OXFORD ARCHAEOLOGICAL RESOURCE ASSESSMENT 2011

NEOLITHIC TO BRONZE AGE

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Figures

Abbreviations

BP – Before Present ('present' is defined as 1950)
LAA- Oxford Local Authority Area
MIS – Marine Isotope Analysis
OHER – Oxford Historic Environment Record
UAD – Oxford Urban Archaeological Database (UAD Event No unless otherwise stated)
VCH i The Victoria History of the County of Oxford Volume 1, 1939, (ed L, F, Salzman)

Introduction

This assessment report summarises the Neolithic and Bronze Age evidence from the Oxford City Council Local Authority Area and forms part of the resource assessment stage of the Oxford Archaeological Plan. The aim of the report is to aid heritage asset management and inform field investigation and academic research.

The Oxford Resource Assessment is designed to compliment the county level resource assessment produced as part of the Solent Thames Research Frameworks (Hey 2006; Allen 2007). Because of the paucity of late Bronze Age material within the LAA, the Neolithic and Bronze Age information is considered together rather than divided in to Neolithic-Early Bronze Age and Later Prehistoric as in the County level assessments.

The assessment report draws upon the wider literature on the prehistory of the Upper Thames including The *Archaeology of the Oxford Region* monograph published in 1986 (Bradley1986; Case 1986), the paper produced on the Early Prehistory of the Oxford Region for the 1995 Tom Hassall Lecture (Barclay, Bradley, Hey and Lambrick 1996) and the discussion provided in the Centre for Gene Function excavation report (Boston *et al*. 2003). At a regional level overviews have been provided by the Solent Thames Research Frameworks (Bradley 2010; Lambrick 2010) and the *Thames Through Time* monograph series (Lambrick and Robinson 2009, Morgi *et al*. 2011). In addition the Oxfordshire Historic Environment Record (OHER) and the Oxford Urban Archaeological Database (UAD) have been consulted.

Chronology

Local environmental sequences have provided evidence for the climate during the Neolithic (Robinson and Lambrick 1984; Parker 2006; Robinson 2003) and radio carbon dating of material recovered from Neolithic-Bronze Age sites at Oxford has provided good evidence for an extended period of monument construction and utilisation spanning over two thousand years from the Middle Neolithic.

The 2009 excavation at the Radcliffe Infirmary in north Oxford produced evidence of significant activity from the Middle Neolithic period. Here radio carbon dating of bone and charcoal from the lower fill of a sub rectangular enclosure indicated a construction date of 3530-3600 cal BC for the charcoal (95% probability, SUERC-29156: 4680+-30BP)) and 3520-3360 cal BC for the bone (95% probability, SUERC-29158: 4660+-30BP), providing the earliest scientific dating for a monumental structure in the LAA (Braybrooke 2010: 16). Samples taken from the nearby henge monument discovered at St John's College in 2008, provided a radiocarbon date from an early soil horizon which probably formed after the sides of the ditch had stabilized sufficiently for a turf line to develop within it. A sample of carbon from a hearth sitting on this horizon dated to 2136-1948 cal BC (Probability 95.4%, KIA37660, 3660+-30BP) and a cow bone from within it dated to 2289-2129 cal BC (Probability 87.8%, KIA37661, 3770+-30 BP) representing the late Neolithic – Early Bronze Age transition (Wallis 2010: 9, 18).

In addition several Bronze Age funerary monuments have been archaeologically investigated in recent years, some of these have produced useful scientific dating. Four inhumations excavated at the University Science Area Gene Function Building indicated a lengthy focus of activity around a single barrow, with radio carbon dates spanning between 2460 – 1750 cal BC (Boston *et al*. 2003). A primary fill of a ring ditch enclosing the Neolithic enclosure at the Radcliffe Infirmary site returned a date of 1890-1690 cal BC (95% probability, SUERC-29157: 3460+-30BP). Whilst a cremation associated again with the same ring provided a date of 2030-1870 cal BC (95% probability, SUERC-29155: 3585+-30BP). An animal tooth from the later silting

of the same ring ditch provided a radiocarbon date of 780-500 cal BC (94% probability, 440-210 cal BC (1.4% probability, SUERC-29159: 2490+-30) indicating that by the Late Bronze Age- Early Iron Age the ditch had silted up (Braybrooke 2010: 15, 78). Elsewhere a possible domestic site at The Hamel to the west of the city on the 1st gravel terrace floodplain, has provided a radiocarbon date of 3470+/-80BP (1520 BC) placing it within the late Beaker period (Palmer 1980).

The following broad phases of activity can be suggested from the Oxford evidence:

- Initial limited tree clearance on the 2nd gravel terrace is thought to have been undertaken from the late Neolithic onwards (Robinson and Lambrick, 1984), but partial clearance in the Middle Neolithic is suggested by the Radcliffe Infirmary enclosure.
- The creation of a sub-rectangular enclosure in the middle of the 4th millennium BC at the Radcliffe Infirmary site on the Summertown Radley gravel terrace.
- Limited evidence for activity on the gravel terrace and Corallian ridge associated with Peterborough ware pottery (broadly 3400-2750 BC)
- Phased monumental building on the Summertown Radley gravel terrace including a large henge monument and extensive barrow cemeteries (broadly 2200-1600 BC).
- Evidence for late Beaker domestic activity on the edge of the flood plain at the Hamel (circa 1500 BC).
- Limited evidence for Late Bronze Age activity on the Corallian ridge including a Late Bronze Age urn at Iffley and a fragment of Deverell-Rimbury pottery from Minchery Farm, Littlemore (notably located away from the 2nd gravel terrace complex).
- Ritual/funerary complex activity on the 2nd gravel terrace ceases to be respected by the local population- date unknown but evidence for the silting up of ditches by the Late Bronze Age – Early Iron Age transition.

Key themes for the Neolithic and Bronze Age in Oxford

A number of themes can be identified as of particular interest in relation to these periods. See also f the Neolithic and Bronze Age Research Agenda for Oxford (2010).

- The emerging evidence from Oxford of an extensive ritual-funerary complex which developed over two millennia and can be compared with other known Upper Thames complexes.
- Emerging evidence for Mid or Late Neolithic ritual activity (e.g. the Radcliffe Infirmary enclosure) and activity related to Peterborough type ware across the LAA.
- The discovery of new evidence from the Thames floodplains since Holgate's study of Neolithic to Bronze Age settlement patterns in 1984 has indicated a more extensive settlement on areas previously considered largely unpopulated such the Corallian Ridge (Hey 2006: 10).
- The potential for environmental data to produce further data on changing hydrology, woodland clearance and agricultural practices.
- The Upper Thames is an important area for the study of the early use of Bronze.

- The identification of Late Bronze Age evidence presents a challenge for recording strategies. At present the Late Bronze Age material from the LAA comes from the higher ground to the south east of the city.

Nature of the evidence base

Around seventy records for Neolithic to Bronze Age or prehistoric evidence are recorded in the UAD/OHER of which at least thirty are findspots from the 19th-20th century (Appendix 1: Site Gazetteer). Isolated find spots or residual finds from archaeological investigations can contribute to an understanding of mobility and activity in the region but they should be treated with some caution, particularly isolated find spots from the 19th and early 20th centuries where incomplete evidence is a factor.

Key sites at Oxford

Evidence for a number of significant ritual/funerary and occupation sites have been recorded within the LAA.

Neolithic

- A Middle Neolithic enclosure was recorded at the Radcliffe Infirmary site (excavation).
- A large ditch and possible 'structured pit deposit' at the New Chemistry Laboratory site, South Parks Road was associated with Peterborough type ware.
- A poorly recorded but large concentration of Neolithic flints (476 objects) were recovered between 1897 -1910 by Alexander James Montgomrie Bell (1845 - 1920) from the Iffley area.

Late Neolithic/Early Bronze Age

- Part of a large henge has been excavated at Queen Elizabeth House (The Kendrew Quad), St John's, St Giles (excavation).

Barrows and ring ditches have been recorded at:

- Port Meadow *(primarily aerial photographic analysis and some antiquarian excavations).*
- University Parks and Science Area *(including several excavations and aerial photographic analysis).*
- Logic Lane (*excavation*).
- Sackler Library, Beaumont Street (*excavation*).
- 24 St Michaels Street (*excavation*).
- The Radcliffe Infirmary, Woodstock Road (*excavation*).

Possible Bronze Age occupation sites have also been excavated within the LAA

- Early Bronze Age- The Hamel (Excavation, Palmer 1980).
- Middle Bronze Age- Blackbird Leys (Excavation, Booth and Edgeley-Long 2003).
- Late Bronze Age-Early Iron Age Garsington Road (Excavation, Keevil, and Parsons 1995).

Landscape and settlement

The wider setting

In the early Neolithic the Upper Thames Valley was a heavily wooded landscape of mixed deciduous woodland, with alder growing in the valley bottoms and lime, oak, hazel, ash and elm on better-drained soils of the gravel terraces and higher slopes. There is evidence for cereal cultivation in the region from the earliest Neolithic period, with wheat and barley recorded, nevertheless the evidence is limited and cereal use appears to decline the middle Neolithic to the early Bronze Age when cereals are heavily outnumbered by evidence of wild food remains, principally hazelnut shells. Cereals begin to become more numerous in Beaker and early Bronze Age contexts. At present the evidence for bounded fields and more extensive agricultural production dates to the Middle-Late Bronze Age. Neolithic and EBA settlement is recognised mainly through flint scatters and occasional pit groups which sometimes include a few postholes. Settlement is also sometimes represented by middens and finds spreads. The evidence suggests short-term settlement by a mobile population. There are only four definite early Neolithic-early Bronze Age 'houses' recorded in Oxfordshire, all from Yarnton. By the late Bronze Age there is evidence for enclosed settlement and the establishment of defended hilltop sites suggested greater social stratification and periodic stress on social relations. There is evidence for interpersonal violence from early Neolithic and early Bronze Age contexts from Oxfordshire. Other examples of violence are known from these periods in Britain, however they are not common.

For a further summary of the wider context please refer to the County and Regional Resource Assessments (Hey 2006; Bradley 2010; Allen undated; Lambrick 2010).

Inheritance

Whilst the evidence does not allow us to say much about Mesolithic-Neolithic transition or continuity, there is some evidence for the continued utilisation of choice locations, for example at the former Oxford City Football Club Manor Ground site on the Corallian Ridge, here small numbers of Mesolithic and Neolithic flints were recovered along with more substantial evidence for subsequent Late Neolithic – Early Bronze Age, Iron age and Roman activity (Hart 2003).

Key characteristics of the landscape

The river courses at the end of the Mesolithic had stabilised from a complex system of small braiding channels that frequently shifted paths to a more simplistic series of major channels as their flow was decreased and increased sedimentation led to the silting up of the more complex channels. The lowering of the water table also allowed for the increased spread of woodland and vegetation (Robinson 2003).

Deposits of peat and tufa (formed through the development of waterlogged ground where the clays and limestone meet) can provide environmental evidence for climate change from the Neolithic to Bronze Age. In the Upper Thames Valley ongoing projects have identified deposits across the region providing environmental sequences from around 10,000 BP to the present (Parker and Anderson, Parker 1996; 1998; 2006; Day 1990; 1991).

The landscape at the start of the Neolithic was characterised by dense woodland across the valleys and slopes with only rare occurrences of woodland clearance primarily to the north of Oxford in the Cotswolds (Robinson and Lambrick 1984). Woodland clearance does not appear in the environmental record until the later Neolithic and it was not until the Bronze Age that significant areas of grassland were exposed for any length of time and not until the later Bronze Age that clearance had

been undertaken on a sufficient scale as to affect alluvial and hydrological processes (Hey 2006). Woodland species included alder and willow on the wetter soils of the floodplains and river corridors with oak, elm, lime and ash on the clays and gleyed soils and lime species on the well drained calcareous soils and limestones (Parker 2006).

The effects of woodland clearance can be seen in environmental sequences from a number of areas, for example at St Aldates (Robinson 2003). Here radiocarbon dating from peat deposits from a palaeo-channel at 33 St Aldates indicate that by the Neolithic it had likely dried up completely (Lambrick and Robinson 2009). However later increases in the local water table, probably as a result of localised woodland clearance, created a substantial area of shallow water around St Aldates by the Late Bronze Age - Early Iron Age transition. At Linacre College, St Aldates minerogenic silt clays and more organic deposits began to accumulate over the surface of the flood plain gravel at higher elevations, the organic deposits produced a radio carbon date of 1010-400 cal BC (HAR-209), (Dodd ed. 2003: 77 and Fig A2.1).

Oblique photographs of Port Meadow examined in the 1980s suggest that the Iron Age sites were on slightly higher ground surrounded by marshy areas (Lambrick 1981: 85; Lambrick 1982, 129). Lambrick has noted that environmental samples from Bronze Age features have demonstrated lower levels of archaeological preservation than those taken from Iron Age features (*ibid.*). This observation is supported by evidence from the Hamel (Palmer 1980) and at King's Weir, north of Port Meadow (Bowler and Robinson 1980).

One study modelling the stratigraphy and geo-archaeology of the Thames Valley from the Holocene period highlights the significance of palaeo-channels and the potential of the alluvial terraces to preserve significant archaeology (Clevis *et al*. 2004) The study examined the pattern of erosion and deposition in a single valley along the Upper Thames over a 2000 year period, suggesting a moderate channel bed aggradation rate of 0.25m during the Bronze Age (*ibid.*: 23). The model of channel formation over a period of 15000 years is a useful resource in identifying possible palaeo-channels and their approximate age.

Evidence for cultivation

The increasingly dry conditions during the Neolithic may have made the Oxford area unattractive for cereal cultivation. Subsequently an increase in the water table in the Late Bronze Age to Early Iron Age may have been advantageous to agricultural cultivation on the floodplains (Lambrick and Robinson 2009). As yet there is inconclusive evidence for early agriculture within the Oxford LAA. A pit at the New Chemistry Research Laboratory site produced a typical Neolithic assemblage with small quantities of cereal grain, but the presence of *Anthemis cotula* seeds indicates some Roman contamination of the sample. Also the spelt wheat recovered was more common in the late Bronze Age or Iron Age, emmer wheat being the major crop in southern Britain in the Neolithic (Challinor in Bradley *et al*. 2005: 178). Charred Plant remains from soil samples recovered from Early-Middle Bronze Age features excavated at Blackbird Leys produced a limited amount of wheat grain and a possible barley grain, but again there were concerns regarding contamination (Campbell 2003: 219). Possible Bronze Age ard or plough marks were recorded at the Hamel, but the dating evidence was limited and the marks are not conclusive for cultivation (Palmer 1980).

Environmental sampling at the Oxford Science Park site, Littlemore indicates that the removal of lime woodland in this area could have commenced in the Middle Bronze Age, whilst a pollen sequence from peat adjacent to Littlemore Brook recorded low levels of cereal pollen through most parts of the sequence correlating with the Bronze

Age to Saxon periods (Moore 2001; Parker and Anderson 1996). The Oxford Science Park data correlates with data from zone MF 4 from nearby Minchery Farm, Littlemore, which represented the major phase of woodland clearance, unfortunately this sequence has no radio carbon dating at this location. Samples taken from Sidlings Copse, some 5km from the Science Park, indicated a date of around 3500 BP for the lime decline (Day 1991).

A number of isolated ditches of Bronze Age date have been identified within the LAA at the New Chemistry Research Laboratory (Bradley and Charles 2005), Garsington Way (Keevill and Parsons, 1995), Windale First School, Blackbird Leys (Oxford Archaeological Unit 1995a) and Blackbird Leys housing development (Oxford Archaeological Unit 1995c) but none can be convincingly interpreted as either stock or field boundaries. The environmental data currently points to a land-use model for the Corallian ridge of localised pastoral farming with perhaps small scale arable activity by the Middle-Late Bronze Age.

The Yarnton Project (located just to the north of Oxford) recorded cereals dated from the 38th century cal BC and even charred bread from c 3630 - 3350 cal BC, so there is no doubt that cereals were being grown in the immediate area from the beginning of the Neolithic. We have free-threshing wheat from the end of the 4th millennium and spelt wheat from the middle Bronze Age. However at a regional level there is evidence that in the later in the Neolithic cereals became less important and gathered foods more so (Pers. Comm. G Hey; Morgi *et al*. 2011: 188-9).

Hunting, gathering and pastoralism.

Evidence for gathered wild foods such as hazelnuts during the Neolithic is common across the county, although it has also been suggested that hazelnuts could have been produced as a crop (Francis Pryor cited in Hey 2006). A pit at the New Chemistry Research Laboratory site contained hazelnut remains (Bradley 2005)

There is limited evidence for pastoralism in the LAA. Sheep, goat and cattle bones have recorded at sites associated with Beaker Pottery at Oxford Science Park (possibly residual) (Moore 2001: 167) and The Hamel (Wilson 1980).

Also a cylindrical loom weight found in a pit containing Middle Bronze Age pottery excavated at Blackbird Leys (Booth and Edgeley-Long 2003: 209). The loom weight was made from fired clay and was decorated with round-toothed comb impressions making a rare, perhaps unique, find (Barclay, 2003).

Settlement sites

There is currently no evidence for domestic structures and only piecemeal artefactual evidence for settlement and domestic activity of a Neolithic or Bronze Age date in the Oxford LAA. Nevertheless given the regional context and noting the discoveries at nearby Yarnton there remains potential for settlement sites to be identified. The mobile character of settlement in the Neolithic, with some sites occupied repeatedly but none, apparently, occupied for long periods of time, makes the evidence particularly hard to detect in an urban environment (Hey *et al*. 2011: 227-236). Excavations at the Institute of American Studies (Booth and Hayden 2000) and at the nearby New Chemistry Research Laboratory (Bradley and Charles 2005), recorded limited evidence of Neolithic to Early Bronze Age activity comprising a total of three pits and a large ditch, it remains unclear whether these features represent a short lived visit close to a monumental structure or something more long lived and domestic in character. Single Neolithic pits have also been recorded at Littlegate Street (Hassall, Halpin and Mellor 1989: 135) and in the University Parks (Heistermann and Norton 2011).

Further evidence for possible domestic activity (although this interpretation is contested) comes from the Hamel, off St Thomas' Street. Here the skeleton of a 2-4 year old child, a number of Beaker pottery sherds and animal bone were discovered within the fills of a pit (Palmer 1980). It has been suggested that the twisted body position of the child and the character of finds indicated a domestic rubbish pit rather than a ritually placed deposit (*ibid*.: 128; Boston *et al*. 2003: 198).

At Blackbird Leys a number of pits producing middle-late Bronze Age pottery, burnt stone and a decorated cylindrical loom weight were excavated, this being the first evidence for settlement of probable middle Bronze Age date from the LAA (Booth and Grace Edgeley-Long 2003: 209, Fig 6). At Garsington Way a late Bronze Age/Early Iron Age ditch of reasonable size (2m wide and 0.46m deep) was recorded associated with a small but significant group of late Bronze Age to early Iron Age pottery perhaps suggesting domestic activity nearby (Keevill and Parsons 1995).

Elsewhere on the Oxford gravel terrace excavations undertaken in 1972 at New Inn Court, 300m west of Christ Church Cathedral, recorded postholes of possible 'prehistoric date' (UAD 260). No finds were recovered from the features, so the prehistoric interpretation is based upon the nature of the fills and the recovery of struck flint flakes in adjacent late Saxon features (Halpin 1983). Small amounts of 'Bronze Age' pottery have also been recovered from the Blackbird Leys Peripheral Road site (Oxford Archaeological Unit. 1995) and several sherds from a single vessel at Eastfield House, Brasenose Driftway (Challis 2005). At Minchery Farm, Littlemore a securely dated Bronze Age post hole containing sherds of a plain Deverell-Rimbury tradition food urn were associated with a ditch (RPS 1996: 28; 2001: 8).

A small amount of sheep/goat bone was recovered from a pit containing Beaker pottery at the Oxford Science Park, Littlemore, points to local activity but the report cautions that this may be residual (Moore *et al*. 2001: 167). As noted above a collection of residual later Neolithic or early Bronze Age re-touched flints from the Manor Ground, Headington could point to specialised flint working in the vicinity. A small amount of 'Bronze Age' pottery from possible north-south feature was also recorded at this site (Hart 2003).

The mobile character of Neolithic settlement, with some sites occupied repeatedly but none, apparently, for long periods of time, makes the evidence particularly hard to detect in an urban environment. Nevertheless the flint scatters and isolated pits noted to date point to the further potential for settlement evidence. The distribution of flint scatters, discussed under the material culture section below, provide an indication of possible early settlement sites. Furthermore Neolithic Peterborough Ware sherds found at the Kings Weir barrow, Logic Lane and The Chemistry Lab sites in Oxford (See Ritual and Ceremonial sites below) may also represent evidence of settlement activity rather than ceremonial activity (pers. comm. G. Hey). The potential for settlement evidence is demonstrated by the extensive areas of Neolithic and early Bronze Age pits recorded to the north of Oxford at Yarnton (Hey *et al*. forthcoming). Oxey Mead (the south-east corner of the Yarton Project site) being located less than 1 km from the Oxford Local Authority boundary.

Warfare and defences

There is as yet no evidence for Late Bronze Age defensive enclosures or structures in the Oxford LAA. A bronze celt and sword were recovered from the River Cherwell in 1865 (OHER 3609) whilst other palstave finds and two Bronze Age hoards are noted below [See material culture: metalwork below]. An early discussion of the typological evolution of bronze age weapons in Oxfordshire is provided in the 1939 Victoria County History Volume (See Bibliography for web page address). Of particular interest with regard to evidence for violence is indentation in the skull of the

earliest inhumation recorded at the Gene Function Building barrow in the University Science Area [See below for dating]. The excavation report suggests that the indentation resulted from a fatal blow to the skull perhaps from a bronze implement. If so this is an early and rare example of Bronze Age violence to an individual (Boston *et al*. 2003).

Ritual and ceremonial sites

The wider setting

The construction of large earthwork monuments in the Upper Thames Valley, initially causewayed enclosures in the mid 4th millennium cal BC, suggests gatherings of large groups of people belonging to wide and dispersed social networks. A few individual burials suggest that some people were accorded more ceremony at death than others, but in the early Neolithic there remains little evidence for social hierarchy. Individual burials become slightly more common later in the Neolithic but it is only in the Beaker period, and then the Early Bronze Age that this becomes regular practice. A wide variety of subsequent communal and funerary monument forms are recorded (henges, cursuses, barrows). The absence of any obvious evidence of dense settlement around these ceremonial and funerary sites, and the apparently large scale of these monuments in relation to population size, suggests that people congregated in these places from a wide area on an occasional/episodic basis. Other evidence for ritual/belief systems includes the placing of votive offerings or placed deposits in many Neolithic and Bronze Age contexts, including rivers, tree-throw pits and other types of pit.

For a further summary of the wider context please refer to the County and Regional Resource Assessments (Hey 2006; Bradley 2010, Allen undated; Lambrick 2010).

The Upper Thames funerary/ritual complexes

The Thames Valley river confluences are usually places favoured for both settlement and for ceremonial and funerary activity in the Neolithic and Bronze Age. Until recently, surprisingly little was known from Oxford, but recent work in advance of development has led to some important discoveries, including a previously unrecorded large henge monument and the discovery and excavation of a number of ring ditches and other smaller features. These discoveries indicate that the impression that one might have formed 20 years ago or so that the Thames/Cherwell confluence was something of an exception along the Upper Thames, would have been misleading and a function of the pattern of development and investigation rather than an actual absence of activity.

The late Neolithic-early Bronze Age ritual-funerary complexes of the Upper Thames Valley are primarily located on the 2nd gravel terrace and vary in scale (from six monuments to over twenty) and size (Barrow Hills extends for 1km). In many cases it has become clear that the late-Neolithic- early Bronze Age cemeteries were constructed around an earlier Middle Neolithic ceremonial landscapes (Barclay and Halpin 1999: 323). The ceremonial complex at Barrow Hills, Radley, is perhaps one of the best known examples of a linear cemetery in the country, extending for over a kilometre the complex contained at least 25 monuments of Neolithic to Bronze Age date (Barclay and Halpin 1999: 1).

A search for 'ring ditch' or 'barrow' on the County HER brings up almost 600 sites. The county assessment cites 428 such sites demonstrating the difficulty with the definitions and dating used to record these sites over time. At least 400 of the 600 records are for sites first recorded in the 1930s following aerial photographic surveys The OHER also records at least 37 barrow 'cemeteries' in the county (Appendix 2: Possible Barrow cemeteries in the county), however of these only a small number survive intact and the most well known examples – Barrow Hills and Dorchester – have been largely destroyed by gravel extraction. Of these 37 barrow cemeteries, four are distinct linear cemeteries, of these Barrow Hills and Standlake have both been heavily quarried but Lambourn on the border with West Berkshire survives as a Scheduled Ancient Monument (County No. 12071; Case 1950) and comprises two

parallel rows of ten barrows on a north-west to south-east alignment and a number of outlying examples surrounding the principle complex (English Heritage 1991). The fourth barrow cemetery stretching from University Parks through to the Radcliffe Infirmary site also appears to be a linear cemetery based on recent evidence from the Infirmary (Hassall 1986; Barclay 1996; Braybrooke 2010) with parallels to both Lambourn and Barrow Hills. The ritual and ceremonial landscapes of the Upper Thames have been comprehensively summarised in Morgi *et al*. (2011).

Mid-Late Neolithic

Christ Church- Prehistoric features

A report published in *Oxoniensia* by Sturdy (1961/2: 30) notes that a feature in the Christ Church cathedral garden contained struck flint and 'resembles that of a causewayed camp at Abingdon, standing on the extreme southern tip of a gravel peninsula between two streams'. The note presumably relates to the discovery of a Neolithic flint knife and some flakes in the garden of the Canon of the Sixth Stall, Christ Church in 1954-5. A substantial feature some 2m deep beneath the east wall of the cathedral (UAD 200), extensive enough to cause large cracks to appear on either side of the high altar, was interpreted as a prehistoric ditch on a north-south alignment and possibly part of a Neolithic causewayed camp (Sturdy 1988: 90). The observation remains speculative.

University Parks Cursus?

Linear features visible as parch marks in the University Parks have been interpreted as evidence for a possible Cursus monument. However there is no convincing evidence to confirm such an interpretation (Dodd ed. 2003: 9; Case 1986: 26).

Radclife Infirmary sub rectangular enclosure

Excavations at the Radcliffe Infirmary in 2009 identified a Neolithic enclosure, itself enclosed by a later barrow (Braybrooke, 2010: 14). Such an arrangement is unusual and the enclosure may be interpreted as perhaps a Neolithic mortuary enclosure broadly similar to sites in Northamptonshire (Deegan and Foard 2007). Radiocarbon dating from the primary fill of the enclosure ditch provided a date 3530-3600 cal BC (95% probability). A single animal sacrum, thought to have been from a calf was recovered from the ditch (Braybrooke 2010: 16).

Parks Road, Chemistry Labs site

At the New Chemistry Research Laboratory site on South Parks Road, two pits and a substantial east-west ditch of likely middle-late Neolithic date were recorded. The ditch was V shaped and averaged 2.20m wide and 1.05m deep contained a small amount of pottery consistent with Peterborough ware (Barclay 2005: 155). An unfinished arrow head in one of the pits could suggest a placed deposit (Bradley and Charles 2005: 145).

Further Peterborough ware evidence

A Peterborough Ware type sherd has been recovered in association with a later barrow at Kings Weir just north of the Oxford LAA and also from a prehistoric ditch, presumed to be a barrow, at Logic Lane, Central Oxford (Barclay 2001: 27). A small assemblage of Neolithic pottery from the Oxford Science Park, Littlemore included a Mortlake style vessel of the Peterborough ware type (*Ibid*). The association of two of these sherds with presumed later barrows is noteworthy.

St John's College (UAD 1778)

An excavation at St John's College in St Giles in 2008 for the new Kendrew Quadrangle produced substantial new evidence of Late Neolithic- Early Bronze Age

activity on the Oxford 2nd gravel terrace (Wallis 2010: 7). An earlier evaluation on the site recorded only medieval and post medieval evidence (UAD 1691). The subsequent excavation encountered a substantial curving ditch some 7m wide and 2.5-2.9m deep. The curvature of the ditch suggests a feature some 150m in diameter. No trace of an external bank was noted. Radiocarbon dating of a cow tibia and charcoal spread located close to the base of the ditch indicate that the monument dates from around 2290-2130 BC (See page 3 for full dates). Unfortunately it was not possible to recover a scientific date from the antlers recovered from the base of the ditch and as it was not possible to date the very deepest deposits it remains possible that the henge dates from the middle of the 3rd millennium, by parallel to the concentration of 'large' henges in the Upper Thames and along the Windrush Valley, rather than to c2200BC or later. The presence of a late Saxon mass grave in the ditch demonstrates that the monument continued to be a significant feature in the landscape into the Late Saxon period (*ibid*.: 9). The feature is interpreted as a Neolithic henge that may have been the focus of the later Bronze Age barrow cemetery.

The primary floor of the ditch contained a significant quantity of antler and bone fragments. Above this fill Late Neolithic pottery was recorded, lying above this was a horizon containing 142 sherds of Beaker pottery and a hearth that radio carbon dated to 2136-1948 BC. The next horizon contained no datable pottery evidence and may have formed between the Early Bronze Age and the Middle Iron Age. The next horizon contained Early to Middle Iron Age pottery with some residual Late Neolithic sherds. A 1st century hearth was recorded in the upper fill of this horizon The upper horizon of the ditch contained limited evidence dating to the Roman period, subsequently there appears to have then been little activity on the site until the 10th century when bodies were dumped in the still visible ditch (Wallis 2010). Optical Stimulated Luminescence Dating of sediments from the ditch has been undertaken but the results are not yet available.

Late Neolithic- Bronze Age

There are two broad spatial groupings of barrows in the Oxford LAA. In the centre of Oxford, on the Summertown-Radley gravel terrace between the Thames and Cherwell rivers, a number of enclosures, barrows and ring ditches have been recorded and a ritual/funerary complex has been suggested focused on the Radcliffe Infirmary/University Parks area (Figure 4). A second grouping of monuments is located on the 1st gravel terrace flood plain at Binsey and Port Meadow (SAM County No 12003), here a large group monuments dating from the Bronze Age to the Post Medieval period have been identified as cropmarks or shallow earthworks (Figure 5).

Oxford Summertown-Radley 2nd gravel terrace complex

University Parks Barrow Cemetery

Aerial photographic analysis has identified a series of parch-marks within the University Parks (UAD 686) which appear to include several barrows. The parch-marks were first noted by Dr R Plot, the first Keeper of the Ashmolean Museum in 1686 although they were not initially considered archaeological (Parkinson *et al*. 1996: 62). The hot summer of 1976 revealed more of the complex (Hassall, 1986: fig 12; Barclay 1996). Three complete barrow crop-marks on an east-west alignment have a roughly similar form with a diameter of around 35-40m while two partial barrows on the same alignment are estimated to be 23m and 58m in diameter.

Hassall suggested a possible linear barrow cemetery within this complex, comprising at least three and possibly five barrows within the park itself (*ibid*.: 10). The recent excavation of two barrows and a section of a possible third barrow on the same alignment at the Radcliffe Infirmary site some 300m to the west of the park confirms

Hassall's observation. In common with the cemeteries at Barrow Hills, North Stoke, and Seven Barrows; the University Parks appears to be a Bronze Age cemetery constructed around earlier Neolithic monuments.

Excavations prior to the installation of water attenuation tanks in the University Parks in 2009 identified a ditch terminus that was identified as a possible Bronze Age feature (Wessex Archaeology 2011: 19). A watching brief during the construction of an IT trench through University Parks in 2010 identified a single Neolithic pit dated by the presence of a scraper, narrow blade , five waste flakes and part of a likely polished flint axe. It was suggested that the finds represented a placed deposit (Mullin 2011).

Rex Richards Building, University Science Area

Immediately adjacent to the University Parks in the University Science Area, a double ringed ditch was recorded during a series of archaeological investigations prior to construction of the Rex Richards Building (Parkinson *et al*. 1996; UAD 306, 307, 308). The investigations comprised of a series of small scale watching briefs and evaluations between 1982 and 1993. They revealed a double ditched barrow with a central cremation pit containing the partially cremated remains of an aging adult male with skeletal fragments (Boyle and Harman 1996: 49). The cremation was associated with a quantity of charcoal and burnt flint that may be pyre debris, several sherds of Early Bronze Age pottery were also recovered (Parkinson *et al*. 1996: 53) The barrow was roughly comparable in size to the three larger barrows known from the University Parks and comprised of an inner ditch approximately 3.7m wide and a later outer ditch around 2.9m wide (*ibid*.: 43). Double ditched barrows are rare in the Upper Thames Valley but examples are known. For example at Barrow Hills, Radley (and another example at the Radcliffe Infirmary site, Oxford).

Gene Function Building, University Science Area (UAD 1629)

The investigations at the Gene Function site revealed a smaller barrow than at the Rex Richards building and more comparable in size to the smaller barrows in the University Parks. The ditch was approximately 1.8m wide with a 14.7m diameter and the interior of the narrow contained four graves cut in the natural gravels (Boston *et al*. 2003). The earliest grave contained the body of an adult female and was radiocarbon dated to 2460-2040 BC. Its position away from the central area of the barrow could suggest that predates the barrows construction. At least one other example of a barrow built on the site of a flat grave is known from the Upper Thames at Radley (Barclay and Halpin 1999: 133-9; Boston *et al*. 2003: 197). The most centrally positioned burial was that of a child and was radiocarbon dated to 2110-1740 BC. Two additional female burials were also recorded on the periphery of the monument and were radiocarbon dated to 2200-1820 BC on the northern side and 2120-1750 BC on the southern edge [See Material Culture: flint (below) and Warfare and defences (above)].

Halifax House

Close to the Science Area at Halifax House on South Parks Road, a Middle Bronze Age ditch and pit were recorded. The ditch was V shaped 1.85m wide and 0.69m deep and terminated with a rounded shallow profile, it contained the rim of a possible bucket urn (Anthony 2005: 134).

The Radcliffe Infirmary (UAD 1761)

The Radcliffe Infirmary excavations in 2009 identified three barrows and a Neolithic enclosure whilst a fourth barrow was identified by a subsequent watching brief. The largest ring ditch (A) enclosed an earlier sub-rectilinear Neolithic enclosure (Braybrooke 2010: 14). Ring Ditch A was approximately 58m in diameter with a ditch

measuring 4.2m in width and around 1.2m in depth. Two cremation burials were recorded within Ring Ditch A external to the enclosure. Radiocarbon dating from one burial provided a date of 2030-1870 cal BC (95% probability). The sample from the second cremation was unsuitable for dating (Braybrooke 2010: 16). Optical Stimulated Luminescence dating of the secondary fills has given a date of 731BC–AD69 (2.34±0.40ka, 17% error), for the infilling of the ditch (Braybrooke 2009:109).

About 30% of Ring Ditch B had survived previous truncation and consisted of two concentric ditches. The U shaped profile of the outer ditch appeared similar to the ditch of A with a width of around 3.8m and a depth of 1.2m and could be calculated as having a diameter of c.39m with reasonable accuracy. The inner ditch was around 19m in diameter with a V shaped profile and a width of around 2m and a depth of 1.1m (Braybrooke 2010: 15). Although no suitable samples for radiocarbon analysis were taken Optical Stimulated Luminescence dating of the secondary fills has given a date of 1180–560BC (2.88±0.31ka, 11% error for the infilling of the ditch (Braybrooke: 2009:109).

Ring Ditch C was the best preserved in plan with more localised truncation. This had a similar profile to A and B and was 48m in diameter. No samples suitable for radiocarbon were identified. A cluster of undated post holes were recorded at the centre of the ring ditch. Ring Ditch D sits largely under the 18th century Infirmary building, the investigated area was badly truncated by modern quarrying and only a small section was recorded, but it was estimated that it was of a similar dimension to B (Braybrooke 2010: 15). Optical Stimulated Luminescence dating of the secondary fills has given a date of 790–270BC (2.54±0.26ka 10% error) for the infilling of the ditch (Braybrooke 2009:109).

Logic Lane, 1960 (UAD 181)

A rescue excavation in 1960 recorded evidence of two ditches; Ditch 1 was approximately 0.6m wide and 0.8m deep with vertical sides and a shallow U shaped bottom while the far more substantial Ditch 2 was 2.1m wide with a more gradual form (Radcliffe 1961-2: 39). Although the excavations were limited in their extent and the stratigraphic relationship between the two ditches could not be determined, their fill and form were characteristic of a Bronze Age ring ditch similar to those at Port Meadow. However, only Ditch 1 was characterised as curving (*ibid*.: 40). Evidence from the ditches was limited to a single fragment of Neolithic to Bronze Age pottery from the lower fill of Ditch 2 while a fragment of red deer antler was recorded from Ditch 1 (*ibid*.: 43). A sherd from this site has been re-assessed as Peterborough Ware (Barclay 2001: 184)

24a St Michaels Street (UAD 6)

A substantial curving ditch, thought to be part of a Bronze Age barrow was recorded during excavations at 24a St Michaels Street (Parkinson *et al*. 1996: 57). The section of the ditch revealed a U shape profile 1.3m deep. The excavation was limited in scope and little dating evidence was recovered (*ibid*.: 59).

The Sackler Library, Beaumont Street, 1997 (UAD 395)

Two barrows were partially investigated during excavations for the Sackler Library on Beaumont Street (Poore and Wilkinson 2001). A curvilinear ditch 50m in length was excavated in the northern part of the site indicating a barrow of approximately 28m in diameter. The ditch had a fairly typical U shaped profile 3m wide and 0.95m deep. A second curvilinear ditch in the southern part of the site was partially excavated and although only section of approximately 12m in length was recorded it appeared to be similar in profile and dimension to the northern ditch Artefactual

evidence was limited with 16 pieces of residual flint of a Neolithic-Bronze Age date recovered from non prehistoric contexts.

Other Sites on the Oxford 2nd gravel terrace (Summertown Radley Terrace)

Further inhumation burials have been recorded in the area around Walton Manor. In 1882 two skeletons of a possible 'Neolithic' date were recorded during development on Southmoor Road (anon 1892: 52) and a further two skeletons were recorded at nearby Kingston Road one of which was in a crouched position (*ibid.*). Inhumations accompanied by a 'food vessel' were also recorded at Park Crescent in 1864 (Salzman 1939: 265). At Norham Gardens (UAD 1711) a single gully of Neolithic to Bronze Age was recorded during a small scale evaluation in 2005 (Wallis 2005). A watching brief at 61-62 Banbury Road in 2005 recorded an Early Bronze Age crouched inhumation (Cuenca 2005).

Beaker flat graves

Burials and Beaker pottery recorded at Summertown (Leeds, 1938, 29), Polstead Road (*ibid*) and Southmoor Road (anon 1892: 52; Manning and Leeds 1920: 251) and potentially other recorded burials in North Oxford could belong to flat graves (e.g. no mound) of Beaker type. Beaker flat grave cemeteries are a feature of the Upper Thames - especially the cemeteries at nearby Cassington and at Foxley Farm, Eynsham (Garwood 2011: 416). The potential for more such graves in the North Oxford area can be noted. The example of a female flat grave later enhanced with a barrow at the Gene Function Building is noted above. Garwood notes that in the Upper Thames female flat graves are rarer and less consistent in layout than their male counterparts (*ibid*.: 406). A child burial at the Hamel (see below) may also be an example of a flat grave burial.

Binsey and Port Meadow Barrow Cemetery 1st gravel terrace (floodplain)

Port Meadow is a Scheduled Ancient Monument (SAM) covering an area of ancient meadowland between Fiddler's Island and Lower Wolvercote. Crop-marks appear over a much larger area beyond the SAM including Binsey Meadow to the west of the River Thames. In the Bronze Age the floodplain was used as a barrow cemetery.

The extent of Bronze Age to Iron Age features on Port Meadow was revealed between 1933 and 1947 following the application of aerial photographic analysis. The first photographs, taken by Major G Allen in 1933, were studied by Atkinson (1942) who identified a substantial number of crop-marks (Atkinson Areas One to Three). At the same time the Oxford University Archaeological Society (OUAS) carried out the first excavations of some of the features. Following a new photographic survey including the adjacent Binsey Meadow by Riley in 1944 a further series of crop-marks were identified by Rhodes (Rhodes Areas A-F, 1949). More recently, regional surveys of the Upper Thames Valley have identified further crop-marks as well as clarifying known features (Benson and Miles 1974; RCHME 1992).

The crop-marks at Port Meadow comprise four main concentrations of features: Atkinson Area One appears to be Bronze Age in character while the three remaining areas (Atkinson Areas Two and Three and Rhodes Area F) appear Iron Age in character. The main components of these areas are summarised below. Additional Areas Rhodes A-E are also briefly summarised.

Atkinson Area One

This area, adjacent to the boundary with Burgess Meadow, comprises of four discrete features including three circular ring ditches of probable Bronze Age date known only as crop-marks (Atkinson sites 1, 2 and 4) and 'Round Hill' (Atkinson 3), a probable Bronze Age barrow that was excavated in 1842 (when it may have been

reconstructed), in 1900 and again in 1940 (Atkinson 1942: 28). The excavation of 'Round Hill' (Site 3) in 1842 by Freeman James Hunt, then Sheriff of Oxford, is believed to be the earliest excavation of a Bronze Age barrow in the county (Penney1985: 286). The excavation records indicate that previous disturbance had occurred in the 17th century. Some human remains were noted but no urn or cist was recorded. The site was briefly investigated again in 1900 by T E Lawrence although there are no details of any finds or measurements (*ibid.*).

A recent LiDAR survey of Area One proved largely inconclusive with substantial interference to the south of the area, only Site 3 was identified with any conclusiveness although Site 4 was also located, but it appeared more rectilinear in form than in the aerial photographs (Briscoe 2006: 18).

Atkinson Area Two

This area in the centre of Port Meadow comprises nine discrete features including two overlapping ring ditches (Atkinson Sites 5 and 6) originally thought to have been one monument but excavations in 1940 revealed evidence of two distinct ditches of a 'Late Bronze Age to Iron Age date'. North of this, two further low mounds were interpreted as round barrows (Atkinson sites 7 and 8). Of a similar form, they survive only to a height of 7.6-22.8cm. Adjacent to this site was a rectangular enclosure (Atkinson site 9) marked by a ditch 1.6m wide and 0.9m deep. To the north of this is another feature of uncertain origin (Atkinson site 10), recorded in the 1933 and 1947 aerial photographs only. To the east of this is another possible barrow (Atkinson site 11) surviving to a height of 30-38cm adjacent to two further ring ditches approximately 3.6m wide (Atkinson sites 12 and 13). When Atkinson site 13 was re-examined in 1947 it appeared to contain a second smaller circle (Rhodes 1949: 84). The 2005 LiDAR survey of this area was only able to identify three of these sites (Sites 5, 12, 13) and two further shallow curvilinear earthworks that may have been enclosure ditches (Briscoe 2006: 17).

Limited excavation of Atkinson Area 2 was carried out in 1940. This recorded some extant earthworks and confirmed the presence of the two overlapping circular ditches (Atkinson sites 5 and 6; Atkinson, 1942, 30). Atkinson site 6 was estimated to be approximately 20m wide with a U shaped ditch 2m wide and 0.7m deep, slightly larger than the estimated 15m width for Atkinson site 5. The Atkinson site 6 report suggests that the ditch was deliberately filled in soon after construction in 'the Late Bronze Age'. A conclusion that has to be treated with caution (*ibid.*: 32). Atkinson 5, in contrast was longer lived with the V shaped ditch showing evidence of erosion, the only evidence from the ditch was a few sherds of badly degraded pottery that may be Iron Age in date. A recent layer of thick blue clay was recorded in the upper fill of the ditch suggesting it remained a visible part of the landscape until the early 20th century

Atkinson Site 7 was excavated in 1946 by OUAS. Evidence for Iron Age domestic activity was recorded within the ditch (Atkinson and McKenzie 1946-47: 163). At Site 9, a section of through the enclosure was recorded (Atkinson 1942: 28). The enclosure was marked by a broad flat bottomed ditch around 1.8m wide and 0.9m deep and in common with Site 6 it appears to have been in-filed soon after it was dug.

Atkinson Area Three and Rhodes Area F

In the northwest corner of the meadow a trapezoidal enclosure and a series of ring ditches surrounded by a possible enclosure ditch are recorded. The morphology of this ditch is characteristic of Iron Age settlement (Lambrick 1985: 99). Area F lies adjacent to the River Thames in Port Meadow and comprises a series of concentric ring ditches (Rhodes 21-23, 26) and two rectangular enclosures (Rhodes 24, 25) all of which were recorded in 1944 from new aerial photographs (Leeds and Atkinson

1943-4: 197). The area is thought to be an Iron Age settlement (Lambrick and Robinson 1985: 99).

Rhodes Areas A-E

The Rhodes survey in 1949 largely concentrated on the visible crop-marks at Binsey west of the river Thames. The majority of these features were only recorded from aerial photographs and no extant earthworks are known. Areas A-C comprise three groups of concentric ring ditches thought to be Iron Age in origin. Area D to the west of Binsey Meadow comprises a series of circular features of possibly natural origin (Rhodes 1949: 83). Area E in the central part of Binsey Meadow comprises an extensive area of cropmarks including a system of small enclosures and ring ditches (Rhodes 16-18) thought to represent a 'village' settlement (Rhodes 1949: 83).

Kings Weir and Cutteslowe

Three barrows were recorded at King's Weir to the north of Port Meadow in the 1960s. The larger of the three, Barrow A, is 36m in diameter and still stands to a height of 1m, while Barrows B and C appear to be around 34m and 30m in diameter and only 0.5m in height (Bowler and Robinson 1980: 2). Although ridge and furrow was recorded in the field it did not appear to cross the mounds indicating they remained prominent in the medieval period. Barrow C was subsequently excavated in 1979, revealing a ditch some 1.6m deep. Pottery evidence from the barrow included sherds of Beaker ware, Peterborough ware and Later Bronze Age pottery indicated a period of construction and use throughout the Bronze Age (*ibid*.: 6). While not within the extent of the Scheduled Monument, the King's Weir barrows may be an outlier of the Bronze Age cemetery at Port Meadow. Two further round barrows are located just outside the LAA near Cutteslowe (OHER 13294).

The Hamel

A single 'Beaker type' burial has also been identified on the edge of the floodplain to the west of the city at The Hamel site, St Thomas' Street (Palmer 1980). The remains were identified as those of a child between the ages of two and four placed in a grave pit in a 'crouched position' [For an alternative interpretation of this feature as a domestic deposit see above]. Radiocarbon dating from the human and animal bone also recovered from the pit gave a date of between 1520 BC ± 80 placing the burial within the Late Beaker period. The burial also appears to be overlain by a series of linear features interpreted as possible Bronze Age ard marks (plough marks) but there are some inconsistencies with this interpretation and they may be later (Palmer, 1980). It is possible that the infant burial is an example of a flat grave (pers comm. G Hey) as children were often afforded special burials during the beaker period (Garwood 2011). A worked gold sheet recovered from the overlying (?) plough soil may be from a gold-covered dagger pommel, potentially indicating the presence of another Beaker grave in the area (Palmer 1980, Fig 3). At Cresswell Field, Yarnton a similar burial of a child placed apparently without ceremony in a pit with much pottery and flint work. In this case it was near a U-shaped Neolithic enclosure with three formal Beaker burials nearby (pers. comm. G Hey; Hey forthcoming).

Osney Mead

Pits and gullies, one containing an inverted Collared Urn without any related cremation burial, were recorded sealed by alluvium during an evaluation at Osney Mead (Hammond 2002).

Oxford Science Park

Away from the gravel terrace a sub circular pit containing sherds from at least seven Beakers (including both fine and coarse vessels) and bone (including sheep/goat)

was recorded at Oxford Science Park, Littlemore (Moore *et al*. 2001:167). Three of the Beaker vessels contained black carbonised residue indicating they may have been used for cooking purposes (Barclay 2001: 179). The prehistoric pottery at the Science Park also included a further 48 sherds dating from the Neolithic to the Iron Age indicating a long period of activity in an area where contemporary sites are rare (*ibid*.: 184).

Donnington Bridge Road, Iffley and Minchery Farm, Littlemore

A Late Bronze Age urn was found near Donnington Bridge Road, Iffley in the early 20th century. The urn has three false handles and resembles one from Winterslow in Wiltshire (OHER 3650; VCH i, 246). It has been suggested that the urn represents a late stage of Collared Urn use in the upper Thames, occurring in a number of Deverell Rimbury cemeteries and may indicate a shift of funerary activity away from the monumental landscape. Similarly a fragment of Deverell Rimbury pottery was recovered in a post hole at Minchery Farm, Littlemore (RPS 1996; 2001).

Ritual or placed deposits

Two Bronze Age hoards were recovered from the LAA in the 19th century [See metalwork below]. As already noted above a pit at the New Chemistry Laboratory site on Parks Road has been suggested as a possible ritual or placed deposit (see above).

Other kinds of deposit

The number flint finds (flint blades, axe heads and arrow heads) from the Upper Thames and other tributary watercourses outside of Oxford is notable suggesting perhaps deliberate deposition in these places. This pattern is less distinct within the Oxford LAA, nevertheless a number of finds from this period have been recovered from dredging or other works near to the Thames (UAD701; UAD712; OHER12944 and the Cherwell (UAD1462).

Material culture

The wider setting

(A short summary of the wider context – please refer to the County and Regional Resource Assessments for more information (Hey 2006; Bradley 2010, Allen undated; Lambrick 2010).

In the Upper Thames Valley the main domestic items found are pots (mainly bowls) and flint tools. Pottery production appears to have been undertaken at a household or community level and there little evidence that pottery was exchanged. Many pots may have been made for special occasions. Flint was used for producing cutting, scraping, whittling and drilling tools. Other utilitarian objects such as quern stones and rubbers are also found, mainly manufactured from locally available stone with limited evidence for the transport of quern material. The most exotic items found on domestic sites are polished flint axes or stone axes made from igneous rock which may not have had a solely utilitarian function. Wood and bark containers from early Bronze Age contexts at Yarnton and part of a probable leather sheath from Radley Barrow Hills are rare examples of organic objects that must have been widely used. Animal bone tools, including antler picks, shovels, pins and needles are recorded. Notably objects for personal adornment are usually recovered from graves rather from domestic contexts.

Flint

Distributions flint scatters recorded during field walking surveys and development led investigations can be used to map prehistoric domestic sites. In the case of Oxford the compact urban and recreational character of the landscape does not lend itself to field-walking and local surveys have been confined to the eastern fringe of the LAA Coherent distribution patterns are therefore elusive because of the uneven distribution of development led investigation and variations in recording techniques.

A poorly recorded but large concentration of Neolithic flints (476 objects) were recovered between 1897 -1910 by Alexander James Montgomerie Bell (1845 -1920) from the Iffley area. The findspot is discussed in detail by Nicholas, (undated, See webpage link below). Bell never published any details but he did give a lecture to the Ashmolean Natural History Society of Oxfordshire in 1909 on the subject. The finds are briefly mentioned by Manning and Leeds (1921: 250). The 468 Neolithic stone tools from Iffley appear to have never been analysed (Nicholas, Pitt Rivers Museum Web Site Article)

Elsewhere a number of small flint assemblages from the Neolithic to Bronze Age have been recorded from development across the city. A quantity of struck flint from the Christ Church Cathedral garden is published in Sturdy (1961/2: 33). Small assemblages were recovered from Church Street and Littlegate (Hassall *et al*. 1989) Jowett Walk (Roberts 1995) the Rex Richards Building (UAD Event No 308; Parkinson *et al*. 1996), 113-119 High Street (UAD Event No 365; Walker and King, 2000), Balliol College (UAD Event No 193; Case and Sturdy, 1963, 90; Sturdy and Sturmeister 1964-5) and Mansfield College (Booth and Hayden 2000).

The largest excavated assemblage recovered to date came from two pits at the Chemistry Research Laboratory site on South Parks Road (Bradley and Charles 2005). A total of 303 flints were recovered from the site, 13 flints came from a single context of one pit [3383] and 262 from a single context of the other [3442]. Much of the flint from pit 3442 appeared to originate from a single knapping event aimed at the production of flakes rather than blades. Knapping debris, burnt and utilised pieces were placed together suggesting production for a specific on-site task. The

flint from the site dated from the mid-late Neolithic on the basis of technological traits and the presence of a chisel arrowhead.

A third Neolithic pit was recorded c40m to the south-west of this site, at Mansfield College. The Mansfield pit flint assemblage was similar to that of pit 3383 and included a serrated flake amongst other retouched artefacts. Differences in the deposition of artefacts in these three pits can be discerned. The Mansfield pit and pit 3383 contained flint (and in the case of 3383 a small quantity of hazel nut shells, crab apple seeds and possible lime and spindle fruits). Pit 3442 contained a large amount of flint and a little fired clay, burnt animal bone, stone and some charred hazelnut shells. Pottery was absent from all three pits. Similar deposition patterns have been noted at Barrow Hills, Radley and Barton Court Farm, Abingdon. The pit at Mansfield College and pit 3383 both contained small flint assemblages that include well utilised flints including retouched tools. Pit 3442 also contained a high number of retouched artefacts, including a crude, possibly unfinished and probably unused chisel arrowhead. It has therefore been suggested that the arrow head could have been made especially for deposition in the pit (Lamdin-Whymark 2005: 154).

An assemblage of 33 struck flints from four contexts were recovered during an excavation at The Manor Ground, London Road, Headington. The majority of the material dated broadly to the Neolithic- early Bronze Age and appears to have been knapped from local gravel derived flint. A chisel arrowhead and thumbnail scraper could be more closely dated to the Late Neolithic or early Bronze Age. The material was interpreted as low density and residual but the assemblage was characterised by a high proportion of retouched flint with scrapers well represented, perhaps suggesting the performance of a specialised, scraper reliant, activity in the immediate area (Hart 2003: 32).

A small assemblage of 50 pieces of struck flint and 33 fragments of burnt un-worked flint of a broadly Neolithic to Bronze Age date were recovered from two phases of investigation at Oxford Castle (Norton 2006: 106). The flint represented a fairly even distribution across the site and was recovered from 34 contexts indicating some Neolithic to Bronze Age activity in the area (*ibid*.).

Flints associated with monumental structures

Generally the excavations of Neolithic/Early Bronze Age monumental structures in Oxford have not produced significant flint assemblages from either barrow or enclosure ditches. A total of 10 flints were recovered from the barrow excavation at the Centre for Gene Function in the University Science Area, but these came from the graves of inhumations within the barrow rather than from the ditch. A group of flint deposited behind the skull in one of the graves could represent the personal tool kit of the female buried within the grave (Lamdin-Whymark 2004: 191). At the Sackler Library excavation no artefacts were recovered from the fills of either of the sampled ring ditches (Poore and Wilkinson 2001:17). Just nine pieces of flint were recovered from the extensive excavation of three truncated ring ditches at the Radcliffe Infirmary (Braybrooke 2010: 22) and just two flints were recovered from the excavated section of henge ditch at St John's (Ford 2010). Eleven pieces of worked flint were recovered from the ditch of a barrow in St Michael's Street (Barclay and McKeague 1996). An excavation at Logic Lane in 1960 recorded the likely remains of a ring ditch. Here a core, a scraper and a barbed and tanged arrow head of early Bronze Age date were found 'in medieval pits and later contexts' (Radcliffe 1961/2: 43).

Miscellaneous finds

A definitive quantification of the flint and other stone implements recovered from the LAA would require further assessment of museum records, however the following

find spots can be noted;, Neolithic polished greenstone axe recovered from the High Street, near St Mary's Church, in 1873 (anon 1892-3), Neolithic stone axe, found at Hinksey Stream (OHER 1625), Neolithic axe from Iffley Road (OHER 3614), Neolithic diorite axe head from the River Thames west of Folly Bridge (OHER 3611), Neolithic diorite axe from the Banbury Road (OHER 5313), Neolithic polished axe from between Barton and Headington (OHER 3627), Neolithic polished stone axe from Headington (OHER 3801), Neolithic greenstone celt from Oxford (anon 1920-1; OHER 3501); Neolithic axe and stone hammer found between Christ Church Meadow and St Aldates 'in a bed of black, peaty-looking decomposed vegetable' (Anon 1920-21; VCH i ; OHER 3566). A distinct concentration of 'Neolithic' axes have been recovered close to Chester Street in the 19th century (UAD No's 762, 715, 746)., Fragment of Neolithic flint adze-blade from Oxford (OHER 6163; Case and Sturdy 1961) and 'flint arrowheads and stone axes from Littlemore' (VCH i: 264; OHER 6190). A single barbed and tanged arrowhead was recovered near the River Cherwell in 1941 (UAD 1462).

A Bronze Age barbed and tanged arrowhead was found in a ploughed field south of Willow Walk, North Hinksey (OHER 1743). A Bronze Age flint scraper 'of Beaker type' was recovered from the garden of 8 Bardwell Road (OHER 3258, Brown, 1969) Also a Neolithic/Bronze Age Knife was found near Godstow Nunnery (OHER 12944)

Metalwork

Two Bronze Age hoards have been recorded within the LAA, one at Leopold Street (OHER 3613) where eleven palstaves were recovered in 1881 and a second hoard at Burgess Meadow, Oxford, discovered in 1830 (OHER 3816). At least one of the palstaves from Leopold Street was considered to be from the same mould as a palstave from.

Other bronze implements have been recorded from the LAA with varying degrees of provenance, these include; a bronze celt and sword from the River Cherwell (OHER 3609), a bronze side-looped socketed spearhead from Old Marston (OHER 9166), a bronze spearhead with side loops and a slightly bulbous point from Littlemore (OHER 6189; VCH i, 264; Anon, 1854; Ehrenberg, 1977; Anon 1873; Anon, 1921), a socketed axe from Iffley (VCH i: 265, plate VI, 248; OHER 6183), A bronze celt from the Examination Schools (OHER 6022), a 'Prehistoric Bronze Implement' from Rivermead, Abingdon Road (OHER 3654), A miniature bronze socketed axe head, small spearhead and chisel dredged from Minster Ditch (HER 3636) and a bronze palstave found in Oxford in 1768 (OHER 3681).

Early metal use

It should be noted that a significant quantity of Bronze Age metal artefacts have been recovered from nearby Radley, providing some of the earliest dates for metallurgy in the county. Copper wire ring straps and a gold-covered bead from Barrow Hills, Radley, are dated to 2490-2200 BC and referenced as the earliest metal find in the country. A bronze dagger from Radley is one of a group from Oxfordshire, that have been dated to 2460-2040 BC, currently the earliest evidence for the use of Bronze (Bayley, Crossley and Ponting 2008: 42). The Upper Thames is therefore a significant area for the study of early metal usage. As noted above at the Hamel, Oxford, an early Bronze Age gold strip was recovered suggestive of high status activity. The strip may have come from the hilt of a dagger and is only one of three finds of gold of this date known in the county (Palmer 1980: 131; Barclay cited in Dodd ed. 2003: 9).

Pottery

Peterborough type ware

A small assemblage of Neolithic pottery from the Oxford Science Park, Littlemore included a Mortlake style vessel of the Peterborough Ware ceramic tradition of the mid-late Neolithic. Another sherd reassessed as likely Peterborough ware came from a prehistoric ditch at Logic Lane, Oxford (Barclay in Moore *et al*. 2002). Sherds of a fabric consistent with the Peterborough style (3500-2800 cal BC) were also recovered from a large V shaped ditch at the Chemistry Research Laboratory site, 2-4 South Parks Road (Bradley and Charles 2005: 145). A sherd of Peterborough Ware was also recovered from one of the Kings Weir barrows, just to the north of the LAA (Bowler and Robinson 1980)

Grooved ware and Beaker ware

An assemblage of Late-Neolithic to Bronze Age pottery was recovered from the 2008 excavations at St John's College including some 72 sherds of Neolithic grooved ware from the lower fill of the henge ditch (Raymond in Wallis 2010: 15). The excavations also recorded 156 sherds of Late Neolithic to Early Bronze Age pottery characteristic of the Beaker period. Several other sites across the city have produced Beaker period pottery; Polstead Road (Leeds 1938: 29); Summertown (*ibid*); at the Hamel (Palmer 1980); Church Street (Hassall *et al*. 1989); North Oxford (Kines and Longworth 1985: UN.48) and Oxford Science Park, Littlemore (Moore *et al*. 2002: 167). The pottery from the Hamel was considered characteristic of domestic debris rather than deliberate deposition associated with the grave (Case in Palmer 1980: A04).

A few sherds of Middle Bronze Age flint tempered pottery were found in a pit along with the loom weight at Blackbird Leys (Brown in Booth and Edgeley Long 2003: 216).

Deverell Rimbury ware and other later fabrics

Only a single sherd of Late Bronze Age Deverell Rimbury ware (c1400-1100BC) has been recorded at Oxford at Minchery Farm, Littlemore (RPS 1996: 28; RPS 2001: 8). Notably Deverell Rimbury urns have were found inserted into a barrow at the nearby Barrow Hills, Radley (Barclay and Halpin 1999: 162-3 and 167). In the early part of the 20th century a Late Bronze Age Urn was recovered from near Iffley, the urn 'had three false handles' and resembled Late Bronze Age bucket urns recorded at Winterslow in Wiltshire (anon 1921; Case 1951).

A small but significant assemblage of Later Bronze Age- Early Iron Age transition pottery was recovered from a ditch at the Rover VQ Building, Garsington Way in east Oxford. This consisted of 29 sherds manufactured from a wide range of fabrics which have been tempered either with grog, shell, grog and shell, coarse sand, flint and coarse sand and quartz/quartzite (Barclay 1995). Similar pottery was also recovered from work in 1995 by OAU at Blackbird Leys (Oxford Archaeological Unit 1995b: 8-9), and two further sherds from the Paint Shop at Garsington Way (Oxford Archaeological Unit 1995c).

Other ceramic objects

Ceramic objects of this period recovered from Oxford include a Middle Bronze Age cylindrical loom weight excavated at Blackbird Leys (Barclay 2003: 217, Fig 6, 218), Elsewhere at the Chemistry Research Laboratory site on South Parks Road a likely Bronze Age pit contained 45 amorphous fragments of fired clay (Bradley and Charles 2005). A clay net sinker or loom weight recovered from drainage works at the end of

Catte Street in 1873 was considered to be prehistoric in date, presumably because of the Neolithic axe found with the material (anon 1892-3).

Bone and antler

Small quantities of bone and antler from the Neolithic-Bronze Age have been recovered from several sites across the LAA. At the Radcliffe Infirmary site a single sacrum, possibly from a calf, was recovered from the Neolithic sub-rectangular enclosure ditch (Braybrooke 2010: 14). At the St John's henge excavations a small assemblage of animal bone and red deer antlers was recovered (Holmes 2010: 16). Attempts to radio-carbon date the antlers were unsuccessful. The animal bone proved to be poorly preserved and highly fragmentary although evidence of cattle, sheep/goat and red deer were noted. Wear on the antlers however suggest that they were used as picks (*ibid*.: 17). A fragment of red deer antler was also recovered from a ring ditch at Logic Lane (Radcliffe 1961/2). Animal bone from the Bronze Age 'Late Beaker' period site at the Hamel included evidence of cattle and sheep/goat remains as well as a small assemblage of unidentifiable fragments. Cut marks were present on a few fragments of cattle bone, the assemblage was indicative of domestic occupation debris (Wilson 1980: A307).

A bone needle and a quantity of animal bone was recovered from drainage works at the end of Catte Street in 1873. The deposit was considered to be prehistoric in date, presumably because of the Neolithic axe found with the material (anon 1892-3).

Legacy

By the Middle Bronze Age the Oxford 2nd gravel terrace was populated by an extensive barrow cemetery perhaps centred around the large Late Neolithic henge located at St John's College or perhaps orientated on other Neolithic monuments yet to be identified. The barrows were primarily round or double-ditched examples, they appear to be of two fairly uniform sizes, either large (c60m in diameter) or small (c 10-20m in diameter). The dating of inhumation burials from the Gene Function Room barrow suggested a period of barrow activity between 2460 and 1570 BC but the recent discovery of a middle Neolithic enclosure at the Radcliffe Infirmary suggests a much longer period of ritual activity in this landscape. At Port Meadow the landscape was similarly populated by a series of barrows and ring ditches that distinguish this area as an important ritual focus. As the Port Meadow barrows have not been subject to modern excavation techniques direct comparison with the 2nd terrace landscape is difficult. The use of the floodplain presumably indicating a dryer climate at this time, an observation that is broadly supported by the available environmental evidence.

The Optically Stimulated Luminescence (OSL) and radio carbon dating from the Radcliffe Infirmary ring ditches suggests that barrow ditches were silted up by the beginning of the Iron Age. We know from 12th century records and archaeological evidence from St John's Henge that both individual barrow mounds and the henge ditch remained at least partially extant into the Late Saxon period. We also know from the parch mark evidence at the University Parks that an Iron age/Roman agricultural landscape appears to overly some of the late Neolithic/Early Bronze Age monuments. The date at which the ritual/funerary complex ceased to be respected by local communities remains of considerable interest.

Environmental evidence indicates that the hydrology at the end of the Bronze Age had changed quite significantly as woodland clearance and increased agricultural practices led to a rise in the water table and subsequently resulted in wetter conditions in the Oxford valley.

The is currently scant evidence for Late Bronze Age activity in the LAA, currently consisting of small amounts of broadly Late Bronze Age-Early Iron pottery from Littlemore, a single sherd of Later Bronze Age Deverell Rimbury from Littlemore and a possibly Late Bronze Age urn from Iffley. The few recorded finds are noticeably from the higher ground to the south-east of the LAA, away from the earlier monument complexes on the floodplain and 2nd gravel terrace. Whether this represents a genuine shift in settlement pattern, either as a result of changing hydrology or an inability to sustain the ritual landscape on the 2nd gravel terrace is a matter for further investigation. The limited evidence for cultivation and field boundaries from these periods could be taken at face value or may reflect the impact of subsequent land use and patterns of investigation

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Further resources:

Geology

- Geological Conservation Review

Summary descriptions of site evaluation of geological stratification for the county: http://www.jncc.gov.uk/default.aspx?page=2947)

- *British Geological Survey Online Maps:*

http://maps.bgs.ac.uk/geologyviewer_google/googleviewer.html

Archaeological Evidence

- Oxford Urban Archaeological Database, Oxford City Council

A database of archaeological records for the historic city centre area. For a map of the area covered by the UAD see visit:
http://www.oxford.gov.uk/PageRender/decP/UrbanArchaeologicalDatabase.htm
To search a version of the database visit:
http://www.heritagegateway.org.uk/gateway/

- Oxfordshire Historic Environment Record, Oxfordshire County Council

A database of archaeological records for the County of Oxfordshire. To search the database visit the Heritage Gateway:
http://www.heritagegateway.org.uk/gateway/
or Oxfordshire Heritage Search:
http://publicapps.oxfordshire.gov.uk/wps/portal/publicapps/applications/heritage

- Oxford History Centre (formerly the County Records Office)

Holds large collection of historic maps and historic documents from the medieval period to the present.

http://www.oxfordshire.gov.uk/cms/public-site/oxfordshire-history-centre

- *Oxoniensia*

Archaeological and architectural journal for Oxfordshire
http://www.oahs.org.uk/oxof.php

- Archaeology Data Service.

Holds archive of grey literature by participating archaeological units from c2000 onwards. Also holds complete catalogue of several archaeological journals including Medieval Archaeology as well as complete archive of CBA publications:
http://ads.ahds.ac.uk/.

- Portable Antiquities Scheme

Voluntary scheme recording archaeological objects recorded by members of the public including those by metal-detector users
http://www.finds.org.uk/

Museum Archives

- The Ashmolean Museum:

http://www.ashmolean.org/
Also for ceramics online see the Ashmolean Potweb:
http://potweb.ashmolean.org/PotChron7g.html

- The Pitt Rivers Museum:

http://www.prm.ox.ac.uk/
The Collection of Flints from Iffley have been reviewed by Nicholas, M, (undated). See http://england.prm.ox.ac.uk/englishness-Iffley-Bell.html (accessed July 2011)

- Oxfordshire County Museums:

http://www.oxfordshire.gov.uk/cms/public-site/oxfordshire-museum

Appendix 1: Neolithic to Bronze Age and Late Prehistoric Site Gazetteer

1. **24a St Michaels Street (UAD 6)**

Bronze Age ring ditch

2. **Cornmarket Street (UAD 20)**

Prehistoric antler pick

3. **Examinations Schools 1870s (UAD 159)**

Bronze Age axe

4. **Christ Church 1954-5 (UAD 164)**

Neolithic knife and flake

5. **Logic Lane 1960-1 (UAD 181)**

Prehistoric flint implements, pick, ditch, Early Bronze Age pottery

6. **Cathedral Garden, Christ Church, in 1961 (UAD 185)**

Prehistoric flint implements

7. **Balliol College in 1962-3 (UAD 193)**

Prehistoric flint scraper

8. **Christ Church in 1962-3 (UAD 200)**

Prehistoric flint implement

9. **Church Street, St Ebbe's, 1968-72 (UAD 210)**

Prehistoric flint implement, Early Bronze Age pottery

10. **St Peter in the East, 1968 (UAD 212)**

Neolithic lithic implement

11. **79-80 St Aldate's 1970-1 (UAD 227)**

Prehistoric plant remains, Neolithic flint flakes

12. **Aerial Photograph of Ring Ditch in University Parks (UAD 234)**

Record of probable Bronze Age ring ditch

13. **Littlegate, 1971 (UAD 239)**

Neolithic pit and flint flakes

14. **New Inn Court 1972 (UAD 260)**

3 Prehistoric postholes, 5 flint implements

15. **The Hamel, 1975-6 (UAD 281)**

Early Bronze Age pit, skeleton, pottery, Bronze Age plough marks

16. **Jowett Walk 1993 (UAD 304)**

Prehistoric tree throw hole

17. **Rex Richards Building, University Science Area, in 1982 (UAD 306)**

Bronze Age ditch and pit with human remains in a cremation pit

18. **Rodney Porter Building, University Science Area, in 1989 (UAD 307)**

Bronze Age ditch

19. **Rex Richards Building, University Science Area, in 1993 (UAD 308)**

Prehistoric flint implements, Bronze Age ditch and animal remains

20. **Holywell Ford in 1993 (UAD 312)**

Prehistoric soil layer, flint implements

21. **Longwall Quadrangle, Magdalen College in 1995 (UAD 321)**

Prehistoric flint flake

22. **89-91 St Aldate's 1982 (UAD 340)**

Prehistoric river channel

23. **Mansfield College 1992 (UAD 362)**

Prehistoric pottery

24. **113-119 High Street 1992-4 (UAD 365)**

Prehistoric lithic implement

25. **Sackler Library 1997-9 (UAD 395)**

Bronze Age ditch

26. **Mansfield College 1998-9 (UAD 403)**

Neolithic pit and lithic implements

27. **Dept of Earth Sciences 1990 (UAD 507)**

Prehistoric ditch

28. **113-119 High Street 1991 (UAD 426)**

Five residual struck flints recorded, one definitely Bronze Age

29. **Southmoor Road 1882 (UAD 678)**

Neolithic burial

30. **High Street, 1873 (UAD 683)**

Prehistoric animal remains, deposits, needle, net sinker, Neolithic axe

31. **Manchester College 1887-9 (UAD 694)**

Bronze Age object, unidentified

32. **Christ Church Meadow 1876 (UAD 699)**

Neolithic axe and hammer

33. **Osney Lock (UAD 701)**

Prehistoric arrowhead, blade

34. **Magdalen College (UAD 708)**

Prehistoric hammerstone

35. **Manor Road (UAD 710)**

Prehistoric axe

36. **River Cherwell 1865 (UAD 711)**

Bronze Age axe and sword

37. **River Thames 1876 (UAD 712)**

Neolithic axe

38. **Leopold Street 1881 (UAD 714)**

Bronze Age hoard of palstaves

39. **Chester Street 1893 (UAD 715)**

Neolithic axe

40. **Minster Ditch 1895-8 (UAD 716)**

Bronze Age hoard of axe, spearhead, chisel and an unidentified object

41. **Iffley Road (UAD 746)**

Neolithic axe

42. **Riverbank, nr Chester Street, 1896 (UAD 762)**

Neolithic handaxe

43. **Find from Merton Allotments, St Cross Road (UAD 763)**

Prehistoric scraper

44. **Find from Ship Street in c1905 (UAD 768)**

Neolithic spindle whorl

45. **Find from Botley Road Allotments in 1998 (UAD 1213)**

Early Bronze Age arrowhead

46. **Find from Chester Street in 1896 (UAD 1235)**

Prehistoric implement

47. **Excavations at St Edmund Hall in 1934-5 (UAD 1310)**

Neolithic flint axe

48. **Finds from the University Parks in 1941 (UAD 1462)**

Prehistoric arrowhead

49. **South Parks Road and Mansfield Road, new Chemistry Building (UAD 1596)**

Neolithic pit and flint implements, Late Bronze Age pottery, Bronze Age ditch

50. **University Club House Mansfield Road Oxford (UAD 1617)**

Prehistoric ditch

51. **Halifax House South Parks Road Oxford. (UAD 1621)**

Prehistoric field boundary

52. **Centre for Gene Function, South Parks Road, Oxford (UAD 1629)**

Four Early Bronze Age burials

53. **South Parks Road, in 2001 (UAD 1659)**

Neolithic pit, Bronze Age ditch

54. **15 Norham Garden, evaluation (UAD 1711)**

Prehistoric gully

55. **Wycliffe Hall Library (UAD 1733)**

Prehistoric ditch

56. **Oxford Castle.**

Flint assemblage, no features

57. **Windale First School, Blackbird Leys, 1995 (OHER)**

Prehistoric parallel ditches

58. **Littlemore Hospital, Yamanouchi Site Redevelopment 1995 (OHER)**

Prehistoric palaeo-channel

59. **Paint Shop Building, Garsington Way, 1995 (OHER)**

Late Bronze Age pottery

60. **Rover VQ Building, Garsington Way, 1995 (OHER)**

Late Bronze Age pottery, ditch Late Bronze Age to Early Iron Age

61. **Blackbird Leys Peripheral Road 1995 (OHER)**

Prehistoric palaeo-channel

62. **Enlargement and regrading of pond, University Parks, Parks Road, 1995 (OHER)**

Prehistoric palaeo-channel

63. **Archaeological Zones E and D Blackbird Leys, 1996 (OHER)**

Neolithic axe

64. **Land to the north and south of Heyford Hill Lane, Littlemore, 1997 (OHER)**

1 end scraper, 2 fragments

65. **former Transco site, Watlington Road, 2000 (OHER)**

Late Bronze Age pottery

66. **Oxford Science Park, Littlemore, 2001 (OHER)**

Neolithic pottery, Early to Middle Bronze Age pottery and flint, early prehistoric stake holes Mesolithic to Early Bronze Age

67. **Oxford United Football Stadium, Minchery Farm 2001 (OHER)**

Bronze Age postholes and Late Bronze Age pottery

68. **Minchery Farm, Grenoble Road, 2002 (OHER)**

Bronze Age postholes and some pottery

69. **Manor Ground, London Road, Headington, 2003 (OHER)**

Late Bronze Age pottery and Neolithic to Bronze Age flint

70. **Wolvercote Paper Mill, 2007 (OHER)**

Neolithic pottery

71. **New Music Building, Headington School, 2008a (OHER)**

Neolithic pottery

72. **New Music Building, Headington School, 2008b (OHER)**

Neolithic pottery, 4-5 prehistoric parallel linear features and a pit

Appendix 2: Possible Barrow cemeteries in the county

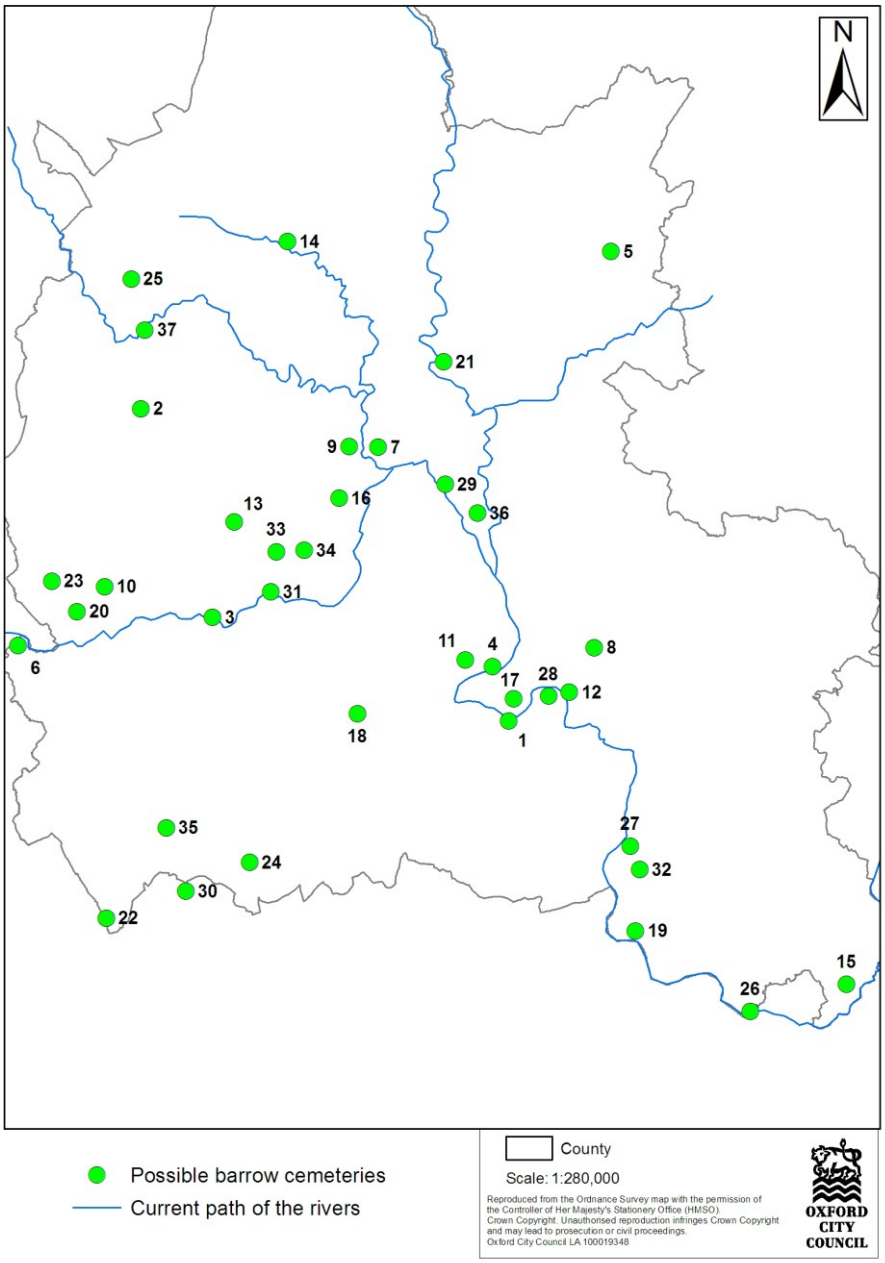
Site	Source	Period	Evidence	Survival
1. Appleford	HER	Bronze Age	Barrows	Partial SAM 243
2. Asthall		Bronze Age	Round barrows	Yes (SAM)
3. Aston	HER	Undated	Barrow cemetery	SM 137
4. Barrow Hills, Radley	Barclay and Halpin, 1999	Neolithic Bronze Age	Linear Cemetery 23 barrows	No SAM 240
5. Bicester	HER	Bronze Age	Barrow cemetery	No
6. Buscot	HER	Bronze Age	Barrow cemetery	Not visible
7. Cassington	Atkinson R. 1946	Bronze Age	Double ditched barrow	No
8. Chiselhampton	HER	Neolithic	Barrow cemetery	Not visible
9. City Farm, Hanborough	Case H *et al*, 1964	Bronze Age	6 round barrows	No
10. Clanfield	Riley, 1942	Undated	Ring ditches	Yes
11. Corporation Farm	HER	Bronze Age	Barrow cemetery	No
12. Dorchester-on-Thames	HER	Neolithic Bronze Age Iron Age/Roman	Henge Barrows Settlement	No
13. Ducklington	Riley, 1942	Undated	Ring ditches	Yes?
14. Enstone	HER	Bronze Age	Barrow cemetery	Not visible
15. Eye and Dunsden	HER	Bronze Age	Barrow cemetery	No
16. Foxley Farm, Eynsham		Undated	Ring ditches	Yes?
17. Fullamoor Plantation	HER	Bronze Age	Barrow cemetery	Yes SAM 146
18. Garford, Abingdon	HER	Bronze Age	Barrow cemetery	Not visible
19. Gatehampton Farm, Goring	HER	Bronze Age	Barrow cemetery	Not visible
20. Grafton	Riley, 1942		Ring ditches	Yes
21. Hampton Gay	Riley, 1942		8 ring ditches, 4 in a row	? not visible
22. Idstone Down	HER	Bronze Age	Barrow cemetery	Yes SAM28147
23. Langford Downs	Williams A, 1946	Bronze Age	6 Ring ditches	Partial SAM 133
24. Letcombe Bassett	HER	Undated	Barrow cemetery?	Not visible
25. Lyneham	HER	Bronze Age	Barrow cemetery	Not visible
26. Mapledurham	HER	Bronze Age	Barrow cemetery	Yes
27. North Stoke	Case, H. 1982	Bronze Age	Barrows	Partial SAM 121
28, Northfield Farm,	HER	Bronze Age Iron Age	Urnfield, barrows Settlement	Yes SAM 180
29. Port Meadow	HER	Bronze Age Iron Age	Barrows Settlements	Yes (SAM)
30. Seven Barrows,Lambourn	Case H, 1950	Bronze Age	11 barrows +20 barrows	Yes (SAM)
31.Shifford, Aston	HER	Bronze Age	Barrow cemetery	SAM 31434
32. Ivol Barn, South Stoke	HER	Bronze Age	Possible linear cemetery	Yes
33. Standlake	Atkinson,	Bronze Age	+20 ring ditches	No

	1945	Iron Age	Settlement	
34. Stanton Harcourt	Harden, 1945	Neolithic/Bronze Age Iron Age	Henge, Barrows Settlement	No
35. Uffington	HER	Bronze Age	Barrow cemetery	Not visible
36. University Parks	HER	Neolithic/Bronze Age Iron Age/Roman	Henge, enclosure 9 barrows	Yes
37. Wychwood		Bronze Age	Round barrows	Yes (SAM)

Table 1: Known barrow cemeteries in Oxfordshire

Appendix 3: Figures

Below: Figure 1: Distribution of possible barrow cemeteries in the county



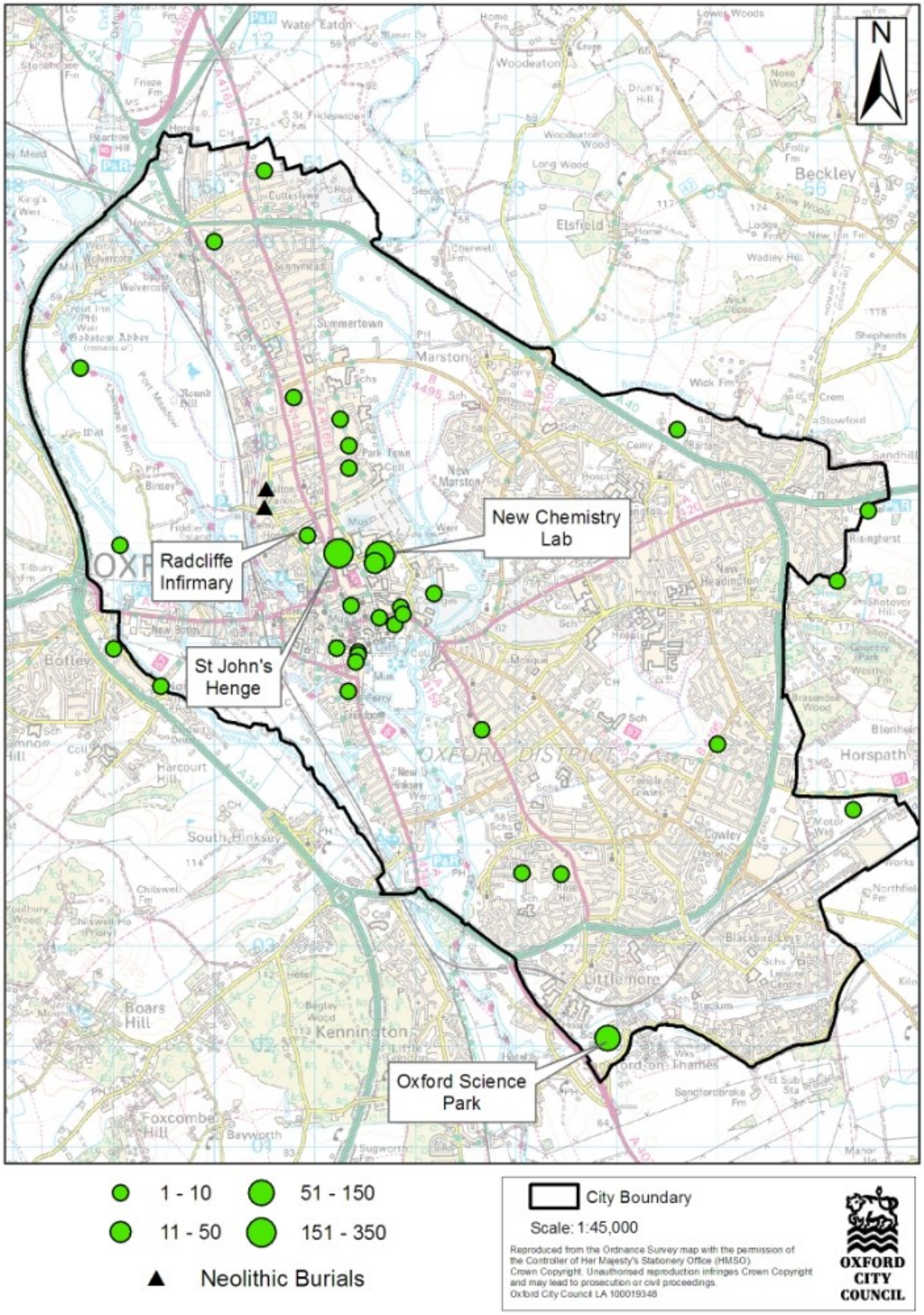


Figure 2: Distribution of Neolithic artefacts

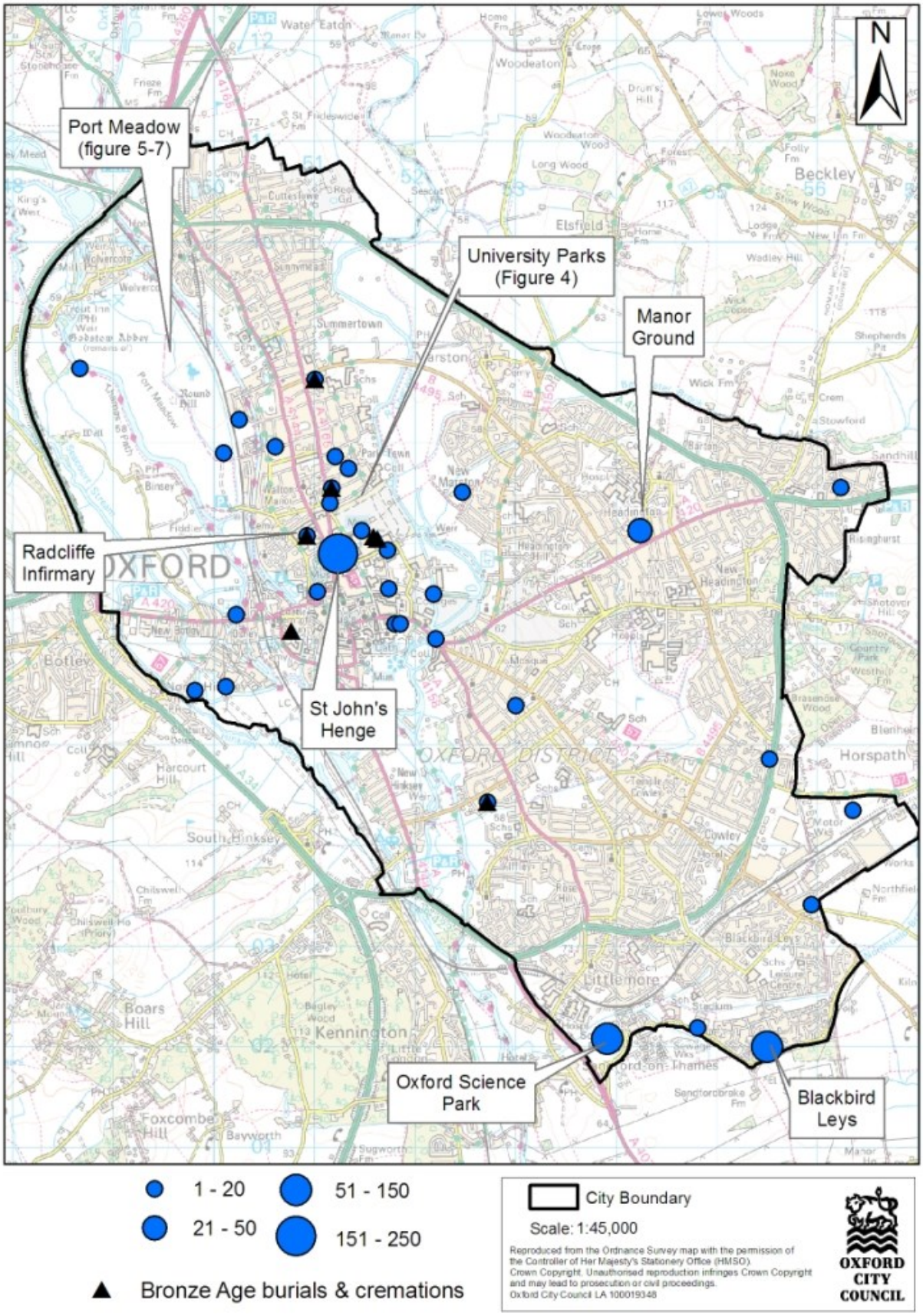


Figure 3: Distribution of Bronze Age artefacts

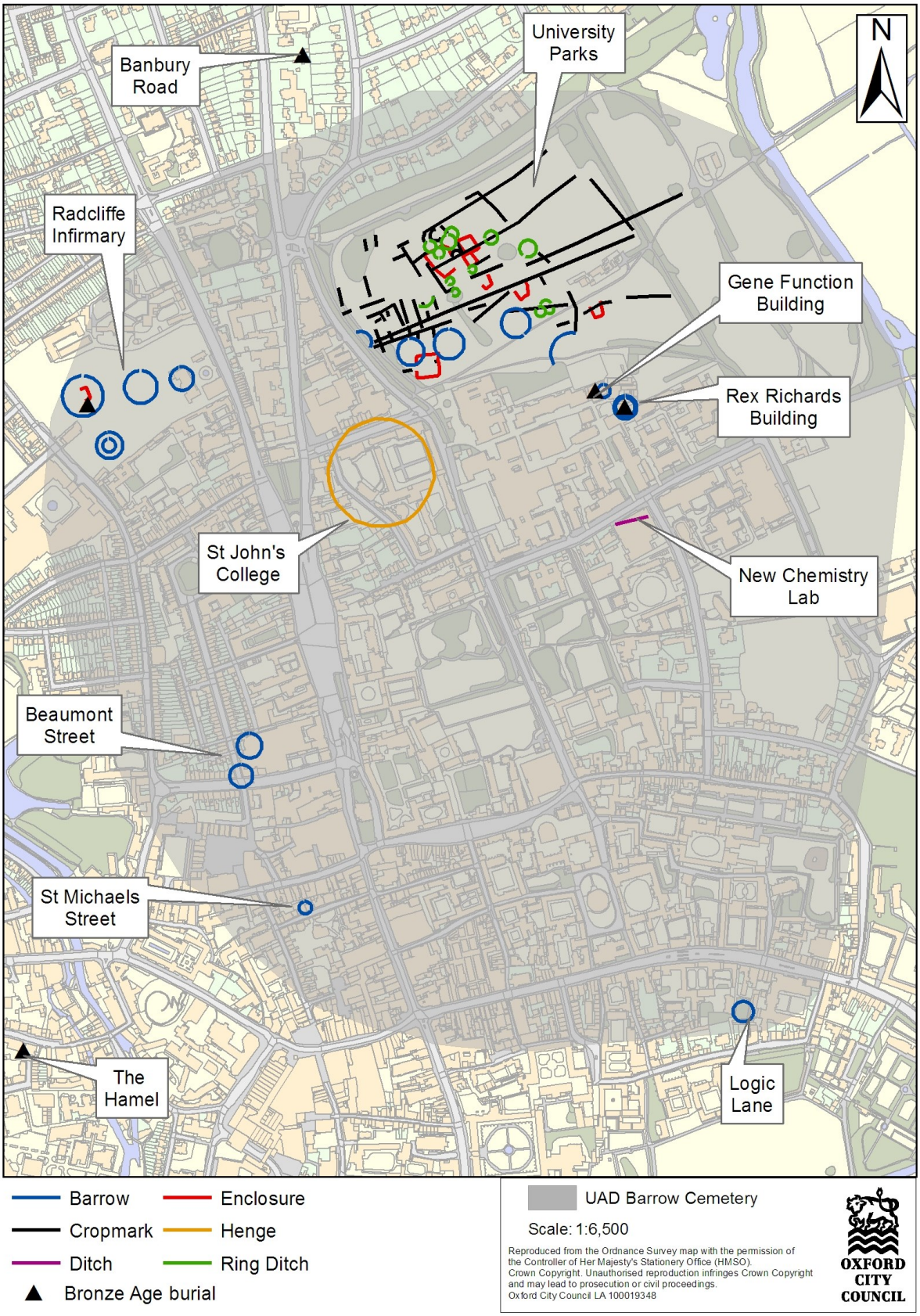


Figure 4: Known barrow sites in North Oxford (Please note the interpretation of the parch marks in the University Parks is illustrative and not archaeologically demonstrated)

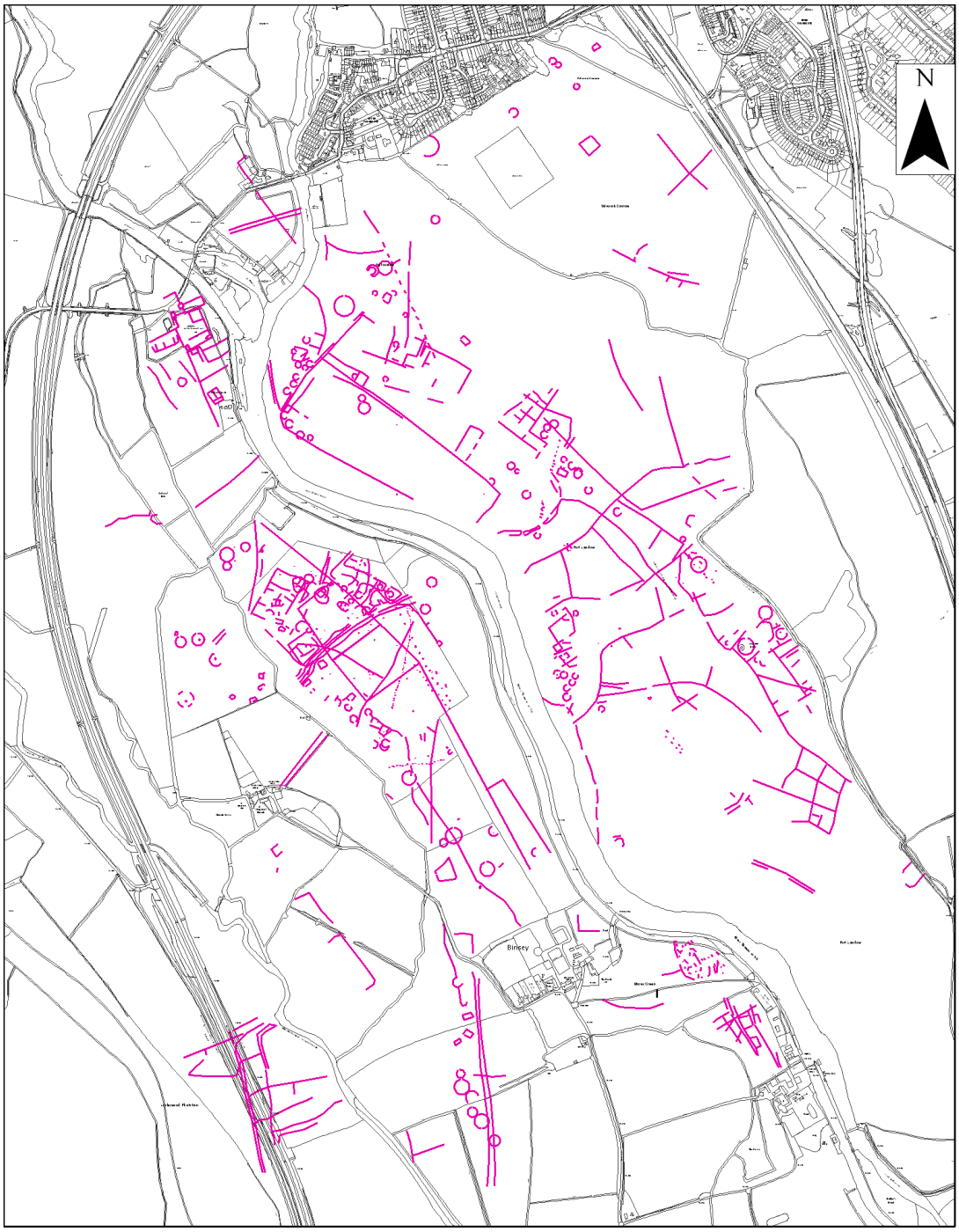


Figure 3: Parchmarks recorded from aerial photographs of Binsey and Port Meadow showing a mixture of Late Neolithic - EArly Bronze Age ritual and funerary monuments overlaid with Iron Age settlement clusters and field systems.

Scale: 1:10,657

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Figure 5: Binsey and Port Meadow Parch Marks