

CHAPTER 17 – APPENDICES

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Appendix 17.1: Gazetteer of Cultural Heritage Features

Gazetteer of Cultural Heritage Features

Source Abbreviations Key

GLHER = Greater London Historic Environment Record.

NMR: National Monuments Record as held by Historic England (formerly English Heritage)

GLHER sites are divided into Monument nos (*MLO*) and Event nos (*ELO*).

OA Ref. No	Feature Type	Description	Source.
OA 1	Landfill Site	Site of landfill taken from British Geological Survey data supplied to the Environment Agency. It is not known whether this site was made or worked land, and the date of infill is unknown, although all of are 19th/20th century date.	GLHER: MLO72665
OA 2	Archaeological Event	An archaeological evaluation was carried out on the site of the former Old Swan Public House, Battersea Church Road, by the Museum of London Archaeology Service in 1993. Natural sand with silt and clay bands was cut by post medieval pits (MLO66405) and the wall foundations of the earlier public house (MLO664046).	GLHER:ELO11296 MLO66403, 66405, 66406

OA Ref. No	Feature Type	Description	Source.
OA 3	Archaeological Event	Evaluation by H. Jones for Museum of London Archaeology Service, July-Aug 1992; site code SMM92. A post-mediaeval ditch (MLO36070) possibly a field boundary, was recorded. Three others of unknown date were also recorded (MLO63071), as well as three dating from the mid Bronze Age (MLO63067). Late Bronze Age pottery (MLO63068) and a Neolithic arrowhead (MLO63069) were also recovered during the investigation.	GLHER:ELO4565 MLO63067-71
OA 4	Archaeological Event	An archaeological evaluation was carried out by the Museum of London Archaeology Service at South Middlesex Hospital in 1992. Residual struck prehistoric flints (MLO63062) and Roman (MLO63063) and medieval (MLO63064) pottery were recovered. Plough marks (MLO63065) and bedding trenches (MLO 63066) dating to the 18th/19th c were found.	GLHER:ELO4571 MLO63062-6
OA 5	Landfill Site	Site of landfill taken from British Geological Survey data supplied to the Environment Agency. It is not known whether this site was made or worked land, and the date of infill is unknown, although all of are 19th/20th century date.	GLHER:MLO72666
OA 6	Historic Site	Medieval moated site mentioned by Copley in the monograph ; Copley GJ, Archaeology Of South East England, 1958.	GLHER:MLO19033
OA 7	Archaeological Findspot	Evaluation undertaken by S Ford for TVAS, July1995; site code KLR95. Archaeological evaluation at Kneller Gardens, Whitton, Hounslow. Investigations recorded a prehistoric flint spall (MLO64015), two medieval pot sherds that were recovered from a post-medieval feature and one sherd from the spoilheap. (MLO64016), a shallow gully or garden feature was of post-medieval date (MLO64017) and an undated recut gully that produced a fragment of tile. (MLO64018).	GLHER:ELO3800 MLO64015-8

OA Ref. No	Feature Type	Description	Source.
OA 8	Listed Building	Kneller Hall. Originally built 1709-11 for Sir Godfrey Kneller, much altered and extended to its present elaborate neo-Jacobean form by George Mair, 1848. A particularly fine symmetrical main elevation (east front): Brick and stone, 3 storeys, 'E' plan form, the projecting centre containing the entrance, having a large square, 3-storey bay window, mullioned and transomed, crowned by an elaborate parapet with a coat of arms. Grade II Listed Building	NMR:1065380
OA 9	Listed Building	Gatepiers to Royal Military School of Music. Probably early C19. Four gatepiers, stucco, corniced with swags and urns on fluted pedestals. Probably C18 at main entrance and at other end of railed part of boundary wall.	NMR:1065381
OA 10	Historic Gardens	The moated enclosure grounds of Kneller House, now built over only north & west arms remain.	GLHER:MLO25002
OA 11	Historic Park	Kneller Gardens, Meadway, Twickenham was developed in 1930 from farmland as a recreation and sports area for the residents of Whitton. The gardens are named after Sir Godfrey Kneller (1646-1723), who had come to England in 1676 and was appointed court painter in 1680. It is uncertain whether the land once formed part of the estate of Kneller Hall to the north.	GLHER:MLO102892
OA 12	Listed Building	Brimsworth House. Probably late C18 or early C19 house, remodelled early to mid C19. Two storey house of 3 bays width. Grade II Listed Building.	NMR:1252849
OA 13	Archaeological Findspot	A retouched flake found at Twickenham. Now in Museum of London.	GLHER:MLO11161
OA 14	Listed Building	Briar House. C18 house. Three storeys. Five windows wide with central bay advanced, the windows and entrance porch to which are probably later.	NMR:1080854
OA 15	Listed Building	K6 Telephone Kiosk junction 17/14 of First Cross Road and Staines Road. Telephone kiosk. Type K6. Designed 1935 by Sir Giles Gilbert Scott. Made by various contractors. Cast iron. Square kiosk with domed roof. Unperforated crowns to top panels and margin glazing to windows and door. Grade II Listed Building.	NMR:1254103

OA Ref. No	Feature Type	Description	Source.
OA 16	Historic Park	Twickenham Green. Public Park. Originally part of a common land, the area continued to be opened for the public and it is located near Hounslow Heath.	GLHER:MLO104140
OA 17	Listed Building	K6 Telephone Kiosk junction 17/15 of First Cross Road and The Green. Type K6. Designed 1935 by Sir Giles Gilbert Scott. Made by various contractors. Cast iron. Square kiosk with domed roof. Unperforated crowns to top panels and margin glazing to windows and door. Grade II Listed Building.	NMR:1254104
OA 18	Listed Building	K6 Telephone Kiosk junction 4/16 of The Green and Heath Road. Designed 1935 by Sir Giles Gilbert Scott. Made by various contractors. Cast iron. Square kiosk with domed roof. Unperforated crowns to top panels and margin glazing to windows and door. Grade II Listed Building.	NMR:1254105
OA 19	Archaeological Findspot	Human remains were discovered at 20 Hampton Road, Twickenham on the 16th February 2011 during non-archaeological works. Due to evidence for a craniotomy the bones are believed to date to the post medieval period.	GLHER:MLO105364
OA 20	Archaeological Findspot	Palaeolithic mammalian fossils were found in April 1972 from Twickenham Open now called Twickenham Green. The finds included a Bovidae Mandible and m3-p4, two Metatarsals, Tibia and 2 Ribs. They were dated by Oxygen Isotope Stage MIS 6-4 early Devensian. The absence of 'in situ' human artefacts from other Twickenham deposits of the same age (only two have been recorded from Twickenham and 1 from the Thames and only a few mammalian remains) supports that early human activity was not present at this time in Britain.	GLHER:MLO103166
OA 21	Listed Building	Holy Trinity Church. 840-41. George Basevi. Simple greyish-cream brick with stone dressings. Graduated slate roof; Early English, decorated and perpendicular. Nave of 5 bays, without any clerestory. Aisles have 3 light, 4 centred windows. Grade II Listed Building.	NMR:1253012
OA 22	Listed Building	Knowle House. Late C18 house. Two storeys and basement. Three windows wide. Tiled hipped roof. Stock brick. Central door beneath brick cornice. Later rectangular, single storey extension with Venetian window to right of entrance. To eastern side a brick building, 2 storeys and attic. Grade II Listed Building.	NMR:1192123

OA Ref. No	Feature Type	Description	Source.
OA 23	Archaeological Event	An archaeological evaluation was undertaken in 2008 by Cotswold Archaeology. Three trenches were excavated. The western wall of Gifford Lodge, a substantial 18th and 19th century villa (MLO99305) was identified. A well, path and two culverts (MLO99306) thought to have been associated with the gardens of Gifford Lodge were also revealed. The construction of the previous building on the site, Twickenham Contact and Assessment Centre, had truncated these remains in the central part of the site.	GLHER:ELO8607 MLO99305 MLO99306
OA 24	Listed Building	Underground passage at Raduor Lodge. C18. Underground passage or grotto leading diagonally under the junction of Raduor Road and Grotto Road to the grounds of St Catherines High School (q.v.). Arched passage with niches at either side decorated with various minerals and slag-glass, partly in tightly designed patterns. Rustic, arched entrances, the Radour Lodge one partly altered and the other blocked. The passage is bricked up half-way along its length. Grade II* Listed Building. Part of Pope's Garden (OA 28).	NMR:1065344 GLHER:MLO62916
OA 25	Listed Building	Underground passage in grounds of St Catherine's High School. C18. Underground passage or grotto leading diagonally under the junction of Radnor Road and Grotto Road to the garden of Radnor Lodge (q.v.). Arched passage with niches at either side decorated with various minerals and slag-glass, partly in tightly designed patterns. Rustic, arched entrances, this one blocked in C19 and converted into pool. Passage is bricked up halfway along its length. Grade II* Listed Building. Part of Pope's Gardens (OA 28).	NMR:1080811
OA 26	Archaeological Event	Thames Valley Archaeological Services carried out an archaeological watching brief on the site of 38A Radnor Road, Twickenham, Richmond upon Thames, London from the 17/05/01 to 22/05/01. The work was commissioned by Mr Malcolm Watton, Architect on behalf of Morland Homes in advance of a planning application for the construction of a four bedroom dwelling. This revealed made ground dated to the late Post Medieval (Victorian) period, a brick wall and circular cut feature (MLO75644) of late Post medieval date.	GLHER:ELO145 MLO75644

OA Ref. No	Feature Type	Description	Source.
OA 27	Archaeological Event	Evaluation for PCA by G. Brown, October 1994; site code RAR 94. Several features were revealed during excavation. These included construction dumps associated with a possible 18th century garden feature, a gravel path and a probable garden refuse pit. Architectural remains appeared to represent a collapsed subterranean passage or chamber. A variety of post-mediaeval artefacts, including pottery, was recovered. No other periods were recorded under the same site code.	GLHER:ELO4388
OA 28	Registered Park and Garden	Pope's Gardens. Early C18 garden and grotto made by the poet Alexander Pope largely on land separated from the mansion by a public road. The garden survives only as part of the archaeological record. Pope's Grotto tunnel, A Grade II* Listed Building (OA 24 & 25) which provided access between the two parts of the garden, survives with C19 additions and modifications.	NMR:1000826
OA 29	Historic Site	Pope's Grove Cutting. Early Medieval settlement first mentioned in an early 8th century Saxon charter. Twickenham became a very fashionable place to live, particularly in the 17th and 18th centuries, and country retreats lined the riverside. Includes Orleans House, and Marble Hill an 18th century garden and park created for Henrietta Howard, Countess of Suffolk by, amongst others, Alexander Pope and Charles Bridgeman.	GLHER:MLO13287
OA 30	Archaeological Findspots	Evidence of prehistoric and Roman occupation in the area has also been found in the Pope's Grove cutting area. Two Neolithic flint adzes and one stone axe (MLO18952), a leaf-shaped Bronze Age sword (MLO18961), a bronze spearhead (MLO18967), six Bronze Age bone implements, 1 possibly a gouge, in museum of London(MLO18968), two flint listed by the Sturge collection (MLO19093) a flint implement (MLO19120), a perforated stone hammer (MLO20670), a flint axe, flake & pebble found in Market Garden in Twickenham (MLO250003) and a heavy holed, axe-like bone tool (MLO5472).	GLHER:MLO1895 MLO18961 MLO18967 MLO18968 MLO19093 MLO19120 MLO20670 MLO250003 MLO5472

OA Ref. No	Feature Type	Description	Source.
OA 31	Archaeological Event	Watching brief undertaken by Lindy Casson for Museum of London Archaeology Service, 15th -17th May 2000; site code CRX00. A C18th gravel path was uncovered with a brick rubble base and edges and a compacted surface of ash and cinders. The highest surviving remains were seen at 9.87m OD. No other periods were recorded during the watching brief and natural deposits were not exposed. The site is particularly interesting due to its location within the garden designed by C18th poet Alexander Pope. Pope was already a famous poet when he moved to Cross Deep, Twickenham in 1718. The garden was connected to his residence by a subterranean grotto, parts of which still survive in the grounds of St Catherine's School.	GLHER:ELO3083
OA 32	Listed Building	Nos 60 and 62 King Street. Early-mid C18. Three storeys. Modern shop front on ground floors with 3 windows per floor above. No 60 faced with brown brick with red dressings; storey band at second floor level; tiled roof once with modillion eaves cornice, now without modillions. No 62 rendered, with late C19 alterations, which include an eaves cornice with open- pedimented gable. Flush framed sash windows to upper floors of both renewed. Grade II Listed Building.	NMR:1357722
OA 33	Listed Building	No. 54 King Street Mid C18 house; brick built. Three storeys, 2 windows wide. Square headed gauged window heads, with flush framed, sash windows, renewed. Modern shop front and entrance to ground floor. Brick modillion eaves cornice with later parapet. Grade II Listed Building.	NMR:1065376

OA Ref. No	Feature Type	Description	Source.
OA 34	Archaeological Event	<p>Evaluation undertaken by Robert Cowie for Museum of London Archaeology Service, April 1996 (RLO3817); site code KST96. Natural brickearth was cut by a late medieval rubbish pit, which contained sherds of C15th pottery, fragments of peg tile, animal bones, oyster and mussel shells and charred cereal grains. The animal bone assemblage was dominated by large mammals including cattle, sheep/goat and pig. The diversity of body parts recovered suggests that the bone was derived from a variety of sources including butchery and food waste. Periods recorded under same site code: medieval (67374), post-medieval (67375).</p> <p>A Watching brief was undertaken by J. Butler for Lawson-Price Environmental, Sept 1996 on the same site (MLO3818); site code KSR96. Several pits containing post-medieval building rubble (MLO68172) were discovered as well as a brick beehive-shaped soakaway (MLO68175), two brick-lined drains aligned N-S and E-W (MLO68176) and the remains of a brick cellar (MLO68177). These and all other features on the site had been truncated in the 19th century-20th century when the land surface had been reduced.</p>	GLHER:ELO3817 ELO3818 MLO67374 MLO67375 MLO68172 MLO68175 MLO68176 MLO68177
OA 35	Listed Building	The George Public House to 36 (even) (Formerly listed as No 32 and No 34). Late C17, 2-storey range, originally brick-faced. Tiled double pitched roofs and modillion eaves cornice but with later alterations. Grade II Listed Building.	NMR:1065375
OA 36	Listed Building	Nos 10 and 12 King Street. C18 houses with modern shops on ground floor. Three storeys. Five bays (3:2). The spacing of the windows and the roof hipped to the left only suggesting that this is the remnant of a longer range. Brick faced, with tiled hipped roof and wood eaves cornice. Segmental-arched first floor windows with stuccoed keys. Grade II Listed Building.	NMR:1357721
OA 37	Archaeological Event	Holly Road (Nos 29-35), Evaluation carried out by MoLAS in 2000. No archaeological observations were made.	GLHER:ELO974
OA 38	Listed Building	Nos 29 and 31 Holly Road. Pair of cottages. Early C18 (shown on Rocque's map of 1741-5) heightened in C19 and altered in C20. Grade II Listed Building.	NMR:1254308

OA Ref. No	Feature Type	Description	Source.
OA 39	Post Medieval Cemetery	Cemetery at Holly Road. Between 1782 and 1868 this site received internments as Holly Road Burial Ground. It was officially closed in 1868 but in 1953 was laid out as a public garden called Holly Road Garden of Rest. It was renovated in 1991.	GLHER:MLO103978
OA 40	Listed Building	Grosvenor House . Early C18 house. Three storeys. Five windows wide with the central bay of 3 windows slightly advanced. Two-storey pilaster strips to either aide. Three-storey wing to right, 2 windows wide. Brick. Central window of first floor blank. Roman Doric pilastered doorcase. The street elevation of this house has been rebuilt and its original detailing considerably altered. Grade II Listed Building.	NMR:1358072
OA 41	Listed Building	Twickenham Library, built in 1906-7 by to designs by Howard Goadby, is designated at Grade II for the following principal reasons: Architecture: main façade is a lively and accomplished neoclassical composition Sculpture: good allegorical pediment group and portrait busts, expressing the institution's cultural significance in both universal and local terms Interior: well preserved, with good survival of decorative features.	NMR:1400831
OA 42	Archaeological Event	An archaeological evaluation was carried out by the Museum of London Archaeology Service at 33-35 York Street, Richmond, in 1995. The evaluation revealed natural gravels overlain by a layer of brickearth 0.74m thick. The brickearth was truncated by 19th and 20th century garden deposits and bedding trenches (MLO66658), which in turn were capped by a layer of modern tarmac/concrete at +8.15m OD, which formed the modern ground surface. * Natural gravels were recorded at a height of +6.58m OD.*	GLHER:ELO4989 MLO66658
OA 43	Historic House	Arragon Road. Original house of Tudor structure with features of no peculiar interest.	GLHER:MLO3761
OA 44	Post Medieval Cemetery	This cemetery was founded in 1838 to replace Holly Road Burial Ground. It became full and was closed in 1955.	GLHER:MLO103979

OA Ref. No	Feature Type	Description	Source.
OA 45	Archaeological Event	Grove Cottage. Cottage, probably C19 on an earlier site, with C18 upper floor flying freehold, structurally part of Devoncroft (21/100). Probably brick, stucco rendered ground floor, pebble dash rendered upper floor, plain storey band. Hipped slate roof. Grade II Listed Buildings.	NMR:1387750
OA 46	Listed Building	Devoncroft. Early C18 house, altered. Stuccoed, with roughcast to upper storey; slated gambrel roof to eaves. Corner site. Grade II Listed Building.	NMR:1261471
OA 47	Listed Building	Amyand Park Road. Late C18 house forming part of hospital complex of later buildings. Two floors. Three bays wide with projecting south wing. Brick with slated roof with eaves. Central bay pedimented with dentilled cornice. Later single storey extension across proposal front. Grade II listed Building.	NMR:1080860
OA 48	Archaeological Event	An archaeological evaluation was undertaken at the former Royal Mail Sorting Office, Twickenham, by Archaeology South East between 21 st and 27 th March 2013. The site comprised seven archaeological trial trenches. The site revealed structural remains likely to be associated with the sites former use as a brewery, between the 17th-20th century.	GLHER:ELO13168
OA 49	Listed Building	Heatham House, walls, entrance gates and piers. Mid-C18. Brown brick. Hipped tiled roof to parapet. Two storeys over a basement, 8-bays wide. Grade II Listed Building.	NMR:1253031
OA 50	Listed Building	Neville House. Mid-C18. Three storeys, 5 windows, brown brick, red dressings, 3 centre bays project slightly. Timber blocked cornice, pedimented over centre bays. Grade II Listed Building.	NMR:1357723
OA 51	Archaeological Findspot	Flint flake. Undated.	GLHER:MLO19016
OA 52	Archaeological Event	Evaluation undertaken by Robert Cowie for Museum of London Archaeology Service, Nov'95; site code AMP95. Natural brickearth was truncated by possible quarry pits of 19th century date and by late 19th century-20th century features associated with a former railway goods yard. One unstratified prehistoric struck flint (MLO67852) was found. No further periods recorded under this site code.	GLHER:ELO10495 MLO67852

OA Ref. No	Feature Type	Description	Source.
OA 53	Listed Building	Church of All Hallows. Tower of All Hallows, Lombard Street by Wren, re-erected 1940 as tower of new Church. Patterned stone, in 3 stages. Very plain except for Corinthian porch. Modern brick- faced reinforced concrete church of 5 bays, with round windows Portland stone dressings, joined to tower by corridor from north side of west end. The church is completely fitted out inside with the furnishings of the Lombard Street Church including work by Grinling Gibbons, 1690 and 1856. Grade I Listed Building	NMR:1080836
OA 54	Listed Building	Barclays Bank. Early C20. Stone building of 3-storeys occupying a semi-circular corner site. Thirteen bay composition, with central 3 bays and outer 2 bays at either end advanced, rusticated window surrounds to upper storeys and pediments to first floor windows. Grade II Listed Building.	NMR:1253034
OA 55	Listed Building	K6 Telephone Kiosk junction 21/101 of King Street and Water Lane. Designed 1935 by Sir Giles Gilbert Scott. Made by various contractors. Cast iron. Square kiosk with domed roof. Unperforated crowns to top panels and margin glazing to windows and door. Grade II Listed Building.	NMR:1254087
OA 56	Listed Building	Nos 24, 25 & 26 Church Street, Twickenham. C18 terrace. Each 2 storeys and attic, 2 flush framed windows wide and one dormer. Brick. Band course to parapet. C19 altered shop fronts. Grade II Listed Building.	
OA 57	Historic Structure	Length of wall separating two Craneford Way Playing Fields	
OA 58	Historic Structure	Old Pump House. Council Depot. RUTBC Building of Townscape Merit	
OA 59	Historic Structure	Cobbled section of road leading to the Council depot through the former Mereway Allotments	

Appendix 17.2: Archaeological Geophysical Survey

**RICHMOND-UPON-THAMES COLLEGE:
EDUCATION AND ENTERPRISE CAMPUS
REDEVELOPMENT**

**Archaeological Geophysical Survey
2015**

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Richmond-Upon Thames College: Education and Enterprise Campus Redevelopment

Geophysical Survey 2015

Abstract

This report describes a geophysical survey which has been undertaken as part of an archaeological evaluation of two proposed development sites at Richmond College, Twickenham. The two areas are currently sports fields, and are located close to buildings, boundaries and other modern disturbances.

The survey has detected considerable magnetic activity, but identifiable findings appear to be limited to pipes, land drains and recent disturbances. The survey results cannot entirely exclude the possibility that archaeological features may be present, but the survey has not produced any findings which can plausibly be interpreted as of archaeological relevance.

1. Introduction

The survey was commissioned from Bartlett Clark Consultancy, Specialists in Archaeogeophysics of Oxford, by Oxford Archaeology on behalf of Richmond College. Fieldwork for the survey was done on 18 February 2015.

The two survey areas are labelled Site A and Site B on the enclosed plans. Site A is an open grassed area to the north of the main college buildings (located at NGR TQ 153737), and south of the A316 Chertsey Road. Site B is a sports field to the south of the college. An area of hard-surfaced tennis courts in the NW corner of Site B was excluded from the survey because the paving would cause magnetic interference. The total survey coverage (across Sites A and B) was 3.34ha.

2. Objectives of the Survey

The purpose of the survey was to test for evidence of archaeological sites or remains, and to provide information which may inform further stages of the archaeological evaluation.

A geophysical survey is usually able to identify the extent and character of any archaeological remains capable of producing a magnetic response. The magnetometer will detect cut features such as ditches and pits when they are silted with an increased depth of topsoil, which usually responds more strongly than the underlying natural subsoil. Fired materials, including baked clay structures such as kilns or hearths are also likely to produce a localised enhancement of the magnetic field strength, and the survey therefore responds preferentially to the presence of ancient settlement or industrial remains. The

survey is also strongly affected by ferrous and other debris of recent origin.

It is often found to be the case in surveys of playing fields that the ground has previously been disturbed by levelling or drainage works. This need not in all cases prevent the detection of archaeological features, but the extent of such interference can only be determined by undertaking the survey.

3. Topography and Geology

Site B is bounded to the south by the River Crane. This part of the site is described in the draft Environmental Statement for the project (as supplied to us by Oxford Archaeology [1]) as former marshland covered by alluvial deposits. The site is otherwise located on a bedrock of London Clay Formation with a superficial deposit of Kempton Park Gravel. It is usually the case that gravel soils provide favourable conditions for the magnetic detection of archaeological features, although there may sometimes be an increase in background magnetic activity on gravels containing individual stones of igneous origin. A possibility remains on alluvial soils that archaeological features may be too deeply buried beneath subsequent deposits for them to be readily detectable.

4. Archaeological Background

It is mentioned in the Environmental Statement [1] that Site B is located within the Crane Valley Archaeological Priority Area, as defined by the London Borough of Richmond-upon-Thames. (This area is marked by cross hatching on the ES figure inset in figure 4.) This zone alongside the river has been used by a number of industries, including gunpowder manufacturing, oil and paper mills and a brewery (although we are not told there is any specific record of such activities within the survey area). It is mentioned also that Site A could have been the site of WW2 air raid shelters.

Other archaeological possibilities are indicated by evidence of a Bronze Age settlement 580m to the NE of the site, but the site itself is likely to have been forested in Roman and later periods. The surrounding area was enclosed and used for market gardens and orchards in the 18th – 19th centuries, followed by housing development from the late 19th C.

5. Survey Procedure

The procedure used for the investigation was a fluxgate gradiometer survey across the evaluation area. Results are presented as described below.

A survey grid was set out at the required locations, and tied to the OS grid using a GPS system with VRS correction to provide 0.1m or greater accuracy. The plans are therefore geo-referenced, and OS co-ordinates of map locations can be read from the AutoCAD version of the plans.

The magnetometer readings were collected along transects 1m apart using Bartington 1m

fluxgate gradiometers, and are plotted at 25cm intervals along each transect. The results of the survey are presented as grey a scale plot (at 1:2000 scale) in figure 1, and as a graphical (x-y trace) plot in figures 2-3 (at 1:1250 at A3). Inclusion of both types of presentation allows the detected magnetic anomalies to be examined in plan and profile respectively.

The graphical (x-y) plot represents minimally pre-processed magnetometer readings, as recommended for initial presentation of survey data in the 2008 English Heritage geophysical guidelines document [2]. Adjustments are made for irregularities in line spacing caused by variations in the instrument zero setting (as is required for legibility in gradiometer data), but no further filtering or other process which could affect the anomaly profiles or influence the interpretation of the data has been applied. A weak additional 2D low pass filter has been applied to the grey scale plot to adjust background noise levels.

An interpretation of the findings is shown in figures 2-3, and is reproduced separately to provide a summary of the findings in figure 4. Colour coding has been used in the interpretation to distinguish different effects. The interpretation is intended to categorize most of the identifiable magnetic anomalies, but cannot reproduce the detail of the grey scale plots.

Features as marked include magnetic anomalies which may represent former ditches (in brown), and stronger (perhaps recent) disturbances in grey. Small (and mainly natural) background magnetic anomalies are outlined in light brown. Some of the more conspicuous ferrous objects (identifiable as narrow spikes in the graphical plots) are outlined in light blue, and probable land drains are also marked.

6. Results

The survey has detected numerous subsurface features and disturbances, although most appear to be of clearly recent or non-archaeological origin.

Site A

The main findings in Site A are linear sequences of magnetic anomalies which are likely to represent iron pipes at A and B (as labelled on figure 4). A second more continuous anomaly (C) could be a concrete pipe or cable alongside A.

There is interference from the adjacent building at the west of the area, and a dense scatter of debris (perhaps rubble or concrete) at D in the NE corner. There are no clearly defined groups of disturbances which could be identified as the intact foundations of an air raid shelter, but it is possible that remains from such structures could be present (mainly as scattered debris) in various parts of the site.

The survey plots show a generally high background noise level. This could in part be caused by the gravel soil, but it is likely that much of the magnetic activity relates to modern debris and disturbances.

Site B

The survey has detected a number of distinct features against a background which (in part) is rather more uniform than in Site A. The main finding is a linear disturbance (E),

which could be a former ditch or drain. It lacks the regularity of response which suggest the presence of iron pipes at A and B, and so could perhaps be a former field boundary or drainage ditch infilled with rubble. A strong north-south linear feature at F could be a second infilled ditch, although it is also possible it might contain a non-ferrous pipe, as was suggested at C. The other (weaker and more fragmented) linear features as marked, some of which terminate at E, are likely to be land drains. (There is clearly more need for drainage on the alluvial soil here than on the gravel to the north.)

It is not impossible that debris from industrial activities of the kind identified in the archaeological priority area could contribute to some of the stronger disturbances seen in the survey (as around G and H), but there are no clearly interpretable disturbances of a kind which would suggest the presence of intact structures rather than dispersed scatters of debris.

7. Conclusions

The survey has detected various pipes in Site A, and one or perhaps two former ditches in Site B. (The feature at F could be a ditch, or a pipe connecting to the former ditch at E.)

It is possible that debris from former air raid shelters could contribute to the magnetic disturbances seen in Site A, but no intact structures can be recognised. There is similar uncertainty in determining whether industrial remains could be present in Site B. Any less conspicuous archaeological findings will be difficult to distinguish from recent magnetic activity in this context.

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14 April 2015


The fieldwork for this project was done by P. Cottrell and M. Berry.

References

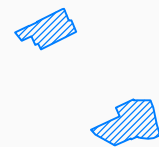
- [1] *Richmond Education and Enterprise Campus Redevelopment: Environmental Statement. Chapter 7: Cultural Heritage.* Document prepared by Oxford Archaeology for Richmond College (Draft 2014).
- [2] English Heritage 2008 *Geophysical Survey in Archaeological Field Evaluation* [online facsimile] (English Heritage: Swindon, 2008), English Heritage Research.

Background mapping includes Ordnance Survey Data.
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figure 2



site boundary



approximate survey coverage
(3.34 ha)

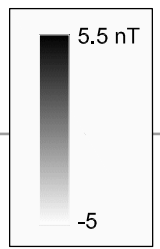
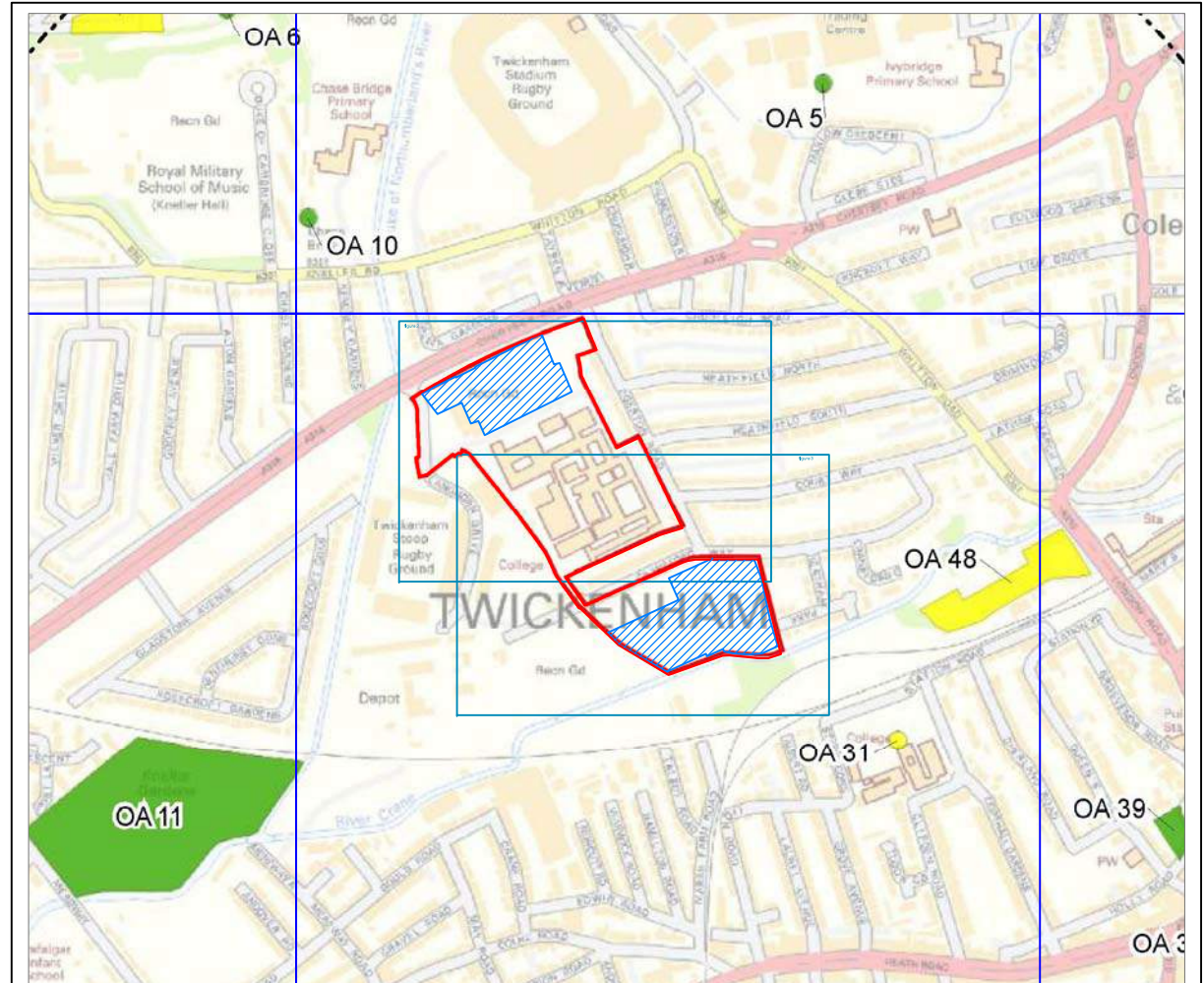


figure 3



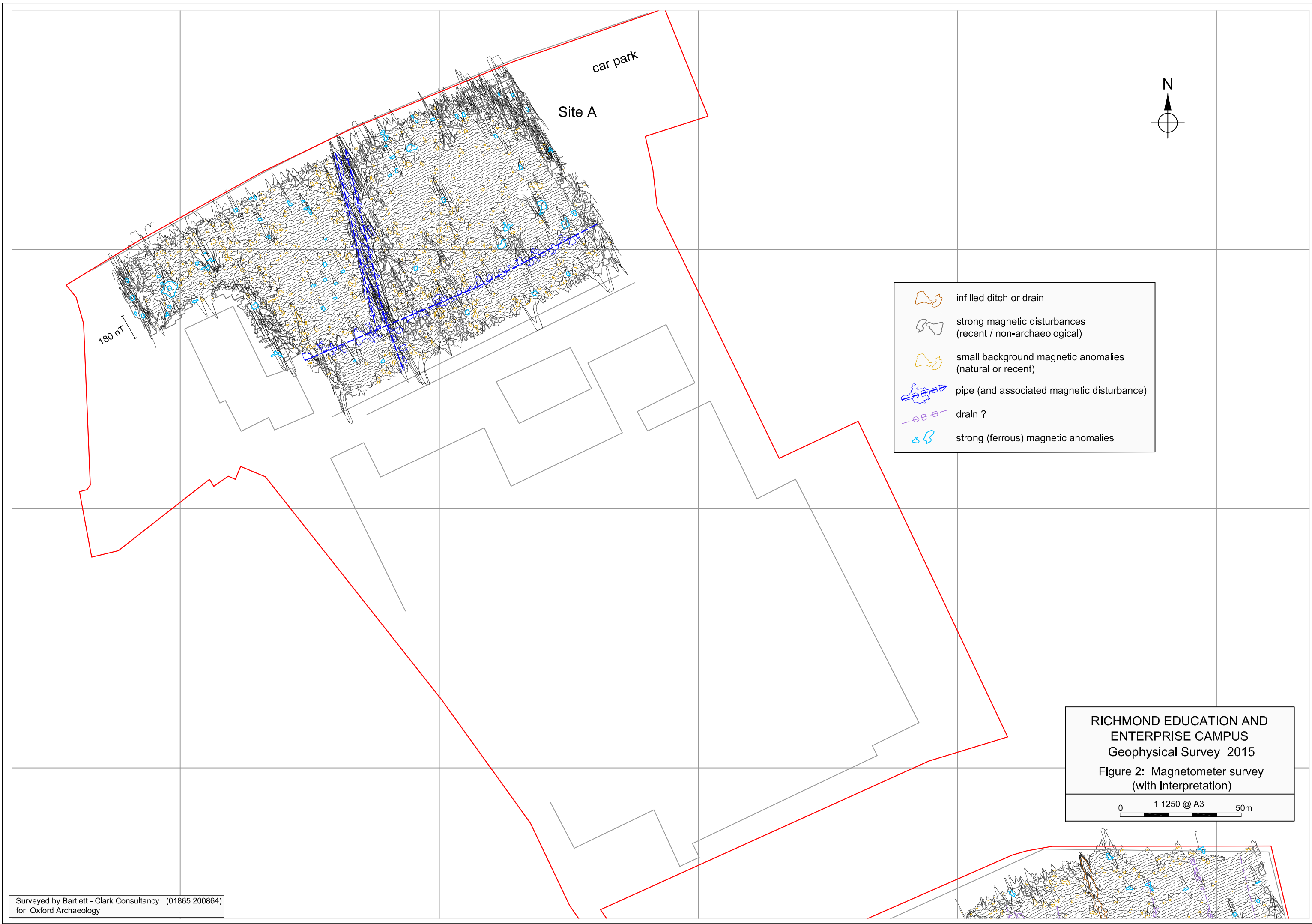
Survey location (with Heritage Assets from Draft ES figure 1)

1:10000







Surveyed by Bartlett - Clark Consultancy (01865 200864)
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Figure 1: Magnetometer survey
(grey scale plot)

0 Scale 1:2000 @ A3 100m





-  infilled ditch or drain
-  strong magnetic disturbances
(recent / non-archaeological)
-  small background magnetic anomalies
(natural or recent)
-  pipe (and associated magnetic disturbance)
-  drain ?
-  strong (ferrous) magnetic anomalies

tennis
courts







Site B

180 nT

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Figure 3: Magnetometer survey
(with interpretation)

0 1:1250 @ A3 50m

Background mapping includes Ordnance Survey Data.
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-  infilled ditch or drain
-  strong magnetic disturbances (recent / non-archaeological)
-  small background magnetic anomalies (natural or recent)
-  pipe (and associated magnetic disturbance)
-  drain ?
-  strong (ferrous) magnetic anomalies

-  Archaeological Priority Areas
-  Conservation Areas

figure 2

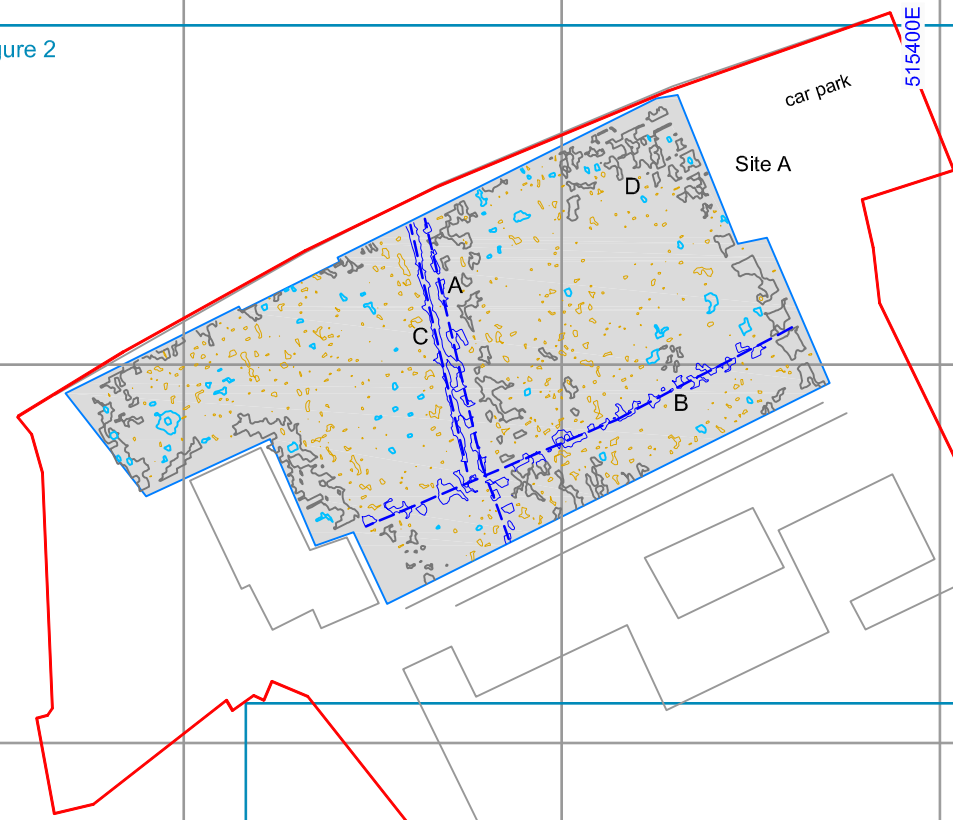
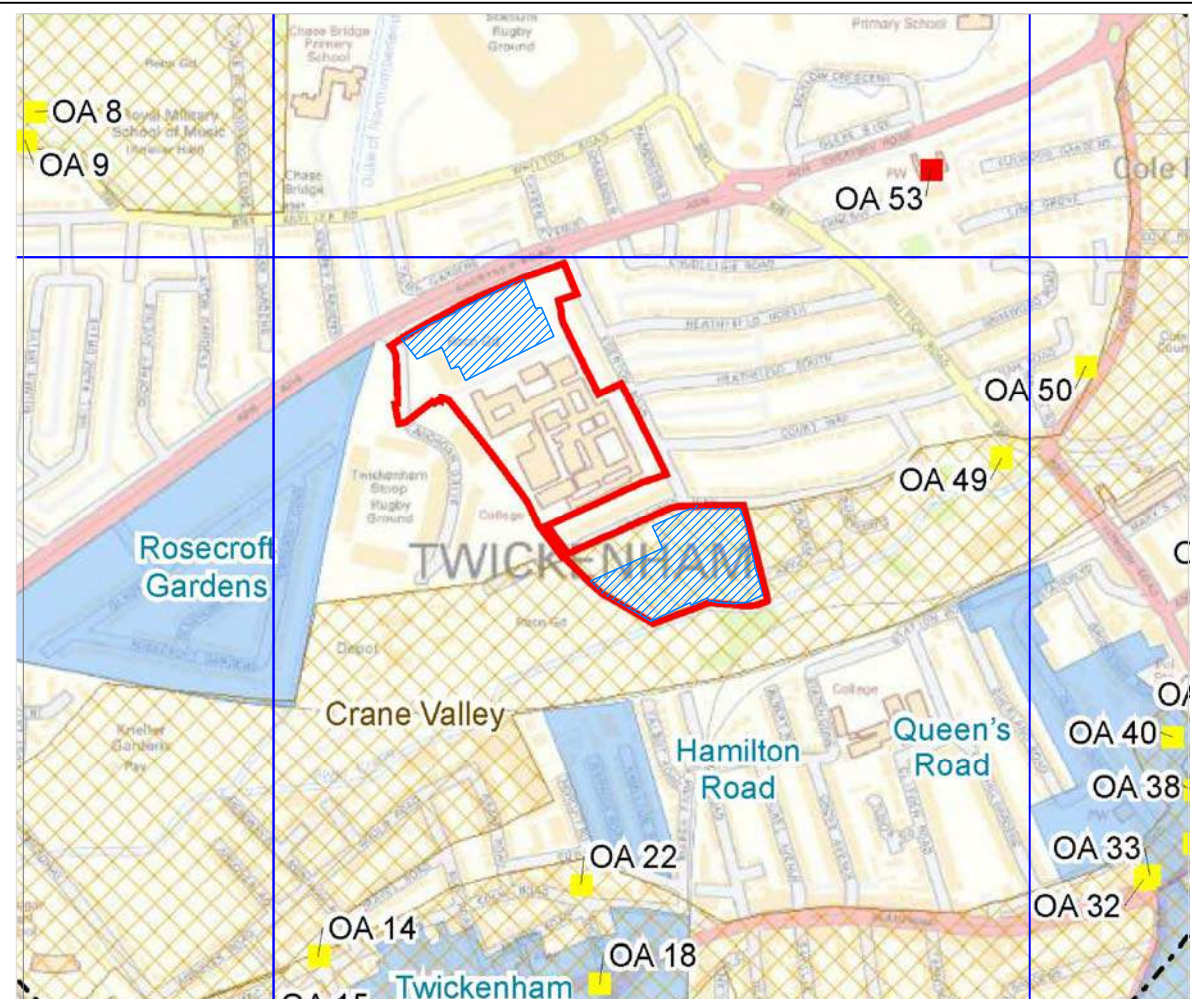
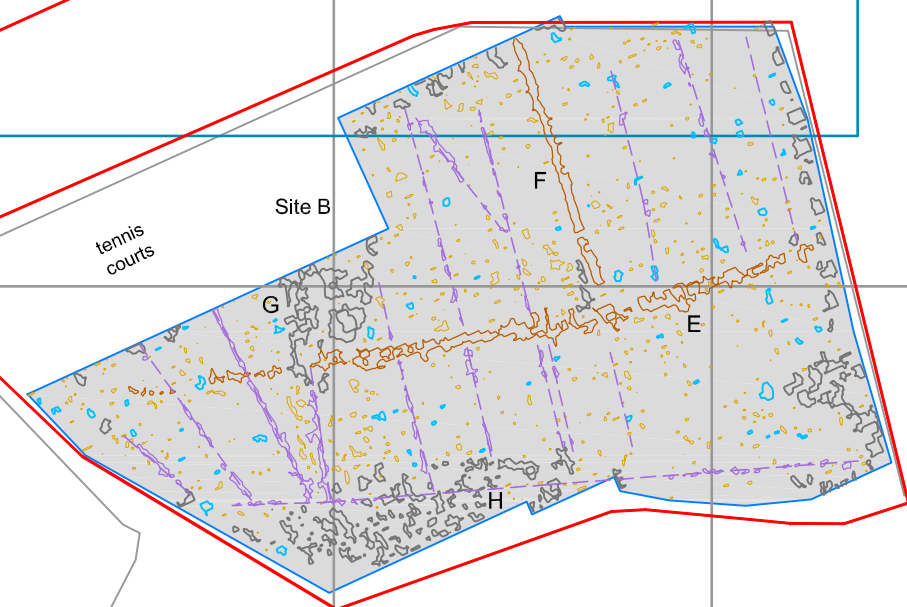


figure 3



Designated sites (from Draft ES figure 2)

1:10000

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Figure 4: Summary of findings

0 Scale 1:2000 @ A3 100m