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2 INTRODUCTION

A resistivity survey was undertaken by Newham Museum Service between 18th and 19th September 1995 at Eastbury Manor House, Eastbury Square, Barking. The present house dates to the mid sixteenth century.

A Geoscan RM15 was used in the survey. This runs an electrical current through the ground, between its twin probes, and then records the soil's resistance to the current. Different deposits will exhibit differing amounts of resistance: walls, for example, should have a higher resistance than ditches.

The object of the survey was to determine the extent of archaeological remains below the ground surface in the areas of the walled garden to the east of the house, the lawn to the north-east and the orchard at the west of the house. The survey is part of an archaeological assessment which the London Borough of Barking and Dagenham requires prior to the redevelopment of the gardens.

The work was funded by the Council and negotiated by Frank Meddens of the Museum Service.

<u>3 THE SURVEY</u>

A Geoscan RM15 Basic resistivity meter with 0.5m separation twin array was used in the survey. There were a total of ten grids surveyed, each spanning an area of 20m by 20m. Readings were taken at 1m sample intervals with a 1m zigzag traverse and any obstructions were dummy-logged.

The meter was set at a current of 1mA with a gain of x10 and written information, such as location and conditions, was recorded for each grid on Museum pro-forma sheets. A base line was established running east-west in each area and tied in to nearby walls and to the manor house itself.

As a general guide for reading the results from the computer print-out, the lighter or whiter areas represent readings of high resistance, which would include features such as walls and structures. The darker or blacker areas represent concentrations of low resistance readings, denoting features such as ditches, areas of backfill and horticultural activity.

4 RESULTS

The results from the walled garden (Figure 2: Area A) clearly show the current layout of the paths, which surround quadrants of grass and form a cross in the centre. This garden covers an area of 28m (N-S) by 27m, excluding the border of trees. As the Geoscan can measure between 0.50m and 1m below the surface of the ground, it is reasonable to assume that these paths have followed an earlier, albeit identical layout, which the resistivity machine may have recorded.

To the east of the grid, a curve of high density readings were picked up. This may represent a solarium, which was constructed and subsequently demolished in the 1960's (pers. comm. M. Watson, 1995).

The most distinctive area of low density readings can be seen in the south-eastern quadrant of the garden. This appears to continue just north of the path and may represent an earlier feature of the garden, either relating to a ground levelling activity prior to its present design or a much earlier landscape. There are approximately three other groupings of low resistance readings in the other quadrants and these suggest an earlier layout of trees or shrubs.

The front lawn to the north-east of the manor house (Figure 2: Area B) displayed a number of undulations on the surface. The printed grid (measuring 36m (N-S) by 40m on the ground) reveals the outline of a likely building; the mass of low density readings in the southern area of this structure suggests a period of back-filling, probably as the building was demolished. The structure appears to be roughly square in shape, but with a stepped-in portion at the east. This may represent a room within the building, since there also appears to be a linear feature between the two heavier concentrations of low resistance readings, and this may be an internal wall. There is another linear structure leading from the south of the building in the direction of the manor house, which may represent a path, possibly heavily back-filled so as to appear on the print-out as an area of low density readings.

To the west of this structure, there is evidence of two linear features, the shorter of which was visible on the ground in the form of a line of longer grass. These appear to be ditches, and it is known that one contains a modern service pipe (pers. comm. M. Watson, 1995). The function of the other remains unclear, although its parallel relationship to the other suggests a similar function. The area of low resistance readings in the north-western corner of the grid appeared on the ground as a series of undulations and would require a test trench to ascertain any possible relationship to the structure. These surface ripples appeared too coarse for plough marks and specific features within the print-out are difficult to discern.

The band of low resistance readings at the north-west edge of the grid relates to the line of trees which skirt the perimeter of the site.

At the west of Eastbury House, there is a small garden (Figure 2: Area C), containing several apple and pear trees, which complements the walled garden at the east. Each dummy-logged

square in this grid represents a tree. This area was smaller than the walled garden, being 23m (N-S) by 16m in size, and failed to produce any notable results in the survey. There is an area of low density readings in the south-western part of the grid, with one area further east and one further north, although it is likely that these may represent pits, dug to accommodate earlier fruit trees or shrubs.

5 SUMMARY AND CONCLUSION

Examination of the topsoil revealed that conditions were ideal for the use of the resistivity meter, which reads at between 0.5m and 1m below ground surface. Features under consideration for future excavation are therefore more likely to be archaeological, rather than geological.

Eastbury House was first mentioned in parish documents in the early fourteenth century (V.C.H. 1973) and it is known that there was a house on the site prior to the present manor, which was built in the mid sixteenth century (Airs, 1968). There is no record of the exact location of the earlier house, nor of the existence of a gatehouse at any time, although these possibilities for the function of the structure in Area B cannot be ruled out. It is unlikely that this structure is associated with the farming occupation of the eighteenth and nineteenth centuries since there is evidence that all of the farm buildings were situated at the south of the manor house (V.C.H. 1973).

Engravings, sketches and photographs from 1783 to 1923 (ref. 019/0136-7, 019/0141, 019/0144, 019/147, 019/0151) show trees as being present in the area of the garden to the west of Eastbury House; two photographs from 'Country Life' in 1935 (ref. 019/0153, 019/0158), however, clearly shows a treeless garden. Similar changes can be seen in the walled garden to the east (ref. 019/0157). The results from the geoplot survey suggest some horticultural activity, occurring after the National Trust took over the management of the house in 1918 and leased it to Barking Borough Council in 1934 (V.C.H. 1973).

It is recommended that, as a result of this survey, further field excavations are carried out in Area B prior to the re-development of the gardens.

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