GUIDANCE FOR APPLICANTS TO THE HERITAGE GRANTS FUNDS

Applications to Fund Radiocarbon Dating

Whilst we welcome applications for the funding of radiocarbon dates from individual/community projects*, we are finding that, on occasion, applicants have not fully considered processes and procedures relating to sample selection, which could lead to unreliable dates. It should be remembered that poor or unreliable dates can be worse than no dates at all! As such, we have put together this short guide for you to read before requesting funds for radiocarbon dating.

When selecting samples for radiocarbon dating it is vital that you consider two things: the context you are dating and the nature of the material that you wish to date from that context.

Archaeological contexts are sometimes sealed and untouched, but the disturbance of contexts by later activities (both natural and human) can also be common. It is important to consider the possibility of disturbance of a context and the implications this may have on the material selected for dating. It should not be assumed that the sample material within a context is necessarily the same age as the context. For example, a fully articulated sheep skeleton at the base of a ditch is likely a deliberate deposit, contemporary with when the ditch was cut. However, a single sheep bone in the upper fills of a ditch may not be a deliberate deposit and could be residual material which has washed into the ditch at a later date. When trying to identify when the ditch was dug, the former would be a good sample to date and the latter a poor choice. Similarly, a sealed hearth containing a thick deposit of twiggy charcoal would be good to date, whereas a few fragments of charcoal in a soil layer, which could be the result of worm action rather than human activity contemporary with the layer, would be poor.

The selection of material to date is also of key importance. Materials to be dated should studied by a specialist prior to submission and their suitability for dating assessed. All materials should be identified to species and their age at deposition should be considered. For example, when dating tree charcoal, twigs from relatively short-lived species, such as hazel or hawthorn, are far preferable to dating oak heartwood, which could have been hundreds of years old when the tree was felled. There is also the problem of timbers being reused, which means the felling date of the tree may have been much earlier than the context the sample ends up deposited in. These issues are often referred to as the “old wood” effect.

Similarly, bone specialists are able to identify many bones to species and are able to describe taphonomic processes, such as weathering, abrasion and gnawing, as well as bone preservation, which will help in sample selection. Fresh, unweathered, preferably articulated bone is much more suitable for dating than single, unidentified fragments.

You may find that commissioning a specialist report on a sample costs as much as the radiocarbon date itself but this is an important step that should not be missed. Specialists also require contextual information about the site and details on your sampling strategy, so ensure you have these prepared.

Ensuring a good sample from a secure context means that the date returned from the sample is more likely to date the context from which it was recovered. It is no longer acceptable to date material “for the sake of dating”.

Checklist:

- Context security – is the context sealed or disturbed?
- Taphonomic security – how confident are you that the sample will date the context?
- Identification of sample by specialist – funding will be necessary
- Selection of “best” sample for radiocarbon dating – in consultation with the specialist
- Radiocarbon dating – funding will be necessary

**Please note that we do not grant funding for commercial projects*

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