

Report on the Results of Resistivity Survey

at Chester House,

3, West Side Common, Wimbledon.

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A. Telfer.

14.01.1993

Report prepared for
Museum of London Archaeological Service.

TABLE OF CONTENTS.

Introduction	page 3
The Survey	page 3
Results	page 4
Interpretation and Conclusions	page 5

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Introduction.

A resistivity survey was conducted for the Museum of London Archaeology Service on 12th. and 13th. January 1993, by members of the Passmore Edwards Museum field staff.

The site consisted of a grassed area, totalling approximately 0.7 Ha. at the rear of Chester House, Wimbledon. Numerous trees of all sizes exist on the site, and a low bank approximately 10m. wide runs along the southern boundary wall. Surface features include gravel paths to the east, along the rear of the house, with further paths extending to the west and north. A stand of mature yews was present to the north of the site. All these features were considered to have implications for the final plot. The areas around three badger setts to the north-west and south-west were excluded from the survey. In addition, demolition of the north wing of Chester House was in progress at the time, and an area c. 15m. around the wing had been fenced off, reducing the possible survey area.

The grass on the survey area was short, and the trees presented no real practical problems with conducting the survey. The site appeared to be well drained, with little sign of water retention in the topsoil, despite the rain of the previous few weeks. The vegetation on the grassed area was variable, with distinct differential growth patterns being discernible. Examination of some of the developers ground-works on the site revealed 0.30m. of friable grey brown sandy silt topsoil, overlying 0.60m. of friable orange brown silty sand. This overlay orange sand and gravel.

The Survey.

The survey was conducted using a Geoscan RM15 Basic resistivity meter, with 0.5m. separation twin array, and the results were processed using Geosoft software. The instrument was set at a current of 0.1mA, with a gain of x10. Readings were taken on 20m. x 20m. grids at 1m. sample intervals, with a 1m. traverse. Obstructions were dummy logged. Grid information was recorded on Museum pro-forma sheets.

A total of sixteen full and partial grids were surveyed over the day and a half that it took to complete the survey. The base line was established to maximise the number of full grids surveyed, and tied into the 1:200 survey plan.

Results.

The completed plot shows very strong positive reading of both high and low resistance features. The strongest readings relate to the existing gravel paths. These are apparent on the eastern 3m. of grid 1, and form a right angle through grids 3 and 4. (Figs. 1, 2)

Particularly noticeable, however, are two extremely strong and well defined linear high resistance features running east- west and north-south across the plot. The density of these features suggests their being formed from dense material, probably stone or brick, although their size discounts their being structural; they appear to be between 3m. and 5m. wide. The larger and more defined of these, running east-west across the site through grids 3, 5, 7 and 9, aligns with the existing gravel paths and may well be a turfed-over continuation of those paths. No sign of this appears on the ground, however, as might be expected. A possible alternative is that this reading represents a previous pathway through the site.

The second of these linear features, runs north-south through grids 5, 6, and 14. In grid 14 the feature is apparently beneath the bank along the south wall, and was not registered by the instruments. It is of similar size to that running east-west, and may well be another buried pathway crossing the first. This may represent the basis of a formal garden on the site.

In grids 5, 6, 7, and 8 a large (25m. x 35m.) area of high resistance readings forms a rough well defined rectangle. It is bounded by areas of lower resistance, and appears to be cut by two parallel linear low resistance features, probably ditches, running east-west through grids 6, 8 and 10. Also evident in the same high resistance area is a linear feature of higher resistance running east-west on the same alignment as the probable ditches. This is of relatively higher resistance, and is of a size that may indicate the remains of a wall. However, given the obvious suitability of the site for resistivity it would be expected that walls would show a lot more strongly than does this feature.

A feature of similar size and density is shown in grid 4, east of the existing gravel path. Although there is no evidence for any relationship, it should be pointed out that these two features, if continued, form a right angle in the unsurveyed portion of grid 4.

Large amorphous areas of high resistance are visible in grids 5 and 7, partially obscured by the linear high resistance feature running through the grid. It is probable that these represent trees, and are therefore natural. However, it appears that there is a line of four of these areas, and they do not relate to existing trees. This would suggest landscaping sometime in the past. The apparently linear high resistance anomaly running south-west to north-east in grid 6 also appears to be natural. The remainder of the plot, the darker areas, are likely to be readings from the sub-soil.

Interpretation and Conclusions.

The plot shows very clearly the presence of large and well defined linear features; both negative and positive features. There is no way of predicting the depth or age of these features, but in all probability they lie between 0.5m and 1m. below the present ground surface. The deposits on the site appear, from limited examination of ground-works, to be ideal for resistivity. The contrast between high and low resistance can be attributed to this fact. Consequently, any features apparent from the survey plot are likely to be real, rather than reflections of the underlying geology.

In the light of this clarity in the plot it would appear that the previous layout of the gardens behind Chester House are to a greater extent still surviving sub-surface, and consequently trial excavations targeted using resistivity are likely to yield reasonable results. It is suggested that trenches be placed across the linear features to determine the nature of the deposits. If the sub-surface deposits revealed by the developers ground-works are continuous across the whole site the features will be easily apparent.

No structural remains are apparent, with the possible exception of the two linear high resistance anomalies in Grids 4 and 8, as discussed above. It is recommended that these be targeted with test pits to determine their exact nature.

It should be noted that almost all of the anomalies identified on the plot are related in alignment to Chester House itself. This would certainly suggest that they are related garden features. However, no conclusive layout of the gardens is readily apparent from the plot at present, but it must be stressed that the plot may change in the light of excavation work. Determination of the exact nature of the deposits revealed in the plot will facilitate further, and more targeted, filtering of the plot.