Archaeology South-East

ASE

ARCHAEOLOGICAL MONITORING

MULTI-USE GAMES AREA (MUGA)
PHILIP MORANT SCHOOL AND COLLEGE
REMBRANDT WAY
COLCHESTER, ESSEX

ASE Project No: 170034
Event Number/Site Code: ECC 3941
ASE Report No: 2017549

February 2018

Archaeological Monitoring

Multi-Use Games Area (MUGA)
Philip Morant School and College
Rembrandt Way
Colchester, Essex

NGR: TL 9766 2444

Planning Ref: 161668

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Abstract

This report presents the results of archaeological monitoring carried out by Archaeology South-East at Philip Morant School and College, Rembrandt Way, Colchester, Essex, between November 2017 and January 2018. The fieldwork was commissioned by the Dudley Smith Partnership on behalf of Philip Morant School and College and was undertaken during the construction of a new multi-use games area (MUGA) in the school grounds.

Previous fieldwork on this site included a geophysical survey, a trial-trench evaluation and archaeological monitoring of groundwork associated with the construction of a new teaching block. These revealed a low incidence of potential archaeological remains, but did not identify features clearly relating to either the Lexden Dyke that forms the southern boundary of the school site or the course of the Heath Farm Dyke projected to cross the development area.

The monitored works for the MUGA included topsoil stripping, the excavation of drain runs and catch pits and the excavation of construction pits for floodlight bases.

No archaeological remains were found relating to either the Lexden Dyke or Heath Farm Dyke, or any Late Iron features possibly associated with them. Two undated features, one of which was a small ditch, were found. Otherwise the monitoring recorded a straightforward sequence of topsoil and probable former ploughsoil over natural strata of sand and gravel.

In the light of the above, the development of the MUGA at Philip Morant School has not had a significant impact upon the heritage resource of this part of Lexden and Colchester.

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1.0 INTRODUCTION

1.1 Site Background

1.1.1 Archaeology South-East (ASE) was commissioned by the Dudley Smith Partnership on behalf of Philip Morant School and College to undertake archaeological mitigation works at Philip Morant School, Rembrandt Way, Colchester, Essex during groundworks for the construction of a new all-weather sports pitch (Multi-Use Games Area, or MUGA).

1.1.2 Previous fieldwork on this site included a geophysical survey, a trial-trench evaluation and archaeological monitoring of groundwork associated with the construction of a new teaching block, access routes and parking areas.

1.2 Location, Topography and Geology

1.2.1 Philip Morant School and College is situated within the Prettygate area of Colchester, *c*. 2km south-west of the town's historic core (Figure 1). The suburb of Shrub End lies on the higher ground to the south and the former separate village of Lexden is located to the north-west. This part of Colchester is characterised mainly by suburban development, although there are large areas of open space, in the form of parks and public open space. The routes of linear earthworks (dykes), surviving as physical monuments or as footpaths/routes, link these green areas.

1.2.2 The site of the proposed MUGA, covering a rectangular area of approximately 7000m^2, was located in the school grounds to the north-west of the existing school buildings and north of a new teaching block and area of car parking, under construction at the time of the archaeological monitoring of the MUGA (TL 9766 2444; Figure 2). These grounds, currently in use as a sports field, were relatively level and laid to grass. The area of the proposed MUGA had an average height of 37.5mOD.

1.2.3 Philip Morant School is situated on the south-facing slope of the River Colne valley.

1.2.4 The geology of the site comprises superficial deposits of the Lowestoft Formation (glacial till) overlying bedrock geology of London Clay (BGS 2017). During the preceding fieldwork, exposed geological deposits were variously recorded as sandy silt, silty clay and gravel, varying in colour from light brown to orangey red.

1.3 Planning Background

1.3.1 Planning permission has been granted by Colchester Borough Council (CBC) for the construction of a two-storey teaching block, an all-weather sports pitch and amended car parking and access routes (planning ref. 161668).

1.3.2 A desk-based assessment was compiled in support of the planning application (ASE 2016a). This document found that the site contained a scheduled monument, Lexden Dyke, one of a series of earthworks around *Camulodunum*. A geophysical survey was also conducted; this did not find any evidence of archaeological features on the site (Stratascan 2016).

1.3.3 Having considered the desk-based assessment, the Archaeological Advisor to CBC recommended the following archaeological condition be attached to planning consent:

"No works shall take place until the implementation of a programme of archaeological work has been secured, in accordance with a Written Scheme of Investigation that has been submitted to and approved, in writing, by the Local Planning Authority. The Scheme shall include an assessment of significance and research questions; and:
a. The programme and methodology of site investigation and recording.
b. The programme for post investigation assessment.
c. Provision to be made for analysis of the site investigation and recording.
d. Provision to be made for publication and dissemination of the analysis and records of the site investigation.
e. Provision to be made for archive deposition of the analysis and records of the site investigation.
f. Nomination of a competent person or persons/organisation to undertake the works.

The site investigation shall thereafter be completed prior to development, or in such other phased arrangement, as agreed, in writing, by the Local Planning Authority. The development shall not be occupied or brought into use until the site investigation and post investigation assessment has been completed in accordance with the programme set out in the Written Scheme of Investigation approved and the provision made for analysis, publication and dissemination of results and archive deposition has been secured.

Reason: To safeguard archaeological assets within the approved development boundary from impacts relating to any groundworks associated with the development scheme and to ensure the proper and timely investigation, recording, reporting and presentation of archaeological assets affected by this development in accordance with Policy SD1 and ENV1 of Colchester Borough Council's Core Strategy (2008)."

1.3.4 The CBC Archaeological Advisor subsequently issued a Brief for an archaeological trial-trench evaluation (CBC 2016).

1.3.5 ASE prepared a Written Scheme of Investigation (WSI) for the evaluation (ASE 2016b), which was approved by the CBC Archaeological Advisor.

1.3.6 The fieldwork was undertaken in November/December 2016. It recorded archaeological remains thought likely to have been of post-medieval date, but no remains of the Iron Age dyke were identified (ASE 2016c).

1.3.7 Having considered the evaluation report (ASE 2016c), CBC required a phase of archaeological mitigation work to be undertaken in tandem with the construction phase of works (monitoring).

1.3.8 A further WSI was prepared by ASE, detailing the methodology for the archaeological mitigation work required at the site (ASE 2017a). This was approved by the CBC Archaeological Advisor.

1.3.9 The first phase of mitigation work took place intermittently between January and March 2017 (ASE 2017b). It focused on monitoring the excavation of service trenches and pits for attenuation tanks, and ground reduction along a new access road route and area of car parking. Post-medieval or modern ditches, and undated features of uncertain type, were recorded but no remains of the Iron Age dyke were identified.

1.3.10 The second phase of mitigation work, relating to the construction of the MUGA, and undertaken in accordance with the same WSI (ASE 2017a), took place November 2017–January 2018 and is described in this report.

1.3.11 All fieldwork was carried out in accordance with the standards and guidance of the Chartered Institute for Archaeologists (CIfA 2014) and the Standards for Field Archaeology in the East of England (Gurney 2003).

1.4 Scope of Report

1.4.1 This report details the results of the archaeological monitoring carried out during the construction of a new all-weather sports pitch (Multi-Use Games Area, or MUGA). The work was carried out intermittently between the 22 November 2017 and 18th January 2018. Initial monitoring was undertaken by Samara King and Mark Germany, with the bulk of the work subsequently undertaken by Kieron Heard and James Alexander. The fieldwork was managed by Gemma Stevenson.

1.4.2 Recipients of this report comprise Philip Morant School and College, Dudley Smith Partnership, the Colchester Borough Council Archaeological Advisor and the Essex Historic Environment Record. Copies of the report will be submitted to fulfil the archaeological planning condition. Additional copies will be submitted to Colchester Museum as part of the project archive.

2.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 The following information has been taken from the Desk-Based Assessment (DBA) for the site (ASE 2016a) and the evaluation report (ASE 2016c).

2.2 Prehistoric

2.2.1 There are no references to known archaeological remains of prehistoric (Palaeolithic to Bronze Age) date on the site itself. Outside the site the known remains are limited to find spots (Figure 1):

- Bronze palstave found in a hedge bank (MCC7752)
- A Bronze Age palstave of 'unusual form', found in a hedge bank (MCC2318)
- Part of a Late Bronze Age leaf shaped spearhead (MCC8168)
- Early to Late Bronze Age ceramic vessel identified during archaeological works at the Girls' School (MCC8173)

2.3 Iron Age

2.3.1 The Iron Age is well represented and heritage assets of this date are recorded within both the site and surrounding area. These primarily relate to the dyke system which developed between the Colne and Roman Rivers in the Late Iron Age. Comprising ditches, banks and perhaps palisades these expansive earthworks gradually developed to create a defended perimeter incorporating fields, water, marsh and forest (ECC 2009, 19). Some 6km of the estimated 25km of dykes survive as extant earthworks, the majority of which are scheduled monuments. The routes of others have been identified through archaeological excavation. There has been considerable archaeological interest in the dykes and a number of excavations have taken place. The results of this work are overviewed in *Camulodunum 2* (Hawkes and Crummy 1995). Enclosed within the dyke system is *Camulodunum*, one of the largest and best known examples of a Late Iron Age *oppidum*. *Camulodunum* covered an area of some 25sq km between the Colne and Roman Rivers, and was probably established in the 1st century BC (Crummy 1997). The interior is thought to have been largely agricultural, with small scattered occupation sites. There are, however, two larger known foci; an extensive farmstead at Gosbecks and an industrial area at Sheepen.

2.3.2 The earliest of the dykes protecting the *oppidum* was the Heath Farm Dyke, constructed between *c*. 50–25BC and running for some 2km. The northernmost section of the dyke is likely to cross the site, although its precise route is not known (Figure 1). The Essex Historic Environment Record (EHER) and Colchester Urban Archaeological Database (UAD) show it crossing the southern part of the site, close to the extant school, but Hawkes and Crummy (1995) place it further to the north. The latter is perhaps the most likely route as it links the earthworks recorded both at Prettygate Junction and in archaeological excavations to the north-east. Little of the Heath Farm Dyke survives as a visible earthwork, but has been recorded in the past as comprising an earthwork bank and ditch, each of which was 10m wide. Investigations at Shrub End showed the ditch to be 2.4m deep at that point. It has however been noted that the profiles of the ditch vary in shape (Hawkes and Crummy 1995, 33). This dyke disregards the Lexden Tumulus.

2.3.3 The Lexden Tumulus (MCC1356), situated 200m to the north of the site, is of Iron Age date and was constructed in the time of king Addedomaros, *c.* 15–10 BC. It is thought that this may be his tomb. This monument is situated within an earlier urnfield, which resumed or continued into the Roman period.

2.3.4 The Lexden Dyke is situated to the west of this urnfield and represents an addition to the dyke system in the final years of the 1st century BC. It defended a larger area than Gosbecks itself, incorporating the Colne Valley (Hawkes and Crummy 1995, 54). An extensive length of this substantial dyke survives and runs along the western boundary of the site and extends into it. It comprises a 19m wide bank, which extends partially into the school grounds, and a partly infilled ditch which is *c.* 14m wide and 1.5m deep.

2.3.5 Additional dykes were constructed to protect the industrial area and settlement at Sheepen. Other pre-Roman dykes include Grymes Dyke, Shrub End Dyke and Dugard Dyke, Kidmans Dyke, Olivers Dyke and Layer Dyke.

2.3.6 By the time of the accession of Cunobelin, in *c.*AD 5, *Camulodunum* had become the most important settlement in Britain and Cunobelin had subjugated large areas of southern and eastern Britain. He died in *c.* AD 40 and his sons continued to expand their power base.

2.3.7 Prettygate Dyke joins the southern end of Lexden Dyke (Middle) and is thought to have been constructed at a later date than the Lexden dyke. Its dating is not well defined but is most likely to be of Late Iron Age or early Roman date, *c.* AD 5–49.

2.4 Roman

2.4.1 Whilst there are no known Romano-British remains from the site there are a number recorded in the general vicinity. *Camulodunum* was a significant objective for the Roman invasion campaign in AD 43 and fell to the emperor Claudius. The army is likely to have been housed in a large temporary camp whilst more permanent sites were established at Gosbecks and a legionary fortress within what is now the town centre. Following the relocation of the legions the fortress became a *colonia*. It was destroyed during the Boudiccan Revolt of AD 60 but was re-established as a walled town. During the Roman period additional earthwork dykes were constructed around *Camulodunum* and existing earthworks modified – for example, the Prettygate dyke was lowered, perhaps to be used as a road (Hawkes and Crummy 1995, 48). A number of Roman roads have also been recorded elsewhere.

2.4.2 The Philip Morant site lies outside the foci of settlements in the Roman period but a number of archaeological remains of this date have been recorded within the area, generally distributed to the north and east. A number of burials have been recorded (MCC7676; MCC3091), although the locations and numbers involved are poorly described in the archaeological record. Pits and parts of the ‘Triple Dyke’ have also been recorded in the vicinity of Norman Way/Park Road. Roman burials also continued in the Iron Age burial zone at Lexden (MCC7525).

2.4.3 To the east of the site, evidence of a road from Gosbecks, a temple, and enclosure were recorded (MCC8407). A pottery kiln was recorded at Fitzwalter Road (MCC7593). Ditches which may perhaps be part of an early Roman enclosure have been recorded to the north of the site (MCC2171, MCC2182). These may represent the remains of an unfinished fort (Hawkes and Crummy 1995, 125). Additional Roman ditches have also been recorded in the vicinity of the northern end of Heath Farm Dyke.

2.5 Anglo-Saxon and Medieval

2.5.1 In contrast to the Late Iron Age and Roman periods there is no activity of Anglo-Saxon or medieval period on the site itself or indeed within the wider area. This may in part reflect the foci of the previous archaeological investigations - that is the various earthwork monuments of the *oppidum*. It could also reflect the fact that the site lies away from the main settled areas in this period.

2.5.2 Within the borough, the Historic Environment Characterisation Project (ECC 2009) notes that early Anglo-Saxon evidence is sparse. The medieval landscape is likely to have been one of dispersed settlement of hamlets and farms, with focal points at church/hall complexes, commons and greens. Thus the site is perhaps most likely to have been situated within a rural landscape away from the centres of settlement at Lexden and Colchester.

2.5.3 Evidence for the occupation of Colchester during the Anglo-Saxon period is provided by documentary sources as well as archaeological evidence from within and surrounding the town or *burg*. The Anglo-Saxon town developed within the ruins of the Roman one, but archaeological evidence suggests there was little or no continuity between them. Excavations and finds indicate scattered Early and Middle Anglo-Saxon settlement within the Roman town walls (Crummy 1997). The layout of the Roman town was altered during the Anglo-Saxon period, by blocking the Balkerne gate to make a stronghold and diverting the road from London to enter the town at the south-west gate. The site lay within the parish of St Mary at the Walls (part of the Liberty of Colchester) close to its border with Lexden parish.

2.5.4 The strategic value of Colchester was recognised by the Normans, who constructed Colchester Castle (now the museum) on the site of the principal Roman temple. There is also archaeological evidence for re-use of Roman structures. By the 12th century the town was expanding beyond the walled town, particularly to the south. A suburb also developed around the Old Hythe (port). There were also lesser suburbs around the main bridges. By the 13th century, the town had begun to have a role in cloth making, a role which developed through subsequent centuries, particularly following the immigration of Flemish weavers in the late 14th century. There were already fullers operating in the town in the 12th century and the area around Colchester became a focus for the building of mills either partially or wholly used for fulling. The adjacent parish of Lexden is recorded in the Domesday Book and grew up around the church and springs, and gradually along the London to Colchester Road. Other small settlements were located at Shrub End and Bottle End.

2.5.5 By *c.* 1500, settlement in Colchester extended well beyond the town walls in ribbon developments along the major roads. However, much of the area was

still largely agricultural. The nearest major road to the site would have been Lexden Road, situated to the north.

2.5.6 At the start of the Civil War in 1642 the town defences were improved, ramparts being built behind lost or weakened sections of the town wall. During the Second Civil War (1648–9), temporary siege works and fortifications were constructed by the Parliamentarian troops surrounding the Royalist force within the walled town during the 1648 siege. The forts on the south and west sides of the town were joined by a continuous trench three miles long while forts to the north and east guarded the river crossings.

2.5.7 By 1835 Colchester was primarily a market town for the surrounding agricultural area. In the Victorian period, and up until the 1980s, the livestock market was held within the town walls. Residential and industrial development was modest. The site however lay in an area which remained agricultural in character. In the mid-19th century the tithe maps record the Philip Morant site as being within two fields; *10 Acres* and *Part of Rainbow* field. Both were under arable cultivation, owned by George Henry Errington and farmed by himself and William Griffin respectively. The boundary between the two fields may represent the route of the Heath Farm Dyke. Reference to subsequent historic mapping shows no changes on the site through much of the 19th and early 20th centuries. In the wider area the gradual expansion of Colchester can be seen.

2.5.8 In 1963 the Philip Morant School was established in Colchester town on East Hill but soon outgrew the premises. In 1965 a new school was built on the current site to serve 450 pupils. This had extended to 750 in 1971 when it became a comprehensive school and further expanded. It became a technology college in 1993, and a sixth form was added in 1996. The school became an academy in 2011.

2.6 Previous Work

Geophysical survey

2.6.1 A detailed gradiometer survey was undertaken on the site in 2016 (Stratascan 2016). The survey did not identify any anomalies of archaeological origin, suggesting the site had a recent agricultural past. A band of 'quiet data' was noted to run to the north of the field boundary (ASE 2017a, fig. 2), along the potential route of Heath Farm Dyke. The majority of the anomalies were modern in origin, relating to scattered magnetic debris, ferrous objects, and magnetic disturbance from nearby buildings.

Trial-trench evaluation

2.6.2 The archaeological evaluation undertaken in November/December 2016 comprised the excavation of seven trenches across the site (ASE 2016c). Archaeological features were recorded in four trenches, comprising two pits, a ditch terminus and a very large feature which may have been linear or a quarry pit. The features may all be post-medieval. No remains of the Iron Age dyke system or associated features were identified within the trenches.

First phase of monitoring

2.6.3 The first phase of archaeological monitoring took place intermittently between January and March 2017 (ASE 2017b). It focused on monitoring the excavation of service trenches and pits for attenuation tanks, and ground reduction along a new access road route and area of car parking.

2.6.4 All encountered remains were either boundary ditches of certain or probable post-medieval/modern date, or else were undated features of uncertain type. One ditch, a field boundary shown on historic Ordnance Survey mapping up until the 1950s, was a further part of that recorded (incorrectly) as a terminus during the evaluation. The site had been disturbed to some extent by the insertion of a substantial service trench in the modern period, perhaps at the time of the school's construction. No remains of the Iron Age dyke system or associated features were identified.

3.0 ARCHAEOLOGICAL METHODOLOGY

3.1 Project Aims and Objectives

3.1.1 The aims of the mitigation were to:

- Identify the date, approximate form and purpose of any archaeological deposit, together with its likely extent, localised depth and quality of preservation.
- Evaluate the likely impact of past land uses, and the possible presence of masking colluvial/alluvial deposits.
- Establish the potential for the survival of environmental evidence.
- Provide sufficient information to construct an archaeological conservation strategy, dealing with preservation, the recording of archaeological deposits, working practices, timetables and cost.
- Identify any remains for the Dyke or associated features that may have fallen between the archaeological evaluation trenches
- Further define the dating and function of those features identified during the evaluation. Are there associated features that may shed light on the purpose of these features?

3.2 Fieldwork Methodology

3.2.1 A site code was obtained from Colchester Borough Council (ECC 3941) and was used as the unique site identifier for the entire project archive.

3.2.2 The WSI (ASE 2017a) stated that floodlight bases and other excavations associated with the MUGA were to be monitored, with a proviso for possible further 'strip, map and sample' excavation should general ground reduction for the MUGA reduce the area to within *c*. 250mm of geological strata.

3.2.3 In practice, the significant potential impacts included the excavation of the principal drainage trenches around the perimeter of the MUGA, with an associated 'catch pit' at each corner, and four construction pits for floodlight bases.

Topsoil stripping

3.2.4 General ground reduction across the area of the MUGA was limited to the removal of turf and topsoil to a depth of up to *c.* 250mm, but usually much less. This process was monitored specifically on two separate occasions (22 November and 05 December) and more sporadically on subsequent site visits. No natural geological deposits were exposed by the strip groundworks.

3.2.5 Observations during the trial-trench evaluation (ASE 2016c) and first phase of monitoring (ASE 2017b) indicated combined thicknesses of 0.60m–0.70m of topsoil/subsoil, overlying natural strata, and this was confirmed during an early stage of the MUGA monitoring. Consequently, there was no requirement for formal 'strip, map and sample' excavation in relation to the MUGA construction. No archaeological deposits or features were identified during the topsoil

stripping.

Drainage trenches

3.2.6 Drainage of the MUGA surface will be by means of a 150mm diameter plastic pipe, laid in trenches running along the edges of the pitch, and much smaller diameter plastic pipes laid in multiple trenches running diagonally across the pitch area. The perimeter trenches were up to 0.30m wide, being machine-dug with a tracked excavator fitted with a 0.22m wide trenching bucket. The trenches varied in depth from 0.30m at the western corner of the MUGA, to 1.30m at the eastern corner.

3.2.7 The perimeter trenches were interrupted at each corner of the MUGA by a rectangular 'catch pit' for a concrete settling tank. These pits varied from 1.30m x 0.80m x 0.50m deep at the western corner, to 2m x 1m x 1.5m deep at the eastern corner.

3.2.8 The excavation of most of the perimeter trenches and three of the 'catch pits' (numbered 1–3 on Figure 2) was monitored (13–14 December), with some archaeological results (see below, 4.3).

3.2.9 Given the restrictive dimensions of the drainage trenches and 'catch pits', it was rarely possible to enter the excavations in order to make detailed records. Smearing of the trench sides by the machine bucket led to poor deposit clarity, especially in the perimeter trenches. Also, trenches on the north-east and south-east sides of the MUGA became partially flooded with groundwater almost as soon as they were excavated.

3.2.10 Sketch plans and sections, and basic soil descriptions, were made on *pro forma* Watching Brief record sheets. A photographic record was made using a compact digital camera. All excavated material was examined for artefacts.

3.2.11 The 'catch pit' at the southern corner of the MUGA could not be monitored because of flooding in this area of the site.

3.2.12 The drainage trenches running diagonally across the pitch were not monitored. These were relatively narrow and shallow, and were dug using a rotary trencher which was not conducive to meaningful archaeological observation.

Floodlight bases

3.2.13 The excavations for the floodlight bases were monitored on 17th–18th January 2018, with no archaeological results. Six construction pits were monitored (numbered 1–6 on Figure 2), measuring 1.40m–1.46m long x 1.30m–1.40m wide and approximately 1.30m deep. The pits were machine excavated with a tracked excavator fitted with a 1m wide, toothed bucket.

3.2.14 Due to the depth of these excavations, all recording was done from ground level.

3.3 Archive

3.3.1 The MUGA monitoring archive is currently held at the Witham office of ASE, and will eventually be deposited with the Colchester and Ipswich Museum Service, in combination with the archive from the preceding phase of

monitoring. The contents of both archives are tabulated below (Table 1).

Description	**Quantity**	**Type**
MUGA WB archive		
Watching Brief Record sheets	7	A4 paper
Digital photos	33	High Res JPGs
Teaching block WB archive		
Context sheets	27	A4 paper
Section/plan sheets	9	Drawing film
Drawing register	1	A4 paper
Digital photos	58	High res JPGs

Table 1: Quantification of site paper archive

4.0 RESULTS

4.1 Summary

4.1.1 The general site strip across the extents of the MUGA area, to the required construction formation level, was of insufficient depth to expose any archaeological features.

4.1.2 Monitoring was therefore undertaken mainly on the principal drain runs around the perimeter of the MUGA, the 'catch pits' at three of the corners and six construction pits for floodlight bases.

4.1.3 Similar sequences of deposits were noted at all monitored locations, consisting of natural strata overlaid by deposits of subsoil and topsoil/turf (Figure 3).

4.1.4 Two cut features (undated) were recorded in Catch Pit 3, at the western corner of the MUGA.

4.1.5 There was no evidence for remains potentially associated with the Iron Age dyke system known to have existed in this vicinity.

4.1.6 No finds were recovered. Flecks and small fragments of red brick or tile were noted in section in subsoil layer [033], but could not be collected.

4.2 General soil descriptions

Natural strata

4.2.1 Natural stratum [035] was loose, orangey or reddish brown sand and gravel, recorded at a maximum thickness of at least 0.70m in Catch Pit 2, at the eastern corner of the MUGA. This deposit extended site-wide, and was sealed by natural stratum [034], with which it had an indeterminate interface.

4.2.2 Natural stratum [034] was firm, light yellowish brown clayey or silty sand with moderate rounded to angular pebbles, 0.10m–0.20m thick and extending site-wide. It was sealed by subsoil [033], with an indeterminate interface.

4.2.3 Typically, natural strata were encountered at *c.* 0.60–0.70m below current ground level, apart from in Catch Pit 3 at the western corner of the MUGA, where natural [034] was recorded immediately below the topsoil at a depth of only 0.20m.

Subsoil

4.2.3 Subsoil layer [033] was soft, mid brown silty sand with occasional to moderate pebbles, and occasional flecks and small fragments of brick or tile (not collected). The subsoil was generally about 0.25m–0.30m thick. It extended across most of the site, being absent only from a localised area at the western corner of the MUGA, in Catch Pit 3 and adjoining drainage trenches. The subsoil was sealed by topsoil [032].

Topsoil and turf

4.2.4 Topsoil/turf [032] was friable, mid brownish grey loamy soil with occasional to

moderate pebbles, forming the current ground surface. The topsoil/turf extended site-wide and had a combined thickness of approximately 0.30m. The interface between topsoil [032] and subsoil [033] was indeterminate.

Recent disturbance

4.2.5 Topsoil [032] and subsoil [033] were not present in the construction pits for Floodlight Bases 2 and 3, having been removed during the recent construction of concrete hard-standing in the spectator area adjacent to the pitch. In those excavations, natural strata were observed at depths below ground level of 0.47m and 0.68m respectively.

4.3 Two cut features

4.3.1 Two small cut features [029] and [031] were recorded in Catch Pit 3, at the western corner of the MUGA (Figure 3). They were both sealed by topsoil [032] and cut natural stratum [034].

4.3.2 Feature [029] was at least 0.80m long SW-NE x 0.50m NW-SE x 0.25m deep, with a steep side breaking gradually into a flat base. It is unknown if this was part of a linear feature or a pit. Fill [028] was soft, mid brown silty sand with occasional pebbles but no finds.

4.3.3 Ditch/gully [031] was at least 1.10m long SSW-NNE x 0.48m wide x 0.15m deep, with steep sides breaking gradually into a concave base. The full extent of the ditch is unknown. Fill [030] was indistinguishable from that of the adjacent feature – soft, mid brown silty sand with occasional pebbles but no finds.

5.0 DISCUSSION AND CONCLUSIONS

5.1 Overview of stratigraphic sequence

5.1.1 Natural strata encountered during the MUGA monitoring were consistent with those recorded during previous fieldwork on the site. These sands and gravels were presumably glacial outwash deposits forming part of the Lowestoft Formation.

5.1.2 Subsoil layer [033] is likely to have been a former ploughsoil. Similar deposits were recorded during the evaluation within the area of the MUGA (Trenches 1 and 2) and also to the south, and were interpreted as naturally occurring soils amended by agriculture. In some of the evaluation trenches, these subsoil deposits were striated with small parallel grooves extending down into the underlying natural stratum – these were interpreted as plough scars or drainage features of relatively recent date (ASE 2016c, 19).

5.1.3 As stated in the evaluation report (*ibid*), it is likely that the subsoil was also modified during landscaping when the school playing field was created in the 1960s. This probably explains why subsoil [033] was absent from the western corner of the MUGA.

5.1.4 Topsoil [032] might in part have been imported during the creation of the school playing field.

5.2 Correlation with geophysical survey and earlier fieldwork results

5.2.1 A linear anomaly plotted in this area of the development site by the geophysical survey (Stratascan 2016) has been confirmed by an earlier phase of monitoring (ASE 2017b) to have been part of a NNE–SSW field boundary ditch of post-medieval date, shown on the 1844 tithe map and subsequent Ordnance Survey maps until at least 1924 (ASE 2016a, 19). The alignment of this ditch would have taken it through the area of the MUGA, as shown on Figure 2. However, the ditch was not recognised during the excavation of the drain runs; probably due to poor deposit clarity and groundwater accumulation in the trench bases.

5.2.2 Similarly, a large cut feature (also shown on Figure 2) recorded during the trial-trench evaluation, at the east end of Trench 3 (ASE 2016b, 13), was not recognised subsequently during the monitoring of the drain run along the south-east edge of the MUGA.

5.3 Deposit survival and existing impacts

5.3.1 The evaluation (ASE 2016c) identified only shallow impacts from modern land use on the natural surface, mainly from ploughing and/or drainage of the playing fields, and noted that the natural surface was relatively deeply buried below thick deposits of topsoil and subsoil. This model was confirmed during the subsequent monitoring in the teaching block area (ASE 2017b), and has been reinforced by the results of the MUGA monitoring.

5.3.2 In the MUGA area, natural strata were generally 0.60m–0.70m below current ground level, with similar depths recorded during previous fieldwork in areas to the south.

5.3.3 The natural was relatively shallow (0.20m below ground level) at the western corner of the MUGA (Catch Pit 3), probably due to landscaping when the school playing fields were laid out in the 1960s.

5.4 Discussion of archaeological deposits and features, by period

Post-medieval ploughsoil

5.4.1 Cartographic evidence indicates agricultural land use at this location during the 19th century and it is likely that subsoil [033] was a post-medieval ploughsoil. This is supported by the presence of flecks and small fragments of brick or tile within the deposit, indicating that it had been amended by human activity.

Undated features

5.4.2 Two cut features [029] and [031] of unknown date were recorded in Catch Pit 3, at the western corner of the MUGA. Feature [029] was of unknown form and function, while [031] was a small ditch or gully oriented SSW–NNE. Although the features were probably intercutting, they had identical fills (comparable to subsoil [033]) and are assumed to have been broadly contemporary. Truncation in this area of the site during modern landscaping had removed any evidence that might have existed for the stratigraphic relationship between these features and the (assumed post-medieval) subsoil.

5.5 Consideration of research aims

5.5.1 There was nothing to suggest that features [029] and [031] were of Iron Age or Roman date, and there is little likelihood that they were associated with the Lexden Dyke or the Heath Farm Dyke. Consequently, the results from the MUGA monitoring have no potential to contribute further to research aims for the project relating to Colchester's prehistoric/Roman dyke system.

5.6 Conclusions

5.6.1 The watching brief has not identified any archaeological remains relating to either the Lexden Dyke or Heath Farm Dyke, or any Late Iron features possibly associated with them.

5.6.2 Apart from two undated features observed at the west corner of the MUGA, one a minor ditch or gulley, no archaeological features were recorded.

5.6.2 The construction of the MUGA, as part of the wider development of this part of the Philip Morant School site, has not had a significant impact upon the heritage resource of this area of Lexden and Colchester.

ACKNOWLEDGEMENTS

ASE would like to thank the Dudley Smith Partnership for commissioning the work on behalf of Philip Morant School and College and for their assistance throughout the project. Staff of Smiths Sports and Civils are thanked for their assistance during the fieldwork. Dr Jess Tipper, CBC Archaeological Advisor, is thanked for his guidance and monitoring undertaken on behalf of the Local Planning Authority. The watching brief was undertaken by James Alexander, Mark Germany, Kieron Heard and Samara King. The report figures were prepared by Andrew Lewsey. The fieldwork was project managed by Gemma Stevenson and the post-excavation process by Mark Atkinson.

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Appendix 1: HER Summary

Site name/Address: Multi Use Games Area (MUGA), Philip Morant School and College, Rembrandt Way, Colchester, Essex	
Parish: Lexden	***District:*** Colchester
NGR: TL 9766 2444	***Site Code:*** ECC 3941
Type of Work: Archaeological Monitoring	***Site Director/Group:*** K. Heard, ASE
Date of Work: 22 Nov 2017 – 18 Jan 2018	***Size of Area Investigated:*** 7000m^2
Location of Finds/Curating Museum: Colchester & Ipswich Museum Service	***Funding source:*** Client
Further Seasons Anticipated?: No	***Related HER Nos:***
Final Report: EAH roundup	***OASIS No:*** *280505*
Periods Represented: Post-medieval, modern, undated	

SUMMARY OF FIELDWORK RESULTS:

Archaeological monitoring was carried out at Philip Morant School and College during the construction of a new Multi-Use Games Area (MUGA) in the school grounds, as part of a wider programme of construction works to expand its facilities.

Previous fieldwork on this site included a geophysical survey, a trial-trench evaluation and archaeological monitoring of groundwork associated with the construction of a new teaching block. These revealed a low incidence of potential archaeological remains, but did not identify features clearly relating to either the Lexden Dyke that forms the southern boundary of the school site or the course of the Heath Farm Dyke, projected to cross the development area.

The monitored works for the MUGA included topsoil stripping, the excavation of drain runs and catch pits and the excavation of construction pits for floodlight bases.

No archaeological remains were found relating to either the Lexden Dyke or Heath Farm Dyke, or any Late Iron features possibly associated with them. Two undated features, one of which was a small ditch, were found in a catch pit. Otherwise the monitoring revealed a straightforward sequence of topsoil and probable former ploughsoil over natural strata of sand and gravel.

Previous Summaries/Reports:

ASE, 2017a, Archaeological Evaluation, The Philip Morant School and College, Rembrandt Way, Colchester, Essex. ASE rep. 2016485

ASE, 2017b, Archaeological Monitoring, The Philip Morant School, Rembrandt Way, Colchester, Essex. ASE rep. 2017158

Author of Summary: Kieron Heard	***Date of Summary:*** February 2018

Appendix 2: OASIS Form

OASIS ID: 280505	
Project details	
Project name	Philip Morant School and College, Rembrandt Way, Colchester
Short description of the project	Archaeological monitoring was carried out during construction of a new two-storey teaching block, associated car parking areas and access routes. Previous geophysical survey and trial-trenching of this c.1.5ha site recorded a low incidence of potential archaeological remains, but did not identify features clearly relating to either the Lexden Dyke that forms the southern boundary of the school site or to the course of the Heath Farm Dyke projected to cross the development area. The monitoring, primarily focusing on the excavation of service trenches, attenuation tanks and ground reduction along a new access road route, did not identify any archaeological remains relating to either the Lexden Dyke or Heath Farm Dyke, or encountered any Late Iron features possibly associated with them. All encountered remains were either boundary ditches of certain or probable post-medieval/modern date, or else were undated features of uncertain type. One ditch, a field boundary shown on OS maps up until the 1950s, was a further part of that recorded during the evaluation. The site had been disturbed to some extent by the insertion of a substantial service trench in the modern period, perhaps at the time of the school's construction. A second phase of monitoring, of a new Multi-Use Games Area (MUGA) to the north of the new teaching block, revealed a straightforward sequence of topsoil and former ploughsoil over natural sand and gravel. Two undated features, one of which was a small ditch, were recorded at the west end of the MUGA.
Project dates	Start: 06-01-2017 End: 18-01-2018
Previous/future work	Yes / No
Associated project reference codes	ECC3941 – Site code 161668 – Planning Application No.
Type of project	Recording project
Site status	None
Current Land use	Other 14 - Recreational usage
Monument type	DITCH Post Medieval PIT Uncertain DITCH Uncertain
Investigation type	'"Part Excavation"', '"Watching Brief"'
Prompt	Direction from Local Planning Authority - PPS
Project location	
Country	England

Site location	ESSEX COLCHESTER COLCHESTER Philp Morant School and College, Rembrandt Way
Postcode	CO3 4QS
Study area	1.5 Hectares
Site coordinates	TL 9766 2431 51.881739014885 0.872227225713 51 52 54 N 000 52 20 E Point
Project creators	
Name of Organisation	Archaeology South-East
Project brief originator	Colchester Borough Council
Project design originator	Archaeology South-East
Project director/manager	Andy Leonard
Project supervisor	Trevor Ennis Kieron Heard
Type of sponsor	client
Project archives	
Physical Archive Exists?	No
Digital Archive recipient	Colchester and Ipswich Museums Service
Digital Archive ID	ECC3941
Digital Contents	"Ceramics", "Glass", "Metal", "Stratigraphic"
Digital Media available	"Images raster / digital photography", "Text"
Paper Archive recipient	Colchester and Ipswich Museums Service
Paper Archive ID	ECC3941
Paper Contents	"Ceramics", "Glass", "Metal", "Stratigraphic"
Paper Media available	"Context sheet", "Miscellaneous Material", "Photograph", "Plan", "Report", "Section"
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	Archaeological Monitoring: The Philip Morant School, Rembrandt Way, Colchester
Author(s)/Editor(s)	Ennis, T.
Other biblio. details	Rep No. 2017158
Date	2017
Issuer or publisher	ASE
Place of issue	Witham
Project bibliography 2	
Publication type	Grey literature (unpublished document/manuscript)
Title	Archaeological Monitoring: Multi-Use Games Area (MUGA), Philip Morant School and College, Rembrandt Way, Colchester

Author(s)/Editor(s)	Heard, K
Other biblio. details	ASE report no. 2017549
Date	2018
Issuer or publisher	Archaeology South-East
Place of issue	Witham
Entered by	Kieron Heard (k.heard@ucl.ac.uk)
Entered on	13 February 2018

Appendix 3: Written Scheme of Investigation

Archaeology South-East

ASE

Written Scheme of Investigation for Archaeological Mitigation Work at The Philip Morant School, Rembrandt Way, Colchester, CO3 4QS

NGR: TL 9766 2431

Planning Application No. 161668
Site Code: ECC 3941

ASE Project no: 170034

January 2017

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Written Scheme of Investigation for Archaeological Mitigation at The Philip Morant School, Rembrandt Way, Colchester, CO3 4QS

NGR: TL 9766 2431

Planning Application No. 161668
Site Code: ECC 3941

ASE Project no: 170034

January 2017

Prepared by:	Andy Leonard	Project Manager	
Reviewed and approved by:			
Date of Issue:	11th January 2017		
Revision 1:	12th January 2017		

1. INTRODUCTION

1.1 This Written Scheme of Investigation (WSI) has been prepared by Archaeology South-East (ASE) on behalf of PCH Associates for a programme of archaeological mitigation works at The Philip Morant School, Rembrandt Way, Colchester, CO3 4QS (Figure 1).

2. BACKGROUND

Site Description and Location

2.1 The site is centred at National Grid Reference TL 9766 2431. The site comprises a roughly triangular plot of land covering an area of c. 3.1ha within the grounds of The Philip Morant School. The eastern limit runs through the school buildings to an extant boundary with St Benedict's Catholic College which is situated to the north. The northern site limits run across the school playing fields. The north-west to south-east boundary runs along the Lexden Dyke.

Geology and Topography

2.2 The site comprises an area of playing fields and a (now disused) garden and is relatively level other than a line alongside the western edge of the site where the toe of the earthwork bank of the Lexden Dyke extends out into the playing fields.

2.3 The site is situated to the south of the River Colne on the south facing valley side at c.34-5AOD. The suburb of Shrub End lies on the higher ground to the south with the Gosbeck's Archaeological Park beyond it, c.1.5km to the south. Lexden lies to the north-west of the site and the walled town of Colchester to the east. The area is now largely characterised by the suburban development, although there are large areas of open space, in the form of parks and public open space; the routes of the dykes, surviving as physical monuments or as footpaths/routes, link these green areas.

2.4 According to the British Geological Survey (BGS) 1:50,000 scale geological mapping available online1 the superficial deposits across the site comprise those of the Lowestoft Formation (boulder clay). The bedrock geology is London Clay.

Planning Background

2.5 Planning permission has been granted by Colchester Borough Council for the construction of a two storey teaching block, an all weather sports pitch and amended car parking and access routes (planning ref. 161668).

2.6 A desk-based assessment was compiled in support of the planning application (ASE 2016). This document found that the site contained a schedule monument, Lexden Dyke, one of a series of earthworks around *Camulodunum*. A geophysical survey was also conducted, this did not find any evidence of archaeological features on the site (Stratascan 2016).

2.7 Having considered the desk-based assessment CBC prepared a Brief for an archaeological evaluation (CBC 2016), including the relevant planning condition:

"No works shall take place until the implementation of a programme of archaeological work has been secured, in accordance with a Written Scheme of Investigation that has been submitted to and approved, in writing, by the Local Planning Authority. The Scheme shall include an assessment of significance and research questions; and:

a. The programme and methodology of site investigation and recording.

b. The programme for post investigation assessment.

c. Provision to be made for analysis of the site investigation and recording.

d. Provision to be made for publication and dissemination of the analysis and records of the site investigation.

e. Provision to be made for archive deposition of the analysis and records of the site investigation.

f. Nomination of a competent person or persons/organisation to undertake the works.

The site investigation shall thereafter be completed prior to development, or in such other phased arrangement, as agreed, in writing, by the Local Planning Authority. The development shall not be occupied or brought into use until the site investigation and post investigation assessment has been completed in accordance with the programme set out in the Written Scheme of Investigation approved and the provision made for analysis, publication and dissemination of results and archive deposition has been secured.

Reason: To safeguard archaeological assets within the approved development boundary from impacts relating to any groundworks associated with the development scheme and to ensure the proper and timely investigation, recording, reporting and presentation of archaeological assets affected by this development in accordance with Policy SD1 and ENV1 of Colchester Borough Council's Core Strategy (2008)."

2.8 The evaluation identified archaeological remains thought to date to the post-medieval period. Having considered the evaluation report (ASE 2016b), CBC have required a phase of archaeological mitigation work to be undertaken in tandem with construction phase works.

2.9 This document is the Written Scheme of Investigation for the archaeological mitigation of the site. All work will be carried out in accordance with this document, the standards and guidance of the Chartered Institute for Archaeologists (CIfA 2014) and the Standards for Field Archaeology in the East of England (East Anglian Archaeol. Occ. Paper 14).

3.0 Historical and Archaeological Background

3.1 The following information has been taken from the Desk-Based Assessment (DBA) for the site (ASE 2016a) and the evaluation report (ASE 2016b).

Prehistoric

3.2 There are no references to known archaeological remains of prehistoric (Palaeolithic to Bronze Age) date on the site itself. Outside the site the known remains are limited to findspots:

- Bronze Palstave found in a hedge bank
- A Bronze Age Palstave of 'unusual form', found in a hedge bank
- Part of a Late Bronze Age leaf shaped spearhead
- Early to Late Bronze Age ceramic vessel identified during archaeological works at the Girls' School

3.3 The Iron Age is well represented and heritage assets of this date are recorded within both the site and surrounding area. These primarily relate to the dyke

system which developed between the Colne and Roman Rivers in the Late Iron Age. Comprising ditches, banks and perhaps palisades these expansive earthworks gradually developed to create a defended perimeter incorporating fields, water, marsh and forest (ECC 2009, 19). Some 6km of the estimated 25km of dykes survive as extant earthworks, the majority of which are scheduled monuments. The routes of others have been identified through archaeological excavation. There has been considerable archaeological interest in the dykes and a number of excavations have taken place. The results of this work are rounded up in *Camulodunum 2* (Hawkes and Crummy 1995). Enclosed within the dyke system is *Camulodunum*, one of the largest and best known examples of a late Iron Age *oppidum*. *Camulodunum* covered an area of some 25 sq km between the Colne and Roman Rivers, and was probably established in the 1st century BC (Crummy 1997). The interior is thought to have been largely agricultural, with small scattered occupation sites. There are, however, two larger known foci; an extensive farmstead at Gosbecks and an industrial area at Sheepen.

3.4 The earliest of the dykes protecting the *oppidum* was the Heath Farm Dyke, constructed between c. 50-25BC and ran for some 2km. The northernmost section of the dyke is likely to cross the site, although its precise route is not known. The HER/UAD show it crossing the southern part of the site, close to the extant school, but Hawkes and Crummy (1995) place it further to the north. The latter is perhaps the most likely route as it links the earthworks recorded both at Prettygate Junction and in archaeological excavations to the north-east. Little of the Heath Farm Dyke survives as a visible earthwork, but has been recorded in the past as comprising an earthwork bank and ditch, each of which was 10m wide. Investigations at Shrub End showed the ditch to be 2.4m deep at that point. It has however been noted that the profiles of the ditch vary in profile shape (Hawkes and Crummy 1995, 33). This dyke disregards the Lexden Tumulus.

3.5 The Lexden Tumulus, situated 200m to the north of the site, is of Iron Age date and constructed in the time of king Addedomaros, c. 15-10 BC. It is thought it may be his tomb. This monument is situated within an earlier urnfield, which resumed or continued into the Roman period.

3.6 The Lexden Dyke is situated to the west of this urnfield and represents an addition to the dyke system in the final years of the 1st century BC. It defended a larger area than Gosbecks itself, incorporating the Colne Valley (Hawkes and Crummy 1995, 54). An extensive length of this substantial dyke survives and runs along the western boundary of the site and extends into it. It comprises a 19m wide bank, which extends partially into the school grounds, and a partly infilled ditch which is c. 14m wide and 1.5m deep.

3.7 Additional dykes were constructed to protect the industrial area and settlement at Sheepen. Other pre-Roman dykes include Grymes Dyke, Shrub End Dyke and Dugard Dyke, Kidmans Dyke, Olivers Dyke and Layer Dyke.

3.8 By the time of the accession of Cunobelin, in c. 5AD, *Camulodunum* had become the most important settlement in Britain and Cunobelin had subjugated large areas of southern and eastern Britain. He died in c.40AD and his sons continued to expand their power base.

3.9 Prettygate Dyke joins the southern end of Lexden Dyke (Middle) and is thought to have been constructed at a later date than the Lexden dyke. Its dating is not well defined but is most likely to be of Late Iron Age or early Roman date, c. 5AD-49AD.

Roman

3.10 Whilst there are no known Romano-British remains from the site there are a number recorded in the general vicinity. Camulodunum was a significant objective for the Roman Invasion campaign in 43AD and fell to the emperor Claudius. The army is likely to have been housed in a large temporary camp whilst more permanent sites were established at Gosbecks and a legionary fortress within what is now the town centre. Following the relocation of the legions the fortress became a Colonia. It was destroyed during the Boudican Revolt of 60AD but was re-established as a walled town. During the Roman period additional earthwork dykes were constructed around Camulodunum and existing earthworks modified – for example, the Prettygate dyke was lowered, perhaps to be used as a road (Hawkes and Crummy 1995, 48). A number of Roman roads have also been recorded elsewhere.

3.11 The site lay outside the foci of settlements in the Roman period but a number of archaeological remains of this date have been recorded within the area, generally distributed to the north and east. A number of burials have been recorded in the area, although the locations and numbers involved are poorly described in the archaeological record. Pits and parts of the 'Triple Dyke' have also been recorded in the vicinity of Norman Way/Park Road. Roman burials also continued in the Iron Age burial zone at Lexden.

3.12 To the east of the site, evidence of a road from Gosbecks, a temple, and enclosure were recorded. A pottery kiln was recorded at Fitzwalter Road. Ditches which may perhaps be part of an early Roman enclosure have been recorded to the north of the site. These may represent the remains of an unfinished fort (Hawkes and Crummy 1995,125). Additional Roman ditches have also been recorded in the vicinity of the northern end of Heath Farm Dyke.

Anglo-Saxon and Medieval

3.13 In contrast to the Late Iron Age and Roman periods there is no activity of Anglo-Saxon or medieval period on the site itself or indeed within the wider area. This may in part reflect the foci of the previous archaeological investigations - that is the various earthwork monuments of the *oppidium*. It could also reflect the fact that the site lies away from the main settled areas in this period.

3.14 Within the borough, the HEC (ECC 2009) notes that early Saxon evidence is sparse. The medieval landscape is likely to have been one of dispersed settlement of hamlets and farms, with focal points at church/hall complexes, commons and greens. Thus the site is perhaps most likely to have been situated within a rural landscape away from the centres of settlement at Lexden and Colchester.

3.15 Evidence for the occupation of Colchester during the Saxon period is provided by documentary sources as well as archaeological evidence from within and surrounding the town or *burg*. The Anglo-Saxon town developed within the ruins of the Roman one, but archaeological evidence suggests there was little or no continuity between them. Excavations and finds indicate scattered early

and middle Anglo-Saxon settlement within the Roman town walls (Crummy 1997). The layout of the Roman town was altered during the Saxon period, by blocking the Balkerne gate to make a stronghold and diverting the road from London to enter the town at the south-west gate. The site lay within the parish of St Mary at the Walls (part of the Liberty of Colchester) close to its border with Lexden Parish.

3.16 The strategic value of Colchester was recognised by the Normans, who constructed Colchester Castle (now the museum) on the site of the principal Roman temple. There is also archaeological evidence for re-use of Roman structures. By the 12th century the town was expanding beyond the walled town, particularly to the south. A suburb also developed around the Old Hythe (port). There were also lesser suburbs around the main bridges. By the 13th century, the town had begun to have a role in cloth making, a role which developed through subsequent centuries, particularly following the immigration of Flemish weavers in the late 14th century. There were already fullers operating in the town in the 12th century and the area around Colchester became a focus for the building of mills either partially or wholly used for fulling. The adjacent parish of Lexden is recorded in the Domesday Book and grew up around the church and springs, and gradually along the London to Colchester Road. Other small settlements were located at Shrub End and Bottle End.

3.17 By c.1500, settlement in Colchester extended well beyond the town walls in ribbon developments along the major roads. However, much of the area was still largely agricultural. The nearest major road to the site would have been Lexden Road, situated to the north.

3.18 At the start of the Civil War in 1642 the town defences were improved, ramparts being built behind lost or weakened sections of the town wall. During the Second Civil War (1648-9), temporary siege works and fortifications were constructed by the Parliamentarian troops surrounding the Royalist force within the walled town during the 1648 siege. The forts on the south and west sides of the town were joined by a continuous trench three miles long while forts to the north and east guarded the river crossings.

3.19 By 1835 Colchester was primarily a market town for the surrounding agricultural area. In the Victorian period, and up until the 1980's, the livestock market was held within the town walls. Residential and industrial development was modest. The site however lay in an area which remained agricultural in character. In the mid-19th century the tithe maps record the site as being within two fields; 10 Acres and Part of Rainbow field. Both were under arable cultivation, owned by George Henry Errington and farmed by himself and William Griffin respectively. The boundary between the two fields may represent the route of the Heath Farm Dyke. Reference to subsequent historic mapping, discussed in more detail in section 5.0 below, shows no changes on the site through much of the 19th and early 20th centuries. In the wider area the gradual expansion of Colchester can be seen.

3.20 In 1963 the Philip Morant School was established in Colchester town on East Hill but soon outgrew the premises. In 1965 a new school was built on the current site to serve 450 pupils. This had extended to 750 in 1971 when it became a comprehensive school and further expanded. It became a technology college in 1993, and a sixth form was added in 1996. The school became an academy in 2011.

Previous Work

3.21 A detailed gradiometry survey was undertaken in 2016 (Stratascan 2016) on the site. The survey did not identify any anomalies of archaeological origin suggesting the site had a recent agricultural past. A band of ‘quiet’ data runs to the north of the field boundary, along the potential route of Heath Farm Dyke. The majority of the anomalies are modern in origin, relating to scattered magnetic debris, ferrous objects, and magnetic disturbance from nearby buildings.

3.22 The archaeological evaluation comprised the excavation of seven trenches across the site. Archaeological features were recorded in four trenches, comprising two pits, a ditch terminus and a very large feature which may have been linear or a quarry pit. The features may all be post-medieval.

4 FIELDWORK AIMS AND RESEARCH OBJECTIVES

Fieldwork Aims

4.1 The general aims of the evaluation are:

- Identify the date, approximate form and purpose of any archaeological deposit, together with its likely extent, localised depth and quality of preservation.
- Evaluate the likely impact of past land uses, and the possible presence of masking colluvial/alluvial deposits.
- Establish the potential for the survival of environmental evidence.
- Provide sufficient information to construct an archaeological conservation strategy, dealing with preservation, the recording of archaeological deposits, working practices, timetables and cost.
- Identify any remains for the Dyke or associated features that may have fallen between the archaeological evaluation trenches
- Further define the dating and function of those features identified during the evaluation. Are there associated features that may shed light on the purpose of these features?

5 METHODOLOGY

Requirements

5.1 A site code has been obtained from Colchester Borough Council (**ECC 3941**) and will be retained as the unique site identifier for the entire project archive.

5.2 The mitigation work will comprise two phases; archaeological strip, map and sample during ground reduction for the new car park and access road (Figure 2) and archaeological watching brief during discrete excavations for (but not limited to) foundation trenches, soakaways, service runs, floodlight bases and any excavations associated with the MUGA (Figure 3). Depending on the depth of the general reduce-dig for the MUGA (i.e. if excavations will reduce the area to within c. 250mm of the natural geology) the MUGA area will also be subject to Strip, Map and Sample.

5.3 In the event that important archaeological remains are identified a site meeting will be held with the client and Colchester Borough Council monitoring officer.

Standards

5.4 ASE will adhere to the CIfA Standard and Guidance for archaeological field evaluation, and Code of Conduct (CIfA 2014a & 2014b), and the Standards for Field Archaeology in the East of England (Gurney 2003) throughout the project. ASE is a Registered Organisation with the CIfA.

Machining

5.5 Machining will be carried out to ASE standards under the supervision of an experienced archaeologist. The removal of modern overburden and topsoil will be performed by a tracked excavator equipped with a toothless bucket where practicable during the watching brief. The strip, map and sample areas must be excavated by toothless bucket. Machine-excavation will stop at the uppermost archaeological surface, or the natural clay, whichever is encountered first, and will create a clean and level surface for further excavation and recording by hand, if necessary.

5.6 Any spoil heaps generated will be visually scanned and checked with a metal detector.

5.7 Where no archaeological remains are encountered the monitoring archaeologist will signal to the contractor that they may proceed with further construction related works in that area. In the event that archaeological remains are present time will be allowed for the archaeologist to make a rapid record of the remains (comprising a photographic, written and drawn record). Should significant archaeological remains be encountered (whether by volume or quality) ASE project management should be informed immediately and a site meeting convened with the Client and the CBC archaeologist to determine a suitable strategy for dealing with the remains.

Excavation and Recording

5.8 All exposed archaeological features and deposits will be recorded and excavated, except obviously modern features and disturbances.

5.9 Standard ASE methodologies will be employed. All stratigraphy will be recorded using the ASE context recording system.

5.10 An overall plan related to the site grid and tied in to the Ordnance Survey National Grid will be drawn in addition to individual plans showing areas of archaeological interest. All features revealed will be planned.

5.11 Site plans will be at 1:20 unless circumstances dictate otherwise. Plans at other scales will be drawn if appropriate (e.g. cremation burials at 1:10). Sections will be drawn at 1:10.

5.12 Datum levels will be taken where appropriate. Sufficient levels will be taken to ensure that the relative height of the archaeological/subsoil horizon can be extrapolated across the whole of the development area.

5.13 Archaeological features and deposits will be excavated using hand tools, unless they cannot be accessed safety or unless a machine-excavated trench is the only practical method of excavation. Any machine-excavation of archaeologically significant features will be agreed with the Colchester Borough Council monitoring officer in advance.

5.14 With the exception of modern disturbances, normally a minimum 50% of all contained features will be excavated. Modern disturbances will only be excavated as necessary in order to properly define and evaluate any features that they may cut. Normally 10% (or at least a 1m-long segment) of non-structural linear features will be excavated. At least 50% of linear features with a possible structural function (e.g. beam slots) will normally be excavated. Details of the precise excavation strategy and any alterations to it will be discussed with the monitoring officer if particularly significant archaeology is revealed as a result of topsoil stripping. Further discussion and agreement on the approach to the excavation of complex areas may be requested during the project.

5.15 All articulated human remains, graves and cremation vessels/deposits will receive minimal excavation to define their extent and establish whether they are burials or not. Generally, all graves and cremation burials will be recorded and their positions noted without full excavation, only surface cleaning. A

decision would then be made on future treatment of the human remains in consultation with the client/ their agent and the Colchester Borough Council monitoring officer, and the coroner would be informed. Graves and cremation burials would only be excavated in exceptional circumstances and only with the necessary licence from the Ministry of Justice.

5.16 A full photographic record comprising colour digital images will be made. The photographic record will aim to provide an overview of the excavation and the surrounding area. A representative sample of individual feature shots and sections will be taken, in addition to working shots and elements of interest (individual features and group shots). The photographic register will include: film number, shot number, location of shot, direction of shot and a brief description of the subject photographed.

Finds/Environmental Remains

5.17 In general, all finds from all features will be collected. Where large quantities of post-medieval and later finds are present and the feature is not of intrinsic or group interest, a sample of the finds assemblage wills normally collected sufficient to date and characterise the feature.

5.18 Finds will be identified, by context number, to a specific deposit or, in the case of topsoil finds, to a specific area of the site.

5.19 All finds will be properly processed according to ASE guidelines and the CIfA Standard and guidance for the collection, documentation, conservation and research of archaeological materials (2014c). All pottery and other finds, where appropriate, will be marked with the site code and context number.

5.20 If appropriate, environmental samples will be taken from well-stratified, datable deposits that are deemed to have potential for the preservation/survival of ecofactual material. Bulk soil samples (minimum 40 litres or 50% of context) will be taken for wet sieving and flotation, and for finds recovery. ASE's environmental consultant is Karine Le Hegarat (ASE) and, if necessary, the Historic England regional scientific advisor will be consulted. In all instances deposits with clear intrusive material shall be avoided.

5.21 In addition to retrieving environmental evidence, bulk sampling will be used to collect charcoal for potential C14 dating.

5.22 Any finds believed to fall potentially within the statutory definition of Treasure, as defined by the Treasure Act 1996, amended 2003, shall be reported to the Essex County Council Finds Liaison Officer, the client and the Colchester Borough Council monitoring officer. Should the find's status as potential treasure be confirmed the Coroner will also be informed. A record shall be provided to all parties of the date and circumstances of discovery, the identity of the finder, and the exact location of the find(s) (OS map reference to within 1 metre, and find spot(s) marked onto the site plan).

5.23 See above and Section 8 for information regarding specialist consultants

6.0 PRESENTATION OF RESULTS

Evaluation Report

6.1 Within 4 weeks of the completion of fieldwork a report will be produced containing the following information:

- SUMMARY: A concise non-technical summary
- INTRODUCTION: General introduction to project including reasons for work and funding, planning background.
- BACKGROUND: to include geology, topography, current site usage/description, and what is known of the history and archaeology of the surrounding area.
- AIMS AND OBJECTIVES: Summary of aims and objectives of the project
- METHOD: Methodology used to carry out the work.
- FIELDWORK RESULTS: Detailed description of results. In addition to archaeological results, the depth of the archaeological horizon and/or subsoil across the site will be described. The nature, location, extent, date, significance and quality of any archaeological remains will be described.
- SPECIALIST REPORTS: Summary descriptions of artefactual and ecofactual remains recovered. Brief discussion of intrinsic value of assemblages and their more specific value to the understanding of the site.

- DISCUSSION AND CONCLUSIONS: Overview to include assessment of value and significance of the archaeological deposits and artefacts, and consideration of the site in its wider context.
- APPENDICES: Context descriptions, finds catalogues, contents of archive and deposition details, HER summary sheet.
- FIGURES: to include a location plan of the archaeological works in relation to the proposed development (at an Ordnance Survey scale), specific plans of areas of archaeological interest (at 1:50), a section drawing to show present ground level and depth of deposits, section drawings of relevant features (at 1:20). Colour photographs of the more significant archaeological features and general views of the site will be included where appropriate.

6.2 In addition to copies of the report supplied to the client, a digital copy of the report will be supplied to the Colchester Borough Council monitoring officer for planning purposes and inclusion in the Essex Historic Environment Record.

6.3 Copies of the report will also be submitted to the recipient museum as part of the project archive.

6.4 A form will be completed for the Online Access to Index of Archaeological Investigations (OASIS) at http://ads.ahds.ac.uk/project/oasis/ in accordance with the guidelines provided by English Heritage and the Archaeological Data Service.

Publication

6.5 Publication will be by a report produced within four weeks of the completion of fieldwork, or six months should significant remains be present. Subject to a timescale to be approved by the Client a summary report will also be submitted for publication in the annual fieldwork round-up in *Essex Archaeology and History*. In the event that no further works are planned and exceptional archaeological remains are found which warrant publication in

their own right a separate note on these will be produced to a timetable to be agreed with Colchester Borough Council.

Archive

6.6 Guidelines contained in the CIfA Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (2014d) will be followed for the preparation of the archive for museum deposition.

6.7 Finds from the archaeological fieldwork will be kept with the archival material.

6.8 Subject to agreement with the legal landowner ASE will arrange with the receiving museum for the deposition of the archive and artefact collection. Any items requiring treatment will be conserved. The landowner will be asked to donate the finds to the local museum.

7 HEALTH AND SAFETY

Site Risk Assessment and Safety Measures

7.1 ASE's Risk Assessment and Method Statement (RAMS) system covers most aspects of excavation work and ensures that for most sites the risks are adequately controlled. Prior to and during fieldwork sites are subject to an ongoing assessment of risk. Site-specific risk assessments are kept under review and amended whenever circumstances change which materially affect the level of risk. Where significant risks have been identified in work to be carried out by ASE a written generic assessment will be made available to those affected by the work. A copy of the Risk Assessment is kept on site.

Site risk assessment and safety measures

7.2 An initial appraisal of risk suggests that adherence to ASE's RAMS system should adequately control identified risk. Assessment of risk is an ongoing process and should circumstances demand additional risk assessments will be carried out prior to and during archaeological work.

7.3 ASE staff will liaise with the client and/ or their agent and will follow any additional Health and Safety instructions that are given/agreed.

8 RESOURCES AND PROGRAMMING

Staffing and Equipment

8.1 The archaeological works will be undertaken by a professional team of archaeologists, comprising an Archaeologist with support from Assistant Archaeologists and a surveyor as required.

8.2 The Archaeologist for the project will be determined once the programme has been agreed and will be responsible for fieldwork, post-excavation reporting and archiving in liaison with the relevant specialists. The project will be managed by Andy Leonard (project manager, fieldwork) and Mark Atkinson (project manager, post-excavation).

8.3 The Colchester Borough Council monitoring officer will be notified of the Senior Archaeologist assigned to the project prior to start of works and should any subsequent change of personnel occur. CVs of all key staff are available on request.

8.4 Specialists who may be consulted are listed in Appendix 1.

8.5 Other specialists may be consulted if necessary. These will be made known to the monitoring office for approval prior to consultation. Similarly, any changes in the specialist list will be made known to the monitoring office for approval prior to consultation.

8.6 Specialists who may be consulted are:

Prehistoric and Roman pottery Louise Rayner & Anna Doherty (ASE)
Prehistoric Nick Lavender (external: Essex region)
Post-Roman pottery Luke Barber (external: Sussex, Kent and London)
Post-Roman pottery (Essex) Helen Walker (external: Essex)
CBM Sue Pringle & Luke Barber (external)
Fired Clay Elke Raemen & Trista Clifford (ASE)
Clay Tobacco Pipe Elke Raemen (ASE)
Glass Elke Raemen (ASE)
Slag Luke Barber, Lynne Keyes (external); Trista Clifford (ASE)
Metalwork Trista Clifford (ASE)

Worked Flint Karine Le Hégarat (ASE); Hugo Anderson-Whymark (external)
Geological material and worked stone Luke Barber (external)
Human bone incl cremated bone Lucy Sibun (ASE)
Animal bone incl fish Gemma Ayton (ASE)
Marine shell Elke Raemen (ASE); David Dunkin (external)
Registered Finds Elke Raemen & Trista Clifford (ASE)
Coins Trista Clifford (ASE)
Treasure administration Trista Clifford (ASE)
Conservation and x-ray Fishbourne Roman Villa or UCL Institute of Archaeology
Geoarchaeology Dr Matt Pope & Liz Chambers (ASE)
Geoarchaeology (incl wetland environments) Kristina Krawiec (ASE)
Macro-plant remains Dr Lucy Allott & Karine Le Hégarat (ASE)
Charcoal & Waterlogged wood Dr Lucy Allott (ASE).

8.7 Other specialists may be consulted if necessary. These will be made known to the monitoring office for approval prior to consultation. Similarly, any changes in the specialist list will be made known to the monitoring office for approval prior to consultation.

9 MONITORING

9.1 The Colchester Borough Council monitoring officer will be responsible for monitoring progress and standards on behalf of the LPA throughout the project.

9.2 Any variations to the specification will be agreed with the client and the Colchester Borough Council monitoring officer prior to being carried out.

9.3 The Colchester Borough Council monitoring officer will be kept informed of progress by the client throughout the project and will be contacted in the event that significant archaeological features are discovered.

10 Insurance

10.1 Archaeology South-East is insured against claims for: public liability to the value of £50,000,000 any one occurrence and in the aggregate for products liability; professional indemnity to the value of £15,000,000 any one occurrence; employer's liability to the value of £50,000,000 each and every loss.

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CIfA	2014c	*Standard and guidance for the collection, documentation, conservation and research of archaeological materials. Chartered Institute for Archaeologists*
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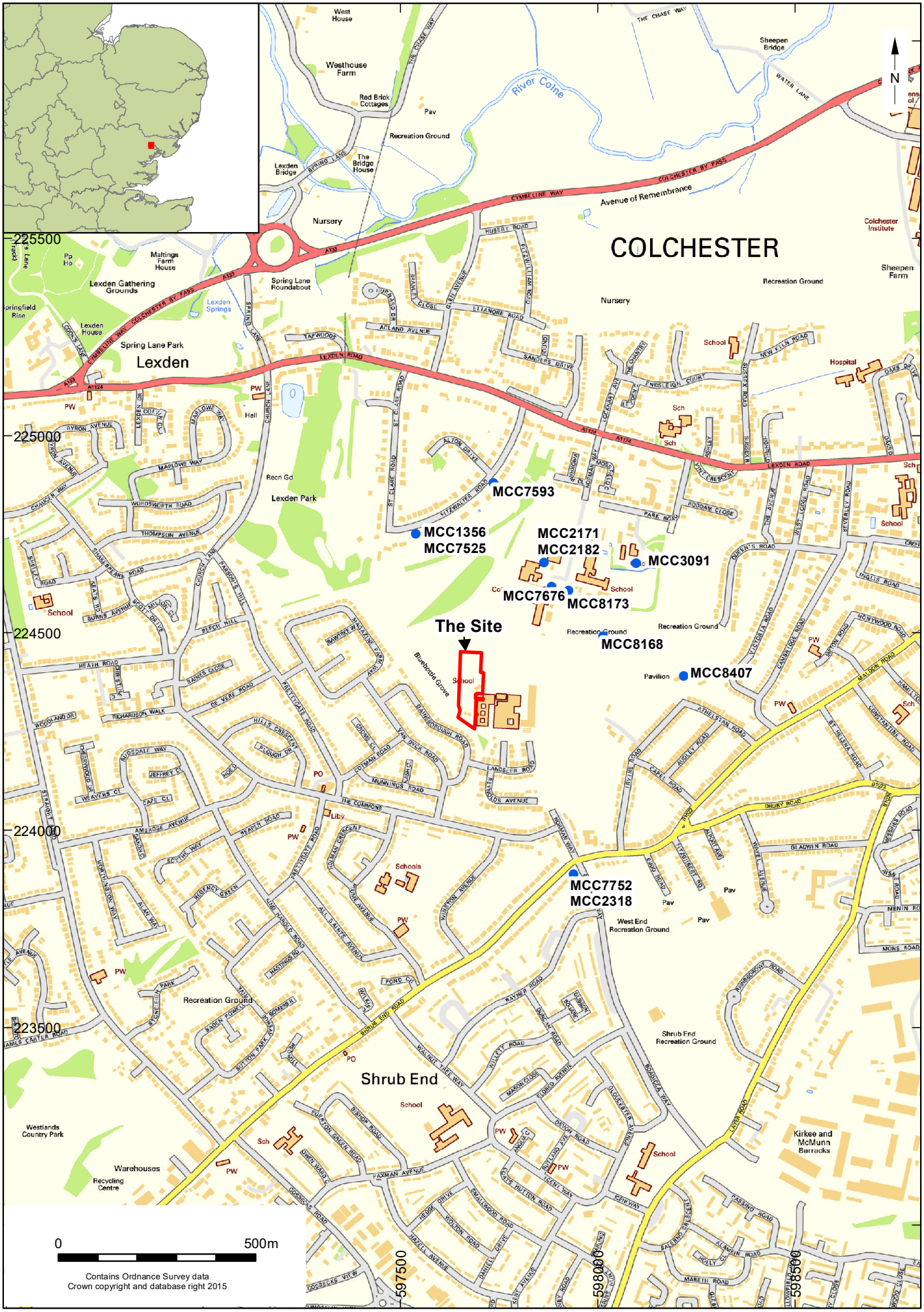
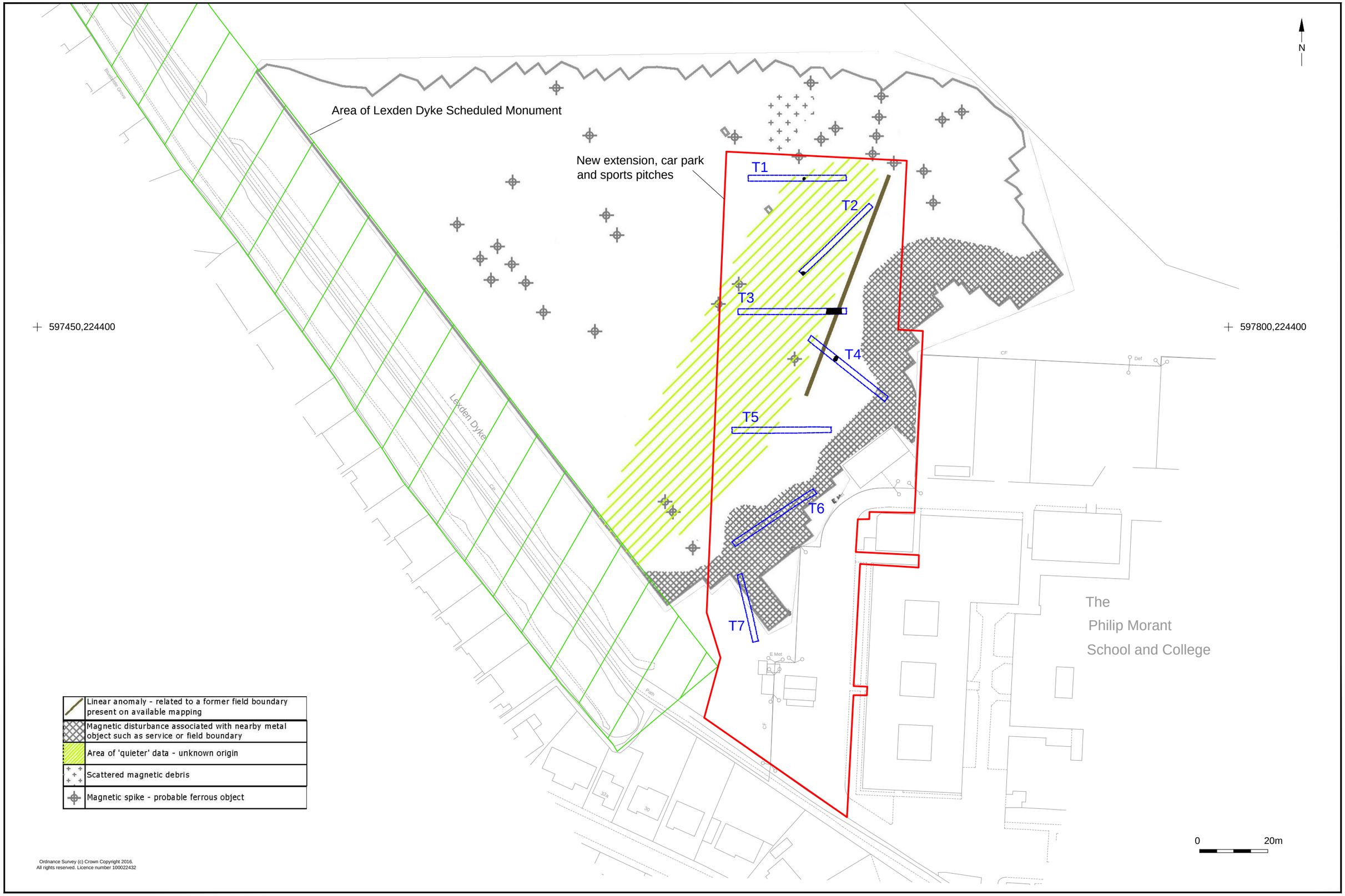
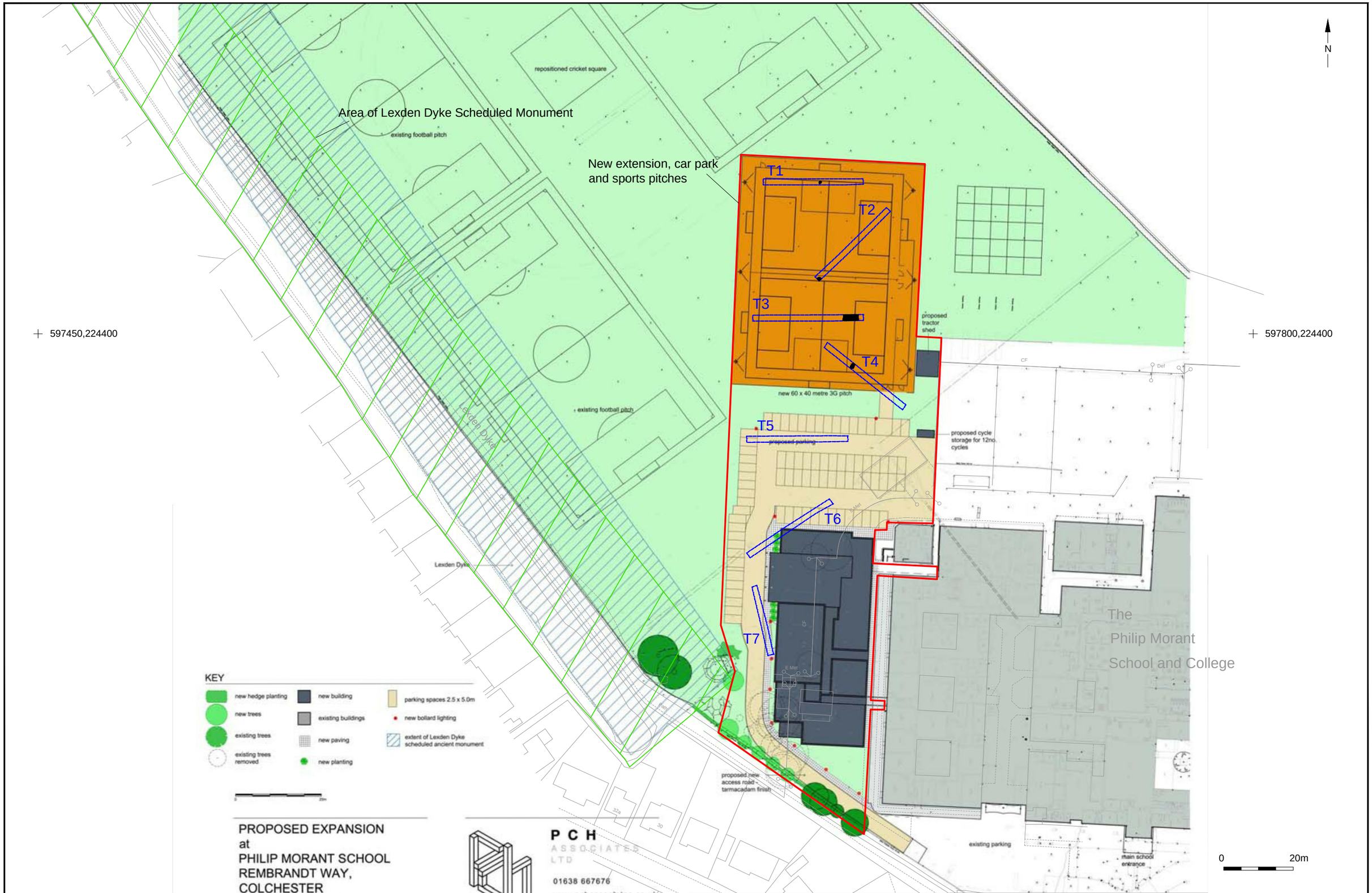


© Archaeology South-East		The Philip Morant School & College, Colchester	Fig. 1
Project Ref: 160988	Jan 2017	Site location and other local sites and find spots	
Report No: 2016485	Drawn by: APL		

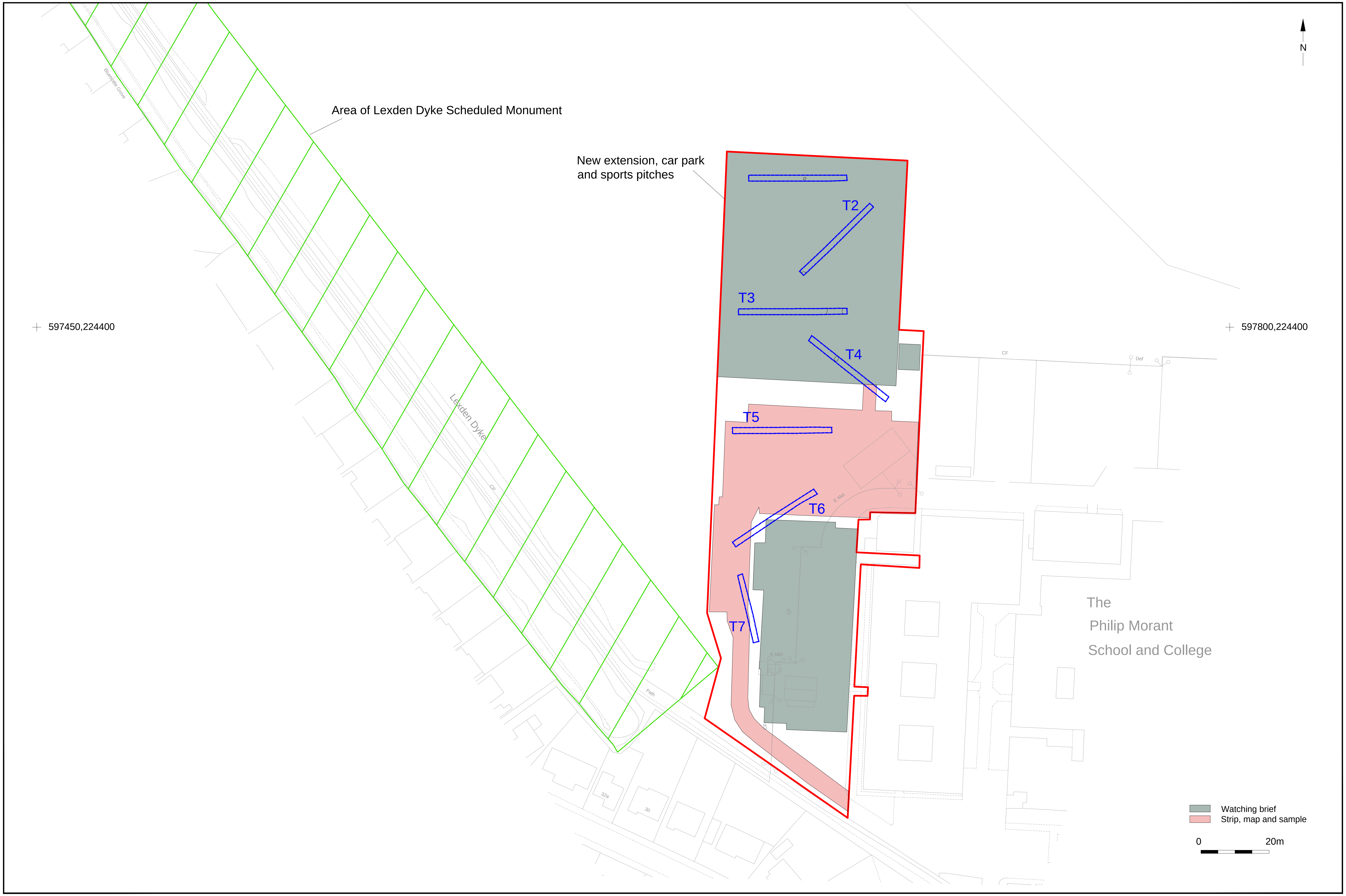


	Linear anomaly - related to a former field boundary present on available mapping
	Magnetic disturbance associated with nearby metal object such as service or field boundary
	Area of 'quieter' data - unknown origin
	Scattered magnetic debris
	Magnetic spike - probable ferrous object

© **Archaeology South-East**		The Philip Morant School and College, Colchester	Fig. 2
Project Ref: 170034	Jan 2017	Trench locations in relation to the Scheduled Monument and geophysical survey	
Report Ref:	Drawn by: APL		



© Archaeology South-East		The Philip Morant School and College, Colchester	Fig. 3
Project Ref: 170034	Jan 2017	Proposed development	
Report Ref:	Drawn by: APL		



© Archaeology South-East		The Philip Morant School and College, Colchester	Fig. 4
Project Ref: 170034	Jan 2017	Location of proposed SMS and watching brief areas	
Report Ref:	Drawn by: APL		

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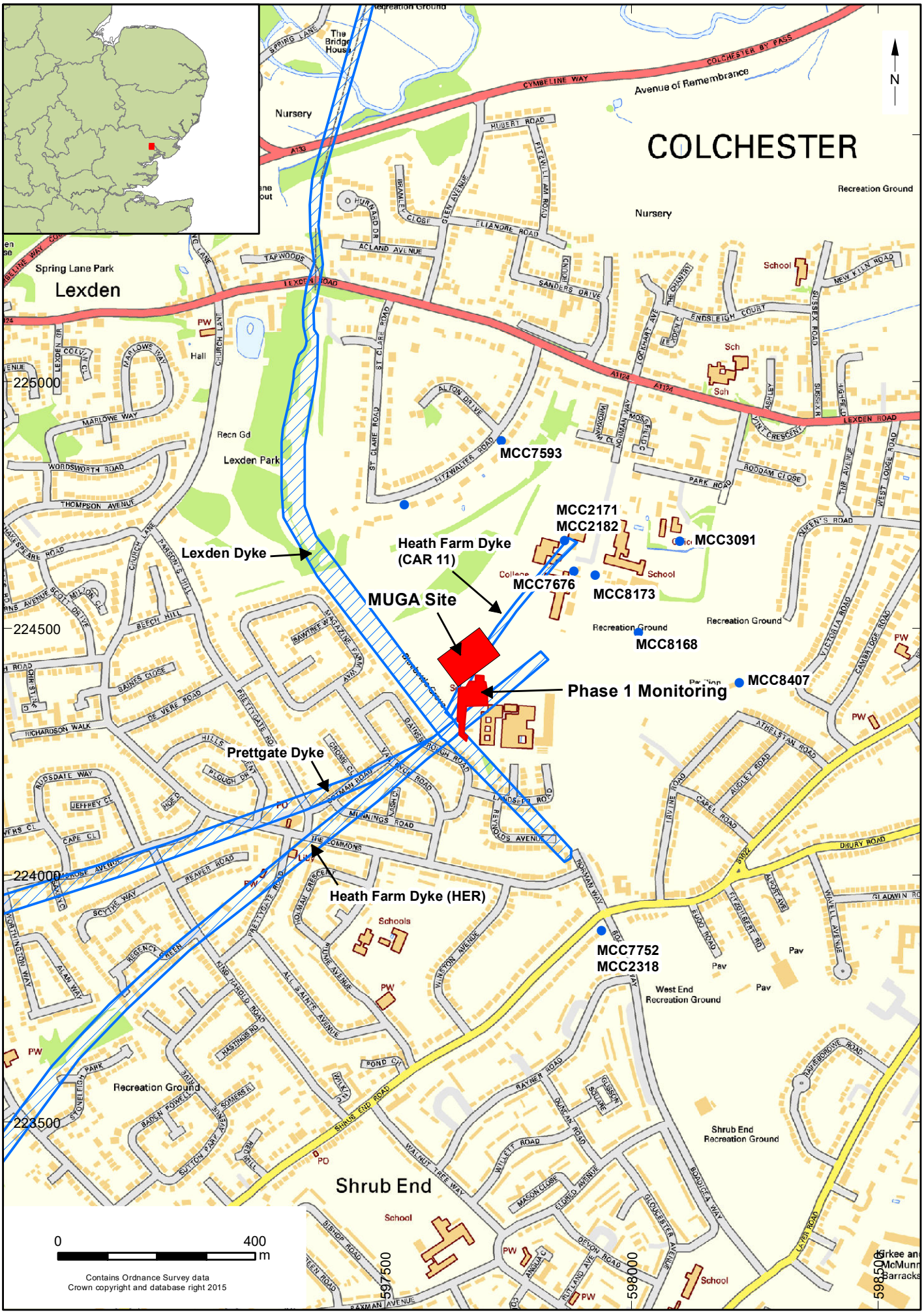
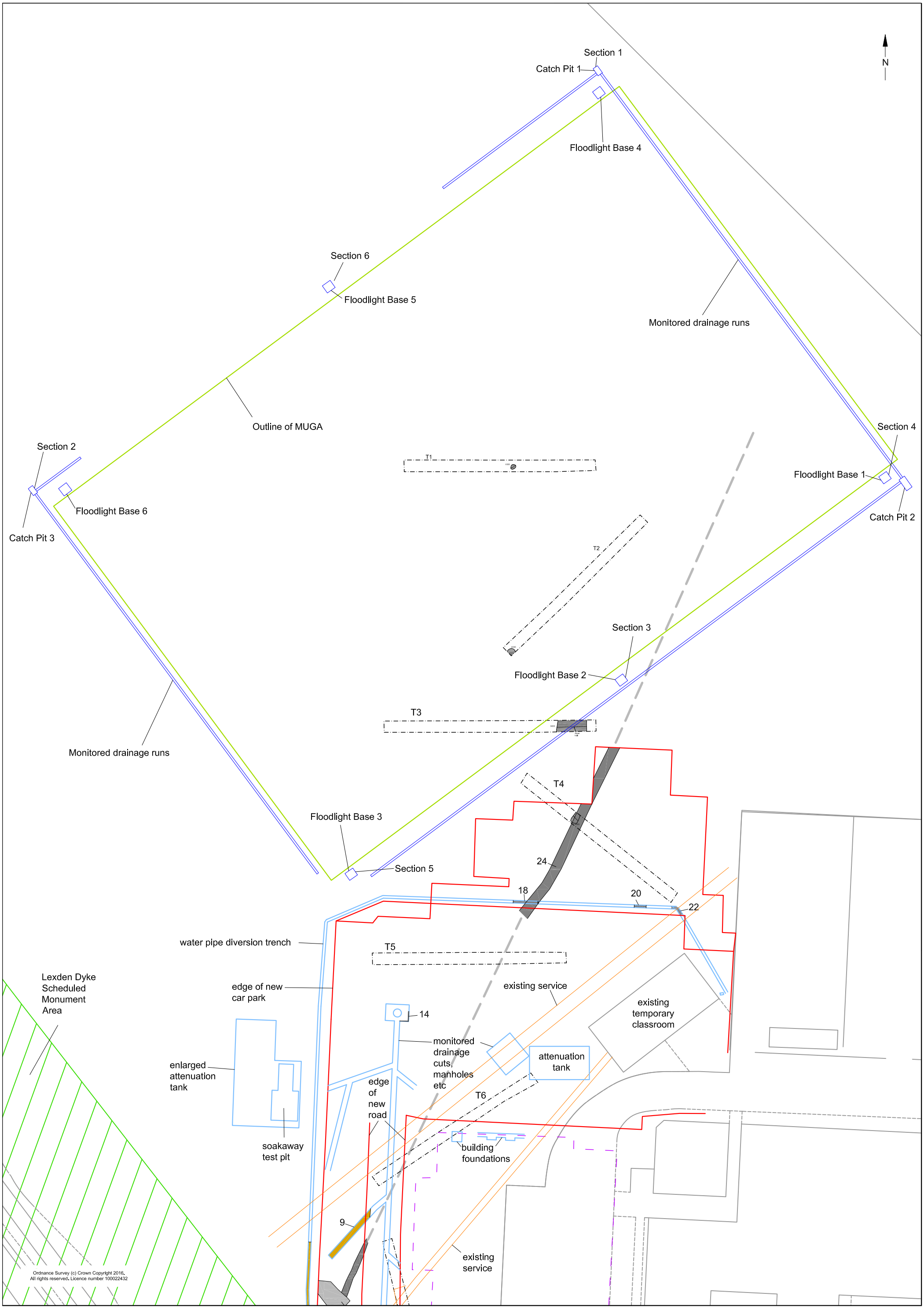
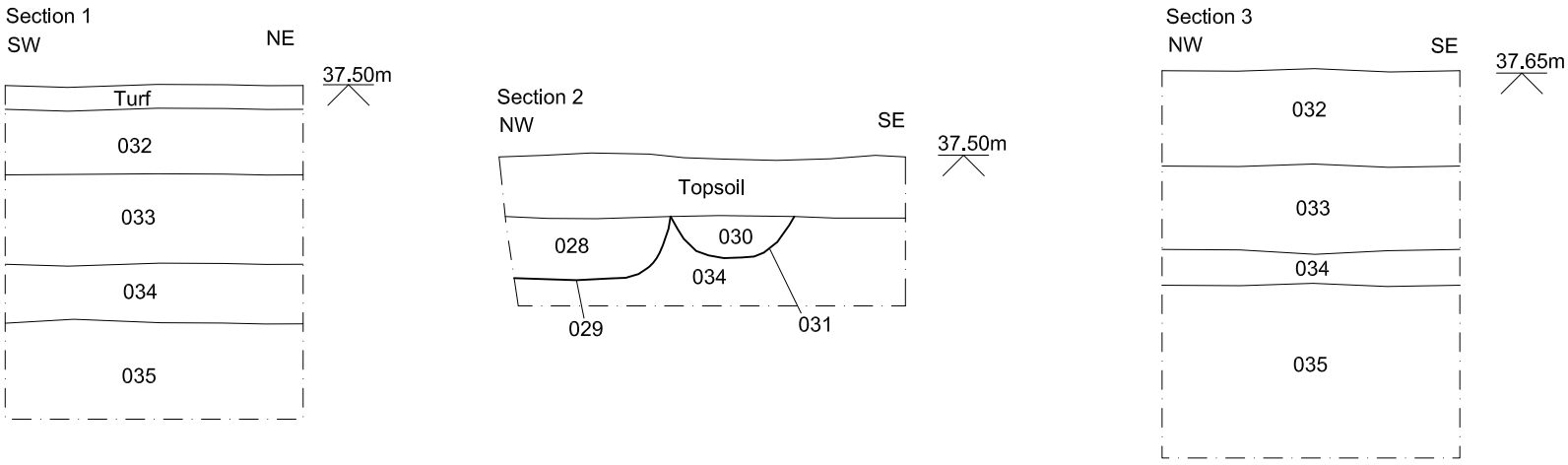
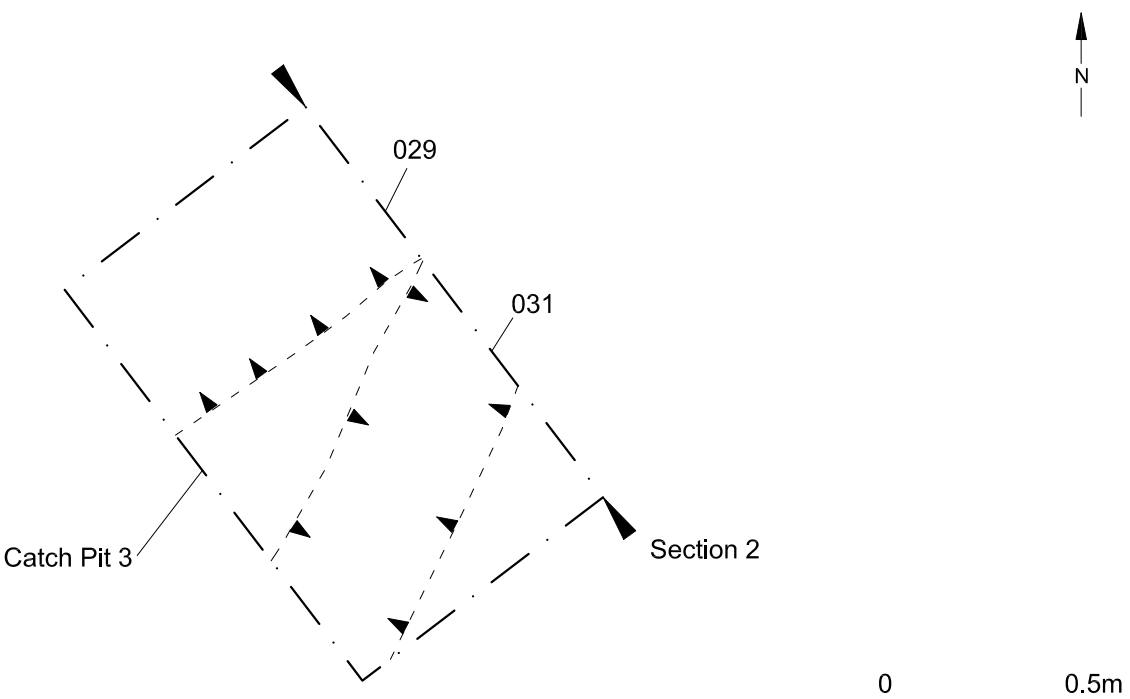


© Archaeology South-East		The Philip Morant School & College, Colchester	Fig. 1
Project Ref: 170034	Feb 2018	Site location and other local sites and find spots	
Report No: 2017549	Drawn by: APL		



© Archaeology South-East		The Philip Morant School and College, Colchester	Fig. 2
Project Ref: 170034	Feb 2018	Plan of the MUGA, showing monitored areas, with previous archaeological work	
Report Ref: 2017549	Drawn by: APL		





© **Archaeology South-East**		The Philip Morant School and College, Colchester	Fig.3
Project Ref: 170034	Feb 2018	Sections 1 - 6 and plan of Catch Pit 3	
Report Ref: 2017549	Drawn by: APL		

Topsoil stripping in progress

Catch Pit 3 / settling tank

General view of the NE drainage trench

Features 029 (left) and 031, in Catch Pit 3

Typical section through the SW drainage trench

Construction pit for Floodlight Base 3

© **Archaeology South-East**		The Philip Morant School and College, Colchester	Fig.4
Project Ref: 170034	Feb 2018	Selected photographs	
Report Ref: 2017549	Drawn by: APL		

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