

14. Lithic analysis

CONOR BRADY

INTRODUCTION

The lithics under discussion come from a number of separate sites discovered during site works associated with the development of a golf-course and related facilities at Killeen Castle demesne, Co. Meath. Site A was identified as a prehistoric site and produced the bulk of the lithics, amounting to 34 artefacts. Two lithics came from site D annexe, outer enclosures associated with a ringfort site of probable early medieval date; seven lithics came from site G, a possible moated site of medieval date; and the remaining one lithic was found at site H, a D-shaped enclosure of probable early medieval date.

Because of the large scale of the development and the distribution of the excavated sites, the finds from each of the sites will be discussed here separately.

RAW MATERIAL

Pebble flint appears to have been the only type of flint used for knapping in these assemblages.

Flint occurs naturally in chalk and has a range of colours from grey to black and caramel brown. The cortex or outer skin on a nodule of fresh or chalk flint is usually soft and white, or chalky. During times of glaciation, flint was extracted and transported by ice sheets to non-flint-bearing areas, where it was deposited as a constituent of the general glacial drift (Jackson 1991, 34; see also Woodman 1987). Once deposited, the colour of the material tends to be altered by the absorption of minerals from the local soil and colours vary widely, ranging from shades of grey to cream through to brown (Dillon 1997, 33). Owing to the abrasion and erosion experienced during transportation, any cortex remaining is generally textured or smooth in character rather than being chalky. The size of nodules and pebbles found in glacial drift tends to be much smaller than nodules from *in situ* chalk deposits because of the stresses to which the nodules were subject during transportation.

Artefact dimensions

The largest artefact from the assemblages was a split pebble from site A (05E0303:4), a topsoil find with a maximum

length of 49mm and a weight of 47g. The next largest item came from site D annexe, a fine example of a plano-convex knife (05E0949:41 1), and measured 46mm in maximum length in its incomplete state. A retouched blade (05E0303:19:3) came from site A and was 45mm in maximum length. These maximum artefact lengths indicate that in all likelihood the source of the raw material was pebble flint and, indeed, the largest of the formal artefacts are all smaller than the split pebble that was recovered, an example of the type of material that was available to the knappers.

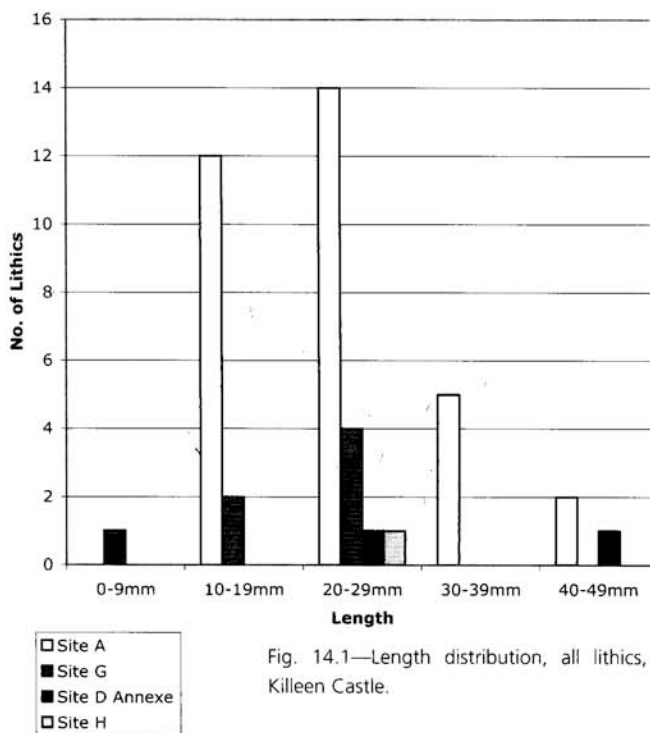


Fig. 14.1—Length distribution, all lithics, Killeen Castle.

There were seventeen flakes from the assemblages, eight of which were complete. All flakes, whether complete or incomplete, came from site A, apart from one example from site D annexe. The complete flakes are 05E0303:26:1–3 (19mm, 18mm and 12mm respectively), 05E0303:6 (39mm), 05E0303:9 (10mm), 05E0303:12 (33mm) and 05E0303:14 (19mm) from site A and 05E0949:2:1 (25mm) from site D annexe. The lengths of the flakes, both complete and incomplete, are consistent with a glacial till origin for much of the raw material used.

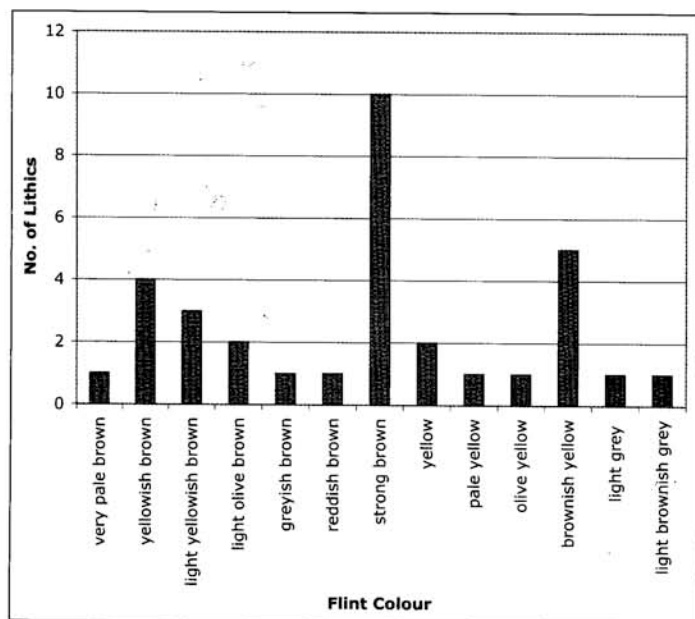


Fig. 14.2—Flint colour analysis, all lithics, Killeen Castle.

Artefact colour

Eleven of the artefacts from the various assemblages were either burned or patinated to such a degree that it was not possible to identify the colour of the raw material. For the remaining 33 pieces, a range of colours was present.

The majority of the pieces are shades of brown (67%), with strong brown being the single most dominant colour. The remainder of the assemblage is made up of shades of yellow (27%) and two artefacts (6%) are light grey. Again, the range and variation in the colours present is consistent with a glacial till source for the raw material.

Cortex

Sixteen artefacts examined still had some cortex adhering to them. Thirteen of these were from site A and the rest were from site G. Analysis of the texture of cortex on these pieces supports the idea of a glacial till origin, probably relatively local, for the raw material, as most had smooth or textured cortex. None of the artefacts had chalky unabraded cortex, a feature of flint derived from an *in situ* chalk source. The relatively high proportion of pieces in the assemblage with cortex reflects the small size of the available raw material and suggests that there was a concern to maximise the use of all available struck flakes, many of which in other situations might be discarded.

Patination

The patination of flint artefacts is a little-understood process (Schmalz 1960) but one that can shed some light on the

sometimes complex life cycles of certain artefacts. Eighteen of the artefacts examined were patinated to some degree. Fifteen of these came from site A and the rest were from site D annexe and site G. Eleven artefacts had all-over patination, while four appear to have differential patination relating to separate episodes of knapping and possibly indicating some curation of opportunistically recovered artefacts. This may signify that an element of the raw material being used at this site was sourced from earlier abandoned sites (a complete tertiary flake, 05E0303:26:2; an incomplete tertiary retouched flake, 05E0303:5; a complete tertiary flake, 05E0303:9; and a complete tertiary flake, 05E0949:2:1), one has a pre-retouch patina (a complete notched secondary flake from site G, 05E0539:153) and two have unpatinated break surfaces (an incomplete tertiary retouched flake, 05E0303:19:2, and an arrowhead fragment from site G, 05E0539:31:21), indicating that the breaks probably occurred some time after deposition.

Burning

Four artefacts were recognised as having been burned: an incomplete concave scraper on a tertiary flake and a chip from site A (05E0303:2 and 05E0303:64:2), and a fragment of a tertiary flake and a tertiary trimming flake from site G (05E0539:152 and 05E0539:17:22). While this represents a very small proportion of the assemblage, it may be indicative of settlement activity close by, or at the very least the use of a campfire/hearth in association with some of the flint-using activity. These pieces may have been directly associated with the activities involved in the production of the *fulacht fiadh* material in the pits.

SITE A

Behavioural analysis

The finds in each assemblage have been grouped according to their place in the production cycle. This method attempts to identify the behaviours involved in the production and maintenance of the assemblage (after Peterson 1990; Dillon 1997)

Activities directed towards the selection of raw material for further processing at site A are represented by a single artefact, a split pebble (05E0303:4) that came from the topsoil. As discussed above, this artefact is likely to have been sourced relatively locally. There is an additional split pebble in this assemblage (05E0303:8) which was not included in this category as it was used as an ad hoc tool. Nonetheless, it was indicated in the table above in the 'Selection of material' category as it does indicate activity directed towards this

Table 14.1—Behavioural analysis, site A lithic assemblage.

	No.	Total	%
Selection of material			
Split pebble	1(+1)	1	2.9%
Production of tools			
Single-platform core	1		
Bipolar splinter	1	2	5.9%
Discarded material			
Unutilised flake	6	6	17.7%
Unmodified tools			
Utilised flake	9		
Utilised bipolar flake	1		
Utilised bladelet	1		
Utilised split pebble	1	12	35.3%
Modified tools			
Hollow scraper	1		
Concave scraper	1		
Round scraper	1		
Thumbnail scraper	1		
Spokeshave	1		
Retouched blade	1		
Retouched flake	5		
Notched flake	1	12	35.3%
Miscellaneous			
Chip	1	1	2.9%
Total		34	100.0%

preliminary goal.

Finds falling into the 'Production of tools' category indicate the production of cores and associated waste flakes. Two artefacts in the site A assemblage pointed to such activities: a single-platform core (05E0303:26:7) and a bipolar splinter (05E0303:25:1).

'Discarded material' includes flakes that show no signs of having been utilised and are by-products of the production of usable flakes and tool blanks. Six unutilised flakes were identified in the site A assemblage.

The 'Unmodified tools' category includes all flakes that show signs of having been utilised, i.e. they display visible traces of edge damage. The assignment of pieces to either of these two categories is based solely on a visual inspection of the edges of each piece. It is possible that for some activities the wear patterns produced are not discernible to the naked eye. It is also possible that some of the edge damage assumed to have been caused by the use of a tool was in fact caused by post-depositional processes. Notwithstanding these limitations, the figures derived do give a useful impression of the proportion of utilised to unutilised flakes and the process is worthwhile. Twelve lithics from site A were assigned to this category, representing 35.5% of the assemblage.

The 'Modified tools' category accounts for all formal tools

that have been modified or retouched, i.e. the systematic removal of tiny flakes from the edge of a flake to create a tool of a particular form, a sharp edge, a steep edge suitable for scraping or for blunting an edge in order to facilitate hafting. Diagnostic pieces will normally belong to this category, as flakes are sometimes modified according to culturally prescribed templates which tend to vary over time. A further twelve site A lithics fell into this category, representing another 35.3% of the assemblage.

The final category in the analysis, 'Miscellaneous', includes waste pieces. While it is possible that waste is produced at any one of the preceding stages, it is not assignable to any particular category because it does not occur in forms that can be associated with one or other of the categories. Items of other materials that do not fit into the preceding scheme are also included here. Just one artefact from site A was assigned to this category, a flint chip (05E0303:64:2).

Bipolar or scalar reduction is a technique that allows the knapping of smaller material that cannot be reduced using the more conventional hand-held knapping methods. It involves wedging a small pebble securely between two stones while it rests on top of an anvil stone and hammering directly down on top of it in order to split it. This technique is less predictable and controlled than normal knapping. A number of the artefacts in the present assemblages display the characteristics of having been struck using the bipolar technique—crushing at both ends of the flake as if it had been struck simultaneously from both ends. Two of the artefacts from the site A assemblage showed signs of the bipolar reduction technique: a bipolar splinter (05E0303:25:1) and a utilised bipolar flake (05E0303:13). One additional flake showed possible signs of the technique: a double ventral flake (05E0303:19:1).

From the foregoing analysis it appears that just over 70% of the site A assemblage consists of either unmodified or modified tools. Although the size of this assemblage is small, it does strongly indicate that much of the activity represented by the assemblage was directed towards the processing of other materials, perhaps the preparation of food or other craft activities. There is very little indication that much production took place at this location. Furthermore, the proportion of formal or modified tools is particularly large. It has often been suggested that when modified or retouched pieces represent a proportion of c. 10% of an assemblage, this is a strong indication of residential activity. This can be further supported by the presence of a wide range of different forms (R. Foley 1981, Holgate 1985; Schofield 1987, 1991, Zvelebil *et al.* 1987). The site A assemblage, although it is small, contains eight different forms of modified tools, further suggesting the

idea of a residential component to the activities carried out on the site.

Chronology

Chronologically diagnostic pieces in the site A assemblage are the hollow scraper (05E0303:12:1), the concave scraper (05E0303:2), the round scraper (05E0303:64:1), the thumbnail scraper (05E0303:1) and the spokeshave (05E0303:16), all of which indicate a broadly Neolithic date. The hollow scraper may have been an example of Herity's 'classic' type, with a well-formed concavity and a trapezoidal cross-section (Herity 1987, 137), and may date from the second half of the Neolithic (Woodman 1994, 215). The concave scraper, perhaps a less formal version of the hollow scraper, may also indicate general Neolithic activity (Green and Zvelebil 1990). The round scraper perhaps indicates earlier Neolithic activity (Keeling and Keeley 1994) and, indeed, these have been found in the earlier 'Western' Neolithic levels at Knowth (Eogan and Roche 1997, Eogan 1984, 211–43). The thumbnail scraper and the spokeshave, similarly, have been taken as indicative of a general Neolithic date (Green and Zvelebil 1990). The presence of bipolar cores indicates that the assemblage dates from the Neolithic or Bronze Age, as no evidence of bipolar technology has yet been found in an earlier context (Woodman 1987, 144).

The presence of pits containing *fulacht fiadh*-type material at site A coupled with the radiocarbon determinations indicate a date in the early Bronze Age for the activity here. While this may appear to be at odds with the indications given by the lithics, it must be pointed out that, although it is widely recognised that lithics were still in common usage for some time after the end of the Stone Age, their usage and the particular technology and forms used are not well understood in Ireland. Many forms held to be diagnostic of an earlier period often continued to be made in subsequent periods. Many of the attempts to identify diagnostic lithic forms have focused on the earliest appearance and use of these forms, with little, if any, consideration being given to when these forms go out of use. Thus diagnostic lithics can only be regarded as giving general *terminus post quem* dates. Another possibility is that the artefacts are residual from earlier Neolithic activity.

Conclusion

The lithics from site A point to small-scale activity, perhaps directed towards the processing of foodstuffs or other craft activities. The production and maintenance of lithic tools seems to have formed a very minor component of this activity. The proportion and range of retouched forms present might indicate a residential element to this activity. The date of the

artefacts points to a general Neolithic to early Bronze Age date for the activity, with one artefact, the hollow scraper, indicating a later Neolithic/early Bronze Age date.

SITE D ANNEXE, SITE G AND SITE H

While 34 artefacts were recovered from the excavation of site A, a further ten pieces came from the three other sites: two from site D annexe, seven from site G and one from site H.

These assemblages are too small to be able to identify the behaviours that led to their manufacture and deposition with any degree of certainty. At site G, however, there was a high proportion of retouched pieces, four out of the seven artefacts recovered. Given that site G is of probable medieval date, it is likely that these artefacts are residual and relate to previous phases of activity at that location. It is considered highly unlikely that these artefacts were manufactured during the medieval period, as they are indicative of a general Neolithic/early Bronze Age date, especially the notched flake (05E0539:153), the side scraper (05E0539:154) and the retouched flake (05E0539:17:23). The arrowhead, although incomplete, may be a fragment of a barbed-and-tanged arrowhead, in which case it is indicative of a more specific early Bronze Age date (Zvelebil *et al.* 1987, Green and Zvelebil 1990; Peterson 1990). The plano-convex knife from site D annexe (05E0949:41 1) is a fine example of its type but with a notch at the bottom of its left side. Woodman states that the elongated form of this tool may have been present as early as the earlier Neolithic, often with a slight tang (Woodman 1994, 217), but this form was used into the early Bronze Age and is a frequent find in pit and cist burials (Waddell 1985, 22).

Conclusion

The additional diagnostics are not incompatible with an early Bronze Age date for the prehistoric activity on the site. Indeed, the arrowhead fragment and the plano-convex knife are potentially the best indicators of a chronological link between the activity at site A and the other sites. The lithics from site D annexe, site G and site H may be related to the activity at site A and possibly represent further small-scale activities carried out in the wider landscape around the features on the site.

CATALOGUE

All pieces were measured and weighed, and a standardised objective colour determination was made using Munsell Soil

Colour Charts. Maximum length, breadth and thickness dimensions were recorded in millimetres, as was weight in grams. Platform length and platform width were also recorded in millimetres for prepared platforms, where such were present.

Site A

05E0303 4.1 An incomplete utilised tertiary flint flake. The proximal end is missing. The platform is missing and soft hammer percussion was used. The flint is strong brown, it is also opaque. The flake has a hinge termination and there is wear visible along the distal edge.

L 13mm. W 24mm. T 2mm. Wt 2g.

Munsell no. 7.5YR 5/8.

05E0303 8.1 An incomplete utilised tertiary flint bladelet. The distal end is missing. The piece has a heavy white all-over patina. A punch platform was used to detach the piece and soft hammer percussion was used. The flint is opaque and colour is not discernible, but small inclusions are visible. There is wear visible especially on the left-hand side.

L 25mm. W 8mm. T 3mm. Wt 1g.

Munsell no. not discernible.

05E0303 12.1 An incomplete tertiary flint classic hollow scraper. The proximal end, right-hand side and distal tip are missing. The piece has a heavy white all-over patina. The platform is missing and it is unclear what percussion was used. The piece was retouched along the right-hand side of the distal end and has very fine steep abrupt retouch on the dorsal face; the diameter of the hollow (present) is 18mm, the depth is 5mm. The flint is opaque and the colour is not discernible.

L 29mm. W 25mm. T 3mm. Wt 2g.

Munsell no. not discernible.

05E0303 15.1 A complete retouched tertiary flint notched flake. The piece has a mottled yellowish brown patina. A prepared platform was used to detach the piece and soft hammer percussion was used. The piece has steep abrupt retouch along the right-hand side on the ventral face forming the notch. The flint is opaque, the colour is brownish yellow and there is one large inclusion on the left-hand side. The flake has a steep feather termination and there is evidence of utilisation along the distal edge.

L 28mm. W 30mm. T 6mm. Wt 5g.

Plat. L 8mm. Plat. W 1mm.

Munsell no. 10YR 6/8.

05E0303 17.1 An incomplete unutilised tertiary flint flake. The distal end is missing. The piece has a cream patina. A prepared platform was used to detach the piece and soft hammer percussion was used. The flint is opaque and the colour is not discernible. The flake has a feather termination and there is a small notch on the dorsal side of the platform.

L 21mm. W 18mm. T 4mm. Wt 2g.

Plat. L 10mm. Plat. W 4mm.

Munsell no. not discernible.

05E0303 19.1 An incomplete utilised tertiary flint flake. The distal end is missing. A prepared platform was used to detach the piece and soft hammer percussion was used. The flint is transparent and strong brown in colour. There is wear visible along one edge. This may be a double ventral flake struck using the bipolar technique.

L 23mm. W 14mm. T 2mm. Wt 2g.

Plat. L 7mm. Plat. W 2mm.

Munsell no. 7.5YR 5/8.

05E0303 19.2 An incomplete retouched tertiary flint flake. The distal end is missing. The piece has a heavy strong brown pre-break patina. A prepared platform was used to detach the piece and soft hammer percussion was used. The piece has fine abrupt retouch along the left-hand side on the dorsal face. The flint is opaque and the colour is not discernible because of the patination.

L 22mm. W 17mm. T 4mm. Wt 2g.

Munsell no. not discernible.

05E0303 19.3 An incomplete retouched secondary flint blade. The distal end is missing. A prepared platform was used to detach the piece and soft hammer percussion was used. The piece was invasively retouched along the left-hand side on the ventral face. The flint is transparent and yellowish brown in colour. The cortex is smooth and greyish brown in colour and is <1mm thick. Some utilisation is visible on both edges and the distal tip appears to have been deliberately removed by a transverse blow from the left-hand side.

L 45mm. W 22mm. T 9mm. Wt 10g.

Plat. L 12mm. Plat. W 8mm.

Munsell no. 10YR 5/6.

05E0303 25.1 A complete unutilised secondary flint bipolar splinter. The flint is opaque and strong brown in colour. The cortex is smooth and greyish brown and is <1mm thick.

L 29mm. W 10mm. T 6mm. Wt 3g.

Munsell no. 7.5YR 5/8.

05E0303 26.1 A complete utilised secondary flint flake. The piece has a heavy mottled cream patina. A prepared platform was used to detach the piece and soft hammer percussion was used. The flint is opaque and the colour is not discernible because of the degree of patination. The cortex is gritty and greyish brown in colour and is <1mm thick.

L 19mm. W 20mm. T 4mm. Wt 3g.

Plat. L 14mm. Plat. W 4mm.

Munsell no. not discernible.

05E0303 26.2. A complete utilised tertiary flint flake. The piece has a brown patina, heavier on one dorsal facet, indicating the reworking of a previously knapped piece. The platform is reworked and soft hammer percussion was used. The flint is opaque and olive yellow in colour. It has a feather termination and there is slight wear visible on all edges.

L 18mm. W 21mm. T 6mm. Wt 3g.

Munsell no. 2.5Y 6/6.

05E0303 26.3 A complete unutilised tertiary flint flake. A punch platform was used to detach the piece and soft hammer percussion was used. The flint is transparent and is brownish yellow in colour. It has a feather termination.

L 12mm. W 9mm. T 3mm. Wt 2g.

Munsell no. 10YR 6/6.

05E0303 26.4. An incomplete unutilised primary flint flake. The proximal end and left-hand side are missing. The piece has a heavy cream patina. The platform is missing and it is unclear what percussion was used. The flint is opaque and the colour is not discernible because of the degree of patination. The cortex is smooth and grey, 1–2mm thick. The flake has a feather termination.

L 18mm. W 16mm. T 5mm. Wt 2g.

Munsell no. not discernible.

05E0303 26.5 An incomplete, possibly utilised tertiary flint flake. The platform is missing. The flint is transparent and strong brown in colour. The piece is a fragment only.

L 27mm. W 14mm. T 3mm. Wt 2g.

Munsell no. 7.5YR 5/6.

05E0303 26.6. An incomplete unutilised tertiary flint flake. Both proximal and distal ends are missing. The piece has a heavy cream patina. The platform is missing and it is unclear what percussion was used. The flint is opaque and the colour is not discernible because of patination.

L 10mm. W 11mm. T 3mm. Wt 2g.

Munsell no. not discernible.

05E0303 26.7 A complete tertiary flint single-platform core. The flint is opaque and strong brown in colour with very small inclusions. The core was formed on a flake and it has two clear negative scars.

L 21mm. W 18mm. T 11mm. Wt 4g.

Munsell no. 7.5YR 5/6.

05E0303 64.1 A complete retouched tertiary flint round scraper. The platform is reworked and soft hammer percussion was used. There is both invasive and abrupt retouch along all edges on the dorsal face. The flint is opaque and yellowish brown in colour. There is evidence of heavy utilisation on all edges.

L 28mm. W 24mm. T 7mm. Wt 7g.

Munsell no. 10YR 5/6.

05E0303 64.2 An incomplete unutilised burned tertiary flint chip. The flint is opaque and the colour is not discernible.

L 11mm. W 7mm. T 2mm. Wt 1g.

Munsell no. not discernible.

Site A topsoil

05E0303 5. An incomplete retouched tertiary flint flake. The distal end is missing. The piece has a heavy cream patina along facets on the left side of the dorsal, very light on others while the surface of the break is unpatinated. A faceted platform was used to detach the piece and soft hammer percussion was used. The piece has steep abrupt retouch along the left-hand side on the dorsal face. The flint is opaque and light grey.

L 18mm. W 17mm. T 9mm. Wt 5g.

Plat. L 13mm. Plat. W 4mm.

Munsell no. 2.5Y 7/2.

05E0303 6. A complete utilised secondary flint flake. The piece has a milky white patina. The platform is reworked and it is unclear what percussion was used. The flint is opaque and light olive brown. The cortex is very smooth and cream, <1mm thick. The piece is heavily rolled and has a markedly different appearance to all other pieces in the assemblage.

L 39mm. W 38mm. T 13mm. Wt 21g.

Munsell no. 2.5Y 5/3.

05E0303 7. An incomplete unutilised primary flint flake. The distal end is missing. The platform is cortical/crushed and soft hammer percussion was used to detach the piece. The flint is opaque and yellow in colour. The cortex is very smooth and cream and is <1mm thick.

L 31mm. W 27mm. T 4mm. Wt 4g.

Munsell no. 10YR 7/6.

05E0303 8. An incomplete utilised primary flint split pebble. The tops of both left- and right-hand sides are missing. The piece has a yellowish brown patina. The flint is opaque and the colour is not discernible because of the degree of patination. The cortex is smooth and greyish brown, 1–2mm thick. There is utilisation/retouch visible along the break edges.

L 33mm. W 24mm. T 12mm. Wt 9g.

Munsell no. not discernible.

05E0303 9 A complete unutilised tertiary flint flake. The piece has a heavy cream patina on the platform only. The platform is prepared and soft hammer percussion was used. The flint is transparent and strong brown in colour. The flake has a feather termination.

L 10mm. W 17mm. T 3mm. Wt 2g.

Munsell no. 7.5YR 5/8.

05E0303 10. An incomplete retouched tertiary flint flake. Both proximal and distal ends are missing. The platform is missing and soft hammer percussion was used. The piece has steep abrupt retouch along the right-hand side on the dorsal face, with some less systematic retouch also along the right-hand side but on the ventral face. The flint is transparent and light yellowish brown. There is wear visible on both the left- and right-hand sides.

L 17mm. W 19mm. T 3mm. Wt 2g.

Munsell no. 2.5Y 6/4.

05E0303 11 An incomplete utilised tertiary flint flake. The left- and right-hand sides and the distal end are missing. The platform is incomplete and the percussion used is unclear. The flint is transparent and yellowish brown. There is some evidence of utilisation along the break edges.

L 29mm. W 16mm. T 8mm. Wt 4g.

Munsell no. 10YR 5/6.

05E0303 12. A complete utilised secondary flint flake. The piece has a cream patina. A prepared platform was used to detach the piece and soft hammer percussion was used. The flint is opaque and strong brown in colour with small inclusions. The cortex is smooth and greyish brown and <1mm thick. There is wear visible along the right-hand side.

L 33mm. W 25mm. T 8mm. Wt 7g.

Plat. L 8mm. Plat. W 2mm.

Munsell no. 7.5YR 5/8.

05E0303 13 A complete utilised secondary flint bipolar flake. The platform is crushed. The flint is transparent and brownish yellow. The cortex is smooth and greyish brown, 1–2mm thick.

L 26mm. W 15mm. T 5mm. Wt 3g.

Munsell no. 10YR 6/8.

05E0303 14. A complete retouched tertiary flint flake. The platform is characterised by the presence of a large inclusion and could not be conventionally categorised but soft hammer percussion was used. The piece has fine invasive retouch all along the distal edge on the dorsal face. The flint is transparent and greyish brown. The flake has a feather termination.

L 19mm. W 33mm. T 11mm. Wt 6g.

Munsell no. 10YR 5/2.

05E0303 15 An incomplete utilised secondary flint flake. The proximal end has been removed, possibly deliberately. The piece has a mottled cream patina. The platform is missing and soft hammer percussion was used. The flint is transparent and brownish yellow. The cortex is smooth and greyish brown and 1mm thick. It has a feather termination and there is wear visible along the distal and right-hand side.

L 29mm. W 19mm. T 4mm. Wt 3g.

Munsell no. 10YR 6/8.

05E0303 16. A complete retouched tertiary flint spokeshave. A prepared platform was used to detach the piece and soft hammer percussion was used. The piece has steep abrupt retouch forming two concavities on the left-hand side on the ventral face and very fine retouch along the right-hand side on the dorsal face. The flint is very transparent and pale yellow.

L 30mm. W 13mm. T 3mm. Wt 2g.

Plat. L 6mm. Plat. W 1mm.

Munsell no. 2.5Y 7/4.

Topsoil, grid C

05E0303 1 A complete retouched primary flint thumbnail scraper. A cortical platform was used to detach the piece and soft hammer percussion was used. The piece has steep abrupt retouch along the distal on the dorsal face. The flint is opaque and strong brown. The cortex is very smooth and yellowish brown, <1mm thick.

L 23mm. W 20mm. T 7mm. Wt 4g.

Munsell no. 7.5YR 5/8.

05E0303 2 An incomplete retouched burned tertiary flint concave scraper. The right side of the distal end is missing. A prepared platform was used to detach the piece and soft hammer percussion was used. There is steep abrupt retouch along the left-hand side of the distal and on the dorsal face. The flint is opaque and the colour is not discernible because of the burning. There is evidence of heavy utilisation along the

left side.

L 18mm. W 18mm. T 5mm. Wt 2g.

Plat. L 9mm. Plat. W 4mm.

Munsell no. not discernible.

05E0303.3 An incomplete retouched tertiary flint flake. The left-hand side and the distal end are missing. The platform is incomplete and soft hammer percussion was used. There is steep abrupt retouch along the distal break on the dorsal face. The flint is transparent and yellowish brown with small inclusions. It has a hinge termination and the breaks are reworked, utilisation is visible along the right-hand side.

L 20mm. W 31mm. T 8mm. Wt 6g.

Munsell no. 10YR 5/8.

05E0303.4 A complete unutilised primary flint split pebble. A cortical platform was used to detach the piece and soft hammer percussion was used. The flint is opaque and very pale brown. The cortex is smooth and cream and 1mm thick. There is one large negative scar present.

L 49mm. W 34mm. T 24mm. Wt 47g.

Munsell no. 10YR 7/4.

Site D annexe

05E0949.2 1 A complete utilised tertiary flint flake. The piece has a light cream patina, with deeper yellowish brown patination on one dorsal facet. A prepared platform was used to detach the piece and soft hammer percussion was used. The flint is opaque and light brownish grey. It has a feather termination and there is wear visible on both edges, quite heavy on the right-hand side, where there are chips missing.

L 25mm. W 13mm. T 4mm. Wt 2g.

Plat. L 4mm. Plat. W 1mm.

Munsell no. 10YR 6/2.

05E0949.41 1 An incomplete retouched tertiary flint plano-convex knife. The distal end is missing. The platform is reworked and soft hammer percussion was used. The piece has invasive retouch along all edges on the dorsal face. The flint is transparent and light yellowish brown. It is quite a narrow piece, well worked. There is wear visible along both edges and there is a notch at the bottom of the left side.

L 46mm. W 15mm. T 5mm. Wt 6g.

Munsell no. 10YR 6/4.

Site G

05E0539 3 57 An incomplete utilised secondary flint bipolar flake. The proximal end is missing. The platform is crushed. The flint is opaque and brownish yellow. The cortex is

textured and mottled cream/brown in colour, 1mm thick. There is heavy wear visible on the right side.

L 29mm. W 15mm. T 5mm. Wt 4g.

Munsell no. 10YR 6/8.

05E0539 31 21 An incomplete retouched tertiary flint arrowhead. Only the tip of the piece is present. The piece has a strong brown pre-break patina. The platform is missing/reworked and it is unclear what percussion was used. The piece has bifacial invasive retouch. The flint is opaque and yellow. Because of the breakage it is not possible to say what type of arrowhead is represented but it may be barbed and tanged, given the splay of the tip.

L 16mm. W 13mm. T 3mm. Wt 3g.

Munsell no.: 2.5Y 7/6.

05E0539 17 22 A complete unutilised burned tertiary flint trimming flake. A punch platform was used to detach the piece and soft hammer percussion was used. The flint is opaque and white. There is some evidence of pot-lid fracturing.

L 7mm. W 6mm. T 2mm. Wt 1g.

Munsell no. n/a.

05E0539.17.23 An incomplete retouched tertiary flint flake. The left-hand side and the distal end are missing. The platform is reworked and soft hammer percussion was used. The piece has very fine abrupt retouch along the distal and the top of the right side on the dorsal face. The flint is opaque and strong brown. It is possibly a double ventral flake and there is pot-lid fracturing on one side.

L 23mm. W 22mm. T 3mm. Wt 3g.

Munsell no. 7.5YR 4/6.

Site G, grid 3

05E0539 152 An incomplete burned tertiary flint flake fragment. Both proximal and distal ends are missing, as well as the right-hand side. The platform is missing and it is unclear what percussion was used. The flint is opaque and reddish brown.

L 15mm. W 25mm. T 9mm. Wt 5g.

Munsell no. 2.5YR 5/3.

05E0539.153 A complete notched secondary flint flake. The piece has a light white pre-retouch patina. A prepared platform was used to detach the piece and soft hammer percussion was used. The piece has steep abrupt retouch along the distal on the ventral face. The flint is opaque and light yellowish brown. The cortex is smooth and light brown, <1mm thick. It has a feather termination.

L 24mm. W 19mm. T 5mm. Wt 3g.
Plat. L 5mm. Plat. W 2mm.
Munsell no. 10YR 6/4.

05E0539-154. A complete retouched primary flint side scraper. A cortical/punch platform was used to detach the piece and soft hammer percussion was used. The piece has steep abrupt retouch along the length of the left side and the distal end on the dorsal, and there is some abrupt retouch in the middle of the right side on the ventral face. The flint is opaque and light olive brown. The cortex is smooth and strong brown, 1–2mm thick.

L 24mm. W 17mm. T 3mm. Wt 3g.
Munsell no. 2.5Y 5/3.

Site H

05E415-47 1 A complete utilised tertiary bipolar flint flake. The platform is crushed. The flint is opaque and strong brown. L 26mm. W 14mm. T 4mm. Wt 2g.

Munsell no. 7.5YR 5/8.