

GEOPHYSICAL SURVEY REPORT
FOR
**AMMERDOWN HOUSE,
KILMERSDON**

REPORT NO: 05/01



Work commissioned by:
Cluttons – Rural Asset Management

ACKNOWLEDGEMENTS

In the preparation of this geophysical survey report, acknowledgment is made, with many thanks, to the assistance given by the landowner of Ammerdown House, Andrew Jolliffe who gave kind permission for this survey to be conducted.

Additionally, thanks are also extended to Mr. David Baker from Cluttons – Rural Asset Management, who kindly acted as the point of contact between the relevant parties.

Finally, thanks must go to Peter Rowe, who assisted with both the survey itself as well as the collation of the background information needed for the preparation of this report.

My thanks to you all.

ABREVIATIONS

GPS - Global Positioning System
NGR - National Grid Reference

LIST OF FIGURES

Fig.1 - Map displaying the location of the original gatehouses in relation to Ammerdown House and the believed re-routed roads
Fig.2 - O/S 1886 Map of surveyed area
Fig.3 - Plan / layout of surveyed grid
Fig.4 - Raw data – RM15 Resistance survey results
Fig.5 - Processed data- RM15 Resistance survey results

LIST OF PLATES

Plate 1 – Present north-west facing gatehouse
Plate 2 - Present south-east facing gatehouse

COPYRIGHT

Copyright to the following geophysical survey report, drawings and photographs, unless otherwise stated and referenced, is the property of Mr.P.R.Rowe, University of Bristol, to whom all enquiries should be addressed to: -

Mr.Philip R Rowe
University of Bristol
Department of Archaeology and Anthropology
43 Woodland Road
Bristol, BS8 1UU.

Email – PR1139@Bristol.Ac.UK.

1 - SUMMARY OF RESULTS

1.1 -

SITE RESULTS SUMMARY

GEOPHYSICAL SURVEY REPORT NO: 05/01 **NGR:** ST 708 523

SITE NAME: Ammerdown House, Kilmersdon, Bath & North East Somerset

SITE TYPE: Earthen partially metalled trackway

DESCRIPTION: Running north-east from the main B3139 road, the partially metalled earthen trackway was surveyed approximately 150m north-east from the main road and the two current gatehouses, following guidance from the owner, Mr Jolliffe.

PERIOD: Original 18th Century house and landscape designed by James Wyatt combined with a later Italianate formal garden layout by Lutyens.

GEOLOGY: Partially metalled surface overlying a mixture of Triassic Rhaetic mainly clay (10 -30Ft), Jurassic Lower Lias mainly clay with bands of limestone, Jurassic Inferior Oolite limestone (30-50ft) and Jurassic Oolite series forest marble / fullers earth.

LAND USE: Trackway / Footpath

SURVEY TYPE:	Resistance	METHOD:	Zig – Zag
INSTRUMENT:	Geoscan RM15	SURVEY AREA:	50m x 20m
SAMPLE INT:	1m	TRAVERSE INT:	1m

RESULTS SUMMARY:

A RM15 resistance survey of an area 50m x 20m was completed in April 2005, providing, as a result, distorted geophysical raw data that has made accurate interpretation of the site difficult. Suggesting the possible presence of buried building material pertaining to two perceived structures believed located either side of a partly metalled trackway leading from the B3139 to Ammerdown House, the overall disturbed local geological conditions of the site makes the precise archaeological interpretation of the geophysical survey results difficult and therefore suggestive rather than conclusive.

SURVEY DATE(S): 13th April 2005

REPORT DATE: 16th June 2005

COMPLETED BY: Philip R Rowe

REPORT AUTHOR: Philip R Rowe

2 – INTRODUCTION

2.1 Commissioned by David Baker of Cluttons – Rural Asset Management, on behalf of Andrew Jolliffe, owner of Ammerdown House, in consultation with English Heritage, a RM15 Resistance survey was conducted early April 2005 in order to establish the whereabouts of two believed previously demolished gatehouses.

2.2 To cover an area indicated on old maps held by Mr Jolliffe as being the possible location of the earlier gatehouses (**Fig.1**), a survey grid measuring 50m x 20m (10m² per grid) was laid out over a partly metalled earthen trackway that leads to Ammerdown House, Kilmersdon, c.150m from the main B3139 road and the two existing derelict gatehouses (**Plates.1/2**).

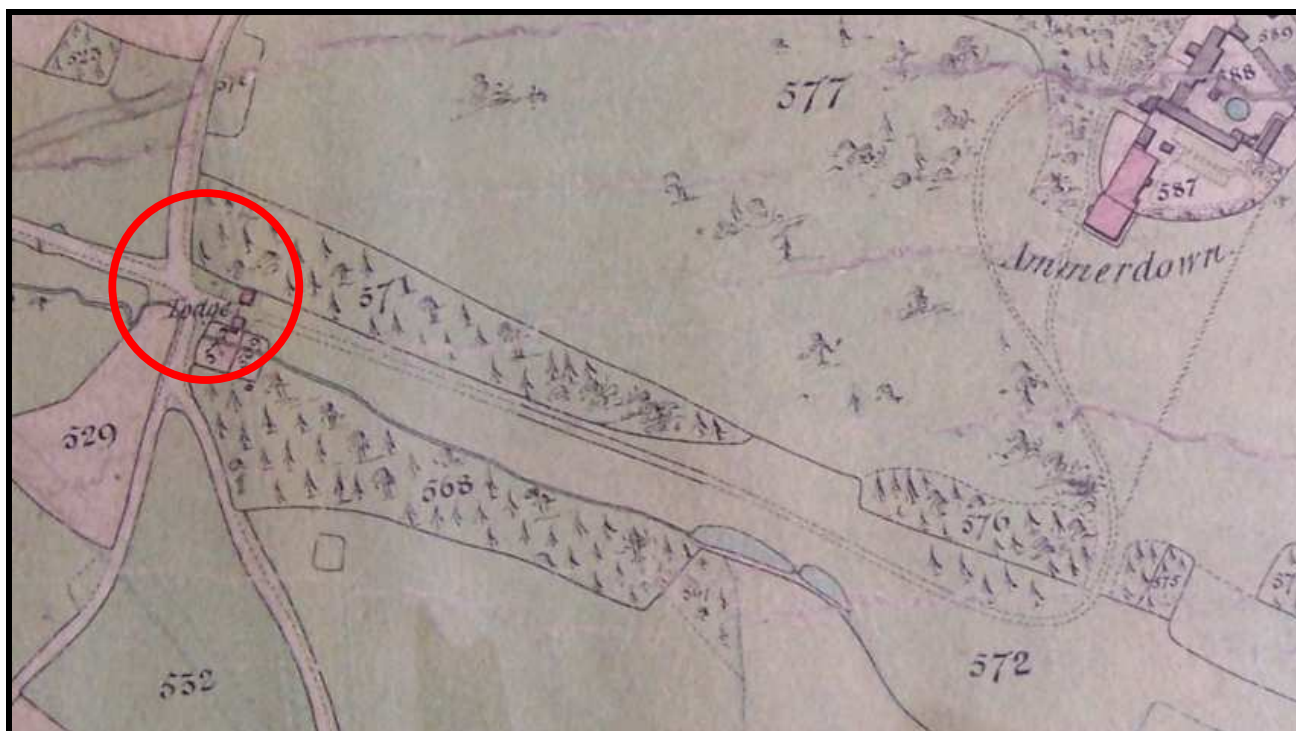


Fig.1 – Map displaying the location of the original gatehouses in relation to Ammerdown House and the believed re-routed roads (Jolliffe)



Plate 1 – North-West facing gatehouse (Author)



Plate 2 – South-East facing gatehouse (Author)

3 – LOCATION, TOPOGRAPHY AND GEOLOGY

3.1 Situated just off the B3139 road, c.1km east-north-east of the village of Kilmersdon, Somerset, and 13.25km south-west of the City of Bath, the surveyed site (NGR ST 70816 52304) can be found located c.150m along a partially metalled earthen trackway that lies within the estate grounds of Ammerdown House.

3.2 Lying 110m above sea level ¹ in the valley bottom of a small group of elevated ridges, the surveyed site can be seen to lie upon a mixture of Triassic Rhaetic mainly clay (10 -30ft), Jurassic Lower Lias mainly clay with bands of limestone, Jurassic Inferior Oolite limestone (30-50ft) and Jurassic Oolite series forest marble / fullers earth.

4 – GEOPHYSICAL SURVEY

4.1 Point of Note: Whilst all survey reports are produced as correctly as possible, the resulting information is based on the accuracy of the equipment therefore no responsibility is taken for any errors or omissions.

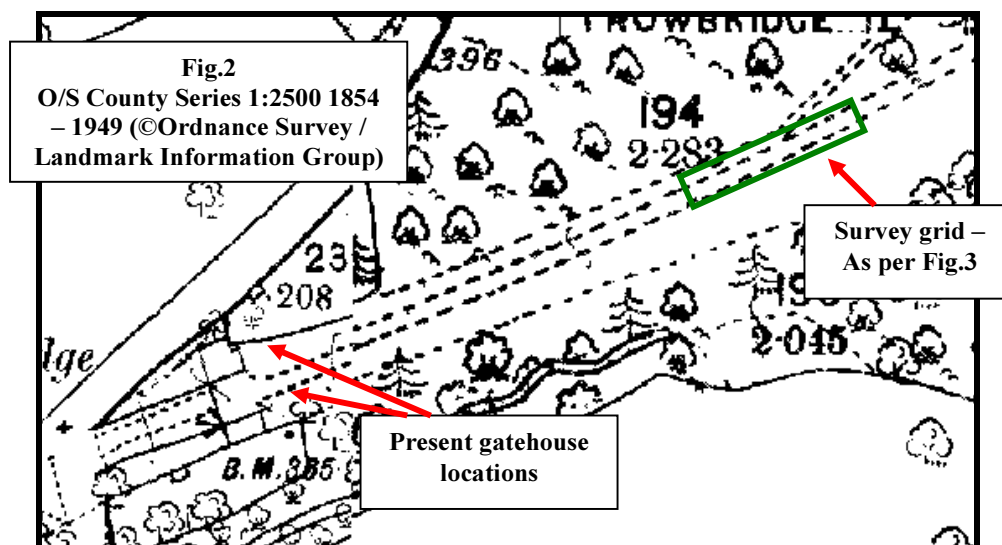
4.2 INSTRUMENTATION

4.2.1 Resistance Meter – Geoscan RM15: Measuring the electrical resistance of the earth to a current being passed through it via a system of four electrodes (two current and two potential), a twin probe arrangement (0.5m interval) that involves the paring of electrodes (one current / one potential) was passed over a measured grid, with the results being compared to a back ground reading obtained from a pair of electrodes placed in a 'fixed' position.

4.2.2 Measured in Ohms and calculated resistivity in Ohm – Metres, the effective dept of penetration for the RM15 resistance meter is approximately 0.75m, although the nature of the overburden as well as underlying geology will cause variations in this generality.

4.3 SURVEY AREA

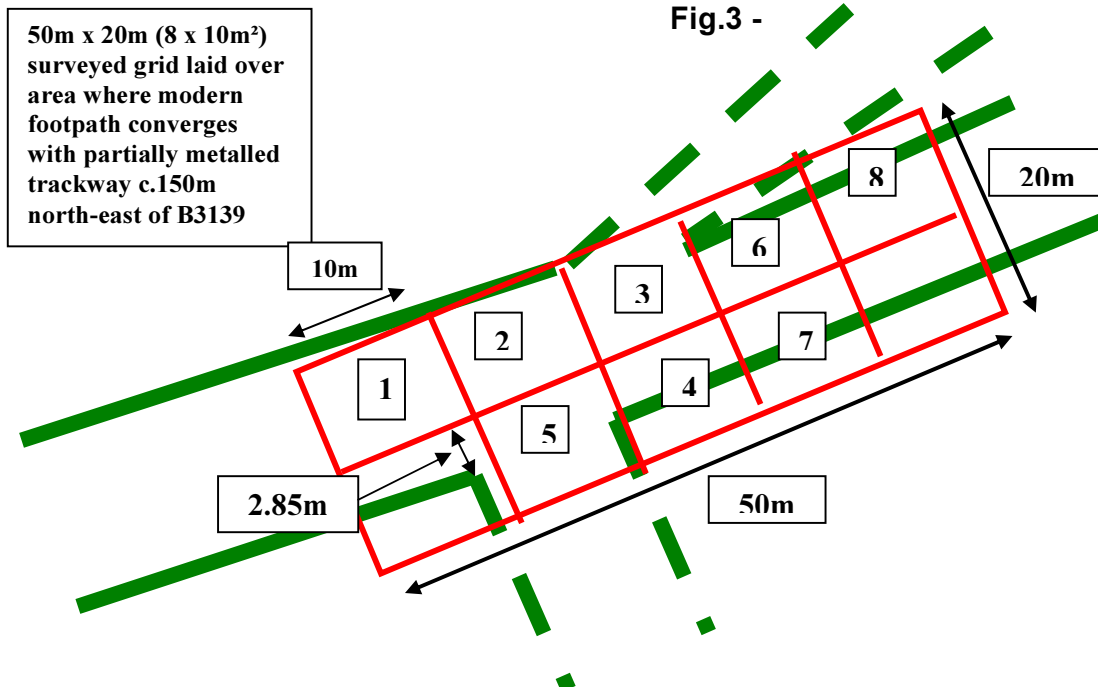
4.3.1 The RM15 resistance survey was completed over a 50m x 20m (8 x 10m²) grid area that incorporated the area highlighted in Fig.2.



¹ Information obtained using handheld Garmin *Etrex* 12 Channel GPS system (accuracy to 5m).

4.3.2 Set out by P R Rowe with the aid of P J Rowe, the survey grid was measured in using taped offsets from a 50m baseline running in a south-west to north-east direction (**Fig.3**), though it must be noted that the grid was NOT tied into the current Ordnance Survey mapping system ¹.

Fig.3 -



4.4 DISPLAY

4.4.1 Displayed as greyscale images, this visual format divides a given range of predefined arrangement of dots / shades of grey readings into a set number of classes.

4.4.2 Increasing in intensity as the value increases, the resulting image is displayed as a toned / grey scale enabling fast and accurate interpretation of any sub-surface archaeological features discovered.

4.5 COMPLICATING FACTORS

4.5.1 Overall, the survey conditions of the site were acceptable, with the ground being relatively flat and either under short grass or partially metalled, though a small part of the survey area was obstructed by bushes / trees that resulted in the logging of 'dummy' readings.

4.5.2 Additionally the partially metalled trackway, as well as the mixed local geology would have quite conceivably caused problems with the resistance survey results suggesting that an accurate archaeological interpretation of the site would be difficult.

5 - RESULTS

5.1 Two areas of disturbed material are visible (**Fig.4**) within the greyscale displayed resistance data: Line A) north of the trackway and line B) located south (**Fig.5**) (**Appendix A/B**).

¹ Survey grid location / layout accurately represented in Fig.'s.2 & 3 for surveying purposes.

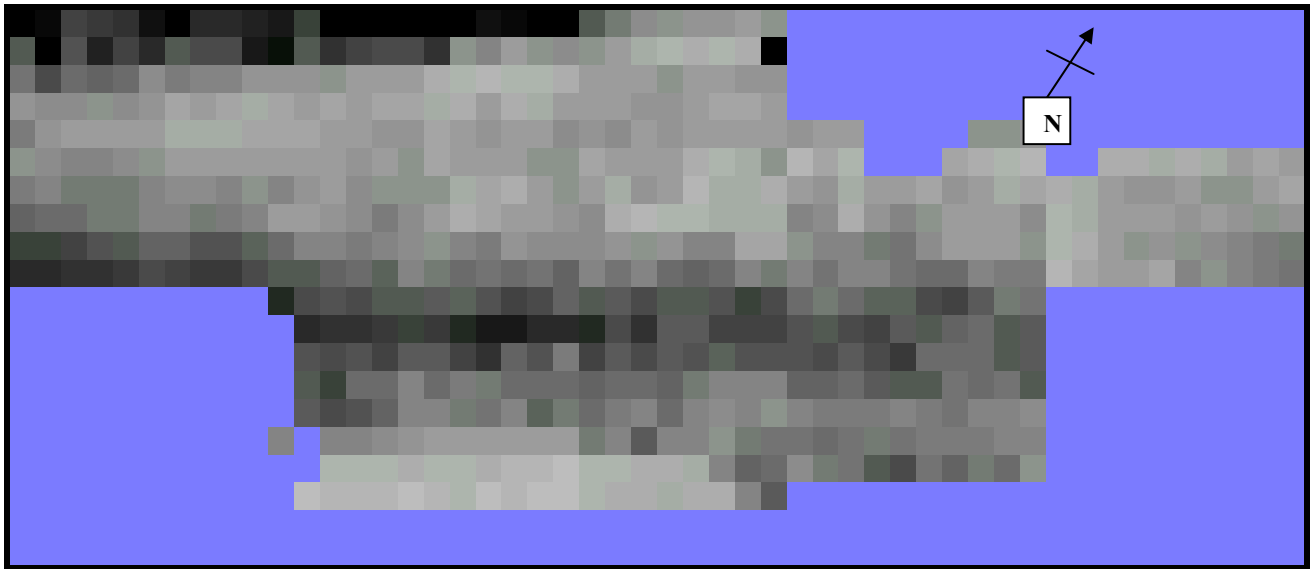


Fig.4 – Raw data – RM15 Resistance survey results – Ammerdown House

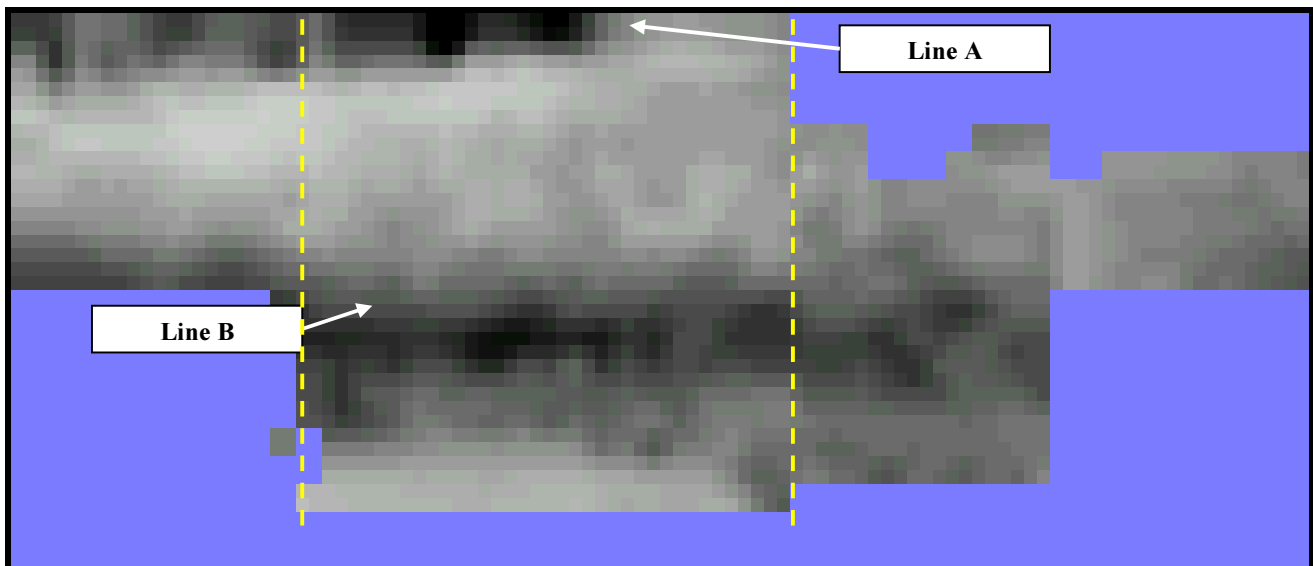


Fig.5 – Processed data – RM15 Resistance survey results – Ammerdown House

5.2 Stretching for c.20 -25m, the distribution of resistance encountered along line A (incorporating grid numbers 1,2,3,6,8 – As per **Fig.3**) infers the presence of high resistance material, suggesting as a result the possibility of it pertaining to scattered building material.

5.3 Additionally, line B, also stretching for c.20-25m though (incorporating grid numbers 5,4,7 – As per **Fig.3**) and lying parallel to line A, also displays the presence of high resistance material suggesting, as per 5.2, the possibility of scattered building material.

5.4 Viewed together, the highest resistance appears in grids 2 (line A) and 5 (line B) suggesting the possible locality of a structure (marked between yellow lines – **Fig.5**).

5.5 It must be noted however that the interpretation(s) forwarded in 5.2 – 5.4 are only suggestive and by no way conclusive due to the high level of disturbance along lines A and B.

6 - Conclusion

6.1 The results of the RM15 resistance survey at Ammerdown House suggest the presence of possible buried building material pertaining to structures at the location given by the client; however this conclusion is suggestive and therefore inconclusive in terms of archaeological interpretation of the site.

6.2 Only a full archaeological excavation of the site would fully establish the presence of any building(s) / gatehouse(s).

Project Co-ordinator: P R Rowe

Project Assistant: P J Rowe

Field work survey completed 13th April 2005

Survey Report 16th June 2005