An Archaeological Resource Assessment of The Neolithic and Bronze Age in Nottinghamshire

Mike Bishop, Principal Archaeological Officer, Environment Department, Nottinghamshire County Council.

Note: For copyright reasons the figures are currently omitted from the web version of this paper. It is hoped to include them in future versions.

1. Currently, there are 710 records on the Nottinghamshire Sites and Monuments Record (SMR) which are relevant to the Neolithic and Bronze Age. 236 records refer to remains or finds which have been categorised as Neolithic while 253 refer to the Bronze Age. A further 221 records include Neolithic and/or Bronze Age under the description of Prehistoric.

2. These records principally refer to cropmarks and finds. The only upstanding remains are a henge monument at Gunthorpe [1] and some of the 6 earthworks included amongst the 24 and 14 sites which are respectively categorised as round mounds and round barrows. Evidence about landscape comes primarily from palaeoenvironmental data within deposits in river channels and alluvium which ranges from pollen to the trunks of forest oaks. These deposits also produce metal and other objects, and human remains, which may variously derive from ritual deposition or the erosion of river bank sites. Structural remains, such as burnt mounds, pits and ditches have been discovered within or beneath alluvium during development led investigations

3. Until the advent of aerial reconnaisance the only research material was finds. Then came recognition from aerial photographs of palimpsests of remains of all dates, in which the settlements and field systems of the Iron Age and Roman periods predominate. Neolithic and Bronze Age funerary and ritual monuments have been recognised amongst these. However, because of a lack of detailed analysis of these cropmarks, anything else which might belong to early prehistory is masked within a plethora of features. The aptitude of the Trent Valley and, after 1974, the Sherwood Sandstones to produce cropmarks inevitably focussed attention on these areas and it is here that most work has been done.

4. It is necessary to remind ourselves that this inevitable concentration, on the Trent Valley in particular, can give a false perspective. "Tumuli" marked on historical maps and a few records of antiquiarian diggings into barrows show that the distribution of early prehistoric monuments was once much greater. More revealing is the distribution of all records of Neolithic and Bronze Age material, which includes findspots. These are numerous and widespread, demonstrating considerable levels of activity in other regions of the county. Indeed the heavy concentrations in some localities outside the Trent Valley, such as along the limestone margins of the Meden Valley and on the clays at Westwood Farm, Tuxford, which are the product of locally intensive fieldwalking, suggest that there is much yet to be discovered.

5 Before PPG16, studies in the Neolithic and Bronze Age involved the collection of material brought to the surface by the plough or from gravel extraction, with some limited salvage excavation of features exposed in quarrying, Formal excavation was limited to a number of ritual or funerary monuments appearing as cropmarks and threatened by gravel extraction, and to a few sites identified from surface collections of flintwork. With a few notable exceptions, such as the campaign by the Sherwood Archaeological Society above the Meden Valley [2], or the programme carried through by the Trent and Peak Archaeological Trust on the Roman landscape revealed by cropmarks on the Sherwood Sandstones, little fieldwalking took place. That which was carried

out was mostly unstructured or was targeted on particular sites known to be productive, like Westwood Farm, Tuxford [3], or Scratta Wood, Worksop [4]. Studies of flint collections were limited to major collections or the identification of diagnostic tool types.

6. With PPG16 it has become possible to build upon this base. With the justification which SMR provides, by demonstrating the potential or probable presence of Neolithic and Bronze Age remains, some level of search for these is a standard component of site investigations. Fieldwalking is normal in evaluation, followed by geophysical survey and excavation where productive, or is incorporated, where appropriate, in the design and costing of mitigation work. Any site where early prehistoric remains may be likely will be covered by at least a watching brief. Searching for, identifying and collecting palaeoenvironmental data is a standard component of both evaluations and the larger scale excavations which may follow, and in recent years has contributed as much as all other work to the general understanding of the Neolithic and Bronze Age in Nottinghamshire.

7. In addition, Nottinghamshire County Council has been supporting research which will provide new data which will enhance our understanding of these periods and assist resource management. On one hand, this has involved securing added value from developer funded work, for example by funding palaeoenvironmental work in Girton Quarry, and by funding the excavation of a burnt mound, at Waycar Pasture, also in Girton Quarry, and of a deposit containing human and animal remains dating to c.2100 BC, which built up behind a log jam in a palaeochannel in Langford quarry [5]. On the other hand, it has involved commissioning work, sometimes in partnership, which, although not targeted specifically on these periods, includes the Neolithic and Bronze Age. An example of this is the Trent Valley Survey which produced the report "Archaeology and Alluvium" [6]. Expanding on this, the County Council has gone on to fund the plotting of river meanders and alluvial deposits in Nottinghamshire from aerial photographs, and is working with the Trent and Peak Archaeological Trust on an English Heritage sponsored pilot approach to enhance the methodology of the Trent Valley Survey in Nottinghamshire, with a view to extending it all the way upstream. More locally the County Council has funded a 5 year programme of fieldwalking in the designated Area of Major Archaeological Resource at South Muskham, which covers the densest complex of cropmarks in the Trent Valley [7]. This project had the specific objective of developing research into this area, and has recorded extensive scatters of flintwork which appear to respect potential palaeochannels and alluvial deposits. This relationship, that of the flintwork to elements of the cropmark complex, and the significance of the scatters as representing sites, will be amongst the targets of further work. Finally, the County Council has commissioned a fieldwalking project on the Mercia Mudstones to begin addressing the absence of data there.

8. Despite the numbers of records in the SMR, with this history of study our picture of the Neolithic and Bronze Age is patchy and constrained. There are many factors which limit the recognition of sites, the recovery of data, and the analysis and interpretation of these periods. These include the lack of field walking already mentioned, the lack of cropmark development and of survey on the clays which underlie substantial tracts of the County, the inherited inadequacy of typological descriptions of material coming from surface collections and cropmark sites, a certain lack of reporting of more recent research and discoveries, principally of objects, to the SMR, past losses and limitations on work within development sites, and the acidic nature of the gravels in the Trent Valley which usually destroys or degrades bone and results in a dearth of direct economic and social data.

9. As elsewhere in England, the most readily recognizable sites across the County are funerary or ritual in character. There are 21 sub-rectangular "long" enclosures which might be classed as Neolithic mortuary enclosures or long burial mounds, approximately 104 circular enclosures or ring ditches which we may expect to represent burial mounds or ritual enclosures, 2 henges, 4 hengi-form circles and 1 timber circle, 1 Middle Bronze Age cremation cemetery at Conygre Farm, Hoveringham [8], and 2 hoards of the Late Bronze Age. These form the core of our known resource, to which we may add timber piles and a log-boat which were possibly associated with

Bronze Age metalwork at Clifton, near Nottingham [9] and numbers of Bronze Age metalwork, most coming from dredging or bank side erosion along the River Trent. Recently Langford Quarry has produced an Middle Bronze Age rapier [10], 2 spearheads and 3 palstaves from redeposited river gravels or deposits within palaeochannels, A further addition must be a proportion of the human remains coming from similar situations. Some, perhaps many, of these originate in ritual or funerary deposition in the river, or in river side burials eroded out from the bank. However, the late 2nd millennium human and animal remains, predominantly skulls, in the Langford log-jam, have been interpreted as indicating other forms of funerary activity, such as excarnation.

10. Of the cropmark monuments, some 7 ring ditches have been excavated and show that this class of site can cover a number of different dates and functions. Those at Cromwell, Fiskerton, Shelford, and Clifton, have been described as barrows [11]. Recent evaluation of a ring ditch, one of a number at Sandy Lane, Holme Pierrepont, produced Early Bronze Age cremations in urns [12]. By constrast excavations in 1985/6 of a another ring ditch at Holme Pierrepont, at Great Briggs [13], and of a further one in 1998 in Hoveringham Quarry uncovered deposits of Neolithic pottery and stone tools in the ditch fills and no burials..

11. Structural remains of domestic or settlement character, are rare and fragmentary, and not usually identified until earth moving begins. Preservation such as that at the Old Rectory, Stanton on the Wolds [14], is most unusual. Here Neolithic flintwork, animal bone and a hearth were found stratified within a circular saucer shaped depression 24' in diameter and over 4' deep, which has been interpreted as a hut. Study of the flints indicated a specialised industry with a few pebbles, only 2 cores, and very few primary flakes, together with a rarity of recognisable tool types. The distribution of finds within the depression appeared to suggest foci for different activities, which included food preparation or bone working, graphically illustrated by a flint tool claimed as a "marrow extractor" which was embedded in a piece of ox femur. Sheep, pig, cattle and dog were all apparently represented by the bone in the site, all stated as being from domesticated animals.

12. Excavated between 1938 and 1940, Stanton on the Wolds is a site which if found today might be expected to attract attention and resources for the quality of preservation and level of information presented. In contrast, settlement remains, as usually encountered, are limited to dispersed or isolated individual features, or groups of features, uncovered in investigations of funerary or ritual sites, or of sites of a later date, and in watching brief exercises designed as "safety-nets" to capture low order data or to identify specific targets for emergency treatment. An example of the former would be the 3 pits and a ring ditch producing fragments of Bronze Age pottery and flints encountered in excavating Iron Age settlements at Holme Pierrepont [15]. At Sandy Lane, Holme Pierrepont, mentioned above, the ring ditches were the primary trigger for investigation, but scattered pits, postholes, and pottery were uncovered distributed around and between them. Examples of the product from watching brief exercises are the Waycar Pasture burnt mound and adjacent, but not contiguous, settlement remains, and the isolated Late Bronze Age/Early Iron Age midden, all of which have been recorded beneath alluvium at Girton Quarry, and the burnt mound at Holme Dyke, Gonalston [16] recorded in an extension to Hoveringham Quarry. Such burnt mounds are fast becoming the most frequently recognised "domestic" type of site. The first in the region was Waycar Pasture [17],discovered in 1992; this was followed by another at Pig Pens, Tiln [18] ; 4 at East Carr, Mattersey [19] ;Holme Dyke, Gonalston; and finally, a probable example in South Muskham. However, there is the hope that we may soon be able to speak of a more substantial site, for a cropmark enclosure in Hoveringham Quarry is due to be excavated in 1999. Bronze Age pottery was found in a ditch and a post hole within this enclosure during evaluation suggesting a domestic dimension, despite the presence of a large circular feature which could be ritual in origin.

13. The principal evidence for settlement consists of material culture. However, pottery is relatively rare outside of funerary or ritual sites. The largest collections of Neolithic pottery come from the ring ditches at Great Briggs, Hole Pierrepont, and Holme Dyke, Gonalston. Most pottery finds, of sherds or of vessels, come from field walking or are otherwise unstratified or poorly preserved, such as the Beaker from Clumber [20]. Bronze Age pottery seems to be more frequently recognised,

perhaps because of some enduring occupation of localities into the Iron Age when settlement becomes recognisable in cropmarks, but is usually fragmentary and again is more often than not without any secure context. The best preserved material and contexts are from burial sites such as the Middle Bronze Age cremation cemetery at Conygrey Farm, Hoveringham or the Early Bronze Age cremations within ring ditches at Sandy Lane, at Holme Pierrepont, already mentioned.

14. From the Bronze Age we have metalwork, from some 103 findspots, but these lack any structural contexts. There have been occasional finds of wooden objects or structural fragments from river deposits in the Trent Valley. The portion of withy basket work amongst the bones in the Langford log-jam is rare in having a context. More usual are wooden stakes and other pieces of timber, some exhibiting cut marks, which derive from the revetting of banks or other structures, washed away to be dumped in river deposits. An in-situ example of such a structure is the log and brush-wood platform projecting into a palaeochannel and associated with the Waycar Pasture burnt mound on the stream bank. The Trent has also produced a number of logboats; as the example from Clifton mentioned earlier suggests some may date to at least the Bronze Age. Apart from 3 deer antlers claimed to be picks, the only bone objects which appears in the record is a gouge, insecurely dated and without context from South Muskham [21]. This rarity may be attributed perhaps to the acidity of the Trent gravels and past limitations in recognition and recovery

15. The bulk of the material culture consists of Neolithic and Bronze Age flintwork or stone objects. Stone and flint tools, and debitage, coming from surface collection are widespread. As already mentioned, only in few places has this been collected in systematic fieldwalking, although now this is being somewhat amplified by fieldwalking in the assessment and evaluation of sites proposed for development. From this latter work there is an impression that, against a general background of a possibility, even likelihood, that such sites may be found anywhere, some areas may be more profitable than others. In the Trent Valley for example, a prior expectation that flint work will be present to some degree in any given area appears to be justified. The extent to which this perception is influenced by development demands and the size of the areas assessed has yet to be examined however.

16. Quite what is represented by these flint scatters and concentrations is a problem. That they can indicate the presence of structural remains is obvious; the Stanton on the Wolds site, for example, was located through the surface collection of flints. However excavation engendered from surface collections has been uncommon, and the results usually have been limited in terms of structural remains. Typical of this would be the excavations at Newton Cliffs, North Clifton, which produced a single pit of Neolithic or Early Bronze Age date from a site where the surface collection consisted of over 6,000 flints, numerous polished stone axe fragments and one sherd of Peterborough style pottery [22]. Structural remains to be associated with flints scatters identified in assessment and evaluation of development sites are also woefully few. This leaves an impression that either our expectations of the nature of the structures involved in Neolithic and Early Bronze Age settlement are over high, or that millennia of subsequent land use have so damaged sites of this date that virtually nothing survives below the plough soil.

17. Consequently, we are dependent upon the studies of the objects themselves, and their distribution within study areas and more generally, for some understanding of the activities represented. However, for the majority of collections or sites recorded in the SMR, there is no detailed analysis or study other than to flag certain tool types considered to be diagnostic of period. Of course, material coming from more recent work has been more closely studied, particularly in terms of the technologies of the flint industries represented. Necessary and essential as this is, such work is rarely, perhaps can not be, developed into statements about functions and activities related to space or economy.

18. By contrast, the last 9 years have seen a growth in palaeoenviromental data. This has resulted from a consistently applied approach to the identification and recovery of such information in developer funded evaluations and major excavation. Consequently, the number of pollen diagrams available has at least doubled. From these, and the examination of other floral and fauna remains

in organic deposits, statements about land use in a number of locations are possible. Together with studies of the flood plain geomorphology at individual sites, and along the Trent Valley as a whole, these have permitted the drawing up of a general model of the development of the topography and landscape of the Trent Valley. This involves the anastomising of a braided river into a single channel, which may not have been tidal below Cromwell as it is today [23]. This was a river valley environment which was dynamic and changeable, sometimes violent, and increasingly affected by human activity, with the onset of alluvium deposition resulting from increasing agricultural clearance of woodland.

19. Some Neolithic and Bronze Age channels can be deduced from the distributions of dated tree trunks, as at Colwick [24] and Langford, or from other remains such as the human and animal bones in the log-jammed channel at Langford. Such data from the Trent and Idle Valleys show that early prehistoric remains may be expected within and beneath alluvium and that, in the Trent Valley at least, river movement and bank erosion and deposition has often been destructive of early sites. With studies currently in progress, it may be possible to identify zones in which such changes have been limited and to identify the circumstances in which high returns in data about the environment and human activity are most likely. So far, such palaeoenvironmental studies have been concentrated in the valleys of the Trent and Idle, for it is here that the opportunities have largely arisen. The resource to extend these studies does exist however, in the alluvial and colluvial deposits of the river valleys feeding into these more major rivers, in the colluvium in the hollows of the undulating Sherwood Sandstones and in the Gorges in the Magnesian Limestone such as Cresswell and Pleasley.

20. Drawing on both this palaeoenvironmental evidence and general models, it can be asserted that much of Nottinghamshire was covered in woodland at the opening of the Neolithic. Lime will have been a dominant species in this, particularly on the heavier soils, mixed with oak, elm and hazel on the claylands and with oak, pine and hazel dominating on the sandstone. On the floodplains of the major rivers birch, hazel, willow and alder were characteristic, although the massive oak trunks from palaeochannels in the Trent Valley show that there were areas of forest right down to the river banks. We have a good picture of this woodland at the end of the 2nd millennium BC, from a beetle fauna in the Langford log-jam. Foliage feeders and predators indicate a mature woodland, with the full range of ecological niches, involving a wide range of trees, oak, beech, lime, elm, ash, hazel and alder. Some grassland, suggested as having been in woodland glades, is also indicated by beetle species associated with grassland and exposed animal dung.

21. The story of the landscape from the Neolithic onwards is to be expected to be that of the clearance of this woodland for farming. The Elm decline, taken by some to represent the first impact of this, appears in Nottinghamshire pollen diagrams, although currently this is not independently dated. Nottinghamshire can also contribute its bit to the controversy over the cause of this phenomenon, with the pollen diagram from a palaeochannel at Collingham showing the presence of cultivated cereals just before the Elm decline [25] Rather than cultivation however, grazing will have had the greatest impact on the woodland. The domesticated sheep and cattle identified at Stanton on the Wolds and in Langford imply grazing, probably in both woodland and open grassland.

22. Cultivation and domesticated animals are automatically taken as the indicators of permanent settlement. This need not have been long term however, and the likelihood of seasonal movement, not least to find fresh grazing, must be high. It may be that this is one reason why structural remains of settlements are so lacking; they may have been light in construction because they were not to be needed for long. Such movement may also be a factor in the long distance contacts implied by the stone axes and "imported" flint and pottery in the material culture [26]. Seasonal movement is likely to have involved long distances, linking highland to lowland areas, but although this is often discussed, the evidence from Nottinghamshire alone can not yet sustain this argument.

23. On the other hand, it appears that some sites were favoured and, if not settled continuously, were returned to on a regular basis. This is suggested by the chronological range of the flintwork from fieldwalking on the limestone above the Meden Valley and the multiple recuttings of the Neolithic ring ditch at Great Briggs, Holme Pierrepont. While the cycle and social mechanisms of these returns can only be guessed at, being likely to involve both agricultural and ritual motives, such "anchoring" could have maintained and expanded local change in flora and fauna and in woodland clearance.

24. The association of the Neolithic with the first agriculturists should not blind us to the fact that until the 1st Millennium at least, woodland and game resources will have been abundant, despite modification by climate change and human use. Hunting and gathering will have continued to play a major part in the economy. Arrowheads appearing in flint collections probably testify to this, as may the scrapers which, amongst other things, will have served for the cleaning of the pelts of hunted animals equally as well as for the skins of domesticated ones, or for the processing of wood and other vegetal materials. Stone axes, which are widely distributed, must also be relevant to the use of woodland resources. The presence of several skulls of *Aurochs*, a wild woodland beast, amongst the human and domestic animal bones in the Langford log jam might suggest hunting. Perhaps we may attribute at least a proportion of the wide spread of flint scatter sites to this hunting and gathering. In that proportion, we must expect to see traditions of hunting patterns, which could explain the chronological range of the material at some locations, and sites of different function, such as kill, food processing, flint knapping, materials processing, as in the models current for the Palaeolithic and Mesolithic.

25. By the Bronze Age, there is an impression of increasing permanence of settlement and therefore woodland clearance, in at least the Trent Valley. While the examples of Great Briggs and Gonalston must remind us that some of the ring ditches in the Trent Valley are Neolithic, most of these may be attributed to the Bronze Age. Here too, is our single example of a Middle Bronze Age, Deverel-Rimbury cemetery, at Conygrey Farm, Hoveringham, and it is from the Trent Valley that the majority of our Bronze Age metalwork comes. The funerary and religious connotations of most of these sites and finds lead us to consider them as components of a " ritual landscape", and indeed the concentrations of ring ditches in particular places may appear to reinforce this concept. However behind these concentrations lies a more diffuse and general scatter of such sites implying that funerary or religious monuments were not necessarily separated from fields and settlement in the landscape. Indeed very much the contrary may be suggested by the traces of settlement adjacent to Early Bronze Age funerary ring ditches uncovered in evaluation at Home Pierrepont.

26. However we may view the permanence of settlement, land use or, more correctly perhaps, the functional landscape, need not have conformed to models to be derived from later periods. First impressions from some of the wide area investigations carried out recently or in progress, are that activities were perhaps not concentrated together in the manner seen in later intensively used landscapes. Overall, where there is a range of sites, as in the Trent Valley, we may observe a scattering of funerary and ritual monuments, burnt mounds, and occasional individual pits, ditches and flint collections. At Gunthorpe, the henge monument appears to be a focus for a concentration of flint scatters and cropmark features, including pit alignments, over an area of some 3 or more square kilometres. Despite the example of Sandy Lane, Holme Pierrepont, direct spatial relationships between remains of different type and function are usually not apparent. Although this may be a result of a lack of study, it is also possible that it could be a structural reality, produced by a dispersal of functions and activities across individual territories or communities. This might give another explanation for the widespread distribution of flint scatters. Within narrower spatial and social constraints, such dispersal could be analogous to that suggested above in the context of hunting and gathering, with different activities, such as butchery, flint knapping, materials processing, being carried out at different locations.

27. In sum, I must repeat that the poverty and diversity of our data severely restricts the interpretation of the Neolithic and Bronze Age in Nottinghamshire. Currently, existing data, new discoveries and the observations and perspectives these may throw up, can only be set into a general story

drawn from the wider regional and national view. This story begins with an extensively wooded landscape with limited settlement and clearances for agriculture. By the 1st Millennium BC, three and a half thousand years later, our model is one of expanded clearance and modification of the flora and fauna in the woodland, resulting from a more agricultural based society with communities tied more closely to the land and to more confined territories, presumably within the context of rising population. Substantial woodland remained however, to be cleared in a final assault over the 1st millennium as settlement and population began an expansion which was rapid by earlier standards.

28. One factor in this expansion may have been movement of population from high land areas made untenable by climatic deterioration and decline of resources. However, evidence for this is lacking in Nottinghamshire. Finds of Late Bronze Age metalwork are no greater than those of Middle Bronze Age material. Settlement remains appear to be absent. This does not mean they did not exist; most likely is that Late Bronze Age settlement remains are present, unrecognised, amongst the cropmarks of Iron Age and Roman settlements and that distinctive material culture has yet to be recognised amongst that of these later settlements. In other words, it is in the Late Bronze Age that a new phase in settlement and landscape development opens. In terms of continuity of land use and of settlement form then, sites of this period, like the possibly Late Bronze Age midden at Girton, take their context from the settlements of later date rather than from those of the previous millennia.

29. From this overview, it is evident that the Neolithic and Bronze Age in Nottinghamshire needs closer attention and effort in research. The agenda is wide open, for we lack basic data and every scrap of information is valuable. The content of that agenda is the subject of another discussion, but it is clear that it must include fundamental information gathering to provide a body of information which will inform both academic research and site management.

References:

1. Gunthorpe Henge - SMR 01820a, SAM 29901

2. Phillips, P. and Guirr, H., 1984, "Stone Age Activity on the Hardwick-Pleasley Plateau of Nottinghamshire and Derbyshire", *Transactions of the Thoroton Society (TTS)*, vol 79, pp 132-135.
Sherwood Archaeological Society Fieldwalking reports, 1973/4, 1976, 1976/7, 1979/80, 1980/81.

3. Oswald, A., 1939, "Some Unrecorded Earthworks in Nottinghamshire", *TTS*, vol 43, pp 1-15.

4. *East Midlands Archaeological Bulletin (EMAB)*, 1959, vol 2, p 12;
EMAB, 1960, vol 3, p 9;
EMAB, 1961, vol 4, p 14;
EMAB, 1962, vol 5, pp 20-1.

5. Challis, K. (ed), 1997, "Fieldwork by Trent and Peak Archaeological Trust in Nottinghamshire, 1995-6", *TTS*, vol 101, p 22;
Garton, D., Howard, A. and Pearce, M., 1997, "Archaeological Investigations at Langford Quarry, Nottinghamshire1995-6", *Tarmac Papers*, vol 1, pp 29-40.

6. Knight, D. and Howard, A., 1994, *Archaeology and Alluvium in the Trent Valley, and archaeological assessment of the floodplain and gravel terraces*, Trent and Peak Archaeological Trust.

7. Garton, D., 1998, *The South Muskham Fieldwalking Project 1992-7*, Trent and Peak Archaeological Trust.

8. Bingham henge - SMR 01465, SAM 29902
Hengi-form - Normanton SMR 04176b, Lambley SMR 02047, South Muskham 02966, Barton in Fabis SMR 00436
Timber circle - East Stoke SMR 01438, SAM 29909

Cemetery - Coneygre Farm SMR 01614; Allen, C., Harman, M. and Wheeler, H., 1987, "Bronze Age Cremation Cemeteries in the East Midlands", *Proceedings of the Prehistoric Society*, vol 53, pp 187-221
Hoards - Newark SMR 03644; *Proceedings of the Prehistoric Society*, 1950, vol 16, p 186;
Nottingham SMR 02261, *Proceedings of the Society of Antiquaries*, 2nd Series vol 1, pp 332-2

9. Phillips, C. W., 1941, "Some Recent Finds from the River near Nottingham", *Antiquaries Journal*, vol 21, pp 133-43;
Thoroton Society Excavation Section, 1938, Annual Report 3, pp 19-23.

10. Knight, D., 1997, "A Middle Bronze Age Rapier from Langford, Nottinghamshire", *TTS*, vol 101, pp 59-61.

11. Cromwell SMR 04206b; Dauncey, K. D. M. and Hurrell, D. J., 1951, "The Excavation of a Round Barrow at Cromwell, Nottinghamshire", *TTS*, vol 55, pp 1-2.
Fiskerton SMR 03055; O'Brien, C., 1979, "The Excavation of a Ring Ditch at Fiskerton, Nottinghamshire", *TTS*, vol 83, pp 80-2.
Shelford SMR 01797c; Revill, S., 1974, "The Excavation of a Ring Ditch at Shelford, Nottinghamshire", *TTS*, vol 78, pp 7-12.
Clifton SMR 00419; Allen, C., Salisbury, H. and Sheppard, R., 1994, "A Bronze Age Burial Site at Clifton, Nottinghamshire", *TTS*, vol 98, pp 130-133.

12. Guilbert, G., 1999, "Archaeological Evaluation at Holme Pierrepont Quarry, Nottinghamshire", *Tarmac Papers* III, pp 15-24.

13. ibid
Elliott, L. and Knight, D., 1999 "A Prehistoric Burnt Mound in Hoveringham Quarry, Nottinghamshire", *Tarmac Papers* III, pp 45-55.

14. Bird, A. J. and Bird, K. M., 1972, "A Prehistoric Hut-floor at Stanton-on-the-Wolds, Nottinghamshire", *TTS*, vol 76, pp 4-12.

15. *EMAB* 1979-82, vol 13, p 20.

16. Elliot, L. and Knight, D., 1999, op cit.

17. Challis, K., 1997, op cit, pp 25-27 ;
Challis, K., 1998, "Fieldwork by Trent and Peak Archaeological Trust in Nottinghamshire, 1996-7", *TTS*, vol 102, pp 139-142.

18. *EMAB*, 1961, vol 4, p 13; *EMAB* 1962, vol 5, p 20

19. *EMAB*, 1974, vol 10, pp 43-44

20. Phillips, P., 1989, *Newton Cliffs*, pp 87-99, BAR.

21. Dinnin, A. and Brayshay, B, 1994, *Palaeoenvironmental evidence for the Holocene Development of the River Trent Floodplain at Bole Ings, Nottinghamshire*, ARCUS.

22. *EMAB*, 1978, vol 12, pp 41-2;
Salisbury, C. R., Whitley, C. D. and Fox, J.L., 1984, "Flandrian Courses of the River Trent at Colwick, Nottingham", *Mercian Geologist*, vol 9, no 4, pp 189-207.

23. Hunt, C. O., *Environmental Assessment, Cromwell Quarry Extension, Nottinghamshire*, Department of Geographical and Environmental Science, University of Huddersfield.

24. Garton. D., 1991, “Neolithic Settlement in the Peak District: Perspective and Prospects”, in Hodges. R., and Smith. K., (eds), *Recent Developments in the Archaeology of the Peak District*, Sheffield Archaeological Monographs, No.2, J.R.Collis Publications, Department of Archaeology and Prehistory, University of Sheffield.