

The excavation of the front of the William Smith Quarry

The stone archway around a blocked quarry entrance off Summer Lane, Combe Down, at OS 76406305, is thought to be that operated by William Smith early in the 19th Century. The Combe Down Heritage Society, representing the 'William Smith Quarry Steering Group', agreed to investigate the quarry in collaboration with the Bath & Camerton Archaeological Society. The aim was to seek evidence of a railway at the quarry entrance which would confirm that this was Smith's Kingham Field Quarry.

A small scale excavation was carried out on the 13th September 2008 to look for evidence of a railway, particularly stone sleeper blocks of the form shown below. Remaining iron rails or nails were considered to be extremely unlikely since these have been taken as scrap from early times.



PREVIOUS INVESTIGATION

In 1982 Pollard described and photographed the mine passage which had become blocked some distance from the entrance. He also noted that a hole dug for a drain revealed signs of flanking walls which lined up with the tunnel walls and his findings and interpretation have been recently extended by Irving. A wall was built across the quarry entrance about 10 years ago for reasons of safety. In 2007, as part of the investigations of the Combe Down mines, this wall was partly breached, gaining access to confirm that the passage did not communicate with any other known mine. It also confirmed that the mine was not a bat habitat.

Smith's diaries for 1812, Nov 6, mentioned that he 'opened a quarry arch' and in the same year record that he bought iron rails for the railway down to Tucking Mill. There is other historical evidence of Smith's quarry, in particular the intriguing note on the Jackday Quarry by Pitcairn and Richardson (1926), 'its entrance almost faces Lakeview and it is said to extend underground ... below The Brow. It also penetrated nearly up to the site of the Monkton Combe Junior School ... the owner of this quarry and the owner of the Vinegar Down quarry near De Montalt House joined hands and truck lines were laid between them and carried down into the Midford valley'. Irving has suggested that John O'Neal was the other partner, and that the tramways from each of the quarries connected at the top of Bluebell Steps on Summer Lane. Recent field walking between Summer lane and Tucking Mill has found signs in several places of the rail route near the bottom of the hill. But the site of his quarry and the upper part of the railway remain in doubt. Irving's investigations pointed to the need for excavation.

THE EXCAVATION

We were aware that the ground in front of the quarry had, during two centuries, been covered by debris from the steep sides of the surrounding woodland and by the dumping of rubbish. We were therefore uncertain of the depth and nature of the dig. The excavation throughout was hampered and slowed considerably by the presence of tree roots.

Possible sites for excavation were marked out and consisted of an area one metre wide by ten metres long at right angles to the quarry arch and abutting its western edge, this area being

selected as the one most likely to find signs of a railway. The curve of a track within the quarry would have continued on roughly the same radius outside so taking it westwards.

TRENCH 1 consisted initially of a test pit 1m square in the north west corner of the area against the arch. Because this revealed only the concrete footing of the recent wall, the pit was extended for a further half metre to the south.

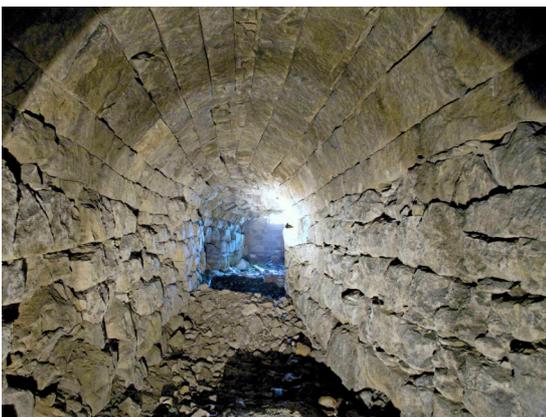
TRENCH 2 was opened up seven metres from the arch. Again, a test pit one metre square was extended, this time for a further metre to the east across the quarry front.



The quarry entrance showing the amount of debris that has accumulated



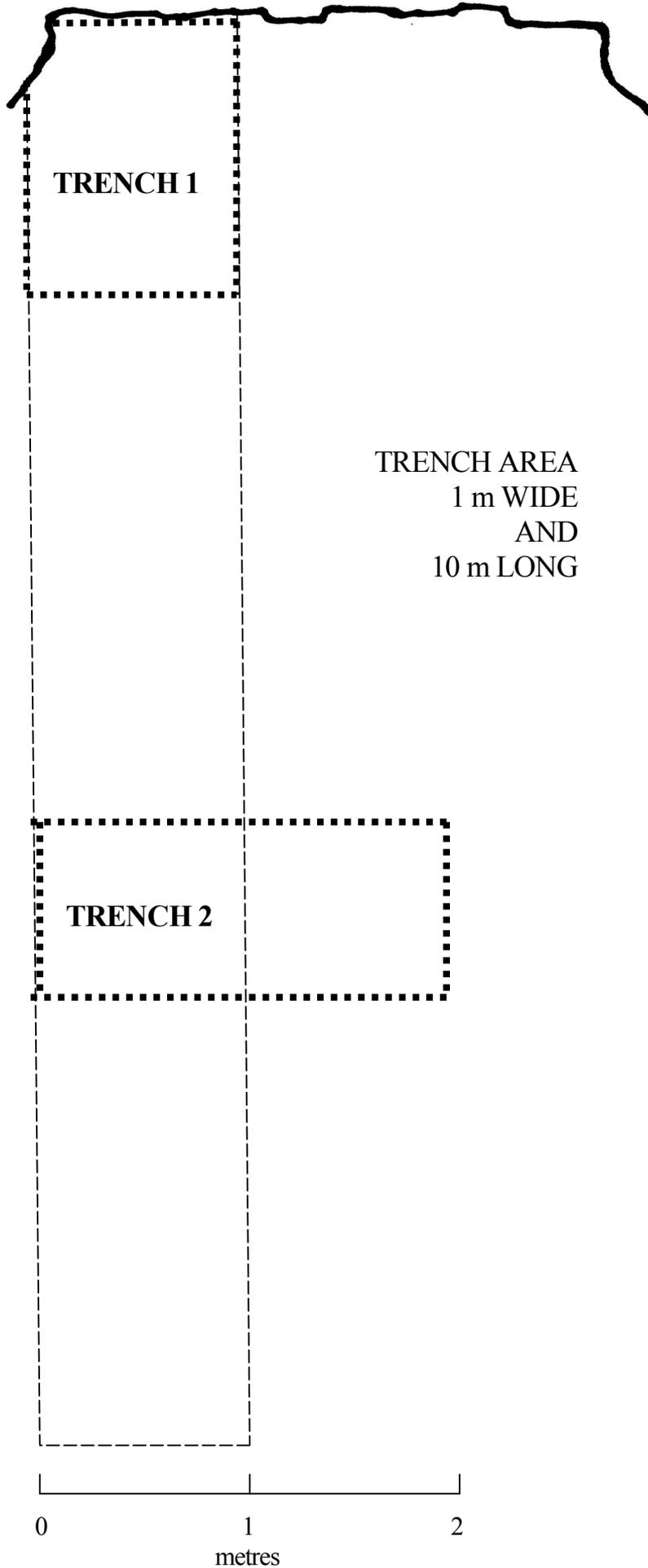
Demontalt House and Mill from the east about 1850. Summer Lane is at the bottom right hand corner. The path running across to the bottom left hand corner is on the suggested line of the railway.



Inside the quarry looking outwards to the entrance. To the left of the distant shadow is a cleft in the wall which is a 'gull', or 'fault' as Smith described it.

William Smith Quarry Sketch of excavation

Outline of arch viewed from above



EXCAVATION FINDINGS

TRENCH 1 revealed only recent concrete layers, through mainly leaf mould and topsoil, containing some mid-20th Century artefacts in what is assumed to be rubbish tipped into the area.



Trench 1 showing recent concrete

TRENCH 2 went through similar layers as Trench 1 but contained earlier artefacts. These items are not directly relevant to the aims of the excavation but as a matter of interest will be subjected to further study.

At a depth of 1.2 m the floor of this trench was of level, uniformly compacted fine limestone rubble. Excavating through this layer showed it to be about 100 mm thick under which was natural firm soil.



Trench 2 showing the working surface of compacted rubble which has been dug through

ESTIMATION OF LEVELS

Although much of the tunnel floor is covered by debris, its part of its working surface remains exposed. During our excavation we were able to take levels which confirmed that the compacted rubble in Trench 2 was about 3cm lower than the working surface of the mine. At a later date, using a Dumpy level, we worked our way westwards on the road to the steps down to Tucking Mill, the 'Bluebell Steps', and found that the mine surface level is 1.64m (5 feet 1 inch) below the top of the steps.

INTERPRETATION

This limited excavation was inconclusive in the sense that it failed to find any actual signs of a railway outside the mine entrance. It was nevertheless of value to have found the working surface on which stone would have been brought out.

The finding that the top of the Bluebell Steps is 1.64 m higher than the mine surface is consistent with the proposed route of the railway. It was common in this era to use horses to pull laden trucks up minor slopes and we give elsewhere the evidence of this being the route taken by William Smith which is consistent with the views of Pollard (1982). Alternative possible routes as discussed by Willies now seem less likely (Willies and Davies).

ARTEFACTS

On superficial examination, artefacts from Trench 1 appeared to be of late C 20 but from Trench 2 of the C19. They will be further assessed by experts.

ACKNOWLEDGEMENTS

The William Smith Quarry Steering Group is led by the Combe Down Heritage Society whose President, Dick Irving, has researched and recorded extensively the history of Smith's 'Venture into Stone Quarrying'. This small excavation was based on his research.

The Bath and Camerton Archaeological Society shared in the provision of the organisation and infrastructure of the exercise and we thank the diggers from both Societies who took part. The excavating team were Bob Whittaker, Malcolm Aylett, Tavis Walker, Jane Briggs, Richard Read, David Stubbs, Daniel Brown, Jaqueline Burrows.

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The first photograph on page 3 was taken by Heritage Society member Dan Brown. The illustration of stone sleeper blocks was taken from 'Weighbridge', published by the Somerset Coal Canal Society.

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