Woodford County High School, 12th June and 17th July 2018

Geophysical Survey and archaeological Test Pit Investigation

by the West Essex Archaeological Group (WEAG)

Site code WFR18

London Borough of Waltham Forest

By Lee Joyce and Colin Mann, with contributions by Christina Holloway

Report Date: 30th January 2019

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Site Name: Woodford County High School, High Road, Woodford Green, IG8 9LA

London Borough of Waltham Forest (note that the school entrance is in the London Borough of Redbridge)

Dates of Investigation: 12th June and 17th July 2018

National Grid Ref: TQ 3982 9173

Site Code: WFR18

OASIS Reference ID: westesse1-334902

Archive Receiving Body: Museum of London, 46 Eagle Wharf Road, London, N1 7ED

Note: The "archive" consists solely of digital records, comprising this report in PDF format, photographs of the finds in JPG format, context records in PDF format, records of pit locations and levels in PDF format, and a digital record of the Ground Penetrating Radar results in AVI video format. The paper versions of the records have been retained by WEAG, and the physical finds have been retained by Woodford County High School.

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Summary

The West Essex Archaeological Group (WEAG) conducted a one-day geophysical survey in June 2018, followed by a one-day test pit excavation event in July 2018, at the Woodford County High School (WCHS). The test pits were located in the London Borough of Waltham Forest, though the school entrance is in the London Borough of Redbridge.

The fieldwork was carried out at the request of the school, and the purpose of the events was to enable groups of pupils to have a short experience of archaeological investigation. They were, in effect, "Community Archaeology" events.

Six test pits, each 1m x 1m, were opened on a level, grassed area to the west of the school buildings. The site was chosen for its convenient location on the school site, rather than for its specific archaeological potential. The test pits were positioned to test anomalies recorded by the geophysical survey.

In the time available, none of the test pits were dug beyond a depth of 30cm. Only made ground was recorded and no levels of natural deposits were reached.

Most of the finds were assessed as being from the 20th Century, with some re-deposition of earlier artefacts dated from the 17th to the 19th Centuries. None of the finds were judged to be significant at a local, national or international level.

The events were highly successful in their own terms, with around 60 enthusiastic pupils gaining a good first introduction to archaeology.

1 Introduction

1.1 Location and scope of work

1.1.1 An archaeological investigation was conducted by the West Essex Archaeological Group (WEAG) at Woodford County High School (WCHS) on 12th June and 17th July 2018.

1.1.2 The investigation can best be described as two short "Community Archaeology" events. WCHS were celebrating the 250th Anniversary of the construction of the original building on their site. They had planned a special "Co-Curricular Day" on 17th July, at which groups of pupils would carry out a variety of activities, including a short experience of archaeological excavation on their school site. They invited WEAG to organise the archaeological excavation. Six test pits were opened on a convenient location on the school site. Three group of pupils of around 20 pupils per group spent around one and half hours per group on this investigation, under the supervision of members of WEAG.

1.1.3 The site of the investigation was chosen primarily for ease of movement of pupils between one activity on the Co-Curricular Day and another. Another consideration was the need for WEAG to be able to move equipment onto the site at the start of the day and out again at the end of the day. A flat grassy open site 30m x 13.5m near to the back (west side) of the main school buildings was chosen for its convenience.

1.1.4 Before the test pit investigation, on 12th June 2018, a geophysical survey of the grassy area was conducted using Ground Penetrating Radar (GPR). The results of this were used to choose locations for the test pits within the grassy area. On 17th July 2018 six test pits were opened, each 1m x 1m. Three group of pupils of around 20 pupils per group spent around one and half hours per group on this investigation, under the supervision of members of WEAG.

1.1.5 The location of the test pit area is shown in Figure 1 below.

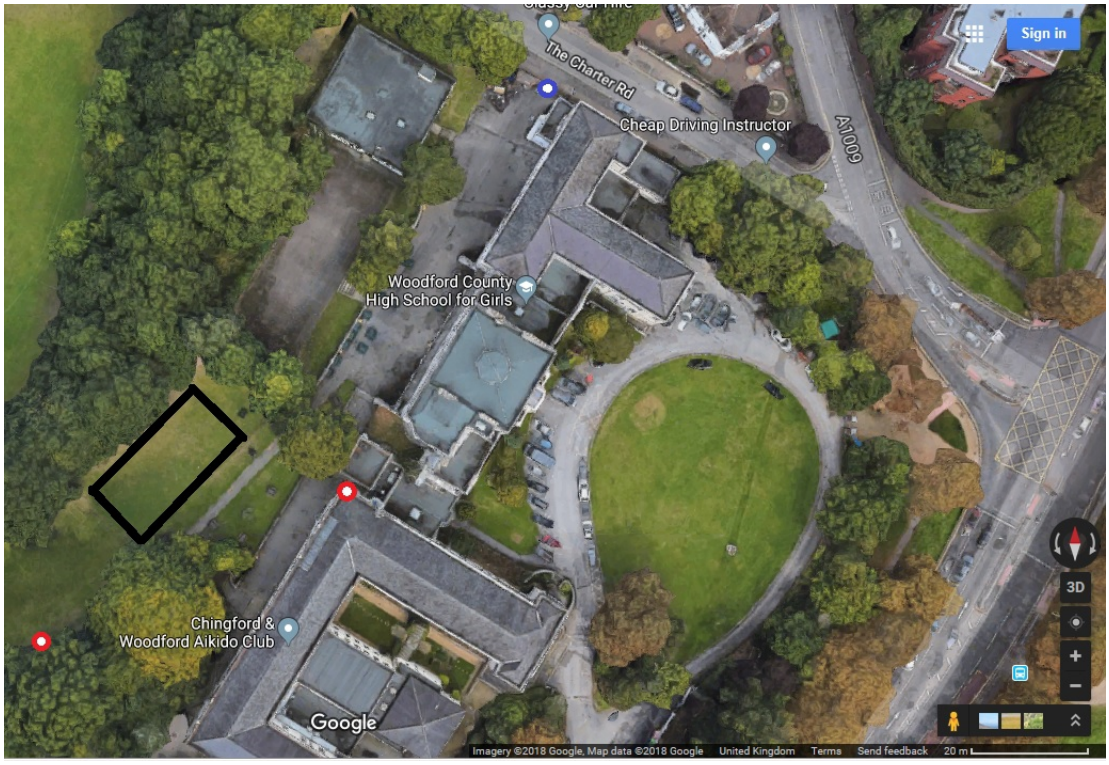


Figure 1. Location of the Site.

Source: Google Maps, accessed on 9th October 2018. The orientation of the sides of the Figure is North-South (North at the top). The black rectangle shows the approximate test pit area. The red markers show the positions of

reference points for locating the test pit area by triangulation. The blue marker shows the reference point for establishing site levels in relation to known heights above Ordnance Datum (OD) in The Charter Road.

1.1.6 The exact location of the test pit area, also used for the geophysical survey, is shown in Figure 2 below.

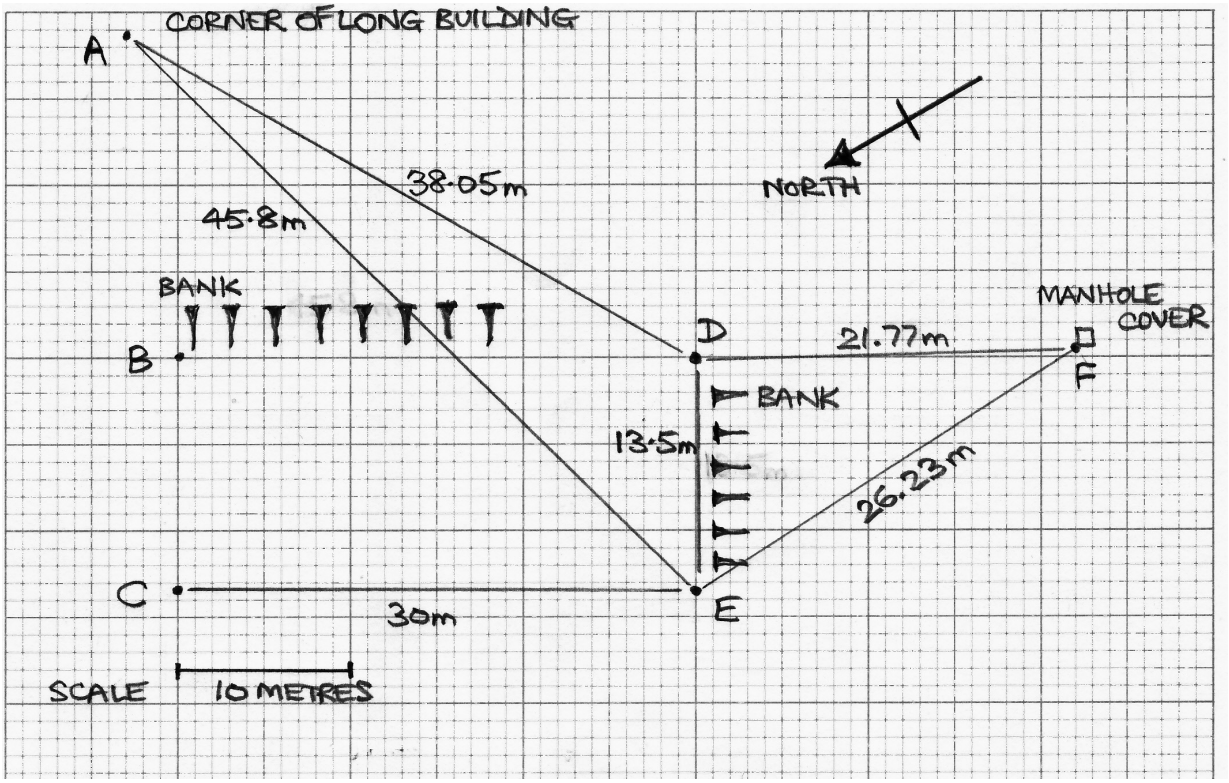


Figure 2. The points A and F are shown in red in Figure 1. The black rectangle in Figure 1, which is the test pit area, is the rectangle BDEC in Figure 2.

1.1.7 The test pit locations are shown in Figure 3 below, measured from the south-west corner of the rectangle (E). The test pits for pupils were numbered from 1 to 5. An additional test pit named “Pit S” was opened to give school staff the opportunity to exercise their excavation skills, separate from the pupils.

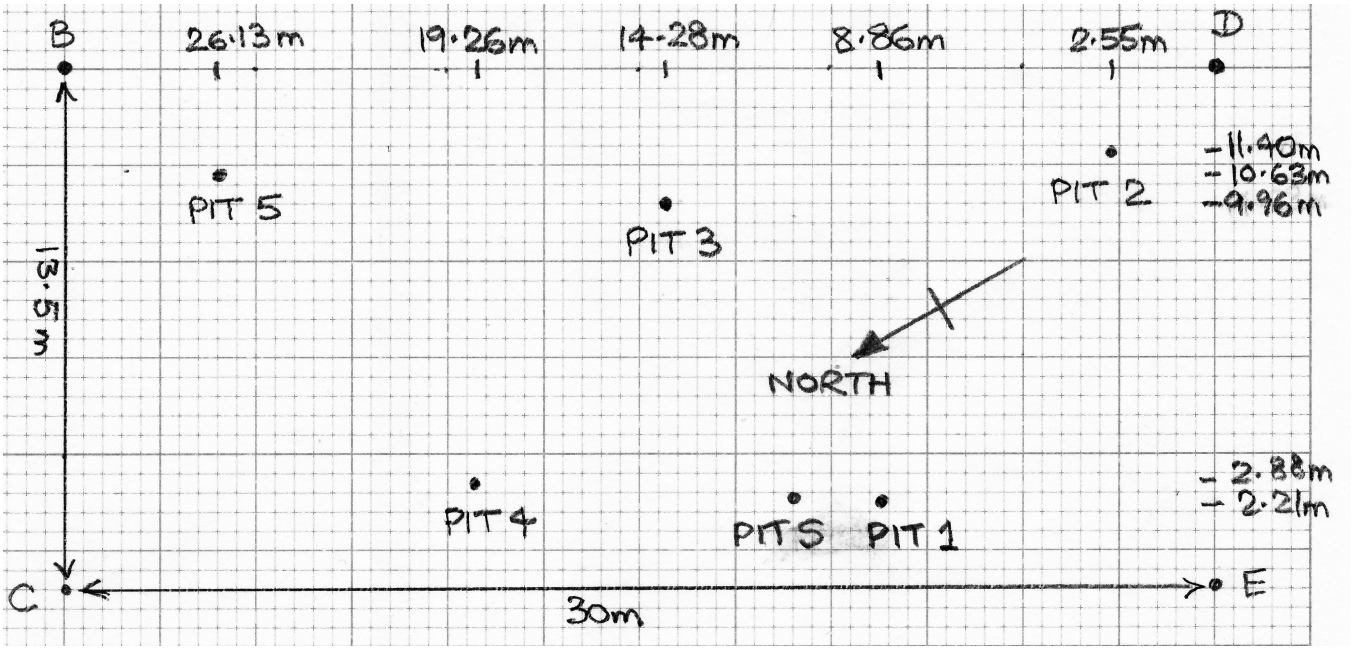


Figure 3. The rectangle BDEC is the same as in Figure 2, and in the same orientation, but drawn to a larger scale.

1.1.8 WCHS is in the London Borough of Redbridge. The boundary between the London Boroughs of Redbridge and Waltham Forest runs through the school site, from north-east to south-west. The entrances to the school site along the High Road in Woodford Green lie in the London Borough of Redbridge, but the majority of the buildings on the site lie within the boundary of the London Borough of Waltham Forest. The excavation site itself is located wholly within the London Borough of Waltham Forest.

1.1.9 The site archive will be held by the Museum of London. The "archive" consists solely of digital records, comprising this report in PDF format, photographs of the finds in JPG format, context records in PDF format, records of pit locations and levels in PDF format, and a digital record of the Ground Penetrating Radar results in AVI video format. The paper versions of the records have been retained by WEAG, and the physical finds have been retained by Woodford County High School.

1.2 Geology and topography

1.2.1 The British Geological Survey Sheet 257 (Romford 1996) shows that the underlying geology of the site consists of London Clay overlain by the drift glacial gravel deposits. [Source: Pre-Construct Archaeology report 2006].

1.2.2 The test pit area is a level grassy area at a height of about 60m OD.

1.3 Archaeological and historical background

1.3.1 The school site lies at what was the eastern boundary of the medieval Manor of Higham Bensted in the west of Essex, close to Woodford Row, now known as Woodford Green. The original manor house had been on the western side of the manor.

1.3.2 After a change of manor ownership in 1764, a new house was constructed in 1768, on what is now the school site. It was the 250th anniversary of this event that the school was celebrating in 2018.

1.3.3 There does not seem to be any written or cartographic evidence of residential or agricultural buildings on the site prior to 1768, though the eastern boundary of the site was close to Woodford Row and the old north-south route along the ridge between the valleys of the River Lea and the River Roding, through Epping Forest, followed roughly by the modern High Road.

1.3.4 In 1793 a new owner invited Humphry Repton to redesign the house and its surrounding park.

1.3.5 In 1919 the house and its immediately surrounding grounds were acquired for use by the Woodford County High School, which has remained there until the present.

1.3.6 Further detail of the history of the site can be found in the publication *Highams* by the Walthamstow Historical Society, from which the above summary has been drawn.

1.3.7 The test pit area lies to the west of the original 1768 house, and slightly to the south of it, on ground which slopes down to the west, overlooking what would originally have been parkland. A map drawn by Humphry Repton suggests that the test pit area may lie within what had been a Kitchen Garden before Repton's alterations. Later maps do not show any built structures in this area, though photographs from the 1920s suggest that garden terraces may have extended southwards into it. [Sources: *Highams* by the Walthamstow Historical Society; *Old Ordnance Survey Maps*, 1914 and 1915, Godfrey A.].

1.4 Acknowledgements

1.4.1 WEAG is grateful to the Headteacher, Staff and Pupils of the WCHS for inviting them to organise this excavation event, and for their hospitality on the day. Particular thanks go to Suzanne Cook and Iain Saxton of the school Staff, who played a major part in the planning and execution of the event, as well as excavating “Pit S”. WEAG is also grateful to its own members who helped with the geophysical survey, with the excavation event itself, with rapidly transporting equipment into and out of the site, and with post-excavation work including photography, examination and analysis of finds, and production of this report.

2 Aims and Methodology

2.1 Aims

2.1.1 The main objective of this archaeological event was to give pupils of WCHS a short experience of participating in a geophysical survey and in an excavation, to stimulate an interest in archaeology. There was no specific archaeological question that was under investigation. The test pit area was chosen as much as anything else for its convenient location, rather than its archaeological potential. Nevertheless, WEAG sought as far as possible to conduct the entire process in a thorough manner, including recording what was found and creating this report.

2.2 Methodology

2.2.1 On 12th June 2018 a geophysical survey of the test pit area (rectangle BDEC in Figure 2) was conducted using GPR.

2.2.2 On 17th July 2018, excavation of the test pits was carried out by hand-trowelling, with the occasional use of mattocks. In the time available, none of the test pits were excavated to a depth of more than 30cm.
All finds were retained for later examination, apart from some brick, clinker, mortar and pebbles.

2.2.3 Archaeological features and deposits were recorded using WEAG's *pro-forma* sheets. Test pit locations and positions of important finds were recorded at appropriate scales and colour photographs were taken of all relevant features and deposits. No section drawings were made as there was insufficient time, and there were no interesting features to record given the shallow nature of the pits. Where possible, and subject to the time available, school pupils were invited to participate in the recording process. Other records were made by WEAG members in the intervals between one group of pupils leaving and the next arriving, and after the last group had left. At the end of the day the test pits were backfilled and the turf re-laid.

2.2.4 No environmental sampling was undertaken.

2.2.5 The site conditions in June and July 2018 were dry. It was a period of many weeks of dry, hot weather.

3 Results

3.1 Geophysical Survey

3.1.1 The results of the geophysical survey, using GPR, are shown in Figure 4 on page 11 below.

3.1.2 The survey created a three-dimensional representation of the space underneath the rectangle BDEC shown in Figures 2 and 3 above. The distance CB is 13.5m, and the distance CE is 30m. Figure 4 shows a series of horizontal planes in this three-dimensional space, each plane lying approximately 5cm below the previous one. In effect, these planes show the levels that would have been encountered if the entire area had been excavated, "in plan", in 5cm spits. The plane just below the ground surface is shown in the top-left of the planes in Figure 4. Subsequent planes are shown going from left to right along the first row, and then left to right along subsequent rows, so that the deepest plane in the sequence is at the bottom-right.

3.1.3 The darker areas in Figure 4 represent material that is relatively more dense than surrounding material.

3.2 Test Pits

3.2.1 None of the six pits were excavated to a depth of more than 30cm. Excavation stopped when time ran out. Nothing was found that could be described as natural geology. No London Clay or overlying gravel was found at these depths.

3.2.2 All of the pits contained clinker, which might explain the darker elements of the first five planes in the sequence of the geophysical survey shown in Figure 4.

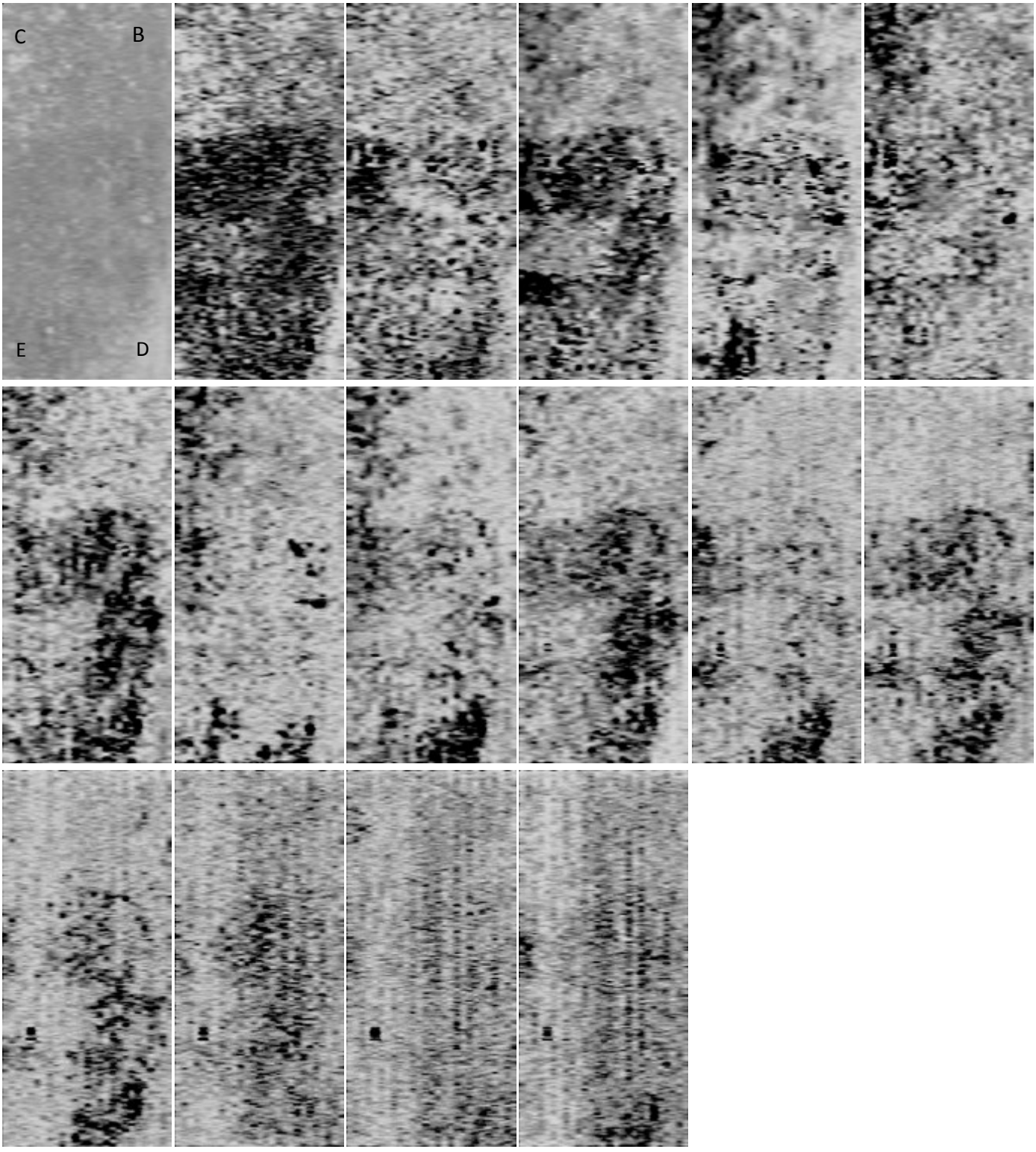
3.2.3 The matrix within the pits was a compacted dark brown clayey soil, with a large number of inclusions of brick, glass, clinker, pebbles and a small number of other inclusions such as pottery fragments. Many of the inclusions suggested secondary or tertiary deposition processes associated with horticulture and landscaping. A half-penny coin, dated 1974 and found in Pit 2, suggests a late 20th Century date for the most recent landscaping event. None of the pottery fragments were complete forms, suggesting re-deposition of older material. Random older items were found amongst more modern items, such as a 2cm fragment of 19th Century clay tobacco pipe stem near the top of Pit 1, and a large lower half of a bovis/cattle femur near the top of Pit 2.

3.3 Finds Assessment

3.3.1 An assessment of the finds, by Lee Joyce, was created as a separate report. For ease of access, it has been added to this report as Appendix B.

Figure 4. Woodford County High School GPR results.

Each rectangle represents a horizontal plane, at increasing depths. The plane at top-left is at ground level, and subsequent planes, going from left to right along the first row and then left to right along subsequent rows, are at successive intervals of approximately 5cm depth, so that the deepest plane in the sequence is at bottom right. Darker patches usually represent relatively denser material. The rectangle BDEC is the same as in Figures 2 and 3.



4 Discussion and Conclusions

4.1 Conclusion

4.1.1 Given the flat nature of the site, its size (just over 30m long and 13.5m wide), and the presence of clinker in the soil, one possible interpretation for what was found is that this was a former lawn tennis court, perhaps created in the late 20th Century, but this hypothesis has not been explored further. Obviously many other interpretations are possible.

4.1.2 Given that the excavation did not reach deposits that could be described as “natural”, it is impossible to say whether lower levels of this site might contain evidence of earlier use of the site, such as the possibility of the site being included within the former Kitchen Garden noted on Humphry Repton's plan.

4.1.3 The whole assemblage of finds suggests typical domestic activity and supports a late-20th century date for the made ground in which it was found.

4.2 Significance

4.2.1 The pottery that was found has negligible significance at a local, national or international level. Likewise, the assemblages of glass, metalwork, brick, tile, tobacco pipe, shell, bone, and other finds have negligible significance at a local, national or international level.

4.3 Recommendations

4.3.1 In archaeological terms, this site is a low priority for further investigation.

4.3.2 However, the site proved to be a very convenient place to allow school pupils unfamiliar with archaeology to practice basic excavation skills, with enough finds to maintain their interest, and WEAG would be happy to organise future similar activities there if WCHS wanted to run them.

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Appendix B: Assessment of Finds

B.1.1. An assessment of the finds, by Lee Joyce, was created as a separate report. For ease of access, it has been appended to this report.

Woodford County High School (WFR18)

17th July 2018

West Essex Archaeological Group

Finds Assessment

Lee Joyce

Pottery assessment

Introduction

A small sized assemblage of 64 pottery sherds was recovered from the site. The material is fragmentary and no complete profiles are represented. A few of the sherds show evidence of abrasion and show secondary and tertiary deposition processes and were probably subject to horticultural or landscaping processes. Despite the fragmentary nature of the pottery some forms could be identified. Pottery was recovered from 11 contexts and individual deposits produced small groups of pottery (the largest 13 sherds in context 5/1).

All the pottery was examined macroscopically and microscopically using a binocular microscope (x20), and recorded in an Excel 2013 database, by fabric, form, decoration, sherd count and estimated number of vessels. The classification of the pottery form & fabric types is according to Cunningham's typology (Cunningham 1985, 1-4) the standard reference work for Essex. All the material is post-medieval in date and is discussed by types and its distribution.

THE POTTERY TYPES

English tin glaze white earthenware (delft) (Fabric 46A)
A buff to pinkish earthenware with a thick white to light blue tin glaze, the glaze does not fuse with the body so it is susceptible to chipping (Noel-Hume 1969, 11-12)

Refined white earthenware (Fabric 48) This is the largest category of modern wares. As defined here, this refers to refined white-bodied earthenwares with a neutral glaze and whose forms are clearly recognisable as the products of highly standardised or mechanised industries. It is thus something of a catch-all category,

although in effect it consists almost entirely of 19th- and 20th-century tablewares, (Cotter 2001).

Pearlware (Fabric 48P)
A form of refined white earthenware made from a mix of Cornish china clay, ball clay & flint. It has a faint blue tinge coursed by the addition of cobalt to the transparent lead glaze 1770s (Noel-Hume 1969, 25)

Modern flowerpot (Fabric 51B) the ubiquitous 19th-/20th century flowerpot of easily recognisable form.

Discussion

The vast majority of the pottery (75%) is horticultural flower pots, with only 25% representing domestic pottery.

The majority of the pottery is of a late date & fairly standard type & does little to illuminate the grandeur of the house in former times.

The only earlier & higher status pieces being the 2 sherds of fabric 46A English tin glazed pottery. These two sherd represent London products of late 17th century date, & are examples of a type known as Bleu Persan or Persian Blue. There is archaeological evidence for their production at Norfolk House (Britton 1987)

Pottery								
Trench	**1**	**2**	**3**	**4**	**5**	**S**	Total	%
Flower pot	3	4	11	15	9	6	**48**	75
R.W.E	2	0	3	3	4	2	**14**	22
Tin Glazed	0	2	0	0	0	0	**2**	3
Total	**5**	**6**	**14**	**18**	**13**	**8**	**64**	**100**

Significance, potential & recommendations for further work

The pottery has negligible significance at a local, national or international level. The pottery types are common to London & the surrounding areas during the post-medieval period and reflect mostly horticultural & some domestic activities. The only potential of the pottery is to date the context it was found in. There are no recommendations for further work.

Small Finds

Glass

An entirely modern assemblage of both window & vessel glass are present all dating to the 19th-20th century. 58 sherds of window glass from 10 contexts & 17 sherds of vessel glass from 6 contexts are represented.

The coloured bottle glass probably come from medicine bottles.
1 sherd of clear glass may be a paste jar & the two sherds of white glass are from a lamp.

This assemblage is too small to provide any conclusions & offers no dating evidence.

The assemblage has negligible significance at a local, national or international level & there are no recommendations for further work.

Metalwork

The metalwork comprises 2 amorphous lumps of iron without any visible detail.

One coin (Elizabeth II half penny) with corrosion dated 1974, a broken key fragment (late 20th century) & a group of machine made iron nails from 2 contexts, none of this need date earlier than the 20th century.

Significance, potential & recommendations for further work

This assemblage is too small to provide any conclusions.

The assemblage has negligible significance at a local, national or international level & there are no recommendations for further work.

Brick and tile

All brick & tile was recorded using MOLA's Medieval and post-medieval ceramic building materials fabrics: dating. July 2007:

Brick fragments, Floor-tile, roof tile and land drain fragments were recorded in 5 contexts.

Only 2 brick fragments were recovered from Trench S containing a very course late 20th century example refractory brick MOLA 3275,
& from context 5/1 only loosely datable to the later post-medieval period (post 1800) MOLA 3274.

Post-medieval roof tile fragments came from 3 contexts, amounting to 5 pieces, weighing just 114 g. All MOLA 3062.

A fragment of land drain (datable to 1850-1900) was also collected from Trench S. MOLA 2281

Floor tile. A large fragment of floor tile from context 1/2. MOLA 3087

Significance, potential & recommendations for further work

This assemblage is too small to provide any conclusions & offers no dating evidence.

The assemblage has negligible significance at a local, national or international level & there are no recommendations for further work.

The clay tobacco pipe

Two fragments of pipe stem dated to the19th century.

Significance, potential & recommendations for further work

This assemblage is too small to provide any conclusions & offers limited dating evidence.

The assemblage has negligible significance at a local, national or international level & there are no recommendations for further work.

Shell & Bone

Shell

A single oyster shell valve was recovered from context 3/3.

Bone

A small assemblage was recovered amounting to 6 Bone fragments recovered from three contexts. A single small fragment of Ovis/capra rib was recovered from Trench S.

Four fragments of Thoracic cattle vertebrae were recovered from Context 4/1 & a large lower half of a Bovis/Cattle Femur from context 2/1.

Significance, potential & recommendations for further work

This assemblage is too small to provide any conclusions & offers no dating evidence.

The assemblage has negligible significance at a local, national or international level & there are no recommendations for further work.

Other

This category consists of nothing of significance.

Significance, potential & recommendations for further work

This assemblage is too small to provide any conclusions & offers little dating evidence.
The assemblage has negligible significance at a local, national or international level & there are no recommendations for further work.

Conclusion

No sign of the Repton or other earlier garden features survive at the depth excavated, only 20th century deposit were encountered. This almost certainly relates to 20th century landscaping. (See Hawkins, N 2006 Pg15).

Abbreviations

C.B.M. Ceramic Building Material
C.T.P. Clay Tobacco Pipe
R.W.E. Refined white earthenware

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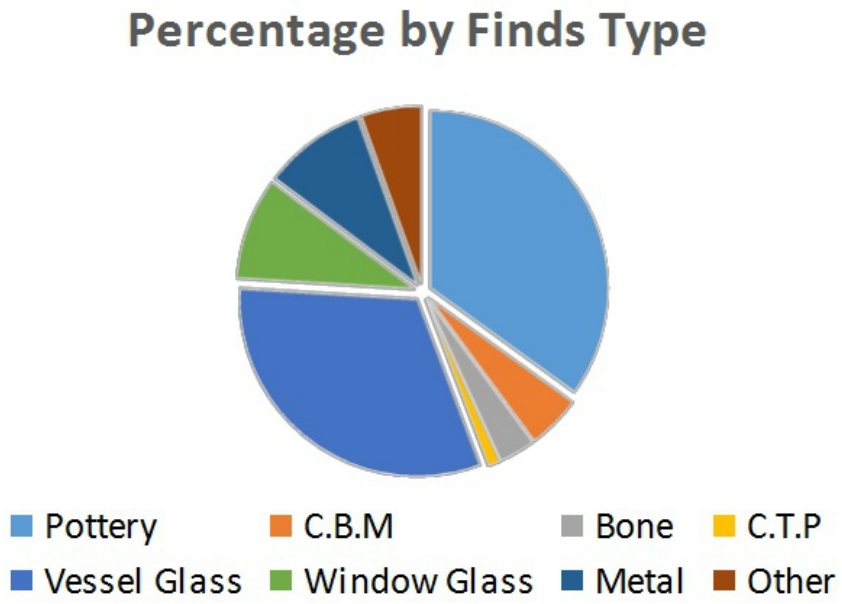
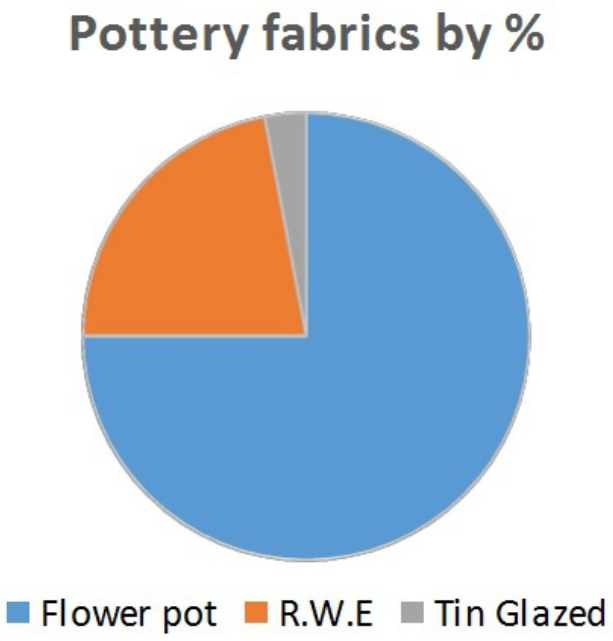
Archive The site records, finds, associated papers and digital archive is to be returned to Woodford County High school for Girls, with copies of the report sent to the local Museum & another retained for the WEAG Archive. This is a minimum standard it is also suggested that copies be placed with ADS, Oasis & all other interested bodies.

Spot Dates

Trench	Context	Spot date
1	1	20thC
1	2	20thC
2	1	20thC
1	2	20thC
3	1	20thC
3	2	20thC
3	3	20thC
4	1	20thC
4	2	20thC
4	3	20thC
5	1	20thC
5	2	19th-20thC
S	N/A	20thC


Percentage by Finds Type
Pottery
C.B.M
Bone
C.T.P
Vessel Glass
Window Glass
Metal
Other


Pottery fabrics by %
Flower pot
R.W.E
Tin Glazed


All finds by Trench
1
2
3
4
5
S


Pottery by trench
1
2
3
4
5
S

Trench	Pottery	C.B.M	Bone	C.T.P	Window Glass	Vessal Glass2	Metal	Other	Total	%
1	5	1		1	20		1	1	**29**	16
2	6		1		5	7	12	4	**35**	19
3	14				8	2	3	1	**28**	15
4	18	1	4		9	3		3	**38**	21
5	13	4			5	2		1	**25**	14
S	8	3	1	1	11	3	1		**28**	15
Total	**64**	**9**	**6**	**2**	**58**	**17**	**17**	**10**	**183**	
%*	35	5	3	1	32	9	9	5		100%
*Figures Rounded up= 99%										

[End of report]