

**St Leonard's, Launceston
Survey 96/36**

Time Team

Six areas in and around the site at St Leonard's were surveyed using geophysical techniques as part of the *Time Team* investigations into the archaeological significance of recently discovered human remains. The aim was to try to establish whether the burials were associated with a known leper hospital and to see if there is any evidence for surviving archaeological features associated with the medieval site.

Survey Area 1 (Fair Field)

An extensive resistance survey, covering an area of approximately 1 ha, was investigated initially in the area next to the human burials and then in the adjacent field (Fair Field).

The results indicated a generally uniform background level of resistance readings with a few isolated high and low anomalies. The high readings in the southern half of the survey were thought at first to have greatest archaeological potential. During data collection, it was felt that the high readings could be associated with stone buildings thought to be surviving in the field. However, once the data had been processed and displayed as images it was realised that there was no 'structure' to the results; the variations were thought to be geological in origin. This was confirmed by trenching. Manganese outcrops close to the surface were found to be the cause of the anomalies.

Other anomalies noted in the survey data included those associated with an original boundary bank and ditch; this was also confirmed by excavation. Two narrow linear anomalies crossing the field were the result of a field drain and a small water pipe. An area of high resistance responses in the north-western arm of the survey corresponds with known manganese workings.

Survey Area 2

The aim of this survey was to investigate the line of a wall noted by local workers within a sewage farm. While the resistance survey failed to identify any responses that coincided with the reported location of the wall, clear anomalies were noted that followed the line of an earlier boundary crossing the site. Excavation confirmed the existence of this boundary wall which in turn was stated by the local workers to be the wall that they had seen during earlier excavations i.e. the original location they had suggested was incorrect.

When the survey area was extended to the south, several anomalies of potential interest were identified. These appeared structural in nature, however aerial photographs indicated that old sewage tanks had been located in this position.

Survey Area 3

This sample block of gradiometry was targeted on features of potential interest in a field to the north of the leper grounds. The results confirm the presence of former field boundaries, an old trackway and evidence for ridge and furrow cultivation. Several potential pit-like anomalies were also noted. However, there were no areas of noise that are often characteristic of building remains.

Survey Areas 4 and 5

These two areas were investigated by gradiometry with the aim of identifying possible buildings in the fields along the river to the north of the sewage farm but within the leper grounds. The results indicate areas of noise associated with the existing field boundaries, lines of former ridge and furrow cultivation, and an old field boundary now removed. As with Area 3, there are no distinctive areas of magnetic disturbance that might indicate buildings.

Survey Area 6

A resistance survey was carried out over this small area of lawn immediately inside the entrance to the sewage farm and east of the location of the burials. The restricted survey area and modern disturbance affected interpretation of the results. It was suggested that a trial trench be located in the south-western corner of the grid where the readings were slightly higher. While excavation found features of archaeological interest, the resistance results did not really correspond with the stone foundations that were discovered; the resistance results merely reflected the rubble above.

Conclusions

The geophysical work at St Leonard's succeeded in identifying numerous anomalies of archaeological potential, but none that could be demonstrated as being associated with the leper hospital. If the conclusions of the wider archaeological investigations are correct, i.e. the leper hospital remains are within the sewage works, then geophysics is likely to be of limited use in any future investigations. The extent of ground disturbance will severely hamper not only the effectiveness of the techniques but also the interpretation of the results.

J Gater

Geophysical Surveys of Bradford