# BISHOPDOWN FARM SALISBURY WILTSHIRE

# **ARCHAEOLOGICAL EVALUATION**

For

# WSP ENVIRONMENTAL UK

on behalf of

# **BARRATT SOUTHERN COUNTIES**

CA PROJECT: 2760 CA REPORT: 09026

FEBRUARY 2009

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#### SUMMARY

Project Name: Bishopdown Farm Location: Salisbury, Wiltshire

**NGR:** SU 1551 3260

**Type:** Evaluation

**Date:** 6 – 20 January 2009

Location of Archive: To be deposited with Salisbury and South Wiltshire Museum

Site Code: BDF 08

An archaeological evaluation was undertaken by Cotswold Archaeology in January 2009 at Bishopdown Farm, Salisbury, Wiltshire. Twenty-seven trenches were excavated.

Two pits of prehistoric date were identified together with eleven undated pits, two undated postholes, eight undated ditches, the undated remnants of a chalk and flint bank and a potentially recent metalled track. One of the undated ditches contained two inhumation burials.

#### 1. INTRODUCTION

- 1.1 In January 2009 Cotswold Archaeology (CA) carried out an archaeological evaluation for WSP Environmental UK on behalf of Barratt Southern Counties at Bishopdown Farm, Salisbury, Wiltshire (centred on NGR: SU 1551 3260; Fig. 1). The evaluation was undertaken to accompany a planning application to be submitted to Salisbury District Council (SDC) for the erection of approximately 500 dwellings with associated works. Ms Helena Cave-Penny, Archaeological Officer, Wiltshire County Council (WCC), the archaeological advisor to SDC, recommended that a programme of archaeological evaluation be undertaken before the determination of the planning application.
- 1.2 The evaluation was carried out in accordance with a detailed Written Scheme of Investigation (WSI) produced by CA (2008), guided in its composition by the Specification for Archaeological Evaluation at Bishopdown, Salisbury (WSP 2008) and approved by Ms Helena Cave-Penny. The fieldwork also followed the Standard and Guidance for Archaeological Field Evaluation issued by the Institute of Field Archaeologists (2001), Statement of Standards and Practices Appropriate for Archaeological Field Work in Wiltshire (WCC 1995) and the Management of Archaeological Projects (English Heritage 1991). It was monitored by Ms Cave-Penny, including a site visit on 9 January 2009.

#### The site

- 1.3 The site is bounded to the south by Pearce Way, to the west by fields, to the north by paddocks and east by the River Bourne (Fig. 2). The site lies between approximately 55m and 79m AOD with ground level dropping away into the western portion of the site and to the north east.
- 1.4 The proposed development area encloses an area of approximately 12ha, and comprises of three fields of arable land.
- 1.5 The underlying solid geology of the area is mapped as Upper Chalk of the Upper Cretaceous era with locally occurring Pleistocene Valley Gravel (BGS 1976). The natural deposits encountered on site consisted of chalk and gravels.

#### Archaeological background

- 1.6 The site lies in an area of known archaeological potential. Old Sarum (Scheduled Ancient Monument no. 26715) lies approximately 1km to the west of the Site. It is a multivallate (defences composed of more than one bank and ditch) Iron Age hillfort with contemporary settlement outside the ramparts.
- 1.7 A number of archaeological investigations have taken place within the site boundary (Fig. 2). An archaeological evaluation was undertaken by AC Archaeology in 1991 in the north central part of the site. During the evaluation a dense scatter of Neolithic flint flakes and scrapers were collected (WCC SMR ref: SU13SE105), along with Bronze Age flint implements in the form of a scatter of flakes and scrapers (SU13SE150). A scatter of Romano-British tile and pottery fragments was also recovered (SU13SE314). A fieldwalking exercise was undertaken by AC Archaeology at Bishopdown Farm in 1994 (SU13SE164). The area surveyed comprised a single field parcel covering c. 7ha. Six Bronze Age flint tools and a single fragment of Beaker pottery were found.
- An undated field system to the south and west of Green Acres is visible on aerial photographs as earthworks (SU13SE654). The field system was confirmed as a series of subsoil features by a geophysical survey undertaken in 1992. An archaeological evaluation at Bishopdown Farm approximately 250m to the south of the site (SU13SE154) found a pit containing probable Bronze Age pottery and cremated bone. Burnt flint was also recovered during the archaeological evaluation. A loopless Bronze Age palstave (a metal cutting implement hafted by a forked wooden handle and secured in place) was found in fields at Bishopdown Farm in 1915 approximately 375m to the south of the Site (SU13SE155 not illustrated). A scatter of Bronze Age flakes, cores and burnt flint were collected by AC Archaeology in 1991 during a field evaluation at Bishopdown approximately 200m to the west of the site (SU13SW153 not illustrated).
- 1.9 Remains of an Iron Age settlement were excavated at Bishopdown in 1992 approximately 700m to the south of the Site. This included a 'V'-profiled ditch which contained considerable quantities of burnt flint and other occupation debris. A total of 26 pits, including bell-profiled storage pits, were also recorded in the evaluation. These were clustered predominantly on the north-facing chalk slope (SU13SE211).

A scatter of Romano-British pottery sherds, tile and burnt flint were collected during an evaluation by AC Archaeology in 1991 at Bishopdown Farm approximately 700m to the south-west of the site. The excavation at Pond Field, Bishopdown also recovered Romano-British pottery fragments in 1993 approximately 300m to the south of the site (SU13SE316). A series of undated pits and linear features have been recorded approximately 300m to the south west of the site at Bishopdown, which suggests a settlement site (SU13SW670).

- 1.10 A geophysical survey of the site was undertaken by Archaeological Surveys in 2008. This comprised a scanning magnetic susceptibility reconnaissance survey across the whole site, followed by detailed magnetometry of 50% (6ha) of the site.
- 1.11 The full report upon the geophysical survey is presented as Appendix E. What follows is a brief summary. The detailed magnetometry was carried out across four areas. Within Area 1 a number of linear anomalies interpreted as former land boundary ditches were observed. Other linear and curvilinear anomalies were not confidently interpreted; the curvilinear anomalies, in particular, were very weak. In addition, there were many pit-like anomalies. A confident interpretation could not be reached as many may relate to the underlying geology - a couple of larger ones within the western part of Area 1 appeared more likely to be anthropogenic in origin. Area 2 contained more possible pit-like features. Area 3 contained a sub-rounded positive anomaly, possibly an infilled pit, depression or quarry. Area 4 contained a negative, possibly rectilinear feature. The negative response was associated with material of low magnetic susceptibility i.e. in this area subsoil/chalk/flint. This type of response can indicate former earthworks although can be associated with agricultural activity. In addition there were possible pit-like anomalies and more amorphous positive zones some of which may have related to the negative anomaly (D. Sabin, pers. comm.).

# Archaeological objectives

1.12 The objectives of the evaluation are to provide data on the date, character, quality, survival and extent of the archaeological deposits within the application area in order that an informed decision on their importance in a local, regional or national context can be made. This information will assist Salisbury District Council in making an

informed judgement on the significance of the archaeological resource, and the likely impact upon it of the proposed development.

#### Methodology

- 1.13 The fieldwork comprised the excavation of 27 trenches all measuring 50m in length and 1.8m wide, in the locations shown on the attached plan (Fig. 2). Nineteen of the trenches were targeted upon geophysical anomalies potentially representing archaeological features. The remaining eight were located in areas not covered by the geophysical survey. Trench 26 was relocated due to the presence of overhead power lines and trench 11 was expanded to the north and south due to the presence of buried human remains, with the approval of Ms Cave-Penny.
- 1.14 All trenches were excavated by mechanical excavator equipped with a toothless grading bucket. All machine excavation was undertaken under constant archaeological supervision to the top of the first significant archaeological horizon or the natural substrate, whichever was encountered first. Where archaeological deposits were encountered they were excavated by hand in accordance with CA Technical Manual 1: Fieldwork Recording Manual (2007).
- 1.15 Deposits were assessed for their palaeoenvironmental potential in accordance with CA Technical Manual 2: The Taking and Processing of Environmental and Other Samples from Archaeological Sites (2003) and a single pit was sampled and processed primarily for artefact recovery. All artefacts recovered were processed in accordance with CA Technical Manual 3: Treatment of Finds Immediately After Excavation (1995).
- 1.16 The archive and artefacts from the evaluation are currently held by CA at their offices in Kemble. Subject to the agreement of the legal landowner the artefacts will be deposited with Salisbury and South Wiltshire Museum, along with the site archive. A summary of information from this project, set out within Appendix D, will be entered onto the OASIS online database of archaeological projects in Britain.

#### 2. RESULTS (FIGS 2-5)

- 2.1 This section provides an overview of the evaluation results; detailed summaries of the recorded contexts, finds and environmental samples (palaeoenvironmental evidence) are to be found in Appendices A, B and C respectively.
- 2.2 During the evaluation eight ditches, thirteen pits, two postholes, a trackway and a flint and chalk bank were identified within trenches 2, 3, 4, 5, 6, 7, 8, 11, 13, 14, 16, 18, 19, 20, 26 and 27. One pit (trench 4) was dated to the Neolithic/Bronze Age and is thought to represent flint extraction from the natural chalk deposits. Two undated pits of similar form and probable function were revealed in trenches 3 and 13. A heavily truncated pit in trench 14 contained pottery dating to the Late Neolithic/Early Bronze Age; an adjacent pit, although undated, contained burnt flint and could potentially be contemporary. Worked flint was recovered from a pit in trench 5 and pit in trench 8. In trench 11 a ditch contained articulated human remains representing two inhumation burials. The remainder of the archaeological features were artefactually sterile and may date from the prehistoric period onwards. Trenches 1, 9, 10, 12, 15, 17, 21, 22, 23, 24 and 25 were devoid of archaeological features. Tree throw pit pits were identified in trenches 4, 5, 7, 8, 10, 14 and 26 with worked flint and medieval pottery recovered from their fills (trenches 4 and 10 respectively). A broadly similar stratigraphic sequence was identified in all of the trenches. Undisturbed natural substrate, comprising chalk in the western part of the site and valley gravels to the east, was revealed within all of the trenches, at a depth of 0.1m to 0.51m below present ground level (bpgl). Intermittent subsoil was revealed in trenches 2, 6, 7, 11, 18, 19, 20, 21, 22, 26 and 27 up to 0.42m thick which in turn was sealed by cultivated topsoil up to 0.51m thick.

## Trench 2 (Fig. 2)

2.3 Pit 204 contained a single fill 203 which was devoid of artefactual evidence.

### Trench 3 (Figs 2 & 3)

2.4 An undated pit 309 contained a single fill 308. Interpreted as a flint extraction pit, the loose silt fill 308 contained natural flint and chalk fragments indicating rapid backfilling. To the south of the extraction pit undated postholes 303 and 307, and pit

305 could potentially form part of a wider structure extending beyond the trench limits.

### Trench 4 (Fig. 2)

2.5 Pit 408 contained a number of slump and backfill deposits 402, 403, 404, 405, 406 and 407 containing two sherds of coarse flint tempered Neolithic/Bronze Age pottery possibly from the same vessel and has been interpreted as a flint extraction pit. A number of tree throw pit pits were also identified, with fill 409 within tree throw pit 410 containing re-fitting flakes of worked flint lending weight to the flint extraction interpretation for 408.

#### Trenches 5, 6 & 7 (Fig. 2)

An undated north/south orientated ditch (503 and 604) was revealed within trenches 5 and 6 respectively, containing fills 502 and 603. Identified as a linear geophysical anomaly, its form was very similar to ditch 1122 in trench 11 to the east, tentatively suggesting they may form part of a contemporary field or enclosure system. Undated ditch 704 in trench 7 also had a similar form to 503 and 604. An additional undated ditch 706 to the west of 704 contained a single fill 705 and was stratigraphically earlier than 704. A single pit 506 was also identified in trench 5, its fill 504 containing a possible worked flint flake. Tree throw pit 508 contained an artefactually sterile fill 507.

#### Trench 8 (Fig. 2)

2.7 Pit 803 contained a single fill 802 from which was recovered a worked flint flake and animal bone. Two tree throw pits 805 and 807 were also identified.

#### Trench 11 (Figs 2 & 4)

2.8 A number of sections were excavated through a north-east/south-west orientated ditch 1122. Identified as a linear geophysical anomaly continuing beyond the survey limits to the north-east, the ditch terminated to the south-west. Two articulated human skeletons 1123 and 1124 were revealed within the ditch cut, these were not fully excavated. Skeleton 1124 lay on the base of the south-west terminal end of the ditch and appeared to be interred in a crouched position, head to the south.

Skeleton 1123 lay extended, head to the south on the base of the ditch cut 3.5 metres to the north of 1124. Overlying the inhumations a number of clearly stratified fills were recorded within the ditch cut suggesting their interment immediately post dated the initial cutting of the ditch. No artefactual evidence was recovered from the ditch fills. To the east of ditch 1122 three undated pits 1106, 1108 and 1110 were also recorded.

## Trench 13 (Fig. 2)

2.9 Pit 1305 contained a number of slump and backfill deposits 1306, 1307, 1308 and 1309. Its form and the nature of the fills were very similar to that of extraction pit 408 and it has therefore also been interpreted as a flint extraction pit. A later, also undated pit, 1303 cut the northern edge of 1305 and contained a single fill 1304. At the southern end of trench 13 a recent dump deposit 1302 (not illustrated) overlay the topsoil 1300 to a depth of 0.6 metres. Forming a low bank extending to the west along the southern site boundary, 1302 probably represents material dumped during the construction of the adjacent housing development.

#### Trench 14 (Figs 2 & 5)

2.10 A shallow, heavily truncated pit 1407 contained a single fill 1406 from which was recovered Late Neolithic/Early Bronze Age Beaker pottery. Burnt bone fragments, charcoal, hazel nut fragments, mollusc shells and charred seeds were recovered from a bulk sample of 1406. The presence of Beaker pottery and burnt bone fragments could suggest that this feature is the truncated remains of a cremation pit, although it should be noted that the bone fragments were too small to be identified further. To the south-west an additional undated pit 1405 contained burnt flint within fill 1404. Two tree throw pits 1403 and 1409 were recorded in addition to a recent dump deposit 1410 (not illustrated) visible as a continuation of the low bank recorded in trench 13.

#### Trench 16 (Fig. 2)

2.11 North/south orientated ditch 1603, visible as a linear geophysical anomaly contained a single fill 1602 devoid of artefactual material.

#### Trench 18 (Fig. 2)

2.12 Pit 1804 contained a single artefactually sterile fill 1803.

#### Trench 19 (Fig. 2)

2.13 A substantial east/west orientated ditch 1904 contained a single fill 1903. No dateable artefacts were recovered.

# Trench 20 (Fig. 2)

2.14 Heavily truncated ditch 2004 was aligned broadly north/south and contained a single fill 2003 devoid of dateable artefacts.

#### Trench 26 (Fig. 2)

2.15 Positioned to intersect the north-western side of a positive rectilinear geophysical anomaly, the southern end of trench 26 revealed a loosely compacted stone and gravel deposit 2604 orientated on a broadly north-east/south-west alignment. Surviving to a maximum depth of 0.14m with heavy modern plough damage to the upper portion of the deposit, 2604 has been interpreted as an agricultural track of undetermined date.

#### Trench 27 (Figs 2 & 5)

2.16 Also positioned to investigate the north-east and south-western sides of the rectilinear geophysical anomaly, trench 27 revealed an outcrop of natural chalk 2705 coinciding with the north-eastern side of the anomaly and the remnants of a chalk faced bank with flint gravel core 2707 aligned with the south-western side of the anomaly. Bank 2707 measured 2.25m wide, was aligned broadly north-east/south-west and survived to a depth of 0.28m. To the south of the bank a north-east/south-west orientated ditch 2704 contained a single fill 2703 but remains undated.

#### The Finds and Palaeoenvironmental Evidence

- 2.17 Quantities of pottery, animal bone, worked or burnt flint and nut shell were recovered from eight deposits (Appendix B). Included are quantities of pottery and worked flint recovered following processing of soil sample no. 1, which was taken from pit 1407 for bulk finds recovery and environmental analysis.
- 2.18 A total of 83 sherds (206g) of pottery of Beaker type was recovered from the fill, 1406, of 1407. Of this material 45 sherds, weighing 40g and including many small fragments, were recovered from soil sample no. 1. At least four vessels are represented in a similar fabric characterised by common grog and sparse limestone inclusions. One vessel, represented as 12 bodysherds, is of Beaker fineware type and features decoration as rows of impressed square-tooth comb impressions. A sherd from a second Beaker fineware vessel features scoring or possibly indistinct comb impressions. The remaining material occurs as thicker-walled sherds including rim and base sherds. All exhibit 'crowsfoot' type splayed fingernail impressions, of the kind commonly seen with Beaker coarsewares. Beaker pottery can be expected to date in the range c. 2400–1700 BC.
- 2.19 A further two sherds of prehistoric pottery was recovered from deposits 402 and 404. Both are unfeatured bodysherds in a coarse calcined flint-tempered fabric and might derive from the same vessel. In the absence of evidence for vessel form, broad earlier Prehistoric (Neolithic to Bronze Age) dating is suggested.
- 2.20 A single small bodysherd in a unglazed oxidised sandy fabric from the fill 1002 of tree throw pit 1003 is tentatively identified as of medieval date and possibly of the local tradition of scratch-marked wares.
- 2.21 A small quantity of worked and unworked, burnt flint was recovered from five deposits (appendix B). Of this material, two flakes were recovered from soil sample no. 1. The worked material, all of which exhibits a deep white or mottled patina, consists of flakes without secondary working. Most noteworthy, as suggestive of the presence of stratified material, are re-fitting flakes from deposit 409. No precise dating is possible for the worked (or burnt) lithics, although the characteristics of hard-hammer use and 'squat' proportions exhibited by the flake removals, would be consistent with a date within the later Neolithic to Bronze Age range.

- 2.22 A small quantity of extremely weathered animal bone was recovered from pit fill 802, in the form of a cow-sized metapodial. The damage to the bone surface is consistent with a chalky soil with water-percolation and root erosion. A snail shell from deposit 1406 was too fragmented to identify to species but appeared to be a terrestrial type. A single item of charred plant material was recovered from the fill 1002 of tree throw pit 1003 which has been identified as walnut shell.
- 2.23 A single bulk sample (10L) was taken from a possible cremation deposit 1406, the fill of pit cut 1407. Bone fragments recovered were burnt white in colour but were too small to identify further. Charcoal and hazelnut shell fragments were recovered, few exceeding 5mm across. Seeds were a combination of charred and uncharred specimens, the latter likely to be modern. Several mollusc shells are complete and can be identified to species. At least three other species of land snail are present but were not identified.

#### 3. DISCUSSION

- 3.1 Two pits of prehistoric date were identified during the evaluation. Pit 408 contained two sherds of coarse flint tempered pottery dating to the Neolithic/Bronze Age. Pit 1407 contained grogged Beaker pottery representing at least four vessels all exhibiting impressed decoration and date in the range c. 2400-1700 BC. It is probable that pit 408 represents flint extraction from the natural chalk substrate and although undated pits 309 and 1305 probably had the same function. The Beaker pottery in pit 1407 could be indicative of domestic or ritual/funerary activity. The burnt bone recovered from pit 1407 could not be identified to species and combined with the limited scope of the evaluation did not provide any additional evidence to support either interpretation. Evidence for Bronze Age activity has been recovered during previous archaeological works in the vicinity, both from within the current site boundary and to the south and west, including a pit containing pottery and cremated bone located approximately 100m to the south of the current site.
- 3.2 In addition eight pits, 204, 506, 803, 1106, 1108, 1110, 1405 and 1804 were identified but were found to be devoid of artefactual material. However given the limited number of dated pits identified during the evaluation containing prehistoric material, it is plausible that at least some if not all of the above are prehistoric.

- 3.3 Of the eight ditches identified during the evaluation, 503/604, 704, 706, 1122, 1603, 1904, 2004 and 2704, all were found to be devoid of artefactual material and therefore remain undated. Within ditch 1122, identifiable as a linear geophysical anomaly continuing to the north-east and terminating to the south-west, two articulated human skeletons 1123 and 1124 were revealed. Although these were not fully excavated it was possible to ascertain skeleton 1124 lay in a crouched position, head to the south and skeleton 1123 lay extended, head also to the south. Clearly stratified fills within the ditch suggest their interment was a deliberate act immediately post-dating the cutting of the ditch. This would suggest some degree of ritual activity. However, the limited scope of this evaluation did not allow more extensive investigation in the vicinity to ascertain whether the ditch and burials form part of a wider ritual complex, or whether the burials are isolated occurrences. No artefactual material was found in association with these burials and it therefore possible that they are prehistoric rather than of Romano-British date.
- 3.4 With the exception of 704, 706, 1904 and 2004 all the ditches were identified by the geophysical survey and all probably represent remnants of former field systems or enclosures. However, it should be noted that a number of features were encountered which had not been identified by the geophysical survey and conversely not all features depicted by the survey were identified.
- 3.5 Bank 2707, initially thought to be the south-eastern side of a rectangular enclosure was proven to be a discreet feature. Without being able to ascertain its full form in plan and a total lack of dating evidence, very few conclusions can be drawn as to its function other than its surviving dimensions suggest it would have been a substantial feature in the landscape at the time of its construction.
- 3.6 The track 2604 identified in trench 26 aligns with a bridged crossing of the River Bourne to the east and the present field access onto the Green Lane to the west, suggesting it may represent a recently disused access way, although no dating evidence was recovered.
- 3.7 A large number of tree throw pits were also identified. Although the majority remain undated and are simply indicative of the site once being woodland, 410 contained worked flint suggesting a prehistoric date and 1003 contained pottery tentatively identified as of medieval date.

- 3.8 The low bank along the southern boundary of the site 1302 and 1410 was revealed to be redeposited material overlying the original topsoil horizon and probably represents dumping of soil from the adjacent housing development.
- 3.9 No Iron Age or Romano-British material was recovered during the evaluation suggesting the settlements identified to the south and south-west during previous archaeological works did not extend as far as the investigation area. In addition no evidence survived for an undated field system visible on aerial photographs as earthworks, probably having been obliterated by recent agricultural activity.

#### 4. CA PROJECT TEAM

Fieldwork was undertaken by Ray Holt, assisted by Kelly Saunders, Darran Muddiman and Hazel O'Neill. The report was written by Ray Holt. The illustrations were prepared by Rachael Kershaw. The archive has been compiled by Ray Holt, and prepared for deposition by Victoria Taylor. The project was managed for CA by Richard Young.

#### 5. REFERENCES

- BGS (British Geological Survey) 1976 Geological Survey of England and Wales, Sheet 298, Salisbury, Scale 1:50,000
- CA (Cotswold Archaeology) 2008 Bishopdown Farm, Salisbury, Wiltshire: Written Scheme of Investigation for an Archaeological Evaluation
- WSP (WSP Environmental UK) 2008 Specification for Archaeological Evaluation at Bishopdown, Salisbury

# **APPENDIX A: CONTEXT DESCRIPTIONS**

Trench 1. Ground Level 76.01m to 78.35m OD

No.	Туре	Description	Length (m)	Width (m)	Depth (m)	Spot- date
100	Deposit	Topsoil. Mid brown silt with flint inclusions			0.51	
101	Deposit	Natural. Substrate. Chalk with flint and gravel				

Trench 2. Ground level 74.72m to 74.78m OD

No.	Type	Description	Length	Width	Depth	Spot-
			(m)	(m)	(m)	date
200	Deposit	Mid brown silt with flint inclusions			0.22	
201	Deposit	Subsoil. Orange brown silt			0.13	
202	Deposit.	Natural Substrate. Chalk with flint gravel				
203	Fill	Fill of 204. Light brown silt, occasional flint		>1.9	0.64	
204	Cut	Ditch terminus/pit. Concave sides and base		>1.9	0.64	

Trench 3. Ground level 76.45m to 78.97m OD

No.	Туре	Description	Length (m)	Width (m)	Depth (m)	Spot- date
300	Deposit	Topsoil. Mid brown silt with flint inclusions			0.37	
301	Deposit	Natural Substrate. Chalk with flint gravel				
302	Fill	Fill of 303. Dark brown silt, occasional flint	-	0.3	0.16	
303	Cut	Cut of pit. Circular with steep sides and a flat base		0.3	0.16	
304	Fill	Fill of 305. Mid brown silt, occasional flint		0.7	0.15	
305	Cut	Cut of pit. Circular with moderately sloping sides and a flat base		0.7	0.15	
306	Fill	Fill of 307. Dark brown silt, occasional flint		0.25	0.25	
307	Cut	Cut of posthole. Circular with almost vertical sides and a flat base		0.25	0.25	
308	Fill	Fill of 309. Dark brown silt, occasional flint and chalk		3.8	0.66	
309	Cut	Cut for quarry pit. Sub-circular with irregular sides and a concave base		3.8	0.66	

Trench 4. Ground level 77.86m to 78.28m OD

No.	Туре	Description	Length (m)	Width (m)	Depth (m)	Spot- date
400	Deposit	Topsoil. Dark brown clay silt, occasional chalk			0.34	
401	Deposit	Natural Substrate. Chalk				
402	Fill	Sixth fill of 408. Dirty white re-deposited chalk with lenses of mid orange brown clay silt. No flint	1.8	1.7	0.36	Neolithic /Bronze Age
403	Fill	Joint fourth fill of 408. Pale brown clay silt and chalk	1.8	0.83	0.18	
404	Fill	Joint fourth fill 0f 408. Dark grey brown silt, occasional chalk. No flint	1.65	1.07	0.57	Neolithic /Bronze Age
405	Fill	Third fill of 408. Dirty white re-deposited chalk and clay silt, occasional large nodules of flint	1.8	0.7	0.29	
406	Fill	Second fill of 408. Mid grey brown clay silt and degraded chalk. No flint		0.67	0.18	
407	Fill	First fill of 408. Dirty white chalk and some well mixed clay silt. No flint		0.4	0.08	

408	Cut	Cut for quarry pit for flint extraction. Sub-circular with irregular concave sides and a flat base. Very little flint found in backfill	1.8	2.85	0.66	
409	Fill	Fill of 410. Mid orange brown clay silt	1.9	1.1	0.27	prehisto ric
410	Cut	Tree throw pit. Concave sides and base with evidence for rooting	1.9	1.1	0.27	
411	Fill	Fill of 412. Mid orange brown clay silt	1.83	1.8	0.09	
412	Cut	Tree throw pit. Very shallow irregular root action	1.83	1.8	0.09	
413	Fill	Fill of 414. Pale cream brown chalk clay silt	1.8	1.22	0.17	
414	Cut	Tree throw pit. Very irregular sides and base				

Trench 5. Ground level 71.53m to 73.58m OD

No.	Туре	Description	Length (m)	Width (m)	Depth (m)	Spot- date
500	Deposit	Topsoil. Dark grey brown clay silt, occasional chalk			0.28	
501	Deposit	Natural Substrate. Chalk				
502	Fill	Fill of 503. Mid brown clay silt and chalk	1.8	0.57	0.14	
503	Cut	Cut of north/south gully, concave and even sides and base	1.8	0.57	0.14	
504	Fill	Second fill of 506. Dark brown clay silt with rare flint and chalk fragments	2.4	1.8	0.21	
505	Fill	First fill of 506. Dark brown grey silt, frequent fragments of chalk	1.8	1.35	0.32	
506	Cut	Pit, possible tree throw pit. Irregular sides with evidence of rooting with slightly concave base	2.4	1.8	0.49	
507	Fill	Fill of 508. Mid grey brown silt	1.7	1.55	0.26	
508	Cut	Tree throw pit. Irregular sides with evidence for rooting	1.7	1.55	0.26	

Trench 6. Ground level 72.99m to 75.25m OD

No.	Туре	Description	Length	Width	Depth	Spot-
			(m)	(m)	(m)	date
600	Deposit	Topsoil. Mid brown silt, flint inclusions			0.22	
601	Deposit	Subsoil. Orange brown silt			0.11	
602	Deposit	Natural Substrate. Chalk with large flint inclusions				
603	Fill	Fill of 6004. Mid brown silt with flint flecks	>1.9	0.7	0.38	
604	Cut	Cut of NW-SE linear. Concave sides and base	>1.9	0.7	0.38	

Trench 7. Ground level 75.48m to 77.30m OD

No.	Туре	Description	Length (m)	Width (m)	Depth (m)	Spot- date
700	Deposit	Topsoil. Mid brown silt, flint inclusions			0.34	
701	Deposit	Subsoil. Orange brown silt			0.13	
702	Deposit	Natural Substrate. Chalk with flint and gravel				
703	Fill	Fill of 7004. Light brown silt, flint flecks	>1.9	0.5	0.45	
704	Cut	Cut of NW-SE linear. Concave sides and base	>1.9	0.5	0.45	
705	Fill	Fill of 7006. Dark brown silt, small fragments of flint	>1.9	1	0.12	
706	Cut	Cut NW-SE gully. Shallow concave sides and base	>1.9	1	0.12	

Trench 8. Ground level 71.85m to 73.92m OD

No.	Туре	Description	Length	Width	Depth	Spot-
			(m)	(m)	(m)	date
800	Deposit	Topsoil. Dark grey brown clay silt, occasional chalk			0.3	
801	Deposit	Natural Substrate. Chalk with mid brown silt lenses				
802	Fill	Fill of 803. Mid brown clay silt, occasional chalk	2.6	1.8	0.18	
803	Cut	Cut of ?pit. Irregualr sides with a flat base	2.6	1.8	0.18	
804	Fill	Fill of 805. Mid brown grey silt	1.45	1	0.35	
805	Cut	Tree throw pit. Penannular with irregular sides and	1.45	1	0.35	
		base				
806	Fill	Fill of 807. Mid brown grey silt	2.15	1.1	0.33	
807	Cut	Tree throw pit. Subcircular	2.15	1.1	0.33	

#### Trench 9. Ground level 69.68m to 71.64m OD

No.	Туре	Description	Length	Width	Depth	Spot-
		. •	(m)	(m)	(m)	date
900	Deposit	Topsoil. Mid brown silt, frequent chalk and flint			0.25	
901	Deposit	Natural Substrate. Chalk, frequent flint nodules				
902	Deposit	Dump of material to southern end of trench. Light			0.15	
		brown silt, frequent chalk and flint	<b>A</b>			

#### Trench 10. Ground level 69.96m to 71.47m OD

No.	Type	Description	Length	Width	Depth	Spot-
			(m)	(m)	(m)	date
1000	Deposit	Topsoil. Mid brown silt, flint inclusion			0.34	
1001	Deposit	Natural Substrate. Chalk with flint and gravel				
1002	Fill	Fill of 1003			0.62	medieval ?
1003	Cut	Tree throw pit, irregular sides and base			0.62	

# Trench 11. Ground level 69.90m to 70.87m OD

No.	Туре	Description	Length (m)	Width (m)	Depth (m)	Spot- date
1100	Deposit	Topsoil. Mid brown silt, flint inclusions	(111)	(111)	0.3	dato
1101	Deposit	Subsoil. Orange brown silt			0.2	
1102	Deposit	Natural Substrate. Chalk, flitninclusions				
1103	Fill	Third fill of 1104. Mid brown silt, occasional flint nodules	>1.9	0.8	0.09	
1104	Cut	Cut of N-S ditch. Steep and regular convex sides and concave base. Initial excavation revealed extended? Burial. Section moved and skeleton left in situ	>1.9	0.8	0.47	
1105	Fill	Fill of pit 1106. Mid brown silt, occasional flint nodules		>1.3	0.32	
1106	Cut	Cut of pit. Sub-circular, moderately sloping concave sides and base		>1.3	0.32	
1107	Fill	Fill of 1108. Mid brown silt, occasional flint nodules		>1.7	0.37	
1108	Cut	Cut of pit. Sub-circular, moderately sloping concave sides and base		>1.7	0.37	
1109	Fill	Fill of 1110. Mid brown silt, occasional small flint nodules		0.75	0.18	
1110	Cut	Cut of pit. Circular, moderately sloping concave sides and base		0.75	0.18	
1111	Fill	Second fill of 1104. Pale brown chalk and silt	>1.9	8.0	0.07	

1112	Fill	First fill of 1104. Mid brown silt, small flecks flint. Covers skeleton left in situ	>1.9	0.8	0.12
1113	Fill	Third fill of 1116. Mid brown silt, small flecks flint	>1.9	0.7	0.1
1114	Fill	Second fill of 1116. Pale brown chalk and silt	>1.9	0.7	0.08
1115	Fill	First fill of 1116. Mid brown silt, small flecks flint	>1.9	0.7	0.34
1116	Cut	Cut of N-S ditch. Steep and regular convex sides and concave base.	>1.9	0.7	0.52
1117	Fill	Fourth fill of 1121. Dark brown clay silt, occasional fragments of chalk	1	0.8	0.19
1118	Fill	Third fill of 1121. Mid orange brown clay silt with chalk		0.96	0.24
1119	Fill	Second fill of 1121. Dark brown grey fine chalk and silt		0.53	0.12
1120	Fill	First fill of 1121. Dark brown clay silt, frequent large flint fragments, occasional chalk fragments. Covers partially exposed skeleton left in situ		0.86	0.25
1121	Cut	Cut of N-S ditch terminus. Linear ditch with steep convex side ends in a circular pit with almost vertical sides and a flat base. Crouched? skeleton contained within the pit. Longitudinally sectioned, skeleton left in situ.	1	0.8	0.63
1122	Generic	Generic number for ditch 1104, 1116, 1121	<u> </u>	1	
1123	Skeleton	Partially exposed. Not lifted			
1124	Skeleton	Partially exposed. Not lifted			

#### Trench 12. Ground level 69.64m to 69.80m OD

No.	Type	Description	Length	Width	Depth	Spot-
			(m)	(m)	(m)	date
1200	Deposit	Topsoil. Mid brown silt, frequent chalk and flint			0.25	
		fragments				
1201	Deposit	Natural Substrate. Chalk, frequent flint nodules				

# Trench 13. Ground level 68.71m to 69.34m OD

No.	Туре	Description	Length (m)	Width (m)	Depth (m)	Spot- date
1300	Deposit	Topsoil. Mid to dark brown silt, frequent chalk and flint fragments			0.3	
1301	Deposit	Natural Substrate. Chalk, frequent flint nodules				
1302	Deposit	Redeposited topsoil at southern end of trench. Mid brown silt with frequent chalk			0.6	
1303	Cut	Cut of pit. Sub-rectangular with rounded corners, steeply sloping sides and a concave base. Truncates 1305	>1.7	1.25	0.54	
1304	Fill	Fill of 1303. Mid brown silt, frequent chalk and flint fragments.	>1.7	1.25	0.54	
1305	Cut	Cut for sub-circular pit. Moderate sloping sides and rounded concave base, contains deposits of redeposited chalk. Probably a flint extraction pit		>1.8	0.7	
1306	Fill	First fill of 1305. Mid orange brown silt, occasional chalk and flint fragments		1.2	0.22	
1307	Fill	Second fill of 1305. Yellow white re-deposited chalk, no flint.		0.64	0.18	
1308	Fill	Third fill of 1305. Light grey silty chalk, no flint		1	0.24	
1309	Fill	Fourth fill of 1305. Re-deposited white chalk, no flint		0.12	0.4	

Trench 14. Ground level 68.68m to 68.80m OD

No.	Type	Description	Length	Width	Depth	Spot-
			(m)	(m)	(m)	date

1400	Deposit	Topsoil. Mid grey brown clay silt with flint gravel			0.25	
1401	Deposit	Natural Substrate. Brown white chalk and flint gravel				
1402	Fill	Fill of 1403. Mid grey brown clay silt	1.9	0.8	0.35	
1403	Cut	Tree throw pit. Irregular concave sides and base	1.9	0.8	0.35	
1404	Fill	Fill of 1405. Mid grey brown clay silt with flint gravel	0.14	0.8	0.27	
1405	Cut	Cut of N-S sub-ovoid pit. Convex sides and concave base	1.14	0.8	0.27	
1406	Fill	Fill of 1407. Mid grey brown clay silt, occasional flint. Possible cremation?		0.55	0.08	Late Neolithic /Early Bronze Age
1407	Cut	Cut for possible cremation pit. Sub-circular with irregular concave sides and base.		0.55	0.08	
1408	Fill	Fill of 1409. Mid grey brown clay silt	1.1	0.9	0.27	
1409	Cut	Tree throw pit. Sub-circular with irregular sides and base	1.1	0.9	0.27	
1410	Deposit	Redeposited topsoil to southern end of trench. Mid to light grey brown clay silt with flint gravel			1.04	

# Trench 15. Ground level 69.03m to 69.92m OD

No.	Туре	Description	Length	Width	Depth	Spot-
			(m)	(m)	(m)	date
1500	Deposit	Topsoil. Mid brown silt with frequent flint and chalk			0.25	
1501	Deposit	Natural Substrate. White chalk, occasional flint nodules				

# Trench 16. Ground level 70.04m to 71.06m OD

No.	Туре	Description	Length (m)	Width (m)	Depth (m)	Spot- date
1600	Deposit	Topsoil. Mid grey brown clay silt with flint gravel			0.28	
1601	Deposit	Natural Substrate. Light brown white chalk and silty clay				
1602	Fill	Fill of 1603. Mid red brown clay silt and flint gravel	>1.8	0.41	0.08	
1603	Cut	Cut of N-S gully. Concave sides and base. Agricultural?	>1.8	0.41	0.08	

# Trench 17. Ground level 69.80m to 69.64m OD

No.	Туре	Description	Length (m)	Width (m)	Depth (m)	Spot- date
1700	Deposit	Topsoil. Mid brown silt, frequent chalk fragments			0.25	
1701	Deposit	Natural Substrate. Chalk with occasional flint nodules				

# Trench 18. Ground level 68.27m to 70.44m OD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot- date
1800	Deposit	Topsoil. Mid brown silt, occasional flint	()	()	0.2	
1801	Deposit	Subsoil. Orange brown clay silt			0.02	
1802	Deposit	Natural Substrate. Chalk with lenses of chalky silt				
1803	Fill	Fill of 1804. Mid brown silt, occasional flint		1.8	0.4	
1804	Cut	Cut of pit. Oval, moderately sloping sides with a concave base. Possibly a flint extraction pit		1.8	0.4	

Trench 19. Ground level 70.80m to 71.06m OD

No.	Туре	Description	Length	Width	Depth	Spot-
			(m)	(m)	(m)	date
1900	Deposit	Topsoil. Mid brown silt, flint inclusions			0.2	
1901	Deposit	Subsoil. Orange brown clay			0.07	
1902	Deposit	Natural Substrate. Chalk				
1903	Fill	Fill of 1904. Dark brown silt, occasional flint	>1.9	1.4	0.38	
1904	Cut	Cut of E-W ditch. Steep sides and a concave base	>1.9	1.4	0.38	

#### Trench 20. Ground level 69.46m to 69.86m OD

No.	Туре	Description	Length (m)	Width (m)	Depth (m)	Spot- date
2000	Deposit	Topsoil. Mid grey brown clay silt, occasional flint gravel	()	()	0.2	dato
2001	Deposit	Subsoil. Mid grey brown clay silt with flint gravel			0.2	
2002	Deposit	Natural substrate. Mid orange brown silt clay and flint gravel				
2003	Fill	Fill of 2004. Mid to light grey brown clay silt with flint gravel	>1.8	0.96	0.2	
2004	Cut	Cut of N-S ditch. Concave sides and a flat base	>1.8	0.96	0.2	

# Trench 21. Ground level 63.71m to 65.91m OD

No.	Type	Description	Length	Width	Depth	Spot-
			(m)	(m)	(m)	date
2100	Deposit	Topsoil. Mid brown silt, flint inclusions			0.2	
2101	Deposit	Subsoil. Orange brown clay silt			0.42	
2102	Deposit	Natural Substrate. Mid brown flint gravel with clay				
		lenses				

#### Trench 22. Ground level 66.38m to 67.79m OD

No.	Туре	Description	Length (m)	Width (m)	Depth (m)	Spot- date
2200	Deposit	Topsoil. Mid brown silt, flint inclusions			0.17	
2201	Deposit	Subsoil. Orange brown silt			0.16	
2202	Deposit	Natural Substrate. Chalk and light brown silt				

#### Trench 23. Ground level 66.11m to 67.78m OD

No.	Туре	Description	Length	Width	Depth	Spot-
			(m)	(m)	(m)	date
2300	Deposit	Topsoil. Mid brown silt, frequent chalk and flint			0.3	
		fragments				
2301	Deposit	Natural Substrate north end of trench. White chalk				
2302	Deposit	Natural Substrate south end of trench. Orange				
		brown clay silt				

Trench 24. Ground level 63.57m to 63.64m OD

No.	Туре	Description	Length (m)	Width	Depth (m)	Spot- date
			(111)	(m)	(111)	uale
2400	Deposit	Topsoil. Mid brown silt, frequent chalk and flint			0.3	
		fragments				
2401	Deposit	Natural Substrate. White chalk and flint nodules				·

#### Trench 25. Ground level 59.17m to 60.62m OD

No.	Туре	Description	Length	Width	Depth	Spot-
			(m)	(m)	(m)	date
2500	Deposit	Topsoil. Mid brown silt, frequent chalk and flint			0.3	
		fragments				
2501	Deposit	Natural Substrate. White chalk, frequent flint				
		nodules				
2502	Deposit	Natural Substrate. Mid orange brown silt with high				
		proportion flint gravel				

# Trench 26. Ground level 56.15m to 59.93m OD

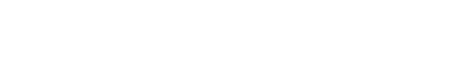
No.	Туре	Description	Length (m)	Width (m)	Depth (m)	Spot- date
2600	Deposit	Topsoil. Mid grey brown clay silt with flint nodules			0.18	
2601	Deposit	Subsoil. Mid orange grey brown clay silt with flint nodules			0.15	
2602	Deposit	Natural Substrate. Orange brown silty clay and flint gravel				
2603	Deposit	Natural Substrate. Light grey chalk and flint nodules				
2604	Deposit	Mid grey brown silty clay with flint nodules, possibly a track		>1.8	5.4	0.14

# Trench 27. Ground level 57.58m to 59.13m OD

No.	Туре	Description	Length (m)	Width (m)	Depth (m)	Spot- date
2700	Deposit	Topsoil. Mid brown silt, flint inclusions			0.3	
2701	Deposit	Subsoil. Orange brown silt			0.2	
2702	Deposit	Natural Substrate. Red brown silt with flint nodules				
2703	Fill	Fill of 2704. Dark brown silt, occasional flint flecks	>1.9	1.3	0.53	
2704	Cut	Cut of N/E-S/W ditch. Shallow sloping sides and concave base	>1.9	1.3	0.53	
2705	Deposit	Natural Substrate. Large fragment of chalk				
2706	Deposit	Natural Substrate. Silty chalk				
2707	Deposit	Dark brown silty and flint nodules. Possible E-W stone built bank	>1.9	3	0.48	

# APPENDIX B: THE FINDS

Context	Artefact type	Count	Weight (g)	Spot-date
402	Prehistoric pottery: coarse flint-tempered	1	7	Neolithic/Bronze
				Age
404	Prehistoric pottery: coarse flint-tempered	1	9	Neolithic/Bronze
				Age
409	Worked flint: flakes (re-fitting)	2	17	prehistoric
504	(?) Worked flint: flake or natural	1	2	-
802	Worked flint: flake	1	10	-
	Animal bone: cow-sized	8	44	
1002	Medieval? pottery: sandy coarseware	1	3	medieval?
	Nut shell: walnut, charred	1	1	
1404	Burnt flint	10	92	-
1406	Prehistoric pottery: Beaker grogged	38	166	Late Neolithic/
	Mollusc; land snail unidentified	2	0.5	Early Bronze Age
				(Beaker)
1406	Prehistoric pottery: Beaker grogged	45	40	Late Neolithic/
<1>	Worked flint: flakes	2	3	Early Bronze Age
				(Beaker)



#### APPENDIX C: THE PALAEOENVIRONMENTAL EVIDENCE

A single bulk sample (10L) was taken from a possible cremation deposit 1406, the fill of pit cut 1407. The sample was processed by flotation in order to recover any human bone and for finds recovery. A flotation tank was used with a 1mm residue mesh and 0.25mm and 1mm flot sieves.

The 1mm flot (8.5g) contained modern roots, small balls of concreted silt and frequent mollusc shell. The 0.25mm flot (15g) comprised modern roots, tiny fragments of mollusc shell and fine sand/silt. The residue of the sample was sorted and produced a wide range of artefacts and ecofacts. The artefactual material is described in Appendix B. Ecofactual material comprised; 9.8g of molluscs shells (200+ fragments), 0.2g of burnt bone (four fragments), 0.2g of charcoal (26 fragments), 0.1g of coal (seven fragments), 0.4g of charced hazelnut shell (10 fragments) and 0.2g of seeds (34 fragments). The bone fragments were burnt white in colour but were too small to identify further. The charcoal and hazelnut shell fragments were quite small, few exceeding 5mm across. The seeds were a combination of charred and uncharred specimens, the latter likely to be modern.

Several mollusc shells are complete and can be identified to species; *Pomatius elegans* (the round mouthed snail), *Discus rotundus* (the rounded snail) and *Cecilodes acicula* (the blind white snail) were identified. At least three other species of land snail are present but could not be positively identified. *Pomatius elegans* is a species found only on chalk and limestone, which fits with the chalk geology of the site. *Discus rotundus* is a catholic species, able to tolerate a wide range of habitats. *Cecilodes acicula* should be excluded from any habitat reconstruction because of its burrowing habit.

The material recovered from the sample gives an indication of what types of material are present at the site and how well these are preserved. The mollusc shells are in good condition and not too fragmented. As a pit fill, this deposit is not suitable for molluscan analysis for habitat reconstruction, as it has been deliberately rather than naturally filled. It does, however, demonstrate that a range of land snail species are present and well-preserved. When developing a sampling strategy for any further work at the site, sampling for snails targeted at the silting/primary fills of ditches is recommended.

# APPENDIX D: OASIS REPORT FORM

PROJECT DETAILS		
Project Name	Bishopdown Farm, Salisbu	ury, Wiltshire
Short description	Cotswold Archaeology Bishopdown Farm, Saliseven trenches were exca  Two pits of prehistoric dawith eleven undated pits eight undated ditches, the chalk and flint bank and a	sbury, Wiltshire. Twenty
Project dates	6 – 20 January 2009	
Project type	Field Evaluation	
Previous work	Yes	
Future work	Unknown	
PROJECT LOCATION		
Site Location	Bishopdown Farm, Salisbu	ury, Wiltshire
Study area	12ha	
Site co-ordinates	SU 1551 3260	
PROJECT CREATORS		
Name of organisation	Cotswold Archaeology	
Project Brief originator	WSP Environmental UK	
Project Design (WSI) originator	Cotswold Archaeology	
Project Manager	Richard Young	
Project Supervisor	Ray Holt	
PROJECT ARCHIVES	Intended final location of archive	Content
Physical	Salisbury and South Wiltshire Museum	Ceramics, animal bone
Paper	Salisbury and South Wiltshire Museum	Trench Sheets, context sheets, matrices, photographic record sheets, permatrace drawings, drawing record sheets
Digital	Salisbury and South Wiltshire Museum	digital photos
BIBLIOGRAPHY		
CA (Cotswold Archaeology) 2008 Bishopdown Farn	n, Salisbury, Wiltshire: Arch	naeological Evaluation CA
typescript report 09026	-	-

# APPENDIX E: GEOPHYSICAL SURVEY REPORT

# ARCHAEOLOGICAL SURVEYS LTD

# Bishopdown, Salisbury

Magnetic Susceptibility and Magnetometer Survey

for

Cotswold Archaeology

Fieldwork by David Sabin and David Kenyon Report by David Sabin and Kerry Donaldson

Survey date - from 3<sup>rd</sup> December to 5<sup>th</sup> December 2008 Ordnance Survey Grid Reference - SU 155 325

Archaeological Surveys Ltd PO Box 2862, Castle Combe, Chippenham, Wiltshire, SN14 7WZ Tel: 01249 782234 Fax: 0871 661 8804

Email: info@archaeological-surveys.co.uk
Web: www.archaeological-surveys.co.uk

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#### **SUMMARY**

A geophysical survey was carried out across approximately 17ha of land at Bishopdown on the northern edge of Salisbury in Wiltshire.

A magnetic susceptibility reconnaissance survey indicated a wide zone of magnetic enhancement within the central part of the site. Subsequent targeted detailed magnetometry across 5ha (Area 1) located a number of positive linear anomalies that may relate to field boundaries associated with a former field system. Other linear, curvilinear and discrete anomalies also exist within the main survey area but their form and magnitude do not allow for confident interpretation.

Three smaller areas totaling 1ha (Areas 2-4) were targeted on more discrete zones of enhanced magnetic susceptibility. Several positive and negative linear and discrete anomalies were located but could not be confidently interpreted.

#### 1 INTRODUCTION

## 1.1 Survey background

- 1.1.1 Archaeological Surveys Ltd was commissioned by Cotswold Archaeology, on behalf of WSP Environmental Ltd, to undertake a geophysical survey of an area of land at Bishopdown Farm that has been outlined for residential development by Barratt Southern Counties. This survey formed part of an assessment of any potential archaeology that may be affected by the development.
- 1.1.2 The geophysical survey was carried out in accordance with a Specification produced by WSP Environmental (2008) and requested by Helena Cave-Penney, Archaeological Officer at Wiltshire County Council.

# 1.2 Survey objectives and techniques

- 1.2.1 The objective of the survey was to detect and precisely locate buried archaeological features using non-invasive techniques. The results will help in the subsequent archaeological field evaluation programme.
- 1.2.2 Magnetic susceptibility reconnaissance, at a coarse resolution, was carried out to identify zones of magnetic enhancement. Areas of enhancement were then targeted with detailed magnetometry in order to locate individual archaeological features.
- 1.2.3 The methodology is considered an efficient and effective approach to archaeological prospection. The work follows the English Heritage, 2008: Geophysical survey in archaeological field evaluation. Research and Professional Service Guideline No.1.

## 1.3 Site location, description and survey conditions

- 1.3.1 The site is located to the north of Salisbury in Wiltshire and centred on Ordnance Survey Grid Reference SU 155 325.
- 1.3.2 The geophysical survey covers an area of approximately 17 hectares within three parcels of land. Ground cover consisted of soil with an emerging arable crop. The site is immediately north of existing residential development and its most easterly edge is bounded by the River Bourne.
- 1.3.3 A grassed bank forms the southern boundary along the majority of the site, see Plate 1. It appears to have been constructed relatively recently and is probably associated with residential development to the south. There is some evidence that material associated with the bank has spread some 30m or more into the central part of the site.



Plate 1: Central part of the site looking towards the northeast

#### 1.4 Site history and archaeological potential

- 1.4.1 The background information has been summarised from the Specification issued WSP Environmental (2008). Previous archaeological investigation within the site located a number of Neolithic and Bronze Age flint implements and some Romano-British tile and pottery fragments. Aerial photographs have shown a series of crop/soil marks within the main part of the survey area which may relate to an undated field system.
- 1.4.2 Surrounding the survey area are many sites and findspots that indicate Bronze

Age, Iron Age and Romano-British activity and settlement in the vicinity. Immediately to the north of the site is the Roman Road from Old Sarum to Winchester.

Geophysical survey to the north of the site by Archaeological Surveys located a

## 1.5 Geology and soils

- 1.5.1 The underlying geology is Chalk (BGS, 2001) with overlying alluvium and River Terrace Deposits close to the eastern section, adjacent to the River Bourne (BGS, 1977).
- 1.5.2 The overlying soils across the majority of the site are from the Andover 1 association which are brown rendzinas. These consist of shallow, well drained calcareous silty soils over chalk. Towards the eastern edge of the survey area the soils are from the Coombe 1 association which are typical brown calcareous earths. These consist of well drained fine silty soils. Adjacent to the River Bourne the soils are from the Frome association which are calcareous alluvial gley soils. These consist of shallow calcareous loamy soils over flint gravel (Soil Survey of England and Wales, 1983).
- 1.5.3 Chalk and its associated soils usually provide good magnetic contrast between the fill of cut features and the material into which they are cut. Magnetometry is therefore an effective technique for archaeological prospection.

#### 2 METHODOLOGY

#### 2.1 Technical synopsis

- 2.1.1 Iron minerals within the soil can be altered through biological decay and burning which can enhance the magnetic susceptibility of the soil. Field equipment can be used to measure the magnetic susceptibility of the soil allowing zones to be mapped which may indicate areas of potential archaeological activity. This also allows subsequent targeting of higher resolution survey techniques such as magnetometry or resistivity in order to obtain more detail.
- 2.1.2 Magnetic susceptibility is only measurable in the presence of a magnetic field and is defined as a ratio between the intensity of the induced field to that of the magnetising field. As the two fields are measured in the same units the ratio can effectively be defined using no units although it is common practice to add SI to distinguish measurements from an older system.
- 2.1.3 Detailed magnetometry records localised magnetic fields that can relate to former human activity. Alteration of iron minerals present within topsoil is related to activities such as burning and the break down of biological material. These minerals become weakly magnetic within the Earth's magnetic field and can accumulate in features such as ditches and pits that are cut into the underlying subsoil. Mapping this magnetic variation can provide evidence of former settlement and land use. Additional technical details can be found in Appendix A.
- 2.1.4 The localised variations in magnetism are measured as sub-units of the Tesla which

is a SI unit of magnetic flux density. These sub-units are nano Teslas (nT) which are equivalent to 10-9 Tesla (T).

#### 2.2 Equipment configuration, data collection and survey detail

- 2.2.1 The magnetic susceptibility survey was conducted using an MS2 meter with MS2D field coil manufactured by Bartington Instruments Ltd. The instrument was used in conjunction with a CSI Wireless Differential Global Positioning System (dGPS) receiver used to navigate to measuring positions.
- 2.2.2 Magnetic susceptibility data were collected across the whole site at 20m centres. Each position was recorded 3 to 5 times to ensure a representative value free from erratic or spurious readings created by ferrous debris or poor soil contact. The values were entered into PocketGIS software as a point attribute attached to the coordinates of each recording station.
- 2.2.3 The detailed magnetic survey was carried out using a Bartington Grad601-2 gradiometer. This instrument effectively measures a magnetic gradient between two fluxgate sensors mounted vertically 1m apart. Two sets of sensors are mounted on a single frame 1m apart horizontally. The instrument is extremely sensitive and is able to measure magnetic variation to 0.03nanoTesla (nT). All readings are saved to an integral data logger for analysis and presentation.
- 2.2.4 The instrument is operated according to the manufacturer's instructions with consideration given to the local conditions. An adjustment procedure is required prior to collection of data in order to balance the sensors and remove the effects of the Earth's magnetic field, further adjustment is required during the survey due to instrument drift often associated with temperature change. It is often very difficult to obtain optimum balance for the sensors due to localised magnetic vectors that can be associated with large ferrous objects, geological/pedological features, 'magnetic' debris within the topsoil and natural temperature fluctuations. Imperfect balance results in a heading error often visible as striping within the data; this can be effectively removed by software processing and generally has little effect on the data unless extreme.
- 2.2.5 The Bartington gradiometer undergoes regular servicing and calibration which is carried out by the manufacturer. A current assessment of the instrument is shown in Table 1 below.

Date of calibration/service	16 <sup>th</sup> May 2008
Sensor type	Bartington Grad - 01 – 1000 Nos. 084 and 085
Bandwidth	12Hz (100nT range) both sensors
Noise	<100pT peak to peak
Adjustable errors	<2nT

Table 1: Bartington fluxgate gradiometer sensor calibration results

The instrument was considered to be in good working order prior to the survey with no known faults or defects.

- 2.2.6 Data were collected at 0.25m centres along traverses 1m apart. The survey area was separated into 30m by 30m grids giving 3600 recorded measurements per grid. This sampling interval is very effective at locating archaeological features and is the recommended methodology for archaeological prospection (English Heritage, 2008).
- 2.2.7 The survey grids were set out to the Ordnance Survey OSGB36 datum using a Penmap RTK GPS. The GPS is used in conjunction with Leica's Smartnet service where positional corrections are sent via a mobile telephone link. Positional accuracy of around 10 20mm is possible using the system.

# 2.3 Data processing and presentation

- 2.3.1 Magnetic susceptibility readings recorded in the field using PocketGIS were downloaded into MapInfo GIS software with Vertical Mapper and displayed as an interpolated colour plot using a fifth order polynomial solution, see Figure 02. No additional processing beyond interpolation is required for this data.
- 2.3.2 Magnetometry data downloaded from the Grad 601-2 data logger are analysed and processed in specialist software known as ArcheoSurveyor. The software allows greyscale and trace plots to be produced for presentation and display. Survey
- grids are assembled to form an overall composite of data (composite file) creating a dataset of the complete survey area. Appendix B contains specific information concerning the survey and data attributes and is derived directly from ArcheoSurveyor, this should be used in conjunction with information provided by Figure 03.
- 2.3.3 Only minimal processing is carried out in order to enhance the results of the survey for display. Raw data are always analysed as processing can modify anomalies. The following schedule sets out the data and image processing used in this survey:
  - clipping of the raw data at ±30nT to improve greyscale resolution,
  - clipping of processed data at ±2nT to enhance low magnitude anomalies,
  - zero median/mean traverse is applied in order to balance readings along each traverse.
     (Reference should be made to Appendix B for details on the processing used for each survey area).

#### Data processing explanation notes:

Clipping

Clipping replaces the values outside the specified minimum and maximum with those values. The process is useful for displaying detail as extreme values are removed allowing greyscale shades to be allocated to a narrower range of values which improves the definition of anomalies.

#### Zero Median/Mean Traverse

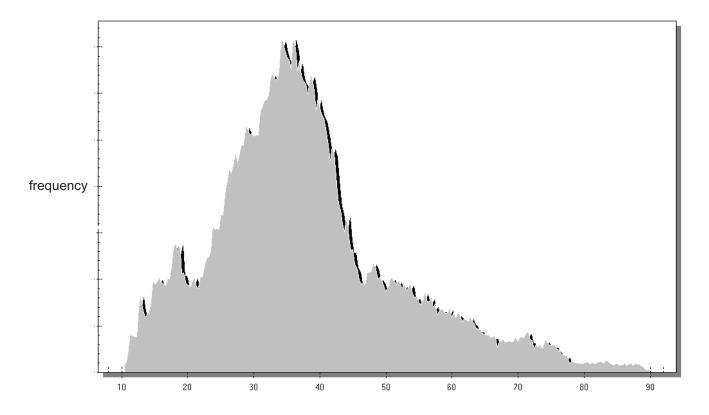
The median (or mean) of each traverse is calculated ignoring data outside a threshold value, the median (or mean) is then subtracted from the traverse. The process is used to equalise slight differences between the set-up and stability of gradiometer sensors and is used to remove striping.

- 2.3.4 An abstraction and interpretation is offered for all geophysical anomalies located by the survey. A brief summary of each anomaly, with an appropriate reference number, is set out in list form within the results (Section 3) to allow a rapid assessment of features within each survey area. Where further interpretation is possible or where a number of possible origins should be considered, further more detailed discussion is set out in Section 4.
- 2.3.5 The main form of data display used in this report is the greyscale plot. Magnetic data are also displayed as a trace plot. Both 'raw' and 'processed' data have been shown followed by an abstraction and interpretation plot.
- 2.3.6 Graphic raster images in Bitmap format are initially prepared in ArcheoSurveyor. Regardless of survey orientation, data captured along each traverse are displayed and processed by ArcheoSurveyor from left to right. Prior to displaying against base mapping, raster graphics require a rotation upon insertion into AutoCAD LT, traceplots are rotated using ArcheoSurveyor. Rotated traceplots are derived from interpolated datasets and can be considered as representative only as the raw data will have been modified to a minor degree.
- 2.3.7 The raster images are combined with base mapping using AutoCAD LT 2007 creating DWG file formats. All images are externally referenced to the CAD drawing in order to maintain good graphical quality. Quality can be compromised by rotation of graphics in order to allow the data to be displayed and this is considered acceptable as the survey results are effectively georeferenced allowing relocation of features using GPS, resection method etc.. A digital archive including raster images is produced with this report allowing separate analysis if necessary, see Appendix C.

#### 3 RESULTS

#### 3.1 Magnetic susceptibility

3.1.1 The magnetic susceptibility survey indicated levels of enhancement between 11 and 88 10-5 SI with an average of 37.12 10-5 SI and a SD of 14.68. Histogram 1 indicates the range in which the majority of values occur.



Histogram 1: Magnetic susceptibility data

- 3.1.2 There is a trend within the magnetic susceptibility data for increased enhancement towards the centre of the site, see Figure 02. The distribution of the enhancement and the strength of the readings indicates anthropogenic input although the archaeological potential of the zone cannot be inferred by these alone.

  Magnetometry Area 1 has been targeted over this large zone of magnetic enhancement.
- 3.1.3 Ground make-up, associated with a modern earth bank that forms the southern boundary to the site, has suppressed the magnetic susceptibility of the soil along the southern edge of the central area. The incorporation of subsoil into the plough soil is likely to have caused the lower readings. This suppressed area was mainly avoided by target magnetometry Area 1.
- 3.1.4 Two discrete areas of enhancement were discovered to the west and east of the central zone, and these were also targeted with the detailed magnetometry as Areas 2 and 3. The easternmost part of the site also contains a zone of enhancement and this was targeted by magnetometry Area 4.

#### 3.2 Magnetometry general overview

3.2.1 The detailed magnetic survey was carried out over a total of four survey areas covering 6ha. Area 1, covering a large zone of magnetic enhancement revealed by

magnetic susceptibility survey, is formed by a block of approximately 5ha. Areas 2-4, covering more discretely enhanced zones, are formed by blocks of 0.36ha.

- 3.2.2 Data quality is considered to be good with generally good surface and weather conditions through the survey period.
- 3.2.3 Geophysical anomalies located can be generally classified as: positive linear anomalies possibly relating to former field boundaries, positive linear and discrete anomalies of an uncertain origin, negative anomalies caused by material of low magnetic susceptibility, linear anomalies of agricultural origin, areas of magnetic debris and strong discrete dipolar anomalies relating to ferrous objects. Anomalies located within each survey area have been numbered and will be outlined below with subsequent discussion in Section 4.
- 3.2.4 The listing of sub-headings below attempts to define a number of separate categories that reflect the range and type of features located during the survey. A basic explanation of the characteristics of the magnetic anomalies is set out for each category in order to justify interpretation, a basic key is indicated to allow cross reference to the abstraction and interpretation plot. Sub-headings are then used to group anomalies with similar characteristics for each survey area.

Anomalies relating to possible former field boundaries

Positive anomalies

Anomalies within this category appear as positive linear anomalies which may be responses to the magnetically enhanced fill of cut features such as ditches. The anomalies may be long and/or form rectilinear elements.

Anomalies with an uncertain origin

Positive anomalies Negative anomalies

The category applies to a range of anomalies where there is not enough evidence to confidently suggest an origin. Anomalies in this category may well be related to archaeologically significant features but equally relatively modern features, geological/pedological features and agricultural features should be considered.

Anomalies with an agricultural origin

Agricultural anomalies

Where confidence is high that anomalies have been caused by agricultural features this category is applied. The anomalies are often linear and form a series of parallel responses or are parallel to extant land boundaries. Where the response is broad, former ridge and furrow is likely; narrow response is often related to modern ploughing.

Anomalies with a modern origin

Magnetic disturbance



The magnetic response is often strong and dipolar indicative of ferrous material and may be associated with extant above surface features such as wire fencing, cables, pylons etc.. Often a significant area around such features has a strong magnetic flux which may create magnetic disturbance; such disturbance can effectively obscure low magnitude anomalies if they are present.

Anomalies associated with magnetic debris

Strong discrete dipolar anomaly



The response often appears as areas containing many small dipolar anomalies that may range from weak to very strong in magnitude. Magnetic debris often occurs where there has been dumping or ground make-up and is related to magnetically thermoremnant materials such as brick or tile or other small fragments of ferrous material. This type of response is occasionally associated with kilns, furnace structures, or hearths and may therefore be archaeologically significant. It is also possible that the response may be caused by natural material such as certain gravels and fragments of igneous or metamorphic rock. Strong discrete dipolar anomalies are responses to ferrous objects within the topsoil.

#### 3.3 Area 1

Centred on OS NGR 415510 132595, see Figures 04 – 07.

Anomalies relating to possible former field boundaries

- (1) A positive linear anomaly extends across the western part of the survey area with a general northeast to southwest orientation. This anomaly relates to a crop/soil mark identified from 1991 WCC aerial photographs and is probably a cut feature associated with a field system.
- (2) Located approximately 100m to the east of anomaly (1), is a very weak linear anomaly which also correlates with a crop/soil mark.

Anomalies with an uncertain origin

- (3) A positive linear anomaly that may be associated with anomaly (2) and could relate to a cut ditch-like feature.
- (4) Two parallel positive linear anomalies are located approximately 50m to the west of anomaly (1). They are oriented north-north-east to south-south-west and 7m are apart.
- (5) Towards the eastern edge of Area 1, is a weak positive linear anomaly. possible that this relates to a further linear feature associated with anomalies (1) and (2).

- (6) A series of weak linear anomalies oriented southeast to northwest and located on the southeastern side of anomaly (2). They are located in the vicinity of, and have a similar orientation to, crop/soil marks also previously identified. It is likely that they are associated with anomalies (1) to (5).
- (7) A fragmented weakly positive curvilinear anomaly located within the eastern part of the survey area. The anomaly is approximately 12m in diameter but its very low response and fragmented form make it difficult to confidently interpret its origin.
- (8) Located to the east of anomaly (3) are two concentric weak curvilinear anomalies. Their incomplete form and low magnitude do not allow for confident interpretation.
- (9) Discrete positive responses may indicate pit-like features.
- (10) Two low magnitude diffuse responses have been located towards the southwestern corner of Area 1.

Anomalies with an agricultural origin

(11) – A series of linear anomalies can be seen extending across the whole of the survey area. They are parallel with the northern field boundary and indicate the ploughing trend.

Anomalies associated with magnetic debris

- (12) An area of magnetic debris located at the southern edge of the survey area close to a field boundary. Likely to relate to modern dumped material.
- (13) Several strong discrete dipolar anomalies caused by ferrous objects within the topsoil.

Anomalies with a modern origin

(14) – Magnetic disturbance is a response to ferrous material in adjacent fencing.

#### 3.4 Area 2

Centred on OS NGR 415240 132580, see Figures 08 – 11.

Anomalies with an uncertain origin

(15) – Discrete positive responses may indicate pit-like features.

Anomalies with an agricultural origin

(16) – A series of linear anomalies can be seen extending across the whole of the survey area.

#### 3.5 Area 3

Centred on OS NGR 415840 132580, see Figures 12 – 15.

Anomalies with an uncertain origin

- (17) Weak linear anomalies in the southern part of the survey area. It is possible that they are associated with agricultural activity.
- (18) Discrete positive responses may indicate pit-like features.
- (19) Positive response may indicate an infilled depression.

#### 3.6 Area 4

Centred on OS NGR 41620 132400, see Figures 16 – 19.

Anomalies with an uncertain origin

- (20) A negative rectilinear anomaly that is likely to be a response to material with low magnetic susceptibility such as subsoil. It is not certain whether this is one or a group of features.
- (21) Weak positive responses appear associated with anomaly (19) and may relate to magnetically enhanced material.
- (22) A weak positive linear anomaly located in the centre of the survey area.
- (23) Weak discrete positive anomalies may indicate pit-like features.

Anomalies associated with magnetic debris

(24) – A patch of magnetic debris at the southwestern corner of the survey area, may relate to dumped magnetically thermoremnant material.

## 4 DISCUSSION

#### 4.1 Magnetic susceptibility

- 4.1.1 A broad zone of enhanced magnetic susceptibility, located in the central part of the site, covers a shallow valley tending to dip towards the south. Magnetometry targeted across this zone revealed a number of possible cut features although generally these are of low magnitude. It is considered likely that the enhanced susceptibility is related to magnetic material spread throughout the topsoil rather than material derived from archaeological features below it.
- 4.1.2 The enhanced soils could form as a result of the inclusion of magnetic material within the soil from occupation nearby although it is not possible to determine whether this is archaeologically significant. Magnetic material derived from relatively recent and ancient manuring could form similarly enhanced zones.

### 4.2 Detailed magnetometry

- 4.2.1 The magnetometry survey in Area 1 located a number of linear anomalies that can be seen to relate to crop/soil mark features identified from Wiltshire County Council 1991 aerial photographs. There are many discrete positive anomalies that may indicate pit-like features, and while it is possible that some of them may be anthropogenic in origin, others may relate to natural features. Very low magnitude curvilinear anomalies cannot be confidently interpreted.
- 4.2.2 Area 2, to the west of Area 1, was targeted on a discrete zone of magnetic enhancement, no significant anomalies were located. Area 3, to the east of Area 1, contained linear and discrete anomalies although it has not been possible to confidently interpret them.
- 4.2.3 Close to the eastern edge of the site, Area 4 contains negative anomalies that appear to form a rectilinear feature. It is not clear if this is a single feature or several separate features, and although likely to be a response to material of low magnetic susceptibility, it is not possible to provide an interpretation.

#### 5 CONCLUSION

5.1

- 5.1.1 Magnetic susceptibility reconnaissance survey revealed a wide zone of enhancement within the central part of the site. Detailed magnetometry Area 1 targeted this zone. Magnetometry Areas 2-4 targeted more discrete zones of moderate enhancement within the western and eastern parts of the site.
- 5.1.2 Area 1 revealed a number of linear anomalies that may relate to former boundary features associated with a field system. Discrete anomalies indicative of pit-like features were also located although it is possible many of these are associated with underlying geology and soil. Very weak curvilinear anomalies could not be confidently interpreted. The wide zone of magnetic enhancement within the central part of the site may, therefore, relate to magnetically enhanced material distributed during episodes of manuring.
- 5.1.3 Several positive and negative anomalies located within Areas 2-4 could not be confidently interpreted.

#### 6 REFERENCES

British Geological Survey, 1977. Geological Survey Ten Mile Map, South Sheet, First Edition (Quaternary). Scale 1:625 000.

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- English Heritage, 1995. Geophysical survey in archaeological field evaluation. Research and Professional Service Guideline No.1.
- Soil Survey of England and Wales, 1983. Soils of England and Wales, Sheet 5 South West England.
- WSP Environmental, (2008). Specification for Archaeological Evaluation at Bishopdown, Salisbury. Unpublished document.

#### APPENDIX A - BASIC PRINCIPLES OF MAGNETIC SURVEY

Iron minerals are always present to some degree within the topsoil and enhancement associated with human activity is related to increases in the level of magnetic susceptibility and thermoremnant material.

Magnetic susceptibility is an induced magnetism within a material when it is in the presence of a magnetic field. This can be thought of as effectively permanent due to the presence of the Earth's magnetic field.

- Thermoremnant magnetism occurs when ferrous material is heated beyond a specific temperature known as the Curie Point. Demagnetisation occurs at this temperature with remagnetisation by the Earth's magnetic field upon cooling.
- Enhancement of magnetic susceptibility can occur in areas subject to burning and complex fermentation processes on biological material; these are frequently associated with human settlement. Thermoremnant features include ovens, hearths, and kilns. In addition thermoremnant material such as tile and brick may also be associated with human activity and settlement.
- Silting and deliberate infilling of ditches and pits with magnetically enhanced soil can create an area of enhancement compared with surrounding soils and subsoils into which the feature is cut. Mapping enhanced areas will produce linear and discrete anomalies allowing an assessment and characterisation of hidden subsurface features.
- It should be noted that areas of negative enhancement can be produced from material having lower magnetic properties compared to the topsoil. This is common for many sedimentary bedrocks and subsoils which were often used in the construction of banks and walls etc. Mapping these 'negative' anomalies may also reveal archaeological features.
- Magnetic survey or magnetometry can be carried out using a fluxgate gradiometer and may be referred to as gradiometry. The gradiometer is a passive instrument consisting of two fluxgate sensors mounted vertically 1m apart. The instrument is carried about 30cm above the ground surface and the upper sensor measures the Earth's magnetic field as does the lower sensor but this is influenced to a greater degree by any localised buried field. The difference between the two sensors will relate to the strength the magnetic field created by the buried feature. If no enhanced feature is present the field measured by both sensors will be similar and the difference close to zero.
- There are a number of factors that may affect the magnetic survey and these include soil type, local geology and previous human activity. Situations arise where magnetic disturbance associated with modern services, metal fencing, dumped waste material etc., obscures low magnitude fields associated with archaeological features.

AND

SURVEY

**INFORMATION** 

DATA

В

**APPENDIX** 

AI I LIIDIX	_	OOKVET	AND	DATA
Area 1 raw d	lata  Area1-raw.xcp	48 Col:3 Row:7 49 Col:3 Row:8 50 Col:3 Row:9	grids\14.xgd grids\15.xgd	
Instrument Type:	Grad 601 (Magnetometer )		51 Col:3 Row:10	
Units:	nT		52 Col:3 Row:11 53 Col:4 Row:6	
Surveyed by: Assembled by:	on 05/12/2008 on 05/12/2008		54 Col:4 Row:7	grids\54.xgd
Direction of 1st Tra	•		55 Col:4 Row:8 56 Col:4 Row:9	
Collection Method: Sensors:	ZigZag 2 @ 1.00 m spacing.			3 3.
Dummy Value:	32702		Area 1 proce	seed data
Origin:	Zero		Area i proce	sseu uala
Dimensions			Filename:	Area1-proc.xcp
	eadings): 600 x 420 rs): 150 m x 420 m		Instrument Type: Units:	Grad 601 (Magnetometer ) nT
Grid Size:	30 m x 30 m		Surveyed by:	on 05/12/2008
X Interval: Y Interval:	0.25 m 1 m		Assembled by: Direction of 1st Tra	on 05/12/2008 overse: 0 dea
			Collection Method:	ZigZag
Stats Max:	30.00		Sensors: Dummy Value:	2 @ 1.00 m spacing. 32702
Min:	-30.00		Origin:	Zero
Std Dev: Mean:	1.71 -0.26		Dimensions	
ivicari.	-0.20			eadings): 600 x 420
Processes: 2			Survey Size (meter Grid Size:	,
1 Base Layer 2 Clip from -30 to	o 30		X Interval:	30 m x 30 m 0.25 m
			Y Interval:	1 m
Source Grids: 56 1 Col:0 Row:0	grids\30.xgd		Stats	
2 Col:0 Row:1			Max:	2.00
3 Col:0 Row:2 ( 4 Col:0 Row:3 (			Min: Std Dev:	-2.00 0.73
5 Col:0 Row:4	grids\50.xgd		Mean:	0.05
6 Col:0 Row:5 9 7 Col:0 Row:6 9			Processes: 5	
8 Col:0 Row:7	grids\09.xgd		1 Base Layer	
9 Col:0 Row:8 ( 10 Col:0 Row:9			2 Clip from -30 to 3 DeStripe Media	o 30 an Traverse: Grids: All
11 Col:0 Row:10	) grids\28.xgd		4 Clip from -3 to	3
12 Col:0 Row:11 13 Col:0 Row:12			5 Clip from -2 to	2
14 Col:0 Row:13	3 grids\47.xgd		Source Grids: 56	
15 Col:1 Row:0 16 Col:1 Row:1	grids\34.xgd grids\35.xgd		1 Col:0 Row:0 ( 2 Col:0 Row:1 (	
17 Col:1 Row:2	grids\36.xgd		3 Col:0 Row:2	grids\32.xgd
18 Col:1 Row:3 19 Col:1 Row:4			4 Col:0 Row:3 ( 5 Col:0 Row:4 (	
20 Col:1 Row:5			6 Col:0 Row:5	
21 Col:1 Row:6 22 Col:1 Row:7			7 Col:0 Row:6 ( 8 Col:0 Row:7 (	grids\52.xgd
23 Col:1 Row:8	grids\22.xgd		9 Col:0 Row:8	grids\26.xgd
24 Col:1 Row:9 25 Col:1 Row:10			10 Col:0 Row:9 11 Col:0 Row:10	
26 Col:1 Row:11	1 grids\25.xgd		12 Col:0 Row:11	
27 Col:1 Row:12 28 Col:1 Row:13			13 Col:0 Row:12 14 Col:0 Row:13	
29 Col:2 Row:0			15 Col:1 Row:0	
30 Col:2 Row:1 31 Col:2 Row:2			16 Col:1 Row:1 17 Col:1 Row:2	
32 Col:2 Row:3			18 Col:1 Row:3	
33 Col:2 Row:4 34 Col:2 Row:5			19 Col:1 Row:4 20 Col:1 Row:5	
35 Col:2 Row:6			21 Col:1 Row:6	
36 Col:2 Row:7 37 Col:2 Row:8			22 Col:1 Row:7	
38 Col:2 Row:9			23 Col:1 Row:8 24 Col:1 Row:9	
39 Col:2 Row:10			25 Col:1 Row:10	
40 Col:2 Row:11 41 Col:3 Row:0			26 Col:1 Row:11 27 Col:1 Row:12	
42 Col:3 Row:1	grids\43.xgd		28 Col:1 Row:13	3 grids\49.xgd
43 Col:3 Row:2 44 Col:3 Row:3			29 Col:2 Row:0 30 Col:2 Row:1	
45 Col:3 Row:4	grids\10.xgd		31 Col:2 Row:2	grids\40.xgd
46 Col:3 Row:5 47 Col:3 Row:6			32 Col:2 Row:3 33 Col:2 Row:4	
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34	Col:2	Row:5 grids\02.xgd
35	Col:2	Row:6 grids\03.xgd
36	Col:2	Row:7 grids\04.xgd
37	Col:2	Row:8 grids\18.xgd
38	Col:2	Row:9 grids\19.xgd
39	Col:2	Row:10 grids\20.xgd
40	Col:2	Row:11 grids\21.xgd
41	Col:3	Row:0 grids\42.xgd
42	Col:3	Row:1 grids\43.xgd
43	Col:3	Row:2 grids\44.xgd
44	Col:3	Row:3 grids\45.xgd
45	Col:3	Row:4 grids\10.xgd
46	Col:3	Row:5 grids\11.xgd
47	Col:3	Row:6 grids\12.xgd
48	Col:3	Row:7 grids\13.xgd
49	Col:3	Row:8 grids\14.xgd
50	Col:3	Row:9 grids\15.xgd
51	Col:3	Row:10 grids\16.xgd
52	Col:3	Row:11 grids\17.xgd
53	Col:4	Row:6 grids\53.xgd
54	Col:4	Row:7 grids\54.xgd
55	Col:4	Row:8 grids\55.xgd
56	Col:4	Row:9 grids\56.xgd

#### Area 2 raw data

Filename: Area2-raw.xcp

Grad 601 (Magnetometer ) Instrument Type:

Units:

Surveyed by: on 05/12/2008 Assembled by: on 05/12/2008 Direction of 1st Traverse: 0 deg ZigZag 2 @ 1.00 m spacing. 32702 Collection Method:

Sensors:

Dummy Value: Zero Origin:

Dimensions

Composite Size (readings): 240 x 60 Survey Size (meters): 60 m x 60 m Grid Size: 30 m x 30 m

0.25 m X Interval: Y Interval: 1 m

Stats

Max: 30.00 Min: -29.35 Std Dev: 1.24 Mean: 0.45

Processes: 2 1 Base Layer 2 Clip from -30 to 30

Source Grids: 4

1 Col:0 Row:0 grids\01.xgd 2 Col:0 Row:1 grids\02.xgd 3 Col:1 Row:0 grids\03.xgd 4 Col:1 Row:1 grids\04.xgd

#### Area 2 processed data

Area2-proc.xcp

Instrument Type: Grad 601 (Magnetometer)

Units:

on 05/12/2008 Surveyed by: Assembled by: on 05/12/2008 Direction of 1st Traverse: 0 deg Collection Method: ZigZag

Sensors: 2 @ 1.00 m spacing.

Dummy Value: 32702 Origin: Zero

Dimensions

Composite Size (reds): 60 m x 8 Survey Size (meters): 60 m x 8 30 m x 30 m Composite Size (readings): 240 x 60 60 m x 60 m X Interval: 0.25 m Y Interval: 1 m

Stats

Max: 2.00 Min: -2.00 Std Dev: 0.62 Mean: 0.06

Processes: Base Layer

Clip from -29.35 to 52.56

DeStripe Median Traverse: Grids: All

Clip from -2 to 2

Source Grids: 4

Col:0 Row:0 grids\01.xgd Col:0 Row:1 grids\02.xgd Col:1 Row:0 grids\03.xgd Col:1 Row:1 grids\04.xgd

#### Area 3 raw data

Area3-raw.xcp Filename:

Instrument Type: Grad 601 (Magnetometer)

Units:

Surveyed by: on 05/12/2008 Assembled by: on 05/12/2008 Direction of 1st Traverse: 0 deg Collection Method:

ZigZag 2 @ 1.00 m spacing. 32702 Sensors:

Dummy Value:

Zero Origin:

Dimensions

Composite Size (readings): 240 x 60 Survey Size (meters): 60 m x 60 m Grid Size: 30 m x 30 m 0.25 m X Interval: Y Interval: 1 m

Stats

Max: 30.00 Min: -30.00 Std Dev: 1 09 Mean: -0.13

Processes: 2 Base Layer 2 Clip from -30 to 30

Source Grids: 4 1 Col:0 Row:0 grids\01.xgd Col:0 Row:1 grids\02.xgd 3 Col:1 Row:0 grids\03.xgd Col:1 Row:1 grids\04.xgd

#### Area 3 processed data

Filename: Area3-proc.xcp

Instrument Type: Grad 601 (Magnetometer) nΤ

Units:

on 05/12/2008 Surveyed by: on 05/12/2008 Assembled by: Direction of 1st Traverse: 0 deg Collection Method: ZigZag

2 @ 1.00 m spacing. Sensors:

Dummy Value: 32702 Origin: Zero

Dimensions

Composite Size (readings): 240 x 60 Survey Size (meters): 60 m x 60 m 30 m x 30 m Grid Size: X Interval: 0.25 m

Y Interval: 1 m

Stats

Max: 2.00 Min: -2.00 Std Dev: 0.66 Mean: 0.07

Processes: 4 1 Base Laver

- 2 Clip from -55.47 to 30.34
- 3 DeStripe Median Traverse: Grids: All

3 Col:1 Row:0 grids\03.xgd 4 Col:1 Row:1 grids\04.xgd

4 Clip from -2 to 2

Source Grids: 4

- 1 Col:0 Row:0 grids\01.xgd 2 Col:0 Row:1 grids\02.xgd 3 Col:1 Row:0 grids\03.xgd
- 4 Col:1 Row:1 grids\04.xgd

#### Area 4 raw data

Area4-raw.xcp Filename:

Instrument Type: Grad 601 (Magnetometer )

Units:

on 05/12/2008 Surveyed by: Assembled by: on 05/12/2008 Assembled by.

Direction of 1st Traverse: 0 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 32702

Origin: Zero

Dimensions

Composite Size (readings): 240 x 60 Survey Size (meters): 60 m x 60 m Grid Size: 30 m x 30 m X Interval: 0.25 m Y Interval: 1 m

Stats

30.00 Max: Min: -30.00 Std Dev: 1 67 Mean: -0.09

Processes: 2 1 Base Layer 2 Clip from -30 to 30

Source Grids: 4

1 Col:0 Row:0 grids\01.xgd 2 Col:0 Row:1 grids\02.xgd 3 Col:1 Row:0 grids\03.xgd 4 Col:1 Row:1 grids\04.xgd

#### Area 4 processed data

Filename:

Area4-proc.xcp Grad 601 (Magnetometer ) Instrument Type:

nΤ Units: Surveyed by:

on 05/12/2008 Assembled by: on 05/12/2008 Direction of 1st Traverse: 0 deg Collection Method: ZigZag

2 @ 1.00 m spacing. Sensors:

Dummy Value: 32702

Zero Origin:

Dimensions

Composite Size (readings): 240 x 60 Survey Size (meters): 60 m x 60 m Grid Size: 30 m x 30 m X Interval: Y Interval: 0.25 m 1 m

Stats

Max: 2.00 Min: -2.00 Std Dev: 0.82 Mean: 0.05

Processes: 4

- 1 Base Layer
- 2 Clip from -30 to 30
- 3 DeStripe Median Traverse: Grids: All
- 4 Clip from -2 to 2

Source Grids: 4

- 1 Col:0 Row:0 grids\01.xgd 2 Col:0 Row:1 grids\02.xgd

#### APPENDIX C - ARCHIVE

Survey results are produced in hardcopy using A4 for text and A3 for plots (all plots are scaled for A3). In addition digital data created during the survey are supplied on CD. Further information on the production of the report and the digital formats involved in this creation are set out below.

This report has been prepared using the following software on a Windows XP platform:

- ArcheoSurveyor version 2.3.3.1 (geophysical data analysis),
- AutoCAD LT 2007 (report figures),
- OpenOffice.org 3.0.0 Writer (document text),
- PDF Creator version 0.9 (PDF archive).

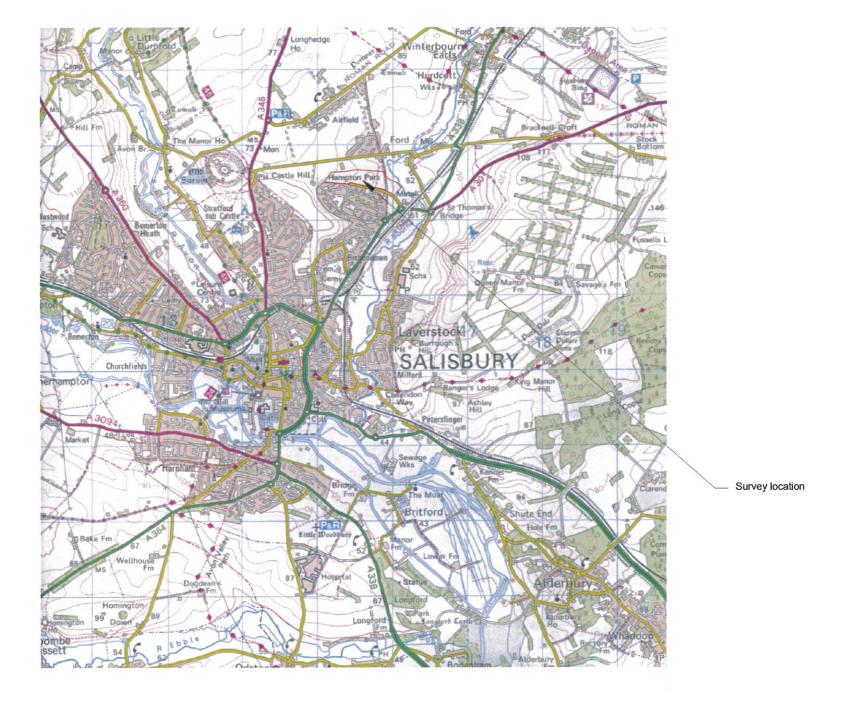
Digital data are supplied on CD ROM and includes the following files:

- ArcheoSurveyor grid and composite files for all magnetometry data,
- CSV files for raw and processed magnetometry composites,
- CSV files for magnetic susceptibility data,
- magnetometry composite file graphics as Bitmap images,
- magnetic susceptibility graphics as a Bitmap image,
- AutoCAD DWG files in 2000 and 2007 versions,
- report text as Word 2000 doc file,
- report text as an OpenOffice.org Writer odt file,
- report text as rich text format (RTF),
- report text as PDF.
- PDFs of all figures.

The CD ROM structure is formed from a tree of directories under the title J258 Bishopdown – CD. Directory titles include Data, Documentation, CAD, PDFs and Photos.

The CAD file contains externally referenced graphics that may be rotated, see 2.3.6, with separate A3 size layouts for each figure. Layouts are fixed using frozen layers and named views allowing straightforward plotting or analysis on screen. (Note – CAD files are prepared using AutoCAD's e Transmit function to produce a directory containing the digital drawing along with any externally referenced graphics which may need reloading).





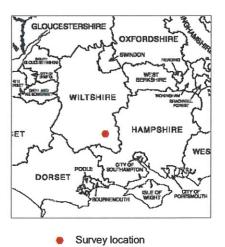
# Archaeological Surveys Ltd

## Geophysical Survey Bishopdown Salisbury

## Map of survey area

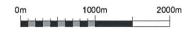
Reproduced from OS Landranger map no.184 1:50 000 by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office.

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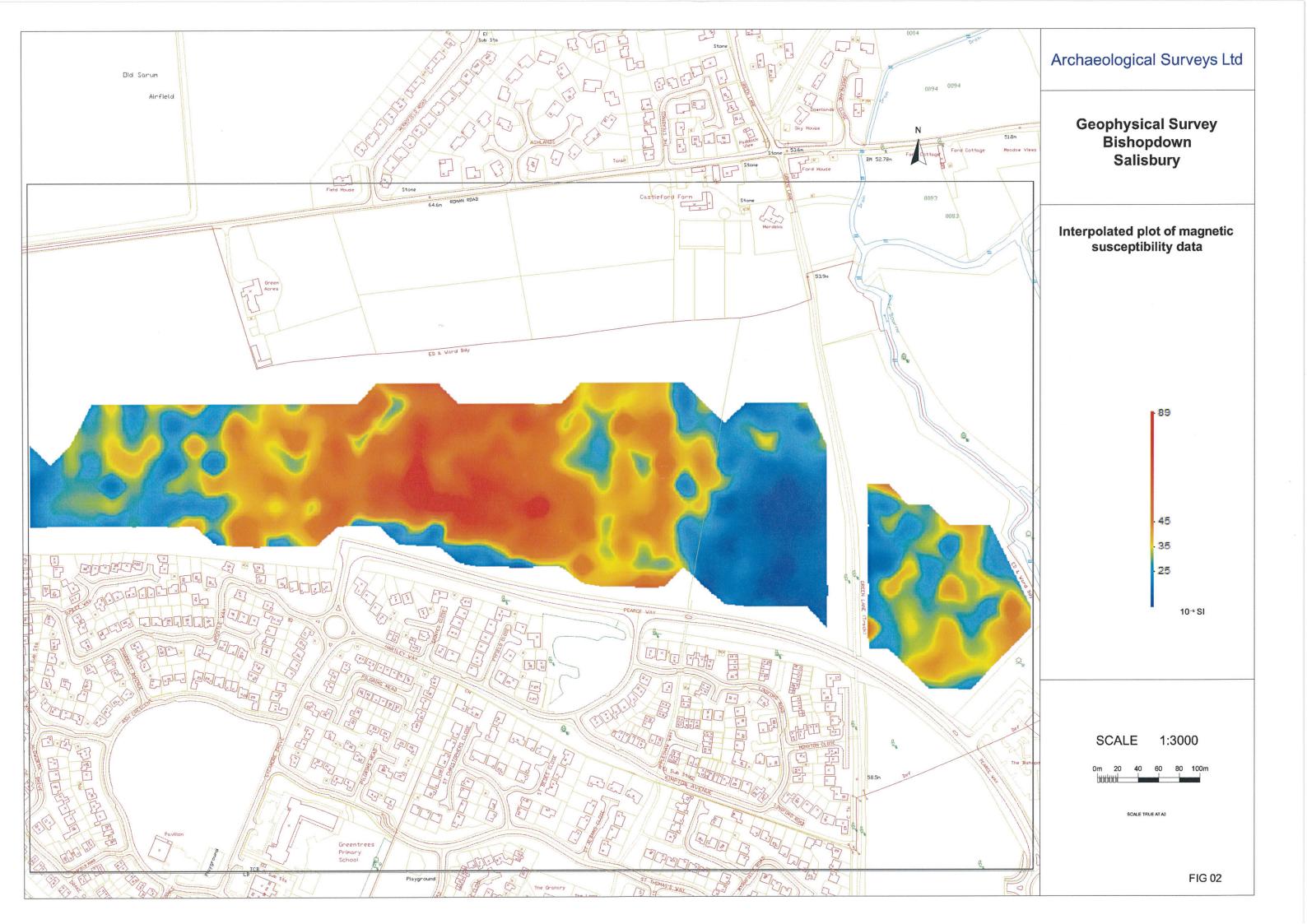
Site centred on OS NGR SU 155 325

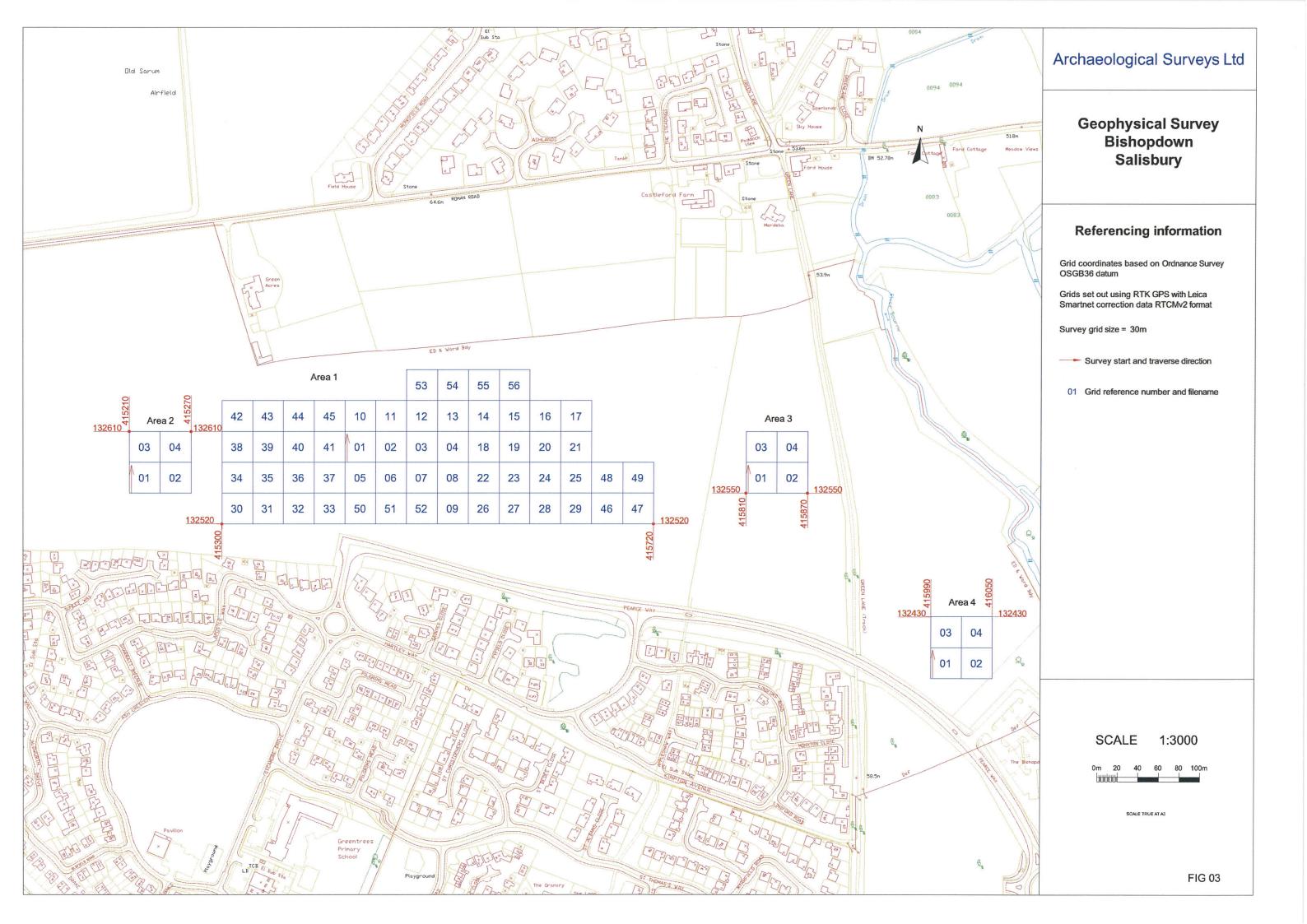


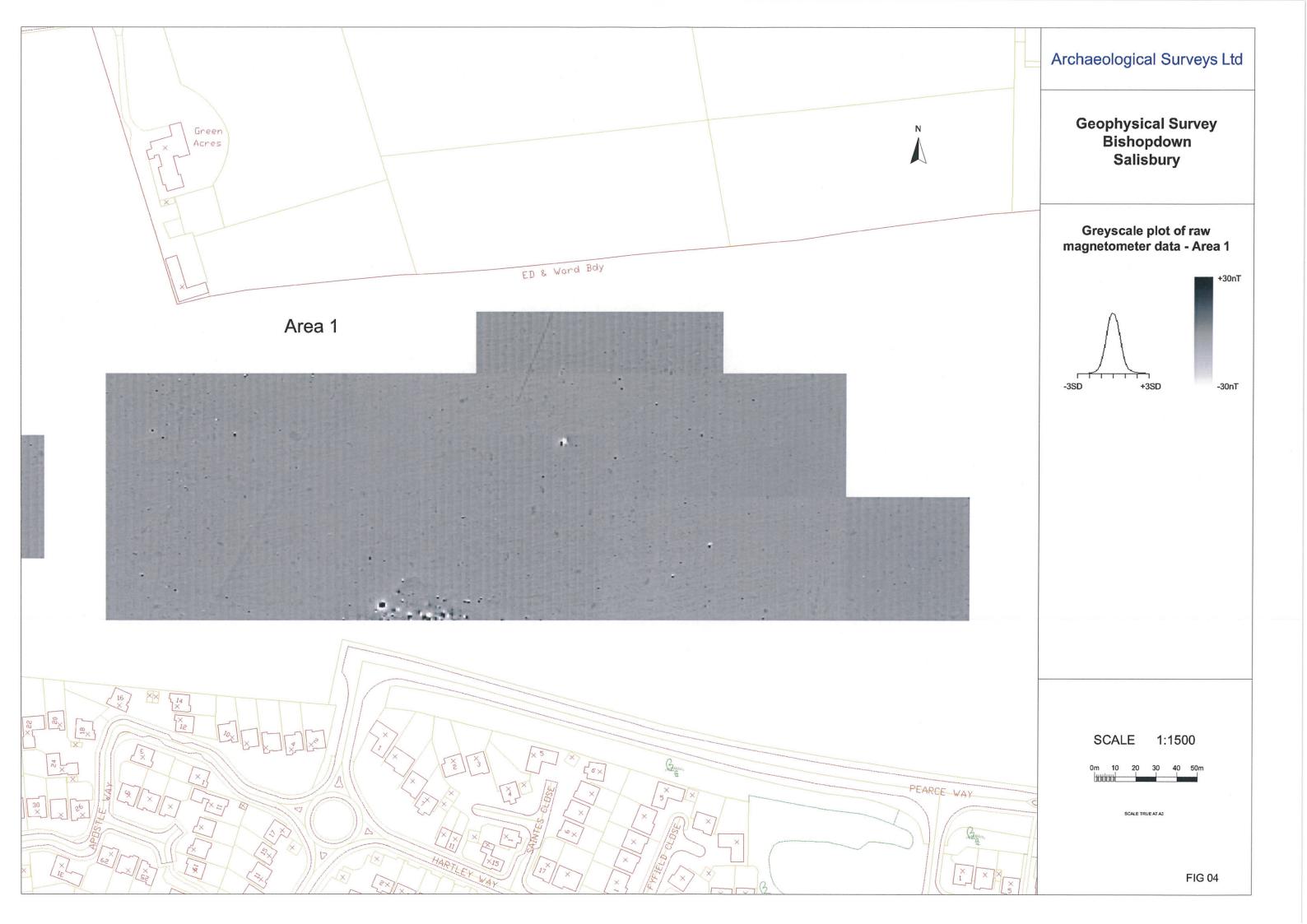


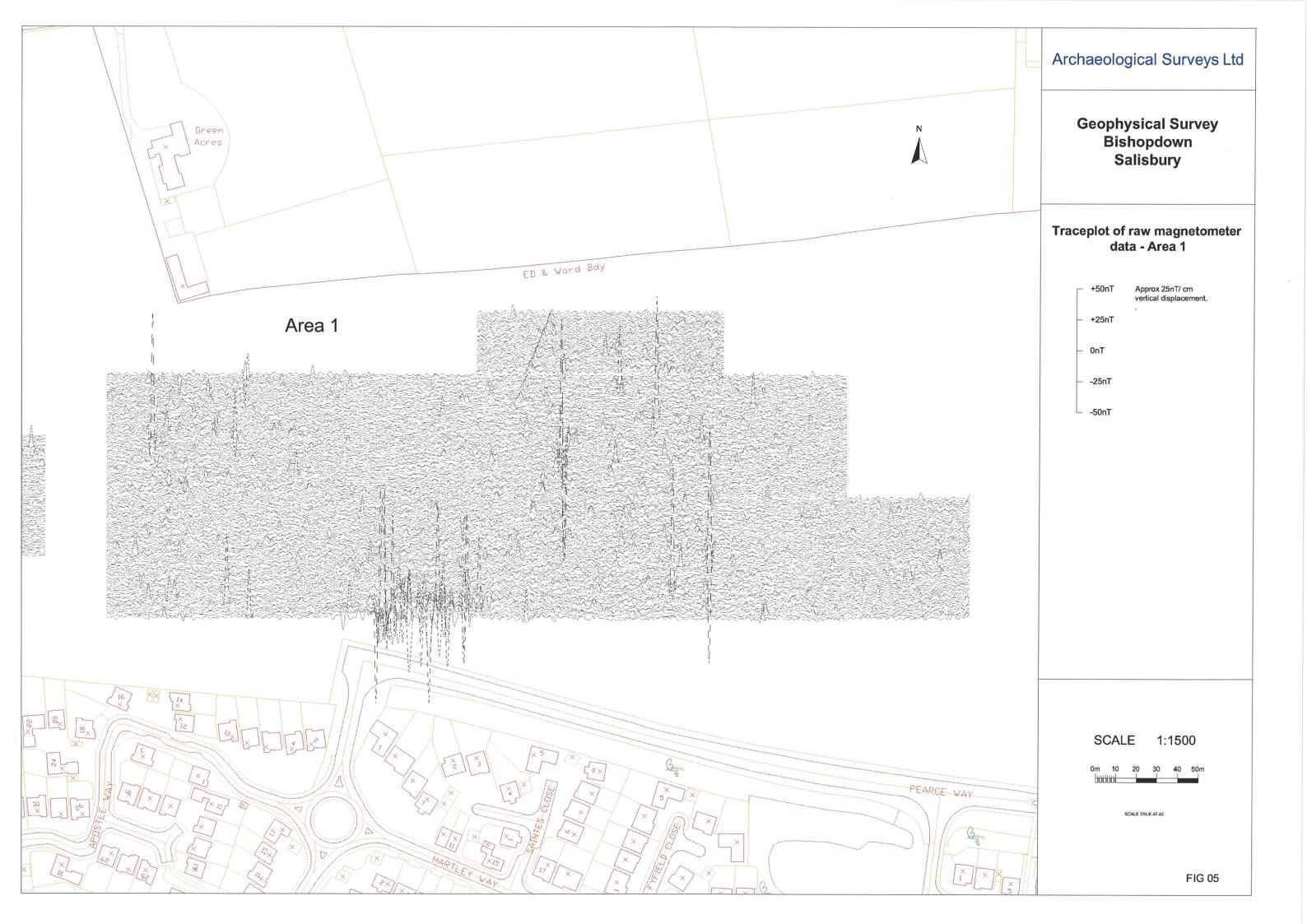
SCALE TRUE AT A3

FIG 01

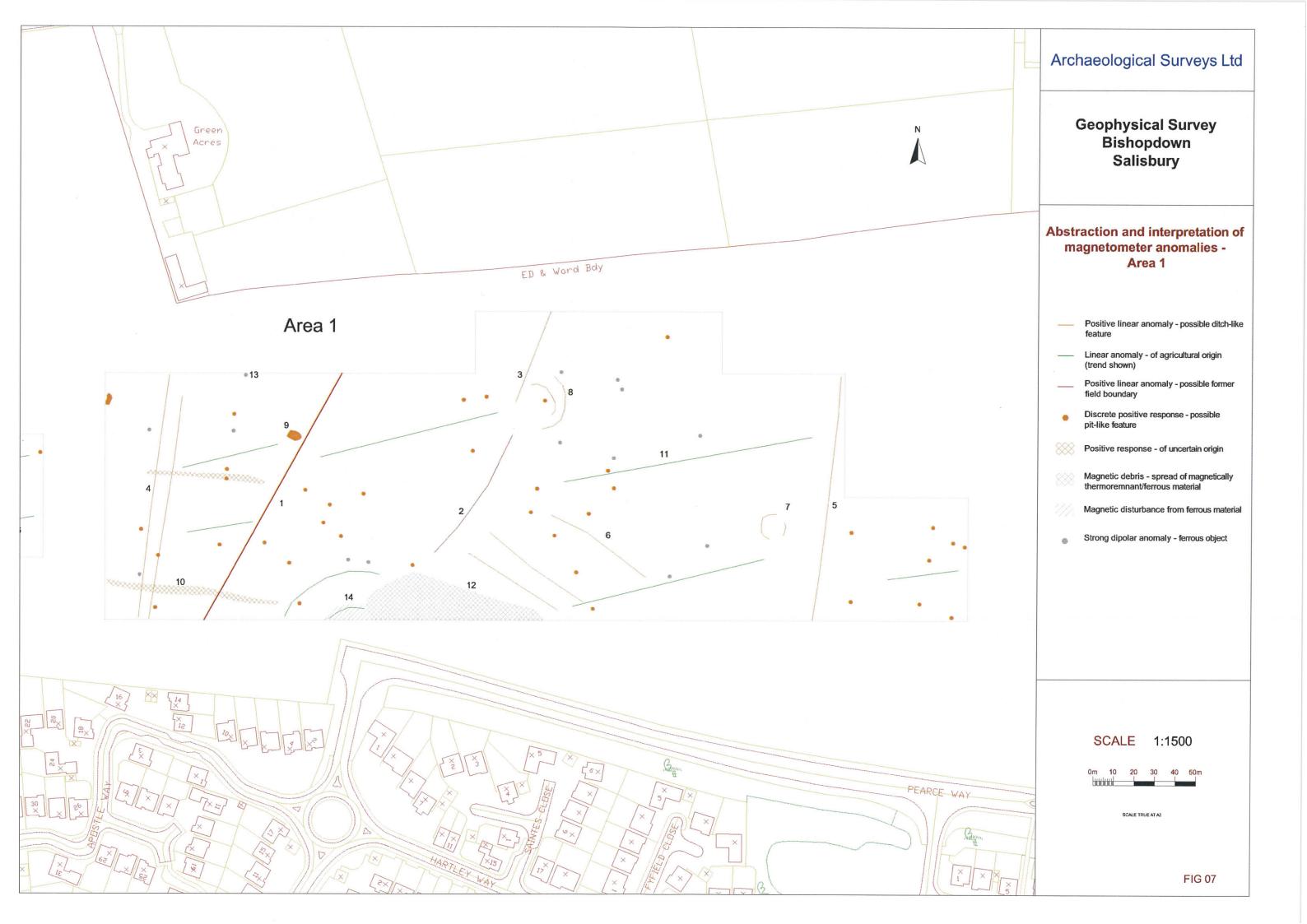


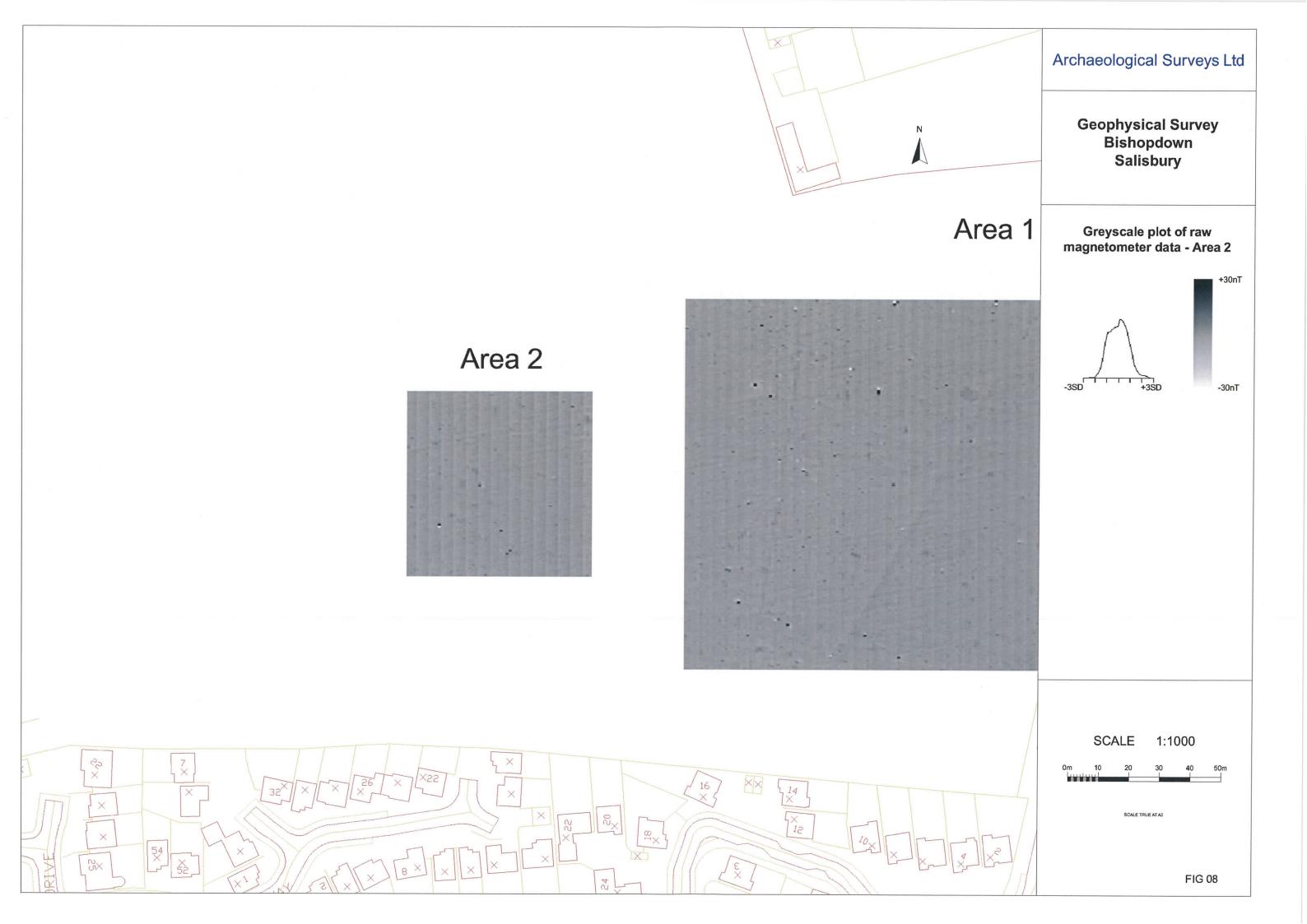


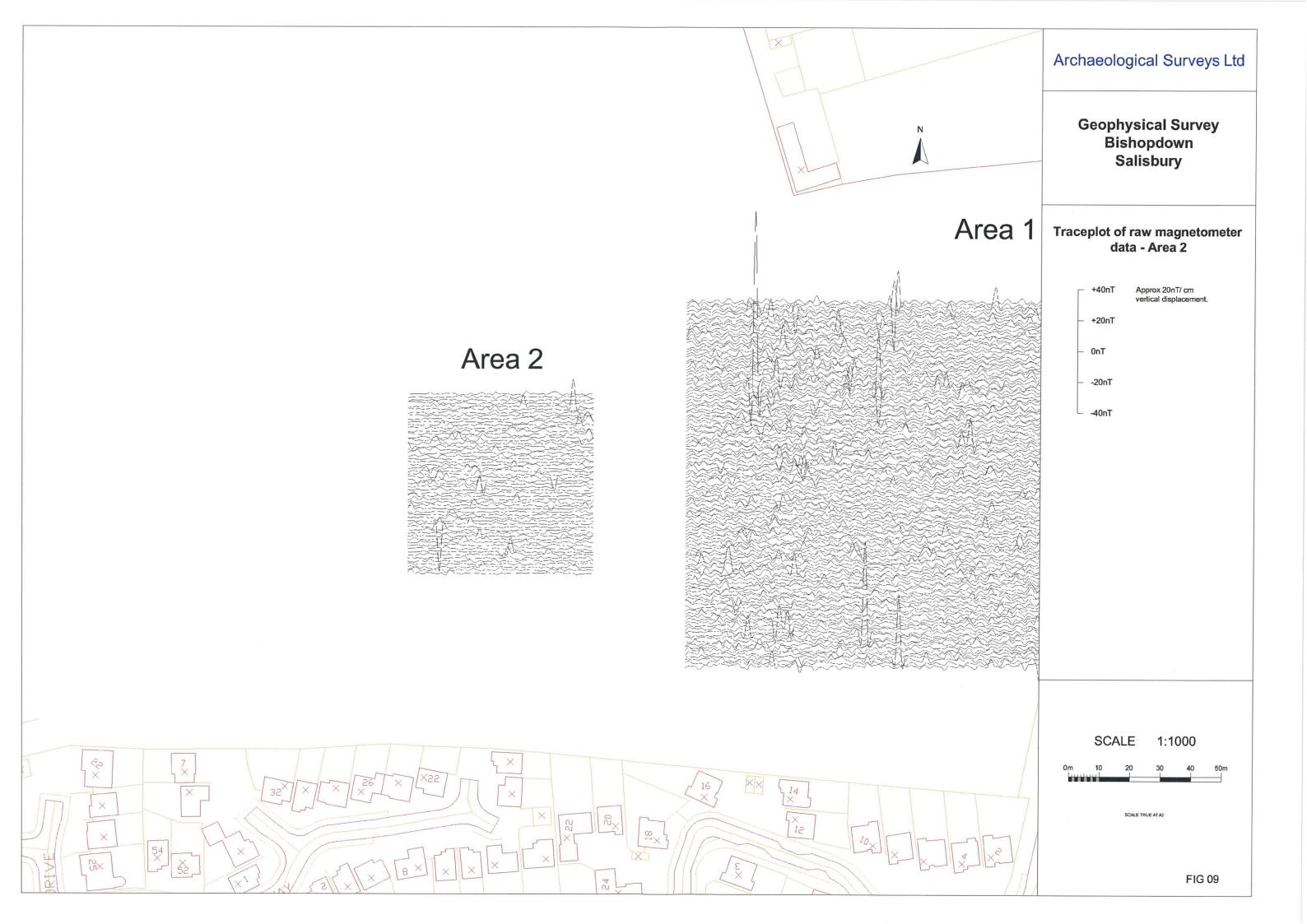


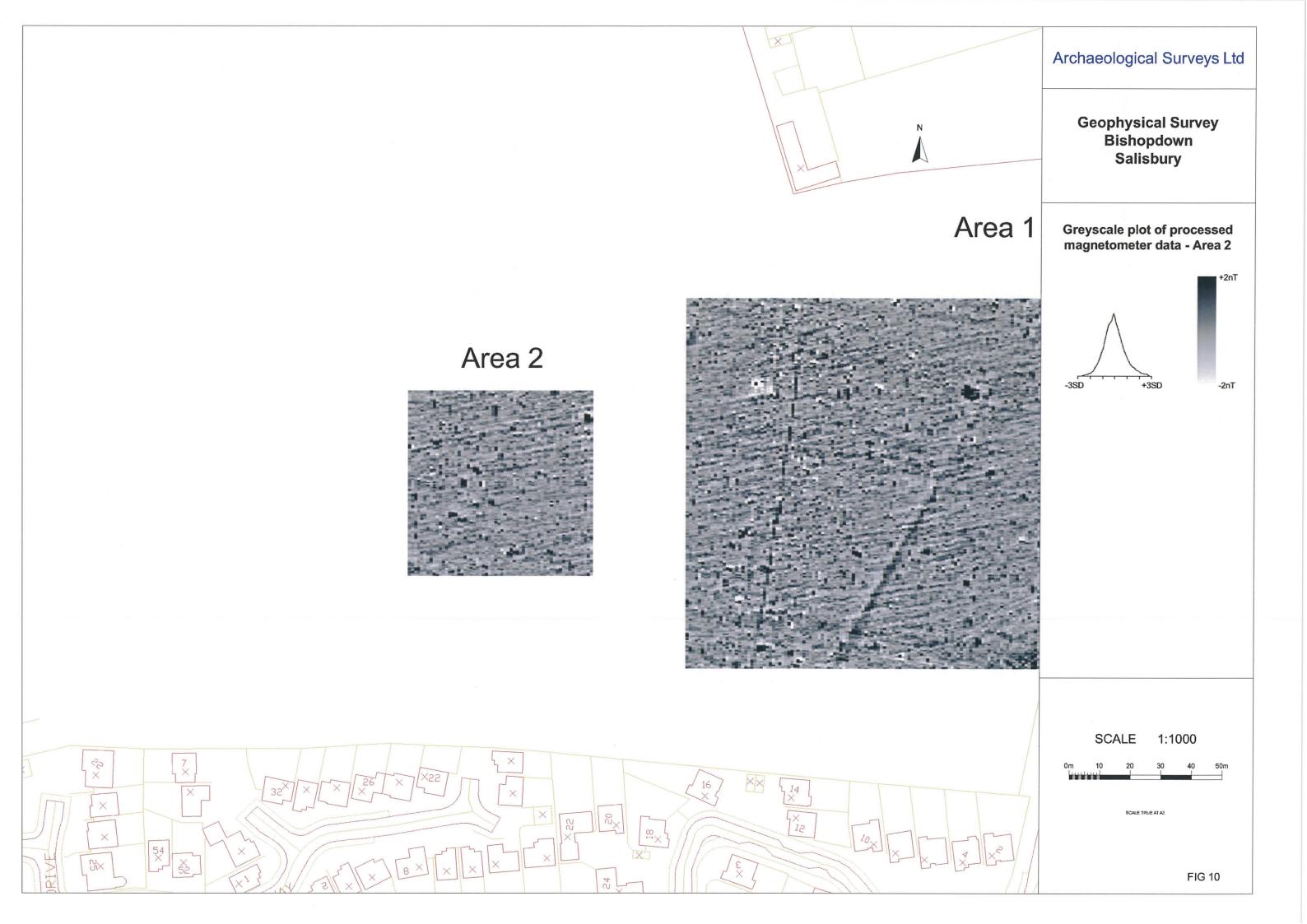


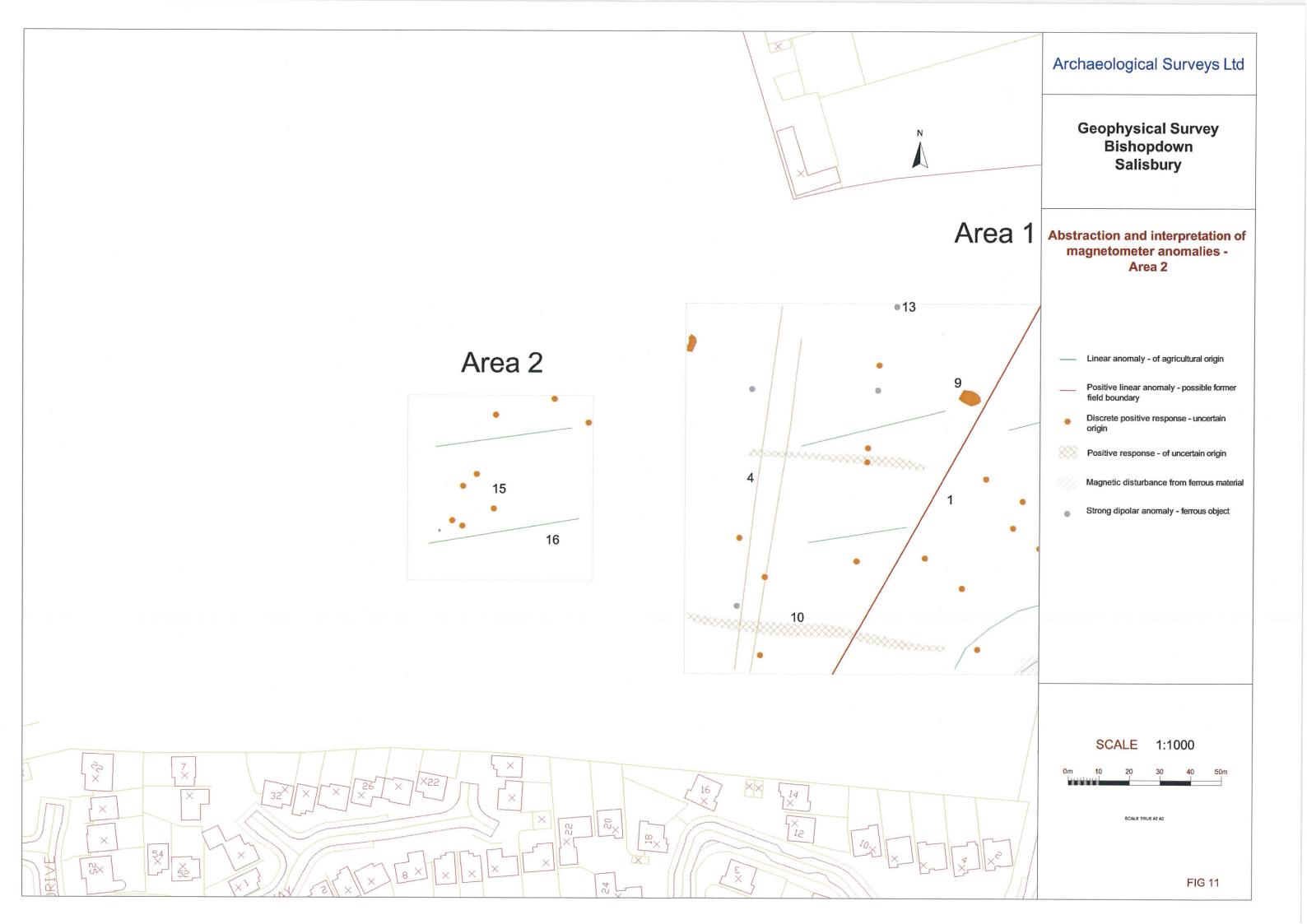




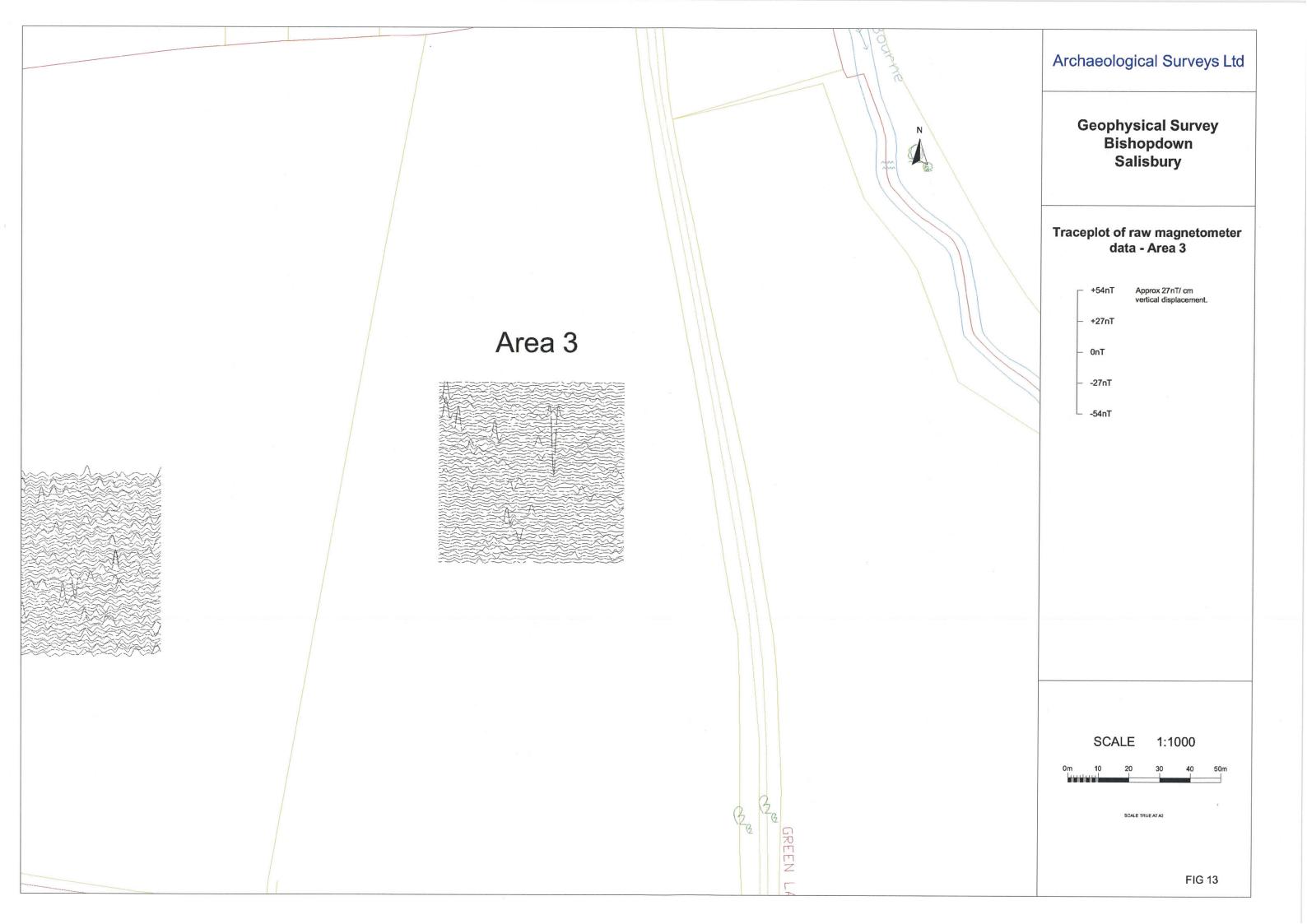


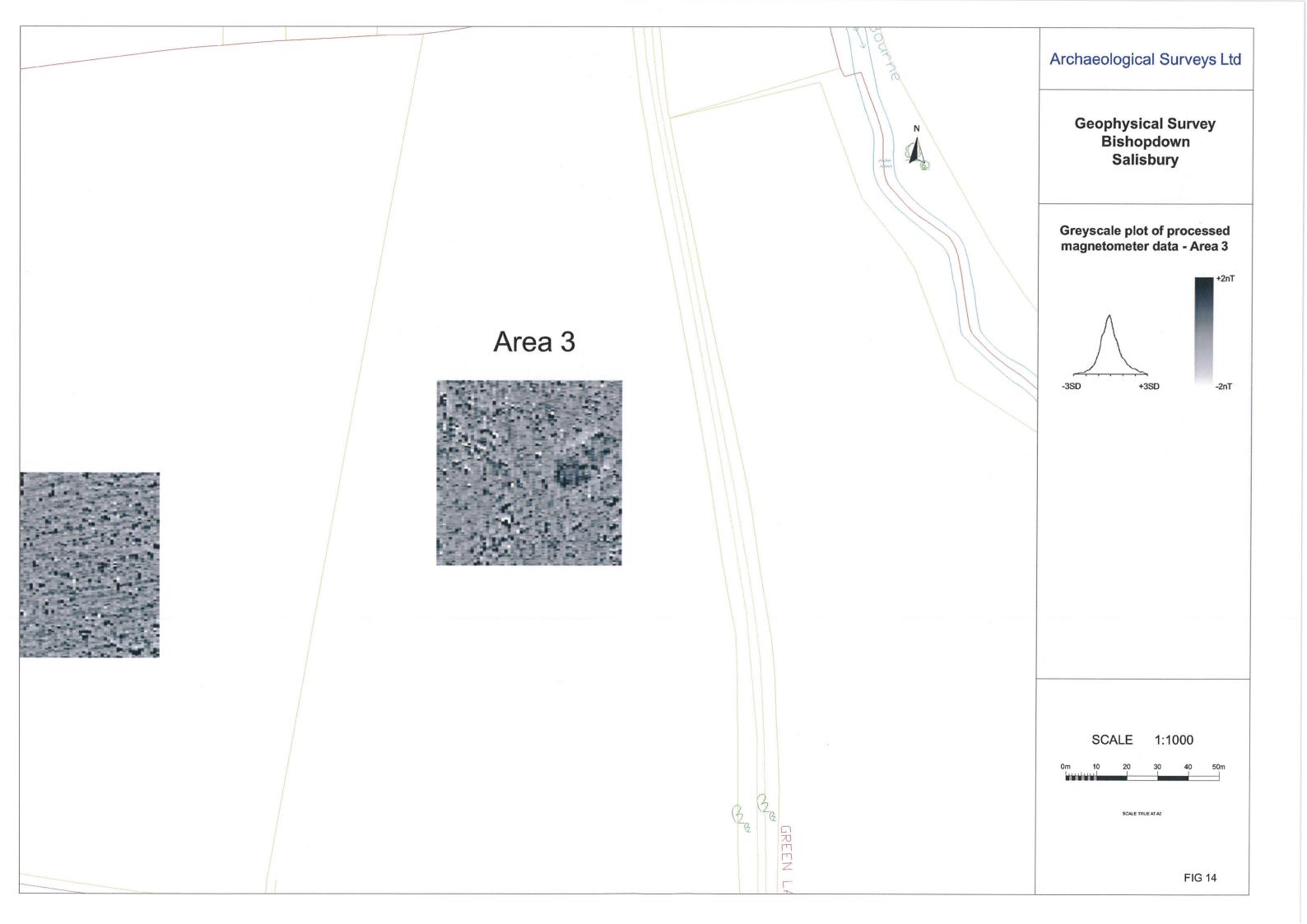


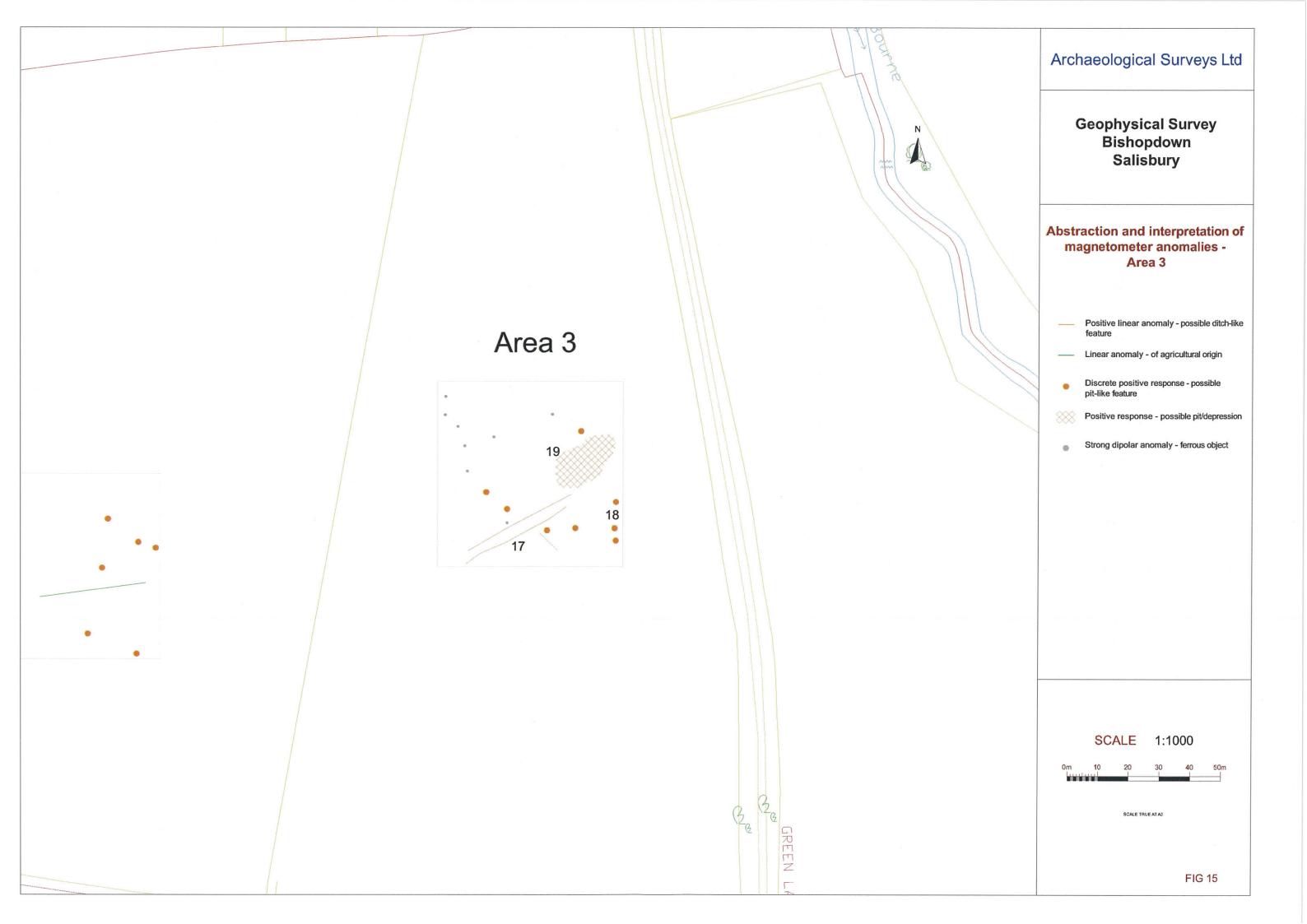


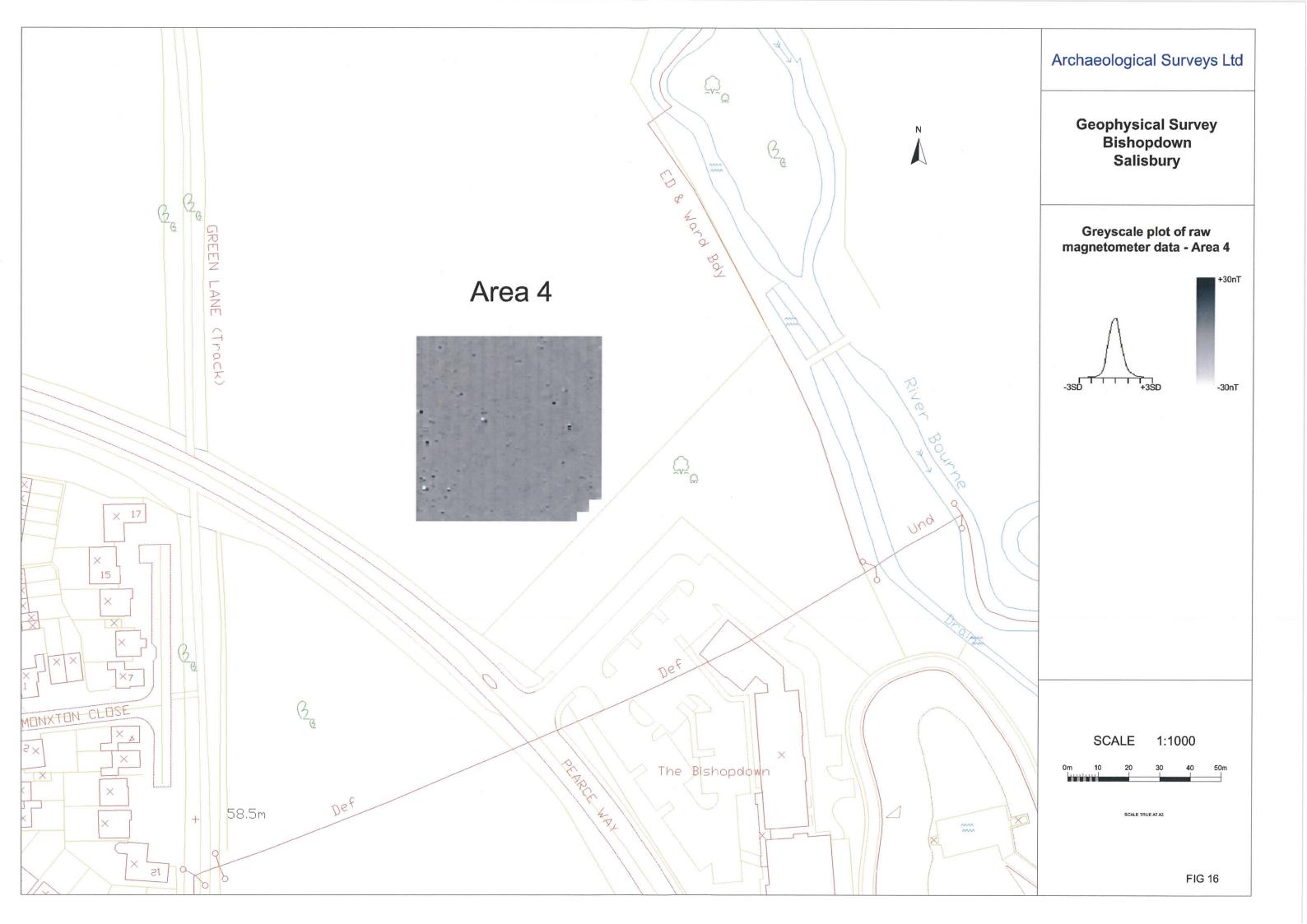


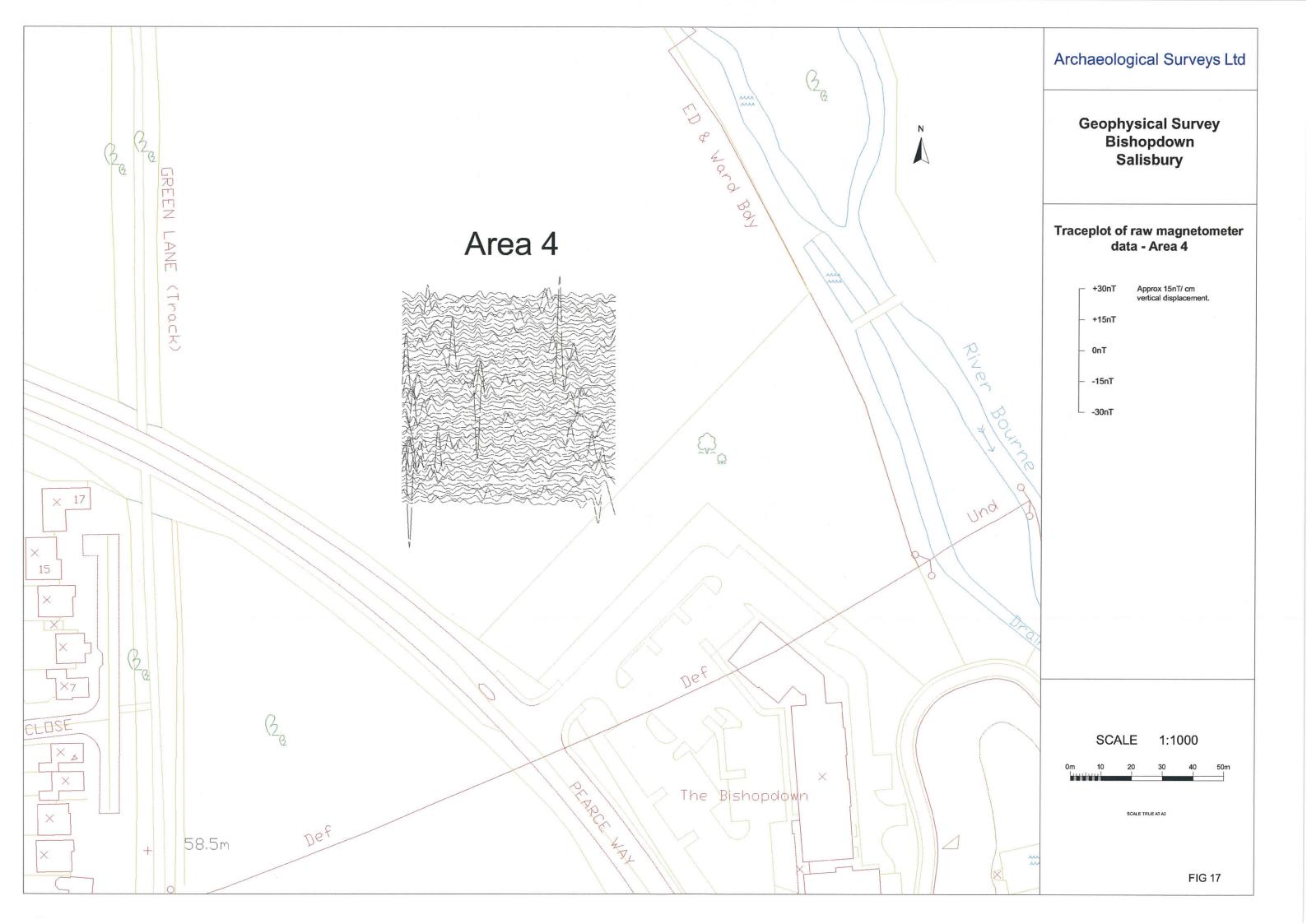


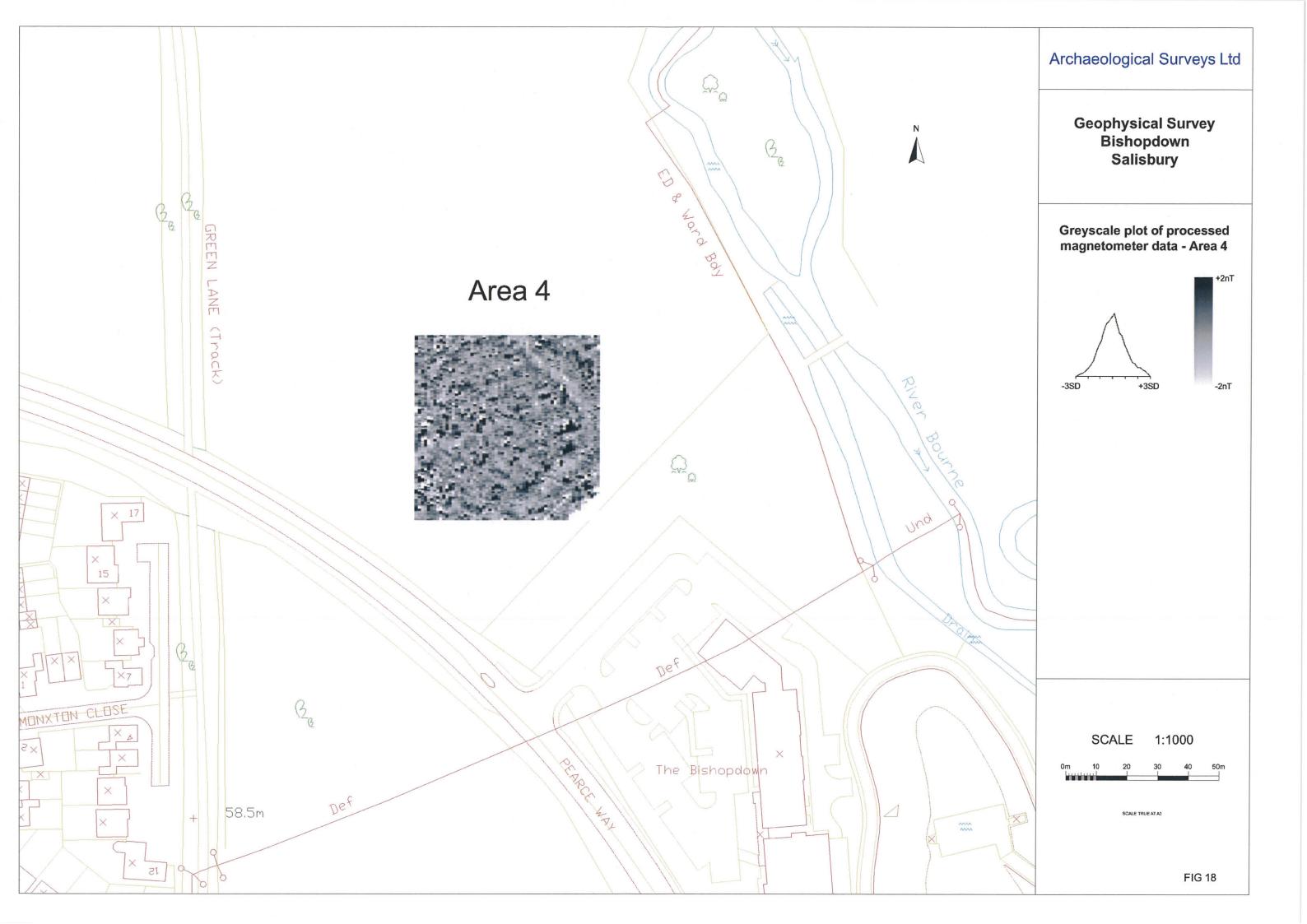


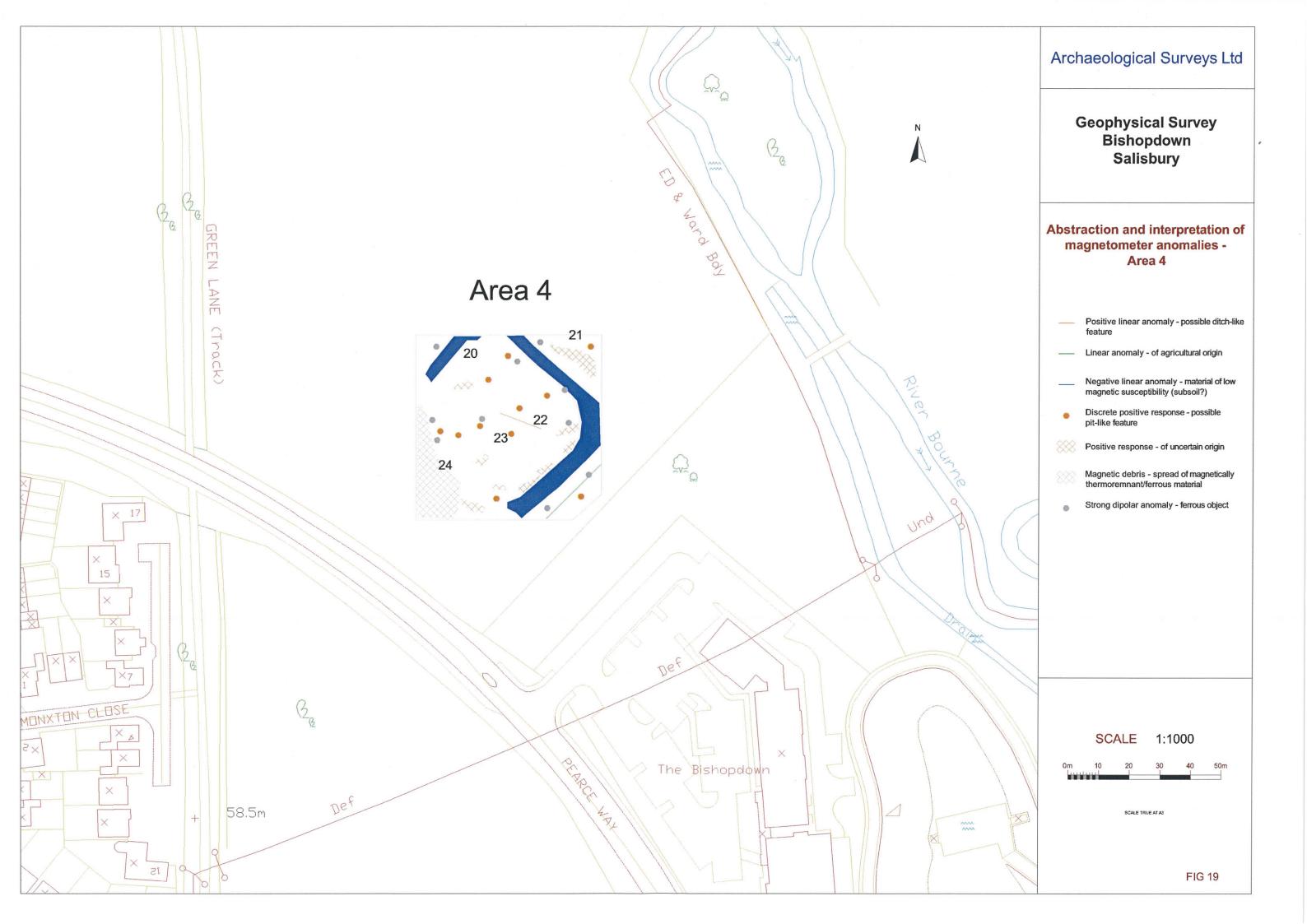


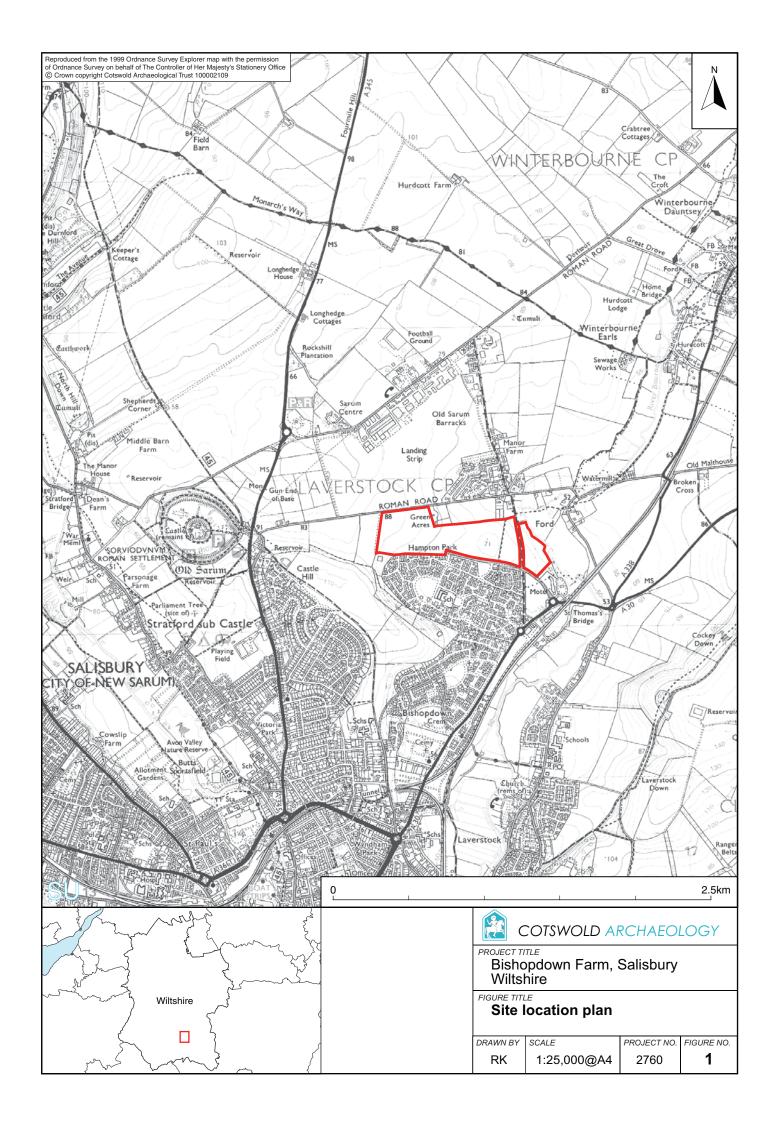


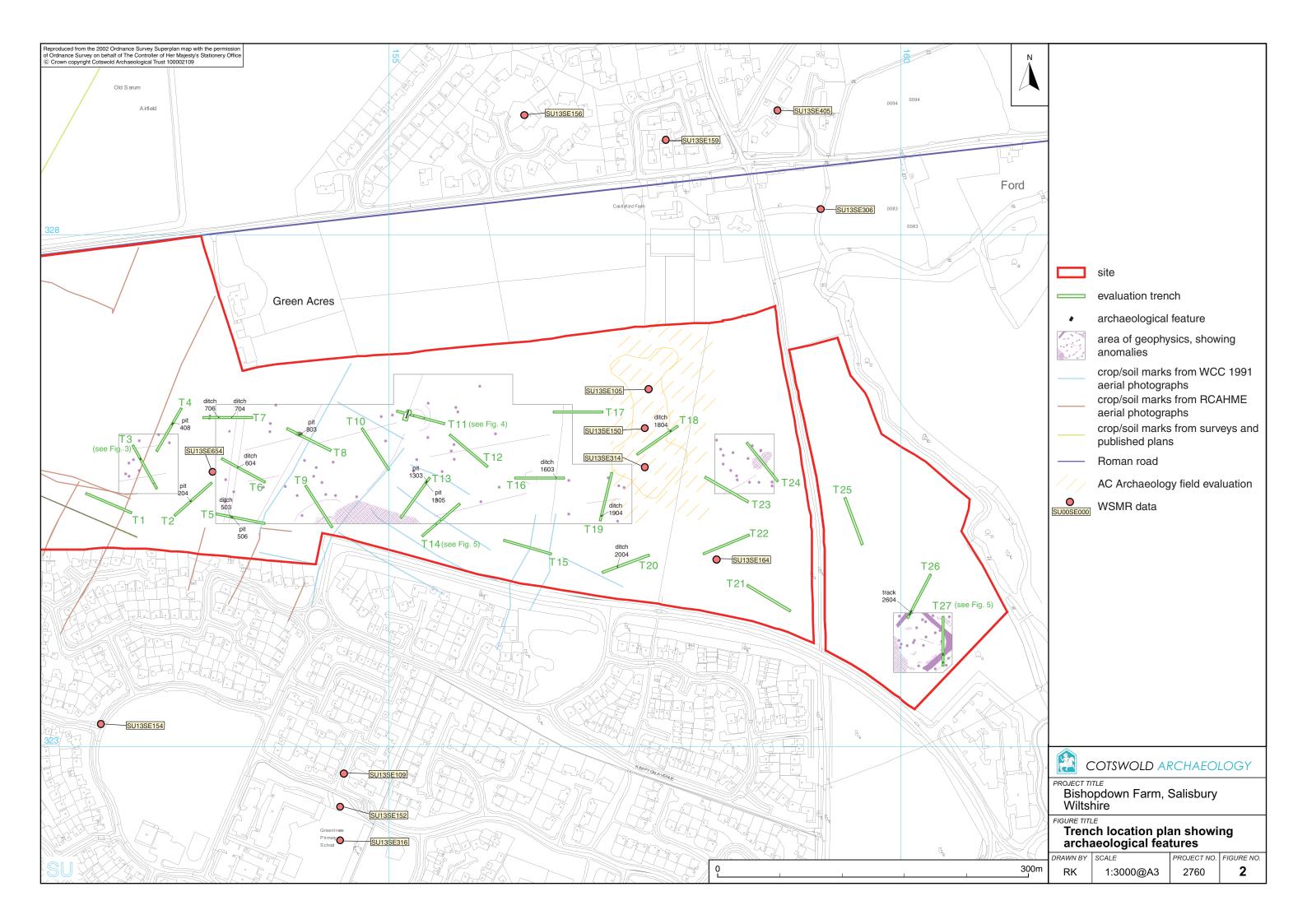






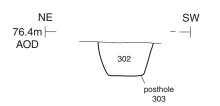




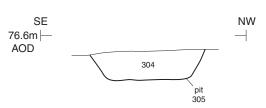




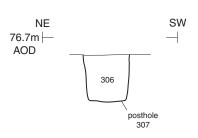
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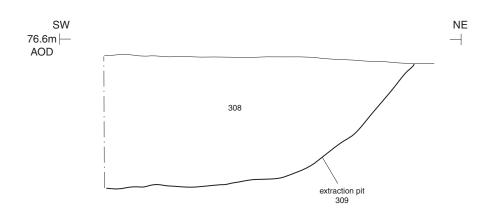
Section BB



Section CC



Section DD





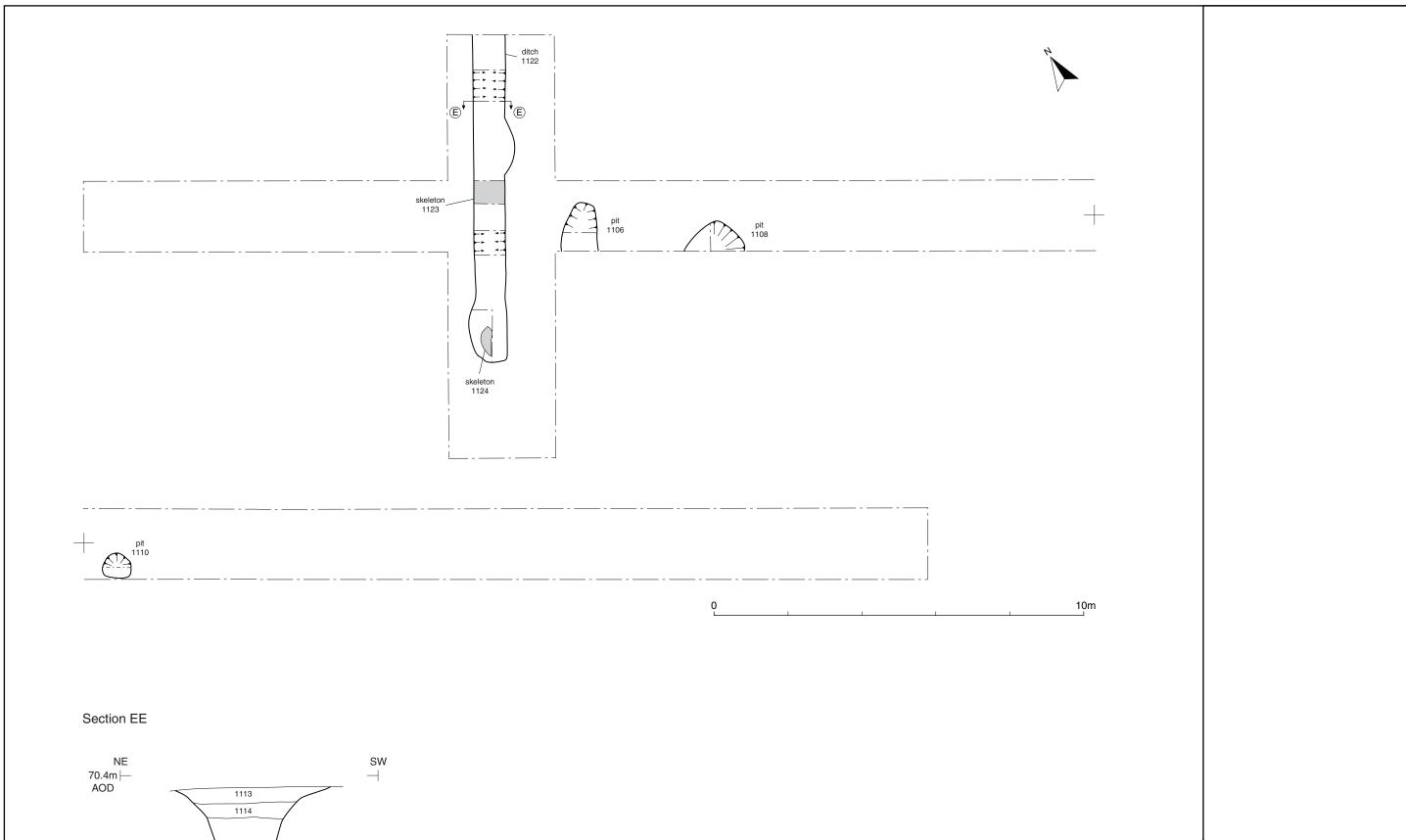
## COTSWOLD ARCHAEOLOGY

PROJECT TITLE
Bishopdown Farm, Salisbury
Wiltshire

FIGURE TITLE

Trench 3: plan and sections

DRAWN BY	SCALE	PROJECT NO.	FIGURE NO.
RK	1:100/1:20@A3	2760	3





COTSWOLD ARCHAEOLOGY

PROJECT TITLE
Bishopdown Farm, Salisbury
Wiltshire

FIGURE TITLE

Trench 11: plan and section

DRAWN BY SCALE PROJECT NO. FIGURE NO. 1:100/1:20@A3 2760

