CHAPTER 1

Introduction to the Study Region, the Outline of Previous Research, and the Aims of this Study

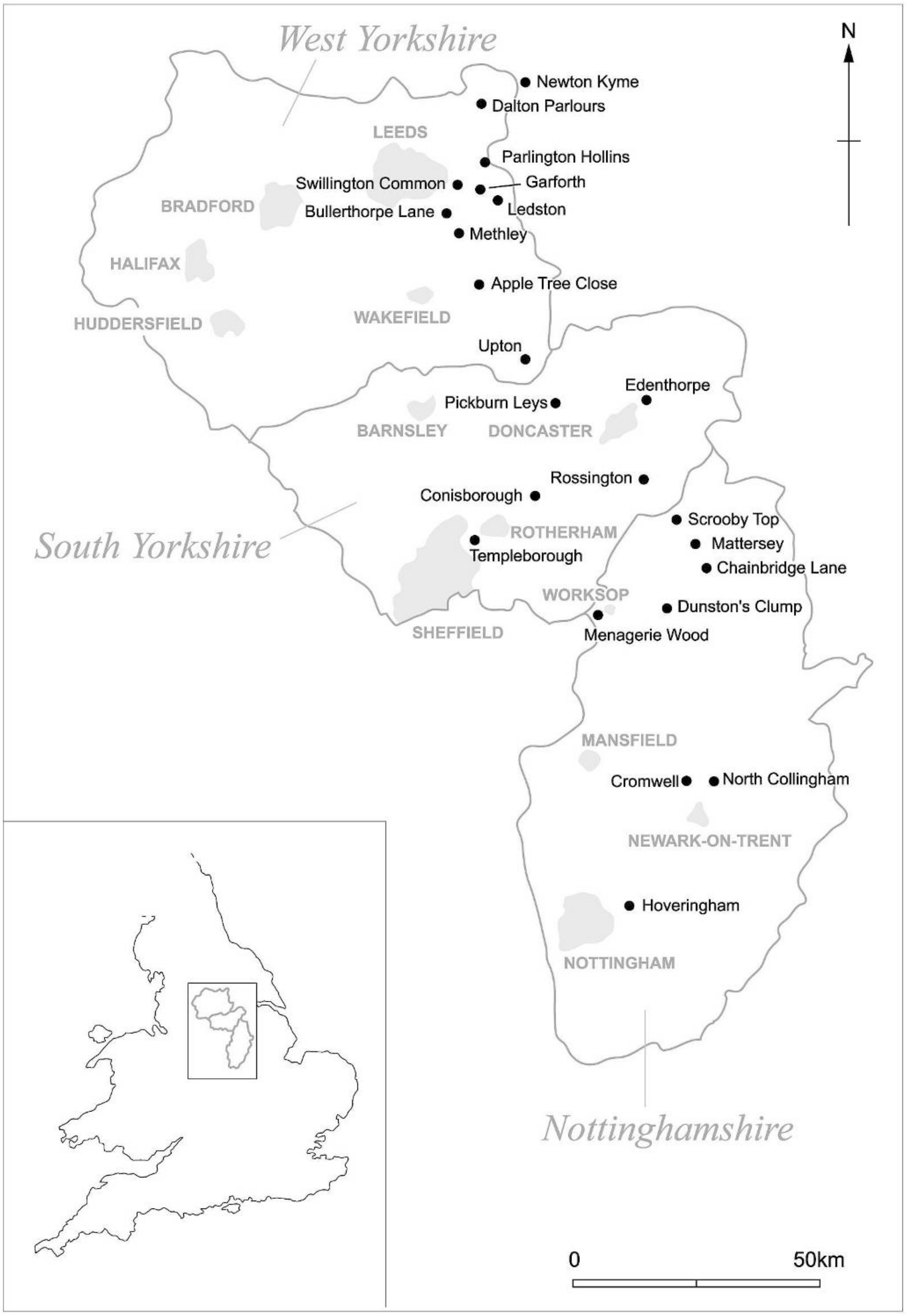


Figure 1.01. *Map showing the three modern English counties forming my study region, and a few of the sites mentioned within the text. (Drawn by A. Leaver, from Chadwick 2004a: 91).*

The geology, topography and hydrology of the study region

This thesis focuses on South Yorkshire, West Yorkshire and Nottinghamshire (Fig. 1.01). These are modern administrative units, but they have been selected for convenience and to provide reasonable limitations on the data. Where relevant, I have at times also mentioned evidence from Derbyshire, Staffordshire, North Yorkshire and Lincolnshire. The Pennines and Peak District have characteristically different archaeologies, and they form a convenient western boundary. The eastern 'boundary' of the sample area is much less clear however.

The dominant bones of the land lie north-south. The Trent Valley is formed by a wide band of Mudstones, and west of these are the Sherwood Sandstones (once known as Bunter Sandstones). Across these areas and north up to the River Humber, the topography consists of rolling broad, shallow alluvial valleys interspersed with mostly gentle gravel ridges of drift geology, with occasional patches of marls and fertile loess-derived aeolian deposits (Catt 1978; Knight and Howard 2004a: 1-6; Robson and George 1971). The soils are light and well drained on more elevated ground, but Pleistocene river terrace gravels and alluvium fill the river valleys, and in some there are peat and wind-blown sand deposits too. In the north of Nottinghamshire and the eastern third of South Yorkshire, the landscape is very low and merges seamlessly into the flatlands of Lincolnshire and Humberside. Here, the topographic contrasts are more subtle, and in the frosty mornings of autumn and winter mist lies between these low ridges like a skein of fine wool held between the fingers.

West of the Sherwood Sandstones, other north-south geological bands brace the region, comprised of Permean Mudstone and Marls, Magnesian Limestone and Coal Measures deposits. These form more elevated and undulating landscapes, cut by the valleys of the Rivers Idle, Don, Calder, Aire and Wharfe. Here there are greater topographic contrasts and sharper rises and falls, including ridgelines parallel to the rivers running beneath them. There are extensive and sometimes dramatic vistas available from valley-side slopes, along and across these broad valleys. The Magnesian Limestone dips gently to the east, forming a west-facing scarp, and has shallow but well-drained and fertile brown earth soils. To the north are a swathe of Boulder Clay and the broad alluviated plain of the River Ouse and the Vale of York. The Coal Measures comprise alternate bands of grit, shale and mudstone (Berg 2001: 4), and form an elevated, rolling plain, with more subtle and localised folds of ground. The soils here are heavier, more acidic and less well drained.

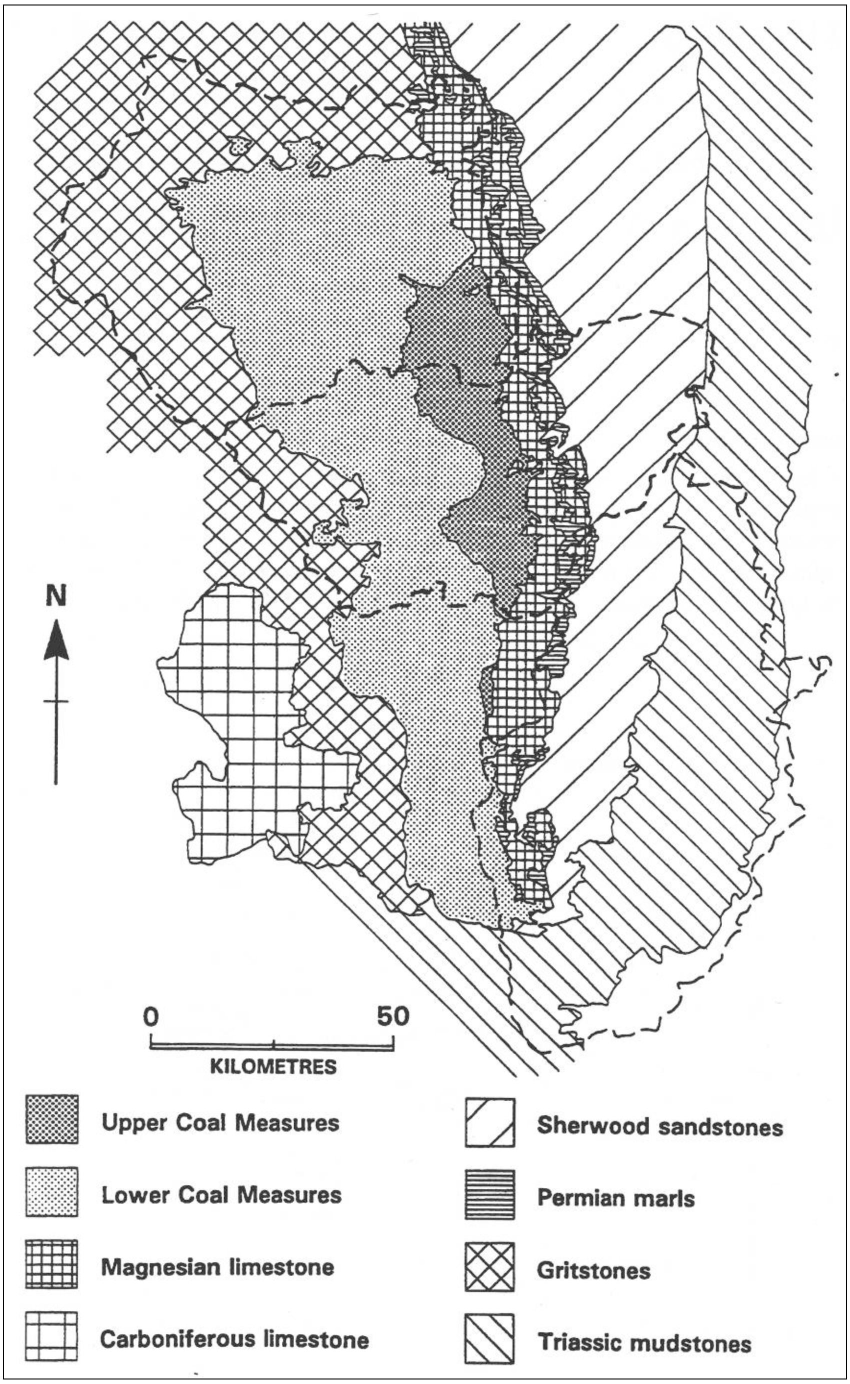


Figure 1.02. *Simplified solid geology map with the outlines of West Yorkshire, South Yorkshire and Nottinghamshire. (Source: author, from Chadwick 1999: 150).*

Further west again, the land rises to the dramatic Millstone Grit shelves and Carboniferous Limestone plateau of the Pennines and Peak District. Rainfall increases westwards too (ibid.), and here blanket peat formation has been extensive (see below). The soils on the Millstone Grit are thin, acidic and stony, whilst fertile loess deposits on the Carboniferous Limestone were the only non-calcine contribution to the otherwise thin soils (Catt 1978).

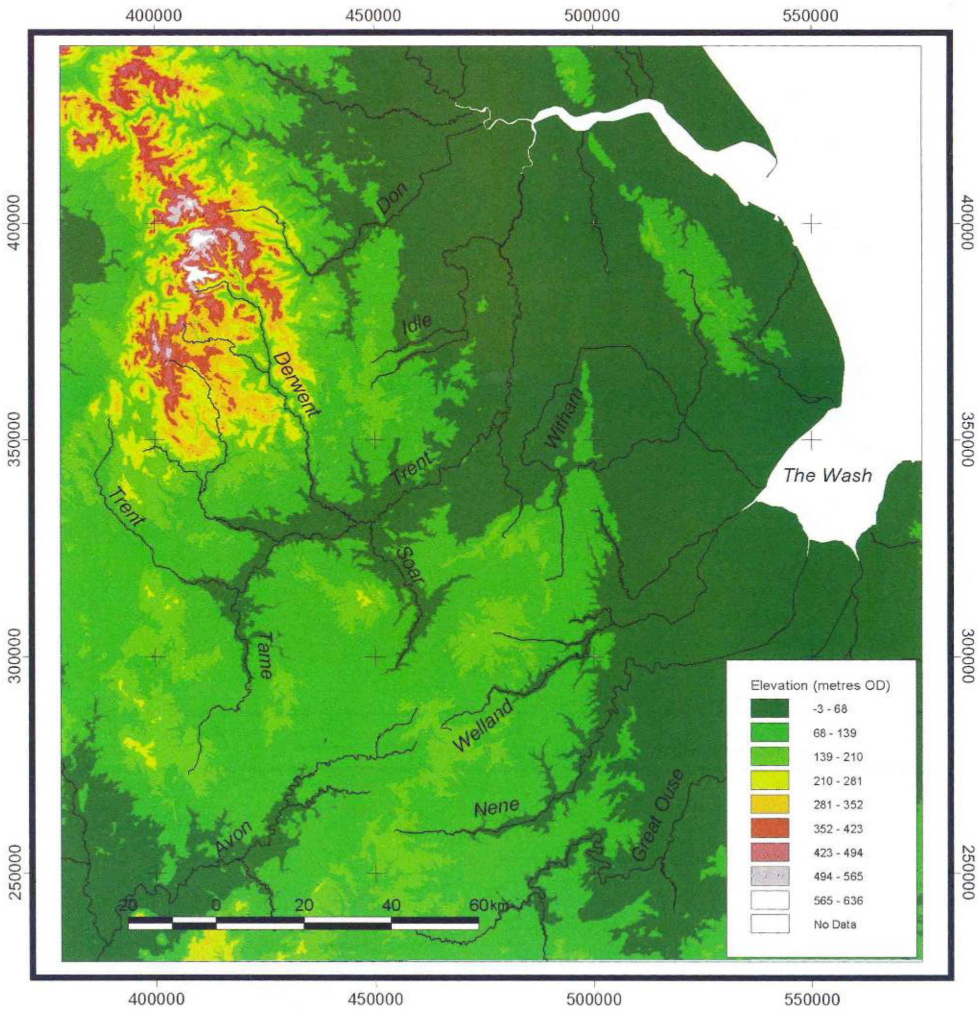


Figure 1.03. *The major relief of the eastern part of the study area, including the Trent Valley. (Source: Knight and Howard 2004a: 3, fig. 1.2).*

The River Humber and its estuary is the principal drainage basin in the region, the soggy heart into which all riverine arteries flow (Fig. 1.03). The Rivers Trent, Idle and Don all drain north or north-east into this area, the Idle, Derwent and Soar eventually merging with the Trent; whilst the Rivers Calder, Aire and Wharfe drain eastwards into the Humber too.

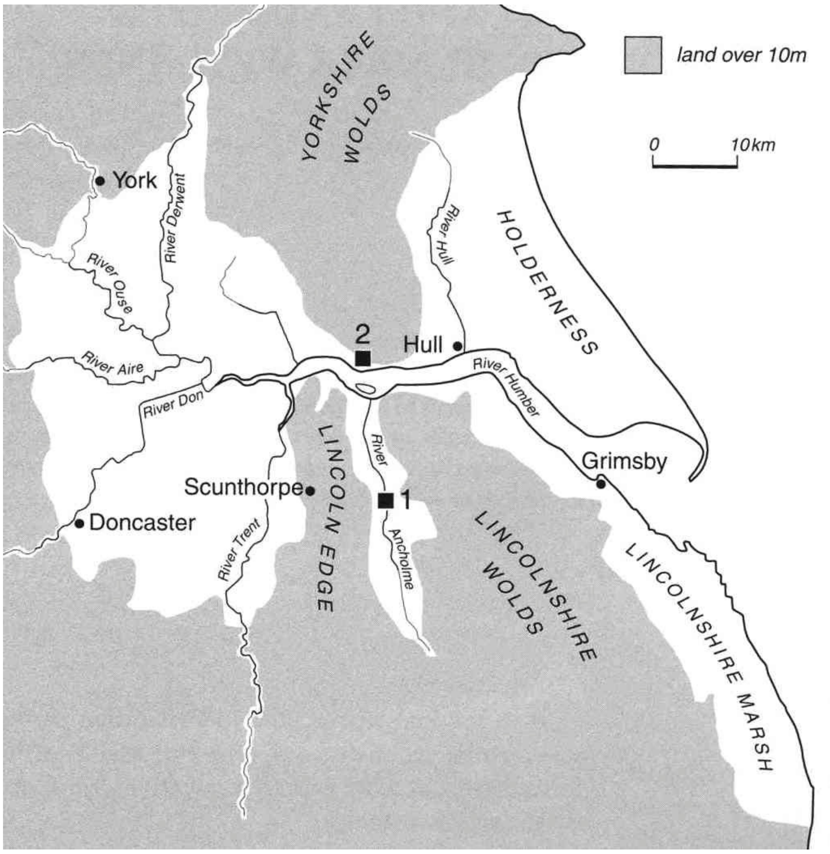


Figure 1.04. *The north-eastern part of the study area, showing the extent of the Humberhead Levels in the natural basin between modern York, Doncaster and Scunthorpe. (Source: Van de Noort 2004).*

In addition to these major channels, there were numerous minor channels and becks, greater in number and many more impressive in the past than they are today, tamed as they have been with drainage ditches and lowered water tables (Berg 2001: 4). Some smaller tributaries may have been quite violent at times when in full spate after spring thaws and rain, or following summer thunderstorms. There may even be place name evidence for this past fluvial fecundity in the region (Breeze 2002). Throughout much of prehistory, the Humberhead Levels formed an extensive area extending southwards into modern South Yorkshire and Lincolnshire, and northwards into the Vale of York (Fig. 1.04). The Levels would have comprised a highly diverse mix of alder carr, peat bog, marsh, raised mires such as Thorne and Hatfield Moors, and standing open water (Van de Noort 2004; Van de Noort and Ellis 1997, 1999) (Figs. 1.05-1.07). These landscapes would have been in constant flux, as some places progressively flooded or peat bog developed, whilst others dried out and were colonised by birch scrub.

Figure 1.05. (top left). *Modern alder carr woodland (Source: Miles 1999: 210)* **Fig. 1.06. (top right).** *Standing pool of water, surrounded by rushes, reed mace and birch scrub.* **Fig. 1.07. (left).** *Developing peat bog. (Sources: author).*

Within the Levels there were occasional areas of drier ground such as the Isle of Axholme to the north of modern Doncaster, just a few significant metres above the prevailing low-lying landscape. Even in the twentieth century this place sometimes felt remote and cut-off from the outside world (Doncaster Museum oral history exhibition). Just to the north of Armthorpe and south-east of Doncaster, a large subcircular depression in the underlying solid geology may even represent the remains of an ancient astrobleme or meteorite impact crater that has slowly filled up with sediments over the millennia (P. Buckland and G. Gaunt pers. comm.). This would have been a boggy, peat and alluvium-filled basin in the Iron Age and Romano-British periods (Fig. 1.08), and it is notable how many past field system boundaries and trackways in the area appeared to end on its edge, or skirt round it.

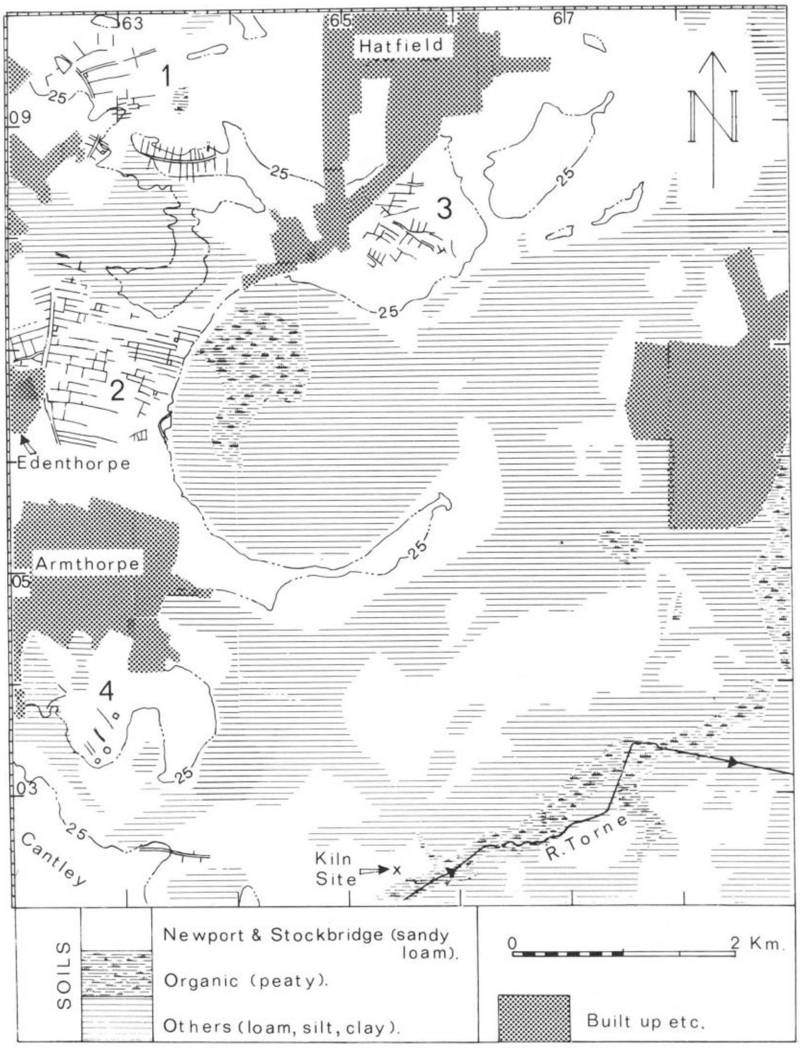


Figure 1.08. *Soils and cropmarks of part of the study region in South Yorkshire, showing the large subcircular silt and alluvium filled basin to the east of Edenthorpe that may be an ancient meteorite impact crater. (Source: Riley 1980: 61, fig. 9).*

The river valleys of the Trent, Don and Aire were extremely dynamic environments. The lower courses of the main channels would have shifted laterally across the floodplains over the decades, leaving bar deposits, oxbows, silted up and peaty palaeochannels and backwater reed swamps in their wake (Brown 2002; Dinnin and Weir 1997: 152; Garton and Malone 1997; Knight and Howard 2004b: 80). The broad, alluvium filled valleys would have been relatively low-energy environments, however. Overbank flooding of extensive low-lying areas might nonetheless have been commonplace during the winter and spring. In some places the Trent and other rivers may have had several braided channels flowing at the same time, with gravel islands of varying sizes in between. Many palaeochannels and silted up oxbows are visible on aerial photographs and have been archaeologically investigated (e.g. Baker

2002; Garton 1999; Kinsley 1998; Knight and Howard 1995; MacCormick et al. 1968; Salisbury 1992) (Figs. 1.09-1.11). In the upper reaches of these rivers along the more dynamic gravel terraces, sometimes erosion and deposition would have been gradual, but at other times flash floods would have swept away riverbanks and trees and broken through river loops, depositing new bars of mud and gravel downstream. So-called ‘ridge and swale’ topography has also been identified from aerial photographs, appearing as multiple but irregular corrugations or banks and hollows, and marking the lines of previous bars and channels (Baker 2002: 18).

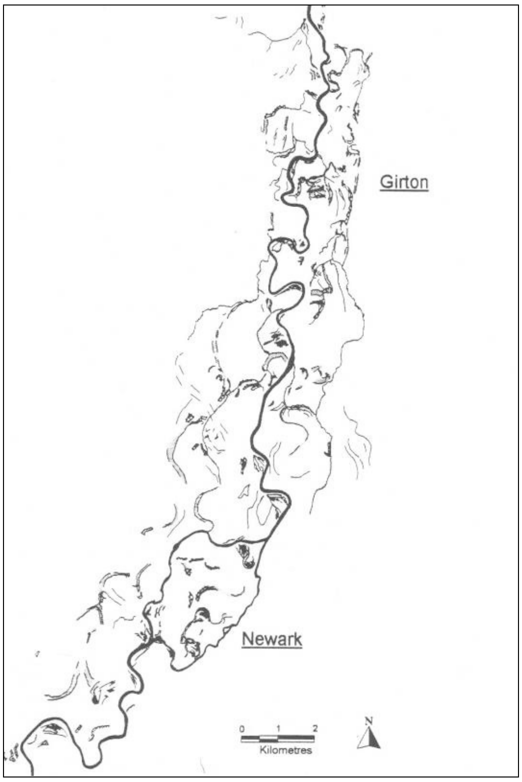
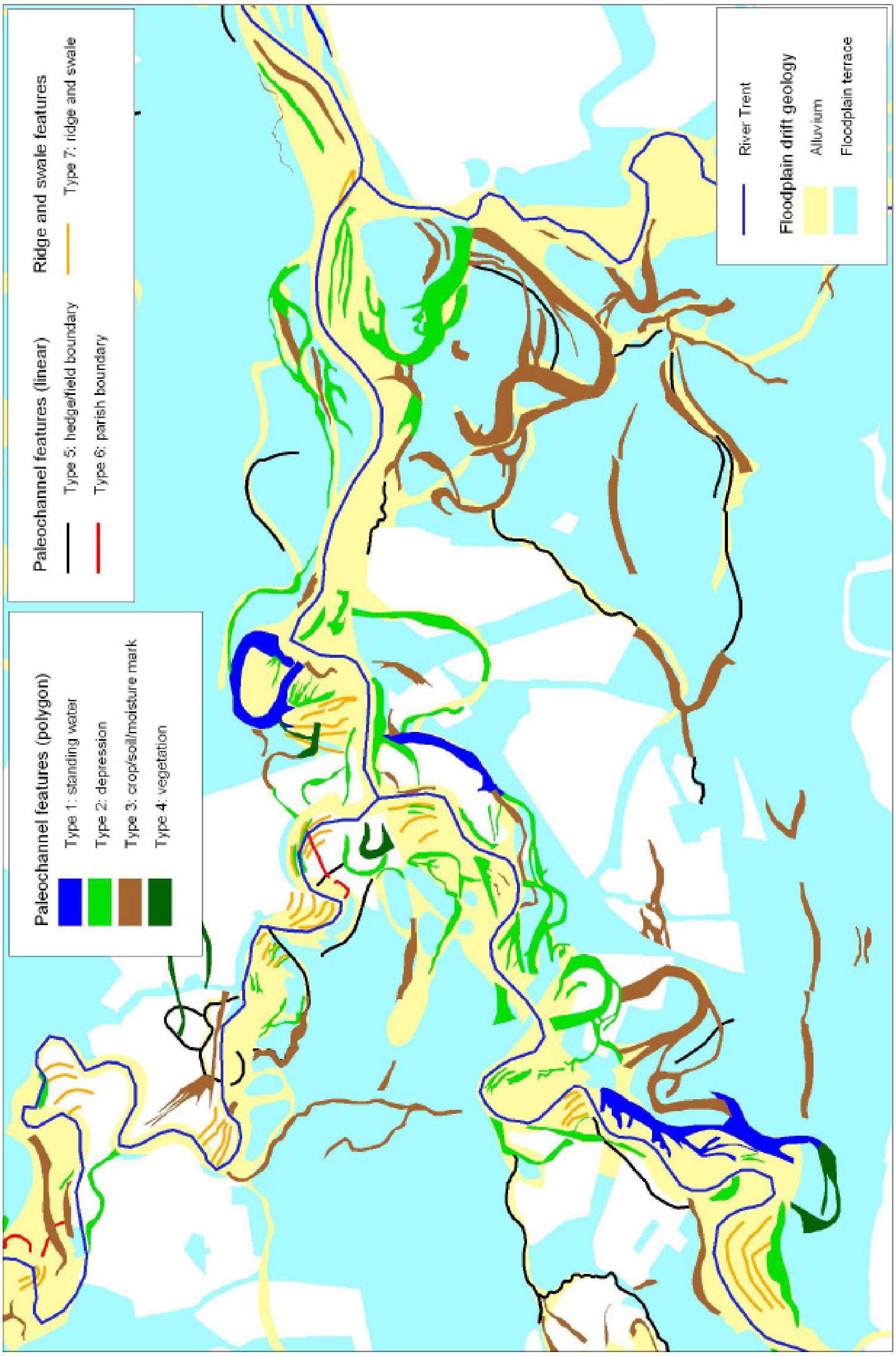


Figure 1.09. (left). *The River Trent between Newark and Girton, showing palaeochannels mapped from aerial photographs. (Source: Garton and Malone 1997: 141, image © S. Malone).* **Fig. 1.10. (right).** *Aerial photo of the Trent Valley showing palaeochannel features in a dynamic gravel terrace landscape, including silted up loops of the river and ‘ridge and swale’ features. (Source: Baker 2002: 24, fig. 19).*

Drainage of the Humberhead Levels began in the medieval period (Dinnin 1997), but became widespread from the seventeenth century to the present day (Buckland 1986: 42; Caulfield 1991: 22-24). In some parts of the region Dutch engineers were brought in to assist with the challenge. Large parts of north Nottinghamshire and eastern South Yorkshire on the edge of the Humberhead Levels were extremely low-lying, with

Figure 1.11. (left). *Palaeochannel features plotted from aerial photographs at the Trent-Derwent and Trent-Soar confluences. Source: Baker 2002: 26, fig. 20).*



extensive areas below the 5m contour. Reclaimed and 'improved' areas feature numerous large, straight-edged ditches and often have place names such as 'dike' and 'drain', but also the surviving place names 'ing', 'carr' and 'levels', from the pre-drainage landscape. These areas would have flooded repeatedly during winter and spring high water levels, and pastures were often under water from November to April (Fig. 1.12) but the rich silts borne in the waters ensured lush summer vegetation. Even during the medieval period, seasonal flooding formed extensive meres that persisted for much of the year (Dinnin and Weir 1997: 152; Hey and Rodwell 2006: 32). Such landscapes consisted of stream channels and pools of standing water, raised peat bogs and reed beds, separated by slightly raised gravel islets on which grew damp grassland and wooded birch and alder carr. Many were used as commons grazing until the nineteenth century, or formed part of Hatfield Chase royal hunting estate.

Figure 1.12. *Standing water or mere on the floodplain of the Aire Valley just east of Castleford, West Yorkshire, April 2006. (Source: author).*

In the late twentieth century, highly destructive large-scale drainage and peat extraction by multi-national companies such as Fisons have threatened remaining wetland areas such as Thorne and Hatfield Moors and Sutton Common, which preserve valuable ecological communities and archaeology (Buckland 1979; Caulfield 1991; Dinnin, Ellis and Weir 1997). The tenant farmer of Sutton Common bulldozed one Scheduled enclosure, and not only escaped penalties but was ultimately financially compensated when the land was taken into stewardship (Parker Pearson and Sydes 1997; Van de Noort, Chapman and Collis 2007). Fisons have repeatedly blocked conservation measures, and even tried to remove the SSSI status of Thorne and Hatfield Moors (Caulfield 1991; Dinnin and Whitehouse 1997).

> What some of the conservationists would say to us for using peat today I don't know, but I don't know what a gardener can do without peat. I intend to go on using it. (Margaret Thatcher 1990, quoted in Caulfield 1991: 59).

Figure 1.13. *Thorne Moors, showing 3000 year old tree stumps exposed by drainage and peat extraction. (Source: Caulfield 1991: 82, © F. Godwin).*

Modern land-use and archaeology

Modern land-use in the area is highly variable, with arable agriculture generally dominating over pasture in lowland areas, mainly with the help of modern organo-phosphate fertilisers and pesticides. Nineteenth and early twentieth century heavy industries such as mines, steelworks and quarries and the dumping of associated waste have undoubtedly removed or masked much archaeology. With few exceptions (e.g. May 1922), most destruction went unrecorded at the time. Spoil tips and slurry lagoons have impacted heavily on some areas, whilst limestone quarries have also removed large areas. Gravel quarrying is predominant in the Trent Valley and on the sand and gravel drift deposits over the Sherwood Sandstones, and many of the sites I will be considering were excavated in advance of gravel extraction (Fig. 1.14). Many limestone and aggregates quarries were granted planning permission in the 1950s and 1960s, which until recent ROMP schemes (Renewal of Old Mineral Permission), severely limited archaeological work. Quarrying still constitutes a major threat to archaeology across the region (Figs. 1.15-1.16). Funds from the Aggregates Levy, however, are now being channelled into research and educational archaeology projects though (e.g. AS WYAS 2006; Bevan 2006; Roberts et al. 2004, 2007).

Figure 1.14. *Gravel extraction at Chainbridge Lane, Lound, Nottinghamshire in the late 1980s. (Source: © Jen Eccles).*

Woodlands are another important aspect of modern landscapes. None are extensive, but some contain elements of Ancient Woodland – usually medieval or post-medieval plantings, that nevertheless may preserve earthworks of Iron Age and Romano-British date (e.g. Atkinson, Latham and Sydes 1992; Corder 1951; Court 1944; Latham 1992; Makepeace 1985; Radley and Plant 1969b; Sumpter 1973; Tyson 1950). They are a valuable and threatened archaeological resource (Whiteley 1992), and some earthworks are enclosures and elements of field systems that escaped plough damage. Tree roots, however, have often caused disturbance to these woodland features.

Figure 1.15. (right). *Pastures Road, Mexborough, South Yorkshire, with an enclosure complex threatened by quarrying and housing developments. (Source: D. Riley, SLAP 843, SE 4880 0040).*[1]

Figure 1.16. (left). *Barnsdale Bar Quarry, S. Yorks., with ongoing limestone extraction. Archaeological features are visible in the area stripped of topsoil in the foreground. (Source: Roberts et al. 2007, cover image).*

The palaeo-environmental evidence

Although still far from comprehensive, there is increasing palaeo-environmental evidence across the study region for extensive clearance during the Bronze Age, contrary to older interpretations (cf. Turner 1981a). Peat from palaeochannel deposits within the Trent Valley indicates a marked decline of woodland and a rise in grasses and sedges from 1200-1000 BC onwards, along with suggestions of cultivation and pastoralism (Brayshay and Dinnin 1999; Knight and Howard 2004b: 79; Scaife 1999; Smith and Howard 2004: 115-117). At Hatfield Moors heath and pine vegetation was present prior to peat formation, and mixed deciduous woodland at Thorne Moors. At both these locales, small-scale woodland clearance developed from the early Bronze Age, but accelerated greatly during the Iron Age (Buckland 1979; Dinnin and Whitehouse 1997; Smith 2002).

In West Yorkshire, there are also indications of a major decrease in tree cover and an associated increase in grassland and perhaps cultivation during the Bronze Age (Berg 2001: 8-9). Woodland clearance was not always a progressive trend, however – there was probably localised woodland regeneration in some places (McElearney 1991). Peat formation in the Pennine uplands began in earnest during the mid to late Bronze Age, and although tree clearance undoubtedly contributed to this, it was exacerbated by a probable climatic downturn between *c*. 1000-800 BC, and by rising sea levels and a concomitant rise in inland water tables from around 500 BC, which also affected low-lying areas of East Anglia (Bell 1996; Dark 1999; Dinnin, Ellis and Weir 1997; Evans 1999; Scaife 1992; Turner 1981a). The wetter, colder conditions were once linked to Icelandic major volcanic eruptions (Baillie 1991, 1995; C. Burgess 1985, 1989), but such arguments have been criticised as too simplistic (e.g. Buckland, Dugmore and Edwards 1997; Tipping 2002; Young and Simmonds 1995).

By the middle Iron Age, in West Yorkshire there were probably extensive areas of largely open, grasslands, with occasional evidence for ploughing and arable cropping (Long and Tipping 2001: 225; Richardson 2001a: 248). At Sutton Common in South Yorkshire, the landscape was dominated by alder carr, with some willow, hazel and oak. During the middle and later Iron Age there were increasing areas of grass and sedges, maintained and extended by grazing (Boardman 1997: 245-247; Broadbent 1997: 49-50; Gearey 2007: 62-64; Roper and Whitehouse 1997: 244).

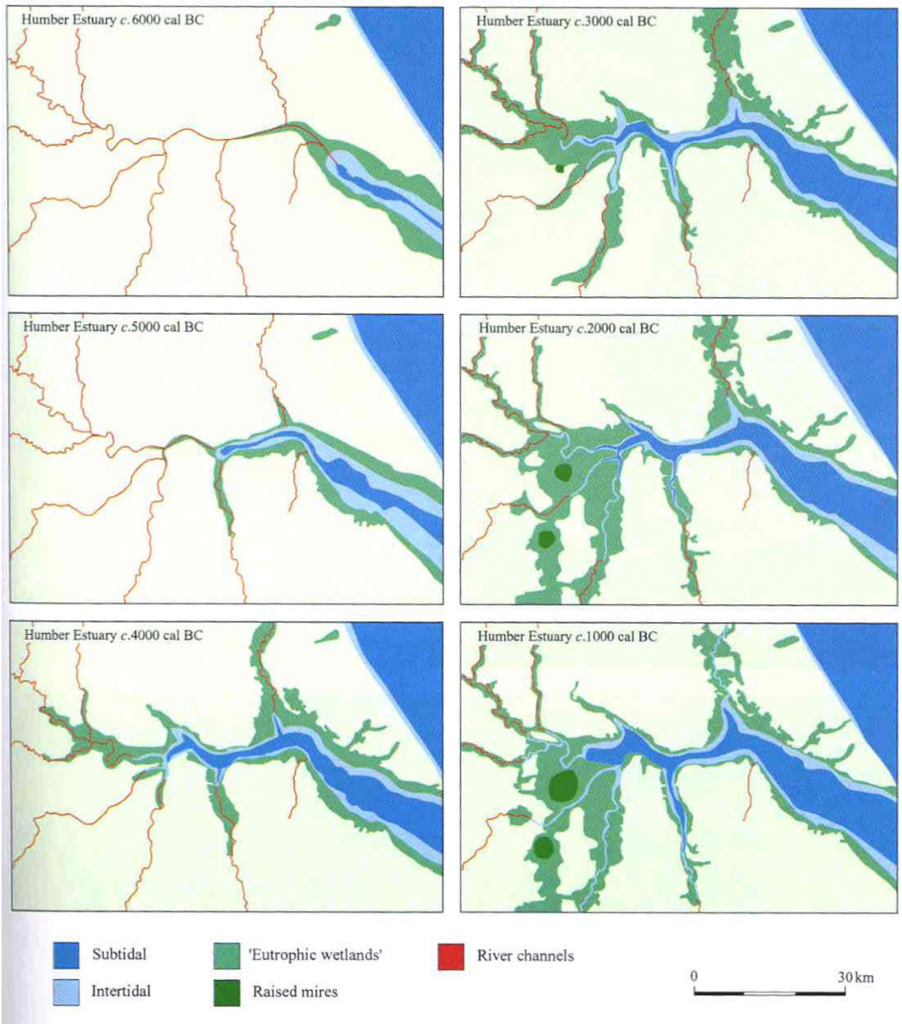


Figure 1.17. *The possible chronological development of the Humberhead Levels, showing phases of marine incursion and regression. (Source: Van de Noort 2004).*

By the late Iron Age, these essentially open landscapes had farmsteads interspersed with fields and small copses of woodland, much of the latter probably managed (Berg 2001: 8-9; Buckland 1986: 4; Garton 1987: 67; Garton et al. 1988: 29; Garton and Salisbury 1995: 40-41; Rackham and Martin 2004: 56, 73-74; Wilson 1968: 43-44; Yarwood 1981: 51-52). There is some limited evidence for plants associated with hedges that may have helped define some boundaries (Greig 2005: 13; Wilson 1968: 48). Although some wildwood might have remained on hillsides and upland areas, on the lowlands much tree cover had probably disappeared by the later Iron Age.

There were damp meadows in valley bottoms but also drier grasslands, and heather, heath and pine trees on ridges and elevated ground (Bastow and Murray 1990: 266-267; Berg 2001: 9; Bogaard 2000: 184; Giorgi 2004: 70; G. Jones 1987: 60). At Balby Carr, there were dry and damp grasslands, alder carr, hedges and water filled ditches during the later Iron Age and Romano-British periods, with cereal cultivation further afield (Greig 2005: 13; Hall et al. 2005). Balby was on the edge of the Humberhead Levels, whose rich habitats would have provided many resources. There was timber in the alder and birch carr, whilst around open water and reed swamp willow, sedges, rushes, reeds, water lily, arrowhead and water plantain served for food, thatch, hurdles, matting or basketry. Fish, wildfowl and beavers were potential food sources[2], although biting insects and disease could have been a problem – malaria may even have been present in some areas.

Conditions gradually became warmer and drier from around 150 BC (Lamb 1981: 62-63; Simmons 2001: 53), as increasing evidence for Roman viticulture in the midlands also suggests (Brown and Meadows 2000; Brown et al. 2001). In addition, the Romans may have attempted some large-scale engineering schemes as they did in East Anglia and on the Gwent and Somerset Levels. The canalised course of the River Don north of Thorne, the eastwards course of the River Idle, the Turnbridgedike and Bycarrsdike canals and the Fossdyke Canal were artificial channels, and these might have been built by the Romans (Buckland 1986: 40-42; Gaunt 1975; M. Jones 2002: 95; P. Jones 1995; Knight and Howard 2004b: 122).

There is evidence for another climatic downturn in the late second to fourth centuries AD, with wetter, cooler conditions (Knight and Howard 2004b: 116; Lamb 1981: 62-63; Simmons 2001: 53). At sites along the Trent such as *Segelocum* (Littleborough-on-Trent), Ferry Lane Farm, Moor Pool Close, Rampton and Bottom Osiers, Gonalston there were major episodes of flooding, deposition of alluvial silts and the abandonment of inhabited areas in the later Roman period (Eccles, Caldwell and Mincher 1988; Elliott and Knight 1997, 1998, forthcoming; Knight and Howard 2004b: 117-120; Knight and Priest 1998; Macklin 1999; Rackham 2000: 115). Late Roman flooding has also been suggested for areas beside the Don and Idle (Buckland and Sadler 1985: Ch. 5; Dinnin and Weir 1997: 124, 147; Samuels and Buckland

1978). It is possible that loss of woodland and deeper ploughing, perhaps with increased cropping of winter wheat for tax payments (Didsbury 1992; Riley, Buckland and Wade 1995: 263), caused higher levels of surface run-off and soil loss.

Extensive sand deposits around Holme Pierrepont and Collingham may have resulted from 'blow-outs' caused by loss of vegetation over sandy soils (Bourn, Hunn and Symonds 2000: 99; Knight 2000; Knight and Howard 2004b: 120). Such aeolian erosion still takes place today over the Sherwood Sandstones (e.g. Riley 1980: 70, plate 16) due to modern intensive arable agriculture. The fertile but fragile loess is particularly prone to erosion (Limbrey 1978: 23-25), and it is likely that much of this was lost during this period. Peat formation also seems to have increased during the Romano-British period in some river valleys, as at Rossington Bridge in the valley of the River Torne (Dinnin and Weir 1997: 124, 152), and East Carr, Mattersey in the Trent Valley (Morris and Garton 1998a, 1998b). Coupled with higher rainfall, possible agricultural intensification or extensification and another phase of marine transgression in the lower Trent Valley and Humberhead Levels between AD 100-400 (Van de Noort and Davies 1993: 18); this may have caused soil erosion and colluvium and peat formation. The histories of later Iron Age and Romano-British field systems have to be viewed with regard to these changing environmental conditions, and in some cases may have been a response to them.

This then was the varied shape of the land. Some landscapes were open, and extended to the far horizons with only the subtle rise and fall of gentle ridges and knolls, and occasional copses of woodland to interrupt the view. In other areas there were more restricted vistas with pronounced folds of ground and ridges and hills, with denser woodland on the steepest slopes. In places journeys by foot and on horseback would have been little hindered, in others boats may have been the best or only means of travelling long distances. Standing on a grass or heath-covered hilltop or a ridge in the limestone country would have been a very different embodied experience to picking a route through the boggy tracks or paddling through the narrow waterways of a lowland wooded carr or reed swamp. The physical characteristics of these landscapes were not backdrops to the archaeology but rather the foregrounds to it, the settings for the daily dramas of animal and human life during the Iron Age and Roman periods.







The bones of the land. **Figure 1.18. (top left).** *The River Trent at Carlton-on-Trent, Notts.; looking north.* **Fig. 1.19. (top right).** *Low-lying land near Mattersey, Notts., looking north from Blaco Hill.* **Fig. 1.20. (second row left).** *New Rossington, S. Yorks., looking north-east, across gently undulating Sherwood Sandstone gravels.* **Fig. 1.21. (second row right).** *Low-lying land at Cantley Low Common, S. Yorks., looking east along South Ring Drain.* **Fig. 1.22. (centre).** *The Magnesian Limestone scarp near Barnburgh, S. Yorks., looking north-east.* **Fig. 1.23. (bottom left).** *Near Goldthorpe, S. Yorks., looking south-east.* **Fig. 1.24. (bottom right).** *Back Newton Lane, near Ledston, W. Yorks., looking south-west across the River Aire towards Castleford. (All images source: author).*

The nature of the crop and soil mark evidence

The nature of the soils and underlying geology is highly influential to cropmark formation. Cropmarks are more visible on lighter, more free-draining soils, which is why they are so clear on the Sherwood Sandstone zone. Heavier, more clayey soils such as those above the Coal Measures and east of the River Idle are not as conducive to cropmark formation (Deegan 1996: 19; Riley 1980, 1983), though local variations make generalisations misleading. Alluvium, colluvium and peat deposits may also mask archaeological features (Knight and Howard 1994: 80-81; Riley 1980: 62-63; Whimster 1989: 20-22). Natural periglacial and fluvial features can further hamper the interpretation of aerial photographs (Wilson 1987), and this is a particular problem over Magnesian Limestone areas, where frost cracks and ice wedges from cryoturbation, bedding planes and other geological patterning is often evident (Fig. 1.25), although periglacial activity may also affect Sherwood Sandstone areas too.

Figure 1.25. *Cropmarks near Thorpe Salvin, South Yorkshire, showing a possible enclosure and field boundaries (the darker features to the centre and lower left of the photograph); but also the extent of geological patterning on the underlying Magnesian Limestone. (Source: D. Riley, SLAP 733, SK 5400 7970).*

Figure 1.26. *Unusual patterning north-east of Burghwallis, South Yorkshire, probably a result of underlying periglacial features. (Source: © Google Earth).*

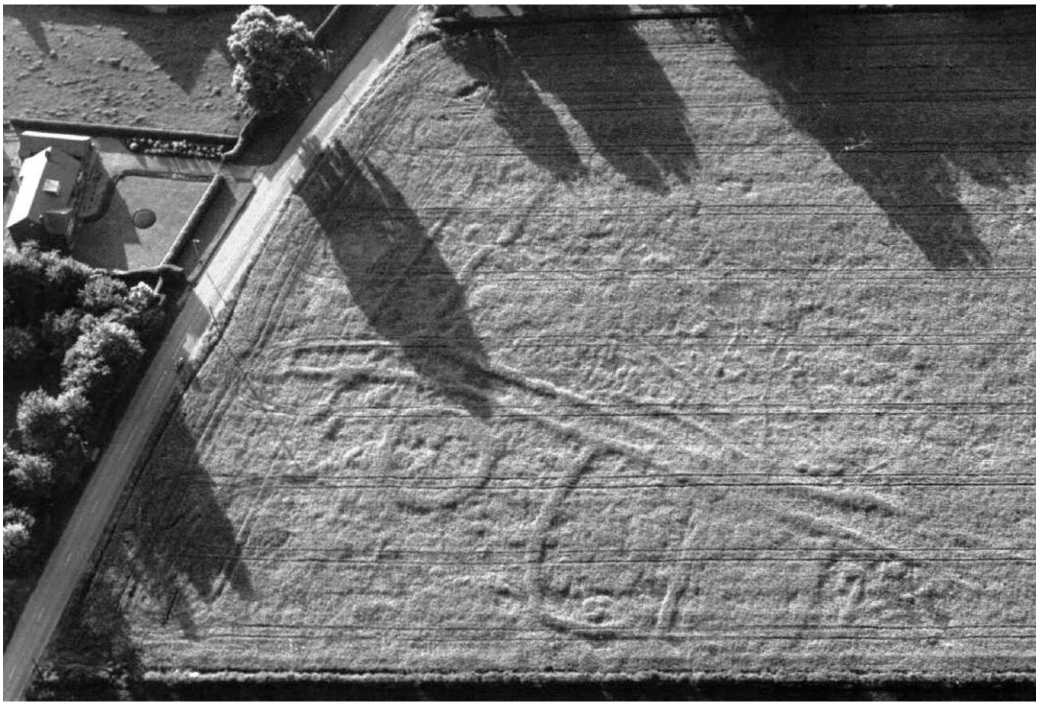


Figure 1.27. *Cropmarks near Kirk Smeaton, just inside modern North Yorks., showing positive cropmarks of an enclosure, a trackway and field boundaries; along with a possible roundhouse or ring ditch/round barrow. Such exceptional detail from cropmarks is rare. (Source: D. Riley, SLAP 338, SE 5150 1650).*

Features such as ditches and pits retain more moisture than surrounding soils, and during summer plants above such features have more luxuriant growth that produces positive cropmarks (Fig. 1.27) (Cox 1984; Jones and Evans 1975: 2; Kershaw 1998). Most cereals such as barley produce good cropmarks (Kershaw 1998), but even sugar beet may still be responsive (Riley 1983: 72). Differential ripening of the crops in different fields also affects cropmark formation. Soil marks of ditches and pits are usually darker than surrounding soils, and masonry lighter in colour (Wilson 1989: 61). Buried masonry produces negative cropmarks, as plants above such features are more stressed and produce less luxuriant growth (Cox 1984; Jones and Evans 1975), though such features are rare in the study region. The few Roman villas such as Stancil or Cromwell do not reveal buried masonry (Whimster 1989: 78-79), probably due to later robbing of their stone, whilst Roman forts and fortlets at Rossington, Burghwallis and Scaftworth were mostly of timber and turf construction. More recent plough damage can also be a factor – Marr Thick existed until the early 1960s as earthworks of limestone walls and ditches (Buckland 1986). After the removal of the trees and subsequent deep ploughing, however, only the bases of ditches were apparent (Fig. 1.28). The same is true of the Scratta Wood enclosures (Fig. 1.29).

Figure 1.28. *Cropmarks at Marr Thick, South Yorkshire, showing trackways and two subrectangular enclosures (in the centre and upper part of the photograph), after woodland clearance and ploughing. (Source: D. Riley, SLAP 2486, SE 498 050).*

Figure 1.29. *Former Iron Age and Romano-British earthwork enclosures within Scratta Wood in Nottinghamshire, visible as dark green, subcircular cropmarks in what are now arable fields after woodland clearance (in the centre of the image). SK 5475 8020. (Source: © Google Earth).*

The history of archaeological research within the study region

Unlike Derbyshire and East Yorkshire with such notable figures as Thomas Bateman and Canon Greenwell, and despite the work of Joseph Hunter and others, there was a comparative lack of antiquarian investigation in the study region during the eighteenth and nineteenth centuries, particularly with regard to prehistoric remains. Until the 1960s, most work on the Iron Age had concentrated on hillforts and other earthworks, with surveys and/or limited excavations at Barwick in Elmet (Colman 1908; Whitaker 1816), and Castle Hill, Almondbury (Armitage 1900; Armitage and Montgomery 1912); followed by Varley's excavations during 1936-1939, 1969-1970 and 1972 (Varley 1976). There were also very limited investigations of Sutton Common (Surtees 1868; Whiting 1936) and South Kirkby in 1949 (Atkinson n.d.), the latter unfortunately unpublished.

Early Romano-British studies consisted mainly of reports on isolated finds of pottery, burials and coin hoards, as with finds from Adel in the early eighteenth century (Thoresby 1702, 1715) and between 1933-1938 (Clark 1934, 1939), in Wetherby (Kent and Kitson Clark 1933) and Castleford (Johnson 1861). Early excavation work tended to be relatively small-scale and with a particular focus on forts, as at Slack (Dodd and Woodward 1920), Ilkley (Woodward 1925) and Castleshaw on Saddleworth Moor in Lancashire near the boundary with West Yorkshire (Buckley 1898; Bruton 1908; Watson 1766). Further fort excavations took place at Ilkley and Elslack in the 1960s (Hartley 1966; Thompson 1965). There were excavations of the fort at Templeborough in Sheffield in 1877 by J.D. Leader, and during 1916-1917 by May (Freemantle 1913; May 1922), and early investigations of the villa at Dalton Parlours (Procter 1855), and very poor work on the villa at Stancil (Whiting 1943). In Nottinghamshire and western Lincolnshire, there were earlier twentieth century excavations of villas at Mansfield Woodhouse, Norton Disney and Barton-in-Fabis (Oswald 1949; Oswald and Buxton 1937; Thompson 1951), and at the small Roman towns of *Ad Pontem*, *Margidunum* and *Crococolana* (Inskeep 1965; F. Oswald 1927, 1941, 1948; Todd 1969; Wacher 1964; Woolley 1910).

Unlike southern England, there was no dramatic rise in rescue archaeology during the 1950s and 1960s, with few resources made available. Doncaster, Chesterfield, Castleford and Ilkley saw limited rescue or salvage excavations ahead of development (e.g. Borne, Courtney and Dixon 1978; Buckland and Magilton 1986; Courtney 1975; Fossick and Abramson 1999: 14-17; Hartley 1966; Lane 1985; see Cumberpatch and Thorpe 2002 and Ellis 1989 for a summary of the Chesterfield investigations). Some of this work remains unpublished, and many areas in Doncaster and Chesterfield in particular were extensively redeveloped with little or no archaeological recording. Despite these centres having Roman and medieval deposits equivalent to York or Winchester, their archaeology was largely ignored at a national level, and the destruction attracted little concerted opposition, despite the valiant efforts of local researchers and museum staff. It may be that the larger middle class populations of cities such as York and Durham, and those in the affluent south of England, were able to exert more political and social pressure for rescue archaeology to take place. Regional variations in property values were also a likely factor in this.

J.K.S. St Joseph and the Cambridge University Committee for Air Photography had recorded Roman forts and fortlets in the region during the 1950s and 1960s (St Joseph 1953, 1969), but it was not until 1974 that Derrick Riley began to identify patterns of field systems (Riley 1976, 1980: 1). He flew regularly over the region until his death in 1993, although the Air Photography Unit of English Heritage (formerly the Royal Commission on the Historical Monuments of England or RCHME) based in York still carry out regular flights (McNeil 1995). The bulk of Riley's published photographs and maps concern the Sherwood Sandstone areas of South Yorkshire and north Nottinghamshire, and the extensive, 'brickwork' field systems (Riley 1980). These have received most subsequent attention, partly due to their perceived regularity but also the pattern of developer-funded archaeological work within the region.

In the 1970s and 1980s, in advance of quarrying, new roads or housing estates there were a few poorly funded 'salvage' excavations, although as at Chainbridge Lane, whole enclosure complexes were often quarried away with only limited investigations (e.g. Eccles, Caldwell and Mincher 1988). Initial work was largely concerned with identifying and attempting to date the enclosures and field systems. A paucity of Iron Age pottery and poor sampling methodologies meant that some researchers believed the 'brickwork' field systems were planned estates established under centralised Roman control (e.g. Branigan 1989), although landscape stratigraphy suggested a late Iron Age origin for at least some of the field systems (Buckland 1986: 8-9).

Derrick Newton Riley 1915-1993. **Figure 1.30. (left).** *Derrick Riley as a young RAF Sergeant Pilot in 1941.* **Fig. 1.31. (right).** *Derrick and Marjorie Riley at home in 1986. (Source: Kennedy 1989: iii, 4).*

Since 1990 and PPG16 (DoE 1990), there has been a dramatic rise in developer-funded excavations of Iron Age and Romano-British sites in the region, and have included detailed aerial photographic survey carried out by Alison Deegan (Deegan 2001b). Deegan also undertook the Lower Wharfedale mapping project, and AP analyses for developer-funded projects in South Yorkshire (e.g. Deegan 2000, 2001a, 2001c, 2004). Alison Deegan and Christine Cox also plotted Nottinghamshire cropmarks as part of English Heritage's National Mapping Programme (Deegan 1996, 1999a). Building on previous small-scale research (Chadwick 1998; Cox 1984), an ongoing project has been examining the Magnesian Limestone and some of the Sherwood Sandstone areas of West and South Yorkshire, with funding from the Aggregates Levy and English Heritage (AS WYAS 2006; Roberts et al. 2004, 2007) (Fig. 1.32). When collated and fully published, these projects will further aid archaeologists wishing to examine these Iron Age and Romano-British landscapes.

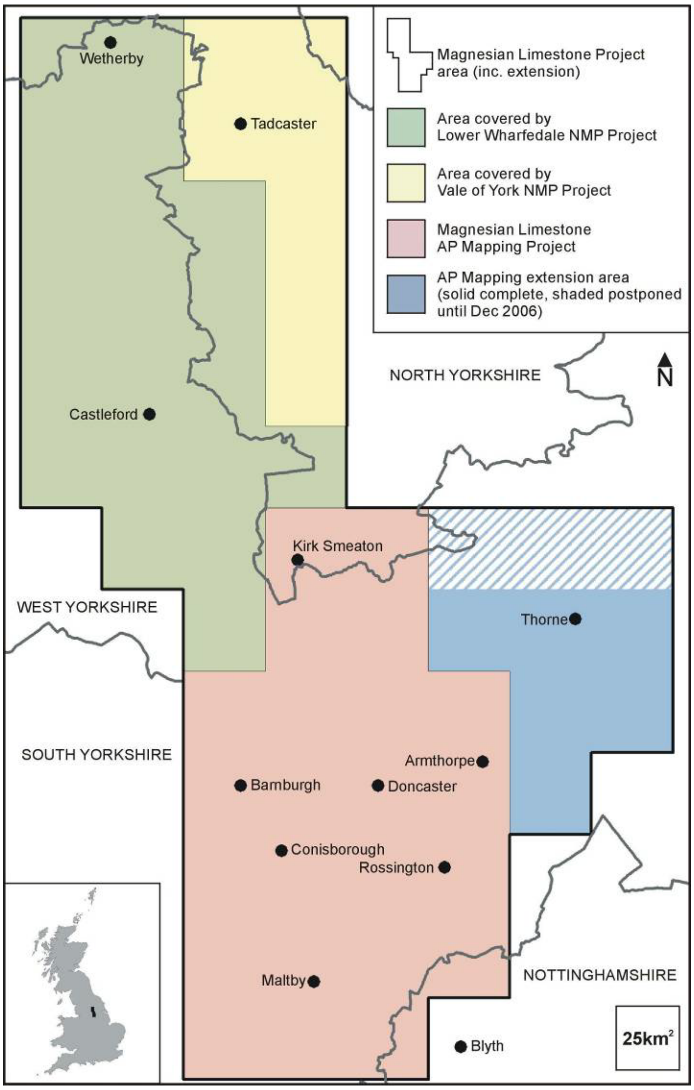


Figure 1.32. (left). *The Magnesian Limestone Project area for West and South Yorkshire, which also covers some Coal Measures and Sherwood Sandstone areas, and parts of North Yorkshire and north Nottinghamshire. (Source: © AS WYAS/WYAAS.*

Despite recent developer-funded work, the impact of Rome on the everyday life of the region is poorly understood, particularly for rural communities. Most developer-funded projects lack clear research focus, and remain as unpublished 'grey literature'[3]. There has been no major synthesis of fields, settlements and societies during the study period. Broader accounts of Iron Age and Romano-British Britain (e.g. Cunliffe 1991; Dark and Dark 1997) barely mention the evidence, whilst the few previous regional studies are now very dated (Buckland 1986; Challis and Harding 1975; Faull and Moorhouse 1981; O'Brien 1979). A recent account of the Iron Age in northern Britain used some published information from the region that was nearly twenty years old (Harding 2004), but did not reference more recent investigations.

Figure 1.33. *The M1-A1 junction under construction. The M1-A1 and A1(M) road schemes have provided opportunities to examine Iron Age and Romano-British rural settlements and field systems at a landscape scale. (Source: © AS WYAS).*

The M1-A1 and A1(M) projects enabled cogent summaries of the Iron Age and Romano-British periods in West Yorkshire to be produced (Brown, Howard-Davis and Brennand 2007; Burgess 2001c; O'Neill 2001d), and the Trent Valley evidence has been excellently reviewed (Knight and Howard 2004b; Knight, Howard and Leary 2004). A very useful research framework for the East Midlands has been published (e.g. Bishop 2001a, 2001b; Willis 2001), but the Yorkshire example was poor by comparison (Manby 2003; Ottaway 2003), and West and South Yorkshire continue to be treated (or ignored) as adjuncts to 'northern England' (Cumbria, C. Durham and Northumberland). These two counties are also rarely compared with the evidence from Nottinghamshire and the East Midlands, despite some similarities in the archaeological evidence. In addition, the evidence from all three counties continues to be downplayed or marginalised in the national literature (q.v. Robbins 1999).

There was thus a pressing need for an interpretative synthesis of the Iron Age and Romano-British archaeology of the region, and it was this major lacuna that this thesis aims to address. It has been produced in response to many of the questions posed by the Iron Age Research Agenda (Haselgrove et al. 2000, 2001: 24-25), the Romano-British research agenda (Taylor 2001b: 48-53), and the various regional research agendas noted above. I wish to conclude this introductory chapter with one important observation. The supposedly 'problematic' nature of the archaeological evidence, including a perceived paucity of material culture (see Chapter 10), can actually be beneficial. Without many of the key 'type fossils' of the Iron Age and Romano-British periods found in central and southern Britain (such as hillforts, villas and small towns), the region's archaeology allows the writing of different accounts that move away from dominant, highly stereotypical views of Iron Age and Roman Britain.

Notes

1. Throughout this thesis, whenever I have used aerial photographs I have tried to provide six or eight figure grid references for them, and note the photographer. The SLAP number refers to images from the Derrick Riley collection of aerial photographs in the Sheffield Library of Aerial Photographs held at the Research School of Archaeology, University of Sheffield. These photographic prints, slides and negatives were donated by his widow Margaret after Riley's death in 1993. Only the prints have been fully catalogued, but a few of these are missing their SLAP numbers, so in such cases I have used Riley's own numbering scheme.
2. There is no archaeological or palaeo-environmental evidence that I am aware of for the exploitation of fish in the study region during the Iron Age or Romano-British periods, although shellfish remains have been found at some Roman sites such as Dalton Parlours. This

is similar to the evidence from Iron Age Britain at least, where there is remarkably little evidence for the consumption of either fresh or salt water fish (Dobney and Ervynck 2007). This might suggest that during the Iron Age there was some prohibition on fishing, along with the hunting (or at least the consumption) of wild animals such as deer and wild boar (see Chapter 5); although in Iron Age deposits at Haddenham in Cambridgeshire a few pike bones were found, in addition to butchered beaver and wild fowl bones, and bird eggshell fragments (Serjeantson and Sidell 2006: 227-235).

3. I have tried wherever possible in my in-text referencing of specific points or arguments to give details of page numbers for unpublished developer-funded client reports as well as published articles and books. Unfortunately, for many years AS WYAS reports were produced without page numbers, and so this has not been possible for most of their reports from *c*. 1990-2007. Some reports did have individually numbered paragraphs, however, and I have referred to these wherever possible.