# Ham & Doulting Stone Quarry, Ham Hill, Somerset

An Archaeological Evaluation



Marcus Brittain and Andrew Chaplin







## Ham & Doulting Stone Quarry, Ham Hill, Somerset. An Archaeological Evaluation

**Marcus Brittain and Andrew Chaplin** 

With illustrations and photography by Charlotte Walton and Dave Webb

Scheduled Ancient Monument 1003678 NGR ST 477 170

Museum accession numberTTNCM 94/2021HER number445294CAU report number1499VersionDraft

Edited by: Marcus Brittain (Senior Project Officer)

Approved for issue by: Matthew Brudenell (Director)

January 2022

© Cambridge Archaeological Unit Department of Archaeology University of Cambridge 34 A&B Storey's Way, Cambridge, CB3 0DT







#### **CONTENTS**

Project Summary Acknowledgements	1 1
INTRODUCTION Methodology	2 2
Historical and Archaeological Background	2
RESULTS  Trench Results  Cultural and Economic Material  Prehistoric and Roman Pottery  Post-Medieval/Modern Pottery  Worked flint  Glass  Metalwork  Slag  Worked Stone  Animal Bone	4 4 6 6 7 7 7 7 8 8 8
DISCUSSION	9
BIBLIOGRAPHY	11
FIGURES	13
OASIS	22
LIST OF FIGURES AND TABLES	

Figure 1.	Site Location
Figure 2.	Artefacts from Trench 1

Figure 3. Photographs from Trench 4

Figure 4. Artefacts from Trench 6

Figure 5. Photographs from Trenches 7 and 8 Figure 6. Photographs of Trenches 10, 11 and 12

Figure 7. Transects over PQA contour plan

Figure 8. Transect profiles

Figure 9. 1776 map of Stoke-sub-Hamdon by William Simpson

Table 1. Summary of trench results

Table 2. Summary of prehistoric and Roman pottery

#### Summary

Between 12th and 17th November 2021, an archaeological trench evaluation was undertaken at Ham Hill, Somerset, by the Cambridge Archaeological Unit (CAU) in response to a proposal by The Ham & Doulting Stone Company to extend quarry works by 2.23ha southward from its existing operations. Occupied since at least the early Neolithic, the site is one of Britain's largest prehistoric hillforts, totalling 88.1ha and a Scheduled Ancient Monument (SAM 1003678). Subject to quarrying since its Roman occupation, the hill is the primary source of Ham Stone which, since at least the Medieval period, has been the preferred building stone both locally and regionally for ecclesiastical foundations, stately homes and other important structures. Their continued conservation relies on this scarce resource.

Fourteen trenches were opened but no archaeological features were found during the investigation, which encountered only quarrying waste and, in three trenches, unquarried bedrock that represents the depth limit of historical quarry works. The trenching demonstrated significant quarrying impact to depths likely to have truncated and probably removed archaeological horizons. The quarry waste contained cultural materials that indicate the landscape's former prehistoric and Roman occupation, as well as documenting historical aspects of its quarrying operations into the nineteenth and early twentieth centuries.

#### Acknowledgements

We are grateful to the Duchy of Cornwall for permission to carry out the fieldwork. Zak England, Managing Director of The Ham & Doulting Stone Company and Nick Dunn, Land and Mineral Management, are acknowledged for their considerable assistance leading up to and during the fieldwork. Scheduled Monument Consent was granted by Historic England on 5th October 2021 (ref: S00241734) with support and oversight by Sasha Chapman (Historic England) and Steve Membury (South West Heritage Trust). Matt Brudenell was the Project Manager (CAU) with Marcus Brittain acting as Project Director (CAU). Survey was conducted by Jane Matthews, and the report graphics produced by Charlotte Walton with studio photography by Dave Webb.

#### **INTRODUCTION**

An archaeological evaluation comprising thirteen trenches totalling 214.4m² was carried out by the Cambridge Archaeological Unit (CAU) between 12th and 17th of November 2021 at Ham Hill, a Scheduled Ancient Monument (SAM 1003678) and one of Britain's largest prehistoric hillforts (Figure 1). The work was commissioned by Land and Mineral Management on behalf of The Ham & Doulting Stone Company in connection to a proposed southward extension to its existing quarry operations.

The proposed quarry area (PQA) amounts to 2.23 ha and is situated on the north 'spur' of Ham Hill at an elevation of approximately 125-127m OD. Centred on ST 477170, the site lies within the parish of Stoke-sub-Hamdon.

Where unaffected by quarrying, the Hill's solid geology consists of Liassic Ham Stone (limestone) that is normally overlain by compacted Yeovil Sand with a capping, up to 0.9m thick, of bioturbated sandy soils (including palaeosols and colluvium), sandy subsoil and a thinly grassed topsoil. The PQA lies within an area of historical quarrying with an undulating terrain of deep open faces of exposed bedrock interspersed with tall mounds of grass-covered quarry waste material. The aim of the trench evaluation was to determine the potential for areas of the PQA in which archaeological horizons may have survived amidst the quarry workings.

#### Methodology

Investigations were carried out in accordance with a Method Statement (Patten and Brittain 2021) and Written Scheme of Investigation (WSI; Brittain 2021) which conform to the requirements of Historic England's (HE) standards document *Management of Research Projects in the Historic Environment* (2015), and the Chartered Institute for Archaeologists' (CIfA) documents *Codes of Conduct* (2019) and *Standards and Guidance for Archaeological Evaluation* (2020).

Trenches were opened with a tracked 360-degree machine excavator using a 1.8m wide toothless ditching bucket under the direct supervision of an experienced archaeologist. All 'trenches' were cut through quarry waste. These interventions were mostly either 4.0 x 4.0m test pits stepped at 1.0m intervals to a depth of 2.0-2.5m, or long trenches 1.0m deep but sunk to 2.0m at one end. Owing to the loose nature of the exposed layers the 2.0m+ deep interventions were backfilled immediately following their recording. Removed overburden was placed in separate heaps to either side of each trench and, along with every machined level, was subject to regular sweeps with a metal detector.

Trenches were located using an advanced Global Positioning System (GPS), which also obtained heights against Ordnance Datum (OD). No surviving pre-quarry horizons were encountered. All deposits and sequences of quarry waste were documented by written record and digital photography (high-resolution RAW and JPEG files). Artefacts were recorded against context and depth of recovery and retained for study. Cut stone was recorded during the fieldwork with a small selection retained for further analysis.

#### Historical and Archaeological Background

An overview of the historical and archaeological background of the PQA is outlined in detail in the Archaeological Management Plan (Wessex Archaeology 2011) and with updated

information in the WSI (Brittain 2021) that includes data from the 2011-13 investigations conducted by the Cambridge Archaeological Unit in partnership with Cardiff University (Brittain et al. 2013; 2014; 2015). In short, there is considerable evidence for significant and complex occupation of the hilltop from the early Neolithic through to the Roman era that is of both regional and national interest.

Map regression, topographic survey and archived aerial photography (Jefferson Consulting 2012; RCHME 1997; Wessex Archaeology 2009; 2010; 2014) indicate areas of known and expected quarrying activities within the PQA from at least the eighteenth century to the present, though this could not identify the precise locations of earlier quarrying works.

Artefacts encountered during quarrying of the hill's stone have been collected in vast quantities and today form an impressive archive within the Somerset Heritage Centre, Taunton (Adkins & Adkins 1992; Gray 1902, 1904; Woodward 1997). They include evidence of the hill's important prehistoric and Roman chapters and testify to the density of human activities that once occupied the hill's north 'spur'. According to annotated maps held by the Somerset Heritage Centre, a number of these finds' locations broadly lie within the PQA, but these records must be treated with caution and as inexact locators of findspots.

Between 1923 and 1930, Harold St George Gray conducted seasonal excavations over the spur of Ham Hill, opening a total of nineteen 'cuttings'. Three of these, which interconnected, were opened over four seasons at 'Ham Turn', which lies somewhere within or near to the west side of the PQA (thought to be close to the current project's Trench 5), in an area known to have consistently produced artefacts during localised quarry works (Gray 1910). Mostly unpublished, Gray's findings at Ham Turn revealed well preserved archaeological layers sealed beneath later quarry waste. Trench 2 of the 2011-13 investigations was opened in the vicinity and revealed an intact sequence of the Iron Age ramparts and related archaeological horizons, all sealed beneath up to 1.0m of quarry waste. In both Gray's Ham Turn investigations and in Trench 2 the evidence points to Iron Age occupation at the rear of the rampart defences, and suggestions of pre-rampart occupation by earlier prehistoric communities are indicated by the material assemblages.

Gray's 1920s investigations were undertaken whilst the quarry works were still in operation within the PQA. Ordinance Survey (OS) maps from the 1880s to the early twentieth century illustrate cranes and stone mason's workshops at various locations within the quarries on the west side of the hill, though none are shown within the footprint of the PQA.

The existing and previously consented areas for quarrying north of the PQA have, since 1975, been subject to various archaeological monitoring exercises. These have illustrated that the area was previously quarried and infilled with quarry waste. All archaeological horizons had been removed except for post-Medieval and modern foundations to industrial installations (SHER 22037; 28820; 28821; 28830; 44780; 57126). Though few, some artefacts of prehistoric and Roman date have been encountered within the quarry waste, along with items that relate to the historical quarry works.

#### RESULTS

#### **Trench Results**

No archaeological features were encountered throughout any of the thirteen trenches (Figures 2-6). All layers within the trenches were quarry waste comprising loose stone rubble and yellow or orange sandy silt either mixed or in layers of varying compaction. This was sometimes also mixed with dark grey silt, which occasionally occurred as thin lenses between rubble layers. These layers were recorded in a variety of horizontal and diagonal bands that reflect sequences of excavation and redeposition. Unquarried bedrock was reached in Trenches 4, 5 and 12 at an elevation of 120.5-122.2m OD; quarry waste was encountered from a height of 127.9m OD. Details of the trenches are summarised below in Table 1.

Trench	Height at	Height at	Depth of	Trench	Trench	Quarry-	Prehistoric
	ground level	base of trench	unquarried bedrock	length (m)	width (m)	related artefacts	/ Roman artefacts
	(m  OD)	(m OD)	(m OD)	(111)	(m)	arteracts	arteracts
1	127.90	125.8	(111 OD)	9	1.8	Yes	
2	123.85	121.8		4	4		
3	125.30	123.1		10.5	1.8	Yes	
4	123.61	122.2	122.1	10	1.8	Yes	Yes
5	122.05	121.0	121.0	2	1.8		
6	127.01	125.9		16.5	1.8	Yes	Yes
7	126.65	126.0		5	1.8		
8	127.17	125.1		4	3		
9	125.56	123.5		4	3	Yes	Yes
10	127.08	125.0		4	4	Yes	Yes
11	125.16	123.1		4	3		
12	122.17	120.5	121.2	7	3		Yes
13	121.52	119.5	•	4	3		Yes
14	122.01	119.9		10	1.8	Yes	Yes

Table 1. Summary of trench results.

#### Prehistoric and Roman artefacts

Seven trenches yielded prehistoric and/or Roman artefacts, sometimes mixed with items of post-Medieval date. Of note is a copper alloy stud from Trench 9 that probably dates to the Late Iron Age (Figure 5), but all artefacts were recovered from material redeposited from their contexts of origin. Though the lenses of dark grey silt tended to be the most promising sources for their artefact content, this was not exclusive.

#### Evidence of quarry practices

A variety of extractive and masonry practices were represented. Described by Charles Trask, one of the hill's quarry owners in the late nineteenth century, a technique of block extraction from stone beds was to cut a groove with a pick, targeting where possible the natural joints in the stone (Trask 1898, 220). Wedges were then driven into the stone beneath the cut and blocks were then levered from the beds using iron bars. An example of this method was noted by a groove cut into a fragment of stone in Trench 4 (Figure 3), found immediately above unquarried bedrock. In Trench 12 part of an exposed quarry face was revealed, looking southwest, scarred with markings made by metal picks (Figure 6). A small 1.0m test pit determined that deeper extractions had occurred south and east of this, the base of which was not reached.

Stones that had been saw-cut were recorded in Trenches 1, 3, 4, 6, 9, 10 and 14 (Figure 4). Greatest quantities came from Trenches 6 and 10, which are directly next to one another, and in Trench 14. A fragment of a stonemason's zinc sheet template with a double arc design was found in Trench 3 (Figure 3), and in the same trench a small triangular cut stone displayed shallow guidelines scored into one of its surfaces.

Also found in Trenches 6 and 10 were a number of machine-cut iron nails and, in Trench 10, brass cogs that may have come from a timepiece. Though lacking in structural evidence, it is possible that rudimentary workshops operated in the area of these trenches. The uppermost layer of quarry waste in Trench 10 comprised fine compacted sand and crushed stone, 0.1-0.15m thick (see Figure 6), that may represent a prepared floor surface; a similar surface was recently found in association with a stonemason's workshop within the southwest sector of the hill (Chaplin and Brittain 2021).

Manufacture of roof tiles occurred in the location of Trench 1 (Figure 2). Tile discards and the stone blocks from which blanks were pick extracted were represented within the upper 1.0m of the trench profile. Historically, Ham stone tiles were quarried mostly from the north part of the hill, worked from thin layers of hard stone in the upper beds using a 'tile-pick'. A report from a visit to the working quarries by the Somerset Archaeological and Natural History Society in 1886 stated that 'The working of tiles is now a lost art on the hill' (Anon 1886, 40), which implies that by this time tile manufacture was no longer in operation there.

Trench 7 targeted a low banked earthwork today used as a pedestrian pathway running slightly east of north to south (Figure 5). This was to test its potential use as a tramline as a part of the quarry operations, but only quarry waste was visible and its relation, if any, to quarry workings remains unknown.

### **Cultural and Economic Material** (Marcus Brittain)

### Prehistoric and Roman Pottery

All collected from waste quarry material, pottery of a Late Bronze Age to Early Roman date amounted to 26 sherds weighing 210g. Listed in Table 2, owing to the out of context circumstances of its finding, the assemblages were often chronologically mixed.

Trench	Context	Qty	Weight	Description
<cat. no.=""></cat.>	Context	Qij	(g)	Description
Tr4 <12>	Spoil	3	37	<ul> <li>One thick-walled body sherd (3.5g) in a shell and coarse sand fabric.</li> <li>One plain thick-walled body sherd (22g) in a shelly fabric.</li> <li>One fine sandy quartz gritted handle (11.5g), possibly of a high-shouldered jar. Probably Late Iron Age.</li> </ul>
Tr6 <2>	2	5	34.2	<ul> <li>Two small body sherds (16.89g) in quartz grit fabric. Both are thin walled, though one is burnished and the other is coarse. Probably Mid to Late Iron Age.</li> <li>Two thick-walled body sherds (15g) in shell fabric.</li> <li>One rounded open rim of a small thin-walled jar (2.35g) with quartz grit fabric. Probably Mid to Late Iron Age.</li> </ul>
Tr6 <14>	Spoil	2	33	• One thick-walled body sherd (3.7g) in a shell fabric. Iron Age.
Tr9 <5>	2	5	17.8	<ul> <li>One body sherd (1.6g) in a shell fabric.</li> <li>One body sherd (2.6g) in a quartz sand fabric.</li> <li>One body sherd (2.6g) in a fine quartz fabric with buff surface.</li> <li>One beaded rim of a bowl with slightly convex sides in a coarse clay mix with rare quartz and sand grit under a burnished surface. Probably Late Iron Age.</li> <li>One simple round-topped upright rim of a jar in a quartz grit, with smoothed outer and coarse interior surfaces. Possibly Early to Middle Iron Age.</li> </ul>
Tr10 <11>	Spoil	1	2.5	• Out-turned rounded rim (2.5g) in a shell coarse sand fabric. Mid to Late Iron Age.
Tr12 <8> Tr13 <1>	2 1 Topsoil	5	30	<ul> <li>One body sherd (12.5g) in coarse grit fabric.</li> <li>One body sherd (10g) in a fabric of smooth clay with common to abundant coarse to very coarse (2–7mm) rounded argillaceous inclusions. Possibly Late Bronze Age coarseware.</li> <li>One body sherd (2.3g) in sandy fabric.</li> <li>One thick-walled body sherd (27g) with shelly fabric and grog inclusions. Burnt residue on inner vessel surface. Possible Early Roman storage jar.</li> <li>Three plain body sherds in shelly grit fabric.</li> <li>One body sherd (6.6g) in flint fabric with fingernail impressed decoration. Probably Late Bronze Age.</li> </ul>
				Flat-topped rim of a thin-walled open jar with straight sides in a coarse quartz sand fabric with buff surface. Common Durotrigian Black Burnished Ware I fabric. Late Iron Age. Source Wareham – Poole Harbour (non-local).
Tr14 <10>	Spoil	1	3.7	Small body sherd of sandy quartz body sherd.
Total		26	210	

Table 2. Summary of prehistoric and Roman pottery

#### Post-Medieval/Modern Pottery

Two sherds of pottery totalling 42g came from Trenches 3 and 9.

Trench 3, context [3]. Fragment of circular base (40.4mm diameter, 2.6g) from a small cup with a fine cream stoneware fabric with clear glaze on all surfaces. Probably nineteenth / early twentieth century.

Trench 9, context [2]. Thin-walled (5mm) body sherd (1.6g) with fine orange paste fabric under brown glaze. Eighteenth / nineteenth century.

#### Worked flint

Just a single small flake came from Trench 6 and is undated.

Trench 6, <4> context [6]. A small unutilised flake with cortex along one edge; weight 0.48g.

#### Glass

One sherd of post-Medieval/modern glass came from the quarry waste of Trench 3.

Trench 3, context [3]. One body fragment of thick (7.5mm) bottle glass with slight blue tint; weight 15.9g.

#### Metalwork

One item of prehistoric metalwork was identified from Trench 9 with a mix of prehistoric and post-Medieval pottery. This was a copper alloy stud that may be assigned to the Late Iron Age (Figure 5). Metal items were otherwise all post-Medieval, probably nineteenth century, and included part of a stone mason's zinc sheet template in Trench 3, machine cut iron nails in Trenches 6 and 10 that may relate to structures erected for stone cutting, and elements to a timepiece, also from Trench 10.

#### Trench 3, context [3].

Two fragments of zinc sheet template (0.1mm thick, weight 56g; Figure 3). The production of sheet zinc was established in Belgium during the early nineteenth century, first as a roofing material and then by the 1820s its application was considerably diversified (Downs 1976). Ham Hill stone masons cut templates out of zinc sheets for setting out complex shapes and mouldings. The zinc was soft enough to be easily scored with a blade or metal point and then cut with shears. The larger of the two pieces is eight inches in length and 4.5 inches wide, with two opposite and rounded arcs of equal size cut from the sheet. Nineteenth century.

#### Trench 6, spoil heap.

Fragment of short, flat iron bar with surface oxidised concretions. Length 42.1mm, width 26mm, thickness 1.3mm; weight 19g.

Two hand-forged iron nails (a. 43 x 4.3mm, 3.75g; b. 19.3 x 4.3mm, 1.55g). One has an obviously square profile across the shank and the other displays an irregular profile, possibly due to hammer shaping, whilst both have an irregular, flat and sub-circular head. The direction of the grain along the shank is uncertain, and the shank overall has a very slight taper. An early nineteenth century or earlier date is likely for both nails.

#### Trench 9, <15> context [2].

Copper alloy flat headed stud or mount with green mottled surface patina (Figure 5). The head is flat and rounded (13mm diameter), and the shank is 13.4mm long with a rounded cross-section (2.7mm diameter); weight 3.58g. Though seen in Roman contexts, two pairs of flat headed circular studs have recently been found at Ham Hill in a pit (F.1554) dated by pottery to the Late Iron Age; these have been compared with similar items known to decorate Iron Age sword handles (Fitzpatrick, *forthcoming*).

#### Trench 10, spoil heap

Machine cut iron nail (70 x 6 x 2mm, 8.5g) with die-domed head and grain running lengthways and in line to the shank that tapers on the two short sides to a squared tip. A middle to late nineteenth century date of manufacture is most likely

Timepiece or measuring device: Short length of iron, circular in cross-section, attached to which are two circular ceramic discs, one with six small and evenly spaced perforations around the central hole. A third disc is made from copper alloy and displays a feathered decoration over one face; four worn stumps of connecting arms protrude from the outer edge. Also, a brass toothed cog wheel with diameter of 26.3mm (outer) and 18mm (inner); its teeth are evenly separated, and there are two connector arms projecting from the inner edge of the wheel.

#### Slag

One small nodule of iron slag was recovered from quarry waste in Trench 2.

Trench 2, <7> context [9]. Small nodule of iron slag; weight 18.9g.

#### Worked Stone

A sample of cut stone was selected for closer examination and a selection of this is shown in Figure 4. Dimensions accord with imperial inch measurements, and shapes (many rectangular or triangular) would be marked out against a zinc sheet template cut to shape. Guide marks were evident on a rectangular offcut (1.5 inches thick) from Trench 3 [003]. Examples of sawnshaped and chiselled stone were most apparent in Trenches 1, 3, 6, 10 and 14, which may imply the nearby presence of working areas or a dedicated workshop in the vicinity to these trenches.

In Trench 1 were numerous examples of roof tile discards, chiselled to shape. One item, broken across its mid-point, was chisel finished over the main flat surfaces, 8.25 inches wide, and file-finished to a taper on three edges. Pick-marked blocks of Ham stone from which roof tile blanks had been extracted were also noted in Trench 1 (Figure 2).

#### Animal Bone (with identifications by Vida Radjkovača)

Small fragments of animal bone, amounting to 212g, were recovered from quarry waste in Trench 4 (two fragments), Trench 6 (seven fragments), Trench 9 (seven fragments) and Trench 12 (seven fragments). Cow, sheep/goat and pig were each represented. One cow humerus from Trench 9 displayed two clean-cut chop marks, and one end of a long bone of sheep/goat from Trench 6 may have been gnawed. A fragment of rib of an unidentified medium-sized mammal was charred in Trench 12.

#### DISCUSSION

No pre-quarrying archaeology was identified during the trenching, which is consistent with investigations north of the PQA where historical quarrying was deemed to have occurred to a prodigious scale.

Owing to the steep and abrupt nature of the land's topography, evidently an outcome of substantial piles of loose quarry waste, the excavation depth of each trench, limited to a maximum of 2.5m, has not surprisingly been unable to expose full deposit sequences other than in Trenches 4, 5, and 12 that struck the top of unquarried bedrock. However, the combined results, added with data drawn from previous contour elevation assessments, enable a series of transect models across the PQA that broadly document its deposit character in relation to bedrock exposures and the height at which archaeology has been shown to have survived elsewhere along the hill's north spur. Three east-west transects are illustrated in Figures 7 and 8. The elevation in which archaeology has been documented from Trench 2 of the 2011-13 investigations and in Gray's cutting XV (reopened as Trench 3 in 2011-13, see Figure 1) is highlighted in grey and lies within 124-126m OD (see also Brittain 2021, 6, Figure 6). This is referred to below as the 'archaeological horizon'. Substantial areas along Transects 1 and 3 already lie beneath the archaeological horizon. Each transect evidently traverses considerable waste heaps, many of which peak above 126m OD. It was possible to only penetrate a fraction of these in Transect 2, but this too is punctuated by drops and voids that lie far below the archaeological horizon.

Owing to their proximity to the projection of the west arm of the hill's defensive rampart system, Trenches 11 and 12 were believed to hold the greatest potential for survival of *in situ* occupation deposits (Figure 6). Trench 11 was sunk to a depth of 123.1m OD with quarry waste clearly continuing beyond this. Trench 12 struck a quarried rock face at a depth of 121.2m OD with other areas of the trench continuing beyond 120.5m OD. Both trenches represent quarrying below the archaeological horizon. There is a slight rise in the land surface several metres west of Trench 11 (on the opposite side of a public trackway) that may represent the top of the rampart sealed beneath quarry waste and unaffected by stone extraction, but this lies beyond the limit of the PQA.

Though it has not been possible to conclusively demonstrate the absence of surviving islands of pre-quarry archaeology, on current evidence it is unlikely that quarrying was not exhaustive.

It is estimated that cumulative quarrying activities have removed some 33 hectares (37.5%) of the hillfort's interior (SHER 41470). Systematic quarrying for the hill's stone during the Roman period is demonstrated by its use for coffins and in buildings across the region, though precise locations for Roman quarrying on the Hill are unknown. Stone extraction was evidently the major industry across the hill during the Medieval period, the stone being widely used in secular and religious building projects (Durman 2006). The quarries, each about 6.2m², were leased to financiers or individual tenants through the manors of Stoke and Norton-sub-Hamdon and worked to exhaustion (Gittos and Gittos 2012). The earliest documentary references to quarrying relate to Stoke-sub-Hamdon parish, and by the early 17th century the Norton-sub-Hamdon side of the hill was probably the principal focus. William Simpsons's map of the hill from 1776 shows only a small parcel of industry on the hill's north spur (Figure 9). Probably depicting quarry operations, little of this appears to extend into the southeast corner of the PQA, with the remainder of the area seemingly undisturbed. A major drive of quarrying was galvanised in the nineteenth century, particularly with the introduction of steam powered

cranes. This is an age that is represented across the cultural material and seems to have incurred the greatest impact to the PQA.

Research agendas for the archaeology of extractive industries in England foreground a need to build synergies across local and higher education sectors, as well as HER resources (Newman 2016). Considerable desktop research into the quarrying history of the hilltop has already been undertaken but has also highlighted the relative paucity of available data. No foundations to workshop structures are visible on the ground surface within the PQA, and none were identified within the trenching. Though possible areas dedicated to particular types or stages of stone working have been identified, such as tile preparation in Trench 1 and the suggestion of a workshop in the vicinity of Trenches 6 and 10, the evidence is far from conclusive.

#### **BIBLIOGRAPHY**

- Adkins, L. and Adkins, R. 1992. *Ham Hill, Somerset. Project Synopsis*. Unpublished document.
- Anon, 1886. Wednesday: Excursion. Hamdon Hill. *Proceedings of the Somersetshire Archaeological and Natural History Society* 32, 38-51.
- Brittain, M. 2021. Written Scheme of Investigation for Evaluation Trenching at the Ham & Doulting Stone Quarry, Ham Hill, Stoke-Sub-Hamdon, Somerset. Cambridge Archaeological Unit.
- Brittain, M., Evans, C. and Sharples, N. 2013. *Excavations at Ham Hill, Stoke-Sub-Hamdon*. Proceedings of the Somerset Archaeology & Natural History Society 156: 160-163.
- Brittain, M., Sharples, N. and Evans, C. 2014. *Excavations at Ham Hill, Stoke Sub Hamdon, 2013*. Proceedings of the Somerset Archaeology & Natural History Society 158: 131-134.
- Brittain, M., Sharples, N. and Evans, C. 2015. *Excavations at Ham Hill, Somerset 2011-2013*. *Post-Excavation Assessment*. Cambridge Archaeological Unit Report No. 1318 (2 vols).
- Chaplin, A. and Brittain, M. 2021. *Limekiln Car Park, Ham Hill Country Park, Somerset: An Archaeological Evaluation*. Cambridge Archaeological Unit Report No. 1498.
- Downs, A. C. 1976. Zinc for Paint and Architectural Use in the 19<sup>th</sup> Century. *Bulletin of the Association for Preservation Technology* 8(4), 80-99.
- Durman, R. 2006. Ham Hill: Portrait of a building stone. Reading: Spire books.
- Gray, H, St George, 1902. The "Walter Collection" in Taunton Castle Museum. *Proceedings of the Somersetshire Archaeological & Natural History Society* 48: 24-78.
- Gray, H, St George, 1904. The Norris Collection in Taunton Castle Museum. *Proceedings of the Somersetshire Archaeological & Natural History Society* 51: 136-159.
- Gray, H. St George, 1910. Notes on Archaeological Remains found on Ham Hill, Somerset. *Proceedings of the Somersetshire Archaeological & Natural History Society* 56: 50-61.
- Gittos, B. and Gittos, M. 2012. Medieval Ham Hill Stone Monuments in Context. *Journal of the British Archaeological Association* 165: 89-121.
- Jefferson Consulting 2012. Hamdon Hill, Somerset. The Extent of Quarrying Remains from the Late Nineteenth Century. Map Regression of the Western limits of Hamdon Hill to Identify Areas of Quarrying Activity Since 1887. Unpublished Report.
- Newman, P. (ed), 2016. The Archaeology of Mining and Quarrying in England: A Research Framework for the Archaeology of the Extractive Industries in England. Matlock Bath: National Association of Mining History Organisations.

- Patten, R. and Brittain, M. 2021. Risk Assessment and Method Statement for Evaluation Trenching at the Ham & Doulting Stone Quarry, Ham Hill, Stoke-Sub-Hamdon, Somerset. Cambridge Archaeological Unit.
- RCHME 1997. Ham Hill, Somerset. A New Survey by the Royal Commission on the Historical Monuments of England. Unpublished report.
- Trask, C. 1898. Norton-sub-Hamdon, In the County of Somerset. Notes on the Parish and the Manor and on Ham Hill. Taunton: Barnicott & Pearce, Athenaeum Press.
- Wessex Archaeology 2009. Ham and Doulting Stone Quarry, Hamdon Hill, Stoke Sub Hamdon, Somerset; Archaeological Desk-Based Assessment and Topographical Survey. Wessex Archaeology Report ref. 70690.01.
- Wessex Archaeology 2010. Ham & Doulting Stone Quarry. Hamdon Hill, Stoke Sub Hamdon, Somerset Phase 2. Map & Aerial Photographic Regression. Wessex Archaeology Report Ref. 74820.03.
- Wessex Archaeology 2011. Ham Hill Country Park, Somerset. Archaeological Management Plan. Wessex Archaeology Report Ref. 76370.01.
- Wessex Archaeology 2014. Ham Hill Revised Extension Areas, Hamdon Hill, Stoke sub Hamdon, Somerset. Map and Aerial Photographic Regression. Wessex Archaeology Report Ref.105510.01.
- Woodward, A. 1997. *The Ham Hill Project Design*. Unpublished document submitted to English Heritage by Somerset County Council Museums Service.

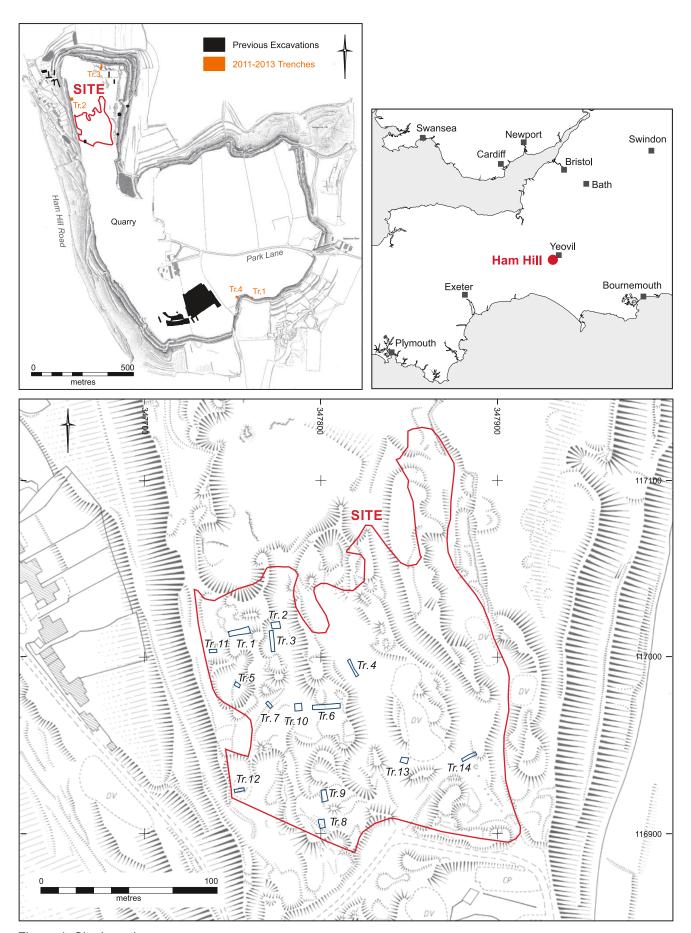


Figure 1: Site Location



a) Stone block from which tile blanks have been extracted



D 5 10 centimetres

Figure 2: Artefacts from Trench 1





Figure 3: Photographs from Trench 4 (a-c) and artefacts from Trench 3 (d)



a) Saw cut stone



b) Saw cut stone



c) Saw and pick-shaped stone



Figure 4: Artefacts from Trench 6



a) Tr. 7 - trench through trackway earthwork





c) Tr.8 - Late Iron Age copper alloy stud

Figure 5: Photographs from Trenches 7 and 8



Figure 6: Photographs of Trenches 10,11 and 12

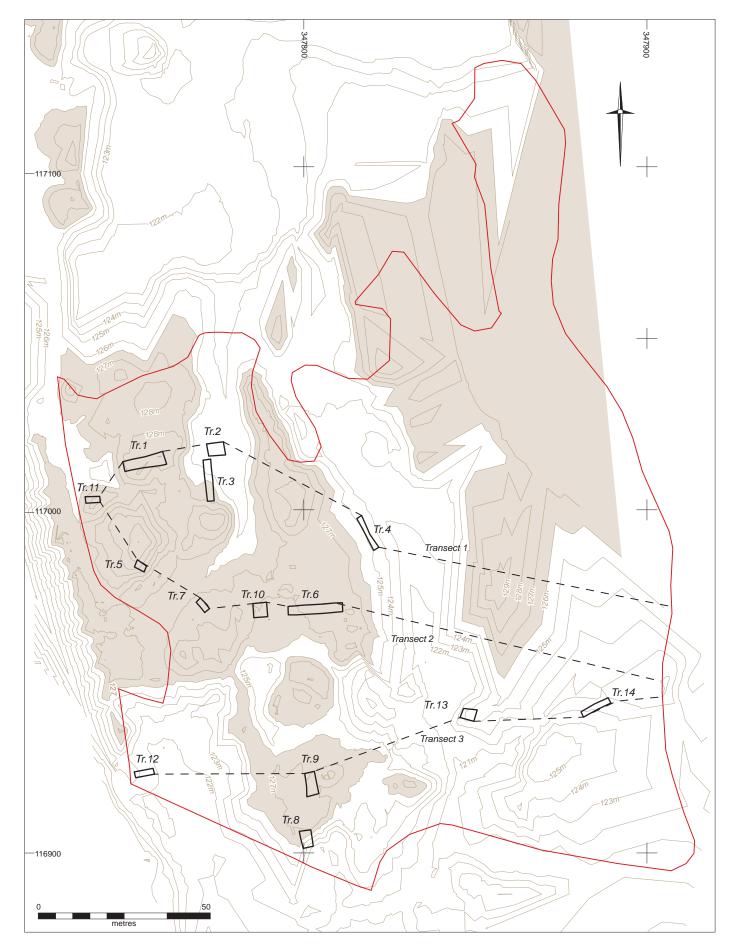


Figure 7: Transects over PQA contour plan

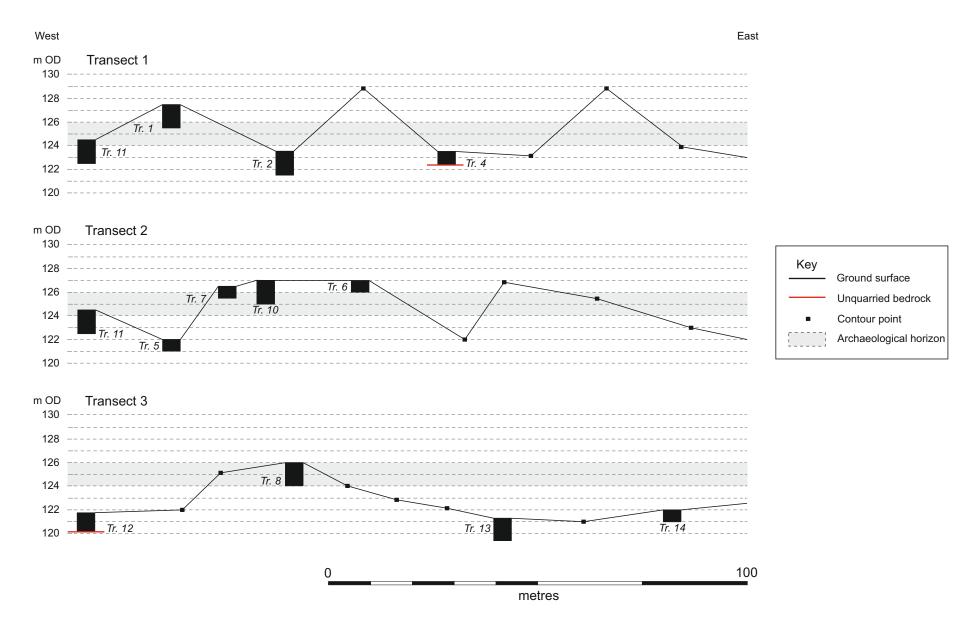


Figure 8: Profile Transects



Figure 9: 1776 map of Stoke sub Hamdon by William Simpson

## **Summary for cambridg3-503825**

OASIS ID (UID)	cambridg3-503825
Project Name	Ham & Doulting Stone Quarry, Ham Hill, Somerset. An Archaeological Evaluation
Activity type	Evaluation
Project Identifier(s)	Ham Hill
Planning Id	
Reason For Investigation	Planning: Pre application
Organisation Responsible for work	Cambridge Archaeological Unit
Project Dates	12-Nov-2021 - 17-Nov-2021
Location	Ham Hill
	NGR : ST 47800 17010
	LL: 50.950147453502, -2.7444708547729
	12 Fig : 347800,117010
Administrative Areas	Country : England
	County : Somerset
	District : South Somerset
	Parish : Stoke sub Hamdon
Project Methodology	14-trench evaluation
Project Results	Fourteen trenches were opened but no archaeological features were found during the investigation, which encountered only quarrying waste and, in three trenches, unquarried bedrock that represents the depth limit of historical quarry works. The trenching demonstrated significant quarrying impact to depths likely to have truncated and probably removed archaeological horizons. The quarry waste contained cultural materials that indicate the landscape's former prehistoric and Roman occupation, as well as documenting historical aspects of its quarrying operations into the nineteenth and early twentieth centuries.
Keywords	Metal Working Debris - LATE IRON AGE - FISH Archaeological Objects
	Thesaurus
	Ceramic - IRON AGE - FISH Archaeological Objects Thesaurus
	Ceramic - ROMAN - FISH Archaeological Objects Thesaurus
	Ceramic - POST MEDIEVAL - FISH Archaeological Objects Thesaurus
	Metal Working Debris - POST MEDIEVAL - FISH Archaeological
	Objects Thesaurus
	Animal Remains - UNCERTAIN - FISH Archaeological Objects
	Thesaurus
HER	Somerset HER - unRev - STANDARD
HER Identifiers	HER Event No - 445294, HER Monument No - 1003678
Archives	Physical Archive, Documentary Archive, Digital Archive - to be
	deposited with Somerset Museum Service