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## LAND AT MAIN ROAD/STATION ROAD, DONINGTON-ON-BAIN, LINCOLNSHIRE

#### ARCHAEOLOGICAL EVALUATION

By K Wragg

CLAU ARCHAEOLOGICAL REPORT NO: 360

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## A Report to Eastman Securities Limited

#### September 1998

#### Prepared by

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## Archaeological Evaluation

Contents	Page
NON-TECHNICAL SUMMARY	1
1.0 INTRODUCTION	2
2.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND	3
3.0 RESULTS	4
3.1 Phase 1: Earthwork & Geophysical Surveys	4 4
3.1.1 Earthwork Survey 3.1.2 Geophysical Survey	4
3.2 Phase 2: Trial Trench Excavation	5
3.2.1 Trial Trench 1	5
3.2.2 Trial Trench 2	5
3.2.3 Trial Trench 3	6
3.2.4 Trial Trench 4	7
4.0 DISCUSSION OF RESULTS & CONCLUSIONS	8
5.0 ACKNOWLEDGEMENTS	9
6.0 BIBLIOGRAPHY	9
7.0 LHA NOTES/ARCHIVE DETAILS	9
7.1 LHA Note Details	9
7.2 Archive Details	9
APPENDIX A - Archive Deposition	10
	10
APPENDIX B - Colour Plates	11
Plates 1 & 2	11
Plates 3 & 4	12
APPENDIX C - List of Contexts	13
APPENDIX D - List of finds	14
A) Post-Roman Pottery Archive	14
B) Roman Pottery Archive	15
C) Registered & Bulk Finds	16
APPENDIX E - Geophysical Survey Report	17

## LAND AT MAIN ROAD/STATION ROAD, DONINGTON-ON-BAIN, LINCOLNSHIRE

## Archaeological Evaluation

#### List of Illustrations

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Fig.1	Site location plans - scale 1:50000 & 1:10000
Fig.2	Extract from the 1907 Ordnance Survey map - not to scale
Fig.3	Earthwork Survey plan, with Trial Trench locations - scale 1:500
Fig.4	Geophysical Survey plan (with Trial Trench locations) - scale 1:500
Fig.5	Plan & Sections, T.T.1 - scale 1:50
Fig.6	Plan & Section, T.T.2 - scale 1:50
Fig.7	Plan & Sections, T.T.3 - scale 1:50
Fig.8	Plan & Section, T.T.4 - scale 1:50

## LAND AT MAIN ROAD/STATION ROAD, DONINGTON-ON-BAIN, LINCOLNSHIRE

## ARCHAEOLOGICAL EVALUATION

#### NON-TECHNICAL SUMMARY

This project was prompted by plans to redevelop an area of former pasture, lying close to the southern limit of the village of Donington-on-Bain, in the district of East Lindsey, Lincolnshire.

The village lies in an area of known archaeological importance, and therefore the planning consent issued for the development was conditioned to ensure that any archaeological remains on the site were not lost without record.

The City of Lincoln Archaeology Unit (C.L.A.U.) was commissioned by Eastman Securities Limited (the developer) in July 1998 to provide the required archaeological evaluation for the site. The subsequent specification for the archaeological works (as approved by the Lincolnshire County Council Archaeology Section, on behalf of East Lindsey District Council) allowed for a phased programme of evaluation.

The first phase of work involved earthwork and geophysical surveys of the whole site area, with the results helping to target locations for the second phase.

This second phase of evaluation comprised the excavation of four trial trenches at various locations across the site. Work on the site was carried out between the  $24^{th}$  of July and the  $14^{th}$  of August 1998.

The results of this programme of evaluation have served to confirm the presence of human

activity on this site, possibly beginning in the early prehistoric era.

However, while some inconclusive evidence (generally in the form of single finds, or undatable features) was produced for a possible presence in both the prehistoric and Roman periods, the main occupation on the site appears to date from the medieval period.

Unfortunately even though numerous features were uncovered, together with secure dating evidence in many cases, little interpretation can be placed on the nature of the occupation on the site.

It would appear likely that several drainage ditches or gullies are represented, with those revealed in Trial Trench 3 possibly forming the boundary to a timber building. The presence of hammerscale deposits in the fills of several of the features also indicates the possible presence of smithing activities on, or close to, the site: the 1907 O.S. map indicates the presence of a smithy immediately to the west of the site. It may be the case that this general area was the focus of this type of activity for some considerable time.

Dating evidence from the site would seem to suggest that the first period of confirmed occupation began in the 10<sup>th</sup> to 11<sup>th</sup> Century (a date which coincides with the age of the earliest surviving elements of the village church). Occupation appears to have continued into the 12<sup>th</sup>-13<sup>th</sup> century, after which the site may have been abandoned, or at least the main focus was moved elsewhere.

On the basis of the datable artefacts, occupation/land-use is likely to have resumed during the post-medieval period (16<sup>th</sup>-18<sup>th</sup> centuries), and the extant ridge & furrow ploughmarks probably date from this period. Unfortunately, this cultivation appears to have at least truncated, if not destroyed, much of the earlier archaeological remains on the site, further confusing interpretation.

## LAND AT MAIN ROAD/STATION ROAD, DONINGTON-ON-BAIN, LINCOLNSHIRE

## ARCHAEOLOGICAL EVALUATION

#### 1.0 INTRODUCTION

This project was prompted by plans to redevelop an area of former pasture, lying close to the southern limit of the village of Donington-on-Bain, in north-east Lincolnshire (see Fig.1).

The village lies approximately 10km to the south-west of Louth, and c.30km north-east of Lincoln, at the edge of the Lincolnshire Wolds, in an area of known archaeological importance (see 2.0, below).

The site itself measures approximately 100m square, and currently lies under grass. The boundaries of the site area are formed of mature hedges, with a small copse of trees present at the south-eastern corner, and a stream present along the southern and eastern sides. A derelict brick-built structure, together with an assortment of timber sheds, occupies the north-west corner of the site, while the present road (Main Road/Station Road) from Donington to Stenigot, Goulceby & Scamblesby runs past the site to the south-west (see Figs.1-4).

Proposals for the redevelopment of the site involve the construction of nine houses together with new access road arrangements. Outline planning permission was originally granted by East Lindsey District Council in 1992 (ref: N/042/1837/92). Following submission of a series of amendments to the proposed design, full planning permission, subject to a number of conditions, was granted in March 1994. Condition 9 of the planning consent related specifically to archaeology as follows: 'No development shall take place within the application site until the applicant has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation, which shall be submitted to and approved in writing by the local planning authority'.

In order to comply with the above condition, the City of Lincoln Archaeology Unit (C.L.A.U.) was commissioned by Eastman Securities Limited (the developer) in July 1998 to provide the required archaeological evaluation for the site. The subsequent specification for the archaeological works was approved by the Lincolnshire County Council Archaeology Section (on behalf of East Lindsey District Council) on the 16<sup>th</sup> of July 1998, and allowed for a phased programme of evaluation.

This programme was to begin with an earthworks and geophysical survey of the whole site area (conditions permitting). The results of this first phase would then be used by the L.C.C. Archaeology Section, to determine if further evaluation, by means of trial trenches, would be required.

In the event, further work was deemed necessary, and a series of four trial trenches was excavated across the site, in order to investigate various anomalies identified by the Phase 1 surveys (see Figs. 3 & 4). Work on the site was carried out between the  $24^{th}$  of July and the  $14^{th}$  of August 1998.

The information in this document is presented with the proviso that further data may yet emerge. The Unit, its members and employees cannot, therefore, be held responsible for any loss, delay or damage, material or otherwise, arising out of this report. The document has been prepared in accordance with the terms of the Unit's Articles of Association, the Code of Conduct of the Institute of Field Archaeologists, and The Management of Archaeological Projects 2 (English Heritage, 1991).

#### 2.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

A search of the Lincolnshire Sites & Monuments Record revealed a number of sites of known archaeological and historical interest in the area surrounding the proposed development area, but very little for the site itself.

Earthworks in the vicinity of the village all appear to be medieval in origin, and the existing village church retains Norman features, probably dating from the 11<sup>th</sup> century (Pevsner *et al*, 1989).

The earthworks include several areas of surviving ridge & furrow plough-marks (including this site), suspected property/field boundaries (at NGR TF 2363/8299 & 2327/8294), a possible trackway (NGR TF 2329/8292), and part of a building (NGR TF 2363/8298).

Further earthworks are present to the west of Main Road (NGR TF 2345/8320), thought to represent part of the medieval village extending towards the water mill on the River Bain.

In addition, finds dating from the prehistoric, Roman and medieval periods have also been These have included: flint recorded. implements found near Benniworth Farm (NGR TF 2300/8300) in 1975 (and in other locations); barrow graves, including a Scheduled 'bowl' barrow at TF 2593/8293 (NM no.27879); bronze spearheads; a Romano-British site (to the south-west of the village, on the line of the disused railway); signs of 13<sup>th</sup>-15<sup>th</sup> century occupation (including pottery, padstones, cobbles and floor areas), mainly towards the north and west of the present village; and post-medieval pottery.

• Recent archaeological interventions in the area have all been associated with improvements to the water storage and distribution network. These have included work carried out during pipeline works between Stenigot and Bully Hills in 1992, and excavations undertaken on the site of the Stenigot reservoir (and along an associated pipeline running eastwards towards Louth) during 1997.

The majority of the first pipeline project was largely concentrated to the north-west of Donington, and was therefore not of direct relevance to the present development site. However, the section of pipeline between Biscathorpe/Belmont Covert (NGR TF 2270/8380) and Nob Hill (NGR TF 2490/8220) skirted around the north and east sides of the Donington. During investigation of the stripped pipeline wayleave in this area, various finds and features were revealed including: a ring ditch and ploughed-out tumuli; flint axes; a bronze spear; and an Iron-Age coin.

The works around Stenigot reservoir revealed part of a late Iron-Age enclosure, a complex series of linear & curvilinear features within the enclosure, and the first positivelyidentified Iron-Age inhumation burial in the county. This occupation has been interpreted as probably a small farmstead, with domestic occupation occurring for a short period of time in the late Iron Age (probably spanning the Roman invasion of AD43, but abandoned and levelled shortly after). Post-medieval (or later chalk extraction pits were also revealed on the site (all refs. Coupland, F & Field, N 1992-7).

#### 3.0 RESULTS

As mentioned previously, the evaluation of the site comprised two phases, utilising both intrusive and non-intrusive evaluation techniques.

#### 3.1 Phase 1: Earthwork & Geophysical Surveys (see Figs. 3 & 4; and Appendix E)

As the first stage of the evaluation process, the site was investigated non-intrusively. A combination of surface survey, using an EDM theodolite, and geophysical investigation was used to attempt to identify any buried archaeological features and/or deposits on the site.

As mentioned in the Introduction, the results of this first phase were then used to highlight areas to be investigated by trial trench excavation.

#### 3.1.1 Earthwork Survey (see Fig.3)

The survey carried out by C.L.A.U. was designed to identify all extant earthworks on the site, to allow determination of any possible areas of archaeological interest. Any such areas would then be investigated during Phase 2.

In general, however, the site was found to be largely devoid of any substantial earthworks, with the notable exception of the raised 'headland' that actually forms the majority of the site. The ridge & furrow ploughmarks present across most of this headland do however provide a good explanation for this general lack of relief on the site (as the plough-marks were present across the site, and already feature on the County SMR, it was not considered necessary to include them on the final survey plot: Fig.3).

It was noted during the survey that the ridge & furrow remains were divided into two areas, with those in the southern half of the site lying at a slightly higher elevation to those to the north. Part of a channel was visible along the eastern edge of the site area (oriented E-W), and it appeared to mark the dividing line between the different levels. The results from the geophysical survey subsequently identified a continuation of this line, indicating that the present plot of land was originally divided into two (with the field being further sub-divided, as evidenced by the N-S boundary shown on the early O.S. map).

Only two other possible earthworks were identified, comprising the small raised 'platform' to the east of the existing barns, and a shallow, indistinct channel revealed close to the southern edge of the headland. This latter feature was identified by the geophysical work as part of a larger curvilinear feature (no sign was found of this feature in T.T.2, however, which was excavated across its supposed path). The platform is possibly associated with a structure shown on the 1907 O.S. map as related below.

## 3.1.2 Geophysical Survey (see Fig.4 & Appendix E)

The geophysical investigation of the site was carried out by GSB Prospection, using a fluxgate gradiometer, and the results of their survey are presented as *Appendix E*.

In summary, numerous anomalies of possible archaeological interest were identified, with the intensity of the responses suggesting possible domestic or small scale industrial activity. However, it was noted that the lack of a clearly defined archaeological form to the majority of the anomalies made interpretation difficult. It appeared to be the case that the later ridge & furrow ploughing had disturbed earlier archaeological features, although it was possible that the responses related to modern material and/or land use.

Two of the anomalies appear to be possibly associated with features shown on the 1907 O.S. map (see Fig.2). These are the N-S pipe (which coincides with a earlier property boundary), and the ferrous signals centred on the raised mound adjacent to the surviving barns/sheds (which could be associated with the apparently larger structure shown on the map).

3.2 Phase 2: Trial Trench Excavation (see Figs. 3 - 8)

The second stage of the archaeological work on the site involved the machine excavation of a series of trial trenches.

Following discussion with the Assistant County Archaeologist, Mr Bonnor, it was decided to excavate four trenches at various locations across the site. Each trench was positioned to investigate one or more of the anomalies highlighted by the geophysical survey.

#### 3.2.1 Trial Trench 1 (see Figs. 3, 4 & 5)

The first of the four Trial Trenches was situated at the north-western corner of the site. It measured approximately 10m (E-W) x 1.5m (N-S), and was excavated to a depth of c.650mm over the majority of the trench, with an area approximately 1.5m square taken down to an ultimate depth of 1.05m. The position of the trench was designed to coincide with several possibly archaeological anomalies identified during the geophysical survey, although in the event, only one of these was positively confirmed.

The sequence of deposits featured in this trench was as follows.

The earliest context recorded was a layer of well compacted mid-light orange-brown clay, [118], which contained only occasional small flint fragments. The top of this deposit occurred at a depth of approximately 550mm below the present ground level (c. 71.616m O.D.), with the layer being at least 400mm thick to the limit of excavation (L.O.E.). This clay appears to be the natural (i.e., geological) deposit for this area.

Towards the centre of the trench, [118] was cut by a linear cut feature, [121], which was oriented approximately NW-SE. This cut was only c.200mm deep with a concave base, and coincided with a linear anomaly revealed by the geophysical survey. The cut, possibly the remains of a ditch or gully, appeared to rise towards the north.

[121] was subsequently filled by [120], a mid grey-brown silty clay soil, containing flecks of clay and charcoal, and small amounts of 'pea' gravel. A single sherd of pottery was recovered from this fill, dating to the 10<sup>th</sup>-11<sup>th</sup> centuries.

At the western end of the trench, [118] was overlain by [122], a thin (c.100mm) layer of mid red-brown clayey soil, containing occasional charcoal flecks and small flint fragments.

Both the fill deposit [120], and layer [122] were then sealed beneath the moderately compacted, friable mid yellow-brown sandy subsoil layer [116]. This deposit was present across the site and was up to 400mm thick.

The final deposit encountered in Trial Trench 1 was the topsoil layer, which was again present across the whole site. This context, [115], was approximately 200mm thick and comprised a moderately compacted, friable mid-light greyish-brown slightly sandy soil. It contained only occasional small stones, with a covering of coarse grass at its upper boundary.

Two pieces of unstratified pottery (context [101]) were recovered from the spoil heap for this trench, dating to between the  $12^{th}-13^{th}$  and the  $16^{th}-18^{th}$  centuries respectively.

#### 3.2.2 Trial Trench 2 (see Figs. 3, 4 & 6)

This trench was located on the western side of the site, immediately to the east of the two surviving barns/sheds. A slightly raised 'platform' was visible at this location, and several possibly archaeological anomalies were also revealed by the geophysical survey to the east of this mound. The trench was therefore positioned to investigate the purpose (and, if possible, origins) of this mound, and the nature of these possible anomalies.

The trench itself measured approximately 10m (E-W) x 1.5m (N-S), and was excavated to a general depth of 600mm-700mm (with an area at the eastern end excavated to a maximum depth of 1.15m).

In the event, however, no sign was revealed of the cause of the geophysical responses, and the purpose of the mound could not be established.

The stratigraphic sequence recorded in this trench was as follows:

The earliest deposit comprised the natural clay [118], as revealed in T.T.1, which was present

from a depth of c.600mm below the existing ground level (@ c. 71.70m O.D.), and continued at least to L.O.E. @ 71.126m O.D.

The clay was overlain by the subsoil deposit [116], again as revealed in T.T.1, which was up to 300mm thick, raising the ground level to c. 72m O.D. at the eastern end of the trench. Pottery fragments recovered from layer [116] in this trench suggest that this deposit possibly dates from the  $12^{th}$ - $13^{th}$  century.

In a break from the stratigraphic sequence established in T.T.1, subsoil [116] was then sealed beneath a dump of moderately compacted mid yellow-brown friable sandy soil, [123], which occurred in the western half of the trench. This deposit was between 150mm and 350mm thick, and contained frequent small pieces of angular limestone and occasional rounded pebbles, together with a number of larger limestone pieces. The larger pieces were up to 110mm x 100mm x 60mm in size, and appeared to form a rough eastern edge to the raised mound (with the bulk of the context then forming the dumped infill within this boundary). No indication of dating or purpose for the mound was revealed.

[123] was then overlain by the 250mm-350mm thick topsoil deposit [115], as revealed in all trenches.

Two further fragments of medieval pottery were recovered from this trench (unstratified context [102]), appearing to date to between the 15<sup>th</sup> and 17<sup>th</sup> centuries, together with a single 3<sup>rd</sup>-4<sup>th</sup> century Roman sherd.

#### 3.2.3 Trial Trench 3 (see Figs. 3, 4 & 7)

The geophysical data from the southern part of the site appeared to show part of a possible rectilinear feature, together with several other large, though more amorphous, anomalies. The density of the possible archaeological features in this area prompted the decision to open a larger area than was the case with the other trenches.

Trial Trench 3 was therefore the largest of the four trenches, measuring approximately 6m (N-S) x 7.5m (E-W). It was located at the edge of the headland on the southern side of the site.

. In contrast to T.T.2 (where little explanation for the cause of the geophysical anomalies was

seen), T.T.3 was successful in identifying the majority of the signals shown on the geophysical plot. Unfortunately, while features were uncovered, little could be determined about their date and/or function.

With the exception of the aforementioned features, the general stratigraphy of T.T.3 was identical to that in the previous two trenches.

Again, the earliest deposit was the natural clay layer [118], although in this trench it was overlain by a further clay deposit, [117]. This was virtually identical in composition to [118], but was lighter in colour, and appeared to be only c.100mm-120mm thick.

[117] was concentrated in the easternmost two-thirds of the trench, and possibly represents the disturbed (by subsequent occupation activity) upper surface of the natural clay.

At the western end of T.T.3, [118] was cut by a linear feature oriented approximately northsouth. This feature, [105], appeared to be the remains of a 'V'-shaped ditch, and coincided with a strong linear response from the geophysical survey. [105] gradually increased in size from north to south (its depth increasing from 140mm to 280mm, and its width from 560mm to 950mm) and was infilled by two deposits.

The first of these was [108], a very well compacted dark grey-brown clayey soil containing frequent patches of charcoal, sand and dark reddish clay. This deposit also contained evidence of spherical hammerscale (a by-product of smithing).

[108] was then sealed by the secondary fill deposit, [119], a well compacted mid yellow/grey-brown clayey soil containing frequent charcoal flecks.

The remaining features revealed in T.T.3 were all found to cut into the presumed disturbed natural layer [117] (and were almost entirely concentrated in the eastern half of the trench).

Along the southern side of the trench, a further substantial cut feature [111] was revealed, oriented approximately E-W. This was aligned approximately perpendicular to cut [105], and (on the geophysical plot) appears to intersect with it (the actual point of any intersection was not however revealed). [111] was approximately 200mm deep, and was at least 1.1m wide (N-S). It was filled by [110], a deposit virtually identical to [108] (the primary fill of [105]), which further supports the idea that the two features are actually parts of a larger rectilinear cut. One piece of Roman pottery/tile was recovered from this fill.

An isolated post-hole [107] was present at the northern side of the trench, which was filled by [106], a well compacted mid grey-brown clayey soil with no inclusions.

The final two archaeological features were then discovered in the north-eastern corner. These comprised a north-south linear cut feature incorporating two possible post-holes, [114], and [112], a more indistinct cut, this time with a single post-hole, together with a possible limestone 'post-pad' at the southern end.

[114] measured c. 1.7m+ (N-S) x 400mm (E-W), and was approximately 200mm in depth. It featured a gently rounded or flat base with fairly steep sides, and continued beyond the south-facing section of the trench. Two postholes were also present in the base of the cut, one at the extreme southern end, and the second adjacent to the trench section. Both the post-holes and the main cut were filled by [113], a moderate-well compacted mid greybrown clayey, slightly sandy soil which contained charcoal, clay, flint and fragments of burnt limestone.

Cut feature [112], was fairly irregular in shape and was up to 320mm deep. It appeared to form part of a circular feature (at the north end), with a more linear extension to the south, although later truncation (as a result of cultivation) may have destroyed its original form. At the extreme south end of the feature, however, a circular depression was present containing a flat piece of limestone. A posthole was also in evidence at the northern end, together with several limestone fragments scattered throughout the feature as a whole.

[112] was then filled by [109], a very well compacted dark grey-brown clayey soil very similar in appearance (and inclusions) to the fills of cut features [105] and [111]. A number of pottery fragments recovered from this fill suggest a broad date for the infilling of c.  $12^{th}$ - $13^{th}$  century (a single piece of  $3^{rd}$ - $4^{th}$  century Roman pottery was also produced from this fill).

It is possible that these two cut features were originally associated with a timber structure. If this were the case, [114] could represent an 'eaves-drip' gully (to channel rainwater away from the walls), with [112] possibly forming the remains of the foundations of the west wall of the structure. It could then also be conjectured that the linear cut features [105] and [111] formed part of the property boundary to the west and south respectively.

The fills of all of the aforementioned features were then overlain by the subsoil layer [116] and the topsoil [115], as revealed in the previous Trial Trenches.

Several unstratified pottery sherds were also recovered from this trench (context [103]), although with the exception of a single  $3^{rd}-4^{th}$  century Roman sherd, they were all generally of a late date ( $18^{th}$  century).

#### 3.2.4 Trial Trench 4 (see Figs. 3, 4 & 8)

The final trench of the sequence was situated at the north-eastern corner of the site, in the vicinity of several linear geophysical anomalies.

The trench was of similar dimensions to both T.T.1 & 2, and was in general excavated to a depth of 500mm. An area at the western end of the trench was however taken to a depth of c.1m as in previous trenches.

Again, as with trenches 1 & 3, the majority of the geophysical anomalies were proven, although as before, little indication of their function and/or origins could be ascertained.

The stratigraphic sequence revealed in this trench was as follows (from earliest to latest):-

The natural clay deposit [118]/[129] was again revealed, appearing at c.72.056m O.D. and continuing to L.O.E. at 71.706m O.D.

At the eastern end of the trench the natural clay was cut by a linear feature, [128]. This was oriented approximately N-S, and was at least 1.5m wide, and appeared to represent part of a ditch. The cut had an uneven base with a wide 'shelf' to the west, falling abruptly away to form a deeper channel. [128] was filled by [127], a well compacted mid-light orange/yellow-brown sandy clay. A single artefact was recovered from this fill, a small piece of Roman roof tile, together with some small fragments of what appeared to be fired/burnt clay.

Along the northern edge of the trench, [127] was cut by what initially appeared to be part of a curvilinear feature, [125], filled with a coarse-grained gritty orange-brown sand, [124]. Closer investigation, however, revealed this 'feature' to be far more likely of natural origin, possibly a fissure in the clay, further eroded by the passage of water, and ultimately silted up with sediment.

This was then overlain by [132], a c. 300mm thick layer of yellow-brown sandy clay containing only occasional small flint pieces/fragments. This deposit was very similar to [117] (revealed in T.T.3), and similarly probably represent disturbed natural strata.

At the eastern end of the trench, [132] was overlain by [126], a thin mottled sandy clay layer, which was in turn cut by a further possible ditch feature, [133]. This latter cut appeared to follow the same alignment as [128], but was much narrower (only c. 500mm).

In the central and western parts of the trench, [132] was cut by another linear feature, in this case oriented approximately E-W. This cut [131], again probably a ditch or gully, was only approximately 100mm deep and 250mm wide, but extended for at least 6m (E-W). It appears to be the end of a larger curvilinear feature shown on the geophysical plot. [131] was subsequently filled by a mid grey-brown sandy clay, [130]. This deposit also contained charcoal and red clay inclusions, together with a single sherd of  $10^{th}$ - $11^{th}$  century pottery.

Ultimately, both this fill and the possible ditch feature [133], were sealed beneath the common subsoil layer [116], and the topsoil [115] as before.

#### 4.0 CONCLUSIONS

The results of this programme of evaluation have served to confirm the presence of human activity on this site, possibly beginning in the prehistoric era.

However, while some inconclusive evidence (generally in the form of single finds, or undatable features) was produced for a possible presence in both the prehistoric and Roman periods, the main occupation on the site appears to date from the medieval period.

Unfortunately even though numerous features were uncovered, together with secure dating evidence in many cases, little interpretation can be placed on the nature of the occupation on the site.

It would appear likely that several drainage ditches or gullies are represented, with those revealed in Trial Trench 3 possibly forming the boundary to a timber building. The presence of hammerscale deposits in the fills of several of the features, also indicates the possible presence of smithing activities on, or close to, the site (the 1907 O.S. map indicates the presence of a smithy immediately to the west of the site. It may be the case that this general area was the focus of this type of activity for some considerable time).

Dating evidence from the site would seem to suggest that the first period of confirmed occupation began in the  $10^{th}$  to  $11^{th}$  Century (a date which coincides with the age of the earliest surviving elements of the village church). Occupation appears to have continued into the  $12^{th}$ - $13^{th}$  century, after which the site may have been abandoned, or at least the main focus was moved elsewhere.

On the basis of the datable artefacts, occupation/land-use is likely to have resumed during the post-medieval period (16<sup>th</sup>-18<sup>th</sup> centuries), and the extant ridge & furrow ploughmarks probably date from this period. Unfortunately, this cultivation appears to have at least truncated, if not destroyed, most of the earlier archaeological remains on the site, further confusing interpretation.

#### 5.0 ACKNOWLEDGEMENTS

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Field, N 1997 Evaluation and Excavation at Stenigot Reservoir, Donington-on-Bain, Lincolnshire, LAS Archaeological Report, Lindsey Archaeological Services, Lincoln

Field, N 1997 Stenigot Reservoir-Kenwick P.S.: Archaeological Watching Brief during groundworks for a water trunk main, LAS Archaeological Report, Lindsey Archaeological Services, Lincoln

Pevsner, N, Harris, J & Antram, N (eds) 1989 Lincolnshire, The Buildings of England, Penguin Books, London

#### 7.0 LHA NOTE/ARCHIVE DETAILS

#### 7.1 LHA NOTE DETAILS

CLAU CODE: DOB98

PLANNING APPLICATION NO.: N/042/1837/92

FIELD OFFICER: K.Wragg

NGR: TF 2380/8285

CIVIL PARISH: Donington-on-Bain

SMR No .:

DATE OF INTERVENTION: 24/07/98 - 14/08/98

TYPE OF INTERVENTION: Archaeological Evaluation

UNDERTAKEN FOR: Eastman Securities Limited, Rand, Market Rasen, Lincolnshire, LN8 5NJ

#### 7.2 ARCHIVE DETAILS

PRESENT LOCATION: City of Lincoln Archaeology Unit, Charlotte House, The Lawn, Union Road, Lincoln, LN1 3BL.

FINAL LOCATION: The City and County Museum, Friars Lane, Lincoln.

MUSEUM ACCESSION No.: 158.98

ACCESSION DATE:

## APPENDIX A - ARCHIVE DEPOSITION

The archive consists of:

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No.:	Description:
1	Site diary
1	Report
34	Context records
17	Scale drawings
1 set	Photographic records - Colour slides
1	Stratigraphic matrix

The primary archive material, as detailed above, is currently held by :

The City of Lincoln Archaeology Unit, Charlotte House, The Lawn, Union Road, Lincoln, Lincolnshire, LNI 3BL.

. It is intended that transfer to the City and County Museum, Friars Lane, Lincoln, in accordance with current published requirements, under Museum Accession Number 158.98, will be undertaken following completion of this project.

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## APPENDIX B - COLOUR PLATES

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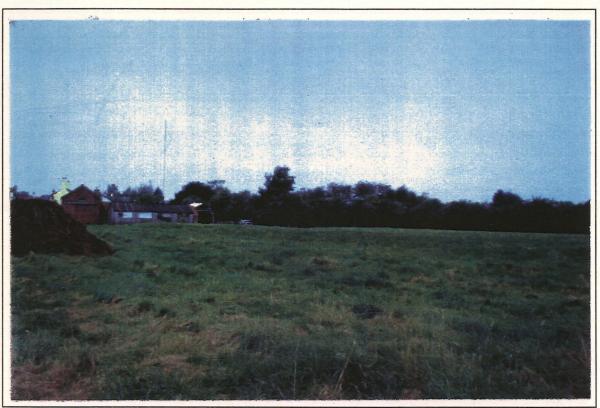


Plate 1: General view of site (showing indistinct ridge & furrow plough-marks) (looking north-west)



Plate 2: General view of Trial Trench 2, showing limestone dumping (in section) for raised area (looking north-east)

## APPENDIX B - COLOUR PLATES (continued)



Plate 3: Overhead view of possible structure remains, Trial Trench 3 (looking west/overhead)

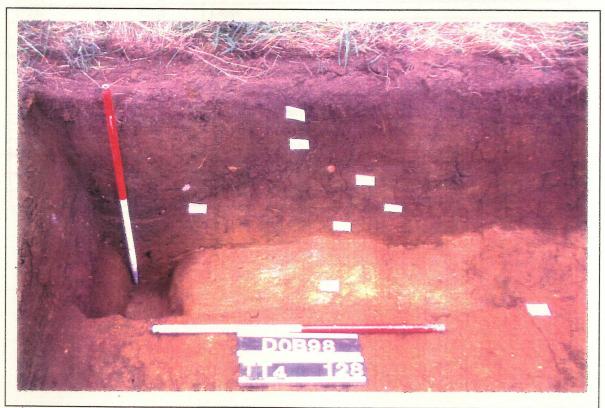


Plate 4: View of multiple ditch/cut feature, Trial Trench 4 (looking south)

## APPENDIX C - LIST OF CONTEXTS

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Context No.:	Area:	Description:		
[100]	Site	General unstratified finds from overall site		
[101]	T.T.1	Unstratified finds from Trial Trench 1		
[102]	T.T.2	Unstratified finds from Trial Trench 2		
[103]	T.T.3	Unstratified finds from Trial Trench 3		
[104]	T.T.4	Unstratified finds from Trial Trench 4		
[105]	T.T.3	Cut feature (possible ditch)		
[106]	T.T.3	Fill of post-hole		
[107]	T.T.3	Cut for posthole [107]		
[108]	T.T.3	Fill of cut feature [105]		
[109]	T.T.3	Fill of cut feature [112]		
[110]	T.T.3	Fill of cut feature [111]		
[111]	T.T.3	Linear cut feature		
[112]	T.T.3	Cut feature		
[113]	T.T.3	Fill of cut feature [114]		
[114] .	T.T.3	Rectilinear cut feature		
[115]	T.T.1-4	Topsoil deposit		
[116]	T.T.1-4	Subsoil deposit		
[117]	T.T.3	Clay layer (natural)		
[118]	T.T.1-3	Clay layer (natural)		
[119]	T.T.3	Fill of cut feature [105]		
[120]	T.T.1	Fill of cut feature [121]		
[121]	T.T.1	Cut feature (possible ditch)		
[122]	T.T.1	Layer		
[123]	T.T.2	Stone dump/fill		
[124]	T.T.4	Fill of [125] - probably natural		
[125]	T.T.4	Possible cut feature - probable natural fissure		
[126]	T.T.4	Clay fill/dump layer		
[127]	T.T.4	Clay layer/Fill of [128]		
[128]	T.T.4	Linear cut feature (possible ditch)		
[129]	T.T.4	Clay layer (natural) (same as [118]) *		
[130]	T.T.4	Fill of cut feature [131]		
[131]	T.T.4	Linear/Curvilinear cut feature		
[132]	T.T.4	Clay layer		
[133]	T.T.4	Possible cut feature		

## APPENDIX D - LIST OF FINDS

### A) POST-ROMAN POTTERY ARCHIVE

#### Horizon Dating

Context:	Earliest Horizon:	Latest Horizon:	Probable Horizon:	Date Range:
[100]	РМН6	PMH8	-	16-18 <sup>th</sup> Century
[101]	MH3 OR PMH3	MH5 OR PMH8	-	possible intrusive: 12-13th or 16-18th
[102]	MH10	PMH6	-	15-16 <sup>th</sup> Century
[103]	PMH8	PMH9	-	18 <sup>th</sup> Century
[109]	MH1	MH5	-	12-13 <sup>th</sup> Century
[116]	MH1	MH5	-	12-13 <sup>th</sup> Century
[120]	ASH9	ASH13	-	10-11 <sup>th</sup> Century
[130]	ASH9	ASH13	-	10-11 <sup>th</sup> Century

#### Ware Types By Context

Context:	Ware:	Sherds:	Form:	Comments:	
[100]	BL	1	HOLLOW	BS; 17/18 <sup>th</sup> CENTURY	
[101]	BEVO	2	JUG	CUFF RIM; OLIVE GLAZE; FABRIC 2; INC WAVY DECORATION ON STRAP HANDLE	
[101]	GRE	1	-	WORN BODY SHERD (BS)	
[102]	LLSW	1	JUG	BS; INTERNAL DEPOSITS	
[102]	ТВ	2	BOWL	RIM	
[103]	BERTH	1	-	BASE; 18 <sup>th</sup> CENTURY	
[103]	BERTH	1	BOWL	L17/18 <sup>th</sup> CENTURY	
[103]	EMLOC	1	BOWL	SV 109; BS	
[103]	HLKT	3	JAR	DEEP HOLLOW RIM	
[103]	MEDLOC	1	JUG	WELL WORN	
[103]	MEDLOC	1	JUG?	WELL WORN	
[103]	MISC	1	-	TINY FRAGMENT; VERY WORN; ? BOU	
[109]	EMLOC	1	1-	GREY FABRIC OXIDISED SURFACES; SUB ROUND QUARTZ + FE + CA VOIDS	
[109]	EMLOC	3	BOWL	DARK GREY FABRIC OXIDISED MARGINS GREY/BROWN SURFACES; SUB ROUND QUARTZ + FE + CA VOIDS	
[109]	HLKT	1	JAR	? ID	
[109]	HLKT	3	JAR?	? ID; SCRAPS	
[109]	LKT	1	-	? ID; COMPLETELY LEACHED	
[109]	MEDLOC	1	JUG	WORN	
[109]	R	1	-	OR LATE SAXON GREY-WARE	
[116]	EMLOC	1	-	SPLASH GLAZE	
[116]	HLKT	1	JAR	BASE; ? ID; LEACHED	
[116]	LKT	1	JAR	BS; ? ID; LEACHED	
[120]	HLKT	2	-	BS; ? ID; LEACHED	
[130]	HLKT	1	-	BS; ? ID; LEACHED	

#### Discussion:

The presence of HLKT on this site is interesting. The material adds to the growing evidence that this ware is probably a product of a potter in nearby Horncastle. The ware is copying LKT products and is being produced sometime in the 10<sup>th</sup> or early 11<sup>th</sup> century. The ware has only been recognised at a few sites in the county.

#### Key to Ware codes:

BERTH	BROWN EARTHENWARES
BEVO	BEVERLEY ORANGE WARE
BL	BLACKWARE
BOU	BOURNE; FABRIC D
EMLOC	EARLY-MEDIEVAL LOCAL FABRICS
GRE	GLAZED RED EARTHENWARES
HLKT	HORNCASTLE-TYPE LKT WARE
LKT	LINCOLN KILN-TYPE WARE
LLSW	LATE GLAZED LINCOLN WARE
MEDLOC	MEDIEVAL LOCAL FABRICS
MISC	UNDATED MISCELLANEOUS FABRICS
R	ROMAN
TB	TOYNTON or BOLINGBROKE-TYPE WARE

#### B) ROMAN POTTERY ARCHIVE

#### Ware Types By Context

Context:	Ware:	Form:	Sherds:	Comments/Date:
[102]	GREY	BD	1	BASE; STRING DECORATION; ABRADED/ LATE 3 <sup>rd</sup> -4 <sup>th</sup> CENTURY OR POST-ROMAN
[103]	GREY	BD	1	LATE 3 <sup>rd</sup> -4 <sup>th</sup> CENTURY OR POST- ROMAN
[109]	GREY	-	1	BODY SHERD; VERY ABRADED/ 3 <sup>rd</sup> - 4 <sup>th</sup> CENTURY OR POST-ROMAN
[110]	OX	JS?	1	BODY SHERD; VERY BURNT - POSSIBLE CERAMIC BUILDING MATERIAL/ ROMAN

Key to Ware/Form codes:

GREY	MISCELLANEOUS GREY WARES
OX	MISCELLANEOUS OXIDISED WARES
BD	BOWL OR DISH
JS	JUG SHERD

## APPENDIX D - LIST OF FINDS (continued)

#### C) REGISTERED & BULK FINDS

#### Registered Finds

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Context:	Count:	Material:	Description:
[104]	1	IRON	CURVED STRIP

#### Tile/Building material

Context:	Form:	Count:	Weight:	Comments/Date:
[102]	TEG	1	175	
[103]	RTIL	.1	35	-
[103]	PNR	2	380	SAME TILE;LMED-PMED
[103]	PNR	2	50	MED-PMED
[108]	PNRDISC	1	0	ROM-PMED
[109]	PNRDISC	1	0	ROM-PMED
[116]	TEG	1	220	-
[116]	IMBRX	1	210	-
[123]	IMBRX	1	100	-
[123]	TEG	1	140	-
[127]	RTIL	1	20	-

Key to Form codes:

IMBRX	ROMAN IMBREX
PNR	UNGLAZED UNDIAGNOSTIC ROOFING TILE
PNRDISC	DISCARDED UNGLAZED UNDIAGNOSTIC ROOFING TILE
RTIL	UNDIAGNOSTIC ROMAN TILE
TEG	ROMAN TEGULA TILE

## APPENDIX D - LIST OF FINDS (continued)

#### C) REGISTERED & BULK FINDS (continued)

#### **Bulk** Finds

Context:	Type:	Count:	Comments:
[101]	MSTO	1	FLINT FLAKE (POSSIBLE SCRAPER/BLADE?)
[103]	MSTO	2	IRONSTONE (DISCARDED)
[103]	MSTO	2	FLINT (1 X FLAKE; 1 X DISCARDED)
[103]	MSTO	5	SANDSTONE; SPILSBY SANDSTONE?; ALL WOLDS SANDSTONE (ADDED TO REFERENCE COLLECTION)
[108]	COAL	1	2 GRAMS (DISCARDED)
[108]	FIRE	4	7 GRAMS
[109]	SLAG	3	2 GRAMS (FUEL ASH SLAG)
[109]	MSTO	1	SANDSTONE (SPILSBY SANDSTONE?) (ADDED TO REFERENCE COLLECTION)
[109]	MSTO	1	IRONSTONE WITH FOSSIL IMPRINT (DISCARDED)
[110]	MSTO	1	FLINT
[116]	MSTO	1	IRONSTONE (DISCARDED)
[118]	MSTO	4	FLINT (2 X FLAKE; 2 X DISCARDED)
[127]	MSTO	1	FLINT (DISCARDED)
[124]	MSTO	4	IRONSTONE (DISCARDED)

Key to Type codes:

COAL	COAL
FIRE	FIRED CLAY
MSTO	MISCELLANEOUS STONE
SLAG	SLAG

#### Bone Finds

Context:	Count:	Type:	Comments:
[102]	2	ANBN	
[110]	2	ANBN	SAME TOOTH

Key to Type codes:

ANBN ANIMAL BONE

## APPENDIX E - GEOPHYSICAL SURVEY REPORT

#### SITE SUMMARY SHEET

#### 98 / 73 Donington-On-Bain, Lincolnshire

#### NGR: TF 2380 8285

#### Location, topography and geology

The area under investigation lies on the western outskirts of the village of Donington-on-Bain, Lincolnshire which is situated approximately 30km northeast of Lincoln. The proposed development occupies an undulating pasture field which had been cut prior to survey. The underlying geology consists of drift deposits overlying Jurassic and Cretaceous clay or mudstone. The soils comprise fine loamy over clayey and fine silty over clayey soils, with some areas of coarse loamy soils (SSEW, 1983).

#### Archaeology

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The application area occupies a slightly elevated pasture field with remnants of ridge and furrow visible on the surface. Additional earthworks are also evident, although their age and nature is unknown.

#### Aims of Survey

Gradiometry was undertaken with the aim of defining the nature and extent of any buried archaeological remains within the proposed development area. This geophysical survey forms part of a wider archaeological evaluation being undertaken by City of Lincoln Archaeology Unit (CLAU) prior to development of the site.

#### Summary of Results \*

The gradiometer survey has identified a wealth of anomalies of possible archaeological interest. The responses are relatively strong suggesting possible domestic or small scale industrial activity. However, interpretation is confused by the lack of a clearly defined archaeological form to the anomalies. The data suggest that later ridge and furrow cultivation may have disturbed earlier features of archaeological interest. However, the possibility of these responses relating to modern material or modern land use cannot be dismissed.

\* It is essential that this summary is read in conjunction with the detailed results of the survey.

#### Donington-On-Bain : geophysical survey

#### SURVEY RESULTS

#### 98 / 73 Donington-On-Bain, Lincolnshire

#### 1. Survey Area

- 1.1 The application area occupies a pasture field approximately 1ha in size. The whole of the field was investigated by gradiometry as indicated on Figure 1, at a scale of 1:5000.
- 1.2 The survey grid was set out by **GSB Prospection** using baseline markers established by **CLAU**. Detailed tie-in information has been lodged with the client.

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#### 2. Display

- 2.1 The results are displayed as X-Y traces, a dot density plot and a grey scale image at a scale of 1:500. These display formats are discussed in the *Technical Information* section, at the end of the text. An interpretation diagram is also provided at the same scale. Letters in parentheses in the text refer to anomalies noted on the interpretation diagram.
- 2.2 A complete list of figures precedes the diagram section of the report.

#### 3. General Considerations - Complicating factors

3.1 Conditions were suitable for survey with the grass having been cut prior to survey.

#### 4. Results of Detailed Survey

- 4.1 The ridge and furrow which is visible on the surface is discernible in portions of the dataset as a weak linear trend aligned east-west. Two broad parallel negative anomalies (A) appear to coincide with the existing ridge and furrow, while linear response (B) may indicate a former field division, parallel to the ridge and furrow.
- 4.2 In the southwestern quadrant of the survey area a concentration of strong archaeological type responses (C) has been identified. The strength of these responses is consistent with small scale industrial/ domestic activity and an archaeological origin for these seems likely. However, there is no coherent form to the responses which makes a precise interpretation difficult. It is possible that these responses relate to archaeological deposits that predate the ridge and furrow and that the latter has disturbed the earlier archaeological remains. Within the data there are suggestions of the ridge and furrow truncating other linear anomalies.

For the use of CLAU

- 4.3 The level of magnetic response increases to the west where strong ferrous type responses (D) have been noted. Interpretation of these responses is cautious, although their proximity to farm buildings marking the western limit of the site does support a modern origin. There is also evidence of modern debris on the surface in this area. However, the presence of these strong anomalies casts some doubt on the nature of the presumed archaeological responses (C) immediately to the east.
- 4.4 A curving negative response (E) runs through the western half of the survey area. It is unclear on the ground whether this coincides with an earthwork. From the interpretation diagram it appears that the possibly archaeological type anomalies all lie 'within' this curving anomaly. However, the strong nature of all of the responses in the western half of the survey area may mean that this negative anomaly could simply indicate a relatively modern feature, within an area of disturbance.
- 4.5 Numerous weak archaeological type anomalies have been noted in the northern half of the survey area. Of possible archaeological interest is a suggestion of a curving anomaly (F) in the northeastern part of the survey area.
- 4.6 A linear anomaly aligned north-south (G) may relate to topographic features, while the broad response (H) in the south of the survey area indicates a topographic effect relating to a pronounced bank.
- 4.7 A strong linear response dominates the eastern half of the survey area and indicates a buried pipe. Elsewhere several isolated ferrous type responses have been noted. These are most likely to indicate modern ferrous material in the topsoil. Magnetic disturbance along the perimeters of the survey area is likely to relate to ferrous material within the field boundaries.

#### 5. Conclusions

5.1 Gradiometry has identified a wealth of anomalies of possible archaeological interest. However, interpretation is confused by the lack of a clearly defined form and the strong nature of the responses. Although a modern origin for these anomalies cannot be dismissed, it seems probable that archaeological deposits, possibly relating to domestic or small scale industrial activity, have been disturbed by later ridge and furrow cultivation. Correlation with the detailed earthwork survey undertaken by CLAU may clarify the nature of some of the anomalies.

Project Co-ordinator:Dr S Ovenden-WilsonProject Assistants:C Martinez & A Shields

Date of Survey: Date of Report: 28<sup>th</sup> July 1998 4<sup>5h</sup> August 1998

#### **References:**

SSEW 1983.

Soils of England and Wales. Sheet 4, Eastern England. Soil Survey of England and Wales.

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#### TECHNICAL INFORMATION

The following is a description of the equipment and display formats used in **GSB Prospection (GSB)** reports. It should be emphasised that whilst all of the display options are regularly used, the diagrams produced in the final reports are the most suitable to illustrate the data from each site. The choice of diagrams results from the experience and knowledge of the staff of **GSB**.

All survey reports are prepared and submitted on the basis that whilst they are based on a thorough survey of the site, no responsibility is accepted for any errors or omissions.

Instrumentation

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#### (a) Fluxgate Gradiometer - Geoscan FM36

This instrument comprises of two fluxgates mounted vertically apart, at a distance of 500mm. The gradiometer is carried by hand, with the bottom sensor approximately 100-300mm from the ground surface. At each survey station, the difference in the magnetic field between the two fluxgates is conventionally measured in nanoTesla (nT), or gamma. The fluxgate gradiometer suppresses any diurnal or regional effects. Generally features up to one metre deep may be detected by this method. Readings are normally logged at 0.5m intervals along traverses 1.0m apart.

#### (b) Resistance Meter - Geoscan RM4 or RM15

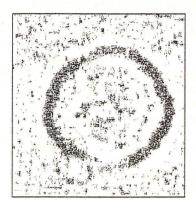
This measures the electrical resistance of the earth, using a system of four electrodes (two current and two potential.) Depending on the arrangement of these electrodes an exact measurement of a specific volume of earth may be acquired. This resistance value may then be used to calculate the earth resistivity. The "Twin Probe" arrangement involves the paring of electrodes (one current and one potential) with one pair remaining in a fixed position, whilst the other measures the resistance variations across a fixed grid. The resistance is measured in Ohms and the calculated resistivity is in Ohm-metres. The resistance method as used for area survey has a depth resolution of approximately 0.75m, although the nature of the overburden and underlying geology will cause variations in this generality. The technique can be adapted to sample greater depths of earth and can therefore be used to produce vertical "pseudo sections". In area survey readings are typically logged at 1.0m x 1.0m intervals.

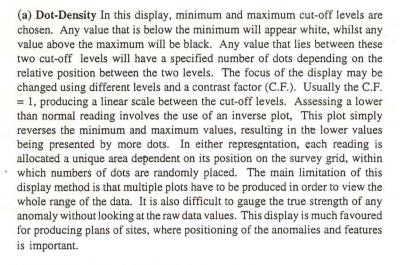
#### (c) Magnetic Susceptibility

Variations in the magnetic susceptibility of subsoils and topsoils occur naturally, but greater enhanced susceptibility can also be a product of increased human/anthropogenic activity. This phenomenon of susceptibility enhancement can therefore be used to provide information about the "level of archaeological activity" associated with a site. It can also be used in a predictive manner to ascertain the suitability of a site for a magnetic survey. The instrument employed for measuring this phenomenon is either a field coil or a laboratory based susceptibility bridge. For the latter 50g soil samples are collected in the field. Sampling intervals vary widely but are often at the 10m or 20m level.

**Display Options** 

The following is a description of the display options used. Unless specifically mentioned in the text, it may be assumed that no filtering or smoothing has been used to enhance the data. For any particular report a limited number of display modes may be used.

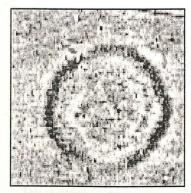






(b) X-Y Plot This involves a line representation of the data. Each successive row of data is equally incremented in the Y axis, to produce a stacked profile effect. This display may incorporate a hidden-line removal algorithm, which blocks out lines behind the major peaks and can aid interpretation. Advantages of this type of display are that it allows the full range of the data to be viewed and shows the shape of the individual anomalies. Results are produced on a flatbed plotter.

This display joins the data values in both the X and Y axis. The display may be changed by altering the horizontal viewing angle and the angle above the plane. The output may be either colour or black and white.



#### (c) Grey-Scale

This format divides a given range of readings into a set number of classes. These classes have a predefined arrangement of dots or shade of grey, the intensity increasing with value. This gives an appearance of a toned or grey scale.

Similar plots can be produced in colour, either using a wide range of colours or by selecting two or three colours to represent positive and negative values. While colour plots can look impressive and can be used to highlight certain anomalies, grey-scales tend to be more informative.

#### Glossary of terms commonly used in the graphical interpretation of gradiometer data

#### Ditch / Pit

This category is used only when other evidence is available that supports a clear archaeological interpretation e.g. cropmarks or excavation.

#### Archaeology

This term is used when the form, nature and pattern of the response is clearly archaeological but where no supporting evidence exists. These anomalies, whilst considered anthropogenic, could be of any age. If a more precise archaeological interpretation is possible then it will be indicated in the accompanying text.

#### ? Archaeology

The interpretation of such anomalies is often tentative, with the anomalies exhibiting either weak signal strength or forming incomplete archaeological patterns. They may be the result of variable soil depth, plough damage or even aliasing as a result of data collection orientation.

#### Natural

These responses form clear patterns in geographical zones where natural variations are known to produce significant magnetic distortions e.g. palaeochannels or magnetic gravels.

#### ? Natural

These are anomalies that are likely to be natural in origin i.e geological or pedological.

#### Areas of Magnetic Disturbance

These responses are commonly found in places where modern ferrous or fired materials are present e.g. fencelines, pylons or brick rubble. They are presumed to be modern.

#### Areas of Increased Magnetic Response

These responses show no visual indications on the ground surface and are considered to have some archaeological potential.

#### Ferrous Response

This type of response is associated with ferrous material and may result from small items in the topsoil or larger buried objects such as pipes. Ferrous responses are usually regarded as modern. Individual burnt stones, fired bricks or igneous rocks can produce responses similar to ferrous material.

#### **Ridge and Furrow**

These are regular and broad linear anomalies that are presumed to be the result of ancient cultivation. In some cases the response may be the result of modern activity.

#### **Ploughing Trend**

These are isolated or grouped linear responses. They are normally narrow and are presumed modern when aligned to current field boundaries or following present ploughing.

#### Linear Trend

This is usually a weak isolated linear anomaly of unknown cause or date.

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#### Donington-On-Bain: geophysical survey

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		List of Figures	
Figure 1	Location Diagram		1:5000
Figure 2	XY Trace		1:500
Figure 3	Dot Density Plot		1:500
Figure 4	Greyscale Image		1:500
Figure 5	Interpretation Diagram		1:500

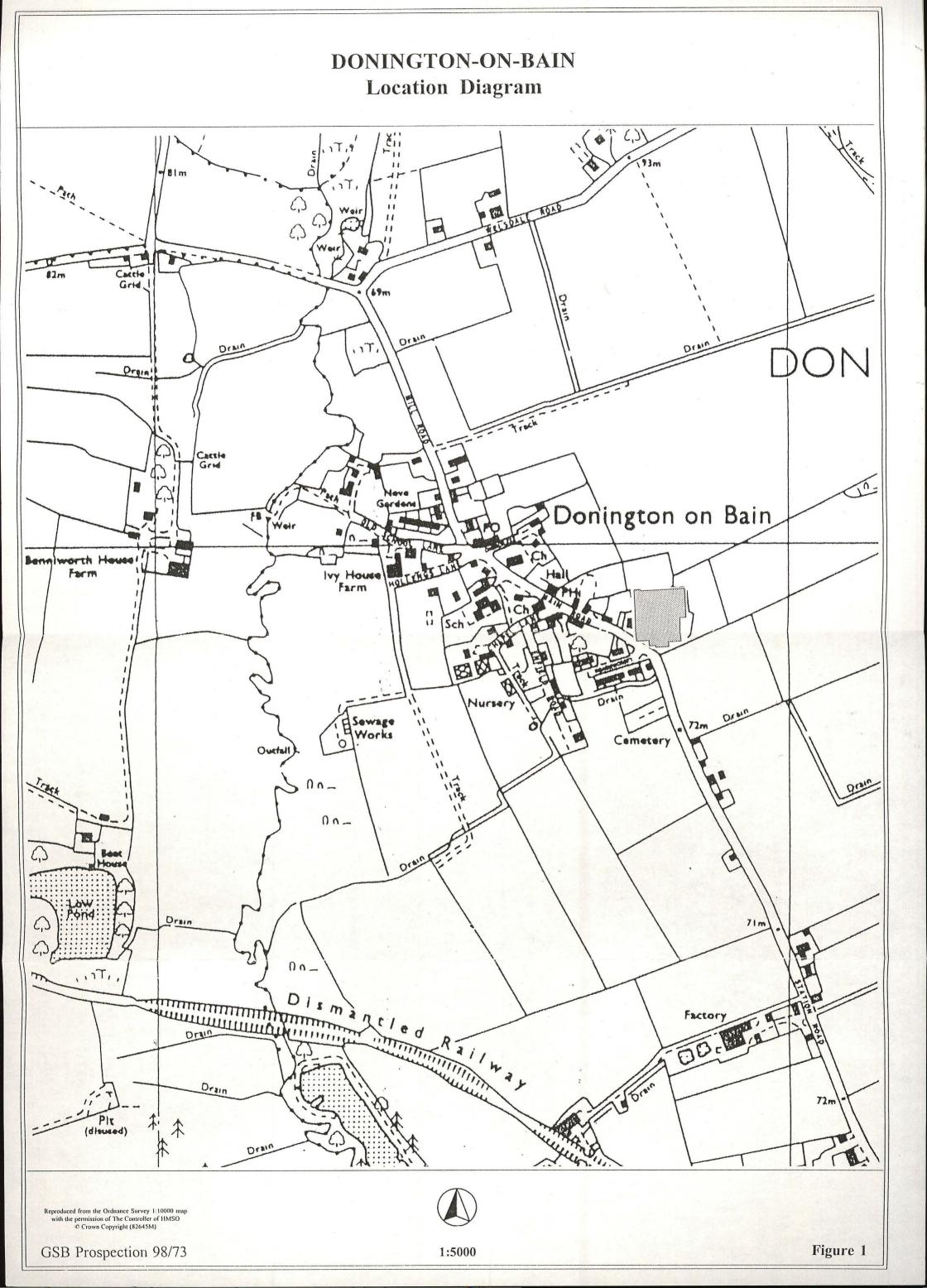
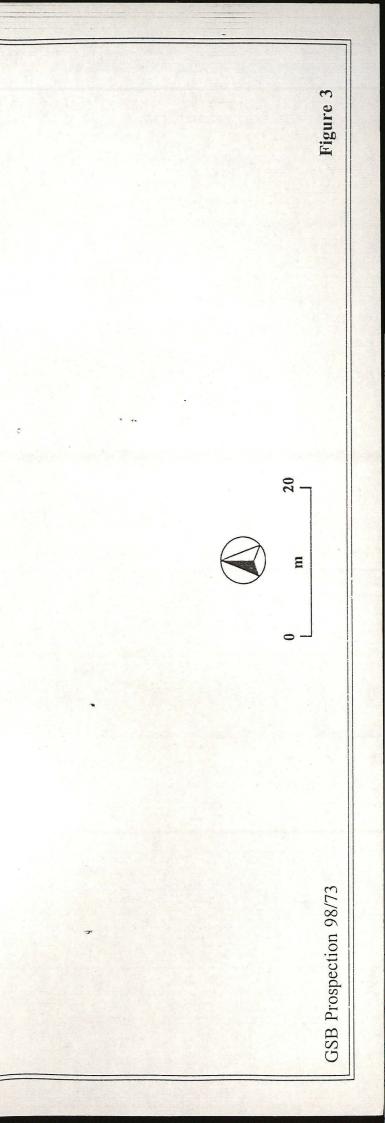


Figure 2 30 nT DONINGTON-ON-BAIN 20 m 0 -GSB Prospection 98/73

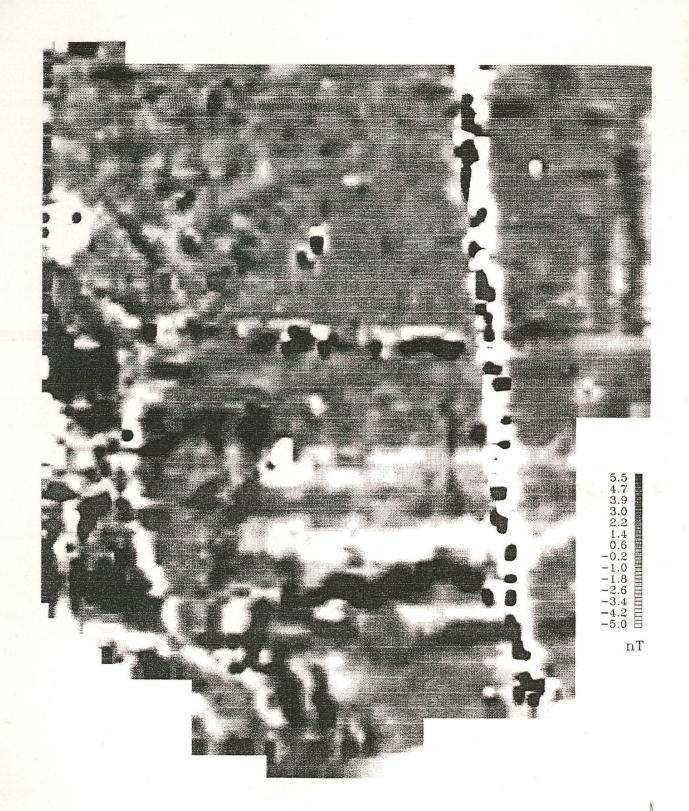
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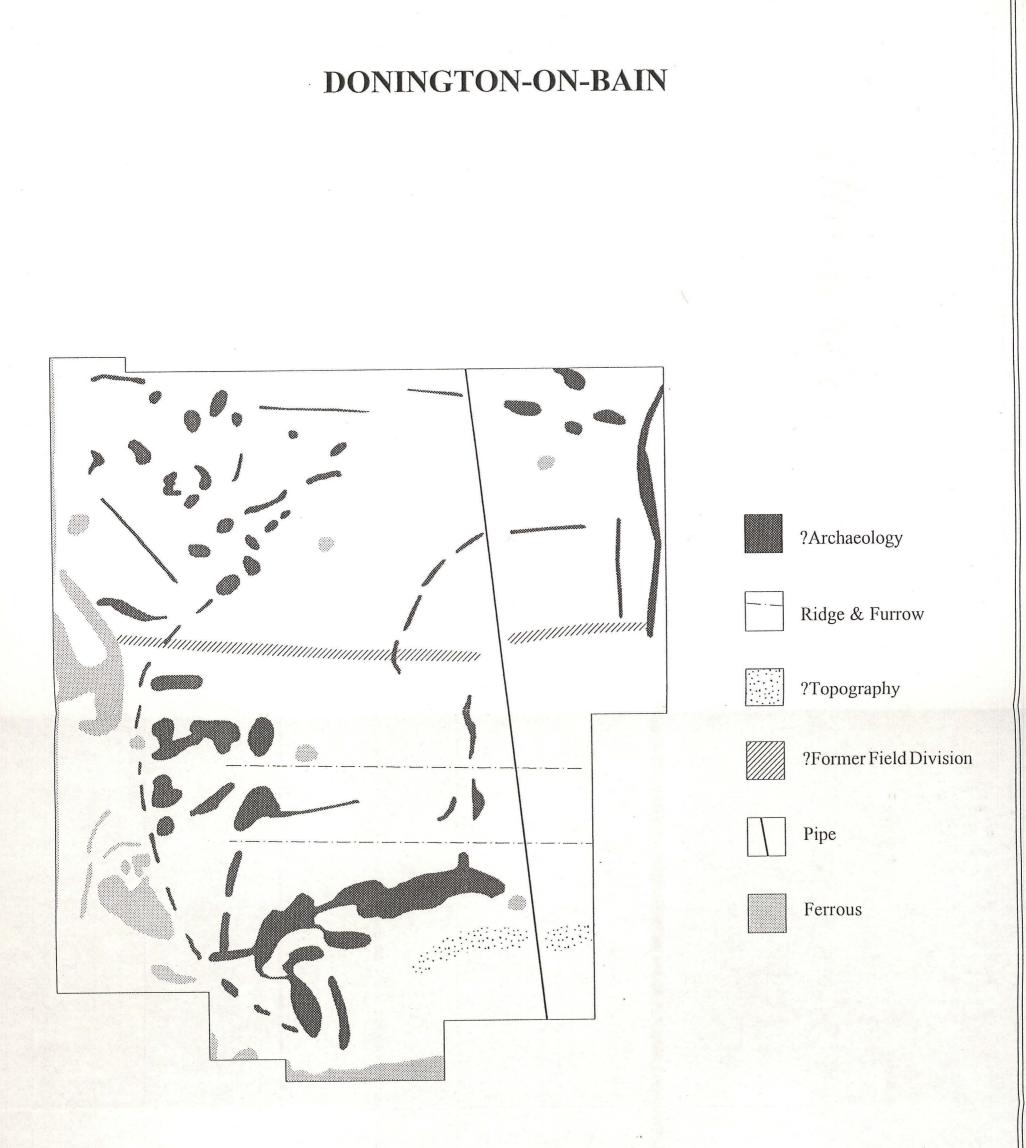
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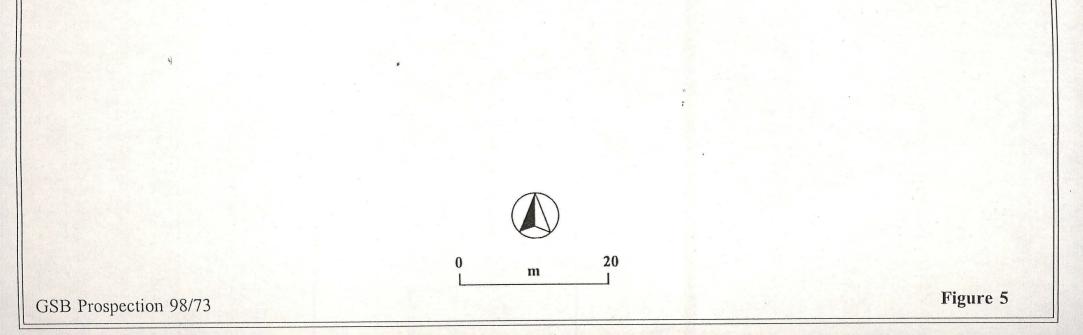
GSB Prospection 98/73

(metres)

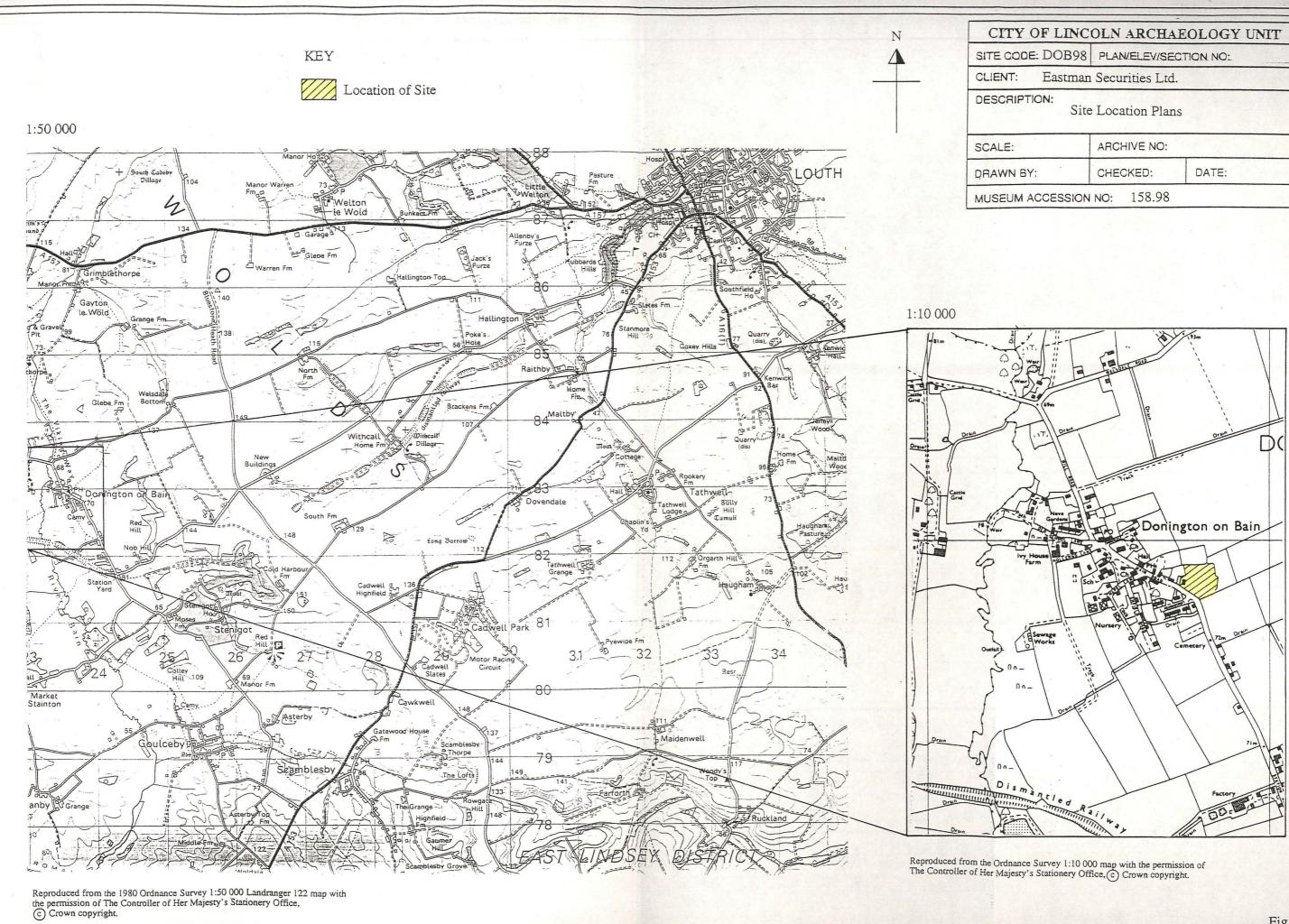
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Figure 4



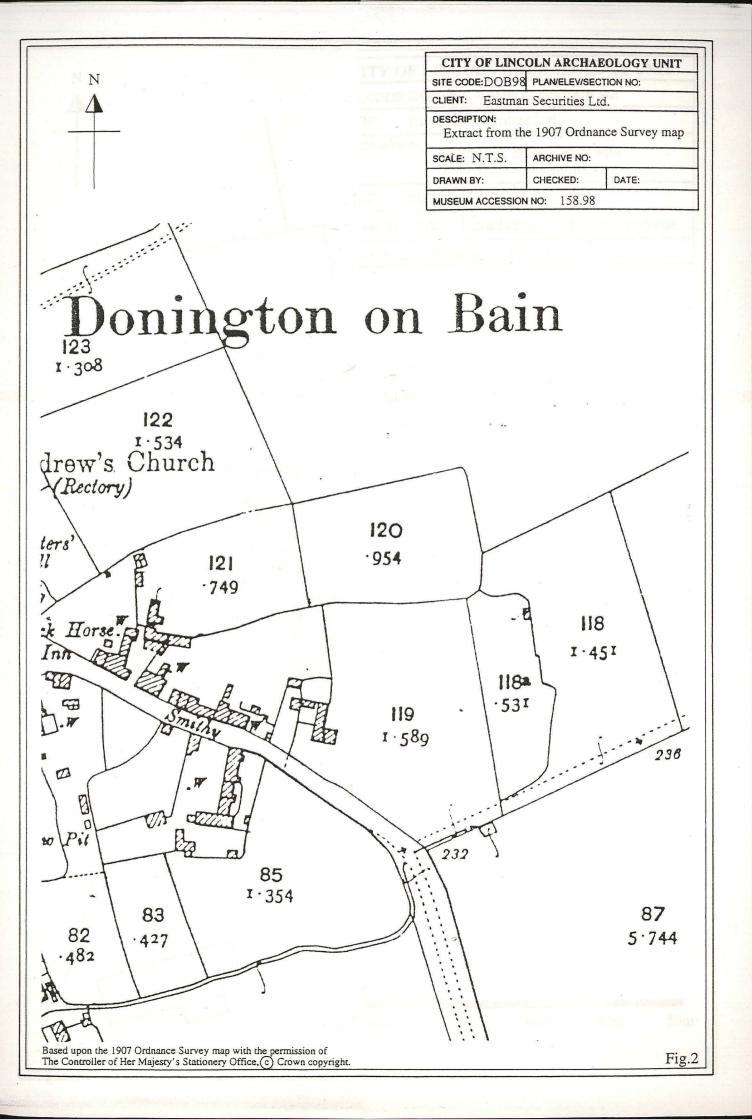


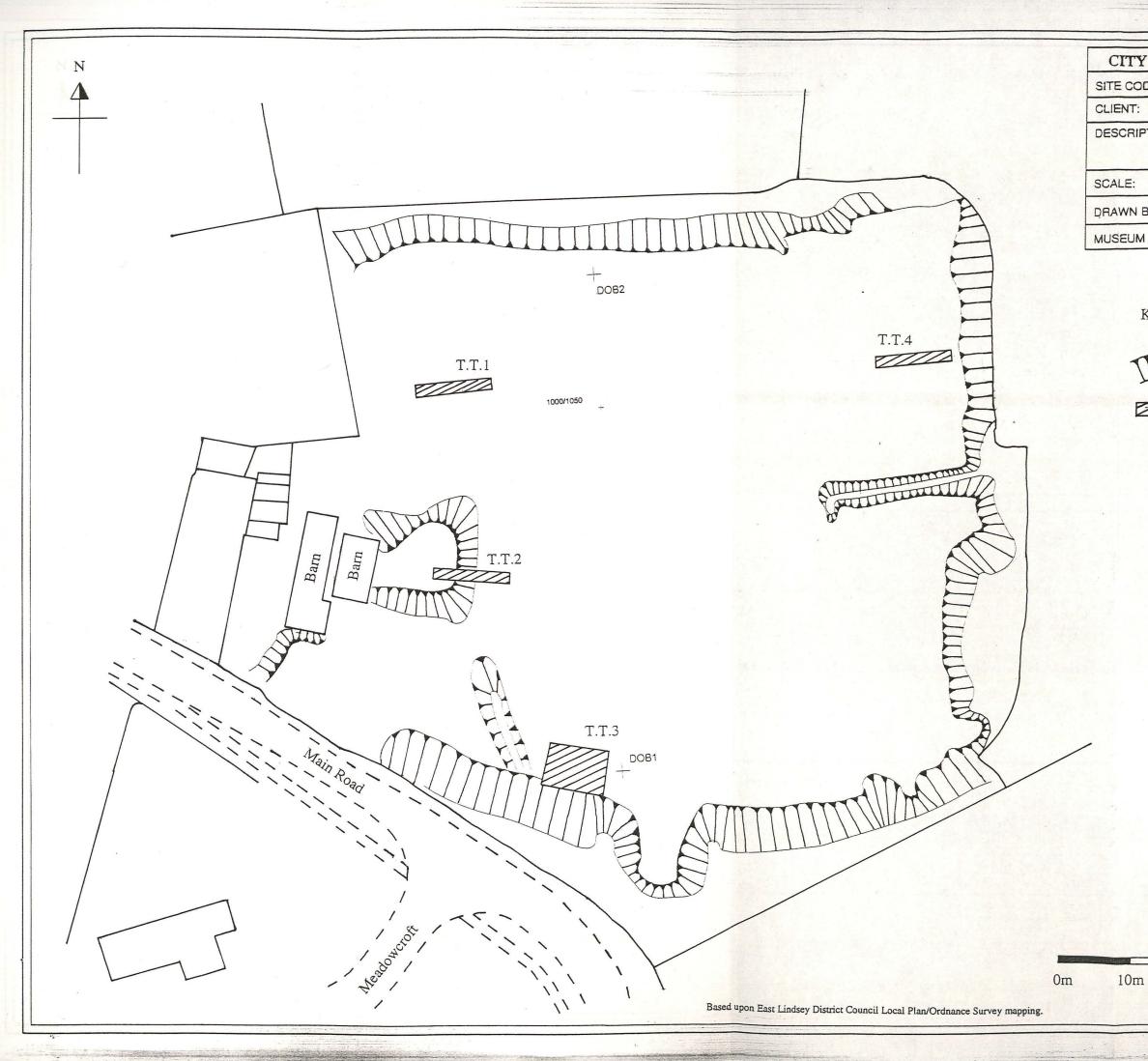
## Illustrations



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	NO: 158.98	

Fig.1





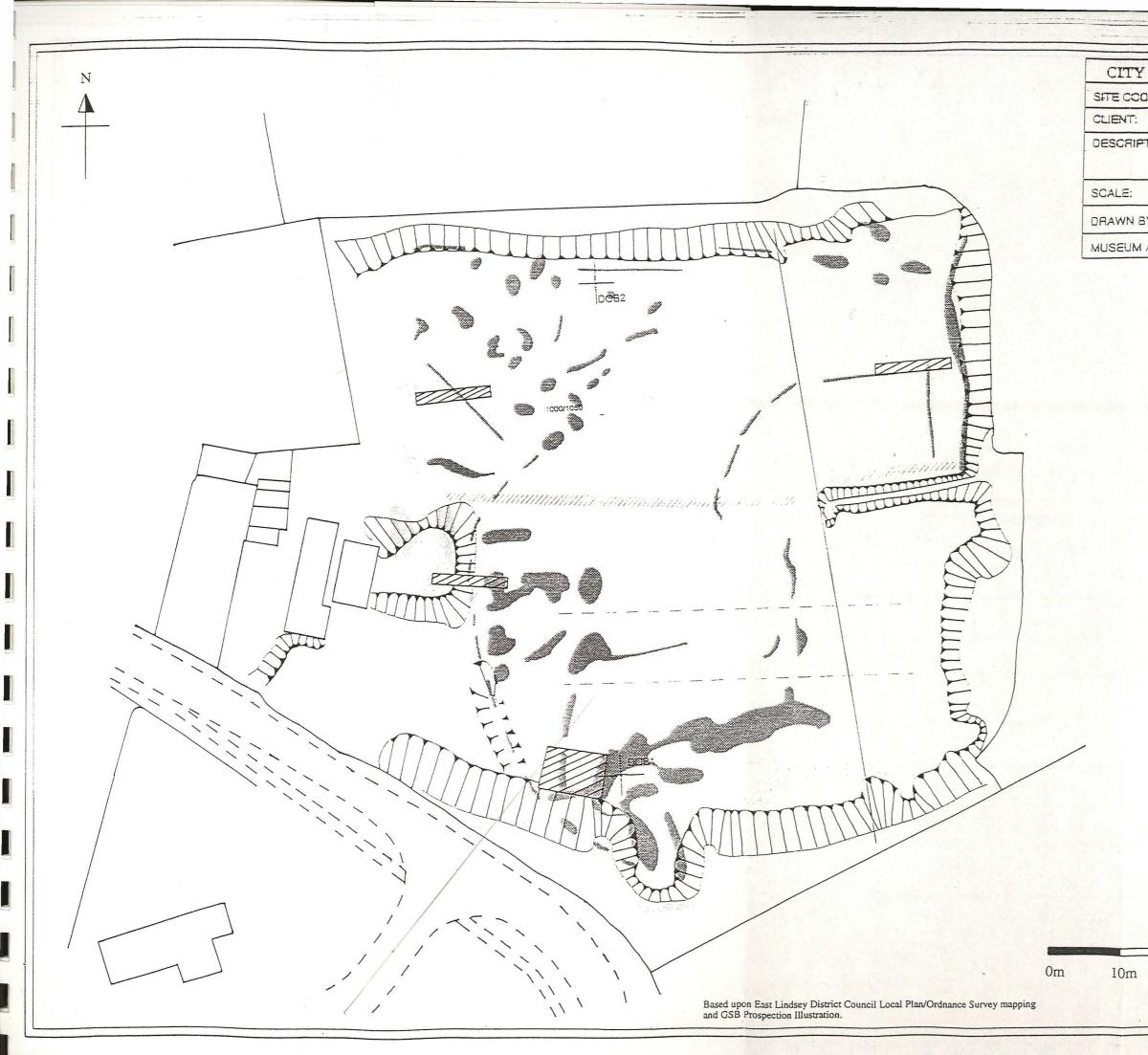
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BY: K.W. CHECKED: DATE: 07/09/98		

KEY

Earthwork/Contour

Trial Trench Location

20m	30m	40m	50m
			Fig.3



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KEY

?Archaeology

Ridge & Furrow



?Topography



?Former Field Division

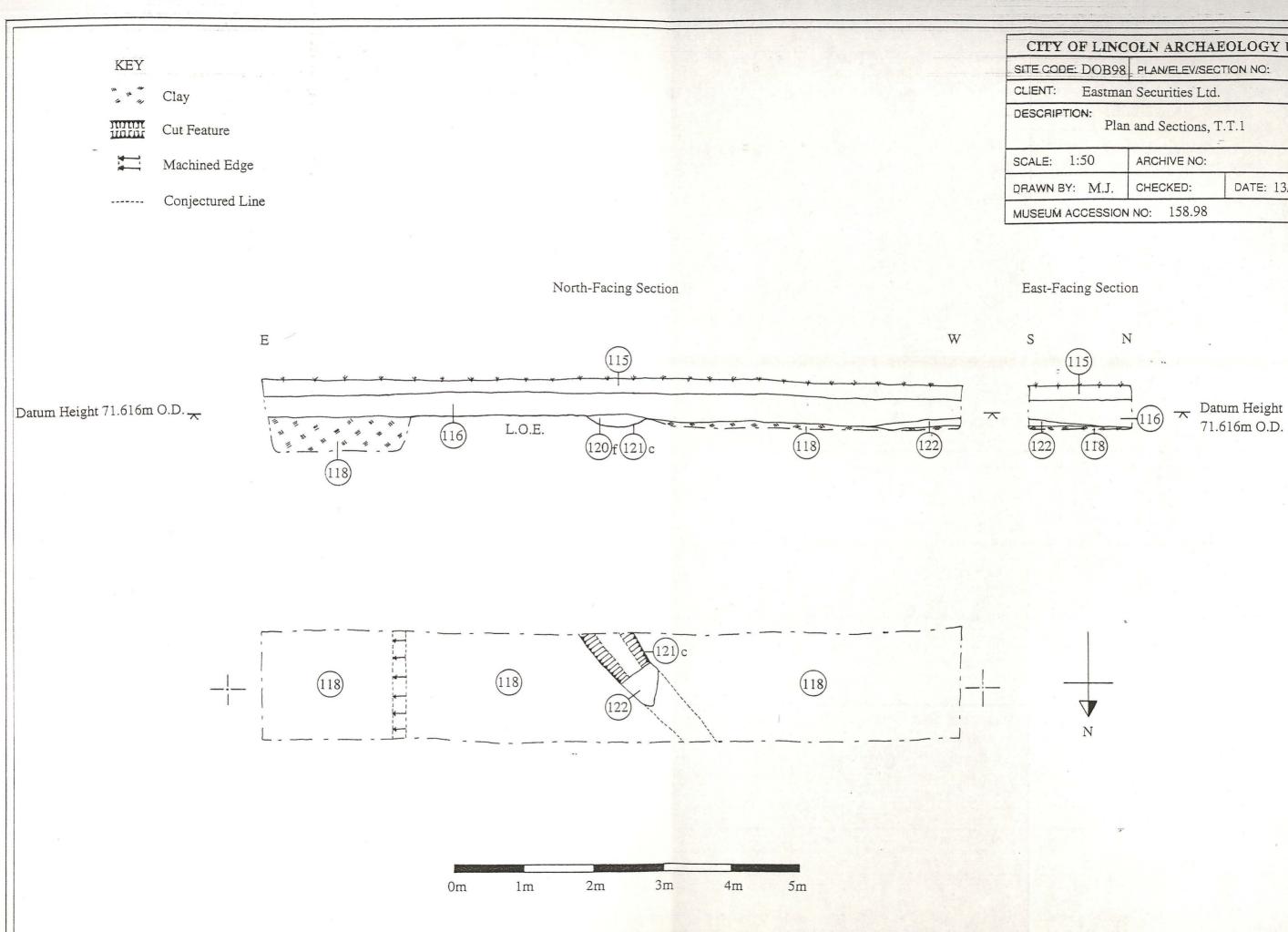


Pipe



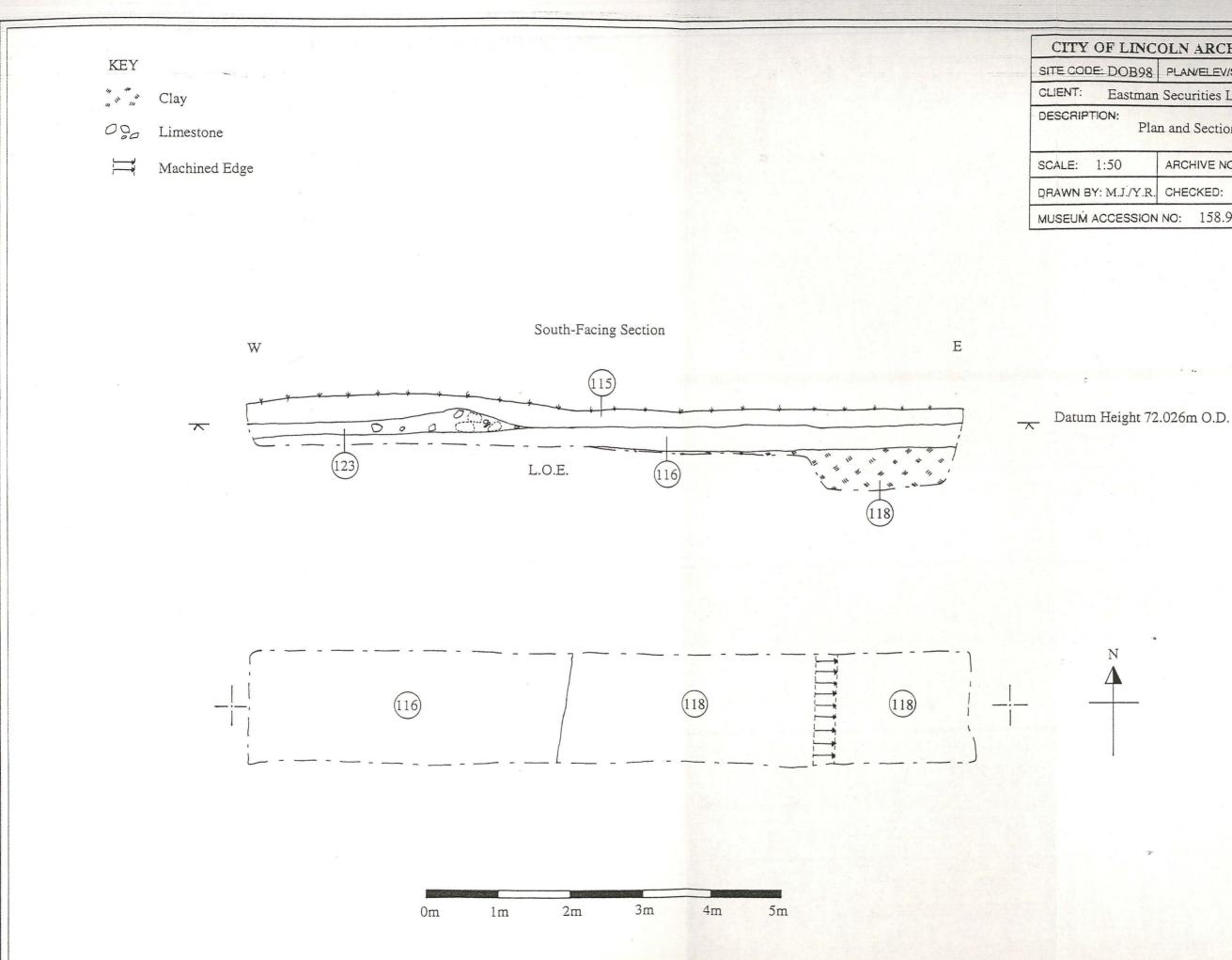
Ferrous

20m	30m	40m	50m
			Fig.4



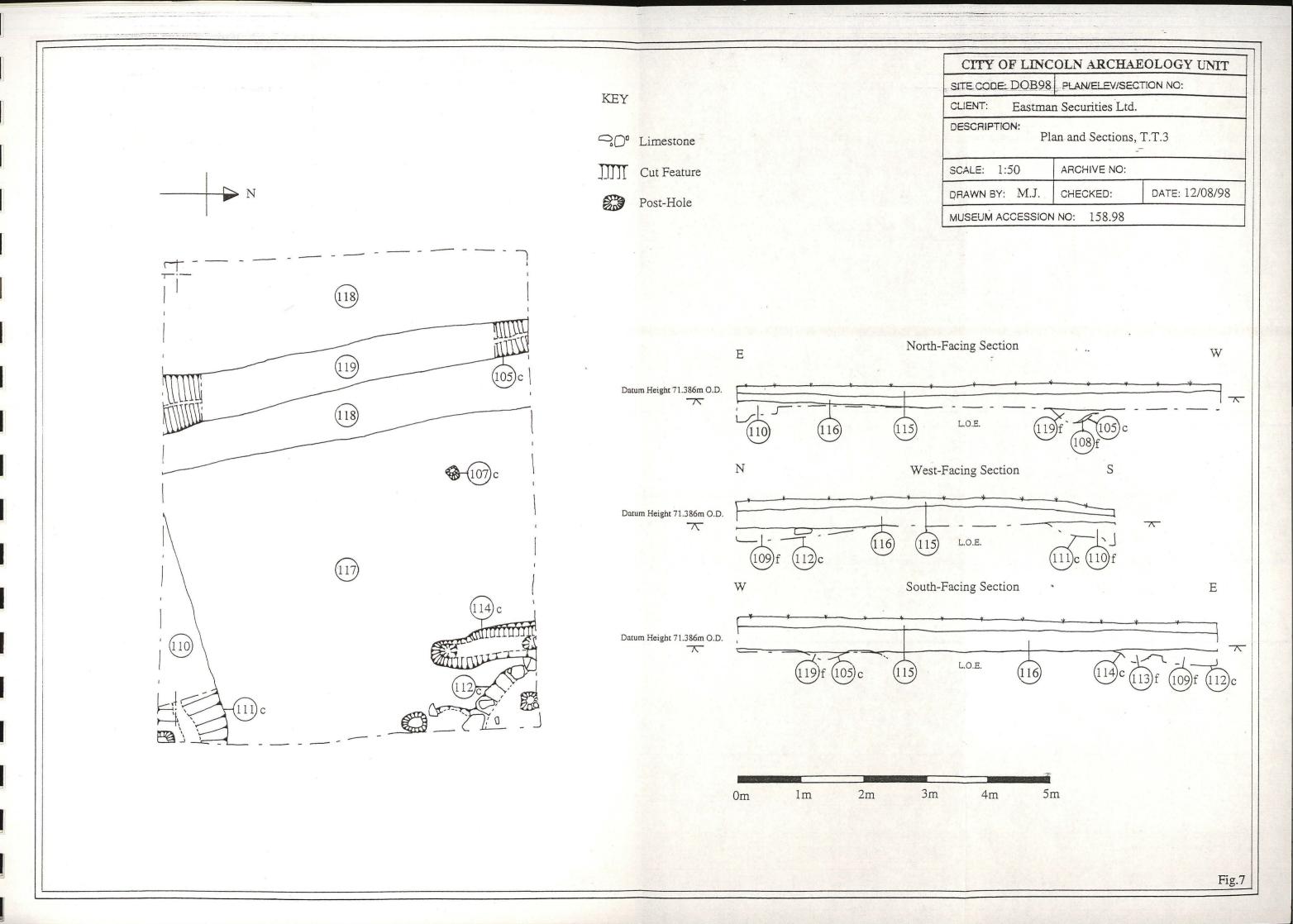
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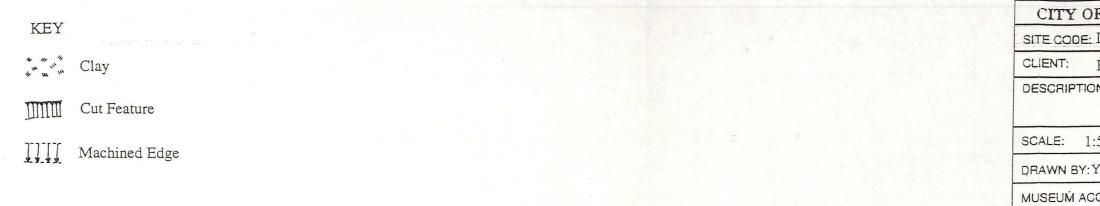
Fig.5

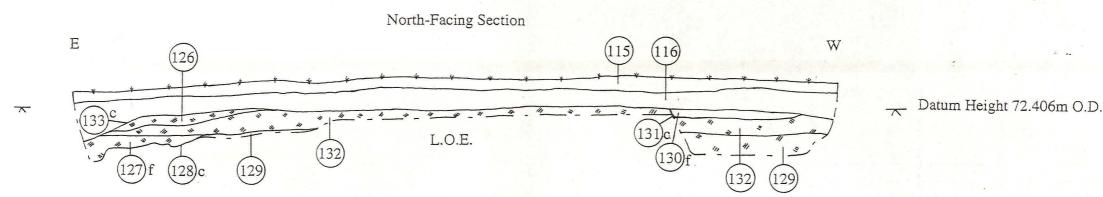


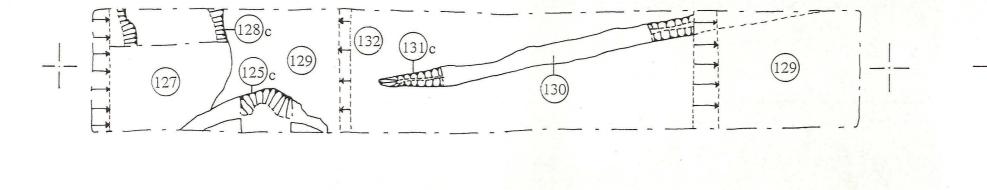
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0m	lm	2m	3m	4m	5m	

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