
Northamptonshire Archaeology

Archaeological Evaluation
at
Brampton Road, Buckden
Cambridgeshire



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June 2006

06/146

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**NORTHAMPTONSHIRE ARCHAEOLOGY
NORTHAMPTONSHIRE COUNTY COUNCIL
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**ARCHAEOLOGICAL EVALUATION
AT
BRAMPTON ROAD, BUCKDEN,
CAMBRIDGESHIRE
JUNE 2006
06/146**

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QUALITY CONTROL

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OASIS REPORT FORM

PROJECT DETAILS		
Project title	Archaeological Evaluation at Brampton Road, Buckden, Cambridgeshire	
Short description (250 words maximum)	Northamptonshire Archaeology carried out an archaeological evaluation on c 1ha of land proposed for an oil storage depot at Brampton Road, Buckden, Cambridgeshire. The trial trenching revealed considerable remains of Romano-British field systems in the form of enclosure and/or boundary ditches and a probable pond or stock watering hole. According to the Historic Environment Record the development site is set within an extensive local archaeological landscape.	
Project type (e.g. desk-based, field evaluation etc)	Field Evaluation (Site Code: RRB06)	
Previous work (reference to organisation or SMR numbers etc)		
Future work (yes, no, unknown)	Unknown	
Monument type And period		
Significant finds (artefact type and period)	Roman pottery, animal bone	
PROJECT LOCATION		
County	Cambridgeshire	
Site address (including postcode)	Brampton Road, Buckden	
Easting (use numerical 100km grid square no.)	2033	
Northing	6893	
Height OD	14m	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology	
Project brief originator	Cambridgeshire County Council	
Project Design originator	Northamptonshire Archaeology	
Director/Supervisor	Adrian Burrow	
Project Manager	Adam Yates	
Sponsor or funding body	Chapman Farrant Ltd	
PROJECT DATE		
Start date	June 2006	
End date	June 2006	
ARCHIVES	Location (Accession no.)	Content (e.g. pottery, animal bone etc)
Physical	ECB2318	Roman pottery, animal bone
Paper		
Digital		
BIBLIOGRAPHY		
Title		
Serial title & volume		
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AN ARCHAEOLOGICAL EVALUATION

AT

BRAMPTON ROAD, BUCKDEN

CAMBRIDGESHIRE

JUNE 2006

ABSTRACT

Northamptonshire Archaeology carried out an archaeological evaluation on c 1ha of land proposed for an oil storage depot at Brampton Road, Buckden, Cambridgeshire. The trial trenching revealed the remains of Romano-British field systems in the form of probable enclosure, boundary and drove-way ditches and a pond or stock watering hole dating from the 1st-3rd centuries AD. Consultation of the Historic Environment Record revealed that the site is set within an extensive local archaeological landscape.

1 INTRODUCTION

Northamptonshire Archaeology carried out an archaeological evaluation, on behalf of Chapman Farant Limited, during June 2006 on land south of Brampton Road, Buckden, Cambridgeshire (NGR TL 2033 6893, Fig 1).

The work was undertaken in order to inform a planning application for the construction of a petroleum distribution depot (planning application: 02/12862/FUL). The evaluation met the requirements of a specification issued by Northamptonshire Archaeology (2006) following a brief for Archaeological Investigation issued by Cambridgeshire County Council Archaeology Section (Gdaniec 2006).

The purpose of the evaluation was to determine the presence, date, character, integrity, state of preservation and depth of burial of any archaeological deposits within its cultural and environmental setting.

2 TOPOGRAPHY AND GEOLOGY

The site occupies an area of approximately 1ha and lies to the south of Brampton Road, between the villages of Buckden to the south, and Brampton to the north. The ground gently slopes from west to east and lies at an elevation of approximately 14mOD. The plot

of land is currently completely overgrown with vegetation including brambles, young saplings and more mature trees. The site is situated on 1st and 2nd Terrace river gravels of the Great Ouse (www.bgs.ac.uk/geoindex).

3 ARCHAEOLOGICAL BACKGROUND

There are no known archaeological remains from within the application site itself, however, the site is within an area of high archaeological potential and includes enclosures and trackways relating to late prehistoric, Roman and Saxon land use.

Historic Environment Record

A search was undertaken of the Cambridgeshire Historic Environment Record (HER plots, Fig 2, Appendix A1). Records of the area surrounding the development site comprises sites and finds spots of varying dates and indicate a landscape of extensive multi-period settlement. These include reports of the excavations at the Buckden gravel pits to the south and east of the site, where quarrying was undertaken between 1956 and 1964.

Prehistoric

To the east of the site, quarrying during 1956–1964 has exposed Mammoth and other mammalian bones (HER 2532). The excavations in the quarry to the south of the site revealed Mesolithic flints including cores, awls, blades and flakes (HER 2530) and several pits, one containing Neolithic pottery (HER 861a). In addition, Iron Age pits, one of which contained carbonised grain and worked flint flakes were revealed (HER 861b, 9776, 861d).

Iron Age pottery and loomweights (HER 2498A) were recorded in the quarry to the east of the site.

At the north and north-west of the site, an extensive area of cropmarks show enclosure ditches, track-ways and a circular enclosure and possible square barrow (HER 4475, 5765, 10066). Aerial photographs of land surrounding the area of quarry to the south of the site also show cropmarks of enclosures, trackways, circular ditches (HER 861e, 6799) and are further evidence of prehistoric or later settlement.

Roman

A Roman settlement was excavated from 1963 to 1964 at the quarry to the south of the site and 1st to 2nd century pottery was recovered from ditches, pits and postholes (HER 861). Roman ditches, pottery and flue tile were also present in the same area (HER 2498B, 950).

To the north-east of the site two Roman silver coins were recovered (HER 951, 951a).

Saxon

Saxon settlement remains, including huts, ditches, pits and postholes were also excavated during 1963–1964 at the southern quarry (HER 861c) as were Saxon huts, pits and pottery (HER 2498, 2498C).

4 METHODOLOGY

In total, seven trial trenches were excavated in accordance with the specification (NA 2006) (Fig 3). All were between 30m-50m in length and were excavated under archaeological supervision using a JCB 3CX mechanical digger fitted with a 1.8m wide toothless ditching bucket. Mechanical excavation proceeded as far as the first significant archaeological layer or, in its absence, as far as the surface of the natural substrate. During the evaluation further extensions were made to Trenches 4 and 6 to better define the archaeological features at the request of the Cambridgeshire Planning Archaeologist.

Most archaeological features were examined by hand excavation. Standard Northamptonshire Archaeology recording procedures were employed. The trenches were located relative to the Ordnance Survey National Grid using a GPS (Leica 1200 system). Levels were taken and related to Ordnance Survey Datum. Contexts were recorded on pro-forma sheets with a unique context number being allocated to each distinct deposit and feature. All trenches were planned at 1:100 and sections were recorded at 1:10. Environmental samples were taken from secure archaeological contexts to recover paleobotanical and paleozoological evidence.

A full photographic record comprising both 35mm monochrome negatives, with associated prints, and colour transparencies was maintained, with additional digital photographs. All records were compiled during fieldwork into a comprehensive and fully cross-referenced site archive.

All works were carried out in accordance with the *IFA Standards and Guidance for Archaeological Excavations* (1994, revised 1999). In addition all works complied with the guidelines detailed in *Standards for Field Archaeology in the East of England* (Gurney 2003). All procedures complied with the Northamptonshire County Council Health and Safety provisions and *Northamptonshire Archaeology Advisory Document, Health and Safety at Work* (NA 2003).

5 RESULTS OF FIELDWORK

General

The following is a summary of the archaeological findings. An inventory of all archaeological contexts is presented in Appendix A2.

The natural substrate was encountered across the entire site at between 0.40m and 0.70m below ground level. This comprised orange sand and gravels across most of the site, with areas to the south-west comprising yellow/orange sands with patches of gravels present.

Ditches

The earliest and predominant phase of occupation was Roman, represented by a series of ditches across most of the evaluation area. Most of these ran on either a rough north-west to south-east or north to south alignment and were clearly parts of a substantial field system. Ditch fills were broadly similar, comprising firmly compacted clayey silts with gravel inclusion, generally representing gradual silting up post-abandonment rather than deliberate backfilling.

A large ditch was present in Trenches 2 and 7 on a north-west to south-east alignment. It was represented by [205] in Trench 2 (Figs 4 & 5, Section 1) and [707] in Trench 7 (Plate 2). Both sections revealed a broad, deep ditch with an irregular U-shaped profile, containing two similar silty fills, (203), (204) and (705), (706) respectively. The latter three contained Roman pottery. Numerous pieces of large cattle bone recovered from the fills suggested these ditches formed part of a stock enclosure (see 6.3).

This ditch extended in a straight line between the two trenches but was not present in Trench 1 on the same alignment further to the north-west, indicating either a rapid change in orientation or a termination to the north-west of Trench 2. A much smaller ditch [104] with a shallow, U-shaped profile and a compact, silty fill (103) was however present in Trench 1. No dating evidence was recovered from this feature.

Ditch [709] in Trench 7 was located 2m to the east of [707] with a similar broad, deep profile. It contained two fills, (708) and (711) from which Roman pottery was recovered. Aligned north to south, this formed a 45 degree angle with [707] but no stratigraphic relationship between the two was present within the trench. This ditch did not extend into Trench 4 to the north on the same alignment.

Two parallel ditches [405] and [407] crossed Trench 4 on a north-north west to south-south east orientation. Ditch [405] had a steep U-shaped profile and concave base. It had an orange/brown silty clay lower fill (404) and a brown silty clay upper fill (403) containing Roman pottery. Ditch [407] had an identically sized profile but had a flat base and a single silty fill (406).

At the north-west corner of the site, three ditches crossed Trench 5. Of these, the most notable was [512], aligned north-west to south-east with a broad, shallow upper profile sharply descending into a nearly vertical lower slope with flat, squared base (Figs 4 & 5, Section 2, Plate 1). It contained three fills, (509) and (510) were both sandy silt fills whereas the primary fill (511) was a silty clay.

Parallel to [512] was another ditch, [508], with a moderately steep U-shaped profile and single silty clay fill [507] (Fig 6, Section 3). It was cut on the south side by ditch [506], on the same alignment with a broader, marginally shallower flattened profile containing a silty clay fill (505). The parallel alignments of these two ditches and the similarity in fills suggest [508] was a re-cutting of an established boundary ditch.

Ditch [504] was located towards the east of the trench on a north-south alignment. It had fairly shallow concave sides and base and contained a single silty sand fill (503) containing ceramic tile (see 6.2).

In Trench 6, two parallel ditches, [605] and [614] were aligned north-east to south-west, 7m apart and continued into Trench 7 as [713] and [704] respectively (Fig 4, Plate 3). Ditch [605] had a U-shaped profile containing two fills, (603), an orangey brown silty clay containing Roman pottery and (604), a brown sandy clay. Ditch [614] was not excavated but its equivalent in Trench 7, [704] was. It had a very similar profile but only a single sandy clay fill (703). It is likely that these ditches formed the boundary of a drove-way for stock management, possibly related to a stock enclosure. Its proximity to a possible stock watering pond [611] 15m to the north also suggests a direct relationship.

Pit

A large sub-rectangular pit [609] was present in Trench 6, extending beyond the edge of the trench. Measuring 3m across with a depth of 0.7m, this contained three clayey silt fills (606), (607) and (608). Notably, no dating evidence was recovered from this feature, in contrast to the Roman ditches on site. The possibility exists that this may pre or post-date the Roman ditches.

Pond

A very large pit [611] (Figs 4 & 6, Section 4, Plate 4 and Cover Plate) was present on the northern part of Trench 6 and extended into the eastern extension of Trench 4 as [413]. It was revealed to be sub-circular in plan and 10m in diameter, while a machine dug sondage established a maximum depth of 1.5m below the natural substrate. The upper fill (610) comprised of dark grey silty clay while the lower fill (612) was a very dark grey sandy clay with gravel inclusion and frequent iron panning. The lower part of (612) was waterlogged; the sondage immediately filled with water once the base was reached.

A column sample was taken through (610) and (612) to obtain paleo-environmental evidence (see 7.1). A worked timber was recovered from (612), sunk into the natural gravels at the base (see 6.3). No other dating evidence was recovered from this feature. Its proximity to a possible stock enclosure and related drove-way strongly suggest that this may have been utilized as a stock watering hole.

6 THE FINDS**6.1 The Roman pottery**

by Tora Hylton

The evaluation produced a group of 2nd–4th century Roman pottery. A total of 100 sherds with a combined weight of 1.356kg were recovered from eleven individual deposits in six trenches. Most of the assemblage was recovered from the eastern half of the site (Trenches 4-7), with the highest concentration (59 % by weight) deriving from a complex of ditches located in Trench 7.

The assemblage is dominated by locally manufactured kitchen and tablewares in coarseware and fineware fabrics. Greywares make up 34.9% of the total by weight. Diagnostic forms include bowls with bead rims in Lower Nene Valley greyware, and shallow bowls with plain rims (dog dishes), deep bowls with everted rims and necked and

neckless jars. Grog-tempered wares (18.9%) include undiagnostic body sherds from storage jars and two necked jars. Shell-gritted fabrics (6.5%) are represented by undiagnostic body sherds. There are two rim sherd from a reeded hammerhead mortaria. The fabric displays similarities to Hartleys Fabric Type 1 (1996, 199), it has black slag trituration grits, was manufactured in the Castor/Stibbington area and dates to *c.* AD 250-400. A similar example was recovered from Orton Hall Farm, Cambridgeshire (Perrin 1996, fig 14, M17).

Fine table wares in Lower Nene Valley Colour Coat fabrics (17.7%) include the base of a probable bowl and the base/body of a beaker ornamented with applied barbotine decoration, which dates to the late 3rd/4th century and abraded body sherds with worn rouletting.

Imported wares are represented by a single sherd of Samian, a Dragendorf Type 27 cup, with double curved wall and bead rim, which dates to the 1st century (Webster 1996, 38).

Much of the material derived from a complex of linear features sited to the east of the site. No early Roman material is represented. The range of material represents domestic settlement in the area from the 2nd through to the 3rd /4th centuries.

Table 1: The Roman pottery by context number and fabric type

Context/ [feature]	103 [104]		204 [205]		403 [405]		408 [409]		410 [411]		503 [504]	
	No	W (g)	No	W (g)	No	W (g)	No	W (g)	No	W (g)	No	W (g)
Roman Pottery												
Grog tempered wares												
Greyware			3	10	1	17	1	5	2	26		
Lower Nene valley CC												
Oxidised sandy ware					4	17						
Mortaria												
Samian												
Shell-gritted ware	8	24	1	6			1	7	6	64		
Whiteware			1	6					2	16		
Post-medieval												
Trailed slipware											1	46
Total	8	24	5	22	5	34	2	12	10	106	1	46

Table 1 con't

Context/ [feature]	505 [506]		507 [508]		603 [605]		705 [707]		706 [707]		708 [709]	
	No	W (g)	No	W (g)	No	W (g)	No	W (g)	No	W (g)	No	W (g)
Roman Pottery												
Grog tempered wares	2	13					2	13				
Greyware	16	122	4	96	1	3	16	122	4	96	1	3
Lower Nene valley CC	4	42					4	42				
Oxidised sandy ware												
Mortaria	1	22	2	73			1	22	2	73		
Samian	1	3					1	3				
Shell-gritted ware												
Whiteware												
Post-medieval												
Trailed slipware												
Total	24	202	6	169	1	3	24	202	6	169	1	3

6.2 The Animal bone

By Karen Deighton

Method

Animal bone was collected from a range of Roman features by hand during the course of the excavation. This material was examined to provide an idea of the species present, the level of preservation and the amount of ageing and metrical data available. Although sieving was undertaken no bone fragments were recovered by this method.

Results

Preservation was adequate, with fairly heavy fragmentation (approximately 50% the result of fresh breaks) and moderate surface abrasion. Evidence for butchery was restricted to diagonally chopped large ungulate ribs in (506). Only one instance of canid gnawing was noted (506) and no evidence of burning was noted.

Table 2: Animal bone distribution by taxon and context

Context No./ Feature	403 [405]	505 [506]	507 [508]	606 [609]	705 [707]	708 [709]	Total
Bos(cattle)		1	1		3	1	6
Equus(horse)					1		1
Large ungulate		2					2
Indeterminate	1			1			2
Total	1	3	1	1	4	1	11

Ageing and metrical data

Only seven measurements were available from three bone elements, largely due to preservation. Again ageing data (fusion of limb bones) was available from three bone elements only.

Observations

Little can be said of the animal economy of the site beyond an estimate of some of the species utilised here (e.g. cattle and horse). It is difficult to state if the material is typical of a small Roman rural site when so little data is available.

Potential

The potential for further work on the present assemblage is extremely limited due to its small size. However the reasonable preservation indicates that if more bone were recovered during the course of any further excavation statements concerning the animal economy and husbandry of the site could be made.

6.3 Ceramic building material

by Pat Chapman

There are four brick fragments and one tile fragment, weighing 239g, all from context (503). The brick fragments are heavily eroded with no distinguishing features except one piece has a possible nail hole in it, which could also be the cavity left by an inclusion. The fabric is a coarse red brown sandy clay with calcareous/burnt flint inclusions. These could be fragments from Roman brick or *pedalis* tile, but could equally be of medieval or post-medieval date. The tile fragment is 11mm thick and made from a pale pinkish brown soft silty clay with calcareous, flint and grog inclusions. The fabric is typical of Roman material.

6.4 The Wood

by Maise Taylor

A single piece of worked timber was recovered from fill (612) at the base of pond [611]. Using the scoring scale developed by the Humber Wetlands Project (Van de Noort *et al* 1995 Table 15.1) the piece scores 3 on preservation, but is also badly shattered. Shatter often appears to be caused by heavy vehicles moving over material before excavation.

Table 3: Scoring scale for timber preservation

	Museum Conservation	Technology Management	Woodland Management	Dendro- chronology	Species Identification
5	+	+	+	+	+
4	-	+	+	+	+
3	-	+/-	+	+	+
2	-	+/-	+/-	+/-	+
1	-	-	-	-	+/-
0	-	-	-	-	-

Because of the shatter it was impossible to measure the length accurately, but the timber was at least 535mm long. The width varies from 195-205mm and the thickness between 120-170mm.

There is one possible tool facet on one side, but the general condition of the wood made it impossible to measure it. The timber is what is known as ‘boxed heart’ where the round section of the log has been hewn square.

The wood is rather distorted, possibly by drying out, but the species is almost certainly Field Maple (*Acer campestre*). The size of the timber, together with the fact that it was resting on the base of the pit, rather than driven in, suggests that it may be the bottom of a log ladder. Ladders made from logs with steps cut in were common from the Bronze Age onwards, and were made in a variety of designs. There is nothing about Field Maple that makes it particularly suitable for making into a log ladder, except that it would have been commonly available in local hedgerows.

7 THE ENVIRONMENTAL EVIDENCE

7.1 The Pollen Analysis

by Rob Scaife

Introduction

Samples for pollen analysis were taken from an undated 'pond' feature [611] which was sealed by a medieval plough soil. This feature contained silty clay loam sediments which were perceived as having the potential for pollen preservation and thus, for reconstruction of the local vegetation environment during the period represented by the fills. This proved to be the case and a full pollen analysis of the material has been carried out the results of which are presented here.

Methodology

Samples for pollen analysis were obtained directly from the open trench sections using metal monolith tin profiles. These were examined in the laboratory and sub-sampled for pollen analysis. Samples (12) of 2ml volume taken at 10cm intervals throughout the sequence were processed using standard techniques for the extraction of the sub-fossil pollen and spores (Moore and Webb 1978; Moore *et al* 1992). Micromesh sieving (10u) was also used to aid with removal of the clay fraction in these sediments. Sub-fossil pollen and spores were extracted from all of the samples prepared and were identified and counted using an Olympus biological research microscope fitted with Leitz optics. A pollen sum of up to 500 grains of dry land taxa per level was counted for each level where possible. Additionally, all extant spores and pollen of marsh taxa (largely Cyperaceae) and fern spores was also counted for each of the samples analysed. Data is presented in pollen diagram form plotted using Tilia and Tilia Graph (Fig 7). Percentages used have been calculated in a standard way, as follows:

Sum =	% total dry land pollen (tdlp)
Marsh/aquatic =	% tdlp+sum of marsh/aquatics
Spores =	% tdlp+sum of spores
Misc. =	% tdlp+sum of misc. taxa.

Taxonomy, in general, follows that of Moore and Webb (1978) modified according to Bennett *et al* (1994) for pollen types and Stace (1992) for plant descriptions. These

procedures were carried out in the Palaeoecology Laboratory of the School of Geography, University of Southampton.

Results

Pollen was abundant and largely well preserved in these sediments, although there is some indication of differential preservation in favour of robust taxa in the upper levels of the sequence. Lactucoideae (dandelion types) become increasingly more important. Whilst this taxon is a clear indication of a grassland/pasture habitat, its robust pollen is often preserved longer in poorer preserving conditions. Here, the upper fills of the feature will have been subject to a fluctuating water table and oxidation which is detrimental to preservation. Overall, throughout the sequence, the pollen assemblages contain a diverse range of herbs but with very few trees and shrubs present. Because of the effects of differential preservation noted, the taxonomic diversity is greater in the lower half of the profile. Disregarding the expansion of the Lactucoideae noted, the sequence although diverse, shows a large degree of homogeneity throughout, and as such, no separate pollen zones have been differentiated. The characteristics of the principal pollen groups are described as follows;

Trees and shrubs: There are notably few trees and shrubs present. Where these do occur they are sporadic occurrences of *Betula* (birch), *Pinus* (pine), *Quercus* (oak) and *Corylus avellana* type (here, hazel rather than bog myrtle). These are all anemophilous and probably represent transport from regional sources. There are individual records of *Fraxinus excelsior* (ash) and the shrub *Calluna* (ling) which are more probably of local origin.

Herbs: There is a diverse assemblage of herbs. Poaceae (grasses) are dominant throughout (to 60%) with Lactucoideae (dandelion types) which, as noted above, become more important in the upper levels of the profile (to 48%). They are, however, significant and well preserved in lower levels and are an important representative of the local flora. Also of note is *Plantago lanceolata* (ribwort plantain; to 19% at 65cm) along with a range of other pasture types. These include especially the Fabaceae with *Trifolium*, *Medicago* and *Lotus* types (clovers and vetches), *Ranunculus* (buttercups), *Rumex* (docks) and Asteraceae types (e.g. knapweeds) and *Scabiosa* (scabious). In addition there are records of other herb taxa which are not so specifically definable to grassland (e.g. some of the Asteraceae including *Cirsium*-thistles). Whilst grassland taxa predominate, there are also a range of taxa which are attributable to arable and disturbed ground.

These, although to some extent significant, are present in much smaller numbers and include cereal pollen in the lower fill of the profile (612) and weeds such as *Plantago major* (greater plantain), *Spergula* (spurrey), *Polygonum aviculare* (knotgrass), *Fallopia convolvulus* (black-bindweed), *Plantago coronopus* (hoary plantain), *Artemisia* (mugwort) and Chenopodiaceae (goosefoots and oraches). The latter may also be diagnostic of heavily nitrogenous areas such as waterholes and places associated with animals. There is no evidence of cultivated crops other than cereals (e.g. flax or hemp) which might be expected for the medieval period.

Wetland plants: There are relatively few plants in this category in spite of the fact that this feature is thought to have been a pond. There are no aquatic macrophytes and only small numbers of Cyperaceae (sedges) and *Typha angustifolia/Sparganium* type (reed mace and bur reed). In addition to these damp ground and possibly shallow, ephemeral water taxa, are other plants which are thought of as typical of damp grassland, ditches and wet depressions These include *Thalictrum* (meadow rue), *Filipendula ulmaria* (meadow sweet), *Succisa* (devils bit scabious), *Hydrocotyle vulgaris* (marsh pennywort).

Spores of ferns: There are only small numbers of fern spores. These include *Dryopteris* type (typical ferns), *Pteridium aquilinum* (bracken) and importantly, *Botrychium lunaria* (moonwort) which is an indication of mature damp grassland. There are occasional spores of *Sphagnum* (bog moss) and liverworts which are also indicative of damp ground.

Interpretation

The great diversity of plants represented in this profile is typical of those pollen types and assemblages from open agricultural habitats especially for the historic period. Whilst it is generally accepted that such small archaeological or natural topographical features represent a very small pollen catchment area, it would still appear that there was a marked lack of tree and shrub vegetation within the local area. The assemblages of birch and especially oak and hazel represent the vestiges of woodland growing in the region as a whole. This was probably managed but pollen evidence cannot corroborate this. It is clear that the pollen assemblages come from within the feature itself and its near surroundings. This was a rich grassland habitat, probably pasture. This is evidenced by the substantial quantities of grass pollen but also the taxonomic diversity and types of other plants/pollen found. Furthermore, the range of taxa would indicate a long pasture to have the substantial numbers of ribwort plantain and dandelion type (dandelion hawk

weeds etc.) and taxa such as knapweeds, scabious, devils bit scabious, vetches and medicks, the fern, moonwort and other taxa. A rich pasture is thus indicated.

Interpretation of pollen assemblages obtained from such features is complicated by the pollen from the autochthonous plant communities which may mask the pollen from the surrounding not wetland areas. Whilst this may be the case here, the assemblages noted would suggest that the 'pond' was within a zone of rich pasture. The feature itself and its fringes was, however, a damp area which supported a range of taxa characteristic of this habitat. These have already been noted and include sedges, reed-mace bur reed, marsh pennywort.). There is no evidence that there was longevity of standing water in this feature. Whilst pollen from aquatic macrophytes is typically scarce in assemblages, small numbers might have been expected along with cysts of algal *Pediastrum*. These were not present and it is concluded that this may not have been a permanent pond but, more probably, a silting, wet depression which *may* have had occasional, seasonal, standing water.

The presence of small numbers of cereal pollen and associated weeds of arable ground is not unexpected since cultivation would clearly have been taking place at this time. Identification of the cereals to species/type was not possible other than pollen being from wheat, barley or oats rather than rye. The presence of cereal pollen clearly shows cultivation and it is most probable that this comes directly from cultivation of areas of drier land (the interfluves). However, it is also possible that such records may also come from secondary sources such as nearby crop processing (threshing and winnowing) or from waste domestic material and human and/or animal faeces all of which may liberate pollen. The latter (faecal debris) would be particularly relevant if domestic waste was present or if the feature was an animal (cattle) wallow. The presence of Chenopodiaceae has already been noted.

Conclusions

There have been few such studies of ponds or open well type features. This is undoubtedly due to the often complex taphonomy of the pollen recovered from the sediment fills. However, useful information on the local environment during the period of sedimentation can be gained from such analyses. This has proven the case here. Whilst the pollen assemblages do not show interesting phenomena such as hemp or flax cultivation which might be expected from medieval contexts, the well preserved pollen assemblages do demonstrate a rich, generally long pasture environment existing around

the site. It also casts doubt as to whether the feature was a 'real' pond in the sense of having long term standing water or whether it was a damp depression which silted up with possibly seasonally increased wetness. There is an overall background pollen rain showing that tree and shrubs were only present at distance from the site (probably regionally) and that there was an arable component to the economy.

7.2 Environmental Samples

by Karen Deighton

Method

Seven samples were collected by hand during trial trenching. Two were monolith samples collected for pollen analysis (see 7.1). The remaining five bulk samples were processed using a siraf tank fitted with a 500micron mesh and flot sieve. The resulting flots were examined using a microscope (10x magnification). Identifications were made with the aid of a seed atlas (Schoch *et al* 1988) and the author's reference collection.

Results

Ecofacts were noted in three samples from Sample 5 (503), Sample 6 (607) and Sample 7 (612). These comprised three small (i.e. less than 2mm in any dimension), indeterminate charcoal fragments from Sample 5. One indeterminate chaff fragment and one indeterminate charred seed from Sample 6. One fat hen (*Chenopodium album*), one possible stinking mayweed (cf.) and one possible cereal type grain (*Cerealia* sp) from Sample 7. Fragmentation and abrasion were at a moderate level.

Potential

The value of further work is extremely limited due to the low number of ecofacts present and the low level of speciation possible. However, as plant remains were present, the sampling of suitable contexts should be undertaken should further excavation take place.

8 CONCLUSIONS

The trial evaluation revealed evidence for substantial Romano-British occupation of the site spanning the 1st-3rd/4th Centuries AD, most probably a component of a small rural settlement, focused towards the eastern part of the development area. The activity comprised mainly of a system of ditches, possibly forming a least one stock enclosure set within a larger field boundary system. Also present was a possible stock drove-way leading off from the enclosure, and a large 'pond' potentially serving as a stock watering or wallowing hole.

Paleo-environmental evidence corroborates this by suggesting that a rich grass pasture environment, largely free from trees or other vegetation existed on site at this time. The evidence suggests that animal husbandry, more so than crop production was an integral component of the site function.

The character of the pottery assemblage is generally limited, dominated by locally produced coarse-wares although the nature of several of the finds such as table-wares, a single Samian sherd and possible Roman roofing tile suggests a more domestic context. This indicates that a related settlement is likely to be close at hand despite no structures themselves being identified during the evaluation.

It is clear from the HER that the site lies within a landscape of significant archaeological activity, much of it contemporary. However, although the excavation revealed a significant pattern of archaeological features, the small area of the site and the limited amount of trenching undertaken reduces what can be said about the larger pattern of occupation within the sites immediate environs.

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A1: HISTORIC ENVIRONMENT RECORD DATA

HER No.	Grid Ref.	Description
861a	TL 201 680	Buckden gravel pit excavation – several pits, one contained Neolithic pottery
861b	TL 201 680	Buckden gravel pit, Iron Age pits with pottery
861c	TL 201 680	Buckden gravel pit, Anglo Saxon settlement including huts, pits, ditches & postholes
861d	TL 202 680	Buckden gravel pit, worked flint flakes
861e	TL 201 680	Buckden gravel pit, cropmarks – rectilinear enclosures, ditches, tracks, boundaries
951	TL 2128 6990	Roman silver coin
951a	TL 213 698	Roman coin
2498A	TL 210 689	Iron Age pottery & loom weights
2498B	TL 210 689	Roman ditches & pottery
2498C	TL 210 689	Anglo Saxon pit huts, pottery & pits
2530	TL 204 686	Buckden gravel pit, Mesolithic flints including cores, awls, blades & flakes
2532	TL 209 690	Palaeolithic remains including Mammoth and other mammalian bones
4475	TL 205 696	Cropmarks, including enclosures
5765	TL 1972 6975	Cropmarks, including large circular cropmark
6799	TL 208 682	Cropmarks, including enclosure, ditches & trackway
8241	TL 198 684	Possible gallows site
9776	TL 20 68	Iron Age storage pit containing carbonised grain
10066	TL 198 695	Cropmark, possible square barrow
MCB 16436	TL 1998 6860	Royal Observer Corps site – Cold War 1968 AD
54532	TL 20539 69216	Mid 18 th century Milestone

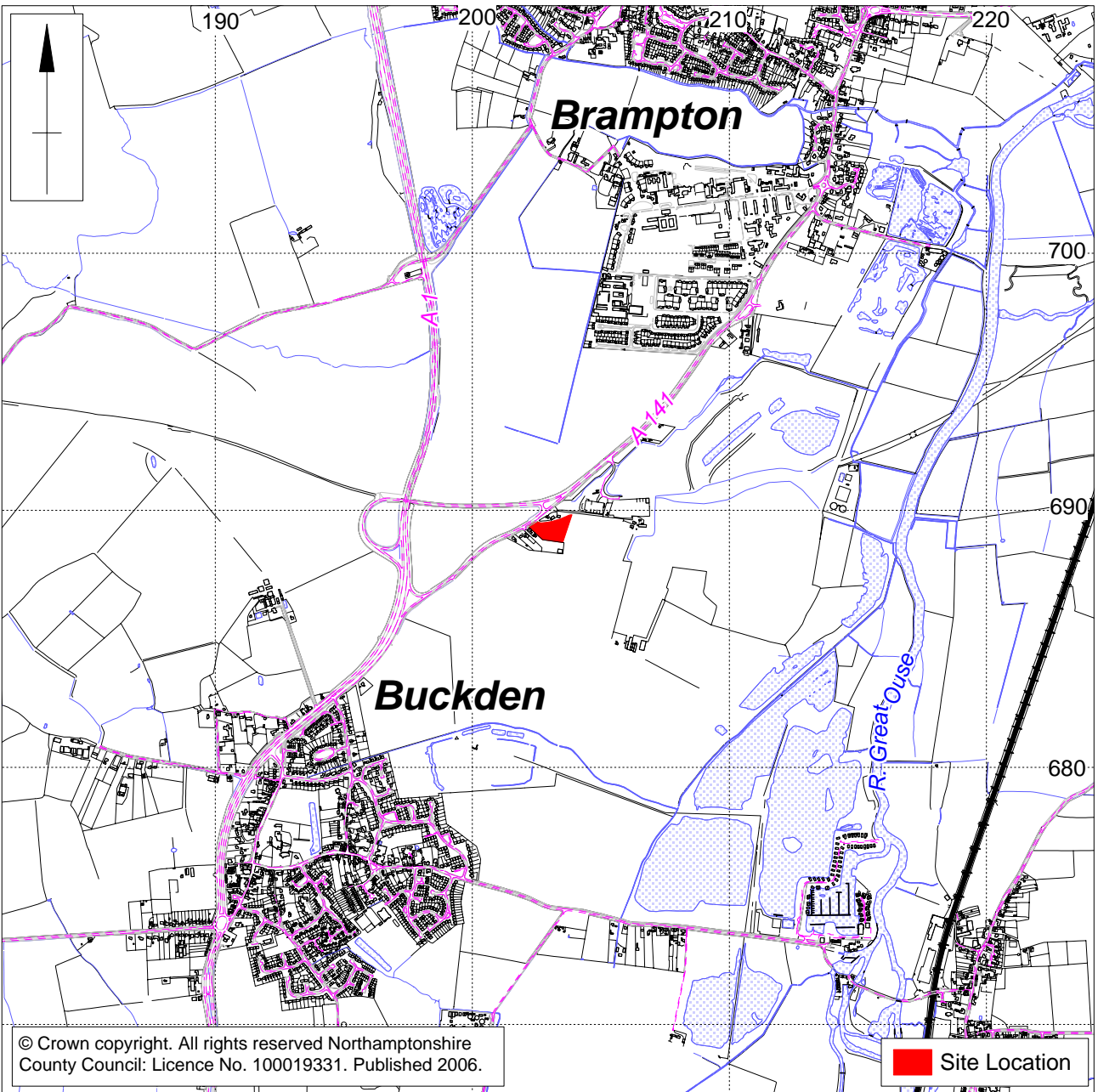
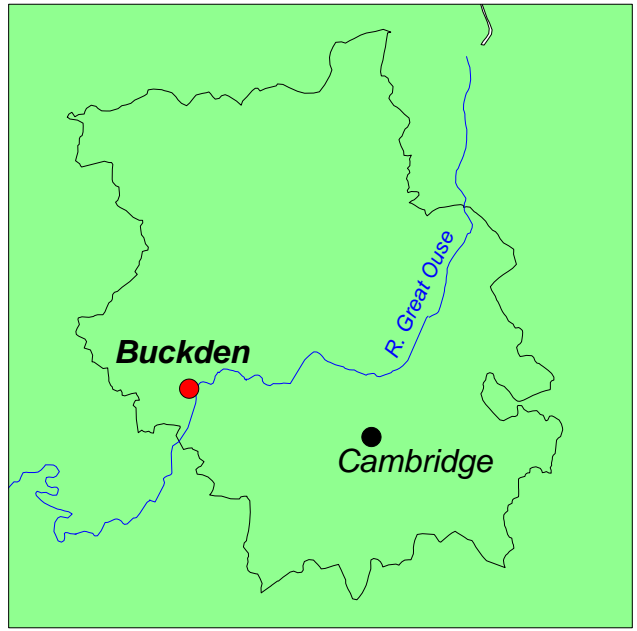
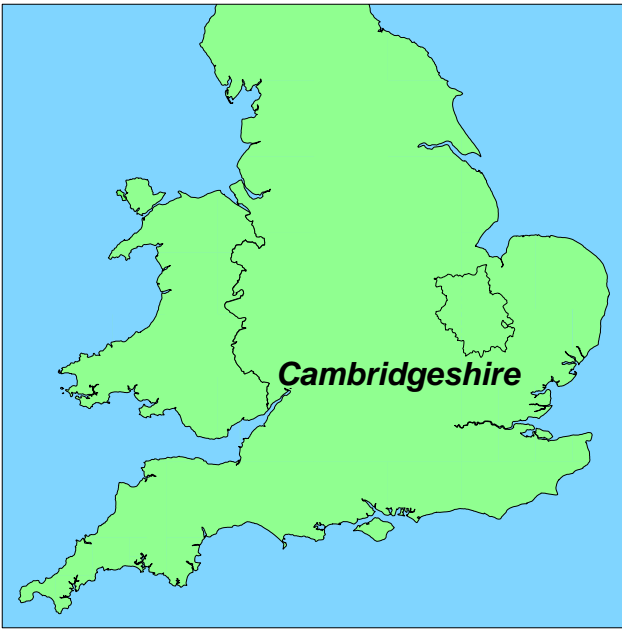
A2: SITE DATA

Trench No	Context	Deposit Type	Description	Artefact types
1	101	Layer	Topsoil 0 – 0.40m thick	
	102	Layer	Subsoil mid orange brown sandy silt 0.3m – 0.63m thick	
	103	Fill	Fill of [104] mid orange brown sandy silt with some angular gravel, 0.25m deep	Pottery
	104	Cut	Cut of ditch aligned E-W with 'U' shaped profile, 1.4m wide x 0.4m deep	
	105	Layer	Natural mid yellow/orange sand with patches of gravel	
2	201	Layer	Topsoil 0 – 0.3m thick	
	202	Layer	Subsoil mid orange brown sandy silt 0.2m – 0.25m thick	
	203	Fill	Fill of [205] med light orange brown silty sand with few angular gravel, 0.5m deep	
	204	Fill	Fill of [205] light grey with orange & brown mottling sand with infrequent large stones, 0.60m deep	Pottery
	205	Cut	Cut of ditch aligned NE-SW 'V' shaped profile with northern side less steep, flat base, 2.4m wide x 1.10m deep	
	206	Layer	Natural mid yellow/orange sand with patches of gravel	
4	401	Layer	Topsoil 0 – 0.3m thick	
	402	Layer	Subsoil dark grey brown sandy silt 0.3m – 0.4m thick	
	403	Fill	Fill of [405] dark brown grey silty clay with infrequent angular stone, 0.2m deep	Pottery, bone
	404	Fill	Fill of [405] med orange brown sandy silt with infrequent gravel, 0.15m deep	
	405	Cut	Cut of ditch aligned SW-NE steep sided 'V' shaped profile with concave base, 1.0m wide x 0.35m deep	
	406	Fill	Fill of [407] mid orange grey silt, mottled with frequent gravel and angular stones, 0.25m deep	
	407	Cut	Cut of ditch aligned N-S with shallow 'U' shaped profile and flat base, 1.0m wide x 0.25m deep	
	408	Fill	Fill of [409] dark brown grey silty sand with some gravel, 0.25m deep	Pottery
	409	Cut	Cut of possible ditch terminus or pit, aligned NW-SE shallow 'U' shaped profile with concave base, 1.0m wide x 0.25m deep	

Trench No	Context	Deposit Type	Description	Artefact types
	410	Fill	Fill of [411] mid grey orange mottled silty sand with infrequent gravel, 0.23m deep	Pottery, bone
	411	Cut	Cut of terminus or pit shallow, aligned NW-SE with shallow 'U' shaped profile and concave base, 1.1m wide x 0.25m deep	
	412	Fill	Fill of [611] mid grey silty clay, same as (610)	
	413	Cut	'Pond' feature, equivalent to [611]	
	414	Layer	Natural mid orange sand and gravel	
5	501	Layer	Topsoil 0 – 0.2m thick	
	502	Layer	Subsoil dark grey brown sandy silt 0.2m – 0.3m thick	
	503	Fill	Fill of [504] mid orange brown silty sand with infrequent gravel, 0.42m deep	Pottery, tile
	504	Cut	Cut of ditch aligned NE-SW with steep sided 'V' shaped profile, shallower on south side and concave base, 1.2m wide x 0.42m deep	
	505	Fill	Fill of [506] dark brown grey silty clay with infrequent gravel, 0.42m deep	Pottery, bone
	506	Cut	Cut of ditch aligned NW-SE steep sided 'U' shaped profile with flat base, 1.2m wide x 0.42m deep	Pottery
	507	Fill	Fill of [508] mid dark brown grey silty clay with infrequent gravel, 0.31m deep	Pottery, bone
	508	Cut	Cut of ditch aligned NW-SE with steep sided 'U' shaped profile and flat base, 0.57m wide x 0.31m deep	
	509	Fill	Fill of [512] mid yellow grey silt with angular gravel and some charcoal flecks, 0.45m thick	Pottery
	510	Fill	Fill of [512] dark brown grey sandy silt with occasional gravel and few charcoal flecks, 0.5m thick	
	511	Fill	Fill of [512] mid yellow with grey mottling silty clay with some angular gravel, 0.15m thick	
	512	Cut	Cut of ditch aligned NW-SE with shallow upper sides, then steep/straight sided, flat based profile, 1.9m wide x 0.85m deep	
	513	Layer	Natural mid orange sand and gravel	
6	601	Layer	Topsoil 0 - 0.5m thick	
	602	Layer	Subsoil dark grey brown sandy silt 0.3m – 0.4m thick	
	603	Fill	Fill of [605] mid orange brown silty clay, 1.2m wide 0.3m deep	Pottery

Trench No	Context	Deposit Type	Description	Artefact types
	604	Fill	Fill of [605] dark brown sandy clay with some gravel, 1m wide 0.23m deep	Shell
	605	Cut	Cut of ditch aligned NE-SW with wide 'V' shaped profile and concave base, 1.2m wide x 0.53m deep	
	606	Fill	Fill of [609] mid orange brown sandy silt with infrequent gravel, 0.24m deep	
	607	Fill	Fill of [609] dark brown and blue grey mottled sandy silt with infrequent charcoal flecks, 0.3m deep	Pottery, flint, bone
	608	Fill	Fill of [609] blue grey sandy clay, 0.25m deep	
	609	Cut	Cut of pit, sub rectangular 'U' shaped with flat base, 3.1m wide x 0.8m deep	
	610	Fill	Fill of [611] mid grey silty clay 0.8m thick	
	611	Cut	Cut of 'pond', approximately 9.7m diameter , 2m deep, flat base	
	612	Fill	Fill of [611] very dark grey sandy clay with infrequent gravel inclusions 0.54m thick	
	613	Fill	Fill of [614] light orange brown sandy clay with frequent gravel 1m wide	
	614	Cut	Cut of ditch aligned NW-SE, not excavated, 1.0m wide	
	615	Layer	Natural mid orange sand and gravel	
7	701	Layer	Topsoil 0 – 0.33m thick	
	702	Layer	Subsoil dark grey brown sandy silt 0.15m – 0.18m thick	
	703	Fill	Fill of [704] light orange brown sandy clay with frequent gravel, 0.38m thick	
	704	Cut	Cut of ditch aligned N-S with wide 'U' shaped profile and flat base, 0.80m x 0.4m deep	
	705	Fill	Fill of [707] dark brown grey sandy silt with charcoal flecks and some gravel, 0.43m thick	Pottery, bone
	706	Fill	Fill of [707] brown grey clay silt with sand and gravel inclusions, 0.23m thick	Pottery, bone
	707	Cut	Cut of ditch aligned NW-SE with wide 'U' shaped profile and concave base, 2.4m wide x 0.66m deep	
	708	Fill	Fill of [709] grey brown, yellow brown mottled sandy silt with charcoal flecks and frequent gravel inclusions, 0.42m thick	Pottery, bone

Trench No	Context	Deposit Type	Description	Artefact types
	709	Cut	Cut of ditch aligned NW-SE slightly irregular 'U' shaped profile and flattish base 2.5m wide x 0.80m deep	
	710	Layer	Natural mid orange sand and gravel	
	711	Fill	Fill of [709] grey and yellow brown mottled sandy silt with charcoal flecks and frequent gravel inclusions 1.7m wide 0.37m thick	
	712	Fill	Fill of [713] dark brown sandy clay with some gravel, 0.9m wide	
	713	Cut	Cut of ditch aligned NE-SW not excavated, 1.0m wide	

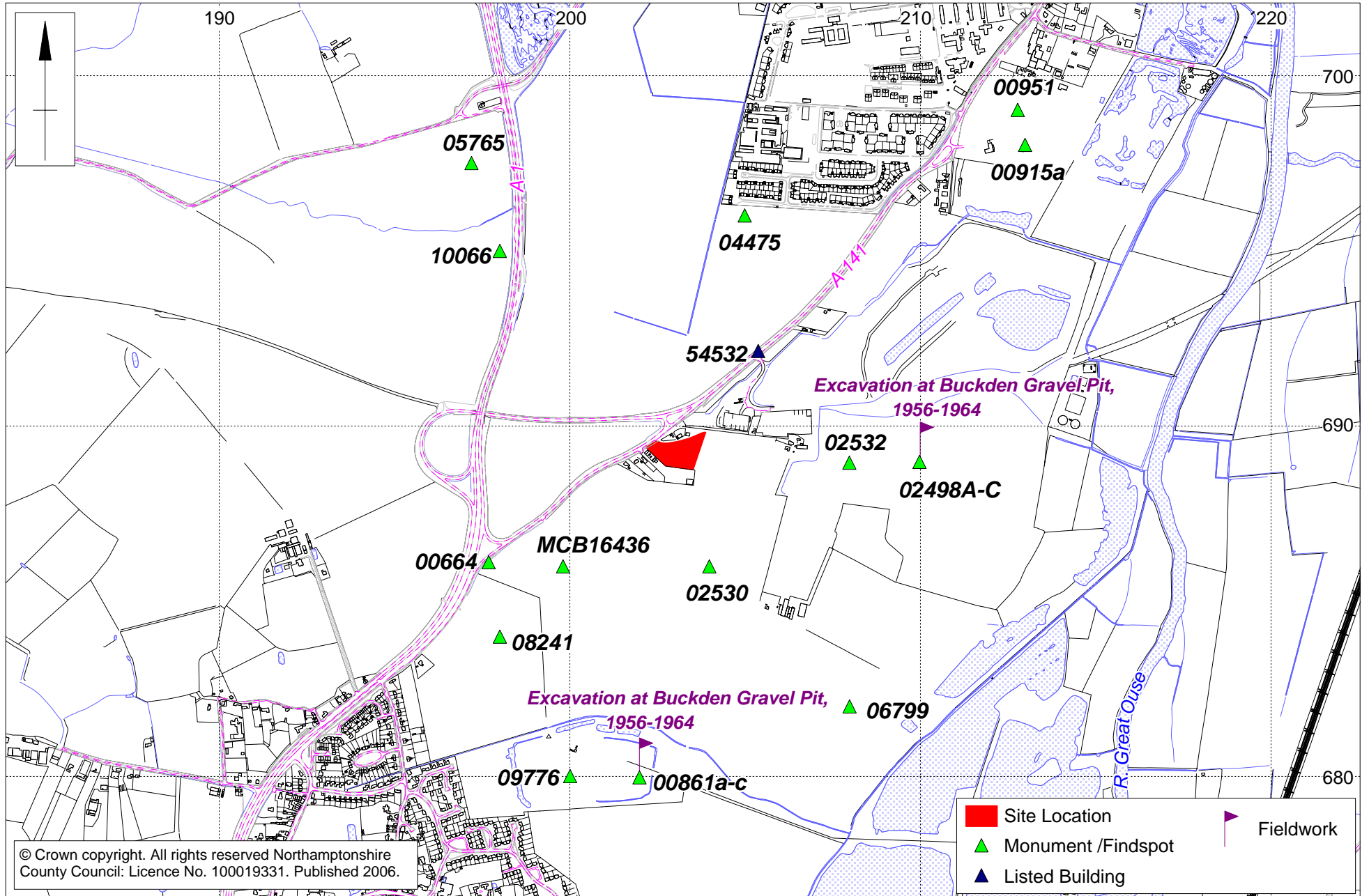


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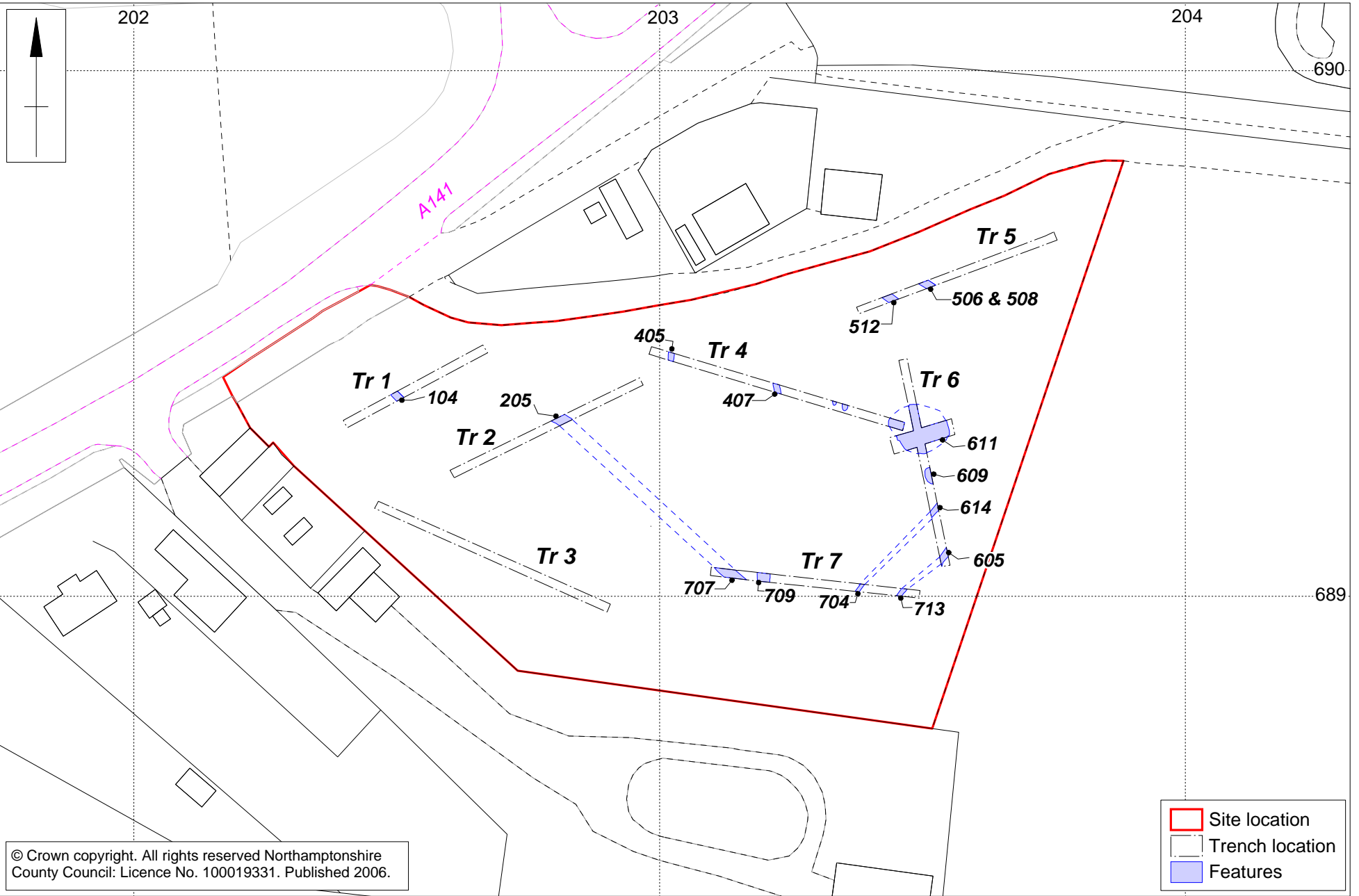
Site Location Fig 1

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Historic Environment Record finds spots Fig 2

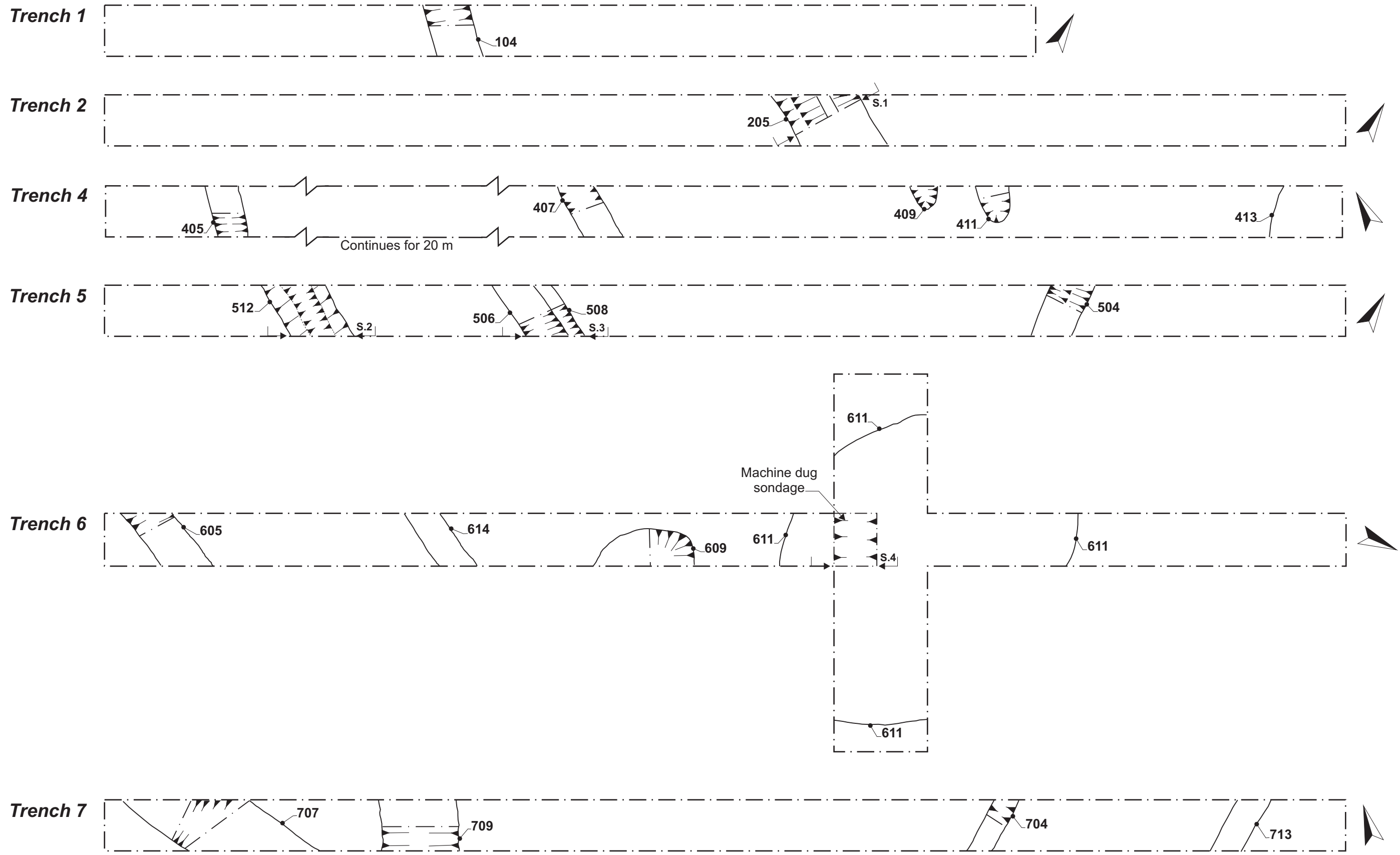


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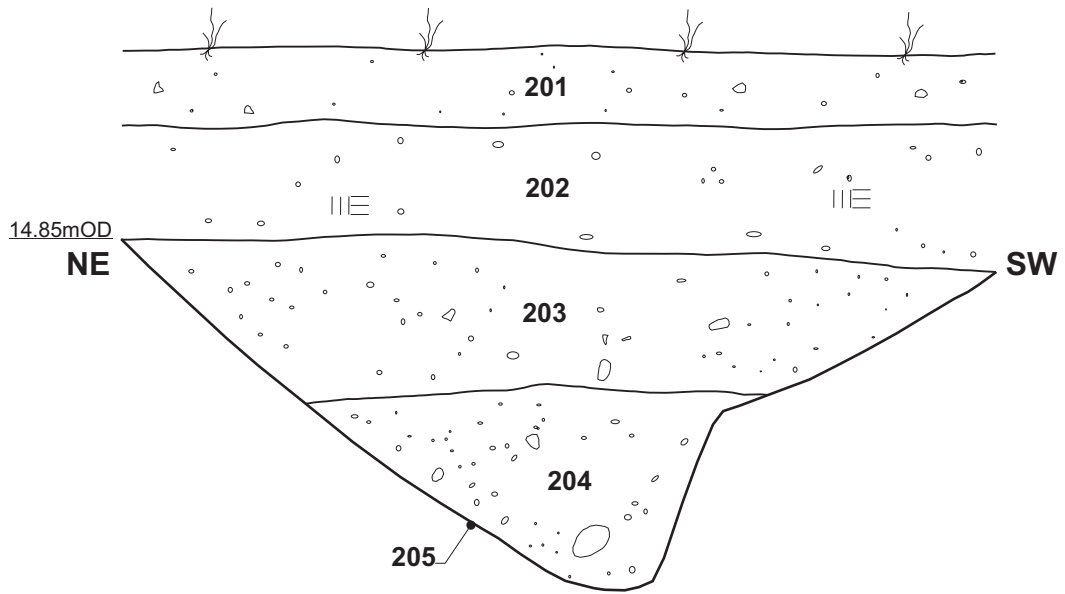
Trench locations
Fig 3

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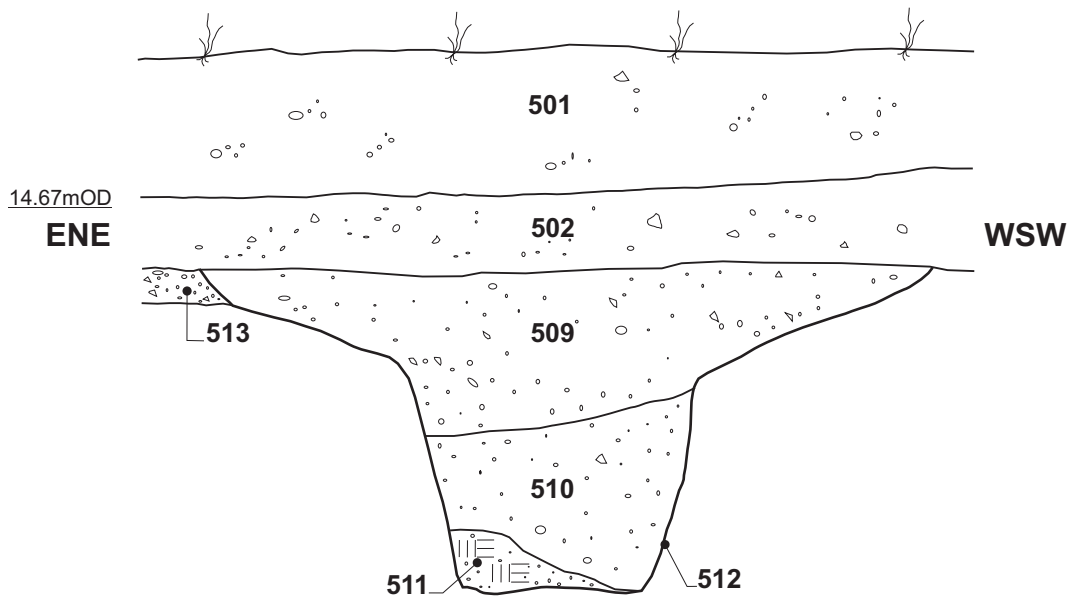


Trench Plans 1, 2, 4-7 Fig 4

Section 1 - Trench 2



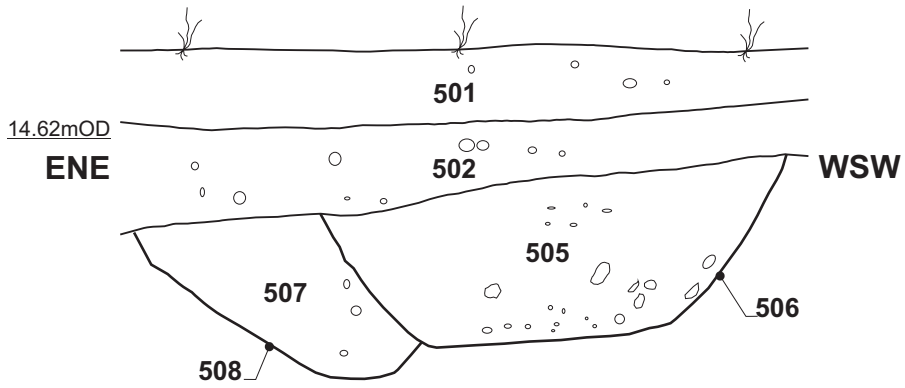
Section 2 - Trench 5



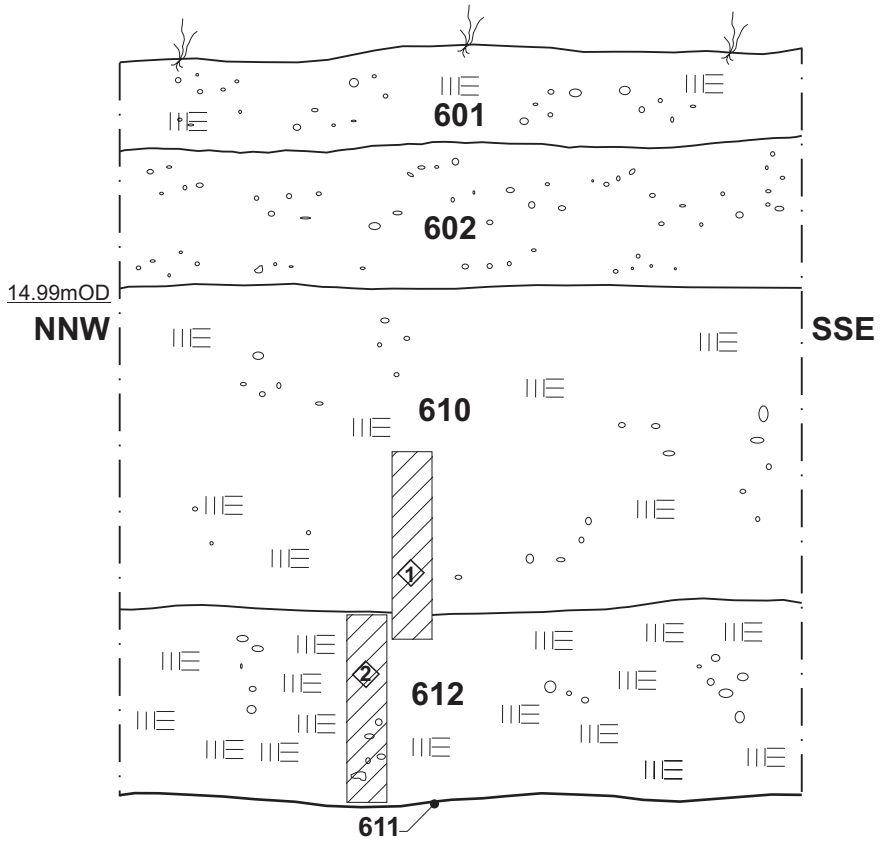
 Clay

Sections 1 and 2 Fig 5

Section 3 - Trench 5



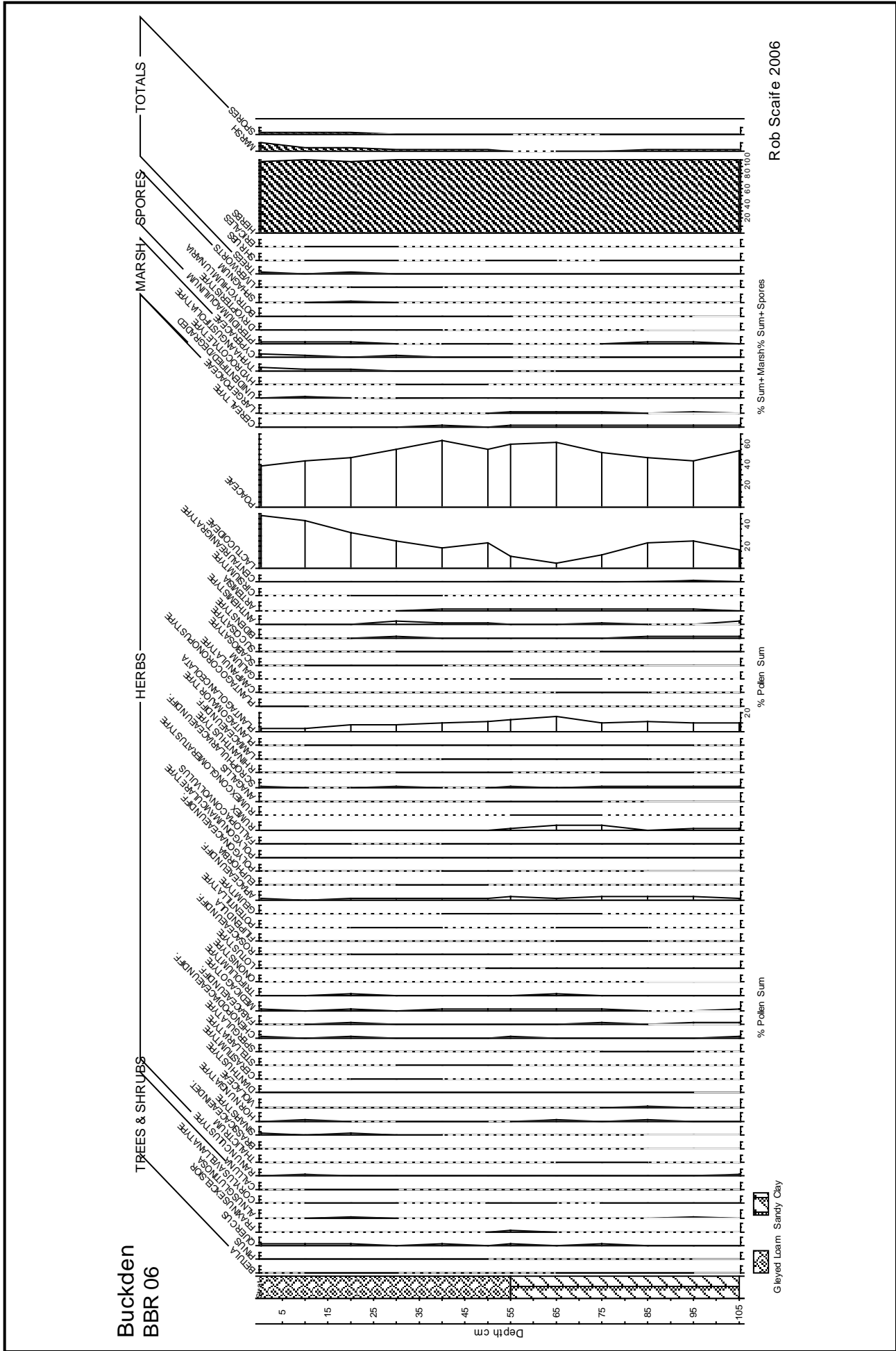
Section 4 - Trench 6



◆ Samples
||E Clay

0 1m

Sections 3 and 4 Fig 6



Pollen analysis table Fig 7