

Burnt Mounds – an extract from The Kingsdale Head Project

by Arthur Batty

Extensive studies have been undertaken on burnt mounds and it is not proposed here to give a general description, but more information on these features can be found in various publications some of which are mentioned below. For a web site reference English Heritage (www.eng-h.gov.uk/mpp/mcd/sub/bm3.htm) give a good general description and discuss some possible uses.

Thought by some archaeologists to have been used for cooking, or as saunas, the structural evidence in Kingsdale does not back up use for either of these purposes. In Ireland some burnt mounds are thought to be related to prehistoric cooking and are called *fulacht fiadh*. *Fulacht* refers to cooking and *fiadh* variously means ‘deer’, ‘out of doors’; or ‘of the wild’ (O’Kelly¹, 1989). At Ballyvourney, Co. Cork, Ireland, O’Kelly uncovered a rectangular, wood-lined trough that filled with water seeping in from the surrounding peaty area and at Killeens, Co. Cork an oakwood trough was uncovered (*ibid*). Diarmuid A O’Drisceóil who according to O’Kelly has identified 2000 *fulacht fiadh* in Ireland, discusses the evidence of burnt mounds being used as cooking sites or saunas in an article for *Antiquity*, concluding that “the precise function of burnt mound is as yet not fully clear” (O’Drisceóil,¹ 1988). Evidence from a burnt mound at Ceann nan Clachan, North Uist, excavated between 1995–1997, was similarly inconclusive (Armit & Brady, 2002) although, in this case, a sauna or ‘sweat lodge’ theory was favoured.

Closer to the Kingsdale site, in the Yorkshire Dales, Tim Laurie investigated 64 burnt mounds that gave similar dates to 2/A2/B2 and he explained that Sioux Indian tribes of North America were known to use these for ritual cleansing of the body i.e. ‘sweat lodges’ (or saunas) and for relaxation (Laurie, 2004).

The stone and timber tanks on the sites mentioned above bear no similarity to the paved feature in Trenches 2/B2. Even if the paved area had a raised stone edge, and had been capable of holding water, its physical dimensions would be many times larger than any water tank currently known. A tank this size would need a large

amount of stone to heat this volume of water and the surface area would probably have lost heat faster than it could have been created. Its use as a cooking tank seems unlikely although a theory concerning producing some product for *tenderising food* is still being investigated. *This will be discussed further below.*

It also seems unlikely that the structural features in 2/B2 could be a sauna or sweat lodge as the size of the structure goes far beyond what is required for this use. Possibly the nearest comparison of a theoretical Mesolithic sweat lodge would come from the Plains tribes of North America although they are also found in Siberia. The basic form of a sweat lodge was dome-shaped with a framework constructed from willow. This frame was covered with hides or blankets and a small pit was dug in the middle of the lodge (Mails¹, 1991). The variations of design for sweat lodges are fairly universal with a few minor differences (Laubin and Laubin¹, 1977). The scale and design of these sweat lodges are inconsistent with Trenches 2/B2, and indeed are more in keeping with Trench 6 described below. Having provisionally ruled out cooking, a sauna or sweat lodge, the question remains – what is the reason for the burnt stone?

Stones heated and then placed in water usually crack very randomly. However, the stones in Trench 2 were very even in size, suggesting that they were broken before being burnt. One explanation may be that broken stones were added to whatever was being burnt e.g. bracken, wood, heather, leaves, rushes etc. Filling a sod kiln with alternate layers of stone and plant material would create very high temperatures – ruling out charcoal production that requires a slower, smouldering heat with control over airflow. In the process plant material would be reduced to ash, the only material evidence remaining. If this analysis is correct, the next question is – what is the purpose of the ash? Microscopic examination of the ash suggests that a large amount of branch material (possibly birch sp. *betula*) was being burnt. If the process being carried out happened in summer or autumn there would have been a lot of leaves being burnt, and branches have a much higher ratio of bark to wood, that produces more ash than main stem timber.

There is a long history of the use of ash, including fertiliser; traditional salt (www.tearfund.org/tilz); soap; as a pesticide and for removing wool from hides by the

production of lye (potassium hydroxide). Briefly lye is produced by immersing ash in water, leaving it to stand and separating the ash from the water. At this stage the water is lye (*ibid and Dundonald, 1803*). There are obviously no records for the use of lye in the Bronze Age, but there would be large numbers of sheep and cattle - both animals have a need for pest prevention and also have hides and skins that need processing. There could also have been uses in prehistory for both ash and lye of which we are currently unaware. Work is continuing into this hypothesis. It is for these reasons that current thinking on Trenches 2/A2/B2/C2 is that they may be related to the processing of wool and fulling (Jeffery 1990); the processing of hides and/or for pest control e.g. dipping sheep. M.L. Ryder describes one process of washing sheep as follows:

“In Hungary the sheep were first soaked for up to 20 minutes in water heated to 84°F (28°C) with added ‘potash’ (potassium carbonate.) After a cooling period under cover the sheep were showered with forceful sprays of water at 61° F (16° C).” (Ryder, 1983).

However there could be some confusion here regarding the term ‘potash’ as identified here as potassium carbonate (K_2CO_3). Could this term be referring to a weak solution of potassium hydroxide known as **caustic** potash, or lye (KOH), which is used as an insecticide and, in stronger solutions, for the removal of wool from hides?

Having introduced the potential production of ash and lye in relation to burnt mounds a whole new line of investigation can be undertaken. A few ideas that need investigating are:

- The use of lye in wool/hide processing
- The use of lye for tenderising food prior to cooking
- The use of wood ash as a calcium supplement for feeding to stock
- The possible connection with pig farming?

The final point to be addressed is whether trenches 2/A2/B2/C2 could have been used for ritual purposes. While this scenario, without further investigation, cannot be completely ruled out there is no artefactual or other evidence that points in that

direction and from the evidence currently available the writers believe a more practical explanation is indicated.

References

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