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ANCIENT MONUMENTS LABORATORY REPORT No. 4300

Examination of Samples from Raisthorpe Manor Long Barrow, Yorkshire

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The material examined consisted of three samples of calcareous material taken from the cremation area of the long barrow at Raisthorpe Manor. The positions from which each sample was taken were:

Sample 1 (AM840185) - Material from the cremation furnace of the facade bedding trench.

Sample 2 (AM840186) - Sample from in front of the cremation furnace on a platform of chalk slabs.

Sample 3 (AM840187) - Sample from paved area disturbed by Mortimer's excavation in 1863.

Each sample was analysed qualitatively using energy dispersive X-ray fluorescence and the compounds present in each sample were identified using X-ray diffraction. Part of each sample was treated with dilute hydrochloric acid to remove the calcium carbonate present and the insoluble residue was then also analysed using X-ray diffraction.

Each of the samples was found to be, essentially, calcium carbonate (CaCO_3) containing silica inclusions and a small amount of organic material. Sample 2 (AM840186) also had burnt wood running through it. No calcium phosphate was found in any of the samples, which implies that crushed bone was not present in significant amounts. Each of the samples could have been either puddled chalk or lime originally, as the calcium hydroxide of slaked lime will react with carbon dioxide in the atmosphere to give calcium carbonate.