

# SILBURY HILL CONSERVATION PROJECT

## Update 30: progress for 21<sup>st</sup> Feb – 13<sup>th</sup> March 08

### Engineering Update

#### **Backfilling works**

Progress on site has been good since the last update, with the period of dry weather helping considerably.

Backfilling of the all of the tunnels and known voids was completed on the 8<sup>th</sup> March 2008. In the period this has included both the section of tunnel and void above arches 47 to 21 and the final section from arches 6 to 21 (figure 1).

The forecast of filling quantities for the sections 47 to 21 was approximately 150 tonnes of chalk paste, but it actually required 229 tonnes to fill this section, the conclusion being that this additional paste had filled voids associated with the old Merewether tunnel and associated collapses.



Figure 2: removal of the 1968 door

In the tunnel entrance area the 1968 tunnel portal concrete frame and first five Atkinson arches were also removed. This included the door to the Atkinson tunnel and the 1968 plaque from the lintel above, these being carefully removed for conservation at the Alexander Keiller Museum in Avebury (figure 2).

Following the removal of this initial section of the tunnel (figure 3) a large bank of chalk was constructed where the tunnel entrance once stood. This was undertaken by mechanically emplacing the chalk in layers and compacting these layers in-situ to construct a secure fill to the former tunnel entrance area (figure 4). The remaining section of tunnel was then filled behind this bank of chalk using chalk paste as before.

In total the tunnels have been filled with 885 tonnes of chalk, 678 tonnes of this being the pumped paste fill, which provides a very high degree of confidence in the quality of the final filling and the assurance that all of the known voids and tunnels have been infilled as well as practically possible to do so with material of the same composition as the original hill construction.



Figure 1: the final section of tunnel prior to filling



Figure 3: the tunnel area following removal of the door, lintel and initial tunnel portal area

Now that the tunnel has been filled the hill top crater infilling has been commenced. At the date of this update approx 254 tonnes of chalk paste had been pumped into the void on the summit. Figure 5 shows the crater extent and level of chalk fill. The next phase of work is to complete the hill top infilling and then commence the hillside turf stripping and subsequent infilling of the collapses and depressions above the alignment of the old tunnels on the south side of the hill.

The archaeologists returned to site and carried out further recording work in the area where the tunnel entrance portal structure was removed and to the sides of the hilltop crater. They also plan to carry out further investigations of the sides of the hillside scarring during the stripping and infilling works scheduled to be undertaken in the coming weeks.



Figure 4: bank of chalk emplaced at the old tunnel entrance



Figure 5: hilltop void infilling progress

