Report 1974

GREAT YARMOUTH - Clay samples

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Twelve samples taken from clay floors and ovens at various levels on the site were examined in an attempt to determine their origin. According to Mr. W. Corbett of the Soil Survey there are three possible local sources of clay; the chalky boulder clay from just inland, the sandy clays of the Norwich brick earths which outcrop on the coast a few miles south of Great Yarmouth and alluvial clays from the river.

The samples were examined visually both before and after firing to about 700°C in an oxidising atmosphere.(1) One sample, no. 350, was X-rayed "edge on" to see if the darker layers in it were due to iron deposition. No definite X-ray opaque layer was noted, although the laminar structure of the deposit was clearly shown. The dark bands in this and some of the other samples are therefore most likely due to staining by organic matter.

As can be seen from the table below over half the samples were chalky, although some (Group D) were far finer textured than others (Group B). The non-calcareous deposits were also divided on a texture basis, Group C being finer than the one sample which comprised Group A. This sample also contained far less iron than any of the others.

Table of results

Site no.	Calcareous	Texture	Group	State as submitted
68	no	finer	C	unfired
163	yes	coarser	B	part fired
210	no	coarser	A	"
249	yes	coarser	B	chalky fired
296	yes	finer	D	unfired
308	no	finer	C	part fired
312	yes	coarser	B	unfired
350	yes	coarser	B	"
438	yes	finer	D	part fired
455	yes	finer	D	unfired
456	yes	finer	D	"
457	no	finer	C	"

Group B are almost certainly chalky boulder clays. Group D, while still being calcareous, are of a far finer and more even texture which would

tend to indicate water sorting. They may well be boulder clays reworked by the river and so could be described as alluvial. Group C are non-calcareous clays, probably of alluvial origin. Sample 210 (Group A) may represent the Norwich brick earths or it could come from a coarser alluvial deposit. Without comparative material of known origin it is difficult to be more precise in assigning a source to any of the groups of material examined.

Reference

(1) Biek, L. (1963) Archaeology and the microscope.