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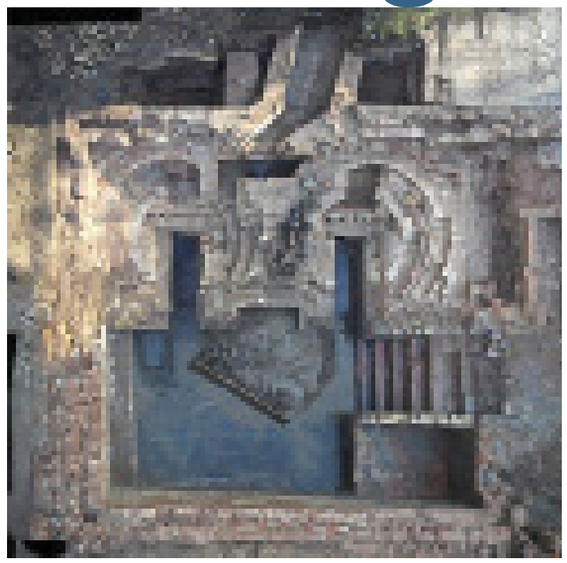

Consultancy - Desk-Based Assessments - Fieldwork - Surveys

Buildings - Post-Excavation - Research and Teaching - Specialised Services

Ferneyhill Toll, Kelso;

Geophysical Survey and Test Pits

Data Structure Report

Project 3056

GUARD

Registered Organisation

Glasgow University Archaeological Research Division

University of Glasgow

Ferneyhill Toll, Kelso; Geophysical Survey and Test Pits
Data Structure Report

On behalf of: Scottish Borders Council

NGR: NT 7333 3572

Project Number: 3056

Project Manager: Ronan Toolis

Report by: Christine Rennie

Illustrations: Charlotte Francoz and Ingrid Shearer

Approved by:

Date: 30/03/2010

This document has been prepared in accordance with GUARD standard operating procedures.

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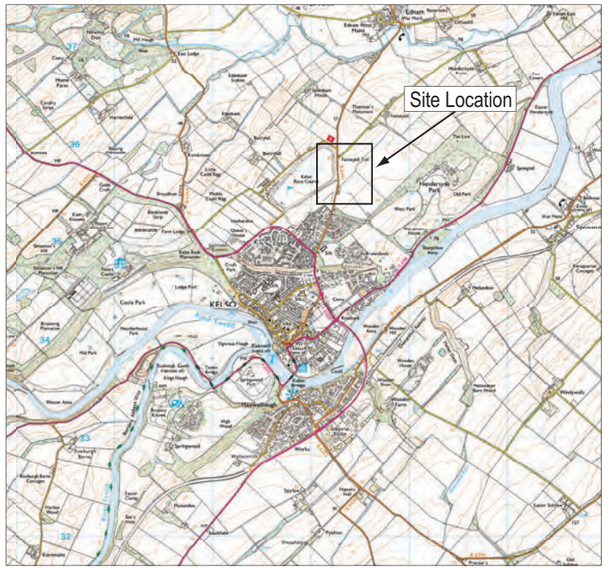

Figure 1: Site location.

Executive Summary

1.1 A geophysical survey was carried out by Glasgow University Archaeological Research Division (GUARD), on behalf of Scottish Borders Council, on an area proposed for a cemetery development at Ferneyhill Toll, Kelso. The survey of 40% of the total area proposed for development was followed by test pitting in areas where geophysical anomalies were encountered. Five potentially significant archaeological features were encountered during the survey. The work was undertaken between 8 March and 12 March 2010.

Introduction

2.1 This report sets out the results of a geophysical survey undertaken by GUARD, on behalf of Scottish Borders Council on a site proposed for the development of a cemetery at land south of Ferneyhill Toll, Kelso. During the course of the work, a total of 11,600 m² was surveyed using resistivity and 10,200 m² was surveyed using gradiometry. The survey was carried out over two areas of the site; nine 20 m by 10 m grids along the western edge of the site, and a block of nineteen 20 m by 20 m and two 20 m by 10 m grids towards the north-eastern corner of the site.

Site Location, Topography and Geology

3.1 The proposed development location lies to the north of Kelso (NGR NT 7333 3572). The development area covers approximately 2.45 hectares and sits about 50-60 m AOD.

3.2 The site is bounded by the B6461 to the west, by Ferneyhill Toll house to the north, by arable land to the east and by a stone boundary wall to the south, and currently consists of arable land that slopes down from the north and east (Figure 1).

3.3 The underlying drift geology consists of Devensian till, while the solid geology consists of Ballagan formation of Chadian to Courceyan age that comprises mudstone, siltstone, sandstone and beds of ferroan dolomite (British Geological Survey 1:63,600, Sheet 25, Drift and Solid).

Archaeological Background

4.1 One site of archaeological interest was identified within the development area (Figure 1):

- Site 1: St Leonard's Hospital (NMRS NT73NW 11; SBC HER 3070006) at NGR NT 7343 3578

4.2 Twelfth century records indicate that there was once a hospital (Site 1) at Ednam. It may have stood about 1.5km south of the modern village, but no archaeological work has been carried out on the site, and no remains are visible above ground. The hospital was founded before 1165, for the Annals of Teviotdale record a grant of land from Malcolm IV to the Master and Congregation of the hospital of St Leonards at Edinham. A further donation from the Countess of Northumberland and Huntingdon was recorded in 1178. Later patrons of the hospital included the Edmonstones of Ednam, whose payments to the hospital were recorded in 1426 and 1437. A source dating from 1542 recorded that the English burnt the hospital during a raid over the border. As records continue to mention it, the hospital cannot have been completely destroyed (information from NMRS).

4.3 The Papers of the Dalrymple Family Earls of Stair, held in the National Archives of Scotland, include a procuratory of resignation by Dame Janet Edmonstoun, in the hands of William Braikenrig, preceptor of the hospital of Ednamspittell of the lands

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in favour of David Chirnsyde in Gilmertoun, dated to 1640. The National Archives of Scotland also include the progresses of writs of subjects in lands of Ednam Spittal, sheriffdom of Roxburgh, 1625-1824, spittal being a common post-medieval place-name deriving from earlier hospitals. The Statistical Accounts of the parish, however, make no mention of the hospital.

4.4 The site is certainly depicted on Blaeu's map of 1654 as 'Ednam Spittell'. The same 'Spittle' is depicted on Roy's map of 1747-55. 'Spittal' is depicted in more detail in Stobie's map of 1770, Blackadder's map of 1797 and Thomson's map of 1820, as a building around three sides of a courtyard, in close proximity to the development area and south-west of Ferneyhill Farm. The Ordnance Survey First Edition six inch and 25 inch maps of 1859 both depict the development area as the site of St Leonard's Hospital but no buildings were extant at this time. The Ordnance Survey Namebook of 1859 notes that until very lately a farm house existed there and that this was known amongst the older local residents by the name of 'the spital'. This must be the courtyard building depicted on earlier maps. The site has remained as an agricultural field since.

4.5 A previous assessment was carried out by the Scottish Borders Council Archaeology Officer in December 2009 during the monitoring of five test pits. Four of the pits were shown to be archaeologically sterile, but one, Test Pit 3 located at NT 73369 35737 towards the north-east of the development area, contained the possible base of a wall set into a terminating squared trench cut into the natural subsoil.

4.6 The archaeological works thus had the potential to encounter archaeological remains related to the medieval occupation of St Leonard's Hospital and post-medieval occupation of Spittal Farm House.

Aims and Objectives

5.1 Due to the possibility of encountering human remains during excavation, a geophysical assessment was deemed necessary to attempt the location of buried archaeology prior to conversion of the site to a cemetery. The aim of the survey was therefore to identify:

- archaeological features associated with the site of St Leonard's Medieval Hospital;
- as yet unknown archaeological features and deposits which may be uncovered;
- modern field drains, particularly along the western edge of the development area.

5.2 The specific objectives were therefore to:

- undertake a resistivity survey of 40% of the 2.45 hectare development area;
- undertake a gradiometry survey of 40% of the 2.45 hectare development area;
- hand-excavate up to 10 test pits to verify the results of the geophysical surveys;

Methodology

6.1 The development area was photographed by digital camera and a brief written description made prior to the commencement of works.

6.2 The survey examined 40% of the proposed 2.45 ha development area, and included both the 1800 m^2along the western edge of the site and the most likely location of the medieval hospital towards the northern edge of the development area, amounting to 9800 m^2 in total. The survey comprised nine 20 x 10 m grids along the western edge, nineteen 20 x 20 m grids and two 20 x 10 m grids towards the north-eastern corner, and up to ten 1 m^2 test-pits.

6.3 The resistivity survey, which sought to identify negative features, such as graves and

trenches and positive features, such as stones, stone sockets, banks and drains, depending on the relatively low or high resistance measured, was carried out over the areas indicated in Figure 1. The gradiometry survey, which sought to identify burials, buried walls and areas of consistent heating such as kilns or ovens, was carried out over the likely location of St Leonard's Hospital. The survey of the grids on the western edge of the proposed development site was abandoned due to the high level of interference from underground services.

6.4 The survey grids were set out as shown in Figure 1, but due to failure of the sub-metre GPS, possibly owing to the overhead electricity line, were measured in from fixed edges in the field. The resistivity survey was conducted using a Geoscan RM15 Advanced Resistivity Meter with a twin probe array and probe separation of 0.5 m. The gradiometry survey was carried out using a Geoscan FM256 Fluxgate Gradiometer. The readings were taken at a 0.5 m sample interval and a 1 m traverse interval, giving 800 reading per 20 x 20 m grid. This frequency of survey allows a good level of resolution with the minimum impact in terms of the time required to complete the survey. The data was downloaded into Geoplot v3 for analysis and plot production. The resulting plots were overlaid onto the existing plan of the site, showing where any anomalies lie in relation to the surface features.

6.5 Four 1 m^2 test pits were hand-excavated in order to verify the results of the geophysical surveys. After CAT scanning, the topsoil in each test-pit was removed to the first archaeological horizon or to the natural subsoil, whichever was encountered first. Archaeological features were cleaned by hand and were recorded by digital photography and written description on *pro forma* sheets. Where appropriate, features were also recorded in plan at a scale of 1:20 and measured section drawing at a scale of 1:10. Negative-cut features were 25% excavated, with the fills being sampled for palaeo-environmental evidence. A representative section of each test-pit was drawn on a *pro forma* sheet, together with a written description of the nature of the soil(s).

6.6 The test-pit locations were recorded using the survey grid and, together with the location of the earlier test-pits monitored by the Scottish Borders Council Archaeology Officer, overlaid on to the site plan. The archaeological finds were collected as bulk samples by context. All finds will be processed to MAP2 type standards and subject to specialist assessment. On completion of each test-pit excavation, any archaeological remains were covered with terram sheeting, and the pit backfilled by hand. A photographic record of the backfilled pits was made using digital photography.

Results

7.1 Following processing of the data collected in the field, the geophysical survey revealed three linear anomalies in the central area of the site, and two possible structures to the south of the site. Four of these possible features were targeted by test-pitting.

Feature 1 – Cobbled Surface

7.2 This linear feature runs approximately north to south for about 100 m, and is clearly visible on both resistivity and gradiometry plots (Figures 2-4). It appears as a band of higher resistance about 2 m wide, where the soil retains relatively less moisture and which often indicates the presence of stone. On the gradiometry plot, this anomaly appears to be very disturbed, with high positive readings adjacent to low negative readings. These di-poles can appear in areas where intense burning has altered the magnetic properties of the soil, or where there is metal in the immediate vicinity. It should, however, be noted that the bedrock in this area contains ferroan dolomite, and it is possible that some of these stones were used in the construction of this stone feature, with the iron ore within these stones causing the gradiometry di-poles.

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Plate 1: Cobbled surface in Test-pit D.

7.3 Test-pit D was excavated along the line of this feature, and a cobbled surface was uncovered at a depth of 0.32 m (Plate 1). The exposed surface was found for the full length of the test-pit (1 m) and was at least 0.70 m wide, being truncated by the limit of excavation. The cobbles were sub-rounded, unbonded, and not arranged in any discernible pattern. An un-diagnostic piece of glazed stoneware was recovered from the topsoil immediately above it.

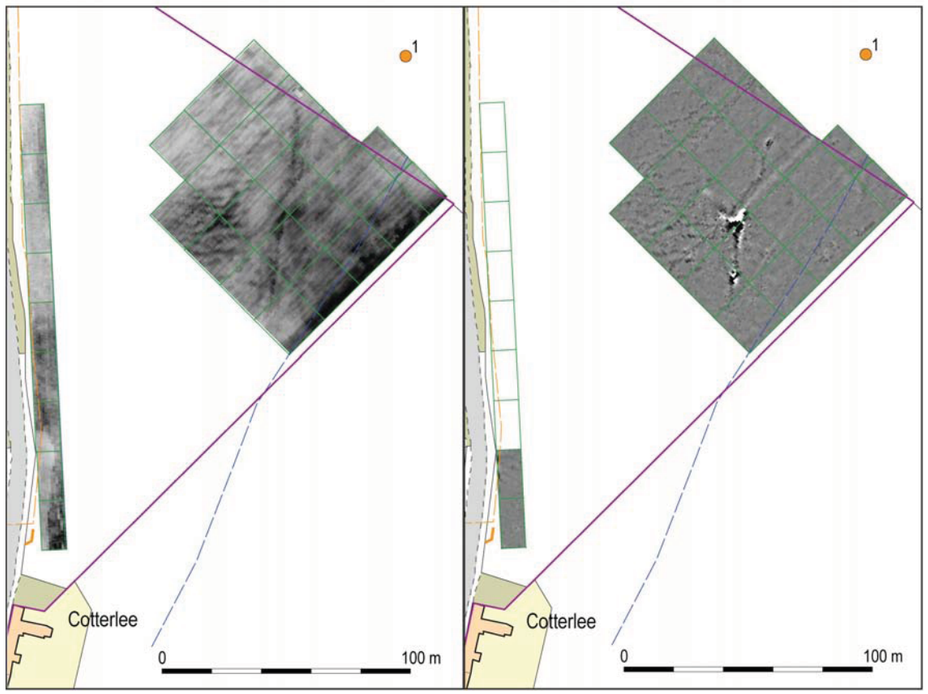

Figure 2. Processed resistivity data (left) and gradiometry data (right) in location context.

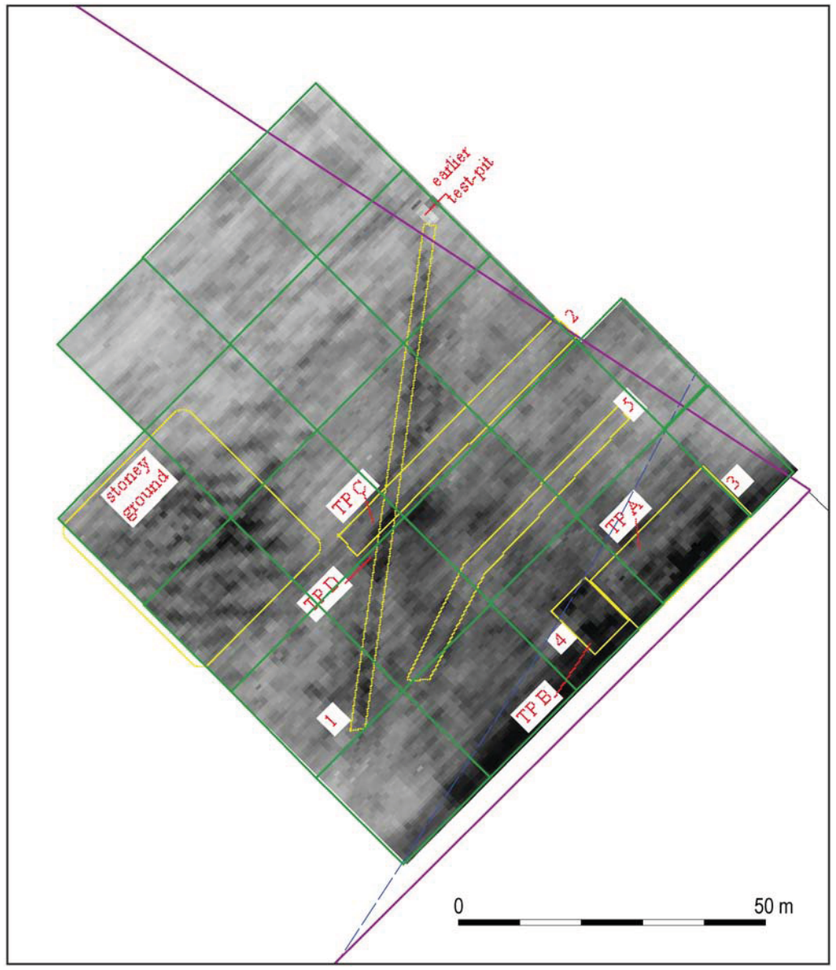

Figure 3. Annotated resistivity plot.

Feature 2 - Ditch

7.4 This linear feature is about 4 m wide and runs approximately north-east to south-west for about 70 m. It appears to extend beyond the limit of the survey and truncates the cobbled surface (Feature 1; see Figure 3). It is visible as a band of lower resistance where the soil has retained more moisture, and has the negative magnetic properties normally associated with cut features.

7.5 Test-pit C was excavated over this feature, and a surface comprising yellow/brown sandy silt was uncovered immediately below the topsoil, across the full extent of the test-pit and, as it was markedly different from the subsoil, would appear to be the fill of a large ditch. No datable evidence was recovered from the test-pit.

Feature 3 – Possible Structure

7.6 A broadly rectangular feature about 25 m long and 10 m wide was located on the crest of a rise at the east of the site. Although gradiometry shows some slight disturbance here, it is best illustrated on the resistivity plot (Figure 3), where it appears as lower resistance than the surrounding area.

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Plate 2. Linear cuts in Test-pit A.

7.7 Test-pit A was excavated over this feature, and three linear cuts were uncovered immediately below the topsoil (Plate 2). The largest of these [A006] extended beyond the width of the test-pit and was filled with grey/brown sandy silt (A007), with two narrow linear gullies cut into it. The eastern cut [A002] was 0.08 m deep and the western cut [A004] was 0.10 m deep, although the latter was truncated by the limit of excavation. The fills of both cuts was dark grey/brown sandy silt; green glazed ceramic, modern ceramic and animal bone were recovered from the fill of cut [A002] and glass was recovered from the fill of cut [A004]. The green glaze ceramic has been identified as Scottish white gritty ware tradition – green glaze with reduced core (late) and is of 15th century date.

Feature 4 – Possible Structure

7.8 A second rectangular feature was found immediately south-west of Feature 3. This is seen on the resistivity plot as two broadly linear bands of higher resistance (Figure 3) and on the gradiometry plot as an amorphous area of magnetic disturbance (Figure 4). The resistivity data suggests that the possible structure is stone-built.

7.9 Test-pit B was excavated in order to investigate this possible feature, but no archaeological remains were uncovered. Here the topsoil overlay orange sandy silt natural subsoil, and it may be that the test-put just missed this feature.

Feature 5 – Ditch

7.10 After processing of the geophysical data, a curvilinear feature was revealed about 10 m north of Features 3 and 4. This feature was about 60 m long and 1 m wide and curved round from the south-west to the east. As this was not identified during the fieldwork, but during post-fieldwork processing, the feature was not investigated by test-pitting.

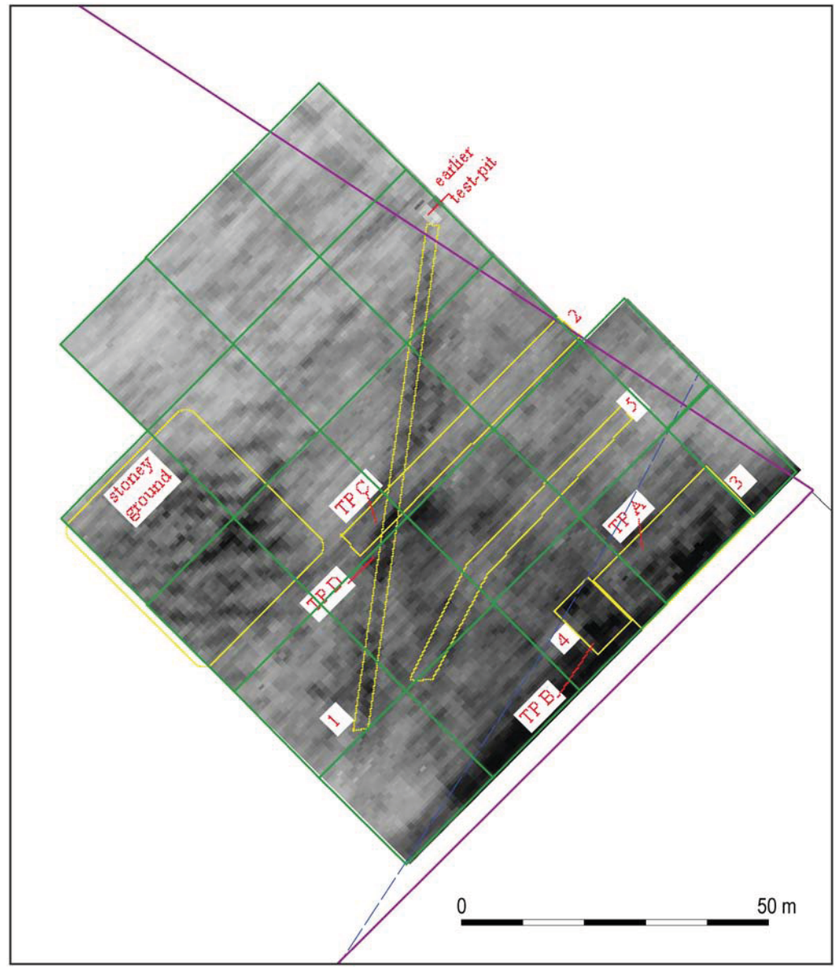

Figure 4. Annotated gradiometry plot.

Discussion

8.1 From the geophysical survey, it is clear that archaeological remains are present within the proposed cemetery development area, and that there is a fairly high potential that other as yet unidentified remains may survive within unexamined areas of the site. Artefactual evidence obtained from test-pits A and D indicates some medieval activity on the site, although whether this relates to St Leonard's Hospital or the later farmstead is not known. Some phasing of features may be indicated by relationship between the cobbled surface (Feature 1) and the ditch (Feature 2), with the cobbled surface clearly predating the ditch which cut through it.

8.2 Although one of the stated aims of this archaeological investigation was to identify locations of modern field drains, particularly along the western edge of the development area, the geophysical survey did not identify any features that could be interpreted as such. There are two possible explanations for this:-

- the sandy nature of the subsoil means that the land is free-draining, and that no drainage has been required;
- the plough-lines visible on the resistivity plot run on the same orientation as the field drains, and are therefore masking the drains

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Recommendations

9.1 The survey has demonstrated that several archaeological features exist within the cemetery development area. In consequence, it is recommended that further archaeological work is required in advance of the development of this site. Evaluation of the features identified through the geophysical survey may better establish the full extent, nature, date and significance of these archaeological remains, in particular distinguishing the remains at St Leonard's Hospital from the later post-medieval farmstead.

9.2 GUARD would stress that these recommendations are intended for guidance only. Final decisions on the nature and extent of any future archaeological mitigation rests with the planning authority, following consultation with Christopher Bowles, Scottish Borders Council Archaeology Officer.

Acknowledgements

10.1 GUARD would like to thank Christopher Bowles, Scottish Borders Council Archaeology Officer, for his assistance. Technical support was from Aileen Maule and John Kiely. The illustrations were produced by Charlotte Francoz and Ingrid Shearer. The pottery was assessed by Bob Will. The report was desk top published by Jen Cochrane. The project was managed for GUARD by Ronan Toolis.

Ferneyhill Toll, Kelso; Geophysical Survey and Test Pits Data Structure Report

Section 2: Appendices

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Appendices

Appendix A: List of Contexts

Test-pit A

A001	Grey/brown sandy silt topsoil
A002	Broad linear cut
A003	Grey/brown sandy silt fill of cut A002
A004	Linear gully cut into A003
A005	Dark grey/brown sandy silt fill of cut A004
A006	Linear gully cut into A003
A007	Dark grey/brown sandy silt fill of cut A004
A008	Yellow/orange sandy silt subsoil

Test-pit B

B001	Grey/brown sandy silt topsoil
B002	Yellow/orange sandy silt subsoil

Test-pit C

C001	Grey/brown sandy silt topsoil
C002	Yellow/brown sandy silt fill of large linear ditch

Test-pit D

D001	Grey/brown sandy silt topsoil
D002	Cobbled surface
D003	Mid grey/brown sandy silt found between cobbles
D004	Mottled grey/brown sandy silt found to the east of cobbles

Appendix B: Site Records

List of Digital Photographs

Frame	Context No	Detail	From
1	-	Pre-survey view of eastern part of site	S
2	-	Pre-survey view of centre of site	SSE
3	-	Pre-survey view of western part of site	E
4	-	Pre-survey view of western part of site	E
5	-	Pre-survey view of south-eastern part of site	NW
6	-	Pre-survey view north-western part of site	NE
7	A001-008	Linear cuts in test-pit A	W
8	A001-008	Linear cuts in test-pit A	W
9	A001-007	West facing section of test-pit A	W
10	A001-007	West facing section of test-pit A	W
11	B001-002	Post-excavation view of test-pit B	SE
12	B001-002	North-east facing section of test-pit B	NE
13	A001-008	Post-excavation view of slot in test-pit A	E
14	A001-008	Post-excavation view of slot in test-pit A	E
15	A001-008	West facing section of test-pit A	W
16	D001-004	Cobbled surface and related deposits in test-pit D	N
17	D001-004	Cobbled surface and related deposits in test-pit D	E
18	C002	Post-excavation view of test-pit C showing ditch fill	W
19	C001-002	East facing section of test-pit C	E
20	-	Test-pit C after back-filling	SW
21	-	Test-pit D after back-filling	SW
22	-	Test-pit A after back-filling	SE
		Test-pit B after back-filling	SE

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List of Finds

Find No	Context No	No of Pieces	Material	Description
1	A003	1	Ceramic	Greenglaze; vessel body piece
2	A003	1	Bone	Animal; rib
3	A003	2	Ceramic	Modern white-glazed vessel body pieces
4	A005	1	Glass	Clear bottle body piece
5	A007	1	Bone	Animal; possible antler piece
6	D001	1	Ceramic	Glazed stoneware; vessel body piece

Appendix C: DES

LOCAL AUTHORITY:	Scottish Borders
PROJECT TITLE/SITE NAME:	Ferneyhill Toll, Kelso
PROJECT CODE:	3056
PARISH:	Ednam
NAME OF CONTRIBUTOR(S):	Christine Rennie
NAME OF ORGANISATION:	GUARD
TYPE(S) OF PROJECT:	Geophysical Survey and test –pits
NMRS NO(S):	NT73NW 11
SITE/MONUMENT TYPE(S):	Medieval Hospital; Post-Medieval Farmstead
SIGNIFICANT FINDS:	Scottish white gritty ware tradition – green glaze with reduced core (late) of 15th century date.
NGR (2 letters, 6 figures)	NT 7333 3572
START DATE (this season)	8 March 2010
END DATE (this season)	12 March 2010
PREVIOUS WORK (incl. *DES* ref.)	Test-pits excavated by Scottish Borders Council in December 2009
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	A geophysical survey was undertaken by GUARD, of a proposed cemetery development area at land south of Ferneyhill Toll, Kelso. The survey of 40% of the proposed development area was followed by test pitting in areas where geophysical anomalies were encountered. Three linear features and two possible structures were encountered during the survey, but it could not be ascertained if these features related to the medieval hospital of St Leonards, or the post-medieval farmstead of Spittal, which documentary and cartographic records indicate formerly occupied this site.
PROPOSED FUTURE WORK:	Further archaeological mitigation
SPONSOR OR FUNDING BODY:	Scottish Borders Council
CAPTION(S) FOR ILLUSTRS:	-
ADDRESS OF MAIN CONTRIBUTOR:	GUARD, The Gregory Building, University of Glasgow, Glasgow, G12 8QQ
EMAIL ADDRESS:	c.rennie@archaeology.gla.ac.uk
ARCHIVE LOCATION (intended/deposited)	The archive will be submitted to the National Monuments Records for Scotland.

Appendix D: Project Design/WSI

LAND SOUTH OF FERNEYHILL TOLL, KELSO, SCOTTISH BORDERS

WRITTEN SCHEME OF INVESTIGATION

PROJECT 3056

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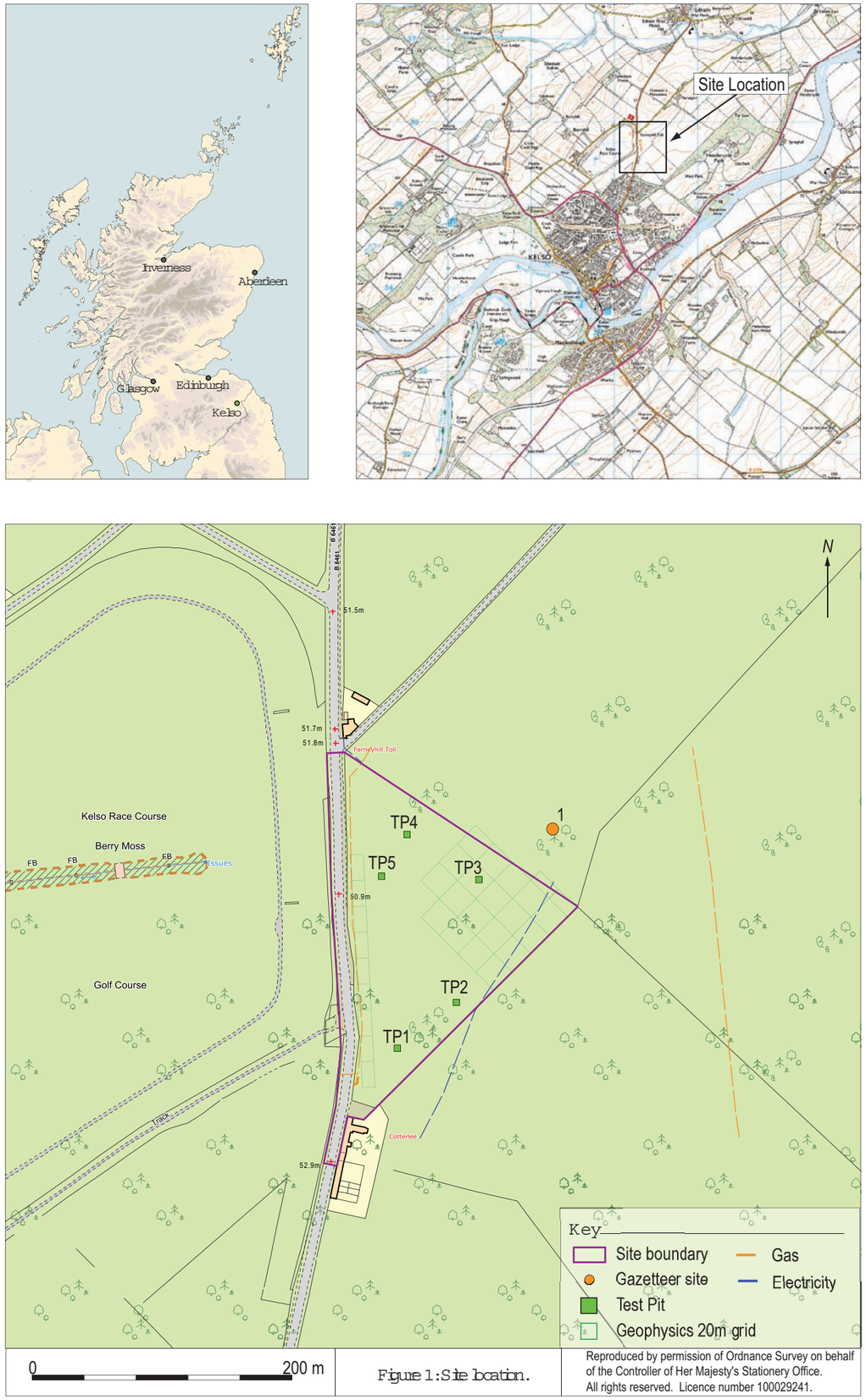

Figure 1: Site location.

1.0 Executive Summary

This written scheme of investigation for a geophysical survey of land proposed for a new cemetery development in land south of Ferneyhill Toll, Kelso was commissioned by Scottish Borders Council.

2.0 Introduction

This written scheme of investigation sets out the methodology for a geophysical survey of land proposed for a new cemetery development within land south of Ferneyhill Toll, Kelso.

3.0 Site Location

The 2.45 ha development area lies to the north of Kelso on the B6461 in the Scottish Borders and is centred around NGR NT 733 357 (Figure 1).

4.0 Archaeological Background

One site of archaeological interest was identified within the development area (Figure 1):

- Site 1: St Leonard's Hospital (NMRS NT73NW 11; SBC HER 3070006) at NGR NT 7343 3578;

Twelfth century records indicate that there was once a hospital (Site 1) at Ednam. It may have stood about 1.5km south of the modern village, but no archaeological work has been carried out on the site, and no remains are visible above ground. The hospital was founded before 1165, for the Annals of Teviotdale record a grant of land from Malcolm IV to the Master and Congregation of the hospital of St Leonards at Edinham. A further donation from the Countess of Northumberland and Huntingdon was recorded in 1178. Later patrons of the hospital included the Edmonstones of Ednam, whose payments to the hospital were recorded in 1426 and 1437. A source dating from 1542 recorded that the English burnt the hospital during a raid over the border. As records continue to mention it, the hospital cannot have been completely destroyed. The Papers of the Dalrymple Family Earls of Stair, held in the National Archives of Scotland, include a procuratory of resignation by Dame Janet Edmonstoun, in the hands of William Braikenrig, preceptor of the hospital of Ednamspittell of the lands in favour of David Chirnsyde in Gilmertoun, dated to 1640. The National Archives of Scotland also include the progresses of writs of subjects in lands of Ednam Spittal, sheriffdom of Roxburgh, 1625-1824, spittal being a common post-medieval place-name deriving from earlier hospitals. The Statistical Accounts of the parish, however, make no mention of the hospital.

The site is certainly depicted on Blaeu's map of 1654 as 'Ednam Spittell'. The same 'Spittle' is depicted on Roy's map of 1747-55. 'Spittal' is depicted in more detail in Stobie's map of 1770, Blackadder's map of 1797 and Thomson's map of 1820, as a building around three sides of a courtyard, in close proximity to the development area and south-west of Ferneyhill Farm. The Ordnance Survey First Edition six inch and 25 inch maps of 1859 depict the development area as the site of St Leonard's Hospital but no buildings were extant at this time. The Ordnance Survey Namebook of 1859 notes that until very lately a farm house existed there and that this was known amongst the older local residents by the name of 'the spital'. This must be the courtyard building depicted on earlier maps. The site has remained as an agricultural field since.

A previous assessment was carried out by the Scottish Borders Council Archaeology Officer in December 2009 during the monitoring of five test pits. Four of the pits were shown to be archaeologically sterile, but one, Test Pit 3 located at NT 73369 35737 towards the north-east of the development area, contained the possible base of a wall set into a terminating squared trench cut into the natural subsoil.

The archaeological works thus have the potential to encounter archaeological remains related to the medieval occupation of St Leonard's Hospital and post-medieval occupation of Spittal Farm House.

5.0 Aims and Objectives

Due to the possibility of encountering human remains during excavation, a geophysical assessment is necessary to attempt the location of buried archaeology prior to conversion of the site into a cemetery. The aim of the survey is therefore to identify:

- archaeological features associated with the site of St Leonard's Medieval Hospital;
- as yet unknown archaeological features and deposits which may be uncovered;
- modern field drains, particularly along the western edge of the development area.

The objectives are therefore to:

- undertake a Resistivity Survey of 40% of the 2.45 development area;
- undertake a Gradiometry Survey of 40% of the 2.45 development area;
- hand-excavate up to 10 test pits to verify the results of the geophysical surveys;
- Submit a report to data structure level for agreement to Scottish Borders Council, on completion of the fieldwork.

6.0 Fieldwork Methodology

1. The survey will examine 40% of the proposed 2.45 ha development area, and will include both the 1800 m^2 along the western edge of the site and the most likely location of the medieval hospital towards the northern edge of the development area, amounting to 9,800 m^2 in total (Figure 1). The survey will therefore comprise nine 20 x 10 m grids along the western edge, nineteen 20 x 20 m grids and two 20 x 10 m grids towards the north-eastern corner, and up to ten 1 m^2 test-pits.
2. The development area will be photographed by digital camera and a brief written description made prior to the commencement of works.
3. A resistivity survey will first be undertaken in the areas highlighted in Figure 1. The resistivity survey will seek to identify negative features, such as graves and trenches and positive features, such as stones, stone sockets, banks and drains, depending on the relatively low or high resistance measured.
4. A gradiometry survey will then be undertaken in the areas highlighted in Figure 1. The gradiometry survey will seek to identify burials, buried walls and areas of consistent heating such as kilns or ovens, depending on the measurements taken of minor fluctuations in the magnetic susceptibility of the soil.
5. The survey grids will be set out by sub-metre GPS, and the positions of the grids will be geo-referenced to allow the grids to be overlain on to existing plans of the site. We will use an RM15 Advanced Resistivity Meter and an FM256 Magnetometer. The readings will be taken at 0.5 m by 1 m intervals, allowing a good level of resolution with the minimum impact in terms of the time required to complete the survey. The data will be downloaded into Geoplot v3 for analysis and plot production. The resulting plots will be overlaid onto the existing plan of the site, showing where any anomalies lie in relation to the surface features.
6. It should be noted that if there are underground power cables and a gas pipe throughout the entire area along the western edge of the site, the signal from these will blot out any other magnetometer readings and so negate the results. If this is the case encountered in the field, the gradiometry survey of the western edge of the field will be curtailed and further gradiometry surveying of the north-east corner of the field will be pursued as time allows.

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7. Up to ten 1 m² test pits will then be hand-excavated, in order to verify the results of the geophysical surveys and to test, if applicable, locations where the results from both surveys don't match. The excavation of test pits will not seek to disturb archaeological remains, but merely to verify their presence.
8. The topsoil at each trench location will be removed in spits to the first archaeological horizon or, where none was found, to the natural subsoil. Any archaeological features encountered will be cleaned by hand to determine their character and extent.
9. Should negative-cut archaeological features be encountered in the test pits, they will be 25-50% excavated in order to determine their significance, date and function. A full record of excavated features will be made using a single context planning system using pro forma sheets, drawings and digital photographs. All archaeological features will be photographed by digital camera and recorded at an appropriate scale.
10. The test-pits will be surveyed by sub-metre GPS and, together with the location of the earlier test-pits monitored by the Scottish Borders Council Archaeology Officer, overlaid on to the site plan.
11. All archaeological finds will be dealt with by the on-site Archaeologists. Finds and animal bone will be collected as bulk samples by context. Significant small finds will be three dimensionally located prior to collection. All finds will be processed to MAP2 type standards and subject to specialist assessment. If necessary, conservation of finds will be appraised to allow for specialist study.
12. All excavated feature fills and horizons will be sampled, using bulk soil samples, for palaeo-environmental evidence.
13. A representative section will be recorded for each test pit denoting depth of topsoil, any stratigraphy present and the nature of the soil. This information will be logged in the day book together with a sketch drawn to scale and a digital photographic record of deposits.
14. Should significant archaeological remains be encountered, requiring more than the limited sampling outlined above, the remains will be left in situ pending the decision of the Scottish Borders Council Archaeology Officer on an appropriate excavation project design.
15. Should human remains be revealed during the excavation of any test pit, the local police and the Scottish Borders Council Archaeology Officer will be informed immediately. Any human remains will be left in situ, pending the decision of the Scottish Borders Council Archaeology Officer on an appropriate mitigation strategy.
16. On completion of each test pit excavation, backfilling will be undertaken by hand. No specialist backfilling is proposed. If archaeological remains are encountered and left in situ, these will be covered with terram sheets prior to backfilling.

7.0 Report Preparation and Contents

Our report will synthesise the results of the survey together with the results of the earlier test pits and assessment undertaken by the Scottish Borders Council Archaeology Officer. A draft report detailing the results of the survey will be submitted to the Scottish Borders Council Archaeology Officer within one week of completion of fieldwork. The report will take the form of a Data Structure Report and will contain an interim analysis of the results of the archaeological fieldwork. The report will include a full descriptive text that will characterise the date and extent of any archaeological features and deposits. It will also include plans at an appropriate scale showing the survey area, the test pits and archaeological features encountered, and archiving lists of all contexts, finds, samples, field drawings and photographs.

The report will include the following:

- executive summary
- a site location plan to at least 1:10,000 scale with at least an 8 figure central grid reference
- OASIS reference number; unique site code
- Planning application number
- contractor's details including date work carried out
- nature and extent of the proposed development, including developer/client details
- description of the site history, location and geology
- a site plan to a suitable scale and tied into the national grid so that features can be correctly orientated
- discussion of the results of field work
- context & feature descriptions (including any modern drainage)
- features, number and class of artefacts, spot dating & scientific dating of significant finds presented in tabular format
- plans and section drawings of the features drawn at a suitable scale
- initial assessment reports by specialists (if relevant finds/samples are recovered)
- recommendations regarding the need for, and scope of, any further archaeological work
- bibliography

At least two copies of the final report will be prepared for the client, including a digital PDF copy for the SBC HER.

The report will be presented in an ordered state and contained within a protective cover/sleeve or bound in some fashion. The report will contain a title page listing site/development name and region together with the name of the archaeological contractor and the developer or commissioning agent. The report will be page numbered and supplemented with section numbering for ease of reference.

8.0 Copyright

Unless otherwise agreed copyright for any report resulting from the archaeological work undertaken as part of the project will be deemed the intellectual property of the University of Glasgow.

9.0 Publication

A summary of the project results will be submitted to *Discovery and Excavation in Scotland*. In the event of minor archaeological remains being encountered, it is proposed that a comprehensive report submitted to *Discovery and Excavation in Scotland*, will form the final publication of the site. A copy of this will be included in the Data Structure Report.

10.0 Archive

The archive for the project, including a copy of the report, will be submitted to the National Monuments Records for Scotland within three months of completion of all relevant work.

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Suitable digital images will be submitted to the Scottish Borders Council Archaeology Officer rather than hard copies of photographs but guidance from the ADS will be followed. Also digital images for inclusion on the online SMR website must be included with the report (these may be general site images or images of specific features or finds).

The online OASIS form at http://ads.ahds.ac.uk/project/oasis/ will be completed within 3 months of completion of the work. Once the Data Structure Report has become a public document by submission to or incorporation into the SMR, the Scottish Borders Council Archaeology Service will validate the OASIS form thus placing the information into the public domain on the OASIS website.

11.0 Finds Disposal

The arrangement for the final disposal of any finds made in connection with the archaeological work, will be deposited in keeping with Scottish legal requirements as set out in the Treasure Trove Code of Practice published by the Scottish Government in December 2008. The laws relating to Treasure Trove and *Bona Vacantia* in Scotland apply to all finds where the original owner cannot be identified. This includes all material recovered during archaeological fieldwork. Accordingly, all assemblages recovered from archaeological fieldwork are claimed automatically by the Crown and must be reported to the Scottish Archaeological Finds Allocation Panel through its secretariat, the Treasure Trove Unit. In the event of the discovery of small finds, a filled-out copy of the form "Declaration of an Archaeological Assemblage from Fieldwork" and two copies of the pertinent Data Structure Report will be submitted to the Panel at the conclusion of the fieldwork. The Panel will then be responsible for recommending to the Queen's and Lord Treasurer's Remembrancer which museum should be allocated the finds. All artefacts will be temporarily stored by GUARD until a decision has been made by the panel.

12.0 Personnel

The GUARD team will comprise the following qualified and experienced archaeologists:

- Project Manager: Mr Ronan Toolis
- Project Director: Ms Christine Rennie
- Archaeologist: Ms Maureen Kilpatrick
- Medieval Pottery Specialist: Mr Bob Wills
- Environmental Specialist: Dr Susan Ramsay
- Botanical and Osteology Specialist: Dr Jennifer Miller
- Finds and Environmental Support and Conservation: Ms Aileen Maule
- Illustrator: Ms Charlotte Francoz
- Quality Assurance: Dr John Atkinson

The GUARD Project Manager, Mr Ronan Toolis, will be the main point of contact for the archaeological works. A full CV for individuals concerned can be made available on request.

13.0 Monitoring

The Scottish Borders Council Archaeology Officer will be informed of the mobile phone number of the GUARD Project Director on-site so that monitoring visits can be arranged. It is expected that the fieldwork will take one week to complete.

14.0 Health & Safety and Insurance

GUARD, operating through the University of Glasgow, adhere to the guidelines and standards prescribed for archaeological fieldwork set down in the Institute of Field Archaeologists approved Health and Safety in Field Archaeology document, prepared under the aegis of the Standing Conference of Archaeological Unit Managers (SCAUM). It is standard GUARD policy, prior to any fieldwork project commencing, to conduct a risk assessment and to prepare a project safety plan, the prescriptions of which will be strictly followed for the duration of all archaeological fieldwork. Copies of the resultant project safety plan and of GUARD's Fieldwork Safety Policy Statement may be viewed upon request.

GUARD, operating through the University of Glasgow, also possesses all necessary insurance cover, proofs of which may be supplied upon request.

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