CHAPTER 8 ARCHAEOLOGICAL ASSESSMENT OF THE STUDY AREA AND ITS ENVIRONS

And of the British floods, though but the third I be,
Yet Thames and Severne both in this come short of me,
For that I am the mere of England, that divides
The north part from the south, on my so either sides, that reckoning how these tracts in compasse be extent,
Men bound them on the north, or on the south of Trent

Michael Drayton, *Poly-Olbion*, The Sixe and Twentieth Song, 1622

The environs for the study area is taken as a transect along the Trent floodplain from Swarkestone to the west of the study area, and Attenborough to the east. The wider environs allows consideration of the Trent's confluence zone with the Derwent and Soar, an area where significant archaeological discoveries spanning the Lower Palaeolithic to the Post-Medieval period have occurred. It is suggested below that the rich archaeological resource of this area is partly due to the confluence zone being an important communications node.

The information included in the report is derived from an SMR search for the eight square kilometre study area (Leicestershire and Derbyshire), a review of published and unpublished reports from the study area and a general search of published data for the environs. The regional and national significance of the sites and monuments in the study area is gauged against the recent regional research frameworks initiative (N.J. Cooper in prep).

The recognition of the archaeological resource in the Trent-Soar-Derwent confluence zone was initially linked with aggregates extraction. Palaeolithic handaxes were recovered from quarries in the Beeston area in the 1920s while occasional finds of Bronze and Iron Age metalwork from the Trent produced the first glimpses of the later prehistoric period (Scurfield 1997; Watkin *et al.* 1996). Aerial photography from the 1940s first began to reveal the hidden past landscapes represented by cropmark evidence on the gravel terraces. The first of the Lockington barrows was located by St Joseph in 1947 and subject to survey and trial excavation in 1954 (Posnansky 1955). Aerial reconnaissance within the study area from the 1960s led to the discovery of further barrows (Pickering and Hartley 1985) and the Lockington Iron Age and Romano-British settlement and villa (St Joseph 1961 and 1968, Frere and St Joseph 1983, Pickering and Hartley 1985), both now Scheduled Ancient Monuments. Follow-up fieldwalking survey of the two cropmarks produced both Iron Age and Romano-British pottery (Clay 1985).

Since the early 1990s the study area and immediate environs has seen much archaeological activity in relation to aggregates extraction, road schemes and proposed developments, all under the remit of PPG16. An area of the barrow cemetery was subject to evaluative and mitigative excavation in advance of the Derby Southern Bypass scheme and associated works (Hughes 2000). Noteworthy was the near-complete excavation of Barrow VI which revealed a multi-phased monument and a spectacular pit deposit of metalwork and ceramics. Two possible ring ditches seen as very faint cropmarks were confirmed by trial trenching in the same field. More recently desk-based survey, geophysical survey, field survey and evaluation have increased the size of the Lockington barrow cemetery area and the Iron Age/Romano-British settlement and associated field systems (Clark 1995; Ripper and Butler 1999).

Perhaps one of the most significant developments in recent years has been the discovery of waterlogged archaeological remains in the palaeochannels in the Derwent-Soar-Trent confluence zone. Hemington Quarry immediately west of the study area has revealed palaeochannels going back as far as the Late Glacial period. These have produced highly significant palaeoenvironmental data while the medieval channels of 9th-14th century date have preserved unique structural evidence for fisheries, bridges and river management.

8.1 Lower-Middle Palaeolithic

Although no finds of this date have been reported from the study area several artefacts have been recovered from the environs, all from gravel pits at Beeston and Stapleford parish. Wymer (1999) records 20 handaxes from the Beeston Sand and Gravel (OIS 4), one from Hemington Terrace Deposits (OIS 1-2) and one from alluvium. Some 16 handaxes and several flakes were recovered from the Tottle Brook pit (Smith 1928; Posnansky 1963). It remains uncertain whether the finds from the Beeston terrace are Devensian or earlier in date (Wymer 1999, 115). Posnansky (ibid) noted the fresh condition of some of the material from Tottle Brook pit, which might suggest that some is of Devensian age, while other pieces were rolled and would seem to be secondary deposits. The mapped Soar-Trent terraces across the study area are probably of OIS 1-2 date and have some potential for derived Lower-Middle Palaeolithic artefacts.

River confluences were favoured places for Lower and Middle Palaeolithic hunter-gatherers (Wymer 1999) and, given the finds from the Beeston terrace, it is suggested that the study area has some potential for the preservation of artefactual and ecofactual evidence for this period. The finds from the environs are among some of the more northerly European Lower Palaeolithic finds and may help to address questions of colonisation and population dynamics (Graf 2002).

8.2 Upper Palaeolithic

Early Upper Palaeolithic evidence is absent from the Trent valley, but this is not surprising as such sites are rare at the national level. While this partly reflects low population densities there is also a problem in recognising sites of this period. Early Upper Palaeolithic sites are identified on the basis of limited lithic typology, in the finding and recognition of leaf points, Font Robert points or Aurignacian type fossils (Jacobi 1980; Barton 1997). An Early Upper Palaeolithic presence in the region is well attested at Creswell Crags (Jacobi 1980), while the recently investigated site at Glaston, Leics. demonstrates the considerable potential for open-air sites in the East Midlands (Thomas and Jacobi 2001; Cooper 2001). While open sites are likely to have been detrimentally affected by periglacial conditions, these can also present some chance for preservation. Ice wedges, which were frequently seen at Hemington Quarry and on aerial photographs of the local terraces, can be repositories for early sites as demonstrated locally on the Wing to Whatborough pipeline (Graf 2002; Cooper 2002b). While only a single flake was recovered from the latter site, remarkable lithics and faunal assemblages have been reported from similar contexts e.g. Wilczyce, Poland (Fiedoeczuk and Schild 2002).

The onset of the Dimlington Stadial led to the abandonment of Britain for some 10,000 years. After the climatic amelioration of the Lake Windermere Interstadial Britain was re-colonised, but this was probably not a continuous process being affected by rapid fluctuations in climate and environment. Radiocarbon dating and distinct typological and technological differences in material culture (lithics and organic tools) suggests that the process was punctuated between 13,000 and 10,000 BP. Conventionally the material culture of this period is divided into the Late and Final Upper Palaeolithic (Barton 1997). The evidence for occupation of the Trent valley during this period is more compelling with a number of

reported later Upper Palaeolithic findspots and sites. Indeed the cluster of findspots within the East Midlands is one of the densest across the country (Jacobi 2004).

The earliest re-colonisation of Britain is associated with the Creswellian culture, dating to *c.* 12,900-12,000 BP (Barton et al. 2003), named after the cave sites at Creswell Crags on the Nottinghamshire/Derbyshire border; Mother Grundy's Parlour cave being the type site (Garrod 1926). The type fossil for this period is now seen as the Cheddar point, a trapezoidal backed blade (Jacobi 1991). A Cheddar point and possibly contemporary blades were recovered by fieldwalking from a field immediately west of the study area at SK 4662 2832, Lockington-Hemington (Cooper and Jacobi 2001). The findspot adds to the growing number of Creswellian sites in the Trent valley located by fieldwalking (Jacobi et al. 2001) including the nationally significant open-air site at Farndon (Garton 1993).

The pollen record of Northern Europe shows a change to a more wooded environment around 12,000 BP, the beginning of the *Allerod* chronozone. The distinctive lithics associated with this phase are the *federmesser* (convex backed blades) including a variant, the penknife point (shouldered, convex backed blade). *Federmesser* technologies appear across much of northern Europe and are probably linked to Azilian industries from southern Europe (Schwabedissen 1954). A *federmesser* from Castle Donington, Leics. (Cooper and Jacobi 2001) is the only certain Final Upper Palaeolithic finds from the study area environs, although other findspots are known within the Trent Basin (Jacobi *et al.* 2001).

The study area has great potential for Late Devensian palaeochannels. At Hemington Quarry eastern extension a truncated channel base produced radiocarbon dates of 11,735 ± 75, 10,960 ± 110, 11,725 ± 80 and 11,775 ± 80 BP (Cooper and Ripper 2001; Greenwood et al. 2003, 648). Another Late-glacial channel at Hemington Quarry (western extension) has produced similar dates (Cooper and Ripper 2001, 141; M. Greenwood, pers. comm.). The latter channel was of note in having a surface expression. The silted palaeochannels contained well-preserved organic remains including cold-climate caddis fly larvae and Greenwood *et al.* (2003) have demonstrated their usefulness as proxy climatic indicators in local and regional palaeo-environmental reconstructions. While there is an absence of Upper Palaeolithic finds from the study area there is considerable potential for their survival on the terrace deposits. Should any such sites have been preserved by alluvium they would be regarded as nationally significant.

8.3 Mesolithic

Mesolithic material is reported from several flint scatters within the study area (LE 4714, 7095, 7096, 7097, 7120), though none of the scatters have been as large as those seen at local upland sites. However, it should be noted that the identifications are based upon technological criteria; there are no typological identifications. Furthermore, the Leicestershire SMR has a tendency to record blade-like flakes as of a general Late Mesolithic – Early Neolithic date e.g. LE 7120. Repeat fieldwalking of the area has further sampled the scatters and the author has reported on this material. There are some Mesolithic debitage pieces in the collections, i.e. showing bladelet technology, but the evidence is slight. However, the fieldwalking within the study area was undertaken at 20m intervals a method not conducive to the location of small scatters.

A remarkable find of a Late Mesolithic antler harpoon from just north of the study area at Long Eaton, Derbs. or Thrumpton, Notts. (Knight and Howard 2004, 38) hints at the likely lost valley bottom sites. Systematic fieldwalking elsewhere in the Trent Valley has shown a widespread occurrence of sparse Late Mesolithic material, but Early Mesolithic material was apparently absent. However, an Early Mesolithic assemblage was reported from excavations at Swarkestone Lowes and, when considered within the Trent Valley context, was described as a rare resource (Jacobi and Garton 1999).

Palaeochannels of early Holocene date within the environs have been sampled. The potential for channels being archaeological repositories is highlighted by the recovery of a Late Mesolithic human femur from Staythorpe, Notts., a find that has allowed some real consideration of Mesolithic economy in the Midlands; stable isotope analysis showed that the female had subsisted on a diet rich in animal protein but lacking evidence for consumption of fish and marine food (Cooper, 2004).

8.4 Neolithic – Mid Bronze Age

The Middle Trent has a remarkable Neolithic ceremonial landscape within the confluence zone between the Dove and the Erewash[1]. Early Neolithic monuments are generally sparse but possibly occur in the environs of the study area at Barton in Fabis where an interrupted ditch system, a likely causewayed enclosure, is juxtaposed with a possible henge site (Harding with Lee 1987, 221; Deegan 1999). Another cropmark site is the probable henge at Round Hill, Twyford and Stenson (Harding with Lee 1987, 116).

Middle Neolithic monuments closer to the study area include the cursus monument at Aston, Derbs., first identified by aerial photography in 1966 (St Joseph 1966). The monument incorporated an earlier ring ditch (round barrow) along its western side while other associated ring ditches might be later additions (Gibson and Loveday 1979). The excavations of Aston I confirmed this to be an Early Bronze Age monument though earlier Neolithic features and artefacts were revealed beneath the mound (Reaney 1968). The NE-SW alignment of the monument is a common trait with cursus and similar monuments such as long mortuary enclosures. Such alignment has been claimed to represent positioning with respect to the solar calendar (Field 1999), although reference to other elements of the natural environment may have also occurred (Brophy 1999; McOmish 2003).

Some 70m west of the study area there is an enigmatic cropmark at the Lockington barrow cemetery (Rookery Lane) that plausibly could be a cursus terminal, or part of a long mortuary enclosure. This was first reported by Pickering and Hartley (1985, 37, fig 2), although the feature was not assigned to a particular monument class[2]. The faint cropmark comprised two parallel ditches some aligned NE-SW with a rounded terminus at its southern end. There is another possible cropmark that deserves mention; just to the west of the study area, near to the barrow excavated by Posnansky (1953), is a possible concentric pit circle (though slightly oval in plan). Pit circles have been recorded at Rearsby and Oakham, the latter excavated by Clay (1998) revealing a multi-phased monument of Late Neolithic and Early Bronze Age date. Both of these features are potentially significant additions to the ceremonial landscape at Lockington-Hemington and both urgently require further work to clarify their character and date.

The Lockington barrow cemetery just extends into the western edge of the study area. Posnanky (1953) partially excavated the first known barrow showing that it had a remnant mound. A central cremation burial had grave goods that included a bronze knife, bronze awl, a barbed and tanged arrowhead and three plano-convex knives (ibid). It is of some interest that the flintwork was all heat damaged.

Subsequent aerial survey recorded further ring ditches; Pickering and Hartley (1985) recorded seven examples including one enclosing a pit circle, and a concentric monument. Barrow VI was subject to an evaluation ahead of works associated with the Derby Southern Bypass and eventually full excavation

[1] A wider environs is considered necessary here to provide the landscape context of the study area.
[2] The feature could not be seen on the aerial photographs searched by the author. The feature is plotted in slightly different locations by Pickering and Hartley (1985) and Meek (2003).

(Hughes 2000). This revealed a remarkably complex monument: initially the site was demarcated with a palisade. An adjacent pit contained a remarkable group of deposits including substantial parts of two beaker vessels, a large copper dagger and two gold bracelets (ibid). Organic residues on the dagger produced radiocarbon dates of 2580-2200 and 2190-1880 cal BC, the latter date best fitting the typology of the dagger. Pre-mound activity has been interpreted as a pyre site but there was no evidence for burials associated with the pit deposits or the mound. The site identified as Barrow V by Pickering and Hartley (1985) was also subject to full excavation, revealing a pit group rather than a ring ditch (J. Meek in Hughes 2000).

The extent of this Late Neolithic - Bronze Age ceremonial landscape has greatly increased in recent years following more intensive assessment of aerial photographs, geophysical survey and fieldwork. Meek (2003) identified 27 possible Neolithic-Bronze Age monuments[3] while the present study adds a further four ring ditches and the afore-mentioned possible concentric pit circle. The 23 known or probable ring ditches are widely distributed, three km east-west by two kilometeres north-south, and might be classified as an 'area cemetery'. However, there is distinct clustering of Lockington sites 1-10, with a sub-group of seven aligned WSW-ENE[4]. The more northerly barrows also appear to be a distinct cluster and might better be termed the Hemington barrow cemetery. However, as much of the area between the two groups has been quarried this might be more apparent than real. A more systematic search of the older air photographs might be useful to assess the areas lost to gravel extraction and the construction of the M1.

Perhaps the most significant result of the recent fieldwork has been to demonstrate the survival of some barrows and associated features beneath alluvial cover (Ripper and Butler 1999). In contrast to the examples revealed by aerial survey, where long term ploughing has levelled and truncated monuments, the sub-alluvial barrows have excellent preservation potential. Deeper cut features such as graves, pits, shafts and enclosing ditches may well preserve organic remains. The location of the sub-alluvial monuments in and adjacent to the study area should be a priority for future research. The excavations at West Cotton, Raunds highlights how nationally significant monument complexes can be masked by alluvium (Windell 1989).

While the conspicuous Neolithic and Early Bronze Age monuments have gradually been revealed in recent years, there has been little evidence of Mid-Late Bronze Age cemeteries. It would be surprising if these did not exist. While many secondary cremation burials in barrows may have perished with the plough, some flat cemeteries can be anticipated. At Eye Kettleby, on the river Wreake, almost 100 cremations were recovered in a flat cemetery (N. Finn pers. comm.). There are numerous small cropmark features in the field containing the barrow excavated by Posnansky (1953) and it is quite plausible that these might be later cremation burials. The 1756 Gentleman's Magazine reported the discovery in Kegworth of ten earthen pots containing bones which fell to pieces when touched (Meek 1999).

As well as the fine metalwork deposited in and around barrows there is an increase in deposition in watery places in the study area environs (Scurfield 1997), mirroring a national picture of depositional translocation during the Bronze Age. The Middle Trent has provided several loci for Bronze Age metalwork clusters recovered from old channels or dredging of the modern Trent (Scurfield 1997). The study area lies between two such clusters at Attenborough (ibid) and Aston on Trent (Salisbury 2004). The Attenborough finds include Early and Late Bronze Age bronze artefacts, but the majority are Mid Bronze Age in date. A sword of this date was recovered from the Trent at Ratcliffe on Soar immediately east of the study area (Scurfield 1997, 54)

[3] 'Ring ditch' sites 26 and 27 are now known to have been infilled ponds while the 'henge' site 25 appears to be a palaeochannel.
[4] Four ring ditches exactly aligned, the remaining three very closely.

The Aston on Trent site has been very prolific producing 12 bronze artefacts from probable lake deposits including rapiers and axes dating from the Mid to Late Bronze Age (Salisbury 2004). A stone and timber structure, possibly a causeway, has also been dated to the Middle Bronze Age. The structure was at least 12 x 50m and comprised irregular rows of oak piles (250-300 in total) stabilised by brushwood and quarried Mercia mudstone blocks, probably from outcrops at Weston Cliff or Kings Mill, some 2km upstream. The structure might be compared with similar structures at Flag Fen, Peterborough and in the Witham Valley (Salisbury 2004). Two Middle Bronze Age logboats have also been recovered from the Aston Lakes, one of which contained a cargo of quarried stone blocks. Another metalwork cluster recovered from the Trent at Clifton in the 1930s included 22 bronze artefacts. The site also produced many wooden piles, boats and human skulls, all undated but quite feasibly associated (Scurfield 1997).

While the monumental archaeology is rich in the study area and environs, any evidence for contemporary settlement is sparse, mirroring the national picture. Several flint scatters from the study area and environs have produced diagnostic Late Neolithic - Early Bronze Age artefacts (LE 4657, 4714, 4724, 7625, 8053 & 9715). Of these the larger scatters with wider ranges of tool forms might be the best indicators for settlement. A large pit containing Peterborough Ware was located during an evaluation at Warren Farm (Ripper and Butler 1999) while other Late Neolithic features have been recorded in the environs at Castle Donington .

Late Neolithic palaeochannels at Hemington Quarry (eastern extension) provided palaeoenvironmental indicators of a cleared floodplain with evidence for use as pasture (Beamish *et al.* 2002). Nearby woodland was mixed oak and hazel, while lime and elm probably occurred on the higher ground. Rising up the profile were indications of further clearance and increasing cereal cultivation. A slightly later palaeochannel produced further evidence for an open environment of grassland. A section of wattle panel, interpreted as a fishweir fragment, produced a date of c. 3600-3300 Cal BC, making it the earliest known in Britain[5] (Clay and Salisbury 1990).

Many Neolithic channels in the Middle Trent have produced so-called 'bog oaks', often providing the dating and locational evidence for the channels (Salisbury *et al*. 1984). These have been seen as indicative of clearance of the wildwood from the valley, that is the result of soil erosion (Knight and Howard 2004, 51). An example was observed in the Warren Farm pit during the fieldwork stage of this project.

8.5 Late Bronze Age – Iron Age

The later prehistoric period sees a rise in the archaeology of settlement across the Middle Trent area, with a trajectory away from the previous ceremonial landscape and 'towards an enclosed landscape' (Knight and Howard 2004). The large corpus of archaeological data from this period in the study area environs allows some generalisation for this landscape development (ibid; Clay 2002; Willis forthcoming). At the start of this period open settlements, often just single buildings, occur in a landscape that has started to be 'marked out' by pit alignments. The earlier ceremonial monuments are often referenced by the pit alignments showing that they still played an important role defining the physical landscape. From the Middle Iron Age settlements start to be bounded by small enclosures while by the beginning of the first millennium AD the landscape has been fully enclosed (Willis forthcoming).

[5] However, there may have been problems with the radiocarbon date nb the Current Arch article on the 'Bronze Age' date for the Hemigton mill dam site, later re-dated to the medieval period.

Late Bronze Age – Early Iron Age structures have been recorded from the environs at Swarkestone Lowes (Guilbert and Elliott 1999), Willows Farm, Castle Donington and Hemington Quarry, Castle Donington (Cooper and Ripper forthcoming). Each site has produced only single buildings, each of distinctive post-ring construction. Postholes and gullies of probable Early Iron Age date were recorded at Red Hill, Ratcliffe-on-Soar immediately east of the study area (Elsdon 1983). Later prehistoric lithic scatters have been found at Willow Farm (pers. obs.), comprising small scatters demonstrating squat flake technology and a high tool index dominated by piercers and scrapers, often with linear retouch.

Pit alignments occur across much of the environs and within the study area itself. These are dated conventionally to the later prehistoric period although a longer currency into the Roman period may occur (Deegan 1999). Knight and Howard (2004, 104-5) suggest that the dating evidence for such monuments in the Trent Valley indicates a relatively late development, concomitant with the development of an enclosed landscape. An alignment at Willows Farm, Castle Donington was undated but LBA and Iron Age pottery was recovered from features adjacent to a gap in the alignment. None of the monuments within the study area has produced dating evidence.

There is a large settlement complex within the study area that is conventionally interpreted as an Iron Age nucleated settlement (Clay 1985; Clay 2004; Liddle 1982) although essentially the complex remains undated and, arguably, much of its more regular layout may be of Romano-British date (see below). Certain earlier elements are apparent such as some of the pit alignments and the smaller enclosures that lie uncomfortably with the later settlement. The current study has allowed a re-interpretation of the latest 'phase', that is an extensive co-axial settlement flanking a major Roman road (see below).

To the north of the large settlement there are indications of Iron Age and early Romano-British settlement from a small field scatter (LE 4721). The scatter straddles the Roman road but may also be related to a faint cropmark in the field immediately to the east, which appears to represent a D-shaped enclosure with a roundhouse towards the centre. The sites provide proxy-dating evidence for the underlying channel(s).

There is some continuation of metalwork being placed in watery places into the Late Bronze Age e.g. a sword was recovered from gravel working at Church Wilne, just north-west of the study area (Hughes 1998, fig 18). These depositional practices appear to end in the Early Iron Age but there is some resumption of ritual deposition in watery contexts in the later Iron Age. The Ratcliffe-on-Soar shield was found *c.* 500m east of the study area and is thought to date to *c.* 300 BC (Watkin et al. 1996). The quality of the metalwork led to it being described as standing 'at the head of a series of British masterpieces unsurpassed in Europe' (ibid. 27). The deposition of metalwork in this area might be related to the proximity of the suspected Iron Age religious site at Red Hill, immediately east of the study area (Elsdon 1983). Of course, it may also indicate the former presence of a ford at this location (Palfreyman and Evans 2003). The Red Hill cliffs at Ratcliffe-on-Soar with their colourful striped appearance (red clay and gypsum) are a dramatic sight rising from the wide Trent floodplain and it is not too difficult to imagine how it may have been deemed a special place. There is good evidence for a Romano-British temple site at Red Hill and it has been suggested that this developed from a late Iron Age shrine site (Elsdon 1983; Palfreyman and Evans 2003).

8.6 Romano-British

There are significant Romano-British sites both within the study area and its immediate environs, that is respectively, the villa complex at Lockington and the 'small town' at Redhill, Ratcliffe-on-Soar, both having clear origins as significant Iron Age sites (Liddle 1982; Elsdon 1982). The current study has

presented fresh evidence for a Roman road passing through the study area and it would appear that the co-axial elements of the so-called Iron Age settlement are actually Romano-British.

A Roman road (Margary 182) from Little Chester (Derventio) to Sawley passes into the study area north of the modern Trent (Margary 1967, Dool 1985). The line of the road in Sawley is that of Draycott Road with a continuation beyond the modern junction with the B6540, Tamworth Road. The line would appear to turn slightly following the property boundary to Grounds Farm and the river (a slight earthwork is shown on the OS map for part of this stretch). This takes one to the Billystones ford, a known crossing point until the 18th century. While Margary (1955) believed the Derby-Sawley road terminated at the river, implying a port in the area, a crossing point and a southern continuation has been postulated (Liddle 1982; Lycett 1999; Palfreyman and Ebbins 2003).

Liddle (1982) speculated that a route existed between Redhill and Leicester and Lycett (1999) has presented a convincing case for its course, from Leicester passing through the Charnwood uplands via Anstey, Shepshed and Long Whatton into the Soar/Trent floodplain through Kegworth into the study area, i.e. Long Lane, Lockington. The Leics. SMR suggests that the route continues beyond the modern T- junction, progressing to the Soar. Immediately north of this speculative crossing point there is a report of a layer of cobbles halfway up the riverbank, feasibly the remains of a road. However, the straight route of Long Lane is that of the turnpike road; Hartley (1984) plotted the lane overlying and cutting across the grain of ridge and furrow along its course. However, it is tempting to suggest a crossing to Red Hill in this vicinity; the historical crossing of the Soar is located in this area.

A more speculative proposal for a southern route has been made by Simon Marchini (http://www.btinternet.com/~simonmarchini/History/History_Measham.htm) suggesting that the Roman road linking Tamworth and Measham might extend to Sawley. He points to the straight parish boundaries, nearly 5km long, between the villages of Diseworth, Castle Donington and Lockington-Hemington and a land parcel in Lockington called King Street plantation; such names often indicating Roman roads (Margary 1967). The parish boundary of Castle Donington and Lockington-Hemington eventually kinks to the northeast and then follows the line of the Tipnall Bank. One might speculate that this could this have been the remains of a Roman road extending to the aforementioned crossing point in the study area.

The present study has presented strong evidence for a major Roman road heading north to the crossing point of the Derventio road. The afore-mentioned King Street Plantation actually lies on the parish boundary of Lockington-Hemington and Kegworth, *between* the two postulated routes mentioned above. Meek (1999) noted that 19th century documents refer to four adjacent closes called First King Street, Far King Street, King Street and King Street. The appellation can be given to Roman roads. The parish boundary here has a relative straightness. Indeed the straight line can be traced southwards to the northern parish boundary of Belton, with one slight kink. Projected northwards the line continues into the study area and is fossilised as Warren Lane. This continues to the north as a trackway to Cliff Farm. The most convincing evidence for the route is the co-axial arrangement of the large cropmark site flanking the postulated route. The terminus is remarkably close to the aforementioned Billystones ford site, the likely crossing point of the Derventio road, and passes through the Iron Age and Romano-British scatter of LE 4721.

The cropmark (Pickering and Hartley; Clay 1985) and geophysical survey (Ripper and Butler 1999, 102) show an extensive site flanking the postulated road, comprising co-axial trackways and field boundaries. To the east there is a parallel track some 100m from the road line, partly defined by double pit alignments and/or ditches. There are *c.* 20 roundhouses in this area, but it uncertain if they are contemporary or represent earlier settlement. The western side of the roadside settlement, recently revealed by geophysical survey, has many small enclosures that may represent paddocks. The dating evidence for the scheduled site is limited to Iron Age and Romano-British pottery recovered from the

surface. However, to the west and south, evaluation trenches have provided Roman dates for associated features. The site would appear to extend further south beyond Ratcliffe Lane but the cropmark evidence is poor, possibly due to alluvial cover. Further geophysical survey of this area could prove fruitful.

Lockington villa (SAM 140), just east of the afore-mentioned settlement, comprises the well-defined cropmark site of a corridor villa within a trapezoidal enclosure with associated buildings and structures including two large barns (Frere and St. Joseph 1983; Clay 1985; Pickering and Hartley 1985). Fieldwalking survey across the villa complex produced pottery of 2nd-4th century date, while limited excavations by Deaney produced pottery of a similar date (Clay 1985). The cropmark indicates that the walls of the complex have been robbed of masonry.

A rectangular earthwork at Sawley (SAM 228) just to the east of the Derby-Sawley road 'terminus' has been claimed as a small fort (Todd 1968). The earthwork was investigated by the Derbyshire Archaeological Society revealing a near square enclosure of 0.61 ha with a possible western entrance, but secure dating evidence was not found (Deegan 1999). The SMR records that medieval pottery was recovered from a section, but there are no details. There are two other earthworks also in the study area, the Bull Ring (LE 4719), a small rectangular raised platform with a surrounding ditch and the raised platform of Cliff Farm. These are both interpreted as later features.

8.7 Anglo-Saxon

On place name evidence it is assumed that both Hemington and Lockington were established in the late Anglo-Saxon period. Early Anglo-Saxon settlement evidence is recorded from the environs at Willows Farm and Hemington Quarry, both in Castle Donington parish. Two post-built halls and a sunken featured building were excavated at Willows Farm (Coward and Ripper 1999) while at Hemington Quarry two small, post-built structures of sub-square plan were excavated (pers. obs.). An Early Anglo-Saxon pottery vessel from an associated pit provided the only dating evidence for the latter site. Small buildings of similar form were recorded at the large Anglo-Saxon site of Eye Kettleby, Leics. where the excavator interpreted them as bothies; they occured away from the settlement areas, as defined by numerous post-built halls, within a craft-working area. It might be speculated that the Hemington Quarry structures were used for temporary occupations such as task-specific seasonal waterside activities such as fishing or withy harvesting.

Within the study area the evidence for Early Anglo-Saxon settlement is limited to a small number of sherds recovered by fieldwalking (LE4713). A small number of Early Anglo-Saxon sherds were reported from Red Hill (Palfreyman and Ebbins 2003) and a larger assemblage has also been recovered (N. Cooper, pers. comm.).

Anglo-Saxon exploitation of the river is well documented in the Middle Trent with fishweirs recorded at Colwick, Notts. and Hemington Quarry. At the latter some 46 fishweirs have been reported, although many of the observations were limited to fragments showing in the quarry faces. However, four recent examples were subject to more controlled excavation and have provided unique evidence for fishing methods and technologies in inland Britain (Cooper 2003). Radiocarbon dating of the fishweirs shows a chronological range from the 8th-12th century (Brown and Salisbury forthcoming; Cooper 2003).

It is quite likely that there would have been a crossing point of the Trent in the vicinity of the study area. Doomsday mentions a ferry at the Weston estate, one of only two along the Trent. Several Saxon cross fragments have been located in the northern part of the original Hemington Quarry and it might be speculated that these were once way-place markers for a crossing point.

8.8 Medieval

The study area lies within the prime champion landscape of the Trent Valley. Much of the area to the south of the Trent comprises part of the open field system of Lockington, the settlement focus being off the floodplain to the south of the study area. Hartley (1984, map 2) has partly mapped the field system from cropmarks and earthworks of the ridge and furrow. To the north of the Trent is the parish of Sawley and the medieval core of the settlement lies within the study area but this is mainly covered by modern development.

The SMR has few records for the study area but there is great potential for archaeological remains in medieval palaeochannels of the Trent and Soar. The Lockington estate map of 1849 (LRO Ti/202/1) shows that the northeastern extent of the modern parish was originally part of Sawley, reflected in the name of Sawley Cliff Farm. The palaeochannel in this vicinity would appear to be an oxbow of the old Soar. The calendar of Patent Rolls for 1402 mentions an avulsion episode for the Trent between Sawley and Lockington (Clay and Salisbury 1990), but this probably relates to the Sawley loop.

Archaeological work at Hemington quarry has demonstrated the incredible potential for preserved riverine structures from this period and some discussion of this evidence aptly demonstrates such potential. An important bridge crossing along this stretch of the Trent was located at Hemington *c.* 1km to the west of the study area (Cooper *et al*. 1994; Cooper 2003). The crossing linked Derby and the north with Leicester and the site, effectively the major route now known as the A6. Three successive bridges were excavated at Hemington Quarry between 1993-8. The earliest was a timber bridge constructed in 1097 and partly rebuilt *c.* 1111, evidently due to severe flood damage. The bridge was superseded by another timber structure in the later 12th century that in turn was replaced by a large masonry bridge in 1240/1. Each was built slightly upstream of its predecessor, demonstrating the importance of the crossing location. Documentary and proxy archaeological evidence suggest that the bridge crossing was redundant by *c.* 1311/12 when the Wilne Ferry was established, near the site of the modern crossing at Cavendish Bridge (Courtney forthcoming; Cooper 2003). The Sawley Ferry was established in 1321, possibly also reflecting the loss of the Hemington bridge crossing (Cooper and Ripper forthcoming). This was probably located at the site of the modern crossing of Harrison Bridge, in the northwestern corner of the study area.

Another class of monument recorded at the quarry was the 'shoot'. Salisbury (1985) described surviving 18th century 'shoots' (from the waterman vernacular) along the Trent, these being bankside works of stone and timber designed to protect the banks from erosion (their name derived from the local waterman vernacular). Up to six examples of 'shoot' structures have been recorded from the right (Leicestershire) bank of the medieval channel (Cooper & Ripper 2000; 2001) several dated to the 1320s (R. Howard, pers. comm.). It is suggested that the shoots were near-contemporary measures to protect the eroding right bank of the medieval river. The associated channel was traced for almost 500m, showing evidence for dynamic bank erosion (clasts of anaerobic clay from silted palaeochannels) and deep scouring, cutting through Devensian gravels, occasionally into the Mercian mudstone below. The evident dynamism of the channel would seem to reflect the national picture of climatic downturn seen in the period 1310-30 when severe winters caused damage to bridges almost every year (Brown *et al*. 2001) and, as suggested above, probably destroyed Hemington Bridge III and led to channel avulsion.

Hemington Quarry has also revealed rare structural and artefactual evidence for inland fishing in the form of 46 fishweir structures, numerous anchor stones and several fish traps (Salisbury 1991; Cooper 2003). A large weir structure (HL12), possibly a 'fixed engine' fishery was associated with fish baskets up to 2m long (Cooper 2003). However, the structure bears some resemblance to the 12th century mill dam excavated in 1985 (Clay and Salisbury 1990). The apparent demise of fishweirs from the 12th century may reflect the changing use of the river with water mills exacting greater control over the river.

8.9 Post-medieval

The Lockington estate has been described as old enclosure by Nichols and the open field system was likely to have been enclosed between 1601 and 1607 (Beresford 1948, 109). Warren Farm probably dates to this period (Smith and Ripper 2000) but its early status is uncertain. The early 18th century saw major investment in the road networks and much of the medieval landscape of the study area was lost to the new turnpike routes and enclosure. The study area was traversed by several major routes at this time, the Derby-Leicester road (modern A6) and the Tamworth-Sawley road (B6540). By the 18th century the respective crossings for these routes were bridges, Cavendish Bridge (1758) and Harrington Bridge (1788) across the Trent, each being the site of earlier ford and ferry crossings. The river crossing at Ratcliffe on Soar remained a ford until the construction of the Kegworth to Nottingham road (A453).

The 18th century also saw the rapid development of water transport with works to make the Trent navigable in the early 18th century, followed by the Soar Navigation and the Erewash Canal later in the century. There was a customs house at Cavendish Bridge and, in the study area, associated wharf development at Sawley. By the 19th century the area had several farms including Lockington Grounds Farm, Warren Farm and Long Lane Farm and, in Sawley, Grounds Farm. Warren Farm was a fine example of a model farm and was fully recorded prior to demolition (Smith and Ripper 2000). This agricultural landscape remains but has been further impinged upon by modern transport (M1 motorway, A453, A50), development (Sawley Marina) and mineral extraction.

8.10 Geomorphology and the archaeological resource

The archaeological resource within the study area has been identified though consulting the SMR databases at Leicestershire and Nottingham County Councils. This SMR search creates a 'known' archaeological resource, containing data on the location, morphology and in some cases dating evidence, of the archaeology. Conversely, the study area also has an 'unknown' archaeological resource, which is comprises of the undiscovered archaeological artefacts and sites. The known archaeological resource has been identified due to the 'visibility' of the sites and artefacts to conventional methods of archaeological detection. Such site detection methods are principally air photography and fieldwalking.

The BGS drift geology map provides the basis for describing the relationship of the archaeology to the geomorphology, labelling one area of older Devensian terrace (terrace 2), with younger Holocene drift geology making up terrace 1 and the modern floodplain (Fig. 8.1). The archaeological resource can be plotted against the LiDAR last pulse DTM to investigate patterns of the archaeological resource related to the terrace sequence (Fig. 8.2). The archaeological resource is plotted by method of investigation and two clear trends come out from the data. The 'known' archaeological resource effectively clusters on terrace 2. On terrace 1 and the modern floodplain there are six SMR entries, compared to nineteen entries on the much smaller area of terrace 2.

The method of identification highlights a second key trend. The greater number of SMR entries located on terrace 2 have been identified through three methods. Ten sites have been identified through cropmarks, seven sites from surface finds and two sites through excavation. This can be compared to the known archaeological resource within the Holocene deposits, which have identified two sites through earthworks, three sites from surface finds and only one from cropmarks.

The geomorphology of the terrace 2 deposits provides the explanation for the distribution of the known archaeological resource. The GPR investigations on terrace 2 have shown the terrace has a thin layer of alluvium overlying deep gravels deposits. The shallow alluvium (circa 40cm and often less) has meant the archaeological resource contained within it is visible. Much of the alluvium covering the terrace 2 gravels is within the plough zone. Therefore, archaeological structures can affect plant growth, identifying archaeology as cropmarks. The ploughing action has also disturbed artefacts allowing identification through surface survey/field walking.

The known archaeological resource in the Holocene deposits consists of one human skull as a surface deposit (SMR number 4683, terrace 1) but it is thought to be a disturbed deposit from stream dredging. The one cropmark (SMR 22595) was identified though a spectral air borne scanner. The two earthworks include a possible Roman Fort on terrace 1, although the site is more probably a post medieval enclosure (SMR 4719) and also a post medieval farmstead (SMR 4716). Of potential significance is a pottery spread of Iron Age/Romano-British (SMR 4721) located on terrace 1.

The known archaeological resource can also be plotted by the period of each site (Fig. 8.3). The Devensian terrace has a diversity of prehistoric sites and find locations, such as the Lockington Villa complex (Fig. 8.4). Whilst the terrace 1 deposits do not have such a visible archaeological record there are reasons to expect that terrace 1 has a significant archaeological resource. Terrace 1 has an Iron Age/Roman pottery scatter located on it. A second site not listed on the SMR database is visible as a cropmark (Fig. 8.5). Although there has been no dating evidence on this site its morphology (a D shaped enclosure) does suggest a Late Iron Age/Roman date. These two sites are strong evidence for later prehistoric/Roman activity and possible settlement on Terrace 1.

The reasons for the apparent invisibility of the archaeological resource on terrace 1 relates to riverine erosion and alluvial deposition on the terrace. Major channels have eroded away substantial areas of terrace 1. In this process, areas of the archaeological resource will have been destroyed. Secondly, as shown through Fig. 8.4, some archaeology has been buried by alluvial deposition. For example the GPR transect T1T1 showed the alluvial deposition from T1C5 that has partially buried the D shaped enclosure T1C5.

This process of alluvial deposition on terrace 1 was also discovered through the T1G1 survey, on a fragment of terrace 1 adjacent to a palaeochannel. In this instance over 1.4m of alluvial deposition was discovered before the terrace 1 gravels were discovered. The quarry transect (T1QT) also demonstrated that areas of terrace 1 will have substantial levels of alluvial deposition on top of the terrace gravels. Therefore, it is suggested that specific areas of terrace 1 will have a high archaeological potential dating back at least to the later prehistoric period, due burial and preservation under more recent alluvial deposition.

The archaeological potential on the modern floodplain is likely to be lower than terrace 1. Although the date range of the modern floodplain is not known, the level of alluvial deposition onto gravels was shown to be generally shallow (survey MFG1). Considering this factor plus the younger age of the modern floodplain compared to terrace 1 (although neither are dated) the archaeological potential is considered to be lower. However, this does not preclude the possibility of significant archaeological remains on the modern floodplain, giving that the age of the modern floodplain has not yet been absolutely dated (see chronostratigraphy Chapter 9).

Fig 8.1: The study area mapped by geological stage.

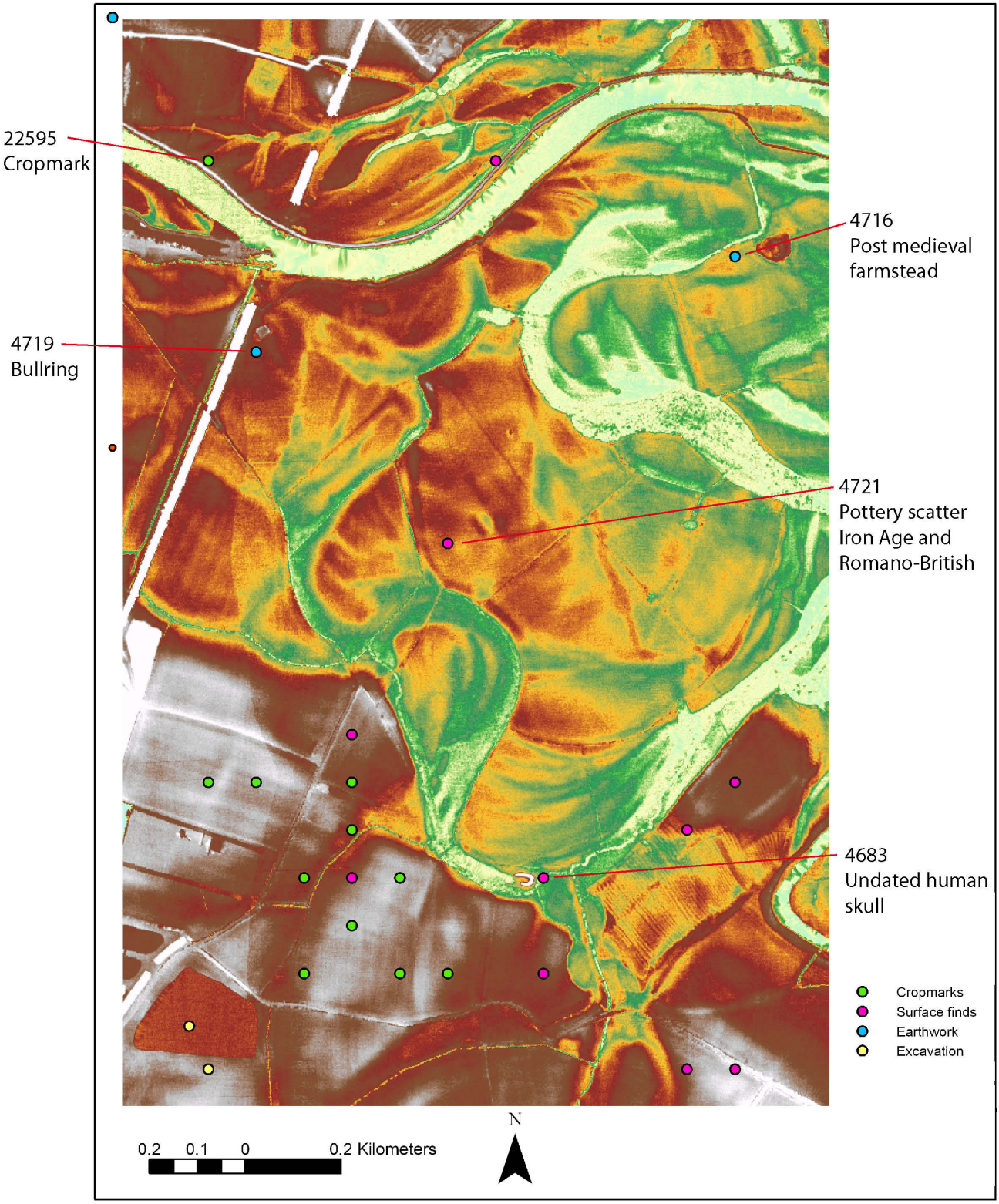

Fig 8.2: The archaeological resource plotted by its method of investigation, against the LiDAR last pulse DTM.

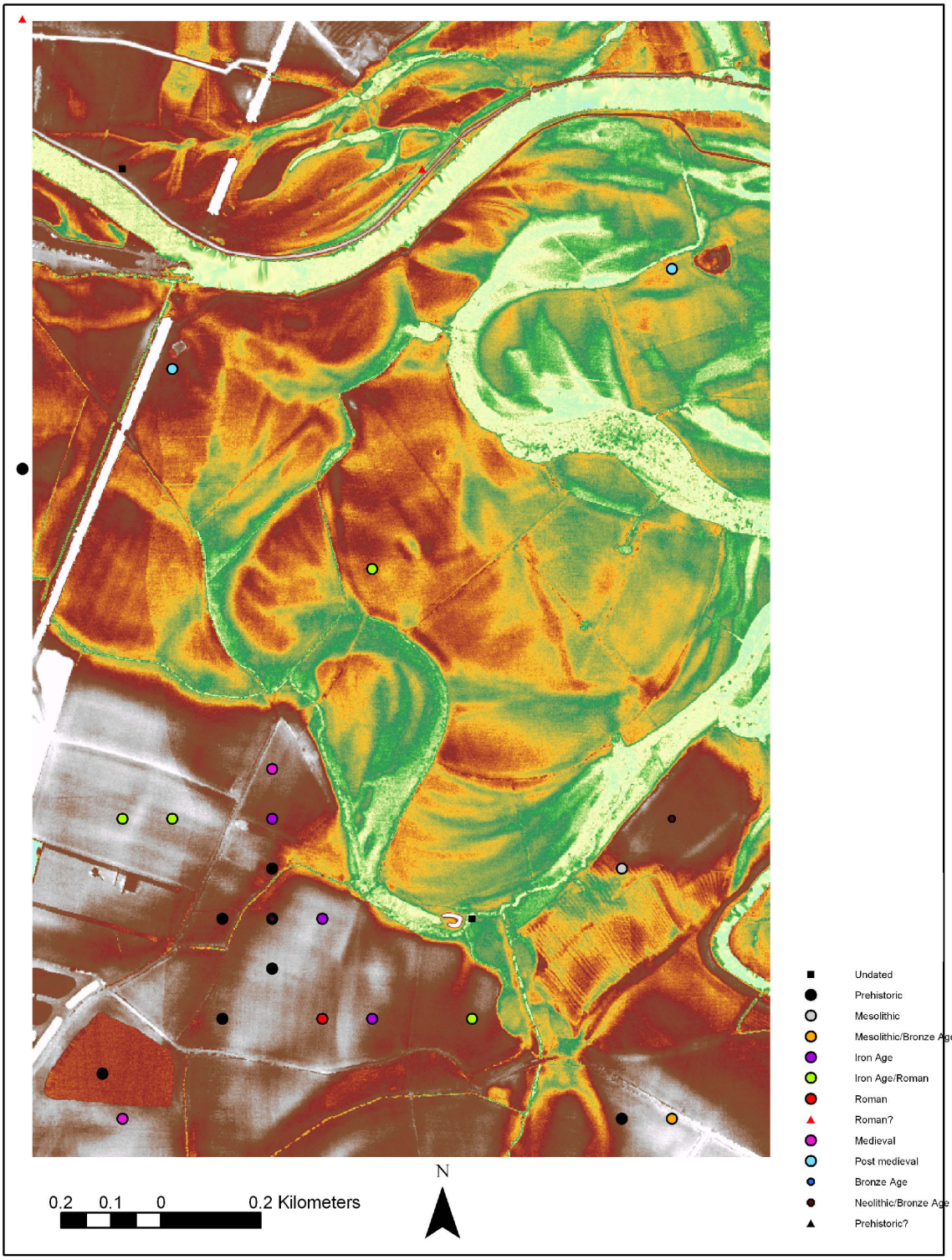

Fig 8.3: The archaeological resource plotted by period.

Fig 8.4: The 'Lockington Villa' complex within the study area. The complex contains a wealth of archaeological features, which are interpreted as dating from a range of periods, from the later prehistoric through to the Romano-British and possibly, post Romano-British periods. The complex is located on the Devensian terrace 2.

Fig 8.5: The cropmark enclosure on terrace 1. Although the enclosure is undated its morphology suggests a later prehistoric/early historic date.

8.11 Conclusions

The Trent-Derwent-Soar confluence zone, is an area with demonstrable, abundant archaeological remains from the Palaeolithic to the present while the study area encompasses significant known archaeological remains from the Mesolithic to present and great potential for remains as yet undiscovered. The cropmark evidence from the study area environs is very prolific on the terraces and new and old aerial photographs are a great resource. Indeed the present study has highlighted a number of new monuments in the study area and immediate environs including a possible pit circle, five ring ditches, a D-shaped enclosure, two pit alignments and other pre-medieval field boundaries. Further desk-based assessment has also proved fruitful in highlighting evidence for suspected Roman crossings of the Soar and Trent.

Previous geoarchaeological work in the environs has demonstrated the great mobility of the rivers in this confluence zone. This dynamism has undoubtedly truncated much archaeological evidence but has also been an agent of preservation, sealing sites under or within alluvium, such as the barrows mentioned above, and burying riverine sites within sand and gravel bars, most ably demonstrated by the discoveries at Hemington Quarry. The proximity of the latter site would suggest considerable potential for the study area.

One of the dominant themes to emerge from recent studies of the Trent Valley is the river as a physical and cultural boundary. While the river does, in a broad sense, delimit north and south, upland and lowland, possibly even different ethnic groups (Vince forthcoming), it also acts as a natural communications node along the waterways and through the valleys. The present study has presented some evidence for the importance of the study area as a central node in the regional communications network.

For the hunter-gatherers the zone would have been a crossing point for migrating animals and it is likely that the social and economic territories of the humans extended between upland and lowland. It is quite feasible that later prehistoric groups continued such movements in a transhumant economy. An appreciation of past communications and transport can be gained by examining the distribution of products and raw materials in the region. Loveday (2004) draws attention to the cluster of Charnwood Group XX axes around the Arbor Low henge environs. He has pointed to the 'exceptional potential' of the Middle Trent in understanding wider cultural and material connections in the Neolithic and Bronze Age. The ceremonial landscape of the study area and environs, in particular the cursus monuments, are seen to mediate these relations. Charnwood grano-diorite tempered pottery of Iron Age date has been widely recognised north of the Trent (Knight *et al.* 2003). In the Roman period Palfreyman and Ebbins (2003) have examined the role of the Red Hill site in the distribution of commodities and raw materials including iron, lead, coal, pottery, gypsum and salt. Similar distribution networks can be envisaged for the medieval period where there is a proliferation of markets around the Middle Trent. Courtney (forthcoming) has shown that the Trent was a very permeable barrier and that in the medieval and post-medieval period one would rarely have to travel over 2km to a crossing point. The major crossings such as Hemington, just outside the study area, formed part of the national infrastructure of roads while the Sawley crossing would have served these local markets and link to the larger network.