PERRYOAKS SEDIMENT INVESTIGATION

by Martin R. Bates

Introduction

This report summarises the findings from the investigation of selected sections from the Bed B and Bed C areas of the WPR98 excavation taken during the fieldwork phase in 1999. The work undertaken by the author included field visits throughout the period of excavation from April to November 1999. Field visits involved recording of key representative profiles through major identified ditches[1] and the sampling (on a context basis) of the major units present in individual ditches. This work aimed to ascertain whether:

- Individual contexts identified by field staff exhibited different sedimentological signatures thereby cross-checking the validity of the contextual sub-division.

- Consistent patterns of infilling of the ditches could be identified across space (and through time) within Beds B and C.

- The patterns of infilling could be interpreted in terms of changing processes of infilling.

- Further investigation of sampled contexts would provide additional data to clarify issues arising as a result of the present investigation.

Ultimately the work was designed as an attempt to determine whether changing patterns of landscape use may have been reflected in the fills of individual ditches (conventionally such patterns should be recorded in the site stratigraphy across the site however, because of the large scale stripping of the stratigraphy prior to sewage farm construction this evidence was not available for study).

Methodology

Sections through ditches were identified for investigation following consultation with field staff responsible for individual excavation areas. Features and sections were selected for detailed investigation if:

- The profiles were thought to represent typical fills (based on repeated observations through a number of intersections) through an identified feature.

[1] Only ditches were selected for study; it was considered that ditches would act as a local to regional trap for sediments deriving both from within and beyond the ditch. Pits were omitted from the study due to their restricted nature and the complex patterns of infilling expected within a closed system such as a pit.

- The profiles derived from features representing a sample of features from across the site and of different (preliminary) ages from the Neolithic to Iron Ages.

Once features had been selected for investigation the drawn section was used to identify the contexts present in the profile and descriptions of individual contexts were undertaken by the author. Following description bulk samples were taken of the major contexts for detailed analysis. The recovered bulk sample sizes were intended to reflect the nature of the contained material (i.e. in order to produce an accurate estimation of the particle size distribution of an individual context larger samples were required from coarser gravel samples than from finer grained deposits in order to be assured that all grades of particle would be represented in the recovered sample).

A full list of all sections, contexts and sampling information is presented in Table 1.

Samples taken were processed in the following fashion:

- Bulk samples were weighed and wet sieved through a nest of sieves with sieve mesh sizes of 64mm, 32mm, 16mm, 8mm, 4mm and 2mm. The residues retained on each mesh was weighed. Subtraction of the total weights retained on all meshes from the original bulk weight allowed the less than 2mm fraction to be determined. Percentage values for each fraction were then calculated.

- In order to calculate the sand (2mm – 0.062mm) and clay-silt (<0.062mm) fractions a sub-sample from each bulk sample was sieved in order to determine the >2mm fraction, 2mm – 0.062mm fraction and the <0.062mm fraction. The >2mm fraction was then calibrated against the >2mm fraction from the coarse sieving exercise and the percentages of sand and clay-silt calculated.

- Additionally the size of the largest clast in the coarse sieved samples and the mean particle size of the 10 largest clasts were determined using measuring callipers for each sample.

The results of this investigation (Table 2) are shown in Figures 2 to 26. The results are presented on a feature by feature basis and illustrate:

- The particle size distribution of individual samples investigated presented as a series of percentage bar graphs (tabulated data on percentages in each grade class are shown).

- The gravel to fine ratio (>2mm:<2mm fractions) for all samples investigated.

- The clasts size statistics for all measured samples (mean (10) largest clasts and the maximum clast size).

- A stacked bar graph comparing the particle size distributions for each sample investigated set out in stratigraphic order from base to top of profile (where possible).

In addition to the work on the particle size distributions a limited investigation of the organic content and the magnetic susceptibility properties of a number of features from Bed B have been undertaken. Determination of organic content was undertaken by combustion of air dried samples at 550°C for 2 hours. Mass specific magnetic susceptibility determinations were made on air-dried sub-samples using a Bartington MS2 system.

MODELS AND ASSUMPTIONS

In order to understand the information generated by this study and to interpret the results it is necessary to consider the ways in which the ditch features would infill. A substantial body of data is available on the processes responsible for feature infilling (e.g. Bell *et al*. 1996). An exhaustive survey of the relevant literature has not been conducted on these aspects as part of this study however from this body of literature it is possible to arrive at some basic conclusions regarding feature infill. For example, for a feature infilling from the decay of the ditch profile and where no re-cutting of the ditch profile is in evidence and where no additional material is derived from bank collapse/deliberate backfilling it is likely that:

- Bedrock substrate will be a primary determinant regarding the nature of the fills, i.e. a fill may be derived directly from a given bedrock, e.g. a fine grained bedrock substrate can only provide fine grained fills.

- Profiles through wider, shallower ditches will stabilise rapidly thereby reducing the slope angles across which potential infilling particles may move and decreasing energy levels required to transport larger particles. This will result in a typically finer grained fill (in respect to narrower ditches).

- Narrow, deep ditches will be subject to profile decay over longer timespans than wider ditches and are likely to contain coarser elements (bedrock substrate permitting) than wider ditches.

Figure 1 illustrates these relationships.

Ultimately if these assumptions are valid individual features infilling through natural processes should exhibit a general fining upwards in particle size. This would reflect the initial infilling of the feature resulting from collapse of feature edges (if bedrock sediments were coarse the early fills would reflect this) and later filling from fines derived from washout of material from feature edge locations but where the larger particles remain *in situ* within the parent body due to the absence of sufficient transport mediums to move them.

If the assumptions outlined above are valid then deviation from the observed pattern may indicate derivation of fill deposits through other mechanisms and processes. These may be:

- Decay of adjacent bank material.

- Deliberate backfilling of features by human activity.

- The presence of an unknown sources material for sediment adjacent to the feature.

- Stripping of the adjacent soil cover to expose bedrock surfaces to erosion.

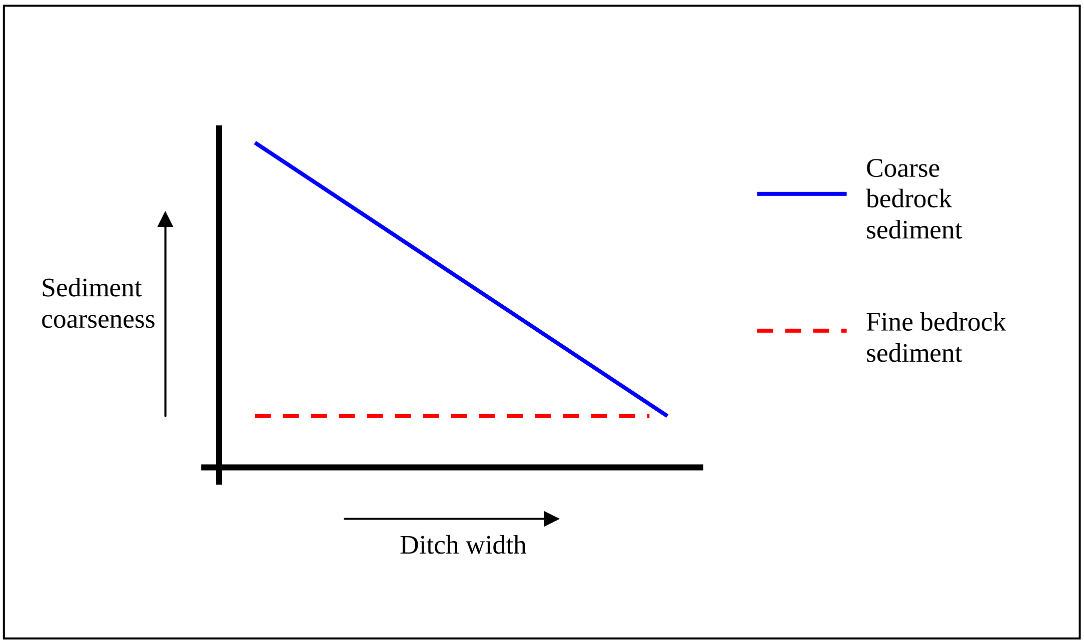


Figure 1. Theoretical relationships between ditch width and fill sediment coarseness for two types of bedrock sediment. For coarse bedrock sediment fills should be coarser within narrow features than wider features. For fine bedrock sediment fills fill particle size distributions will be similar in narrow and wide features.

Bed B. Cursus ditches (Figures 2 – 8).

Four intersections through the cursus ditches were examined:

149009 – cursus ditch west (southern end) (Figure 2)

149006 – cursus ditch west (northern end) (Figure 3)

134022 – cursus ditch east (southern end) (Figure 4)

155165 – cursus ditch east (central area) (Figure 5)

153023 – cursus ditch east (northern end) (Figure 6)

The following points are revealed from a study of the graphical results:

- Particle size distributions from the western cursus ditch (Figures 2 and 3) show that there is a small, but significant increase in the sand content of the sediments up-profile. Within the northern intersection (149006) (Figure 3) the bedrock particle size distribution is similar to that within the fill deposits.

- Mass-specific magnetic susceptibility determinations (Figure 7) throughout the profile from 149006 (western cursus ditch) show little up-profile change, this is mirrored in the organic content of the fills (Figure 7).

- There is a significant up-profile decrease in particle size in the eastern ditch (Figures 4 and 6). This is seen clearly in the gravel/fine ratio and in the summarised results where an increase in sand content (at the expense of gravel) occurs up-profile.

- Mass specific magnetic susceptibility results from 153023 (Figure 8) increase up-profile to a depth of 9.5cm where values stabilise. The organic content of the feature shows a similar pattern to a depth of 11.5cm before values begin to decline upwards.

- Information from 155165 (Figure 5) indicates that the presence of a coarse middle fill from this sequence suggest a different pattern of infilling dominated in this area of the cursus ditch.

This information suggests that:

- The infill of the western ditch could have been derived from degradation of the surrounding bedrock edges with only minimal alteration of the sediment during infilling. However the increase in sand content seen in 149006 (Figure 3) may indicate an influx of sand from other sources (possibly a fluvial input?).

- The magnetic susceptibility determinations from the western ditch fills indicate little evidence for trends within results that perhaps indicates gradual, slow and continual accumulation of sediment.

- Infilling of the eastern ditch suggests that progressive infilling of the feature resulted from a winnowing out of the finer elements of the bedrock, and their subsequent deposition as ditch fills, and a decrease in gravel content up-profile (Figures 4 and 6). Infilling of the central section of the eastern ditch (155165) suggests differing patterns of infilling dominated here.

- The peaks of values for both magnetic susceptibility and organic content within the eastern ditch (Figures 7 and 8) suggest variation in the nature of patterns of sedimentation and the possibility that a phase of stability exists within the middle part of the profile (thus implying a period of ditch fill stability and cessation of infilling – this may be reflected in the age distribution of finds from the uppermost fills being considerably later than the assumed age for the early fills).

Bed B. Diagonal ditch (Figures 9 – 12).

Two intersects were examined from the diagonal ditch present to the east of the cursus monument:

132003 (Figure 9)

153003 (Figure 10)

The following points are revealed from a study of the graphical results:

- In both profiles a decrease in the particle size distributions of contexts up-profile was noted.

- Data from 132003 (Figure 9) indicates that the sand and clay-silt fractions both increase significantly up-profile.

- Gravel/fine ratios decrease up-profile.

- Mass specific magnetic susceptibility values show a peak in values towards the top of the sequence in 132003 (Figure 11).

- Organic levels are typically low but exhibit some variations in the fill of 132003 (Figure 12).

This information suggests that:

- This pattern is similar to that seen in certain parts of the cursus ditch fills (Figures 4 and 6) suggesting winnowing out of finer elements in the surrounding bedrock and their deposition within the ditch fills occurred progressively up-profile during ditch infilling

- The infilling elements within the ditch fills may all be derived from the surrounding bedrock profiles.

- Mass specific susceptibility values may indicate the presence of a buried soil or weathering horizon towards the top of the fill in 132003 (Figure 11).

Bed B. Ditches in the vicinity of the ring ditch (Figures 13 – 15).

Three intersects were examined from ditches in the vicinity of the ring ditch feature:

150003 (Figure 13)

138007 (Figure 14)

138003 (Figure 15)

The following points are revealed from a study of the graphical results:

- Fills in all intersections rest of bedrock with a major coarse gravel component.

- Particle size distributions from the fills indicate decreasing particle size up-profile but where the uppermost fills exhibiting a slightly coarser component than the penultimate fills (i.e. the fills possess a coarse ‘tail’).

- This coarse tail within the fills is clearly illustrated by the upturned tail exhibited in the gravel/fine ratio from all intersects (Figures 13 – 15).

This information suggests that:

- Progressive winnowing of finer elements within the bedrock took place during the deposition of the majority of the ditch fills.

- A sudden influx of coarser sediment occurred within the uppermost fills of all intersections.

This pattern of infilling does not reflect patterns observed in any ditches to the west towards the cursus monument and does not match the model set out above. This data suggests that differing infill processes may have been responsible for the infilling of the upper parts of these features.

Bed B North-south ditches at eastern end of Bed B. (Figures 16 – 20).

Three intersects were examined from the ditches present towards the eastern end of Bed B:

147007 (Figure 16)

146014 (Figure 17)

148006 (Figure 18)

The following points are revealed from a study of the graphical results:

- A general trend to fining upwards is noted in the fills of the three profiles sampled (Figures 16 – 18). A coarser tail is noted in Figure 18 to the fills of 148006.

- Fill units retain a typical coarse gravel component throughout the fill sequences in all three profiles examined (this contrasts with sediments for example in any of the features to the west of this part of Bed B).

- Magnetic susceptibility determinations through 148014 (Figure 19) exhibit little evidence of trends in values from top to base of profile.

- Organic content values fluctuate, exhibiting a general upwards increase in values but with a major peak in values at c.17cm depth (Figure 20).

This information suggests that:

- The infilling of the ditches are likely to have been derived from the local bedrock but winnowing of fines from the adjacent bedrock and the subsequent concentration within the fills does not appear to be as important a processes as that seen in other fills to the west (e.g. within the diagonal ditch fill sequences).

- A sudden influx of coarser sediment occurred within the uppermost fill of 148006 (Figure 18). This is consistent with the pattern seen in ditches surrounding the ring ditch complex.

- Infill rates of features may have been constant (see Figure 19) with minimal variation in fill processes up-profile.

Bed C (Figures 21 – 24).

Four intersects were examined from the Bed C area:

125137 (Figure 21)

138038 (Figure 22)

166025 (Figure 23)

125144 (Figure 24)

The following points are revealed from a study of the graphical results:

- Bedrock particle size distribution is typically coarse gravel (Figures 21, 22 and 23).

- Fining upwards trends are seen in all profiles sampled (Figures 21 – 24) but a coarse tails to the sediments is only seen in feature 125144 (Figure 24).

This information suggests that:

- Progressive winnowing of the sediments in the bedrock surrounding cuts occurs and this material is concentrated in fill units exhibiting concentration of finer elements up profile. This is similar to trends seen in features towards the western end of Bed B.

- All particle size distributions of fill deposits may be generated from the bedrock sediments however, in order to generate the quantities of fine grained fills present it is necessary to consider what has happened to the coarser elements clearly present in the natural bedrock sediments.

CONCLUSIONS

The evidence presented in this study indicates that a number of conclusions can be drawn:

- Bedrock particle size distributions vary across the site and range from coarse gravels to sands.

- Fining upwards processes can be seen to dominate ditch fill profiles throughout most sequences (this is predicted by the model outlined above). This indicates that many of the features examined appear to have infilled naturally.

- Although fining upwards processes dominate, some features contain fills that are considerably coarser than others (e.g. ditches at the eastern end of Bed B (Figures 16 – 18).

- In some cases coarse tails to the infill sequences are reported, e.g. from features surrounding the ring ditch complex (Figures 13 – 15), ditches in the eastern part of Bed B (Figure 18) and a single profile from Bed C (Figure 24).

- Loss-on-ignition and magnetic susceptibility data indicate that infilling processes within different features may have varied.

In order to illustrate the nature of the results two graphs are presented (Figures 25 and 26) which attempt to summarise the findings. Figure 1 illustrated the potential relationships between feature width and sediment coarseness and Figure 25 shows the information generated in this study illustrating the relationship between width/depth ratios and gravel/fine ratios (uppermost fills) from selected samples. This evidence shows that:

- The wide, shallow cursus ditches are filled with fine-grained sediments and therefore conform to the proposed model presented above.

- Ditches towards the eastern end of Bed B exhibit coarse fills resting within narrow features, in some cases the gravel fills may appear very coarse.

- Ditches surrounding the ring ditch complex exhibit values between the cursus values and those from the eastern part of Bed B showing intermediate values in ditch width and sediment grain size.

- Feature fills from Bed C indicate the presence of narrow ditches containing typically fine-grained fills. This does not fit with the proposed model.

The feature fills from Bed B conform to the pattern of the model set out in Figure 24 for natural infilling of the features derived from the sediments surrounding the ditch profile cut. However, the coarse elements noted in some of the upper fills from the features surrounding the ring ditch complex and the eastern ditches in Bed B suggest an input of coarser sediments late in the infill history of the features. Two sources of material may exist for this fill element:

- Decay of adjacent bank or

- Erosion of the surrounding landsurface following clearance.

At present it is not possible to be certain which of these hypotheses is correct. If bank decay is responsible then it must be assumed that decay of banks was not an important factor during the infilling of features towards the western end of Bed B.

The finer grained fills of the features within Bed C may relate to either differing processes of infilling or the fact that a brickearth spread existed across much of this part of the site. This brickearth spread would have contributed most of the fill to these features. It is clear from the results from Bed C that while general trends up-profile in these features indicate fining upwards sequences decay of the surrounding ditch edges does not appear to have played an important role in ditch fill generation (this contrasts with the patterns in the fills from the eastern edge of Bed B).

The results of the investigation do appear to indicate that:

- The recognition of the major context units during field excavation is verified by the results of this investigation.

- Consistent patterns of infilling of the ditches could be identified across space.

- Infill patterns appear to be dominated by factors associated with the nature of the underlying bedrock and the natural progression of abandoned features. Some evidence from the ring ditch complex and the eastern end of Bed B suggests other processes such as bank decay or, probably, landscape degradation may have been contributing to ditch fill sediments.

The results of this investigation suggest that further work could be contemplated:

- Additional magnetic susceptibility determinations from key contexts sampled to cross-check results presented here.

- Geochemistry/mineralogy of cursus ditch fills and Bed C features to ascertain whether fills are derived from alluvial sources/brickearth sources.

REFERENCES

Bell, M., Fowler, P.J. and Hillson, S.W. 1996 **The experimental earthwork project, 1960 – 1992**. CAB Research Report 100. Council for British Archaeology: York.

Table 1. Features, context and laboratory analysis statistics.

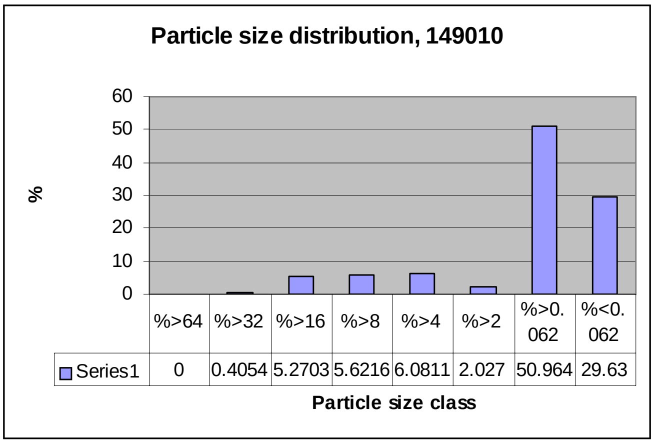
Feature No.	Context No.	Type	Particle size	Large clasts	LOI	M.Sus.
147007	147004 147005 147006 Natural gravel	N/S ditch in east of B	Yes	Yes		
146014	146011 Natural gravel	N/S ditch in east of B	Yes	Yes	Yes	Yes
148006	148003 148004 148005 Natural gravel	N/S ditch in east of B	Yes	Yes		
138007	138008 138017 Natural gravel	Ring ditch area	Yes	Yes		
150003	150004 150005 (upper) 150005 Natural gravel	Ring ditch area	Yes	Yes		
149009	149010 149011	Cursus ditch	Yes	Yes		
149006	149007 149008 Natural gravel	Cursus ditch	Yes	Yes	Yes	Yes
134022	134025 134024 Natural gravel	Cursus ditch	Yes	Yes		
153023	153025 153024 Natural gravel	Cursus ditch	Yes	Yes	Yes	Yes
153003	153005 153004	Diagonal ditch	Yes	Yes		
132003	132004 132007 Natural gravel	Diagonal ditch	Yes	Yes	Yes	Yes
125144	125148 125146 125145	Bed C	Yes	Yes		
155165	155166 155167 Natural gravel	Cursus ditch	Yes	Yes		

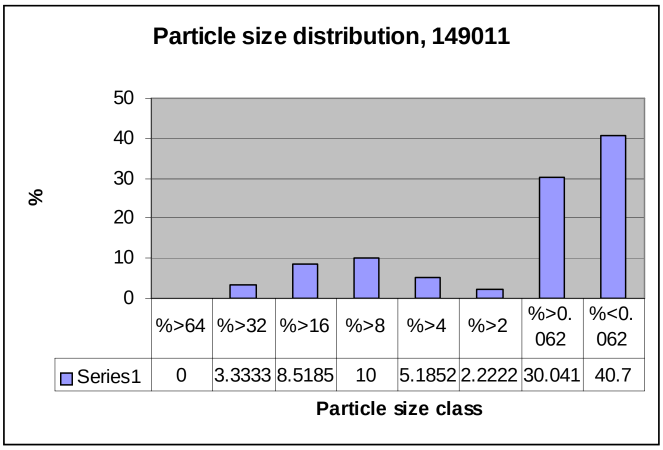
Table 1 (cont.). Features, context and laboratory analysis statistics.

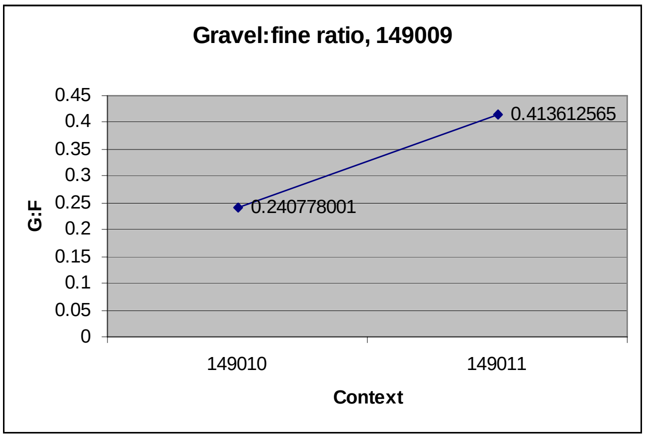
138038	138039 138040 138041 138043 Natural gravel	Bed C	Yes	Yes
166025	166023 166024 166031 166028 166030 Natural gravel	Bed C	Yes	Yes
125137	125141 125140 125139 125138 Natural gravel	Bed C	Yes	Yes
138003	138004 138005 138006 Natural gravel	Ring ditch area	Yes	Yes

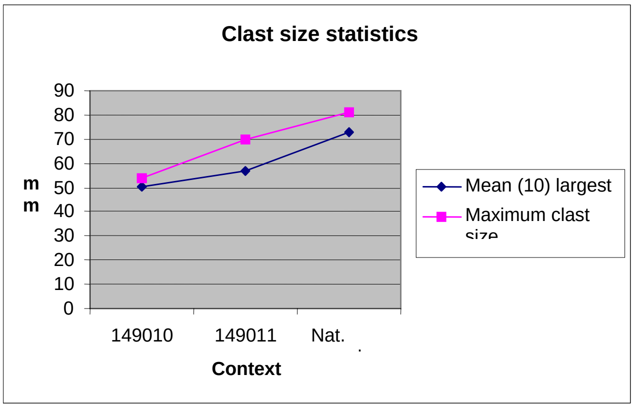
Figure 2

Feature No.	149009
Contexts/age ascription	149010 149011









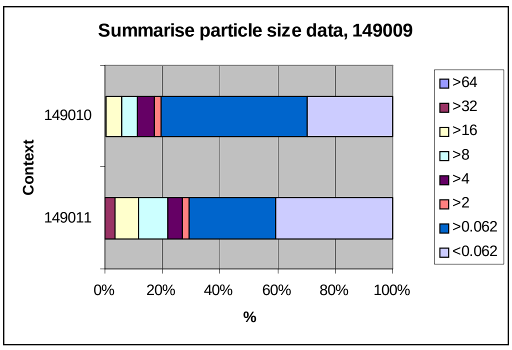
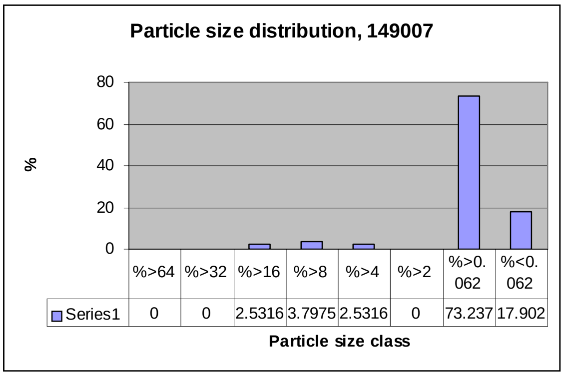
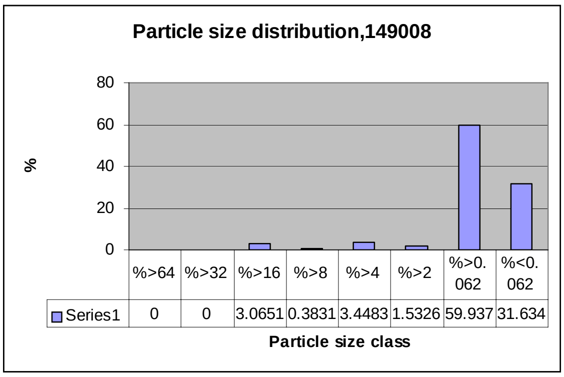
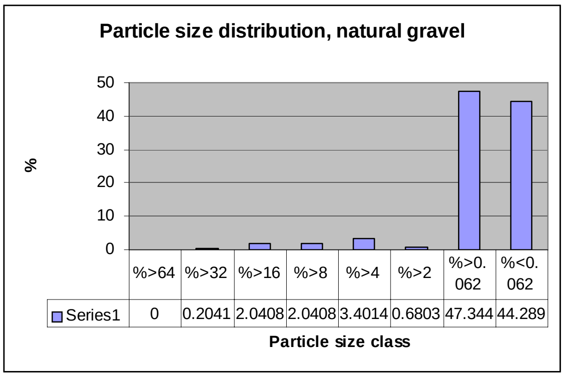


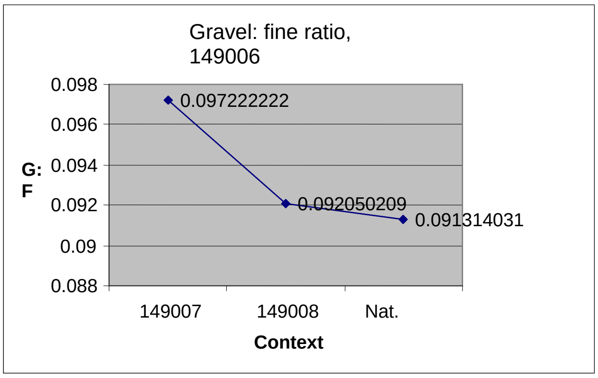
Figure 3

Feature No.	149006
Contexts/age ascription	149007 149008 Natural gravel









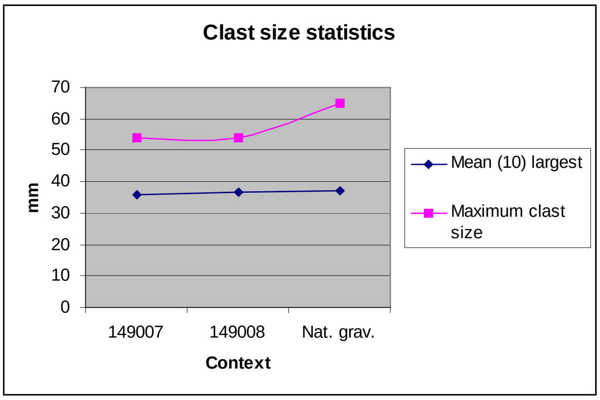
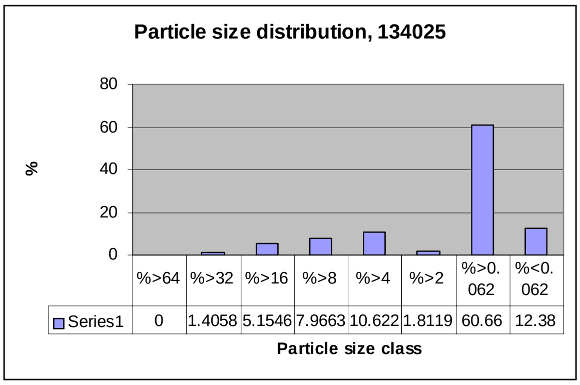
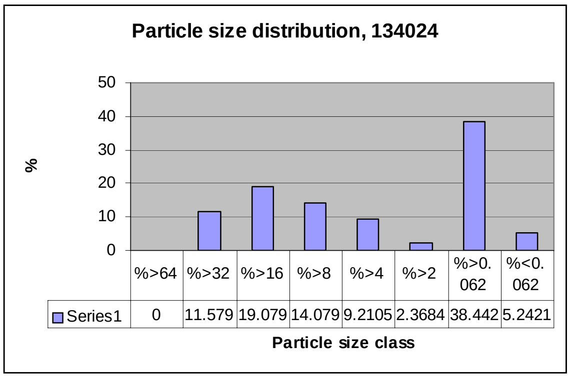
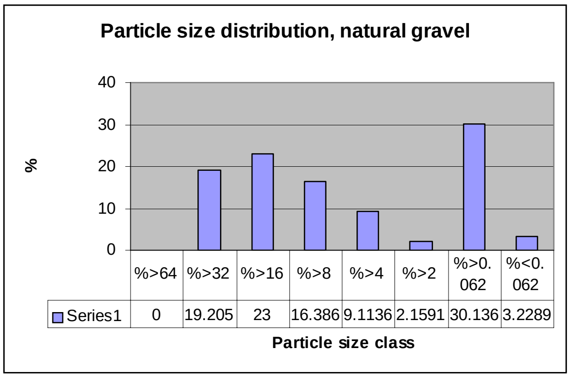


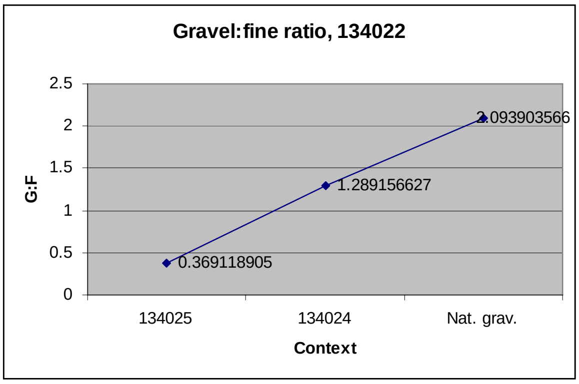
Figure 4

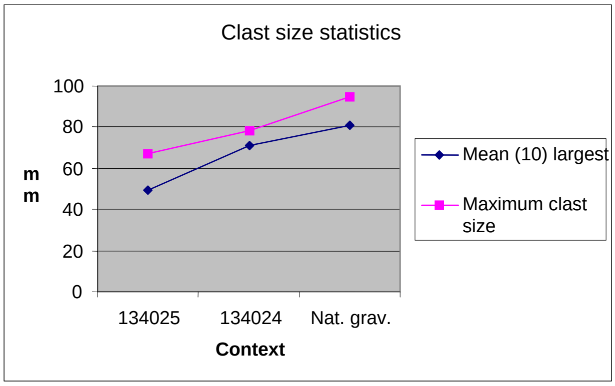
Feature No.	134022
Contexts/age ascription	134025 134024 Natural gravel











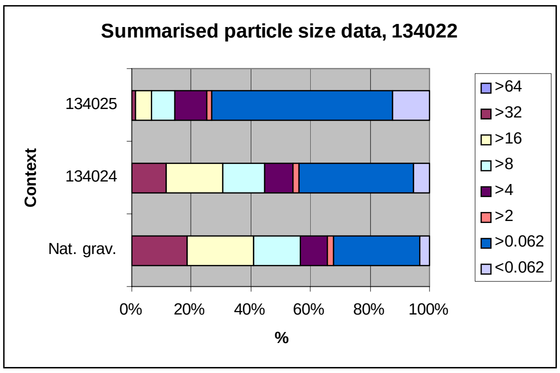
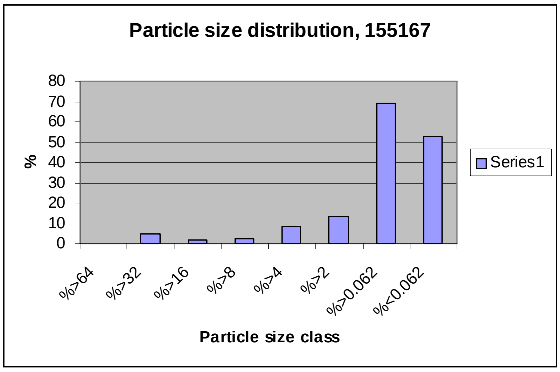
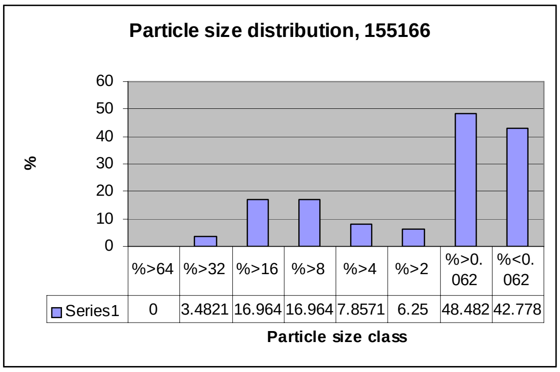
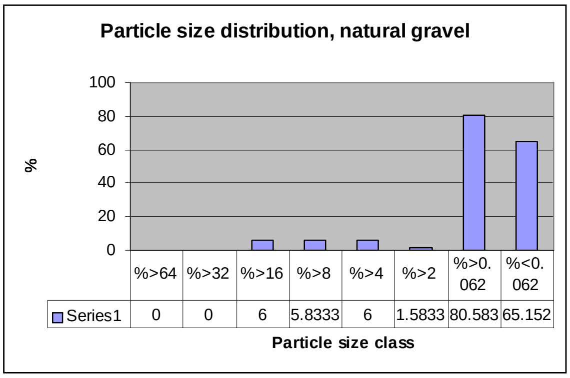


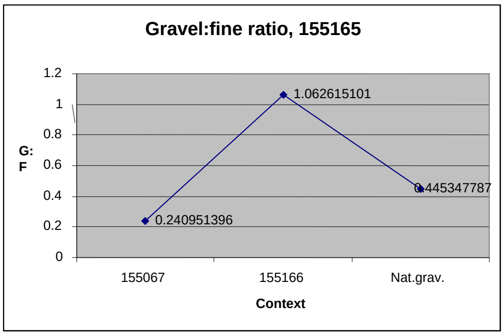
Figure 5

Feature No.	155165
Contexts/age ascription	155166 155167 Natural gravel









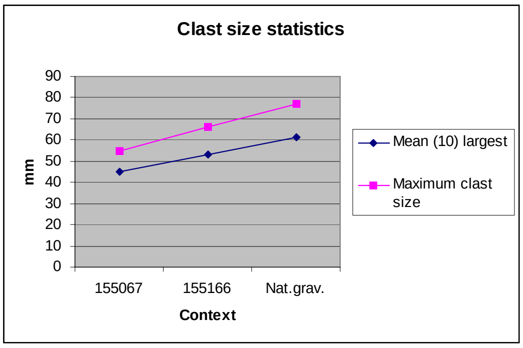
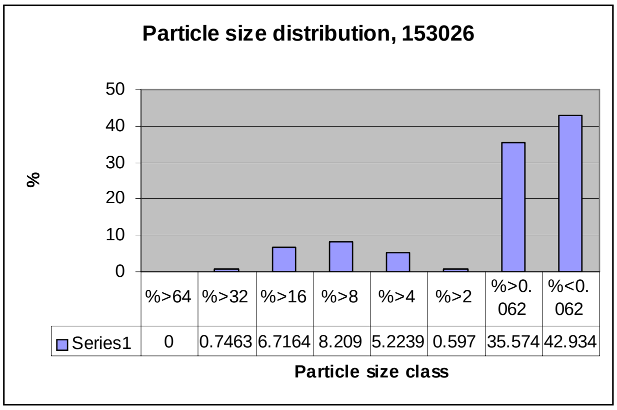
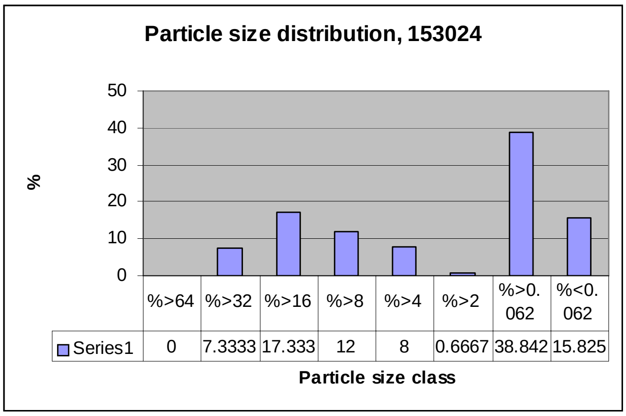
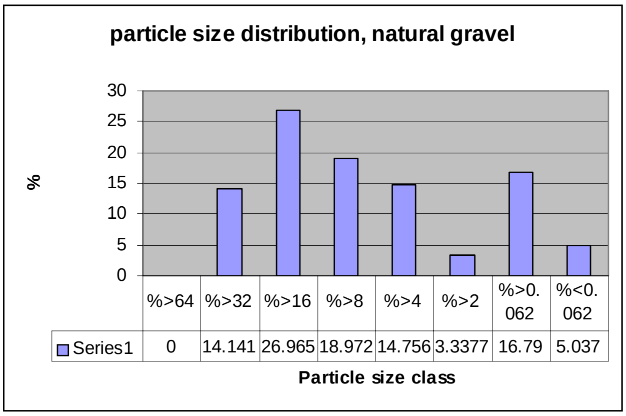


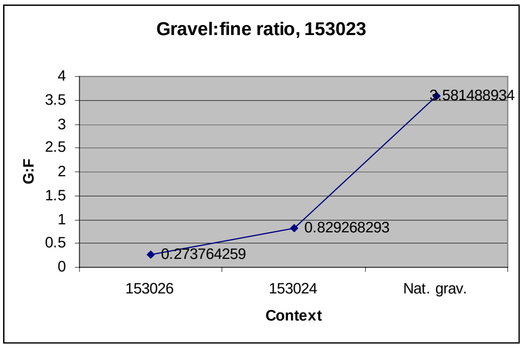
Figure 6

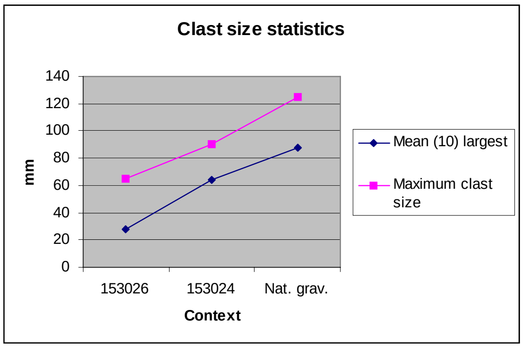
Feature No.	153023
Contexts/age ascription	153026 153024 Natural gravel











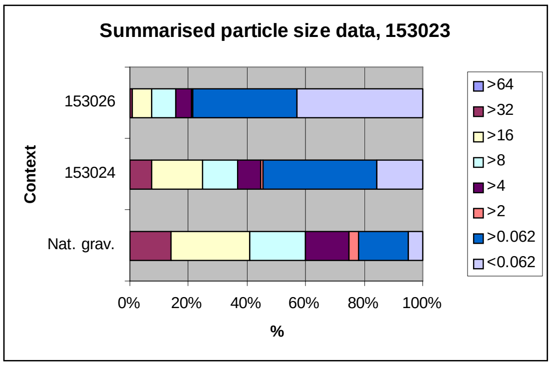
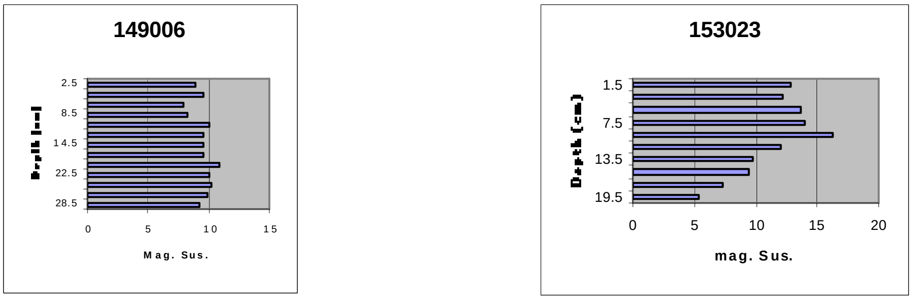


Figure 7: Mass specific magnetic susceptibility results $\chi_{lf}(10^{-6}m^3kg^{-1})$ from cursus ditch fills



Western ditch

Eastern ditch

Figure 8. Organic content within cursus ditches

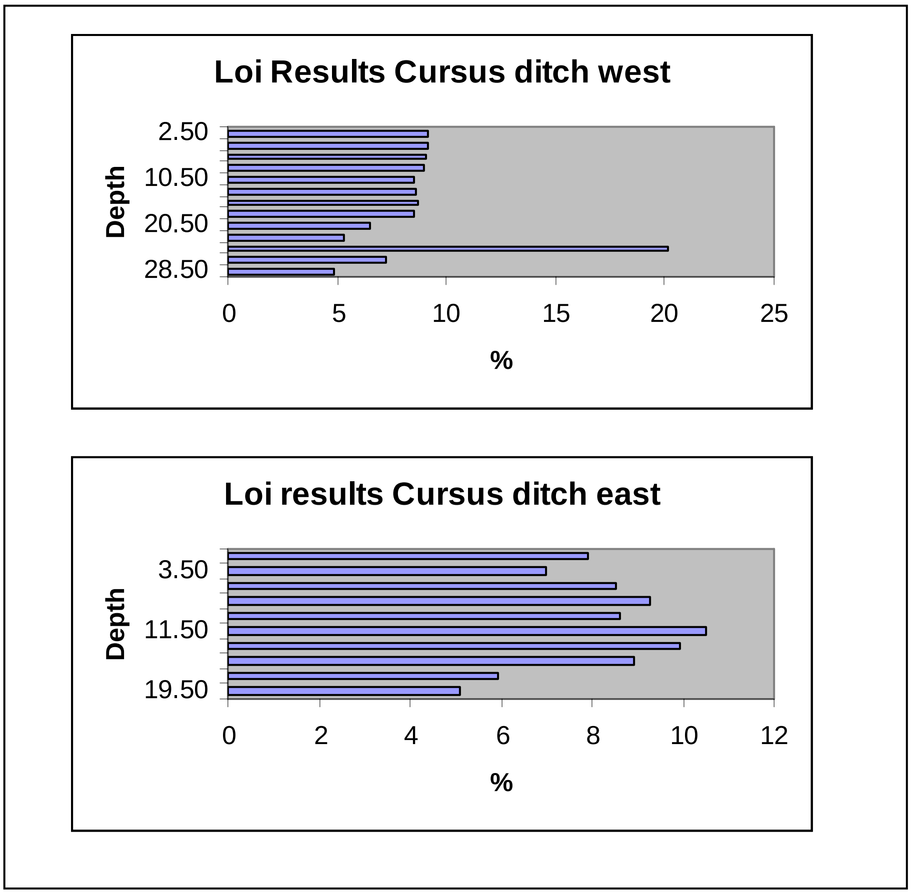
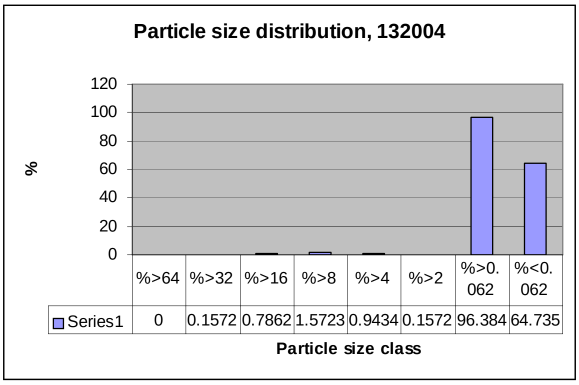
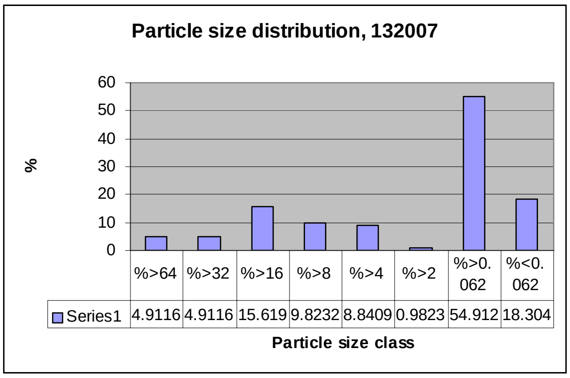
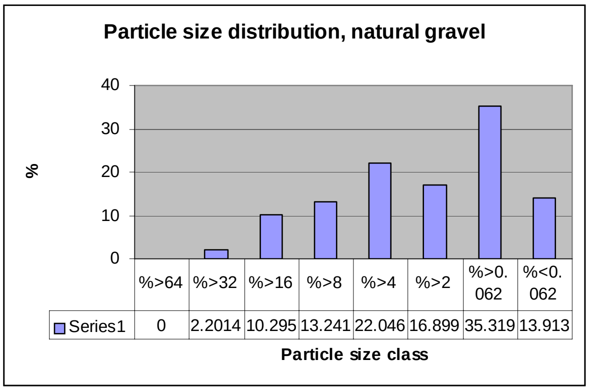


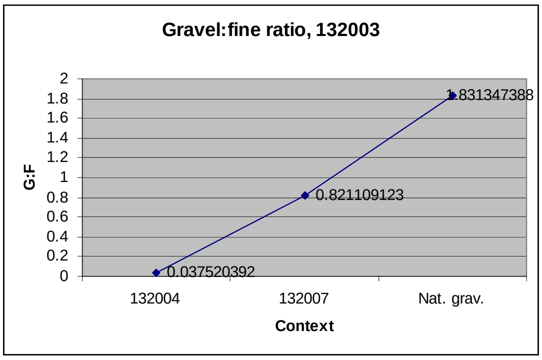
Figure 9

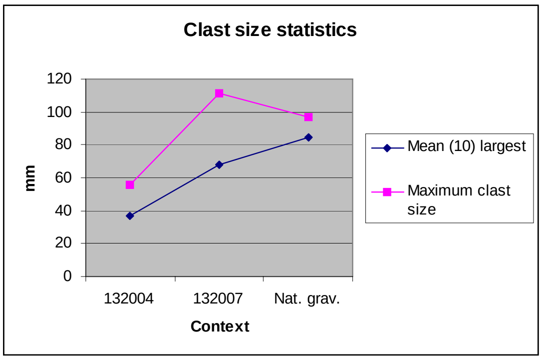
Feature No.	132003
Contexts/age ascription	132004 133007 Natural gravel











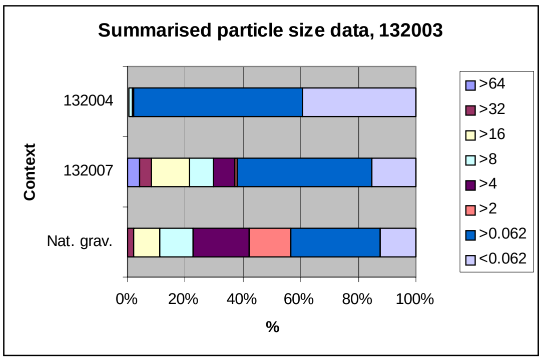
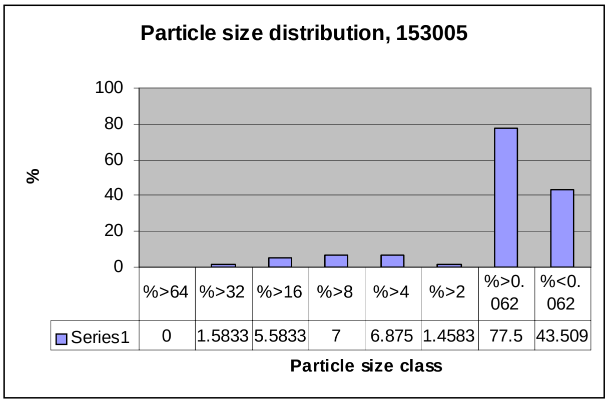
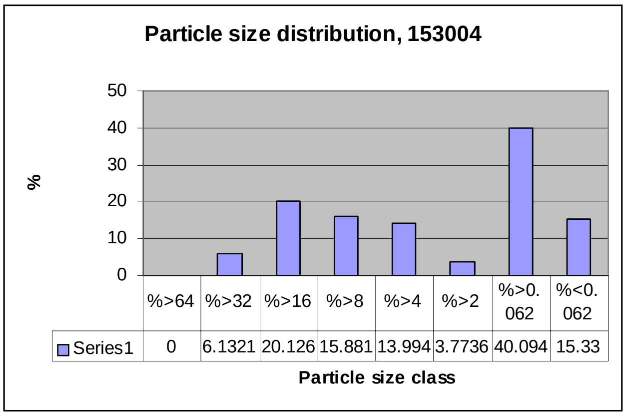
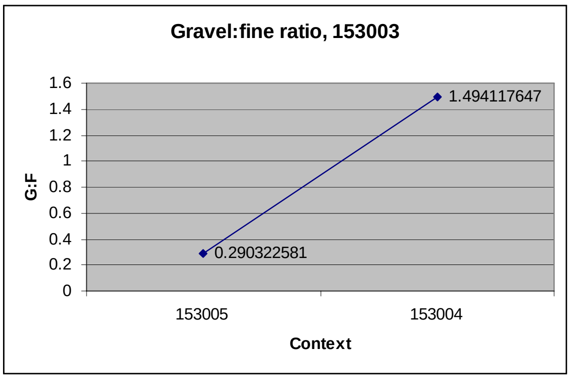


Figure 10

Feature No.	153003
Contexts/age ascription	153005 153004







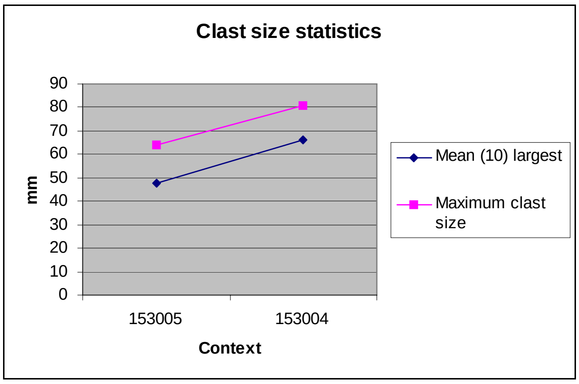
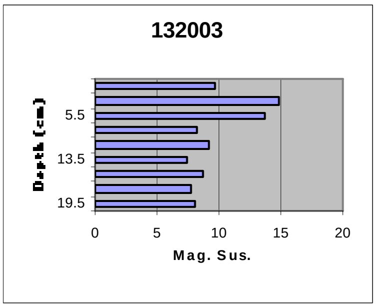


Figure 11. Mass specific magnetic susceptibility results $\chi_{lf}(10^{-6}m^3kg^{-1})$ from feature 132003



Diagonal ditch

Figure 12. Organic content within diagonal Bronze Age ditch

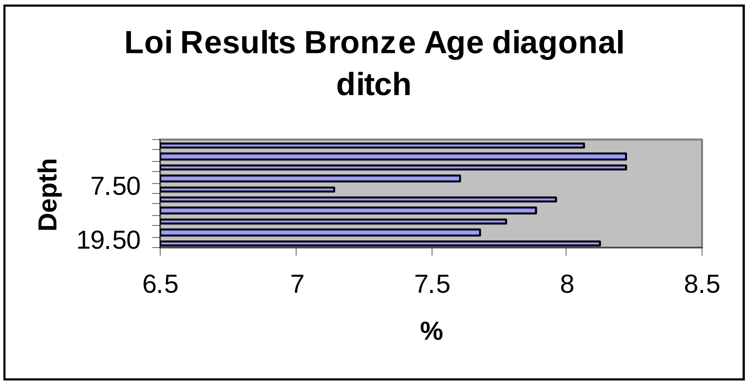
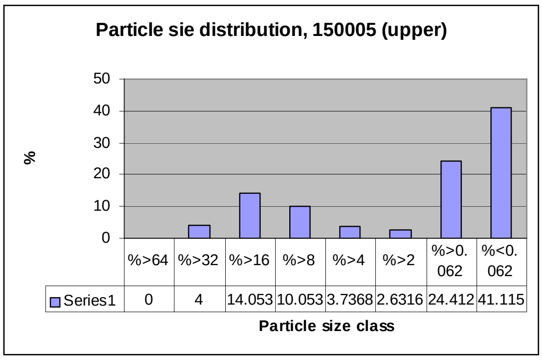
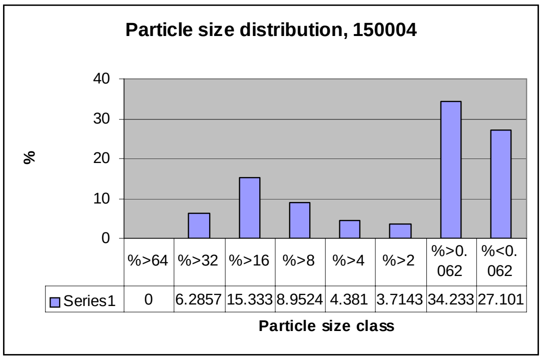
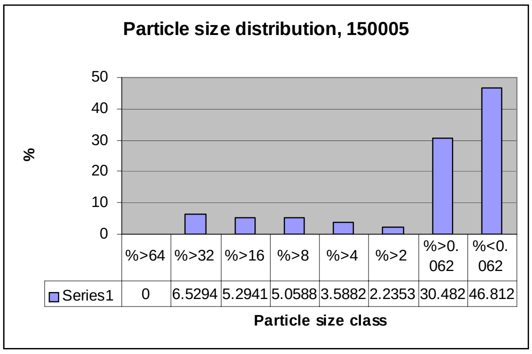


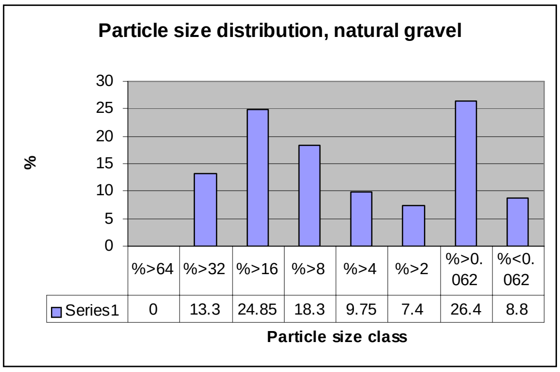
Figure 13

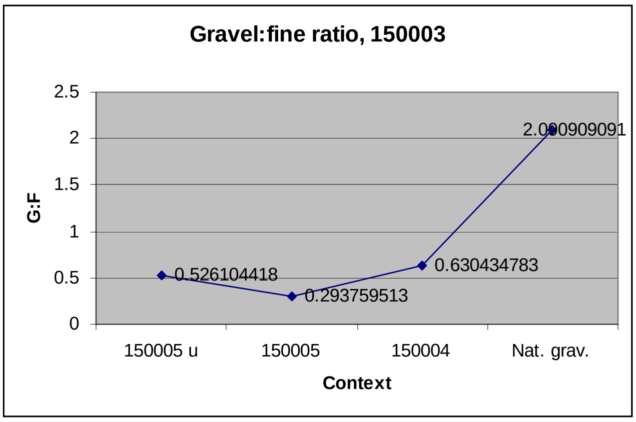
Feature No.	150003
Contexts/age ascription	150005 (upper) 150005 150004 Natural gravel

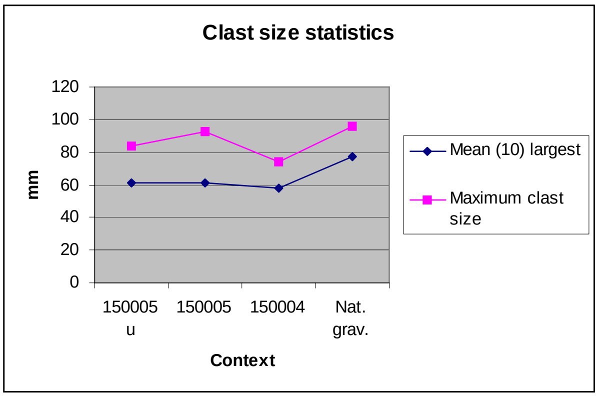












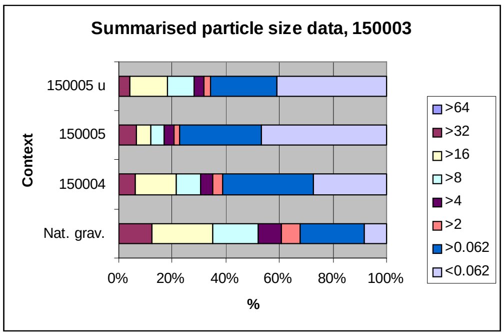
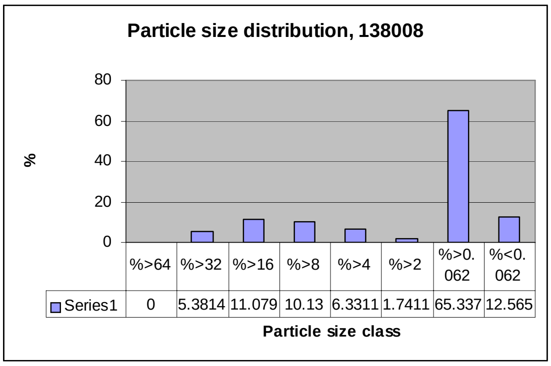
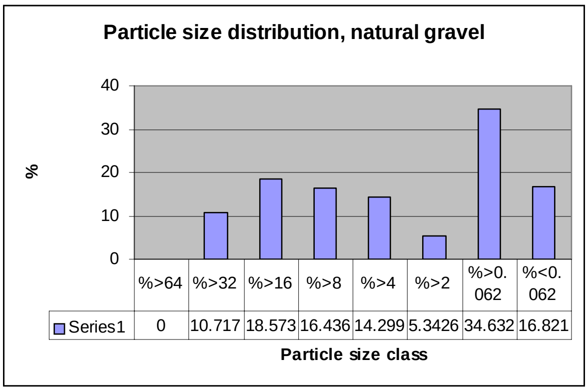
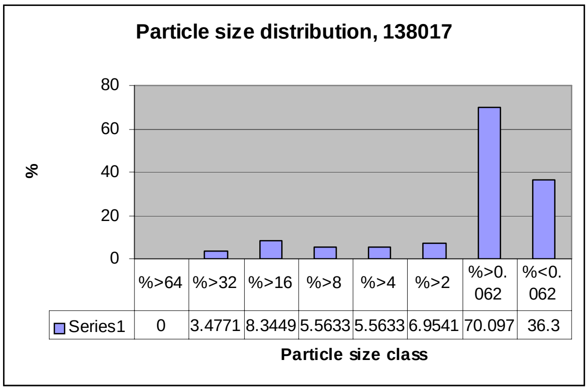


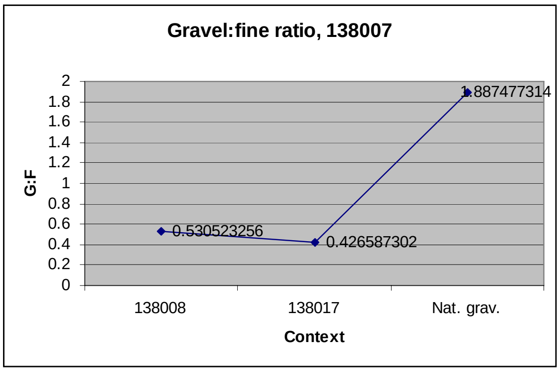
Figure 14

Feature No.	138007
Contexts/age ascription	138008 138017 Natural gravel









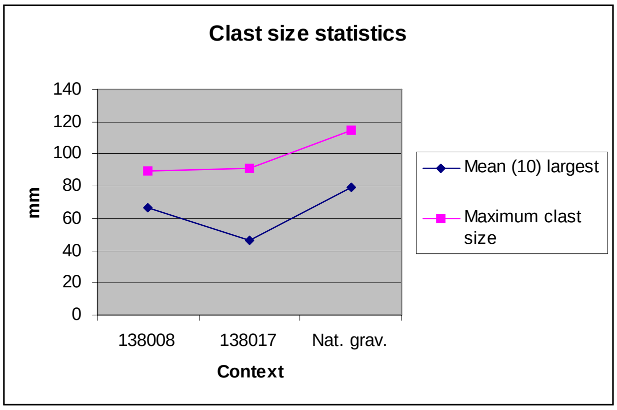
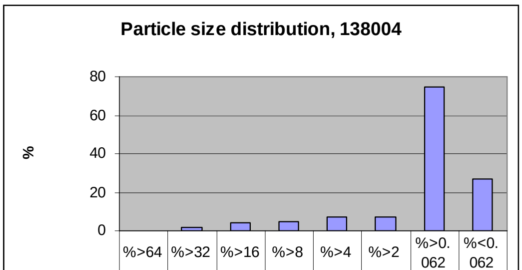
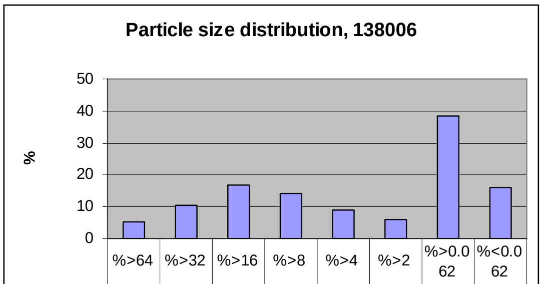


Figure 15

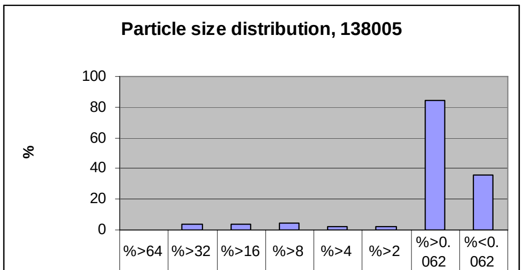
Feature No.	138003
Contexts/age ascription	138004 138005 138006 Natural gravel



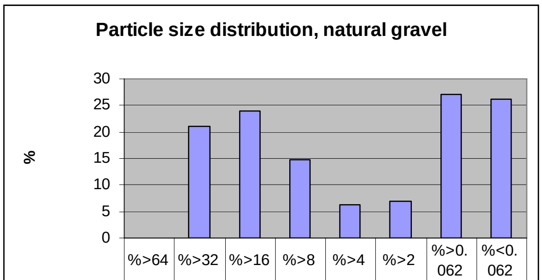
	%>64	%>32	%>16	%>8	%>4	%>2	%>0.062	%<0.062
Series1	0	1.5341	4.4034	4.6023	7.3864	7.2727	74.801	26.715



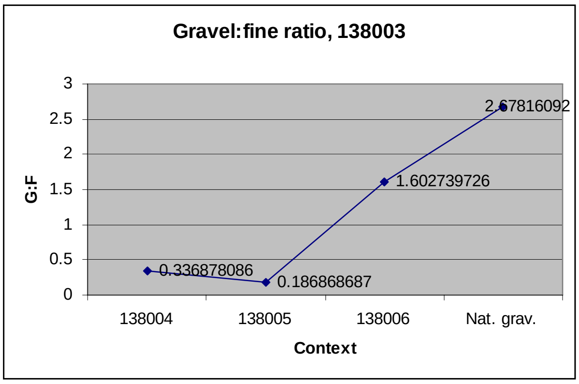
	%>64	%>32	%>16	%>8	%>4	%>2	%>0.062	%<0.062
Series1	5.0526	10.526	16.842	14.105	8.9474	6.1053	38.421	16.177

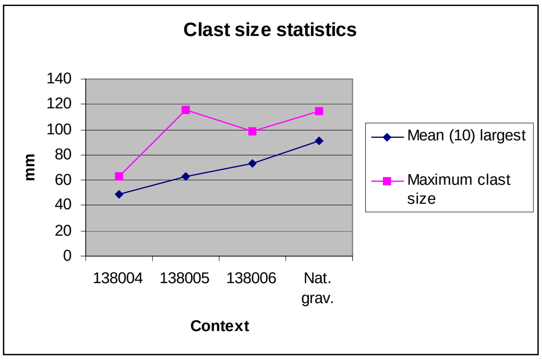


	%>64	%>32	%>16	%>8	%>4	%>2	%>0.062	%<0.062
Series1	0	3.4468	3.8298	4.2128	2.2979	1.9574	84.255	35.887



	%>64	%>32	%>16	%>8	%>4	%>2	%>0.062	%<0.062
Series1	0	20.938	24.063	14.688	6.25	6.875	27.188	26.121





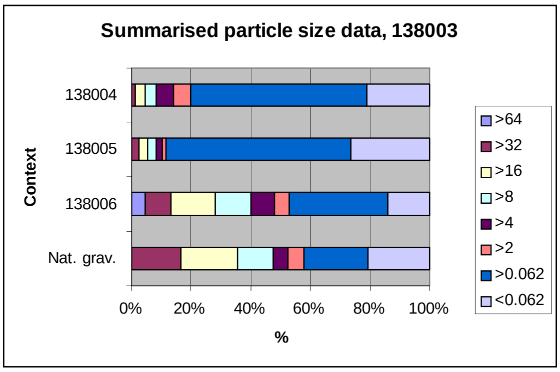
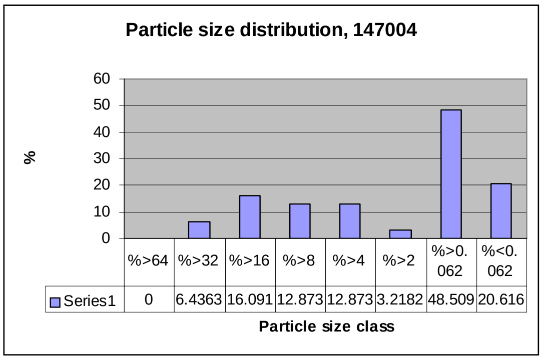
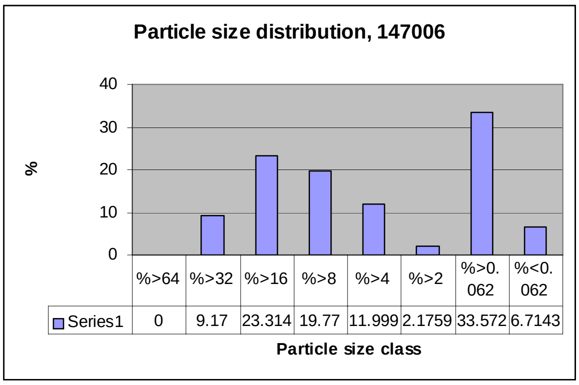
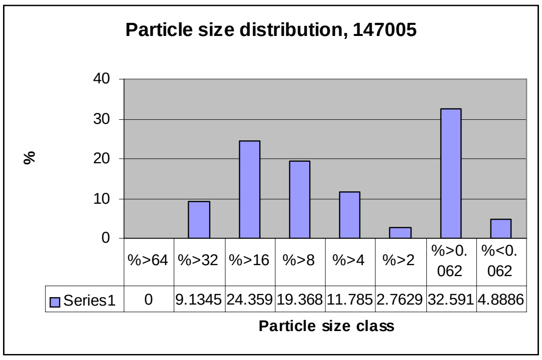


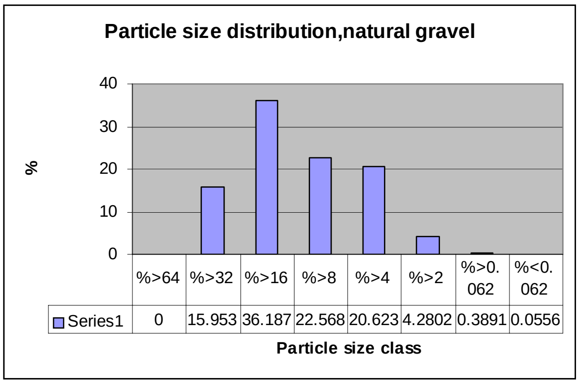
Figure 16

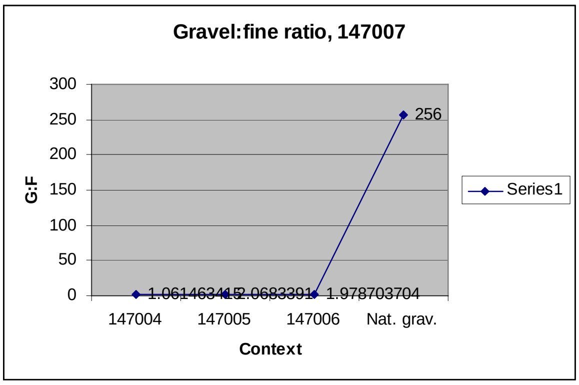
Feature No.	147007
Contexts/age ascription	147004 147005 147006 Natural gravel

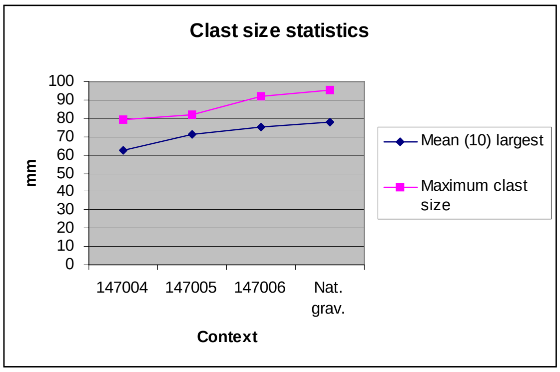












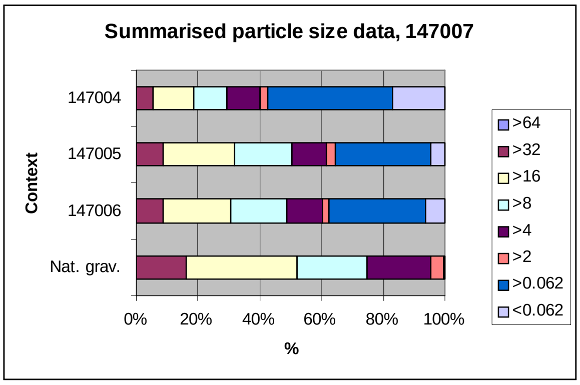
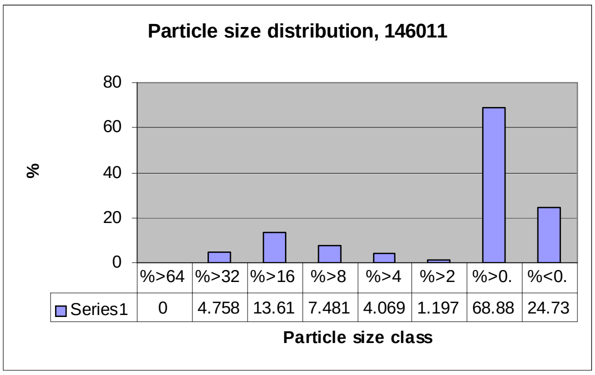
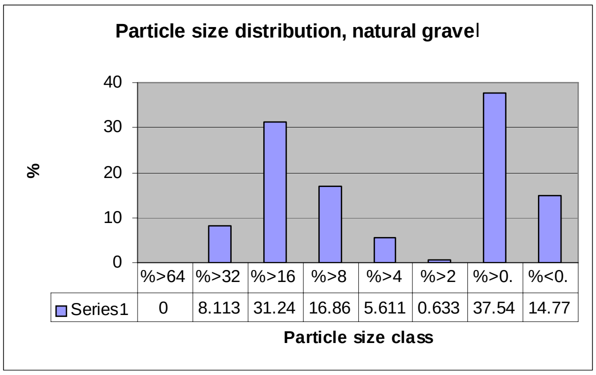
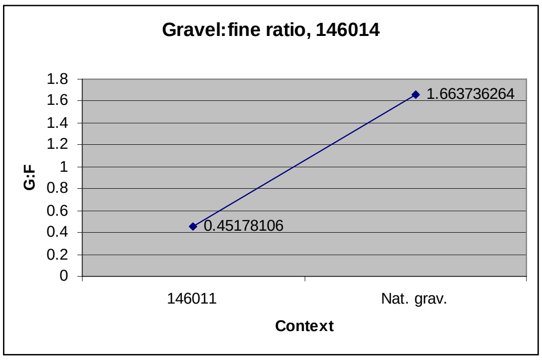


Figure 17

Feature No.	146014
Contexts/age ascription	146011 Natural gravel







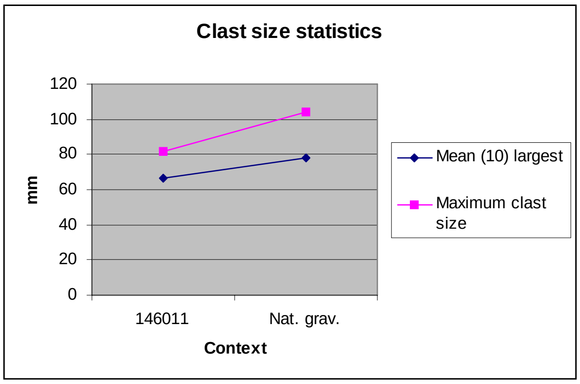
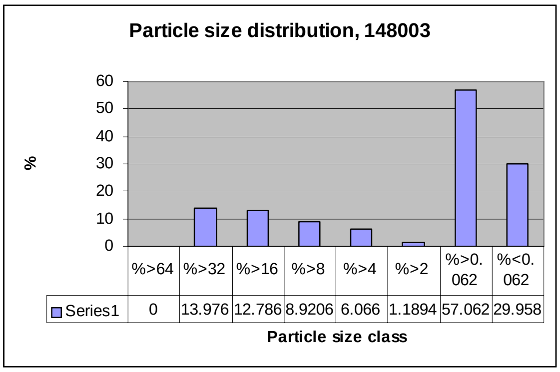
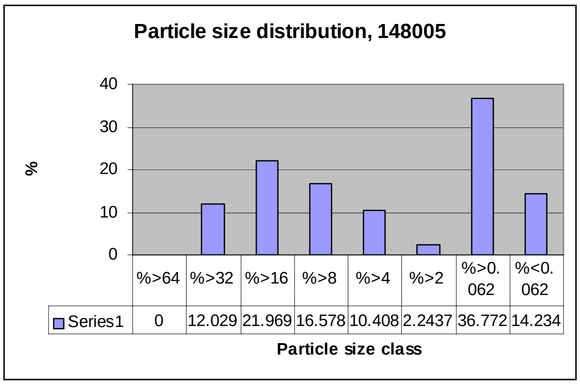
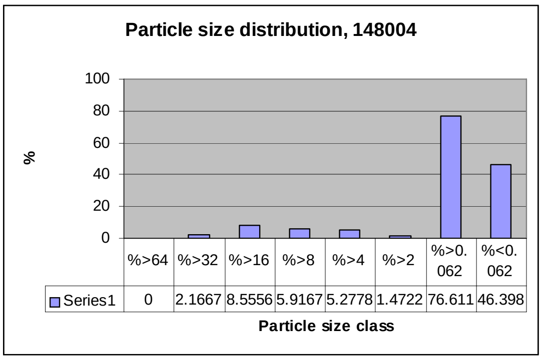


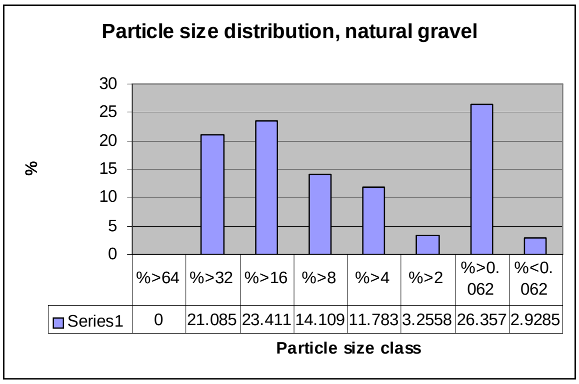
Figure 18

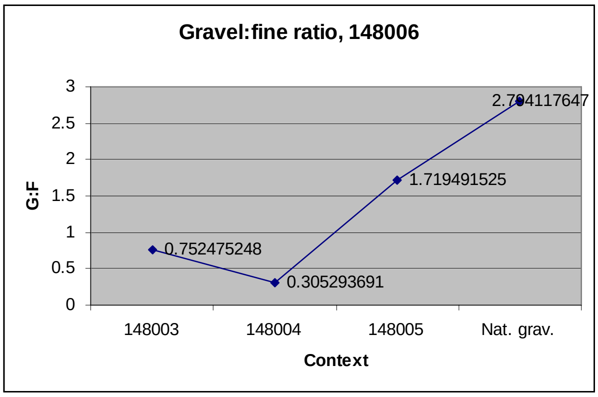
Feature No.	148006
Contexts/age ascription	148003 148004 148005 Natural gravel

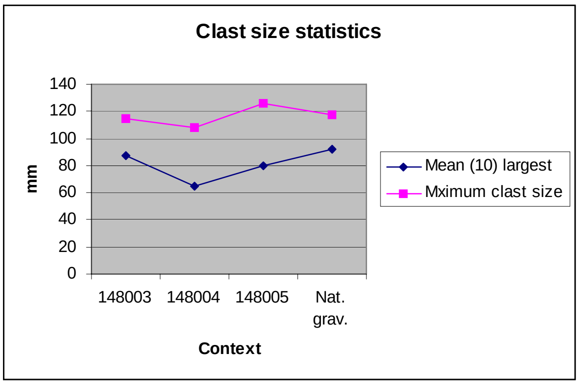












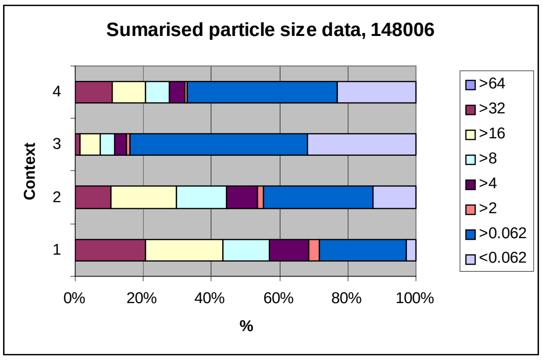


Figure 19. Mass specific magnetic susceptibility results $\chi_{lf}(10^{-6}m^3kg^{-1})$ from a late Bronze Age ditch

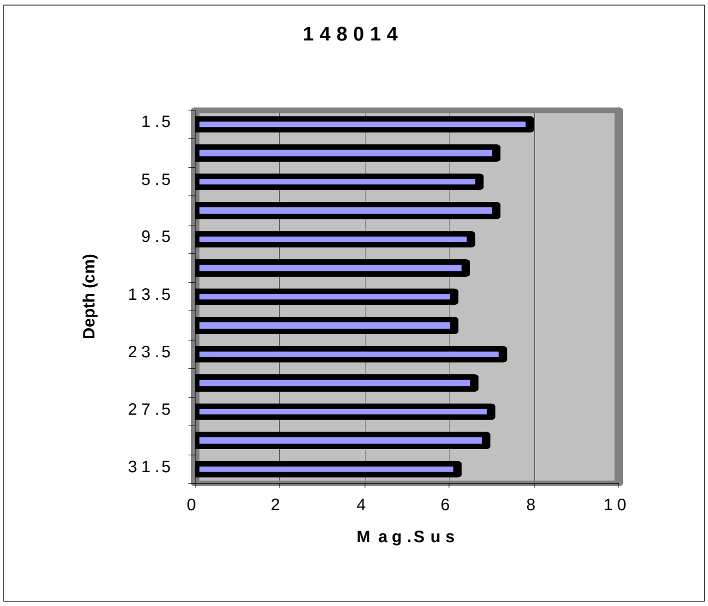


Figure 20. Organic content within later Bronze Age ditch

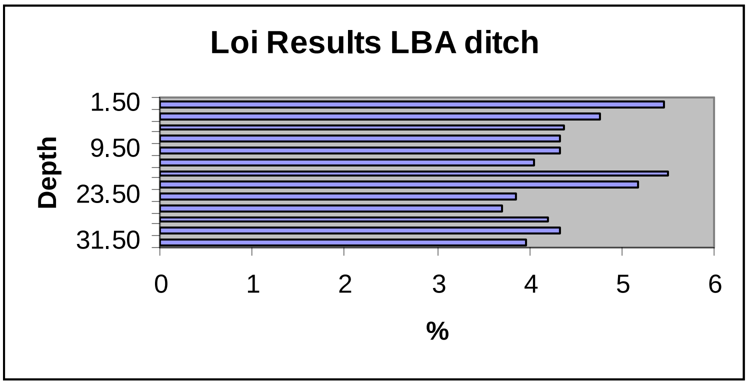
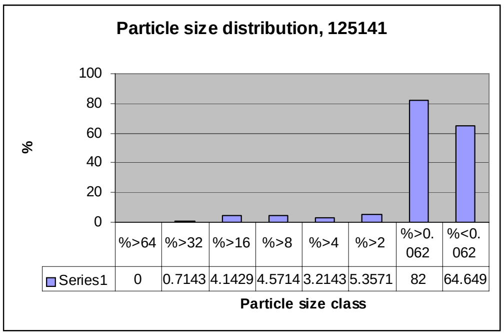
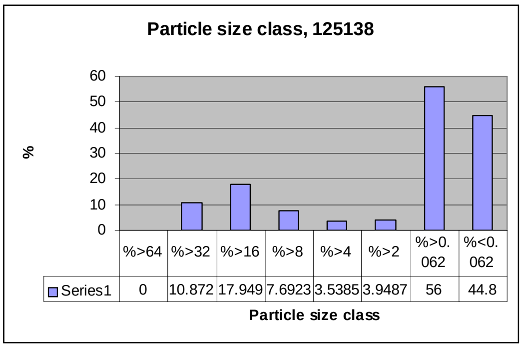
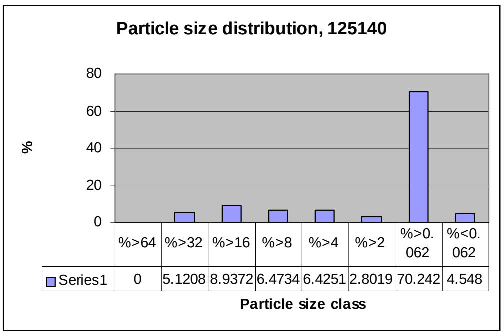


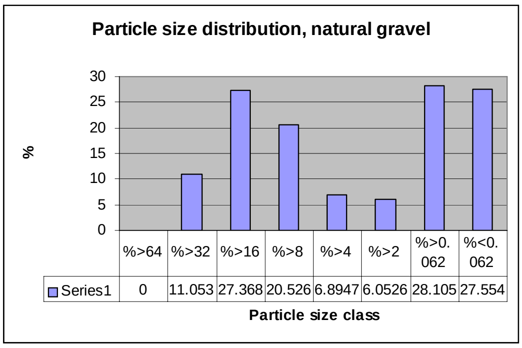
Figure 21

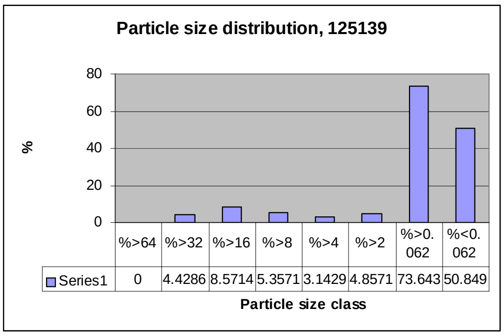
Feature No.	125137
Contexts/age ascription	125141 125140 125139 125138 Natural gravel

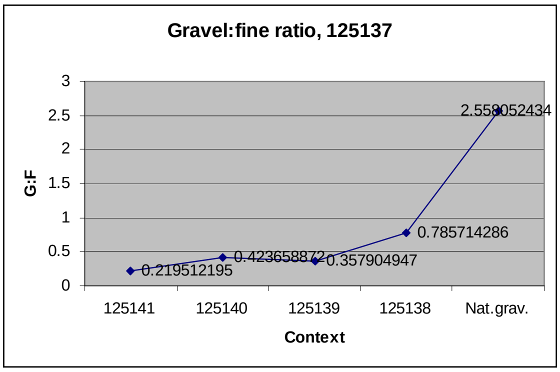












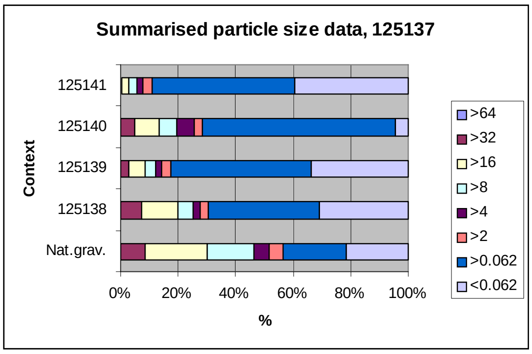
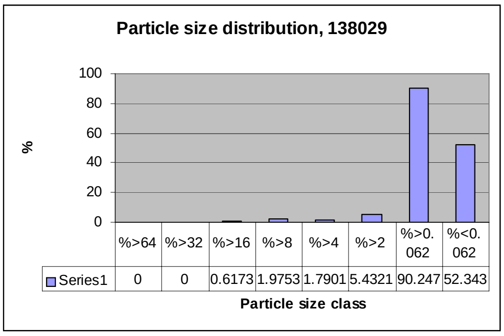
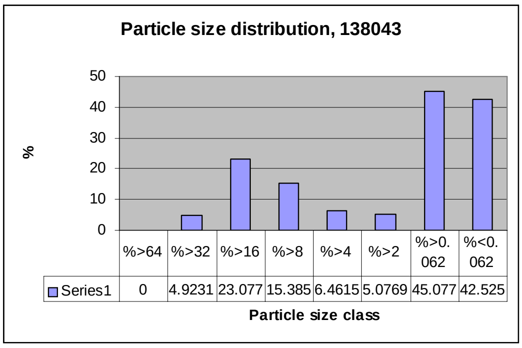
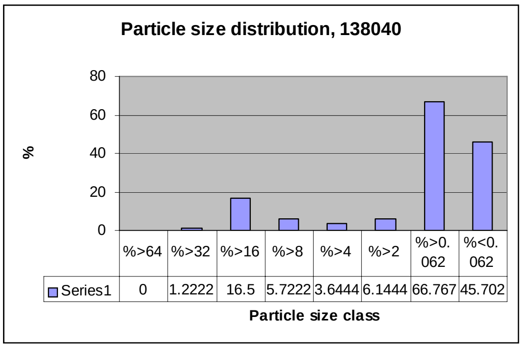


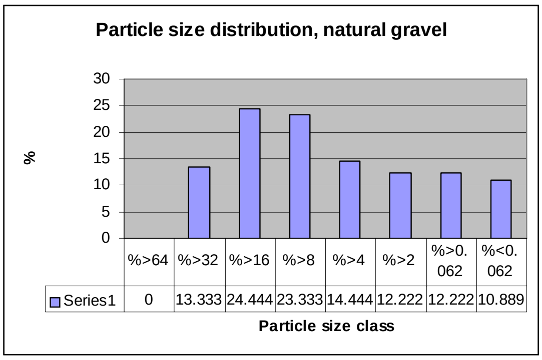
Figure 22

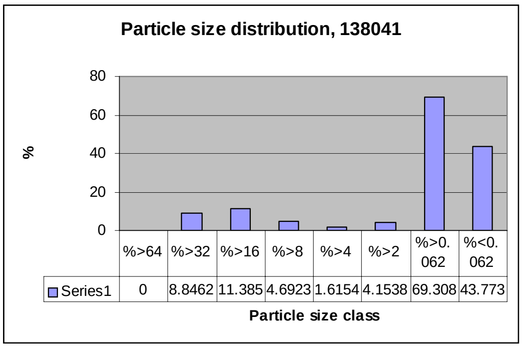
Feature No.	138038
Contexts/age ascription	138039 138040 138041 138043 Natural gravel

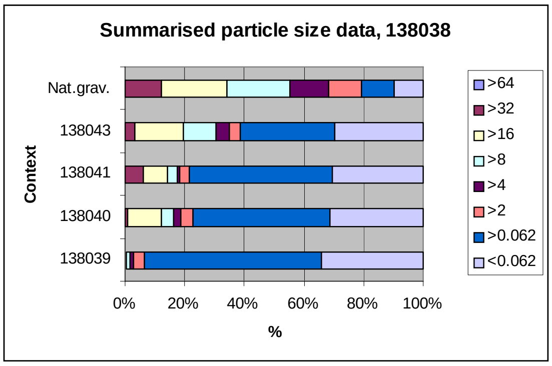


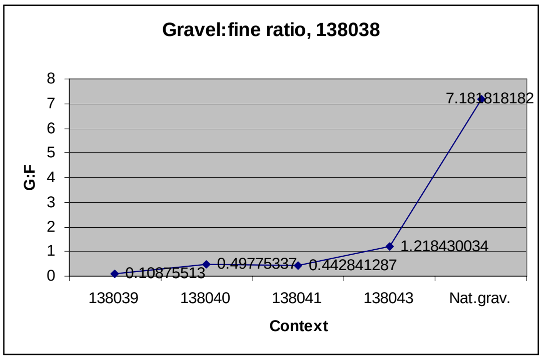












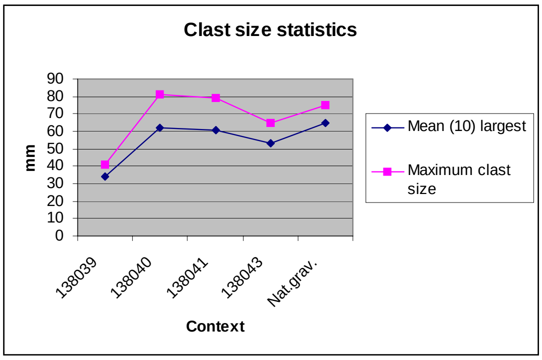
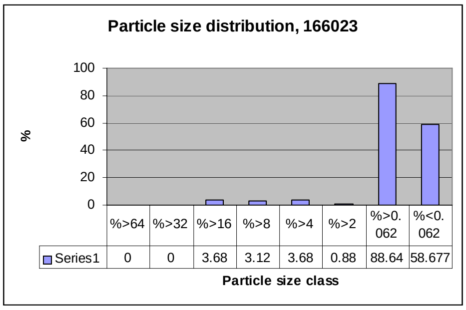
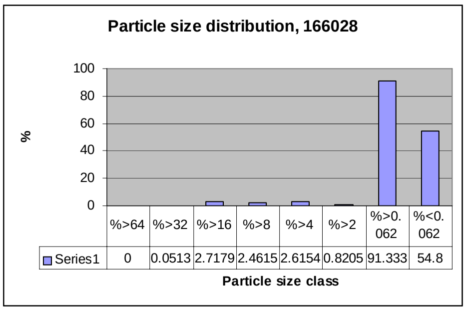
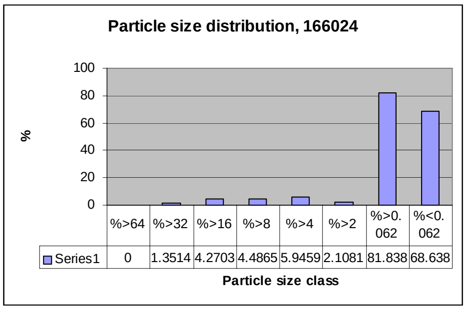


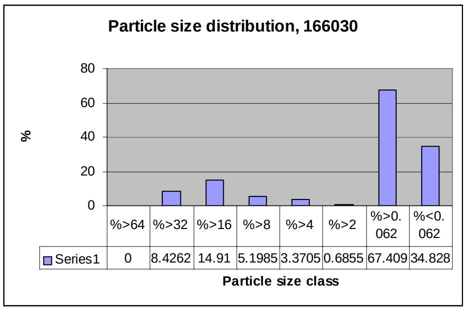
Figure 23

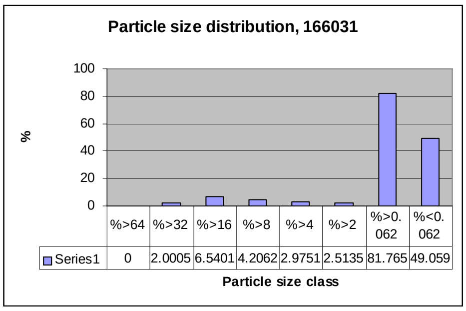
Feature No.	166025	
Contexts/age ascription	166023 166031 166029 Natural gravel	166024 166028 166030

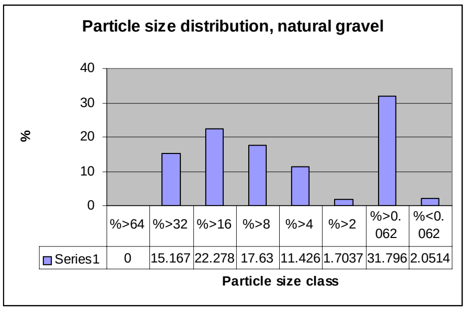


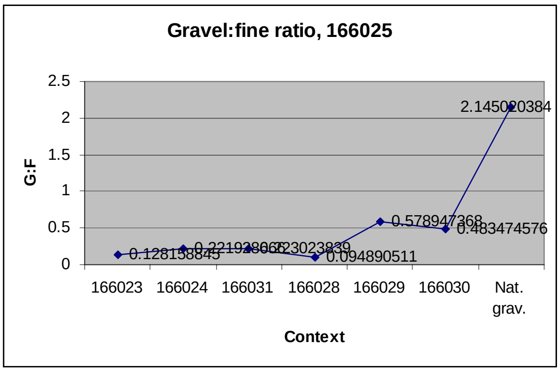












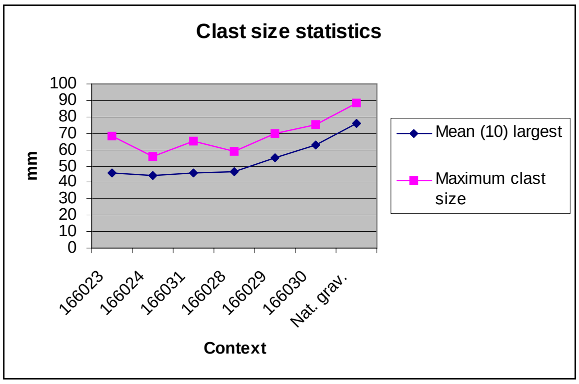
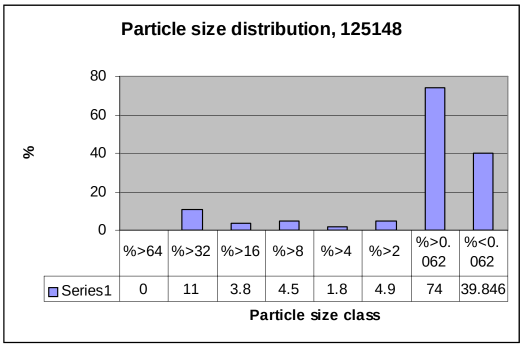
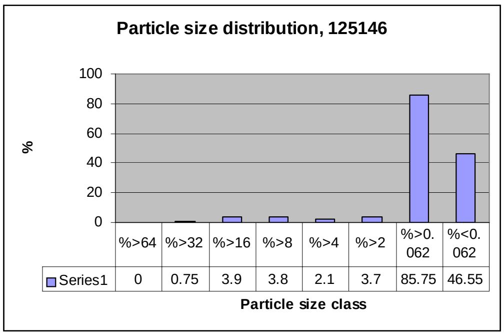
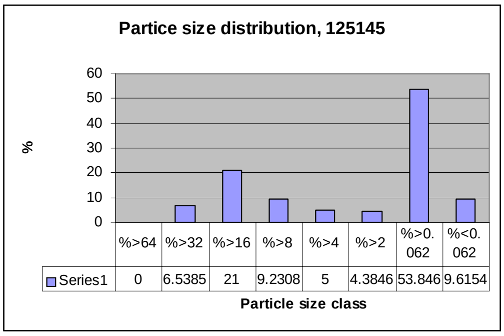


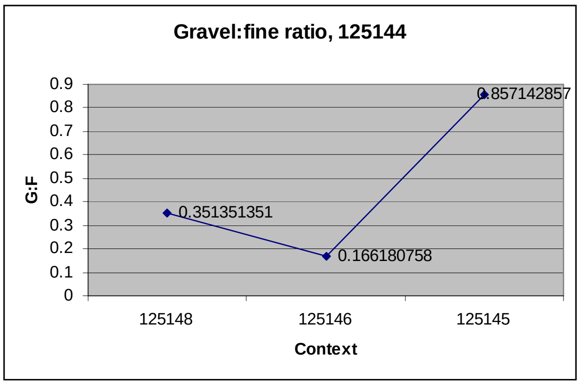
Figure 24

Feature No.	125144
Contexts/age ascription	125148 125146 125145









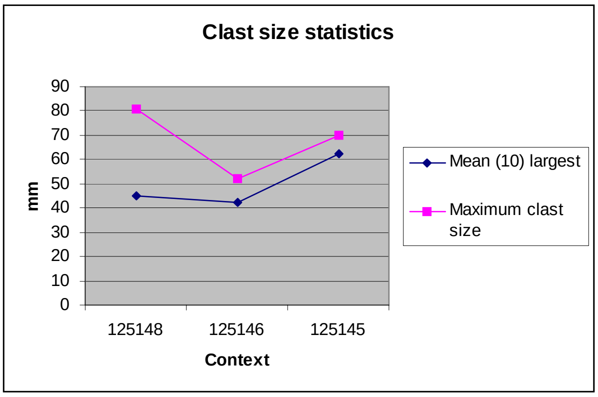


Figure 25

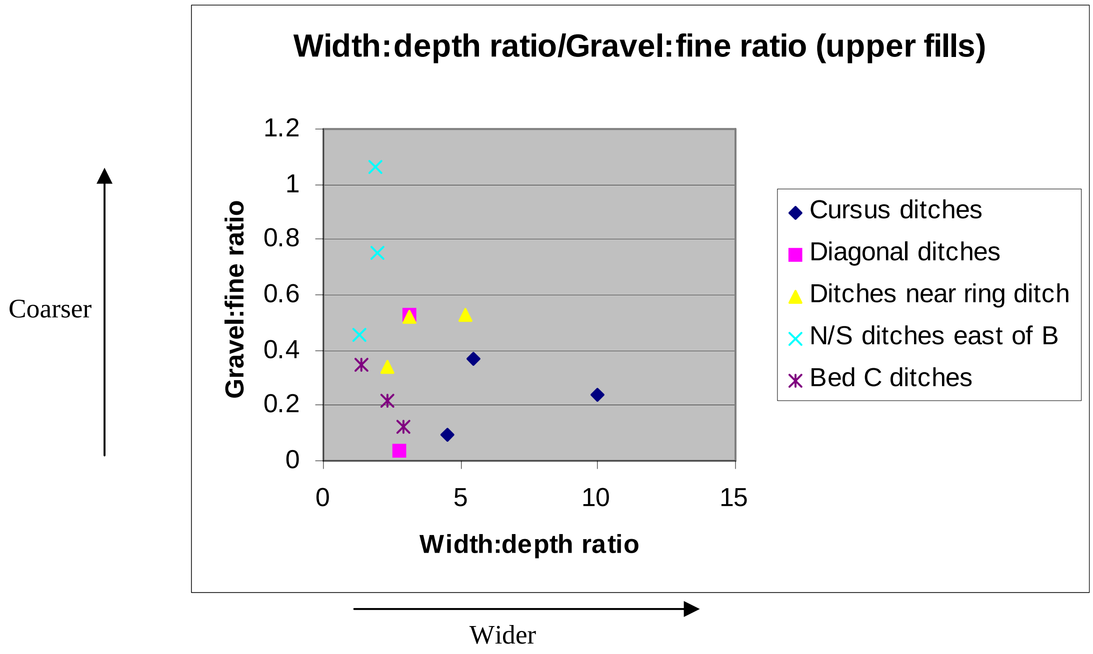
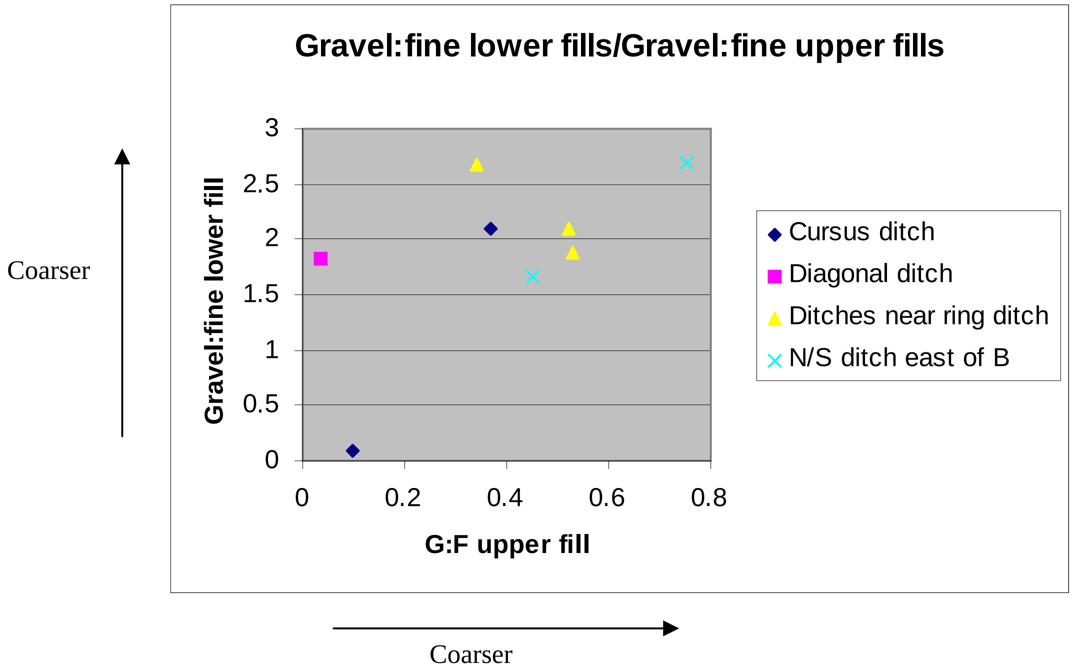

Width:depth ratio/Gravel:fine ratio (upper fills)
Coarser
Gravel:fine ratio
1.2
1
0.8
0.6
0.4
0.2
0
0
5
10
15
Width:depth ratio
Cursus ditches
Diagonal ditches
Ditches near ring ditch
N/S ditches east of B
Bed C ditches
Wider

Figure 26



Gravel:fine lower fills/Gravel:fine upper fills
Gravel:fine lower fill
3
2.5
2
1.5
1
0.5
0
0
0.2
0.4
0.6
0.8
G:F upper fill
Cursus ditch
Diagonal ditch
Ditches near ring ditch
N/S ditch east of B
Coarser
Coarser