The Chesters, Drem, East Lothian

Erosion and Topographic Survey

Rampart Scotland Project 002:

Season 2

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Abstract

This report represents the results of Rampart Scotland's Hillforts of East Lothian Project Phase 2 and comprises the results of the continuing archaeological survey at The Chesters, Drem.

The eastern ramparted area was close contour surveyed, revealing an accurate topographical plan, and the entire area of the site was subjected to erosion survey, providing a damage assessment to be utilised for further management plans.

Geophysical survey was carried out in the area to the east around the large glacial erratic boulder and to the north east within the possible post medieval farm courtyard

In addition, all visible hut platforms and structures were located and measured by an adult learning class and transferred to a GIS system for analysis.

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1 INTRODUCTION

1.1. The overarching aim of Rampart Scotland an in particular the Hillforts of East Lothian Project is to provide dating and survey (topographic, geophysical and management) evidence from as many previously unexcavated hillforts in East Lothian as access can be gained to, in order to provide an framework with which to compare and contrast hillforts across Scotland (Connolly & Cook 2010). This project represents the second of three hillforts geing examined by Rampart Scotland in East Lothian, the others being White Castle, Garvald and Sheriffside, Gifford.

1.2. This report presents the results of an second season of archaeological topographic erosion survey on the site of The Chesters, Drem, East Lothian (NMRS NT57NW 1; NGR NT 50760 78260; Figure 1). The project was undertaken in July 2011 in generally sunny conditions using volunteers as part of the ongoing training fieldschool of Rampart Scotland.

1.3. The Chesters faces a range of pressures and the survey was intended to aid its future management. In addition, the survey forms part of an on-going research project into East Lothian's hillforts and is intended as the first stage of specific project on The Chesters to include more topographic and surveys, geophysical survey and ultimately key-hole excavation.

1.4. The Chesters is one of the largest and best preserved hillforts in East Lothian, if not Scotland, with an internal measurement of c 120m east-west by c 50m north-south. It comprises a *multivallate* hillfort with up to eight banks and ditches, as well as extensive evidence for internal settlement. The maximum measurement of the visible upstanding remains are c 270m east-west and c 140m north-south. Intriguingly the site is overlooked to the south by a low ridge and is one of the few locations in East Lothian where there is no inter-visibility with Traprain Law.

1.5. To date, the only excavation works to have taken place on site involved the monitoring of the removal of two World War II observation posts, for monitoring the nearby Drem airfield (Yates 1976), which identified no significant archaeological deposits or finds.

1.6. The Chesters sits within an extensive series of cropmarks including undated pit alignments (**NMRS NT57NW 46,49, 50, 51 & 52**), ring ditch (**NMRS NT57NW 45 & 48**) and enclosures (**NMRS NT57NW 50 & 104**). Haselgrove (2009, 236) has suggested that the site may be connected with the local haematite source in the Garleton Hills.

2 PREVIOUS SURVEYS

2.1 The Chesters first appears in William Forrest's Map of Haddingtonshire in 1799. The site was previously surveyed by the Ordnance Survey in 1853/54, in 1893 by J. H. Cunningham (1895) and by RCAHMS in 1914.

2.2 The ongoing close contour survey is the first detailed examination of the topography of the site and the geophysical survey is now adding to the growing understanding on the site as a whole.

3 MANAGEMENT ISSUES

3.1. The Chesters is both open to the public and an element of a working farm and as such has a series of management problems including:

- Gorse roots
- Rabbit damage
- Visitor pressure
- Stock pressure from cattle movement and grazing

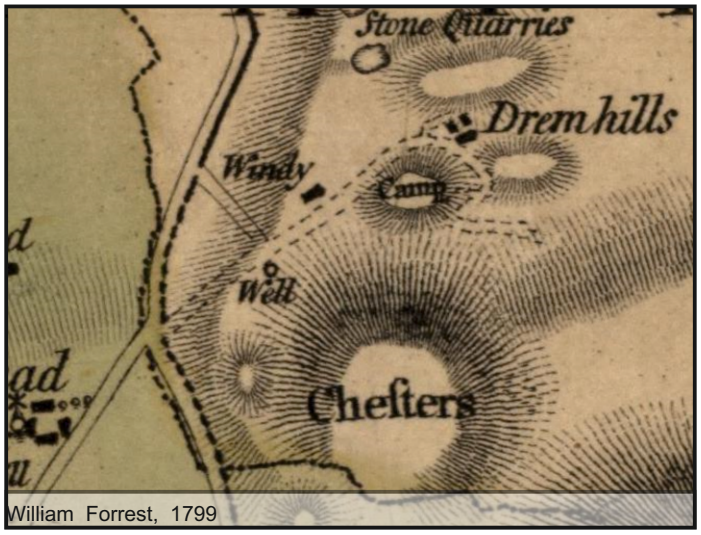
3.2. Previous active removal of gorse has exposed bare ground which is now open to erosion. At present there are no signs of grass regeneration.

3.3. Rabbit damage is in some places quite extensive, however, no rabbits were observed during the period of the survey, though active burrows were recorded. Some burrows have collapsed causing the surrounding rampart to slump. In addition, in areas of cattle movement, there are signs of further collapse.

3.4. Visitor pressure is limited to well established routes that lead directly to the summit, crossing ramparts and causing deep scarring and rampart degradation. In some respects, the established path in some respects encourages visitors to follow it, thus increasing the damage.

3.5. During the survey a herd of some 20-30 dairy cows were present on the site, and while this clearly manages the level of grass, there is also however evidence for erosion tracks across upstanding features.

1799

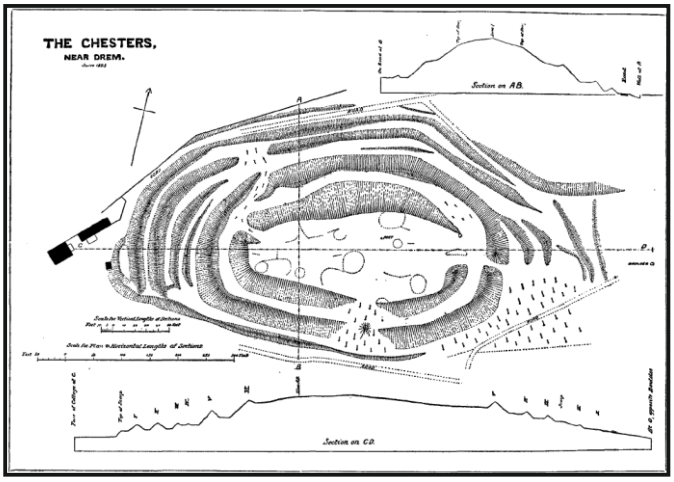


William Forrest, 1799

1854

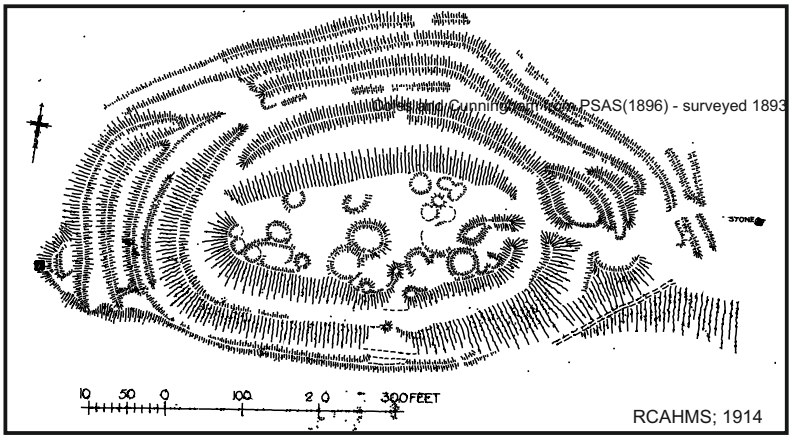
Ordnance Survey -
Six-inch 1st edition, Scotland, 1854

1893



Dr Joseph Anderson, PSAS(1896) - surveyed 1893

1914



RCAHMS; 1914

Fig 2: Previous site surveys

4 SURVEY OBJECTIVES

4.1 The principal objectives of the survey were:

a. To document the extent and severity of the various sources of damage to The Chesters visible from surface traces;
b. To provide a report on the findings of the survey for the use as a resource by Historic Scotland for the future management of the site;
c. To provide a survey to guide future research on the site;
d. As an ideal location for the teaching of survey to archaeology students, adult education classes and volunteers;
e. To compare and contrast management practices and results at The Chesters with White Castle.

4.2 This report highlights key findings relating to the erosional condition, topographic, geophysical and documentary research into The Chesters, making general recommendations and identifying future research proposals.

5 SURVEY METHODOLOGIES

5.1 The erosion survey methodology was based upon that developed by the CFA, as outlined by in Historic Scotland's Technical Advice Note 16: *Burrowing Animal and Archaeology* (Dunwell & Trout 1999). The survey recorded visitor tracks, stock tracks, gorse damage and rabbit burrows. (Figure 3)

5.2 A close contour survey was undertaken over interior of the site (Figure 4). Points were taken at a spacing of c. 1-3 metres along top and bottom of banks and ditches in addition to any discernible breaks in slope. In addition, random points were taken in the intervening spaces to ensure adequate coverage.

5.3 The survey was conducted using a Leica TCR 805 series Total Station with internal data logger. All points were processed through Lecia Geo-Office software and attributed on point-type. The survey was processed through Penmap software to produce a maximum resolution contour plot of 10cm intervals.

5.4 The resistivity survey was undertaken by the *Edinburgh Archaeological Field Society* using TR/CIA area ground resistance measuring equipment. The equipment operates in the 'twin' configuration with four probes: two of the probes are mounted on a portable frame 0.5m apart and comprises one current input and one potential measurement probe. The second two probes, again one for current input and one for potential measurement, complete the two circuits; and are inserted about 1m apart and positioned so that no reading is taken with the portable frame nearer than 15m to them. All readings were taken at 1m intervals in lanes 1m wide in 20m by 20m survey grids, giving a total of 400 measurements in each grid. The unit on the frame generates the 137Hz signal current that flows through the ground and the potential drop is detected by the measurement probes; the computer in the unit converts this voltage reading into a ground resistance value in ohms. Within the unit is the display, which indicates this resistance, together with the data store into which the readings are dumped for later processing and printing. The data were down loaded, to a computer and printer. The printout is in grey scale with the black and white limits chosen based upon the highest and lowest ohms readings recorded. It is normal practice to print high resistance (well drained areas and bedrock) as black and low resistance (infilled ditches and damp areas) as white.

5.6 A total of eight 20 by 20m survey squares were undertaken at the site (Figures 6 & 7) , although many of the squares were taken on slopes, there were no locations where it was not possible to carry out the survey.

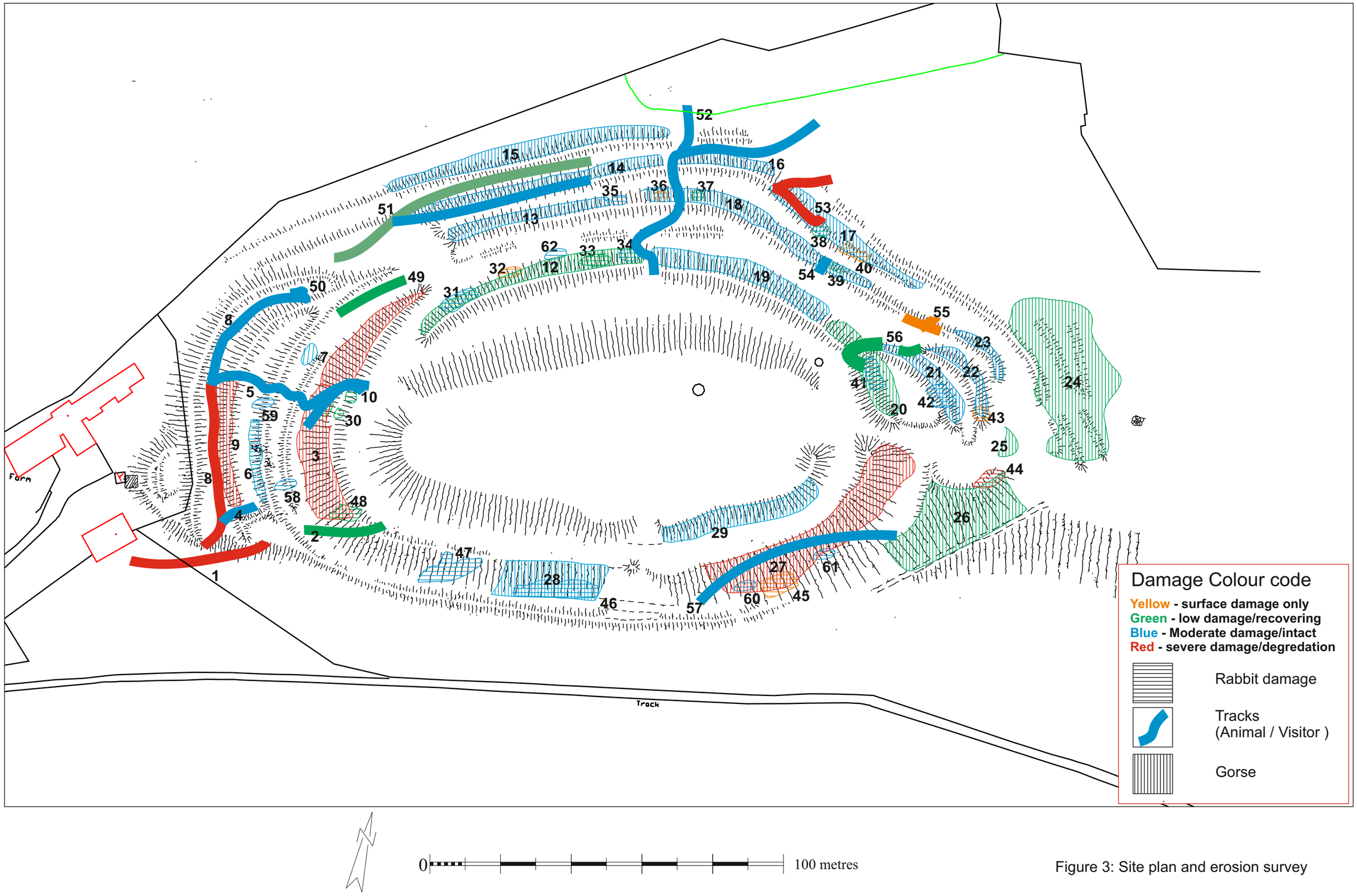


Figure 3: Site plan and erosion survey

6 EROSION SURVEY RESULTS

As described in *Section 3.2*, four different types of erosion were recorded in 2010 (Connolly and Cook 2010): rabbit damage, cattle tracks, visitor tracks and gorse damage.

The updated 2011 results of the survey are presented in Table 1 and Figure 3, with the associated photographic record presented in appendix.

	Type	State / Scale 2010	2011 Condition	Notes
1	**Visitor track**	Active / Superficial From visitor entrance onto site	**No Change**	From layby to interior, crossing all ramparts
2	**Visitor track**	Active / Intrusive Over ramparts and ditch, deep cutting and up to 1.60m wide	**Improvement**	Seems to show signs of regeneration of grass cover
3	**Cut Gorse**	Stabilised / Intrusive	**No Change**	Although not regenerated, there are signs of new growth.
4	**Visitor track**	Active / Intrusive Track over rampart causing slumping	**Improvement**	Seems to show signs of regeneration of grass cover
5	**Cattle track**	Active / Superficial Beside fence	**No Change**	
6	**Rabbit scrapes**	Active / Intrusive Exposes bedrock and rampart material	**Improvement**	Signs of stabilisation and grass cover
7	**Cut Gorse**	Stabilised / Intrusive	**Improvement**	No sign of regrowth and bank material stabilised
8	**Visitor/Animal track**	Active / Intrusive Over ramparts and ditch, deep cutting and up to 60cm wide	**No Change**	

	Type	Condition / Scale 2010	Condition 2011	Notes
9	**Cut Gorse**	Stabilised / Intrusive Although stabilising, there has been erosion of material down slope	**Worse**	New growth and heavy erosion of bank
10	**Visitor track**	Active / Intrusive Track causing serious damage to rampart, creating a deep cut	**No Change**	
11	**Cut Gorse**	Stabilised / Superficial Roots have exposed soil for erosion	**No Change**	Signs of new growth appearing
12	**Cut Gorse**	Stabilised / Superficial Roots have exposed soil for erosion	**No Change**	Signs of new growth appearing though previous bank material slumping has stabilised
13	**Cut Gorse**	Active / Intrusive Roots have exposed soil for erosion	**No Change**	Signs of new growth appearing
14	**Cut Gorse**	Active / Intrusive Gorse is regenerating – roots causing further damage to rampart	**No Change**	Signs of new growth appearing though previous bank material slumping has stabilised
15	**Cut Gorse**	Active / Intrusive Gorse exposed rampart	**No Change**	Signs of new growth appearing
16	**Cut Gorse**	Active / Intrusive Roots have exposed soil for erosion	**No Change**	Signs of new growth appearing
17	**Cut Gorse**	Active / Intrusive Roots have exposed soil for erosion	**No Change**	Signs of new growth appearing though previous bank material slumping has stabilised
18	**Cut Gorse**	Active / Intrusive Area now used by active rabbit	**No Change**	Signs of new growth

	Type	Condition / Scale 2010	Condition 2011	Notes
19	**Cut Gorse**	Active / Intrusive Gorse is regenerating – roots causing further damage to rampart	**No Change**	
20	**Cut Gorse**	Active / Intrusive Roots have exposed soil for erosion	**Improvement**	No sign of regrowth and bank material stabilised
21	**Cut Gorse**	Active / Intrusive Roots have exposed soil for erosion - regenerating	**No Change**	Signs of new growth appearing though previous bank material slumping has stabilised
22	**Cut Gorse**	Active / Intrusive Roots have exposed soil for erosion - regenerating	**No Change**	Signs of new growth appearing though previous bank material slumping has stabilised
23	**Cut Gorse**	Active / Intrusive Roots have exposed soil for erosion -	**No Change**	Signs of new growth appearing though previous bank material slumping has stabilised
24	**Cut Gorse**	Active / Superficial Roots have exposed soil for erosion - regenerating	**No Change**	Signs of new growth appearing though previous bank material slumping has stabilised
25	**Cut Gorse**	Active / Intrusive Roots have exposed soil for erosion – collapse in several areas.	**Improvement**	No sign of regrowth and bank material stabilised
26	**Cut Gorse**	Active / Intrusive Roots have exposed soil for erosion – collapse in several areas.	**Improvement**	No sign of regrowth and bank material stabilised
27	**Cut Gorse**	Active / Intrusive Roots exposed soil for erosion – collapse in several areas.	**Worse**	New growth appearing bank material slumping has continued to erode

	Type	Condition / Scale 2010	Condition 2011	Notes
28	**Cut Gorse**	Active / IntrusiveRoots have exposed soil for erosion	**Improvement**	No sign of regrowth and bank material stabilised
29	**Cut Gorse**	Active / Intrusive Roots have exposed soil for erosion – rampart & core exposed	**Improvement**	No sign of regrowth and bank material stabilised though stone core and revetment of rampart is now exposed
30	**Isolated Burrow**	Old / Intrusive Exposes stone core of rampart	**No Change**	Still active
31	**Isolated Warren**	Active / Intrusive 5 burrows evident	**No Change**	Still active
32	**Isolated Warren**	Active / Intrusive 8 burrows evident	**Improvement**	Rabbits no longer active
33	**Isolated Warren**	Stabilised / Intrusive 3 burrows evident	**Improvement**	Rabbits no longer active
34	**Area Warren**	Active / Intrusive 12-15 burrows evident – extensive undermining of rampart	**Worse**	Still active – causing more damage to banks
35	**Area Warren**	Active / Intrusive 10 burrows evident with deep scarring of rampart exterior face	**Improvement**	Rabbits no longer active
36	**Isolated Warren**	Active / Intrusive 3 burrows evident	**Improvement**	Rabbits no longer active
37	**Isolated Warren**	New / Intrusive New burrows removing material and with track 52 causing severe collapse of rampart	**No Change**	Still active
38	**Isolated Warren**	Stabilised / Intrusive	**No Change**	Still active
39	**Isolated burrows**	Active / Intrusive Rampart degrading with track 53.	**Improvement**	Rabbits no longer active – track still used

	Type	Condition / Scale 2010	Condition 2011	Notes
40	**Area Warren**	Active / Intrusive Rampart degrading with animal track 54 over.	**No Change**	Still active
41	**Isolated Warren**	Active / Intrusive Damage is increased by gorse cover removal 20.	**No Change**	Still active
42	**Isolated Burrow**	Active / Intrusive Large amount of rampart interior excavated.	**No Change**	Still active
43	**Isolated Warren**	Active / Severe Noticeable deflation of rampart	**No Change**	Still active
44	**Isolated Warren**	Active / Severe 11 burrows honeycombing area	**No Change**	Still active
45	**Isolated Warren**	Active / Severe 5 burrows	**No Change**	Still active
46	**Area Warren**	Active / Intrusive several burrows undermining profile and causing rampart slump	**No Change**	Still active
47	**Area Warren**	Active / Intrusive burrows undermining profile and causing rampart slump	**No Change**	Still active
48	**Isolated Burrow**	Active / Intrusive 2 burrows close to summit, with some slumping	**Worse**	Extensive activity in area, causing bank collapse and undermine
49	**Stock Track**	Active / Superficial Track beginning to erode surface	**No Change**	Very little additional damage
50	**Stock Track**	Active / Intrusive Track causing damage to summit of rampart	**Improvement**	Very little additional damage Path is stabilising

	Type	Condition / Scale 2010	Condition 2011	Notes
51	**Stock Track**	Active / Intrusive Two tracks converge on of rampart – upper track on summit is causing damage	**No Change**	Some areas have same level of damage as before though signs of some stabilisation
52	**Stock Track**	Active / Severe Two tracks converge to cut through ramparts	**No Change**	Some areas have same level of damage as before though signs of some stabilisation
53	**Stock Track**	Active / Severe Track causing deflation of rampart	**No Change**	Some areas have same level of damage as before though signs of some stabilisation
54	**Stock Track**	Active / Severe Rampart breached and slumping due to cattle track	**Improvement**	Some signs of stabilisation
55	**Stock Track**	Active / Intrusive Small breach in rampart	**Improvement**	Some signs of stabilisation
56	**Stock Track**	Active / Intrusive Small breach in rampart and traverses up exterior	**Improvement**	Some signs of stabilisation
57	**Stock Track**		**NEW**	**Active / Superficial** Stock track trough cleared gorse area is causing visible damage.
58	**Rabbit burrow**		**NEW**	**Active / Intrusive** Active burrows with large amount of fresh soil from bank core
59	**Rabbit burrow**		**NEW**	**Active / Intrusive** Active burrows (3) with fresh soil from bank core

	Type	Condition / Scale 2010	Condition 2011	Notes
60	**Rabbit burrow**		**NEW**	**Active / Intrusive** Active burrows (6) with fresh soil from bank core
61	**Rabbit burrow**		**NEW**	**Active / Intrusive** Active burrows (6) with fresh soil from bank core
62	**Rabbit burrow**		**NEW**	**Active / Intrusive** Active burrows (4) with fresh soil from bank core

Table 1: Erosion survey results

7 MANAGEMENT SURVEY RESULTS (Figure 3 & Table 1)

7.1 Livestock and Visitor paths

7.1.1 The damage from visitors is very localised and clearly follows established paths. Visitor access is focussed along Tracks 1 and 2, leading directly into the interior, and there is no evidence for *ad hoc* alternative routes. Of course while this activity minimises the overall spread of erosion it concentrates it in particular locations.

PLATE 1: VISITOR DAMAGE 2 THROUGH UPPER RAMPART

7.1.2 It is likely that the visible stock erosion has been in place for years, as many of the rampart breaches such as those associated with Tracks 10, 52 and 54, are significant and are likely to have taken some time to 'wear' through the rampart. Again, like the visitor tracks, these are now established and are in continued use, causing further damage.

PLATE 2: STOCK DAMAGE 10 OF RAMPART BANK AND SLOPE

7.1.3 Tracks 51 and 53 also interact with rabbit damage to create further erosion, with the undermined rampart more susceptible to collapse (Section 6.3.2).

7.1.4 A new stock track 57 has appeared on the south east flank of the site (Figure 3) which runs along the slope for a distance of circa 40 metres. This is in part due to the clearance of gorse which has now allowed stock access to this slope.

7.2 Gorse growth

7.2.1 The 2010 gorse clearance removed large areas of this intrusive vegetation and is to be welcomed in principle. However, the removal resulted in the exposure of unvegetated and loose soil and rampart material leading to some erosion.

7.2.2 There is also clear evidence of gorse regeneration and it is recommended that the situation is continued to be monitored.

7.2.3 Several locations are showing signs of new growth, though this may be controlled with grazing, however, although some areas of gorse are showing no sign of life, there is a potential that gorse could begin re-colonisation if left unchecked.

PLATE 3: REGENERATING GORSE AREA 24.

7.3 Rabbit damage

7.3.1 The effects of rabbit infestation on archaeological monuments are now well attested and described in detail in the *Historic Scotland Technical Advice Note* (Dunwell & Trout 1999). There is evidence for intense colonisation across the whole site, although the east and south slopes are favoured. The loose composition of the rampart material favours burrows, and it is suggested that there is little depth to the inner area soil profile, which will in general prohibit intense rabbit activity.

7.3.2 In very specific locations, for example, the south slope, where warrens and isolated burrows penetrate the once-covered gorse slopes (rabbit damage 43–48) the erosion represents a real threat to the structural integrity of the rampart, with deep burrows and clear activity throwing up large amounts of core material. As mentioned above (Section 6.1.3) rabbit damage (31-39) combine with cattle tracks (Tracks 52 and 53) to increase the level of collapse. It is unclear as to whether the rabbit population is increasing or has decreased at the present as new damage is clearly in evidence (Damage 58-62) but other locations seem to be no longer active. (Damage 32,33,35 &36).

PLATE 4: NEW RABBIT DAMAGE [59]

Comparative damage record example

PLATE 5: DAMAGE 56 IN 2010

PLATE 6: DAMAGE 56 IN 2011

0

100 metres

10cm contour intervals

Farm

2010 survey area

2011 survey area

Track

Figure 4: Site plan and erosion survey

8 TOPOGRAPHIC SURVEY RESULTS (Figure 4)

8.1 Topographic work and hut recording

8.1.1 The previous 1914 RCAHMS plan indicated a number of hut circles and enclosures and a complex configuration of banks and ditches. The topographic survey allowed a new close contour examination of the interior of the monument, which enhanced the level of detail to a point where subtle stratigraphic interpretation of these structures could be postulated. It is hoped to refine and report upon this survey and interpretation in future years.

8.1.2 The initial 2010 survey was concentrated on the interior, within the rampart bank, with the 2011 survey extending the area to the east down as far as the large erratic stone boulder. This has already clarified several previously confused elements of the banks and ditches, where previous surveys had amalgamated banks or misaligned features.

8.1.3 In addition to the close contour survey, a visual inspection of the entire monument was carried out in 2010 with the Historic Scotland's Senior Archaeologist Richard Strachan. During this examination of the earthworks, in relation to the original 1914 plan (Figure 2), it became clear that at least 3 elements of the Second World War gun battery were visible as earthworks cut into the middle rampart on the north side (Figure 5) and that the earthwork configuration on the east side had been slightly muddled in transcription of the RCAHMS survey. It is this area that the 2011 survey was focussed on in order to understand further this section of the monument.

8.1.4 Outwith the hillfort, to the northeast corner of the Property in Care boundary, there is clear physical evidence of the activity of the 18th century farm of Dremhills (NT57NW 186) which survives now as substantial walling fragments within the boundary. In addition, there are also signs of undated tracks and quarry pitting. Which was examined by a small geophysical investigation and historical research (Sections 9 & 10)

8.2 Huts and Platforms (Figure 5)

8.2.1 In conjunction with the Midlothian Adult Learning class (Intermediate Archaeology II) a site visit was arranged using the topographic contour plan as a basemap. Using a Handheld GPS, each hut platform, structure or enclosure was located and marked (this data is now available as a shp file download) and the dimensions of the unique structure number recorded. This allowed the examination of layout and structure size within the enclosed upper area. The results are reproduced graphically in Figure 5 and presented in table 2 below. All measurements are approximate, given the difficulty in defining the exact limits for the interior of a structure. However, where possible, all measurements are from the interior of the structures.

PLATE 7: RECORDING HUT PLATFORMS AND STRUCTURES

8.2.2 What becomes immediately apparent is the location and number of the larger structures over 7.00 m in diameter (12, 16 and 21). In relation to the smaller sub 4.00 m structures it is clear that there are defined zones of activity and occupation – however, it is currently difficult to define which structures where coeval.

Structure number	**Diameter** (approx.)
1	4.00 m
2	3.70 m
3	4.70 m
4	5.90 m
5	5.50 m
6	5.00 m
7	4.80 m
8	3.00 m
9	3.50 m
10	5.00 m
11	6.80 m
12	10.00 m
13	6.10 m
14	3.00 m
15	5.00 m
16	7.10 m
17	5.10 m
18	4.00 m
19	6.15 m
20	3.45 m
21	8.10 m
22	4.05 m
23	4.55. m
24	2.35 m
25	3.70 m
26	3.15 m
27	3.10 m
28	3.20 m
29	3.25 m
30	3.15 m
31	6.15 m
32	6.05 m
33	3.05 m
34	6.10 m
35	5.15 m
36	3.05 m
37	3.00 m
38	3.00 m

Table 2: Platforms and structure dimensions

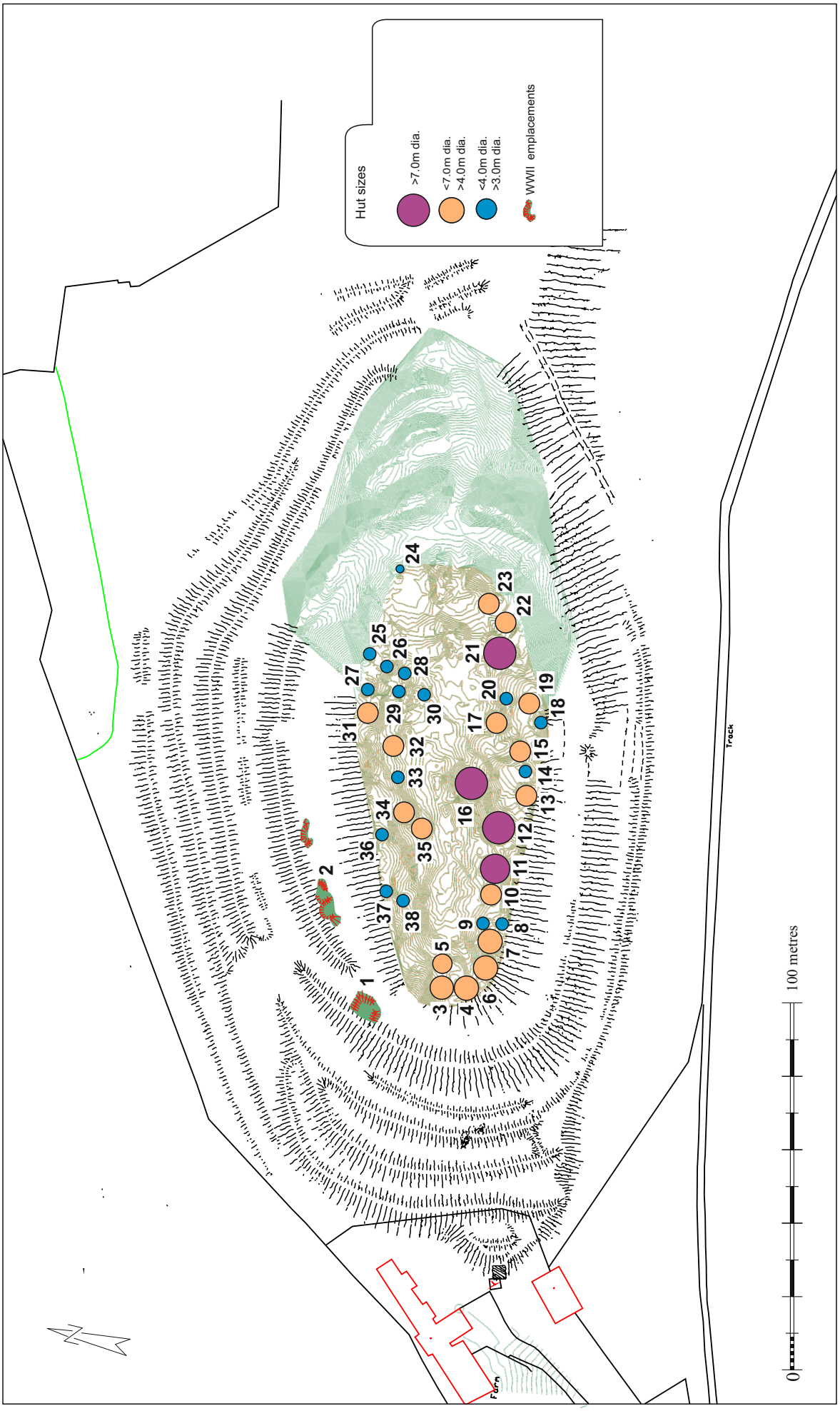


Figure 5: Site plan with hut locations and sizes

8.3 Chronological sequencing

8.3.1 The chronological sequence of The Chesters is extremely complex and the visible remains represents to a certain extent the last phases of activity. In advance of physical excavation, let alone the completion of the topographic survey, any proposed sequence must be tentative at best.

8.3.2 The most obvious sequence, and the one outlined below is one of expansion and increasing defensive complexity, however, the excavations at Broxmouth (Hill 1982) demonstrate how much more complex the reality can be. However, a model of increasing complexity is still offered if only to provide a framework to test through excavation in future years.

- **Phase 1:** Single Rampart and interior occupation
- **Phase 2:** Double Rampart and interior occupation with activity between the two banks
- **Phase 3**: Remodelling of approaches to east and west, with complex outworks and banks
- **Phase 4**: Reuse of a possibly abandoned site, with structures cut into and over the inner rampart bank
- **Phase 5:** World War II artillery emplacements

8.3.4 Further examination of the hut circles would allow perhaps further definition of stratigraphic chronology within the site. This further strengthens the argument for simple cost effective investigation and re-examination of these sites.

9 GEOPHYSICAL SURVEY RESULTS (Figures 6 & 7)

I. Hawkins, (Edinburgh Archaeological Field Society)

9.1 Summary

9.1.1 Two area ground resistance surveys totalling 2,400 sq.m were surveyed in the vicinity of Chesters Fort, Drem in the parish of Athelstaneford, East Lothian to investigate if known prehistoric pit alignments to the north and south-east of the fort were continued. An area to the east of the fort and a small area to the north which included some visible remains of Dremhills Farm were surveyed. The survey did not reveal any evidence of pits although a possible stone setting to the east and some traces of wall foundations at the farm site were noted.

9.2 Introduction

9.2.1 At the request of Rampart Scotland the Society was invited to investigate two areas adjacent to Chesters Iron age Fort. Six 20x20 grids were surveyed of the area to the east at grid reference NT 5091 7829 on a slightly sloping area bounded by the outer East ramparts of the fort, modern fence lines to the N and E and a steep wooded slope to the S. There was a large stone in the centre of this area. A further four 20x20 grids were completed to the north at grid reference NT 5087 7836 at the site of part of Dremhills Farm. The Fort site is bounded to the north by the scheduled Dalvreck palisaded enclosure and pit alignment and to the south-east by Dalvreck ring ditch and pit alignments. There are records for Dremhills Farm in 1665 and it appears to have gone out of use by 1824. The field wall to the E has traces of door or window openings and the core of a probable staircase is visible as part at the corner of a field wall to the north- west.

9.3 Methods

9.3.1 The TR/CIA area ground resistance measuring equipment was used. The equipment operates in the “twin” configuration in which two probes are mounted on a portable frame 0.5m apart. They comprise one current input and one potential measurement probe. Two remote probes, one for current input and one for potential measurement complete the two circuits. They are inserted about 1.0m apart and are positioned so that no reading is taken with the portable frame nearer than 15m to them. All readings are taken at 1.0m intervals in lanes 1.0m wide totalling 400 measurements in each 20x20 grid.

9.3.2 The processor unit mounted on the frame generates the 137Hz signal current that flows through the ground and the potential drop is detected by the measurement probes; the computer in the unit converts this voltage reading to a ground resistance value in ohms. The

resistance value is indicated on a display and retained in a data store for later processing. The data are downloaded via a RS232 interface to a computer running the program "resistivity" The data is saved as text files and uploaded to the Sussex University developed freeware program "Snuffler" The print out is in extended greyscale with black and white limits based on highest and lowest ohms readings recorded.

9.3.3 It is normal practice to print high resistance values as black and low resistance as white within a gradient based on processed resistance values. Data can be further processed by clipping to improve overall contrast and by despiking to reduce abnormally high values. Data is also interpolated between adjacent 1.0m squares to give a smoother gradation based on 0.25m squares.

9.4 Results

9.4.1 Results for the eastern area showed rampart lines to the west and what may be a setting for the large central stone. There were similar slightly higher resistances which appeared to be geological in nature but could represent some form of approach to the east entrance to the Fort.

9.4.2 The area of Dremhills Farm shows higher resistances in the north east which could indicate wall foundations of a two cell structure with further higher resistances to the west being more diffuse wall traces or rubble spreads. There was also a lower resistance area which might represent an area surrounding a small pond or well to the south of the site.

9.5 Conclusions

9.5.1 There were no traces of any pits or other prehistoric features noted in the east environs of the fort although there is possibility of there being a stone setting and vague traces of a possible approach way to the fort from the east. The farm site showed possible wall foundation lines and the site of a pond or well.

EAFS members who assisted were Alan Calder, Jim Oliphant, Charles Conner, Jill Strobridge and Christine McPherson.

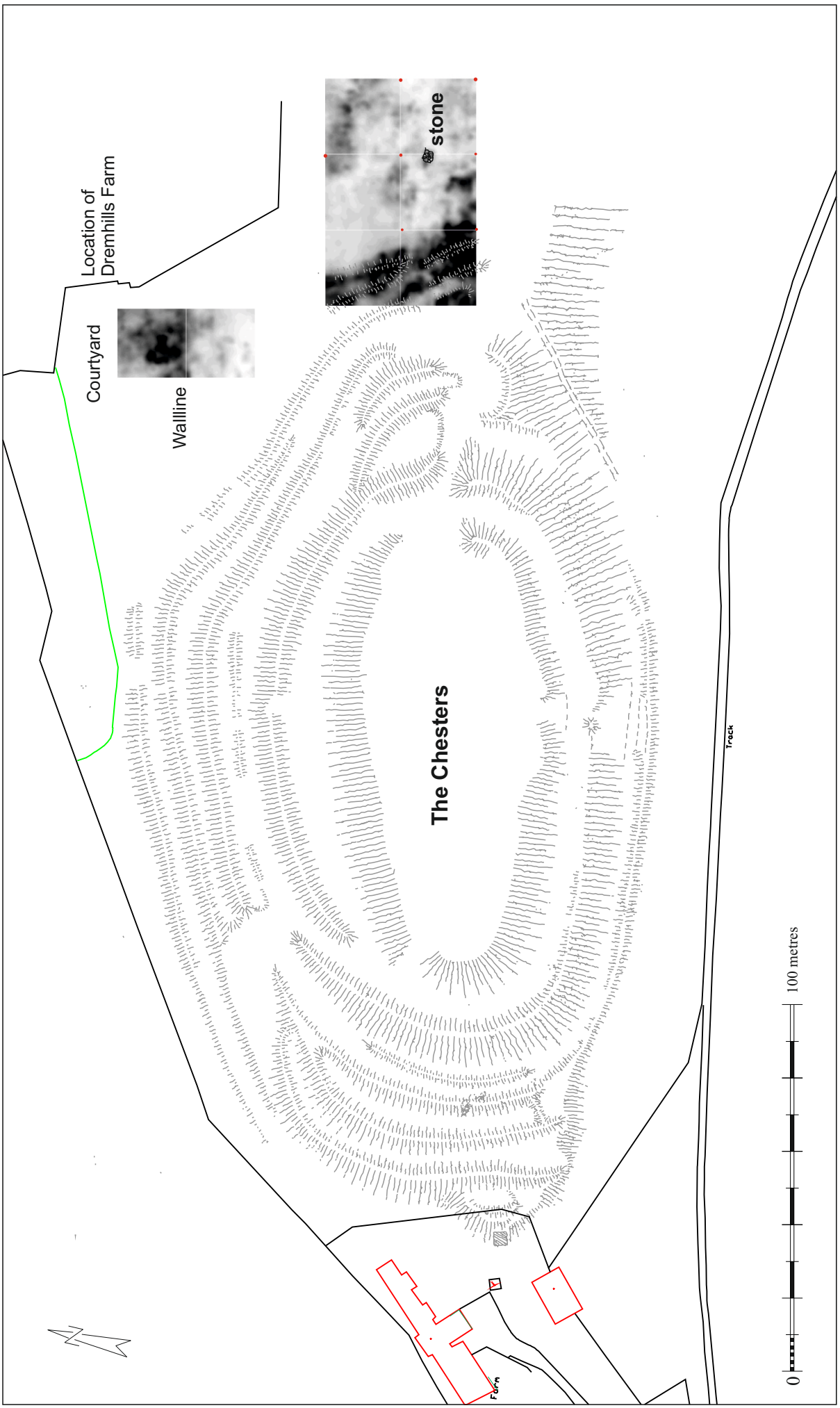


Figure 6: Site plan with location of resistivity survey

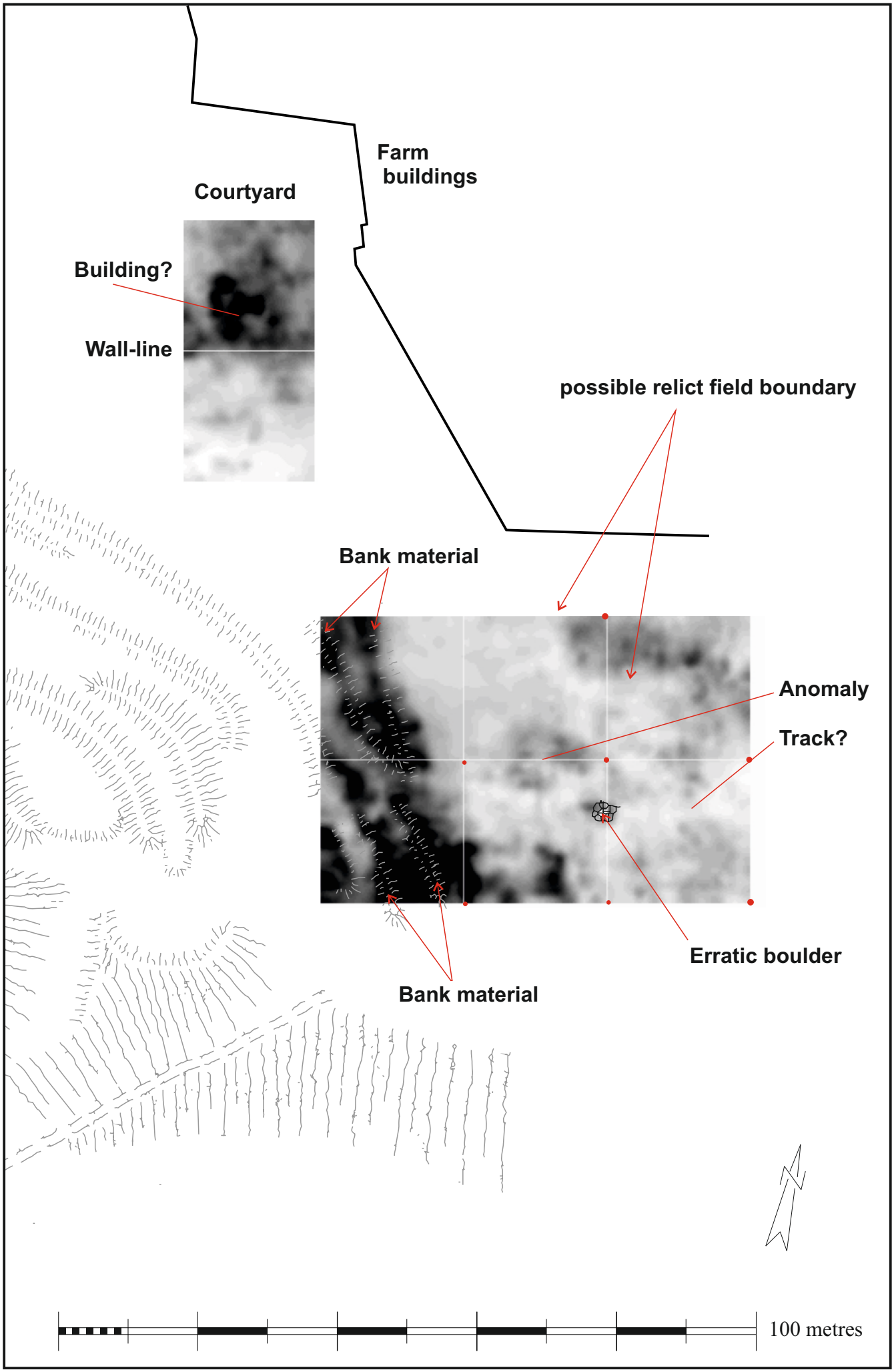


Figure 7: Resistivity survey detail

10 Historical background to Dremhills Farm (Figure 2)

10.1 An initial documentary research on the farm site of Dremhills was carried out by Jill Strobridge (EAFS) in relation to the site (NT57NW 186) that lies in the north-east corner of the site boundary. The inclusion of this monument is in part due to the proximity of the site as well as the effect the operation of farm would have had on the site itself. In addition, this allows for a further understanding of landscape use from the prehistoric period through to the present day, with the farm forming part of this timeline.

10.2 The site itself was called Dremhills from the earliest record with references dating back to the 1580s. The site appears to have been deserted before the 1st ed OS survey in the 1850s as no ruins are shown and the name Dremhills has migrated westwards to more or less where the present converted house is today. Currently the only extant remains are a wall within the current northeast boundary wall, containing blocked windows and a door, there is also a large courtyard pillar subsumed into the north boundary wall at the east end of the woodland strip.

10.3 Roy 1747-55, Armstrong 1773 and William Forrest 1799 and Thomson 1822 all show Dremhills clearly and Forrest shows a track looping round the north and east sides of the Chesters as it does today. However the map by Greenwood et al in 1824 no longer shows Dremhills and by the 1st ed OS 1843-82 map the farm has moved to the west.

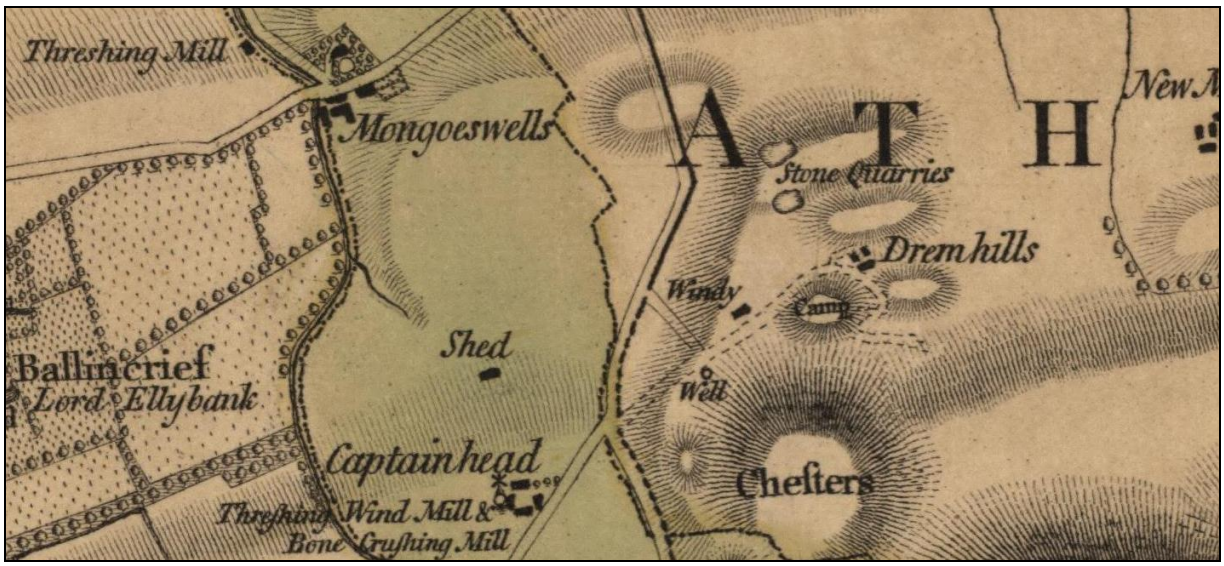


PLATE 8: WILLIAM FORREST 1799

10.4 Presumably new cottages had been built (the 5 dwellings from the 1861 census perhaps) replacing the site previously called “Windy” on Forrest’s map and it is these cottages that were converted to form the present house (Dalvreck Farm).

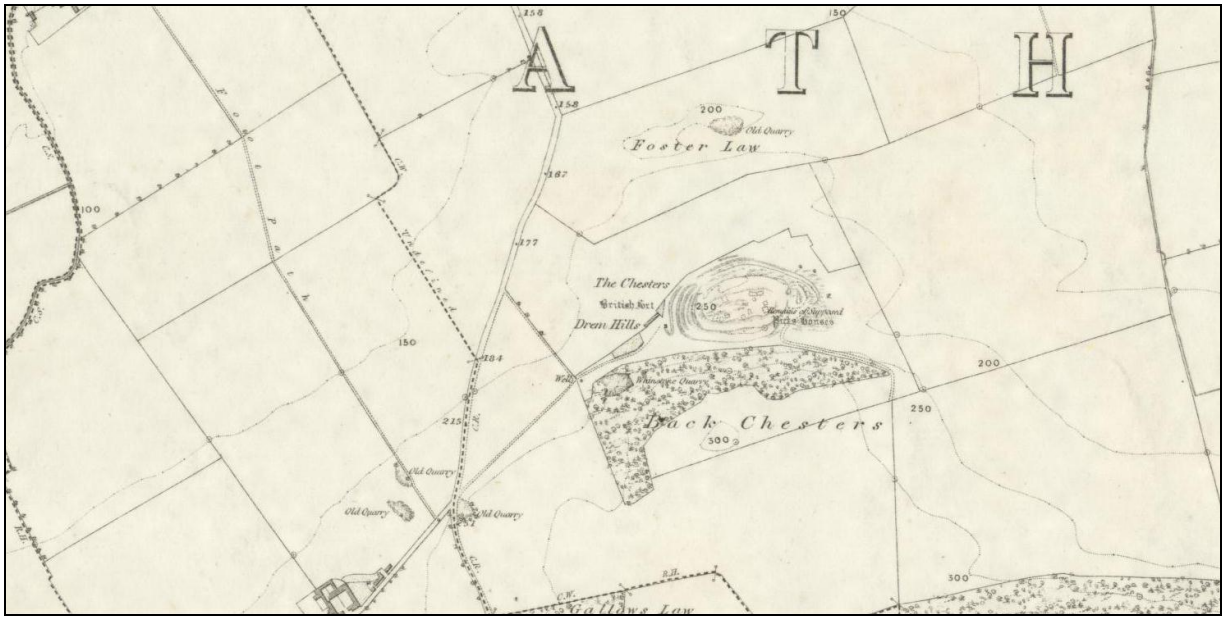


PLATE 9: ORDNANCE SURVEY - SIX-INCH 1ST ED, HADDINGTONSHIRE, SHEET 5, SURVEY DATE: 1853

10.5 Testament records for Dremhills[1] for the 16th century provide us with these named individuals connected to Dremhills:

- Begbie, John, in Dremhills 31 Mar. 1585
- Watt Helen, relict of John Begbie, in Dremhills 31 Mar. 1585
- Begbie (Bagbie), Helen, sometime spouse to John Bickarton, in Dremhills, constable. of Haddington 23 July 1595
- Bickartoun, John, in Dremhills. See Begbie, Helen.

Records available from the National Archives of Scotland reveals an established farm being located at this site by at least the mid-16th century and likely earlier.

10.6 Further Dremhills references are available from the National Archives of Scotland through the centuries, providing a picture of the fortunes of the site and the inhabitants.

[1] http://www.archive.org/stream/commissariotrec00edigoog/commissariotrec00edigoog_djvu.txt THE Commissariot Record of Edinburgh. REGISTER OF TESTAMENTS.
PART I. VOLUMES I TO 35 1514-1600. INDEX EDITED BY FRANCIS J. GRANT, W.S., CARRICK PURSUIVANT OF ARMS. EDINBURGH: ISSUED TO THE SUBSCRIBERS BY THE BRITISH RECORD SOCIETY, LIMITED SCOTTISH SECTION. 1897.

Examples include:

- GD6/1683 Rental of the ferms payable to the Earl of Haddington by the tenants of the barony of Byres (including Drem, Dremhills and Muirtown) (E Lothian). **1665**
- GD6/1696 Rentals of Byres (including Drem, Dremhills and Muirtown) (3 items). **1682**
- RHP12983 Photostat copy of enlarged plan of Captainhead and Dremhills **1760**
- RHP11582/18 Photostat copy of plan of Captainhead and Dremhills **1819**

The Barony of the Byers, East Lothian, property of the family of the Lindsays, is an ancient one dating back to at least the 14thC. Sir Walter Lindsay of Byres (d.1538) was preceptor of Torphichen and was succeeded by James Sandilands.

10.7 There are further references to the Sherriff family living at Dremhills in the 18th century.

10.9 It is clear a more detailed research into the location could create a richer historical picture of occupation at the site as a whole from at least the 14th century to the present and the impacts of the activities surrounding the farm on the prehistoric site of The Chesters.

PLATE 10: BLOCKED WINDOWS AND DOORS OF 'OLD' DREMHILLS FARM, IN THE NORTHEAST WALL.

11. CONLUSION

11.1 The erosion survey has highlighted the potential issues with visitor and stock management, with continued erosion formed by use of existing tracks. It is suggested that the access route is rerouted with non-intrusive markers, ensuring the visitor approaches the site through a known entrance and does not erode the rampart slopes, which will both minimise erosion and enhance the visitor's experience. Stock breaches could be blocked, allowed to regenerate and reinstated.

11.2 Gorse removal was required to stop further root damage and cover for rabbits, however, it may be useful to consider a temporary anti-erosional material to prevent the exposed soil from active erosion from rain, foot traffic and wind. The steep ramparts were destabilised by the gorse, and removal exposed areas to further erosion and when coupled with rabbit infestation, there is potential to cause further damage to the earth banks. Although there is some signs of regeneration, the gorse in certain locations has begun to regenerate.

11.3 Rabbit infestation was quite clearly an issue, with several large warrens, however, although there is active damage, it was hoped that the exposure of the slopes after the removal of the gorse would dissuade more extensive activity. A monitoring of the rabbit burrow locations would allow a picture of activity to be created, and although only in the second year, the evidence suggests continued infestation, but not a growing population. There are however areas where rabbits are colonising new locations while moving from older burrows.

11.4 Close contour survey has established that the original survey work would benefit from enhancement and has allowed a detailed picture of the overlapping chronological sequence of hut circles and structures to be examined.

11.5 Geophysical survey (ground resistance) is proving to be able to locate banks, ditches and field systems in the area to the east, and it is possible that further work within the inner enclosure would aid interpretation of the monument.

11.6 Simple recording of the huts/structures has proved to be useful as a first step in understanding the layout, chronology and perhaps potential population of the site.

11.7 On balance the monument is in good condition and ongoing active management and monitoring should be able to remedy the issues identified by the report.

11.8 It is too early to compare the results with White Castle and this will be done at the conclusion of both sets of fieldwork.

12 FURTHER WORK

12.1 A continuation of the management survey for at least the next 3 years would produce a deeper understanding of the various activities (gorse regeneration, burrow density, stock track damage and visitor movement) that are causing damage to the monument's earthworks.

12.2 Completion of the contour survey to include all of the ramparts and banks and the surrounding area to the limit of the Property in Care boundary.

12.3 Continuation of geophysical (ground resistance) survey across the interior and surrounding area to identify both internal and external features.

12.4 Further historical research into the later occupation and use of the site. Such an activity could easily include local community groups.

13 BIBLIOGRAPHY

Connolly D and Cook M, *2010 Rampart Scotland Project 001: White Castle, Garvald, East Lothian, Data Structure Report and Costed Post Excavation* Research Design, unpub rep

Connolly, D *2010 Rampart Scotland Project 002: Chesters Erosion and Topographic Survey, Drem, East Lothian, Data Structure Report*, unpub rep

Cunningham, J *1895 Note on the Chesters, a Fort Near Drem*, Proc Soc Antiq Scot, 30, 267-9

Dunwell, A and Trout, R 1999 *Historic Scotland Technical Advice Note 16: Burrowing animals and archaeology*, Edinburgh

Forrest, W 1799 *Map of Haddingtonshire,* Edinburgh

Grant, F J 1897 *The commissariot record of Edinburgh*. Register of testaments, Volume I TO 35 1514-1600, Edinburgh

Haselgrove, C (ed) 2009 *The Traprain Law Environs Project: Fieldwork and Excavations 2000-2004*. Edinburgh

Hill, P 1982 *'Broxmouth Hill-fort excavations, 1977-78: an interim report'*, in Harding, D W *Later Prehistoric Settlement in South-East Scotland,* University of Edinburgh, Department of Archaeology, Occasional Paper No. 8, Edinburgh

Ordnance Survey Maps - Six-inch 1st edition, 1843-1882, Scotland

RCAHMS 1924 *Eighth Report with Inventory of Monuments and Constructions in the County of East Lothian*, Edinburgh

Hew Scott D D, 1915 *Fasti ecclesiæ scoticanæ; the succession of ministers in the Church of Scotland from the reformation, Synod of Lothian and Tweedale* (Edinburgh)

Yates, M J 1976 'The Chesters Fort, *Discovery Excav Scot,* 32-3

Appendix 1: Photo List

Photo	File	Aspect	Description	Damage	Date
01	ID_01	Southwest	**Visitor track**	**01**	08/07/2011
02	ID_02	West	**Visitor track**	**02**	08/07/2011
03	ID_03	Southeast	**Cut Gorse**	**03**	08/07/2011
04	ID_04	West	**Visitor track**	**04**	08/07/2011
05	ID_05	West	**Cattle track**	**05**	08/07/2011
06	ID_06	East	**Rabbit scrapes**	**06**	08/07/2011
07	ID_07	East	**Cut Gorse**	**07**	08/07/2011
08	ID_08	East	**Visitor/Animal track**	**08**	08/07/2011
09	ID_09	Southeast	**Cut Gorse**	**09**	08/07/2011
10	ID_10	West	**Visitor track**	**10**	09/07/2011
11	ID_11	Southeast	**Cut Gorse**	**11**	09/07/2011
12	ID_12	Southeast	**Cut Gorse**	**12**	09/07/2011
13	ID_13	East	**Cut Gorse**	**13**	09/07/2011
14	ID_14	East	**Cut Gorse**	**14**	09/07/2011
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17	ID_17	East	**Cut Gorse**	**17**	09/07/2011
18	ID_18	Southeast	**Cut Gorse**	**18**	09/07/2011
19	ID_19	South	**Cut Gorse**	**19**	09/07/2011
20	ID_20	South	**Cut Gorse**	**20**	09/07/2011
21	ID_21	Southwest	**Cut Gorse**	**21**	09/07/2011
22	ID_22	Northeast	**Cut Gorse**	**22**	09/07/2011
23	ID_23	Southeast	**Cut Gorse**	**23**	09/07/2011

Photo	File	Aspect	Description	Damage	Date
24	ID_24	Southeast	**Cut Gorse**	**24**	09/07/2011
25	ID_25	North	**Cut Gorse**	**25**	09/07/2011
26	ID_26	**North**	**Cut Gorse**	**26**	09/07/2011
27	ID_27	Northwest	**Cut Gorse**	**27**	09/07/2011
28	ID_28	North	**Cut Gorse**	**28**	09/07/2011
29	ID_29	North	**Cut Gorse**	**29**	09/07/2011
30	ID_30	West	**Isolated Burrow**	**30**	09/07/2011
31	ID_31	Southwest	**Isolated Warren**	**31**	09/07/2011
32	ID_32	South	**Isolated Warren**	**32**	09/07/2011
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35	ID_35	East	**Area Warren**	**35**	10/07/2011
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37	ID_37	Southeast	**Isolated Warren**	**37**	11/07/2011
38	ID_38	Northeast	**Isolated Warren**	**38**	11/07/2011
39	ID_39	Southwest	**Isolated burrows**	**39**	11/07/2011
40	ID_40	Northeast	**Area Warren**	**40**	11/07/2011
41	ID_41	West	**Isolated Warren**	**41**	11/07/2011
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Photo	File	Aspect	Description	Damage	Date
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49	ID_49	West	**Stock Track**	**49**	11/07/2011
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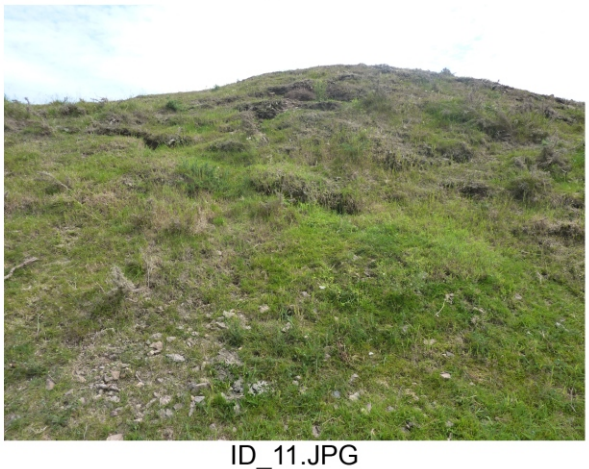
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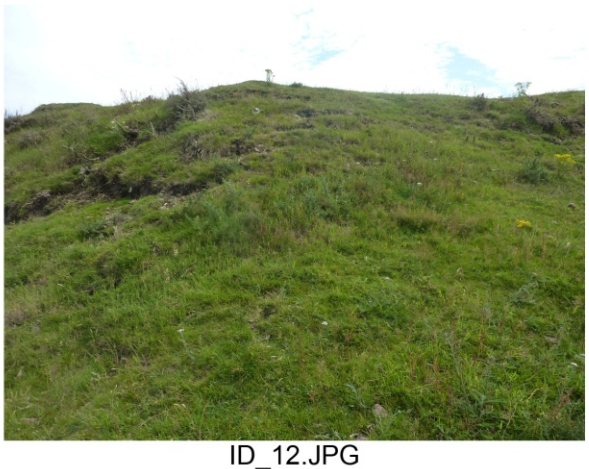
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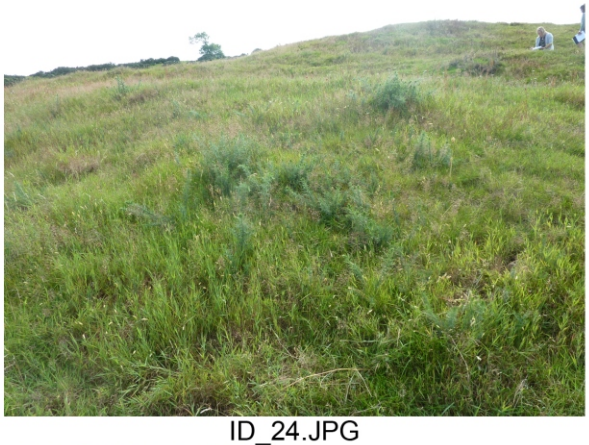

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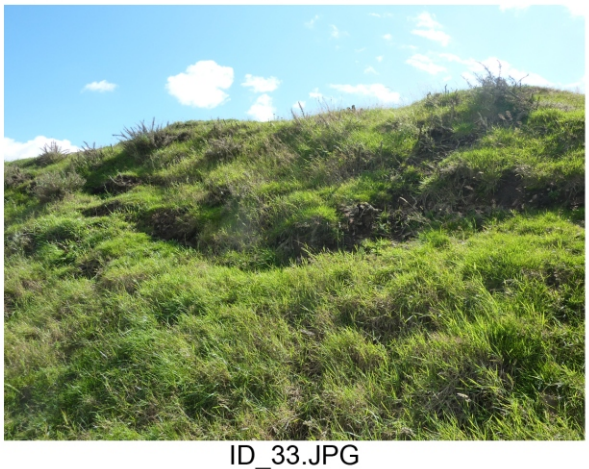

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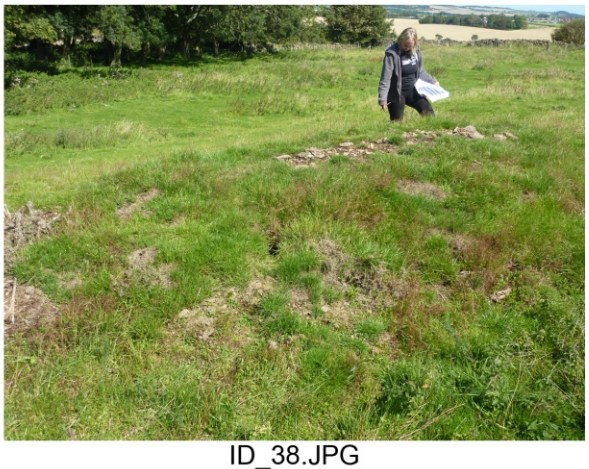

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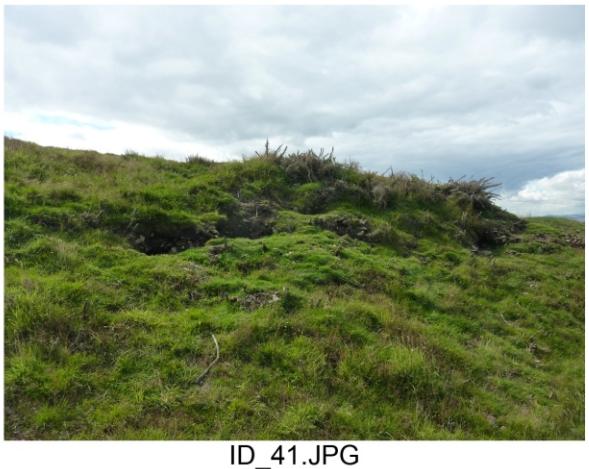

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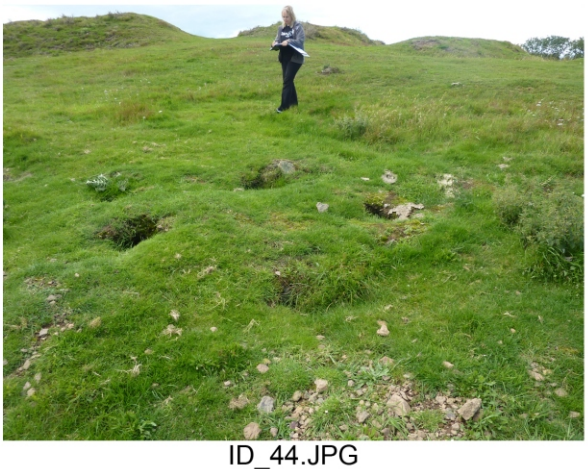

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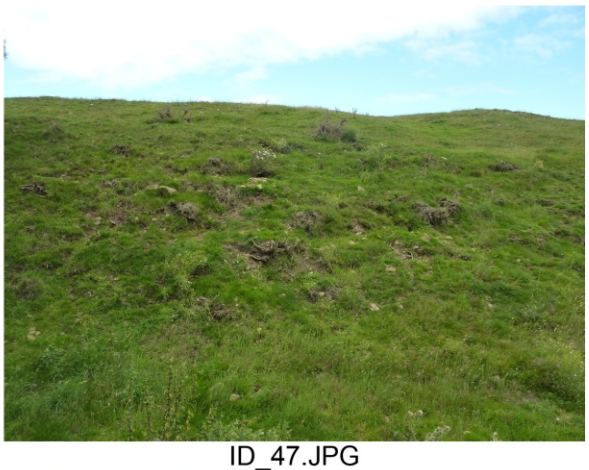
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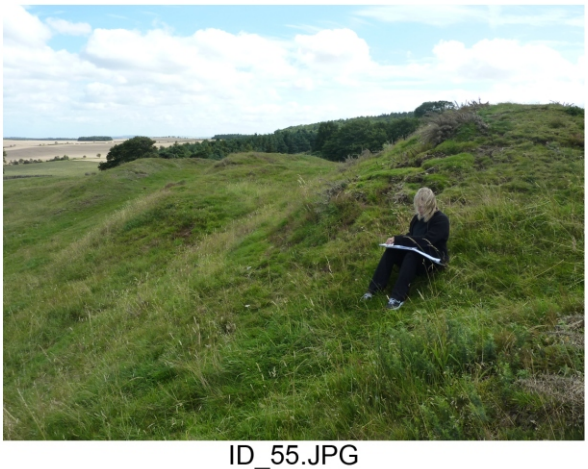
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Appendix 3: Discovery and Excavation in Scotland Report

LOCAL AUTHORITY:	East Lothian
PROJECT TITLE/SITE NAME:	Rampart Scotland: The Chesters Season 2
PROJECT CODE:	002
PARISH:	ATHELSTANEFORD
NAME OF CONTRIBUTOR:	David Connolly and Murray Cook
NAME OF ORGANISATION:	Rampart Scotland
TYPE(S) OF PROJECT:	Geophysical, Erosion and Topographic Survey
NMRS NO(S):	NT57NW 1
SITE/MONUMENT TYPE(S):	Hillfort
NGR (2 letters, 8 or 10 figures)	NT 50760 78260
START DATE (this season)	July 2011
END DATE (this season)	July 2011
PREVIOUS WORK (incl. DES ref.)	July 2010 – Topographic Survey and Erosion Survey
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	As part of on-going research into East Lothian hillforts, further topographic, erosion survey, and limited geophysical survey was undertaken of The Chesters by Rampart Scotland. This work was grant aided by Historic Scotland following a programme of gorse removal. The work was undertaken with volunteers under professional supervision and the Edinburgh Archaeological Field Society and the Midlothian Adult learning (Intermediate Archaeology II) Class. The Geophysics was carried out to the east of the main site and also in the area within the courtyard area of the 16th/17th century farm buildings, to the northeast. The initial survey results show that certain subsurface features are clearly visible. In addition, the structures on the summit were located and characterised by form and size.
PROPOSED FUTURE WORK:	Further survey, geophysical survey and key-hole excavation
CAPTION(S) FOR ILLUSTRS:	--
SPONSOR OR FUNDING BODY:	Historic Scotland and Rampart Scotland
ADDRESS OF MAIN CONTRIBUTOR:	6a Gladstone Place, Stirling, FK8 2NN
EMAIL ADDRESS:	murraycook35@hotmail.co.uk
ARCHIVE LOCATION	Archive to be deposited in NMRS

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