

TRIA_216_217

R.599. Luck's bush pit survey

The report on the clay reserves of Luck Bros at Haines Siding (p. 17) has indicated the general composition in the area and this work has been supplemented by ceramic investigation on the various drill hole samples.

The area appears to be of a basic clay type, intermixed with sandy material, the percentage of which varies considerably from place to place.

Is addition, there appear to be pockets of material which are alien to the main clay type which can be usefully processed.

PROCEDURE

After initial sand determinations on representative samples from various depths in the drill holes, composite samples were extruded and the resultant bricks fired in the laboratory at 1000° C. Additionally, as a control, bricks of each mixture were fired in the factory kilns.

RESULTS

Drill hole	Depth (ft)	% Sand	Fabrication	Colour of fired laboratory product
A	0-18	23.5}	extrudes well	light pink
A	18-21	26.5}		
A	21-24	23.8	poor extrusion	dark red
B	0- 9	51.7	pressed sample only	light red
C	3-12	24.9}	extrudes well	dark red
C	12-18	25.6}		
D	0- 9	39.5}	very stiff extrusion; tendency to dog-ear	red
D	9-18	44.6}		
D	18-27	48.2}		
D	27-30	48.1}		
E	0- 9	33.1}	very stiff extrusion, little plasticity	red
E	9-18	51.0}		
E	18-30	38.3}		
F	0- 9	24.7}	extrudes well, good plasticity	pink
F	9-18	23.0}		
F	18-27	29.3	extrudes well	off white
G	0- 9	37.3	very poor extrusion	red
G	9-18	15.6}	extrudes well, good plasticity	pink
G	18-24	18.7}		
H	0-18	30.3}	good extrusion	light red
H	18-24	34.8}		
H	24-36	42.6}		

Darker shades of the same colour were usually obtained with the factory-fired samples. Sample F 18-27 ft which was a grey shale material fired to a light tan colour. Some colour changes are to be expected in view of the difference in temperature, cycle of firing, kiln atmosphere, etc.

CONCLUSIONS AND RECOMMENDATIONS

The clay reserves of the area are not homogeneous and should not be mined as an isolated pit but along a face of at least a quarter of a mile in length. This will enable a more uniform mixture to be obtained and will give an additional bonus when isolated outcrops of unusual material (i.e., F type) are discovered.

As the production plant becomes geared to a particular cycle of clay processing, uniformity of material becomes increasingly important, so that initial expense in opening up such a large face will give subsequent benefits when considered in relation to future production.