

Airyolland 1

Phase 2 – Evaluation

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AIRYOLLAND 2006: DATA STRUCTURE REPORT

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Non-Technical Summary

This data structure report details the exploratory excavations carried out at Airyolland I homestead in May 2006, and reports the results of two trenches placed over the rampart of the enclosure and in the interior. Details of the rampart's construction are given, and the evidence for structures inside the defences is presented. This season of work was evaluatory in nature, post-excavation work is on-going and as such this report constitutes an interim statement on the investigation of the Airyolland site.

Site summary

Alternative Names: Airyolland I

Type of Site: Homestead

NMRS Number: NX34NW 14

Map reference: NX 3078 4775

Parish: Mochrum

Council: Dumfries And Galloway

Former District: Wigtown

Former Region: Dumfries And Galloway

Introduction and Background

The defended settlements of Galloway constitute a heterogeneous group of monuments of poorly defined date. In archaeological terms, Galloway shares characteristics with areas to the east (in forts), the north west (in Atlantic roundhouses, 'duns' and crannogs) as well as the south (in the form of timber roundhouses). A comparative lack of fieldwork in the area, however, has led to the region being classed as an Iron Age 'black hole' (Haselgrove *et al* 2001), and it is difficult to draw reliable generalisations from the limited numbers of surveyed and excavated sites. The homesteads of the region epitomise this uncertainty, and although comparisons have been made with 'duns' of the north west based on the massive stone construction- particularly in the enclosure ramparts of several sites- the chronology, morphology, function and social status of these sites is unknown.

The region of the west Machars in Wigtownshire contains numerous examples of homestead sites. One particularly coherent group is situated along the shoulder of a raised shoreline running from Port William to Auchenmalg on the west facing coastline (see Figure 1). Among this group of remarkably similar defended enclosures is Chippermere I, excavated by Fiddes in the 1950s (Fiddes 1953). Fiddes' excavations encountered a large drystone enclosure wall, with evidence for a range of internal structures and middens. Fiddes' work was of a basic standard, however; he recorded no evidence of chronological phasing, a situation not aided by the lack of diagnostic finds. Aside from the evidence of the rampart construction, all that can be said of the Chippermere site is that it was probably built prior to the medieval period.

In 2004, the authors carried out a topographic survey of a representative site at Airyolland I (Phase 1). The survey suggests that the site reflects at least three phases. The encircling rampart has been altered at the NE, perhaps in two phases. In addition, the site had clearly been used as a dump for field clearance perhaps in the historic and modern periods. Finally, a number of internal boulders may be interpreted as clearance or possible later structures.

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The following report constitutes the data structure report from the first season of exploratory excavation at the site (Phase 2), carried out in May 2006. The main aims of the project were to build on the detailed survey work by excavating a small portion of the site; it was hoped that this would prove enough information to inform future research and to gain an appreciation of the rampart, interior and date of occupation of the site.

Survey

Although the site had been metrically surveyed the authors in 2004, a laser scan survey was carried out of the enclosure and its environs to provide a detailed topographic survey of the site and surrounding terrain. This survey was carried out using a Mensi GS101 laser scanner, collecting terrain points at a minimum XY resolution of 0.2m. The scan data was geo-referenced to the Ordnance Survey national grid by recording the coordinates of the registration targets using a total station, and integrated with the survey data collected during the excavation. The total station survey was geo-referenced using Ordnance Survey digital data.

The terrain model constructed from the scan data clearly shows the rampart and internal features of the site, and also areas of rig and furrow cultivation to the N and E of the site (Figures 2 and 3). A linear depression outside the rampart to the NW seems likely to be related to this later agricultural activity.

The trenches, drawing points, small finds and overall control were surveyed using a Leica TCR705 Total Station and drawn in real-time using Penmap software.

Excavation Methodology

Fieldwork was undertaken over two weekends in May 2006. Both trenches were opened simultaneously on day 1. Trench 1, over the rampart, was excavated by two separate teams working at either side of the main rubble bank. Trench 2 was excavated initially by opening a central sondage to establish the depth of the subsoil and the complexity of the deposits. Again, this trench was excavated by two teams of two, excavating on either side of the initial sondage trench.

All archaeological contexts were recorded using *pro forma* sheets supplied by Headland Archaeology. Plans and sections were drawn by hand at 1/20 and 1/10 scales respectively. Small finds and drawing points were located using the total station. A total of 22 soil samples were taken from Trenches 1 and 2 (11 from each) over the four days of excavation. These samples were assessed by Headland Archaeology during the post-excavation phase. The drawings are reproduced here at their original scale (where possible).

Photographs were taken using print and transparency film and Canon SLR cameras. Additional shots were taken using digital cameras.

Excavation Results

Trench 1

The principal aim of Trench 1 was to investigate the character of the enclosing bank at Airyolland, and to establish the nature of its construction. A 10m by 2m slot trench oriented N-S was opened on the south side of the enclosure over the rubble bank and excavated by hand.

The bank was covered by thin turf [1000] and topsoil [1001] and [1008]. On top of the bank, loose rubble probably deriving in part from post-abandonment field clearance overlay much of the trench. The topsoil layers [1001] and [1008] contained large quantities of rubble, mostly irregularly shaped stones averaging 0.10- 0.2m in diameter, as well as small quantities of modern material: pottery, glass and iron. On removal of the topsoil and rubble layers the upper stones of the interior [1010] and exterior [1004] wallfaces were exposed. These wallfaces comprised the interior and exterior retention walls of a stone rampart around 3.4m in width, constructed by dumping a core of irregular stones [1015], averaging around 0.15m in diameter between the two retention walls. There was no evidence of the careful construction of the wall core [1015]. The rampart had clearly suffered from stone robbing, and the rubble from its collapse formed a series of layers on both the north and south sided of the wall.

South of the rampart the collapse of the wall was represented by a rubble deposit [1002] in a dark brown silty matrix [1003]. This rubble deposit lay directly on a buried soil [1011] upon which the facing stones of the rampart had been placed. This buried soil deposit merged gradually with a clayey silt [1007] towards the south of the trench, and both deposits overlay a final brown-grey clayey silt deposit, interpreted as a primary soil and containing regular charcoal flecks. No evidence of a ditch or any other negative features were noted outside the rampart.

North of the rampart, the rubble collapse of the wall was evidenced by an upper layer of tumble [1009], comprising angular stones ranging in diameter from 0.1m to 0.5m and a lower layer [1013], containing smaller stones in an orange-brown matrix of sandy silt. The deposits in the interior of the enclosure, in the north end of trench 1, consisted principally of a very loose and mixed dark brown silty sand deposit [1005] c.0.25m in depth. This context was very bioturbated and had possibly been disturbed by ploughing. An apparently intact layer, however, was encountered beneath [1005], represented by a light brown, moderately compact sandy silt containing charcoal [1006]. Underlying the primary collapse of the rampart was a further intact deposit [1014], a reddish-brown compact silty clay, which ran underneath the rampart wall face [1010], and was interpreted as the old ground surface.

On removal of [1014], a single posthole was discovered cut into natural subsoil, directly to the N of the rampart wall face [1010]. The cut [1017] was sub-oval in plan with near-vertical sides, with a shallow concave base. The fill of the posthole [1016] consisted of a reddish-brown compact silty clay, indistinguishable from the overlying context [1014]. As such, it is questionable whether posthole [1017] was stratigraphically below deposit [1014], or cut through it but invisible during the excavation of [1014]. The latter seems more likely.

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Small finds from trench 1 were restricted to modern pottery, iron and glass from the upper levels, although two quartz beach pebbles (SF4, SF6) were recovered from the lower deposits ([1006] and [1013] respectively).

Trench 2

The aim of trench 2 was to evaluate the survival of internal deposits and structures, and establish their character and date. A 5 by 3m trench orientated E-W was opened by hand in the southern half of the interior, aligned with the E edge of Trench 1. The trench was excavated in two parts (with a central sondage) by two different excavation teams. The E part was excavated first, with a W-E baulk left in place.

The turf covered ground surface is flat in this part of the interior. The thin turf [2000] overlay a topsoil c.15cm thick [2001], thinning to the W. Below this a dark brown friable sandy silt [2002] extended across the trench, disturbed by root matter and with stones averaging between 1 and 10cm in diameter throughout. Finds from this layer included late pottery and glass, perhaps relating to manuring of the fields using midden material. A large boulder [2017] was exposed in the W-facing section of the trench in context 2001 and below. This boulder was interpreted as part of a linear feature extending to the W.

Below context [2002], the NE part of the trench contained a light brown/orange sandy silt [2003] with flecks of charcoal throughout. To the S, under [2002], a darker and more compact deposit [2006] was found in the SE corner of the trench, overlying [2003]. Initially, a baulk was left between the higher [2003] and [2006] aligned W-E from the boulder. Beneath [2003], adjacent to the boulder, a spread of stones [2007] within a sandy silt matrix [2008] may have been part of a E-W wall related to the boulder [2017]. Beneath [2003] in the SE, two patchy deposits [2004] and [2013] (of brown sandy silt with charcoal and bone flecks) were found, extending across the trench W-E.

A sondage was excavated N-S across the trench to establish the depth of deposits, this being established at 0.62 depth. The area W of the sondage was excavated during the second weekend. Unfortunately, this sondage, although useful in the early stages of excavation, proved to truncate the possible linear features later excavated in trench 2.

Deposits [2003] and [2006] extended across the trench, though the interface between them was unclear. At the SW of the trench, within [2006] but overlying [2013], there was a SW-NE aligned rubble wall [2010/2012] with two faces and a core in a dark brown sandy silt matrix. The matrix yielded a piece of possibly worked stone (SF 6). This 0.82m wide linear feature extended 1.6m to the NE where it was truncated by the sondage during excavation. It may have continued as context [2009], a group of large (0.2m) stones within [2003] N of boulder [2017].

At the NW of the trench, another less coherent linear feature [2011] extended E-W from a large boulder in the W trench face. This linear feature was of a similar character to [2007/2008] in the E of the trench. The interface between [2011] and [2007] was unclear, and may have been truncated by the excavation of the central sondage. A posthole was discovered below [2006] at the S of the trench [2014]. This

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feature was found to be 0.4 by 0.4m by 0.17m deep, with a light brown silty sand fill [2015].

The results of the excavation of trench 2 suggest that the interior retains evidence for internal structures, possibly from more than one phase of activity; it is certain that the upstanding remains show at least two phases of alteration in addition to use for post-abandonment clearance.

Discussion

The Rampart

From the exploratory work reported here it is clear that the structure of the rampart enclosing the site is relatively well preserved, with the facing stones still retaining a substantial portion of the rubble core. It is unlikely that the rampart survives to any greater height at any other part of its circumference, and no better candidate for the entrance than the area to the E of the site noted during the 2004 survey work was evident. One possible aim of future work at the site might be to investigate this area and locate the entrance to the enclosure. The construction of the rampart most closely resembles that of duns in Argyll, which are datable from the mid first millennium BC to the Early Historic centuries. Airyolland is particularly reminiscent of Dun Glashan in Argyll, where recent excavations by Gilmour and Henderson have dated the enclosure to the earlier Iron Age, and on stylistic grounds alone, this might be taken as a reasonable hypothesis for the dating of the Airyolland enclosure. The close similarities with the enclosure at Chippermore excavated by Fiddes would suggest, furthermore, that the sites are contemporary.

Internal features

The features encountered in trench 2 suggest that internal structures may be relatively well preserved, although it seems likely that they are of relatively slight construction. The apparent use of rubble cored walls and possibly irregular cobbling combined with the close similarity of the wall core matrix to the topsoil do not make the internal structures at Airyolland particularly easy to excavate, although having established the character of the walls allowed the recognition of the curvilinear walling to the W of trench 2 later in the project. The incorporation of large boulders into walls in the internal structures as in the case of [2017] is an unusual characteristic, and it is unfortunate that the location and limited extent of trench 2 were not able to elucidate this construction style more clearly. It seems reasonable to hypothesise that the structural features encountered in trench 2 are the remains of domestic buildings within the enclosure, although the distinct lack of small finds makes identifying any other possible function difficult. The presence of postholes in both trenches suggests that the buildings incorporated a combination of stone footings and earthfast posts, though again the limited extent of the 2006 excavations makes any further description difficult. It should be noted, however, that such stone footed timber roundhouse architecture would not be unusual in the local later prehistoric context. A principal aim of any future work would, therefore, simply be to investigate a larger portion of the interior, in an attempt to establish the character of these internal structures.

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Dating

In the absence of chronologically sensitive small finds, at the current stage of work it will be necessary to rely on radiometric dating of samples from the secure contexts. There is good reason to expect datable material from the sealed deposit [1007] below the rampart, which contained charcoal, while a date might be obtained for the post abandonment levels [1006] and [1013]. Though buried soil deposits were encountered within the enclosure beneath post-abandonment tumble, the bioturbation of these layers would suggest that the fills of post-holes [2014] and [1017] would be more reliable for dating activity in the interior, should the samples of their fills yield sufficient datable material.

Further Work

The excavation carried out in May 2006 was successful in identifying well-preserved remains of occupation in the interior of the Airyolland homestead, demonstrating categorically that Airyolland is enclosed by a massive stone rampart. This wall was built in the same manner as drystone walls of the same period throughout the north and west; with two faces and an internal rubble core. This wall, as it survives to only a limited height, may have supported a stone or timber super-structure of some sort, as the strength of the build would make little sense as a purely impressionistic construction. The internal features suggest that there has been occupation in more than one episode. The conclusion that a larger area of the interior needs to be exposed to provide coherent evidence has led the authors to propose a further season of excavation, which will hopefully take place in 2007.

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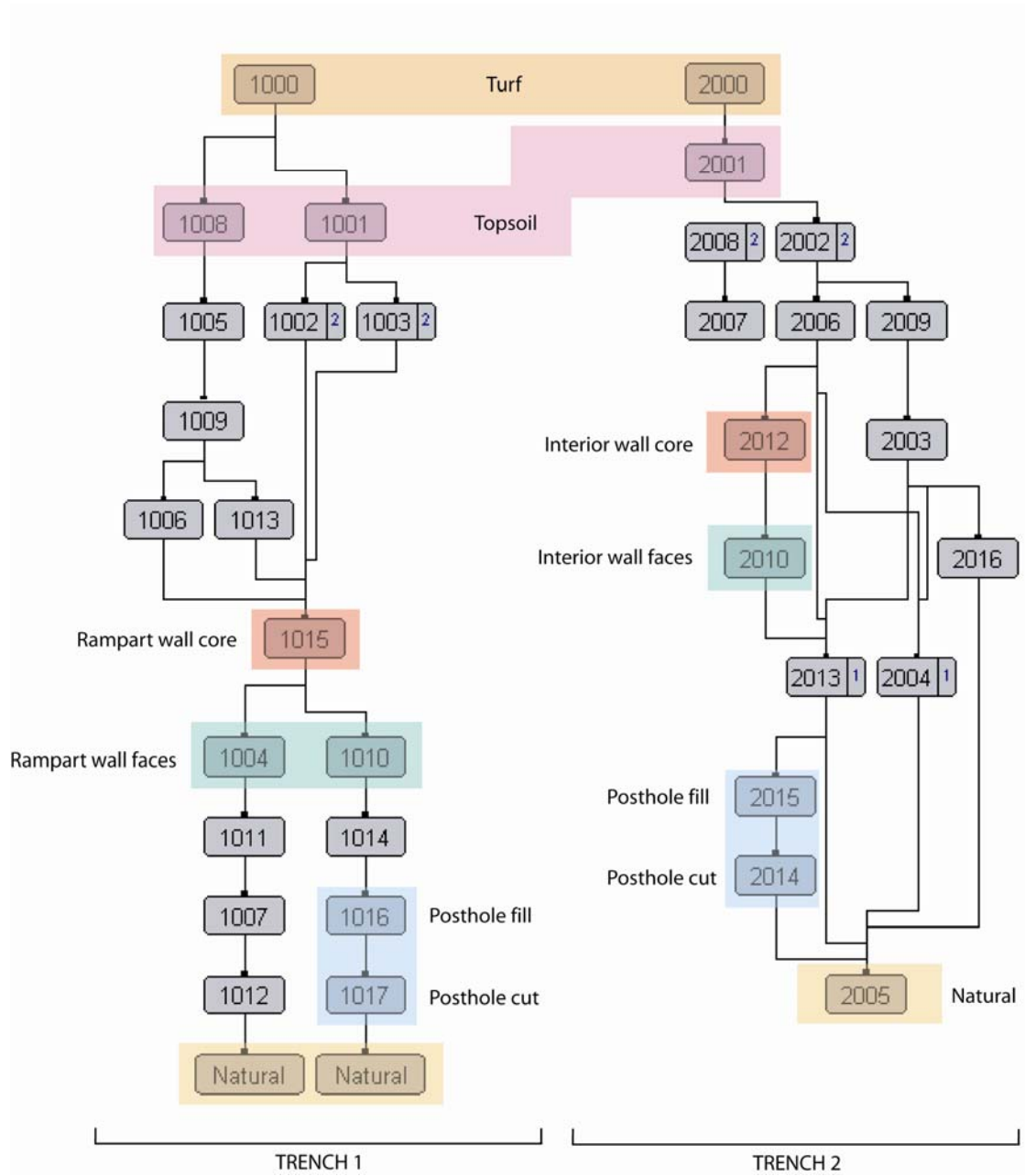
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Harris matrix.

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Appendix 1 - Context Register

CONTEXT	DESCRIPTION	AREA
1000	Turf over Trench 1. Grassy with deep roots to 1001 and deeper. Forms matrix to central tumble of bank - which is probably later clearance.	Trench 1
1001	Topsoil and loose upper rubble at the south end of Trench 1. Coarse rubble deposit in matrix of mid-dark brown clayey silt with regular small inclusions. Rubble consists of med-large angular stones. Covers in situ wall and associated tumble.	Trench 1
1002	Large sub-angular to sub-rounded stones <0.5m. Slightly less frequent to base of deposit. Matrix is 1003	Trench 1
1003	Matrix of tumble 1002. Dark brown silt with regular 5mm sub-angular stone inclusions	Trench 1
1004	External façade of rampart. 3 courses of dry-stone blocks, partly snecked. Blocks are irregular and up to 0.5m	Trench 1
1005	Dark brown loose silty sand at north end of Trench 1	Trench 1
1006	Light brown moderately compact sandy silt with charcoal flecks @ north end of Trench 1.	Trench 1
1007	Light brown clay silt, moderately well compacted with regular small stone inclusions up to 0.06m. Interface with 1011 and 1012 unclear.	Trench 1
1008	Topsoil and matrix at north end of Trench 1. Loose rubble (<0.15m) (possible clearance), runs over whole trench.	Trench 1
1009	Rubble tumble of small (0.1m) to large (0.5m) angular stones. Apparently from inward (N) collapse of internal rampart façade.	Trench 1
1010	Set inner face of rampart under a layer of loose topsoil/tumble (1008). Abutted to the south by core rubble of the rampart. Overlain to the north by in situ tumble (1009) which includes collapsed façade stones. Built of very large stones >0.4m and <1.0m. The wall has been slightly warped by the collapse of stonework above.	Trench 1
1011	Moderately compact mid-dark brown clay silt. Regular small stone inclusions up to 5cm. Immediately underlies wall face (1004).	Trench 1
1012	Moderately well compacted mid-light brown grey clay silt. Occasional red/brown silt mottling. Occasional charcoal flecks. Quite frequent small-medium stones <15cm. Occasional larger stones <40cm. Occasional slate fragments.	Trench 1
1013	Lower tumble and matrix at internal wall façade. Orange brown sandy silt with charcoal	Trench 1
1014	Silty clay, quite compact, reddish brown. Probable old ground surface.	Trench 1
1015	Wall core to rampart. No matrix as built. Composed of sub-angular to sub-rounded stone roughly packed between the facades. No evidence for great care taken, or for timber lacing. Stones <30cm.	Trench 1
1016	sub-oval cut of possible post hole. Cut in to natural. Concave base with vertical sides and a less clear shallow top section Filled by 1017	Trench 1
1017	Same as 1014 (or indistinguishable from fill of post hole 1016)	Trench 1
2000	Turf	Trench 2
2001	Topsoil	Trench 2
2002	Compact dark friable sandy silt beneath topsoil. Some root matter and loose sub-angular stones (<10cm) throughout. Across trench 2.	Trench 2
2003	Light brown/orange sandy silt with flecks of charcoal throughout. Patchy and appears to be confined to the north east area of Trench 2. Similar to 2006	Trench 1
2004	Dark brown friable sandy silt with little or no charcoal fragments. Patchy but runs across the whole trench beneath 2006 and 2003. Smaller stone inclusions throughout.	Trench 2
2005	Diamicton subsoil.	Trench 2

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2006	Dark brown compact sandy silt with flecks of charcoal in the south east of trench 2.	
2007	Dark brown sandy silt sitting within a matrix of sub-angular stones (2008).	Trench 2
2008	Sub-angular stone fill sitting within deposit 2007.	Trench 2
2009	A series of stones 20 by 30cm sitting within 2003, possible continuation of wall [2010]/[2012]	Trench 2
2010	Outer wall face and less clear inner face of E-W wall. Overlies 2003, within 2002. Drystone curvilinear wall of unshaped limestone (?) mostly in a single course, though two are present in one location. Outer edge is neat, inner is less clear. Continues into N facing section of trench 2. Filled by rubble core 2012.	Trench 2
2011	Linear group of sub-angular small stones sitting at an angle to 2010. Similar to 2008 in south of trench. Sitting within 2002	Trench 2
2012	Rubble fill and loose medium brown sandy silt matrix within wall 2010. Rubble core of wall 2010. Angular stones in a matrix of dark brown humic sandy silt	Trench 2
2013	Deeper patches of brown sandy silt with large charcoal flecks and occasional bone fragments; discontinuous, but found across trench 2. Large patch identified to the south east of the trench.	Trench 2
2014	Cut of post hole: cut into subsoil. Filled by 2015	Trench 2
2015	Fill of post hole 2014. Light brown sandy silt with some small stones	Trench 2
2016	Mixed light orange brown silty sand with few angular stones. Also under 2003/2009 at NE of trench. In NW corner of trench to N of 2011 above natural.	Trench 2

Appendix 2 – Photograph Register

FILM	SHOT	CONTEXT	FACING	DESCRIPTION
1	1			ID Shot
1	2	1000	N	Trench 1 pre-excavation
1	3	1000	N	Trench 1 pre-excavation
1	4	2000	S	Trench 2 pre-excavation
1	5	2000	S	Trench 2 pre-excavation
1	6	2001	E	Trench 2 topsoil (1000 removed)
1	7	2002	N	Trench 2 context 2002 sondage
1	8	2002	N	Trench 2 context 2002 sondage
1	9	1001	N	Trench 1, general shot
1	10	1001	N	Trench 1, general shot
1	11	1009	S	Trench 1, north end
1	12	1015	SE	Trench 1, wall core
1	13	1009	SW	Trench 1, tumble
1	14	0	NE	Trench 2 working shot
1	15	2004	N	Trench 2, context 2004 pre-excavation
1	16	2005	N	Trench 2, subsoil natural in sondage
1	17	2006	E	Trench 2, context 2006 pre-excavation
1	18	1006	S	Trench 1, context 1006 pre-excavation
1	19	1007	N	Trench 1, context 1007 pre-excavation
1	20	2007	E	Trench 2, contexts 2003, 2007, 2008
1	21	2008	E	Trench 2, contexts 2003, 2007, 2008

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1	22	2004	E	Trench 2, context 2004 pre-excavation
1	23	1013	S	Trench 1, context 1006/1013
1	24	1006	SE	Trench 1, context 1006/1013
1	25	1004	N	Trench 1 at end of first day
1	26	1004	N	Trench 1 at end of first day
2	27	0		ID Shot
2	28		N	Trench 1 general shot
2	29	0	S	Trench 1 general shot
2	30	0	E	Trench 2 general shot
2	31	0	W	Trench 2 general shot
2	32	1012	N	Trench 1 context 1012 pre-excavation
2	33	1010	S	Trench 1, rampart façade
2	34	1013	S	Trench 1, 1006 post ex and 1013?
2	35	2010	N	Trench 2, structure 2010
2	36	2010	N	Trench 2, structure 2010
2	37	2010	E	Trench 2, detail of 2010
2	38	2010	E	Trench 2, detail of 2010
2	39	2011	W	Trench 2, view of wall/bank 2011
2	40	1011	N	Trench 1, post excavation of south section
2	41	2014	W	Trench 2, Post hole 2014/2015 pre-ex
2	42	2015	W	Trench 2, Post hole 2014/2015 pre-ex
2	43	2014	W	Trench 2, Post hole 2014/2015 section
2	44	2015	W	Trench 2, Post hole 2014/2015 section
2	45	0	W	General shot of site from east
2	46	0	W	General shot of site from east
2	47	0	SW	Trench 2, general shot
2	48	0	SE	Trench 2, general shot
2	49	0	SE	Trench 1, general shot
2	50	0	N	Trench 1, general shot
2	51	2010	S	Trench 2, n-facing section of slot through wall 2010
2	52	2010	S	Trench 2, n-facing section of slot through wall 2010
2	53	0	E	Trench 2, w-facing section
2	54	0	S	Working shot of scanner
2	55	0	E	Trench 1, west-facing section - south
2	56	0	E	Trench 1, west-facing section - centre
2	57	0	E	Trench 1, west-facing section - north
2	58	0	N	Trench 1, south-facing section
2	59	0	W	Trench 1, east-facing section - south
2	60	0	W	Trench 1, east-facing section - centre
2	61	0	W	Trench 1, east-facing section - north
2	62	0	N	Trench 1, south area
3	63	0		ID Shot Film 3

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3	64	1016	E	Trench 1, w-facing section post hole 1016
3	65	1016	S	Trench 1, w-facing section post hole 1016
3	66	1010	S	Trench 1, internal façade 1010 and north area post-ex
3	67	0	N	Trench 1 post excavation
3	68	0	N	Trench 1 post excavation
3	69	0	N	Trench 1 post excavation
3	70	1016	E	Trench 1, post ex post hole 1016
3	71	1016	S	Trench 1, post ex post hole 1016
3	72	0	E	Trench 2, west-facing section
3	73	0	E	Trench 2, west facing section
3	74	0	SW	Trench 2, north-facing section
3	75	0	SW	Trench 2, north-facing section
3	76	0	S	Trench 2, north-facing section
3	77	0	E	Trench 2, general shot post-excavation
3	78	0	N	Trench 2, general shot post-excavation
3	79	0	W	Trench 2, general shot post excavation
3	80	0	W	Trench 2, re-turfing
3	81	0	SW	Trench 2, re-turfing
3	82	0	SE	Trench 1, re-turfing
3	83	0	NE	Trench 1, re-turfing

Appendix 3 – Drawing Register

Drawing No	CONTEXT	TYPE	SCALE	DESCRIPTION
1	0	PLAN	1:20	Plan @ 1:20
2	1004	SECTION	1:10	Section @ 1:10 of [1004]
3	0	SECTION	1:10	East facing section @ 1:10 of baulk
4	0	PLAN	1:20	Plan @ 1:20
5	0	SECTION	1:20	West facing section @ 1:20
6	0	PLAN	1:20	Plan @ 1:20
7	0	PLAN	1:20	Plan overlay @ 1:20
8	1016	SECTION	1:10	East facing section @ 1:10 of [1016]
9		SECTION	1:10	North facing section @ 1:10

Appendix 4 – Sample Register

SAMPLE	CONTEXT	DESCRIPTION
1	1001	Topsoil in trench 1
2	1003	Matrix of tumble
3	1005	Sandy silt at north of Tr 1
4	2002	Light brown sandy silt beneath topsoil

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5	2006	Dark brown sandy silt with charcoal flecks
6	1007	Light brown clayey silt at south of trench 1
7	1012	Light brown clayey silt with charcoal flecks
8	2007	Dark brown sandy silt.
9	2004	Dark brown friable sandy silt
10	1013	Orange brown sandy silt with charcoal flecks
11	1012	Light brown deposit
12	1006	Mid brown compact sandy silt
13	2003	Compact light brown/orange sandy silt with charcoal
14	2013	Light brown sandy silt with charcoal, directly above natural
15	2016	Light brown orange silty sand
16	2015	Fill of post hole 2014
17	1014	Basal deposit in Tr 1 north end
18	2013	Sealed topsoil beneath 2010
19	2012	Matrix of wall 2010
20	2013	Relict topsoil north of 2010
21	1017	Fill of posthole 1016
22	1011	Sealed deposit below face of rampart

Appendix 5 – Soil sample assessment

Appendix 6 – Finds assessment

APPENDIX 6

AIR-06: Airyolland I homestead, Dumfries and Galloway

Dr S. Timpany with contribution by D. Masson
Headland Archaeology Ltd (09/11/06)

Environmental sample report

Introduction

Twenty-two samples were collected from two trenches, from the outside (Trench 1) and inside (Trench 2) of an excavated homestead at Airyolland. Eleven samples were taken from each trench. Samples were taken from features such as postholes, and from the sediment layers recorded within each trench.

Method

Samples were processed in laboratory conditions using a standard floatation method (cf. Kenward *et al*, 1980). All plant macrofossil samples were analysed using a stereomicroscope at magnifications of x10 and up to x100 where necessary to aid identification. Identifications were confirmed using modern reference material and seed atlases including Cappers *et al* (2006).

Results

The results are presented in Tables 1 (retent samples) and 2 (floatation samples) below.

Charcoal fragments were present in all samples with only one exception, Sample 001 containing no charcoal fragments (see Tables 1 and 2). Charred cereal grain was present in eight samples (see Table 2), which contained small quantities of hulled barley (*Hordeum vulgare*) and/or oats (*Avena* sp.). Naked barley (*Hordeum vulgare var nudum*) was present in Sample 016, together with hulled barley and oats. Sample 020 was the only sample, which contained other plant remains of the seeds of black mustard (*Brassica nigra*) and corn marigold (*Chrysanthemum segetum*).

Other finds (Davie Masson)

Metal working waste fragments (slag) were found in five samples (001, 004, 005, 008 and 020). Fragments of mortar were recovered from two Samples 016 and 020. Sample 005 contained a small piece of prehistoric burnt flint. Modern glass was found in Sample 009. Pottery fragments were found in Sample 004 and 021, with Sample 005 containing a small piece of unglazed clay, possibly used in a kiln. Fragments of burnt bone were found in six samples (003, 005, 006, 009, 016 and 022), however, none of these fragments were large enough to be able to identify to species (all less than 2cm) therefore all one can say is that they are from a large mammal (e.g. cow, sheep).

Discussion

Trench 1.

The samples from Trench 1 through the rampart were found to contain wood charcoal fragments (except Sample 001), with the exception of two samples (003 and 021) all charcoal

was of a size unsuitable for identification or AMS dating. The small size of the charcoal fragments, less than 1cm³ suggests that they may be from secondary deposits (e.g. redeposited material). This is also indicated by the deposits, which are largely silts suggesting material such as small fragments of charcoal and [burnt] bone may have been fluvially transported to the site via surface run-off from rainfall. Sample 003 is from a context [1005], which is thought to have been disturbed by modern ploughing activity and therefore although contains larger wood charcoal fragments these may have been churned up and redeposited from elsewhere. Sample 021 from the fill [1016] of posthole [1017] also contained large charcoal fragments (>1cm³), together with a piece of pottery. However, the nature of the fill being silty clay, and the small quantity of charcoal again suggests this is redeposited material. This same material from above the posthole (Context 1014) also yielded a low number of charred barley grains, therefore indicating a small amount of domestic material. These grains may have originated from the interior of the homestead, where charred barley grains have also been recovered (see below). One metallic waste (slag) fragment was found from the topsoil [1001] and is believed to be modern. This layer has also been noted as containing other modern material, such as glass, pottery and iron.

Trench 2

Charred cereal grains in association with wood charcoal fragments were recovered from eight samples, with six of these containing fragments of a suitable size for identification and AMS dating (see Table 2). The charred cereal grain assemblage consisted of oats and barley with one sample (016) also containing naked barley. This find from the fill [2015] of a posthole [2006] is significant as it may reflect a period of change in crop cultivation from the use of naked barley to hulled barley. This change is thought to have taken place during the Bronze Age-Iron Age period (Hillman, 1981). Other charred plant material recovered from this trench includes seeds of black mustard and corn marigold (Sample 2013), which are likely to represent the remnants of arable weeds collected with the grain during harvesting. Charred hazel (*Corylus*) nutshell was also recovered from beneath the topsoil [2002], suggesting this is either modern or has been reworked.

The samples from Trench 2 come from the interior of the homestead and therefore may reflect the remnants of material of domestic usage, such as cooking and baking. Fragments of mortar, possible kiln clay and pottery are all likely to represent debris from the interior structure and items within, caused by the collapse of this building. The worked flint was also recovered from Context 2006 within the interior of the structure, from which another piece of possible worked stone was recovered in the field.

Conclusion

Environmental samples showed the charred plant remains to be concentrated in the interior of the homestead. The presence of naked and hulled barley in one sample suggests a date of Bronze Age for the homestead, with the prevalence of all other cereal grain recovered being either hulled barley or oats suggesting an Iron Age date or later. The grain evidence for a possible late Bronze Age-Iron Age date for the site ties in well with that hypothesised from fieldwork and building recording of a later prehistoric date for the homestead. This may be further elaborated on following the examination of the pottery and lithic fragments recovered.

Recommendations

An expert to see if they are diagnostic of any periods should examine the pottery fragments and flint.

Charred cereal grain could be radiocarbon dated to provide dates for agrarian activities at the site. Of particular interest would be Sample 016, which contains both the naked and hulled forms of barley.

References

Cappers R.T.J., Bekker R.M. and Jans J.E.A. (2006) *Digital seed atlas of the Netherlands* (Barkhuis Publishing and Groningen University Library, Groningen).

Hillman G. (1981) Reconstructing crop husbandry practices from charred remains of crops, in Mercer R. (ed) *Farming practice in British prehistory* (Edinburgh University Press, Edinburgh) 123-162.

Kenward, H. K., Hall, A. R. and Jones, A. K. G. (1980). A tested set of techniques for the extraction of plant and animal microfossils from waterlogged archaeological deposits. *Science and Archaeology* **22**, 3-15.

Table 1 AIR-06 Retent Sample Results

Context Number	Sample Number	Retent Vol (l)	Pottery	Kiln Clay	Glass	Lithic	Metallic Waste	Mortar	Charred <i>Corylus</i> Nutshell	Burnt Bone	Charcoal Quantity	Charcoal AMS	Comments
1001	001	10					+						
1003	002	10											Archaeologically sterile
1005	003	10								+	+		Charcoal less than 1cm
2002	004	10	+				+		+		++		Charcoal less than 1cm
2006	005	10		+		+	+			+	+	*	Charcoal up to 1cm
1007	006	10								+	+++		
1012	007	10											Archaeologically sterile
2007	008	10					+				+		
2004	009	10			+					+	+	*	Charcoal up to 1cm
1013	010	10											Archaeologically sterile
2016	011	10											
1006	012	10											
2003	013	10											
2013	014	10											
2016	015	10								+	++		Charcoal less than 1cm
2015	016	10						+++		++	+++	*	Charcoal up to 1cm
1014	017	10								+	+		
2013	018	10											
2012	019	8									+		Charcoal less than 1cm
2013	020	10					+	+++		+	+		Charcoal less than 1cm
1017	021	50	+								++	*	Charcoal up to 1cm
1011	022	20								+	+++		Charcoal less than 1cm

* = sufficient sized charcoal for identification and AMS dating

Table 2 AIR-06 Flotation Sample Results

Context Number	Sample Number	Total flot Vol (ml)	Cereal grain:	<i>Avena sp.</i>	<i>Hordeum vulgare</i>	<i>Hordeum vulgare var nudum</i>	Other plant remains	Charcoal		Comments
								Quantity	AMS	
1001	001	100								Archaeologically sterile
1003	002	10						+		
1005	003	50						+++	*	
2002	004	30		+	+			+++		
2006	005	20		++				+++	*	
1007	006	<10						++		
1012	007	<10						++		
2007	008	50		+	+			+++	*	
2004	009	10		+				++		
1013	010	40						+++		
2016	011	10						+++	*	
1006	012	-								No flot sample
2003	013	-								No flot sample
2013	014	-								No flot sample
2016	015	10						+		
2015	016	15		++	++	+		+++	*	
1014	017	<10			+					
2013	018	-								No flot sample
2012	019	10		+				+++	*	
2013	020	10		++	+		<i>Brassica nigra</i> + <i>Chrysanthemum segetum</i> +	++		
1017	021	<10								Archaeologically sterile
1011	022	<10						++		

Key: + = rare, ++ = occasional, +++ = common and ++++ = abundant
 * = sufficient sized charcoal for identification and AMS dating

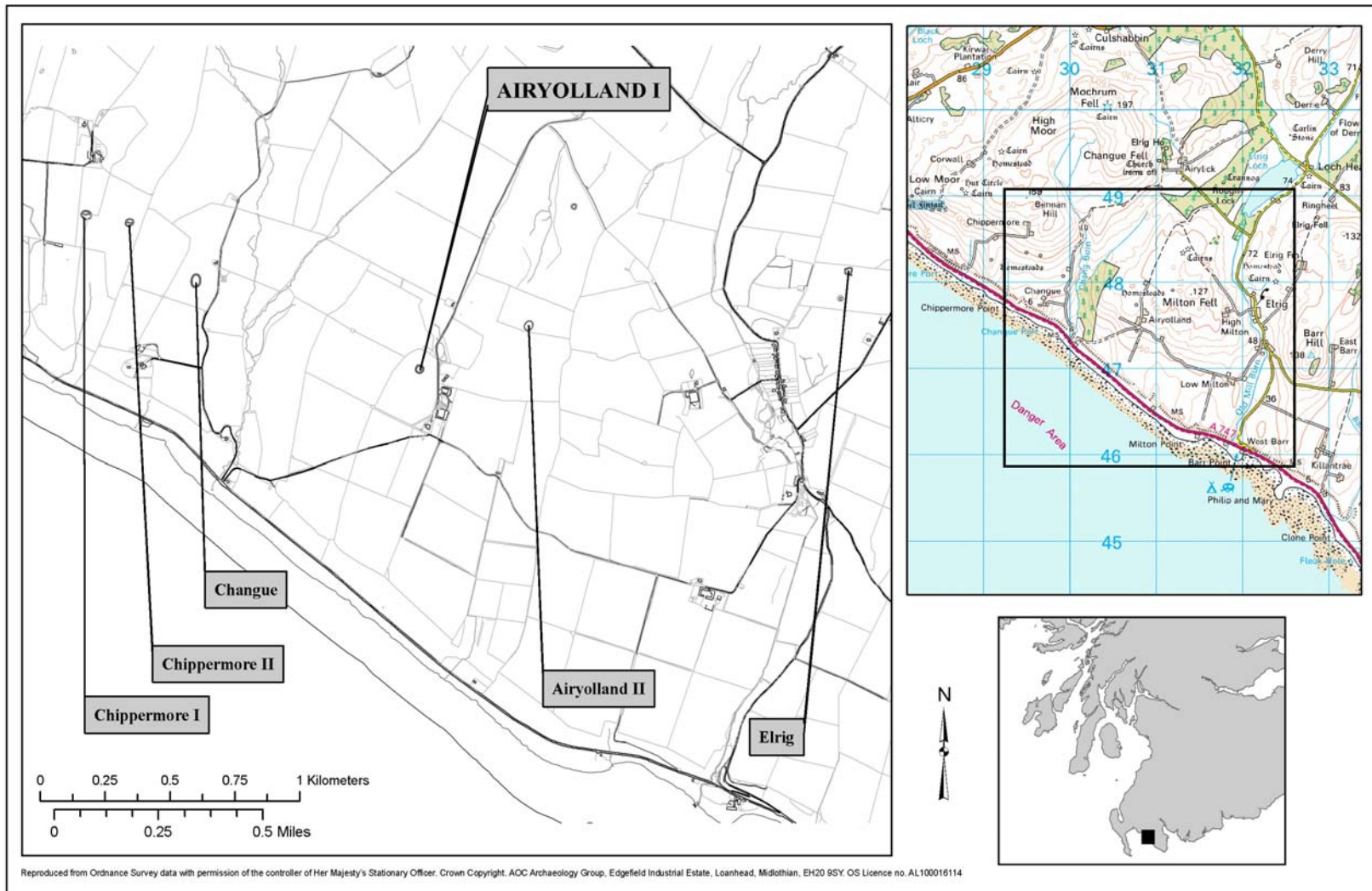


Figure 1: Location Map.

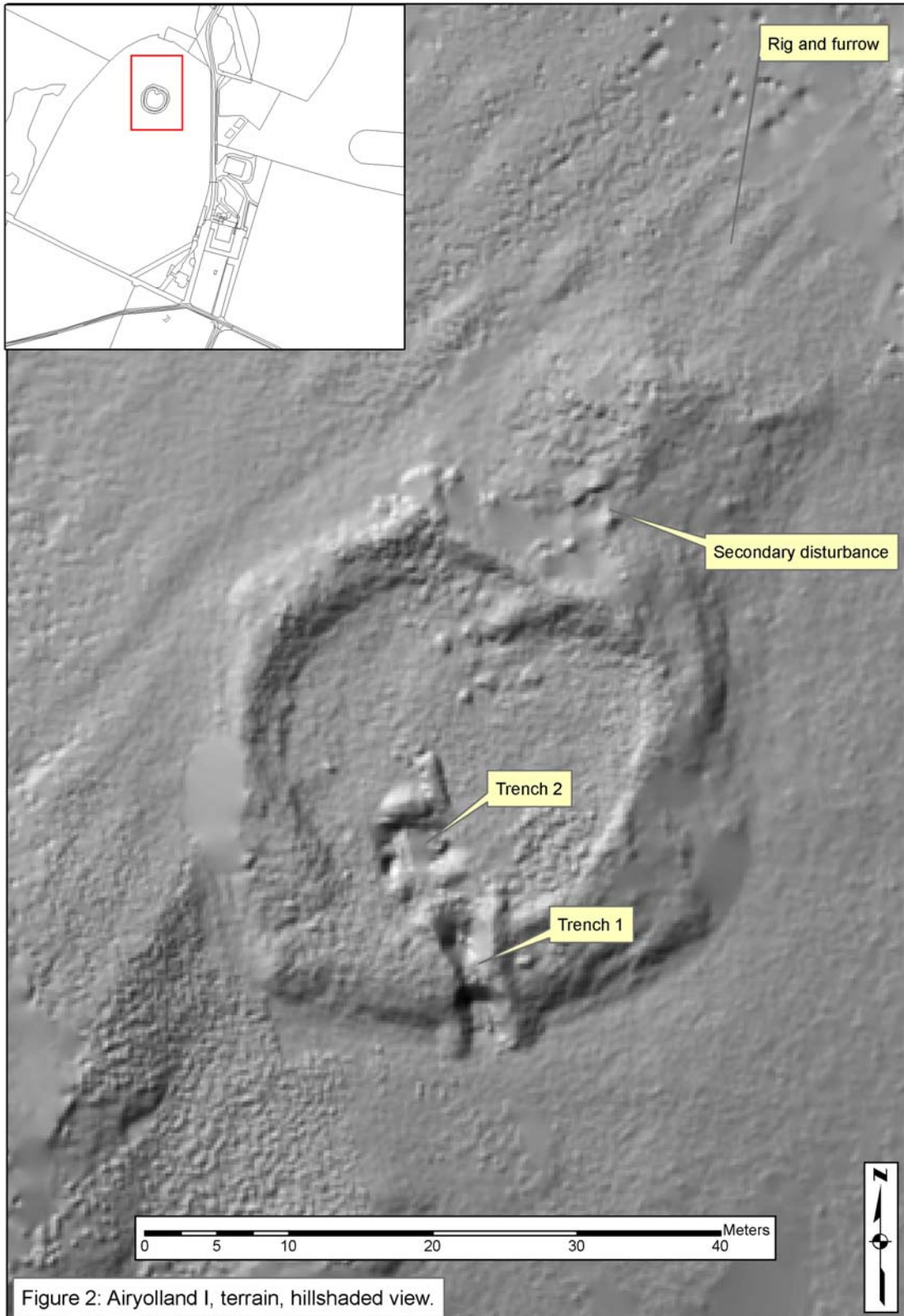
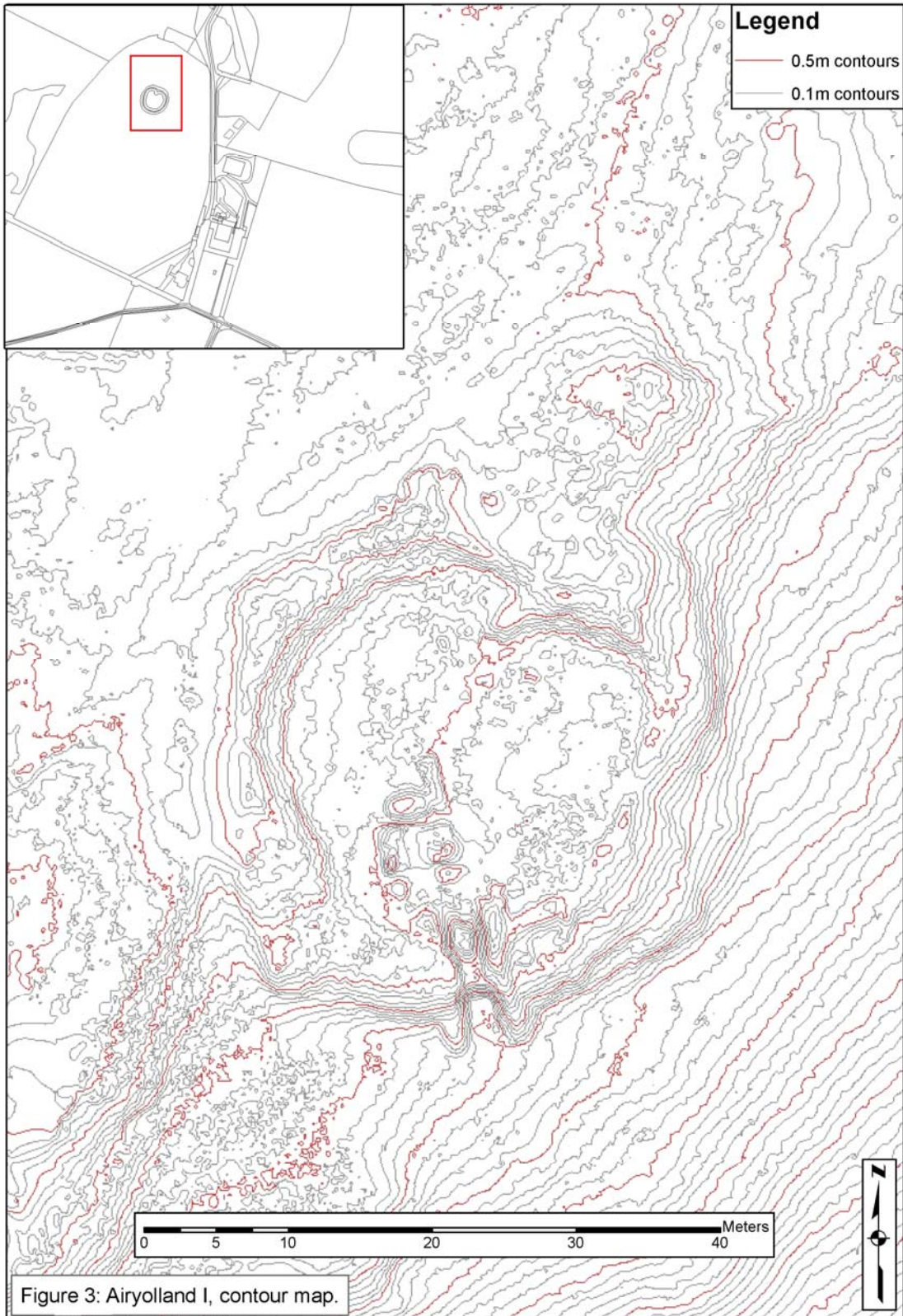
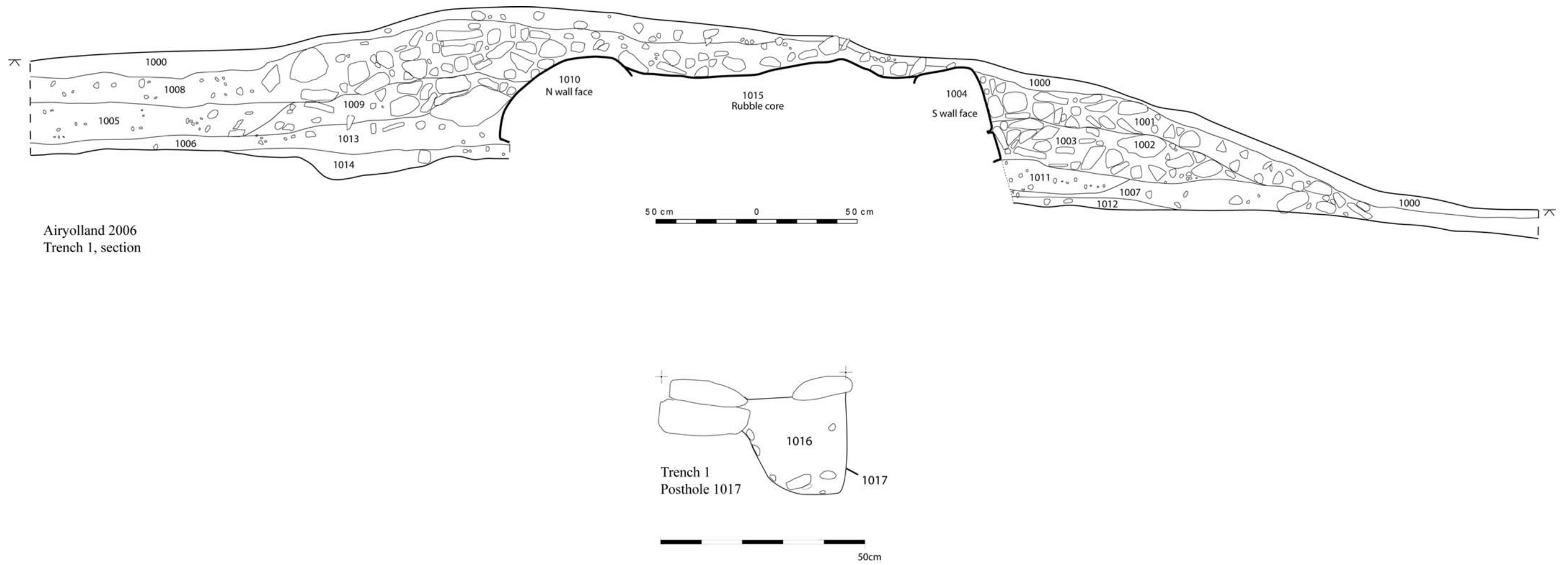


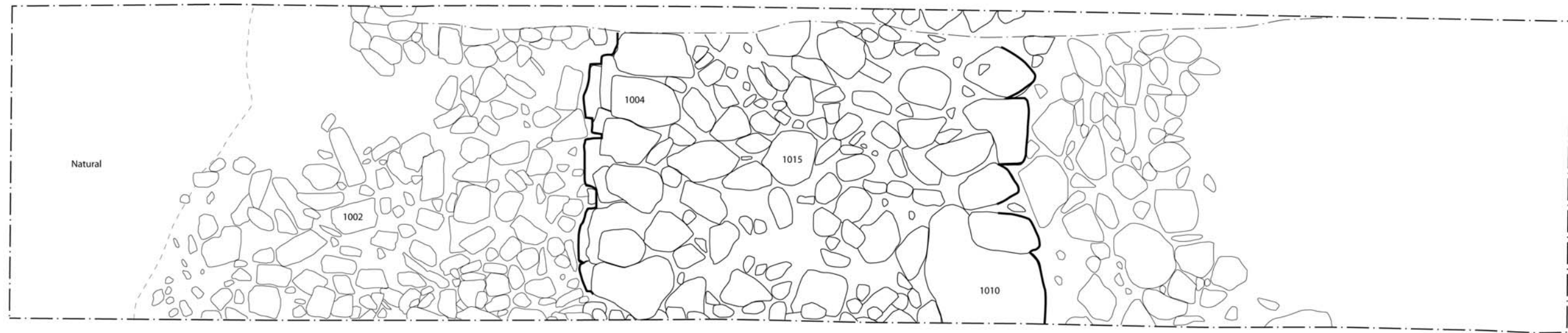
Figure 2: Airyolland I, terrain, hillshaded view.



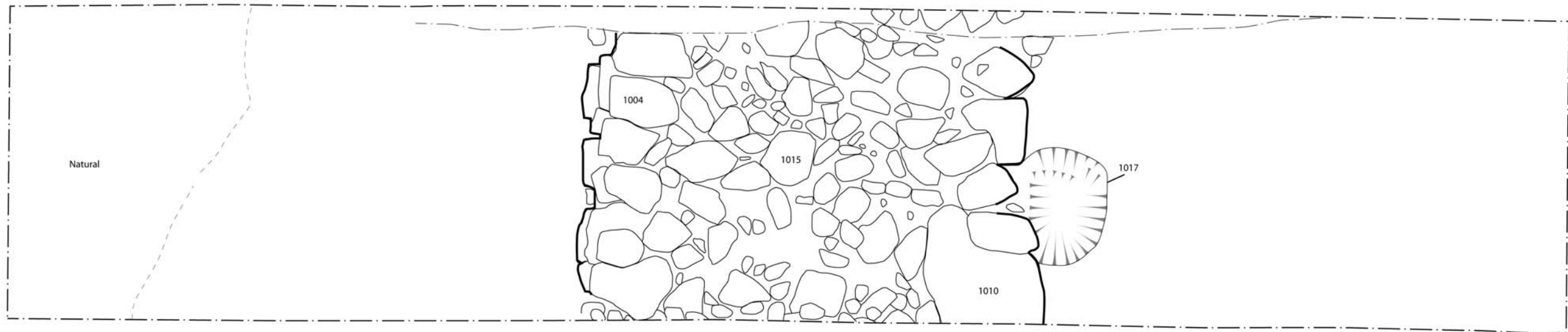


Airyolland 2006
Trench 1, section

Figure 4: Trench 1; section across rampart, W-facing (above); section through posthole 1017, below.



AIR06
Trench 1, with rampart rubble



AIR06
Trench 1, rubble contexts removed



Figure 5: Trench 1, plan before (top) and after (bottom) removal of rubble collapse.

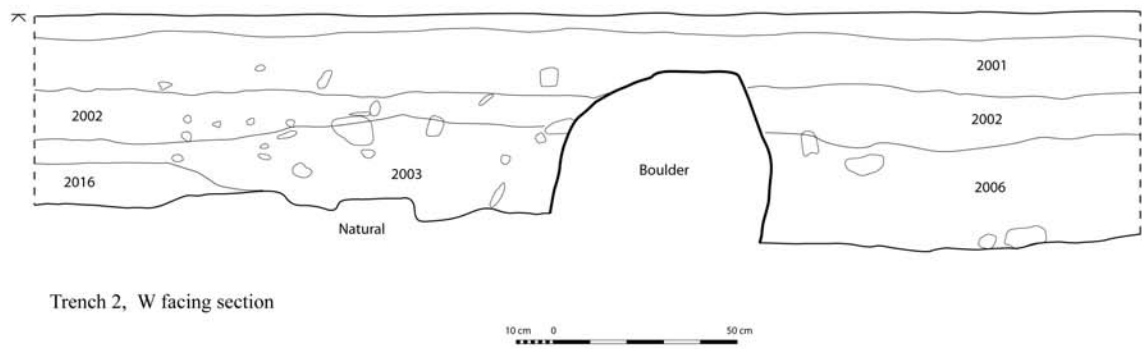
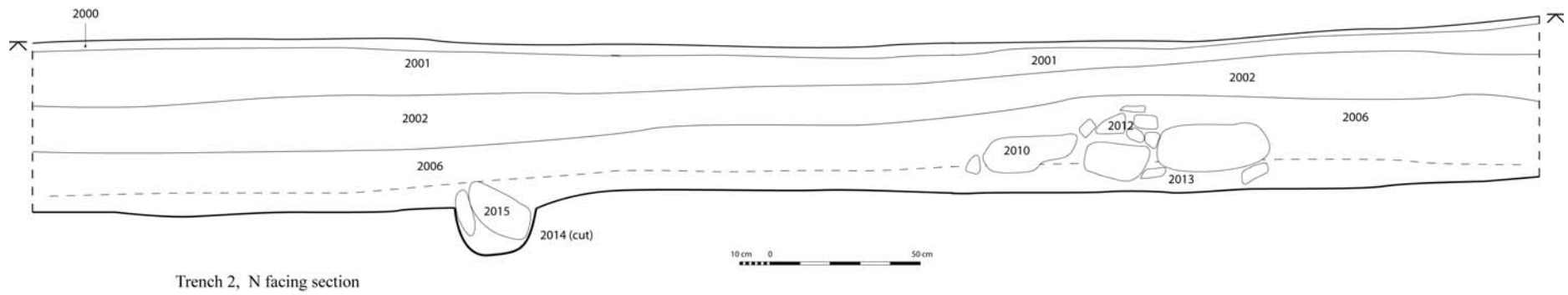
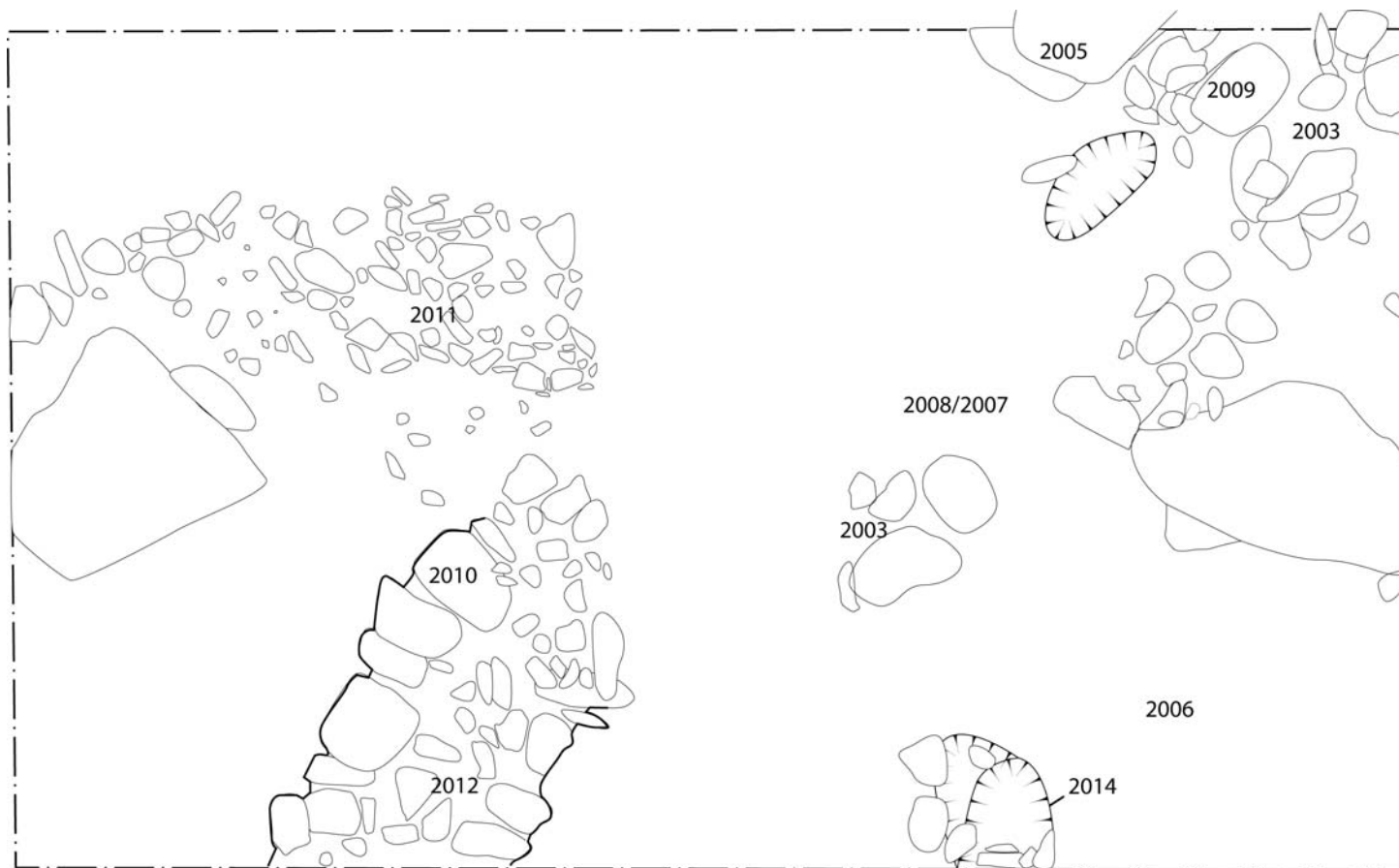


Figure 6: Trench 2, N facing (top) and W facing (bottom) sections.



AIR06
Drawing 6
Trench 2, Plan



Figure 7: Trench 2, plan.

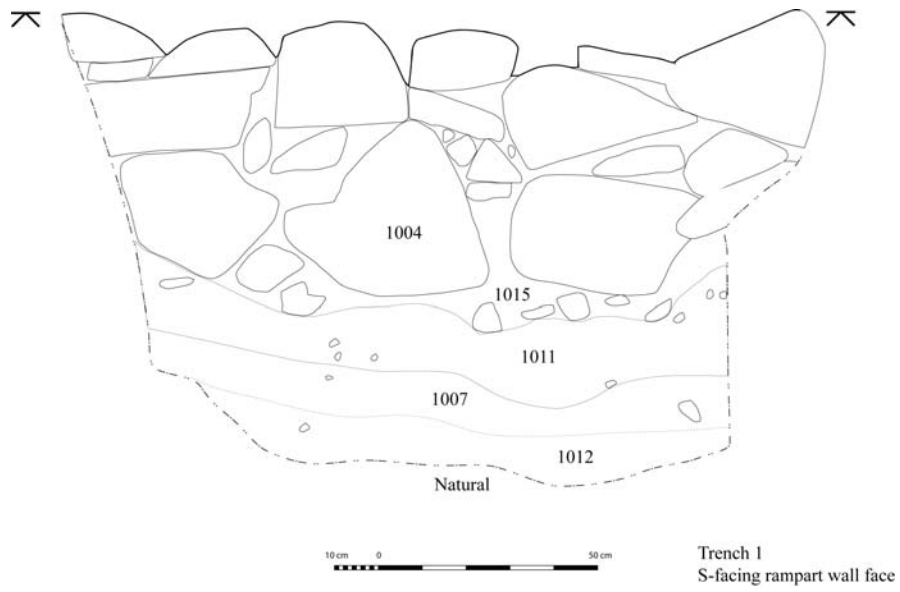


Figure 8: Trench 1, rampart wall face 1004.



Plate 1: Trench 1 West facing section at South

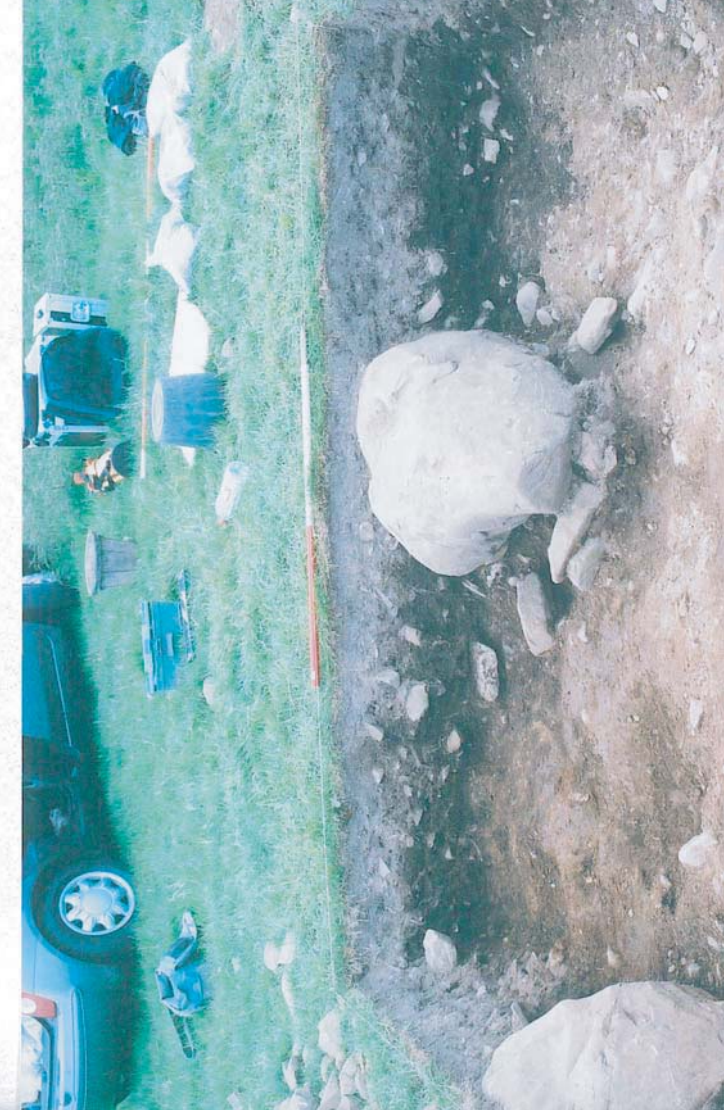


Plate 2: Trench 2 West facing section



Plate 3: Trench 2 Context [2014] Posthole



Plate 4: Trench 2 Contexts [2010 and 2011]



Plate 5: Trench 2 from the North



Plate 6: Airyolland 1 from the East



Plate 7:
Trench 1 from
the South



Plate 8:
Trench 2
Context [2010]
Wall footing



Plate 9:
Trench 1
Context [1016]
Posthole



Plate 10: Trench1, W-facing section over rampart.



Plate 11: Airyolland during excavation, general view.