

SITE SUMMARY SHEET
98 / 104 Kemerton

GSB SURVEY No. 98/104 **NGR** SO 940 360 (General)
SMR / NAR No. Around HWCM 21698 **COUNTY** Worcestershire

SITE TYPE Cropmarks and excavation in Huntsman's Quarry (see Napton *et al* 1997 and Glyde 1998).
DESCRIPTION A complex of cropmark sites comprising trackways, field systems, settlement enclosures and pits; selective excavation has provided dating evidence.
PERIOD Bronze Age through to Saxon.

GEOLOGY & SOILS Fine loamy soils of the 511h Badsey 1 Association (*Soils of England and Wales, Sheet 3, Middle and Western England*) overlying river terrace deposits and Lower Lias Clay.
LAND-USE Mixed agricultural and pasture.

SURVEYTYPE Fluxgate Gradiometer **Magnetic Susceptibility**
INSTRUMENT Geoscan FM36 **Bartington MS2 coil**
SAMPLE INT 0.5m
TRAVERSE INT 1.0m **Spot readings**
METHOD Zig-zag
SURVEY AREA 6 Areas (1-6) total coverage c.4.12ha

SUMMARY OF RESULTS

Six areas, 1 to 6, were surveyed in detail using gradiometry during the course of *Time Team* investigations at Kemerton. The work successfully pinpointed a number of features visible as cropmarks (Areas 1, 2 and 6); this helped in accurately establishing trench locations and by providing more detail than that visible on aerial photographs. In addition, survey in a pasture field (Area 3) provided information on previously unrecorded archaeological features. However, work in a field (Areas 4 and 5) adjacent to an area of known archaeological features only produced tentative results.

SURVEY START 28th September 1998 **REPORT DATE** 6th January 1999
SURVEY END 30th September 1998 **AUTHOR** J Gater

PROJECT ASSISTANTS Dr C Gaffney, L Harvey and A Shields

SURVEY RESULTS 98 / 104 Kemerton

1. Survey Areas

- 1.1 Six detailed survey areas, 1 to 6, were investigated with gradiometry. A general location is shown in Figure 1 at a scale of 1:4000, while more detailed locations for each area are provided at a scale of 1:1250.
- 1.2 The survey was tied in by RCHME, who retain the location information.

2. Display

- 2.1 The results are presented as X-Y traces and grey-scale images, at a scale of 1:625. Interpretation figures are also provided at the same scale.

3. Results

3.1 Area 1

Cropmarks indicate a trackway with two enclosures lying to its west, one apparently appended to the track, the other isolated and much smaller in size. Former settling tanks associated with a sewage farm are also visible.

- 3.1.1 The gradiometer has successfully identified the major elements visible as cropmarks including the putative trackway. While some of the internal features apparently showing on Aerial Photographs (APs) have not been detected, others, particularly in the north-east, have been defined. A clearer picture of the ditch arrangements and apparent entrances has also been provided by the geophysical work. However, all of the responses are quite weak, and in places only just above soil noise levels. Spot readings taken with a Bartington coil indicated that magnetic susceptibility sampling would not have detected any significant elevation in background levels, but the anomalies could have been detected by gradiometer scanning.
- 3.1.2 Trial trenching confirmed the general findings of the geophysical survey and the lack of dense habitation evidence accounted for the absence of any strong magnetic enhancement.

3.2 Area 2

Cropmarks indicate a complex of apparent overlapping enclosures, the largest measuring approximately 70m x 40m.

- 3.2.1 Unfortunately, as a result of the overall project strategy, excavation trenches were begun prior to the geophysical survey work commencing, hence the large gaps in the survey plots.
- 3.2.2 The results provide a very clear plan of the archaeological complex and while there is broad agreement with the APs, there are distinct points of variance in the detail. The prominent enclosure (e5 - as referred to by Glyde, 1998) accords well with the gradiometer data as does an apparent trackway to the east. A pit alignment is also visible in both data sets.

3.2.3 However, a series of conjoined, almost circular cropmarks (e6) is not visible in the geophysics results. The gradiometer results indicate a linear ditch to the west of the clearest enclosure yet this is not marked on the AP transcriptions and the internal detail also differs significantly. Similarly, geophysical results for the area outside the enclosure to the east and north display considerable differences.

3.2.4 While it is expected that variations will arise between AP transcriptions and geophysical results, it is perhaps surprising that in this instance several major elements appear to be at odds.

3.3 Area 3

A pasture field to the north of the complex identified in Area 2.

3.3.1 Unfortunately, the results from the sample block in this field are distorted by strong anomalies associated with iron railings surrounding mature trees. In addition, a large metal feeding trough has resulted in an area of magnetic disturbance.

3.3.2 Despite the disturbed areas, the gradiometer survey has identified a complex of ditches, including a triple ditch alignment. These apparently 'turn through a right angle' though the complete picture is obscured by one of the trees referred to above and the magnetic anomalies are also far from clear in this part of the survey block. It would appear that there is some form of enclosure bounded by the linears; other anomalies indicate pit-like features and other short ditch lengths within the ditched enclosure. Unfortunately time did not permit a total survey of the pasture field as this may have helped resolve the interpretation. While some of the responses are associated with known archaeological features, it is possible that elements of a former formal garden are confusing the interpretation.

3.4 Areas 4 and 5

A ploughed field adjacent to Huntsman's Quarry where topsoil stripping revealed a complex of archaeological features, some of which appeared to extend northwards into these two sample areas.

3.4.1 The results here are more difficult to assess. While the remnants of ridge and furrow ploughing are clearly visible in the data, it is uncertain whether other anomalies are archaeological in origin. The responses are at the soil / instrument noise level, and as such the significance of any results is always uncertain. Mathematical processing of the data, in particular the different algorithms used, can result in spurious anomalies that in some instances can appear archaeological. For example, the 'circular' anomalies that have been highlighted, fall into this category though the linear responses appear more genuine. Unfortunately there is no clear correlation with the APs.

3.5 Area 6

Cropmarks indicate a small penannular shaped enclosure and fieldwalking recovered scatters of pottery across the field; this had been ploughed and harrowed prior to the survey.

3.5.1 The penannular enclosure (c. 23m x 18m in size) is clearly visible in the magnetic data with an entrance in the east. There are suggestions of internal pits, particularly in the western half. To the north is a small arc-shaped anomaly that also may be of interest.

3.5.2 There is a linear trend in the data aligned approximately N-S and this coincides with the modern day ploughing. It is interesting to note that the strength of the linears is greater closer to the enclosure, presumably a reflection of the plough cutting into the magnetically enhanced archaeological deposits.

3.5.3 Elsewhere in the data are several ill-defined responses, possible pits and short lengths of ditch, whose interpretation remains uncertain for reasons referred to in Section 3.4.1.

3.5.4 A small water pipe that feeds a nearby animal drinking trough is the cause of the anomalies in the south-east corner.

4. Conclusions

- 4.1 An area of over 4ha was evaluated by detailed gradiometer survey during the course of a 3-day *Time Team* investigation at Kemerton. Some elements of the archaeological landscape have produced clear magnetic anomalies, while other features have resulted in much weaker responses, close to background noise levels, but nonetheless still readily interpretable. A more detailed study would be required in order to fully explain the variation in anomaly strength, but clearly the nature, intensity and possibly the date of the occupation are affecting the level of magnetic enhancement. In addition, modern ploughing and localised differences in the sands and gravels will be contributory factors.
- 4.2 The survey has demonstrated that while unrecorded scanning with a gradiometer would easily identify the type of archaeological features found in Areas 1, 2, 3 and 6, it is still uncertain whether features of the type found in Huntsman's Quarry could be detected magnetically. Unfortunately, a lack of known similar features in Areas 4 and 5 prevents any conclusions being drawn about the effectiveness of gradiometry in this area. What is apparent, however, is that measurement of magnetic susceptibility levels, particularly on a coarse 20m sampling level, is not an appropriate way to locate the more ephemeral sites.
- 4.3 In general, there has been fairly good correlation between the AP evidence and the geophysical results, though in places some of the detail of the transcriptions has differed markedly.

References

- Glyde, M., 1998. *A Desk Based Assessment of the Cropmarks Around Kent, South Worcestershire*, Glyde Archaeology, unpublished report.
- Napthon, M., Jackson, R., Pearson, E., and Rakai, S., 1997. *Salvage recording at Huntsmans Quarry 1994-6: Post Excavation assessment and Updated Project Design*, Field Section, County Archaeology Service, Report 449, unpublished report.

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