Groundwell Ridge Villa Analysis Project.
Pr 3641

February 2008 (Update 6)

The project specialists are still working hard behind the scenes analysing all the artefacts and eco-facts from the site, this is a laborious task that is only now drawing to a close. The most recent elements of the project to receive special attention were those relevant to Carbon 14 (C14) dating. One task highlighted in the August update, was archæobotany, which together with archæozoology have been taken a stage further. Samples need to be selected for suitability for C14dating and each cereal grain or fragment of wood must be chosen individually. The site is broken down into three main phases for this. Phase 2.1 which is the phase prior to villa construction, Phase 2 (general) which is the occupation phase of the villa and Phase 3 which is the period of Post-Roman occupation. Suitable material must be chosen from each of these to help refine the date of the different elements of the villa.

Fragments of wood from one of the villa's hypocaust furnaces

To be suitable, the material chosen for dating must definitely be from that phase and must preferably be a small, short-lived fragment. The preferred materials for dating from archæobotanical assemblages are cereal grains and twigs of trees. Both of these are short lived which negates the problem of C14 residuality which is when a piece of wood come from, for example, a long-lived tree. When trying to date it, it will be impossible to know if the wood fragment came from the heart of the tree or the outside, which could give a potential difference in date of 500 years.

A meeting was convened between the site team and the specialists where each possible source of material was analysed for its suitability. The site team had definite ideas on the features to be dated and the specialists advised on whether or not they would work. At the end of the meeting it was decided to use animal remains too, as some bones from within the villa were found articulated, (still together). This meant that they had not been disturbed since being deposited which ensured they had not been moved.

Members of the scientific dating team, the environmental science team and the site team discussing the C14 programme

In the end, wood, wheat grains and bones from cattle, sheep /goat and dog were chosen. These primarily come from a deep curvilinear feature and an oven which are the earliest features on site, representing Phase 2.1, the two hypocaust furnaces which represent phase 2 and four of the postholes of the Post-Roman structure. These samples will be sent off for analysis in the next couple of weeks and the results will hopefully be back in time for Update 8.