DISCOVERING DUMFRIES AND GALLOWAY’S PAST

RESISTIVITY SURVEY AT COREHEAD, ANNAN WATER
INTERIM REPORT

COVER IMAGE: VOLUNTEERS UNDERTAKING SURVEY AT COREHEAD
Summary
Volunteers undertook a single day of resistance survey to the immediate North of Corehead Farm, near to the head of Annan Water. A range of historic documents as well as a map of 1590 provide evidence for a tower at ‘Ye Corhead’, although the site for this tower remains unlocated (NMRS NT01SE 52), and it is not depicted on further mapping. This site did not form a direct target of the present survey; the main aim was to test the suitability of resistance survey as a prospection technique across this area.

A generally ‘noisy’ background was recorded across the survey area, most likely the result of recent agricultural activity. A number of probable post-medieval features were recorded, directly observable on late 19th century mapping. Additional features of high resistance were noted; however, they remain difficult to interpret given the small area of survey; further survey would assist in placing these features in a wider context.

A wide range of volunteers drawn from the local community participated in the survey, and attended a talk to hear about the preliminary results.
Acknowledgements
The survey would not have been possible without the enthusiasm of all volunteers who turned up on the day; our thanks to them all. Background research has previously been conducted by Corehead Archaeology Search Team, in particular Chris Halliday, Peter Dreghorn and David Paterson. Permission to carry out survey was granted by landowners, John and Berenice Williams, with assistance from Peter Dreghorn and Borders Forest Trust. This phase of Discovering Dumfries and Galloway’s Past is jointly funded by the Scottish Government and The European Community, Dumfries and Galloway LEADER 2007-2013; The Crichton Foundation and The University of Glasgow.
Introduction
This report presents the results of a single day of resistance survey carried out in the vicinity of Corehead Farm, near Moffat. In total, eight 20m x 20m grids were completed, in a contiguous block to the immediate north of Corehead farmhouse.

This fieldwork was carried out by volunteers drawn from the local community, under the supervision of staff from the University of Glasgow. The survey was part of Discovering Dumfries and Galloway’s Past, a project engaging local communities across the region in non-intrusive archaeological fieldwork.

Project Background

Site Location
The survey area, centred on NT 0721 1251 (figure 1), comprised an area of undulating pasture, and incorporated land either side of two burns, tributaries of the River Annan and Smure Gill which converge towards the north-east corner of the survey area.

The ground conditions and weather on the day of the survey were good, but the large number of obstacles encountered during survey, and the large amounts of stone present across the survey area made survey challenging, and a number of poor contacts were recorded (discussed below). The survey spanned the burn, so a number of dummy values were taken across this area.

Aims and objectives
The purpose of any geophysical survey is to “as far as reasonably possible, determine the nature of the detectable archaeological resource within a specified area using appropriate methods and practices” (English Heritage, 2008: 3).

As a training exercise, and community archaeology project, a key purpose was to provide hands-on experience for local volunteers in planning, setting up and conducting a geophysical survey.

Archaeological and historical background

The focus of research in this area has been the site of ‘Ye Coreheade’, a tower which is depicted figuratively on “A Platt of the Opposite Borders of Scotland to the West Marches of England” (1590), which forms part of a map portfolio annotated by Lord Burghley “to whom the volume at one time belonged” (Ellis, 1829: 161). Corehead is depicted as a tower symbol at the extreme north-east corner of the map. It is possible that this is the same structure depicted on Blaeu’s Atlas of Scotland (1654).

A number of contemporary literary and documentary references have been identified through extensive historical research carried out by Chris Halliday (pers. com.).

However, it has proved difficult to identify a location for the tower, and the suggestion of it being “near Corehead steading” (Hyslop and Hyslop, 1912: 320) must remain tentative.
In the wider area, the majority of monuments represent post-medieval agricultural activity, with lynchets, rig and furrow, clearance cairns and sheepfolds all being found in the local area.

<table>
<thead>
<tr>
<th>NMRS No</th>
<th>Site type</th>
</tr>
</thead>
<tbody>
<tr>
<td>NT01SE 4</td>
<td>Field boundary, pen, scooped settlement</td>
</tr>
<tr>
<td>NT01SE 6</td>
<td>Enclosure, pen, settlement</td>
</tr>
<tr>
<td>NT01SE 34</td>
<td>Enclosure</td>
</tr>
<tr>
<td>NT01SE 41</td>
<td>Cairnfield, hut, lynchet</td>
</tr>
<tr>
<td>NT01SE 42</td>
<td>Building Platform</td>
</tr>
<tr>
<td>NT01SE 47</td>
<td>Enclosure, lynchet, quarry, rig and furrow</td>
</tr>
<tr>
<td>NT01SE 50</td>
<td>Cultivation remains, farmstead</td>
</tr>
<tr>
<td>NT01SE 61</td>
<td>Sheepfold</td>
</tr>
</tbody>
</table>

Sites of probable post-medieval date in the vicinity of Corehead Farm (NMRS NT01SE 53).

One set of features, the settlement and enclosures situated on White Hill, to the south-east of the site, overly an oval defended settlement/fort defined by two stone-faced ramparts and ditches (NMRS NT01SE 6). It is clearly of multi-phase construction but may originate as a later prehistoric enclosed settlement (Scheduled Monument SM 6192).

Of particular note are two irregularly shaped enclosures, formed of broad stony banks, 200m to the south-west of the survey area (NMRS NT01SE 34). The banks of these enclosures are rather amorphous, but they appear to define the boundaries of pre-19th century cultivation in this area.
Additionally, a walled enclosure has been identified by members of the Corehead Archaeology Search Team (CAST) on an RCAHMS aerial photograph taken in 1951 (Dreghorn, 2012). This was the site of the excavation of a number of test-pits in 2011, which recovered little artefactual material. On balance, this site would appear to represent an animal enclosure of fairly rough construction.

The focus of the survey was to the immediate north of Corehead farmhouse (NMRS NT01SE 53), which appears to be first shown on John Thomson’s *Atlas of Scotland* 1832¹. The farmhouse appears to be little altered during the 19th century, as depicted on the Ordnance Survey 1st edition map and its revision (figures 2 and 3). The byre to the north, however, is substantially modified, with an east-west aligned ‘wing’ added to the north-south aligned building. Only the east-west aligned portion of this building stands today. The area to the immediate north of this modern section of building was therefore excluded from the survey, due to its potential to contain significant quantities of demolition rubble.

Geophysical survey

Standards
The survey and subsequent reporting were carried out in accordance with English Heritage’s guide to *Geophysical Survey in Archaeological Field Evaluation* (2008), the IfA’s *Standard and Guidance for Archaeological Geophysical Survey (Draft)* (IfA, 2010) and the ADS’ *Geophysical Data in Archaeology: A Guide to Good Practice* (Schmidt, 2001).

Field methods
An overall survey grid was established using tapes, with reference to known points on Ordnance Survey mapping. Data collection was carried out using a standard methodology. A zig-zag traverse scheme was employed, logging data in 20m grid units, with all grids walked in the same direction (E-W).

A Geoscan RM15 resistance meter was used to conduct the resistance survey; the sample interval used was 1.0m with a traverse interval of 1.0m.

Data processing
Geoplot software (version 3) was used to download and process the resistance data. Greyscale plots of both raw and processed data were produced in Geoplot. Only the processed data is presented in this report, with the raw data included in the project archive.

The ‘raw’ data has been subject to minimum editing to remove operator error, with data subsequently processed to remove geological and background biases and interpolated to aid interpretation (see appendix 1).

Results
A greyscale of the processed data is included as figure 4; interpretation is presented in figure 5, with anomalies discussed in the text below annotated for ease of reference.

Resistance survey was generally successful across the survey area, although the ‘noisy’ background of the survey made interpretation of some features difficult. There were large amounts of near-surface stonework present, particularly along the course of the burns, creating wide areas of higher resistance. A number of poor-contacts were recorded as a result of this buried stonework, which most likely results from post-medieval/modern field clearance in the vicinity of the site.

A number of features appear to relate to field-drains crossing this area, particularly anomalies A and E, high resistance linear traces, which share the same alignment. Three anomalies of higher resistance, B and G, most likely represent concentrated areas of rubble stonework in these areas.

Anomaly C, a well-defined discrete area of high resistance, measuring approx. 10m across, correlates well with a small enclosure shown at the corner of a field boundary on the revised version of the 1st edition Ordnance Survey map (surveyed 1898; see figure 6).

A complex of features of both high and low resistance clusters are evident, at the convergence of the burns at the north of the survey area (D). These features indicate that a prominent earthwork identified to the east of the burn in this area may well represent a concentrated area of buried stonework. This correlates well with a bridge shown across the burn at this point on the revised version of the 1st edition Ordnance Survey map (see figure 6). This would suggest that this feature is a bridge abutment, most likely dating from the late 19th-century, as it is not shown on the original 1st edition map, surveyed in 1857 (see figure 2).

The most well defined feature is a semi-circular arc of high resistance (F). The discrete nature of the anomaly would suggest that it represents in situ building material, with a more amorphous area of high resistance to its east representing rubble. Faint linear trends of high-resistance appear to lead off the western side of this feature, although they are hard to define. The feature remains difficult to interpret, given that no evidence for defined areas of in situ building material are discernible around it.

**Conclusions**

The programme of resistance survey in the vicinity of Corehead farmhouse has recorded spreads of stonework, mostly representing post-medieval/modern clearance across this area. Several features are better defined, including an animal enclosure depicted at the corner of two field boundaries that are no longer extant. Of particular note are features that are best interpreted as bridge abutments across the burn, which correlates with a sub-circular earthwork evident in this area.

A well-defined semi-circular anomaly, measuring almost 18m north-south, is evident slightly upslope of the burn. Its discrete nature would suggest that it represents in situ building material, although it remains difficult to interpret given that no other clear cut traces of buildings were identified in association with it.
Appendix 1: Technical data

Resistance Data

1. ‘Raw’ Data

*Clip* (limits maximum and minimum values for display and subsequent processing): \( -2/2 \sigma \)

*Despike* (removes large anomalies above a certain threshold): x-radius 1; y-radius 1; threshold 3.5

2. Processed data

*High Pass Filter* (removes constant background gradient, such as that caused by geology/hydrology)

*Interpolation* (smoothes greyscale appearance by adding extra data points into the dataset, calculated with reference to surrounding collected data)

For more technical information on data processing, see (Geoscan Research, 2005: Chapter 6).

Appendix 2: Volunteers

Thanks to the following for their assistance with the survey.

Gill Tilstone
Peter Dreghorn
Jim Ness
Brenda Dreghorn
Chris Halliday
Margaret McIlhinney
Martin Tilstone
Eric McIlhinney
Richard Gillanders
David Paterson
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http://www.archaeologists.net/sites/default/files/node-files/geophysicsSG.pdf 04/07/2012

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FIGURE 1: GENERAL LOCATION OF GEOPHYSICAL SURVEY
Figure 2: Ordnance Survey 1st Edition (1:2500 Dumfries-shire Sheet IX.7; Surveyed 1857)
DDGP: Survey at Corehead, Annan Water | 12

**FIGURE 3: ORDNANCE SURVEY 1st EDITION REVISION (1:2500 DUMFRIES-SHIRE SHEET IX.7; SURVEYED 1898)**
FIGURE 4: PROCESSED RESISTANCE SURVEY DATA
Figure 5: Interpretation plan of resistance survey data.
Figure 6: Ordnance Survey 1st Edition Revision (1:2500 Dumfries-shire Sheet IX.7; Surveyed 1898) Overlaid on Processed Resistance Survey Data