

## 1.1 Humanly Modified and Unworked Stone

*by Ruth Shaffrey*

### *Methodology*

- 1.1.1 All retained stone was examined with a x10 magnification hand lens. The stone has been tabulated according to whether it is humanly modified or unworked so that time will not need to be spent on further consideration of the unworked stone.

### *Quantification*

- 1.1.2 Approximately 300 fragments of stone were recovered. Table 2.3 summarises the worked stone; Table 2.4 summarises the lava fragments; Table 2.5 summarises the burnt but unworked stone and Table 2.6 summarises the remaining unworked stone.
- 1.1.3 The assemblage included one complete quern, two fragments of querns and two probable fragments of querns. Of these, two were of Hertfordshire Puddingstone, one was of lava, one was of Greensand and one was possible German Triassic sandstone or Millstone Grit. The provenance of this last stone needs to be clarified with thin section analysis. All the stone retrieved from the site was extremely weathered and in addition to the quern of lava, several contexts produced numbers of very small lava fragments which, although they retain no original features, are most likely to be from querns. Small quantities of ironstone such as might have been used in the iron-smelting process, were also recovered.
- 1.1.4 One possible tessera was identified. This was of a purple coloured quartz ironstone which was a popular material for mosaics. No other stone evidence for a tessellated floor was recovered.
- 1.1.5 One very large rectangular chunk of quartzitic sandstone appears to have been shaped from a boulder and was probably used in construction having been recovered from the structural debris of a possible pottery kiln (8098). Another square chunk of stone also shaped from a boulder and with several smooth sides was recovered from the fill of a pit (8498) and may have been used for grinding.
- 1.1.6 A flint sphere which may have been a sling shot was retrieved from the fill of a pit (8281).

### *Provenance*

- 1.1.7 The stone mostly came from the fills of pits and ditches. Four of the rotary querns were recovered from the fills of pits while the fifth was used in the construction of a kiln. One block of stone was probably also used in the construction of a kiln and was found amongst the structural debris (8098).

### *Conservation*

- 1.1.8 No conservation is required. The lava quern which has been almost completely degraded cannot be repaired but has been carefully packaged to preserve it.
- 1.1.9 All unworked stone may be discarded.

### *Comparative Material*

- 1.1.10 The main items of worked stone which were retrieved were the rotary querns. All the positively identified materials which were exploited here were used in Kent during the Roman period and the range of stone types exploited is largely the same as those found at Thurnham.

- 1.1.11 Hertfordshire Puddingstone tends to occur on early Roman sites and is thought to have been mainly exploited during the early Roman period. It is the least commonly utilised stone type in Kent which is represented here. Thurnham Villa is the only site from previous CTRL excavations which has produced querns of the same lithology. Examples outside the CTRL project are hard to find but there are possible specimens from Fordcroft, Orpington (Tester 1970, 68-69) and another at Oliver Crescent, Farningham (Priest and Cumberland 1931, 69-70, quoted in Black 1987, 177).
- 1.1.12 Lava was more commonly used in Kent. Within the CTRL project, it has been found on sites including Springhead, Waterloo Connection and Thurnham (Roe 1999, 31; Shaffrey 2000a; Shaffrey 2000b). Outside the CTRL project, lava was also widely exploited, especially in eastern Kent and sites include Church Field, Snodland where one fragment was found (Ocock and Sydell 1967, 213-214) and Fawkham, which produced “irregular lumps” of lava querns (Philp 1964, 72).
- 1.1.13 Greensand was locally available and has been found at sites including the CTRL site of Thurnham (Shaffrey 2000b) and the Romano-British farmstead at Fawkham (Philp 1964, 72) and Joyden’s Wood (Tester and Caiger 1954, 182).
- 1.1.14 The quern of unknown material may be either Millstone Grit or German Triassic Sandstone. The latter could easily have been imported at the same time as querns of lava and might in fact have been an easier material to import than Millstone Grit from Derbyshire. Analysis of a thin section would help determine the source.
- 1.1.15 The variety of materials exploited are comparable with other sites across Kent. At nearby Westhawk Farm, querns were made from Millstone Grit, Lava and Greensand. Of the lithologies found at West of Leda Cottages, the use of Hertfordshire Puddingstone is the most unusual. It was much less commonly used in Kent than the other materials, although previous work at Thurnham has shown that it did occur. Future work would usefully examine the distribution of Hertfordshire Puddingstone querns in Kent, which has hitherto only be published as an interim report, and determine whether this find is on the periphery of the distribution.

*Potential for Further Work*

- 1.1.16 Although there were few rotary querns from the site, they are of a broad variety of materials, including Hertfordshire Puddingstone which tends to be from early Roman contexts only and a possible German Triassic Sandstone.
- 1.1.17 Understanding the supply of querns and other items of stone can contribute to any study of the economics of the site and its patterns of contact and trade. To achieve this there needs to be a detailed typological and lithological description of the querns and other artefacts.
- 1.1.18 An in-depth examination of the distribution of Hertfordshire Puddingstone and German sandstone in particular would be beneficial. A study of the Hertfordshire Puddingstone could contribute to a wider study of the distribution of this under-examined quern material. An examination of the possible German Sandstone, whose provenance needs to be determined, could have implications for any study of the supply of the site. Ideally it should be thin sectioned and examined microscopically.
- 1.1.19 Discussion of the objects in relation to contextual information could contribute to a study of the changing supply to the site and to functions in different areas of the site.

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Table 2.3: Quantification of worked stone by context

Context	SF No	Description	Notes	Lithology
8322		Fragment of upper rotary quern	Apparently flat grinding surface and sloping top. Less than 10% remaining	Hertfordshire Puddingstone
8097		Rotary quern fragment	Probably fragment from rotary quern although the edges are very square with one another - perhaps from reuse?	Hertfordshire Puddingstone
8426		Possible tessera	Small piece of granular ironstone which is square and which might have been a slightly incomplete tessera.	Ironstone
8137	802	Slab	Probably worked but not clear what for. Flattish thick slab, no clear evidence of function	Sandstone
8281	804	Possible sling shot	Sphere	Flint?
8098	805	Building stone?	Very large stone. Very smooth on main two faces and on one edge which also has a slight dimple in it. Probably a river boulder. Seems to have been made into roughly rectangular shape. Needs cleaning before looking at again.	fine grained quartz sandstone
8498	808	Unknown	Large squarish chunk of very fine grained quartzite. Has 2 smooth sides suggesting it's from a boulder and 1 smooth face. Possibly used for grinding but no particular evidence. Probably no polish but needs to be looked at with direct light.	Quartzite
8498	809	Probable upper stone of rotary quern	Extremely weathered quern - friable. The item has been almost completely degraded into many pieces but has been retrieved and kept together. Almost 1/4 of the stone remains.	Lava
8499	811	Probable rotary quern fragment	Slightly burnt, one worked surface and an edge.	Millstone Grit?/ German Triassic Sandstone?
8572	814	Lower stone of rotary quern	Very weathered stone so a whole section of the grinding surface has weathered away. Under surface is convex.	Greensand

Table 2.4: Fragments of Lava (probably from rotary querns)

Context	SF No	Description	Notes	Measurements	Lithology
8204		Quern fragments	Lava - very fragmentary but probably from a rotary quern. 6 small fragments. Largest bit shown in next column	45 x 55 x 20	Lava
8343		Rotary quern fragments	Lava - very weathered but probably from rotary querns originally. In final collapse of furnace structure and silting.		Lava
8417		Possible rotary quern fragment	Chunk of lava so may have been from rotary quern. Has glassy deposits on it which may suggest glass working on the site	40 x 35 x 25	Lava
8499		Probable rotary quern fragment	Two tiny fragments so no details		Lava
8520		Possible rotary quern fragments	8 very small weathered fragments so no details		Lava
8539		Possible rotary quern fragment	Tiny fragment of lava so unknown		Lava
8584		Possible rotary quern fragment	Tiny weathered piece of lava so unknown		Lava

*Table 2.5: Quantification of burnt unworked stone by context*

<b>Context</b>	<b>Lithology</b>	<b>Fragments</b>	<b>Description</b>	<b>Notes</b>
8184	Greensand	6	very weathered and slightly burnt fragments	some burnt.
8192	Greensand	7	burnt weathered chunks	
8312	Greensand	5	tiny fragments, possibly burnt	
8336	Greensand	78	very weathered and burnt sandstone	From the furnace super structure
8281	Quartzitic pebble	1	fire cracked large chunk	

Table 2.6: Quantification of unworked stone (includes ironstone)

Context	Lithology	Fragments	Description	Notes
8233	Mudstone	1	unworked	
8016	Ironstone	1	flattish chunk	Purple granular ironstone 75 x 60 x 15
8281	ironstone	1		25 x 20 x 6
8281	Greensand	1	small rounded chunk	25 x 15 x 11
8278	Greensand	13	very small fragments	Possibly fragments from pebbles as some seem to have an outer shell
8275	Greensand	68	small very weathered fragments	gritty greensand
8313	Greensand	8	weathered chunks	
8345	Pebble	1	unworked	
8138	Greensand	1	small weathered chunk	
8283	Greensand	2	small weathered chunks	
8297	chunk	1	UN-worked	
8026	pebbles	16	small fragments of pebbles	all UN-worked
8351	Slag not stone			
8369	Grey siltstone	1	UN-worked	
8281	pebble	2	UN-worked	
8050	Greensand	1	weathered chunk	
8364	Greensand	4	weathered chunks	
8040	Ironstone	1	For smelting?	UN-worked. Measures 60 x 40 x 20mm
8040	Greensand	1	small chunk	
8315	Greensand	2	weathered chunks	
8426	Greensand	1		30 x 30 x 6, brown slightly glauconitic sandstone
8459	Ironstone	1	Pebble chunk	
8484	Ironstone	1	Chunk	
8493	Ironstone	1	Granular	
8495	Ironstone	1		
8498	Ironstone	3	Granular	
8498	Ironstone	3		1 bit is probably slag
8498	Ironstone	1	Granular	55 x 45 x 15
8498	Sarsen	1		55 x 40 x 40, slightly angular
8498	Ironstone	1	Flattish chunk	90 x 60 x 20
8498	Sandstone	1	Chunk	45 x 35 x 30
8498	Ironstone	1	Granular	
8498	Gritty Greensand	1		Possibly Millstone Grit? But very small piece.
8498	Ironstone	6	Granular	small chunks
8498	Pot	7	Not stone	
8498	Burnt clay	3		
8498	White grainy stone	3	unworked	
8498	miscellaneous	9	weathered UN-worked stone	
8499	sandstone	1	angular	
8499	Ironstone	1		
8499	Miscellaneous	4	Very small weathered fragments	
8519	Gritty stone, (Greensand)	1		
8539	Ironstone	1		
8553	Possible greensand	1	Gritty stone probably weathered greensand	
8579	Ironstone	1	Small rounded chunk of granular ironstone	
8584	Quartzite	1	Angular chunk	90 x 60 x 45
8595	Unknown	1	Gritty white stone	
8597	Ironstone	8	Tiny weathered fragments	