**ANCIENT MONUMENTS LABORATORY GEOPHYSICS SECTION**

**REPORT ON RESISTIVITY SURVEY**

**SURVEY:** DEDDINGTON CASTLE, OXON. **DATE:** 31/5/79, 1/6/79

**Report no.** 9/79

## 1. SITE

**OS grid reference:** SP 472 316 **Field no.** -

**Location:** the Inner Bailey area

**Geology:** Jurassic 'clay, silts, siltstones'

**Archaeological evidence:** wall alignments noted during previous investigations on the site.

## 2. SURVEY

**Object:** to test the Inner Bailey area for the presence of unexcavated features

| (a) Resistivity survey | (i) Area survey | (ii) Traverses |
|---|---|---|
| **Configuration** | Twin Electrode | Twin Electrode |
| **Spacing – probes** | 1 m. | 1 m. and 2 m. |
| **traverses** | 1 m. | |
| **Meter** | Martin-Clark | |

**(b) Other tests** -

**Survey grid measured to:** excavator's fixed points

**Plans/charts enclosed:** location plan, 1 : 500
site plan with contour plot of resistivity data, 1 : 500

**cont/**

## 3. RESULTS

A large part of the inner bailey area was surveyed for detailed contrasts in ground resistance in the hope that these would reflect variations in soil moisture caused by the presence of foundations or other archaeological features. The area covered (see plans enclosed) included a 30 metre square set roughly centrally between the Gate House and the Tower Mound where evidence for the lay-out of buildings seemed least well understood; and a contiguous 15 x 30 m. area offset from this to the north, covering the inner northern corner of the bailey and crossing its defences. In addition, a single test traverse (T) was made between the base of the present Tower Mound and the western side of the defences.

The results of the survey are displayed as a filtered contour plot (see plan) and the zones of high resistance which one would expect to correspond with foundations can be compared with the position of features uncovered during earlier excavation work on the site. There is a broad correspondence with the latter, but although distinct, the anomalies are too broad for the resolution of much additional detail. In the southern half of the survey area there is good general agreement with the position of a N - S wall, part of a large 13th. Cent. building, in the centre of the bailey. There are several patches of high resistance in this area, all of which must relate to buried features some of which may be foundations but could equally well be caused by more diffuse effects from, for instance, rubble or cobbling. Apart from general trends, detail such as that seen in the kitchen area of the domestic range, cannot be extracted

In the northern part of the survey area the anomalies are generally scarcer and weaker. There is little evidence for the suggested presence of three northwards-running walls, but it is possible, as elsewhere on the site, that these features are very slight or have been robbed. On the other hand, there is good evidence for the presence of the outer wall although this has been confused by the alignment of the present bank. Along its north-western course the bailey wall runs at an angle with the surviving bank, and it is the latter that has produced the outstanding anomaly, owing to its greater dryness. Part of the wall here has been detected, however, and this happily coincides with an infilled area on the plan (?1140), suggesting here that masonry might be better preserved. The detection of both bank and wall, where the bank is again the stronger of the two anomalies, has been repeated on the traverse (T) to the south. On its north-eastern side the bailey wall coincides with the high resistance showing in the respective corners of the survey area, although the effects of the pronounced bank here must also be responsible.

The single traverse across the site was placed so as to cross both the surrounding wall and the base of the Tower Mound with the centre of the bailey between. A probe spacing of 1 metre was used for comparison with the area survey, and then the traverse was repeated with a 2 metre interval, approximately doubling the initial depth of penetration ( about 1 m.), to see if deeper features could be detected. The readings at 1 m. spacing (see inset on plan) closely correspond with those from the area survey, clearly emphasizing the bank and wall to the west. The central area shows an undiscriminating zone of high resistance suggestive of no particular details, and the eastern third shows average or relatively low readings which rise at the very end of the traverse indicating the edge of the present mound and possibly also the presence of a building here (13th. Cent. on plan). These main features of the traverse persist at 2 m. spacing proving at least that they are not superficial, but revealing nothing new.

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There is no really decisive evidence for a substantial ditch surrounding the mound. Although the readings here are low, they are no lower than over large parts of the remainder of the survey area. The ditch, if present, may well have a fill where moisture contrasts are not clearly marked at this time of year, and may be confused by later archaeological features.

## 4. CONCLUSIONS

In the broadest terms, the survey has confirmed much that was already known or suspected about the castle but has added little of its own account. Perhaps the complexity of features, overlapping and concentrated in a fairly restricted area, and in various states of preservation, accounts for this. Should further work of this sort be considered, it might well be worth surveying the area with a reduced probe-spacing, perhaps 0.5 m., as more recent work has shown this to be effective in detecting relatively greater detail at shallower depth.

Surveyed and reported by: A. David. 21st. May. 1981.
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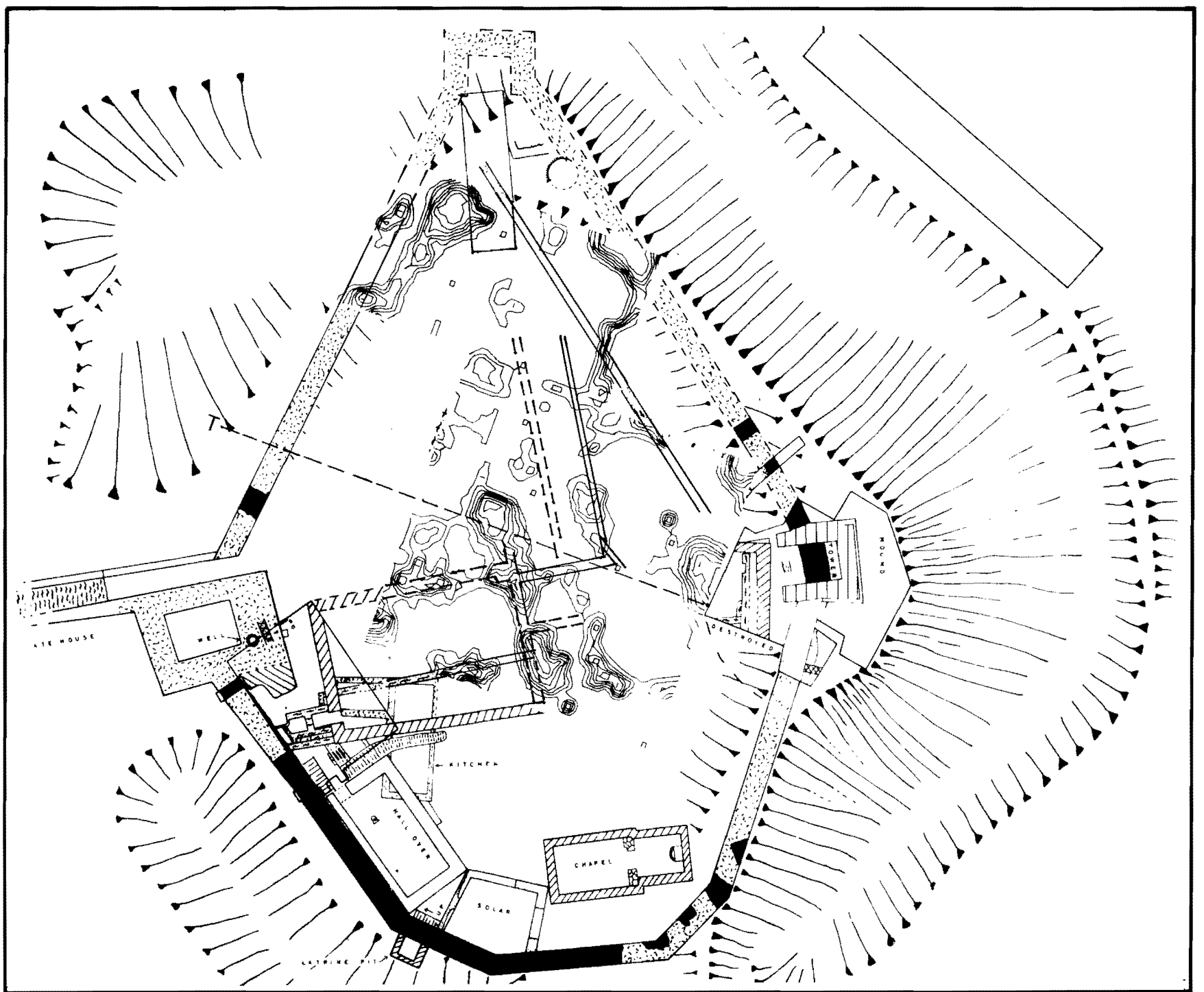
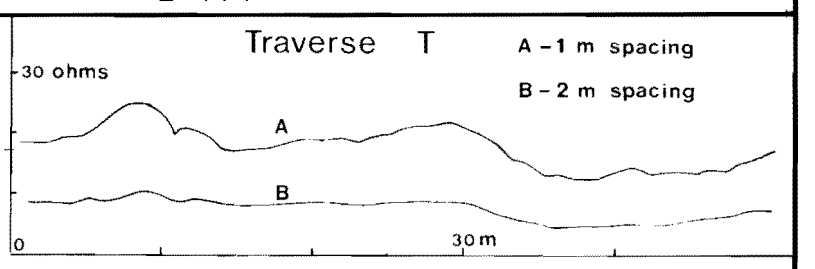



# DEDDINGTON CASTLE
## Resistivity survey, 1978




Known foundations in red

Filtered data shown as contours surrounding higher values

1 : 500

N

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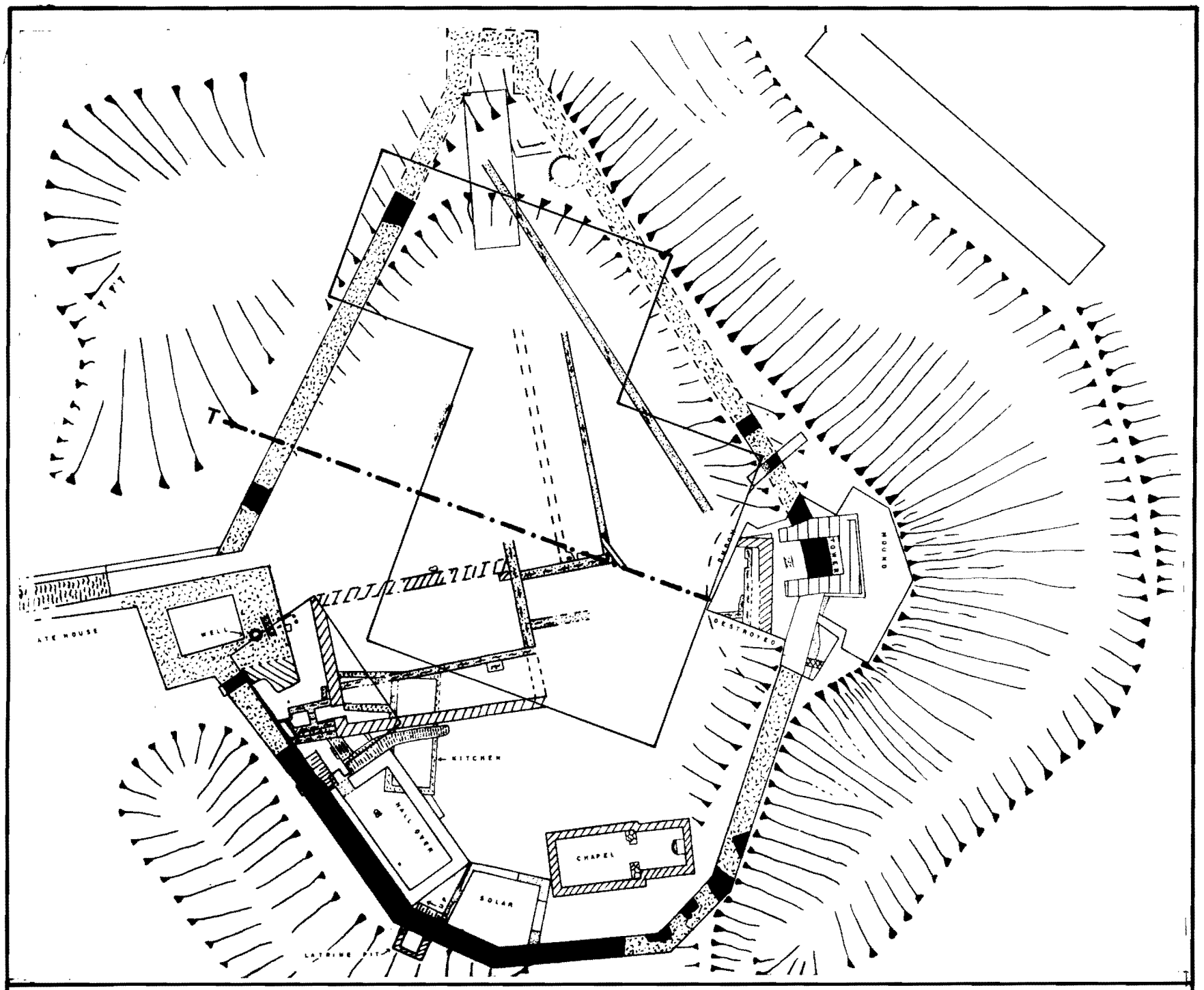


# DEDDINGTON CASTLE

## Resistivity survey, 1978

N

1:500

Survey area outlined in red

T —·—resistivity traverse

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