Chipped stone assemblages from Broomhead Moor, South Yorkshire

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Bolsterstone Archaeology and Heritage Group

2020

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1. Summary

One hundred and ten chipped stone artefacts were examined by me during 2018, and in February of 2020. They belong to several separately collected assemblages with different findspots that are located within close or very close proximity to each other at the summit of Broomhead Moor in South Yorkshire, where springs which feed into Agden Dike and Ewden Beck have their sources. Despite the scattered distribution and distinct episodes of collection, at markedly different dates, the combined assemblage is characterised by significant homogeneity. The raw material of the artefacts is overwhelmingly of black chert, almost certainly derived from deposits located in the vicinity of Monsal Dale in Derbyshire. They relate almost entirely to the Late Mesolithic. I have suggested that they relate to the activities of a distinct mobile community at the outer edge of its home range.

2. Location, geology, topography and current use

Broomhead Moor (SK234955) is located approximately 15 kilometres north west from the centre of Sheffield, In South Yorkshire (Figure 1). The moor falls within the geological formations commonly known as the Millstone Grit, but more properly known as the Namurian, a group of coarse Carboniferous sedimentary sandstones (Cope 2005: 40). The western edge of the moor is naturally bounded by Side Head Beck on its north side and Rushy Dike on its south, carving gullies that divide two localised variants of the gritstone geology. To the west is Flint Hill, of Upper Kinderscout grit sandstone and to the east, rising to 426 metres above ordnance datum is Broomhead Moor itself, consisting of Heyden Rock (BGS 2020). The bedrock geology is overlain by blanket bog peat soils for the most part, but also wet very acidic upland soils with a peaty surface in places (Magic.defra 2020). A precipitous slope defines the north edge of the moor. This descends into the gorge of the Upper Ewden Beck, but the east facing slopes are more gentle. They afford views along most of the length of Ewden Valley and dominate the west end of it (cover illustration).

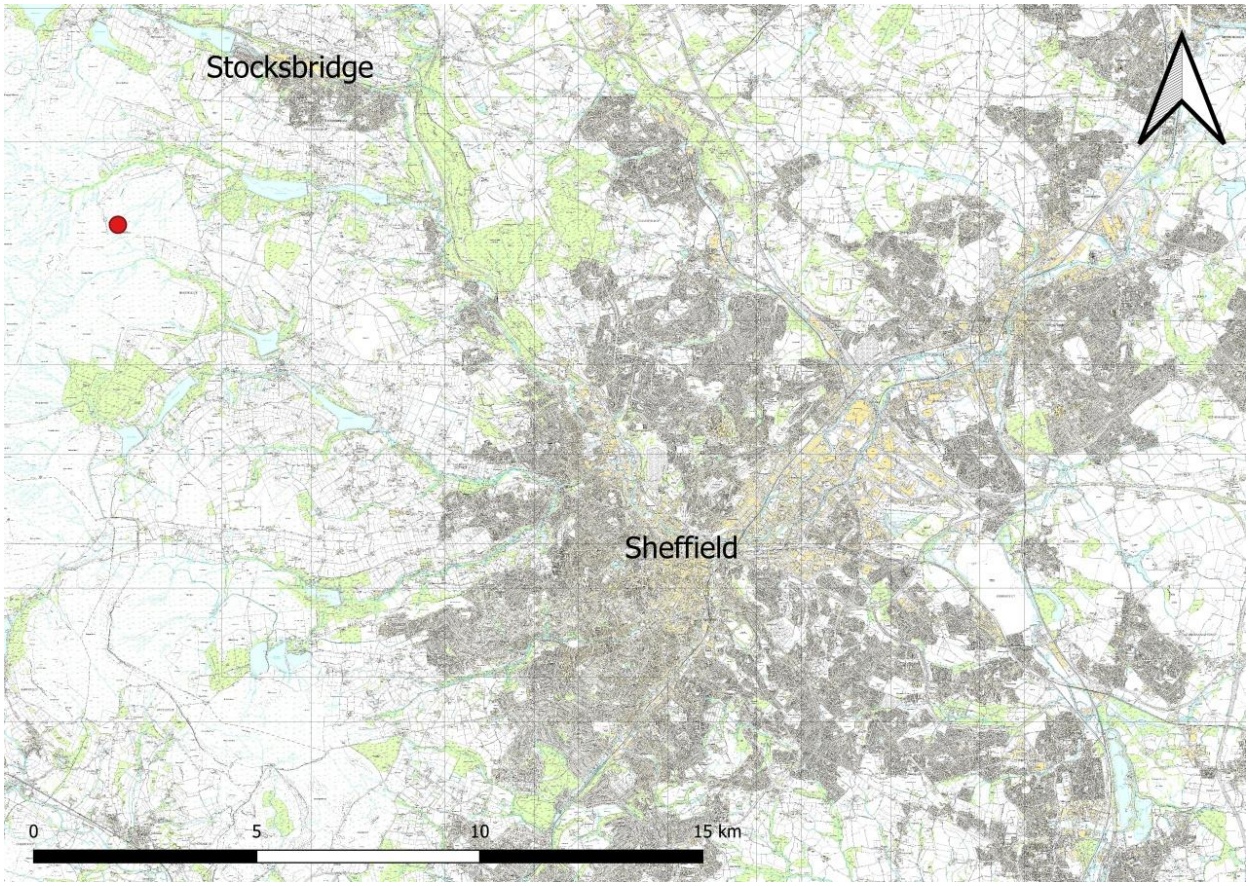

Figure 1: The location of Broomhead Moor (red), South Yorkshire. Contains ordnance survey data © crown copyright database 2017.

The south facing slope of the moor, in the vicinity of Rushy Dike, drops precipitously into Agden Dike from Hurkling Edge (Figure 3), consisting of mudstones and siltstones of the Marsden formation (BGS 2020). Just as the north and east facing slopes tower above and dominate Ewden Valley, the south easterly aspect dominates Emlin Hill, Bradfield and the Loxley Valley (Figure 2).

Figure 2: Agden Dike, Emlin Hill, Bradfield and Loxley Valley facing south east from Hurkling Edge. Source: author.

Natural England designates the vast majority of the landscape at Broomhead Moor as upland heathland, with small areas of upland swamp (Magic.defra 2020), including in the vicinity of the densest flint scatters at Rushy Dike where numerous springs rise. The entire moorland landscape on the west and northern edge of Sheffield, including Broomhead Moor, is designated by Natural England as an area of Special Scientific Interest. Broomhead Moor is also designated as a Special Protection Area and Special Area of Conservation. As Access Land, the moor is available for recreational use by members of the public, but is primarily managed for Grouse shooting by the Broomhead Estate, under the ownership of Ben Rimington-Wilson.

3. Historical and archaeological background

Broomhead Moor forms part of the Broomhead estate, owned by the Wilson family since Adam Wilson was gifted the estate by Thomas Lord Furnival during the reign of Edward I (Hunter 1875 (1819)). His descendant, the antiquary John Wilson (1719-1783), excavated barrows in the vicinity of a cairnfield and embanked stone circle during the eighteenth century, removing pottery and burnt human remains (Hunter 1875 (1819): 461), and a polished stone axe head (Kenworthy 1928: 34). This cairnfield, and the later linear ditched

feature of Broomhead Dyke which overlies it, are scheduled monuments (list entry numbers 1018039 and 1018590 respectively). The aforementioned are located at the north-east extremity of Broomhead Moor (Figure 3).

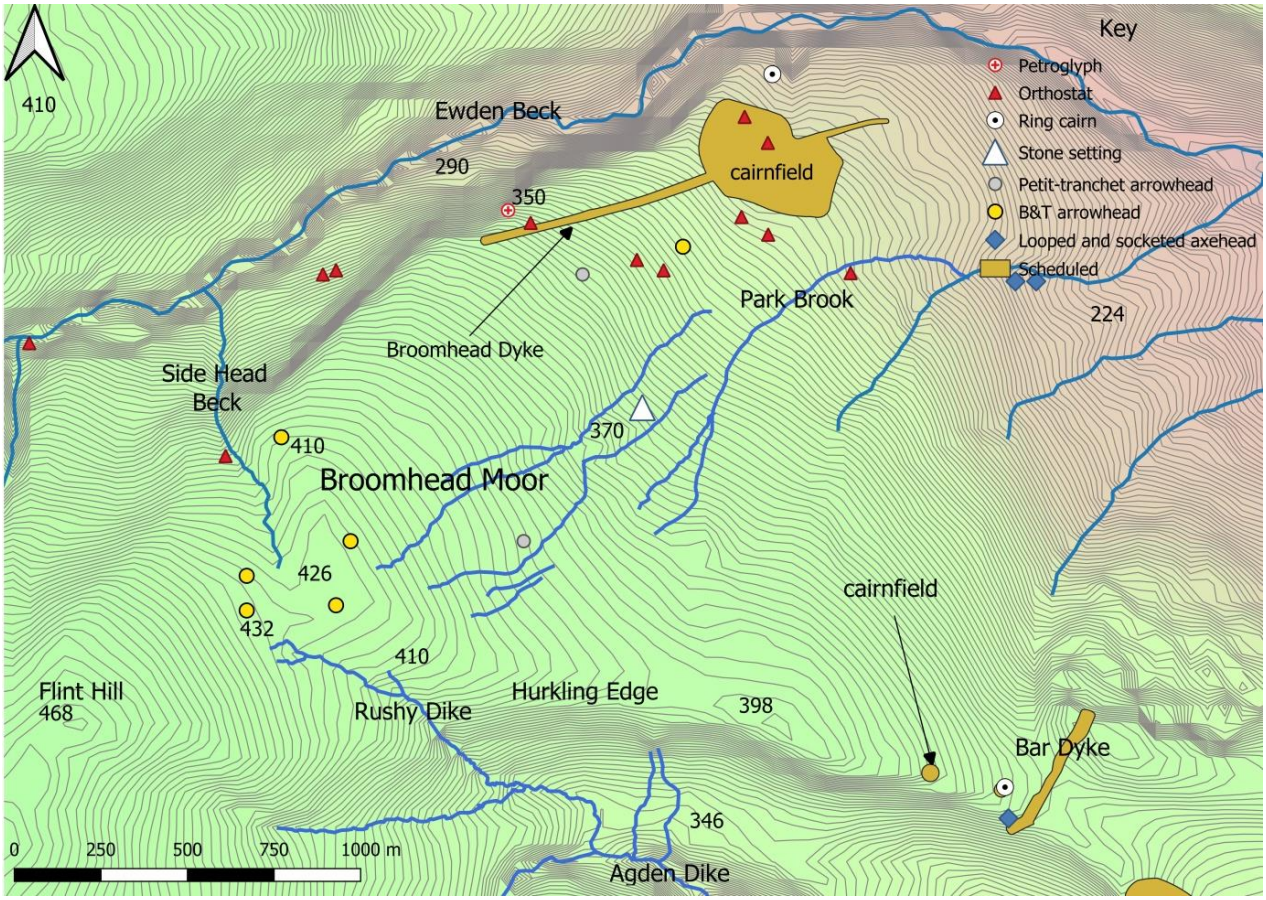

Figure 3: The topography of Broomhead Moor (Green areas higher, Burgundy areas lower), showing probable Late Neolithic/Bronze Age and later prehistoric data. Figures shown are heights in metres above ordnance datum. Contains ordnance survey data © crown copyright database 2017.

The scheduled area, including the embanked stone circle or ring cairn, was surveyed by John Barnatt during the 1970s (Barnatt 1990: 42). Barnatt cast doubt on the antiquity of the cairnfield, suggesting instead that it might be spoil heaps from modest quarrying activities. He further suggested that Wilson's cairnfield might have lain slightly further to the east within intakes and had subsequently been destroyed. He found limited evidence for stones in the putative cairns that he observed.

The above was accepted in Ullathorne's later survey of the area (Ullathorne 2005: 36), with the additional suggestion that they might alternatively be natural features. However, Ullathorne herself claimed that across the Peak District, there were 17-20 known embanked stone circles, "almost all of which are associated with extant or documented cairnfields",

much like that at Ewden Beck (Ullathorne 2005: 35). Holland (2013 (1837): 128) was clear in his belief that Wilson's cairnfield lay on the moor as he knew it "behind the house" (upslope and to the west of Broomhead Hall). In my own survey of the site in 2010, I recorded an extensive spread of small mounds to either side of the Dyke, amongst which were distributed several small orthostats (Cockrell 2017: 164; Figure 3; Figure 4). I found no evidence for quarry pits but did note that stonework, albeit of rather small sized stones, was in evidence in many of the small mounds (Figure 5). In my view there is no compelling reason to question the original designation of the area as a prehistoric cairnfield, until such time as more detailed investigation furnishes new information to the contrary.

Figure 4: part of the cairnfield on the north facing slopes of Broomhead Moor, straddling either side of Broomhead Dyke (adjacent to the wall in the centre). A small orthostat is visible (centre). After Cockrell 2017.

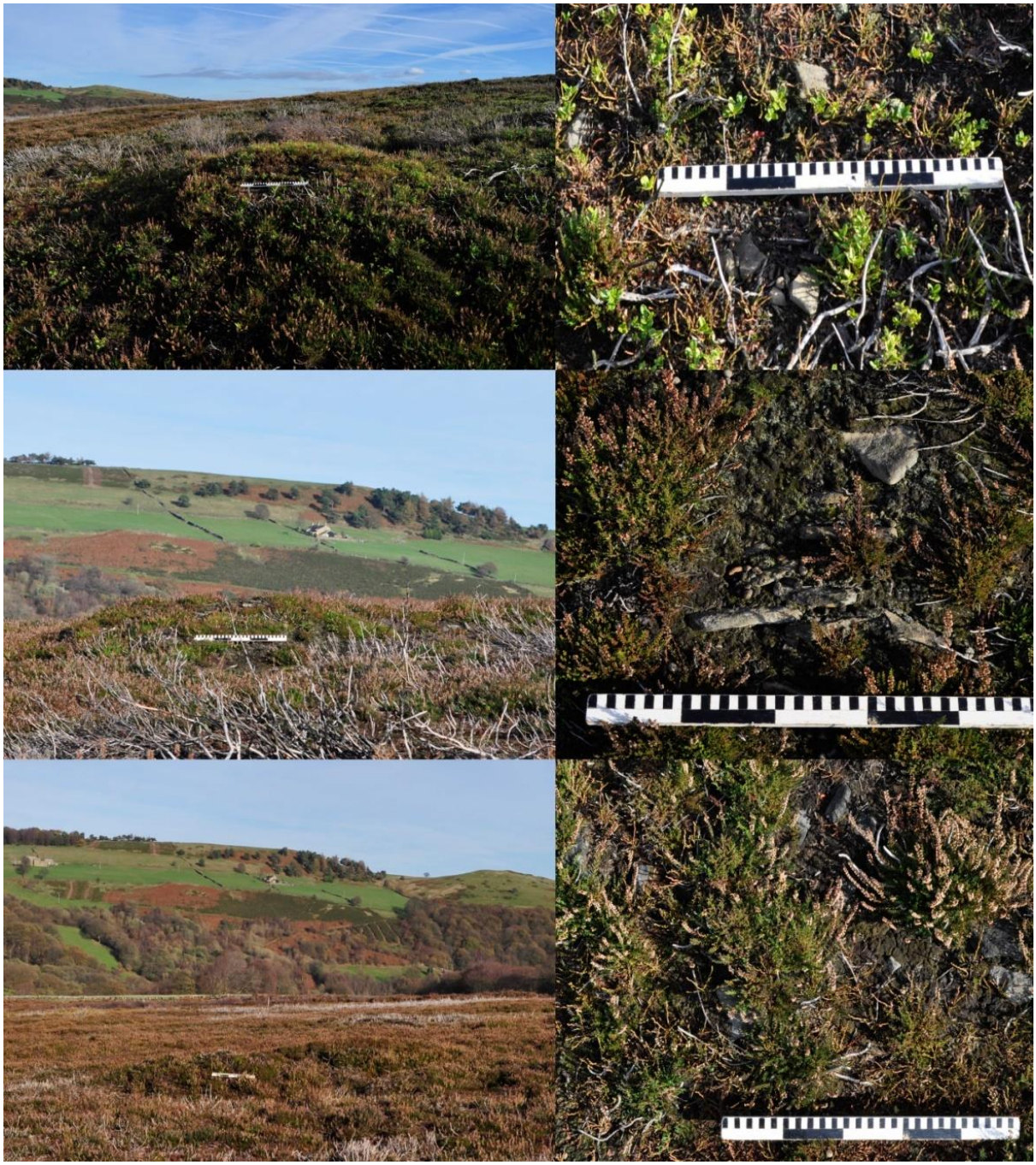

Figure 5: cairns on the south side of Broomhead Dyke (left) with stones visible (right). Source: author.

To the immediate west of the cairnfield, and located on the precipitous north facing boulder strewn slope overlooking the track skirting the edge of Ewden Beck is a large earth fast slab with a slightly sloping horizontal panel of probable prehistoric cup marks, including conjoined cup marks (Figure 6). This has not yet been fully recorded and is the subject of ongoing research by myself.

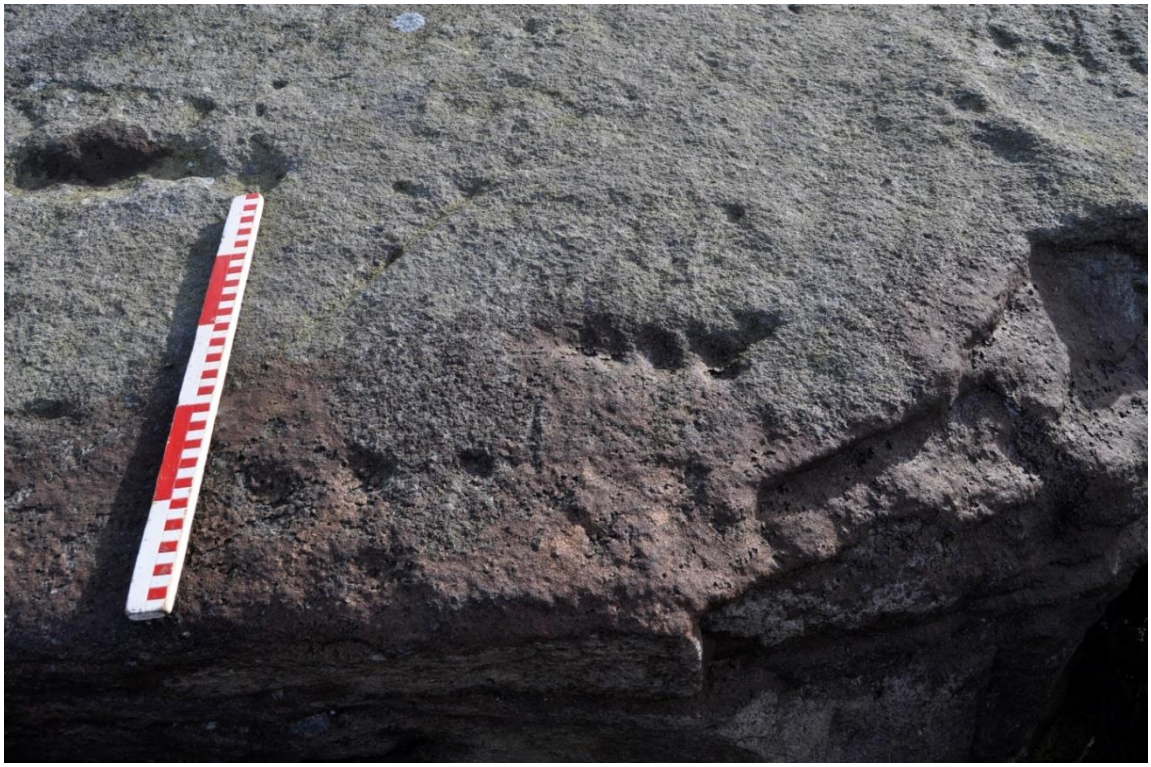

Figure 6: part of the horizontal cup-marked panel at Ewden beck, close to the scheduled area. Source: author.

Ullathorne's rapid survey also resulted in the recording of a braided Holloway of medieval or post medieval date across the moor, as well as mapping in detail estate boundary stones of recent historical date (Ullathorne 2005: 40-41; 44; Figure 7).

Figure 7: estate boundary markers on Broomhead Moor of recent historical date. Source: author.

A number of prehistoric features or features of probable prehistoric provenance have also been recorded at the extreme south west corner of Broomhead Moor (Ullathorne 2005: 42; Figure 3). These include the scheduled linear ditch and bank of the Bar Dyke (list entry number 1017508), a feature the purpose and date of which are contentious. In the immediate vicinity is a scheduled cairnfield (list entry number 1018039). This is reputed to consist of six cairns (Ullathorne 2005: 42). However, it is also marked on modern ordnance survey maps as the location of the "Apron full of stones", a large cairn destroyed in the course of constructing Mortimer Road during the eighteenth century. The cairnfield was not relocated during Ullathorne's survey. Barnatt (1989, quoted by Ullathorne 2005: 42) suggested that the location of the former cairn might be that of the nearby putative ring cairn (list entry number 1017667), on the basis that this is where the cairn was recorded as being located on the 1855 Ordnance Survey map, as well as on morphological grounds. In his judgement therefore, the ring cairn is a surviving remnant of the former cairn. The confusing impression of the various aforementioned features might only be resolvable with detailed further fieldwork. A copper alloy axe head of the Bronze Age was also recovered from the locale as a stray find (SMR 00549/01), all within a short distance of the scheduled Bronze Age landscape of Cowell Flat (list entry number 1017833).

The remaining part of the moor (the greater part) is better known for its flint scatters. Indeed, a Mesolithic flint scatter is recorded at the extreme south east corner of the moor where the aforementioned Bar Dyke and associated features are located (Museums Sheffield accession number 1995.118.49; Figure 3). Leslie Armstrong (1956) was the main local authority for chipped stone on the uplands during the middle of the twentieth century but his work, though pioneering, lacked detail. Jeffrey Radley undertook research during the early 1960s as part of an attempt to better characterise Mesolithic activity on the uplands to the west of Sheffield (Radley and Marshall 1963). Apart from the poor locational detail of earlier work, the quantities known did not exceed many more than 2000 artefacts in total from the entire upland district (Radley and Marshall 1963). Radley determined to find and excavate substantial sites rather than rely on limited data from surface recovery.

Initially, Radley added detail to existing archives, noting that Flint Hill was so named because of the quantities of chipped stone that had formerly been in evidence. So much so that gamekeepers had used it as a source for grit in the rearing of grouse (Radley and Marshall 1963: 89). Radley plausibly suggested that this might have been the location of much of the chipped stone that Armstrong, and Gatty before him, had collected as surface finds from "Bradfield".

Fieldwork followed, with a number of sites being excavated in the vicinity of Midhope Moors and Pike Low (Radley and Marshall 1965; Cockrell *forthcoming*), but also on Broomhead Moor. Ten findspots were recorded between Flint Hill and Rushy Dike listed in the database of Museums Sheffield (accession numbers 1995. 1; .12; .13; .14; .50; .68; .92), subsumed within seven "sites" for the publication (1963; 97). One of these notional "sites"

was excavated slightly upslope of the headwaters of Rushy Dike ("Broomhead 10", accession number 1995.118.68; Figure 8), which in the 1963 publication is further sub-divided into four major findspots. One consisted of four concentrated scatters of chipped stone with finds in between numbering just over four hundred artefacts. Much smaller quantities were recovered from three more "sites" adjacent to Hurkling Edge. The confusion between Radley and Marshall's 1963 publication and the archived information at Museums Sheffield, as well as the somewhat indecisive discussion about which findspots are called "sites" and which are not (Radley and Marshall 1963) is indicative of the difficulty in defining what constitutes a "site" and what that means in terms of the lived experiences of the people who generated them. A literature has grown up in more recent scholarship over the issue (Foley 1981; Bond 2011; Cockrell 2017), which this is not the best place to discuss in detail, but it is likely that the various "sites" and findspots around Rushy Dike that have been fortuitously revealed in the course of erosion episodes are reflective of rather more sophisticated use and widespread inhabitation of the landscape than was once thought.

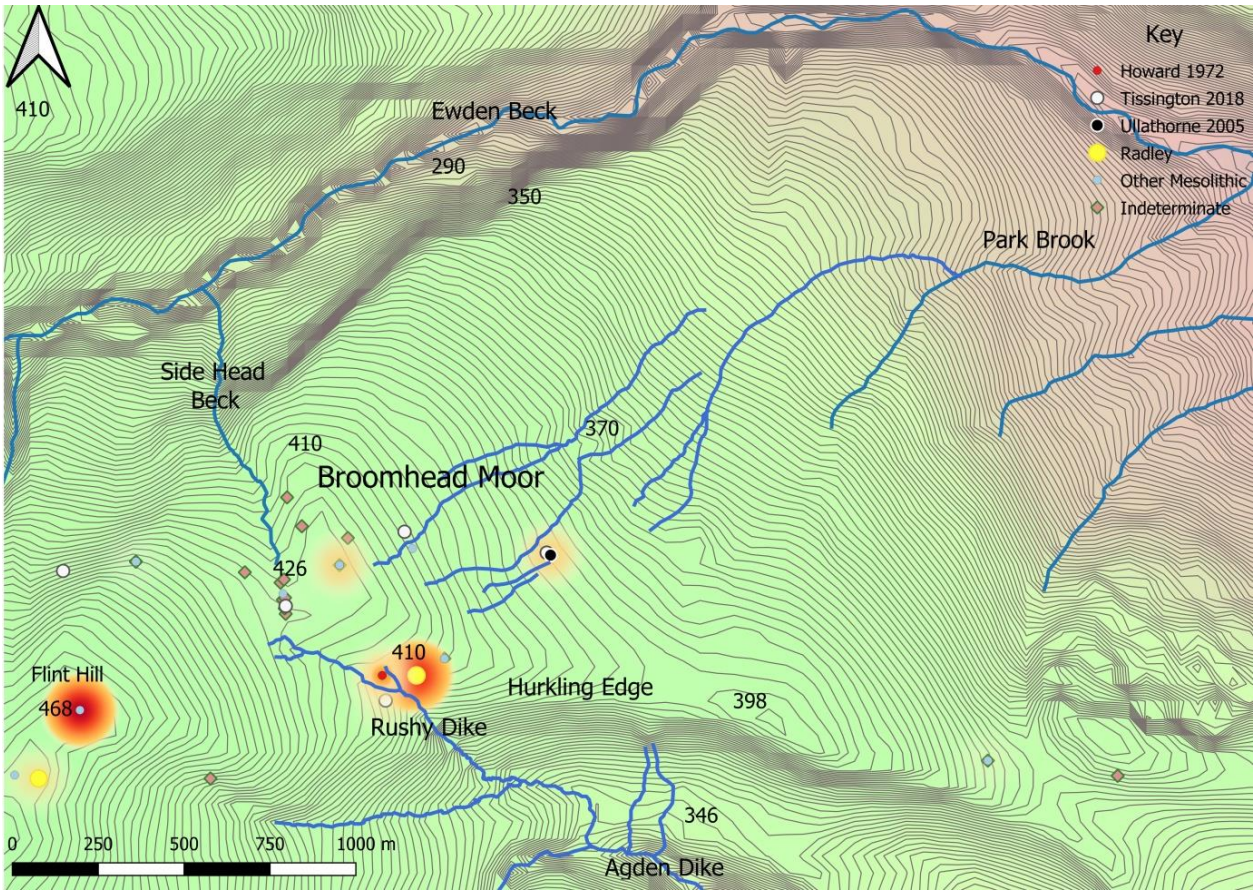

Figure 8: findspots of definite or probable Later Mesolithic findspots from Broomhead Moor. Diffuse roundels represent areas of higher concentration, darker higher and lighter lower. Contains ordnance survey data © crown copyright database 2017.

More stray finds and very small scatters of chipped stone have been recovered from the locale over the years, particularly at the saddle separating Flint Hill from the summit of Broomhead Moor, beside which a rudimentary path crosses the top of the moor frequented by local walkers. Many of these have been recorded as stray finds by Museums Sheffield and South Yorkshire Sites and Monuments Record (Figure 3; Figure 8) including a number of barbed and tanged arrowheads of the Early Bronze Age. A small assemblage of thirty five implements of chert and twenty three of flint was also recovered by Alice Ullathorne during her survey, close to the later findspot of Tissington In the vicinity of the sources of the springs flowing into Park Brook at SK23199525 (Ulllathorne 2005: 51; Figure 8).

Several more flints were reported from close by at Hobson Moss during a watching brief undertaken as part of a seismic survey that skirted the west edge of Broomhead Moor (Merrony 1989: 10). However, these did not amount to anything more than stray finds along a narrow line that did not encounter noteworthy new information on the moor itself.

Since the work of Ullathorne, the only systematic archaeological work on the moor has been the survey of Clare Nowell (2010). This was a phenomenological study of stone (natural and archaeological) in the locale that covered a much larger area than the moor itself. Nowell noted the presence of a triangular stone setting on the moor (Nowell 2010: 39; Figure 3), close to a sub rectangular enclosure wall of probable recent historical date (approximately centred on NGR 423465, 395702). What this is, or whether it is even archaeological, is open to debate. However, it is in close proximity to the perimeter of the cairnfield at Ewden Beck, which is somewhat larger than the scheduled area implies, and therefore nearer than at first apparent. The cairnfield itself is associated with orthostats, and a cup-marked stone. Taken together, this evidence indicates that circumspection in the interpretation of the triangular stone setting would be wise in lieu of more detailed research. It is arguably a prehistoric setting of, as yet, indeterminate character.

4. Aims and objectives

The aim of the present study is to add to the existing record an assemblage of chipped stone donated to me by Terry Howard, along with a similar assemblage collected by Andrew Tissington. Objectives include recording the assemblages and placing them within their regional historic and environmental contexts in order to draw meaning from them.

5. Methodology

Three small assemblages of chipped stone were collected by Andrew Tissington between 2016-2018 during walkover surveys of Broomhead Moor (unpublished) undertaken by him over that time period. The locations of each, and a number of individual stray finds, were recorded using a hand held gps device accurate to within a few square metres. These were at Rushy Dike (NGR 422710, 394827) on the south facing slopes of Broomhead Moor (thirty four artefacts), and at the "saddle" dividing Broomhead Moor from Flint Hill (NGR 422419, 395102) consisting of eleven artefacts. There was also a small assemblage of 14 artefacts (NGR 423179, 395257) recovered from the east facing slopes of Broomhead Moor. This was recorded in the vicinity of the sources of the springs which feed Park Brook. I examined these in 2018. The remaining assemblage was collected by Terry Howard in 1972 from Rushy Dike. The location was not recorded accurately but Terry was able to show me the approximate location on a map (NGR 422700, 394900). The assemblage consists of sixty one artefacts, which I examined in February of 2020.

The recording criteria used were almost identical in both recording events (appendix), although no attempt to record dimensions was made in 2018. Ideally this would have been remedied recently, but the "lockdown" restrictions in place at the time of writing have made that impossible. For the Howard assemblage, measurements were only recorded for complete pieces, in accordance with the methodology designed by Saville (1980).

6. The chipped stone

A complete catalogue of the chipped stone is available in the appendix. Below follows more detailed descriptions of some of the more distinctive artefacts that were allotted small finds numbers.

1. A tertiary chip of mid grey black chert of probable Monsal Dale derivation measuring 9mm long by 8mm wide and 2.5mm thick (Figure 9). Of shallow triangular section, a bulb of percussion and remnant of striking platform is visible on the ventral side. On the dorsal side a ridge is visible along the long axis, between very narrow removal scars. These form a distinct point at the distal end of the artefact, strongly hinting that this implement was crafted as a microlith, although secondary working is not present. It is highly likely to relate to the late Mesolithic.

2. A secondary blade-like flake of mid grey black chert of probable Monsal Dale derivation measuring 13mm long by 6mm wide and 2mm thick. Some cortex is visible on the dorsal side of this implement. A bulb of percussion and remnant of striking platform is visible on the ventral side. This un-diagnostic flake is most likely to relate to the late Mesolithic, on the strength of its diminutive size, and the probable source material.

3. A secondary blade of mid grey black chert of probable Monsal Dale derivation measuring 28mm long by 18mm wide and 4.5mm thick (Figure 9). On the dorsal side a ridge is visible along the long axis between two blade removal scars on the shallow triangular sectioned artefact. One of these has a hinge termination at the proximal end and has also been modified at the proximal end with a removal to form a shoulder. At the distal end it, and the other removal scar, are truncated by a flake removal that forms a point at the distal end of the second blade removal scar. It is unclear if it is intentional, but the second removal scar on the long axis of the implement also has a shoulder at the proximal end. It is likely that the shoulders were designed to form a crude tang in order to haft the implement. The first described blade removal scar forms a distinctly sharp edge, while the second has been blunted by the removal of a single narrow flake along its long axis. The implement has almost certainly been crafted for utilisation as a knife.

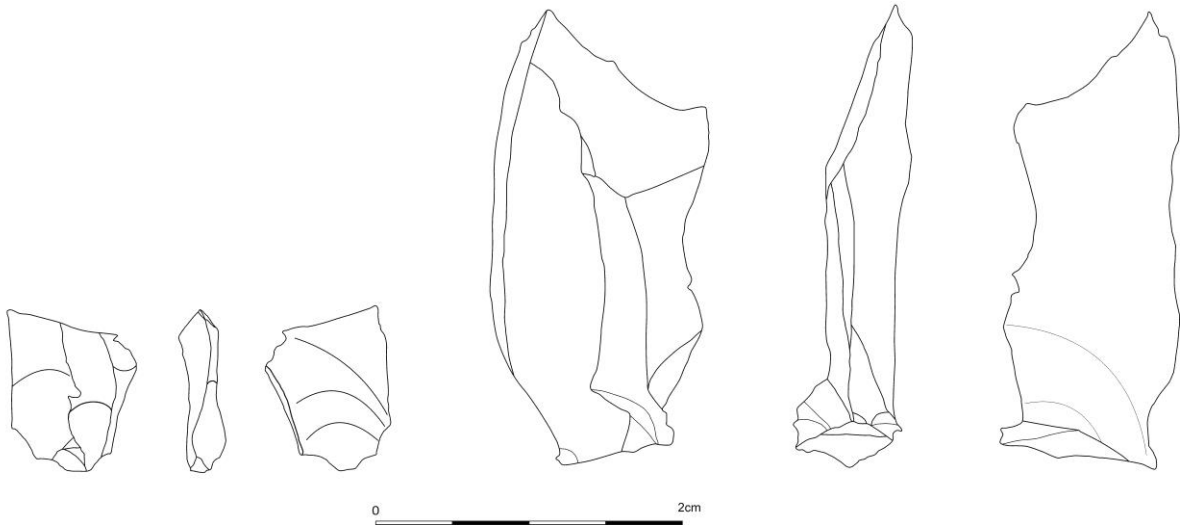

Figure 9: a possible microlith (left, SF1) and possible knife blade (right, SF3). Source: author.

4. A large blade-like secondary flake of light grey brown till flint of probable river gravels derivation. The long axis has been abruptly retouched along both edges, which probably ended in a point, although this is not possible to confirm as the end of the implement is missing. A shoulder-like protrusion on the left hand edge near the proximal end on the ventral side of the implement has been semi-abruptly and carefully retouched to form a nosed scraper. The artefact is not of a diagnostic type, but its relatively large size and the character of its scraper component are most consistent with Early Neolithic working traditions.

5. A bladelet of dark black grey chert of probable Monsal dale derivation, flaked and abruptly retouched along one edge at the proximal end to form a point, and abruptly retouched along both edges at the distal end to form a tool that is broken at the tip (Figure 10). This is therefore a combination tool incorporating an awl, and probably a mèche de foret at the opposite end. It is almost certainly a Late Mesolithic implement.

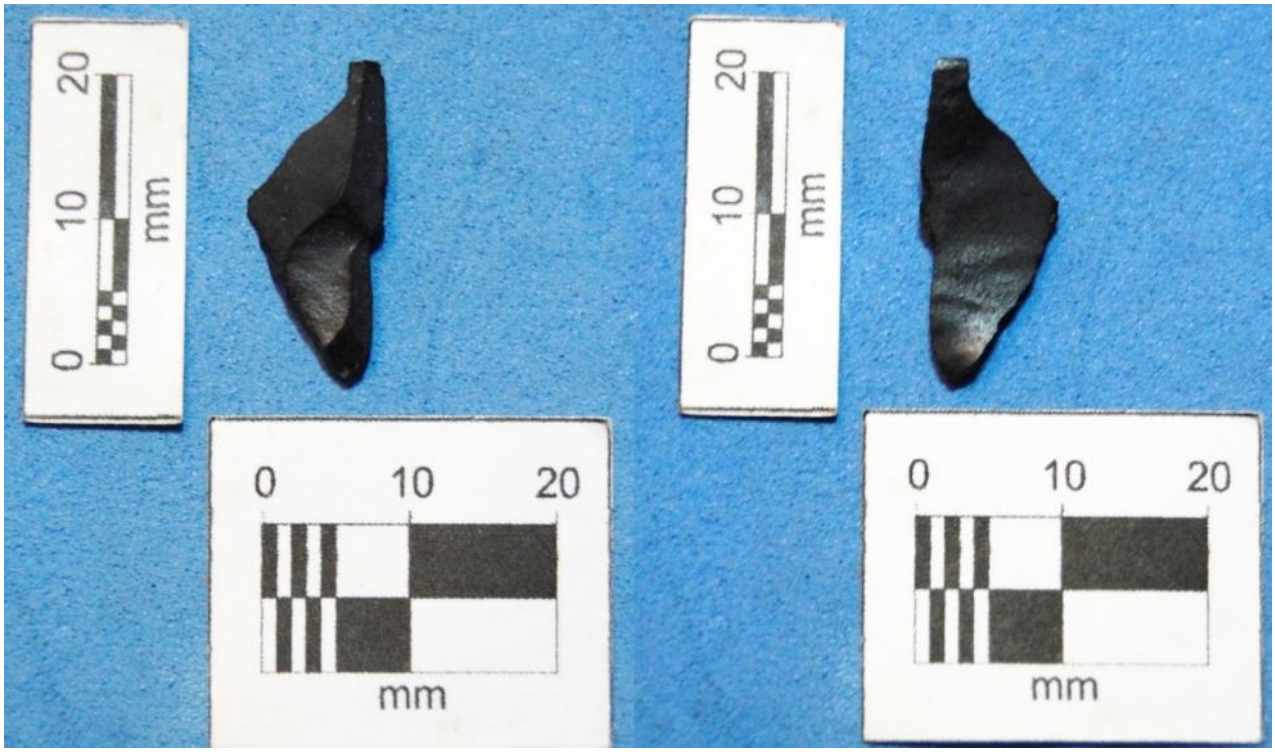

Figure 10: a probable late Mesolithic combination tool, SF 5. Source author.

7. Discussion

Flaking and manufacture

The diagnostic pieces from the assemblages were Late Mesolithic in character. Mesolithic working is based on the manufacture of narrow blades used as blanks. These could either be used as knives, scrapers, and other tools in their own right, or notched and then obliquely snapped along their length to produce a number of microliths to be hafted in composite tools of wood. A number of such implements were recovered, but no cores distinctive of Mesolithic reduction sequences. Finished tools tend to be very small in size. Several scraper tools of probable Late Mesolithic date and the frequency of tiny chips and very small flakes are indicative of secondary working in the vicinity, but the lack of cores and primary flakes that can be related to the Mesolithic indicate that this locale might not have been where primary working took place. This is not inconsistent with regional patterning, where the

predominance of very small implements and debitage is indicative of the careful curation and efficient use of scarce resources by a highly mobile population. Cores of the Mesolithic, absent from the present assemblage, are less likely to be present due to being at the outer edge of their distribution (Figure 12; Figure 13), the centre of which is arguably to have been in the vicinity of Monsal Dale in Derbyshire (Cockrell 2017: 107-109).

Types

A range of types are present in the assemblages and these are summarised in table one. The presence of the various retouched and utilised tools and pieces are probably to be associated with a wide range of processing activities relating to the Mesolithic. They are too few and too widely distributed to enable a more nuanced understanding of the kinds of activities taking place with confidence, although primary working does not seem to be among them. More can be read into their presence at this particular locale by looking at the topography and environment, as well as the presence of later artefacts in the vicinity. The location is close to where springs rise and where the length of one valley is in clear sight and another only a short walk away. This is also in a place offering some protection from the prevailing weather systems coming from the west. The scattered distribution hints at repeated visits, a practice noted across the Pennines (Spikins 2002). A single Early Neolithic leaf shaped arrowhead has been recovered from the locale (SMR 02872/01), as well as the later Neolithic and early Bronze Age implements shown in Figure 3, along with the later features. This might be coincidental, but is more plausibly understood as reflecting persistent knowledge that the locale was of value. It might have been important as a node along routeways, and potentially as part of a home range or region defined by the notable places routinely visited within it, as I have argued elsewhere (Cockrell 2017).

Type	Howard	Tiss. Rushy Dike	Tiss. Springs	Tiss. “saddle”
chip	27	13	9	6
flake	16	3		
chunk	4	4	1	
spall		2	2	
core	1			
bladelet	5	4	1	2
bladelet end	3	2		
knife	1			
awl	3	1		1
scraper		1	1	
burin		3		2
combination	1	1		
total	61	34	14	11

Table 1: summary of lithic types by site distribution.

Raw Material

The careful curation of a scant resource alluded to above is most likely to be a function of the complete absence of suitable raw materials for the crafting of stone tools in the locale, and indeed in the entire region east of it (Cockrell 2017). The most remarkable feature of the combined assemblage is the homogeneity of its source material: 77% of the assemblage from Rushy Dike collected by Howard is of black chert, almost certainly derived from the widely known source in the vicinity of Monsal Dale in Derbyshire (Radley 1968; Henson 1988; Cootes 2012: 80). The assemblage collected by Tissington from nearby, but also from near the source of Rushy Dike is 100% black chert. Fifteen percent of the Howard assemblage is till flint probably derived from the Wolds of East Yorkshire or North Lincolnshire (for a discussion of the differences between the different sources of local till derived flints see Cockrell forthcoming), and a little under seven percent is of river gravel derived till flint. The remaining assemblages are more mixed, but are too small to be statistically significant.

Tissington's Rushy Dike assemblage (like the others) is from surface recovery, but is one that is clearly eroding from peat deposits which have been denuded of vegetational cover (Figure 11), much as the material recorded by Radley came from erosion patches very close by. The size of the area from which Tissington's artefacts were recovered measures approximately only 0.5m². That, the very small and consistent size of all of the artefacts, and the fact that the few diagnostic pieces are Late Mesolithic in character indicates that the entire assemblage is almost certainly a discrete group of the Late Mesolithic belonging to a small "site". Howard's Rushy Dike assemblage was recovered from a more dispersed area, albeit very close by again, but the diagnostic pieces are exclusively of Late Mesolithic character.

Figure 11: Facing east across the south facing slope of Broomhead Moor near Rushy Dike with Andrew Tissington indicating the exact place from where he recovered chert implements at an erosion patch. Source: author.

The homogeneity of the source material of the total assemblage is in stark contrast with that recorded recently from those collected near Hingcliff Hill at Midhope Moors, to the north-west (Cockrell forthcoming). At Midhope Moors the black chert was much less in evidence, and a significant proportion of implements were of river gravel derived till. River gravel derived till is a negligible component of the present assemblages.

In 2016 I noted that there was a distinct character to the distribution of chert and flint implements in the region (Cockrell 2017). Implements of chert (almost all of which were of the black variety) appeared to relate almost exclusively to the Late Mesolithic across the drainage basin of the river Don, supporting a suggestion first made by Jeffrey Radley based on anecdotal evidence in Derbyshire (1968). Recently, it has been shown that there are several possible sources of black chert in the Pennine region (Evans *et al* 2007). However, the data from the river Don drainage basin showed a geographical distribution largely confined to the south and west of the drainage basin, spreading in a crude arc, with higher proportions of cores and debitage apparent at the south and west extremity, and less on the edge of the arc (Figure 12; Figure 13). I suggested that this might reflect the activities of different mobile groups during the Mesolithic, with at least one with a centre of gravity coalescing around its most important source of material for the crafting of stone tools, in Monsal Dale. The present study offers support for that interpretation.

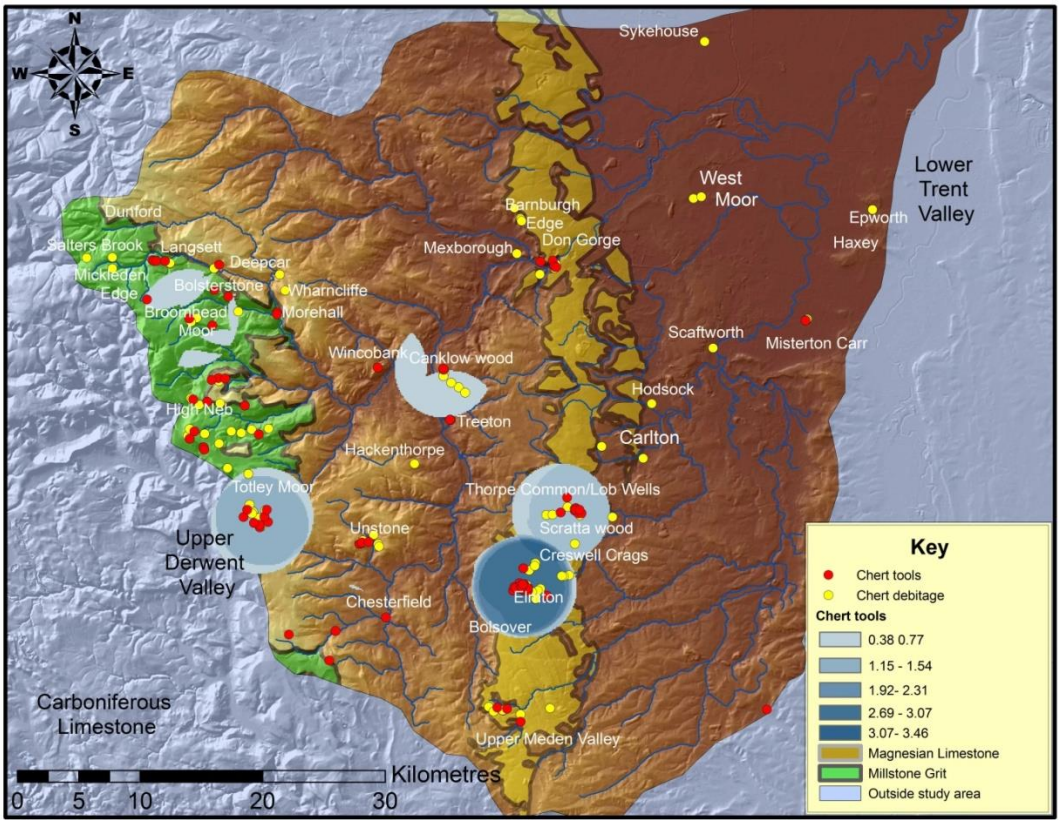

Figure 12: Locales with higher densities of chert tool findspots across the prehistoric river Don drainage basin (after Cockrell 2017). © Crown Copyright/ database right 2014, an ordnance survey/Edina supplied service.

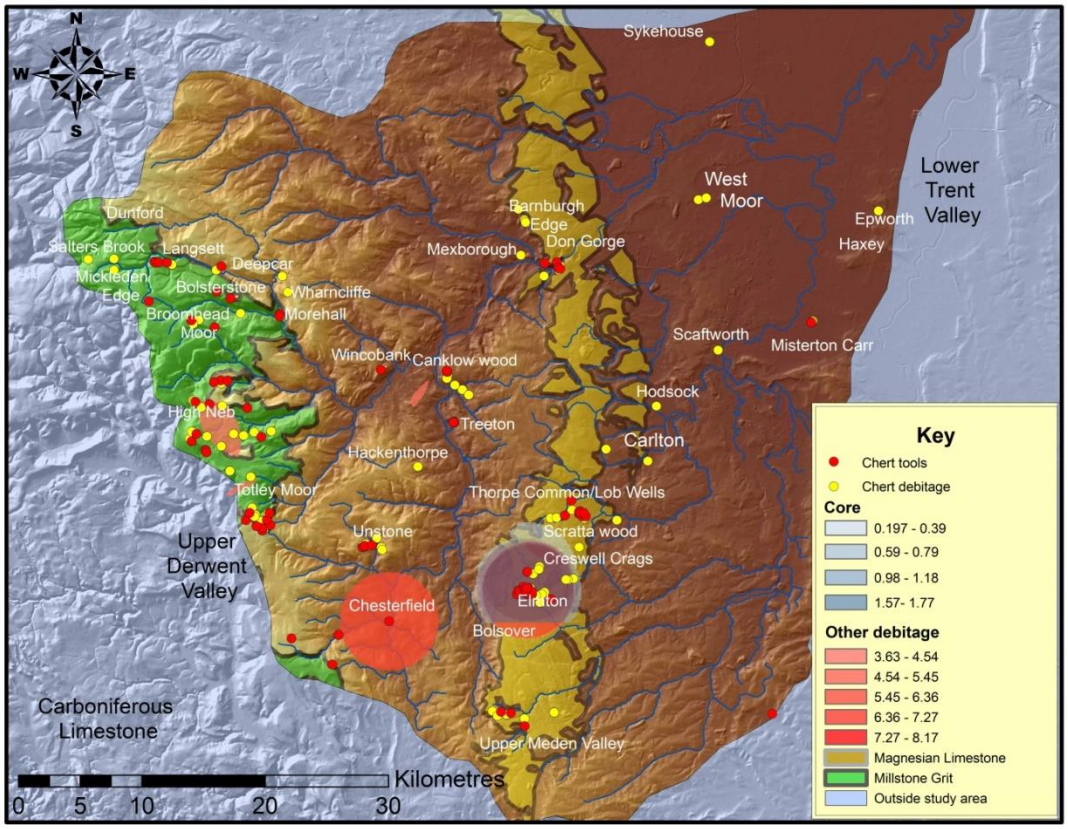

Figure 13: Locales with higher densities of chert debitage findspots across the prehistoric river Don drainage basin (after Cockrell 2017). © Crown Copyright/ database right 2014, an ordnance survey/Edina supplied service.

Acknowledgements

Thanks are due to Andrew Tissington and Terry Howard for their insightful conversations and good company. Colin Merrony and Ruth Morgan read an early draft of this report and provided many useful comments, resulting in a number of improvements. The content here though is solely my responsibility, including any errors present. This report was completed with the generous support of the Bridge Community shop, Stocksbridge.

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Appendix: Catalogue

Key: “mat.”= material; “Prov.”= provenance; “RS”= core reduction sequence.

eas.	north.	L	W	T	No.	Mat.	Colour	Prov.	class	Type	Specific	RS	Period	Comments
422700	394900					chert	mid black grey	monsal	debitage	chip		sec	mes_BA	
422700	394900					flint	light grey brown	till	debitage	chunk		prim	mes_BA	mall pebble. Two removal scars. Frost. Frac.
422700	394900					chert	dark black grey	monsal	debitage	chip		sec	mes_BA	
422700	394900					chert	mid black grey	monsal	debitage	chip		ter	mes_BA	
422700	394900	30	25	11		chert	mid black grey	monsal	debitage	flake	rejuvenation	ter	mes_BA	narrow removal scars on dorsal side. Edge dam.
422700	394900	17	17	4		chert	mid black grey	monsal	debitage	flake	rejuvenation	ter	mes_BA	edge dam..
422700	394900					chert	mid black grey	monsal	debitage	bladelet	end	ter	l.mes	very small. Broken.
422700	394900					chert	mid black grey	monsal	debitage	chip		ter	mes_BSA	very small.
422700	394900	9	8	3	1	chert	mid black grey	monsal	debitage	chip		ter	l.mes	poss. Microlith. No sec. working.
422700	394900	13	6	2	2	chert	mid black grey	monsal	debitage	flake	blade-like	sec	mes_BA	bulb of percussion visible.
422700	394900					chert	mid black grey	monsal	debitage	chip		sec	mes_BA	
422700	394900					chert	mid black grey	monsal	debitage	chip		sec	mes_BA	dorsal ridge visible.
422700	394900	28	18	5	3	chert	mid black grey	monsal	tool	knife		ter	mes_BA	shouldered. Flaked to a point.
422700	394900					chert	mid black grey	monsal	debitage	flake		sec	mes_BA	large.
422700	394900					flint	light white grey	Wolds	debitage	flake	blade-like	sec	mes_BA	
422700	394900					flint	light white grey	Wolds	debitage	chip		ter	mes_BA	poss.unfinished microlith.
422700	394900					flint	mid white grey	Wolds	debitage	chip		ter	mes_BA	
422700	394900					chert	mid black grey	monsal	debitage	chip		sec	mes_BA	
422700	394900				4	flint	mid white brown	till	tool	combi	scraper/piecer	sec	mes_BA	Broken tip. Invasive retouch on scraper.
422700	394900					chert	mid black grey	monsal	debitage	bladelet	mid-section	ter	l.mes	triangular profile. Broken.
422700	394900					chert	dark black grey	monsal	debitage	chip		ter	mes_BA	
422700	394900					chert	dark black grey	monsal	debitage	chip		ter	mes_BA	
422700	394900					chert	dark black grey	monsal	debitage	bladelet		ter	l.mes	Broken.
422700	394900					chert	dark black grey	monsal	tool	awl		ter	l.mes	edge trimmed on one edge to form point.
422700	394900					flint	light white grey	Wolds	debitage	chip		ter	mes_BA	
422700	394900					chert	dark black grey	monsal	debitage	flake		ter	mes_BA	
422700	394900					flint	light white grey	Wolds	debitage	bladelet		ter	l.mes	poss. Unfinished microlith
422700	394900					chert	dark black grey	monsal	debitage	chip		ter	mes_BA	
422700	394900					chert	dark black grey	monsal	debitage	chip		ter	mes_BA	
422700	394900					chert	dark black grey	monsal	debitage	chip		ter	mes_BA	
422700	394900					chert	dark black grey	monsal	debitage	chip		ter	mes_BA	
422700	394900					flint	light white grey	Wolds	debitage	bladelet	end	ter	l.mes	Broken.
422700	394900					chert	dark black grey	monsal	debitage	bladelet		ter	l.mes	Broken.
422700	394900					flint	light grey brown	till	debitage	bladelet	end	ter	l.mes	Broken.
422700	394900					chert	dark black grey	monsal	debitage	chip		ter	mes_BA	
422700	394900					chert	dark black grey	monsal	debitage	flake		ter	mes_BA	
422700	394900					chert	dark black grey	monsal	debitage	flake		ter	mes_BA	
422700	394900					chert	dark black grey	monsal	debitage	chunk		ter	mes_BA	
422700	394900					flint	light white grey	Wolds	debitage	flake		ter	mes_BA	
422700	394900					flint	light white grey	Wolds	debitage	chip		ter	mes_BA	
422700	394900					chert	dark black grey	monsal	tool	awl		ter	l.mes	edge trimmed on one edge.

422700	394900					chert	dark black grey	monsal	debitage	chunk		ter	mes_BA	
422700	394900	14	14	2		chert	dark black grey	monsal	debitage	flake		ter	mes_BA	bulb of percussion and striking plat. visible.
422700	394900					chert	dark black grey	monsal	debitage	bladelet		ter	l.mes	Broken.
422700	394900					chert	light brown white	derb.	tool	awl		ter	mes_BA	No sec. working but flaked to a point.
422700	394900					flint	light white grey	Wolds	debitage	core		ter	l.mes	narrow removal scars. Hinge termination.
422700	394900					chert	dark black grey	monsal	debitage	chip		ter	mes_BA	
422700	394900					chert	dark black grey	monsal	debitage	flake		ter	mes_BA	very small.
422700	394900	30	17	10		chert	dark black grey	monsal	debitage	flake		sec	mes_BA	
422700	394900					chert	dark black grey	monsal	debitage	chip		ter	mes_BA	poss. Microlith, but damaged dorsal side.
422700	394900					chert	dark black grey	monsal	debitage	chip		ter	mes_BA	
422700	394900					chert	dark black grey	monsal	debitage	chip		ter	mes_BA	
422700	394900					chert	dark black grey	monsal	debitage	chip		ter	mes_BA	
422700	394900					chert	mid black grey	monsal	debitage	chip		ter	mes_BA	
422700	394900					chert	mid black grey	monsal	debitage	flake		ter	mes_BA	
422700	394900					flint	light white brown	till	debitage	flake		ter	mes_BA	translucent
422700	394900					chert	mid black grey	monsal	debitage	flake	balde-like	ter	mes_BA	
422700	394900					chert	mid black grey	monsal	debitage	flake		ter	mes_BA	
422700	394900					chert	mid black grey	monsal	debitage	chip		ter	mes_BA	
422700	394900					chert	light black grey	monsal	debitage	chunk		ter	mes_BA	
422700	394900					chert	dark black grey	monsal	debitage	chip		ter	mes_BA	
422710	394827				5	chert	dark black grey	monsal	tool	awl/mèche	combi.	ter	l.mes	Broken tip.
422710	394827					chert	dark black grey	monsal	tool	awl		ter	l.mes	
422710	394827					chert	dark black grey	monsal	tool	scraper	end	ter	l.mes	On bladelet end.
422710	394827					chert	dark black grey	monsal	debitage	chip		ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	chip		ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	chip		ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	chip		ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	chip		ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	chip		ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	chip		ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	chip		ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	chip		ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	chip		ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	chip		ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	chip		ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	chip		ter	l.mes	
422710	394827					chert	dark black grey	monsal	tool	burin	micro	ter	l.mes	
422710	394827					chert	dark black grey	monsal	tool	burin	micro	ter	l.mes	
422710	394827					chert	dark black grey	monsal	tool	burin	micro	ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	bladelet	end	ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	bladelet	end	ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	bladelet		ter	l.mes	broken.
422710	394827					chert	dark black grey	monsal	debitage	bladelet		ter	l.mes	broken.
422710	394827					chert	dark black grey	monsal	debitage	bladelet		ter	l.mes	broken.
422710	394827					chert	dark black grey	monsal	debitage	bladelet		ter	l.mes	broken.
422710	394827					chert	dark black grey	monsal	debitage	spall		ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	spall		ter	l.mes	

422710	394827					chert	dark black grey	monsal	debitage	flake		ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	flake		ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	flake		sec	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	chunk		ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	chunk		ter	l.mes	
422710	394827					chert	dark black grey	monsal	debitage	chunk		ter	l.mes	
422419	395102					flint	light white grey	Wolds	debitage	chip		ter	mes_BA	
422419	395102					chert	mid brown grey	derb.	debitage	chip		ter	mes_BA	
422419	395102					chert	mid brown grey	derb.	debitage	chip		ter	mes_BA	
422419	395102					chert	dark black grey	monsal	debitage	chip		ter	mes_BA	
422419	395102					chert	dark black grey	monsal	tool	burin	micro	ter	mes_BA	
422419	395102					chert	dark black grey	monsal	tool	burin	micro	ter	mes_BA	Notched.
422419	395102					flint	light white grey	Wolds	debitage	bladelet		ter	l.mes	
422419	395102					flint	light white grey	Wolds	debitage	bladelet		ter	l.mes	
422419	395102					flint	white		debitage	chip		ter	mes_BA	
422419	395102					flint	white		debitage	chip		ter	mes_BA	
422419	395102					flint	white		tool	awl		ter	mes_BA	
423179	395257					flint	light white grey	Wolds	debitage	chip		ter	mes_BA	
423179	395257					flint	light white grey	Wolds	debitage	chip		ter	mes_BA	
423179	395257					chert	dark black grey	monsal	debitage	chip		ter	mes_BA	
423179	395257					chert	dark black grey	monsal	debitage	chip		ter	mes_BA	
423179	395257					flint			debitage	chip		sec	mes_BA	
423179	395257					flint		till	debitage	chip		sec	mes_BA	
423179	395257					flint		till	debitage	chip		sec	mes_BA	
423179	395257					flint	light grey brown	till	debitage	chip		sec	mes_BA	Translucent.
423179	395257					flint			debitage	chip		ter	mes_BA	Burnt.
423179	395257					flint	light grey brown	till	debitage	spall		sec	mes_BA	Translucent.
423179	395257					flint	light grey brown	till	debitage	spall		sec	mes_BA	Translucent.
423179	395257					flint			debitage	bladelet		ter	L.mes	
423179	395257					flint		till	debitage	chunk		ter	mes_BA	
423179	395257					flint		till	tool	scraper		ter	mes_BA	Minute invasive retouch on edge.

Table 2: catalogue.