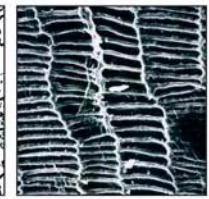


HOPE10/001



HOPETOUN ESTATE PROPOSED CYCLE PATH

Watching Brief

for Sustrans Ltd

0557/FUL/09, 0505/FUL/10

June 2011



HEADLAND
ARCHAEOLOGY (UK) Ltd



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CONTENTS

1.	INTRODUCTION	1
2.	HISTORICAL & ARCHAEOLOGICAL BACKGROUND	1
3.	PROJECT DESIGN	2
	3.1 Objectives	2
	3.2 Methodology: Watching Brief	2
	3.3 Recording	2
	3.4 Samples and artefacts	2
4.	RESULTS	2
	4.1 Finds assessment	4
	4.2 Environmental assessment	4
	<i>Terracing/levelling deposit [008] & [009]</i>	4
	<i>Linear feature [019]</i>	5
5.	DISCUSSION	5
6.	REFERENCES	6
	6.1 Cartographic sources	6
	6.2 Bibliographic sources	6
	6.3 Internet sources	6
7.	APPENDICES	7
	7.1 Appendix 1 – Site registers	7
	<i>Context register</i>	7
	<i>Photo register</i>	7
	<i>Drawing register</i>	9
	<i>Sample register</i>	9
	7.2 Appendix 2 – Finds assessment	10
	7.3 Appendix 3 – Environmental assessment	11
	<i>Retent sample results</i>	11
	<i>Flotation sample results</i>	11

LIST OF ILLUSTRATIONS

<i>Illus 1</i>		x
	<i>Site location, showing features</i>	
<i>Illus 2</i>		3
	<i>West facing section through hollow way</i>	
<i>Illus 3</i>		3
	<i>North facing section through cut [019] and terracing deposits [020], [021] & [022]</i>	
<i>Illus 4</i>		4
	<i>Roy's military survey of 1747-55</i>	
<i>Illus 5</i>		5
	<i>Walls [001] & [002] and hollow way prior to excavation</i>	
<i>Illus 6</i>		5
	<i>Terracing deposits [020], [021] & [022]</i>	

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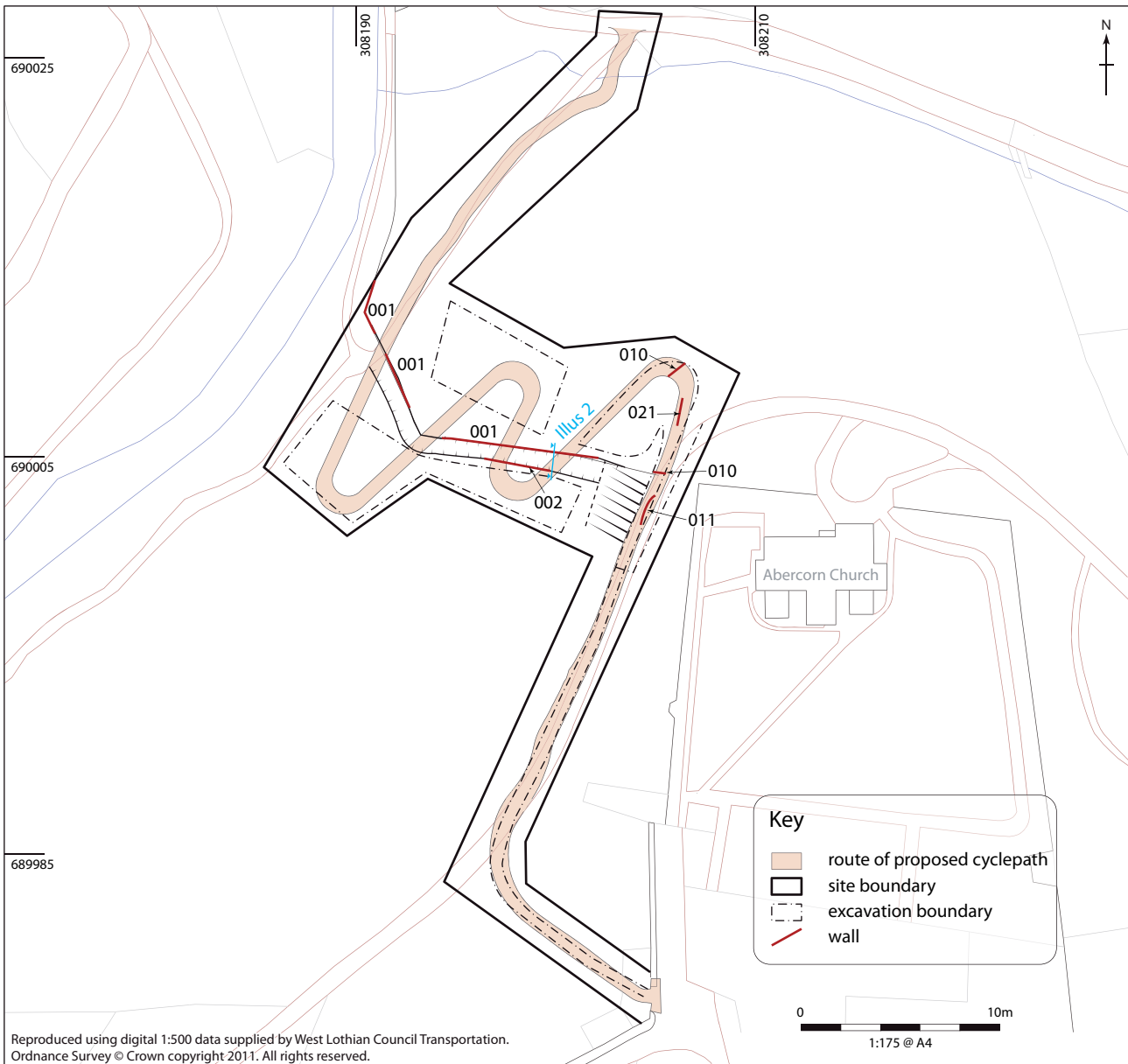


South Queensferry

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Illus 1

Site location, showing features

HOPETOUN ESTATE PROPOSED CYCLE PATH

Watching Brief

Headland Archaeology (UK) Ltd carried out an archaeological watching brief for Sustrans Ltd on construction of a cycle path at Abercorn through the Hopetoun Estate, West Lothian in order to satisfy a condition of planning consent. The archaeological work was carried out during August 2010; it was curated by the West of Scotland Archaeological Service (WoSAS) who advise West Lothian Council on archaeological matters.

Monitoring took place at all areas of ground level reduction. The main area of excavation was the 130m length of 2m wide cycle path constructed within a cutting. This ran just outside the kirkyard wall of Abercorn Church, the site of an Anglian monastery of the 7th century. Two additional trenches totaling 250m² were excavated to gain material for the construction of banking, these revealed no archaeological evidence.

Evidence of medieval activity in the area was in the form of deposits of midden material tipped down a steep hill, alongside pottery found in the topsoil. The archaeological monitoring also revealed evidence of the alteration of the landscape during the construction of and subsequent changes to the designed landscape of Hopetoun House.

1. INTRODUCTION

Headland Archaeology (UK) Ltd was commissioned by Sustrans Ltd to undertake an archaeological watching brief at the NCNR76 cycle path through Hopetoun Estate, West Lothian in connection with a condition of consent (application nos: 0557/FUL/09, 0505/FUL/10) set out by West Lothian Council on the proposed upgrades to the cycle path. The Written Scheme of Investigation (WSI) for the watching brief was agreed by the West of Scotland Archaeology Service (WOSAS), which advises the planning authority on archaeological matters.

2. HISTORICAL & ARCHAEOLOGICAL BACKGROUND

The cycle path is located immediately west of Abercorn Church, the earliest parts of which date from the 12th century although it has been extensively remodelled, most recently in 1893. The church is situated on the site of an earlier Anglian monastery dating to the 7th century, the 'Aebbercurnig' recorded by Bede. Excavations within the kirkyard exposed structural remains of this Anglian monastery, along with artefacts of 13th century date. The Anglian monastery may have been temporarily abandoned around AD 685 following the Northumbrian defeat at Nechtansmere but appears to have been reoccupied by the 8th century when a number of Anglian crosses were produced (McWilliam 1978).

The early monastery would have been enclosed by a 'vallum' or large ditch. The putative western limit of this ditch was expected to lie near the line of the path to the west of the church. 1

The cycle path also lies within the designed landscape of Hopetoun House. The immediate policies are enclosed by a wall that extends west to the Midhope Burn, south to Parkhead and in the east to Society Point on the shore of the Firth of Forth. Long drives were laid out through these policies to form grand approaches to the house.

Sir William Bruce designed Hopetoun House in 1696 and it is thought a formal garden accompanied the house but no evidence of this remains. William Adam established the structure of the designed landscape seen today between 1720 and 1740 while designing alterations and additions to the house. By the second half of the 18th century the designed landscape of Hopetoun was well established, according to contemporary reports. Further improvements and alterations were made to the gardens in the early 19th century.

The designed landscape was laid out to a plan prepared by William Adam, though Roy's map of c.1750 suggests that not all of his proposals were carried out. The 1st and 2nd edition OS mapping indicates that while there were some alterations, the structure of the landscape has remained consistent with William Adam's plan. (Information from Historic Scotland Gardens and Designed Landscape Inventory).



3. PROJECT DESIGN

3.1 Objectives

The objective was to ensure the recording of any features and finds of archaeological interest.

3.2 Methodology: Watching Brief

Monitoring of the following activities was stipulated in the WSI:

- ground level reduction and cuttings for the cycle route,
- the excavation of associated ditches and side drainage,
- excavation for the culvert site,
- the grubbing out of tree stumps.

2 All excavation, except the grubbing out of tree stumps, was carried out using a tracked mechanical excavator equipped with a flat-edged ditching bucket. The resulting surfaces were hand cleaned where appropriate and investigated for archaeological features. Archaeological features identified were subject to sample excavation and recording. Work on the culvert site was limited due to the discovery of sewage contamination in the stream.

3.3 Recording

All recording followed standard archaeological guidelines as set out by the Institute for Archaeologists (IfA). All contexts, small finds and environmental samples were given unique numbers and all recording was undertaken on pro forma record cards.

Colour transparency, print and digital photographs were taken and recorded in a photographic register. A graduated metric scale is clearly visible in record photographs of contexts.

An overall site plan was supplied by West Lothian Council Development and Regulatory Services and related to the National Grid. Hand-drawn plans of individual features at a scale of 1:20 were drawn where appropriate. Sections and elevations were drawn at 1:10 where appropriate.

3.4 Samples and artefacts

Finds retrieved during the works were bagged and labelled by context. Finds were processed and stored appropriately, according to established archaeological guidelines.

Archaeological deposits were sampled systematically in accordance with standard environmental sampling practice. Bulk samples, a minimum of 10 litres per context, were taken for wet sieving and flotation.

4. RESULTS

Boundary walls [001] and [002] were upstanding at the start of the works either side of a hollow way running approximately east-west downslope before turning north-west/south-east and then north-south out of the area of the site. Prior to construction of the track in this area a trench was excavated across the walls and hollow way. Both of the walls were subsequently reduced to ground level across the whole site (Illus 2 & 5).

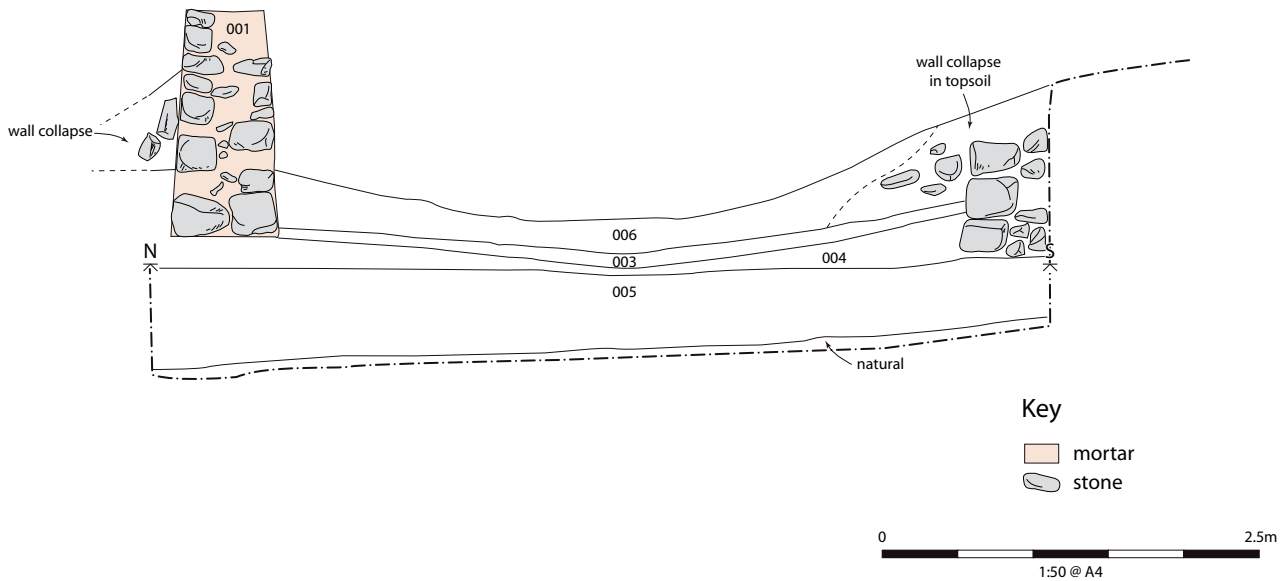
Wall [001] was constructed of roughly dressed irregularly coursed stones typically 0.4 x 0.2 x 0.15m bonded together with lime mortar. Wall [001] survived up to 1.5m high in places and ran east-west downslope before turning north-west/south-east and then north-south out of the area of the site. Wall [002], to the south of the hollow way, was of drystone construction and composed of randomly coursed, very roughly squared stones typically 0.3 x 0.15 x 0.1m. Wall [002] survived up to 0.5m high and ran parallel to the east-west section of wall [001].

The hollow way was surfaced with rough cobbling [003] set into an old ground surface of dark brown clay loam [004]. A bank towards the top of the slope and east of wall [001] covered the walls and hollow way and indicated subsequent landscaping activity. To the east of this bank a section of east-west wall [015] on the same alignment as wall [001] was exposed and is probably part of the same structure.

Prior to the start of construction, tree stumps across the site were grubbed out across the site using a toothed bucket in order to gain sufficient grip on the stumps to rip them out. Only the removal of one tree stump disturbed a dark brown gravelly clay loam [007] terracing/levelling deposit. The remaining tree stumps were removed with limited disturbance to the deep, dark brown clay loam topsoil [006] that was seen across the site.

There were three areas of excavation during the construction of the cycle path (Illus 1). Two of these, located down the slope of the hill and with a combined area of 250m², were excavated solely to gain material for infill and the construction of banking. In both of these areas excavation was limited to a maximum depth of 0.5m, which did not exceed the depth of the dark brown clay loam topsoil [006], so the underlying natural deposits were not seen.

The third area of excavation was a 130m long trench excavated where the new cycle path sat in a cutting. For most of its length this trench was 2m wide and excavated to a maximum depth of 0.3m. These excavations were limited



Illus 2
West facing section through hollow way

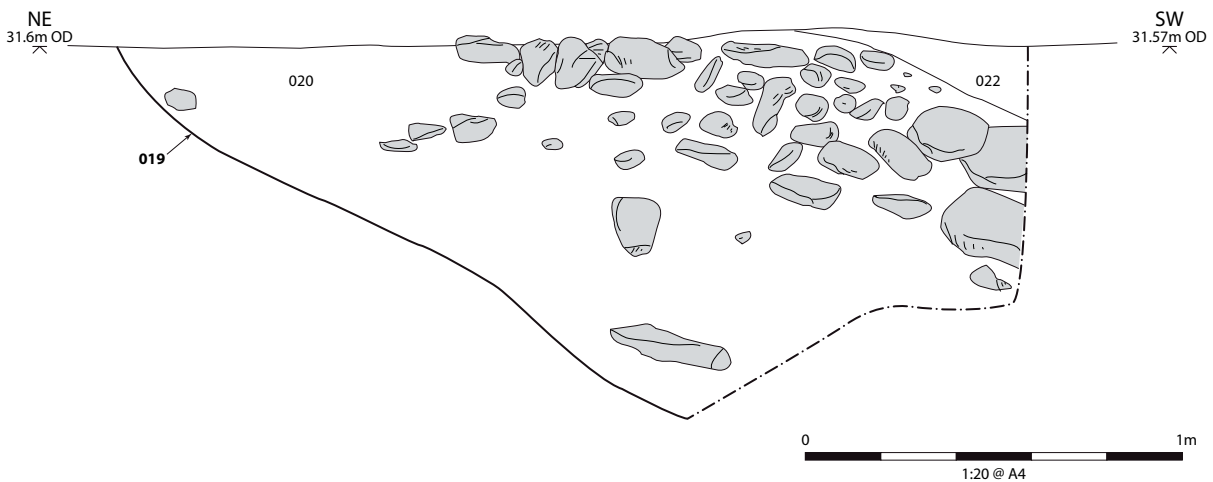
to removal of the overlying vegetation, an old gravel path surface [012] and a crushed brick levelling deposit [016] associated with the track surface. The basal course of a small stretch of a wall constructed of roughly squared basalt blocks [011] forming an edge to this path was revealed.

In the area of the first hairpin bend at the top of the slope, the excavations for the cycle path became deeper and further deposits were disturbed. Underlying the crushed brick of the path [016] in this area was a deposit of dark grey brown shale and gravel [017] and a deposit of pale grey loose gravel. Both of these deposits had tip lines visible within them suggesting that they were the result of landscaping activity.

Removal of terracing deposit [018] exposed a linear cut [019], visible for 12.5m running NNE-SSW at the top of the track to the north-west of the church. This cut sloped steeply away to the west and reached a depth of 1m

before continuing down beyond the limit of excavation. The cut curved slightly to the NNW at its northern end, away from the church, suggesting it was unlikely to be an enclosing ditch or vallum for the early monastic site. Cut [019] was filled with a dark brown black sandy loam deposit [020] with occasional tip lines visible in section. Occasional inclusions of animal bone and shell were present in deposit [020]. A roughly linear deposit of sub-angular sandstone boulders and cobbles [021] lay over [020] and may represent a dump of stones to consolidate the made ground or to help with drainage. A very compact mid grey brown sandy loam deposit [022] with frequent inclusions of small stones sealed this stone layer, suggesting further deliberate landscaping.

A wall [010] was exposed running north-west/south-east across the hairpin bend towards the top of the track and to the NNE of cut [019]. This structure was composed of rounded basalt stones, typically 0.25 x 0.1 x 0.05m



Illus 3
North facing section through cut [019] and terracing deposits [020], [021] & [022]



in size; no bonding material was present. This structure may represent a small retaining wall supporting the embankment to the southeast.

To the west of this structure [010] further terracing deposits were encountered these were composed of dark brown clay silt [008] and dark grey sand and gravel [009] sampling of these deposits again showed that they were similar in composition to medieval midden deposits, although no firm dating evidence was recovered (see Sample assessment below).

4.1 Finds assessment

Julie Franklin

The assemblage numbers 17 finds of pottery, tile, metalwork (copper alloy, iron and lead), clay pipe, glass and bone. The finds cover a broad date range from possibly as early as the late 14th century to possibly as late as the early 20th century. Most of the assemblage was made up of surface finds collected by amateur archaeologist Nick Davies. These include any finds listed from the topsoil [007] and contexts [013] and [014]. The finds from context [014] were collected from the shore to the north of the site and consequently some are very abraded.

4 The finds from the topsoil were all of modern date, including building material and domestic refuse of 19th or early 20th century date.

The finds listed under contexts [007], [013], [014] were all of late medieval or early post-medieval date. The

most remarkable feature of these finds is the proportion which were imported from northern Europe. Five out of seven finds were imported, including four sherds of late medieval to early post-medieval stoneware from the Rhineland and a late medieval Flemish floor tile ([014]). Flemish floor tiles are found in large quantities on 15th century sites in eastern Scotland (Norton 1994, 150–3). They were used to floor high status buildings and are particularly, though not exclusively associated with ecclesiastical sites. Associated local pottery includes only two sherds of locally made jugs. The finds might all have been deposited during the 16th century. Though the assemblage is too small to be statistically reliable, the finds do hint at something unusual about the find area, possibly strong trading links or a foreign presence.

Two further finds were of uncertain date and lacked any associated dating evidence. These are an iron object, possibly a nail ([008]), and a small bone point which appears to be part-finished ([020]). Both may be contemporary with the late medieval and early post-medieval finds but this is not certain.

4.2 Environmental assessment

Davie Masson & Scott Timpany

Terracing/levelling deposit [008] & [009]

Two samples ([001] & [002]) were assessed from this deposit in order to check for possible dating evidence, such as small fragments of pottery. The deposit itself is



Illus 4

Roy's military survey of 1747–55



Illus 5

Walls [001] & [002] and hollow way prior to excavation

described as a possible hillwash deposit of dumped and re-deposited material. The sample contents would appear indicative of such deposit formation. The main material to come out of the samples was burnt and unburnt mammal bone fragments suggesting deliberate deposition of food waste debris as would be expected within midden material. A small number of charred cereal grains were recovered with oat, hulled barley, spelt wheat and wheat sp. found together with indeterminate cereal grains. The grain assemblage present is similar to medieval urban assemblages found in middens in central Scotland (e.g. Timpany 2006; Timpany and Haston 2008), with small numbers of badly preserved grains likely to have been damaged through re-deposition and movement within the soil profile.

Linear feature [019]

One sample ([003]) was assessed from the fill [020] of the linear feature. The assemblage is similar to that from the terracing/levelling deposit described above. The main contents are again burnt and unburnt mammal bone suggestive of food waste and midden material. Of note is the presence of fish bone and mussel shell from this deposit, suggesting an increased reliance on marine (and possibly freshwater) resources. A very small number of cereal grains were also recovered, with hulled barley and indeterminate grains present. The poor preservation is again suggestive of taphonomic movement of the grain. Together with

the probable food refuse, a bone pin was also recovered, which may also indicate domestic waste. Unfortunately no specific date could be assigned to the pin but it has been suggested to be late medieval to post-medieval (see Finds assessment).

5. DISCUSSION

No evidence of the vallum associated with the Anglian monastery was discovered during the watching brief, however in only a few isolated areas did the excavations penetrate the later landscaping deposits.

Medieval to early post medieval activity on the site is shown by the presence of deposits [008], [009] & [020] dumped down the steep slope that are similar in character to medieval midden deposits

excavated on medieval urban sites. The discovery of these deposits suggests that the route of the cycle path lay at the edge of an area of occupation with the marginal sloping ground to the east of the church being utilised as a rubbish dump. Further evidence of medieval activity in the wider area is provided by the collection of late medieval finds from the shore to the north of Abercorn Church that hint

5

The majority of the deposits discovered during the watching brief are related to the designed landscape created by William Adam in the early 18th century and its subsequent alteration in the mid 1800s. The boundary



Illus 6

Terracing deposits [020], [021] & [022]



walls [001] & [002] and associated hollow way are part of Adam's original plan for the estate and are shown on Roy's map of c.1750. By the time of the OS 1st edition map of 1856 the hollow way has fallen out of use. It is probably with these alterations that the terracing deposits [017], [018] discovered in the watching brief are associated. By this time the path [012] running round the north of the church has also been created. It is probable that a large amount of the landscaping activity that was revealed by the watching brief is associated with the construction of the path running around the north of the church.

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7. APPENDICES

7.1 Appendix 1 – Site registers

Context register

Context no.	Description
001	Wall, running roughly E-W surviving up to 1.5m high constructed of roughly dressed irregularly coursed basalt stones typically 0.4 x 0.2 x 0.15m bonded together with lime mortar
002	Wall, running roughly E-W surviving up to 0.5m high of drystone construction and composed of randomly coursed, very roughly squared basalt stones typically 0.3 x 0.15 x 0.1m
003	Rough cobbled surface, composed of water rounded cobbles typically 0.1 x 0.05 x 0.02m laid in a single layer
004	Old ground surface composed of humus rich dark brown clay loam
005	Old ground surface composed of humus rich dark brown clay loam
006	Topsoil, organic rich dark brown clay loam
007	Erosion/dumping deposit down bank, dark brown gravelly clay loam
008	Terracing/levelling deposit, dark brown clay silt
009	Terracing/levelling deposit, dark grey sand and gravel
010	Wall running NE-SW, constructed of undressed uncoursed water rounded basalt stone of typical size 0.25 x 0.1 x 0.05m, no banding material
011	Wall running N-S, composed of sub rounded stone of average size 0.15 x 0.1 x 0.05m, only basal course survived
012	Gravel track surface, composed of compacted grey gravel
013	Finds assemblage from immediately north of church handed in by local amateur archaeologist
014	Finds assemblage from shore to north of site handed in by local amateur archaeologist
015	Wall, probable continuation of [001], constructed of roughly squared basalt blocks bonded with grey white sandy lime mortar
016	Mixed deposit of crushed brick stone and lime mortar forming base for track surface [012]
017	Terracing/levelling deposit of dark grey brown shale and gravel
018	Terracing/levelling deposit of pale grey loose gravel
019	Linear cut running N-S filled with [020], [021], [022]
020	Dark brown black sandy loam deposit fill of cut [019]
021	Stone deposit over [020], composed of sub-angular sandstone boulders and cobbles; probable represents dumping of stone to help consolidate or drain the sloping ground
022	Terracing/levelling deposit of compact grey sandy loam over [021]

7

Photo register

Photo no.	Colour print	Colour slide	Digital	Direction facing	Description
1	*	*	*	-	ID Shot
2	*	*	*	NE	Pre-excavation shot of track
3	*	*	*	E	Pre-excavation shot of track
4	-	-	*	W	Pre-excavation shot of track
5	*	*	*	SW	Pre-excavation shot of track showing wall [001]



Photo no.	Colour print	Colour slide	Digital	Direction facing	Description
6	*	*	*	NW	Walls [001] and [002] and hollow way
7	*	*	*	N	Walls [001] and [002] and hollow way
8	*	*	*	NE	Walls [001] and [002] and hollow way
9	-	-	*	E	Walls [001] and [002] and hollow way
10	*	*	*	E	Walls [001] and [002] and hollow way
11	-	-	*	NE	Walls [001] and [002] and hollow way
12	*	*	*	E	Section through hollow way
13	*	*	*	SE	Section through hollow way (SW end)
14	*	*	*	SE	Section through hollow way (NE end)
15	-	-	*	NW	Working shot of de-stumping
16	*	*	*	N	Location shot of hollow way trench
17	*	*	*	E	Terracing deposits [008] and [009]
18	*	*	*	S	Section through terracing deposit [008]
19	*	*	*	NE	Post-excavation shot of track to north of churchyard
20	*	*	*	E	Post-excavation shot of BT track
21	*	*	*	E	Post-excavation shot of banking
22	*	*	*	S	Post-excavation shot of banking
23	*	*	*	SW	Trench excavated to gain topsoil
24	*	*	*	SE	Trench excavated to gain topsoil
25	*	*	*	NE	Pre-ex (and post de-stumping) shot of track towards bridge
26	*	*	*	NE	Pre-ex (and post de-stumping) shot of track towards bridge
27	*	*	*	SW	Wall [010]
28	*	*	*	NE	Wall [010]
29	*	*	*	E	Location shot of wall [010]
30	*	*	*	NE	Wall [011]
31	*	*	*	E	Wall [011]
32	-	-	*	NE	Working Shot
33	*	*	*	W	Stones [021] in cut [019]
34	*	*	*	S	Stones [021] in cut [019]
35	*	*	*	S	Stones [021] in cut [019]
36	*	*	*	S	Stones [021] in cut [019]
37	*	*	*	S	Section through [021] in cut [019]
38	*	*	*	S	Section through [021] in cut [019], showing depth of deposits
39	-	-	*	NW	Working shot of backfilling of slot through [019]
40	-	-	*	NW	Working shot of backfilling of slot through [019]
41	-	-	*	N	Working shot of backfilling of slot through [019]

Drawing register

Drawing no.	Scale	Section	Plan	Description
1	1:250	-	+	Site plan
2	1:20	+	-	West facing section through hollow way
3	1:20	-	+	Wall [010]
4	1:20	-	+	Wall [011]
5	1:10	+	-	Deposits [021] and [020] in cut [019]

Sample register

Sample no.	Context no.	Description
1	9	Terracing/levelling deposit
2	8	Terracing/levelling deposit
3	20	Brown black sandy loam filling [019]



7.2 Appendix 2 – Finds assessment

Context no.	Sample no.	Material	Qty	Object	Description	Spot date	Period
Topsoil	-	CBM	1	Pan tile	Edge sherd	-	PM/Mod
Topsoil	-	Clay pipe	1	Stem	Narrow Bore	19th/e.20th	Mod
Topsoil	-	Cu	1	Spoon	Small spoon, rounded bowl, hallmarked on underside of handle	-	Mod
Topsoil	-	Cu	1	Object	Thin, wide rectangular strip with small rectangular cut out, has broken at either end through further rectangular cut outs	-	Mod
Topsoil	-	Glass	1	Bottle	Green sherd, very pitted surface	17th/19th	Mod
Topsoil	-	Pb	1	Object	Small rectangular ?offcut	-	Mod
Topsoil	-	Pottery	1	Modern	Stoneware handle, yellow glazed	-	Mod
Topsoil	-	Stone	1	Floor tile	Corner tile fragment	-	Mod
007	-	Pottery	1	Medieval	Rhenish Stoneware – possibly Raeren or Langerwehe. Large large jug shoulder sherd with grey/brown salt glaze	15–m.16th	Medi
008	2	Fe	1	Object	Small curving rod	-	-
013	-	Pottery	1	Post-Medieval	Frechen Bartmann jug – face mask sherd	m.16–17th	PM
014	-	CBM	1	Floor tile	Flemish type yellow glazed tile sherd, T.20	l.14–e.16th	Medi
014	-	Pottery	1	Medieval	Raeren Stoneware? – small frilled base, pale grey/brown salt glaze; waterworn, from beach deposit?	15–m.16th	Medi
014	-	Pottery	2	Post-Medieval	PMR jug base and sherd	16–17th	PM
014	-	Pottery	1	Post-Medieval	Frechen Stoneware, very unusual shaped ?base sherd	m.16–17th	-
020	3	Bone object	1	Point	Small bone point, longitudinal cutmarks round 75%, unpolished	-	-

7.3 Appendix 3 – Environmental assessment

Retent sample results

Context no.	Sample no.	Feature	Sample vol (l)	Metal	Bone/ shell object	Burnt bone	Unburnt bone	Shell	Charcoal	Material available for AMS dating	Cinders	Coal	Comments	Max size (cm)			
														Fe object	Bone object	Mammal	Fish
009	001	Terracing/ levelling deposit	30	-	-	++	+	-	-	Burnt bone ++	++	+++	No cinders or coal retained from any sample				
008	002	Terracing/ levelling deposit	30	+	-	++++	++++	-	-	Unburnt bone ++++	+++	+++	No cinders or coal retained from any sample				
020	003	Dark brown black sandy loam deposit	20	-	-	++	+++	++++	<1	Unburnt bone ++++	+	+	Bone pin, Mussel shell. Coal and cinders not retained.				

Key: + = rare, ++ = occasional, +++ = common and ++++ = abundant

NB charcoal over 1cm is suitable for identification and AMS dating

Flotation sample results

Context no.	Sample no.	Feature	Total flot vol (ml)	Cereal grain			Other plant remains	Charcoal qty	Charcoal max size (cm)	Comments
				Avena sp.	Avena vulgare	Triticum spelta				
9	1	Terracing/levelling deposit	30	+	+	+	Persicaria sp. +	+++	<1	-
8	2	Terracing/levelling deposit	30	+	+	-	Ranunculus sp. +, cf. Viola sp. +	++	<1	-
20	3	Dark brown black sandy loam deposit	20	-	+	-	Persicaria sp. +, Carex sp. +	++	<1	Burnt mammal bone ++++, Mussel shell +

Key: + = rare, ++ = occasional, +++ = common and ++++ = abundant

NB charcoal over 1cm is suitable for identification and AMS dating



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