

DAVE MITCHELL'S DIG

The Original Dig

This large, shallow depression at NGR 49285434 on Charterhouse Warren Farm was first dug by Dave Mitchell and Allan Cowley in 1962.

Dave Mitchell's log book records the events:

Feb 4th 1962

A trip to the cottage (MCG) in looking at a shakehole which fell in on Warren Farm. Digging carried out for a short spell by Allan (Cowley) and myself and it looked very promising.

March 4th 1962

Spent a day at the Cottage where much work was done at dig on Warren Farm. Dug down approx. 15 feet and encountered choke of small loose stones. Very promising.

April 15th 1962

A visit to Warren Farm where no trace of previous shaft could be seen owing to new collapse. A new shaft dug and after a day's digging bypassed previous shaft by about 2 feet. Nothing found. Shoring placed in position for future dig.

July 8th 1962

Warren Farm dig was found to have fallen in.

The 1980s Dig

The dig was probed again in the late 1980s by Pete and Alison Moody and Rob Taviner. They sank a lightly shored shaft for 15', but were defeated by a buried mass of baler twine which resisted all attempts at removal, including bang and fire.

Saturday 19 April 1997 - Dave Morrison, Dave Speed, Rob Taviner, Graham Bromley, Angie Cave, Paul Stillman, Bob Cottle, Clive North, Richard Witcombe, Pete Hann, Keith Fielder, Tony Audsley plus a stream of visitors.

Commenced an excavation of Dave Mitchell's Dig at 8 am using a Case Poclair tracked digger driven by Martin Ford.

After a trial trench on the western edge produced no solid rock at a depth of 10', excavation moved to the north and eastern edges. Huge quantities of brown soil were removed down to a depth of 15' before a possible rock floor was encountered. Attempts to relocate this further south west involved removing the rusting steel and galvanised iron shoring of the earlier digs together with the infamous baler twine, but no further rock was seen down to a depth of 20'.

The earth and mud was featureless apart from occasional bands of grey clay and patches of small stones, some possibly frost shattered.

All afternoon, the digger moved around the depression, benching itself downwards to reach a depth of over 28'. A few larger rocks were located, giving hope of buried cliff faces, but all proved to be displaced and surrounded by mud. One rock did ring solid when struck by the bucket but it was at that stage too deep to be

pursued.

Work ceased at 6 pm with a general view that the search was going to prove fruitless. Over a 40' to 50' radius and a depth of 28', there seemed to be no solid edge to the depression. Only DM retained his optimism that a cave would be found on the Sunday.

Sunday 20 April 1997 - Dave Morrison, Dave Speed, Rob Taviner, Graham Bromley, Bob Cottle, Paul Stillman, Pete Hann, Keith Fielder, Tony Audsley, Richard Witcombe plus other vistors

Work on the dig resumed at 9.30 am and the digger trenched eastwards at a depth of 25' to 30'. At 11.30 am, a small area of solid rock floor was uncovered roughly in the centre of the depression and close to the location of the earlier digs. The bucket then revealed a small hole approximately 1' in diameter, which readily swallowed the loose earth around it. PH and RT went down in the bucket to examine it and pronounced that it was in more or less solid rock and was fretted by water erosion. It appeared to bell out below the lip, but was largely filled by a cone of earth and mud.

A decision to safeguard and pipe it was quickly reached and DS and helpers were sent off to Little Crapnell Farm to bring back the stock of concrete pipes. Starting at 4.30 pm, eight 1' 9" high pipes were installed and the surrounding pit backfilled. Work ceased at 7 pm.

A slight draught was detected emerging from the new shaft.

Wednesday 23 April 1997 - Dave Speed, Graham Bromley, Rob Taviner, Paul Stillman, Pete Hann, Richard Witcombe, Keith Fielder

DS had brought over eight further pipes and seven of these were installed during the evening, making the shaft some 27' deep. The excavator then completed the backfilling of the depression.

The winch was unloaded but not set up.

Sunday 27 April 1997 - Dave Speed, Richard Witcombe, Kate Lawrence, Tony Audsley, Pete Hann, Nigel Graham, Keith Fielder plus visitors

DS set up the winch and linked bipod while the others picked stone from the filled area.

RW commenced the underground digging by breaking up one side of the hole. The rock yielded quite easily to blows from the small pick and it soon became apparent that the solid rock was not that solid. In due course PH took over at the face and started clearing in the undercut area below the hole. Instead of water eroded rock, he found that the walls comprised cemented scree material or breccia, which broke off very readily when hit or even brushed against.

By the end of the afternoon, RW was digging out mud and breccia from a conical pot which seemed far too insubstantial to support the concrete rings. About twenty bucket loads were taken to the surface, before prudence dictated a halt.

If we are not to lose the bottom section of pipe, it will need to be either pinned into the surrounding fill or bolted to the pipe above, or both.

It may be that we are not actually digging in a cave but rather in a water excavated hole in a scree pile.

Wednesday 30 April 1997 - Dave Speed, Paul Stillman, Kate Lawrence, Richard Witcombe

After DS had checked that the bottom ring was still in place, we considered the options for safeguarding the shaft:

1. Drill through the bottom pipe and drive out steel rods or angles into the surrounding fill.

Dismissed - As the concrete is reinforced with steel, it would be difficult to drill large diameter holes, and with no certainty of hitting any solid rock, the rods would not offer much additional friction.

2. Connect the rings by bolting plates across the joins.

Dismissed - Drilling near the rims would weaken the pipes, and it would in any event be a long winded job.

3. Connect all fifteen rings by three tensioned cables bolted or clipped to the top and bottom rings.

Possible - But the steel cable and tensioners would be expensive.

4. Connect all fifteen rings by welding three strips of steel to the connecting H sections. Where the H section is offset, a linking tab could be welded to the strip. The top and bottom of the strip could be either clipped over the rim of the pipes or bolted to the centre of the pipes.

Possible - And relatively cheap and speedy.

Option 4 was chosen. With all fifteen pipes linked together, the combined friction factor should keep the tube in place within the compacted fill.

Wednesday 7 May 1997 - Rob Taviner, Kate Lawrence, Tony Audsley, Pete Hann, Keith Fielder, Graham Bromley, Dave Speed, Richard Witcombe

Despite some heavy rain, the pipes were still in place. Both RT and GB inspected the prospects below and between then sent up six buckets of spoil. Small, water washed holes around the edge of the scree chamber provided some encouragement.

DS had brought over three 15' length of flat steel bar with 6" at one end bent at right angles. PH hammered the angled sections under the bottom ring and then secured them in place by inserting rawlbolts through the upright sections into the bottom ring.

An attempt was then made to weld the flat sections to the H links between the pipes. KH descended halfway down the shaft, and the heavy, two stroke welder was suspended above him on the winch cable. PH "fired up" the rods, only to be immediately overwhelmed by petrol fumes. He had no option but to abandon the welding idea.

The swirling fumes descended the shaft and were quickly drawn into the dig - clear evidence of an inward draught.

A decision was made to return on Sunday to bolt the steel straps to the pipes.

Wednesday 14 May 1997 - Graham Bromley, Dave Speed, Kate Lawrence, Paul Stillman, Keith Fielder, Pete Hann, Richard Witcombe, plus visitors

Sunday had been too wet to use power tools.

DS fitted a pre-fabricated, spring assisted steel lid, after which PH successfully bolted the straps to the rings. There was just time for KL to send up three token buckets of spoil.

Part of the shelf on which the rings rest had crumbled away. Grouting will be needed before serious digging begins.

Sunday 18 May 1997 - Bob Cottle, Dave Speed, Graham Bromley, Paul Stillman, Tony Audsley, Richard Witcombe, Keith Fielder, Kate Lawrence

DS followed by BC and TA sent up 28 buckets of mud and scree from the bell chamber at the foot of the shaft. TA concentrated on enlarging the small airspace descending at 45 degrees to the northwest, and by the end of the session he was able to peer into a tiny straw and column filled grotto, still entirely in scree, about 6' ahead. There appeared to be a slight outward draught.

RW attempted to stabilise the walls and roof of the digging space with a bucket of grout, but the scree was so loose in places that it fell off when the concrete coating was thrown against it.

To make any further progress in even relative safety, some form of steel shuttering structure or cage will need to follow the digger downwards.

Wednesday 21 May 1997 - Mark Lumley, Rob Taviner, Paul Stillman, Kate Lawrence, Graham Bromley, Richard Witcombe

DS had sprained his ankle while sorting out steel, and GB and RW were delayed by a puncture on the Land Rover.

KL had brought over some corrugated steel sheets and RW some Dexion, but in the absence of DS's heavy steel lengths, it was decided to continue probing carefully downwards in the floor, avoiding the unsupported and dangerous roof leading down to the "grotto".

ML, RT and GB between them sent up twenty two buckets of spoil. The fill no longer contains pieces of grass from the initial run in, and is likely to be undisturbed material from here on.

Sunday 25 May 1997 - Graham Bromley, Rob Taviner, Richard Witcombe, Kate Lawrence, Clive North, Dave Morrison

In the absence of the "engineers", RW, RT, KL and CN took turns to dig. Twenty three buckets of scree and mud, and one trussed rock were brought out. A further large block was uncovered in the floor - perhaps bedrock.

Tuesday 27 May 1997 - Jim Young, Dave Morrison

JY welded two 6' lengths of steel angle at 45 degrees to the straps at the bottom of the shaft. These run down towards the "grotto" close to the dangerous section of roof.

Wednesday 28 May 1997 - Paul Stillman, Graham Bromley, Richard Witcombe, Rob Taviner, Mark Lumley, Kate Lawrence, Keith & Ros Fielder, Pete Hann

GB managed to insert two pieces of corrugated steel sheet above the steel angle. The sheets were then braced against the roof by means of two jammed angle cross members.

The shoring had unfortunately reduced the access to the dig chamber and RW had to hammer off a section of scree wall to allow the bucket to pass through. Four token buckets of spoil were sent up. The slab in the floor appears to be a random rock rather than bedrock. Still evidence of a draught.

Thursday 29 May 1997 - Jim Young, Dave Morrison

JY extracted the corrugated sheets in order to weld two canted cross members to the two descending pieces of angle.

Two buckets of spoil were removed.

Sunday 1 June 1997

One of the Small brothers had harrowed the disturbed area of the depression.

AM: Dave Morrison, Paul Stillman

Fifteen buckets of spoil removed.

PM: Graham Bromley, Bob Cottle, Rob Taviner, Paul Stillman, Richard Witcombe. Kate Lawrence and Dave Speed later.

GB, RT, BC and PS took it in turns to dig, sending up a total of twenty eight buckets. Some of the spoil, and some stone picked from the surface, was taken away by Land Rover and trailer and dumped into an old stonewalling pit.

The diggers worked downwards and into the threshold of the grotto, encountering small rocks and plenty of wet mud. By the end of the afternoon, a fairly solid left hand wall of larger blocks had been uncovered as well as a well cemented, stal coated right hand wall. The 18" wide "rift" sloped down to the grotto and round to the right into an area of loosely packed fill with small holes and clean, water washed rock. A very encouraging strong draught emerged from this area.

Monday 2 June 1997 - Jim Young, Dave Morrison

Welded a support bracket to the base of the shaft and two more canted cross members.

Wednesday 4 June 1997 - Graham Bromley, Kate Lawrence, Paul Stillman, Rob Taviner, Mark Lumley, Richard Witcombe, Clive North

GB, RW and PS sent up sixteen buckets of muddy spoil, further deepening the threshold of the grotto. The draught was only slight.

Sunday 8 June 1997 - Dave Speed, Bob Cottle, Rob Taviner, Richard Witcombe, James Witcombe, Graham Bromley, Kate Lawrence

DS, RT and KL excavated thirty buckets in fairly muddy and unstable conditions. Many minor collapses occurred, and the large blocks which were thought to be indications of a bedrock wall turned out to be only loosely associated! The spoil and some surface stone pickings were taken away by trailer and dumped in the nearby stone pits.

Wednesday 11 June 1997 - Mark Lumley, Rob Taviner, Dave Morrison, Dave Speed, Graham Bromley, Richard Witcombe, Clive North, Paul Stillman

ML, DM, GB and CN, working in pairs, sent up thirty four buckets of mud and scree. The grotto floor is now some ten feet below the concrete shaft, and more steel shoring is needed to prevent further collapse. There are many small holes in the fill and hints of some development under a large slab. The draught was fairly strong.

Spoil was dumped in the trailer.

Sunday 15 June 1997 - Rob Taviner, Paul Stillman, Bob Cottle, Graham Bromley, Kate Lawrence, Pete Hann, Dave Morrison briefly

Forty bucket loads were sent up, including one large rock from the floor, taking the depth of the dig to over 12' below the shaft. The left hand wall is a partly stal coated collection of small and medium sized blocks, but every other surface is loose or only lightly cemented. Small collapses occur continually. The draught was negligible.

All spoil was dumped in the stone pits.

Wednesday 18 June 1997 - Paul Stillman, Richard Witcombe, Graham Bromley, Rob Taviner, Mark Lumley

Thirty bucket loads were sent up. The left hand blocks are beginning to peter out, and the digging chamber is now very precarious. More steel shoring is essential. Only a faint, intermittent draught.

Thursday 19 June 1997 - Jim Young, Dave Morrison

Welded two 7' vertical steel angle sections down from the pipe shaft and linked them to the descending angles with horizontal pieces, creating two steel triangles.

During the course of cutting back the "rear" wall of the dig to accommodate one of the verticals, a small, loose alcove was encountered issuing a draught. More trimming of the wall will be needed to push one of the verticals into a parallel position ready for a horizontal cross member to be welded in.

Concrete and stone walling will be built up from these horizontal sections.

Sunday 22 June 1997 - Richard Witcombe, Rob Taviner, Graham Bromley, Kate Lawrence

RW sent up three buckets of slumped material from just below the concrete rings before making a start on the concrete walling.

The spaces between the loosely cemented rubble roof and the four canted roof beams were filled in with rock and concrete, and a few courses were laid in the right hand steel triangle.

The recent heavy rain had produced drip in the shaft which caused continuous minor wall collapses throughout the afternoon.

Wednesday 25 June 1997 - Richard Witcombe, Paul Stillman, Graham Bromley, Kate Lawrence, Rob Taviner, Mark Lumley, Tony Audsley, Clive North

An inspection of Sunday's work showed that one eighth of an inch cracks had opened up between the concrete and the canted roof beams, suggesting that the latter had been forced downwards a fraction by the weight of the pipes.

RW walled up two thirds of the right hand triangle, working under heavy drip, pungently contaminated with sheep droppings, and occasional scree collapses.

Sunday 29 June 1997 - Richard Witcombe, Clive North, Rob Taviner, Tony Audsley

The gap between the concrete and the roof beams had opened up to nearly half an inch, indicating further downward movement by the pipes.

RW finished walling up the right hand triangle, but in the absence of further welding, could do nothing to seal up the back wall which continues to collapse. Instead, a 3' length of steel angle was inserted on top of the sloping steel roof sections just below the rings, and walling was constructed upwards from this to pick up the ring above. Some of the stone was imported from the nearby pits.

The drip had reduced slightly from last Wednesday.

Wednesday 2 July 1997 - Dave Speed

Inspected the shoring. No further movement of the steel frame.

Sunday 6 July 1997 - Rob Taviner, Bob Cottle

Cut back the rear and left hand side walls. Thirty buckets removed.

Wednesday 9 July 1997 - Dave Speed, Paul Stillman

Removed two further buckets.

Sunday 20 July 1997 - Richard Witcombe, Bob Cottle, Graham Bromley, Kate Lawrence, Rob Taviner

With the left hand steel triangle in an acceptably upright position, RW commenced walling it up, completing about one third during the afternoon.

Wednesday 23 July 1997 - Richard Witcombe, Paul Stillman, Rob Taviner, Graham Bromley, Kate Lawrence

KL had earlier delivered a trailer-load of walling stone.

RW continued walling inside the left hand triangle, completing about two thirds of it.

Sunday 27 July 1997 - Richard Witcombe, Ken Appleby, Rob Taviner

The surface run off from recent heavy rain had created small gullies and deltas in the depression, and underground there was still heavy drip. The water had disappeared into the scree choke with no sign of back up.

RW completed the stone and concrete infilling of the left hand steelwork.

Wednesday 30 July 1997 - Paul Stillman, Richard Witcombe, Rob Taviner

RT and PS sent up twenty five buckets of spoil between them, most of it slumped scree from the walls. The large floor block was uncovered again and a slight draught detected.

Sunday 3 August 1997 - Dave Speed, Graham Bromley, Kate Lawrence

A day of persistent rain. A mud-covered, disorientated lamb was found collapsed in the depression, perhaps a victim of lead poisoning. It was taken up to the farm.

Twelve buckets were brought out. Digging on the left hand side below the step uncovered small air spaces and very loose fill, coupled with a noticeable draught.

Wednesday 6 August 1997 - Paul Stillman, Rob Taviner, Dave Speed, Kate Lawrence, Richard Witcombe

RT and PS between them sent up fifteen buckets from the bottom of the dig. The large block broke up when levered out.

Sunday 10 August 1997 - Graham Bromley, Kate Lawrence, Dave Speed, Richard Witcombe, Rob Taviner, Paul Stillman

DS welded a section of angle linking the bottom of the two steel triangles to provide a base for the back wall. The welding proved very time consuming as the steel was galvanised and the surface generator was probably providing too little power.

RW made a start on the concrete and stone back wall, with RT providing some infilling material from the bottom of the dig.

The trailer, full of spoil and stuck in the mud for many weeks, was jacked up, dug out and hauled away to the stone pit.

Wednesday 13 August 1997 - Rob Taviner, Paul Stillman, Graham Bromley, Richard Witcombe

RW continued constructing the back wall, switching to a semi-circular shape after 18" to match the rings above and allow the easy passage of buckets. Some backfill material had to be sent down from the surface! The wall is now half completed.

Wednesday 20 August 1997 - Paul Stillman, Richard Witcombe, Dave Speed

Further work on the back wall. A "1997" date stone was built in.

Wednesday 27 August 1997 - Dave Speed, Rob Taviner, Richard Witcombe, Paul Stillman, Len Coltham

RW continued work on the back wall, almost reaching the concrete rings. DS cut a length of steel angle which will be welded to form the front edge of a concrete floor at the foot of the walls.

Saturday 30 August 1997 - Dave Morrison, Jim Young, Dave Speed

Welded the floor level cross member.

Wednesday 3 September 1997 - Kate Lawrence, Richard Witcombe, Dave Speed, Paul Stillman, Len Coltham

RW completed the back wall and a concrete and rock floor platform.

Sunday 7 September 1997 - Richard Witcombe, James Witcombe, Paul Stillman, Len Coltham, Rob Taviner, Kate Lawrence

PS, KL and RT sent up thirty buckets of muddy scree. A few small holes were uncovered towards the end of the afternoon, and one large rock which might just be bedrock.

A digger's assistant is now required underground to guide the bucket past the shoring.

The 3' steel ladder was exchanged for a 10' length.

Wednesday 10 September 1997 - Richard Witcombe, Clive North, Rob Taviner, Kate Lawrence

CN assisted by RW sent up sixteen buckets. The small holes petered out and the large rock appears to be just that. On the credit side, larger slabs are now appearing in the fill and some of these were left underground for future shoring use.

More steelwork will need to be installed before any further depth is gained.

Friday 31 October 1997 - Dave Morrison, Jim Young, Rob Taviner

JY extended the welded steel framework into the main digging chamber. Wall frames, uprights and two canted roof sections were inserted in a day long session.

Wednesday 20 May 1998 - Richard Witcombe, Kate Lawrence, Paul Stillman, Tony Littler, Rob Taviner, Mark Lumley, Dave Morrison

Opening of the 1998 campaign. The digging area was dry with little evidence of slumping. Ten buckets of

scree were brought out and one small frog. Slight draught.

DM brought over some galvanised steel mesh.

Sunday 31 May 1998 - Rob Taviner, Paul Stillman, Richard Witcombe, Ken Appleby

RT fitted cut sections of steel mesh over the roof joists, adding a further 5' length of steel angle to the "cage".

Wednesday 3 June 1998 - Paul Stillman, Richard Witcombe, Dave Speed, Rob Taviner, Mark Lumley, Tony Boycott

Brought out thirty buckets of scree, mainly run-in material from the unstable section of roof and wall. Small stone falls continued throughout the digging session, but the digger is now protected from overhead collapse.

Sunday 7 June 1998 - Rob Taviner, Richard Witcombe, Bob Cottle

Brought out twenty buckets of scree.

A female pheasant was feeding amongst the thistles in the depression.

Sunday 21 June 1998 - Rob Taviner, Bob Cottle, Paul Stillman, Richard Witcombe, Kate Lawrence

Brought out thirty buckets of muddy scree.

Collapses and run-ins have left one wall seriously undercut. More steel shoring on which to base stone and concrete walling is urgently required.

Wednesday 24 June 1998 - Richard Witcombe, Paul Stillman, Kate Lawrence

Careful digging at the base of the stal cemented wall, which forms a 180 degree arc about 4' around. The "wall" continues downwards and the fill is loose. Occasional puffs of fresh air could be felt. Twelve buckets were sent out.

The undercut wall on the right is a serious threat to the stability of the shaft, and needs to be shored and back-filled urgently.

Monday 21 September 1998 - Dave Morrison, Jim Young, Paul Stillman, Kate Lawrence

Under very trying conditions of wall collapse and run-ins, JY welded further sections onto the steel cage creating an irregular cube within the digging chamber.

Sunday 4 October 1998 - Paul Stillman, Rob Taviner, Richard Witcombe

Commenced walling up the very undercut right hand side of the chamber where any further collapse would threaten the stability of the concrete pipe foundations. The stone and concrete was laid on the steel framework and supporting Dexion sections driven horizontally into the run-in material.

Sunday 11 October 1998 - Richard Witcombe, Clive North

Continued walling, mostly along the far side. Incorporated a drainpipe of perforated plastic in the right hand wall. Some alarming scree falls punctuated the afternoon, and the roof above this point is looking very unsafe.

Sunday 18 October 1998 - Richard Witcombe, Bob Cottle, Paul Stillman, Rob Taviner, Max Midlen, Dave Morrison and some Wessex casual labour

More work on the right hand and far wall. The backfill was "stiffened" with odd pieces of steel and wire mesh. Small rock falls continue and the undermining is now close to the side of the entrance shaft.

Wednesday 21 October 1998 - Richard Witcombe, Tony Littler

Backfilled some of the collapse areas behind the stone and concrete walls, using scree and rocks dug out of the floor. A few minor stone falls. No detectable draught.