SURVEY RESULTS

98 / 28 Papcastle, Cumbria

1. Survey Area

1.1 The work at Papcastle involved survey at two locations within the village. The first survey was in a small raised garden at Derwent Lodge Cottage, and the second open land to the south of 'The Grove'.

1.2 The survey grid was set out by ***GSB Prospection*** and tied in to existing field boundaries. The approximate survey areas are shown in Figure 1.

2. Display

2.1 The results are displayed as X-Y traces, dot density plots and grey scale images. These display formats are discussed in the *Technical Information* section, at the end of the text.

3. General Considerations - Complicating factors

3.1 The small area available for survey at Derwent Cottage Lodge and the great depth of soil resulted in difficult conditions for survey. However, the knowledge that a target did exist at depth allowed the appropriate methods to be used at the site.

3.2 The open land at the southern edge of the village was free of obstacles, although the presence of modern fences complicated the survey. The land was covered by short grass.

4. Survey at Derwent Lodge Cottage

It was believed that part of a Roman building might extend under a raised garden to the north of Derwent Lodge Cottage. Two techniques were used in this area. Initially, the garden was surveyed using electrical resistance with the Twin-Probe configuration. In an effort to circumvent the problem of the depth of soil some radar traverses were then undertaken.

Resistance survey

4.1 The area was surveyed using a 'multiplexer' system with measurements taken at 0.5, 1.0 and 1.5m probe separation. The three separations give measurements at different depth, with the 0.5m representing near surface variation and 1.5m more deeply buried resistance. all cases the results mirror the modern use of the garden i.e. paths, borders, etc. No variation at depth could be attributed to buried archaeology and the results are not reproduced in this report.

Radar Survey

The survey was carried out using a Mala GeoScience radar system and a variety of antennae. One traverse, using an unshielded 100 Mhz, produced significant results and is reproduced in this report.

4.2 The radargram indicates a number of strong reflections. The clearest of these is associated with a path at the surface and a presumed cable beneath it.

4.3 At a depth of 1.7 - 2.0 m can be seen a number of minor reflections. These were highlighted as positions of possible stone footings. Excavation proved this interpretation to be correct, with Roman pottery located directly above one of the stones. Other more subtle anomalies are present including presumed stratagraphic interfaces. Stratified layers are suggested both above and below the stone slabs. While bedrock is suggested on the diagram at between 3.5 -4.5m, it is possible that a reflector found at about 2.5m depth may indicate weathered bedrock rather than a soil interface.

5. Survey on land south of 'The Grove'

Survey was undertaken in the area to the south of The Grove on open pasture. At the eastern edge of the field is a track that may represent the route of a Roman road. If the track does indicate a road then it is possible that settlement may lie adjacent to it.

5.1 Magnetic survey within this area revealed a large number of anomalies throughout the data. In general there is a difference in response between the eastern and western half of the plot. Those in the eastern part of the survey appear to indicate the presence of individual pits, while the western section are likely to represent settlement responses. They are divided by what may be a trackway.

5.2 The resistance data has provided evidence for a series of high resistance anomalies. They are clearest in the area of increased magnetic noise. The interpretation of the resistance data suggests that the high resistance anomalies indicate either compacted surfaces, such as a road, or collapsed walling. The anomalies appear to 'go under' the existing earthwork and continue to the west of it. The alignment of these anomalies is of some interest as they appear to follow the general alignment of the fort.

5.3 The broad, high resistance anomalies adjacent to these presumed roads/walls are also likely to be of interest. It is believed that they may indicate the position of collapsed structures or deliberately laid floors.

6. Conclusions

6.1. Radar proved an effective tool in the estimation of the presence and depth of archaeological remains within the garden at Derwent Lodge Cottage.

6.2. The resistance and gradiometer surveys on the open pasture at the southern edge of the village have revealed a complex of archaeological type anomalies. It is likely that they represent settlement and associated activities.

Project Team: Dr C Gaffney, J Gater, Dr S Ovenden-Wilson and C Stephens (GSB Prospection)
J Emilsson (Mala GeoScience)

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References:

SSEW 1983. *Soils of England and Wales. Sheet1, Northern England.* Soil Survey of England and Wales.

SITE SUMMARY SHEET

98 / 28 Papcastle

NGR: NY 110 313

Location, topography and geology

The survey areas are within the village of Papcastle, Cumbria, which is situated on the northern bank of the River Derwent. The village has commanding views of the valley to the south and overlooks the town of Cockermouth. The soils at Papcastle are from the Brickfield 3 association, which are seasonally waterlogged clayey soils (SSEW 1983). Both survey areas were gently sloping down towards the river.

Archaeology

The scheduled area of the Roman fort of Derventio lies at the northern edge of Papcastle. It is known that a considerable part of the village overlies settlement associated with the fort. One of the survey areas is adjacent to a potential Roman building discovered during excavations of a patio at Derwent Lodge Cottage.

Aims of Survey

Survey was conducted in two areas using gradiometry, resistivity and radar techniques. In the first area it was hoped that geophysical investigations would locate presumed archaeology at a depth of c. 2m. In the second area the techniques were used to evaluate a zone of high archaeological potential. The work was part of a '**Time Team'** investigation undertaken for **Channel 4**. The programme is scheduled to be broadcast during 1999.

Summary of Results *

The investigations were successful in locating features of archaeological interest. Radar, at the Derwent Lodge Cottage site, revealed anomalies which on excavation proved to be stone slabs dating to the Roman period. The second area, at the southern edge of the village, revealed considerable activity, perhaps indicating planned settlement associated with the fort. Excavations again proved that Roman features were present, although insufficient time was available to determine the precise nature of the remains.

*** It is essential that this summary is read in conjunction with the detailed results of the survey.**

List of Figures