

Report on soils infilling a ditch and associated positive lynchet at
Streatley Warren, Berkshire.

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During the summer of 1978, excavations were carried out by the Berkshire Archaeological Unit (Field Officer, Julian Richards) of a substantial lynchet dating from Late Bronze Age/Early Iron Age to Late Roman times. The feature consists of a "V" shaped ditch cut in Chalk Head, which was apparently partially backfilled with rammed chalk and soil mixture. The positive lynchet itself comprises colluviated soil, and flints, which are especially concentrated in the upper part of the ditch fill. Lines of colluviated flints can be traced upslope from this concentration, which has had the effect of making the negative lynchet downslope relatively poor in these flints. The soil was described, and analysed for its particle size characteristics. In addition it was sampled for snail analysis.

Soil Report: Streatley Warren (SW78A)

Site: SU 553807

Soil subgroup: Colluvial (non-humic) rendzina

Soil series: Icknield (deep phase)

Vegetation: base-rich grassland

Slope: micro-relief, 20° SE

Parent material: Chalk Head

Horizon, depth, cm.

L 0.5-0	Grass turf.
A1 0-15	Dark greyish brown (10YR4/2) moderately strong sandy silt loam; strongly developed fine to medium crumbs, to medium subangular blocky; abundant fine roots; high organic matter content; earthworm burrows; slightly stony with fine chalk fragments and flints; few snail fragments; clacareous; clear wavy boundary.
B1 15-(25)43	Yellowish brown (10YR5/4) moderately strong sandy silt loam; strongly developed medium subangular blocky to fine prisms; common medium roots; low organic matter content; moderately stony with medium to large flints (includes a flinty layer), chalk fragments; snails, burrows present; very calcareous; gradual, irregular boundary.
B2 (25)43-120	Yellowish brown (10YR5/6) moderately strong clay loam in the upper part and sandy silt loam in the lower part; strongly developed medium prisms; common medium roots; low organic matter content except for dark greyish brown burrow infil (15%); increasingly stony with depth to an extremely stony layer at base of the horizon comprising large flints; horizon also contains much chalk brash and few snail fragments; very calcareous; clear "V" shape boundary.
C1 120-143	White (10YR8/1) to very pale brown (10YR7/4) moderately strong chalk brash - B horizon mixture; appears compacted; sharp "V" shape boundary.
C2 143+	Chalk Head.

Analytical Data:

Horizon	pH(H ₂ O)	Sand	Silt	Clay
		%	%	%
A1	8.0	46	37	17
B1	8.2	40	42	18
B2 upper	8.2	46	33	21
B2 lower	8.5	36	45	19
C1	8.6	N.D.	N.D.	N.D.

Comments:

The ditch section forms a very deep phase of the Icknield Soil Series. Grain-size analysis of this rendzina shows it to be predominantly a sandy silt loam, but it is interesting to note that the maximum silt content occurs in the lower part of the B2 horizon (above the artificially compacted and homogenized C horizon) which was also characterized by very flinty conditions. The high silt and flint content of this lower soil horizon (B2) may suggest the rapid concentration of silt and perhaps surface flints, possibly during a later period of agricultural usage. The induration of the C horizon may also be in part due to the movement of calcium carbonate down-profile and its accumulation in this horizon.