Fig. 1: the site huts before the fire.

Be a match for the arsonists

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IN MAY 1985 an arson attack on the site huts of the Beddington excavation resulted in the loss of most of the wooden site huts and their contents. Four huts were damaged or destroyed. Hut 1 (the mess hut) had a floor area of 15ft × 15ft and a pitched roof 11ft high at the ridge. Hut 2 (the finds hut) had a floor area of 10ft × 15ft and a pitched roof 9ft high at the ridge. Hut 2 was built onto hut 1, and both had roofs covered with bitumen felt and walls partly covered with felt. Hut 3 (the directors' hut) had a floor area of 6ft × 10ft, with a pitched roof 7ft high at the ridge, and hut 4 (the supervisors' hut) had a floor area of 6ft × 8ft with a pitched roof 7ft high at the ridge. The roofs of these huts were also covered with bitumen felt. Huts 3 and 4 stood 8ft apart, but were joined by a wooden frame supporting a shelter of heavy duty plastic sheet. These were the huts affected by the fire: in addition there were three huts containing elsan toilets and an ex-customs steel storage container.

The contents of the huts consisted largely of finds from the site (about half the finds excavated since November 1984), including unwashed finds, washed unmarked finds and marked finds. There were also

site records and finds records (security copies of most of these were stored elsewhere), calor gas heaters and cookers, fire extinguishers, chairs, tables, water carriers, balance scales, a typewriter, kettles, mugs, an exhibition of photographs, a variety of small equipment and tools, and items of clothing.

Huts 1, 2 and 3 and the wood and plastic shelter were burnt to the ground, and one wall and part of the roof of hut 4 were destroyed. The fire was so severe that, for example, only the steel toe caps of leather boots survived, and the kettles and typewriter completely melted.

Rescue

After the police investigation was completed, equipment and excavation records were salvaged from hut 4. This hut had been saved by the fire brigade and consequently everything was very wet. All paperwork was laid out on flat surfaces to dry, and plans (all drawn on plastic drafting film) were hung up to dry – the ones covered in soot were washed in running water first.

The ashes and debris of huts 2-4 were carefully sifted; all discarded material was placed in skips, and burnt finds were collected in buckets. Apart from some very charred paperwork, nothing else could be salvaged.

Salvage

Faded plans, soiled plans, and those which had partly melted were traced onto new sheets of drafting film. Some had been destroyed, but could be traced from the security photocopies. Some of the damaged paperwork had to be written out again, while many charred copies and destroyed copies were replaced by photocopying their security copies. The resultant loss of irreplaceable records was minimal.

All finds were rewashed vigorously in cold or warm water with toothbrushes and nail brushes; dry-brushing, detergents and soft brushes were ineffective. After drying they were carefully examined for any surviving markings. All unmarked finds were then marked with white ink as unstratified, while surviving markings on finds were deciphered where possible. As in the case of the Glamorgan-Gwent Archaeological Trust Offices fire, marking done in white ink survived very well, whereas black ink was often difficult to detect[1]. Some of the finds had been stuck together by the melted remains of their rigid plastic containers, but after about four months the plastic became brittle and could be separated from the finds.

1. K. Hunter 'Survival of packaging material in a fire' *Conservation News* **23** (1984) 15-16.

Observations

Not all finds survived: it is known that some metalwork did not survive, including a Roman iron hammerhead which presumably shattered in the heat, and a lead steelyard weight and other fragments of lead which probably melted. Also, it was difficult to distinguish between burnt Roman nails and modern ones from the huts.

The remains of the burnt huts consisted of miscellaneous burnt debris and a large quantity of ash, charcoal and fragments of charred wood. After this was cleared, there was no surviving evidence for a building apart from a blackened area with the charred stumps of two posts set in the ground, and a short section of drainage gulley. Some stones beneath the huts had been reddened by heat, but no stones appeared to have been shattered by it. The blackened area of ground became so bleached by weathering that it was almost undetectable. It seems likely that if the burnt debris had been left for future excavators, the presence of the huts would be easily detectable, but clearance of the site has removed nearly all trace of them.

Only one Stewarts Plastics sealable box was in use (as a first aid kit). This melted badly and the contents were destroyed, even though it was in hut 4 which was not completely burnt. However, as it was not certain that the lid was securely fitted, it is not obvious how effective these boxes would be for the storage of finds in a fire as severe as that at Beddington (they were found to survive fairly well in the Glamorgan-Gwent fire[2]). It should be noted, though, that the water carriers of a heavier duty plastic in hut 1 were largely destroyed in the fire despite the fact that some of them were full of water.

Recommendations

The following recommendations are based on previous site practice at Beddington known to have minimised the overall loss, and current practices based on experience resulting from the fire:-

1. All field drawings should be done on plastic drafting film in order to minimise damage by water.
2. All records should be photocopied – completed records within a few days of completion and on-going records at regular intervals. Photocopies should be taken of *everything*, including photographic records, accounts and staff employment details, as well as site records and drawings. The security copies should be stored far enough away to be unaffected by fire – preferably several miles away.

2. *Ibid.*, 16.

Fig. 2: the burnt remains of the huts.

3. Black and white negatives and colour slides should be stored in separate locations. Photographs should be catalogued immediately after processing. If there is a delay in processing, the photographic site notebook should be regularly photocopied.

4. All finds should be washed, marked and processed during the excavation.

5. With a few exceptions (for example metalwork), all categories of finds should be marked in white or black ink. Marking should not be restricted to particular categories of finds, as is sometimes recommended[3]. Apart from being invaluable after a fire, the marking of finds prevents errors arising from accidental mixing and facilitates examination of the finds by specialists.

6. Calor gas bottles, when not in use or when empty, should be stored in a secure well-ventilated and labelled compound or cage away from imflammable materials, according to Guidance Note CS6 from the Health and Safety Executive 1981 *The Storage and use of LPG on construction sites.*

7. If space permits, huts should be placed well apart from each other, with separate huts for different functions (the Beddington elsan toilets were saved because they were placed well away from huts 1-4).

8. If possible a steel container (such as an ex-customs storage container) should be used for storage of equipment, finds and records. Most of the equipment at Beddington was stored in such a container and so was not affected by the fire.

9. Insurance cover should be checked before the start of an excavation.

10. Archaeologists should seek every opportunity to learn the relevant aspects of health and safety procedures. At present, even for professional archaeologists, opportunities for health and safety training are virtually non-existent.

3. E.g. The *Museum of London Department of Urban Archaeology Finds Procedures Manual* 1984, 6.3 recommends that only pottery should be marked.