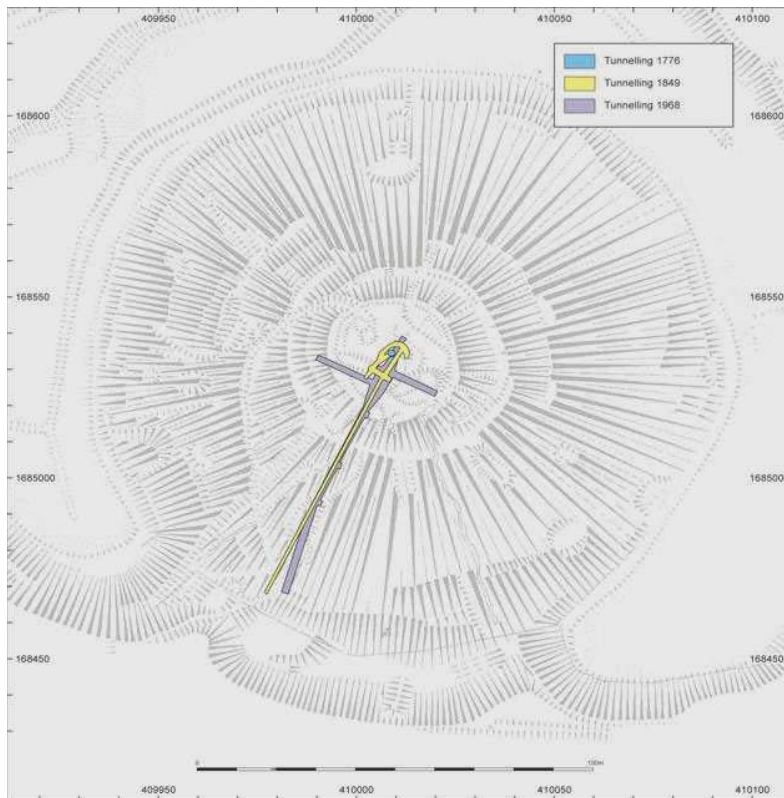


**Silbury Hill 2007/8 Conservation Project**  
**Interim summary of the archaeological investigations**  
**Project Number 661**  
**Jim Leary**

Background

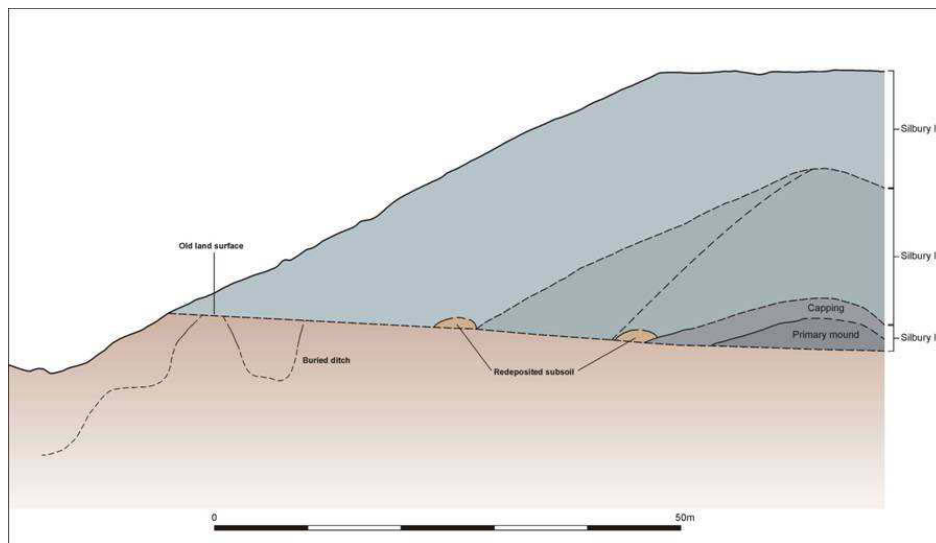
The enormous earthen mound of Silbury Hill is situated in the heart of the Marlborough Downs in the Avebury World Heritage Site. The archaeological importance of Silbury Hill was first recognised by John Aubrey, who in 1663 escorted Charles II to the top. Stukeley was also aware of its importance and spent a considerable amount of time in the area in the first half of the 18<sup>th</sup> century, and his illustrations and observations are of prime importance, particularly his observation of an episode of tree planting on the summit.

Major investigations into the mound began with the sinking of a shaft from the top to the centre of the hill by Colonel Drax on behalf of the Duke of Northumberland in 1776. This shaft was recorded as being 8 feet square and 100 feet deep (shown on Fig.1 as the blue circle). This was followed in 1849 when John Merewether, the Dean of Hereford, drove a horizontal tunnel from the side to the centre of the hill (shown on Fig.1 as the yellow tunnel). The third major intervention was between 1968 and '70, when Richard Atkinson, a professor from Cardiff University, supervised the excavation of a tunnel that followed a similar line to the centre of the hill as the Merewether tunnel but with two laterals and a central chamber (shown on Fig.1 as the grey tunnel). Unfortunately Atkinson never published his work and much of the archive was lost. Following Atkinson's death Alasdair Whittle published the fragmentary archive in 1997.

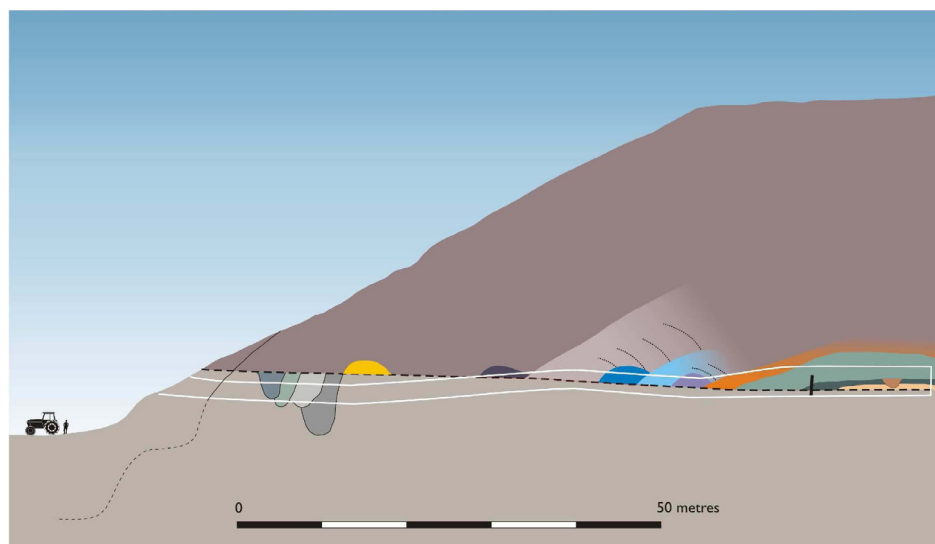


*Figure 1 – plan of the major interventions into Silbury Hill*

Atkinson's work identified three phases of the hill: Silbury I: an organic mound with a low bank against it; Silbury II: a chalk mound with another low bank, and associated quarry ditch; and Silbury III: the final mound you can see today, which buried the earlier ditch and was itself quarried from the surrounding ditch (Fig. 2). Following the 2007/8 recording work 15 late Neolithic phases were recorded (Fig. 3), suggesting that the sequence is considerably more complex than previously thought; the mound growing through many small events, rather than a few grand statements, and it is no longer acceptable to use the terms Silbury I, II or III. It is also worth noting that it is likely that if we had seen more than just the narrow strip of the tunnel sides and a few above-tunnel voids we may well have recorded many hundreds, if not thousands, of phases of activity.



*Figure 2 – Schematic of Atkinson's phases*



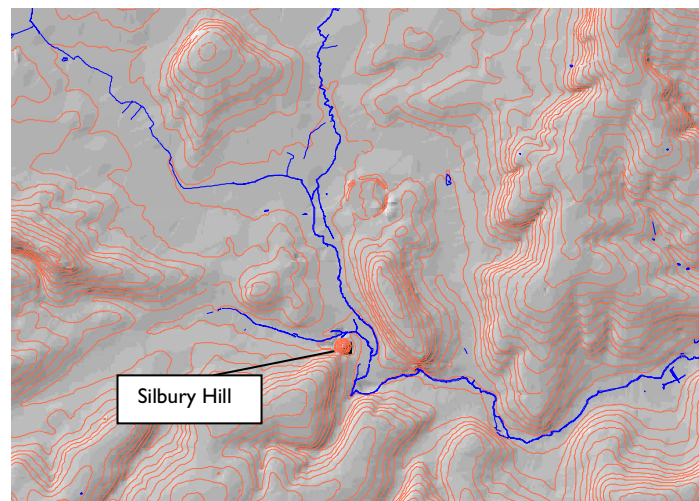
*Figure 3 – Schematic of the 2007/8 phasing*

On the 29th May 2000 a roughly square shaped hole, appeared on the top of the hill. After a further collapse, the resulting crater was filled in with temporary polystyrene blocks. The stability of the hill was investigated by drilling boreholes from the summit. Two of these bore holes encountered Atkinson's tunnel, revealing that at

the least, neither the West Lateral nor the Central Chamber had been backfilled. It was clear therefore from this work that areas connected with earlier archaeological investigations had not been backfilled, leading to voids formed by the upward migration of the tunnels. It was decided therefore to re-open Atkinson's tunnel and fill all the known voids to prevent further damage to the hill. This, therefore, provided an opportunity to record in detail the various phases of Silbury and in May 2007, an intensive programme of archaeological recording and sampling begun.

### Topography

Lying on the valley floor of the River Kennet, Silbury Hill sits on the toe of a spur of chalk protruding from the southern slope of the Kennet valley (Fig.4). To the south of Silbury Hill is the Swallowhead spring, and this, together with the north flowing drainage pattern on the dip slope, has influenced the dramatic change of course, eastwards of the River Kennet. The activity of the various fluvial elements at this confluence has eroded a natural amphitheatre into the landscape.



*Figure 4 – the topographic position of Silbury Hill*

### Phase I – Natural

The underlying geology is Cretaceous chalk (Fig. 5). This is overlain with a layer of flinty yellowish brown clay (Fig.5), which is derived clay-with-flints of late glacial or early post-glacial age.

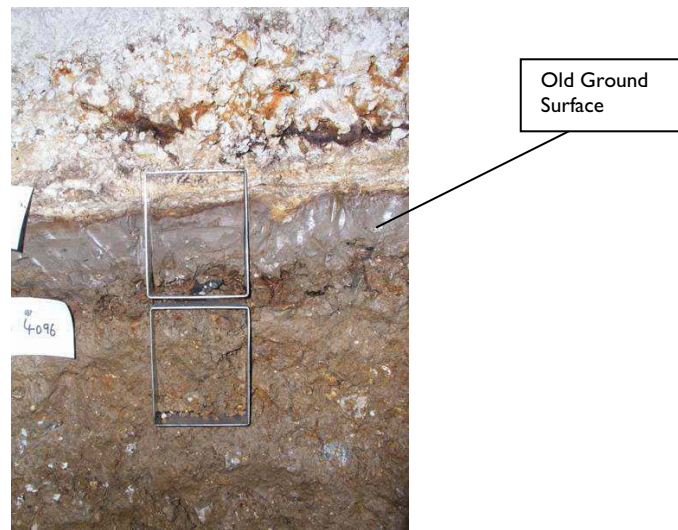


*Figure 5 – Photograph showing the natural geology*

### Phase 2 – Old Ground Surface and possible turf layer

Overlying the derived clay-with-flints is a thin unbroken band of grey stone-free silty clay, described by Atkinson as the Old Ground Surface, and appears to extend under every phase of the monument. Towards the centre this has a brown, organic layer on top of it (see Fig. 8). The Old Ground Surface slopes down to the north, reflecting the topography of the area.

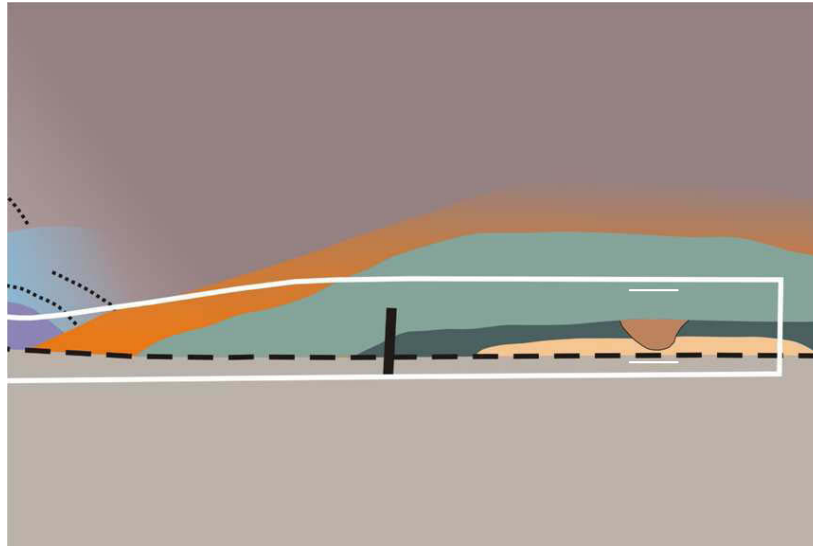
It appears on current evidence that the Old Ground Surface is a truncated soil horizon that may have been subjected to extensive trampling; suggesting that after the soil was stripped away, significant activity took place on the site. Since this layer occurs under even the earliest phase of the mound, this suggests that considerable activity occurred on the site before monument construction. It is uncertain what the organic layer in the centre is; however, it may represent *in situ* turf or moss growth, or possibly the remains of an organic mat. A concentration of charcoal and a few burnt pig teeth were recorded in the central area on top of the Old Ground Surface and may well indicate the remains of a hearth.



*Figure 6 – photograph showing the OGS*

### Phase 3 – Gravel mound

Overlying the Old Ground Surface in the very centre is a low gravel mound, *circa* 0.8 metres high and around 9-10 metres in diameter (Fig. 7 – the beige phase, and Fig. 8). This appears to have been formed of Pleistocene gravels, suggesting that it would have been quarried from deep under ground or found exposed in a river valley, for example the side of the River Kennet. Either way – they were clearly very deliberately imported and used here.



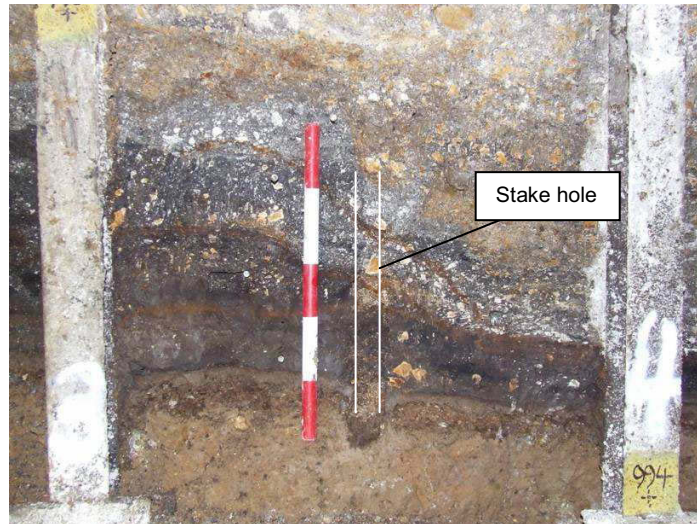
*Figure 7 – close-up schematic showing early phases*



*Figure 8 – photograph showing northern tip of gravel mound as well as deposits that form the overlying Lower Organic Mound*

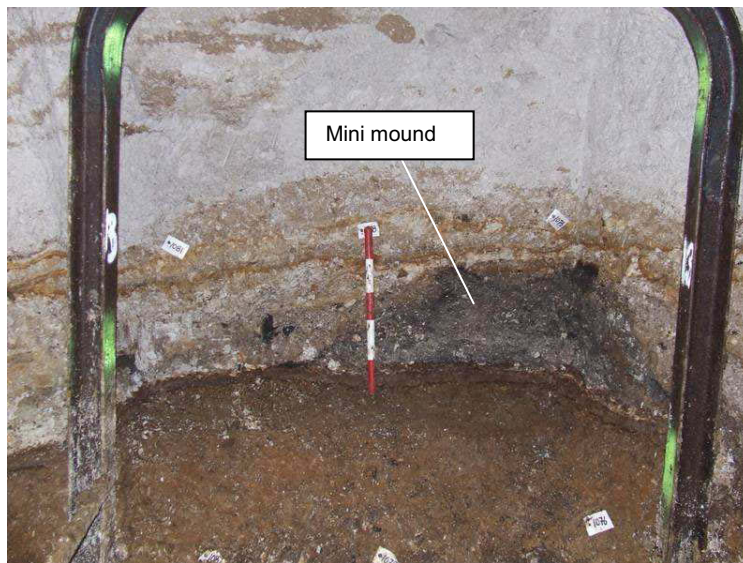
#### Phase 4 – Lower Organic Mound

Subsequently, a series of organic layers, possibly edged by stakes, were piled up over the top the gravel mound, enlarging the overall size of the mound to about 1.1 metres in height and *circa* 22 metres in diameter. These organic layers are represented in Figure 7 as the dark green phase, and can be seen in the above photograph, overlying the gravel mound (Fig. 8). One stake hole was recorded during the 2007/8 work (Fig. 9), although Atkinson recorded a number of others. The stakes may have demarcated the edge of the Lower Organic Mound.



*Figure 9 – the stake hole associated with the Lower Organic Mound*

Another smaller mound was recorded a few meters to the east of the Lower Organic Mound (Fig. 10), and is currently interpreted as belonging to this phase. The mound stands at less than half a metre high however was clearly purposefully constructed and even added to and modified. It comprises organic layers and some turfs and is separated from the main mound by a linear feature; either a small, interrupted gully or a linear pit.



*Figure 10 – the small mound recorded to the east of the Lower Organic Mound*

#### Phase 5 – Pitting activity

Cutting the top of the Lower Organic Mound were two pits (Fig. 7 and Figs. 11 & 12). These pits were about half a metre deep and one and a half metres in diameter. So far the fills of the pits have revealed a few yew berries, some fragments of animal bones and flint flakes.



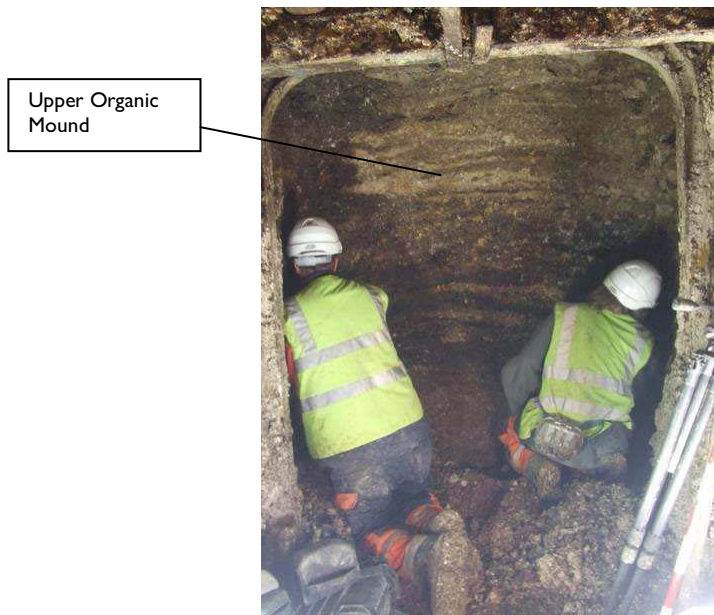
*Figure 11- pit recorded in the central chamber of the tunnel*



*Figure 12 -pit recorded in the West Lateral tunnel*

#### Phase 6 – Upper Organic Mound

Mound building continued, and the pits and Lower Organic Mound became sealed under a series of interleaved layers of different local material – chalk, clay, topsoil as well as turf, which enlarged the monument to a height of around 5m (the light green phase in Fig. 7 and Fig.13 below). Also included within this Upper Organic Mound were a number of rounded sarsen boulders (Fig.14), which had clearly been deliberately incorporated within the matrix of the mound.



*Figure 13 – the interleaved layers of the Upper Organic Mound*



*Figure 14 – some of the sarsen boulders recovered from the Upper Organic Mound*

#### Phase 7 – Clay capping

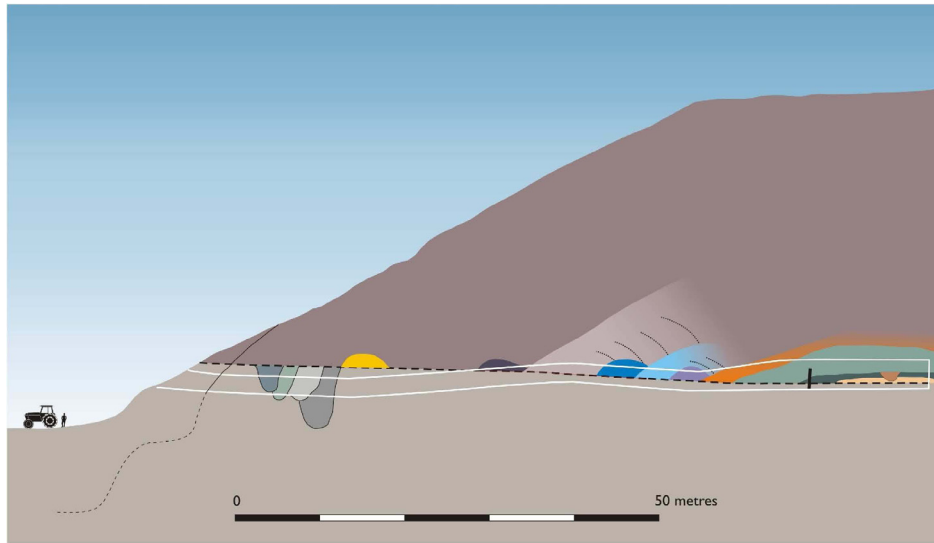
Monument construction continued and the Upper Organic Mound was added to by a series of clay layers (see the orange phase in Fig. 7). These layers were also identified by Atkinson.

#### Phases 8-12 – Banks 1-5 and Ditch 1

Construction continued, but this time in chalk or a mixture of chalk and clay; and at least 5 consecutive phases of activity were recorded (see Fig. 15 below). These phases seem to comprise the piling of chalk (sometimes mixed with clay) around the earlier mound. Three of these construction episodes formed small and easily recognisable banks (Banks 1, 3 and 5). Banks 2 and 4, however, were larger and the tops were not recorded; these two therefore could conceivably be mounds (ie the chalk continued over the earlier mound) rather than banks, although tip lines suggested that they too were banks. It is uncertain what the banks were for, but it is difficult to interpret them solely as part of a construction technique to build a larger



mound. It is also unknown whether material was piled on the inside of the banks, since little of the central area above the level of the tunnel was visible.

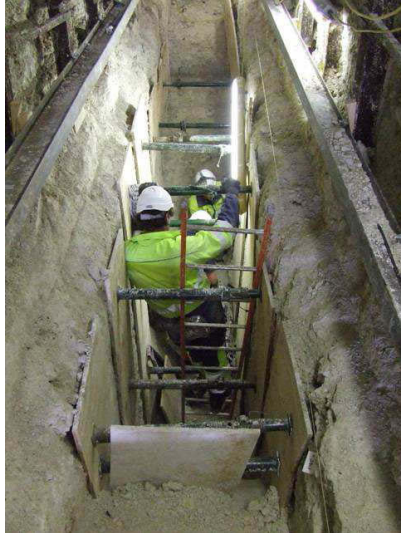


*Figure 15 – schematic showing the various phases*



*Figure 16 – Bank 5. One of a sequence of banks*

The chalk for these banks is likely to have been quarried from a surrounding ditch (Ditch 1) – a ditch which later became sealed by the final phase of the mound (Fig. 15 & 17). A complete section through this ditch was excavated, which showed that the ditch butt-ended in this area – this can be interpreted either as an entrance or, as with other sites of this period, a continuous ditch that had been cut in small, connected sections, rather like a string of sausages. A number of very small and ephemeral stakeholes were recorded in the terminus of the ditch (Fig. 18) – given the ditch's depth these may have been either the imprints of the legs of a ladder or perhaps holes dug to secure a ladder. In a void above the tunnel a bank was also recorded on the inside of this ditch (Fig. 19).



*Figure 17 – excavating a section through the buried ditch (Ditch 1)*



*Figure 18 – possible stake holes at the base of the terminus of Ditch 1*



*Figure 19 – the bank on the inside of Ditch 1*

The buried ditch and internal bank are important features, and we should think of the early phases of Silbury as an enclosure – as an open, accessible and perhaps

public arena. It is only during the final prehistoric phases that Silbury became an inaccessible space.

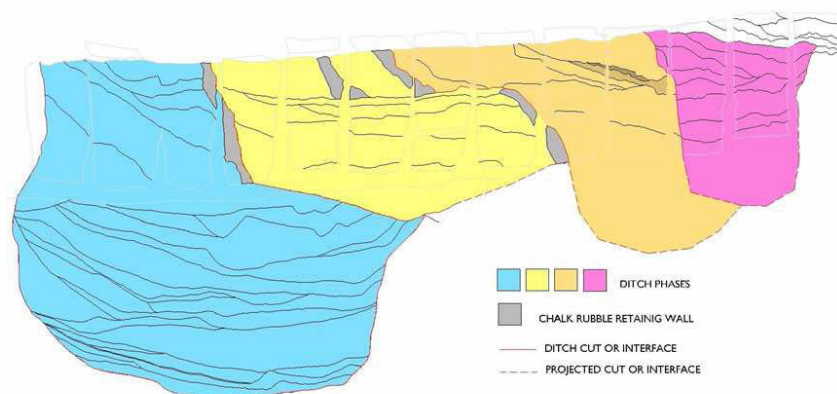
#### Phases 13-16 The backfilling and re-cutting of Buried Ditches 1-4

Activity at the site continued – however at this stage the Neolithic ground level continues to rise to the south whilst the tunnel declines, and the mound deposits were not visible in the section from this point (Fig.15). It is likely, however, that the overlying deposits are not simply one single homogenous phase, but a series of phases; the monument growing in size incrementally, as indicated by the backfilling and re-cutting of Ditches 1-4. As the monument expanded outwards, buried Ditch 1 was deliberately backfilled and re-cut slightly further out. That it was deliberately backfilled is indicated by a distinctive technique – finer grained deposits are laid roughly horizontally and then revetted with larger pieces of chalk rubble effectively forming a dry stone wall (Fig.20).



*Figure 20 – the technique used to deliberately backfill Ditch 1*

Once backfilled, the ditch was re-cut another 3 times (Fig.21); migrating further outwards with each cycle of re-cut and backfill – and perhaps reflecting a few of the separate phases of the expanding mound over the top. This continuous re-cutting of the ditch suggests that the ditch itself was an important feature of the monument; it cannot have simply been a quarry ditch. It is likely that during these phases the large external ditch was open and being used to quarry chalk to backfill the ditches and construct the monument over the top.



*Figure 21 – The buried ditch sequence (North-South)*

### Phase 17 – Final mound construction

As mentioned above, the chalk deposits relating to the final phases of mound construction were not recorded within the tunnel; however a small 5m x 3m trench excavated on the summit did reveal such deposits, as did remedial work on the hillside just above the portal. These deposits showed that the mound was constructed using a distinctive construction technique – finer deposits laid horizontally and revetted by larger chalk rubble (Figs.22 & 23) – just as was recorded in the backfilled ditch, suggesting that it runs through the whole of the last Neolithic phases of Silbury.



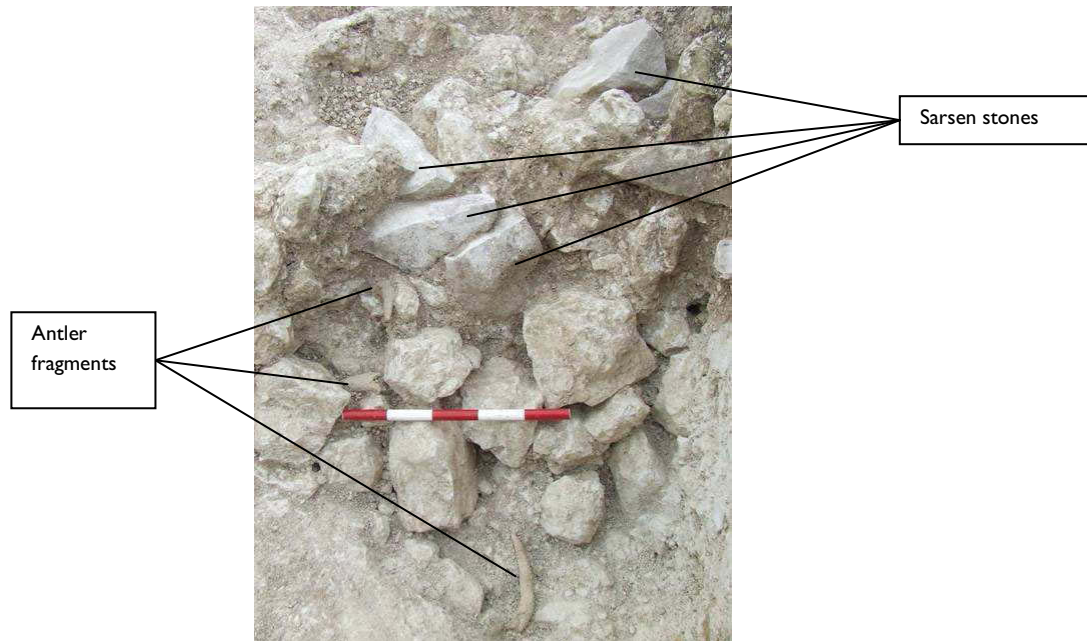
*Figure 22 – a chalk revetment wall on the summit*



*Figure 23 – a section through the summit deposits showing the construction technique used*

Incorporated into one area of one the walls were a cluster of broken sarsen stones and associated with this was a cluster of antler fragments (Fig.24), suggesting that these may be placed deposits. The sarsen fragments recovered from the summit excavations were different to those within the Upper Organic Mound; the fragments

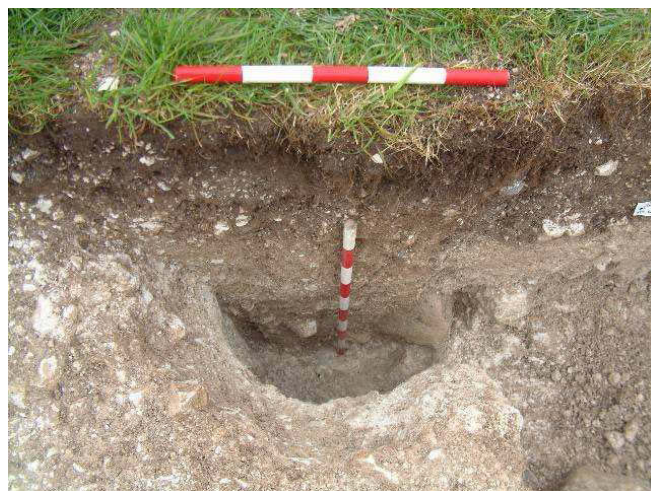
from the summit were formed largely of broken pieces from larger stones; compared to the natural, rounded stones recovered from inside the hill. A possible explanation may be that all the smaller boulders had been used up or consumed during the construction of the early phases, forcing people to break-up larger pieces into more manageable sizes later on.



*Figure 24 – A section of revetment wall incorporating a cluster of sarsen stones and antler fragments*

#### Phase 18: Medieval activity

The summit excavations recorded a series of postholes directly cutting the Neolithic deposits – one of which was large (Fig. 25) and contained a number of fragments of medieval pottery. Two arrowheads of possibly similar date were recovered from the overlying subsoil and topsoil. This suggests that there was a large, possibly defended, building on top of Silbury Hill. The truncated appearance of the Neolithic deposits, and the lack of any later deposits, may suggest that the top of the hill has been truncated in order to construct the building.



*Figure 25 – Large medieval post hole cutting the Neolithic deposits on the summit*

Phase 19: 18<sup>th</sup> century activity

This phase is represented by the evidence for the 1776 shaft in the central area of the tunnel and on the summit, as well as tree planting pits thought to date to an episode of planting in 1723.

Phase 20: 19<sup>th</sup> century activity

This phase is represented by the evidence for John Merewether's 1849 tunnel.

Phase 21: 20<sup>th</sup>/21<sup>st</sup> Century activity

This phase is represented by the evidence for Atkinson's 1968 to 1970 work both within and on the hill as well as later 20<sup>th</sup> and 21<sup>st</sup> century activity.