

Society of Antiquaries

# **The Traprain Law Environs Project**

Fieldwork and Excavations 2000-2004

# Colin Haselgrove

ISBN: 978-0-903903-46-2 (hardback) • 978-1-908332-30-1 (PDF)

The text in this work is published under a <u>Creative Commons</u> <u>Attribution-NonCommerical 4.0 International licence (CC BY-NC 4.0)</u>. This licence allows you to share, copy, distribute and transmit the work and to adapt the work for non-commercial purposes, providing attribution is made to the authors (but not in any way that suggests that they endorse you or your use of the work). Attribution should include the following information:

Haselgrove, Colin 2009 *The Traprain Law Environs Project: Fieldwork and Excavations 2000-2004*. Edinburgh: Society of Antiquaries of Scotland. https://doi.org/10.9750/9781908332301

**Important:** The illustrations and figures in this work are not covered by the terms of the Creative Commons licence. Permissions must be obtained from third-party copyright holders to reproduce any of the illustrations.



Every effort has been made to obtain permissions from the copyright holders of third-party material reproduced in this work. The Society of Antiquaries of Scotland would be grateful to hear of any errors or omissions.

Society of Antiquaries of Scotland is a registered Scottish charity number SC 010440. Visit our website at <u>www.socantscot.org</u> or find us on Twitter <u>@socantscot</u>.

# Appendices

# APPENDIX 1 CROPMARK EVIDENCE AND GEOPHYSICAL SURVEY: A COMPARISON OF RESULTS FROM SITES INVESTIGATED BY THE TLEP

#### DUNCAN HALE and DAVID C COWLEY

The comparison of cropmarked evidence for ploughlevelled sites and geophysical survey data provides a valuable means of developing the interpretation of both datasets, elaborating where they complement each other and exploring the strengths and weakness of both sources of information. The overall context of these sources was outlined in Chapter 2, while both the cropmarked and the geophysical evidence for the six excavated TLEP sites is incorporated in the relevant site discussions (Chapters 3-6). The purpose of this appendix is to compare the aerial photographic evidence and the geophysical surveys for a further 24 sites within the TLEP area. Some contextual information will also be presented placing the site surveys in a wider settlement framework (see Chapter 10). The site numbering corresponds to Table 2.1 and Figure 2.5.

#### 1. NT57SW 31 Begbie (Figures A1.1 and 2.6)

This multivallate 'fort' is situated on a relatively level terrace at an elevation of about 60m OD, overlooking the former floodplain of the River Tyne to the north with a gentle hillside rising to the south. Discovered by RCAHMS from RAF photography (CPE/Scot/UK257: 3152-3, 14 August 1947), it was repeatedly photographed by RCAHMS and CUCAP during the 1970s, 1980s and 1990s, producing a suite of images with good cropmark detail. At the time of geophysical survey, the field contained a young cereal crop. As might be predicted over Calciferous Sandstone Measures the data produced a reasonably clear image with good contrast between the magnetic susceptibility of the materials filling the cut archaeological features and the surrounding subsoil.

The cropmarks recorded on aerial photographs and the geophysical survey provide a broadly similar record, differing only in matters of detail. The enclosure is oval in plan, measuring about 105m from west-southwest to east-north-east by up to 80m transversely, within up to four ditches. Allowing about 4m for a rampart, the internal area is c. 0.6ha. The innermost ditch is the broadest, varying from some 4m across to about 9m on either side of the entrance, which lies on the east-north-east. The gap in the inner ditch extends out through the two further ditches visible on the east. The geophysics implies a smaller entrance gap on the west, not visible in the cropmarks. A possible fourth circuit of ditch is visible on the west, but cannot be traced elsewhere. The outer three circuits are relatively uniform in character, measuring about 2m across, and while the disposition of these ditches in the cropmarks appears uniform, the geophysical data suggests that on the south the inner, broad ditch cuts the innermost of the narrow ditches. Finally, the northern, western and southern sides of the fort are bounded by what is probably an infilled natural water channel.

In the interior there are minor differences between the registration of features as cropmarks and in the geophysics. The cropmarks record a series of narrow straight ditches, which defy easy interpretation, but are conceivably practice trenches excavated by the Home Guard during WW II. These are less clearly registered in the geophysics, which does however show a number of weak and discontinuous anomalies, some of which may be underlying geology. A weak texture across the geophysical data, aligned broadly from east to west, reflects the contemporary plough regime.

This is one of a group of multivallate enclosures known from East Lothian, most of which are sited in slightly more prominent/defensive locations. At least two phases of enclosure can be suggested from the survey data, with the inner, broad ditch cutting an outer ditch. It is likely that a site like Begbie has a long and complex settlement history spanning the mid and later first millennium BC, such as that evidenced by the excavations at Broxmouth (Hill 1982a).



Figure A1.1 Begbie (NT57SW 31): rectified aerial photograph (A29865) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004490)

#### 2. NT57NE 17 East Linton (Chapter 6)

#### 3. NT67NW 19 Knowes (Chapter 5)

#### 4. NT57SW 46 Stevenson Mains (Figure A1.2)

This rectilinear enclosure is situated on a slight terrace at 60m OD, breaking a very gentle north-facing hillside to the south of the River Tyne. Recorded from the air by CUCAP in 1968, it has been photographed by RCAHMS in 1977, 1979, 1989 and 2000, never producing especially distinct cropmarking. The geophysical survey (below) produced even poorer results.

Based on the cropmark evidence alone, only three sides of the enclosure are visible, the west side obscured at the edge of the field. However, the beginnings of a return can be seen at the west end of the north side, suggesting that the enclosure was rectilinear in plan. It was probably roughly square, measuring about 34–36m across within a ditch that is generally no more than 2m across, but expands to some 3m on the east, where



Figure A1.2 Stevenson Mains (NT57SW 46): rectified aerial photograph (EL4258) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004491)

there is a wide gap in the cropmarking, presumably the entrance. Making allowance for a bank, the internal area was probably about 0.09ha.

The field, which was under cereal stubble at the time of the geophysical survey, overlies Calciferous Sandstone Measures. Anomalies, which may relate to the enclosure, can just be identified in the geophysical data, but these are very weak and discontinuous and would almost certainly not have been identified without direct reference to the aerial photography. The poor results may be due to at least three factors, either acting singly or in combination. Firstly, the lack of magnetic susceptibility contrast between the ditch fills and the surrounding soils might indicate that the ditch was backfilled with the same material shortly after excavation. Secondly, the enclosure may not have been used for stock or human occupation, and finally, that the monument is now in an extremely poor state of preservation.

While neither the aerial photography nor the geophysical survey allow a categorical classification of this enclosure, the broad morphology of Stevenson Mains comfortably places it amongst the late/Roman Iron Age rectilinear settlements, such as Knowes or East Bearford (Nos 3, 5), whose distribution extends across much of the East Lothian plain (Chapter 10).

#### 5. NT57SE 16 East Bearford (Chapter 6)

#### 6. NT57NE 16 Overhailes (Figure A1.3)

This rectilinear enclosure is situated in an area of igneous rock on a south-east-facing slope at 65m OD, set above the steeply sloping valley side on the north bank of the River Tyne. First identified by RCAHMS from RAF aerial photographs (CPE/Scot/UK257: 4122-4, 14 August 1947), it was photographed intermittently during the 1970s and most recently in 1980. At the time of the geophysical survey the field carried a young cereal crop.

The cropmarked evidence and the geophysical survey are broadly similar, showing a roughly rectangular enclosure, open on the south and, where visible, with notably sharp angles. The likely location of the southern end is obscured by a field boundary, and with this qualification, the enclosure may have measured about 66m from north-north-west to south-south-east by 46m transversely, within a ditch about 3.5m across. Allowing *c*. 3m for a bank, the internal area would have been about 0.23ha. The entrance may have been on the east.



Overhailes (NT57NE 16): rectified aerial photograph (B89195) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004492)

Curiously, the geophysical data exhibits a change in polarity halfway along the west side of the enclosure. Reference to geological maps demonstrates that the irregularly shaped feature underlying the southern part of the enclosure (evident on both the geophysical plot and as lighter tones on the aerial photographs) is a near-surface basalt intrusion from which the overlying boulder clay has been eroded. The change in polarity of the ditch anomaly corresponds neatly to the northern limit of this intrusion. Curvilinear anomalies in the geophysics within the interior defy easy explanation, but may be houses, while a later ditch cuts across the north-western corner of the enclosure.

This enclosure is included in the original listing of possible rectilinear settlements in East Lothian (Maxwell 1970) and has been marshalled in that context since. While on present evidence, the late/ Roman Iron Age is the most likely context for this site, its distinct tendency towards a rectangular plan sets it apart from the core of the rectilinear settlement grouping, which are generally squarer in plan. As such, it offers a good illustration of a basic tension in creating morphological groupings of sites with fairly simple attributes between fragmentation into smaller groups and agglomerating monuments on the basis of cruder attributes.

# 7. NT57SE 37 Cairndinnis (Figure A1.4)

This rectilinear enclosure, less than 1km west of the foot of Traprain Law, lies at about 80m OD on a gentle north-west-facing slope. First recorded from the air by CUCAP in 1964, it has only been recorded on a few occasions since (in 1976, 1979 and 1995). At the time of the geophysical survey, the field carried a young cereal crop; the location is underlain by extrusive trachyte.

The clearest information comes from the cropmarked evidence, with the geophysical survey providing only weak evidence for the ditch. Measuring about 70m from north-north-west to south-south-east by some



Figure A1.4 Cairndinnis (NT57SE 37): rectified aerial photograph (EL4131) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004493)

62m transversely within a ditch up to 6m across, the enclosure's internal area is about 0.34ha, once allowance has been made for a bank. There are gaps in the visible ditch circuit on the south, east and north, the first two caused by modern field boundaries; the most likely location for an entrance is in the east. Some positive magnetic anomalies may be soil-filled features, but the larger and more intense magnetic anomalies are almost certainly underlying geological features.

On present evidence this enclosure is identified as a late/Roman Iron Age rectilinear settlement, comparing directly with East Bearford (No 5).

#### 8. NT57SE 79 Standingstone (Figure A1.5)

This rectilinear enclosure is situated just over 300m from the south-west foot of Traprain Law on a southeast-facing slope at about 95m OD. It was photographed by CUCAP in 1968 and has not been recorded since. The limited cropmarked evidence does, however, produce a reasonably clear impression of the site. This is not matched by the geophysics, carried out over a young cereal crop overlying extrusive basalt and tuffs.

The enclosure is roughly square on plan, measuring about 35m across within a ditch that varies between 2m and 3m across. Allowing for a



Figure A1.5 Standingstone (NT57SE 79): rectified aerial photograph (EL2829) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004494)



Figure A1.6 West Mains (NT57SE 36): rectified aerial photograph (B24406) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004495)

bank, the internal area is about 0.08ha. The entrance is in the south side, set slightly off-centre to the east. Several geomagnetic anomalies may reflect soilfilled archaeological features, but these, and other features such as a possible small circular enclosure in the south-east of the survey block, are difficult to interpret. The failure of the geophysical data to register the enclosure, while still producing other areas of strongly contrasting anomalies that may include archaeological deposits, raises the possibility that the settlement has been severely truncated by the plough since it was photographed (see also No 4).

The most appropriate context for this enclosure is as a late/Roman Iron Age rectilinear settlement.

# 9. NT57SE 36 West Mains (Figures A1.6 and 2.6)

This rectilinear enclosure is situated on a spur projecting from the north-west flank of Whitelaw Hill at about 145m OD. It was discovered by RCAHMS from RAF aerial photographs (CPE/Scot/UK257: 3133-4, 14 August 1947). It was photographed by CUCAP in 1964 and then on thirteen separate occasions by RCAHMS between 1977 and 2004. At the time of the geophysical survey the field had just been ploughed.

The cropmarked evidence and the geophysical data provide a clear plan of the site. The enclosure has



Figure A1.7 West Bearford (NT57SW 95): rectified aerial photograph (B23939) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004496)

# APPENDICES



Figure A1.8 Tanderlane (NT57SE 41): rectified aerial photograph (A30450) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004497)

rounded corners, measuring some 69m from north-east to south-west by about 50m transversely within a ditch between 3m and 4m across. The south-east side of the enclosure has not been recorded where it lies against the side of a small gully. However, extrapolating this side, and allowing 3–4m for a bank, the internal area is about 0.25ha.

In the geophysics the ditch is evident as a very strong positive magnetic anomaly, suggesting that it is cut through drift deposits rather than the underlying igneous rock. The geophysics indicates a small causeway across the ditch on the north-west, not evident in the cropmarks. Concentrations of intense magnetic anomalies and macular cropmarks in the interior are probably scooped areas and other occupation remains such as hearths, ovens or other features with thermoremanent magnetisation. This enclosure figures on the original list of possible rectilinear settlements in East Lothian (Maxwell 1970) and has been marshalled in that context since. The late/Roman Iron Age remains the most appropriate context for this site.

#### 10. NT57SW 95 West Bearford (Figure A1.7)

This rectilinear enclosure is situated on a terrace on the spine of a low ridge at about 70m OD. Discovered from the air by RCAHMS as a well-defined cropmark in 1989, it has not been photographed since. At the time of the geophysical survey oilseed rape stubble had recently been ploughed-in.

The clearest evidence for the form of the enclosure comes from the cropmarks. It is roughly square on plan, measuring about 30m across within a ditch varying between 4m and 5m across. There is an entrance on

the east-north-east. Making an allowance for a bank, the internal area is about 0.06ha. The low magnetic susceptibility readings from the geophysics could indicate stone wall-footings adjacent to the ditch, or that the ditch is filled with rubble rather than organicrich sediments – although the latter is unlikely from the cropmarked evidence.

The basic morphology of this enclosure places it amongst the other late/Roman Iron Age rectilinear enclosures, though it lies at the smaller end of the size



Figure A1.9 Garvald (NT57SE 39): rectified aerial photograph (0S77120) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004498)

range, and its ditches are broad relative to the internal area.

#### 11. NT57SE 41 Tanderlane (Figure A1.8)

This subrectangular enclosure is situated on a slight north-facing slope at about 145m OD between the B6370 road and the Ninewells Burn. It has been photographed by RCAHMS in 1976, 1977, 1984, 1986 and 1994, producing a good cropmarked record of the enclosure. At the time of the geophysical survey, which produced weak, but reasonably clear data, the field carried a young cereal crop.

The enclosure is somewhat irregular, but describes a rough D-shape on plan; the west and south sides are fairly straight, while the east and north sides take a slightly curved line. Measuring a maximum of about 130m from north-west to south-east by about 123m transversely within a ditch between 2m and 3m across, the enclosure has an internal area of about 1.08ha. The ditch was recorded in the geophysics as a negative magnetic anomaly, reflecting materials of low magnetic susceptibility, which, given its location on Upper Old Red Sandstone, could indicate the presence of stone wall-footings or revetments, or a ditch filled with rubble rather than sediment. The latter is unlikely from the cropmarked evidence. There are no visible internal features, in the case of the geophysics such identifications are hampered by numerous magnetic anomalies and features of more recent origin, including ferrous service pipes, land drains and the field boundary that bisects the enclosure. There are gaps in the ditch on the west, north and east, as well as those in the cropmark caused by the modern field boundary, but none can clearly be identified as an entrance.

This enclosure is difficult to place in a chronological context. It does not fit well in to the grouping of late/ Roman Iron Age rectilinear settlements and there are no analogous sites in the excavation record with which to compare it. Thus, in seeking a context, all options must remain open, with a medieval or later date as likely as a prehistoric one.

#### 12. NT57SE 39 Garvald (Figure A1.9)

This enclosure is situated just to the west of Garvald village and lies at about 165m OD at the top of the steeply incised gully of the Donolly Burn. Discovered from the air by RCAHMS in 1976, it



Figure A1.10 Haddington (NT57SW 77): rectified aerial photograph (B5135) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004499)

has subsequently been photographed only in 1977 and 1999, but at no time has it been especially welldefined. At the time of the geophysical survey the field carried a young cereal crop over intrusive igneous rock, presumed to be highly magnetically susceptible and effectively masking much of the potential for registering cut features. The many other geomagnetic anomalies recorded most likely reflect underlying geological features.

Primarily from the cropmark evidence it appears that the site is bivallate, roughly rectilinear and laid out against the steep valley sides that form the southeast of the enclosure. Measuring about 68m from north-east to south-west by some 50m transversely internally, the internal area was probably about 0.3ha,

once allowance has been made for a bank. The ditches are clearest on the south-west, where two roughly parallel cropmarkings up to 6m across can be seen, with the slight possibility of a third line of defence on the west. Around the north and east, the ditches are poorly defined.

Garvald bears comparison with the enclosure at East Linton, which has Late Bronze Age components (Chapter 6), sharing a similar basic plan with a tendency towards rectilinearity and a location on the edge of a deeply incised gully.

#### 13. NT57SW 77 Haddington (Figures A1.10 and 2.6)

This rectilinear enclosure is situated at about 60m OD on a gentle south-east-facing slope, 40m west of St Laurence House Burn, on the south-western outskirts of Haddington. Photographed by CUCAP in 1951, it



Figure A1.11 Nunraw Burns (NT57SE 104): rectified aerial photograph (C1980) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004500)

has subsequently been recorded by RCAHMS in 1981, 1988 and 1990. At the time of the geophysical survey the field carried a young cereal crop.

The cropmarked evidence and the geophysical survey have produced a broadly similar record of the enclosure. Sub-square on plan, it measures about 30m across within a ditch about 2.5m broad, broken by an entrance on the west, and, in the geophysics, a possible causeway across the ditch near the south-western corner. Within the interior, which is about 0.06ha in area, there are scooped, soil-filled features, that are probably dished house floors such as those excavated at Knowes (Chapter 5). What appears to be a secondary enclosure is attached to the west side of the rectilinear; to the south is what may be a conjoined set of scooped, soil-filled features, visible as dark cropmarking and in the geophysics as intense magnetic anomalies that may point to the presence of hearths.

The rectilinear enclosure compares well with known late/Roman Iron Age rectilinear settlements such as Knowes and East Bearford (No 5). The proximity of the internal features to the inner lip of the ditch suggests a similar general settlement history to Knowes, where an essentially unenclosed settlement of Roman Iron Age date overlies the derelict enclosure. The features recorded to the south of the Haddington example may also belong in this general context. The secondary enclosure to the west is relatively unusual, and while it may belong with a phase of later prehistoric settlement, it is as likely to represent much later re-use of the site.

#### 14. NT57SE 104 Nunraw Barns (Figure A1.11)

This enclosure is situated on the Upper Old Red Sandstones, at about 185m OD on a north-east-facing slope to the north-west of Nunraw Abbey. Discovered from the air by RCAHMS in 1992, it was photographed again in 1994 and 1996. At the time of the geophysical survey the field was set to grass.

Although a geologically noisy background obscures both the cropmarked evidence and geophysical survey, both sources produce a similar record for the eastern half of what is assumed to have been a roughly oval or sub-rectangular enclosure. In the cropmarks, two pencil-thin lines, neither of which can be much more than 1m across, describe an arc from the south, around the east to the north, while nothing is visible on the west. These are palisade trenches and register in the geophysics as chains of positive magnetic anomalies. Given that the western half of the enclosure is not visible, an internal area is somewhat speculative,



Figure A1.12 Hedderwick (NT67NW 20): rectified aerial photograph (A22255) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004501)

but an extrapolation of the palisade circuit suggests about 0.19ha. Lying between 3m and 4.5m apart, the palisades run parallel on the south, but diverge slightly on the east where there may be a staggered gap in both, presumably an entrance. Modern field drains to the south are evident on both sources.

Timber palisades are a recurrent feature of Scottish later prehistoric settlement architecture and often appear in conjunction with dump ramparts. Palisades are present as components of the enclosures at Whittingehame Tower (No 27), Standingstone (No 26) and East Linton (No 2), all of a broadly Late Bronze Age date, and at Dryburn Bridge in a context also apparently antedating the mid-first millennium BC (Dunwell 2007). However, while this form of construction may have its origins in the early and middle centuries of the first millennium BC, it is worth noting that early medieval contexts can also be cited (Barclay 2001; Cowley 2008, 14–15; Hope-Taylor 1980).

### 15. NT67NW 20 Hedderwick (Figures A.12 and 2.6)

This curvilinear enclosure is situated at about 20m OD on a very gentle north-facing slope, with the A199 (formerly the A1) to the north and the mainline



Figure A1.13 Sixpence Strip (NT57 NW 30): rectified aerial photograph (EL4252) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004502)

east coast railway to the south. Discovered from the air by CUCAP in 1962, it has since been photographed in 1975, 1976, 1981, 1984 and most recently in 2000. At the time of the geophysical survey the field carried cereal stubble over the Calciferous Sandstone geology.

Both cropmarked evidence and the geophysical survey provide clear evidence for the form of the enclosure. A ditch measuring between about 2.5– 3.5m across describes a U-shape, which is open to the south and measures about 30m from east to west by at least 35m transversely. Some 2m inside this ditch is the pencil-thin line of a palisade trench, which



Figure A1.14 Kilduff (NT57NW 35) rectified aerial photograph (C28612) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004503)

describes an almost complete oval measuring about 36m from north to south by some 26m transversely, running roughly symmetrically to the inner lip of the ditch. The footprint of the palisaded enclosure is about 0.07ha in area. In the interior there is one well-defined roundhouse and three possible examples, including one on the west that overlaps the line of the palisade and is hard up against the inner lip of the ditch. The narrow positive magnetic anomaly to the south of the enclosure is a narrow trench, perhaps a water supply pipe.

The excavated site at Standingstone (Chapter 4) provides a very direct analogy, sharing the incomplete outer circuit and the inner palisade, although Hedderwick is oval in plan in contrast to the circularity of Standingstone. It seems most likely that Hedderwick, too, is Late Bronze Age in date. At least one of the roundhouses in the interior post-dates the ditch and perhaps the palisade. This may be a component of the unenclosed settlement recorded as cropmarks to the east and perhaps dating to the mid or late first millennium BC, echoing developments also observed at Standingstone.

#### 16. NT57NW 30 Sixpence Strip (Figure A1.13)

This circular enclosure is situated at about 50m OD on a gentle west-facing slope to the west-northwest of 'The Chesters' (Chapter 1), one of only a few surviving earthworks on the coastal plain. Sixpence Strip is noteworthy as one of the first monuments to be recorded as a cropmark in Scotland when Wing-Commander Insall photographed it in about 1930. It was then photographed by RCAHMS in 1979 and on seven subsequent occasions, most recently in 2001. At the time of the geophysical survey the field carried cereal stubble. Whilst the magnetic data complement the aerial photographic evidence, they are relatively noisy, almost certainly due to the extrusive trachyte strata and igneous rocks within the soil.

The enclosure has two components: an outer ditch measuring 3-4m across encloses an area 56m or 57m in diameter (c.0.19ha) within which there is a palisade trench, which is set some 4m to 6m from the inner lip of the outer ditch. Both palisade and broad ditch are broken by an entrance gap on the west and set more or less centrally within the interior there is a large roundhouse. A few linear magnetic anomalies outside the enclosure are probably recent drains and geological features.



Figure A1.15 Newmains (NT57NW 38): rectified aerial photograph (C28594) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004504)

The broad ditch and a more or less symmetrical internal palisade are attributes shared by Standingstone (No 26). If it is accepted that these are sufficient shared traits to create a regionally and chronological distinct site type (Chapter 10), then Sixpence Strip probably belongs in a Late Bronze Age context.

#### 17. NT57NW 41 Foster Law (Chapter 6)

#### 18. NT57NW 35 Kilduff (Figure A1.14)

This curvilinear enclosure is situated at about 90m OD on the ridge extending eastwards from Kilduff Hill. First photographed in 1976, it has subsequently been recorded on five occasions, most recently in 2001, often producing highly contrasting, strong cropmarking. At the time of the geophysical survey the field carried cereal stubble. The geophysical survey data are not readily interpreted: the enclosure

cannot be identified and the negative magnetic anomalies may be soil-filled fissures in the igneous rockhead.

However, from the cropmarked evidence the site comprises an oval enclosure, broken on the south-east by a gap in the ditch some 26m across. The enclosure measures some 48m from north-east to south-west by about 40m transversely within a ditch between 3m and 5.5m across. Allowing for a bank, the internal area is about 0.12ha. In the south-west arc of the interior, set some 2.5m from the inner lip of the ditch, there is what may be a palisade trench. In the interior there is at least one roundhouse, slightly to the south of centre.

Kilduff is one of the many late prehistoric curvilinear settlement enclosures on the coastal plain. The penannular ditch and the shadowy traces of what may be an internal palisade invite comparison with the Late Bronze Age site at Standingstone (Chapter 4), but its basic morphology is also shared by St Germains (Alexander and Watkins 1998), whereby a date in the second half of the first millennium BC would be an option.

#### 19. NT57NW 38 Newmains (Figure A1.15)

This circular enclosure is situated at about 45m OD on a slight rise breaking the undulating ground to the north-east of 'The Chesters'. Discovered from the air by RCAHMS in 1976, it has been photographed on seven subsequent occasions, most recently in 1994, providing a good suite of images with strong cropmark registration. At the time of the geophysical survey the field carried cereal stubble; the underlying igneous geology is probably responsible for a number of curvilinear positive magnetic anomalies visible in the data. The enclosure cannot be identified, although a ferrous service pipe cuts across it.

From the cropmarked evidence the enclosure measures 16m in diameter (c.0.02ha) within a ditch 1m to 1.5m across. On the east, the ditch hooks outwards in two antennae to form a 'porch' at the entrance. This site falls in a grey area between settlement enclosures that may contain multiple roundhouses, and large unenclosed houses. In the light of the substantial 'porch' on the east, in the case of Newmains, an interpretation as a massive (apparently unenclosed) roundhouse is preferred. Although there is no evidence for chronological context, it could be marshalled as a regional type of the substantial roundhouses of later prehistoric date that are attested across Scotland (cf. Hingley 1992, 12–20).



Figure A1.16 Stevenson Mains (NT57SW 47): rectified aerial photograph (EL4258) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004505)

Two parallel pit alignments on a near north-south axis are apparent as cropmarking about 50m to the east of the enclosure, but the parts in the area covered by the geophysical survey do not show at all clearly.

# 20. NT57SW 47 Stevenson Mains (Figure A1.16)

This roughly curvilinear enclosure is situated at about 60m OD on predominantly level ground. First recorded by CUCAP in 1968, it has since been photographed by RCAHMS in 1976, 1977, 1979 and 2000. At the time of the geophysical survey oilseed rape stubble had recently been ploughed in.

The cropmarked evidence suggests that the enclosure is roughly D-shaped, with a straight northern side and relatively sharp angles at the northeast and north-west corners, contrasting with the curvilinearity of the rest of the circuit. This is not, however, as marked a feature in the geophysics, where the enclosure looks more oval. Measuring some 27m by 24m internally within a ditch about 4m across, the enclosure has an internal area of about 0.04ha. A ditch extending eastwards from the southern ditch terminal is evident in both cropmarks and geophysics. A possible roundhouse is visible in the interior in the cropmarks and the many more small intense geophysical anomalies within the enclosure than outside it presumably reflect a concentration of past activity in the interior.

This enclosure lies in a morphological no-man's land between curvilinear and rectilinear settlements,

in common with a small group of other sites. The presence of the possible roundhouse indicates that a context in the panoply of later prehistoric settlements, most likely in the second half and later first millennium BC, would be appropriate.

# 21. NT57SE 50 Northrig (Figure A1.17)

This site lies at about 70m OD on a low rise between the Bearford Burn and the Morham Burn. Discovered from the air by RCAHMS in 1977 it has only been photographed once since, in 2003. At the time of the geophysical survey the field was freshly ploughed.

The site comprises two overlapping enclosures, one circular, and the other oval, which represent at least two distinct phases of construction. These are



Figure A1.17 Northrig (NT57SE 50): rectified aerial photograph (EL3632) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004506)



Figure A1.18 Coldale (NT57SE 91): rectified aerial photograph (B23641) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004507)

visible most clearly on the aerial photography, with the geophysical data reproducing the same features with a reasonable degree of clarity.

The oval enclosure is the larger, measuring about 66m from east-north-east to west-south-west by 50m transversely within a ditch about 3m across (c. 0.2ha internal area). The ditch is broken in two places on the south-east. Internal features include what are probably roundhouses and areas of burning. In the north of the interior, a length of ditch runs at a slight tangent to the oval enclosure ditch. This is likely to represent a phase of remodelling, though whether later or earlier cannot be ascertained from the survey evidence alone. The same ambiguity in phasing attaches to the relationship of the oval enclosure to the circular one that overlaps the north-west of it. This circular enclosure measures 35m in diameter within a ditch no more than 3m across, giving an internal area of about 0.08ha.

This is a relatively rare example of a site where distinct phases both of remodelling (of the oval enclosure) and enclosure construction are evidenced in the survey data. However, it is in the nature of the somewhat coarse grain of the survey data that the interrelationships are ambiguous. The general context of both enclosures is probably as later prehistoric settlements.

#### 22. NT57SE 91 Coldale 1 (Figure A1.18)

This enclosure is situated at just below 70m OD on a gentle north-west-facing slope, immediately beside the public road and opposite a junction with a minor road. It has only been photographed from the air once, in 1989, when it registered as a very strong cropmarking.

The field, which overlies extrusive trachyte, had just been ploughed at the time of the geophysical survey. This failed to produce clear evidence, which may be due to two factors. Firstly, anecdotal evidence gathered during fieldwork indicated that the ground in this corner of the field has been mechanically removed and replaced with spoil from elsewhere since the aerial photographs were taken. Secondly, a pipe or drain has been laid across the north-east of the enclosure, further obscuring possible archaeological features.

From the cropmarked evidence the enclosure appears to be roughly curvilinear in plan, recorded in an arc from the west, around the north to the east, but overlain by the road around the remainder of the projected circuit. The projected circuit would give a diameter of about 40m (e.g. internal area of about 0.11ha) within a ditch that varies between 3m and 6m across.

Although there is little evidence from which to assign a context for this enclosure, it is most likely a curvilinear settlement of later prehistoric date.

#### 23. NT57SE 56 Coldale 2 (Figure A1.19)

This circular enclosure is situated at about 80m OD on the north-west flank of a low hill. Discovered from the air in 1964 by CUCAP, it was not



Figure A1.19 Coldale (NT57SE 56): rectified aerial photograph (B23645) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004508)

photographed again until 1989, and then in 1995, 2000 and 2003. At the time of the geophysical survey, this part of the field was set-aside, overlying extrusive trachyte.

The cropmarked and geophysical evidence produce a similar characterisation of the enclosure. It measures about 54m in diameter (0.18ha internally) within a narrow ditch no more than 2m across, which is broken on the east and the south-west; the former is the most convincing candidate for an entrance. Internal features include two possible roundhouses and several large pits near the entrance. What is probably an infilled quarry lies to the east and a scatter of broad, diffuse magnetic anomalies around the enclosure are likely to be geological in origin.

In the absence of other evidence, this enclosure is probably a later prehistoric settlement.

# 24. NT57SW 50 Mitchell Hall (Figure A1.20)

This circular enclosure is situated at about 80m OD on the crest of a low ridge south-east of Haddington. It has been photographed from the air only twice, in 1977 and 1978, recording strong cropmarking. At the time of geophysical survey the field contained cereal stubble and since magnetic susceptibility contrasts in this area were very weak, no anomalies were detected which might relate to the enclosure ditches or other features.

From the cropmarked evidence two roughly concentric circular enclosures can be seen, the outer measuring about 32m in diameter internally (0.05ha internally), the inner some 19m in diameter, both within ditches between 2.5m and 3m across. There are gaps in both ditches on the north-east and the symmetry of their arrangement suggests that the two



Figure A1.20 Mitchell Hall (NT57SW 50): rectified aerial photograph (EL3802) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004509)



Figure A1.21 Chesters Quarry (NT57SE 27): rectified aerial photograph (EL3032) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004510)

enclosures coexisted (at some point at least). In the interior of the inner enclosure, a macular cropmark indicates the presence of a patch of deepened soils.

This is an unusual arrangement of enclosures that suggests some elaboration of settlement form. In the absence of other evidence its best context is as one of the many later prehistoric settlement enclosures from East Lothian. The inner enclosure is very large for a house, but it is possible that the arrangement of concentric ditches confers a degree of elaboration around a very large roundhouse of which the macular cropmark is only a part. On the other hand, the macular cropmark might be an 8-9m diameter roundhouse within the inner enclosure. The rationalisation of these issues may be helped by further survey, but will require excavation to explore more fully, and highlights the problems of interpreting sites that have no excavated analogies from the coarse-grained survey data alone.

### 25. NT57SE 27 Chesters Quarry (Figure A1.21)

This curvilinear enclosure is situated at about 145m OD on a level terrace to the south of Ninewells Burn. Discovered in the 1950s by RCAHMS on RAF aerial photographs (CPE/Scot/UK257: 3134-5, 14 August 1947), this site has been photographed on ten separate occasions between 1975 and 2003, producing a good suite of images. At the time of the geophysical survey the field was under set-aside. Both sources yielded comparable data.

The enclosure is oval on plan, measuring about 70m from east-south-east to west-north-west by some 54m transversely within a ditch up to 5m across. There is a break in the ditch on the south-west, which is probably an entrance, while the break in the north is probably



Figure A1.22 Preston Mains (NT67NW 18): rectified aerial photograph (C56794) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004511)

an edge-of-field effect. Making allowance for a bank, the internal area is about 0.22ha. An assumption of the high magnetic susceptibility of the underlying intrusive igneous rock is borne out by the registration of the ditch as a clear negative magnetic anomaly. In the interior one possible roundhouse is visible in the cropmarks, and both cropmarks and geophysics record linear features extending across the enclosure roughly from east to west. These are likely to be trackways leading to the quarries a short distance to the west.

Like many roughly oval and circular enclosures and in the absence of further evidence from the site, Chesters Quarry is one of the 'rag-bag' of later prehistoric settlements (Chapter 10) for which only a very general context can be suggested.

#### 26. NT57SE 45 Standingstone (Chapter 4)

#### 27. NT67SW 15 Whittingehame Tower (Chapter 3)

# 28. NT67NW 18 Preston Mains (Figure A1.22)

This site is situated on a very gentle south-westfacing slope set above the floodplain of the River Tyne at about 15m OD. Discovered from the air by RCAHMS in 1977, it has since been photographed six times, most recently in 1997, often recording detailed cropmarking. At the time of the geophysical survey, the field carried oilseed rape stubble and produced very noisy data, which are not readily interpretable. Indeed, the remains visible as cropmarks cannot be identified at all in the geophysics, while other possible features in the magnetic data are difficult to interpret at all.

The cropmarked record remains the clearest record of the site, the main focus of which is a small oval ringditch, which measures about 9.5m from north-west to south-east by 6.5m transversely within a ditch about 1.75m across. There is an entrance gap on the southeast. Across much of the field patchy cropmarking indicates variable soil depth, while a mottling indicates considerable differences in the underlying geology.

The variability in the cropmarking makes the categorical identification of further features difficult, but the ring-ditch has been assumed to be a part of an unenclosed settlement extending across the terrace and including a cluster of pits to the north-east. However, the ring-ditch is markedly oval in plan and its interpretation as a later prehistoric roundhouse must remain provisional, with other possibilities presented by Neolithic and Bronze Age funerary and ritual enclosures.



Tyninghame (NT67NW 16): rectified aerial photograph (C56789) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004512)

#### 29. NT67NW 16 Tyninghame (Figure A1.23)

This unenclosed settlement is situated on a slight rise at about 20m OD to the north-east of Lawhead Hill. It was discovered from the air by RCAHMS in 1976 and has since been photographed on four occasions, most recently in 1996. At the time of the geophysical survey the field carried cereal stubble. The geophysics is dominated by intense anomalies caused by the near-surface igneous rockhead, effectively limiting the detection of weaker magnetic anomalies typically associated with soil-filled features.

The cropmark record shows a scatter of circular, oval and crescentic macular features and, at the west end of the field a circular ring-ditch. The various macular cropmarks are assumed to be the remains of roundhouses, most of which incorporate dished floors or other sunken features. The ring ditch to the west measures about 10m in diameter within a continuous



Sled Hill (NT57SE 103): oblique aerial photograph (C1951) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004513)

ditch just under 4m across. There are at least two possibilities for interpreting this feature: on the one hand it may be a large later prehistoric roundhouse, while on the other it may be a ditched barrow of Bronze Age date.

#### 30. NT57SE 103 Sled Hill (Figure A1.24)

This possible timber hall is situated at about 180m OD near the summit of Sled Hill. It was discovered from the air by RCAHMS in 1992 and then photographed again in 1996, but unfortunately in neither instance did the photography capture sufficient map detail to permit the archaeological features to be transcribed. The land was set-aside at the time of the geophysical survey. Its data are noisy, with many small, intense dipolar anomalies probably of geological origin that may have obscured weaker, possibly archaeological, features. The comparison of the cropmarked evidence and the geophysical survey is compromised by the ambiguity of the geophysics and the inability to map the cropmarked features.

However, the cropmarks appear to show a roughly rectangular building with its long axis lying northsouth, and probably measuring about 15m×6m. There may be three compartments, or two and an annexe at the south end, though interpretation of the south end is complicated by a suggestion that a different phase of building, set at right angles, may overlap this end. There may be some post-holes in the interior. The geophysical survey detected two parallel, positive magnetic features set some 10m apart and continuing for 28m. While these could be the beam slots or other foundations for the building, it is more likely that they are the field drains visible on the aerial photographs to the north of the building. Finally, on the 1992 aerial photographs, a scatter of small pits to the west of the building may be post-holes from further timber buildings, or, on the basis that several are slightly elongated 'maggot-like' cropmarks, they may be eastwest aligned graves.

The interpretation of large timber buildings, or halls, is a somewhat vexed issue, with reliable evidence for such structures of both Neolithic and early medieval date (e.g. Hope-Taylor 1980; Ralston and Armit 1997, 226-9; Brophy 2007). The somewhat mixed survey data will require considerable amplification to resolve this issue for Sled Hill.



Gilmerton House: (A) site location; (B) cropmark and distribution of later prehistoric and Roman finds (Distribution plot Alan Braby; Map, Crown copyright: RCAHMS, GV004514)