The lithic assemblage from Kingsdale Head (KH09)

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Introduction

During excavation the of potential Mesolithic features at Kingsdale Head in 2009 an assemblage of flint and chert artefacts were recovered. The assemblage included tool types associated with the Mesolithic and Neolithic/Bronze Age as well as waste from stone tool working (debitage). The material was recovered mainly from Context 802 – a site wide strategraphic layer of re-deposited clayey colluvium.

Method

Artefacts were recorded *in situ* using a total station to allow accurate spatial analysis, Figure 2. Each piece was identified to material and technology category, and then assessed for evidence of working (flake removal and re-touch) and thermal alteration (in the form of pot-lids, crazed surface and discolouration). The presence of cortex was recorded for flint using a scale 0-3 where 0 = no cortex, 1 = 0.1-33% cortex, 2 = 33.1-66% cortex and 3 = 66.1-100% cortex. Each piece was measured to give maximum length, width and breadth to the nearest 0.1mm. The resulting catalogue was then used to address questions regarding the use and function of the area excavated in 2009 at Kingsdale Head.

Results

In total, 270 flint and chert artefacts were recovered from the 2009 excavations. The assemblage was dominated by chert artefacts, see Figure 1 and Table 1, with only 23% of artefacts being flint. Examples of the tools and cores recovered from the site can be found in Appendix 1.

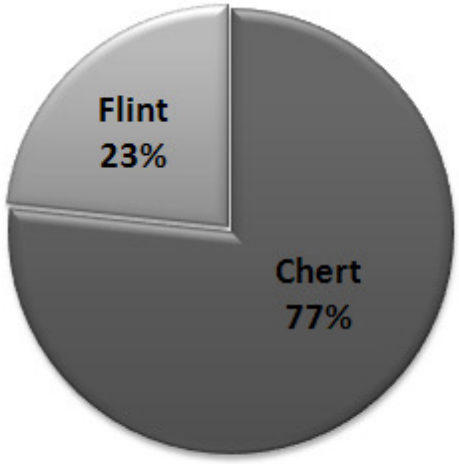


Figure 1: Flint and chert from Kingsdale Head (KH09)

Flint

Fifteen flint pieces displayed evidence of re-touch, and included 3 scrapers, a microlith, an awl, a knife, a backed blade, a truncate and a notched piece. In addition to these specific tool types there were also 5 'miscellaneous retouch flakes' (MRF), these are pieces that have re-touch, but do not resemble any specific tool form. There are also the remains of flint working in the form of cores (2), core fragments (2), platform rejuvenation flakes (3), a microburin and debitage (40). In total 23.8% of the flint assemblage was attributed to a tool from or identified as an MRF.

Chert

A total of 21 chert pieces could be attributed to specific tool type or MRF, this included 9 microlith and microlith fragments, 2 scrapers, an awl, a truncate and a notch in addition to 7 MRFs. In addition to stone tools there were also cores (7), core fragments (12), platform rejuvenation flakes (4),

microburins (2) and debitage (161). In comparison with flint only 10.1% of the chert assemblage could be identified as a tool form or MRF.

Artefact Type	Flint	Chert	Total
Microlith/Microlith Fragment	1	9	10
Scraper	4	2	6
Awl	1	1	2
Truncation	1	1	2
Notch	1	1	2
Knife	1	0	1
Backed Blade	1	0	1
MRF	5	7	12
Core/Core Fragment	3	19	22
Platform Rejuvenation Flake	3	4	7
Microburin	1	2	3
Debitage	41	161	202
Total	63	207	**270**

Table 1: Summary of the lithic assemblage from Kingsdale Head (KH09)

Spatial distribution of artefacts

The distribution of flint (green crosses) and chert (red crosses) across Trench 8 shows there is a clear cluster of artefacts at the east corner of the trench (K8/L8-K10/L11), this is dominated by chert pieces. An absence of flint and chert towards the centre of Trench 8 (F5/H5-F7/H7) is due to previous excavation of this area (2006, Trench 6). There is an absence of finds from the south corner (A11-B12) as this is where a palaeochannel cut through the colluvium.

Figure 2: Spatial distribution of flint (green crosses) and chert (red crosses) at Kingsdale Head, Trench 8. Distribution plot provided by Jeff Price.

Discussion

The presence of microliths, microburins (the waste from microlith production) and microblade cores at the Kingsdale Head site are clear evidence for occupation at the site during the Mesolithic period, supported by a radiocarbon date of 6960-6660 cal BC (Batty & Batty 2007, 86) from a piece of wood recovered from a stone filled pit in Trench 6, excavated in 2006 (Batty & Batty 2007; Howard 2007, 15). Other tool forms suggest a continued use of the site into the Neolithic and Bronze Age periods. Bronze Age occupation of the site is supported by the excavation of a burnt mound at Kingsdale Head in 2006, dated to 1606-1419 cal BC and 1448-1271 cal BC by radiocarbon (Batty & Batty 2007, 69. Calibrated using OxCal 4.1). In comparison with the typically Mesolithic tools, which are mostly made from chert, the typically Neolithic/Bronze Age tools are more frequently made from flint. This indicates an increasing use of flint over time, perhaps suggesting more widespread trade links or the ability to travel increased distances to source flint, which makes a higher quality finished product than most of the locally sourced cherts.

Chert tools and debitage are much more abundant than flint at the Kingsdale Head site. This is to be expected in this area where chert is the locally available material. Flint could be procured in the form of small nodules from glacial till deposits; however, flint is more reliably sourced from chalklands a good distance from the Kingsdale Head. Although there is evidence for chert and flint working at the Kingsdale Head site (e.g. debitage, cores, core fragments), the higher proportion of tool forms of flint (23.85) compared with those of chert (10.1%) supports the interpretation that flint was coming from a distance – people would have worked flint closer to the sourcing site to reduce carrying weight. A low frequency of flint pieces with cortex would support this interpretation, however, 19.0% of the flint pieces had cortex. This might suggest that the flint was sources more locally, but, if the pieces with cortex are considered 5 of the 12 pieces with cortex can be identified as tool forms, this leaves only 7 'tool production' pieces with cortex which supports a distant source for the flint material at Kingsdale Head.

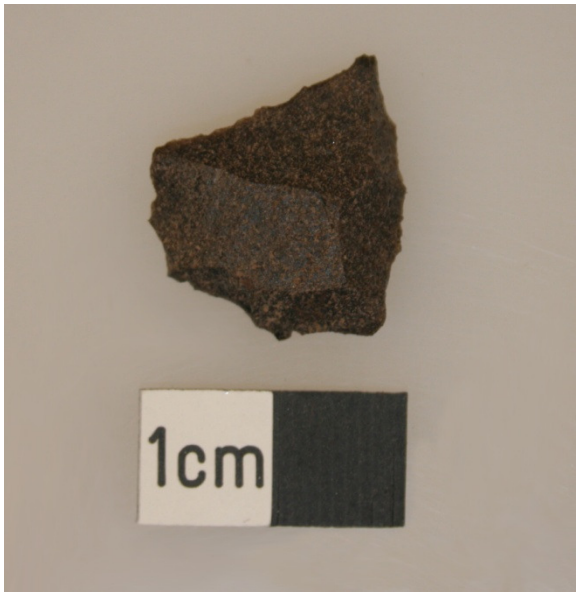
Although there appears to be some concentrations of finds in Trench 8, the excavation of this area is not complete; therefore it would not be useful to make an interpretation of these at this stage. A full assessment of spatial distribution will be made on completion of the excavations at Trench 8 in 2010.

References

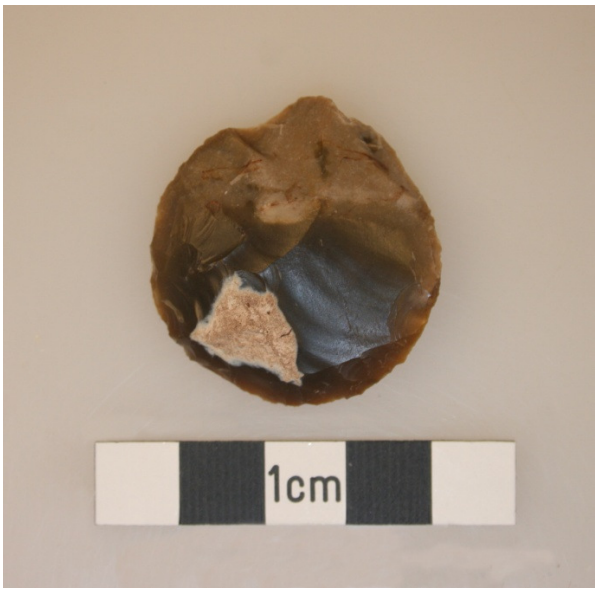
Batty, A. & A. Batty 2007. *Kingsdale Head Project*. Ingleton: Ingleborough Archaeology Group.

Howard, C. (ed.) 2007. *The Kingsdale Survey 2005-2007*. Ingleton: Ingleborough Archaeology Group.

Appendix 1: Examples of stone tools and cores from Kingsdale Head (KH09)



KH09 Trench 8 (802) artefact no. 851
Chert awl.



KH09 Trench 8 (802) artefact no. 857.
Flint Scraper

KH09 Trench 8 (802) artefact no. 868
Chert Microblade core

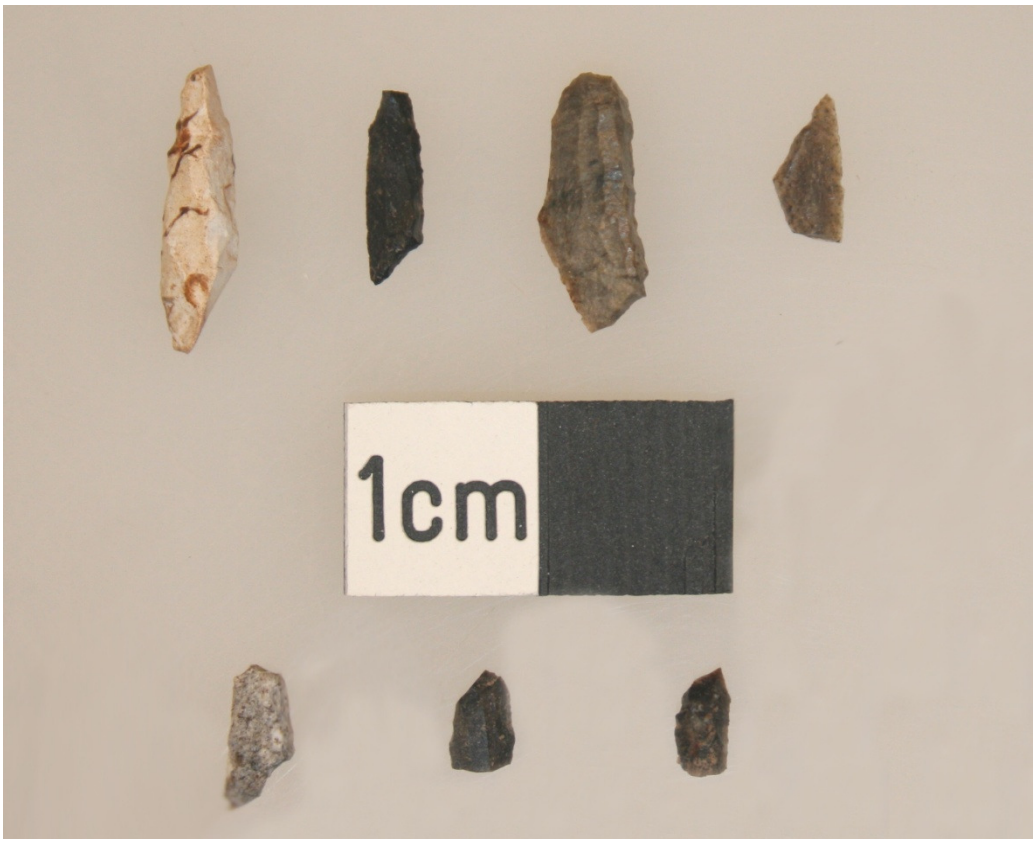
KH09 Trench 8 (802) artefact no. 870
Flint knife.

KH09 Trench 8 (802) artefact no. 1002.
Flint scraper

KH09 Trench 8 (802) artefact no. 1018.
Flint convex scraper.

KH09 Trench 8 (802) artefact no. 1035
Chert scraper. Thermally altered.

KH09 Trench 8 (802) artefact no. 1056
Flint core



KH09 Trench 8. Artefact no's 1074, 1098, 803, 865, 1030, 1085, 1071.
A selection of microliths and microlith fragments.

Glossary

BP	Before present
Bronze Age	Dating to around 3,700 – 2,500 BP in the UK
Chert	A stone type found in limestone areas. Produces lower quality tools than flint. Found locally in the Kingsdale Head area
Core	A chert or flint piece that has been used to produce flakes and/or blades for tool production
Cortex	Chalky outer surface of flint nodules
Debitage	The waste flakes produces during the production of stone tools
Flint	A type of chert which is found in chalk formations. Produces high quality tools
in situ	Here used to describe the recording of artefacts in the position that they were excavated.
Mesolithic	The middle stone age, dating to around 10,000 – 5,000BP in the UK
Microlith	A small stone tool associated with the Mesolithic period
Microburin	A waste product from the production of microliths
Neolithic	The new stone age, dating to around 6,000 – 3,000BP in the UK
Platform rejuvenation flake	A flake removed from a core to restore a dulled striking platform so the core can be used to produce more flakes
Pot lid	A small fragment of flint or chert that has popped off the surface during heating due to expansion of liquid or air pockets.