

### Attempts to create severely-burnt pottery of Event Pit type

[Note: The sherds are boxed in one of the Vessel Function pot boxes; photos have been saved as jpegs]

#### Pottery burning experiment – August 1998

##### Methodology

Two unstratified grog-tempered sherds were placed in a barbecue. The BBQ was allowed to reach optimum temperature before placement. One sherd was placed amongst the charcoal. The second sherd was placed on top of the griddle (*i.e.* not directly in contact with the charcoal – although at one point, it fell into the embers). Both sherds remained *in situ* until the BBQ had completely cooled.

Pre-firing weight: 88g

Post-firing weight: 80g

##### Observations

- Sherds became lighter after firing (presumably due to water evaporation)
- Colour or shape was not significantly altered
- Feel remained soapy
- The temperature needed to alter appearance and feel is much higher than that produced in a BBQ environment – charcoal is too slow burning
- The absence of flames may have reduced the effects of scorching

Ed Biddulph

#### Notes on burning of pottery, 4 November 1998

Sherd appearance black and very 'sooty' (resulting from BBQ conditions above).

*c. 5.40 pm*: fire laid and lit

*6 pm*: pottery sherd inserted near to base of fire

*6.10 pm*: sherd removed from fire, glowing red hot. At 6.15, pottery surface mid brownish red on upper side, lower side remains burnt looking and much as before, but with reddening of surface starting to appear at one end. Sherd charred the log on which it had been left to cool. Pottery very brittle sounding when tapped, especially with metal.

Cool enough to handle at 6.18 pm. Broken at 6.20 to give piece to Jacky; quite soft to break, similar to snapping a bar of chocolate. Break had thick reduced core, with thin oxidised margins on all of inner (upper in fire) surface. The smaller sherd was retained as **sample 1**.

Larger sherd then broken into two, breaking along the horizontal groove on the external surface in spite of an attempt to break the sherd along the pot's vertical axis. Noticeably more difficult to break than when hotter (above).

*6.30 pm*: freshly broken sherds returned to top of rebuilt and hot fire on a well charred log, and pushed into the middle of the fire after a few minutes. One sherd fell flat onto embers; the second fell to remain more or less vertical with surfaces well exposed to heat and flame.

6.50 pm: the sherd which had fallen to lie flat was removed from the fire. Uppermost lying surface reddish and fully 'oxidised'; edges of lower surface similarly red at edges, greying towards the centre of the surface to a black deposit similar to (probably same as) that on the original sherd. Second sherd examined without full removal from fire; this was fully oxidised (*i.e.* orangy-red) on both surfaces. The core was more or less completely oxidised.

7.05 pm: both sherds (*i.e.* the sherd removed from the fire at 6.50, and, unfortunately, sample 1) returned to centre of very hot fire.

7.45 pm: neck fragment removed as **sample 2**. This was the sherd originally retained as sample 1, and accidentally reinserted at 7.05.

10.25 pm: one of the two remaining sherds removed from fire as **sample 3**. Surfaces cracking, core noticeably darker in appearance than in sample 2. Mid reddish-brown to black surfaces.

8.00 am following morning: final sherd removed from cool ash as **sample 4**. Very similar to sample 3 in appearance.

#### General observations

Fire structure open with good through-draft, wood well seasoned and dry (used first) or well seasoned and slightly damp (used subsequently). Struck me as similar to a building fire.

Change is most rapid in the first few minutes of burning, with very marked changes in appearance of surfaces (which are either oxidised or the sooty deposit on the original surface is burnt off to expose oxidised surfaces). At this stage the core is very reduced in appearance (? state of core on original sherd before 1998 burning).

From comparison of samples 3 and 4, the main changes have taken place by 10.25 pm and there is very little difference between sample 3 and sample 4, the latter recovered some nine and a half hours later.

CPC, 5 November 1998

Day 2: 5 November 1998

Further experiment to obtain samples from early stages of the burning process.

Fire laid as before but using kindling and incorporating the little charred wood and charcoal remaining from the previous fire. Lit about 5 pm.

Specimen was similar in appearance to that of yesterday, and had been subjected to the same previous burning on a barbecue by the Elms Farm pottery team.

*9:50 pm*: inserted to centre of hot fire. Fell vertically with outer surface against a red smouldering log, with some flame, the inner surface open to radiated heat from the embers nearby.

*9:55 pm*: sherd removed and left to cool. Reddened surfaces and core glowing red hot. About two thirds of inner surface is reddened, the rest covered in a thin black deposit. Outer surface reddening at edges, greyish-black elsewhere, looking as though the surface deposit is starting to burn off. Core of same appearance as vessel surface throughout, red where soot free. Possible slight signs of part of core turning grey and another becoming brownish-red as in the later samples yesterday.

*10:05 pm*: sherd returned to bottom of fire, surfaces quite well exposed.

*10:11 pm*: recovered from fire. Some blackening of parts of the surface, otherwise uniformly red on surface and core, the core being perhaps slightly darker in colour. When cool enough to handle, attempted to break sherd in half but one corner broke off; re-broke along original line. Core on fresh break in larger fragment (including the black surfaced part) was retained as **sample 5**, the remaining two pieces being returned to the base of the fire at *10:50 pm*.

*11:00 pm*: One piece recovered. Glowing red and brownish all over. Retained as **sample 6**. Fire broken down over remaining sherd, producing much hotter looking environment

*11:23 pm*: last piece recovered and retained as **sample 7**. Glowing red. When cool, blackened charcoaly burn marks slightly around sherd area surface of wood on which sherd had been laid. External surface of sherd, resting on the wood, is blackish grey and perhaps is greyed from soot from the underlying charred wood surface. Inner (uppermost) surface is brownish red with greying at edges; core is slightly darker in colour.

*11.45 pm*: **Specimen 2** inserted to bottom of fire. Fire made up around it.

*08:00 am 6 November*: recovered from ashes, still hot to the touch.

CPC, 6 November 1998

Notes on burning of *Terra Nigra* pottery, December 1998

Platter sherds were extracted from several contexts, as follows:

- 15745 Platter base sherd, no footring, black shiny internal surface, main fabric is white, no mica (26g)
- 24175 *Cam 2* platter rim, part of base present, surface worn, but inner surface was once black and shiny, main fabric is white, no mica (28g)
- 15816 Three joining sherds, *Cam 5* platter rim, central portion chosen for burning, grey slatey finish, main fabric white, no mica (18g)
- 15817 Platter base sherd, possibly same platter as 15816, grey shiny surfaces, main fabric is white, no mica (8g) [Two sherds in the context remain unburnt]

After burning (by CPC), all sherds have changed colour to white and/or pink, some have blistered surfaces. No apparent reduction in weight. None has been shattered by the heat, unfortunately.

Note: There were no suitable unstratified sherds, which could have been used instead.