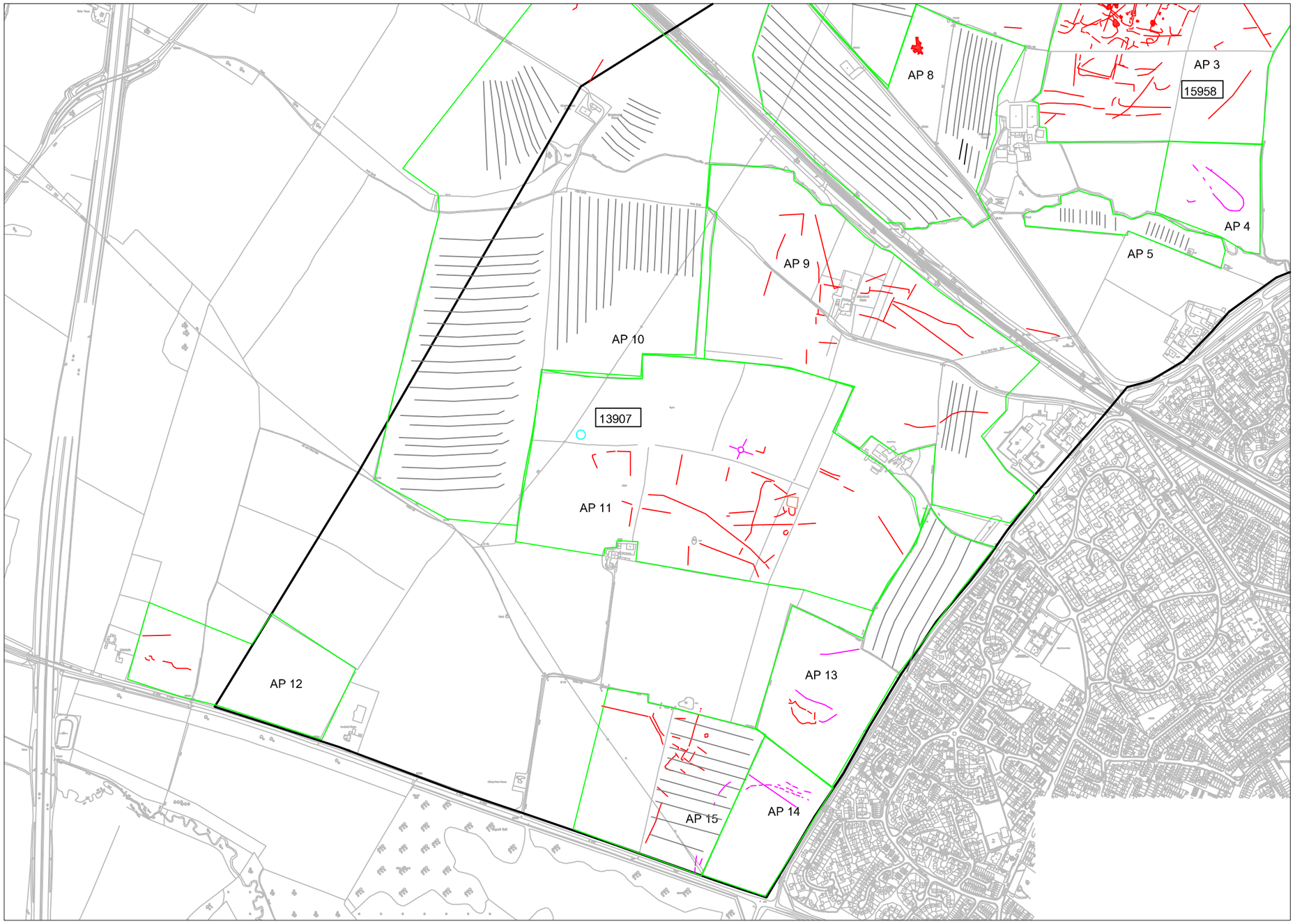
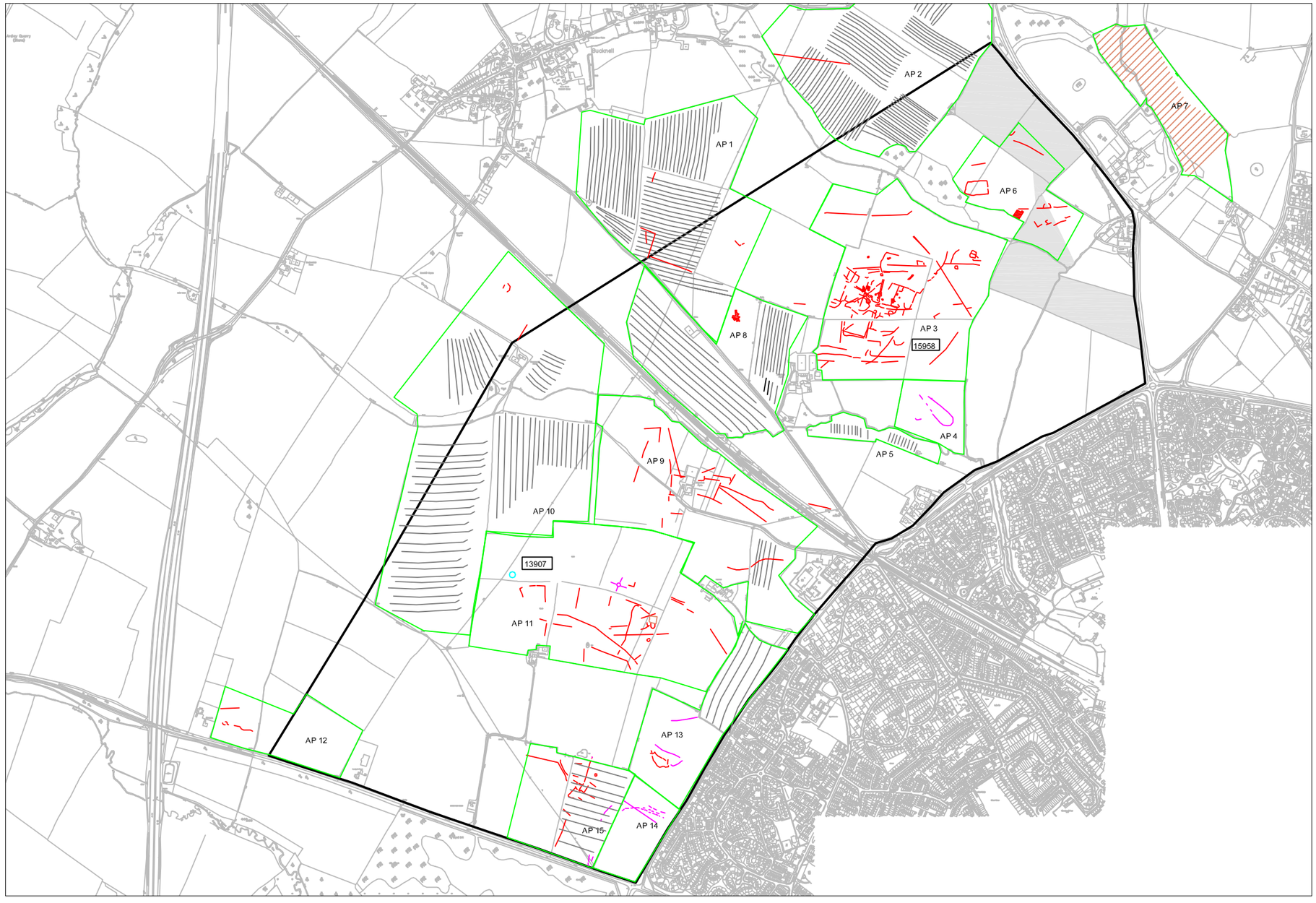


Drawing Title	PLAN 3 Bicester Eco Town PART 1: The Entire Site Sites identified from aerial photographs in the south west sector
Client	Hyder Consulting (UK) Ltd
Project	Bicester Eco Town PART 1
Plan no	0802/03
Scale	Printed to fit A3, use GIS file for accurate scaling
Date	10 2010 cc

Air Photo Services Ltd www.airphotoservices.co.uk

- The site boundary
- AP site polygons
- AP 15 — Sites recorded from aerial photographs
- Buried features which show as marks in crops
- Possible archaeological features which show as marks in crops
- Areas of Medieval ploughing (ridge and furrow)
- Position of ring ditch recorded on OHER, photographs unavailable
- 13907 — OHER numbers



Drawing Title	PLAN 4 Bicester Eco Town PART 1: The Entire Site Overview of all sites identified from aerial photographs
Client	Hyder Consulting (UK) Ltd
Project	Bicester Eco Town PART 1
Plan no	0802/06
Scale	Printed to fit A3, use GIS file for accurate scaling
Date	10 2010 cc

The site boundary

The Exemplar Site

AP site polygons

AP 2 Sites recorded from aerial photographs

Buried features which show as marks in crops

Possible archaeological features which show as marks in crops

Areas of Medieval ploughing (ridge and furrow)

Position of ring ditch recorded on OHER, photographs unavailable

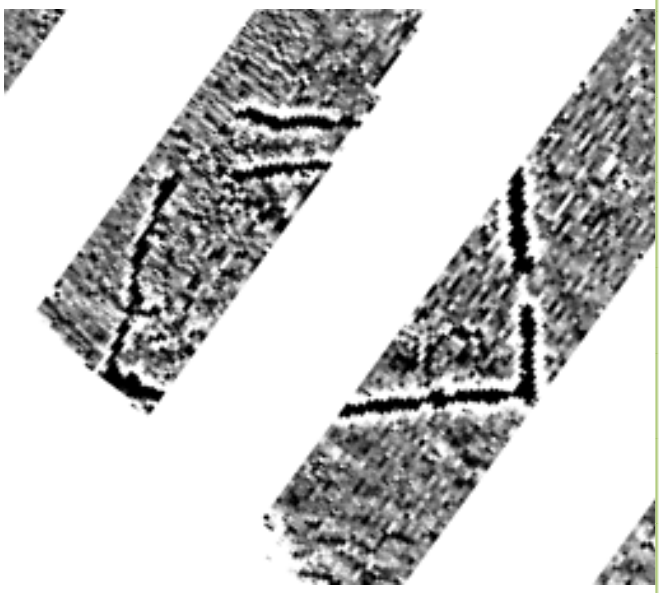
13907 OHER numbers

Air Photo Services Ltd www.airphotoservices.co.uk

APPENDIX 15.3
ARCHAEOLOGICAL GEOPHYSICAL SURVEY

Northamptonshire Archaeology

Archaeological Geophysical Survey For the Proposed Bicester Eco Development Oxfordshire December 2011 – February 2012



Northamptonshire Archaeology
2 Bolton House
Wootton Hall Park
Northampton NN4 8BE
t. 01604 700493 f. 01604 702822
e. sparry@northamptonshire.gov.uk
w. www.northantsarchaeology.co.uk

Adrian Butler

Report 12/27

April 2012

STAFF

Project Manager: Adrian Butler MA BSc AI*f*A

Fieldwork: Ian Fisher BSc
Sam Egan BSc
Jonathan Elston BA
Adam Meadows BSc
Robyn Pelling BA
John Walford MSc

Text: Adrian Butler
Charlotte Walker BSc AI*f*A

Illustrations: Ian Fisher
Adrian Butler

QUALITY CONTROL

	Print name	Signed	Date
Checked by	Mark Holmes	*MPH*	02/04/12
Verified & Approved by	Steve Parry	*SP*	02/04/12

OASIS REPORT FORM

PROJECT DETAILS		
Project title	Archaeological Geophysical Survey for the Proposed Bicester Eco Development, Oxfordshire	
Short description	Northamptonshire Archaeology was commissioned by Oxford Archaeology, on behalf of Hyder Consulting, to conduct a magnetometer survey of land proposed for the construction of the Bicester Eco Development. The survey identified archaeological features within much of the area. A previous aerial photography survey had identified cropmarks, indicating a concentration of archaeological features throughout the area. The geophysical survey confirmed and expanded upon the presence of these features. Particular concentrations of features were located in the north of the area. These included sub-rectangular and sub-circular ditched enclosures, curvilinear ditches and pits, likely to be of late prehistoric or Roman date. Other foci of archaeological features were detected in the north and west of the area. Of particular interest was a possible, long curving droveway or crowding alley in the west of the site.	
Project type	Geophysical survey	
Site Status	None	
Previous work	Airphoto Services 2011; Hyder 2010; Hyder 2011; Oxford Archaeology 2010	
Current land use	Mixed arable and pasture land	
Future work	Unknown	
Monument type and period	Late prehistoric or Roman ditched enclosures, pits and ditches	
PROJECT LOCATION		
County	Oxfordshire	
Site address	Bucknell Road	
Post code	-	
OS co-ordinates	SP 5810 2525	
Area	98.7ha (50% of 198ha available area)	
Height aOD	85.7m	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology	
Project brief originator	Richard Oram, Oxfordshire County Council	
Project Design originator	Northamptonshire Archaeology	
Director/Supervisor	Ian Fisher	
Project Manager	Adrian Butler	
Sponsor or funding body	Hyder Consulting for P3Eco & A2Dominion	
PROJECT DATE		
Start date	12 December 2011	
End date	02 March 2012	
ARCHIVES	**Location (Accession no.)**	**Contents**
Physical	NA store	Site records
Paper		Client report PDF
Digital		Survey data
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report (NA report)	
Title	Archaeological Geophysical Survey for the Proposed Eco Development, Bicester, Oxfordshire	
Serial title & volume	NA report No.12/27	
Author(s)	Adrian Butler	
Page numbers	9	
Date	02/04/2012	

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Figures

ARCHAEOLOGICAL GEOPHYSICAL SURVEY FOR THE PROPOSED ECO DEVELOPMENT, BICESTER, OXFORDSHIRE

DECEMBER 2011 - JANUARY 2012

Abstract

Northamptonshire Archaeology was commissioned by Oxford Archaeology, on behalf of Hyder Consulting, to conduct a magnetometer survey of land proposed for the construction of the Eco Development, Bicester. The survey was successful in identifying archaeological features within much of the area. A previous aerial photography survey had identified cropmarks, indicating archaeological features throughout the area. The geophysical survey confirmed and expanded upon the presence of these features. Particular concentrations of features were located in the north of the area. These included sub-rectangular and sub-circular ditched enclosures, curvilinear ditches and pits, likely to be of late prehistoric or Roman date. Other foci of archaeological features were detected in the north and west of the area. Of particular interest was a possible, long curving droveway or crowding alley in the west of the site.

1 INTRODUCTION

Northamptonshire Archaeology (NA) was commissioned by Oxford Archaeology (OA), on behalf of Hyder Consulting, to conduct a magnetometer survey of land proposed for the construction of the Eco Development, Bicester, Oxfordshire. The proposed Eco Development is located to the north west of Bicester, between NGR SP 55150, 23210 and SP 57630, 25670 (Fig 1).

The fieldwork was carried out between December 2011 and February 2012, and covered approximately 98.77ha of land. Some parts of the proposed Eco Development were not investigated, either because access had not been granted or because ground conditions or standing crops rendered them unsurveyable. Areas of Green Infrastructure that will not be affected by the development were not surveyed.

2 TOPOGRAPHY AND GEOLOGY

The proposed Eco Development, located to the north west of Bicester and south east of Bucknell, lies at 85.7m AOD. It is bounded on the south eastern edge by the A4095 Howes Lane, the B4100 to the east and the B4030 to the south west. Open fields extend beyond its north western edge. The site is bisected by a railway line aligned north-west to south-east and the Bucknell Road to the north-east of that.

The solid geology of the survey area is, in the majority, limestone cornbrash formation with forest marble formation of interbedded limestone and mudstone underlying the streams and any former watercourses (BGS 2012). The soils on the site are of the Aberford association (SSEW 1983), being calcarious shallow, brashy well-drained loams.

3 ARCHAEOLOGICAL BACKGROUND (Charlotte Walker)

There has been little previous excavation within the site, although there are a number of archaeological monuments in the vicinity.

There is an area of ditches and enclosures at the south of the site at Himley Farm. There is also evidence of a ring ditch, which may be the remains of a Bronze Age barrow (Oxford Historic Environment Record (OHER) no 13907). An extensive complex of features, including ditches, pits, possible tracks and enclosures are visible as cropmarks close to Hawkswell Farm (OHER no 15958). They are probably the remains of a prehistoric or Romano-British settlement and may relate to Iron Age settlement recorded at Slade Farm, 400m to the south of the site. Further cropmarks identified during the air photo survey within the area may also date to this period (Airphoto Services 2010).

To the north of the site lie the remains of a deserted medieval settlement at Caversfield. There is a 10th/11th century church at Caversfield and a post-medieval fishpond to the south of the church. A large depression to the north-east has been recorded as an earlier, medieval fishpond (OHER no 13743). There are several areas where eroded ridge and furrow earthworks still survive. These represent the remains of the medieval open field system. Close to a small watercourse within the site are a number of upstanding ridges which may be the remains of post-medieval water meadows (Airphoto Services 2010).

A trial trench evaluation was undertaken in 2010 by Oxford Archaeology in fields at Home Farm, at the northern part of the site (exemplar site). Of seventy trenches, only six contained any features (OA 2010). These were all linear and were interpreted as agricultural boundaries, although they were ambiguous and may equally have been natural in origin.

4 METHODOLOGY

The survey was undertaken between 12th December 2011 and 7th February 2012, at which time five plots of land, (Blocks A – E), were suitable and accessible for survey.

The survey was conducted with *Bartington Grad 601-2*, twin sensor array, vertical component fluxgate gradiometers (Bartington and Chapman 2003). These magnetometers are standard instruments for archaeological survey and can resolve magnetic variations as slight as 0.1 nanoTesla (nT).

An independent set of 30m survey grids was established within each surveyed plot of land by means of a Leica System 1200 dGPS. The magnetometers were carried at a brisk but steady pace through each grid square, collecting data along 1m spaced traverse lines. Measurements were automatically triggered every 0.25m along the traverses, giving a total of 3600 measurements per square. The survey progressed on a field-by-field basis, each having been given a pre-assigned Block number. Alternate lines of grids were surveyed, within each block, resulting in a 50% sample coverage of the site area, as per the written scheme of investigation (OA 2011).

All fieldwork methods complied with the written scheme of investigation (OA 2011), and guidelines issued by English Heritage and by the Institute for Archaeologists (EH 2008; I*f*A 2011).

Survey data was processed using Geoplot 3.00v software. Striping, caused by slight mismatches in sensor balance, was removed using the 'Zero Mean Traverse' function and the data was destaggered as necessary.
The processed data is presented in this report in the form of greyscale plots (scale +4nT to -4nT black ~ white) which have been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Figs 5 - 10). Interpretative plots have been produced and are overlaid on the data in Figures 11 – 18.

5 SURVEY RESULTS

A large number of magnetic anomalies representing subsurface features were detected by the survey. To avoid unnecessary repetition in the bulk of the text, examples of such features and the magnetic anomalies that stem from them are given here:

- Ditches and ditched enclosures - linear and curvi-linear positive anomalies;
- Pits and large postholes – discrete positive anomalies;
- Remnant medieval ridge and furrow cultivation – repeated parallel weakly positive linear anomalies;
- Industrial features (eg hearths, kilns) – discrete highly positive anomalies with negative 'halo';
- Stone structures – weak negative linear and sub-rectangular anomalies;
- Ferrous pipelines – linear chains of alternating intense positive / negative anomalies;
- Iron debris – 'dipolar' paired intense positive / negative anomalies, small if on the surface (eg nails, horseshoes) broader by size and depth of burial; The smaller dipolar anomalies are very common and randomly detected over the entire survey, and so are not generally illustrated in interpretation diagram.

Several concentrations of features were located across the site, enhancing the evidence from the aerial survey (Airphoto Services 2010). Block A at the very northern point of the site area (field *A1* and *A2*), contained a large sub-rectangular enclosure with other associated enclosures, ditches and pits.

A possible settlement site, composed of sub-rectangular enclosures of various dimensions, pits and sub-dividing ditches were situated in the centre of Block B in the northern half of the site (fields *B6* and *B10*).

Block C in the west of the area (field *C1*) was found to contain small enclosures close to a long curving double ditch possibly representing a droveway or crowding alley.

5.1 Block A (Figs 3 & 12)

A large (approximately 80m x 48m) sub-rectangular ditched enclosure was identified spanning the north-south field boundary central to *a1*. The enclosure was orientated east-west and a second ditch was located parallel to the northern which, unlike the enclosure feature, was not mirrored in the cropmark evidence. There was an entrance on the eastern side, where an increased magnetic response suggests wider ditches or possibly a deeper fill or one more rich in cultural-remains. Anomalies representing up to four curving ditches and two pits were identified within the west of

the enclosure. In the eastern half one curving ditch and four pits arranged in a loose square was identified.

The ditch in the east of the large enclosure appears likely to form part of a long ovoid feature crossing two survey transects and composed of interrupted lengths of ditch, much less magnetically enhanced than the sub-rectangular enclosure.

Two further, weakly enhanced, ditched enclosures (*c*15m diameter) were detected to the north and north-east of the sub-rectangular enclosure. Also north-west of the same a linear ditch was located orientated south-east to north-west. A line of small pits (*c* 1m diameter) was identified extending south. Four similar pits were situated to the west.

In the south-eastern transect of *A1* survey located an irregular semi-circular ditch approximately 40m in diameter

The south of Block A (*A2*), was dominated by large ferrous responses, indicating a probable dump of iron-based debris.

5.2 Block B (Figs 4-7 & 13-16)

Survey of the extreme East of Block B, area *B1,* contained a south-west to north-east aligned ferrous pipeline parallel with the southern boundary. As this was not detected in *B2* it is safe to assume that it likely turns sharply either north-west or south-east before the western survey transect of *B2*. The western survey transect in *B1* was found to contain a south-east to north-west orientated ditch. In the northern end of that transect, a west - east aligned ditch was located, apparently continuing east through the remaining survey of *B1*, but not identified across the stream in *B3*. A group of four possible pits were located at the western limit of the ditch. The pits were, in turn, surrounded by a curving ditch to the north and south. A roughly square arrangement of four pits was detected at the northern limit of the survey transect, a north-east to south-west aligned ditch to the west of them.

In field *B2* the survey located a conjoined pair of circular ditches, each 10m in diameter, possibly indicating the drip-gullies of roundhouses. A likely pit was located central to the southern example. Little else of significance was identified in *B2*.

The eastern-most survey transect of *B3* was found to contain several features. A large (*c* 4m) pit was identified at the northern end and a ‘reverse-C’-shaped ditch approximately 100m south of that. A slight indication of part of an anomaly on the edge of this transect suggests that the ditch may continue to form an entire enclosure in the unsurveyed area. Another pit was detected further to the south. The central and western survey transects of *B3* may have features in common. A linear ditch orientated north-east to south-west in the north, central transect was possibly detected continuing approximately 40m to the south-west. Further south in the central transect, several possible small pits were detected, along with a ditch aligned south-east to north-west. This was found to be parallel to the similarly aligned limb of a right-angled ditch located on the eastern edge of the western survey transect, possibly indicating three sides of a *c* 40m x 40m sub-rectangular enclosure. An additional right-angled ditch was detected 20m to the north-east of the former. Four possible pits were identified south of the putative enclosure in the central survey transect. Two more angled ditches were detected, north and south along the western survey transect.

A number of possible archaeological features were detected within the three survey transects in the north of *B4*. Five possible pits were identified in the west and five short south-west to north-east aligned ditches in the central and eastern transects. A single pit was logged in the eastern survey transect. The southern quarter of the central *B4* survey transect was found to contain two gently curving narrow ditches, each approximately 40m long. Another ditch feature was found to curve southward from the southern of the pair.

The cropmarks plot (Airphoto Services 2010) shows a linear feature orientated south-east to north-west across the southern 'square' field of *B5*, this also continues for approximately 105m north-west, half-way across the 'rectangular' northern *B5* field. The presence of this linear ditch was confirmed across all the survey transects in *B5*, including the most northerly transect, where the cropmark had not been identified. In the southern field, occasional disparate short linear ditches were detected and in the east a U-shaped ditch possibly representing the southern part of an enclosure.

Cropmark evidence shows a curving ditch arcing through south of field *B5*, and beyond. Magnetic survey did not detect this ditch in the southern field, although it was present intermittently through the southern survey transect of the rectangular northern *B5* field.

The north-east survey transect of *B5* detected the northern ditch of a cropmark enclosure and a curving ditch likely to represent part of another, previously unidentified enclosure to the west of the previous. A pair of north-west to south-east curving ditches was identified to the east of the enclosures.

Field *B6* was found to contain a palimpsest of linear and curvi-linear ditch-type magnetic anomalies, particularly in the northern two survey transects. Most of these appeared to coincide with and extend upon features such as enclosures and identified as cropmarks (Airphoto Services 2010: AP3). Numerous pits of diameters between 0.5m and 6m were detected amongst the other features. A change in the background magnetic level near the eastern side of *B6* was likely to be due to a variation in the substrate. Survey towards the south of *B6* detected a less dense pattern of features, similar to the aerial photography. Nothing of significance was identified in the most southerly survey transect.

Three transects were surveyed in field *B7*. A ditch following a cropmark east to west from the west of *B7* was identified in the north-east and central survey transects.

A pair of ditches was detected transecting the western and central survey transects of field *B8*. A group of pits were surveyed in the south-western corner of the field. The only other features were two buried ferrous objects in the eastern transect.

In the north-eastern corner of field *B9*, two ditches aligned parallel to the northern boundary were surveyed in the north-western corner there was a set of five ditches. These comprised two orientated west to east; one was aligned north-west to south-east and two ditches which intersected to the south. Another short, south-east to north-west ditch was detected towards the eastern end of the central survey transect. A likely ceramic drain was identified crossing the middle of the southern transect south to north towards a collection of magnetic anomalies of unknown provenance in the next transect north.

As in field *B6* to the immediate south, field *B10* was found to contain a dense network of features, mostly concentrated in the southern half. A large, *c* 70m x 70m,

sub-rectangular enclosure containing subdividing ditches and substantial pits was detected in the east of the field. Smaller curved and rectilinear enclosures, ditches and pits of various dimensions were identified in western half of *B10.* Ditches in the north of *B6* and south of *B10* apparently join to create further enclosures.
Survey in field *B11* located six ditches. Four were orientated north-west to south-east, two were aligned north-east to south-west and there one was aligned north to south. No features were identified in *B12*.

Ridge and furrow cultivation, aligned north to south, was identified in the southern half of *B13*. The cultivation pattern was found to continue on a more south-westerly alignment in field *B14*.

In field *B15* ridge and furrow was located on a north to south alignment in the two northerly and southern-most survey transect. A probable ceramic pipe was detected curving north-west to south-east in the south-western corner of the field.

Two sinuous ditches, orientated north-west to south-east, were located in the east of field *B16*. Sections of a single ditch were detected on the same alignment in survey transects to the west. A pair of adjacent pits was identified in the north-west corner of the field. A ferrous pipeline was detected bordering the southern boundary of *B16* at the south of each transect.

Ditches possibly representing several enclosures were detected in the north and north-east of field *B17*. Ridge and furrow was located north to south through the survey transects.

Ridge and furrow was identified on a north to south alignment in the south-eastern half of field *B18* and east to west in the north-western half. No other features were located.

Ferrous features were detected in the centre of the northern survey transect in field *B19*. Linear anomalies representing a likely historic boundary were located on a north – south alignment through the centre of the field. Three ditches, two on north-east – south-west alignments and one east – west orientated, were detected in the north-west of *B19*. A Y-shaped arrangement of ditches was identified in western corner of the field.

Anomalies representing linear ditches, small enclosures and pits were detected in the south-east of survey transects in field *B20*.

5.3 Block C (Figs 8 & 17)

Anomalies representing a ferrous pipeline were detected aligned south-east to north-west in the north-east corner of *C1*. A second ferrous pipeline was identified orientated west-north-west to east-south-east, across *C1* parallel to and *c*10m south of the track across the north of the field. A linear and a sinuous ditch feature were identified on the same orientation as the pipe. Ridge and furrow previously seen as cropmarks was also detected in the north of *C1*.

The south-eastern quarter of field *C1* was characterised by a set of ditch and pit – type anomalies. A pair of parallel ditches, 6-8m apart extended in a broad curve from the centre of the southern extent of *C1* to half-way along the western boundary. It is possible that this feature represents a droveway or a crowding alley (Beamish and Shore 2008, 42). Linear ditches describing the southern side of a probable sub-rectangular enclosure were pinpointed on the inside extending to the west. To the

north of this a number of pits and sections of ditch were located both on the inside and outside of the possible droveway. Further anomalies were identified within the northern sector of the enclosed area, including three more ditches. Three small sub-rectangular enclosures of between 4m and 10m diameter formed by ditches were located south of the possible droveway; one of the sub-enclosure ditches ends at northern reach of the droveway. Another, aligned east-west begins south of the southern ditch at almost the same point. Three ditches aligned south to north were detected towards the western side of the survey as was a large group of pits, intersected by one of the drove ditches.

Five linear ditch anomalies detected within two survey transects to the north of the putative droveway, reflect a large sub-rectangular enclosure. Two pits were located north-east of the former feature. Two linear ditches on the north and south edges of the transects could represent the edges of another possible enclosure.

Field *C2* was found to contain anomalies representing up to three ferrous pipelines aligned north-west to south-east parallel with the north-eastern field boundary. Ridge and furrow was detected on a north-east to south-western orientation. A negative anomaly though likely to represent a historic field boundary was located on a similar alignment through the centre of the field. The survey located a probable ditch, aligned parallel to the ridge and furrow. Alternatively this could represent a more magnetically enhanced furrow.

Ridge and furrow was detected, aligned north-south in the west of *C3*, and west to east in the east of the field. Two intersecting ditches were identified in the north-east survey transect and a second ditch to the west of that. Four elongated (4-5m) pits were detected on a west to east alignment in the northern transect.

Two small fields, *C4* and *C5*, were surveyed to the west of Aldershot Farm. A ferrous anomaly was caused by an animal trough in *C5*, other ferrous anomalies were clustered in the south-west corner. A likely linear ditch orientated north-south was identified in *C4*. A possible semi-circular ditch was located within the field, apparently around a fragment of ferrous debris.

Field *C6* was surveyed to the west of *C5*. Ridge and furrow was identified on a south-west to north-east orientation in the two transects surveyed in this field. A linear ditch was found to traverse the north-west of the survey on a similar alignment to the medieval cultivation. A second linear ditch, further to the east, was detected on a north-east to south-west cropmark alignment through both survey transects, possibly part of a similar feature in field *C2*. Survey of the south-east of *C6* revealed an ovoid ditched enclosure measuring approximately 30m x 25m. One large and four smaller pits were indicated on the interior. A curving and a linear ditch were identified in the north-eastern edge of survey in *C6*.

5.4 Block D (Figs 9 & 18)

A ferrous pipeline was identified on a west-south-west to east-north-east orientation in the north of field *D1*. A linear ditch was detected, aligned north-west to south-east mirroring a cropmark, in the east of *D1*. A second linear ditch, on a more southerly orientation, was located split between two survey transects in the centre of *D1*.

Field *D2* was found to contain south-west to north-east aligned ridge and furrow. The centre of the inner survey transect of the field was found to contain a pair of narrow curving ditch anomalies forming an inverted ‘y’ shape.

A ferrous pipeline aligned south-west to north-east was detected in two adjacent survey transects of field *D3*. A semi-circular ditch anomaly, possibly representing a roundhouse, was detected on the south-eastern edge of the middle survey transect. To the north-west of that, a slightly curving linear ditch was identified. Similar feature types were detected on a north-south alignment to the north of the pipeline in that transect. Two curvilinear anomalies, likely the same ditch were located orientated north-west to south-east in the western and central survey transects. A possible pit feature was identified north of the eastern ditch.

5.5 Block E (Figs 10-11 & 19-20)

A ferrous pipeline was identified aligned south-west to north-east through a survey transect in the south of field *E1*. A probable continuation of the pipeline was detected on a similar alignment in the adjacent transect, turning to the east towards buildings at Himley Farm. A negative linear magnetic anomaly was detected on a parallel north-east to south-west orientation south of the pipeline in the two survey transects. Such features have a lower level of magnetic enhancement than the surrounding soils and can represent, for example, water or gas-filled plastic pipes.

Four linear anomalies, likely to represent ditches, were located crossing the eastern transect east to west. However, they were not identified in the adjacent survey transect to the west. A lineation of positive, negative and dipolar anomalies detected east to west across the centre of *E1* was likely to represent a historic field boundary. North of this, many dipolar anomalies were detected, indicating a deal of ferrous or brick debris in the topsoil.

A small group of pit anomalies were identified in the western corner of field *E1*. A circular ditch anomaly with a pit offset from the centre, possibly a roundhouse, was located north of the historic boundary in the west of the centre of *E1*. The northern half of the field was found to contain east-west orientated ridge and furrow. Lengths of ditch were detected, one on an east-west and two south-east – north-west alignments. A semi-circular ditch, possibly a second roundhouse, was identified in the north-west of *E1*. Three sections of ditch on east to west and south-east to north-west orientations coincided with a cropmark apparently describing half of a sub-rectangular enclosure in the north-east of field *E1*.

Survey in field E2 detected a ferrous pipeline, possibly the same one as in *E1*, crossing the field north-east to south-west. Ridge and furrow was mapped parallel to the southern boundary of the field. Cropmark evidence (APS 2010) shows two ditches arcing across the field from the south-eastern corner to the west. The northern ditch was mapped in the two eastern survey transects whereas the southern ditch was located in the pair of transects east of the centre, beyond which the cropmark stopped. Two south-east to north-west aligned ditch anomalies located crossing the two western survey transects may indicate a previously unmapped continuation of the southern ditch feature.

A south-east to north-west orientated ditch detected as a possible spur to the longer ditch in the central survey transect. The ditch appears to terminate with a semi-circular ditch anomaly, likely to indicate the detected half of an enclosure. A short ditch was found to extend south-west to north-east from the enclosure. The survey detected a second possible south-east to north-west orientated spur ditch 30m west of the first.

A linear negative anomaly was detected on an east – west alignment in the south-east corner of field *E3*. As in *E1* this could represent a non-magnetic pipe. Two

dipolar anomalies were identified along the length, possibly representing ferrous pipe-fittings such as collars or taps. Nothing else of note was identified in *E3*.

Anomalies representing a semi-circular ditched enclosure and three linear ditches aligned north-east, north-west and south-west from it were detected in the south-west corner of field *E4*, coincident with a 'target-shaped' cropmark of unknown function in that location. A small T-shaped ditch anomaly was identified to the north-east in the western survey transect. The south of the eastern transect was found to contain two crossing ditches and a U-shaped ditch. Other ditches were located in the south of the central transect and north-east of *E4*.

A linear ferrous pipeline crossed the southern part of field *E5*. Two large pits were detected to the north of the pipe in the second survey transect west in the field. A ditch was mapped adjacent to the pits on a south-west to north-east alignment through the transect. At the northern end of the ditch, a second crossed the transect north-west to south-east to be detected again and terminate in the eastern-most survey transect. A second ditch, aligned perpendicular to this was detected across all of the survey transects in *E5*. An east-west ditch was identified in the north of the eastern transect. The north of the second transect west was found to contain a small L-shaped ditch and pit. In the north of field *E5,* a north-west to south-east ditch was detected through all three transects. The northern-most transect also contained an east-west ditch.

A sinuous ditch anomaly was detected through two survey transects in the south of field *E6*. In the central transect a large pit anomaly was identified to the north of the ditch. A circular ditched enclosure with possible entrance to the west, connected with two other linear ditches, was detected in the north-west of field *E6*. Field *E7* was found to contain a north-west to south-east aligned ditch, parallel with the southern field boundary.

6 CONCLUSION

The 50% sample magnetometer survey identified archaeological features within much of the proposed area of the Bicester Eco Development. The geophysical survey confirmed the presence of archaeological features as suggested by the aerial photography. In particular the concentrations of archaeological features located in Block B, which included sub-rectangular and sub-circular ditched enclosures, curvilinear ditches and pits, likely to be of late prehistoric or Roman date. Other foci of archaeological features were detected in Block A and Block C. Of particular interest was a possible, long curving droveway or crowding alley in the west of Block C (field *C1*).

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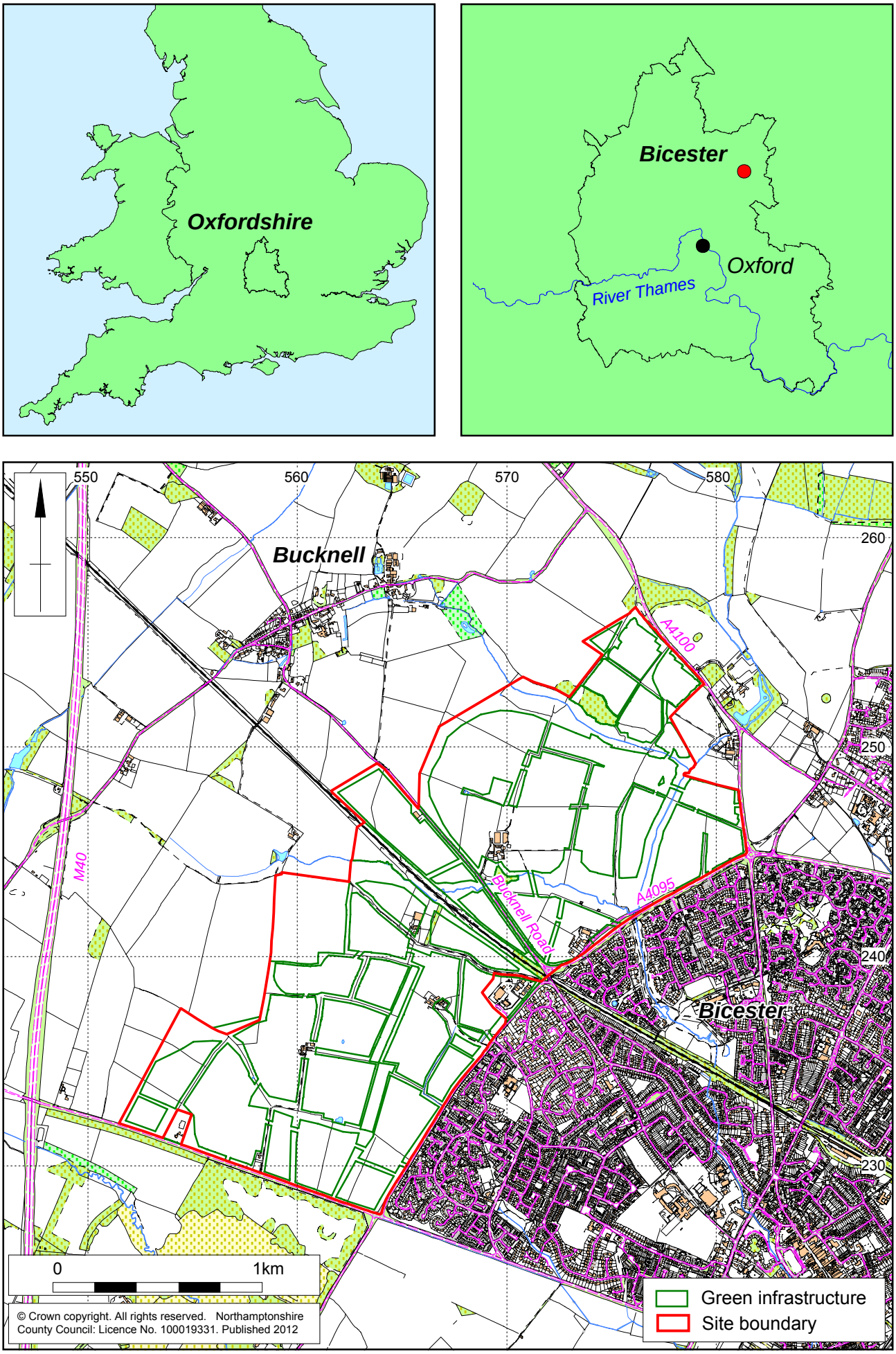

Scale 1:25,000

Site Location Fig 1

Scale 1:5000

Overview of Magnetometer Survey Results Fig 2

Scale 1:2,500

Survey Results: Block A a1 - a2 Fig 3

574
576
578
580
582
249
247
245
b5
b4
b3
b1
b2
Magnetic anomaly /nT
-4nT 0 +4nT
0 1:2500 100m

Scale 1:2500

Survey Results: Block B b1-b5 Fig 4