FOR SITE FILE

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ANCIENT MONUMENTS LABORATORY

REPORT

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SERIES/No	ENVIRONMENTAL	23/83
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TITLE	Interim soil report. Ashton Roman Town, Near Oundle, Northamptonshire	

MARSHAM STREET D.2 FH2

ANCIENT MONUMENTS LABORATORY

INTERIM REPORT By Josephine Parker

This report is not necessarily representative of the final conclusions concerning the material sampled and their significance to this site.

SITE ASHTON ROMAN TOWN, NEAR OUNDLE, NORTHAMPTONSHIRE

EXCAVATORS NORTHAMPTONSHIRE COUNTY COUNCIL ARCHAEOLOGY UNIT

Summary

Various deposits from beneath successive Roman roads were analysed in the field and in the laboratory to determine whether they were from a similar source and if any were natural. Materials from beneath a side road, road edges, ditch edges and below buildings were also sampled for correlation. A post-medieval road was also examined to determine the nature of the fill over the deep ruts, three pre-historic ditches were sampled in the hope of determining whether the fills suggested natural or artificial features, a possible cultivated palaeosol was also examined. An exposed natural profile from the excavation of a Roman well was used as a basis for the local succession of alluvial clays and river terrace gravels.

Although the situation was complicated by localised additions to road surfaces and minor repairs it appeared that materials of a similar origin, ie sandy lenses within terrace gravels, were used as a fill between the Roman roads. Edge materials were different however, being from a gravelly source, and may have proved a better foundation for buildings. Some re-located materials had undergone soil forming processess since their deposition and are now 'man-made' soils. It is difficult to state whether the supposed buried soil had been cultivated without organic remains or pollen analysis but that would provide an explanation for large bone and pottery fragments found within the profile and for the organic staining to a depth of 40cm or so. Surface materials below work floors suggest a deliberately scattered detritus from houses and iron workings with some wind blown silt dusts incorporated.

The post-medieval road appears to be over natural material correlating with natural deposits below the lower Roman road. The fill however is not the same as the fill between Roman roads but may be a compositon of natural parent materials and local soils. The Prehistoric ditches seem to have been man-made (although the C-shaped gully is not conclusively artifical).

INTRODUCTION

Ashton Roman town is situated beside the river Nene at Ashton, near Oundle in Northamptonshire. As an area of the town is shortly to be lost as a by-pass road is to be built for Oundle the Northamptonshire County Surveyor is sponsoring the rescue excavation (supported by DOE) prior to roadwork. The excavations have revealed traces of several buildings, the surface of a metalled street with side streets and stone-paved lanes. The buildings are thought to date from the mid-second century AD onwards until late Roman times. The buildings were often used as workshops with a number of hearths set in the floors, indicating iron-working. A well has also been excavated and the stripping of the road surfaces and sectioning of the material below has revealed an earlier similar metalled surface with apparently local road repairing with assorted materials in front of the various buildings, suggesting that such repairs fell to the lot of the householder past whose dwelling it ran. Beneath the stone buildings remains suggest earlier timber dwellings and lower floors or work surfaces. The buildings replaced earlier deep ditches representing a different system of land division. The ditches have in places been re-cut several times.

Closer to the river further buildings have been uncovered together with several wells and a small drying kiln. In late Roman times sand and gravel were quarried from the area which was also a cemetry. Some graves have been dated to the fourth century AD. Also here a number of ditches thought to be prehistoric in origin have been excavated revealing occasional flints. A section of a rutted post-medieval road has also been excavated.

Subsequent human activity at the site appears to have been mostly agricultural with some quarrying activity for gravels during the late 18th and 19th centuries.

The Materials Sampled

Samples were collected from various locations, some marked on the following map, for organic content and particle-size analysis in the laboratory to back up field observations of various profiles. Beneath the upper road surface one or two different deposits appear to lie over the lower surface which has similar

materials below it overlying the natural clays. It was necessary to attempt to determine which materials corresponded to which at various sites along the road and on a side road, also to determine whether these materials were natural accumulations or artificially placed there to level the roads. Various materials from the edges of the roads and between the road and buildings were also sampled for similar correlations. A 'natural' profile was examined at the excavated well to observe the succession of parent materials and possible palaeosol beneath an unusual 'skin' of material probably artificial in origin from beneath a flooring. A profile from the road surface down to the base of the pre-Roman ditches was also examined to correlate with the other materials and attempt to explain unusual dark horizons.

A possible palaeosol discovered adjacent to the main side street, beneath a film of dirt/ash spread similar to that around the well, was sampled in an attempt to explain its 'dirty' colouring and inclusions of bone and pottery at some depth from the surface.

The post-medieval road was also examined to see if the natural material beneath or the infil material in the ruts were similar to any of the natural or infil materials beneath the earlier roads.

Finally several of the prehistoric ditches were sampled to determine whether they could possibly be natural features ie: if the ditch fills were the same as the edge materials or not.

Methods

Field examination was carried out as outlined in Hodgson (1976) - Soil Survey Field Handbook. Sketches of the various profiles can be found on the pages following the Profile descriptions.

Samples were collected by hand and prepared in the laboratory by sieving to 2mm and oven-drying. Loss on ingnition and particle-size analysis using the pipette method carried out as described in Avery (1974), Soil Survey Laboratory Methods. The results only have been included here. Some interesting ignition strips have been prepared to accompany the discussion.

A NOTE ON THE GEOLOGY AND SUPERFICIAL DEPOSITS OF THE AREA

Ashton lies within the drainage basin of the river Nene which flows NNE through Oundle. Oundle itself is a springline settlement at the junction of overlying

permeable and underlying impermeable materials. Superficial deposits in this area include Alluvium, River Terrace Gravels, Head, Boulder clay, and glacial sands and gravels whilst the solid formations beneath are Jurassic, here at Ashton probably upper Lias clays underlying the lower Estuarine series. Probably only the uppermost of the lias clays is significant here, a bluish grey clay which contains clay ironstones near the top. The lower estuarine series consists of light grey sands and silts, grey clays, yellow/brown sands and silt and ferruginous sands. There are also occasional greenish clays associated with these sands.

The Geological survey of Great Britain has this area covered by the first terrace river gravels (Pleistocene to present day). This is interbeded sands and fine to medium gravels of maximum thickness 15 ft, often resembling only a gravel 'skin' with alluvium beneath. The gravel inclusions are mainly flint, chalk, ironstone, limestone and bunter pebbles with litle matrix. This first terrace forms a low shelf 4 to 8 feet above the level of the flood plain, extending beneath the alluvium and representing the infilling of a valley graded to a lower sea level than that of today. Wells in the floodplain near Oundle show a thickness of 18 to 21 ft of alluvial deposits and gravel. The terrace deposits show little evidence of current bedding but some interbeded sand lenses. Gravels are roughly bedded and poorly sorted with some false-bedding and may contain erratics of white quartz shelly limestone, siderite mudstone and brown sandstones.

The local soils are generally fairly heavy, stony, loamy soils, Brown soils or Grey soils possibly with localised Argillic and Podzolic tendancies, although here at Ashton over the terrace gravels and alluvium, profiles are not likely to be extremely well developed particularly where disturbed by man for such a long period of occupation. Indeed there are probably extensive Azonal raw mineral soils or weakly developed AC profiles, Entisols with strong artificial disturbance, an alluvial deposit with sand or loamy texture (FAO/UNESCO Fluvisols or Regosols) or Terrestrial raw soils with some man-made soils (Avery). Unfortunately there is not a Soil survey memoir for this area to provide confirmation.

PROFILE DESCRIPTIONS

Given here are the field profile descriptions with additional information from later laboratory analysis. Several of the profiles have been drawn in the following sections and annotated where necessary.

Where materials in the profiles are not thought to be naturally occuring at these sites, but man-introduced or disturbed no horizonization has been attempted although where pedogenic processes appear to have been in operation after the material was introduced this has been pointed out using horizon symbols.

SITE 1:- ROAD SECTION TRENCH PROFILE BELOW CENTRE OF ROAD

The trench had been cut across the Roman road at right angles to the direction of the road. The trench was approximately two feet deep and cut through an upper cambered surface, a lower cambered surface at 16", and rested on a clay base of natural 'parent material'.

Site and profile drainage were good; slope 0^{o}.

0-15cm: Artificial road surface.

15-40cm: Appears to be two different materials to left and right, divided by a continuous, undulating, thin iron pan (0.5cm) diagonally. Iron pan continuous to left of profile at approx 40cm. Discontinuous iron pans and red mottling at varios depths also to left of profile. To left of iron-pan sandy loam, 10 YR 6/6 brownish yellow fine crumb, numerous iron mottles and discontinuous pans. Slightly stoney, sub-angular gravels, very friable. Good permeability low in organic matter, no evidence of roots or soil fauna (macro).

Imperfect drainage.

To right of iron-pan sandy loam (much greater silt content than to left)

(Bfe) 10YR 5/6 yellowish brown. Fine crumb, lacking in mottles, slightly stony, small sub-angular gravels, very friable. Permeable, low in organic, no roots or macro-fauna. Good drainage.Second artificial road surface.

42-60cm Sandy loam (silty sand loam) 10 YR 5/6 yellowish brown.

B/Bw Fine, friable crumb, stoney sub-angular gravels, moderate permeability low in organic.

60cm + Yellow/blue/grey-green clays, imperfectly drained.

cg(G)

SITE 2:- SECOND ROAD SECTION TRENCH. PROFILE BELOW CENTRE OF ROAD

Trench cut as at site 1 but only down to second road surface, here at 40cm again.

0-16cm Artificial road surface

16-18cm In places only, a reddish-brown silty sand between road material and

16/18 -

22cm Dark horizon petering out at edges of road. 10 YR 4/2 dark greyish brown loamy sand. Ashy, but little other organic remains (macro) visible. Undulating boundary to....

22-40cm Sandy loam, 10 YR 6/6, fine-crumb, some occasional iron mottling, slightly stony, sub-angular gravels, very friable, well-drained, no evidence for macro organic or faunal remains.

SITE 3. TRENCH CUT THROUGH SIDE ROAD. PROFILE TO ONE SIDE OF ROAD CENTRE

Trench cut down through two road surfaces to natural (?) material at 48cm (variable).

Site and profile drainage good; slope 0^{o}.

0-6cm Upper artificial road surface. Thin film of grey silty material beneath.

6-18cm Loamy sand, 10 YR 4/6 dark yellowish brown. Fine crumb, very friable, slightly stony - sub-angular gravels. Some organic content, no macro flora/fauna visible. Good permeability, good drainage, no mottling. Diffuse, undulating boundary to....

18-28cm Deep gravels and sand, variable depth, layering visible. 7.5 YR 5/8 strong brown, friable coarse matrix of loamy sand. Some pebbles, max size 3cm x 3cm, sub rounded.
(Possibly an artificial temporary road surface, gravels extracted from nearer river or elsewhere on site). Uneven boundary to...

28-34cm Dirty sand loam 10YR 3/6 dark yellowish brown, fine, friable, occasional gravels, some ash, no macro flora/fauna, permeable, good drainage.

34-38cm Lower road surface.

38-45cm Loamy sand 7.5 YR 4/6 strong brown, fine, friable crumb, slightly stony - sub-angular gravels, good permeability/drainage, no macro flora/fauna, low in organic matter.

45-48 + Loamy sand (silty loamy sand) 10 YR 5/6, fine, friable crumb, stony - sub-angular gravels, moderately permeable, low in organic.
Possibly over clay further down?

B/Bw Natural?

SITE 4. WELL SECTION

One half of an excavated Roman well had been removed revealing the natural(?) profile beneath a disturbed, artificial floor covering, probably a work floor.

The water table was low at the time of analysis and the exposed profile had dried out considerably.

0-4/8 cm Fine friable sandy loam, 7.5 YR 3/4 dark brown, slightly stony, small gravels, much charcoal present and other organic remains ie: small pieces of roots and bark. Charcoal concentration at about 4cm depth. Undulating boundary to,

4-22cm Sandy loam, 10 YR 4/6, fine, friable, coarse columnar structure, loose handling consistancy, permeable - interdigitated by numerous worm burrows to approx 12cm showing dark staining from surface material.

BW/Eb 22-26cm C(alluv) Stony-gravels, drainage good. Undulating boundary, not well defined to occasional sand lenses and wedges extending down to 46cm in places, alternating with gravel patches, both merging with,

26-100cm C(alluv) sand loam similar to 4-22cm above but only slightly stony, very fine loose material, no visible structure, no dark staining, abundant small molluscs. 10 YR 4/6.

100cm + Clays. Variety of colours, pale yellow to Bright orange patches, some blue/grey to green. Patches merging. Some ironstone inclusions at approx 200 cm forming discontinuous pan (Cx?)

SITE 5. PROFILE BENEATH STONEWORK IN SIDE OF ROMAN DITCH/DRAIN

A Roman succession of ditches cut into each other to the side of a building were excavated revealing a profile of semi-natural/artificial infil materials above a stone floor which overlaid natural (?) material. Site drainage good above floor surface, poor in ditch bottom.

0-14/27cm (Max) beneath stonework, variable depth of dirty, sandy silty material with organic inclusions, molluscs and charcoal, sharp undulating boundary to,

14/27-30 cm variable thickness of 10 YR 4/2 dark greyish brown silty sand with much organic material, charcoal and ashy material. Fine, friable, very porous, good drainage..

30-60cm Dirty red sandy loam 7.5 YR 5/6, friable crumb, charcoal inclusions, permeable, no organic staining, numerous small molluscs, slightly stony

- gravels. Sharp even boundary with...

60-65cm pale, sandy layer, stony-gravels, permeable, molluscs, some organic material (roots etc), patchy horizon merging with,

65-75cm loam, 10 YR 5/6 fine, friable crumb with discolouration SY S/1 grey occassionally and three material (roots etc), patchy horizon merging with, loam, 10 YR 5/6, fine.

B/Bw iron pans of 1 cm thickness at 68cm, 71cm, 73cm approx. Some bright red and black staining associated with pans (which are continuous), drainage good above pans, moderate between. Slightly stony - gravels, quite a

Bfe/Bx lot of small organic materials - roots, twigs etc no molluscs, no evidence of other fauna.

75-85cm Artificial floor surface with stonework.

85-90cm Fine sandy, silty loam 5 YR 4/6, yellowish red - iron stained no stones. Some organic material - finely dispersed, occasional charcoal. Sharp, even boundary to,

90cm + Clays. Various colours, blue/grey and yellow/orange, drainage moderate

Cg(G) to poor at 150 cm - ditch bottom. Some occasional gravel patches.

SITE 6 POST MEDIEVAL ROAD

Section cut through a post-medieval roadway revealing infilled ruts. Good site drainage, slop 2-3°.

0-3/

30cm Infill material, loamy sand 10.5 YR 5/6 yellowish brown, organic staining and worm burrows, patches of occasional gravels, otherwise slightly stony. Loose, friable, blocky structure, good drainage.

3/30-

40 cm Natural (?) material beneath thin (single layer) road surface with two deep ruts. Sandy loam, 7.5 YR 5/6 strong brown. Little organic material, slightly stony-gravels. Good drainage, firm, friable structure.

SITE 7 BENEATH UPPER SURFACE OF ROMAN ROAD, EDGES

Various sandy materials were found in association with the margins of the upper road surface at different sites along its length, also between various floor levels within buildings.

At this site there was approximately 18cm depth to either side of the road below the artificial surface. To the right a sandy loam, 5 YR 5/8 yellowish red with some organic staining via worm burrows. Loose, friable, semi-crumb structure, quite stony - small gravels (sub-angular). To the left, a sandy clay loam 7.5 YR 5/6 strong brown. Frequent organic staining via burrows, very stony - gravels and small pebbles, loose fine handling consistency.

SITE 8. BENEATH UPPER ROAD SURFACE EDGE APPROX. 30FT FROM SITE 7

Very similar in profile to site 7, well-drained, slope 0°.

0-23cm Sandy, clay loam, 7.5 YR 5/6, frequent organic staining, stony-gravels, loose, fine handling consistency, molluscs,

23-32cm Sandy loam, 5 YR 5/8, organic staining, slightly stony-gravels, well-drained, friable crumb structure. Discontinuous iron pan at 2cm approx.

SITE 9. BENEATH UPPER ROAD SURFACE EDGE APPROX 50FT FROM SITE 8.

This section bordered a building wall. Well-drained, slope 0°.

0-18cm Silty, sand loam, 7.5 YR 5/6, organic staining, slightly stony-gravels, loose, fine handling consistency. Molluscs, wood fragments. Well-drained.

18-23cm Sandy loam, 5 YR 5/8, some organic staining, quite stony sub-angular gravels, medium to coarse loose crumb structure. No molluscs, no wood/charcoal.

SITE 10. BELOW BUILDING TO SIDE OF ROAD

Well drained, slope 0°.

0-12cm Sandy loam, 7.5 YR 5/6 strong brown, some organic staining abudant stones - pebbles, fine, friable structure, no crumb. Several wood fragments and worm burrows.

12-20cm Sandy loam, 5 YR 5/8 yellowish red, organic staining, loose friable consistancy, quite stony - sub angular coarse gravels. No macro organic remains visible.

SITE 11. BELOW BUILDING TO SIDE OF ROAD 10 FT FROM SITE 10

Well drained; slope 0°.

As site 10, 0-5cm as 0-12cm above, - sandy loam 7.5YR 5/6
5-20cm as 12-20cm above - sandy loam 5 YR 5/8

SITE 12. BURIED SOIL BENEATH WORK FLOOR ADJACENT TO SIDE ROAD

Profile cut down below work surface, possibly cultivated (?), below house adjacent to a side road. Well-drained; slope 0°.

Uniform profile, silty loam 7.5 YR 3/4 dark brown, slightly stony-fine gravels. Much organic staining down worm burrows concentrated in upper 40 cm or so, peters out with depth. Occasional bones and pottery fragments found at approx 10-15cm depth (?). No macro organic material, roots, other plant tissues etc.

SITE 13. PREHISTORIC LONG DITCH CLOSE TO POST-MED ROAD

Excavated ditch with fill, local or otherwise?
Good drainage; slope 2-3°

Fill:- 0-35cm - sandy loam 7.5 YR 4/6 strong brown, occasional grey staining (organic? dirt?), loose, friable consistancy, Stony-gravels.

Natural:- edges of fill - silty, sandy loam 7.5 YR 5/6 strong brown, some organic staining, abundant stones - much calcareous material, firm, blocky structure.

SITE 14. PREHISTORIC C-SHAPED DITCH NEAR CEMETERY

As above, well drained; slope 2-3°.

Fill:- 0-40cm - sandy loam 7.5 YR 4/6, occasional organic matter, and staining, loose, friable consistancy, stony-gravels.

Natural:- edges of fill - silty, sandy loam, 7.5 YR 5/6 strong brown, some organic staining, stony - calcarous sub-angular gravels, firm and blocky.

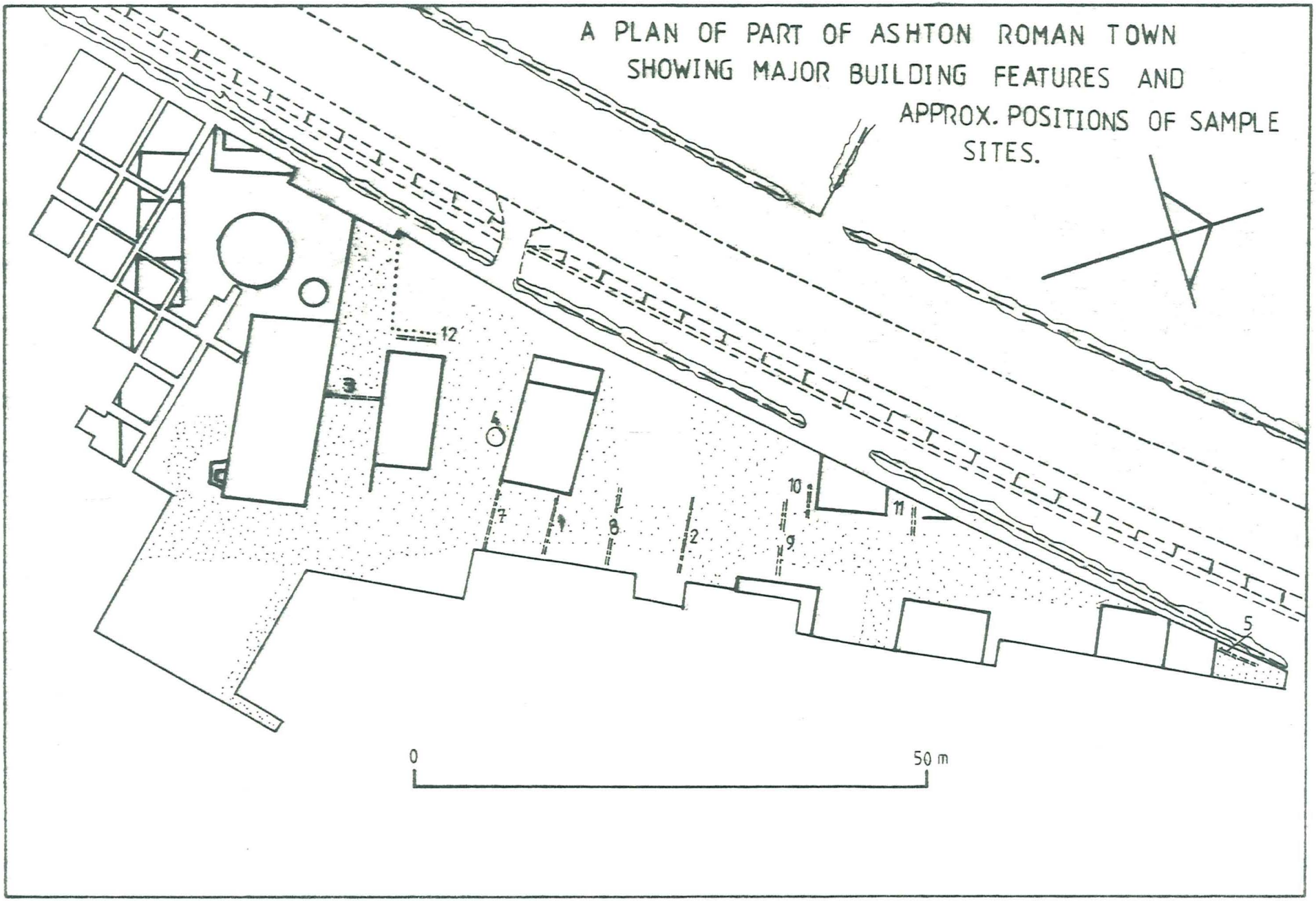
SITE 15 PREHISTORIC LINEAR GULLY NEAR CEMETERY

As above, well-drained; slope 2-3°

Fill 0-38cm - silty, sandy loam - 7.5 YR 3/4 dark brown, stony-gravels, loose, friable consistancy, some organic staining.

Edges, around fill - sandy loam - 7.5 YR 5/6, some organic staining, calcareous gravels - frequent, firm and blocky.

N.B The Appendix gives the correct sample number for each profile horizon sampled at the various sites.


A PLAN OF PART OF ASHTON ROMAN TOWN
SHOWING MAJOR BUILDING FEATURES AND
APPROX. POSITIONS OF SAMPLE
SITES.
12
3
4
7
1
8
2
10
11
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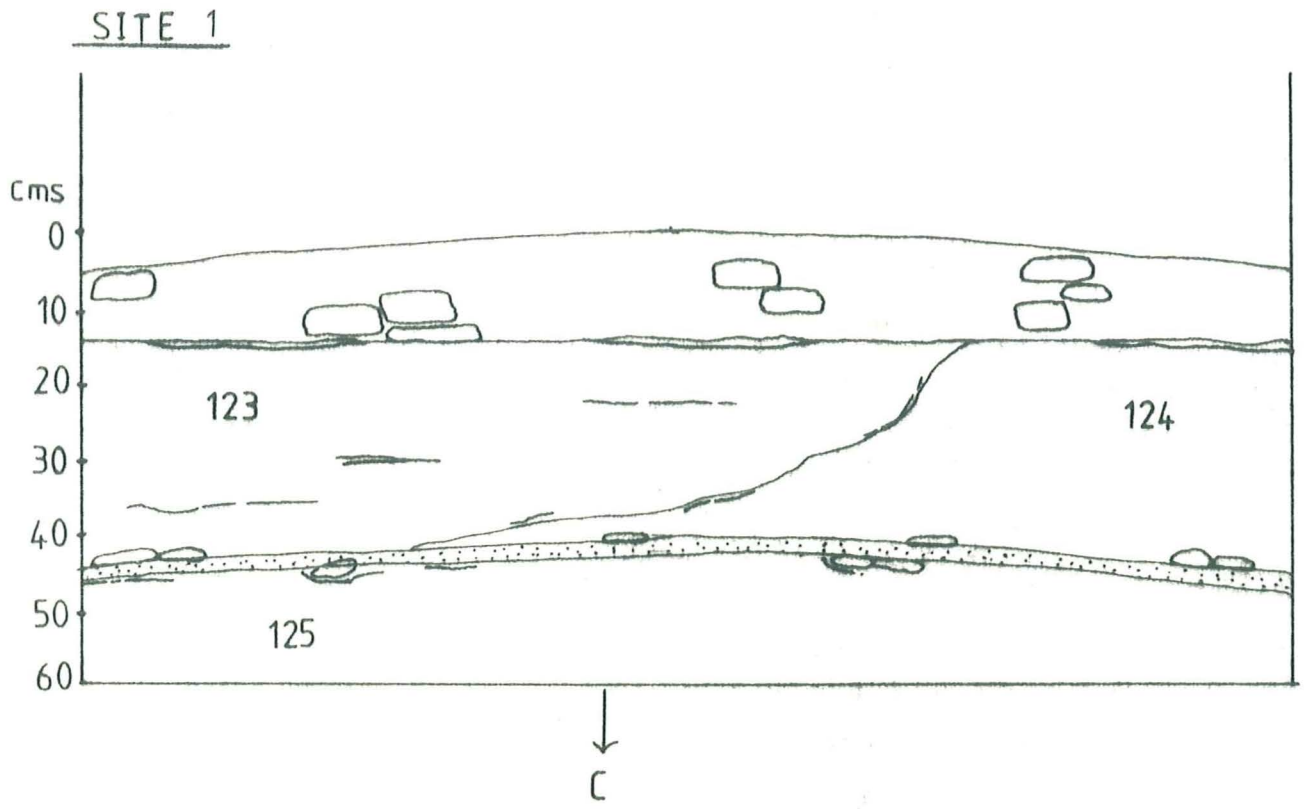
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125
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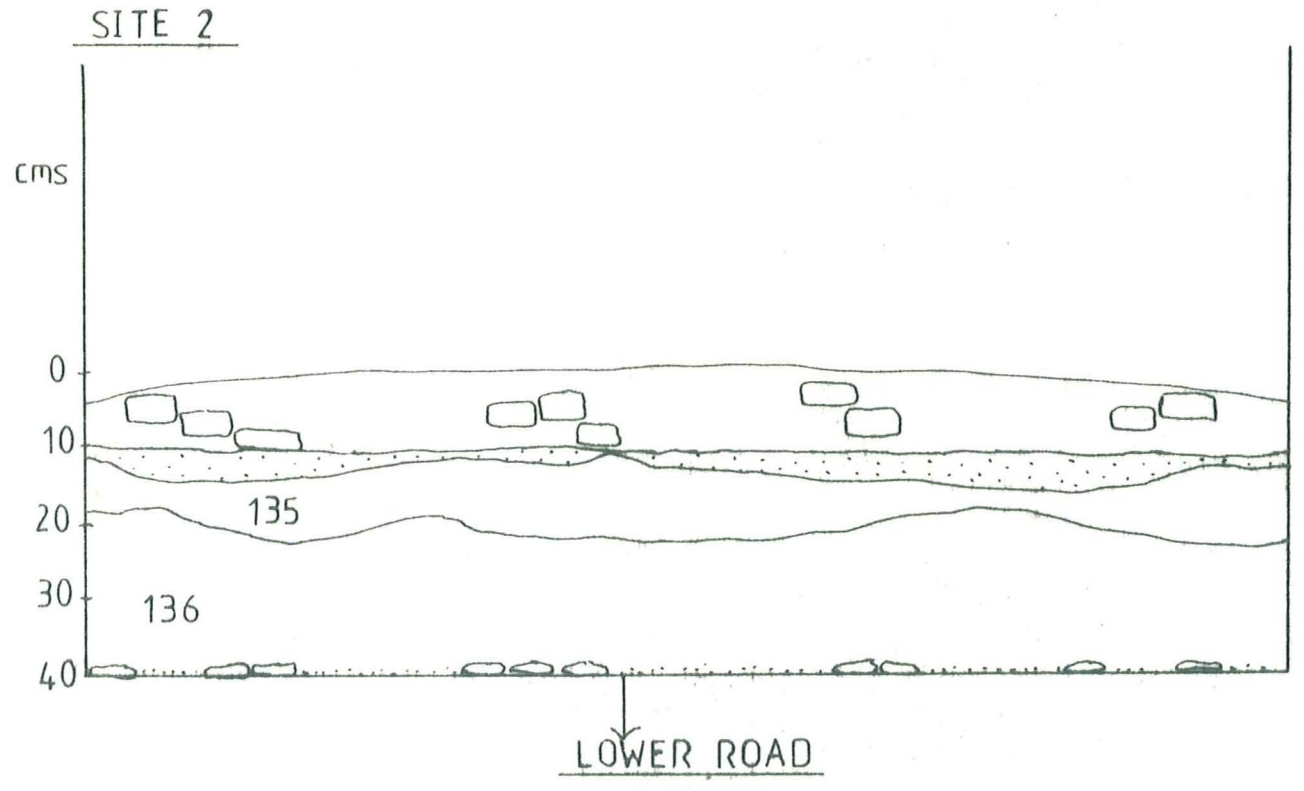
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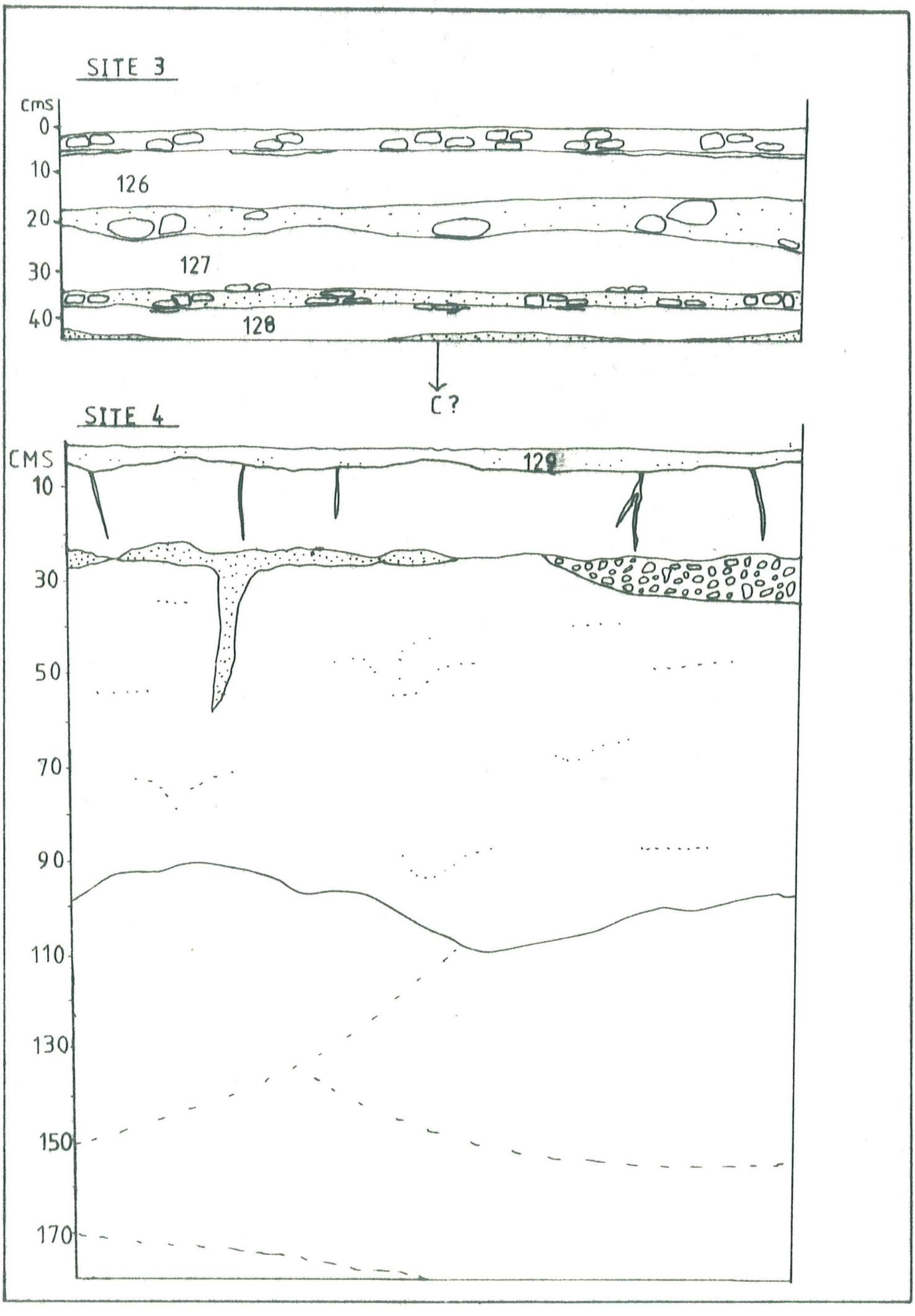
135
136
LOWER ROAD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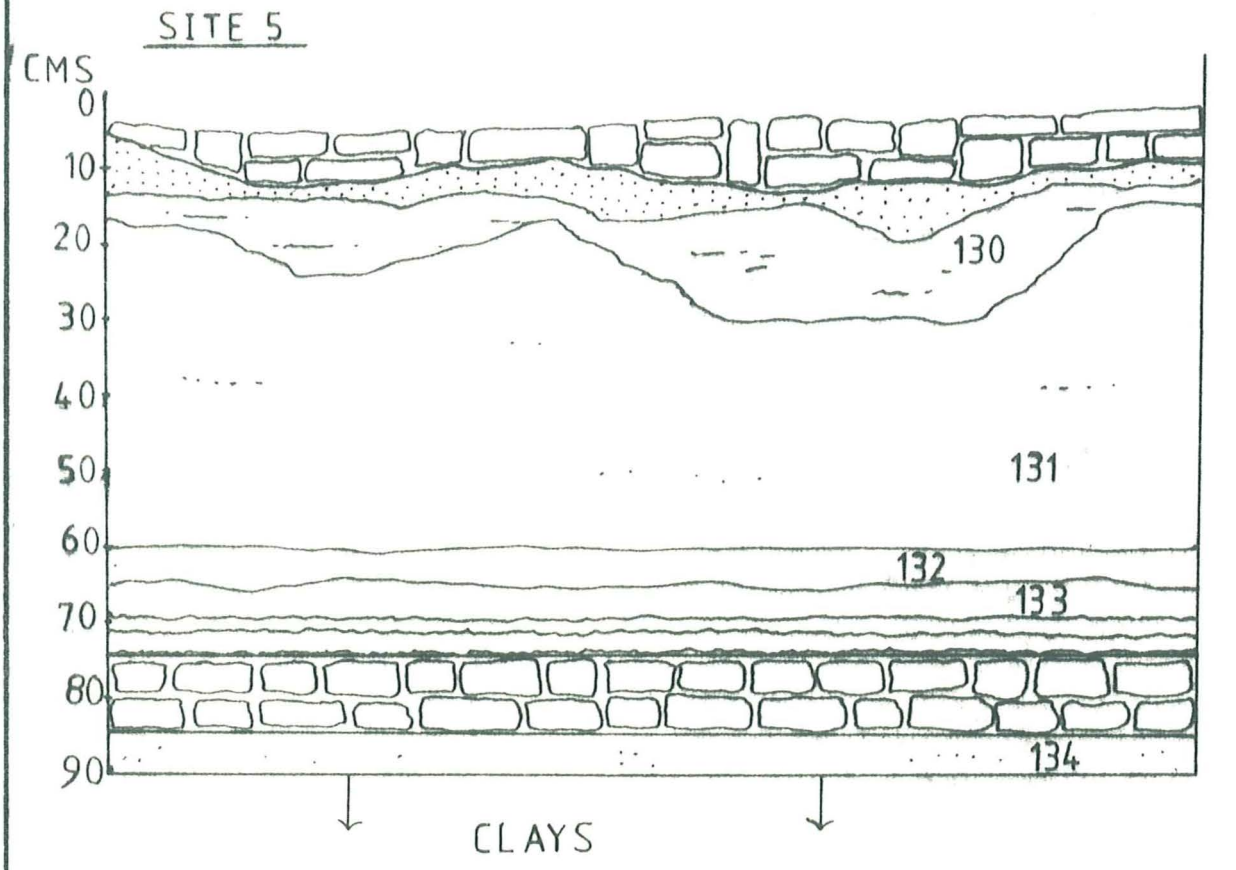
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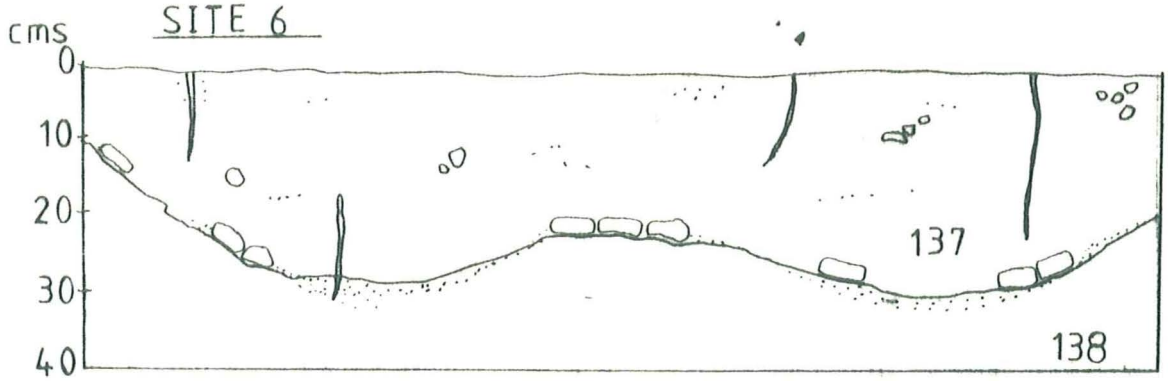
CLAYS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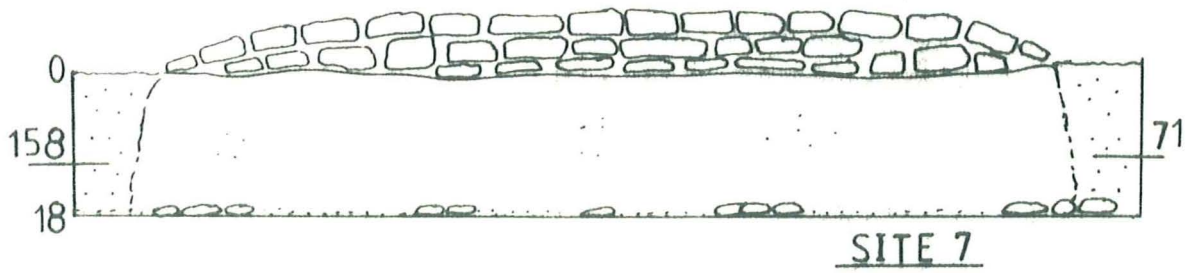
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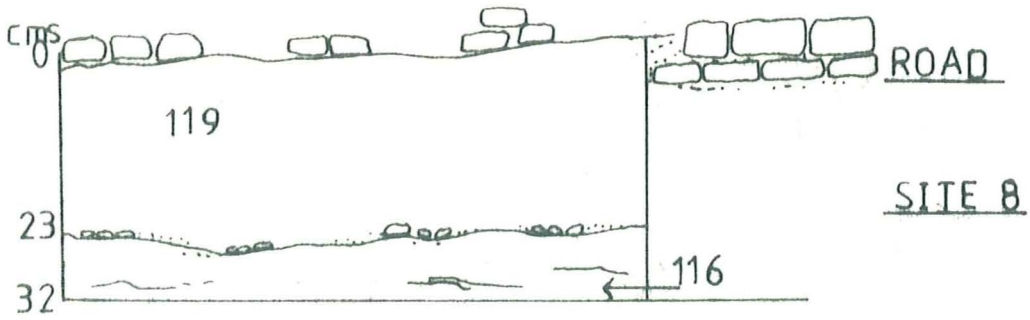
71
SITE 7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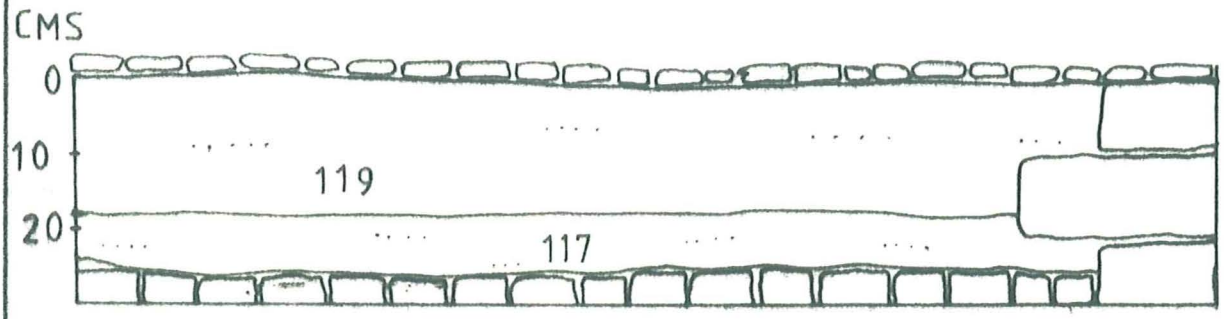

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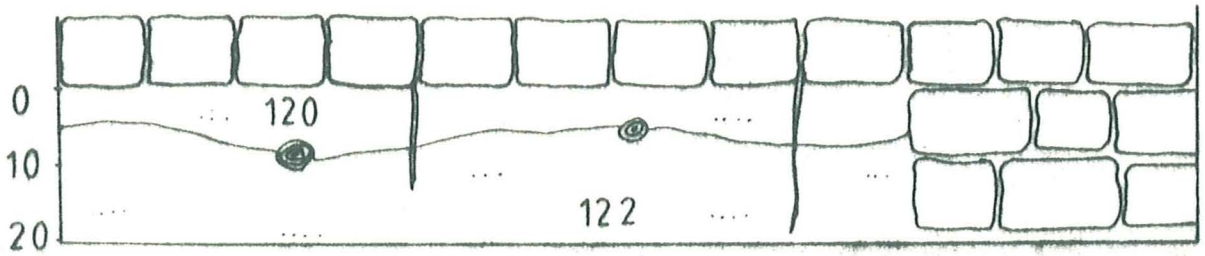
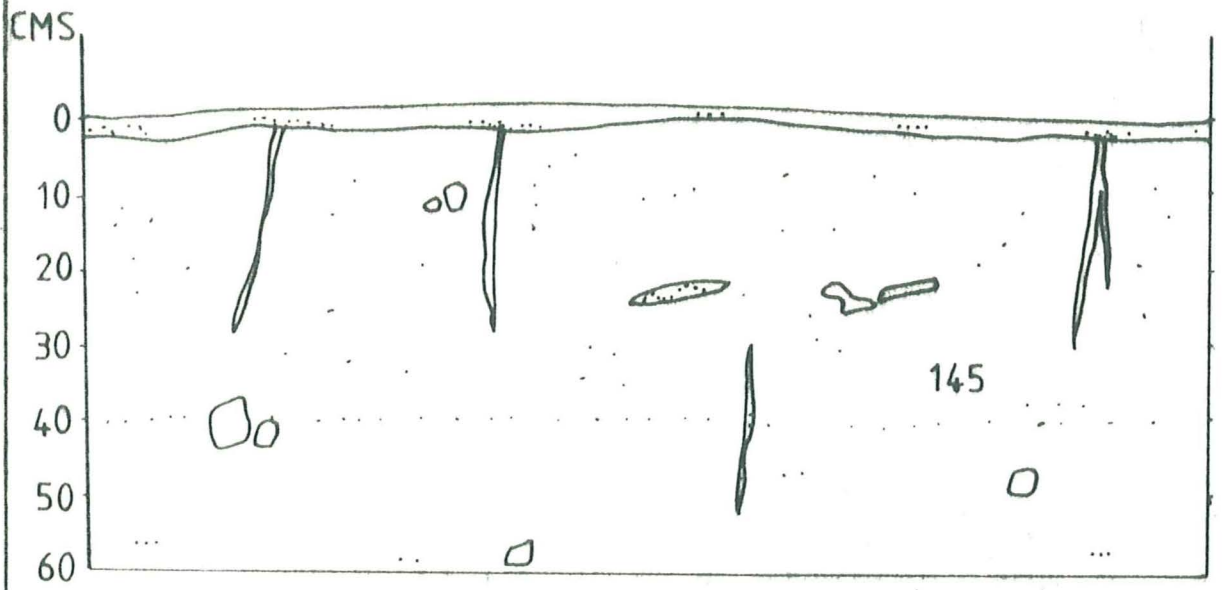


SITE 10



SITE 12

TABLE 1 LOSS ON IGNITION

Sample No	Context No	Loss on Ignition %
114	71	6.2
115	158	6.9
116	2253 (A)	5.8
117	2253 (B)	7.7
118	2254	6.3
119	444	9.3
120	885 (A)	6.7
121	885 (B)	5.3
122	2255	6.0
123	2244	4.5
124	2245	2.0
125	837	3.6
126	2238	5.7
127	2239	4.3
128	2240	2.0
129	2035	11.0
130	2249	9.0
131	2250	4.8
132	2178	6.0
133	2279	9.7
134	2248	6.3
135	2209	4.3
136	2210	2.9
137	1931	11.0
138	-	5.0
139	1933	3.5
140	-	6.0
141	2203	4.3
142	-	4.4
143	2213	5.2
144	-	8.2
145	2256	4.1

NB. APPENDIX 1 relates the samples to their profiles of origin.

TABLE 2. PARTICLE-SIZE ANALYSIS

Sample No	Context No	% Clay	% Silt	% Sand	(% Fine	% med	% Coarse)
114	71	19.34	7.26	73.4	15.87	48.54	8.99
115	158	13.73	[0.46]	85.81	10.15	52.76	22.9
116	2253 A	15.78	4.05	80.17	9.97	48.6	21.6
117	2253 B	3.12	30.75	66.05	16.65	40.5	8.9
118	2254	12.98	6.07	80.94	11.25	47.5	22.19
119	444	7.05	29.18	63.77	11.86	34.5	17.41
120	885 A	23.18	3.71	73.11	16.01	32.8	24.3
121	885 B	11.01	4.21	84.78	13.18	35.2	36.4
122	2255	10.91	26.02	63.07	9.57	32.3	21.2
123	2244	14.2	8.52	77.28	21.48	47.0	8.8
124	2245	10.54	24.32	65.14	18.14	37.4	9.6
125	837	7.95	29.59	62.46	17.06	38.5	6.9
126	2238	7.4½	14.59	78.0	11.9	42.5	23.6
127	2239	19.57	2.65	77.78	12.18	46.5	19.1
128	2240	6.75	20.27	72.98	17.18	49.0	6.8
129	2035	5.03	24.67	70.3	18.0	34.8	17.5
130	2249	7.68	40.57	51.75	12.25	28.0	11.5
131	2250	11.41	27.86	60.74	10.94	30.0	19.8
132	2178	12.4	15.36	72.24	12.64	36.8	22.8
133	2279	11.81	33.7	54.45	13.05	31.0	10.4
134	2248	10.2	35.71	54.09	14.79	33.2	6.1
135	2209	15.83	12.27	72.4	20.1	46.4	5.9
136	2210	22.45	12.66	63.88	21.28	39.3	3.3
137	1931	21.98	21.58	56.44	15.84	30.8	9.8
138	-	16.69	12.53	70.78	10.28	45.6	14.9
139	1933	12.45	14.95	72.6	16.5	46.9	9.2
140	-	26.7	9.97	63.33	15.83	38.6	8.9
141	2203	5.81	23.2	70.97	11.47	47.5	12.0
142	-	8.17	22.77	69.06	10.36	46.5	12.2
143	2213	0.2	49.1	50.7	6.9	29.9	13.9
144	-	14.96	13.94	71.1	8.4	33.1	29.6
145	2256	24.62	13.99	61.39	15.39	40.0	6.0

pH Analysis on samples

Sample No	pH
114	7.68
115	7.85
116	8.00
117	6.99
118	6.84
119	6.90
120	6.95
121	6.78
122	7.09
123	6.60
124	6.94
125	6.68
126	7.15
127	6.96
128	6.80
129	6.81
130	6.97
131	7.28
132	7.27
133	7.13
134	7.09
135	6.86
136	6.83
137	6.97
138	6.85
139	7.26
140	7.34
141	7.08
142	7.16
143	6.93
144	7.25
145	6.87

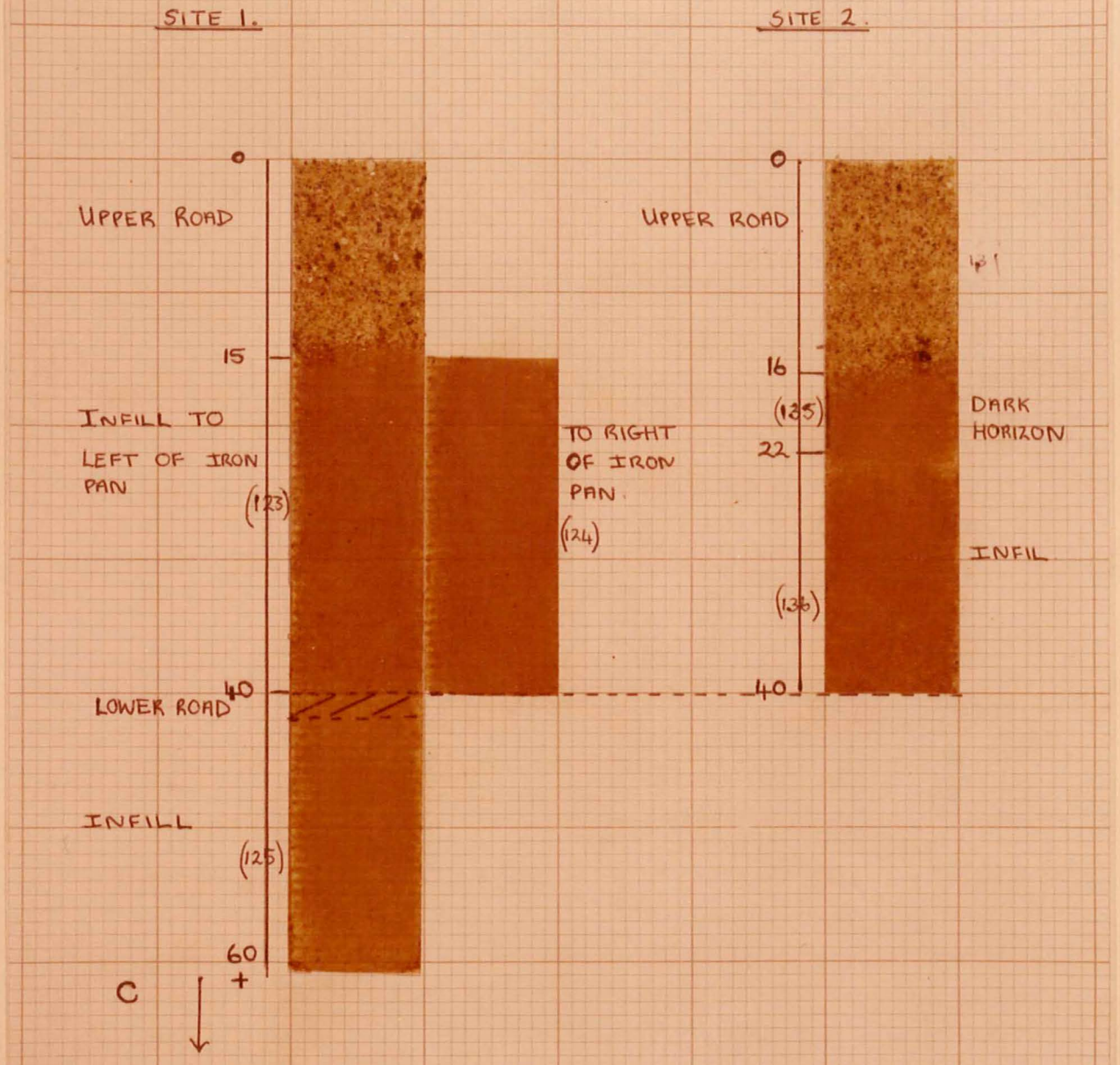
Comments

It can be seen that pH varied little over this site, the maximum, pH 8.0 for sample 116 and the minimum, pH 6.6 for site 123. All the samples are too high in pH for pollen to have been preserved. In general pH appears to decrease down profile probably as acidic detritus materials have been washed downfrom beneath roads, except under some of the buildings where leaching has not been so active.

This range of pH is typical of cool, humid brown soil development but maintained above too acidic a condition by the low amount of leaching due to their having been covered over such a long period.

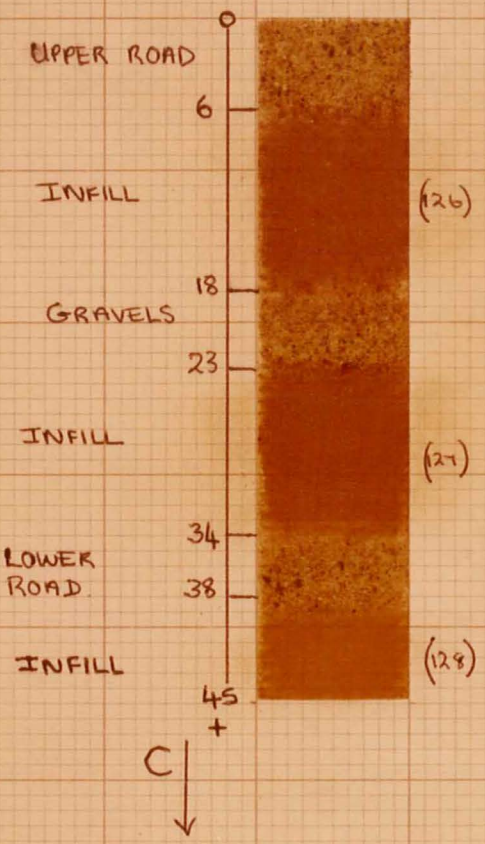
The following ignited profiles show iron concentrations increasing down profile where pedogenic processess have operated after deposition except where a significant barrier to migration ie road/stonework has halted translocation.

IGNITED PROFILES



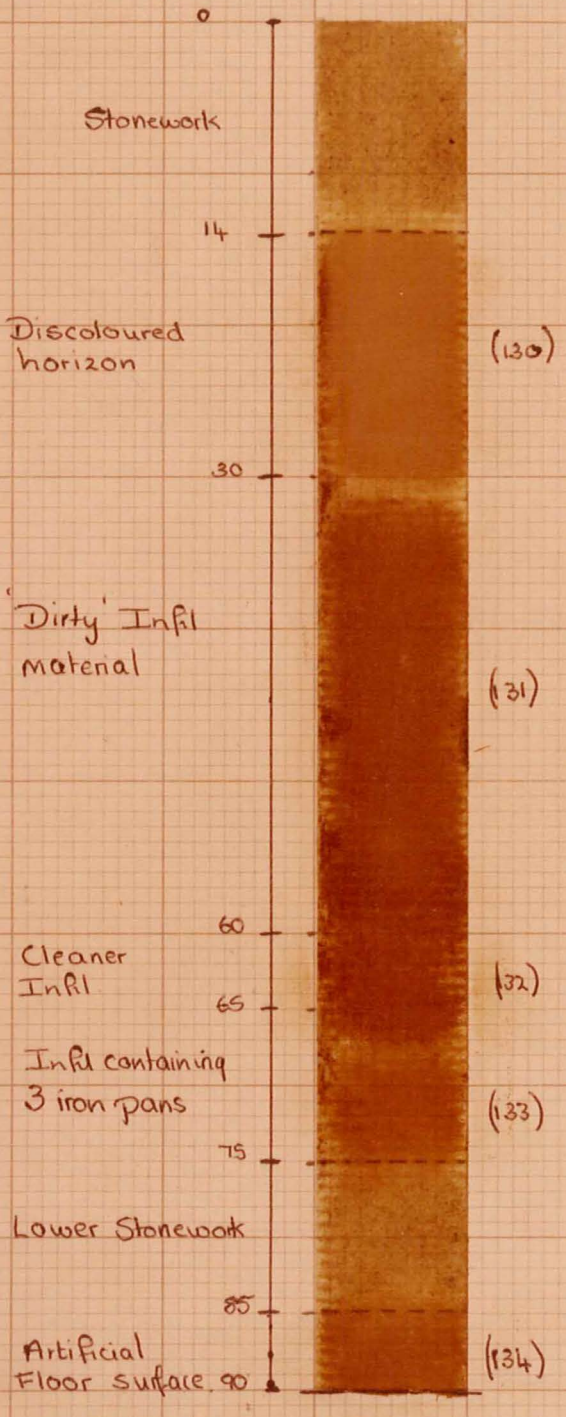
IGNITED PROFILE.

SITE 3



IGNITED PROFILE

SITE 5



COMMENTS

It would appear that much of the material found in association with the archaeological features at Ashton has been subject to disturbance and possible re-location by man.

The section exposed at site 4, ie: the well, gives a good indication of the succession of parent materials naturally occuring beneath the settlement at least at this eastern end of the excavation, although there may well be a different succession closer to the river where the cemetery was found. It would seem that the alluvium, the clays and silty materials, are locally subjected to gleying - hence the variety of colours observed on exposure to the air, with some ironstone inclusions (possibly contributing to the reddish colours of some of the materials). These clays are obviously of variable thickness as they do not seem to correlate throughout the sites but occur at slightly different levels; as the geological survey suggests the alluvium probably fills a channel between overlying and possibly underlying (though not seen at the sites) gravels of the first terrace. At site 4 these gravels show variations in texture, the lower horizon being a mixed one whilst above it concentrations or 'pockets' of gravels with little sand matrix occur and some pure sand lenses. The sand lenses have been subject to a certain amount of washing which has carried material down the profile to contaminate lower levels (a process aided by the digging and utilisation of the well, and more recently its excavation). As to whether the considerable depth of material overlying the gravels is a natural soil profile is still a matter of speculation. Certainly it resembles some of the local present day profiles exposed in the banks and field edges but is lacking in the organic horizons which these show. It is of a very silty nature and grey in colour suggesting possible eluviation of materials, perhaps after the removal of the A horizon/s by man prior to the construction of the buildings. The Superficial dark, silty deposit with much charcoal may be a fine spread from nearby 'industrial' activities incorporated with the remains of the natural topsoil or with the surface layer of the B/Bw horizon. On removal of this material the surface of the 'B' horizon is extremely hard and pitted suggesting it may have been exposed for some time prior to covering, as it is the tendancy of silty soils to slake or harden at the surface when exposed to the elements rendering them difficult to use for cultivation purposes.

At site 5, the section exposed above the drainage ditch it would seem that any terrace gravels overlying the clays may have petered out here or been deliberately removed prior to the laying of a floor. The material directly below

the floor however is very similar to that directly above the floor which contains three very distinct iron pans. It may be that the sands and gravels removed prior to construction were re-laid as a thin base to level the surface for the floor. At some later date the rest of the gravels or similar materials from another location on the site were laid over this floor to quite a considerable depth prior to the laying of a new higher surface. I believe that these horizons have been subject to pedogenic processes or soil formation after their artificial re-location. There would appear to have been considerable movement of iron and some movement of colloids with a concentration of colloids over the iron pans which have developed with the barrier of the lower artificial surface. The discolouration of the upper horizon (sample 131) is probably due to a translocation of materials from the dark band above. This band has a high silt content as well as a high organic content and may be a detritus deposit of blown silts (possibly from alluvial exposures elsewhere in the locality) and general ash, charcoal and organic material from the road, the houses and industries, which collected over probably quite a short period prior to the new stonework being laid. This material also occurs around the edges of the earlier drainage ditches suggesting that it was the everyday accumulated dirt. Above it is a thin layer of material weathered from upper stonework. This profile then may be considered as a man-made soil of sorts.

At Sites 1 and 2 the material below the upper road surface is a re-located derivative of the terrace sands and gravels deliberately deposited over the lower road surface probably to bring it up to the level of secondary buildings over early houses. Although mechanical analysis suggests slight differences in the composition of the samples from Site 1 (123, 124) and site 2 (136) these can be explained for site 1 in terms of the iron pan development. It is probable that this fill material was obtained from more than one location and as can be seen from the well section there is considerable variation in the gravels even over such a small distance. Pockets of sandy material, pockets of silts, pockets of gravels etc occur frequently, accounting for the variations found within re-deposited fill materials. Sample 123 obviously contained more iron than the material used over the other side of the road, a phenomenon which became obvious with the decrease in the adequacy of drainage over the road surface. The field analysis of these deposits over the earlier road suggested they were basically the same, the source presumably had localised differences typical of terrace gravels. At site 2 the dark, organic horizon which does not occur at site 1 may be material derived from a temporary road surface laid here by the owner of the house adjacent, as it was suggested that householders may have been responsible for minor repairs themselves. It could again be a detritus of household sweepings or scattered spread from a yard or work area. An alternative theory that a sort of temporary turf may have covered this area would have probably meant a greater organic content than was found and is not therefore very likely.

The section through the side road at site 3 again revealed similar artificial fills but with the addition of what appears to be a temporary gravel road surface between the upper and lower roads. This may be another local repair using gravels from a gravel 'pocket' in the terrace deposits. The fill material below the lower road correlates very well with the fill below the lower road at site 1 and they may indeed be a natural material in situ, a sand channel in the terrace gravels perhaps, the sand beneath site 3 could represent a sand lens similar to that in the well profile. This material also seems to correlate with the 'natural' material thought to be re-distributed over the lower floor at site 5 indicating further that there may be considerable areas beneath the site where extensive gravels are absent directly over the alluvial clays. Again at site 3 some post-depositional eluviation of materials may have occurred giving a colloid increase down the profile.

At site 7, ie the edges of the road beneath the upper surface, the deposits are not quite the same as the fills beneath the road. Sample 115 appears to have very little silt, being mostly sand. The two deposits are not otherwise extremely dissimilar although field description suggested that sample 115 had a much greater stone content and therefore probably derived from a different source. At site 8 the upper material (118) is more like material 115 than 114, which is more like 116. This suggests that material similar to 114 was used initially, perhaps until the source ran out or a patch of sandier material was used - similar to 115. Material 115 is therefore more extensive at the road edges and beneath buildings and is not from the same source as the fill below the upper road surface. Its stonier nature may have proved a better foundation. At site 9 we find a different situation. The upper material, 119, is very like the upper fill materials found beneath the road. Also at site 10 material 122 is like the upper road fill. This then suggests quite a complicated picture for these sands beneath buildings. Some seem to be continuous with the material used as a road foundation, whilst others seem to be more specifically a building foundation from a different more gravelly source.

If we look at site 6 - the post-medieval road, the natural material below the road is very similar to several of the deposits below the Roman road. This site is lower however and nearer the river and the material appears to be in situ. The fill above the ruts is again similar but of a more gravelly nature but may be derived from a local topsoil. It is unlikely that this fill was brought very far.

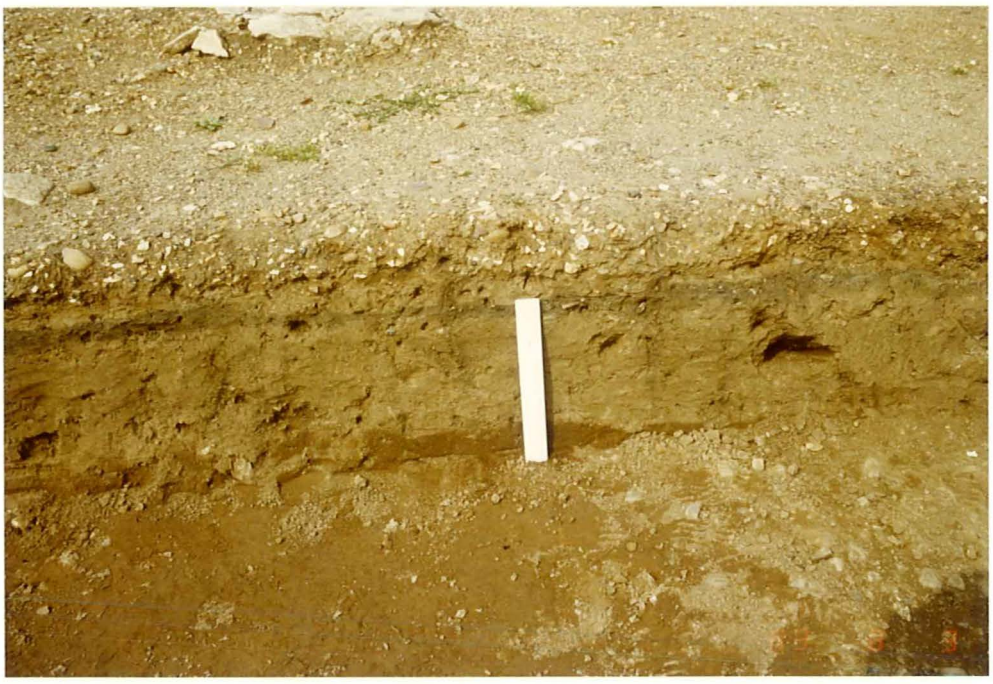
The prehistoric ditches seem to contain a variety of deposits, some similar, others dissimilar. The result for sample 143, the linear gully fill, suggests a silt lens derivation which is not common in these terrace gravels. The results for the C-shaped dith make it difficult to assess whether this feature is artificial or natural as the materials are so similar, but the other features would appear to be artificial. Many of the fills resemble sample 128 which is thought to be the natural material from the sandy areas of the terrace gravel, there, closer to the river there may be a slightly different assemblage of gravels which would give the small variations in deposits.

Finally, it appears that local variations in the terrace gravels have given rise to problems in the interpretation of the various fills throughout the site. The picture has been further complicated by local repairs to road surfaces and local spreading of detritus materials. It would appear that basically similar deposits occur at the same levels under the Roman road and that a semi-natural deposit lies under the lower road and under the Post-Medieval road. Different materials of a more stony nature may have been used as house foundations. Some of the deposits have undergone the initial stages of argillic profile formation, with eluviated colloids accumulating over lower artificial surfaces and considerable mobilisation of iron, and may represent man-made soils.

Site 12, which may be a buried soil has been disturbed considerably in the upper levels, possibly by culivation (although no macroscopic organic remains were found) if the area were a small back yard. This might account for the fragments of bone and pottery found within the profile and thought to be too large for worm transport. Alternatively this profile could be another fill although it resembled the local soil profiles more.

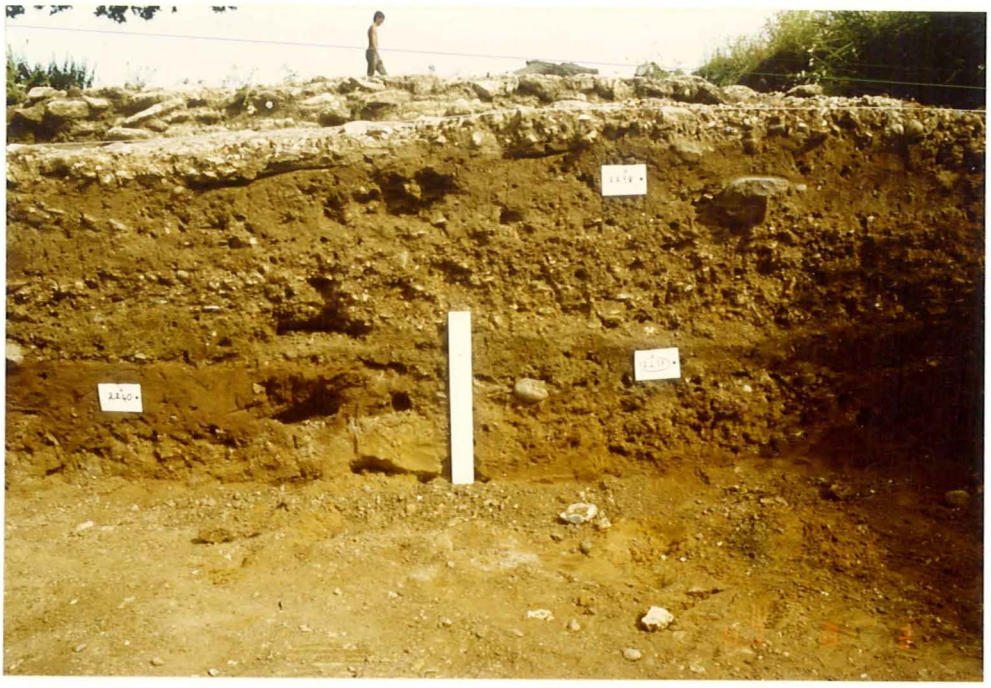
ASHTON ROMAN TOWN: PHOTOGRAPHS.

A. SITE 1: ROAD SECTION TRENCH FROFILE BELOW CENTRE OF ROAD.



B. SITE 2: SECOND ROAD SECTION TRENCH PROFILE BELOW CENTRE OF ROAD.

ASHTON ROMAN TOWN: PHOTOGRAPHS.



C. SITE 3: TRENCH CUT THROUGH SIDE ROAD.

D. SITE 3: AS ABOVE, SHOWING EDGE OF ROAD.

-ASHTON ROMAN TOWN:PHOTOGRAPHS.

- E.SITE 5:PROFILE BENEATH STONEWORK IN SIDE OF ROMAN DRAIN.

APPENDIX 1

Sample numbers with corresponding profiles (Sites 1-15)

Site 1. Horizon 15-40cm: to right of iron pan - sample 124
to left of iron pan - sample 123
Horizon 42-60cm: sample 125

Site 2. Horizon 16/18-22cm: Sample 135
Horizon 22-40cm: Sample 136.

Site 3. Horizon 6-18cm: Sample 126
Horizon 28-34cm: Sample 127
Horizon 38-45cm: Sample 128

Site 4. Horizon 0-4/8cm: Sample 129

Site 5. Horizon 14/27-30cm: Sample 130
Horizon 30-60cm: Sample 131
Horizon 60-65cm: Sample 132
Horizon 65-75cm: Sample 133
Horizon 85-90cm: Sample 134.

Site 6. Horizon - Rut infill: Sample 137
- Natural below road: Sample 138

Site 7. To right hand side of road: Sample 114
To left hand side of road: Sample 115

Site 8. Horizon 0-23cm: Sample 118
Horizon 23-32cm: Sample 116

Site 9. Horizon 0-18cm: Sample 119
Horizon 18-23cm: Sample 117

Site 10. Horizon 0-12: Sample 120
Horizon 12-20cm: Sample 122

Site 11. Horizon 0-5cm: Sample 121
Horizon 5-20cm: Sample as 122

Site 12.	Horizon 0-40cm:	Sample 145
Site 13.	Fill material:	Sample 139
	Natural:	Sample 140.
Site 14.	Fill material:	Sample 141
	Natural:	Sample 142
Site 15.	Fill material:	Sample 143
	Natural:	Sample 144

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