

***A Programme of Archaeological Work at
Snailbeach Lead Mine:
Black Tom Shaft, 2012-3***

by
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Archaeology Service



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A Report for

**Outdoor Recreation,
Shropshire Council**

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SUMMARY

In 2012 it was proposed to relocate a repaired spiral classifier and jigger to the Black Tom area of Snailbeach Lead Mine, Shropshire and erect a shelter to protect the restored machinery. Because of the archaeological significance of the site English Heritage required that this work be accompanied by a Programme of Archaeological Work, comprising desk-based research, field evaluation, and the archaeological monitoring of site groundworks. The Archaeology Service, Shropshire Council was commissioned to undertake the programme of archaeological. The documentary research was able to pinpoint the location of the spiral classifier and jigger prior to its removal and restoration in 1993. The trial excavation found that significant archaeological features and deposits relating to early 20th-century spar processing survived at a depth of c.0.25m below the ground surface. However, there was no evidence for a former shelter over the spar processing plant. The groundworks for the new shelter were carried out in summer 2013. The watching brief recorded the edge of a concrete surface, possibly a former working surface.

ILLUSTRATIONS

- Figure 1: The core area of Snailbeach Lead Mine, showing the location of the Black Tom area
Figure 2: The location of the spar processing plant in the Black Tom area in 1993; 1:200 scale
Figure 3: The 2012 trial trenches, plan view; 1:50 scale
Figure 4: The location of the spar processing plant in 1993, from SB93 Drawing Nos. 6, 7, 29 & 30; 1:50 scale
Figure 5: The location of the area of soil strip for the new shelter and the foundation pits (1-13); scale 1:100

PHOTOGRAPHS

- Photo 1: The Black Tom area in 2012, looking SE
Photo 2: The 2012 trial trenches, looking NW, (scales 2m & 1m)
Photo 3: The 2013 foundation pits, looking NW, scale bar 0.5m
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Photo 6: Pit 11, showing concrete surface, looking NW, scale bar 0.5m

1 INTRODUCTION

1.1 Snailbeach is situated about 15km to the southwest of the centre of Shrewsbury and 17km northeast of Bishop's Castle at the head of a valley running northeastwards into the west side of the Stiperstones ridge.

1.2 The Ordovician rocks of the Shelve area contain numerous intrusive mineral veins, dating from the late Devonian period.

1.3 The lead deposits at Snailbeach may have been worked in Roman times, although the earliest documented workings date to the mid-17th century. In the late 18th century, the Snailbeach Lead Mining Company was formed, and this operated until 1911. The mine's output reached a peak in the mid-19th century, when the mine was one of the country's largest producers of lead ore. Decline set in the late 19th century, although working for barytes continued until c.1955.

1.4 The Snailbeach mine (Shropshire Historic Environment Record [HER] No. SA984) is a well preserved example of a highly centralised mid to late 19th-century lead mine. A number of late 18th-century features also survive, incorporated in later developments, and a number of associated structures, such as the smelter, also survive. The survival of a large archive of documentary material in the collections of the Shropshire Records Office, the Northumberland County Record Office, and at Longleat House relating to the mine's operation is considered to be almost unique (Trueman and Gill, 1990, Vol. I, pp 42-50). These, amongst other factors, have led to Snailbeach Mine being considered as a monument of national importance, and it has accordingly been scheduled as an ancient monument as defined by the Ancient Monuments and Archaeological Areas Act 1979 (Snailbeach Lead Mine, Shropshire, Monument No. 21658).

1.5 In the 1990s a programme of work was undertaken by Shropshire County Council to make safe various of the open workings and spoil tips at Snailbeach Lead Mine. During the course of these works, in 1993 a jigger and spiral classifier were removed from the Black Tom area of the mine for repair and renovation (Hannaford & Price, 1995a, p10). The machinery has now been restored and was relocated to the Black Tom area in the summer of 2013. A shelter was erected to protect the restored machinery from the elements.

1.6 Because of the archaeological significance of the site English Heritage required that this work be accompanied by a Programme of Archaeological Work. The aim of the programme of archaeological work was to allow for the preservation by record of any archaeological remains that are encountered during the works. The programme of archaeological work comprised desk-based research, field evaluation, and the archaeological monitoring of site groundworks. The Archaeology Service, Shropshire Council was commissioned to undertake the programme of archaeological work and this report documents the results of the work.

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 The Stiperstones-Shelve area has long been of great interest to geologists, as the rocks here show a complete sequence of the Ordovician period; the rocks also contain numerous intrusive mineral veins, dating from the late Devonian period, and lead and barytes mineralisation in the Shelve area gave rise to a thriving mining industry in the late 18th and 19th centuries.

2.2 The lead deposits at Snailbeach may have been worked in Roman times, although the earliest documented workings date to the mid-17th century. In the late 18th century, the Snailbeach Lead Mining Company was formed, and this operated until 1911. The mine's output reached a peak in the mid-19th century, when the mine was one of the country's largest producers of lead ore. Decline set in the late 19th century, although working for barytes continued until c.1955.

2.3 The Snailbeach mine (County Sites and Monuments Record No. SA984) is a well preserved example of a highly centralised mid to late 19th-century lead mine. A number of late 18th-century features also survive, incorporated in later developments, and a number of associated structures, such as the smelter, also survive. The survival of a large archive of documentary material in the collections of the Shropshire Records Office, the Northumberland County Record Office, and at Longleat House relating to the mine's operation is considered to be almost unique (Trueman and Gill, 1990, Vol. I, pp 42-50). These, amongst other factors, have led to Snailbeach Mine being considered as a monument of national importance, and it has accordingly been scheduled as an ancient monument as defined by the Ancient Monuments and Archaeological Areas Act 1979 (Snailbeach Lead Mine, Shropshire, Monument No. 21658).

2.4 Shropshire County Council acquired most of the site (excluding private dwellings and farmland) in the 1980s, and put in hand a programme of reclamation works in 1993-4. These works included the infilling or capping of a number of shafts, the infilling of surface collapses into stopes, making safe and gating several adits, constructing a new spillway for the reservoir, removing contaminated soil and material from a number of locations, and the landscaping and sealing of toxic material on the White Tip. The Archaeology Service, Shropshire County Council, carried out an archaeological watching brief on these works (Hannaford and Price, 1995a). At the same time, the County Council had since about 1991 been running a programme of repairs to the former mine buildings, restoring some buildings (the Locomotive Shed and Blacksmiths' Shop), and consolidating others (the Cornish Engine House, the Old or George's Shaft Engine House, the Miners' Dry, the Compressor House, Crusher House, the Office Complex, and the Cornish or New Engine House complex). The repair programme was assisted with grant aid from English Heritage.

2.5 In 1999 the Environment Department, Shropshire County Council, undertook a further programme of restoration and consolidation work. This included the conversion of the Miners' Dry to a visitor centre, the re-building of a shed at Perkins Level, the consolidation of the pithead at George's Shaft and the erection of new pithead gear, the consolidation of the Carpenter's Saw Pit in the Core Area, and the tidying of the ruins of the Halvans Engine House on the edge of the former White Tip. (Hannaford, 2000)

2.6 In 2010 the Archaeology Service carried out a watching brief on groundworks associated with the re-building of an annexe to the Miners' Dry (Hannaford, 2011).

3 THE DOCUMENTARY RESEARCH

3.1 The documentary research was intended to locate as precisely as possible the site of the jigger and classifier before its removal in 1994, and whether it had originally been located within a shelter or shed.

3.2 Mine working was being undertaken in the Black Tom area before 1820, and one of the shafts shown on a mine plan of 1766 may be in this area (Trueman & Gill, 1990, p57). However, mining in the immediate area seems to have ceased in the 19th century; on the 1902 OS 25" plan of the area the "Black Tom" shaft itself is labelled "Old Shaft". The area is shown as being covered by a spoil tip, likely to have come from this shaft and an adjacent adit (Adit I), labelled Trial Level (Lead) on the map. The 1902 map shows no spar processing plant or other structures in the area around Black Tom (OS 1902; Hannaford & Price, 1995a, p9 & Fig. 3).

3.3 Black Tom shaft was re-opened by the Halvans Co. in 1912 to work barytes (Brown, 2001, p40). A photograph of the Black Tom area of c. 1912 held by Shropshire Archives (SA ref PH/S/20/3) shows various pieces of spar processing plant; the only building in the area is identifiable as the Black Tom winding engine house (still extant). The spar processing machinery is shown open to the elements. The barytes working at Black Tom ceased in c. 1930. Photographs of the spiral classifier and jigger of c.1940 and 1960 again show no covering structure (Brown, 2001, p41).

3.4 The Archaeology Service had made a number of scale plans of the spar working area adjacent to the Black Tom shaft in 1993 (SB93, drawing nos. 6, 7, 29, & 30). These formed part of the site archive for the archaeological recording that accompanied the reclamation works in 1993-5. The site archive was deposited with the Shropshire County Council Museum Service and is located at the Ludlow Museum Resource Centre. These scale plan drawings locate the position of the spiral classifier and jigger in relation to the fixed concrete machine beds still in situ in. In 1993 there was no evidence for any former shelter over the classifier and jigger.

4 THE TRIAL EXCAVATION

4.1 Two trenches were excavated to cross at right angles over the 1993 location of the spiral classifier and jigger. The trenches were excavated with a mechanical mini-digger to the top of archaeologically significant deposits and were then cleaned by hand and recorded. Trench A was aligned northwest-southeast and was 6.75m long by 1.25m wide; trench B crossed at right angles and was 6m long by 1.25m wide.

4.2 A thin turf and topsoil layer (1) and a layer of grey sand and fine spar chippings (2) up to 0.35m thick were removed to reveal a number of pieces of timber plank (10) on the surface of a deposit of light grey sand (9) with fine spar fragments. At the northwestern end of trench A, a plank-built box (4) was set into this spar; the box was filled with a deposit of fine very light grey spar (3). The box would have lain immediately by the northwest end of the jigger; similar boxes recorded on the White Tip in 1993 formed part of a hand-jigger apparatus (Hannaford & Price, 1995a, p 14, Fig. 9, & Plate 19). At the southeastern end of the trench, in approximately the position of the southeastern end of the spiral classifier, was a deposit of grey spar with small stone fragments (8).

4.3 Immediately to north of the former location of the jigger was a concrete surface (6), at a depth of c. 0.25m beneath the topsoil (1) and grey sandy spar (2). The southern edge of the concrete surface was marked by a decayed timber beam (5) about 10cms by 7cms in section. A thin patchy deposit of compacted fine light grey sandy spar (11) lay on the surface of the concrete. The surface was 3.15m wide, and at its northern edge was a deposit of light grey spar (7).

4.4 No fixings or mountings for the classifier and jigger were revealed by the trial excavation, though the concrete surface (6) is likely to have formed a working surface on its northern side. The trial excavations have demonstrated that archaeological deposits lie at a depth of as little as 0.05cms beneath the ground surface. This upper deposit of grey sand and spar (2) has been disturbed and is full of tree, shrub, and ivy roots. Significant archaeological deposits and structural remains relating to the early 20th-century barytes working lie at a depth of c.0.25m below the present ground surface.

5 THE WATCHING BRIEF

5.1 The groundworks for the shelter for the spar processing plant were carried out in June 2013. A rectangular area 8.2m by 5.4m was stripped of topsoil with a mechanical mini-digger and levelled to a depth of about 0.15m (see Figure 5). Twelve pits 0.6m by 0.6m in plan by about 0.35m deep (Fig. 5; 1-12) were then excavated by machine for the pads for the shelter base around the edges of the stripped area. A central slot 7m long by 1.5m wide (Fig. 5; 13) by 0.15m deep for the plant base was excavated along the centre of the stripped area.

5.2 A concrete surface (Photo 6) was seen in the five easternmost pits (Fig. 5; pits 1, 2, & 10-12) at a depth of about 0.3m below the ground surface. This lay beneath white and grey spar debris and the topsoil. The concrete surface was interpreted as a working surface of probable early 20th century date associated with the original spar processing plant. In all the other pits only the topsoil and spar deposits were seen.

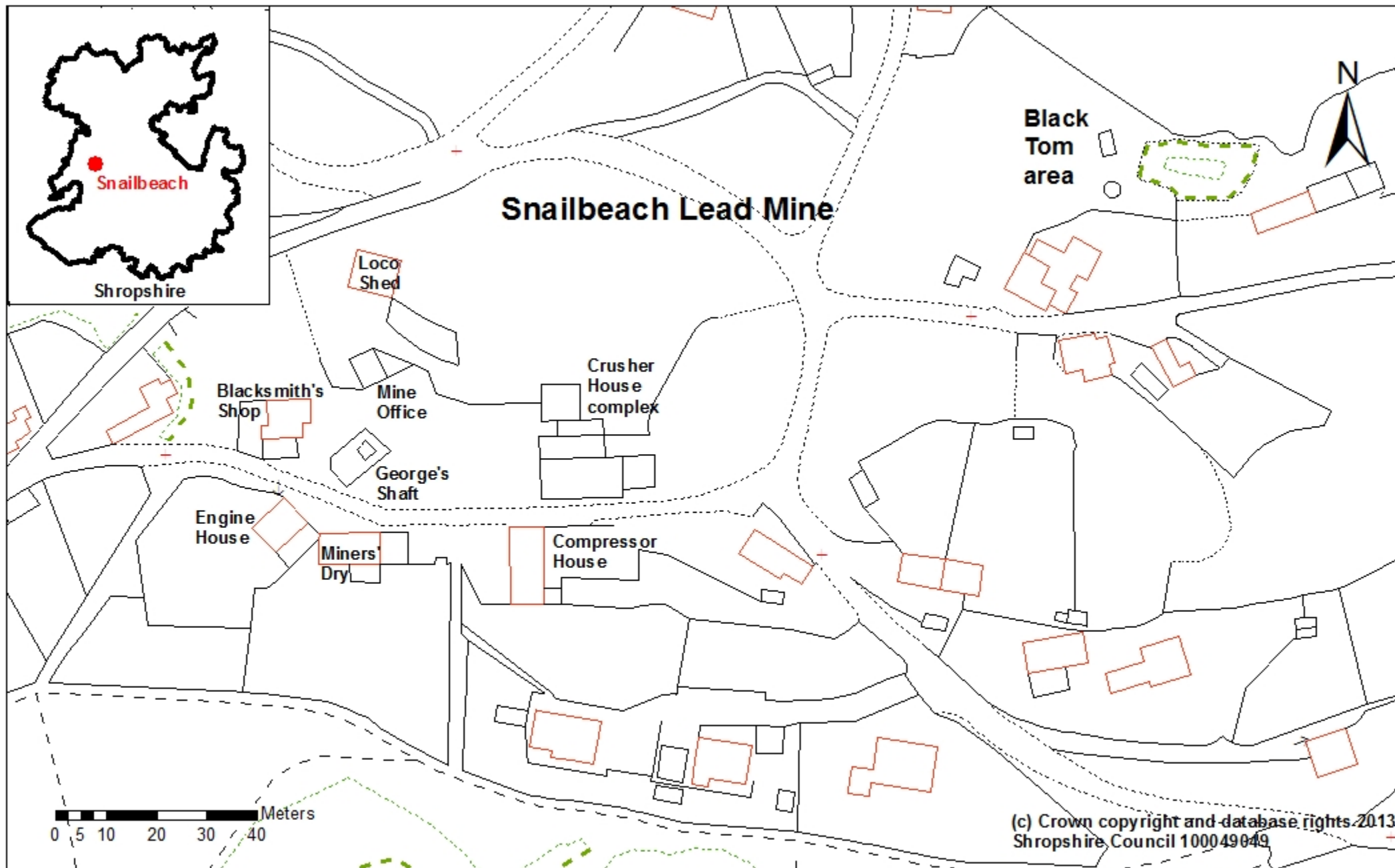
5.3 No other significant archaeological features or deposits were encountered during these works.

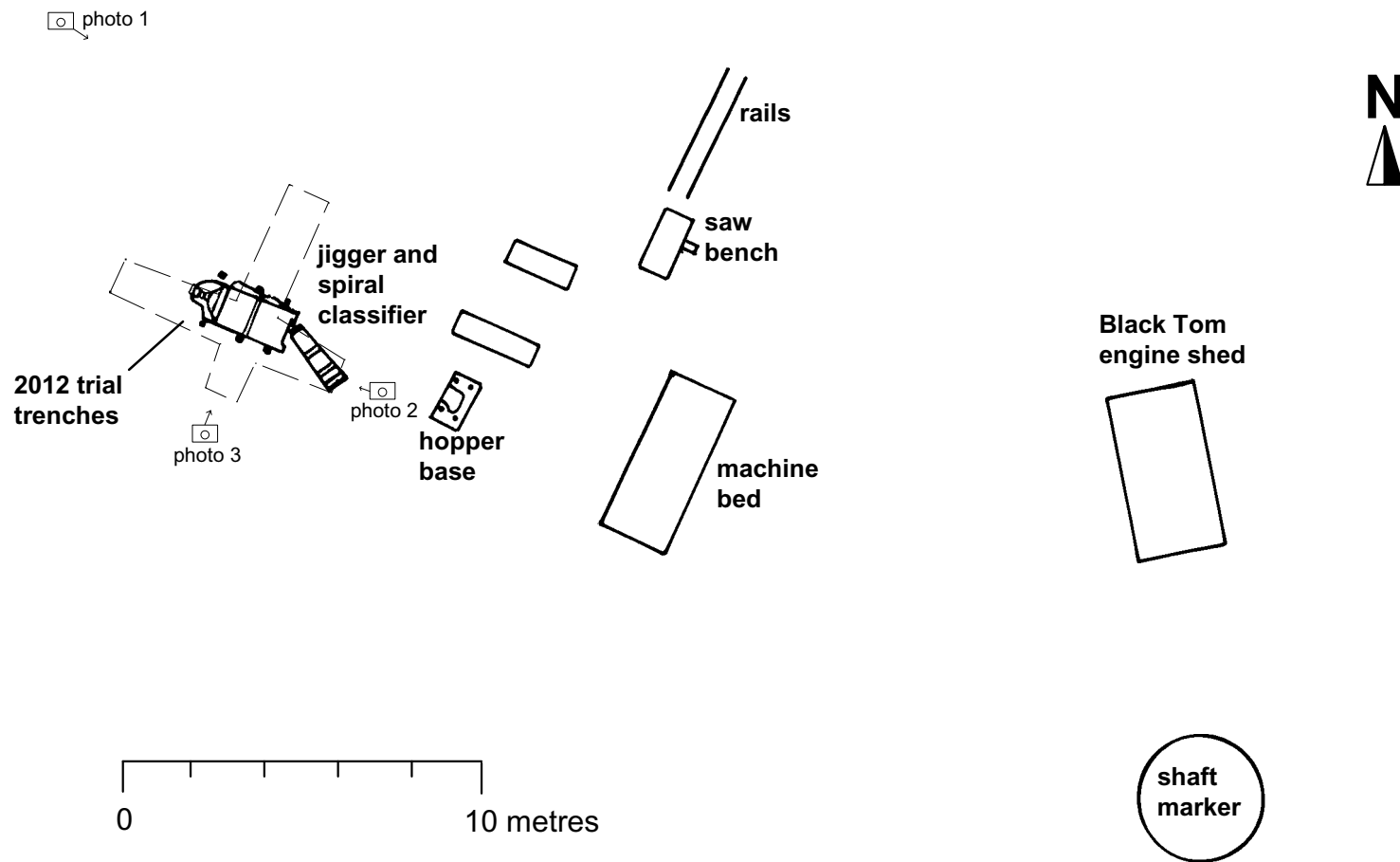
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ABBREVIATIONS

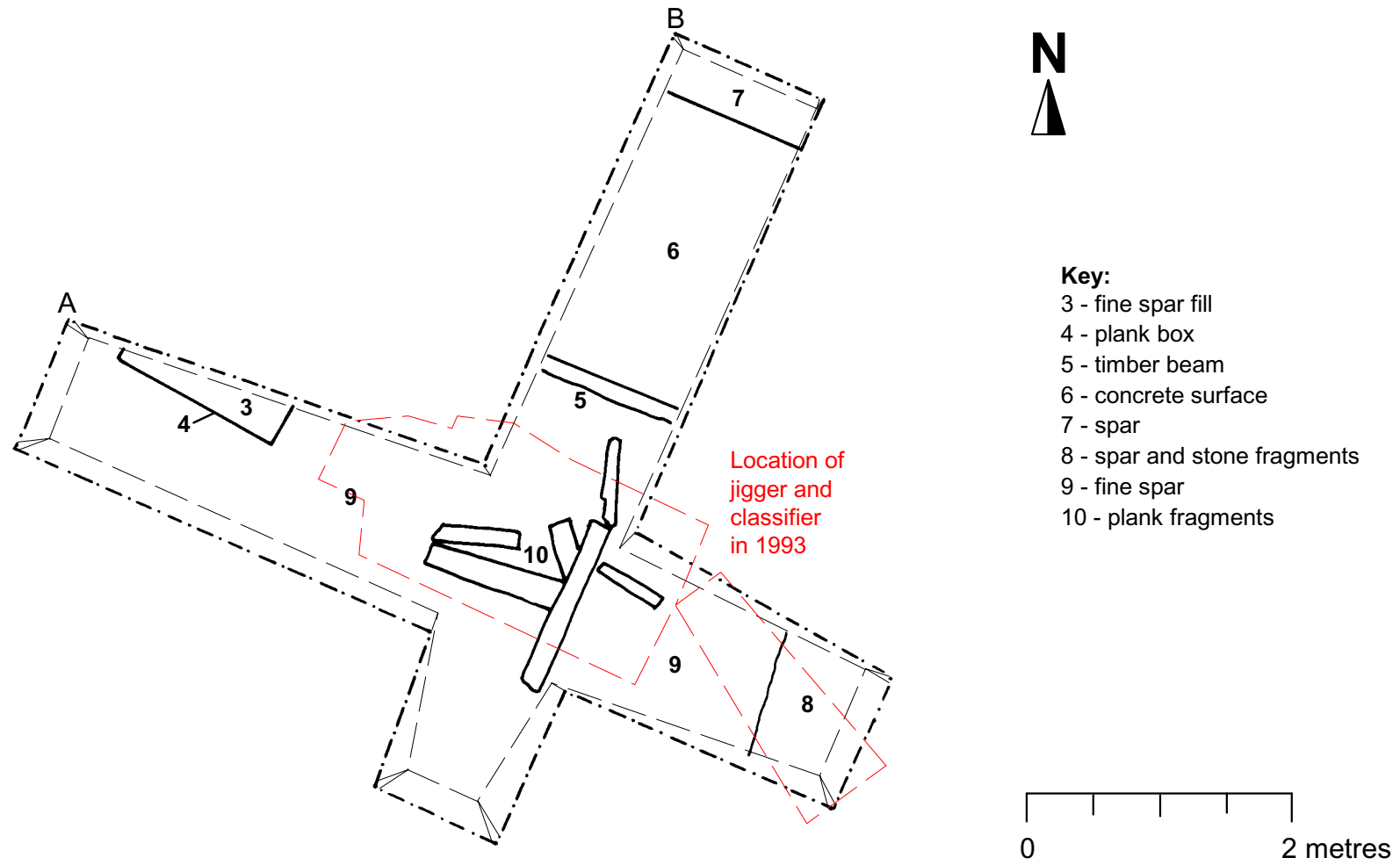
HER	County Historic Environment Record, Shirehall, Shrewsbury
OS	Ordnance Survey
RCHME	Royal Commission on the Historical Monuments of England
SA	Shropshire Archives, Castle Gates, Shrewsbury
SCAS	Shropshire Council Archaeology Service
 TSAHS	Transactions of the Shropshire Archaeological and Historical Society
TSAS	Transactions of the Shropshire Archaeological Society



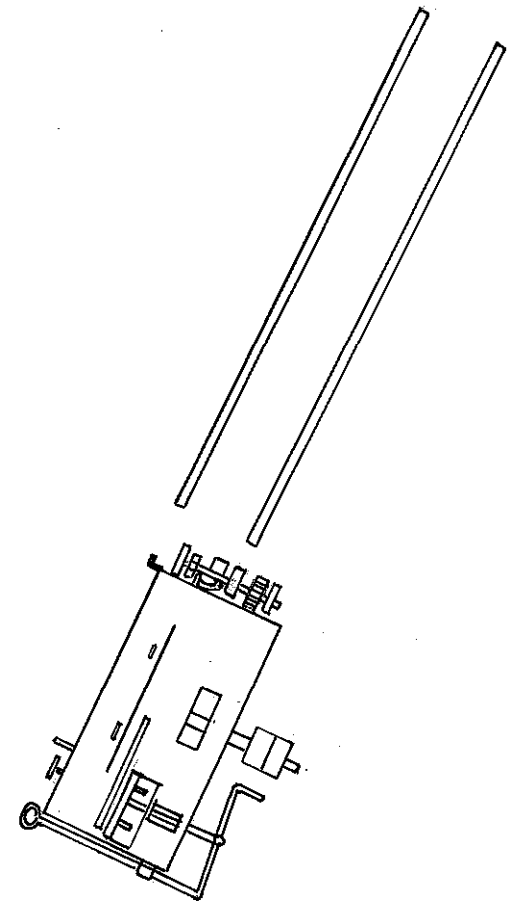
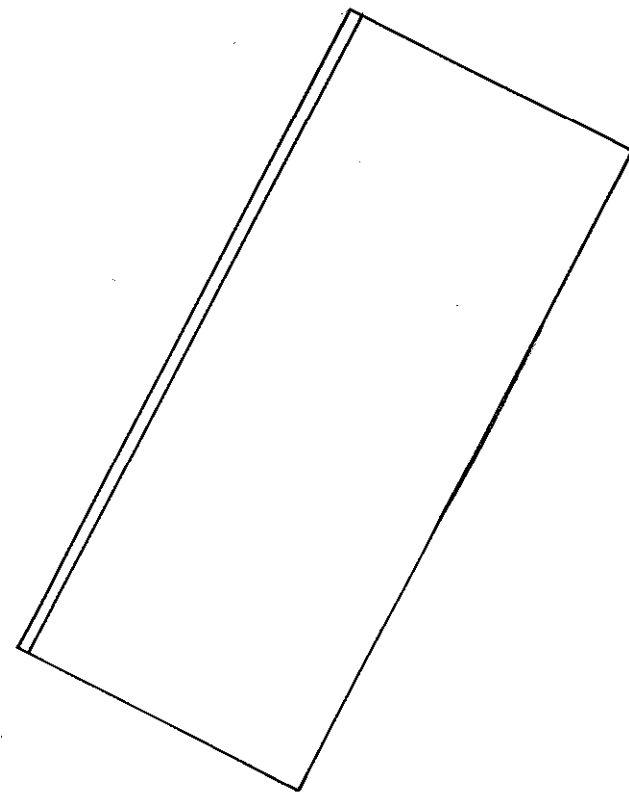
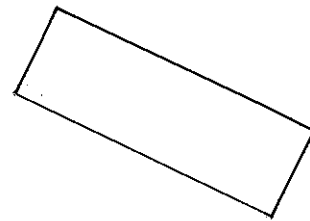
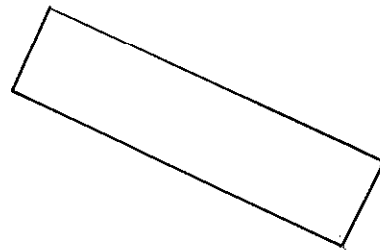
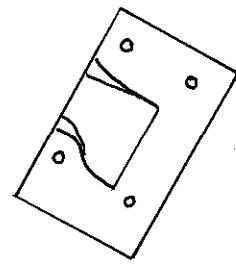
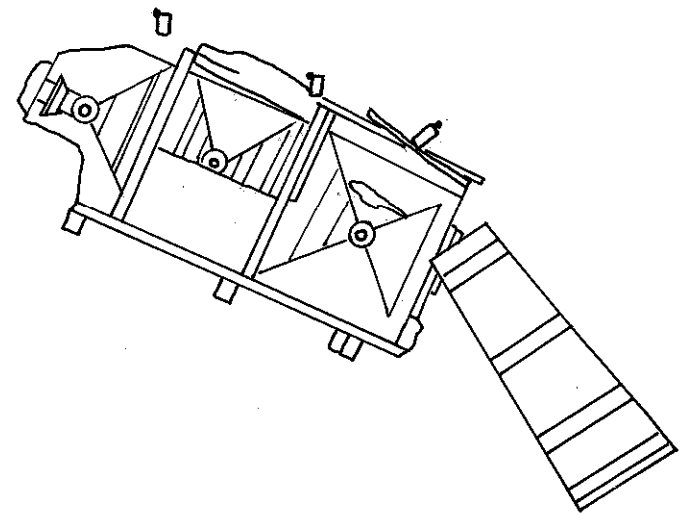


SNAILBEACH LEAD MINE 2012-3

Figure 2: The location of the spar processing plant in the Black Tom area in 1993; 1:200 scale

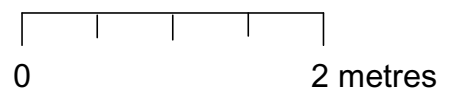


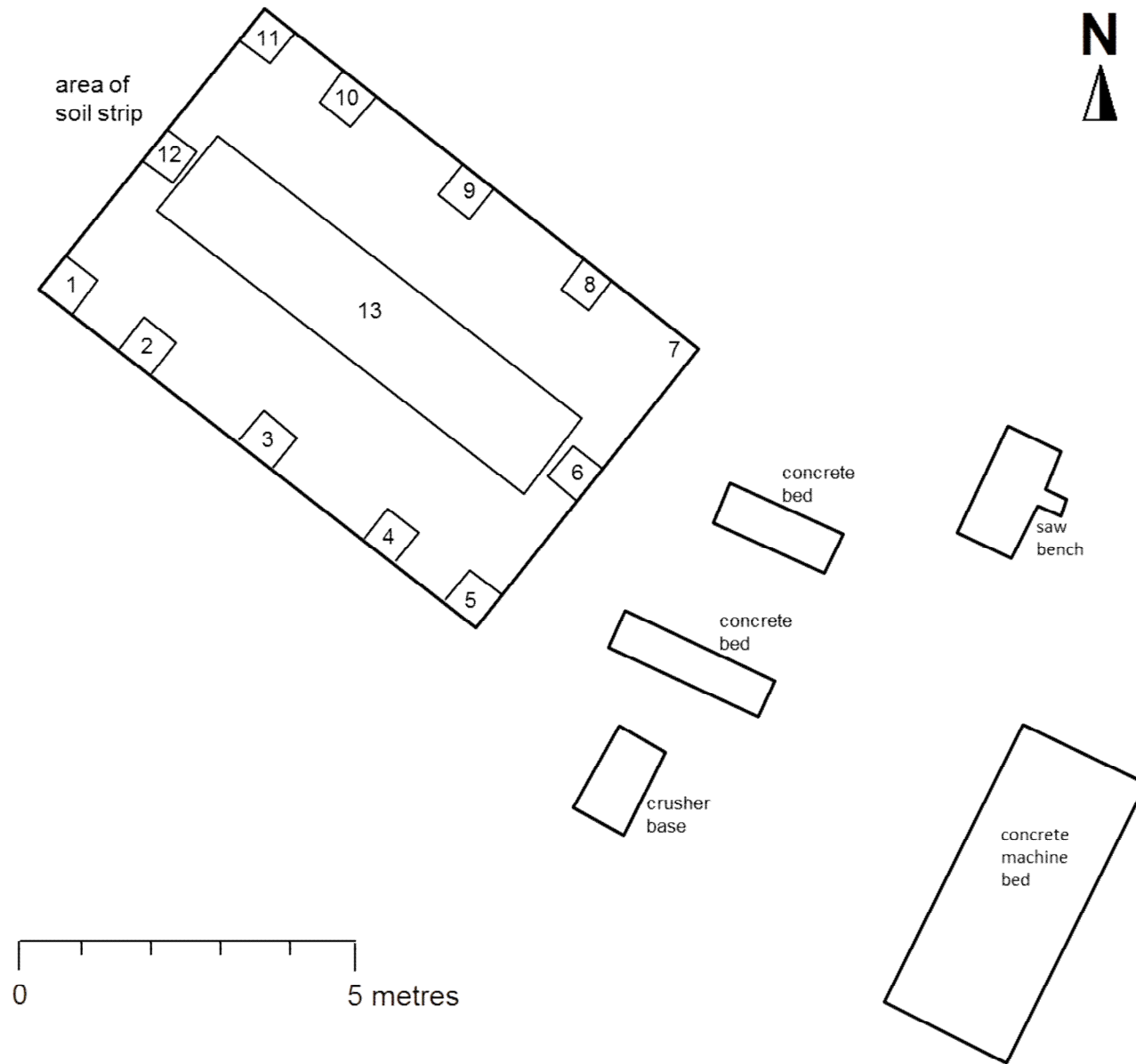
SNAILBEACH LEAD MINE 2012-3
 Figure 3: The 2012 trial trenches, plan view; 1:50 scale



SNAILBEACH LEAD MINE, SHROPSHIRE 2012-3
Figure 4: The location of the spar processing plant in 1993, from SB93 Drawing
Nos. 6, 7, 29 & 30;

1:50 scale at A3:





SNAILBEACH LEAD MINE, SHROPSHIRE 2012-3

Figure 5: The location of the area of soil strip for the new shelter and the foundation pits (1-13); scale 1:100



Photo 1: The Black Tom area in 2012, looking SE



Photo 2: The 2012 trial trenches, looking northwest, (scales 2m & 1m)



Photo3: The 2013 foundation pits, looking NW, scale bar 0.5m



Photo 4: The 2013 foundation pits, looking SE, scale bar 0.5m



Photo 5: Pit 5, looking SE, scale bar 0.5m



Photo 6: Pit 11, showing concrete surface, looking NW, scale bar 0.5m