.34m on the GPR survey plan (Figure 3). A small test hole (**Test-Pit 6a**), measuring 0.50m³, was excavated slightly southeast of Test-pit 6 to investigate a depression in the ground surface. The results of this test hole have been tabulated in 4.6.3 and the two revealed contexts have been summarised in 4.6.4.

4.6.1 **Table 7:** List of Recorded Contexts in Test-Pit 6

Number	Type	Description	Deposit Thickness	Max Height m AOD
6/001	Deposit	Topsoil/turf	0.20m	25.12
6/002	Deposit	Cemetery Soil	0.80m+	24.92
6/003	Fill	Red-brown fill of [005]	-	-
6/004	Fill	Grey-red fill of [005]	-	-
6/005	Cut	Cut of Modern Feature	-	24.92

4.6.2 Summary of Contexts

Natural chalk bedrock was not encountered within this test-pit. A mixed cemetery soil [6/002] comprising loose whitish grey-brown loam with occasional inclusions of flint nodules, chalk flecks, clay pipes, fragments of CBM (spanning 14th – 18th centuries), a clay tobacco pipe bowl inscribed with the markers mark (mid 19th century: RF <3>), a glass wine bottle sherd (17th – 18th centuries) and frequent disarticulated human bone, was the main deposit encountered within this test-pit. It was present from below topsoil to the limit of excavation (c.0.8m thick). A modern cut [6/005] for a pit-like feature was uncovered in the extension of this test-pit. The feature was encountered

below topsoil (at 24.92m AOD) and truncated the cemetery soil deposit. It contained two backfills: reddish brown fine silty sand with CBM fragments (spanning 14th – 18th centuries) [6/003] and greyish red sandy silt [6/004]. There is no evidence of this features function, but its shallow depth and truncation through the cemetery soil suggests that it is fairly modern. A layer of loose, friable mid greyish brown clayey silt topsoil [6/001] covered all of the deposits within this test-pit.

4.6.3 **Table 8:** List of Recorded Contexts in Test-Pit 6a

Number	Type	Description	Deposit Thickness	Max Height m AOD
6a/001	Deposit	Topsoil/turf	0.20m	25.10
6a/002	Deposit	Cemetery Soil	0.30m+	24.90

4.6.4 Summary of Contexts in Test-hole 6a

This small trial-hole revealed only cemetery soil [6a/002] (see [6/002] above) overlain by a layer of loose, friable mid greyish brown clayey silt topsoil [6a/001]. No graves or features were observed within the test-pit.

4.7 Test-Pit 7 (Figure 9)**,** measuring 1.00m north-south and 0.80m east-west with a maximum depth of 0.80m, was located in the central part of the proposed development. This test-pit was cut short on one side due to tree rooting and to necessitate a distance outside of the extant tree canopy. Nine contexts were revealed within the test-pit (see Table 9) and these have been summarised below.

4.7.1 **Table 9:** List of Recorded Contexts in Test-Pit 7

Number	Type	Description	Deposit Thickness	Max Height m AOD
7/001	Deposit	Topsoil/turf	0.25m	25.51
7/002	Deposit	Stony Subsoil	0.25m	25.26
7/003	Deposit	Subsoil/Garden Soil	0.35m+	25.01
7/004	Grave Cut	Grave (no skeleton) Truncates 003	-	25.26
7/005	Grave Fill	Upper backfill in [004]	0.30m	25.26
7/006	Grave Fill	Lower backfill in [004]	-	24.96
7/007	Grave Cut	Grave (no skeleton) Truncates 003	-	25.26
7/008	Grave Fill	Upper backfill in [007]	0.30m	25.26
7/009	Grave Fill	Lower backfill in [007]	-	24.96

4.7.2 Summary of Contexts

Natural chalk bedrock was not encountered within this test-pit. Lightly compacted subsoil [7/003] comprising dark brown silty clay with occasional rounded flint pebbles and chalk flecking, was encountered at the base of this test pit under loose dark greyish brown clayey silt subsoil [7/002] with frequent rounded flint pebbles, 10th-11th century pottery sherds, a Nottingham stoneware sherd with roulette decoration (18th century) and fragments of

CBM (spanning 12th – 18th centuries). Occasional rooting from the nearby tree was also present within this deposit. Two graves were cut through these deposits. The northern grave [7/004] contained two backfills ([7/005] and [7/006]) with 12th-14th century CBM fragments, but no skeleton was revealed at the excavated depth. The southern grave [7/007] also contained two backfills ([7/008] and [7/009]) with 19th-20th century CBM fragments, but again, no skeleton was revealed at the excavated depth. The 'foot-end' of this grave was seen in plan. A layer of loose, friable mid greyish brown clayey silt topsoil [7/001] covered all of the deposits within this test-pit.

4.8 **Test-Pit 8** (Figure 10), measuring 0.80m³, was located towards the southern part of the proposed development along the boundary wall of the churchyard. The test-pit was excavated to inform on the depth of the extant foundations and any surrounding archaeology. Four contexts were revealed within the test-pit (see Table 10) and these have been summarised below. No datable finds were uncovered within this test-pit.

4.8.1 **Table 10:** List of Recorded Contexts in Test-Pit 8

Number	Type	Description	Deposit Thickness	MAX Height m AOD
8/001	Deposit	Topsoil	0.40m	25.95
8/002	Deposit	Subsoil	0.45m+	25.55
8/003	Masonry	Knapped-flint wall face	-	-
8/004	Masonry	Brick footings of [8/003]	-	25.40

4.8.2 Summary of Contexts

Natural chalk bedrock was not encountered within this test-pit. Undisturbed subsoil [8/002] comprising soft, friable dark brown silty clay with occasional rounded flint pebbles and rooting, was encountered at the base of this test pit under a loose dark grey brown clayey silt topsoil [8/001] with occasional chalk flecks, moderate rounded flint pebbles and frequent rooting from the nearby bushes and wall creepers. The boundary wall of the cemetery [8/003] was made up of roughly knapped flint cobbles of varying size and shape bonded with a whitish-grey grainy mortar. This wall continued for approximately 0.40m below the ground at which depth (25.40m AOD), brick footings [8/004] were encountered. The footings continued to a maximum depth of 0.77m below the ground surface (25.18m AOD). The fact that no wall cut was observed within this test-pit combined with the continuation of the flint wall [8/003] below the ground surface suggests that deposits [8/001] and [8/002] have been dumped up against the wall some time after its construction. The remains of a semi-articulated neonate were uncovered close to the wall, but no grave cut or differing grave fill was observed, suggesting that the grave has been heavily disturbed by the present roots. The excavation of this test-pit ceased at 0.20m beneath the wall foundations (24.98m AOD). No turf covered this test-pit due to its location within the hedgerow.

4.9 **Test-Pit 9** (Figure 11), measuring 1.00m² with a maximum depth of 0.80m, was located in the southern extent of the proposed development. Seven contexts were revealed within the test-pit (see Table 11) and these have

been summarised below. One grave was encountered within this test-pit which also contained redeposited chalk and a dump of made-ground.

4.9.1 **Table 11:** List of Recorded Contexts in Test-Pit 9

Number	Type	Description	Deposit Thickness	Max Height m AOD
9/001	Deposit	Topsoil/turf	0.20m	25.83
9/002	Deposit	Made Ground	0.10m	25.63
9/003	Deposit	Redeposited natural chalk	0.07m	25.53
9/004	Deposit	Garden Soil	0.43m	25.46
9/005	Deposit	Natural Chalk Bedrock	-	25.03
9/006	Grave Cut	Grave (no skeleton) Truncates 002, 003 & 004	-	25.63
9/007	Grave Fill	Backfill in [006]	-	-

4.9.2 Summary of Contexts

Natural chalk bedrock was encountered within the base of this test-pit at 0.80m below the ground surface (25.03m AOD). Overlying natural was a loose dark grey brown clayey silt garden soil [9/004] which was 0.43m thick and contained 13th-14th century pottery sherds from a green glazed jug, 17th-18th century CBM fragments. This deposit seemed relatively undisturbed and clearly differed from the mixed cemetery soil present in the north of the site. Above the garden soil, was a redeposited chalk deposit (0.07m thick) [9/003] overlain by a lightly compacted dump of mid orange sandy-gravel made ground (0.10m thick) [9/002]. A possible grave [9/006] was cut into the northwest corner of this test pit truncating deposits [9/002], [9/003] and [9/004], but no skeleton was revealed within the limit of excavation. This potential grave revealed one fill (to the limit of excavation at 0.30m within the grave) [9/007] comprising loose, friable mid brownish grey clayey silt with frequent chalk fleck inclusions. A layer of loose, friable mid greyish brown clayey silt topsoil [9/001] covered all of the deposits within this test-pit.

4.10 **Test-Pit 10** (Figure 12), measuring 1.00m³, was located in the southern extent of the proposed development. Nine contexts were revealed within the test-pit (see Table 12) and these have been summarised below. Two graves were uncovered within this test-pit.

4.10.1 **Table 12:** List of Recorded Contexts in Test-Pit 10

Number	Type	Description	Deposit Thickness	Max Height m AOD
10/001	Deposit	Topsoil/turf	0.20m	25.57
10/002	Deposit	Subsoil/Garden soil	0.80m+	25.37
10/003	Deposit	Chalk block/ possible natural	-	24.79
10/004	Grave Cut	Grave (no skeleton)	-	25.37
10/005	Grave Fill	Upper backfill in [004]	0.30m	25.37
10/006	Grave Fill	Lower backfill in [004]	0.50m+	25.07
10/007	Grave Cut	Grave (no skeleton)	-	25.37
10/008	Grave Fill	Upper backfill in [007]	0.30m	25.37
10/009	Grave Fill	Lower backfill in [007]	0.50m+	25.07
10/010	Cut	Possible earlier grave		

4.10.2 Summary of Contexts

A Chalk block [10/003], measuring 0.40m wide, was encountered crossing the base of the test-pit (roughly east-west aligned). Although the shape of this block is indicative of a wall foundation, it is more likely that it is natural chalk bedrock (at a similar depth to the natural encountered in TP9) which has been truncated during the excavation of graves. Overlying the chalk, was a dark grey brown clayey silt subsoil/garden soil [10/002] into which two graves were cut. This deposit contained 10th-11th century pottery sherds and CBM fragments (spanning 12th – 18th centuries). The grave to the south of the test-pit [10/004] can be seen clearly in Section 12 (Figure 12) cutting through the chalk in the base and the overlying subsoil. This grave contained two backfills [10/005] and [10/006], but no skeleton was revealed within the limit of excavation (to 1m). Although the cut for the northernmost grave [10/007] was clear in Section 10 (Figure 12), this cut does not appear to have truncated the chalk. The cut responsible for truncation of the chalk on the northern side [10/010] was not clearly visible and the subsoil above seemed relatively undisturbed. However, no further investigations were possible within the restrictions of a 1m² test-pit. Grave [10/007] also contained two backfills [10/008] and [10/009], but again, no skeleton was revealed at the excavated depth. A layer of loose, friable mid greyish brown clayey silt topsoil [10/001] covered all of the deposits within this test-pit.

4.11 Test-Pit 11 (Figure 13), measuring 0.95m east-west and 1.00m north-south with a maximum depth of 1.00m, was the southernmost test-pit in the footprint of the proposed development. Thirteen contexts were revealed within the test-pit (see Table 13) and these have been summarised below. Three grave cuts were uncovered within this test-pit which, like Test-pit 9, also contained redeposited chalk and a dump of made-ground.

4.11.1 **Table 13:** List of Recorded Contexts in Test-Pit 11

Number	Type	Description	Deposit Thickness	Max Height m AOD
11/001	Deposit	Topsoil/turf	0.20m	25.82
11/002	Deposit	Made Ground	0.07m	25.62
11/003	Deposit	Redeposited Natural Chalk	0.07m	25.55
11/004	Deposit	Garden Soil	0.86m	25.48
11/005	Grave Cut	Grave (no skeleton) Truncates 002, 003 & 004	-	25.62
11/006	Grave Fill	Upper backfill in [005]	0.30m	25.62
11/007	Grave Fill	Lower backfill in [005]	0.04m	25.32
11/008	Grave Cut	Grave Cut (no skeleton) Truncates 002, 003 & 004	-	25.62
11/009	Grave Fill	Upper backfill of [008]	0.30m	25.62
11/010	Grave Fill	Lower backfill of [008]	-	25.32
11/011	Grave Cut	Grave (no skeleton) Truncates 002, 003 & 004 Also cuts 008	-	25.62
11/012	Grave Fill	Backfill in [011]	-	25.62
11/013	Deposit	Natural Chalk Bedrock	-	24.62

4.11.2 Summary of Contexts

Natural chalk bedrock [11/013] was encountered at a depth of 1.20m (24.62m AOD) in a hand-excavated test-hole in the southwest corner of the test-pit. Overlying natural was a loose dark brown clayey silt garden soil [11/004] which was 0.86m thick and contained CBM fragments (spanning 12th-19th centuries). This deposit seemed relatively undisturbed and clearly differed from the mixed cemetery soil present in the north of the site. Above the garden soil was a redeposited chalk deposit (0.07m thick) [11/003] overlain by a lightly compacted dump of mid orange sandy-gravel made ground (0.07m thick) [11/002], which contained a mid 19th-early 20th century copper-alloy two-hole button (RF <2>) inscribed with maker's name. Three graves were cut through deposits [11/002], [11/003] and [11/004] on a traditional Christian east-west alignment. The easternmost grave [11/011] corresponds to the marked-grave to the east of the test-pit (this part of the cut was probably for the headstone which has now fallen) and seems to have slightly truncated the 'foot-end' of grave [11/008]. Only one backfill [11/012] was observed for [11/011] and this contained 12th-16th century CBM fragments. Two backfills [11/009] and [11/010] were observed in grave [11/008] in which no skeleton was revealed at the excavated depth, but CBM fragments (spanning 12-18th centuries) were recovered from [11/010]. Grave [11/005], cut into the south of the test-pit, also contained two backfills [11/006] and [11/007] and although degraded wooden coffin fragments were observed at a fairly shallow depth of 0.50m (25.32m AOD) in the southern section of this test-pit, no skeleton was revealed (would have been outside of the working area to the south). A layer of loose, friable mid greyish brown clayey silt topsoil [11/001] covered all of the deposits within this test-pit.

5.0 THE FINDS

5.1 Overview

5.1.1 A small assemblage of finds dominated by ceramic building material (CBM) was recovered during the evaluation. A summary can be found in Appendix Table 1. In addition, a small group of finds was assigned a unique Registered Finds number (Table 17).

5.2 The Pottery by Luke Barber

5.2.1 *Overview*

The archaeological work recovered a relatively small assemblage of pottery. Despite the majority of sherds being derived from the grave-soil in different trenches the material is quite fresh, with little signs of heavy abrasion from significant reworking. A wide chronological spread is represented and residuality appears to be high in most contexts.

5.2.2 *Anglo-Saxon*

The earliest pottery recovered consists of three undiagnostic bodysherds in a low/medium fired hand-made fabric tempered with abundant shell to 4mm. Such wares begin in the late Saxon period in Kent but continue after the Conquest. Although the current sherds are oxidised, their crudeness suggests they are more likely to be early and a 10th- to 11th- century range is considered most likely. It is a great shame the sherds from [7/002] (3g), [10/002] (8g) and unstratified (5g) are not more diagnostic of a closer date.

5.2.3 *High Medieval*

There are only two High Medieval sherds in the assemblage, both consisting of mid 13th- to 14th- century glazed jugs in well fired fine/medium sand tempered wares (Mill Green type). That from [9/004] has an external white slip under a patchy green glaze while the unstratified example, although having an external white slip, is finer with a darker more even glaze and combed decoration.

5.2.4 *Post-Medieval*

By far the majority of the assemblage belongs to the early post-medieval period, probably spanning the mid 16th to 17th centuries. Of this period's assemblage coarsewares predominate and include Hard-fired Earthenware jars (both oxidised and reduced) sometimes with calcareous inclusions, and Post-medieval Redwares. The latter include a few green-glazed jars (eg [1/002]) but are dominated by clear glazed vessels (jars, jugs, bowls and plates) with varying amounts of sand tempering. Although the finer examples may be local the coarser sand tempered vessels, such as a plate from unstratified deposits, are likely to be London products. A few redwares with all over black or 'metallic' glazed are also present, probably jugs (eg [4/002]). Such vessels are typical of the 17th century. Four sherds of Borderware are present 38g), three clear/yellow glazed (unstrat, [3/002] and 5/002]) and one

green glazed (layer [4/002]) as well as a possible buff Wealden green glazed copy from [6/002]. All could span the mid 16th to 17th centuries. Three sherds (10g) from 17th- century English tin-glazed vessels were also recovered, all with plain white glaze (layers [3/002] and [5/002]) together with two sherds of Frechen stoneware (layers [4/002] and [5/002]).

5.2.5 *Later Post-Medieval/ Modern*

Later material is relatively sparse and includes two probable 18th- century sherds: an unstratified piece from a Chinese porcelain plate (4g) and a jar with rouletted decoration in Nottingham stoneware (layer [7/002]) (59g). The latest material consists of a few sherds dating to the very end of the 18th century or, more likely, the first two decades of the 19th century. These consist of four sherds (82g) from a pale early Yellow ware bowl, a sherd from an unglazed earthenware flower pot (10g) (both layer [3/002]) and five sherds of transfer-printed pearlware ([U/S] 1/5g; [1/002] 1/9g; [5/002] 3/24g). The latter are all decorated with blue Chinese landscapes, including an example of willow pattern.

5.3 The Ceramic Building Material by Sarah Porteus

5.3.1 *Overview*

A total of 122 fragments of ceramic building material (CBM) weighing 5362g were recovered from fifteen contexts with a small amount of unstratified material and a single mortar sample. The majority of the material was peg tile with a small amount of floor tile being recovered. The CBM is of medieval and post-medieval date, most of the medieval material is likely to be residual.

5.3.2 *Medieval fabrics and forms: Roofing*

Medieval roofing material was represented by peg tile in sandy orange or brown fabrics, often with reduced cores (Table 14). Fabrics near T2 and T7 are of similar sandy fabrics, T1 is a finer less sandy fabric and all are probably locally produced fabrics. Fabric T6 is a coarser fabric with moderate coarse, well sorted angular quartz and occasional burnt organic inclusions and a thick reduced core, probably originating from Tyler Hill near Canterbury. The medieval peg tile has some glazing or splash glaze. The different medieval roof tile fabrics suggest that the roof was either tiled using tiles from a number of sources or that repair or re-tiling was undertaken in the medieval period.

Table 14: Medieval roofing tile fabrics with date and context.

Fabric	Description	Date	Contexts
T1	Brown fabric, reduced core and some splash glaze. Sparse white mica sparkles, and red iron rich silt inclusions, and calcareous speckling. Fine sandy material with sparse coarse quartz.	C13th-C16th	U/S, 3/004, 10/002
Near T2	Orange to brown. Moderate-coarse sandy fabric. Sparse orange-red iron rich silt inclusions and some pale orange silt. As T2, but thinner with occasional glaze and some fine black sand.	C12th-C16th	1/002, 5/002, 6/002, 7/002, 10/002, 11/001, 11/004, 11/010, 11/012
T6	Orange fabric with thick reduced core. With moderate coarse to very coarse well sorted angular quartz inclusions with sparse black burnt organic inclusions.	C12th-C14th	4/002, 9/004, 10/002, 11/004, 11/010
T7	Brown, soft, sandy fabric with poorly sorted quartz and coarse white stone inclusions and sparse coarse red iron rich inclusions. Some splash glazing and some block glaze.	C12th-C14th	5/002, 7/002, 7/005, 11/010

5.3.3 *Medieval fabrics and forms: Flooring*

Medieval floor tile is represented by three fabric types (Table 15). The fragment of floor tile from context [6/002] in fabric FT1 has a clear glaze over cream clay slip giving a yellow appearance to the glaze. The unstratified floor tile in fabric FT1 is abraded, any possible glaze had been worn away. The unstratified floor tile in fabric FT2 has a clear glaze with green appearance. Floor tile fabrics FT1 and FT2 are possible examples of plain glazed Flemish tiles, and are of 26 to 28mm thickness with knife cut bevelled edges. Medieval churches often had tiled floors constructed using imported Flemish tiles in yellow and green, the medieval church of St Mary-the-Virgin also appears to have had a colourful glazed floor. Floor tile in fabric FT3 is thinner than the other floor tiles, 17mm, with a clear glaze and knife cut bevelled edges. The fabric is similar to pegtile fabric T6 possibly suggesting a similar origin and date and may be a locally made tile to replace earlier damaged tiles.

Table 15: Medieval floor tile fabrics with date and context.

Fabric	Description	Date	Contexts
FT1	Sandy fabric with moderate fine to medium white sand and quartz with sparse calcareous inclusions. glazed.	C14th-C16th	U/S, 6/002
FT2	Glazed sandy fabric and moderate to abundant coarse quartz and sparse coarse black iron rich inclusions.	C15th-C16th	U/S
FT3	Thin glazed floor tile. Orange fabric. Moderate angular coarse quartz similar to T6.	C14th-C16th	10/002

5.3.4 *Post-medieval fabrics and forms: Peg-tiles*

Post-medieval peg tile was represented by sandy fabric types T2 and T3, silty fabrics T4, T9 and calcareous fabric T5 (Table 16). Fabric T5 appears to be a typical Kentish fabric type, most likely Canterbury Archaeological Trust fabric CAT32, all other fabrics are likely to be locally produced.

Table 16: Post-Medieval peg tile fabrics with date and context.

Fabric	Description	Date	Contexts
T2	Orange to brown. Moderate-coarse sandy fabric. Sparse orange-red iron rich silt inclusions and some pale orange silt	C14th-C18th	U/S, 1/002, 3/002, 4/002, 5/002, 6/002, 6/003, 7/002, 11/010
T3	Orange fabric with sparse fine calcareous inclusions with sparse very coarse red iron rich inclusions.	C17th-C19th	U/S, 11/004
T4	Orange fabric with pale cream silt streaking and coarse red iron rich inclusions.	C17th-C18th	U/S, 6/003, 7/002, 11/004
T5	Pinkish fabric with abundant calcareous inclusions and moderate well sorted quartz.	C19th-C20th	1/002, 5/002, 7/008
T9	Pale orange peg tile with fine cream silt streaking and sparse calcareous inclusions and sparse coarse red quartz inclusions.	C17th-C18th	9/004, 10/002

5.3.5 *Post-medieval fabrics and forms: Brick*

A small number of post-medieval brick fragments were recovered. These were compared to known Museum of London fabric types. A fragment of orange 'Tudor' type brick in fabric MoL3033 of 15th to 18th century date was found in context [11/004] and in the unstratified material. A piece of handmade brick with vitrified header in fabric MoL3034, a reddish purple fabric with moderate calcareous inclusions dating to the mid 17th to 18th century was identified from context [7/002]. A single piece of yellow Kentish stock brick MoL3035 was also present within the unstratified material and dates from the late 18th to early 20th century.

5.3.6 In addition, a piece of possible orange ceramic pipe or plant pot of probable 20th century date and a fragment of plain, unglazed 20th century wall tile were recovered from context [7/002]. A probable 20th century machine made fragment of fine sanded cream tile of uncertain form, with fine cream silt streaking and sparse calcareous inclusions and sparse coarse red quartz inclusions was recovered from context [7/005].

5.3.7 The evidence from the ceramic building material suggests that the medieval church of St Mary-the-Virgin most probably had a tiled roof and tiled internal floor made of plain yellow and green glazed tiles. The variety of peg tile fabric types suggest a series of re-roofing events or repair to the church roof since medieval times.

5.4 **The Clay Tobacco Pipe** by Elke Raemen

5.4.1 A small group of ten clay tobacco pipe (CTP) fragments was recovered from four individual contexts. All contexts consist of mixed cemetery deposits. The assemblage consists of eight plain stem fragments, the earliest of which date to the second half of the 17th century (i.e. [1/002], [3/002]). A slightly later piece of late 17th- to early 18th-century date was recovered from deposit [5/002]. A fragment dating to the first half of the 18th century was recovered from [5/002]. The latest pieces date to the mid 18th to 19th century and were recovered from [1/002] and [3/002].

5.4.2 In addition to these plain stem fragments, the site also contained two bowls with maker's marks. A bowl fragment (RF <4>) with round heel exhibiting the initials "IW" was located in cemetery soil [3/002]. The bowl fragment is of later 17th- to early 18th-century date. No maker with these initials could be identified for this period in Kent. The second piece (RF <3>) consists of a complete, fluted bowl with leaf decoration on the seams [6/002]. The piece dates to the mid 19th century and shows the maker's initials "IS" on the spur. Multiple makers with these initials were working in Kent during this period.

5.5 **The Glass** by Elke Raemen

5.5.1 A small glass assemblage consisting of eight pieces from five individually numbered contexts was recovered during the evaluations. The earliest bottle fragment consists of a green glass wine bottle body sherd dating to the mid 17th to 18th century and is unstratified. Cemetery soil [1/002] and [6/002] each contained a wine bottle fragment of similar date. A 19th- to early 20th-century wine bottle body sherd was recovered from [3/002].

5.5.2 The earliest window glass fragments consist of three pieces from feature [6/005] (fill [6/003]). The pieces are in clear glass, though now opaque through heavy corrosion, and are of medieval to early post-medieval date. An unstratified clear window glass fragment dates to the 17th to early 18th century. Feature [6/005] (fill [6/003]) contained in addition to the early window glass, a fragment of clear late 18th- to 19th-century window glass.

5.6 **The Metalwork** by Elke Raemen

5.6.1 Two iron nails were recovered during the excavations. A general purpose nail with sub-rectangular head was recovered from the topsoil. Subsoil [7/002] contained a heavy duty nail shank fragment.

5.7 **The Registered Finds** by Elke Raemen

5.7.1 Four objects were assigned a unique Registered Finds number (Table 17). Clay tobacco pipes have been discussed with their functional type. In addition, a blue glass, facetted cylindrical bead (RF <1>) was recovered from topsoil [4/001]. The piece is likely to be of post-medieval date. A copper-alloy two-hole button (RF <2>) was recovered from [11/002]. The button retains some traces of gilt on the surface and is embossed with the maker's name:

"T. S. THWAITES WILTON ROAD PIMLICO" (London). The button is of mid 19th- to early 20th-century date.

5.7.2 **Table 17:** Summary of the Registered Finds.

Context	RF No	Object	Material	Wt (g)	Period
4/001	1	BEAD	GLAS	<2	?PMED
11/002	2	BUTT	COPP	<2	PMED
6/002	3	PIPE	CERA	12	PMED
3/002	4	PIPE	CERA	10	PMED

5.8 The Geological Material by Luke Barber

5.8.1 Three pieces of stone were recovered from the site. The grave soil produced a piece of 19th- century Welsh slate [1/002] and a small fragment of non-calcareous micaceous bedded buff sandstone of probable Wealden origin [5/002]. The other piece of stone, consisting of a fragment of Upper Greensand (Reigate stone) from the garden soil, would certainly have derived from a building block or architectural piece [9/004].

5.9 The Metallurgical Remains by Luke Barber

5.9.1 Two pieces of grey aerated slag were recovered from the site: [7/002] (53g) and [7/008] (47g). Both pieces are likely to be fuel ash slag but may well have originated from iron-working.

5.10 The Shell by Elke Raemen

5.10.1 A total of fifteen shell fragments was recovered during the excavations. These consist mainly of oyster shell valves. Five upper valves ([1/002], [5/002], [7/002], [7/005] and [9/004]] and four lower valves ([7/002], [7/005], [9/004]) were recovered. A minimum of eight individual oyster shells are represented, four of which are immature. Traces of parasitic activity were noted on a lower valve from [7/002]. In addition, a whelk was recovered from grave [7/007] (fill [7/008]). Land snail fragments, representing a minimum of one individual, were recovered from [7/002].

5.11 The Animal Bone by Gemma Driver

5.11.1 Four contexts produced six fragments of animal bone and teeth. Context [9/009] produced a complete sheep atlas. The remaining three contexts, [5/002], [3/002] and [11/004] produced cattle and sheep teeth. Both upper and lower teeth are present and all are in wear. There is no evidence of butchery, burning, gnawing or pathology on the bone or teeth,

5.12 Potential of Finds

5.12.1 The assemblage of finds from the site is interesting in that it shows a wide chronological spread of activity, with a notable increase in the mid 16th to 17th century. Despite this the assemblage is small, lacks feature sherds and is from mixed contexts. As such the material is not considered to hold any potential for further analysis. No further work is required.

6.0 DISCUSSION & CONCLUSIONS

6.1 The Aims of the Evaluation

6.1.1 A reminder of the site specific questions of the project's research agenda as outlined in the *Written Scheme of Investigation* (ASE 2008) is set out below:

- Establish the depth of burials in relation to known grave markers that exist within the footprint of the proposed development
- Establish whether unmarked graves are present within the development footprint and establish the depth at which such remains exist
- Establish whether vaults/tombs or similar burial structures may be present
- Establish the presence, character, quality, date and extent of any structural remains that may be associated with earlier phases of the church
- Establish whether any evidence of activity pre-dating the foundation of the church exists

6.1.2 Each of these issues will be addressed in turn below.

6.2 Human Remains and Burials

6.2.1 The majority of disarticulated skeletal remains were found within the cemetery soil at the north of the site. Soil such as this is often found in churchyards, where the ground has been disturbed frequently over the course of several centuries (evidenced from 12th-20th centuries at St. Mary's) during the excavation of graves. No disarticulated remains were observed within the test pits at the south of the site (Test-pits 7-11). Evidence from Test-pit 5 indicates that the undisturbed natural chalk bedrock exceeds a depth of 2.50m, which suggests that the cemetery soil could be up to 2.30m thick in this area for the site.

6.2.2 The inhumation burials appear to have been arranged in clear rows. All the inhumation burials revealed were on a traditional Christian east-west alignment although, with the exception of the neonate skeleton encountered in Test-pit 1, no further articulated *in-situ* skeletal remains were uncovered during the works. Despite of the limited skeletal information uncovered at the site, skeletal orientation could still be determined in some instances (e.g. TP's 7, and 11), evidenced by the shape of the grave (e.g. coffin-shaped).

6.2.3 The evaluation test-pits revealed that whilst occasional disarticulated human skeletal remains are present throughout the mixed cemetery soil, articulated skeletal remains can appear from a minimal depth of 0.50m as evidenced by exposed coffin wood in Test-pit 11. It should be noted, however, that as a result of the variable ground surface in this area and the fact that the test-pits provide only a sample of the proposed development area, this depth is likely to vary slightly. The maximum height of articulated human remains uncovered during the evaluation was at 25.32m AOD in Test-pit 11. Nine un-marked burials (with no above ground monuments or grave borders) were recorded during the evaluation (e.g. 1/004, 3/003, 7/004, 7/007, 9/006,

10/004, 10/007, 11/005 and 11/008). Although grave cuts are often difficult to define when cut through an already mixed cemetery soil, where graves were cut into different deposits (e.g. garden soil/previously undisturbed subsoil in the south of the site) their cuts could be seen in the test-pit sections. It can be concluded that unmarked graves in the south of the proposed development area should be fairly obvious, whereas graves cutting through the mixed cemetery soil in the north are unlikely to be revealed until burial remains (e.g. coffin/skeletal remains) are exposed. More information may be gained by studying the findings on the GPR plan or by utilising any available above ground evidence, such as sunken ground (where the ground has naturally depressed over burials).

6.2.4 Burials in cemeteries are often hard to date accurately in the absence of headstones and burial records. The dating evidence revealed within the graves uncovered during these works (e.g. clay pipes, glass, pottery sherds) provides a wide date range from the12th century through to the 20th century. Due to the mixed cemetery soil (containing mixed residual artefacts) backfilled within the graves, it is impossible to establish a more accurate date. The graves encountered in Test-pits 9 and 11 are certainly later than the made-ground, redeposited chalk dump and previously undisturbed garden soil deposit into which they are cut. The garden soil present at the south of the site contained datable artefacts ranging from the 10th -19th centuries when it was presumably overlain by the redeposited chalk and made-ground. The button recovered from the made ground deposit in Test-pit 11 provides a mid 19th-early 20th century date, which suggests that the graves cutting through this deposit are fairly modern. This evidence in turn suggests that this area of the site may not have been used for burial before this date.

6.2.5 No vaults or tombs were uncovered during the evaluation. However, due to the known presence of unmarked graves within the area and the limited sample of the area evaluated it can't be stated with certainty that none exist within the cemetery.

6.3 The Church and its Development

6.3.1 The finds assemblage is quite typical for a church site. Evidence of past reconstruction/redevelopment was present in the form of ceramic building materials (CBM). Such building materials are likely to be associated with the upkeep of the church.

6.3.2 The recovery of certain fabric types and form are perhaps evidence that the medieval church of St Mary-the-Virgin had a tiled roof and tiled internal floor made of plain yellow and green glazed tiles. The variety of peg tile fabric types suggest a series of re-roofing events or repair to the church roof since medieval times.

6.4 Other Findings

6.4.1 From the findings of the evaluation it is not possible to say for certain whether any structural remains pre-dating the foundation of the church exist at the site. The exact nature of the chalk block running east to west across the base

of Test-pit 10 is uncertain. However, whilst the possibility that this was a wall foundation was considered, it seems more likely that it in fact represents an isolated block of natural bedrock which has been truncated either side by the excavation of surrounding graves.

6.4.2 The test-pits adjacent to the western boundary wall (2 and 8), demonstrated that the wall foundations cease at a depth of 0.8m (23.89m AOD) and 0.77m (25.18m AOD) below ground surface respectively.

6.4.3 The GPR survey proved beneficial in locating sub-surface anomalies and in term of correlating the information gathered during the evaluation with the supplied GPR information.

6.4.4 Natural chalk bedrock was reached during hand-excavation in three (including TP 10) of the test-pits at the south of the site. Due to the extent of disturbance from grave-digging in the north of the site, a hand-augur was required to reach the depths required within the limits of the 1m² test-pits. These results demonstrated that with the exception of possible isolated blocks (for example TP 1), natural bedrock in the north of the site is not likely to be encountered before a depth of approximately 2.5m

6.5 Impact Assessment

6.5.1 The results of the investigation allow for conclusions to be reached regarding the archaeological potential of the site and the impact that the development will have upon any archaeological remains. In this regard the works carried out on land at St. Mary's Church can be seen to have fulfilled the aims of the investigation as stipulated in the *WSI*.

6.5.2 It is expected that the proposed extension will disturb layers containing disarticulated human skeletal remains and it is likely that any deeper intrusive ground works to a depth exceeding 0.50m in the south and 0.70m in the north, will encounter articulated human skeletons. Whilst it is unlikely that other archaeological remains will be disturbed by the development, since the test-pits provided only a sample of the proposed development area, it is possible that further archaeological remains may be revealed during intrusive ground works.

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8.0 ACKNOWLEDGEMENTS

The co-operation and assistance of all those involved in the project is much appreciated. Particular thanks go to Reverend Kenneth Clarke, Roger Molyneux (Molyneux Architects Ltd.) and Adrian Boult (structural engineer).

APPENDIX

Table 1: Quantification of the Finds

Context	Pot	wt (g)	CBM	wt (g)	Bone	wt (g)	Shell	wt (g)	FCF	wt (g)	Stone	wt (g)	Fe	wt (g)	Slag	wt (g)	Glass	wt (g)	CTP	wt (g)	Mortar	wt (g)
u/s	12	152	14	566	1	<2			1	82			1	6			2	14				
1/002	10	108	15	602			1	18			1	16					1	6	3	8		
3/002	12	168	6	338	3	68											1	4	3	12		
4/002	8	122	2	50																		
5/002	15	198	13	606	1	12	1	12			1	6							2	10		
6/002	1	10	7	488													1	28				
6/003			2	152													4	2				
7/002	2	64	23	1088			5	26					1	30	1	52						
7/005			2	68			2	24														
7/008			2	86			1	14							1	48						
9/004	2	58	10	480	1	12	2	36			1	78									2	60
10/002	1	8	7	256																		
11/001			1	164																		
11/004	2	50	13	224	1	16																
11/010			4	254																		
11/012			1	32																		
Total	65	938	122	5454	7	108	12	130	1	82	3	100	2	36	2	100	9	54	8	30	2	60

/Table 2: Historic Environment Records (HER's) (Locations are shown on Figure 1 - indicated by bold numbers below)

PALAEOLITHIC		
Find/Monument/Site Description	**SMR Ref.**	**NGR**
1 North of Beechin Wood Cottages - Beaker pottery; Palaeolithic implement findspot Lower Palaeolithic to Late Bronze Age - 500000 BC to 701 BC	TQ 57 SE 71	TQ 580 741
2 Palaeolithic handaxe, from Stone	TQ 57 SE 75	TQ 57 74
3 Palaeolithic Handaxe, Waterstone Park, Stone	TQ 57 SE 173	TQ 5826 7421
4 Worked flint at Horns Cross, Stone, Dartford	TQ 57 SE 246	TQ 57497 74468
MESOLITHIC –none recorded		
NEOLITHIC		
Find/Monument/Site Description	**SMR Ref.**	**NGR**
5 3 axes from River Thames	TQ 57 NE 30	TQ 58 75
6 Flint implements findspot, found 1935	TQ 57 SE 40	TQ 5673 7485
7 Neolithic axe, Horn's cross gravel pit	TQ 57 SE 60	TQ 5715 7443
8 Neolithic/Bronze Age Flint Flakes, Stone	TQ 57 SE 172	TQ 57648 74811
BRONZE AGE		
Find/Monument/Site Description	**SMR Ref.**	**NGR**
9 Spearhead findspot at Stone Court, Greenhithe	TQ 57 SE 15	TQ 5759 7476
10 Bronze Age Ring Ditch, Waterstone Park	TQ 57 SE 207	TQ 5825 7425
IRON AGE		
Find/Monument/Site Description	**SMR Ref.**	**NGR**
11 Pit found at Stone Castle Chalk Pit	TQ 57 SE 48	TQ 5796 7400
12 1st c. AD brooches found at Greenhithe	TQ 57 SE 55	TQ 58 74
13 Late Iron Age/ Early Romano-British Farmstead?, Waterstone Park, Stone	TQ 57 SE 178	TQ 58358 74182
14 Middle Iron Age (?) Inhumation, Waterstone Park	TQ 57 SE 208	TQ 5825 7425
ROMANO-BRITISH		
Find/Monument/Site Description	**SMR Ref.**	**NGR**
15 2nd century AD cremation cemetery	TQ 57 NE 10	TQ 5667 7509
16 Romano-British Cemetery, Stone Castle	TQ 57 SE 6	TQ 5848 7436
17 Martin's Pit - Early Romano-British settlement site found during gravel digging in 1916	TQ 57 SE 17	TQ 570 743
18 Roman pottery find at Stone Court	TQ 57 SE 58	TQ 57 74
19 Small Roman pot was found in	TQ 57 SE 59	TQ 569 747

Palmer's Pit, Stone Court		
20 A Roman fibula, found at Stone	TQ 57 SE 61	TQ 57 74
21 Early 2nd century Roman cremation and pottery, Horn's cross	TQ 57 SE 62	TQ 57 74
ANGLO SAXON/EARLY MEDIEVAL - none recorded		
LATE MEDIEVAL/POST MEDIEVAL		
Find/Monument/Site Description	**SMR Ref.**	**NGR**
22 Stone Court - 19th century house on site of medieval archbishop's manor house	TQ 57 SE 5	TQ 5758 7478
23 Possible salt mounds (Earlier than 1946, Unknown date)	TQ 57 NE 1041	TQ 58043 75033
24 Cesspit and man-made watercourse at Station Road, Greenhithe	TQ 57 NE 108	TQ 58195 75211
25 The Woodlands - Grade II listed building. Main construction periods 1780 to 1820	MKE25494	TQ 5845 7509
26 Post Medival Ditch, Waterstone Park	TQ 57 SE 210	TQ 5765 7402

Table 3: Listed Building Details

Building Name: CHURCH OF ST MARY	**Details:**
Parish: STONE	**LBS Number:** 172702
District: DARTFORD	**Grade:** I
County: KENT	**Date Listed:** 01/06/1967
Postcode:	**Date Delisted:**
	NGR: TQ5764174810

Listing Text:

1.
5274 STONE RECTORY ROAD

TQ 57 SE 4/68 1.6.67 Church of St Mary

I

2.
C13, C14, C15, C16 and C19. The Bishops of Rochester had a manor at Stone and the church was in their patronage. Built of flint with stone dressings, patched with brick in places, and tiled roof. Chancel with north chapel, now the vestry, nave with lean-to aisles and west tower, the aisles continued to the north and south of the tower to end flush with its west wall. Late C13 interior with 3 bay nave and rib-vaulted chancel. Late C13 chancel wall arcading - the spandrels of which are identical to similar arcading in Westminster Abbey in the Choir Chapel - which indicates a date of circa 1260 and that Westminster masons built the church at Stone. The north aisle has remains of late C13 wall paintings. The west tower is early C14 and there is a Perpendicular north chapel of circa 1527. G E Street restored the church circa 1859-60 and the roof dates from this time. Brass to John Lumbarde died 1408. Small tomb chest to Sir John Wiltshire died 1527. Small hanging monument in west chapel to Robert Chapman died 1574.

Listing NGR: TQ5704675064

SMR Summary Form

Site Code	SJB 08					
Identification Name and Address	St. Mary the Virgin Church, Stone					
County, District &/or Borough	Kent					
OS Grid Refs.	*NGR 557647 174810*					
Geology	Chalk					
Arch. South-East Project Number	3656					
Type of Fieldwork	**Eval.**	Excav.	Watching Brief	Standing Structure	Survey	Other
Type of Site	Green Field	Shallow Urban	Deep Urban	Other **Churchyard**		
Dates of Fieldwork	**Eval. 31-04-09-06-04-09**	Excav.	WB.	Other		
Sponsor/Client	Mackeller Schwerdt Architects					
Project Manager	Neil Griffin					
Project Supervisor	Kathryn Grant					
Period Summary	Palaeo.	Meso.	Neo.	BA	IA	RB
	AS	**MED**	**PM**	Other **Modern**		

100 Word Summary.

Between 31st March and 6th April 2009 Archaeology South-Eas, commissioned by Molyneux Architects undertook a programme of archaeological work in advance of a proposed new Church Hall at St Mary the Virgin Church, Stone, near Dartford, Kent (centred NGR 557647 174810). Eleven c.1m² test-pits were hand-excavated within the churchyard to assess the archaeological potential of the site and the impact of the proposed development on this potential. Although hand-excavation ceased at a depth of 1m, hand-auguring was undertaken beyond this depth to establish the depth of natural geology within the grounds. Moderate disarticulated human bone and coffin fittings were uncovered during the work. Unmarked articulated burials were encountered at a minimum depth of 0.5m below ground surface at the south of the site. Redeposited natural chalk was uncovered in the southwest corner of the site overlain by a made ground dump, which was dated by a button to the mid 19th-early 20th century. More recent graves cut through these deposits and truncate the underlying garden soil, which suggests that this part of the site was outside of the original graveyard and has been incorporated into the present day cemetery within the last two-hundred years. Artefactual evidence, although predominantly residual, dated from the 10th century through to the 20th century. Natural chalk bedrock was encountered at a maximum height of 25.03m AOD at the south of the site, but had been truncated in most areas during the excavation of graves in the north.

OASIS Form

OASIS ID: archaeol6-58471

Project details

Project name	St. Mary the Virgin Church, Stone, Kent
Short description of the project	Between 31st March and 6th April 2009 Archaeology South-East, commissioned by Molyneux Architects undertook a programme of archaeological work in advance of a proposed new Church Hall at St Mary the Virgin Church, Stone, near Dartford, Kent (centred NGR 557647 174810). Eleven c.1m² test-pits were hand-excavated within the churchyard to assess the archaeological potential of the site and the impact of the proposed development on this potential. Although hand-excavation ceased at a depth of 1m, hand-auguring was undertaken beyond this depth to establish the depth of natural geology within the grounds. Moderate disarticulated human bone and coffin fittings were uncovered during the work. Unmarked articulated burials were encountered at a minimum depth of 0.5m below ground surface at the south of the site. Redeposited natural chalk was uncovered in the southwest corner of the site overlain by a made ground dump, which was dated by a button to the mid 19th-early 20th century. More recent graves cut through these deposits and truncate the underlying garden soil, which suggests that this part of the site was outside of the original graveyard and has been incorporated into the present day cemetery within the last two-hundred years. Artefactual evidence, although predominantly residual, dated from the 10th century through to the 20th century. Natural chalk bedrock was encountered at a maximum height of 25.03m AOD at the south of the site, but had been truncated in most areas during the excavation of graves in the north.
Project dates	Start: 31-03-2009 End: 06-04-2009
Previous/future work	Yes / Not known
Any associated project reference codes	SMV 09 - Sitecode
Type of project	Recording project
Current Land use	Other 4 - Churchyard
Significant Finds	BLUE CYLINDRICAL BEAD Post Medieval
Significant Finds	COPPER-ALLOY BUTTON Post Medieval

Significant Finds	CLAY TOBACCON PIPES: ONE DECORATED FLUTED BOWL INSCRIBED WITH MAKER'S INITIALS Post Medieval
Investigation type	'Test-Pit Survey'

Project location

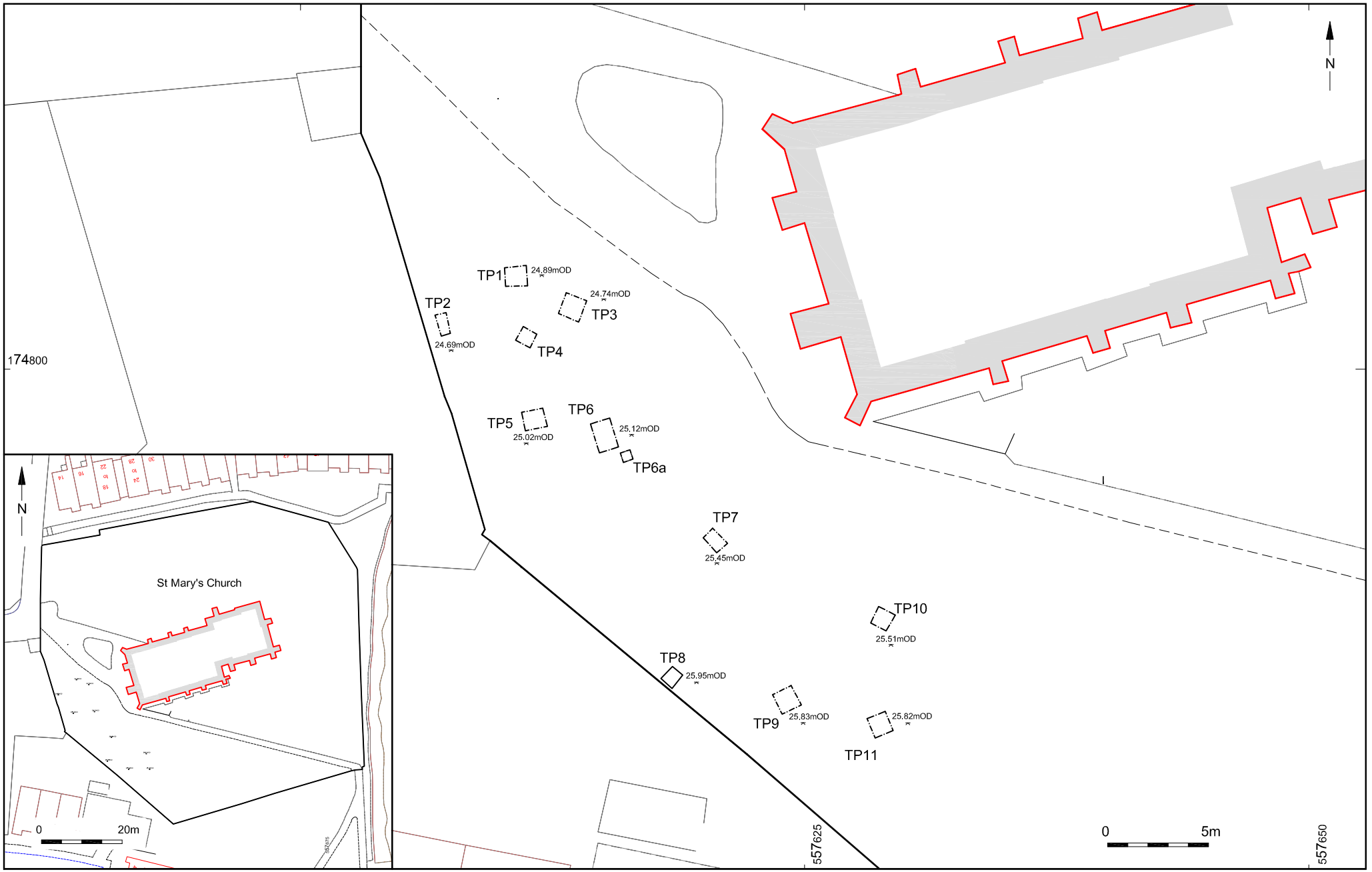
Country	England
Site location	KENT DARTFORD STONE St. Mary the Virgin Church, Stone, Kent
Postcode	DA9 9
Site coordinates	TQ 576 748 51.4497013310 0.268332956238 51 26 58 N 000 16 06 E Point
Height OD / Depth	Min: 22.52m Max: 25.03m

Project creators

Name of Organisation	Archaeology South East
Project brief originator	Archaeology South East
Project design originator	kENT COUNTY COUNCIL
Project director/manager	Neil Griffin
Project supervisor	Kathryn Grant

Entered by	Kathryn Grant (Kathryn.Grant@ucl.ac.uk)
Entered on	22 April 2009

© Archaeology South-East		St Mary the Virgin Church, Stone, Kent	Fig. 1
Project Ref: 3656	May 2009	Site locatioin plan	
Report Ref: 2009060	Drawn by: HLF		



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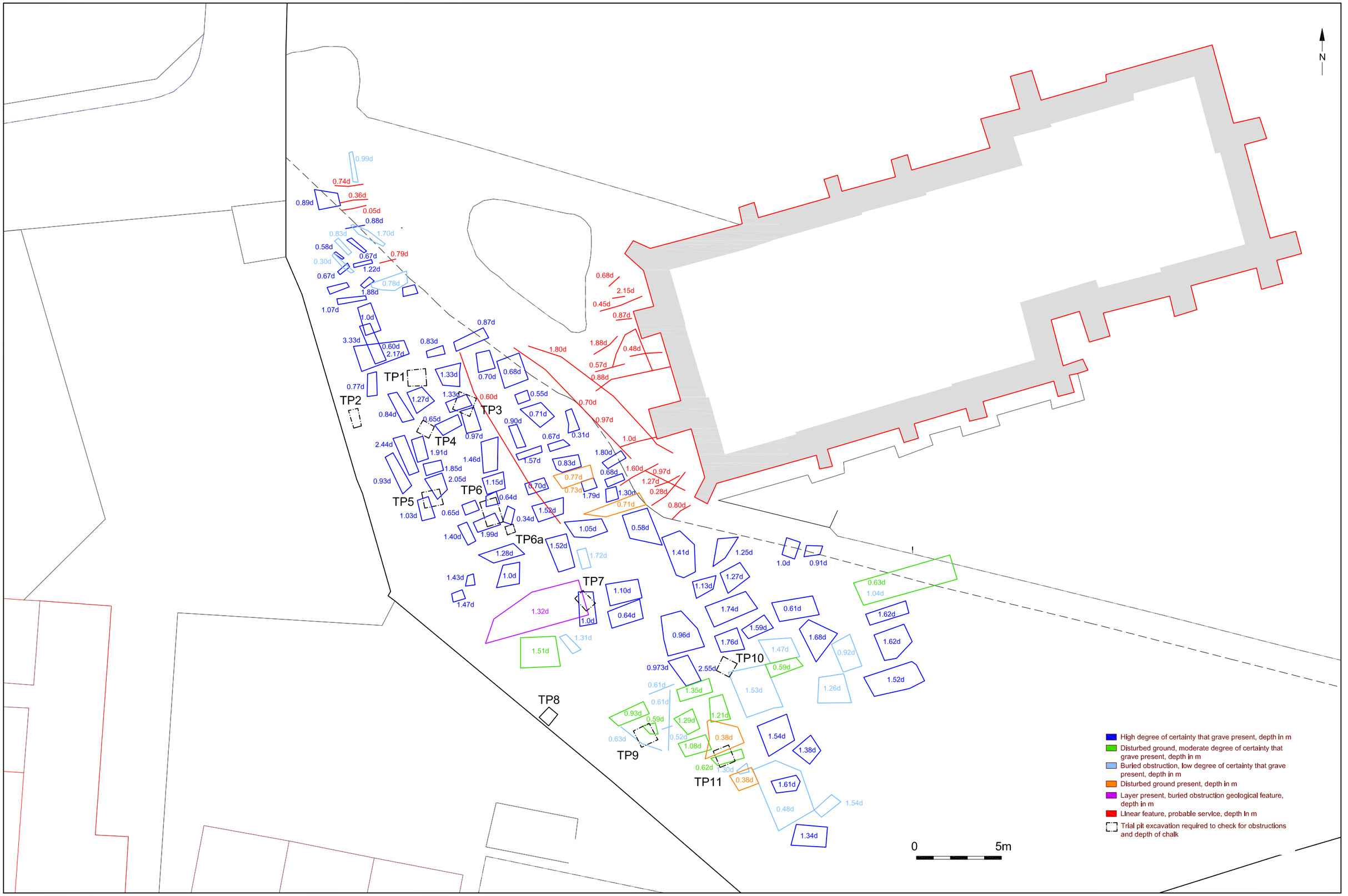
Project Ref: 3656	May 2009	Test pit location	
Report Ref: 2009060	Drawn by: HLF		



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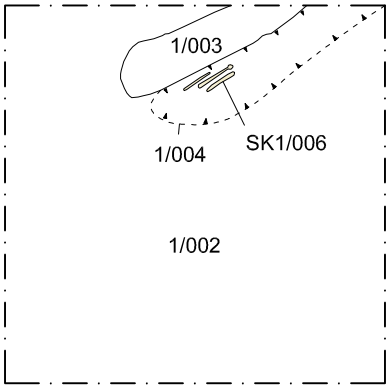
Project Ref: 3656	May 2009	Site plan showing GPR results (Molyneux Architects)	
Report Ref: 2009060	Drawn by: HLF		

Test pit 1



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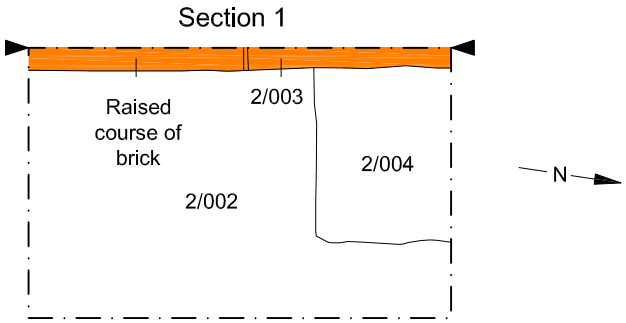
Project Ref: 3656	May 2009	Test pit 1: Section and photo	
Report Ref: 2009060	Drawn by: HLF		

Test pit 2

Section 1



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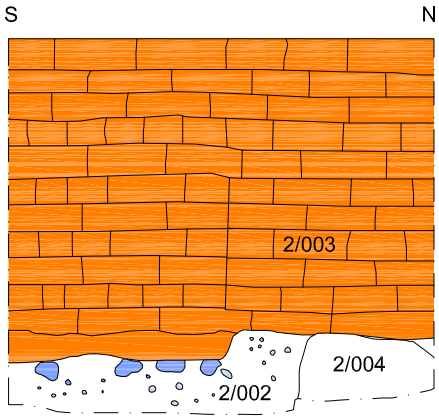

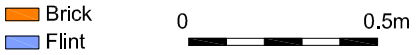

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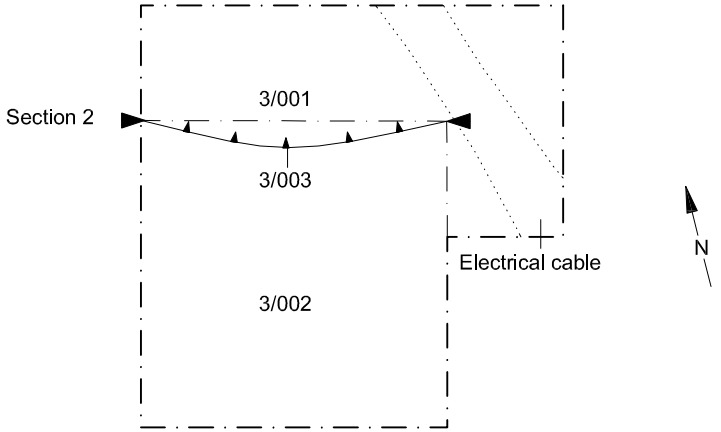
Report Ref: 2009060	Drawn by: HLF		

Test pit 3



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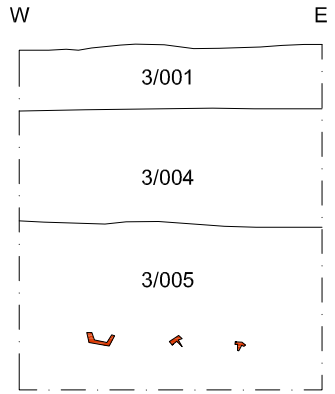

Coffin fittings

0 0.5m

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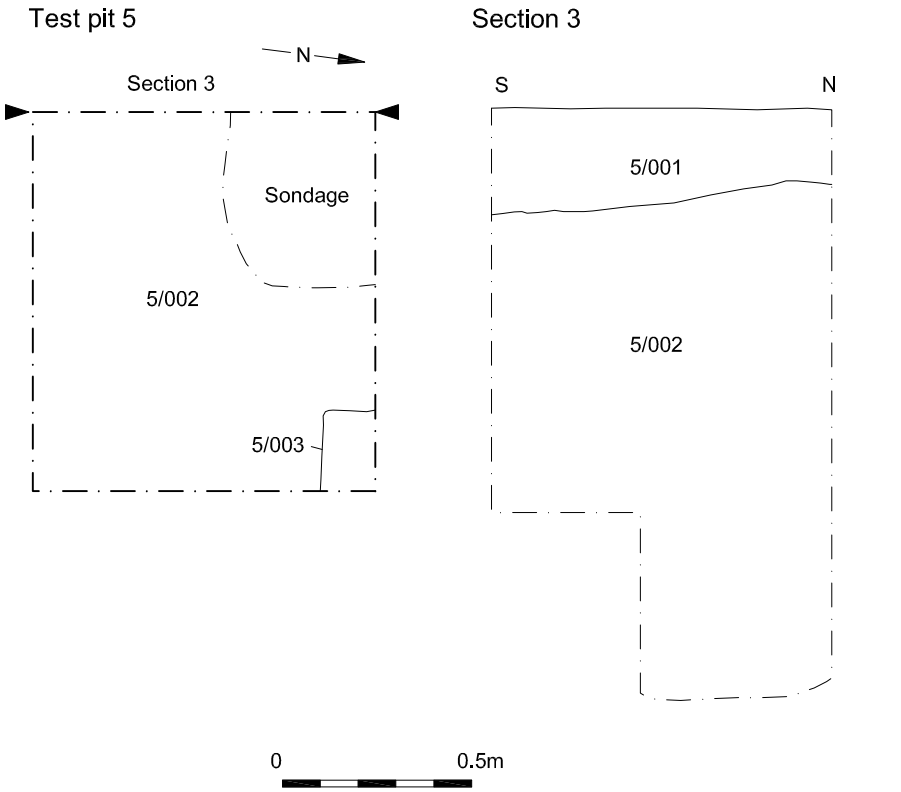
Report Ref: 2009060	Drawn by: HLF		



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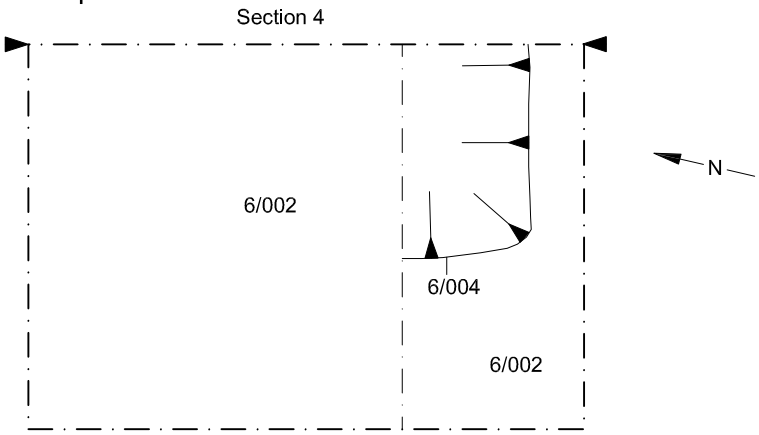
Test pit 6



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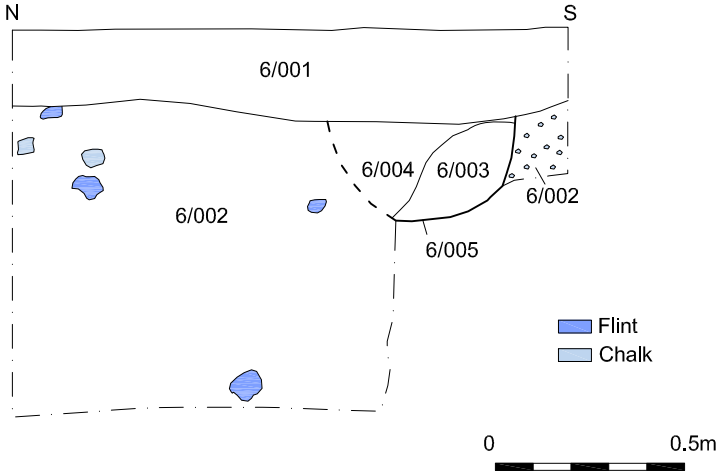

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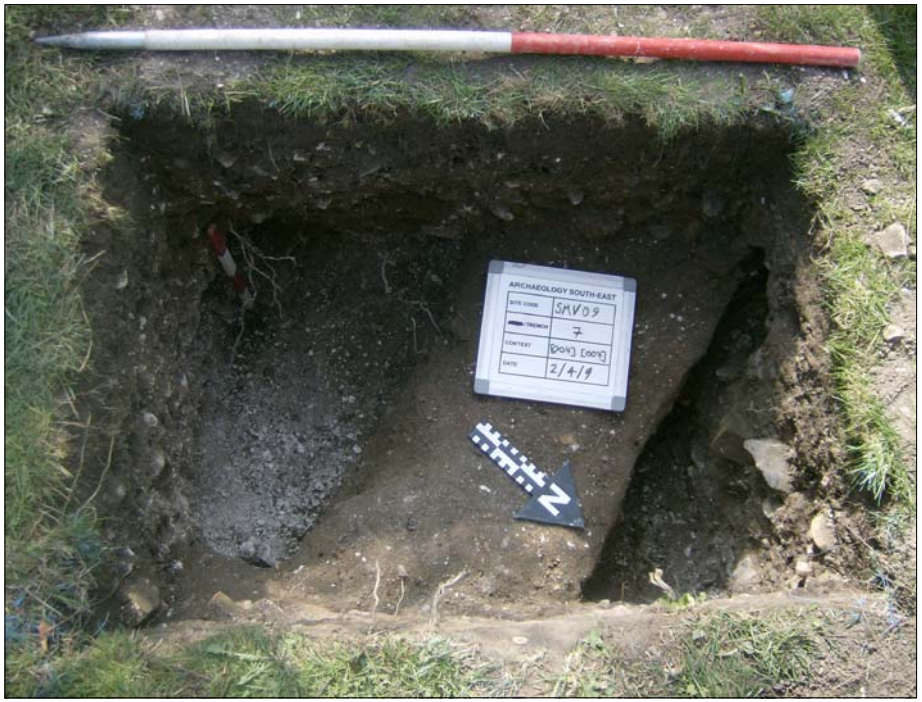
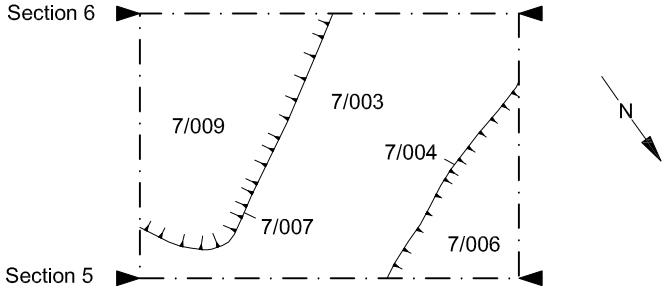


Test pit 7



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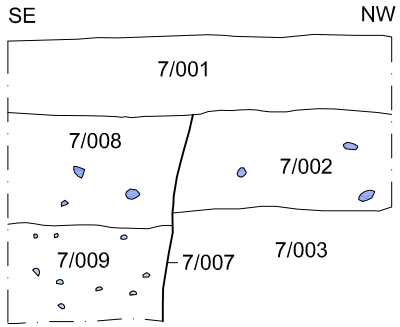

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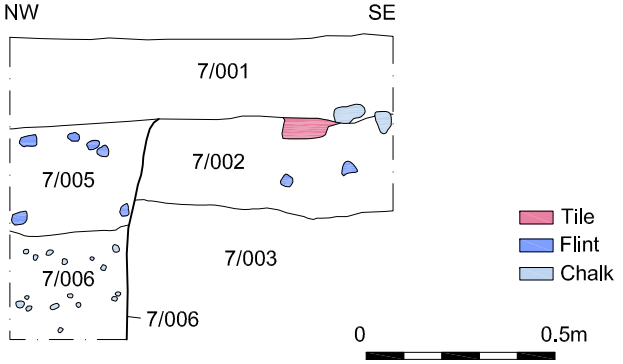

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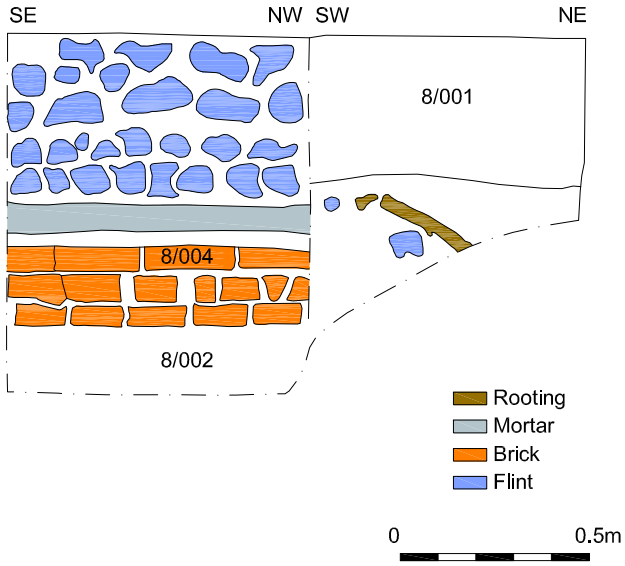
Report Ref: 2009060	Drawn by: HLF		

Section 7



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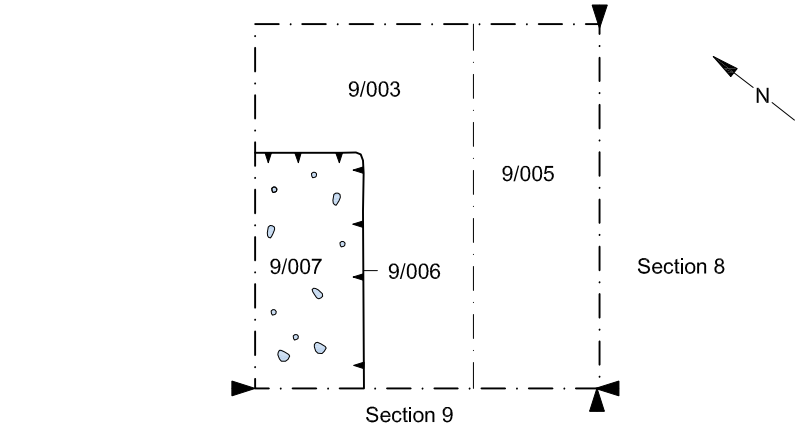
Report Ref: 2009060	Drawn by: HLF		



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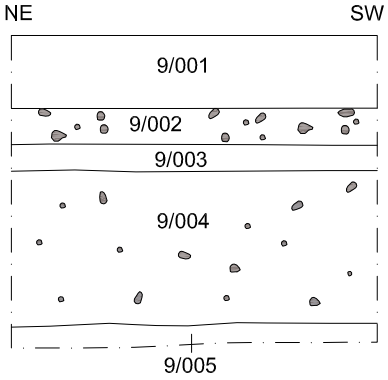

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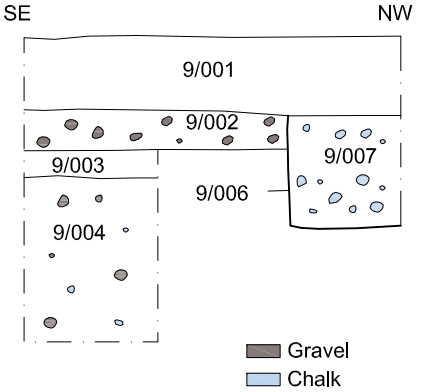

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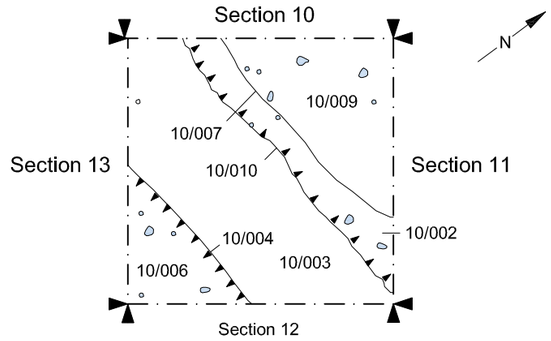

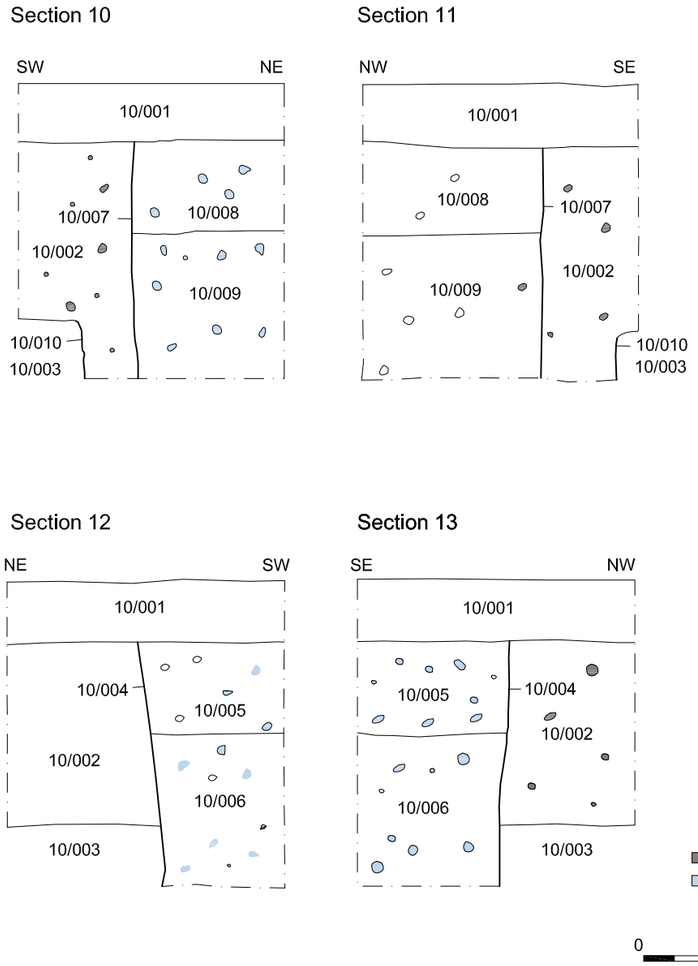

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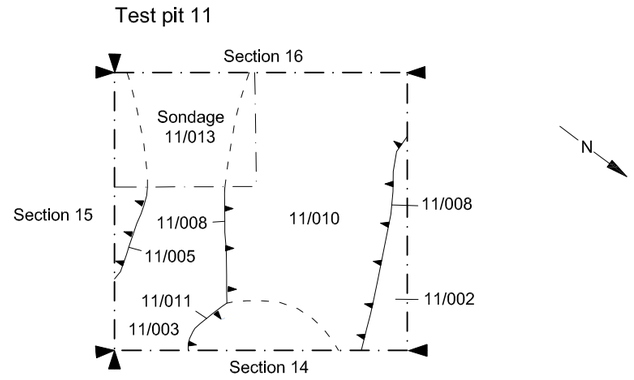

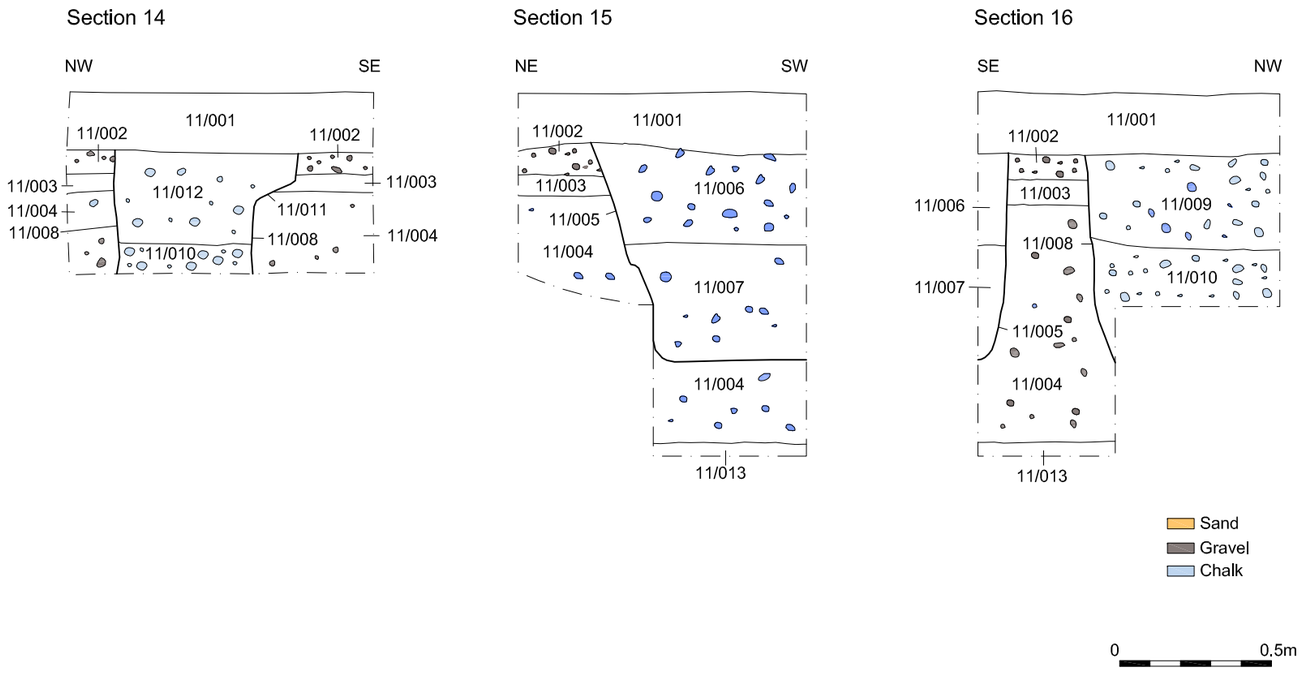

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Project Ref: 3656	May 2009	Test pit 11: Plan, sections and photos	
Report Ref: 2009060	Drawn by: HLF		

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