The geophysical survey west of Fonthill Lake

Published by

Dakers, Caroline.
Fonthill Recovered: A Cultural History.
University College London, 2018.
Project MUSE. muse.jhu.edu/book/81924.

For additional information about this book
https://muse.jhu.edu/book/81924
In November 2016, the PASt Landscapes team\textsuperscript{1} undertook magnetometry and resistivity survey in fields west of Fonthill Lake, in order to attempt to locate the first stately home on the Fonthill estate, built by Sir John Mervyn, and its redeveloped form, occupied by the Cottingtons and Alderman Beckford (see OS map Figure 1.1; see also Chapter 3 Figures 3.8, 3.15, 3.18 and 3.20).

**Magnetometry survey**

Magnetometry measures the magnetic field of subsurface deposits, allowing deposits with enhanced magnetic properties such as ditches, rubbish pits and hearths to be differentiated from less magnetic geological layers. Resistivity survey measures the electrical resistance of subsurface deposits; ditches are more conductive and less resistant than geological strata, as the soil contained therein is moister, whereas walls are considerably less conductive and more resistant, as their stone prevents the easy flow of electricity.

The magnetometry survey covered most of the modern cricket field, a long transect of the lakeside field running north from immediately east of the cricket pitch, and most of the large field running west up the dry valley west of the lake, north of the cricket pitch (see Figure 9.1).

The earliest features demonstrated by magnetometry were the fragmented remains of the ploughed-out banks of a later prehistoric or Roman field system. Like many others in the area, the field system consisted of fairly small rectangular fields separated by fairly broad banks, and would have been used for a mixed agricultural regime. A trackway down the centre of the dry valley running west from the lake may also have originated in this period.

The magnetometry also showed a large spread of disturbed ground with raised magnetic response across the south-eastern quadrant of the large field. In
the western side of this area a series of very high magnetic responses form a rectangular structure. This may be a building, an iron-reinforced structure within a larger building, or an external feature surrounded by iron posts or railings. Without further archaeological investigation it remains a mystery.

Further west a separate series of raised magnetic responses in the base of the valley hints at another fairly large structure, possibly the site of the church demolished by Alderman Beckford. A rectilinear group of responses at the northern edge of the field matches the location of a cottage built by J. B. Papworth for James Morrison, shown on Alfred Morrison’s 1878 estate map. A series of curving features matches precisely to the location of the curved wall at the eastern end of the kitchen garden formed by William Beckford and shown on estate maps from 1822 and also 1878 (see Figure 9.2). Finally, a series of modern pipes or drains run across the field in several places.
Resistivity survey

Resistivity survey is more time consuming, and therefore our use of this method focused on the north of the cricket pitch and south-east of the large field, where magnetometry showed most activity (Figure 9.3). The resistivity survey revealed rectilinear high-resistance anomalies across most of the survey area, all on a similar alignment. The highest resistance anomalies represent substantial walling, with the broader high resistance spreads of material likely to be rubble. These features coincide with the large area of raised magnetic response highlighted by magnetometry; the rectangular structure revealed by magnetometry also fits neatly within the areas of structural remains. The corner of a large, separate building was found at the northern edge of the survey area, possibly with buttresses given the shape of the anomaly. Other high-resistance features were found in a narrow strip adjacent to the lake, and likely represent a lakeside wall and a possible small building.

Overall, these results mean that the southern part of the earliest Fonthill House is very likely to be located across the northern edge of the cricket pitch and the woodland immediately east, with the bulk of the building in the south-east quadrant of the large field, probably stopping slightly short of the base of the dry valley.

The multi-phase nature of the house and its robbing for stone and building material for Fonthill ‘Splendens’ means that the survey results do not match precisely to the available documentary evidence, but the overall alignment and character of the anomalies accord well with evidence from the paintings of ca. 1754; in particular see Chapter 3 Figures 3.18 and 3.20.

Fig. 9.2 Detail from 1878 estate map of Fonthill, showing cottage (167c) and garden wall (around 166b) located by magnetometry survey.
Fonthill Estate Archives.
The survey has also highlighted the longer-term occupation of the valley, showing its early agricultural use in the later prehistoric and Roman periods, and demonstrating the existence of remains of later structures such as the cottage, other buildings and several garden features.

Fig. 9.3 Annotated colour-graded plot of resistivity survey results, David Roberts.

1 Large area of structural remains including walls and rubble
2 Possible garden features, walls
3 Large structure, possibly buttressed
4 Square ended building
5 Possible structure
6 Lakeside wall