

Hoy and Walls Landscape Project 2012

Cantick, S. Walls and Braebuster, Hoy Orkney



Walkover and Geophysical Survey

September 2013



Cantick, South Walls and Braebuster, Hoy Orkney

Walkover and geophysical survey

Data Structure Report

Project No: 345

ORCA
Orkney College
East Road
Kirkwall
Orkney
KW15 1LX

Project Manager:
Nick Card MA MIFA FSA Scot
Daniel Lee BSc MA

Report:
Daniel Lee

Figures:
Daniel Lee
Linda Somerville

Funder:
Orkney Islands Council
Scapa Flow Landscape Partnership Scheme

September 2013

© ORCA 2013

This documents has been prepared in accordance with ORCA standard operating procedures and IFA standards	
--	--

Authorised for distribution by: Nick Card	Date: 05/09/13
---	----------------

Contents

Executive Summary	5
Acknowledgements	28
1.0 Introduction	3
1.1 Aims, Objectives and Research Questions	4
1.1.1 <i>General:</i>	4
1.1.2 <i>Research Questions:</i>	4
2.0 Site Location, Topography and Geology	4
3.0 Historical and archaeological background	5
3.1 Cantick	6
3.2 Braebuster	6
4.0 Walkover survey	9
4.1 Methodology	9
4.2 Results summary	9
4.2.1 <i>Cantick</i>	9
4.2.2 <i>Braebuster</i>	11
5.0 Geophysical survey	15
5.1 Geophysical survey methodology	16
5.1.1 <i>Magnetometry</i>	16
5.1.2 <i>Resistance Survey</i>	17
5.2 Geophysical survey results.....	18
5.2.1 <i>Area 1</i>	18
5.2.2 <i>Area 2</i>	20
5.2.3 <i>Area 3</i>	21
5.2.4 <i>Area 4</i>	21
5.2.5 <i>Area 5</i>	23
6.0 Conclusions	24
7.0 References	26
7.1 Bibliographic References.....	26
7.2 Cartographic References.....	28
Appendix 1: Cantick and Booth walkover sites	29
Appendix 2: Braebuster walkover sites	31
Appendix 3: Photographic registers	33

Figures

1. Site location
2. Walkover sites at Booth, Cantick
3. Walkover sites at Braebuster, Hoy
4. Site plans, G33, G64 and SWC42
5. Geophysical survey areas
6. Area 1 processed magnetometer data
7. Area 1 magnetometry interpretation
8. Area 1 processed magnetometer data and walkover sites
9. Area 2 processed magnetometer data and interpretation
10. Area 2 processed resistivity data and interpretation
11. Area 3 processed magnetometer data and interpretation
12. Area 3 processed resistivity data and interpretation
13. Area 4 processed magnetometer data and interpretation
14. Area 4 processed resistivity data and interpretation
15. Area 5 processed magnetometer data
16. Area 5 magnetometry interpretation
17. Area 5 processed magnetometer data and walkover sites

Plates

Cover: Surveying the prehistoric house G64

1. Braebuster township in 1750
2. Howequoy (SWC42)
3. Later fireplace in the gable end of SWC50
4. Braebuster hill dyke G43
5. Prehistoric house earthwork G64
6. Resistivity survey at Groups G51
7. Magnetometer survey in Area 5

Executive Summary

The Orkney Research Centre for Archaeology (ORCA) undertook walkover, measured and geophysical survey at Cantick, South Walls, and Braebuster, Hoy, as part of on-going research: the Hoy and South Walls Landscape Project. At Cantick, the walkover survey recorded 19 sites, including possible prehistoric mounds and post-medieval farmsteads and houses within land at Booth farm. At Braebuster, 30 sites were recorded during the walkover survey including possible burnt mounds and a prehistoric house. The township head dyke and numerous other features dating to the post-medieval period were also recorded. Measured survey was undertaken at sites SWC17, SWC42, G33 and G64.

Geophysical survey (magnetometry and earth resistance) was carried out in five areas (1-5). These targeted the east and west square barrow cemeteries, the farmhouse house sites (G33 and G51) at Groups and a prehistoric house (G64). Significant anomalies relating to the walkover sites were noted in the resulting data in all areas, apart from Area 4 which contained ferrous material. The square barrows were generally magnetically quiet although some anomalies were noted. Strong magnetic responses and clear areas of high and low resistance, indicative of midden and structural features respectively, were present at the prehistoric house (G64).

Walkover and geophysical survey has further enhanced understanding of the rich multi-period landscape of Cantick and Braebuster. Additional walkover survey, expanding on the areas already covered, would be beneficial in further characterising these landscapes and continuing to address the research questions. Excavation would be beneficial at one of the square barrows to characterise and date the cemetery.

1.0 Introduction

The Orkney Research Centre for Archaeology (ORCA) undertook walkover and measured survey at Cantick, South Walls, and Braebuster, Hoy, Orkney. This formed part of the Hoy and Walls Landscape Project, a research project that has been running since 2006. Geophysical survey (magnetometry and earth resistance) was also undertaken at Braebuster. The project was funded by Orkney Islands Council's Heritage Fund and the Scapa Flow Landscape Partnership Scheme.

The walkover survey undertaken at Cantick by Robertson (2006) was extended to the west adjoining most of the area previously investigated by Card (1998). Three sites were targeted for detailed measured survey: burnt mound (SWC 17), nausts (SWC 9-11) and Howequoy (SWC 42). The walkover survey area at Groups, Braebuster, investigated by Lee (2011) was extended around the eastern square barrow cemetery to the south-west of The Witter and at Bailie Breck, and to the north-west encompassing land at Slack. Two sites were targeted for detailed measured survey: farmhouse G33 and Bronze Age house G64.

Five areas were investigated during the geophysical survey: Area 1 targeted the main square barrow cemetery (G1 – G20), Area 2 the Bronze Age house (G64), Area 3 farmhouse G33, Area 4 Groups farmhouse and Area 5 the eastern square barrow cemetery (G39 – G41). Magnetometry was used in all five areas and earth resistance in Areas 2, 3 and 4 only.

The fieldwork was conducted in two blocks: geophysical survey and walkover / measured survey at Braebuster 14th – 18th May, walkover and measured survey at Cantick and Braebuster 3rd – 7th September 2012.

Fieldwork was undertaken in accordance with the methodology, objectives and research questions detailed in the project outline (ORCA 2012) and the OIC funding application. Gazetteers of sites from the walkover survey are shown in Appendices 1-2.

1.1 Aims, Objectives and Research Questions

1.1.1 General:

- undertake additional archaeological walkover survey at Cantick and Braebuster,
- conduct geophysical survey (magnetometry and earth resistance) at key sites at Cantick and Braebuster,
- record key sites with measured earthwork survey (plane table)
- enhance the landscape context of the known sites at Cantick and Braebuster with additional walkover and measured survey,
- undertake community training in field recognition and recording techniques,
- make links with and train members of the Hoy Heritage Project.

1.1.2 Research Questions:

- 1) What is the interplay between prehistoric and medieval / post-medieval remains in the multi-period landscape of South Walls and Braebuster, and what does this tell us about landscape history and inhabitation of these areas?
- 2) Is the Bronze Age house G64 north-west of Groups isolated, as it appears, or are there buried features in the vicinity? How does this house relate to the wider landscape?
- 3) Can the application of a range of techniques provide suitable information for the future management and protection of the square barrow cemeteries?
- 4) What is the more recent landscape history of the Braebuster area situated on the margins of the township?

2.0 Site Location, Topography and Geology

The Cantick Peninsula forms the south-east tip of South Walls, a large

whale-back island joined to Brims, North Walls and Hoy by a tombolo (Figure 1). A ridge c.25m high forms the spine of the peninsula above sea cliffs that fall into the Pentland Firth to the south. The land drops gradually down to the more sheltered waters of Kirk Hope in the north. All of the peninsula is given over to grazing (cattle and sheep), although some of the fields may have been ploughed in the recent past. A strip of coastal heath is present above the higher cliffs, continuing along the southern side of the island. The survey area covered in 2012 investigated a number of fields and strip of coastal heath at Booth, a farm situated at the 'neck' of the peninsula. This was a mixture of permanent grazing (south) and arable fields (north). The topography gently slopes into a small valley containing a burn which drains from Snelsetter to Booth entering the sea at the head of Kirk Hope.

Braebuster consists of a shallow valley, containing the Braebuster burn and tributaries, between Cuilags and The Witter. The valley drains north-west to the sea. Much of the lower slopes of Cuilags and The Witter are covered with peat, however this gives way to marshy grassland, which may have once been agriculturally improved, in the lower part of the valley adjacent to the burns. Groups farmstead is located at the confluence of two burns and is surrounded by a grassy area. Grazing dominates within the fields of Slack, Murra, Gloup and Head although these have been ploughed in the recent past. Rough grazing occurs in the fields of Slack and Murra to the south-west of the burn.

The underlying drift geology in both survey areas consists of glacial till, and the solid geology comprises rocks of the Upper Stromness Flagstone Formation. Cuilags consists of the Trowie Glen Sandstone Member (Old Red Sandstone) (British Geological Survey 1:100,000 Special Sheet, Orkney Islands, Drift and Solid, 1999).

3.0 Historical and archaeological background

This section provides a brief historical and archaeological background to the main survey areas, for more detail see Robertson (2006) and Lee (2009, 2010, 2011).

3.1 Cantick

The rich multi-period landscape at Cantick has long been appreciated, and was recently recorded during a walkover survey (Robertson 2006). Subsequent geophysical survey (Robertson 2007) excavation, and field survey (Lee 2009, 2010, 2011, 2012) has greatly enhanced our understanding of the prehistoric and historical landscape and addressed a number of long held assumptions; that of Outer Green Hill being an Iron Age broch, and Roeberry barrow a Bronze Age burial monument. Excavations at Outer Green Hill demonstrated that the mound was, in fact, a substantial Neolithic chambered tomb (Lee 2009). It is the results from the excavations at Roeberry barrow, however, that seem to encapsulate the history of inhabitation at Cantick; one of constant re-working, re-building and appropriation of the past in many presents. Roeberry barrow was first a Neolithic chambered tomb, was used for numerous crenation burials in the Bronze Age and was re-used for a substantial square barrow in the Iron Age (Lee 2010, 2011, 2012). Bronze Age burial mounds (SWC 28, 30 and 35), a burnt mound (SWC17) and prehistoric settlement at Hesti Geo (SWC 1 and 13) also occupy the peninsula.

More recently, Cantick was part of an early improvement scheme by James Moodie of Melsetter who enclosed a large rectangular area of the commons for grazing at the 'neck' of the peninsula in the early 18th century (Thomson 1981, 79). This is depicted on McKenzie's map of 1750 and was incorporated into later fields during early 19th-century improvements. Numerous stone quarries (e.g. SWC 16 and 36) pertain to the early 19th-century phase of enclosure when the majority of the stone walls were constructed. A pair of large circular gate posts, one of which has recently been demolished, adjacent to Storehouse (SWC 8) marked the edge of the Snelsetter estate in the 18th century and could be associated with the enclosure.

3.2 Braebuster

Few sites had been recorded in Braebuster before this project, reflecting the lack of archaeological work undertaken in Hoy in general. Listed in the NMRS is: a post-medieval buildings at Groups (HY20SW35) Lenders Dale

(HY20SW34) and Braebuster (HY20NW33), a cast iron fence post at Murra (HY20SW25), the Tuack of the Witter – a possible burial mound (HY20SW5), and on the coast Eves Howe broch (HY20NW20) and the souterrains at Upper and Lower Cairn (HY20NW13 / 15). The discovery of two square barrow cemeteries at Groups (RCAHMS aerial photography) and the subsequent walkover survey (Lee 2011) has demonstrated the rich multi-period landscape of Braebuster, and the Groups area in particular.

A possible burnt mound (G13) was located on the NNW fringe of the western square barrow cemetery and may have influenced the commencement of Iron Age burial practice in the area. The western square barrow cemetery contains at least 13 barrows consisting of well-defined rectangular earthen platforms (c.9.5m by 6.5m and 0.5m high maximum, generally oriented NE-SW), two of which are enclosed with segmented banks (G8 and 17). Numerous other features, including a possible house platform (G19), enclosure (G3) and linear dyke (G20), demonstrate the continued use of the cemetery area in the post-medieval period. The eastern square barrow cemetery, situated to the east of a tributary for the Braebuster Burn, is smaller consisting of four low rectangular platforms, one of which is enclosed (G41). These cemeteries are significant because they survive as upstanding earthworks (usually such barrows are plough truncated; Greig et al 2000; Alexander 2005), they are the only square barrow cemeteries currently known in the Northern Isles and they are part of a rich multi-period landscape. The stone built square barrow at Roeberry, Cantick, is the only other known example in Orkney.

Significant sites dating to the post-medieval period have also been discovered. A small farmstead c.100m south-west of Groups was identified (G33) and is not depicted on the Ordnance Survey map of 1882 (Sheet CXII.1). The farmhouse appears to have been demolished down to foundation level and may have a corn drying kiln at one end.

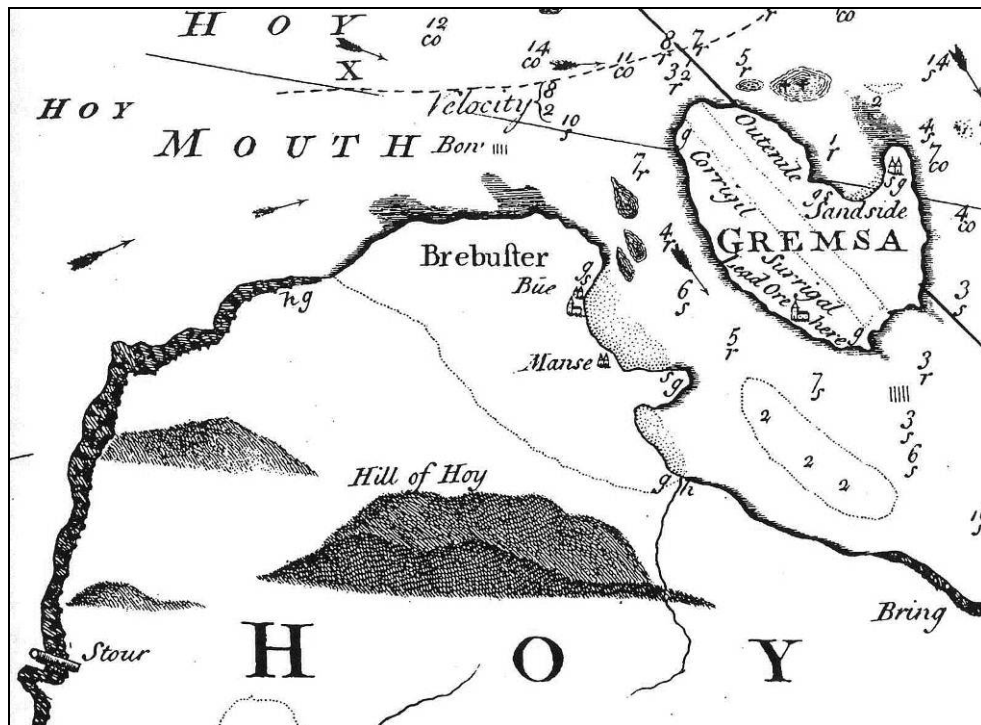


Plate 1. Braebuster township and head dyke, McKenzie 1750.

Braebuster is situated on the north-west edge of the Bu of Hoy township (McKenzie 1750, Plate 1). Early rentals of 1492 and 1497-1503 show that Braebuster was a distinct taxable area, separate from, 'beneth the hill' (Wasbister), and 'The Bull' (The Bu of Hoy) (Peterkin 1820, No 1, 30; Thomson 1996, 72-73). These principle farms were within the same hill dyke by 1750 but may have originally been separate. Rakwik (Rackwick) is listed separately. Four 'outbrekis' (out break from the main farm or hill dyke) are listed in the 1497-1503 rental at Brabuster: Hallay (Head), Dale and two associated with unnamed crofts. This suggests that the origins of Braebuster were adjacent to the coast near to Braebuster broch. The unroofed farmstead depicted on the Ordnance Survey 1882 map could derive from this earlier phase of settlement. Braebuster grew up the valley to the south-east. The farmstead found at Groups (G33, Figure 4) could represent a 16th – 17th century outbreak beyond the hill dyke and was later demolished, perhaps as part of 19th-century improvements or farm amalgamations.

4.0 Walkover survey

A walkover survey was undertaken at land at Booth farm, Cantick peninsula, and Braebuster, Hoy (Figure 2).

4.1 Methodology

The walkover survey extended the existing survey areas at Cantick and Braebuster by field or land blocks. Each block was walked in c.20-50m transects along contours and more intensively where the potential was considered high. Repeat visits were made to areas with high concentrations of sites. The scope of the survey was dictated by time and weather constraints.

All sites were given a unique identifying number prefixed by an area code (SWC 1, 2 etc.) and recorded on *pro forma* ORCA Walkover Survey Record Sheets. SWC was used for South Walls Cantick and G for Groups, Braebuster. Point, line and area data (NGR) was collected in the field using a Garmin handheld GPS receiver. Site points and lines were entered into an ArcView GIS from the field survey data. The GPS error (c.3-10m) has been corrected using fixed landscape features.

4.2 Results summary

The walkover survey results are summarised by Area. Individual site descriptions are shown in Appendices 1 and 2. Photo registers are shown in Appendix 3.

4.2.1 Cantick

Nineteen sites were recorded in the Fields to the south of Booth farmstead. These include two possible prehistoric sites: SWC 49, a substantial earthen mound (9m in diameter and 0.4m high) c.200m to the south-west of Howequoy, and SWC 52, a mound and stone pile just to the west of West Geo, both of which could be burial mounds.



Plate 2. Howequoy (SWC42), looking east.

The remaining 17 sites all date to the post-medieval period consisting of the remains of houses (SWC 42, 47, 48, 50), a byre (SWC 51), linear boundaries or enclosures (SWC 45, 46), rig and furrow (SWC 53). A possible quarry with clearance stone (SWC 43) was also noted. Several sites were identified during a previous survey (Card 1998) were not visited during the current survey, including a stone setting (SWC 56) and site of a well (SWC 55).

Howequoy (Figure 4, Plate 2), and the loose group of four houses to the south (SWC 42, 47, 48, 50), are all depicted on the Ordnance Survey map of 1882 (Sheet CXXIII.11), apart from byre SWC 51. This was constructed after 1882 and was extended after 1900 (Sheet CXXIII.11, second edition). The houses are not named on the Ordnance Survey map and are said to have been almshouses for the poor (Ian McFedries, Booth, pers comm.). Their holding was certainly small and situated at the edge of the township within an area of poor unimproved coastal heath. They may have been erected by the Melsetter estate. Howequoy was occupied for a few years by Yankee Bill, a tailor who had obviously been in America. He was well known for wheelbarrowing peats all the way from Melsetter to The Booth (ibid.).



Plate 3. Later fireplace inserted into the gable end of SWC50, looking north-east.

House SWC 50, near to Wind Geo, is interesting as it is depicted as unroofed (i.e. deserted) on the 1882 map. The same building had been occupied and extended by 1900. This renovation is visible in the building remains as the eastern gable end has had a fireplace and chimney stack added (Plate 3). It appears that the original house may have had a central fire which was upgraded to a gable end fireplace at the end of the 19th century for the new tenants. A similar example of this was noted at Hauses, Braebuster (G70, see below).

Linear dyke SWC 46 runs from West Geo, on the south coast, to the east side of Howequoy where it peters out. It is likely to be the remains of a former head dyke for the Cantick peninsula, perhaps superseded by Moodie's enclosure in the early 18th century. Linear dykes SWC39 at Roeberry (Lee 2010) could derive from similar pre-agricultural improvement field systems.

4.2.2 Braebuster

Thirty sites were recorded during the walkover survey in the Braebuster area. These include six prehistoric sites: two possible burnt mounds (G44 and G54), the possible barrow at The Witter (G72), two mounds (G45 and

G55) and a possible Bronze Age house (G64). The site of a previously noted undated shell midden (G67) was recorded although no trace of it could be found.

The majority of sites date to the post-medieval and modern periods or are undated. These include the township head dyke (G43, G49, G50) and other boundaries (G47, 58, 57, 59, 62, 63), a farmstead (G70), quarrying (G48 and G71), enclosures (G66), a platform (G46) and a structure (G65). Other sites include hollows (G69), a stones pile (G60) and indeterminate mounds (G53, G56). Modern sites include a water management system (G68).

Sites at Braebuster have been divided into areas to the east and west of the Braebuster road for ease of description.



Plate 4. Braebuster hill dyke G43, looking south-east.

East of the road, hill dyke G43 runs up-slope from the burn, takes a sharp turn to the south-east and traverses the side of The Witter along the contour (Plate 4), through an area known as Bailie Breck (Ordnance Survey 1882, Sheet CXII.2). The dyke probably finds its origins in the medieval period, maintained on a yearly basis until the mid-19th century. The area to the south-west of the dyke within the burn valley has escaped agricultural improvements and contains several additional sites to those recorded in 2010 (Lee 2011). These consist of two possible burnt mounds (G44 and

G54), that are both located adjacent to small burn channels. G44 is slightly crescentic and G54 has two distinctive summits. This brings the number of possible burnt mounds to three, including G13 to the west of the road. Mounds G45 and G55 could also be prehistoric and relate to the burnt mounds or square barrows.

Linear dykes G57 and G59 are the remains of a field system outside of the township dyke. G57 abuts the hill dyke and is cut by G58, a mid-19th-century field boundary (fence and drain). There is a pile of stones G60 which may derive from field clearance or could be the remains of a structure nearby.

West of the road, the survey covered the area to the north-west of Groups G36 farmstead. Additional site numbers were allocated to features within Groups: the earlier farmhouse G51 that has been reduced to foundation level and the D-shaped enclosure G52. An additional square platform G46 was also recorded to the east of farmstead G33 (Braebuster Burn). Segments of hill dyke survive along the burn edge (G49) and to the east (G50) where it tapers out within mid-19th-century fields (G62). A substantial curvilinear dyke and ditch (G47) was found to the north of G33 running along the top of the steep sided burn channel. The dyke has a stone revetment and access ramp at the north-east end and along with linear dyke G27 enclosed the farmstead by appending the hill dyke. A small stone quarry G48 was probably the source for some of the farm buildings in the Groups complex. Braebuster Burn farmstead (G33) was probably an outbreck beyond the township dyke in the 17th or 18th century.

The most significant discovery in the fields to the west of slack is a large sub-oval earthwork with a flat top with two hollows (G64) in a figure-of-eight shape (Figure 4, Plate 5). It is 22m by 16m and 0.7m high, grass covered and has well-defined steeply sloping sides. Probing indicates that it contains stone although no significant structural elements are visible. Comparison with similar sites in Orkney suggests that it is the remains of a prehistoric house, probably Bronze Age easily continue in use into the Iron Age.



Plate 5. Surveying the prehistoric house earthwork G64 at Slack, looking west.

Examples of Bronze Age houses in Orkney include the double houses at Wasbister (recorded as a possible burnt mound, NMRS HY21SE 20, Robertson 2005) which is associated with a number of barrows (e.g. MNRS HY21SE 3 and HY21SE 18) and an enclosure system to the west (see RCAHMS photo DP059840, HY21SE 18). Another example of a double Bronze Age house is located on the island of Auskerry, Stronsay, which is also associated with the remains of a field system (NMRS HY61NE 8). No ancient field boundaries are evident in the vicinity of the Braebuster house, although the area to the north requires more detailed survey.

Excavations of double houses have taken place at the Links of Noltland, Westray (Moore and Wilson 2011), Skail in Deerness (Buteux 1997), House 8 at Skara Brae (Ritchie 1995, Downes and Thomas forthcoming) and Tofts Ness, Sanday (Dockrill 2007, chapter 3; see below). Comparative plans of Bronze Age house in Orkney are provided by Downes and Thomas (forthcoming, Fig. 3). They generally consist of a large circular stone built roundhouse with a smaller annex to the south or south-west, comparable in size to the Braebuster example (c.12m by 17m in total). The possible Bronze Age settlement site SWC3-5, 7 that was recorded in the walkover and geophysical survey at Cantick turned out to be a WWII searchlight

emplacement (Lee 2010, 7). Similarly, geophysical survey suggests that the possible prehistoric settlement at the Ruff of Cantick (SWC29, NMRS: ND38NW 19) does not contain magnetically enhanced material and is not likely to be domestic. Architecturally, later prehistoric houses tend to vary greatly in the Northern Isles evidenced by the larger number of excavated examples in Shetland (Downes and Lamb 2000, figure 120).

The late Bronze Age round house at Tofts Ness had an annex added on the south-east side and continued to be inhabited into the Early Iron Age (Dockrill 2007, chapter 3). It is possible that the Braebuster house continued in use well into the Iron Age, with settlement shifting focus to the broch by the coast. It is also possible that the house was built in the Iron Age. Structures from this period are varied in character in Orkney, ranging from large round houses (e.g. Quanterness, Renfrew 1979, chapter 11) to more complex settlements (e.g. Howmae Brae, North Ronaldsay; RCAHMS 1946, 48-50). Excavation would be required to fully characterise the site at Braebuster.

5.0 Geophysical survey

By Linda Somerville MA MA

A magnetometer (fluxgate gradiometer) survey was undertaken in Areas 1-5 and earth resistance survey in Areas 2-4 in order to investigate the sites identified during the previous walkover surveys (Lee 2011 and see above), investigate the immediate vicinity of the sites and contextualise the square barrow cemeteries (Figures 5-17). The single grids surveyed in Areas 2-4 are intended to be test surveys with the intention of expanding the survey area in future if appropriate.

- Area 1 (100m x 100m) targeted the western square barrow cemetery and other associated sites identified during the previous walkover survey (Lee 2011).
- Area 2 (20m x 20m) targeted a probable prehistoric house (G64, see above).
- Area 3 (20m x 20m) targeted farmhouse G33 and associated

features.

- Area 4 (20m x 20m) targeted the remains of the former farmhouse at Groups (G51, see above).
- Area 5 (60m x 20m) targeted the eastern square barrow cemetery.

5.1 Geophysical survey methodology

5.1.1 Magnetometry

Data Collection

Gradiometer survey was undertaken using a Bartington Grad601 gradiometer. The gradiometer comprises two fluxgate sensors mounted 1m apart on a vertical axis. Each sensor measures the earth's magnetic field, in nano-Tesla (nT), and the instrument records the difference between the observed readings for each sensor. By measuring the magnetic field in this manner, the dependency of fluxgate sensors upon the angle between the sensor and the earth's magnetic field and the variations due to large-scale geological variations and diurnal fluctuations are filtered out. By doing so the instrument is recording subtle changes or anomalies in the earth's magnetic field caused by material in the top metre or so of the earth's surface.

Data were collected at 0.25m intervals along traverses 1m apart, in 'zig-zag' fashion i.e. the direction of the traverse alternating between adjacent traverses, within a series of 20m by 20m grids which were later merged together.

Metric Survey

Metric survey was undertaken using a Trimble 5800/R8 differential GNSS system and a Trimble R8 VRS system. Two points were located to control quality using the GNSS before a predefined grid was draped over these points and set out accordingly.

Data Processing

Most data processing involves the manufacture's software applicable to each instrument.

Gradiometer data

'Zero mean traverse' corrections have been applied to all the data. This process sets the mean of each line to zero. These corrections remove discontinuities between adjacent grids and striping effects within grids caused by 'zig-zag' collection of data.

De-stagger has been applied to the data to remove positional errors in the data caused by collecting data in a 'zig-zag' fashion. This function shifts the data along even lines until it visually matches with the data in odd lines.

The data displayed as a processed greyscale has been interpolated twice in the Y and once in the X direction. This has the overall effect of smoothing the data.

Data Display

Greyscale images display the data within a predefined range with all values below the minimum being white and all values over the maximum being black with gradual increments between these two extremes.

5.1.2 Resistance Survey

Resistance survey was undertaken using a Geoscan RM15 resistance meter and MPX15 multiplexer. A parallel twin probe configuration was used with a mobile probe separation of 0.5m, providing a depth resolution of approximately 0.75m, although the nature of the overburden and underlying geology will cause variations in the generality. The data shown are the resistance values in ohms.

Data were collected over 20m grids, with readings taken at 1m intervals along parallel traverses 1m apart. Data are collected in a 'zigzag' fashion.

Resistance Data

Data were initially de-spiked, during which process exceptionally high, isolated readings are replaced with the mean value. These high readings are usually due to poor contact with the ground and are not 'real' values.

The data have been interpolated in both X and Y directions, over the whole data set in order to give a smooth appearance.

Data Display

Greyscale images display the data within a predefined range with all values below the minimum being white and all values over the maximum being black with gradual increments between these two extremes.

5.2 Geophysical survey results

The results of the geophysical surveys are shown in Figures 6-17.

5.2.1 Area 1

Area 1 covers the site of a square barrow cemetery previously recorded by metric survey (Figure 5). The land is unimproved and peaty so the results of the magnetometer survey are generally quiet with a number of discrete responses relating to identified features within the square barrow cemetery (Figures 6 & 7).

Anomaly 1 is a spread of positive responses to the north-west of Area 1 with a much stronger sub-circular response at the northern end. This sub-circular response appears to correspond with site G13, a mound identified in the walkover survey (Figure 8). The strong positive response of this anomaly indicates the presence of enhanced material and in this context is likely to represent onsite burning related to funerary activity. It may be representative of a burnt mound site, although the response is relatively weak compared to other examples of such sites recorded during magnetometer surveys. Overlying peat may have caused the strength of the anomaly to be masked. Anomaly 2 is a much weaker band of positive responses to the north and east of Anomaly 1 and is likely to be related, perhaps representing a wider spread of associated material.

A further five anomalies (Anomalies 3-7) relating to identified features show very strong responses. Anomaly 3 is a small curvilinear section of strong positive responses with associated negative responses corresponding with site G14 from the walkover survey. Anomaly 4 is an amorphous spread of strong positive responses to the west of the area which corresponds with

site G15. Anomaly 5 is a small sub-circular area of strong positive responses which corresponds with site G9. Anomaly 6 is a strong positive and negative linear response to the centre of area 1 which corresponds with site G8. Anomaly 7 is a strong sub-circular positive and negative response to the south-east of the area which corresponds to site G2.

The strong, discrete responses from Anomalies 3-7 may indicate the deliberate deposition of enhanced material within these sites, either through material brought into the area from elsewhere or, more likely, in-situ burning. These anomalies may also be the result of topographic differences across the site causing variations in the data. As the instrument passes across undulating terrain it is not a constant distance above the ground surface and this can cause variations in measured values. Water run-off in the ditches may also cause leaching of enhanced material giving a negative response.

Anomalies 8-13 correspond with previously identified sites, however these show weaker responses. Anomaly 8 is a weak sub-circular response in the centre of the area which corresponds with site G10 from the walkover survey. Anomaly 9 is a small curvilinear section of relatively strong positive responses with associated negative responses which corresponds with site G17. Anomaly 10 is a small linear section of relatively weak positive responses occurring to the north of the area which corresponds with site G11. Anomaly 11 is two sub-circular relatively strong positive responses to the south-east of the area which correspond with site G1. Anomaly 12 is an amorphous positive response to the south of Area 1. It appears to correspond with site G7 from the walkover survey. Anomaly 13 is an amorphous spread of very weak positive responses to the south of the area which corresponds with site G6 from the walkover.

The responses from these anomalies do not seem to suggest the presence of any significant amount of enhanced material (although the features may be covered by overlying deposits), it seems less likely that there was burning conducted at these locations and certainly not at the scale of the anomalies described above. The responses observed here may be due to material from elsewhere on the site being deposited around these features.

A further anomaly observable in the results of the geophysical survey is

Anomaly 14; a series of weak positive sub-circular responses to the south of Area 1. This does not appear to correspond with any previously identified site. It is likely to contain similar material to the anomalies described above. The anomaly suggests that there are likely to be additional features beneath the ground surface associated with the square barrow cemetery which have not previously been identified.

The remainder of the anomalies in Area 1 do not relate to the square barrow cemetery and are likely to be geological. Anomaly 15 is a series of linear trends running north-west to south-east and south-west to north-west across area 1. This is likely to represent the natural terracing of the topography. Anomaly 16 is a large linear response to the north of the survey area. This is likely to represent an igneous dyke. This anomaly corresponds with the line of an old boundary marked on the Ordnance Survey first edition (1882), however the type of response is more characteristic of a geological feature. Anomaly 17 is some small discrete ferrous responses visible across the area which are likely to relate to modern agricultural practices.

5.2.2 Area 2

Area 2 covers the site of a prehistoric house (G64) identified during the walkover survey (Figures 5, 9 & 10). The ground conditions here were drier and less peaty and the site is covered in short grass. The results of the magnetometer survey are dominated by Anomaly 18 which is a very strong sub-circular positive response with associated negative responses. This level of enhancement is indicative of a settlement site, probably a single house, with the positive anomalies likely to represent enhanced material within the wall core such as midden. Enhanced floor deposits may also have built up against the internal wall. A small discrete response in the centre could indicate the position of a hearth, however the anomaly is weaker than would be expected. Similar examples of prehistoric houses identified during magnetometer survey in Orkney include Wasbister, Stenness (GSB 2003), and Skail Bay, Sandwick (OCGU 2008). These are thought to date to the Late Bronze Age or Early Iron Age although they remain unexcavated.

The results of the earth resistance survey also give very strong responses. Anomaly 19 is a high resistance curvilinear anomaly to the east of area 2.

This is likely to represent the structural remains of the house such as stone walls or spreads of stone. Anomaly 20 is a sub-oval low resistance response adjacent to and associated with Anomaly 19. Presumably this relates to fills or features within the interior of the structure.

5.2.3 Area 3

Area 3 covers the site of a post-medieval farmstead (G33) identified during the walkover survey (Figure 5). Both the magnetometer and earth resistance surveys give responses corresponding with the remains visible on the ground surface (Figures 11-12). Although some responses are strong, none appear to be the result of the presence of ferrous material suggesting an earlier date in the post-medieval period for the farmstead.

Anomaly 20 is a series of positive and negative responses in the magnetometer data which appear to correlate closely with remains observable on the surface (Figure 20). These responses are likely to represent walls and rubble within and around the farm building. The responses in the south-west of the area, which are probably outside the building, are particularly strong and are likely to represent industrial activity relating to the use of a probable corn drying kiln. The foundations of this are visible on the ground.

Anomaly 21 is a series of linear magnetic trends running north-west to south-east and north-east to south-west in Area 3. These may be related to post-medieval farming practices or drainage.

The results of the earth resistance survey were less coherent, however a variety of amorphous high and low resistance responses are apparent (Anomaly 22) which may relate to structural remains. A 'D' shaped area of high and low resistance at the south-west end of the house may correlate with the probable corn drying kiln. There is a large area of high resistance to the west of the house site, Anomaly 23, however this is likely to be due to the ground sloping down to a burn to the west of the survey area.

5.2.4 Area 4

Area 4 covered the site of a farmstead (G52) recorded during the walkover

survey (Figure 5, Plate 6). The magnetometry survey results were masked by extensive ferrous responses (Anomaly 24) associated with agricultural and domestic activity. However, there were also responses observable which correspond with the farmstead structures which are indicative of industrial activity (Figure 13). Anomaly 25 is an area of magnetic disturbance to the north of the area representative of enhanced material associated with settlement. Anomaly 26 is an area of very strong positive and negative responses to the south-west of the survey. These seem likely to represent industrial activity relating to the use of what is probably a corn drying kiln marked to the south-west end of the building on the Ordnance Survey 1882 map. Anomaly 27 is a relatively strong positive and negative response in the eastern corner of the survey area. It corresponds to an outbuilding within the farmstead complex and may be representative of industrial activity.



Plate 6. Resistivity survey at Groups G51, looking south-east.

In the results of the earth resistance survey Anomaly 28 is a high resistance sub-rectangular response in the eastern part of the survey area (Figure 14). It appears to correspond with the farmhouse at Groups marked on the Ordnance Survey 1882 map. There are a series of earthen banks containing low wall foundations evident on the ground. Anomaly 29 is a low resistance response associated with Anomaly 28 perhaps representing a wetter area or where material was excavated during construction of the farmstead.

Anomaly 30 is an area of high resistance in the western side of Area 4 and may be associated with the natural slope down to a burn.

5.2.5 Area 5

Area 5 is situated over the eastern square barrow cemetery at Groups (Figure 5). The area is waterlogged and peaty with rough tussocky grass. As with Area 1 the results were magnetically quiet with a number of discrete responses which correspond with sites identified during the walkover survey (Figures 15-17). Anomaly 31 is a series of positive and negative responses in the northern part of the survey area. These appear to correspond with walkover site G41, a large semi enclosed square barrow. Anomaly 32 is a sub-circular positive response in the western part of the survey area. It appears to correspond with walkover site G40. Anomaly 33 is a relatively weak positive response to the south of Area 5. It may relate to site G39 from the walkover survey.



Plate 7. Magnetometer survey in Area 5, looking south.

The responses in Area 5 represent the presence of enhanced material. As with the anomalies observed in Area 1 it is possible that this represents material brought on to the site from elsewhere, perhaps for construction. However, it is more likely that it represents onsite burning associated with funerary activity on site.

Anomaly 34, a very strong positive and negative linear response in the eastern part of Area 5, is most likely to be geological in origin, representing a deeply buried igneous dyke.

6.0 Conclusions

The walkover survey has enhanced our understanding of the rich multi-period landscape of Cantick and Braebuster. In terms of the prehistoric landscape, several mounds were identified at Cantick, further contextualising the rich prehistoric landscape of the peninsula. At Braebuster, a rich prehistoric landscape is emerging from the semi-improved rough grazing in the upper Braebuster Burn valley. A prehistoric house (G64), that is likely to be Bronze Age in date, is associated with several burnt mounds (G13, G44 and G54) further up the valley suggesting that this area was farmed by a small household in later prehistory (research question 2). Geophysical survey (magnetometer and earth resistance) revealed that site G64 contained enhanced magnetic material, perhaps indicative of midden wall core or floor deposits, and contained probable stone walling. The possible burial mound to the north-east, Tuack of The Witter, may have been where this household buried their dead. The duration of inhabitation at the prehistoric house is unclear at this stage, but perhaps settlement had shifted to Eves Howe broch on the coast by the time the square barrow cemeteries were established in the later Iron Age.

Magnetometer survey of the square barrows was successful in characterising this monument group that is unique in Orkney. The results demonstrated that some barrows had a magnetic response (e.g. G1, G2, G8, G9 and G41) whilst others were magnetically quiet (e.g. G5 and G11). The magnetic responses could relate to funerary practices that involved burning or burnt material may have been imported. This highlights the variability of sites within the two cemeteries and indicates that the various platforms and barrows, whilst similar in form and alignment, may contain a range of materials. It is possible that not all of the low platforms are square barrows (e.g. G14, G15, G16, G31 and G32) and these sites may relate to other activities in funerary practice, such as pyre or feasting sites, or comprise later features built within the two cemeteries. If the sites represent

different phases it is interesting how they respect each other physically and follow similar alignments (NW-SE). Mound G13 on the northern edge of the west cemetery contained magnetically enhanced material and is likely to be a burnt mound. This site may have provided an early focus for the square barrow cemetery (research question 1).

Walkover survey at Cantick has enhanced our understanding of the post-medieval landscape. The area to the south of Booth was at the margins of the township (Cantick was likely to have been outfield) evidenced by the former hill dyke and numerous small holdings. The hill dyke, and division of this area of the commonty likely occurred when Moodie constructed the grazing park in the early 18th century.

The area surveyed at Braebuster is also situated at the margins of the township in an area just within or outside the hill dyke. Early outbreck are listed in the first rentals c.1500, and this trend continued into the 17th and 18th centuries – the newly discovered farmstead at Groups (G33) being a possible example. Medieval settlement seems to have originated at Head (Halla) and Dale in lower part of the valley. Mid 19th-century improved fields cut across this farming landscape, however the Groups area has always been on the township margins (research question 4). This location has perhaps facilitated the remarkable survival of prehistoric settlement and burial monuments. The square barrow cemeteries are the only examples known in Orkney, along with the recently excavated and apparently isolated example at Roeberry (Lee 2012). The sequence of farm buildings at Groups is rare in its apparent longevity. The use of geophysics to characterise the early farmstead (G33, Area 3) was highly successful, and demonstrated the value of applying such techniques to early post-medieval farmsteads.

Additional walkover survey, expanding on the areas already covered, would be beneficial in further characterising these landscapes and continuing to address research questions 1, 3 and 4. Excavation would be beneficial at one of the square barrows to characterise and date the cemetery (e.g. G8 and G15, research question 3). Excavation of the early post-medieval farmhouse (G33) would provide insights into later habitation at Groups. Additional geophysical survey around the prehistoric house (G64), which

was only targeted with a single grid test survey, would place this site in a wider landscape context.

7.0 References

7.1 Bibliographic References

- Alexander, D. 2005. 'Redcastle, Lundan Bay, Angus: the excavation of an Iron Age timber-lined souterrain and a Pictish barrow cemetery'. *Proc. Soc. Ant. Scot.* 135, 41-118.
- British Geological Survey 1979 Geological Survey Ten Mile Map, North Sheet Third Edition (Solid) scale 1:625,000.
- Buteux, S 1997. Settlements at Skail, Deerness, Orkney. Excavations by Peter gelling of the Prehistoric, Pictish, Viking and Later periods, 1963-1981. British Archaeological Reports BAR 260.
- Card, N. 1998. The Loft, Longhope, Orkney: Farm Ancient Monument Survey Grant Scheme. Unpublished Report for M.J. Jones, The Loft. Funded by Historic Scotland.
- Dockrill, SJ 2007. *Investigations in Sanday, Orkney. Volume 2: Tofts Ness, Sanday. An island landscape through 3000 years of prehistory.* Kirkwall, The Orcadian Ltd.
- Downes, J and Lamb, R 2000. *Prehistoric Houses at Sumburgh in Shetland, Excavations at Sumburgh Airport 1967-74*, Oxbow Books, Oxford.
- Downes, J. and Thomas, A. forthcoming. 'Where mythical space lies: land ownership versus land use in the northern Bronze Age' in M. Relaki & D Catapoti (eds) *Land Matters: Analytical limitations and potential in archaeological studies of land ownership.* Routledge.
- English Heritage 2008 *Geophysical Survey in Archaeological Field Evaluation.* English Heritage, Swindon. <http://www.english-heritage.org.uk/content/publications/publicationsNew/guidelines-standards/geophysical-survey-in-archaeological-field-evaluation/geophysics-guidelines.pdf> Accessed on 18/10/12.
- Greig, C., Greig, M. and Ashmore, P. 2000. 'Excavation of a cairn cemetery at Lundin Links, Fife, in 1965-6'. *Proc. Soc. Ant. Scot.* 130, 585-636.
- GSB 2003. *Report on the Geophysical Survey at Orkney WHS II*, GSB Prospection, Report 03/12, unpublished report.
- Lamb, R 1989 *The archaeological sites and monuments of Hoy and Waas, Orkney Islands Area*, The Royal Commission on the Ancient and Historical Monuments of Scotland. The archaeological sites and monuments of Scotland series no 29, Edinburgh.

- Lee, DHJ 2009. *Excavations at Outer Green Hill, Cantick, South Walls, Orkney. Data Structure Report, 2008 season.* Unpublished report for OIC.
- Lee, DHJ 2010. Roeberry Barrow, Cantick, South Walls, Orkney (with additional survey in Hoy). Data Structure Report, 2009 season. Unpublished report for OIC.
- Lee, DHJ 2011. Roeberry Barrow, Cantick, South Walls, Orkney, with additional survey in Hoy. Data Structure Report, 2010 season. Unpublished report for OIC.
- Lee, DHJ 2012. Roeberry Barrow, Cantick, South Walls, Orkney. Data Structure Report, 2011 season. Unpublished report for OIC.
- Moore, H & Wilson, G 2011. *Shifting Sands Links of Noltland, Westray: Interim Report on Neolithic and Bronze Age Excavations, 2007-09.* Historic Scotland Archaeology Report no 4. Edinburgh, Historic Scotland.
- OCGU 2008. *Geophysical Survey Report 08/05, World Heritage Area, Orkney, Phase XI.* Orkney College Geophysics Unit, unpublished report.
- ORCA 2012. Hoy and South Walls Landscape Project, Project Outline, 2012 Season. Unpublished ORCA document.
- Peterkin, A. 1820. *Rentals of the Ancient Earldom and Bishoprick of Orkney.* John Moir, Edinburgh.
- RCAHMS 1946. *Twelfth Report and Inventory of the Ancient Monuments of Orkney and Shetland (Volume II: Orkney).* Edinburgh, Royal Commission for Ancient and Historical Monuments of Scotland (RCAHMS), Her Majesties Stationary Office (HMSO).
- Renfrew, C. 1979. *Investigations in Orkney.* London, Society of Antiquaries of London.
- Ritchie, A. 1995. *Prehistoric Orkney.* London, Batsford.
- Robertson, J. 2005. *The Bronze Age Dwelling at Wasbister, Orkney WHS: An Enhanced Landscape Interpretation.* Unpublished MA Dissertation, Orkney College UHI.
- Robertson, J.N. 2006. *Hoy and South Walls Landscape Investigations Pilot Study 2006.* Unpublished report by OAT.
- Robertson, J.N. 2007. *Data Structure Report for Geophysical Survey across Cantick, South Walls, Orkney.* Unpublished report by ORCA.
- ScARF 2012 Scottish Archaeological Research Framework (ScARF): Society of Antiquaries of Scotland. Available online at <http://www.scottishheritagehub.com/> Accessed 15/10/12.
- Thomson, WPL 1981. Common land in Orkney. *Orkney Heritage* Vol 1, 73-91.

7.2 Cartographic References

McKenzie, M. 1750. Map of the Orcades.

Ordnance Survey 1882. Sheets CXII.1/2/6 and CXXIII.6/7/10/11, 1 to 25 inch.

Ordnance Survey 1900. Sheets CXII.1/2/6 and CXXIII.6/7/10/11, 1 to 25 inch.

Bing maps

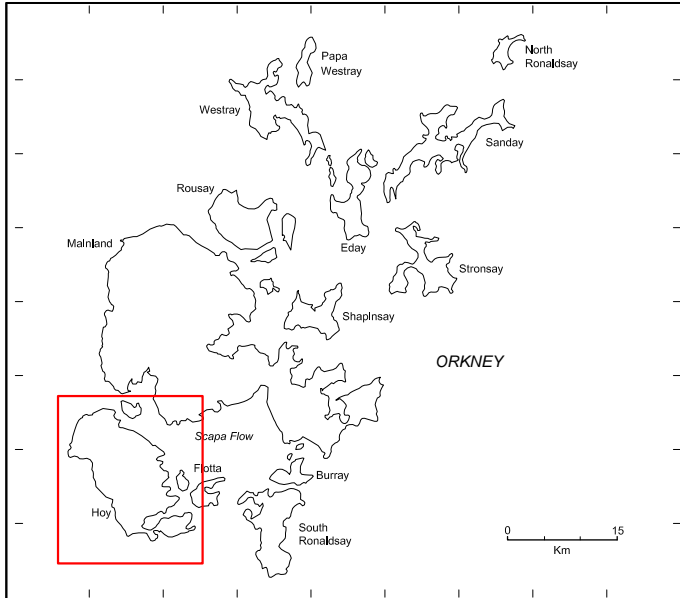
Acknowledgements

Thank you to landowners for access: Basil Groat at Braebuster, Doris Fisher at Groups, Ian McFedries at Booth farm and Eddie Doherty at Cantick, Their support for the project is much appreciated. Thank you to the Hoy Kirk for providing shelter and space to charge batteries.

ORCA Walkover Survey team: Daniel Lee (Project Director), Trish Edwards

ORCA Geophysics team: Mary Saunders

Volunteers: Catherine Krisa, Murray Stewart, Ian McFedries, Rebecca Marr, Jimmy Sinclair.



Orkney College, East Road, Kirkwall, KW15 1LX

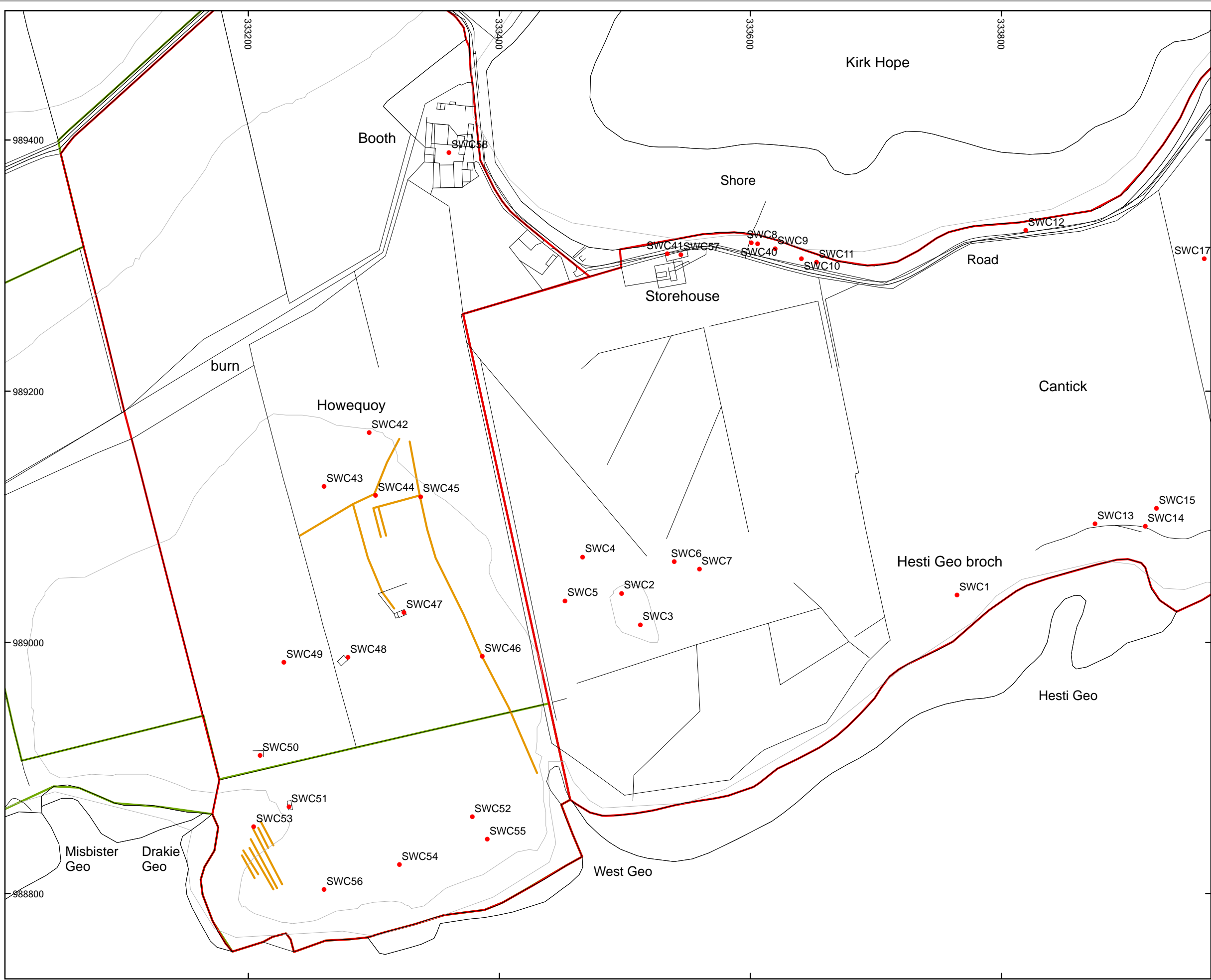
Figure 1. Survey location

Project Name: Hoy & Walls Landscape Project

Project No: 345 Scale: N/A

April 2013 Initial DL Rev. No. 1

This map is based on Ordnance Survey material with the permission of the controller of Her Majesty's Stationery Office © Crown Copyright/database right 2013. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. An Ordnance Survey/EDINA supplied service



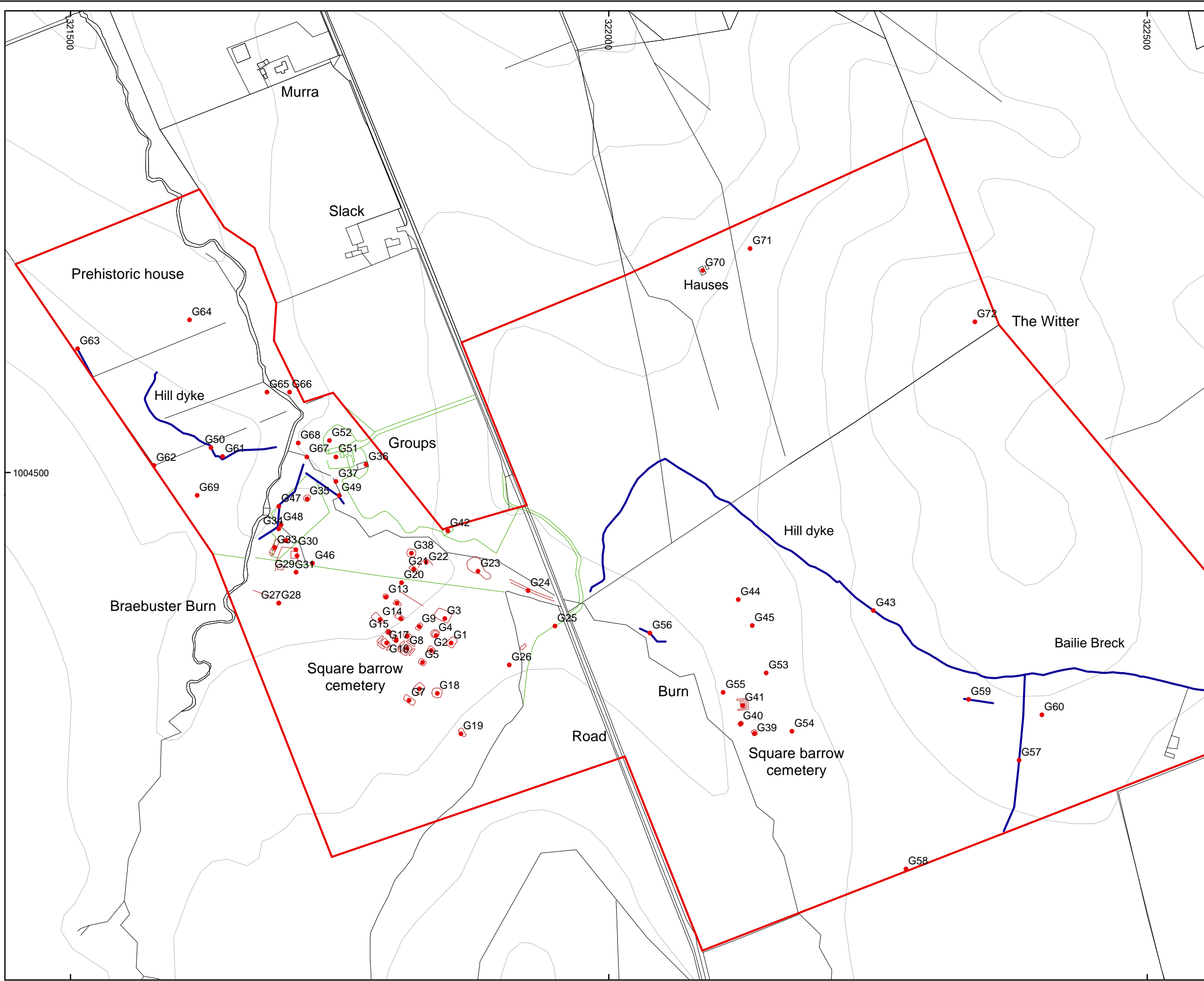
- Walkover site
- Linear features
- Walkover area
- Walkover area 1998

0 150m

Figure 2. Walkover sites at Booth, Cantick, South Walls

Project Name	Hoy & Walls Project
Project No.	345
Date	22/04/13
Creator	DL
Scale	Revision No. 1
ORCA, Orkney College, East Road, Kirkwall, KW15 1LX	

This map is based on Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright/database right 2013. An Ordnance Survey/EDINA supplied service.



- Walkover area
- Walkover site
- Previous survey
- Linear feature
- OS 1882 map detail

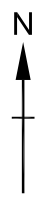


Figure 3. Walkover sites at Braebuster, Hoy

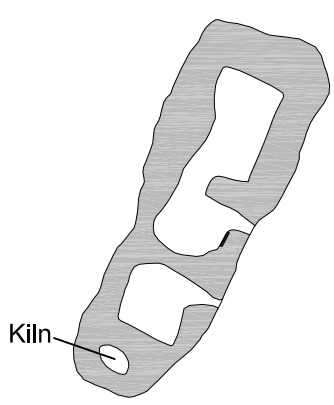
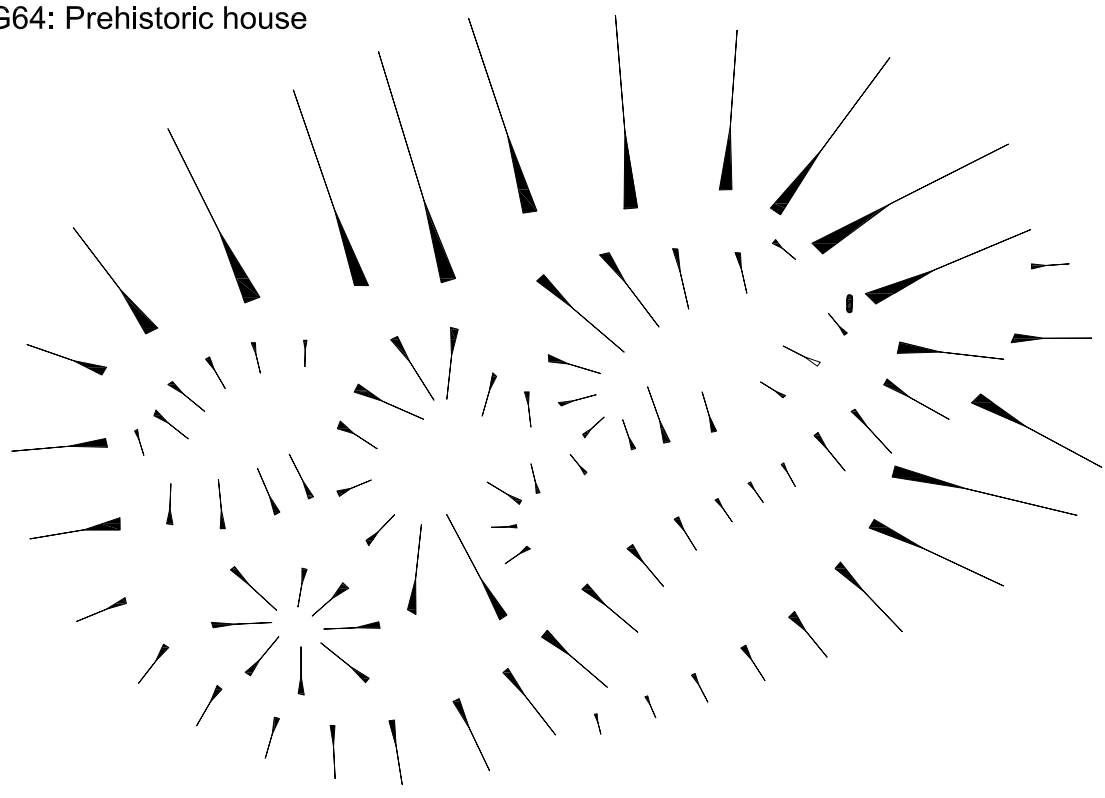
Project Name	Hoy & Walls Project
Project No.	345
Date	22/04/13
Creator	DL
Scale	Revision No. 1

ORCA, Orkney College, East Road, Kirkwall, KW15 1LX

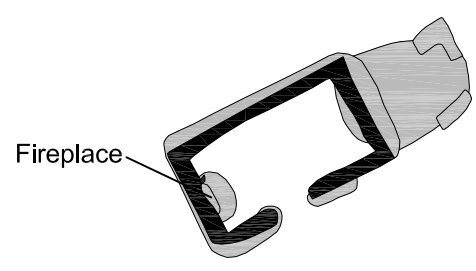
This map is based on Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright/database right 2013. An Ordnance Survey/EDINA supplied service.



G64: Prehistoric house



G33 - Farmhouse



SWC42 - Howequoy



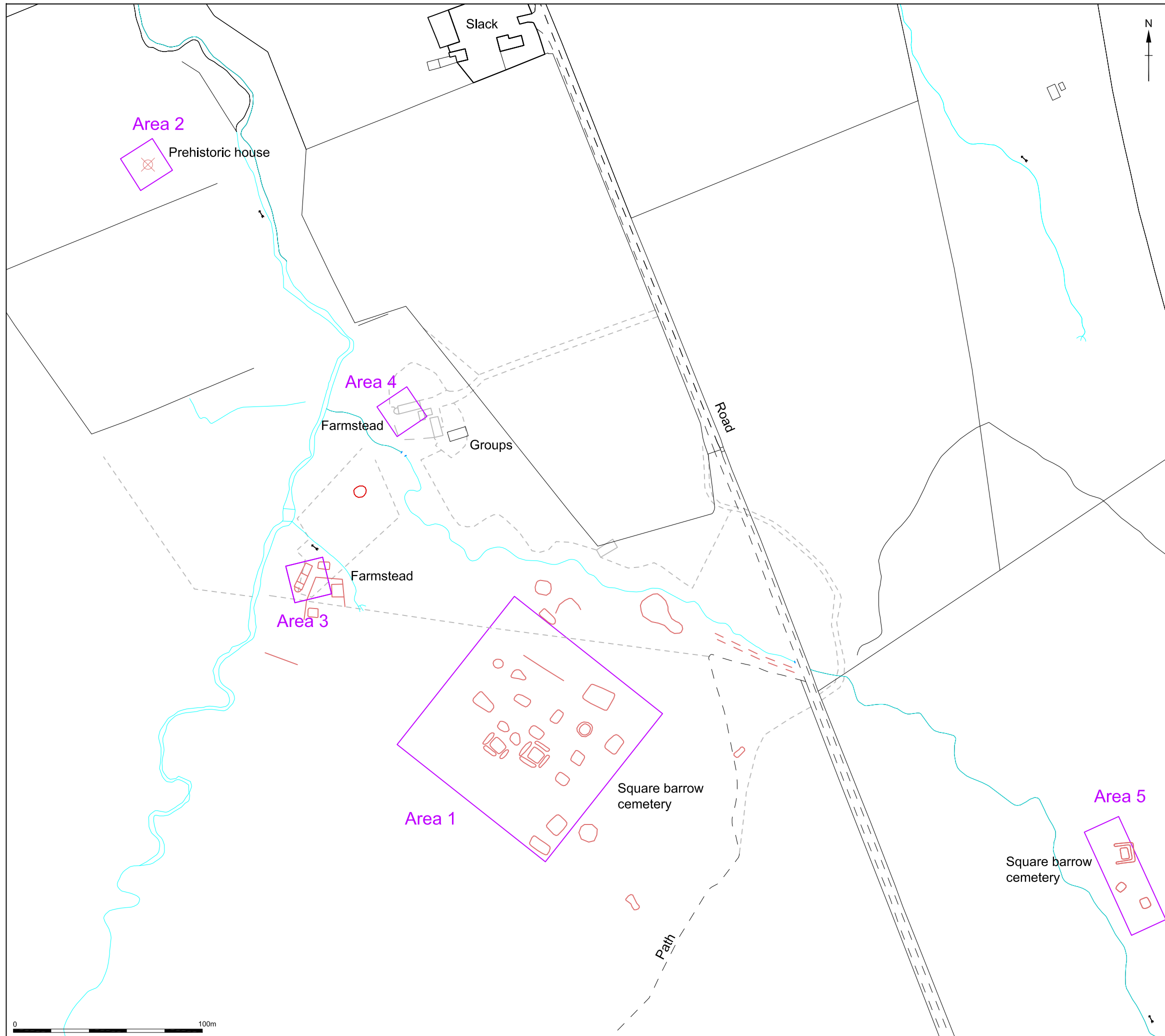
X:\ORCA\ORCA Projects\345 Hoy and Walls 2012\Geomatics\CAD\Current\345 Fig 4 site plans.dwg(345 Fig 5)***** 05 Sep 2013



Orkney College, East Road, Kirkwall, KW15 1LX

This map is has been produced using original survey data collected by ORCA © 2013

Figure 4. Sites G64, G33 and G42		
Project Name: Hoy and Walls Landscape Project		
Project No: 345	Scale: N/A	
April 2013	DL	Rev. No. 1








-  Survey areas
-  OS basemap
-  OS water
-  OS first edition
-  Identified archaeological sites

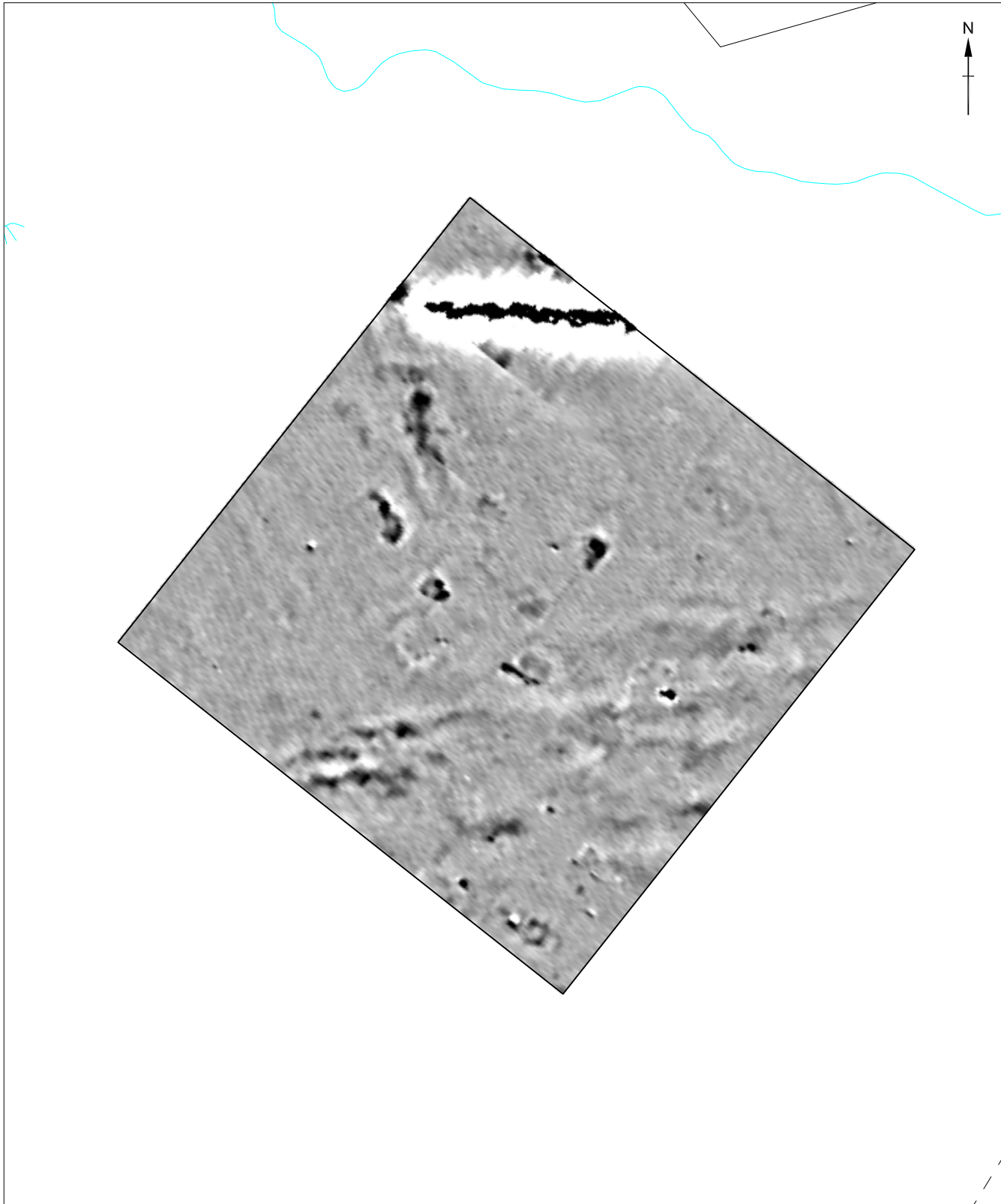
Figure 5. Geophysical survey areas




Project Name	Hoy and Walls 2012
Project No.	345
Date	April 2013
Creator	LS
Scale 1:2000 @ A3	Revision No. 2

ORCA, Orkney College, East Road, Kirkwall, KW15 1LX

This map is based on Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright/database right 2013. An Ordnance Survey/EDINA supplied service.

0 100m



-  OS basemap
-  OS water
-  Survey Area

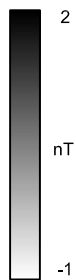
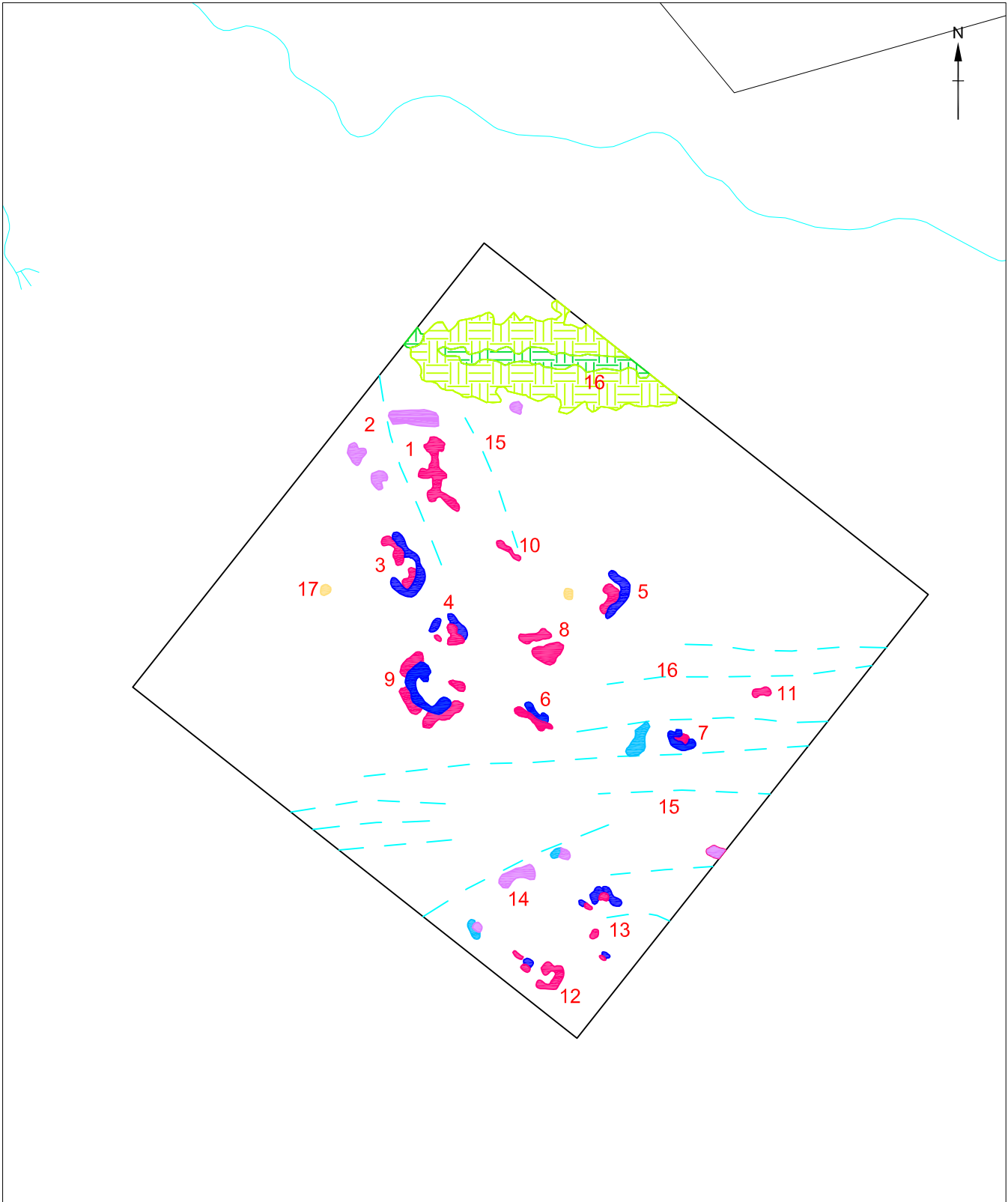


Figure 6. Area 1, processed magnetometer data

Project Name	Hoy and Walls 2012
Project No.	345
Date	April 2013
Creator	LS
Scale 1:1000 @ A4	Draft No. 2

ORCA, Orkney College, East Road, Kirkwall, KW15 1LX
This map is based on Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright/database right 2013. An Ordnance Survey/EDINA supplied service.



	OS basemap		Possible archaeology (positive)		Igneous dyke (negative)
	OS water		Possible archaeology (negative)		Anomaly number
	Survey area		Trend		
	Archaeology (positive)		Ferrous		
	Archaeology (negative)		Igneous dyke (positive)		


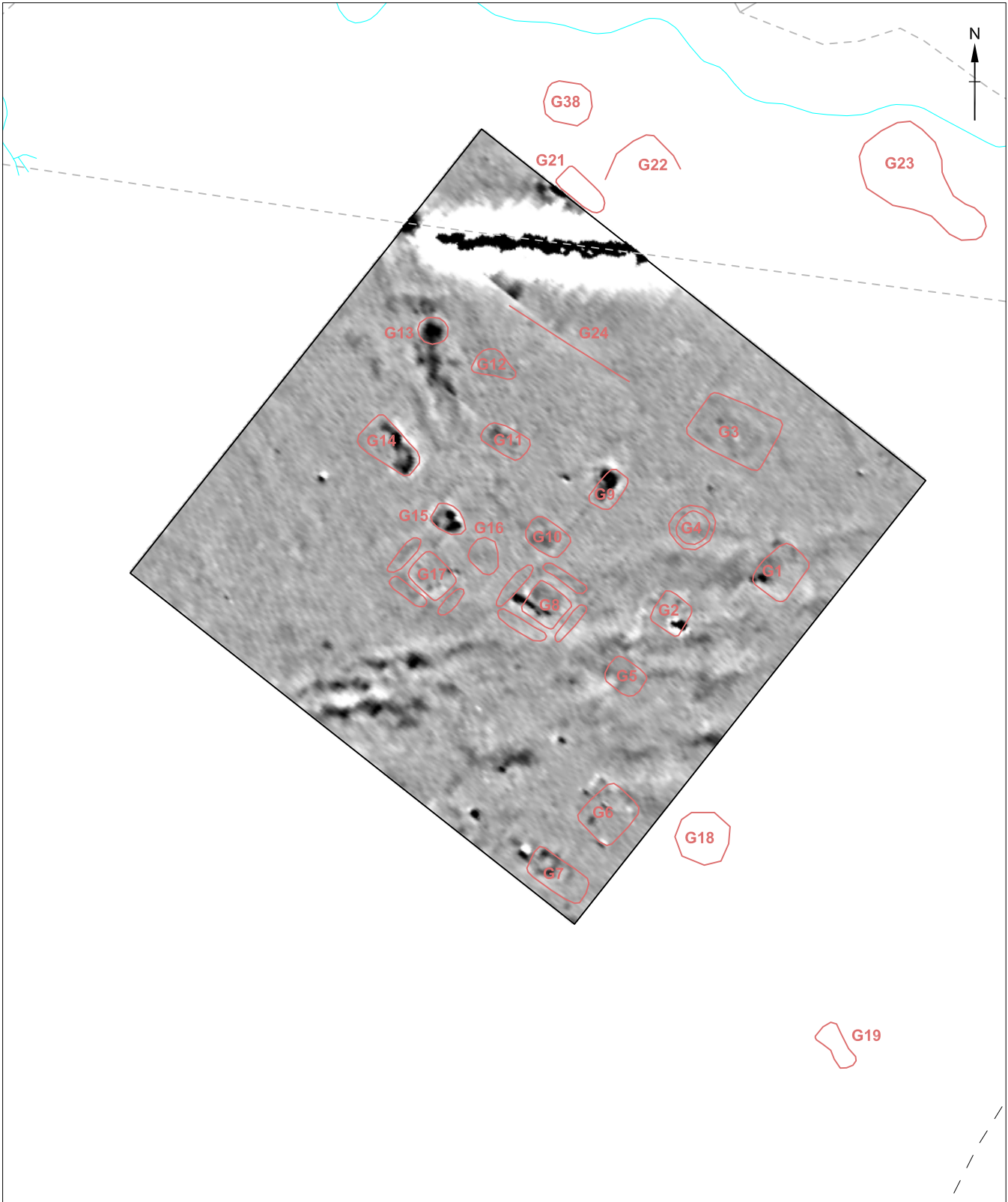


Figure 7. Area 1, magnetometry interpretation	
Project Name	Hoy and Walls 2012
Project No.	345
Date	April 2013
Creator	LS
Scale	1:1000 @ A4
Draft No.	1
ORCA, Orkney College, East Road, Kirkwall, KW15 1LX	
This map is based on Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright/database right 2013. An Ordnance Survey/EDINA supplied service.	








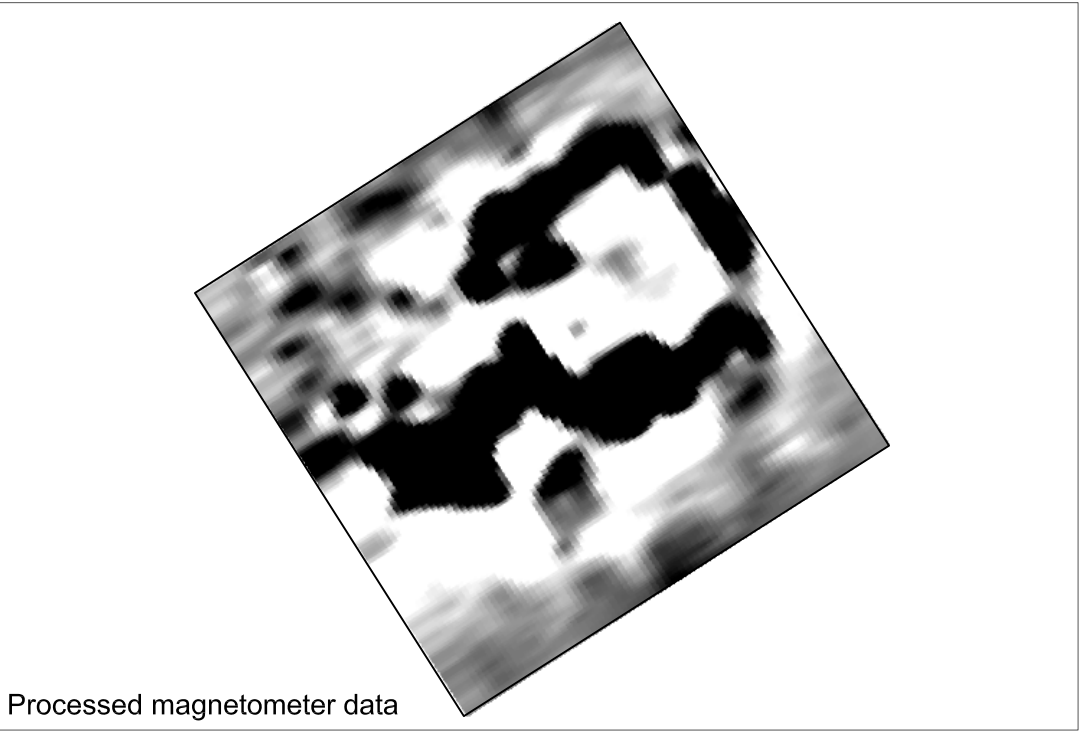
-  OS basemap
-  OS water
-  Survey Area
-  Archaeological feature
-  Walkover survey number



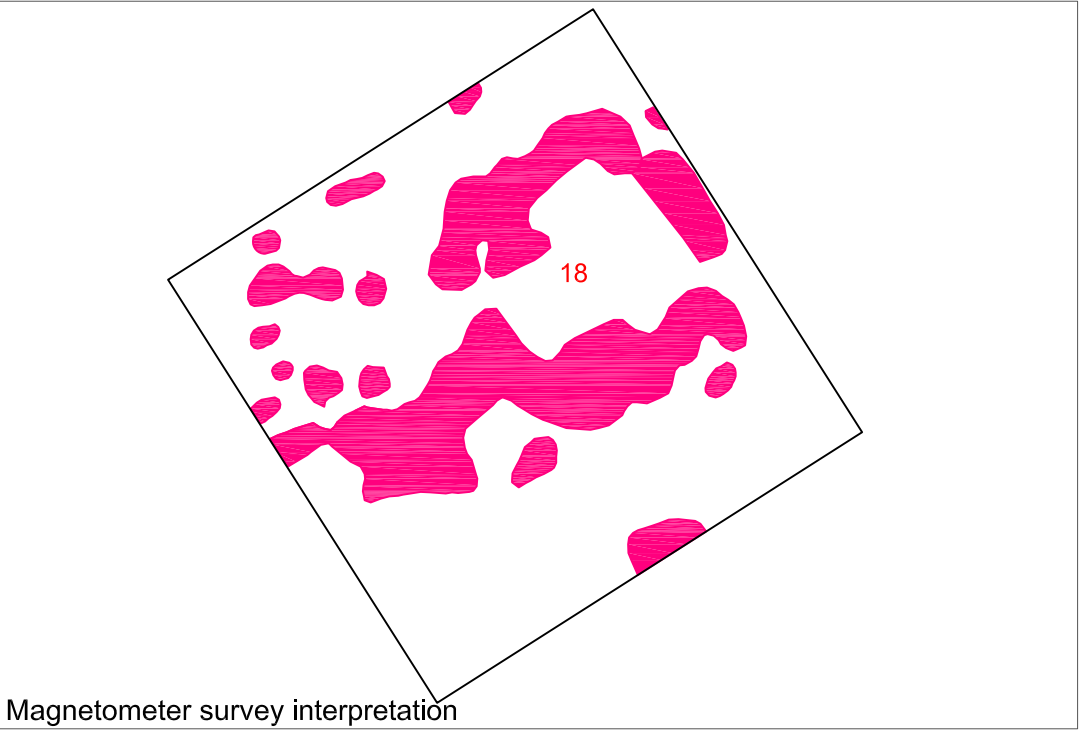
Figure 8. Area 1, processed magnetometer data with walkover survey sites.

Project Name	Hoy and Walls 2012
Project No.	345
Date	April 2013
Creator	LS
Scale	1:1000 @ A4
Draft No.	2




ORCA, Orkney College, East Road, Kirkwall, KW15 1LX
 This map is based on Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright/database right 2013. An Ordnance Survey/EDINA supplied service.



Processed magnetometer data



Magnetometer survey interpretation

-  Survey area
-  Archaeology (positive)
-  Anomaly number

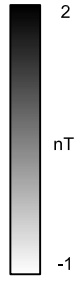
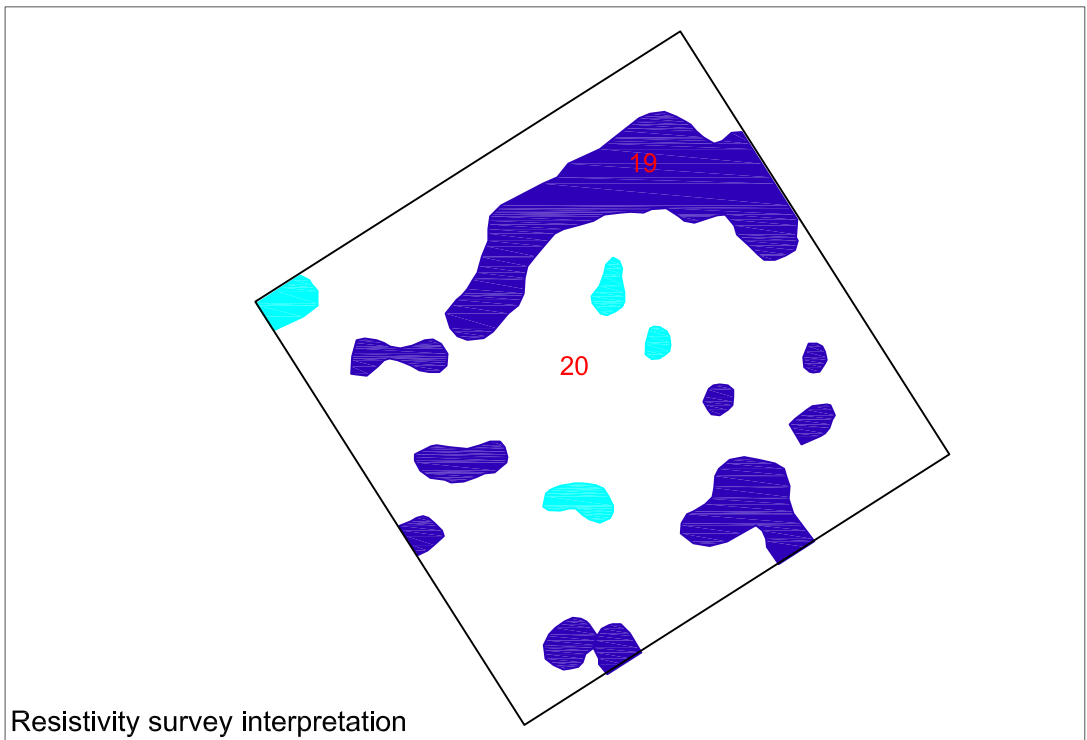
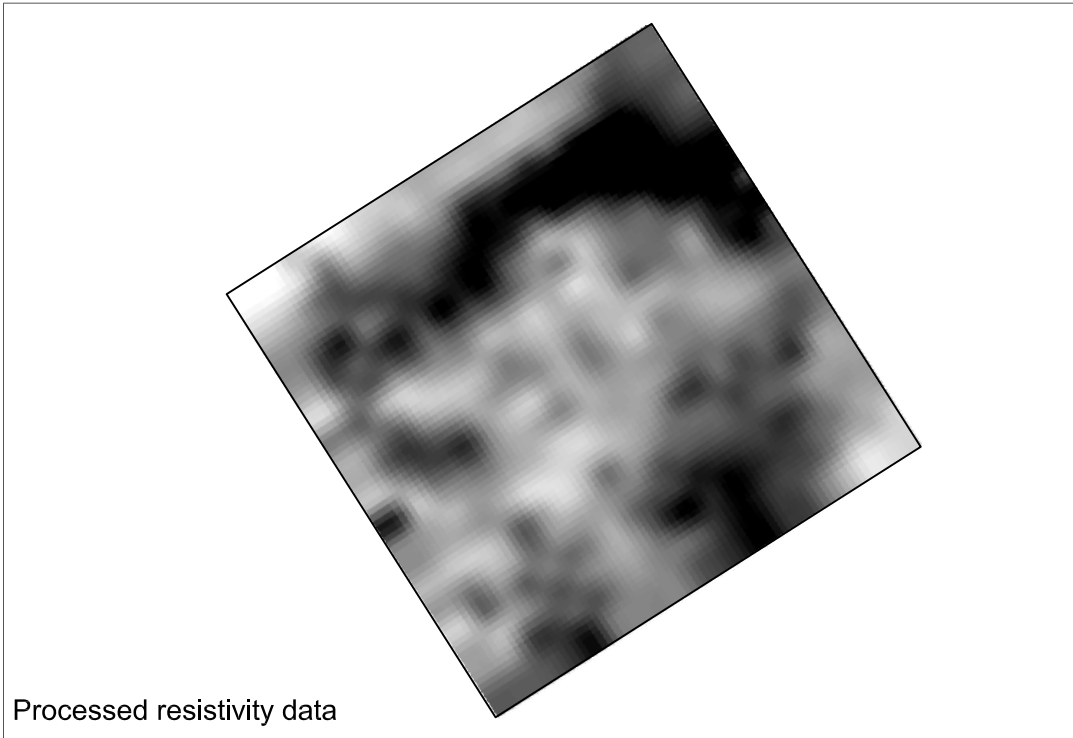
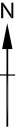
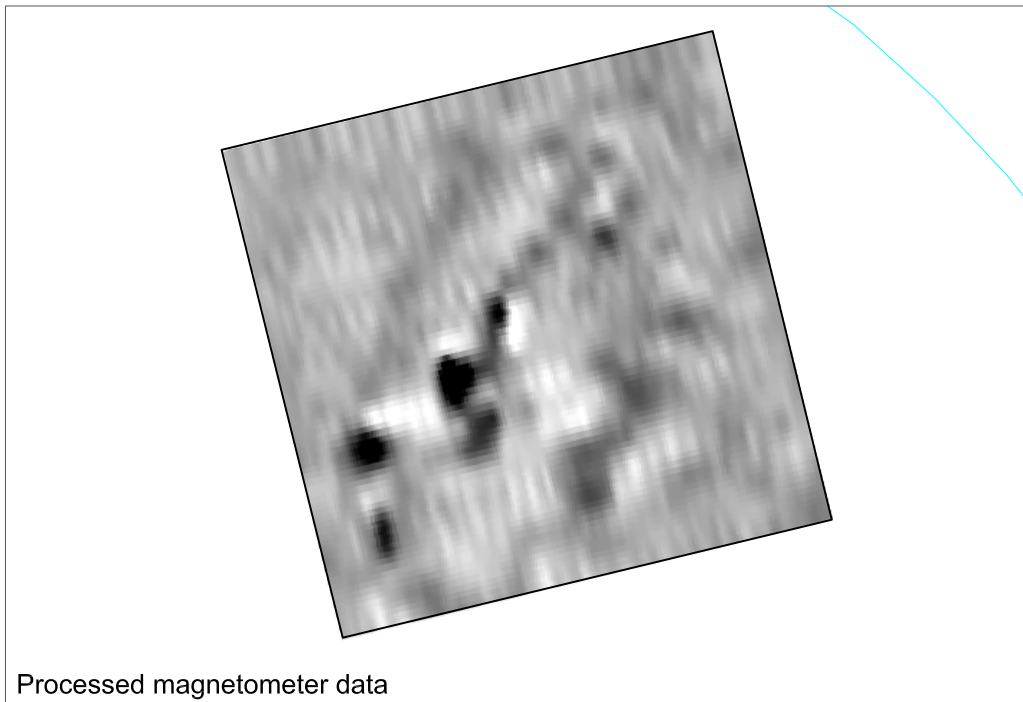


Figure 9. Area 2, processed magnetometer data and interpretation	
Project Name	Hoy and Walls 2012
Project No.	345
Date	April 2013
Creator	LS
Scale 1:300 @ A4	Draft No. 2
ORCA, Orkney College, East Road, Kirkwall, KW15 1LX	
<small>This map is based on Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright/database right 2013. An Ordnance Survey/EDINA supplied service.</small>	

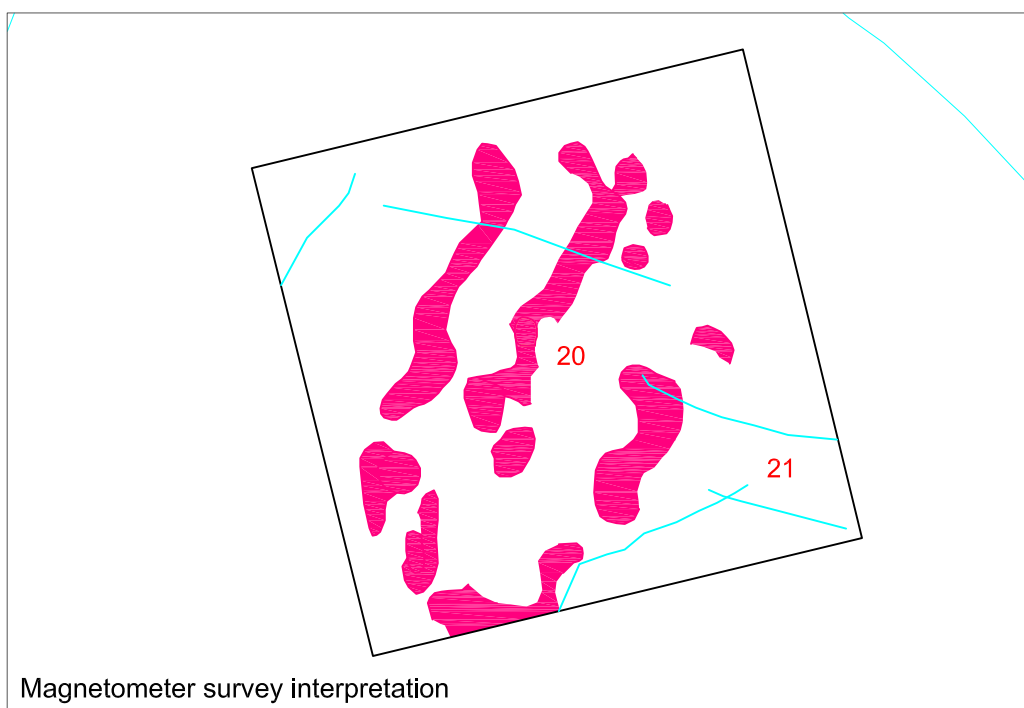


	Survey area		
	High resistance		
	Low resistance		
	Anomaly number		

Figure 10. Area 2, Processed resistivity data and Interpretation	
Project Name	Hoy and Walls 2012
Project No.	345
Date	April 2013
Creator	LS
Scale	1:300 @ A4
Draft No.	2
ORCA, Orkney College, East Road, Kirkwall, KW15 1LX	
<small>This map is based on Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright/database right 2013. An Ordnance Survey/EDINA supplied service.</small>	



Processed magnetometer data



Magnetometer survey interpretation



OS water



Survey area



Archaeology (positive)



Trend



Anomaly number

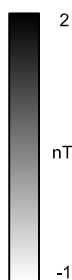
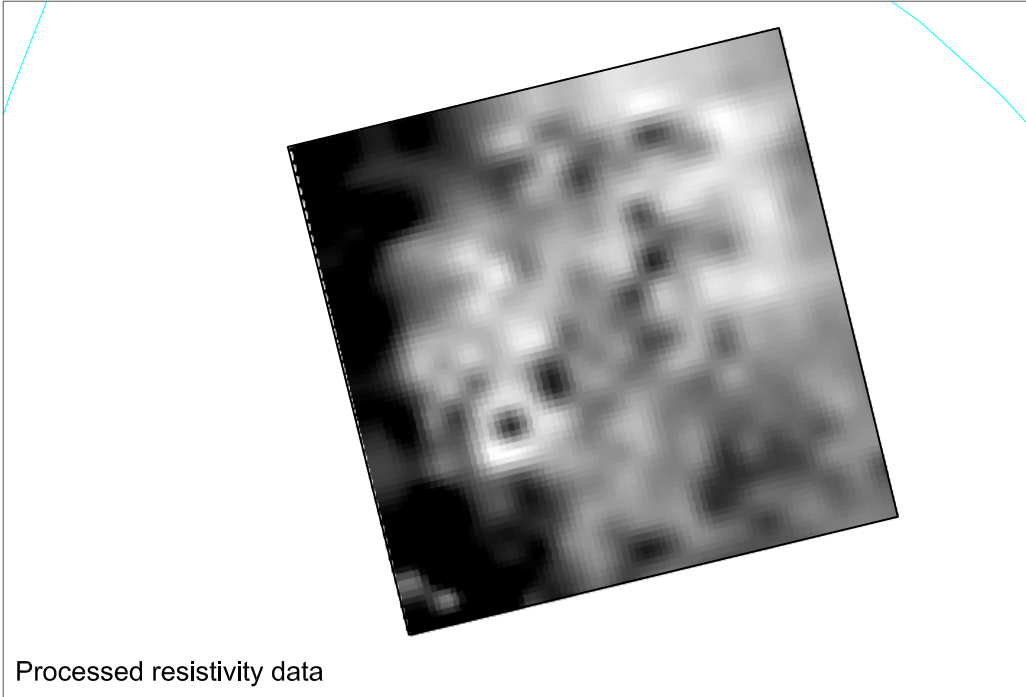


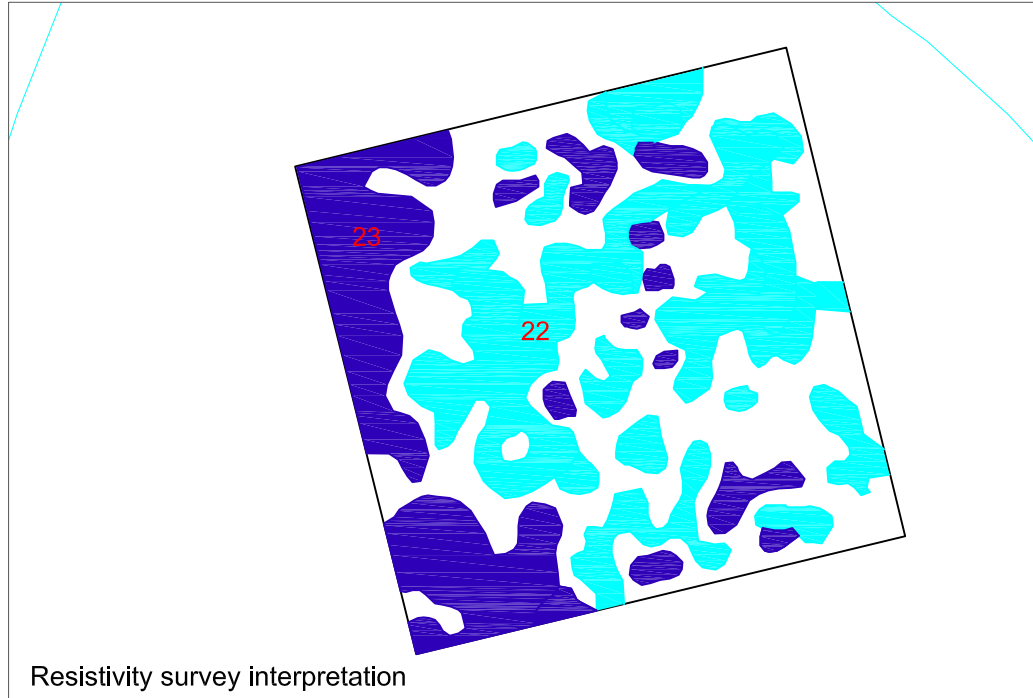
Figure 11. Area 3, processed magnetometer data and interpretation

Project Name	Hoy and Walls 2012
Project No.	345
Date	April 2013
Creator	LS
Scale	1:300 @ A4
Draft No.	2






ORCA, Orkney College, East Road, Kirkwall, KW15 1LX
This map is based on Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright/database right 2013. An Ordnance Survey/EDINA supplied service.



Processed resistivity data



Resistivity survey interpretation

-  OS water
-  Survey area
-  High resistance
-  Low resistance
-  Anomaly number

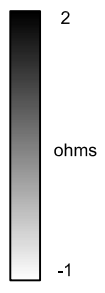
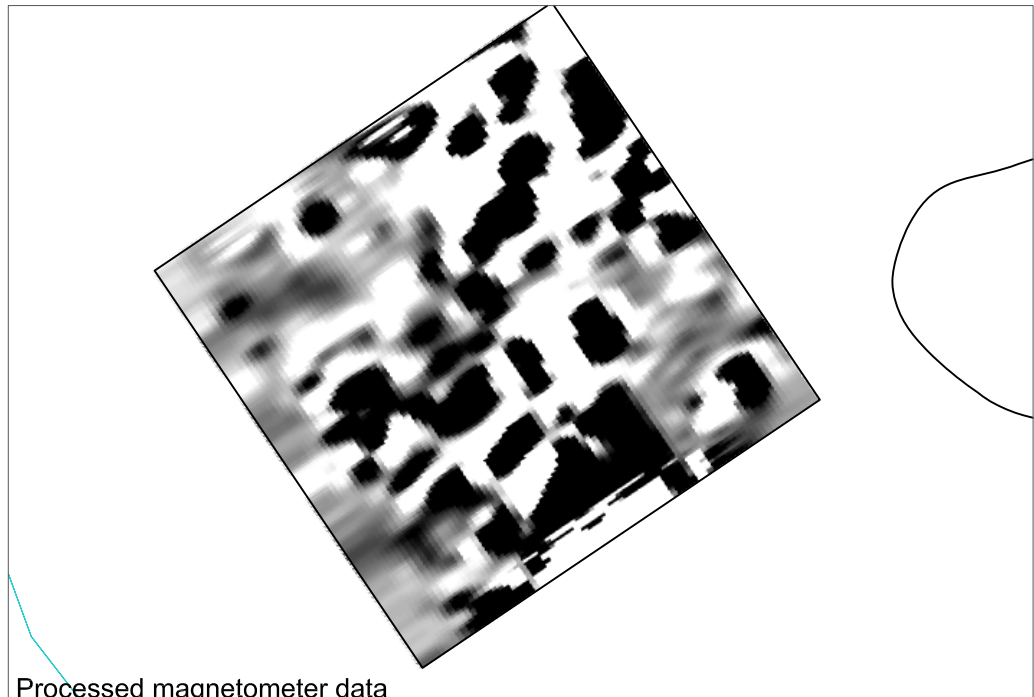
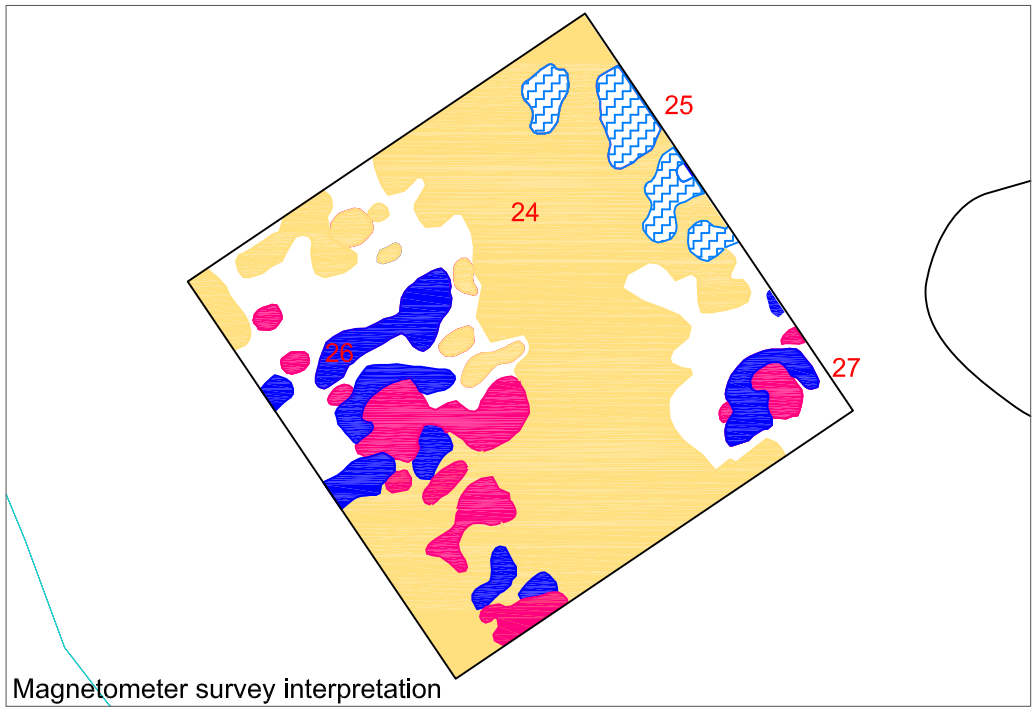


Figure 12. Area 3, Processed resistivity data and interpretation	
Project Name	Hoy and Walls 2012
Project No.	345
Date	April 2013
Creator	LS
Scale	1:300 @ A4
Draft No.	2
<small>ORCA, Orkney College, East Road, Kirkwall, KW15 1LX This map is based on Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright/database right 2013. An Ordnance Survey/EDINA supplied service.</small>	



Processed magnetometer data



Magnetometer survey interpretation

	OS basemap		Trend
	OS water		Ferrous
	Survey area		Magnetic enhancement
	Archaeology (positive)		Anomaly number
	Archaeology (negative)		

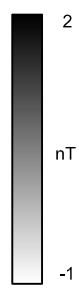
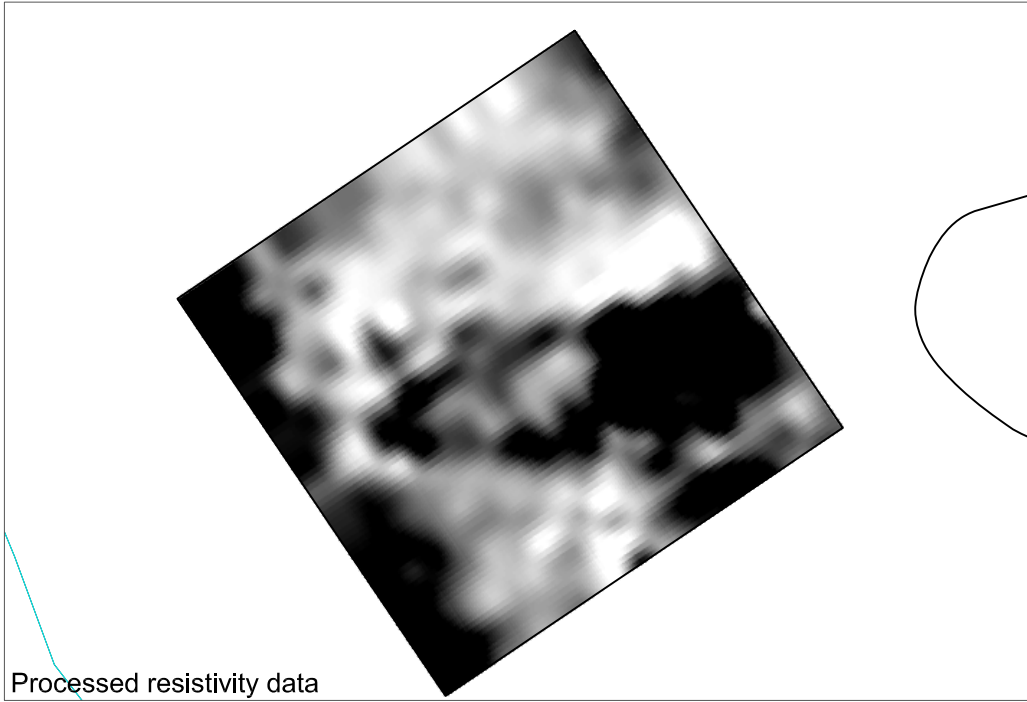


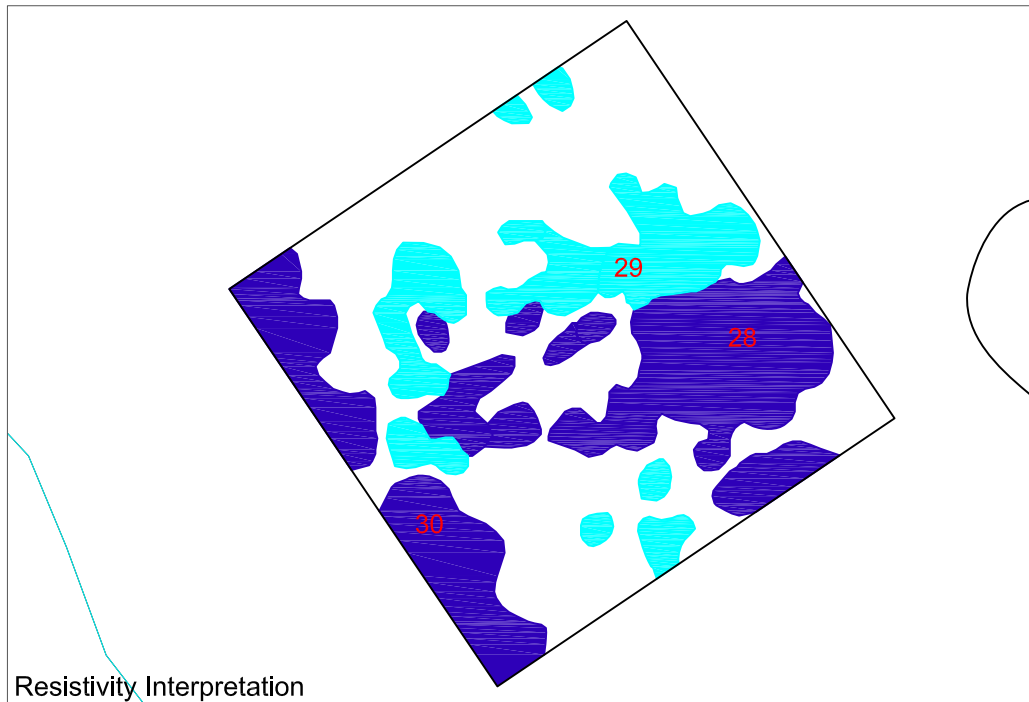
Figure 13. Area 4, processed magnetometer data and interpretation

Project Name	Hoy and Walls 2012
Project No.	345
Date	April 2013
Creator	LS
Scale	1:300 @ A4
Draft No.	2

ORCA, Orkney College, East Road, Kirkwall, KW15 1LX
 This map is based on Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright/database right 2013. An Ordnance Survey/EDINA supplied service.



Processed resistivity data



Resistivity Interpretation

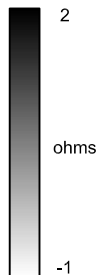
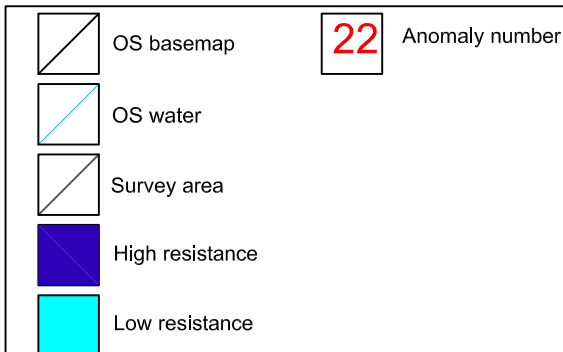
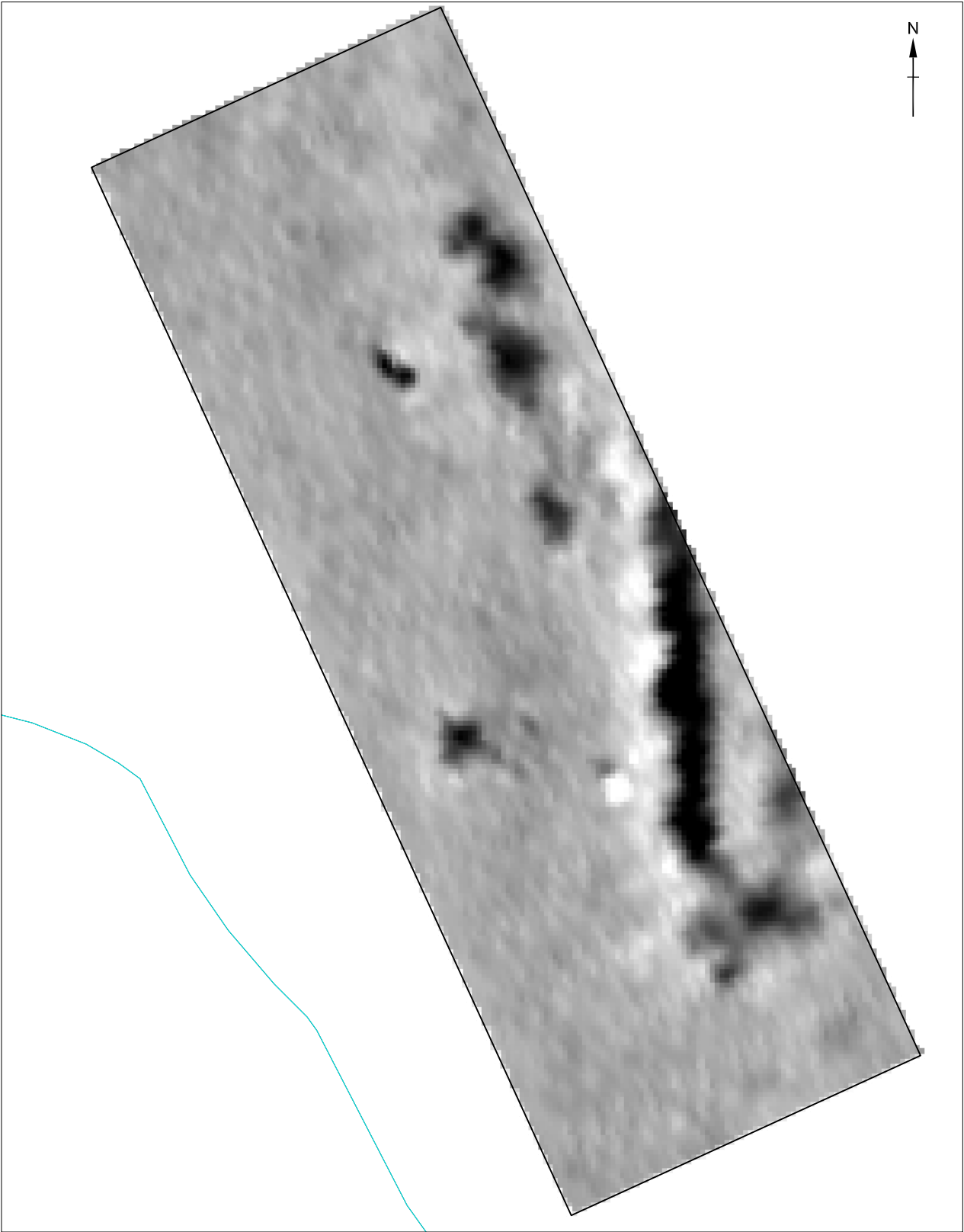




Figure 14. Area 4, Processed resistivity data and Interpretation

Project Name	Hoy and Walls 2012
Project No.	345
Date	April 2013
Creator	LS
Scale	1:300 @ A4
Draft No.	2

ORCA, Orkney College, East Road, Kirkwall, KW15 1LX
This map is based on Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright/database right 2013. An Ordnance Survey/EDINA supplied service.



-  OS water
-  Survey area

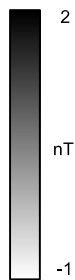


Figure 15. Area 5, processed magnetometer data

Project Name	Hoy and Walls 2012
Project No.	345
Date	April 2013
Creator	LS
Scale 1:300 @ A4	Draft No. 2

ORCA, Orkney College, East Road, Kirkwall, KW15 1LX
 This map is based on Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright/database right 2013. An Ordnance Survey/EDINA supplied service.

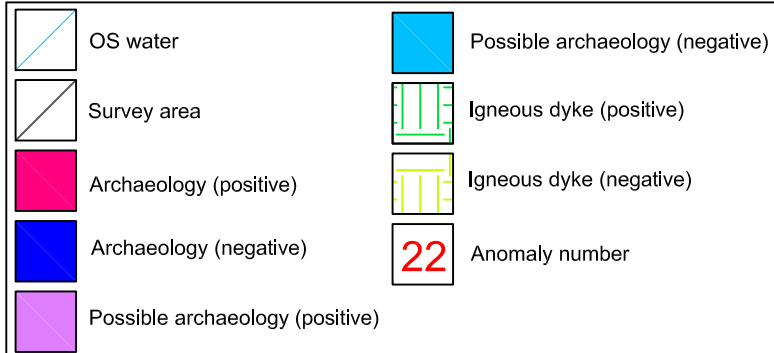
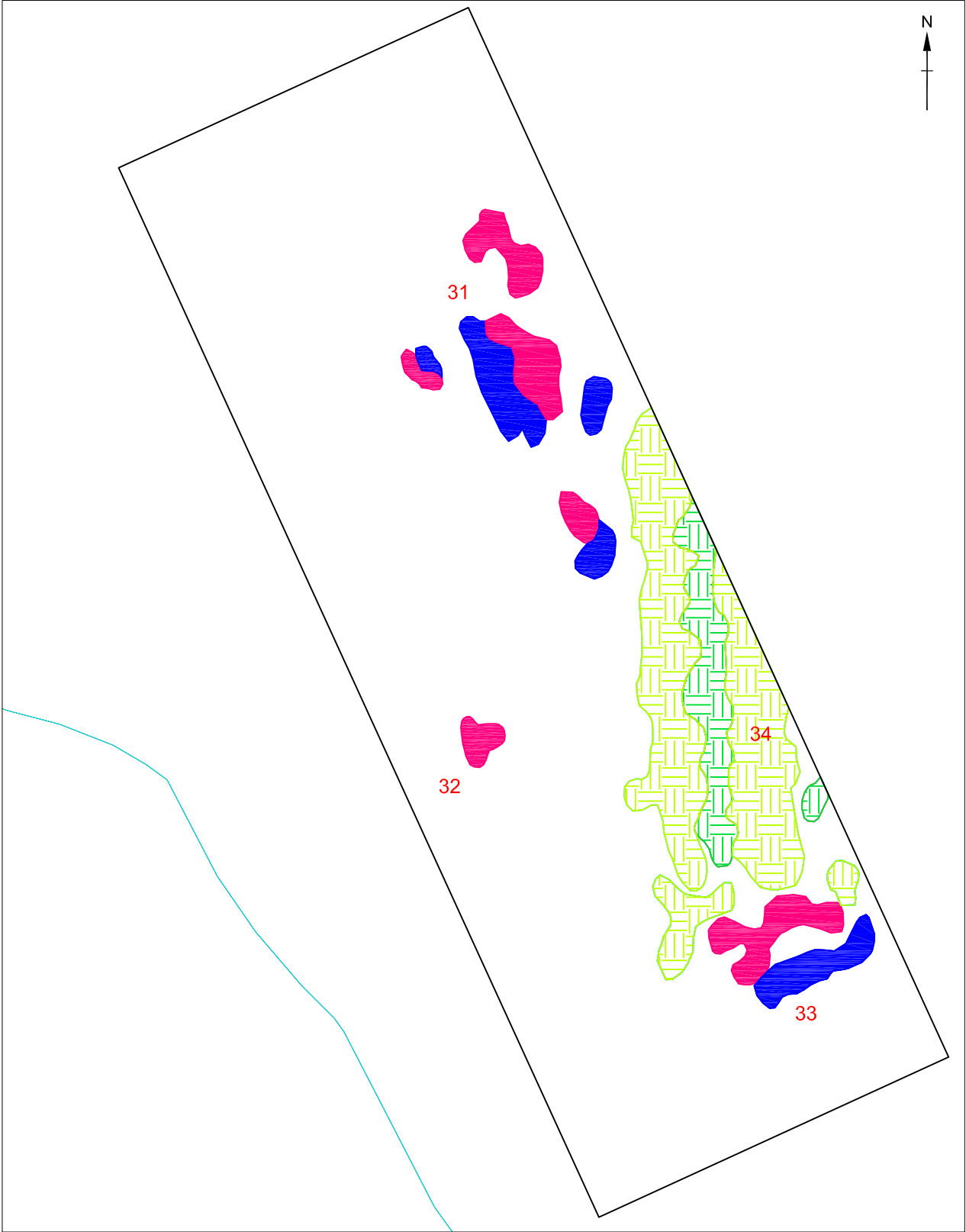
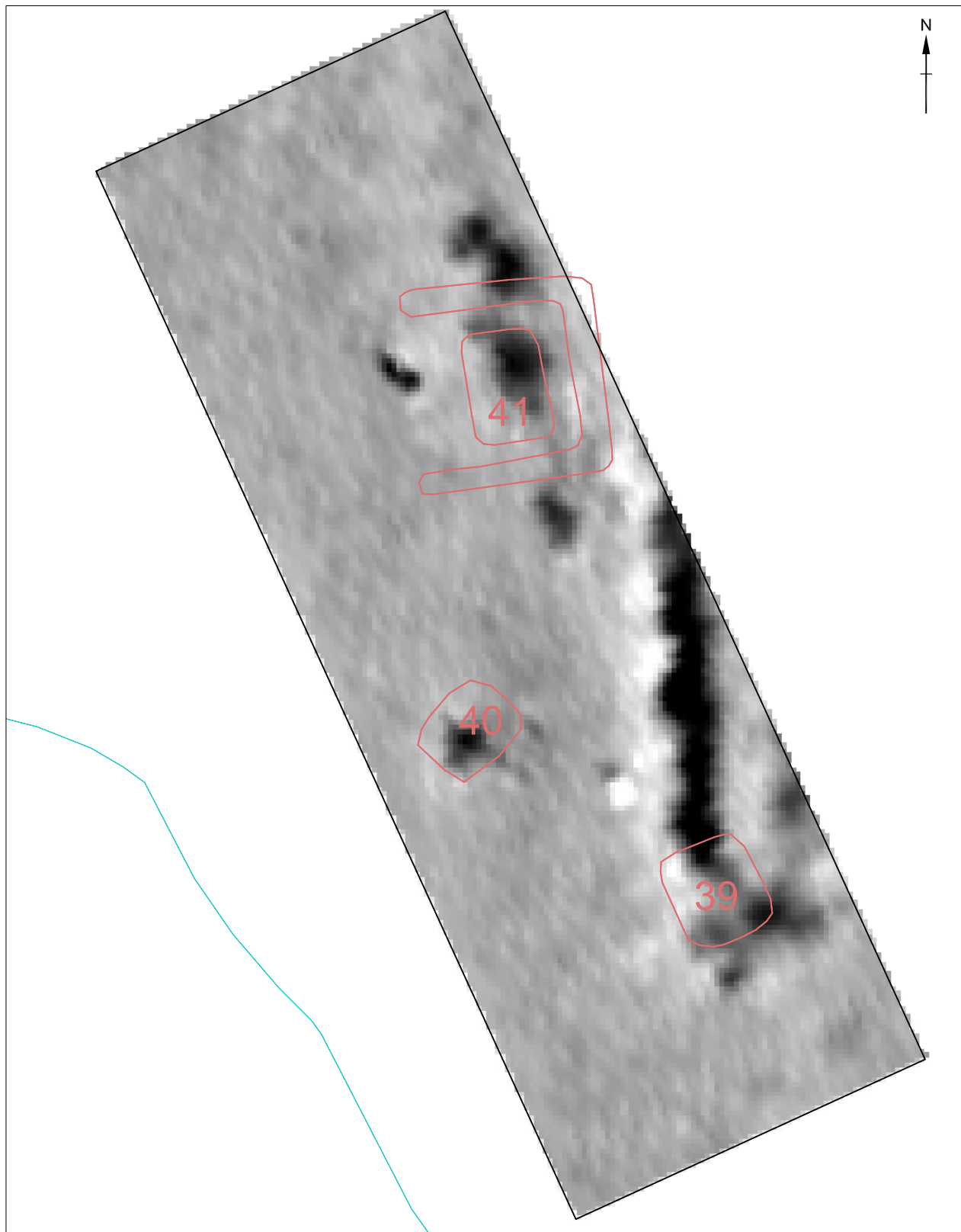






Figure 16. Area 5, magnetometry interpretation

Project Name	Hoy and Walls 2012
Project No.	345
Date	April 2013
Creator	LS
Scale 1:300 @ A4	Draft No. 1

ORCA, Orkney College, East Road, Kirkwall, KW15 1LX
This map is based on Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright/database right 2011. An Ordnance Survey EDINA supplied service.



-  OS water
-  Survey area
-  Archaeological feature
-  Walkover survey number

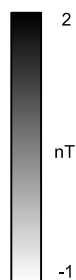


Figure 17. Area 5, processed magnetometer data with walkover survey sites.

Project Name	Hoy and Walls 2012
Project No.	345
Date	April 2013
Creator	LS
Scale 1:300 @ A4	Draft No. 2

ORCA, Orkney College, East Road, Kirkwall, KW15 1LX
This map is based on Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationary Office © Crown Copyright/database right 2013. An Ordnance Survey/EDINA supplied service.

Appendix 1: Gazetteer of sites at Cantick and Booth, South Walls

Site No	Site Name	Site Type	Year	NMRS No	SAM No	Listed Building	E	N	Significance	Importance	Period	Description
SWC1	Green Hill of Hesti Geo	Broch	2006	ND38NW8	1422		333765	989038	High	National	Iron Age	Large grass covered mound on a platform with structural remains visible. Partly eroded into sea.
SWC2	West Geo	Mound	2006				333497	989039	Moderate	Regional	Modern	Sub-circular grass covered earthen bank 16 m diameter. WWII searchlight emplacement.
SWC3	West Geo	Mound	2006				333512	989014	Moderate	Regional	Modern	Low grass covered sub-circular mound, 0.6 m high and 10 m in diameter. Part of WWII searchlight emplacement.
SWC4	West Geo	Mound	2006				333466	989068	Moderate	Regional	Modern	Low grass covered sub-circular mound, 0.6 m high and 10 m in diameter. Part of WWII searchlight emplacement.
SWC5	West Geo	Mound	2006				333452	989033	Moderate	Regional	Modern	Low grass covered sub-circular mound, 0.6 m high and 10 m in diameter. Part of WWII searchlight emplacement.
SWC6	West Geo	Mound	2006				333539	989064	Moderate	Regional	Modern	Base of rectangular structure (11m x 6m), stone walls & concrete pads. WWII searchlight emplacement hut. base.
SWC7	West Geo	Mound	2006				333559	989058	Moderate	Regional	Modern	Grass covered figure-of-8 shaped mound, 22.5m by 14 m. Part of WWII searchlight emplacement.
SWC8	Storehouse	Structure, Gate pillar	2006	ND38NW57.1			333601	989318	Moderate	Regional	Post medieval	Snelsetter Gate pier
SWC9	Kirk Hope Naust South	Naust	2012				333620	989314	Low	Local	Post medieval	Boat naust (4.5m x 3.3m) cut into small beach cliff on south side of Kirk Hope. Associated with SWC 10 and 11.
SWC10	Kirk Hope Naust South	Naust	2012				333641	989306	Low	Local	Post medieval	Boat naust (3m x 2.7m) cut into small beach cliff on south side of Kirk Hope. Associated with SWC 9 and 11.
SWC11	Kirk Hope Naust South	Naust	2012				333653	989303	Low	Local	Post medieval	Boat naust (3.2m x 3m) cut into small beach cliff on south side of Kirk Hope. Stone lined. Associated with SWC 9 and 10.
SWC12	Storehouse	Stone, worked	2006				333819	989328	Low	Local	Post medieval	Flagstone with circular hole. Broken across hole. Probable well cover
SWC13	Hesti Geo	Settlement	2012	ND38NW20			333875	989095	Moderate	Regional	Bronze Age	Probable house. Raised figure-of-eight shaped area with uprights & orthostats protruding though grass.
SWC14	Hesti Geo	Mound	2012				333915	989093	Negligible	Negligible	Modern	Building debris from Cantick Farm (concrete and rubble) dumped on shore edge, post 1989.
SWC15	Hesti Geo	Enclosure	2012				333924	989107	Moderate	Regional	Bronze Age	Rectangular enclosure truncated in SW. Associated with SWC 13.
SWC16	Hesti Geo	Quarry	2006				333987	989078	Low	Local	Post medieval	Stone quarry in cliff face forming a large step. Probably source of improvements wall stone along with SWC 36.
SWC17	South Walls, Cantick	Burnt mound	2012	ND38NW4			333962	989306	Moderate	Regional	Bronze Age	Large sub-oval burnt mound (???) with platform on SE side and burnt stone exposed from cattle poaching.
SWC18	Cantick Farm	Farmstead	2006				334074	989409	Low	Local	Post medieval	A group of roofless stone sheds, stone farmhouse and modern sheds. Depicted roofed on OS 1882 map CXXIII.6.
SWC19	Cantick Farm	Naust	2006				333996	989446	Low	Local	Post medieval	Boat naust, partly stone lined. Full of farm debris and beach stone.
SWC20	Cantick Farm	Boat	2006				333997	989450	Low	Local	Modern	Abandoned military WWII barge once used at fish farm in Kirk Hope û farm now gone.
SWC21	Cantick Farm	Boat	2006				334015	989476	Low	Local	Modern	Wreck. Bow of iron framed boat on shore. Unknown provenance.
SWC22	Outer Green Hill	Chambered tomb	2006	ND38NW9			334269	989587	High	National	Neolithic	Large chambered tomb with outer revetment walls and corbelled chamber. Apparently undisturbed chamber. Evaluation excavation by ORCA in 2008.
SWC23	Outer Green Hill	Well	2006				334281	989544	Negligible	Negligible	Modern	Rectangular stone lined vertical shaft 2.8 m deep under a flagstone with circular hole.
SWC24	Outer Green Hill	Road	2006				334242	989602	Low	Local	Post medieval	Original start of access road to lighthouse c.1845
SWC25	Cantick Head	Earthwork	2006	ND38NW16			334648	989635	Moderate	Regional	Bronze Age	Curved bank & sub-circular mound cut by road - alleged to relate to naust, but could be prehistoric.
SWC26	Cantick Head	Naust	2006	ND38NW16			334630	989670	Low	Local	Post medieval	Boat naust with possible stone lining.
SWC27	Ruff of Cantick	Beacon	2006	ND38NW21			334792	989782	Negligible	Negligible	Modern	Beacon on rocks with access path & service hut.
SWC28	Cantick Head	Barrows	2006	ND38NW17			334688	989651	Moderate	Regional	Bronze Age	Three low barrows (also at NGR 334691 989629). Circular mounds c.8.5 m diameter.
SWC29	Cantick Head	Settlement	2006	ND38NW19			334737	989628	Moderate	Regional	Bronze Age	House (possible). Low earthwork with extension to SW.
SWC30	Cantick Head	Barrow	2006	ND38NW18			334689	989574	Moderate	Regional	Bronze Age	Low grass covered mound with stones protruding. c. 8 m diam. & 0.75 m high.
SWC31	Cantick Head	Lighthouse	2006	ND38NW 13.0/1		18710	334696	989401	Moderate	Regional	Post medieval	Stevenson lighthouse (1858) with principal keepers house, keepers cottages and outbuildings in walled enclosure.
SWC32	Cantick Head	Dyke	2006				334501	989274	Low	Local	Post medieval	Linear bank. Depicted on OS 1882 map CXXIII.7/10/11. Same as SWC 33.
SWC33	Cantick Head	Dyke	2006				334195	989103	Low	Local	Post medieval	Linear bank. Depicted on OS 1882 map CXXIII.10/11. Continuation of SWC 32.
SWC34	Cantick Head	Pond	2006				334377	989227	Negligible	Negligible	Modern	Modern, rectangular, animal drinking pond.
SWC35	Cantick Head	Barrows	2006	ND38NW11			334328	989144	Moderate	Regional	Bronze Age	Grass covered mound c.9m diameter with severe rabbit damage.

Appendix 1: Gazetteer of sites at Cantick and Booth, South Walls

SWC36	Roeberry	Quarry	2006				334178	989087	Low	Local	Post medieval	Possible stone quarry
SWC37	Roeberry	Platform	2006				334091	989077	Low	Local	Modern	Level platform cut into slope, possibly WWII. Test pit excavated by ORCA in 2009.
SWC38	Roeberry	Chambered tomb, cists, square barrow	2011	ND38NW5			334062	989062	High	National	Neolithic	Multi-period burial monument. Neolithic stalled tomb, Bronze Age cists, Iron Age square barrow. Excavated by ORCA 2009-11.
SWC39	Roeberry	Dykes	2009	ND38NW6			334051	989047	Low	Local	Post medieval	Three linear turf built dykes perpendicular to cliff top. Excavated by ORCA in 2009. Seal subsoil and not sub-peat.
SWC40	Storehouse, Cantick	Structure	2012				333606	989318	Low	Local	Post medieval	Circular gate pillar from Melsetter Estate once part of a pair. Other removed when cattle grid built. Depicted on OS 1882 map CXXIII.6.
SWC41	Storehouse, Cantick	Mile stone	2012				333534	989310	Low	Local	Post medieval	Mile stone inscribed with "N. Ness 7, K. Hope". One of a series marking the South Walls and Hoy road at regular intervals.
SWC42	Howequoy	Farmstead	2012				333296	989167	Low	Local	Post medieval	Foundations of house with gable end fireplace. Earthwork on NE side. Depicted roofed on OS 1882 map CXXIII.10.
SWC43	Howequoy	Mound	2012				333260	989124	Low	Local	Post medieval	Circular earthwork with central hollow and stone. Clearance or dump.
SWC44	Howequoy	Trackway	2012				333301	989117	Low	Local	Post medieval	Curvilinear trackway from Howequoy to Misbister farmsteads with branch to SE. Depicted on OS 1882 map CXXIII.10.
SWC45	Howequoy	Enclosure	2012				333337	989116	Low	Local	Post medieval	Small rectangular enclosure adjoining dyke 46.
SWC46	Howequoy	Dyke	2012				333386	988989	Low	Local	Post medieval	Linear earthwork dyke (c.4m wide) between Howequoy and West Geo. Earlier boundary in area, precedes stone dyke to east.
SWC47	The Brecks	Farmstead	2012				333324	989024	Low	Local	Post medieval	Small farmstead. Main house still roofed with gable end fireplace and abutting roofless outhouse. Small enclosure to north. Depicted roofed on OS 1882 map CXXIII.10.
SWC48	Braeckyquoy	House	2012				333279	988988	Low	Local	Post medieval	Remains of small stone built dwelling mostly robbed for stone. Small pond to north. Depicted roofed on OS 1882 map CXXIII.10.
SWC49	The Brecks	Mound	2012				333228	988984	Moderate	Regional	Bronze Age	Large earthen mound (6m x 9m) within field. Out of character with surrounding area and could be a barrow.
SWC50	Drakie Geo	House	2012				333209	988910	Low	Local	Post medieval	Remains of stone built house (robbed?). East gable end contains later fireplace and chimney, suggesting originally had central hearth. Depicted roofless on OS 1882 map CXXIII.10 and occupied on 1903 edition.
SWC51	Drakie Geo	Byre	2012				333232	988869	Low	Local	Post medieval	Small roofless two roomed byre. North room later addition. South end depicted on OS 1903 map Sheet123.10.
SWC52	West Geo	Mound	2012				333378	988861	Low	Local	Post medieval	Small earthen mound (6.5m diameter) with stone spread to NE. Bronze Age barrows?
SWC53	Drakie Geo	Rig and furrow	2012				333204	988853	Low	Local	Post medieval	Small area of rig and furrow (7 planks) on cliff top.
SWC54	Wind Geo	Dyke	1998				333320	988823	Low	Local	Post medieval	Linear dyke (earth and stone) running along cliff top, to 333420/988860. Recorded in 1998.
SWC55	West Geo	Well	1998				333390	988843	Low	Local	Post medieval	U-shaped depression on cliff at site of well depicted roofed on OS 1882 map CXXIII.10. Card 1998 survey.
SWC56	Wind Geo	Structure	1998				333260	988803	Low	Local	Post medieval	Rectangular stone setting of edge set slabs, 1.7m across max., above cliff. Card 1998 survey.
SWC57	Storehouse	Farmstead	2012				333545	989309	Low	Local	Post medieval	Store house for Snelsetter estate. Depicted roofed on OS 1882 map CXXIII.10.
SWC58	Booth	Farmstead	2012				333360	989390	Low	Local	Post medieval	Depicted roofed on OS 1882 map CXXIII.10.

Appendix 2: Gazetteer of sites at Braebuster, Hoy

Site No	Site Name	Site Type	Year	NMRS No	E	N	Significance	Importance	Period	Description
G1	Groups	Square Barrow	2010		321854	1004342	High	National	Iron Age	Low heather and grass covered rectangular earthwork platform 9.1 x 5.8 x 0.5m orientated NE-SW. Probable square barrow.
G2	Groups	Square Barrow	2010		321835	1004335	High	National	Iron Age	Low heather and grass covered rectangular earthwork platform 9.5 x 6.45 x 0.35m orientated N-S. Possible square barrow.
G3	Groups	Platform	2010		321848	1004365	Moderate	Regional	Uncertain	Low grass covered rectangular raised platform 13.9 x 10.6 x 0.25m orientated NW-SE. Platform or possible square barrow.
G4	Groups	Planticrue	2010		321840	1004349	Low	Local	Post Medieval	Small heather and grass covered ephemeral enclosure 8.8 x 6.4 x 0.1m with low interrupted banks orientated NW-SE. Possible planticrue.
G5	Groups	Square Barrow	2010		321827	1004324	High	National	Iron Age	Low grass covered rectangular earthwork platform 7.1 x 5.6 x 0.25m orientated NW-SE. Merges into slope to SE. Possible square barrow.
G6	Groups	Square Barrow	2010		321824	1004299	High	National	Iron Age	Low heather and grass covered rectangular earthwork platform 9.9 x 7.2 x 0.5m orientated NW-SE. Probable square barrow.
G7	Groups	House, platform	2010		321815	1004288	Low	Local	Post Medieval	Irregular heather and grass covered rectangular platform 14.5 x 6.5 x 0.5m divided roughly into 3 parts, orientated NW-SE. Possible house platform.
G8	Groups	Square Barrow, enclosed	2010		321813	1004337	High	National	Iron Age	Low well-defined heather and grass covered rectangular earthwork platform 6.7 x 6.0 x 0.35m with segmented outer bank 14 x 12.5m, orientated NE-SW.
G9	Groups	Square Barrow	2010		321824	1004357	High	National	Iron Age	Low heather covered rectangular earthwork platform 7.3 x 6.0 x 0.45m, orientated NE-SW. Probable square barrow.
G10	Groups	Square Barrow	2010		321813	1004348	High	National	Iron Age	Low heather covered rectangular earthwork platform 7.2 x 4.2 x 0.5m, orientated NW-SE. Probable square barrow.
G11	Groups	Square Barrow	2010		321807	1004364	High	National	Iron Age	Low heather covered sub-rectangular earthwork platform 7.1 x 4.3 x 0.2m orientated NW-SE. Possible square barrow.
G12	Groups	Platform	2010		321803	1004379	Moderate	Regional	Uncertain	Irregular heather and grass covered platform 8.3 x 4.9 x 0.4m orientated NW-SE. Merges into slope to E Possible platform or erosion feature.
G13	Groups	Burnt Mound	2010		321793	1004385	Moderate	Regional	Bronze Age	Small firm circular grass covered mound 5.1 x 0.5m with well-established soil. Possible barrow or burnt mound.
G14	Groups	Platform	2010		321788	1004364	Moderate	Regional	Uncertain	Low heather and grass covered wedge shaped platform 10.7 x 5.3 x 0.3m orientated NW-SE. Platform or possible square barrow.
G15	Groups	Platform	2010		321795	1004352	Moderate	Regional	Uncertain	Low heather and grass covered sub-circular platform or mound 5.6 x 5.4 x 0.25m orientated NE-SW. Platform or possible burial monument.
G16	Groups	Platform	2010		321803	1004345	Moderate	Regional	Uncertain	Low heather and grass covered sub-rectangular platform or mound 5.8 x 4.8 x 0.3m orientated NE-SW. Platform or possible burial monument.
G17	Groups	Square Barrow, enclosed	2010		321794	1004342	High	National	Iron Age	Low well-defined heather and grass covered rectangular earthwork platform 6.9 x 5.6 x 0.4m with segmented outer bank 14 x 10m, orientated NW-SE.
G18	Groups	Platform	2010		321841	1004295	Moderate	Regional	Uncertain	Low heather covered sub-oval possible platform 10.3 x 5.2 x 0.5m. Merges into slope to SE. Possible platform.
G19	Groups	Platform	2010		321863	1004258	Moderate	Regional	Uncertain	Low grass covered oval possible platform 12.0 x 4.7 x 0.2m, orientated NW-SE. Merges into slope to SE. Possible platform.
G20	Groups	Dyke	2010		321808	1004398	Low	Local	Post Medieval	Linear heather covered turf dyke up to 2.5m x 0.4m surviving in sections, orientated E-W. Depicted on OS 1882 map. Field boundary.
G21	Groups	Earthwork	2010		321819	1004410	Low	Local	Post Medieval	Sub-rectangular slightly irregular mound 7.8 x 4.5 x 0.75m with a small enclosure 5.3m long to south, orientated N-S. Remains of possible structure.
G22	Groups	Mound	2010		321831	1004417	Moderate	Regional	Prehistoric	Oval heather and grass covered mound 7.4 x 6.9 x 0.75 with rabbit damage, orientated N-S. Possible prehistoric mound.
G23	Groups	Quarry	2010		321879	1004409	Low	Local	Post Medieval	Area of quarrying, totalling 25 x 14.5m and 1.5m deep, with oval and sub-square depressions and a dividing bank of spoil. Orientated N-S.
G24	Groups	Track	2010		321925	1004390	Low	Local	Post Medieval	Track, 3.2m wide and 0.85m deep, serving Site 23, orientated NW-SE. Joins Site 25 to SE.
G25	Groups	Track	2010		321950	1004358	Low	Local	Post Medieval	Track, 3.6m wide, joined by site 24 to E, orientated E-W. Depicted on 1st Edition OS (1882). Predates metal road.
G26	Groups	Platform	2010		321908	1004322	Moderate	Regional	Uncertain	Low grass covered rectangular platform 12.0 x 5.2 x 0.5m orientated NW-SE. Platform or possible square barrow.
G27	Groups	Dyke	2010		321694	1004379	Low	Local	Post Medieval	Linear heather covered turf dyke 24.1 x 1.5 x 0.35m orientated NW-SE. Possible continuation of Site 20 and depicted on OS 1882 map.
G28	Groups	Mound	2010		321694	1004379	Moderate	Regional	Uncertain	Circular mound 6.3 x 0.6m associated with Site 27.
G29	Groups	Platform	2010		321710	1004408	Low	Local	Post Medieval	Two sub rectangular earthwork platforms 10.4 x 8.6 x 0.25m max south of G30, orientated NE-SW. Possible kail yards.
G30	Groups	Enclosure	2010		321709	1004429	Low	Local	Post Medieval	Turf dyke 1.1m wide and 0.2m high with ditch on S side forming rectangular enclosure for G31 and G33.
G31	Groups	Platform	2010		321710	1004423	Low	Local	Post Medieval	Low heather covered rectangular platform 8.5 x 4.1 x 0.25m. Lazy bed or possible planticrue, orientated NE-SW. Within G30.
G32	Groups	Platform	2010		321701	1004437	Low	Local	Post Medieval	Low heather covered rectangular platform 6.5 x 5.2 x 0.25m, orientated NE-SW. Lazy bed or possible planticrue.
G33	Groups	Farmstead	2010		321690	1004430	Moderate	Regional	Post Medieval	Remains of 3 roomed stone built farmhouse 16.7 x 5.2 x 0.3m reduced to lower course. Corn drying kiln at SW end. Not depicted on OS 1882 map.
G34	Groups	Quarry	2010		321694	1004448	Low	Local	Post Medieval	Semi-circular quarry 5.5 x 5.5 x 1.25m cut into the S side of the burn. Associated with House, Site 33, 10m to SW.
G35	Groups	Mound	2010		321720	1004476	Moderate	Regional	Prehistoric	Low grass covered broad mound 7.4 x 7.1 x 0.2m on platform between boggy confluence of two burns.
G36	Groups	Farmstead	2010		321775	1004508	Low	Local	Post Medieval	Unroofed farmhouse 9.35 x 5.3m with gable end chimneys and mortar pointing. Post 1900. Supercedes G51.
G37	Groups	Bridge	2010		321747	1004492	Low	Local	Post Medieval	Remains of stone built bridge over burn. Piers 0.6m wide and 1.25m high. Associated with Site 36.
G38	Groups	Mound	2010		321817	1004425	Moderate	Regional	Prehistoric	Large heather covered mound 7.4 x 6.8 x 0.75m with slight ridge on south crest. Unknown date or function, could be Prehistoric.
G39	Bailie Breck	Platform, enclosure	2010		322135	1004258	Moderate	Regional	Uncertain	Small turf enclosure 7 x 7 x 0.3m with a slight internal platform, orientated NNW-SSE. Possible square barrow.

Appendix 2: Gazetteer of sites at Braebuster, Hoy

G40	Bailie Breck	Platform	2010		322123	1004267	Moderate	Regional	Uncertain	Low grass covered rectangular platform 6.5 x 4.4 x 0.4m, orientated NE-SW. Possible square barrow.
G41	Bailie Breck	Square Barrow, Enclosed	2010		322124	1004284	High	National	Iron Age	Semi-enclosed square barrow 11.3 x 11.3 x 0.3m with rectangular central platform 6.5 x 4.9 x 0.3m, orientated NNW-SSE.
G42	Groups	Building	2010	HY20SW35	321850	1004446	Negligible	Negligible	Post Medieval	Small roofless building depicted on OS 1882 CXII.1. No longer extant.
G43	Bailie Breck	Head dyke	2012		322246	1004372	Moderate	Regional	Medieval	Head dyke for Braebuster. 5m wide and 1.5m high in places. Depicted on 21750 map, partly on OS 1882 map. Same as G49 and G50.
G44	Bailie Breck	Burnt Mound	2012		322120	1004382	Moderate	Regional	Bronze Age	Low lobe shaped earthen mound 6.5 x 4.5 x 0.5m adjacent to small burn channel. Possible burnt mound.
G45	Bailie Breck	Mound	2012		322133	1004358	Moderate	Regional	Uncertain	Rectangular earthen mound or platform 4 x 3 x 0.4m. Possible square barrow.
G46	Groups	Mound	2012		321725	1004416	Low	Local	Post Medieval	Rectangular mound easts of drain channel. Possible kail yard. Associated with G29 at farmstead G33.
G47	Groups	Dyke	2012		321694	1004469	Low	Local	Post Medieval	Curvilinear earthen bank, 2.3m wide and 0.6m high, with ditch on SE side. Stone revetment at NE end. Extension of head dyke G49 to enclose farmstead G33.
G48	Groups	Quarry	2012		321696	1004452	Low	Local	Post Medieval	Small stone quarry adjacent to burn with bedrock exposed. Contemporary with numerous phases of Groups farm buildings.
G49	Groups	Head dyke	2012		321750	1004479	Moderate	Regional	Post Medieval	Section of head dyke, 1.6m wide and 0.35m high, adjacent to burn at Groups. Continues as G43 and G50.
G50	Groups	Head dyke	2012		321631	1004523	Moderate	Regional	Post Medieval	Section of head dyke, 4m wide and 1m high, to west of Groups. Continues from G49 and G43. Peters out within improved fields at Slack.
G51	Groups	House	2012		321747	1004515	Low	Local	Post Medieval	Early farmhouse at Groups demolished to foundations. Depicted on OS 1882 map, replaced with G36 on 1903 edition.
G52	Groups	Enclosure	2012		321741	1004530	Low	Local	Post Medieval	Small D-shaped enclosure to north of Groups farmstead. Depicted on OS 1882 CXII.1 map.
G53	Bailie Breck	Mound	2012		322146	1004314	Low	Local	Uncertain	Small heathery mound 3.5 x 3.5 x 0.3m with defined edge on W and N sides. Could be natural.
G54	Bailie Breck	Mound	2012		322170	1004260	Moderate	Regional	Bronze Age	Well defined segmented mound 8 x 5 x 0.75m with two distinct peaks adjacent to burn channel. Possible burnt mound.
G55	Bailie Breck	Mound	2012		322106	1004296	Moderate	Regional	Uncertain	Low roughly oval mound 7 x 5.5 x 0.2m. Could relate to Square barrow G41.
G56	Bailie Breck	Mound	2012		322038	1004351	Low	Local	Post Medieval	Low irregular mound 15 x 5.5 x 0.6m along burn edge. Could be remnants of a dyke or natural.
G57	Bailie Breck	Dyke	2012		322381	1004233	Low	Local	Post Medieval	Low earthen bank 1.5m wide and 0.3m high abutting head dyke G43. Peters out to south within improved area. Depicted on OS 1882 map.
G58	Bailie Breck	Ditch	2012		322276	1004132	Low	Local	Modern	Drainage ditch and fence line relating to 20th century improvements.
G59	Bailie Breck	Dyke	2012		322324	1004292	Low	Local	Post Medieval	Short section of linear dyke 1m wide and 0.2m high to west of G57. Remnant field system.
G60	Bailie Breck	Structure	2012		322402	1004275	Low	Local	Post Medieval	Linear pile of stones 5 x 3.5 x 0.75m. Possible former structure or clearance.
G61	Groups	Platform	2012		321641	1004515	Low	Local	Post Medieval	Low earthwork platform 6 x 4 x 0.4m adjacent to head dyke G50. Possible small enclosure or structure that may predate dyke.
G62	Slack	Drain, fence line	2012		321578	1004507	Low	Local	Post Medieval	Drain cut and former fence line for field at Slack. Late 19th century improvements boundary which cuts head dyke G50.
G63	Slack	Dyke	2012		321507	1004615	Low	Local	Post Medieval	Short section of linear dyke 2m wide and 0.4m high. Possible part of former head dyke G50 but could be contemporary with G62.
G64	Slack	House	2012		321611	1004642	High	National	Bronze Age	Well-defined earthwork platform 22 x 16 x 0.7m with figure-of-eight shape. Two internal hollows.
G65	Slack	Structure	2012		321683	1004575	Low	Local	Post Medieval	Cutting into burn edge 3 x 2.2m with outer stone wall. Slab roof collapsed. Animal pen.
G66	Slack	Mound, enclosure	2012		321704	1004575	Low	Local	Post Medieval	Earthen mound 9 x 6.5 x 1m with banked small enclosure 4 x 2.5 x 0.4m appending north end. Mound could be natural, enclosure an animal pen.
G67	Groups	Midden	2012		321720	1004515	Low	Local	Uncertain	Shell midden exposed in side of Braebuster Burn cutting. Two reported sightings c.8 years ago. No longer visible and may have been eroded.
G68	Slack	Structure, pipeline	2012		321712	1004528	Low	Local	Modern	Water extraction system. Two brick manholes with pipe trench between and pressure cylinder in one. WWII or more recent water system for Slack.
G69	Groups	Hollows	2012		321618	1004479	Low	Local	Uncertain	Two small sub-oval hollows 4 x 2.5 x 0.5m max 12m apart. Possible bomb craters or shelters.
G70	Houses	Farmstead	2012		322087	1004688	Low	Local	Post Medieval	Farmstead with single roomed house, outbuilding and enclosure. Fireplace added to SE gable end. Depicted on OS 1882 map minus outbuilding.
G71	Houses	Mounds	2012		322131	1004708	Low	Local	Post Medieval	Four large mounds in linear series E-W. Track to Bridgend to W. Possible mining or quarry spoil.

Appendix 3: Photographic registers

Batch 1: Braebuster

Frame	Description	Direction of shot
1	Cantick, general view	E
2	Cantick, general view	E
3	SWC17 Burnt mound	S
4	SWC17 Burnt mound	NW
5	SWC17 Burnt mound	NW
6	SWC17 Burnt mound	NE
7	SWC17 Burnt mound	NW
8	SWC11 Naust	SW
9	SWC11 Naust	SW
10	SWC10 Naust	SW
11	SWC10 Naust	SW
12	SWC9 Naust	SW
13	SWC40 stone gatepost	NW
14	SWC41 Melsetter milestone	S
15	SWC11 surveying	SE
16	SWC11 surveying	SE
17	SWC40 stone gatepost	NW
18	Ian McFedries with stone weight from Booth	-
19	Ian McFedries with stone weight from Booth	-
20	SWC42 Howequoy	E
21	SWC42 Howequoy	N
22	SWC43 Hollow	NE
23	SWC43 Hollow	NE
24	SWC44 Hollow way track	NE
25	SWC47 House, Lean to	N
26	SWC47 House, General view	NE
27	SWC47 House, Front elevation	N
28	SWC47 House, Internal, west wall	W
29	SWC47 House, Internal, south wall	SW
30	SWC47 House, west gable ends	E
31	SWC48 External; elevation, front	N
32	SWC48 External; elevation, front	NE
33	SWC48 External; elevation, west	E
34	SWC46 Dyke	SSE
35	SWC46 Dyke	NNW
36	Rough Pentland Firth	S
37	Rough Pentland Firth	E
38	SWC49 Mound	NE
39	SWC50 House, gable end	NE
40	SWC50 House, gable end	E
41	SWC51 Roofless house	SE
42	Cantick, general view	E
43	Cantick, general view	E

© ORCA2013

X:\ORCA\ORCA Projects\345 Hoy and Walls 2012\Report\Final_Report\Final Report Text\345 Cantick & Hoy 270613 FINAL.doc

44	Cantick, general view	E
45	Storehouse, General view	E
46	Osmandwall Cemetery	NE
47	SWC42 Survey	E
48	SWC52 Barrow	E
49	SWC52 Barrow	S
50	SWC52 Barrow	S
51	Cantick, general view from SWC52	E
52	Swona, general view	SE
53	SWC51 external elevations	NE
54	SWC51 external elevations	NNW
55	SWC51 external elevations	-
56	SWC51 external elevations	E
57	Sheep	-
58	SWC50 Gable end	N
59	SWC42 Survey	N
60	SWC42 Survey	N
61 - 85	Guided walk	-

Batch 2: Cantick

Frame	Description	Direction of shot
1	G46, looking towards G29	NW
2	G47, looking west	W
3	G47, mid-section	N
4	G47, NE terminal	NE
5	G47, stone revetment	S
6	G47, stone revetment	SW
7	G50, head dyke to NW of burn	NW
8	G49, looking NW to G50	NW
9	General view of burn towards confluence	N
10	General view of burn towards confluence	NE
11	General shot of waterfall	W
12	General shot of waterfall	W
13	G48 working shot	S
14	G48 working shot	S
15	General shot waterfall	SW
16	General shot waterfall	SW
17	G51, looking east	E
18	G51, wall face detail	E
19	G51	SE
20	G52	NE
21	G45 - Sq barrow?	SE
22	G45 - Sq barrow?	E
23	G44 mound	N
24	G44 mound	NE
25	G43 head dyke	SE

© ORCA2013

X:\ORCA\ORCA Projects\345 Hoy and Walls 2012\Report\Final_Report\Final Report Text\345 Cantick & Hoy 270613 FINAL.doc

26-32	Geophysics (G39-41)	-
33	G53 mound (burnt?)	S
34	G54	W
35	G54	SW
36	G54	N
37-42	Geophysics at Groups (resistivity)	-
43	G60 stone feature (5x3m x 0.75m)	N
44	G60 stone feature (5x3m x 0.75m)	NW
45	G43 head dyke, towards Culags	W
46	G43 head dyke, towards Culags	W
47	G57 south to Ward Hill	S
48	G43 head dyke	E
49	General view to Ward Hill	S
50	G43 towards Culags	W
51-53	Realigned stone	-
54	G39 houses	N
55	G40 houses	N
56-57	G412 SQ barrow	N
58	G55 mound	SE
59-60	G33 resistivity	-
61	G36 Groups	NW
62-63	Geophysics - downloading	-
64	G50 burn towards west	NW
65	G50 head dyke	NW
66	G50 head dyke	NW
67	G61 platform	SW
68	G62 drain (south side)	NE
69	G62 drain (north side)	NE
70	G64 prehistoric house	NW
71	G64 prehistoric house	SW
72	G64 prehistoric house	NW
73	G64 prehistoric house	NW
74	G64 prehistoric house`	NW
75	G64 prehistoric house	NW
76	G64 prehistoric house	SW
77	G64 prehistoric house	SW
78	Group photo	-
79	Upper cairn souterrain - internal	E
80	Upper cairn souterrain - internal	W
81	Upper cairn souterrain - internal	W
82	Upper cairn souterrain - internal	W
83	Upper cairn souterrain - internal	W
84	Upper cairn souterrain - internal	W
85	Upper cairn souterrain - internal	W
86	Entrance hole	SE
87	Upper mound	NE
88	Upper mound + orthostat	NE
89	Entrance mound	SE
90-100	Leicester City Wreck site, north shore	-
101	Lower cairn - hollows x 3	SE

© ORCA2013

X:\ORCA\ORCA Projects\345 Hoy and Walls 2012\Report\Final_Report\Final Report Text\345 Cantick & Hoy 270613 FINAL.doc

102	Lower cairn - hollows x 3	N
103	Lower cairn general site shot	NW
104	Lower cairn shore edge (SW side)	NE
105	Lower cairn revetment	E
106	Lower cairn general shot over site	SE
107	Lower cairn stone with cupmarks 15m to SE	NW
108-111	Braebuster block general shot	-
112	Site G65 hut/sty	S
113	G66 mound/earthwork	SE
114	G66 mound/earthwork	S
115	G68 hydration cylinder/manhole	NE
116	G68 hydration cylinder/manhole	NE
117	Wharress burn enclosures	E
118	Groups house	NW
119-135	G64 plane table survey	-