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# PETROLOGICAL EXAMINATION OF POTTERY FROM A MEDIAEVAL THIRTEENTH CENTURY KILN AT RHUDDLAN, CLWYD

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## Introduction

A number of sherds of Mediaeval pottery considered to have been produced at the thirteenth century kiln at Rhuddlan, some of them apparent 'wasters', were submitted for a detailed fabric examination in thin section under the petrological microscope. In addition, heavy mineral separation was carried out on a few of the larger sherds. The main object of the analysis was to characterize the fabric of the pottery to see if it is homogenous or if there are any noticeable variations in the paste. All of the sherds submitted were initially studied macroscopically with the aid of a binocular microscope (x 20). Munsell colour charts are referred to together with free descriptive terms. Also provided from the site was a sample of local boulder clay. Rhuddlan lies at the mouth of the River Clwyd. The solid geology of the area is made made up of Bunter Sandstone, Pebble Beds and Basal Breccias, with Millstone Grit, Culm Measures and Carboniferous Limestone Closeby (Geol. Survey of Gt. Britain 1" Series). The surface geology of the region is composed mainly of Boulder Clays bordered by Glacial Sands or Gravels and Marine Aluvium.

## Petrology and Fabric

In the hand-specimen all of the sherds appear in a hard, slightly roughish sandy fabric, ranging in colour from reddish-yellow (5YR 6/6) to dark grey (10YR 4/1), often with a patchy dark yellowish-brown or brownish-green (10YR 4/4 - 5Y 6/4)

glaze on the outer surface. Selective thin sectioning suggests that there is little fabric variation between the samples. The non-plastic inclusions are generally made up of a groundmass of numerous subangular quartz grains, the majority under 0.10mm in size, together with a scatter of larger grains ranging up to 0.80mm across, flecks of mica, some quartzite, iron ore and occasionally small pieces of sandstone, fine-grained silica and altered igneous rock and discrete grains of felspar and pyroxene. Heavy mineral separation produced very little in the way of heavy mineral grains, although a few grains of barytes and pyroxene were noted.

The local Boulder Clay was also thin sectioned and subjected to a heavy mineral separation for comparison with the Mediaeval pottery. The clay contained many coarse inclusions including fragments of granite and mircogranite, devitrified rhyolite, lava, sandstone and discrete grains of felspar, biotite, amphibole, pyroxene and much quartz. Heavy mineral separation again produced a very low assemblage, although barytes and pyroxene were identified.

On this evidence it seems unlikely that Boulder Clay was used for the Rhuddlan Mediaeval pottery unless considerably refined, though there are points of similarity between the pottery and the clay in that some inclusion-types are common to both. It is perhaps more likely in this instance that one of the other local clays was primarily used for pottery making. However, even if this proves to be the case, Boulder Clays and Glacial Sands are common in the Rhuddlan area, and the materials for the Mediaeval pottery may have been chosen from a heterogeneous deposit which incorporated remnants of Boulder Clay.