Leicestershire County Council

The Leicestershire, Leicester and Rutland

Historic Landscape Characterisation Project



The Leicestershire, Leicester and Rutland Historic Landscape Characterisation Programme was carried out between 2006 and 2009 by John Robinson for Leicestershire County Council with support from English Heritage.

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List of Abbreviations

DCLG	Department for Communities and Local Government
DCMS	Department for Culture, Media and Sport
DEFRA	Department for the Environment Food and Rural Affairs
EAFRD	European Agricultural Fund for Rural Development
EUS	Extensive Urban Survey
EWGS	English Woodland Grant Scheme
GOEM	Government Office for the East Midlands
HER	Historic Environment Record
HLC	Historic Landscape Characterisation
HNET	Historic and Natural Environment Team
LCA	Landscape Character Assessment
LDF	Local Development Framework
OD	Ordnance Datum
PPG	Planning Policy Guidance Note
PPS	Planning Policy Statement
RCC	Rural Community Council
RDPE	Rural Development Programme for England
RSS	Regional Spatial Strategy
SPD	Supplementary Planning Document

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1 Project Outline and Background

1.1 Introduction

1.1.1 The use of Historic Landscape Characterisation (HLC), with the active promotion and guidance of English Heritage, has increasingly come to be recognised as an essential tool aiding heritage professionals to manage change within the historic environment and it is particularly relevant when working at a landscape scale. Concepts of 'character' have their roots in the 1960s and were articulated within the 1967 Conservation Area legislation. The Government white paper 'This Common Inheritance' published in 1991 proposed that a register of historic landscapes should be drawn up by English Heritage and in 1992 the Historic Landscape Project began; this involved English Heritage developing of a methodology for landscape assessment and identified the need for a broad integrated and holistic approach to landscape issues. The recognition of the importance is now embedded into the planning process through the guidance formerly in PPG15 (*Planning and the Historic Environment*), PPS7 (*Sustainable Development in Rural Areas*) and features prominently in PPS5 (*Planning for the Historic Environment*) which replaced PPGs 15 and 16 in March 2010.

1.1.2 Across a range of disciplines current thinking generally accepts the principal that it is not desirable and, moreover, neither is it possible to prevent landscape change. For the landscape to continue to have cultural relevance it is important to recognise its dynamic nature. What is important is that those people making policy or commenting upon proposals need to be adequately informed when determining what scale and type of change is most appropriate. HLC provides much of the necessary information for developing an understanding of the historic dimension of the contemporary landscape which will inform appropriate and effective management strategies. That said it is important to recognise that HLC must be regarded as only one data source and is an interpretation which focuses upon the Historic Environment. Our understanding of the landscape is best enhanced when all available sources of information are consulted and taken into consideration. These can include consultation of the Historic Environment Record, documentary sources, photographic evidence, landscape character assessments at various levels and site visits.

1.1.3 The methodology for HLC was pioneered in Cornwall during the mid 1990s and has been developed under the guidance of English Heritage, typically working in partnership with local authorities, as the programme has been rolled out nationally. Whilst the methodology has evolved to reflect improving technology (most notably the widespread availability of Geographic Information Systems).and local requirements the core principles remain the same. These core principles are concerned with;

> mapping the historic dimension of today's rural and urban landscapes, and are about being comprehensive, not selective (leaving no 'grey areas'), and viewing areas rather than individual sites. HLC is concerned with the commonplace and the locally distinctive and, through identifying and analysing time-depth, it expresses the dynamic nature of towns and countryside (Clark, J. Darlington, J. and Fairclough, G. 2004)

1.1.4 The Leicestershire, Leicester and Rutland Historic Landscape Characterisation (LLR HLC) Project commenced in April 2006 and has been a partnership initiative hosted by Leicestershire County Council, supervised and funded by English Heritage. The project area comprises the areas administered by Leicestershire County Council and the unitary authorities of Leicester City Council and Rutland County Council.

1.1.5 This report has several objectives; these include providing a context to the project which will involve an examination of the geology, topography ecology and archaeology of the project area. In addition this report will provide an explanation of the project aims and attempt to illustrate how it sits alongside other local, regional and national characterisation programmes. An outline of the methodology employed for the main data capture phase of the project will also be included. The bulk of the report will be given over to an analysis and discussion of some of the findings generated by the project. The report will further go on to examine the role envisaged for HLC including its key function as a data set for use by the Historic Environment Team, the potential contribution of HLC to both local and regional development frameworks and how HLC fits into wider national planning policy guidance and international commitments.

1.2 The Project Study Area

1.2.1 The Leicestershire, Leicester and Rutland Historic Landscape Characterisation Project covers an area of 2,606 sq. km and takes in the modern county of Leicestershire (2083 sq. km) and the unitary authorities of Leicester City (73 sq. km) and Rutland (450 sq. km). The project area is landlocked and may be considered to be a fairly typical slice of the English Midlands.



Figure 1 Project Area



Figure.2 The Regional Context

1.2.2 The project area is set within the East Midlands Region and borders Derbyshire, Nottinghamshire, Lincolnshire, Peterborough, Northamptonshire, Warwickshire and Staffordshire. Within Leicestershire itself there are seven local authorities North West Leicestershire District Council, Charnwood Borough Council, Melton Borough Council, Harborough District Council, Oadby and Wigston Borough Council, Blaby District Council and Hinckley and Bosworth Borough Council.

1.2.3 The project area has a population approaching 1,000,000 people (Leicestershire: 641,000; Leicester; c. 292,600; Rutland; 38,400 (Office for National Statistics, Mid 2007 to Mid 2008 Population Estimates)). In terms of area the largest district is Harborough (593 sq. km) which contrasts with Oadby and Wigston which has an area of only 24 sq. km. Oadby and Wigston, however, is the most heavily populated with 56, 800 persons and has a population density of 2,333 persons per sq. km. Melton (47,900 persons) is the most sparsely-populated district with only 100 persons per sq. km.



Figure 3 Local Authority Boundaries Within the Project Area

1.2.4 With the exception of Leicester the study area is predominantly rural however it does have a number of sizable market towns and urban areas. The largest towns are Loughborough (57,560 persons), Hinckley (38,620 persons), Coalville (32,030 persons), Melton Mowbray (25,890 persons), Wigston (25,610). The remaining urban areas and market towns each have populations which do not exceed 25,000 (Leicestershire County Council).



Figure 4 Main Settlements in the Project Area

1.3 Landscape Character Assessment

1.3.1 At a national level HLC may be seen to sit within the context of The Character of England Landscape, Wildlife and Cultural Features Map produced in 2005 by Natural England with support from English Heritage. This is a revision of the 1996 Countryside Character Map which itself was a joint Countryside Commission/English Heritage/English Nature project. This map subdivides England into 159 National Character Areas (NCAs) and provides a picture of the differences in landscape character on a national scale. Leicestershire and Rutland are divided into 13 NCAs. However only two of these National Character Area lie wholly within the project area (Charnwood and High Leicestershire), with a further nine lying partly within it (Kesteven Uplands, Leicestershire and Nottinghamshire Wolds, Leicestershire and South Derbyshire Coalfield, Leicestershire Vales, Mease/Sence Lowlands, Melbourne Parklands, Northamptonshire Uplands, Northamptonshire Vales, Trent and Belvoir Vales and Trent Valley Washlands). In addition a very small fragment of Rockingham Forest lies within south east Rutland.

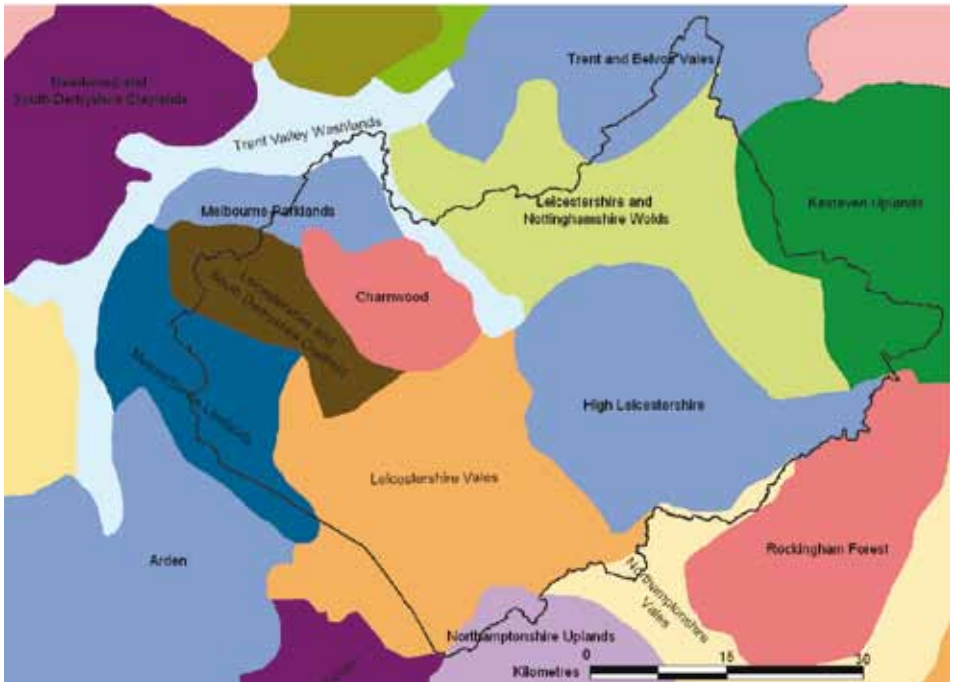


Figure 5 National Character Areas

1.3.2 In 2001 The *Leicester, Leicestershire and Rutland Landscape and Woodland Strategy* was published by Leicestershire County Council in partnership with Leicester City Council and Rutland County Council. The Strategy was designed to sit within the context of the Leicester, Leicestershire and Rutland Structure Plan and is informed by a landscape character appraisal. This appraisal was carried out at a similar level to the one informing The Character of England Landscape, Wildlife and Cultural Features Map. However whilst there is a broad correlation between the two studies the Leicester, Leicestershire and Rutland assessment is less coarse and identifies eighteen character areas and is an attempt to focus on character areas which are seen as significant at the finer county level.

1.3.3 The primary focus of the Landscape and Woodland Strategy was to focus upon the visual character of the countryside and, in line with the landscape character assessment guidelines current at the time, did not specifically address the built environment. The guidelines contained within the Strategy concentrated on landscape and woodland issues whilst at the same time recognising that there was a need to produce guidance on the built and historic environment. It is envisaged that HLC should be one of the tools used to inform such guidance in the future.

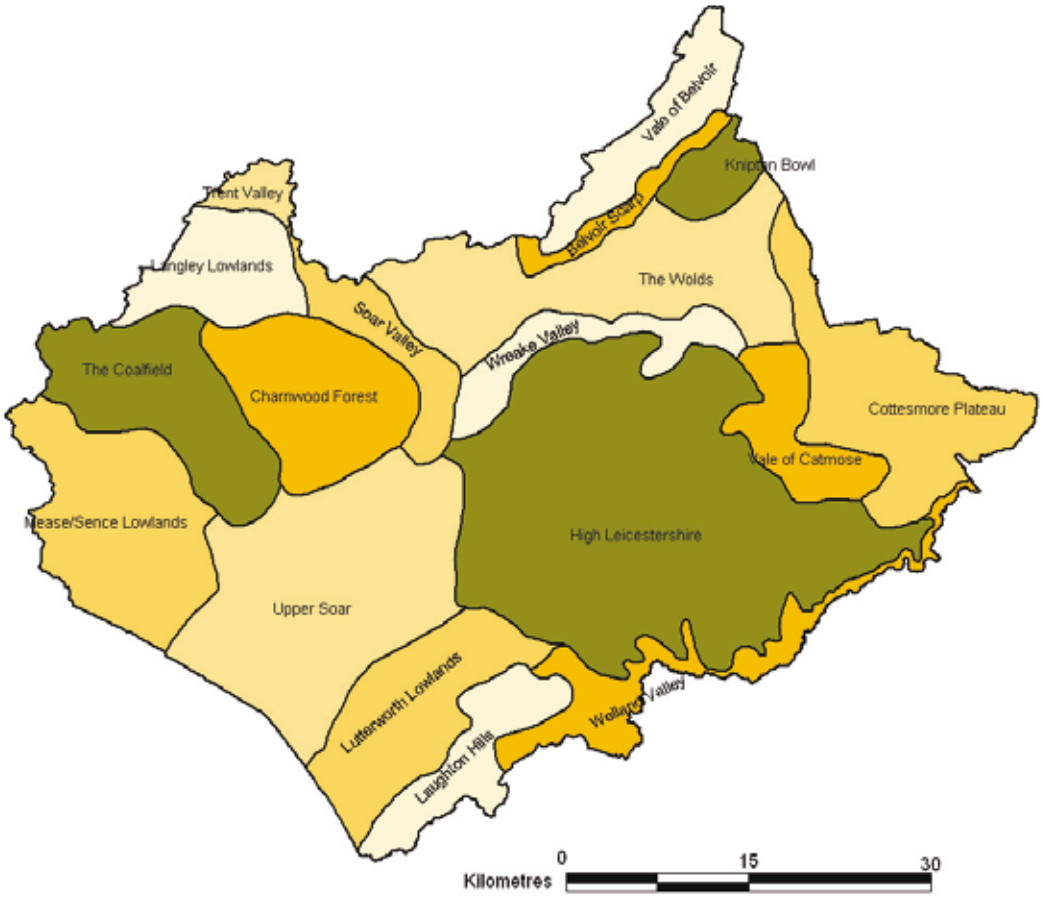


Figure 6 Leicester, Leicestershire and Rutland Landscape Character Areas

1.4 Rural Settlement in England

1.4.1 English Heritage's *Atlas of Rural Settlement in England* (Roberts and Wrathmell, 2000), provides a mapped definition of rural settlement patterns and illustrates the wide regional variation indicative of a diverse physical, social, economic and political history.

1.4.2 Leicestershire, Leicester and Rutland fall within the 'Central Province' as defined by Roberts and Wrathmell (ibid, p 45). This is a zone characterised by the presence of large nucleated settlements. The 'Central Province' contains a number of sub-provinces; these include the 'Vale of Trent', the 'Inner Midlands' and the 'East Midlands'.

1.4.3 The River Trent dominates the 'Trent Valley Vale of Trent' sub province (CTRNT) and defines the north-western fringe of Leicestershire, culminating at the Trent-Soar confluence and also includes the Vale of Belvoir. The area comprises nucleated villages and hamlets. Low densities of dispersion dominate throughout the area reflecting the dominance of the townfield system.

1.4.4 The 'Inner Midlands' covers a large proportion of the west of Leicestershire, including Charnwood and spreading down to Hinckley and Lutterworth in the south. The strong influence of the prevailing scarp and vale topography has been noted by Roberts and Wrathmell who also remark that this is the largest area wholly dominated by nucleations in the country. This is a pattern documented in the Domesday Book and further evidenced by the significant number of deserted settlements.

1.4.5 The Wolds, High Leicestershire, Wreake/Eye and Wellland valleys and the County of Rutland are contained within the 'East Midlands' sub-province. Again this is a scarp and vale landscape, where limestone ridges are interlaced with the watersheds of the Wreake and Welland. Ancient woodland is a notable feature of the area and the former extent of these woodlands is likely to have had a significant effect upon landuse and settlement. The sub-province is dominated by villages and hamlets with low and very low dispersion densities as well as later patterns of dispersed farmsteads associated with 18th century enclosure. In common with the 'Inner Midlands' sub-province the 'East Midlands' contains a significant number of deserted medieval settlements.

1.5 Geology

1.5.1 Most of the geological ages represented within the British Isles can be observed within the scope of the project area. What is more, the geology of Leicestershire and Rutland can be shown to have played a significant role in influencing the industrial and cultural development of the two counties. The many rock types present date from a range of geological epochs and many form prominent features over the study area. However a substantial proportion of this bedrock geology lies below unconsolidated sediments such as boulder clays. Along the Soar valley, and to a lesser extent the along the Welland, Wreake and Trent, there are superficial deposits of sands and gravels and the working of these has had a significant effect upon the present day landscape.

1.5.2 The Pre-Cambrian sedimentary rocks of Charnwood Forest are amongst the oldest in England and Wales. These rocks, which have been folded by subsequent earth movements, are of special geological interest and make a particular contribution to the distinctiveness and character of the Charnwood Forest area. Around the edges of Charnwood Forest younger igneous rock deposits occur which have been extensively quarried for roadstone.

1.5.3 Western Leicestershire's geology consists of layers of younger Carboniferous and Triassic rocks which include sandstones and Carboniferous Limestone. At Breedon Hill and Cloud Hill outcrops of Carboniferous, Magnesian Limestone are quarried at such a scale that it has a significant impact upon the character of the area. The landscape of much of the north-western part of Leicestershire has been significantly impacted upon by the working of extensive Coal Measures with coal seams in the Measham and Heather area suitable for open-cast mining techniques as seen, for example, at Ravenstone. The coal measures of north-western Leicestershire are very variable and include layers of fireclays and brick clays, both of which have been worked extensively. The Triassic Mercian Mudstone Group (Keuper Marl) whick underlies much of western Leicestershire can be up to 300m thick and has given rise to a moderately undulating landscape.

1.5.4 The rocks to the east of the River Soar comprise more recent Jurassic clays, ironstones and limestones. Here the thick clay formations alternate with thinner layers of ironstones and harder bands of limestones which typically stand out as small ridges. The highest parts of Leicestershire, including the Belvoir Scarp and the Laughton Hills, consist of Marlstone which caps the clays. These rocks have all been quarried. Older workings have mostly been on a fairly modest scale with relatively limited impact upon the character of the landscape. Until the early 1970s opencast ironstone working operations were carried out around Eastwell and Easton and near to Harston, Sproxton and Buckminster. These workings have, for the most part, been restored to agricultural use.

1.5.6 In Rutland and the extreme east of Leicestershire the bedrock geology is younger; Jurassic limestones such as the pale stone quarried at Ketton predominate and have been used as sources for building stone and cement.

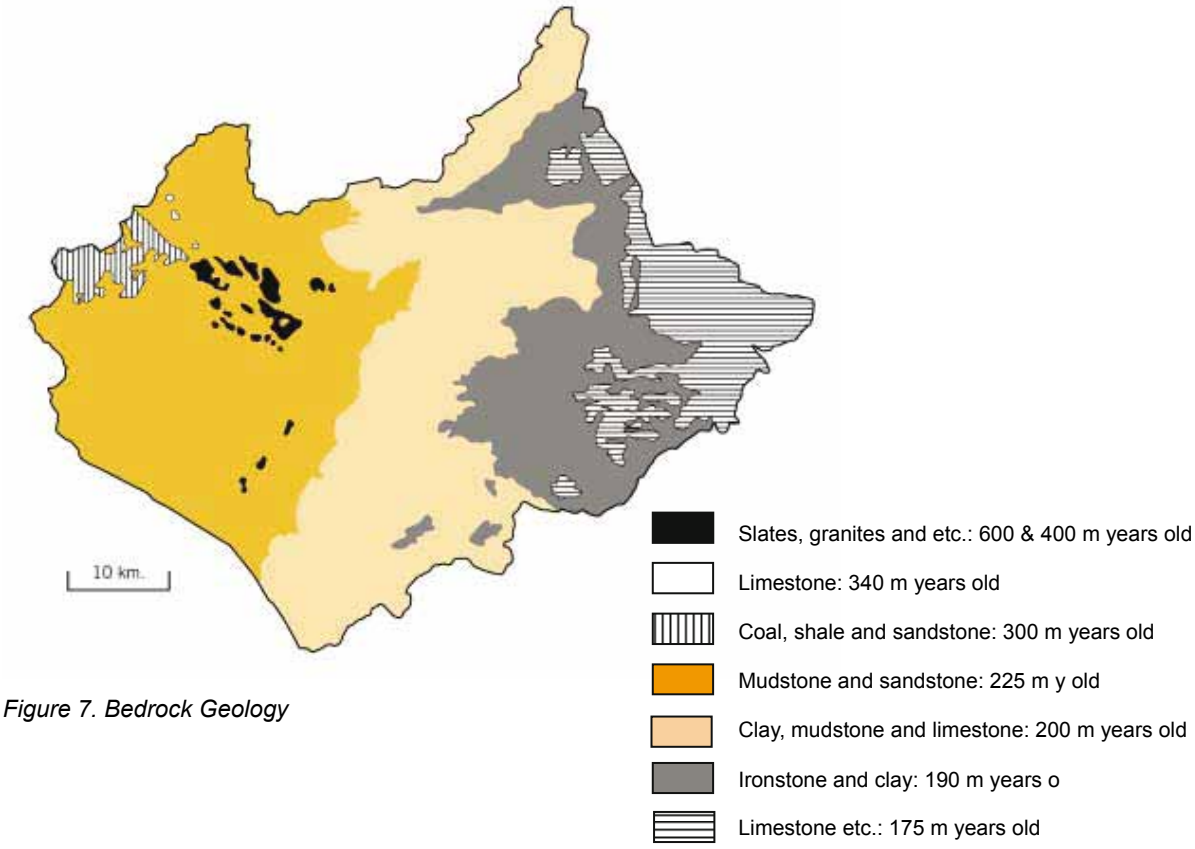


Figure 7. Bedrock Geology

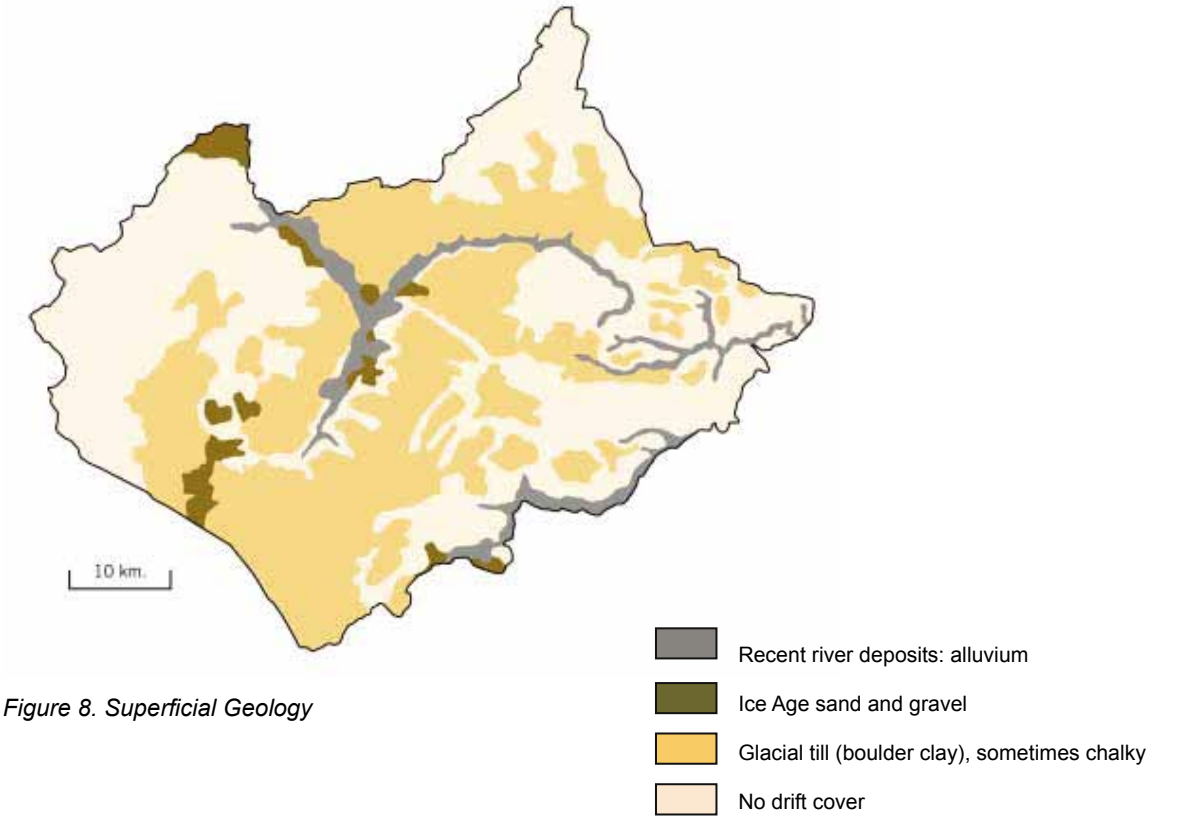


Figure 8. Superficial Geology

The Succession of Rock Formations in the Leicestershire Area (after Ford)

Era		Period	Date	Rock Formations
MESOZOIC		Middle Jurassic	*c.*167-178 Ma	Lincolnshire Limestone
				Lower Estuarine Series
				Northamptonshire Ironstone
		Lower Jurassic	*c.*178-195 Ma	Upper Lias Clays
				Middle Lias Marstone Rock Bed (Ironstone) and Silts
				Lower Lias Clays and Hydraulic Limestones
		Triassic	*c.*195-225 Ma	Rhaetic-White Lias Limestone and Black Shales with Bone Bed
				Keuper Marl (with gypsum) and local Upper Sandstone
				Keuper Sandstone (including 'Waterstones')
				Bunter Sandstone and Pebble Beds
PALAEOZOIC	LATE	Permian	*c.*225-290 Ma	Whitwick dolerite and local 'Permo-Triassic' marls, breccias, etc.
		Carboniferous	*c.*290-345 Ma	Upper 'Barren' Coal Measures
				Middle and Lower Coal Measures
				Millstone Grit Series
				Carboniferous Limestone Series
		Devonian	*c.*345-355 Ma	Upper Old Red Sandstone
	EARLY	Silurian (Caledonian)	*c.*400 Ma	Mountsorrel Granodiorite
				South-west Leicestershire Diorites
		Ordovician (Lower)	*c.*500-515 Ma	Merevale Shales
		Cambrian	*c.*515-570 Ma	Stockingford Shales
				Hartshill Quartzite
NEOPROTOZOIC		Precambrian	> 684 Ma	Charnian Intrusives (markfieldite and other diorites)
				Charnian Sediments – probably more than 10,000ft thick
				Caldecote Volcanics of Nuneaton 400ft

6 Landform and Drainage

1.6.1 Leicestershire and Rutland would seem, upon first impressions, to possess an undramatic landscape consisting of gently rolling countryside, relatively small rivers (Charter, Gwash, Jordan, Sence, Soar, Welland and Eye/Wreake), tilled farmland and market towns. The project area may be considered to have a relatively moderate elevation lying between 60 and 180 metres above sea level. The lowest point in the two counties is near to the confluence of the Soar and Trent below Kegworth (27m). Bardon Hill in Charnwood Forest (278 m) is the highest point.

1.6.2 The study area is roughly divided east/west by the River Soar's broad floodplain, for which the only major tributary is the River Wreake. The Soar itself flows northwards to join the River Trent, which forms a short section of Leicestershire's northern boundary. Much of Leicestershire drains into the Trent through either the Soar or the Mease.

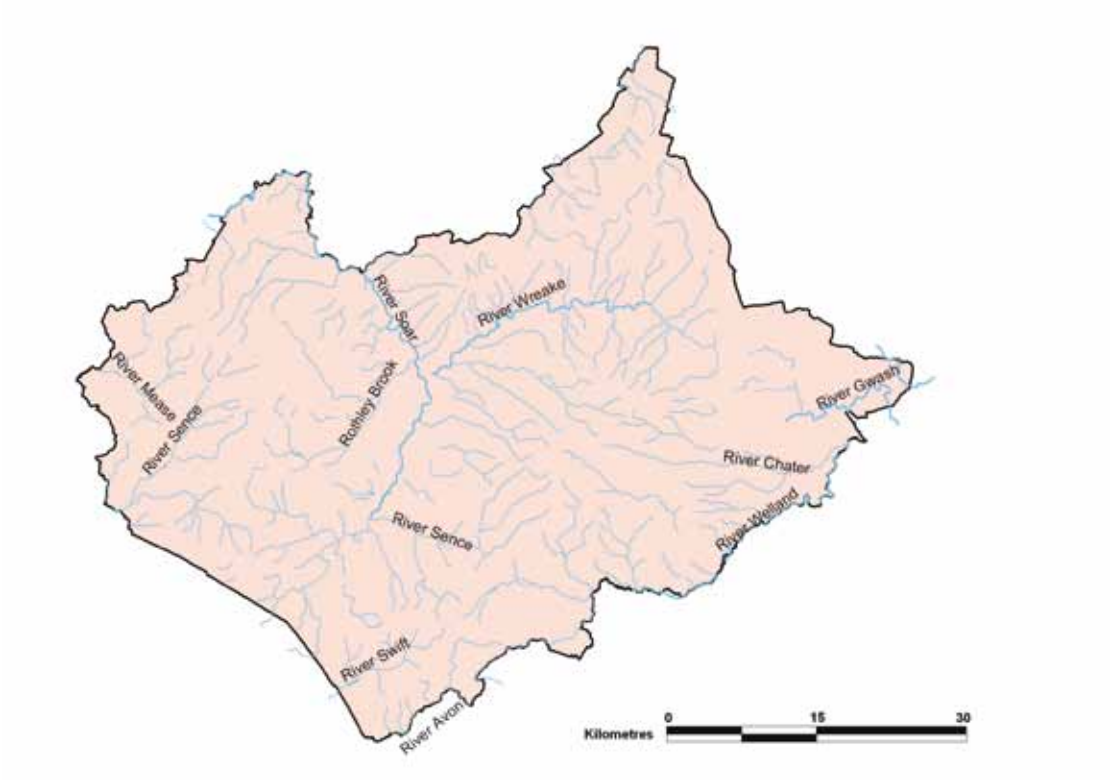


Figure 9. Rivers and Watercourses

1.6.3 To the west of the Soar Charnwood Forest's Pre-Cambrian rocks form an isolated and distinctive area of high relief. The outcrops here, which have been created through a process of tilting, folding and erosion, contribute significantly to the character of the landscape. Many swift flowing streams run off this high area north and east into the Soar and south-west into the Sence. From Charnwood Forest westwards to the county boundary and beyond there is a band of moderately high land. Much of the rest of western Leicestershire typically consists of gently rolling landforms with little in terms of major contrasts in relief.

1.6.4 The area lying to the east of the Soar and south of the Wreake is one

where the erosion of Jurassic Lias Clays has contributed to the forming of a landscape characterised by a high, dissected plateau with numerous small stream valleys with clay floors and marlstone slopes. These streams flow either west or north into the Wreake or directly into the Soar, or south and east into the Welland and eastern River Sence.

1.6.5 East of this plateau is the Vale of Catmose, a broad shallow valley which drains to the Wreake in the north and the Welland in the south. East of the Vale of Catmose lies another plateau area which rises steeply from the Vale at its northern end. The southern part of the plateau has been cut by rivers running into the Welland to form a gently rolling landscape that has within it a number of shallow but sometimes steep-sided valleys separated by broad ridges.

1.6.6 Moderately high land extends in a band roughly from Market Harborough in the east to Lutterworth in the west. The land here drains to the Avon and the Swift.

1.6.7 The north-eastern part of the study area, essentially land north of the River Wreake, consists of undulating uplands. These are abruptly terminated by the Marlstone escarpment of the Belvoir Scarp which dramatically falls to the flat claylands of the Vale of Belvoir to the north-west.

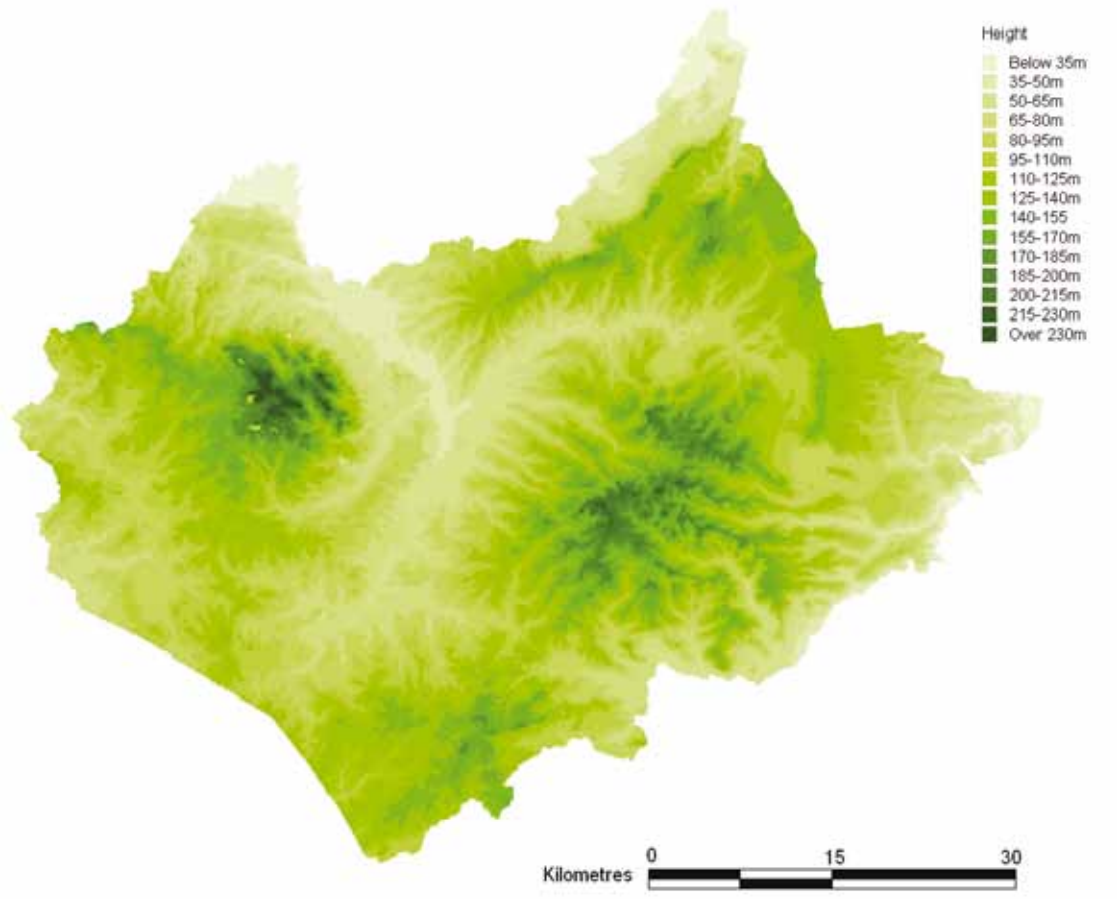


Figure 10. Relief

1.7 Soils

1.7.1 The soil types and their distribution within the study area are of a fairly broad mix and generally reflect drainage patterns and the underlying parent materials. On the western side of Leicestershire the soils deriving from the rocks of Charnwood Forest are very often thin, stony and acidic. Further west the soils of the Coal Measures are generally sandy and of a poor quality. Soils elsewhere in the western parts of Leicestershire tend to be neutral clay loams.

1.7.2 On the eastern side of Leicestershire and in Rutland the clay soils also predominate although here they are more variable in character than on the western side of the study area. Where the Lias Clays form the underlying geology they give rise to clay soils that are difficult to work and which are traditionally under pasture. Arable usage tends to be located on the limestones and ironstones which produce soils that are lighter and more loamy in character. The most easily worked soils, on the Marlstone, tend to have a calcareous and loamy or marl make-up.

1.8 Archaeology

1.8.1 The Palaeolithic

1.8.1.1 The Palaeolithic, literally meaning 'Old Stone Age' is a division in prehistory which spans the emergence of the first tool-using humans to the retreat of the glacial ice in the northern hemisphere. In Britain, the Palaeolithic covers the period from around 700, 000 years ago to about 10,000 years ago (ya) and is itself conventionally divided into three periods; the Lower Palaeolithic (700,000-250,000 ya), the Middle Palaeolithic (250,000-40,000 ya) and the Upper Palaeolithic (40,000-10,000 ya). This division has been based largely upon the types of artefacts found from this period. In recent years archaeologists, in recognising the huge time span, and the varying climactic and geographic conditions involved, have acknowledged that that this classificatory approach is, at the very least, problematic. That said however this framework continues to prove useful when trying to achieve a basic understanding of the period.

1.8.1.2 Throughout the Palaeolithic sea levels were considerably lower than they are today and Britain was connected to mainland Europe through the land mass now referred to as Doggerland. The Palaeolithic spans a period of some 690,000 years and during this time there were significant climactic fluctuations. During those periods when the climate was at its coldest humans seem to have been driven south and away from Britain.

1.8.1.3 For the Lower Palaeolithic evidence for the first hominins in western Europe is restricted to two sites in Spain and is likely to date to about 780,000 ya.

1.8.1.4 At the internationally important site of Pakefield Cliff in Gisleham, Suffolk, excavation of interglacial deposits revealed struck flints, plant and animal fossils in the Cromer Forest-bed Formation, which comprise the earliest evidence for human activity in northern Europe (c. 700,000 ya).

1.8.1.5 The Happisburgh project, Norfolk, was set up after flint artefacts (including a handaxe) and butchered bone were discovered in the organic muds that underlie the rapidly eroding coastal cliffs. In 2004 Happisburgh I was excavated, revealing flint tools, bone, wood and other plant materials, which lay at the marshy edges of a large river. The discovery of the extinct water vole (*Arvicola cantiana*) suggests that this site dates to about 500,000 to 600,000 ya. Two further sites were discovered, Happisburgh II and III; at the latter a gravel river channel also revealed flint tools, bone and plant materials and this has been dated to at least 700,000 years BP. If it is older than this date, then this would make it the earliest human site in northern Europe. The evidence from Happisburgh III has huge implications for our understanding of the earliest colonization of Europe and the types of environment in which early humans could survive (Ashton 2007).

1.8.1.6 At Boxgrove, West Sussex, an early human presence (c. 500,000 ya) was revealed through the discovery of remains of the hominin species *Homo heidelbergensis.* Boxgrove also produced important evidence for the

manufacturing of biface and other lithic tools along with associated faunal material. More recent discoveries for East Anglia include cut-marked animal bones and stone tools which have been taken from deposits dating possibly from as early as 600,000-700,00 ya. It is these East Anglian discoveries which may have important implications for the way we understand the Palaeolithic in the East Midlands since deposits of this period also occur within our region (Cooper, 2004).

1.8.1.7 Our understanding of the Palaeolithic in the region has developed significantly since the 1950s and the identification of a major pre-Anglian river channel. Known as the Bytham River this is now seen as having been a major river during the Lower Palaeolithic, or Cromerian, period. The channel has been has been traced across the Midlands flowing north-east past Coventry, into Leicestershire (along the later Soar Valley) via Leicester and Melton and on into East Anglia (Graf, 2002). In addition many of the known artefacts from this period in Leicestershire are in or close to the 'Brooksby' sand and gravel deposits which themselves underlie the Bytham deposits. Organic remains recovered from a borehole at Brooksby contained 7-8m of water-laid sand and gravel and included plant macrofossils (leaves, bud scales and seed), pollen and other remains. This material has been dated to 480,000 ya (Graf, 2002) and suggests relatively mild conditions (Rice, 1991). A lower deposit included evidence of pine, fir, birch,hazel and oak woodland. The potential importance of the Bytham River deposits could prove to be significant in developing our understanding of the earliest humans in the British Isles and in fact the comparative lack of pre-Anglian archaeology associated with the other major river, the Thames, gives rise to the possibility that the Bytham was the earliest colonisation route for Britain (Cooper, 2002). The Bytham was blocked *c.* 470,000 ya during the Anglian glaciation resulting in the formation of 'Lake Harrison'; this ice-dammed lake would have dominated much of south-west Leicestershire and probably all of Warwickshire, and although no archaeological deposits have been recovered from the clay and silt lake deposits there is a potential for lakeside occupation occurring during warmer phases.

1.8.1.8 A sizable collection of artefacts including handaxes, choppers and flake tools has been gathered from around the Warwickshire and Leicestershire border almost entirely by a single fieldworker, Ron Waite. The material is predominantly quartzite all showing varying degrees of rolling. It has been suggested that these finds were originally deposited further north and transported into the area by glaciers although is should be noted that this is a sizable collection not solely restricted to the sand and gravels but occurs on a variety of geologies and suggests a significant human presence during the Lower Palaeolithic.

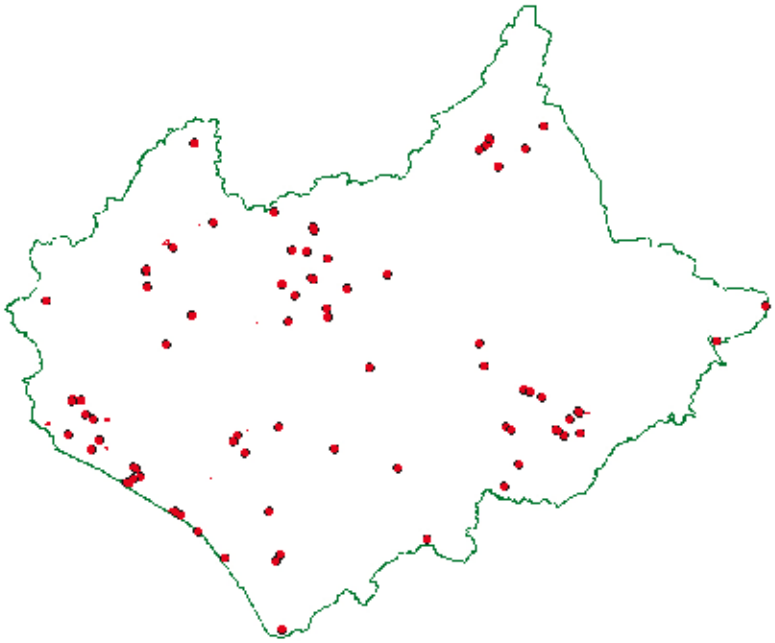


Figure 11. Palaeolithic Sites and Find Spots Recorded in the Historic Environment Record

1.8.1.9 Evidence of human occupation within the study area is scarce for the Middle Palaeolithic which covers the period *c*. 250-30,000 ya. This is a period that sees gradual changes in the population from *Homo heidelbergensis* to humans displaying more modern traits. As the climate became colder hominins around 160,000 ya seem to have abandoned Britain in favour of the warmer regions to the south and it is not until *c.* 58,000 ya that Neanderthals begin to colonise Britain. Very few artefacts have been found from this period within the study area but include a possible side scraper found at Blackbird Road, Leicester and probable handaxes from Stanton-under-Bardon and Aylestone

1.8.1.10 The Upper Palaeolithic which covers the period *c.* 30-10,000 ya sees anatomically modern humans moving into north-west Europe. These newcomers appear to exhibit different behaviours and employ different technologies to Neanderthals whose presence may be suggested from the evidence of material including a flint leaf point recovered from an Early Upper Palaeolithic hyena den at Glaston in Rutland (McNabb, J. 2006). Evidence across Europe suggests the emergence of symbolic expression on artefacts and cave walls and also the formal burial of the deceased. In neighbouring Nottinghamshire at Cresswell Crags evidence for increasingly sophisticated forms of artistic and symbolic expression comes in the form of rock art depicting images of bison, deer, bears and birds. These are the only known examples of Palaeolithic cave art in the UK and their northerly location adds to their significance. New stone tool technology based upon the controlled production of blades which may have been used unmodified or served as blanks for tools such as projectile points, knives, scrapers, burins and piercers is also developing at this time.

1.8.1.11 On the Leicestershire /Rutland border at Launde a dense scatter of around 3,000 blades, blade cores and possible hammerstones was recovered during an excavation in advance of the laying of a pipeline. Of the flints recovered 57% were recorded sealed in a thin silty clay layer thought to be a weathered surface horizon of the boulder clay. The site is on a commanding hilltop with views to the north, south and east.

1.8.1.12 At Glaston in Rutland excavations revealed a scatter of semi-fossilised animal bones, including woolly rhinoceros, wolverine, early horse (*Equus Ferus*), mountain hare and reindeer. Evidence for human activity came from the discovery of a small assemblage of flint tools, including a leaf point, and knapping debris. Most of the horse bones did not appear to have been affected by hyena gnawing, however a number of long bones appear to have been deliberately smashed to extract the marrow.

1.8.1.13 The Leicestershire Historic Environment Record contains 100 sites recorded as having a Palaeolithic date, the distribution of which is shown in Figure 11.

1.8.2 The Mesolithic

1.8.2.1 The Mesolithic or 'Middle Stone Age' is the period spanning *c.* 10,000-6,000 ya and in Britain is often equated with a period of rapid environmental change as the end of the last ice age saw a rapid warming of the climate and widespread changes in vegetation pattern. The open late glacial environments were replaced by pioneer forests of birch and pine which, as temperatures continued to rise, gave way to species such as elm and lime (Myers, 2006). There was also a change in the fauna as species more suited to the postglacial forests such as red deer, roe deer, auroch, boar and elk replaced horse, arctic hare and reindeer. The combination of the warming in climate and the retreat of the glacial ice sheets together with a rise in sea levels culminated in Britain being separated from the continent.

1.8.2.2 By around 10,000 ya evidence for new technologies began to appear across much of Britain. These include assemblages containing distinctive small sharp blades called microliths. Technology changes would seem to indicate changes in hunting techniques which themselves may reflect developing economic strategies and social territories (Cooper, 2004).

1.8.2.3 Several surveys have produced evidence, mainly in the form of lithic scatters, for a Mesolithic presence in the study area. This includes sites at Medbourne, Brooksby, Grace Dieu Priory and around Misterton. Stratified flints have also been found at Croft below the alluvium next to a palaeochannel along with further work revealing a number of sub-alluvial features including partial ring slots. Stratified deposits were also found at Ridlington where a pit was found to contain 50 flints including a microlith. Most recently in 2009 over 5,000 worked flints were found below the ploughsoil at Asfordby during archaeological work carried out in advance of a residential development. Worked flint from the site included flint cores, blades, flakes, scrapers and piercers. Targeted investigation also revealed a

charcoal rich former hearth and several postholes and arcs of stones, suggesting the possible position of tent-like structures. The material recovered suggests that people occupying this site were making and repairing flint weapons and tools on a large scale and it is probable that the range of activities identified from the site will have been associated with subsistence hunting.

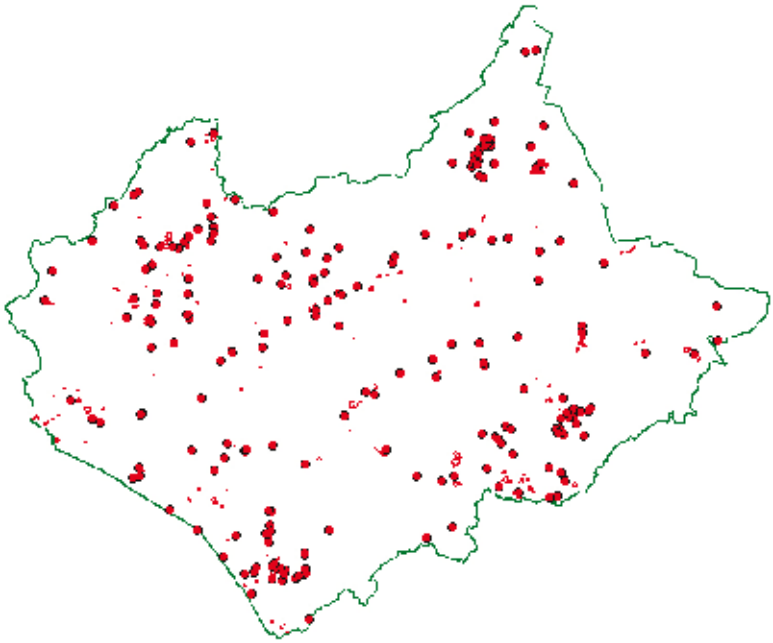


Figure 12. Mesolithic Sites and Find Spots Recorded on the Historic Environment Record

1.8.2.4 The Leicestershire Historic Environment Record contains 380 sites recorded as having a Mesolithic date, the distribution of which is shown in Figure 12.

1.8.3 The Neolithic

1.8.3.1 The Neolithic, or New Stone Age, is often characterised as being a period that witnesses major societal changes from hunting and gathering lifestyles to a more sedentary subsistence economy based upon domesticated animals and cereal production. However, it has become apparent in recent years that this is an over simplified picture and that the Neolithic, spanning the period from *c.* 6,000-4,500/4,200 ya, offers both continuities and contrasts with the periods that came before and after (Whittle, 1999). Further to this the Neolithic may be split into Early (*c.* 6000-54/5300 ya), Middle (*c.* 54/5300-50/4900 ya) and Late (*c.* 5000/4900-45/4200 ya) phases. Alternatively a split of Earlier Neolithic (*c.* 6000-4800 ya) and Later Neolithic/earlier Bronze Age (*c.* 4800-3500 ya) is often used.

1.8.3.2 Geographically the East Midlands is an incredibly diverse region, this diversity of landscapes encompassing highland and lowland zones and including fenland and coastal areas. This diversity will be reflected in the archaeology as Neolithic communities will have employed a variety of techniques designed to exploit a range of contrasting environments (Clay, P. 2006).

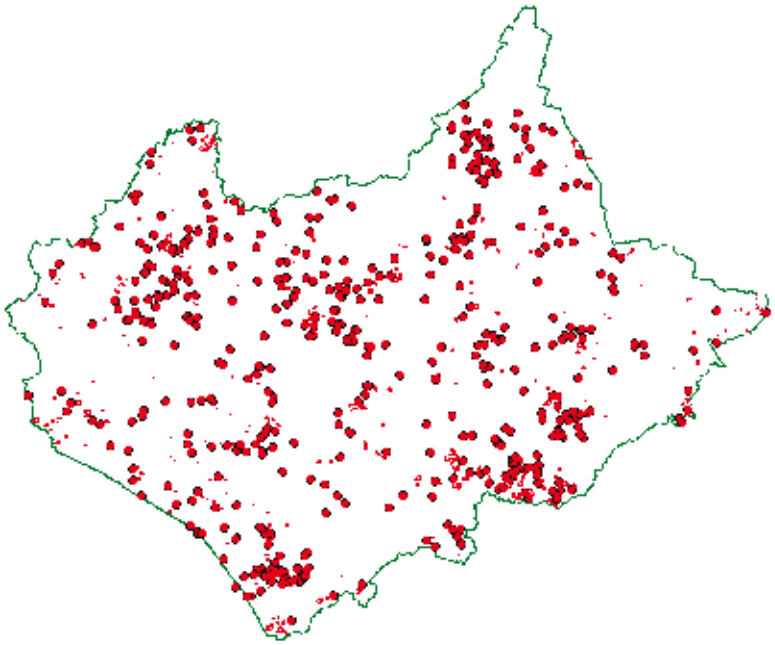


Figure 13. Neolithic sites and Find Spots Recorded on the Historic Environment Record

1.8.3.3 It is often difficult to separate evidence from the Late Mesolithic and Early Neolithic since many of the same areas were exploited and there would appear to be a slow and gradual change in the technologies employed and cultural traditions. Much of the evidence for the Earlier Neolithic in Leicestershire and Rutland comes in the form of lithic material and cropmarks. The lithic evidence is most common and comes in the form of surface scatters of flint and stone artefacts including cores, flakes, blades, scrapers, knives and arrowheads. Surface finds of this kind however, only provide an indication of the distribution of recently disturbed sites. Analysis of the lithic data for Leicestershire and Rutland identified seventeen Early Neolithic 'core

areas' occurring on sands and gravel, Northampton Sand and Liassic Clays but with most from boulder clay substrata at an average height of 111m OD (Clay, 1999).

1.8.3.4 Possibly the earliest recorded evidence for this period comes from Croft close to the confluence of the Thurlaston Brook and the River Soar. Excavations here revealed small circular or sub-circular structures tentatively dated on nearby lithics to the Late Mesolithic or Early Neolithic (Beamish, 2004).

8.3.5 No clearly recognisable Early Neolithic monuments had been identified within the study area until relatively recently with the discovery of two opposed Long or Mortuary enclosures at Eye Kettleby, Melton Mowbray which have been dated to this period by form and an associated pit containing Early Neolithic pottery.

1.8.3.6 Prior to development geophysical survey at Husbands Bosworth identified a causewayed enclosure which bears similarities with relatively close neighbours at Barholm in Lincolnshire and Briar Hill, Northamptonshire. A limited excavation of the site produced decorated pottery with an early Neolithic date.

1.8.3.7 For the Later Neolithic twenty five 'core area' were identified by Clay (1999) from the evidence of lithic scatters. These were again located mostly on boulder clay though at a slightly lower average height of 104.3m OD.

1.8.3.8 The contribution of developer-led archaeological investigation to the research agendas for this period can be seen in the recovery and identification of Neolithic ceramics; Late Neolithic Grooved Ware pottery has been recovered from sites at Rothley Lodge, Thurmaston, Syston and Wanlip, whilst Impressed Wares have been excavated at Lockington, Enderby, Husbands Bosworth, Oakham and Braunstone.

1.8.3.9 It seems likely that the landscape across much of the British Midlands remained one dominated by woodland. However, it has also been suggested that as the Neolithic progressed woodland cover was significantly denuded as new technologies combined with the immigration of people introducing cereal crops and domestic animals cleared and developed their capacity to manage woodland (Rackham, O. 1989, 2003). There is pollen data from Hemington, near the confluence of the Rivers Trent and Derwent, for cereal production dating to 2880-2475BC. Elsewhere within the study area, such evidence may be regarded as scant and it has been suggested that many groups remained woodland and not field dwellers (Beamish, 2004). In support of this, environmental information, including pollen and insect fauna for the Early Neolithic derived from palaeochannel deposits near at Croft and from Kirby Muxloe, indicate a landscape of undisturbed mixed woodland.

1.8.3.10 It is likely that the Neolithic would have been a period during which many different groups of people would have been employing a variety of subsistence strategies including the herding of animals, limited cultivation along with hunting and gathering and the exploitation of resources which

would probably have required a level of seasonal mobility.

1.8.3.11 Communication links and pathways to aid access to food and other resources would have been vital. Streams and rivers would have provided the most obvious permanent communication and boundary network making the confluences and heads of rivers important. It may be that the confluence of the Soar and Wreake had local significance as did Husbands Bosworth at the watershed for the Avon, Welland and Soar.

1.8.3.12 Across the study area there are 1035 sites or find spots recorded in the Historic Environment Record which fall either entirely or partly within the Neolithic the distribution of which is shown in Figure 13.

1.8.4 The Bronze Age

1.8.4.1 The Bronze Age in Britain, which conventionally spans the period *c.*2000-800BC, can be characterised by the introduction of new metal working technologies and the introduction of new techniques for the production of flint tools. The introduction of new pottery designs during this period is also regarded as significant.

1.8.4.2 The archaeology from the Early Bronze Age (*c.* 2,000-1,500BC) indicates strong continuities with the Late Neolithic despite the introduction of metal working as communities continue to employ traditional subsistence strategies including herding and cereal cultivation.

1.8.4.3 Across Leicestershire and Rutland, in common with the other areas of the country, the most frequently occurring monument type is the round barrow and although some ring ditches may be small ceremonial enclosures many are more likely to be the remains of ploughed out barrows (Clay, 2004). Excavations of barrows and ring ditches have been carried out at Cossington, Eaton, Lockington, Melton Mowbray, Oakham, Sproxton, Tixover, and most recently at Earl Shilton. Whilst there are wide variations in funerary practices during this period the general trend seems to be a movement away from communal burials towards some acknowledgement of the individual. The building of round barrows will have served a function other than funerary; the role of the dead was shifting from being commemorated as ancestral guardians of the land to one where their monuments provided markers denoting a group's historic control and rights over a territory (Parker Pearson, 1999).

1.8.4.4 Pottery with an Early Bronze Age date has been found at several locations in Leicestershire and Rutland including examples of Beaker, Collared urn and food vessel.

1.8.4.5 Although settlement evidence has proved to be elusive, inference from known burials suggests that by the Early Bronze Age there was some expansion onto land that had been previously unexploited.

1.8.4.6 For the Middle Bronze Age, spanning the period *c.* 1,500BC-1,000BC, there are no known settlement sites within the project area although there is

the possibility that some areas identified from surface scatters as later Neolithic to earlier Bronze Age may have continued into the Middle Bronze Age. Woodland clearance seems to continue into the Middle Bronze Age. Environmental evidence recovered from an old river channel, or palaeochannel, at Castle Donington suggests that during this period the landscape of this area contained limited woodland and an increase in meadowland and pastureland species. At Lockington crop production may also be inferred from spelt wheat recovered among charred remains found in a pit cluster.

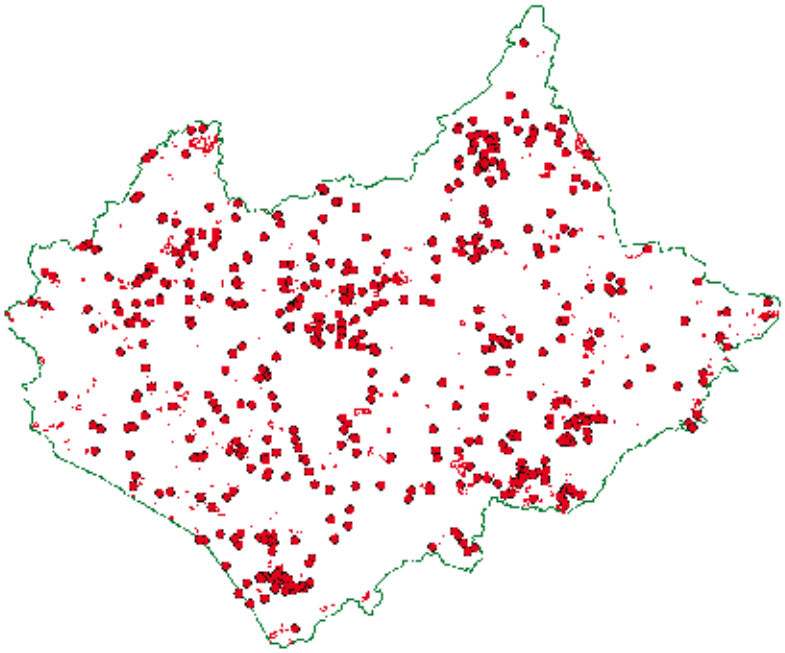


Figure 14. Bronze Age Sites and Find Spots Recorded on the Historic Environment Record

1.8.4.7 Across the study area, although relatively rare, there is some settlement evidence which may be attributed to the Late Bronze Age (*c.* 1,000-800BC) with sites at Glen Parva, Kirby Muxloe, Melton Mowbray, Eye Kettleby and Ridlington in Rutland. The Late Bronze Age is a period of climatic deterioration with lower temperatures and increased rainfall. By the Late Bronze Age an increased use and availability of metal tools enabled more efficient and rapid woodland clearance and more intensive management of the land. Evidence points to management of the landscape, notably with the formation of extensive field and boundary systems, at Eye Kettleby. Pit alignments, for example which, may have functioned as boundary markers, could well have been also associated with the settlement pattern.

1.8.4.8 Across Leicestershire and Rutland there are1311 sites or find spots recorded on the Historic Environment Record which fall either entirely or partly within the Bronze Age, the distribution of which is shown in Figure 14.

1.8.5 The Iron Age

1.8.5.1 The Iron Age across most of Britain is generally taken to cover the period 800 BC-AD 43 with the end of the period being marked by the Roman invasion. As with other periods in prehistory there is no single horizon that clearly marks the transition from the Late Bronze Age. The Iron Age is typically defined by a number of attributes including the construction of hillforts and development of new domestic pottery types, both of which have been shown to have origins in the Late Bronze Age. The Iron Age also sees the gradual introduction of iron technology and by the end of the period major social and economic changes were occurring (Haselgrove, C. 1999).

1.8.5.2 By the earlier part of the period settlement appears to be well organised with small settlements and farmsteads being most common. Animal husbandry was becoming increasingly important and this would have been complemented by the cultivation of grains and legumes and the hunting and gathering of some wild foods.

1.8.5.3 Some of the more permanent Early Iron Age settlements, Beacon Hill, Burrough Hill, Breedon Hill and Buddon Wood for example, within the study area are located on hilltops and ridge tops surrounded by defensive ditches and ramparts. The defensive nature of these settlements may be an indicator of an increasing pressure on the land, a need to establish territories and consequent conflict between neighbouring groups or tribes (Clay, P. 2004).

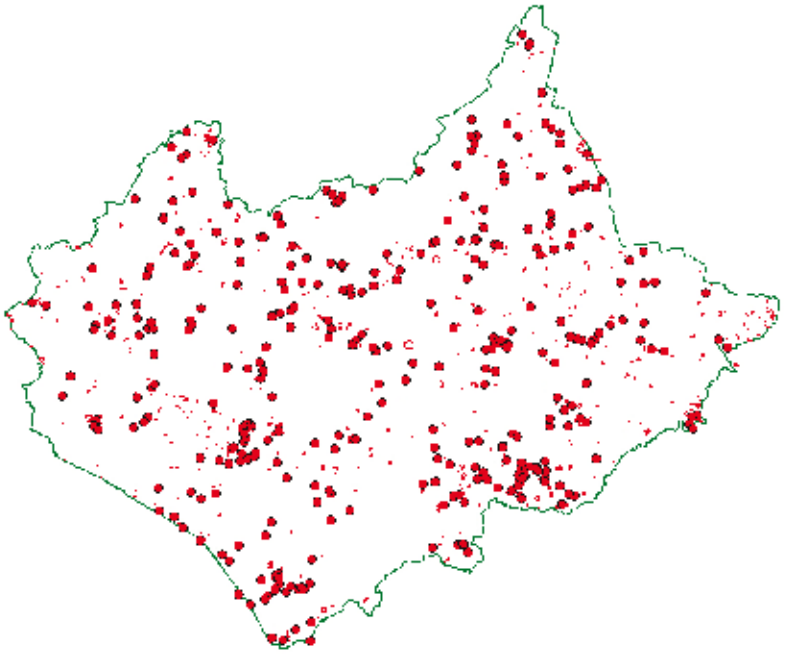


Figure 15. Iron Age Sites and Find Spots Recorded on the Historic Environment Record

1.8.5.4 By the Late Iron Age there is increasing evidence for settlement in Leicestershire and Rutland much of which has been identified from cropmark evidence. Most settlement continues to have been in the form of small farmsteads; however it is during the latter part of the Iron Age that larger, agglomerated settlements with significantly larger populations begin to appear (e.g. Humberstone, Beaumont Leys and Lockington). The Late Iron Age for

Leicestershire and Rutland was a period of significant change which might be characterised by a rapidly increasing population, the establishment of larger scale settlements, including Leicester which by the time of the Roman invasion was manufacturing coins and had trading links with the continent. The major settlement at Leicester which was within the southern extent of the area occupied by the *Corieltavi* may have been the tribal capital.

1.8.5.5 Across the study area there are 1098 sites or find spots recorded on the Historic Environment Record which fall either entirely or partly within the Iron Age, the distribution of which is shown in Fig. 15.

1.8.6 Roman

1.8.6.1 The Roman invasion of AD43 and subsequent pacification of the indigenous tribes brought Britain into much closer contact with the Mediterranean world. The archaeological evidence for the Roman occupation may be placed into four broad categories. First, there is the evidence relating to the military occupation, secondly, that relating to urbanisation, thirdly, the spread of Roman cultural influence beyond the urban centres and finally the evidence for what was happening in the countryside.

1.8.6.2 It seems likely that it was the scale of the initial victory of the Roman military under the command of Aulus Plautius over the British which was to prompt Claudius into deciding to create a British province (Jones, B. and Mattingly, D. 1990). The following years between AD 43 and 60 are generally regarded as a period of conquest during which the Roman forces established control over most of Britain. Within four years of the invasion the south-east, areas of the south-west and the Midlands were under Roman rule.

1.8.6.3 Within the study area there is very little known evidence for the military campaign. The conquest period fortress at Mancetter on Watling Street is located just over the border in Warwickshire and evidence for an early fort at Leicester is not conclusive (Taylor, 2006). The only other evidence for a military presence comes from Great Casterton in Rutland and two other possible locations; one at Wigston Parva in south-west Leicestershire and one at Sawley in the extreme north-west of the county.

1.8.6.4 Three of Roman Britain's most important roads: Watling Street, Fosse Way and Ermine Street pass through the study area. In addition the Gartree Road, linking Leicester to Colchester, has also been shown to continue its path north-west in the direction of Chester. Other known roads within the study area include routes from Leicester south-west to Mancetter; one partially known from Leicester to Tripontium; the Salt Way linking Ermine Street and the Fosse Way and continuing into Charnwood; King Street Lane linking Thistleton and Goadby Marwood (possibly continuing to *Margidunum* near Bingham, Nottinghamshire); Sawgate Lane along the southern side of the Wreake/Eye Valley linking Thistleton with the Fosse. This communication network clearly illustrates that Leicester was an important hub. There is, however, a need to think beyond the simple mapping of roads and consider how individual routes would have been influenced by a Roman reading of the

landscape and how their construction may have facilitated political control over an area (Taylor, J. 2006).

1.8.6.5 Leicester (*Ratae Corieltavorum*) is one of two major urban settlements in the East Midlands, the other being Lincoln (*Lindum Colonia*). Although evidence for a conquest period fort is still a matter of some speculation, what is clear is that Leicester developed on the site of an important Late Iron Age settlement located on the east bank of the River Soar. The formal laying out of the town did not occur until the end of the 1st and beginning of the 2nd century, possibly coinciding with the town's formal appointment as a *civitas* capital. The main phase of public building did not begin until the end of Hadrian's reign (AD 117-138) reign and into that of Antoninus Pius (AD138-161); Leicester in terms of its municipal buildings does appear to be a late starter when considering the provincial context (Cooper, N. J. and Buckley, R. 2004). Archaeological work in the city has identified the forum, bathhouse, a temple and market place (*macellum*).

1.8.6.6 Beyond *Ratae Corieltavorum* there is evidence for at least twelve Roman small towns across the study area; Witherley/Mancetter (*Manduessedum*) bisected by Watling Street and lying both in Leicestershire and Warwickshire, High Cross (*Venonae*), Caves Inn Farm (*Tripontium*), Market Harborough, Medbourne, Great Casterton, Thistleton/Market Overton, Goadby Marwood, Frisby/Kirby Bellars, Willoughby on the Wolds/ Wymeswold (*Vernemtum*), Barrow-on-Soar/Quorndon and Ravenstone/Ibstock. These small towns are fairly evenly spaced across the study area and appear to have been nucleated, with all definite sites on known Roman roads and possibly all at or near road junctions. Most are also close to river or stream crossings. Other typical characteristics of these sites include a significant number of coin finds, no more than one larger stone building with other buildings being mostly timber or stone strip constructions, evidence of late Iron Age settlement, evidence of industry and/or a religious complex and often an apparent significant relationship with a villa.

1.8.6.7 Pottery and tile production and metal-working are the two most archaeologically visible industries with evidence for both in urban and rural contexts. Large-scale pottery production was being carried out at Mancetter with production also at Ravenstone, Market Overton, Great Casterton and Leicester. Fieldwalking in west Leicestershire has revealed a number of pottery production sites notably around the margins of the medieval extent of Leicester Forest and the southern margin of Charnwood (Liddle, P. 1999). Large scale iron working is known at Goadby Marwood, Thistleton, Medbourne and Great Casterton. At Ridlington, Clipsham, Whitwell and Eaton evidence has been found for iron working within a rural context. Other industries such as leather processing, brewing and baking would no doubt have been common but are less easy to find (Liddle, P. 2004).

1.8.6.8 Agriculture would have represented the largest single form of land use and most settlements in the countryside are likely to have been involved in some form of farming activity. A crude distinction may be made between those buildings termed either as villas or farmsteads. The former would typically have been stone and tile buildings, whilst the latter were, in all

probability, timber and thatch constructions. Leicestershire and Rutland's countryside during the Roman period would have been, for the most part, a well developed agricultural landscape with significant cereal production and processing. There were three extensive areas of woodland during the medieval period at Leicester Forest, Charnwood Forest and Leighfield Forest; fieldwork in these areas suggests that they may have already been in existence during the Roman period (Liddle, P. 2004).

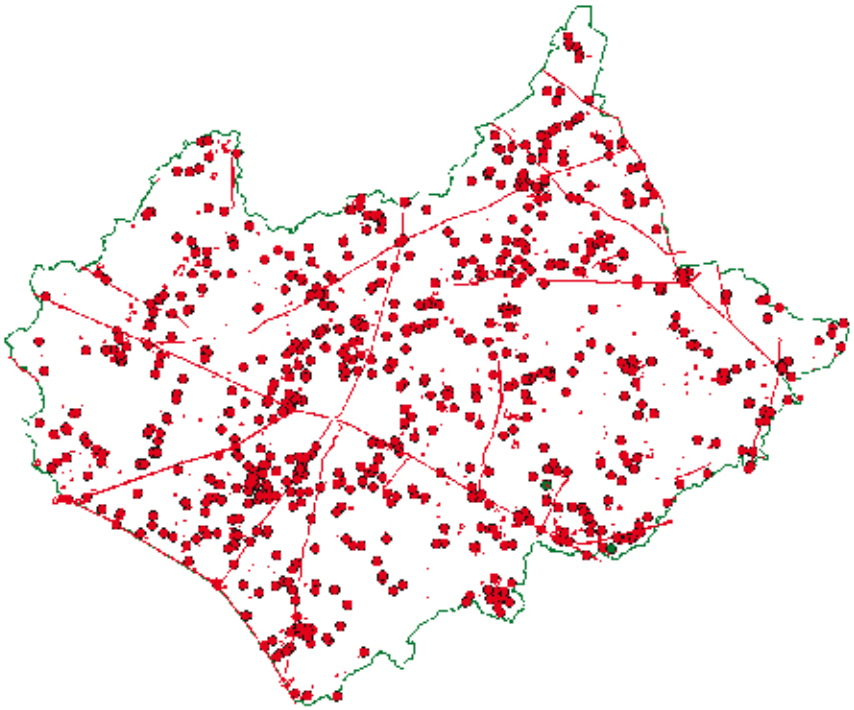


Figure 16. Roman Sites and Find Spots Recorded on the Historic Environment Record

1.8.6.9 Across the study area there are 1578 sites or find spots recorded on the Historic Environment Record which fall either entirely or partly within the Roman period, the distribution of which is shown in Fig. 16.

1.8.7 Anglo Saxon

1.8.7.1 Following the departure of Roman forces in the early part of the 5th century central power in Britain disintegrated as numerous warring groups under the leadership of indigenous and invading tribal leaders vied for control of territories. By the 7th century however a number of larger kingdoms were beginning to emerge. In England these kingdoms were Northumbria, Mercia, East Anglia, Kent and Wessex. For a period it seemed as though the Midlands kingdom of Mercia under Offer might form the core of a consolidated English kingdom. Mercia however was under considerable pressure from Viking attack during the 9th century and instead it was the kings of Wessex who expanded from their West Saxon kingdom south of the Thames to eventually conquer the rest of England during the 10th century (Hills, C. 1999).

1.8.7.2 Until relatively recently evidence for Anglo-Saxon Leicestershire and Rutland was largely confined to the results gained from extensive fieldwalking

programmes and the recovery of Saxon cemeteries from small scale quarrying during the 18th and 19th centuries. However modern, largely developer led, excavations have significantly improved our knowledge of the period (Liddle, P. 1999).

1.8.7.3 There is a direct association between Saxon cemeteries and burials and the Roman towns at Leicester, Medbourne, Great Casterton, Barrow/Quorn, Kirby Bellars, Wymeswold/ Willoughby and Mancetter. At Ibstock/Ravenstone a timber hall has been excavated with an Anglo-Saxon date attributed, as has been the case with material recovered from Goadby Marwood. The only known Roman settlements not to have reported Anglo-Saxon material are High Cross, Caves Inn and Thistleton although for the last two cemeteries have been found less than a mile away. This might suggest that towns retained some significance into the Anglo-Saxon period. However there is little evidence that they retained an urban character or continued to perform an economic function. Urbanism appears to have been alien to Saxon traditions and the general picture, particularly during the earlier phase of this period, would seem to suggest that across the study area much settlement would have been characterised as dispersed and impermanent farmsteads. Relatively large sites such as Eye Kettleby with perhaps as many as ten buildings and which included a hall at some point could have had some form of administrative function associated with them (Knox, R. 2004).

1.8.7.4 With the departure of the Romans there appears to have been a significant decline in the population which combined with political and economic instability may have contributed to an apparent increase in woodland cover (Muir, R. 2000). However this is a view for which there is not universal agreement and there may indeed have been little fluctuation in levels of woodland from the Iron Age into the Anglo-Saxon period (Squires, T. pers. comm)

1.8.7.5 Between the 7th and 9th centuries across large parts of central England, including Leicestershire and Rutland, the farmsteads were abandoned in favour of nucleated settlements that were to take the form of villages and towns. This concentration of the population can be associated with significant changes to the agricultural regime. The enclosed landscapes of the Roman and early Saxon period were replaced by the open field system probably around the end of the 9th or beginning of the 10th century although precise origins are unclear. The open fields would have been sizable areas of land subdivided into a large number of narrow strips called lands which were further grouped into blocks called furlongs. These furlongs were further grouped into larger areas called fields which were hedgeless and occupied virtually all of the available land; the strips of each farmer would be distributed over the fields. There was a communal element to this system since all the farmers would grow the same crops in a field which would be left fallow every second or third year and resources such as the oxen team would be pooled.

1.8.7.6 It is clear that major landscape changes were taking place across the study area during the Anglo-Saxon period and these changes are reflected in the modern landscape of Leicestershire and Rutland, most particularly the nucleated nature of the bulk of the settlement. Ridge and furrow earthworks

have long been a significant feature of the landscape of the area. These features have, particularly since the second half of the 20th century, come under considerable threat from modern agricultural practices. Substantial areas of ridge and furrow have been lost to ploughing denuding the integrity of important heritage assets which have long been considered as being a defining characteristic of Leicestershire and Rutland's rural landscape.

1.8.7.7 By the 870s much of the East Midlands had come under Danish control with Leicester becoming an important fortified town or burh. Although it is unclear as to what the extent of Danish immigration and settlement was the distribution of Viking names is particularly remarkable in north-east Leicestershire along the Wreake Valley and its tributaries where almost three quarters of the place-names are either wholly or partly Viking in origin. It has, however, been noted by Bourne (2003) that the persistence of a significant number of Anglo-Saxon place-names would suggest that the colonisers did not totally displace the existing population and that geological evidence might also indicate that much Scandinavian settlement was located on the less desirable soils.

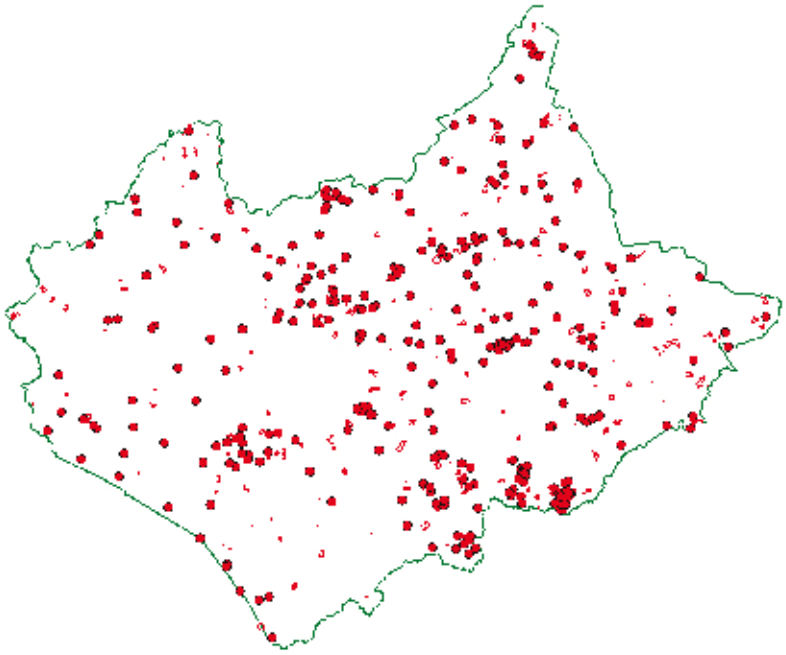


Figure 17. Anglo-Saxon Sites and Find Spots Recorded on the Historic Environment Record

1.8.7.8 Across the study area there are 716 sites or find spots recorded on the Historic Environment Record which fall either entirely or partly within the Anglo-Saxon period, the distribution of which is shown in Fig. 17.

1.8.8 Medieval

1.8.8.1 The period AD 1050-1500 in Britain may be divided into three successive phases the first of which from 1050 to 1300 was a period of growth both in the towns and the countryside. There then followed a period of crises during the early and mid 14th century which included the Black Death. Finally there was a period of mixed fortunes from around 1350 to 1500 during which, in England, London became increasingly dominant whilst across the

rest of the country some towns prospered while others went into decline (Schofield, J. 1999).

1.8.8.2 By the time of the Norman Conquest Leicester was already established as a town and retained its position throughout the medieval period at the top of the settlement hierarchy across the study area. Leicester's status is reflected by the fact that it had several (specialist) market places, a large castle, several parish churches and religious houses and, from early on, a mint. Commerce and industry also played a significant role for Leicester with cloth manufacture and wool and leather working being important for the town's prosperity. In addition Leicester also had an important administrative function and would have exercised a considerable influence politically, commercially and socially across much of the rest of the project area.

1.8.8.3 Below Leicester in the settlement hierarchy sat the market towns of Ashby-de-la-Zouch, Castle Donington, Hallaton, Hinckley, Loughborough, Lutterworth, Market Bosworth, Market Harborough, Melton Mowbray and in Rutland, Oakham and Uppingham. All of these have market places with several (Ashby-de-la-Zouch, Castle Donington, Hallaton, Oakham and Hinckley) having castles. Several market towns also contain minor religious houses (Castle Donington, Hinckley, Loughborough, Lutterworth and Melton Mowbray) along with inns and large churches.

1.8.8.4 The relationship between towns and the countryside during the medieval period is one that does not seem to be fully understood. It has, however, been suggested that the relatively high number of deserted settlements close to the larger market towns of the study area may be corroboration for the theory that the high mortality rate in urban areas was offset by immigration from the surrounding countryside (Lewis, C. 2006).

1.8.8.5 Across the study area, beyond the larger towns, the predominant settlement type is one of nucleated villages. Some villages have market charters and/or market places. Almost all villages have a parish church or chapel; many would also include a manorial complex, moated sites, fishponds and dovecotes. Most villages seem to have been established during or soon after the 9th century and are closely associated with the reorganisation and establishment of the open field system.

1.8.8.6 Woodland was an important resource throughout the medieval period and needed to be carefully managed. Despite the aim to achieve a regime of sustainable management between 850 and 1500 clearances, which may be attested by documents and place-names, may have resulted in reduced woodland cover in places. However such reductions in cover may not have been significant and it doesn't appear to be the case that there were clearances in Leicester Forest or Leighfield Forest.

1.8.8.7 Hunting parks were introduced into England by the Normans and although the Domesday Book records thirty-six being in existence by 1086 none appear in Leicestershire or Rutland (Cantor, L. and Squires, A. 1997). It is possible that many of these could represent some continuity with the late Anglo-Saxon 'multiple estates' that would each have formed part of a larger

royal administrative unit, or *regio.* Possible Anglo-Saxon estates have been suggested for The Langtons, Hallaton, Claybrooke, Market Bosworth and Lyddington (Bourne, J. 1986). Hunting was very popular amongst Norman nobility and the establishment of Royal Forests placed severe restrictions upon those living there. Over time higher nobles were granted land and many established their own hunting areas called Chases which were administered under less oppressive common law. As trees and deer became more scarce and many Royal Forests and Chases contracted, carefully managed hunting parks developed as a way of maintaining the supply of game. These hunting parks were often well wooded and would typically occur on the edge of a lord's manor. The perimeter of the area would be marked by a deep ditch and bank and a fence would be erected to contain the deer. At least fifty-five hunting parks are known to have existed in Leicester and eleven in Rutland (Cantor, L. and Squires, A. 1997) with woodland being the most important factor accounting for their distribution across the two counties. The incorporation of woodland into deer parks is often the most significant factor accounting for its survival into the early modern period and, in some cases, into the present. Most woodland, particularly within the study area, is located in areas that prove to be difficult for agriculture and the Royal Forests of Leicestershire and Rutland were both on heavy clays. It is also perhaps important to note that parks were established for a variety of reasons of which hunting would have been just one. Parks also played an important social and economic function within local communities. The shallow, stony and infertile soils of Charnwood Forest made it an ideal location for the ten parks that ring the area. There are also large concentrations of parks on the uplands of south-west Leicestershire and in the north-west on the border with Derbyshire.

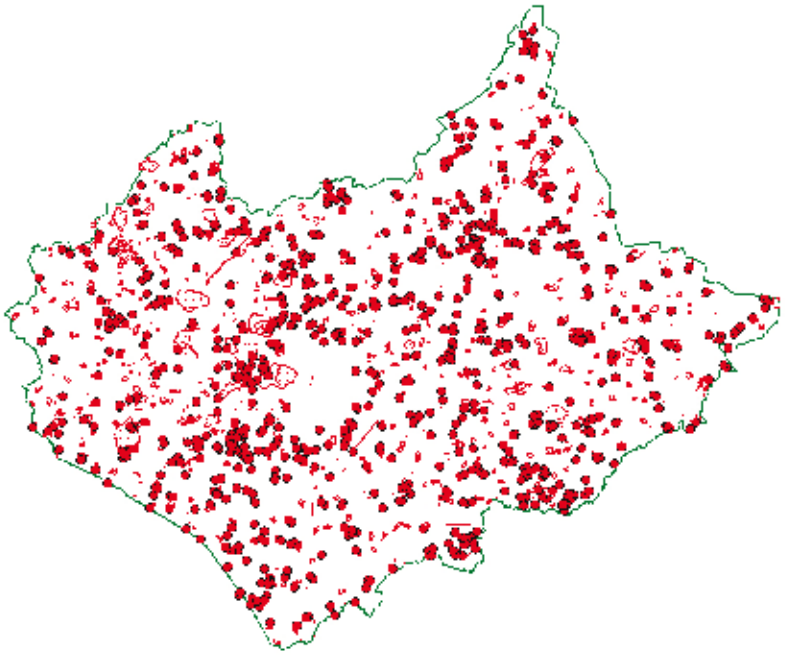


Figure 18. Medieval Sites and Find Spots Recorded on the Historic Environment Record

1.8.8.8 Across the study area there are 3,873 sites or find spots recorded on the Historic Environment Record which fall either entirely or partly within the medieval period, the distribution of which is shown in Fig.17.

1.8.9 Post-medieval

1.8.9.1 The post-medieval period spanning the early 16th to the end of the 19th centuries is generally seen as a period of transition between the medieval or feudal world and the birth of modern capitalism (Courtney, P. 2006). The period differs from earlier ones in so far as many buildings and landscape features figure significantly within the modern landscape.

1.8.9.2 In terms of landscape development one of the dominate themes of this period is the process of enclosure. The ridge and furrow arable of the open field system is replaced with enclosed pasture. At the same time many landscape parks and gardens were created often on the sites of former villages.

1.8.9.3 The earlier part of this period, 1500-1750, sees gradual changes in the agrarian economy and landscape with enclosure having a major impact upon local communities. Society was becoming increasingly stratified at the bottom of which was a growing landless class. The process of enclosure seems to have had a depopulating effect in the countryside and many cottagers or smallholders would have been severely affected by the loss of common rights entailed with Parliamentary enclosure. Early enclosure dating from the mid 15th to the mid 18th centuries tended to be by agreement and was piecemeal in nature and within the project area was predominant in the south-west and central eastern parts. Early enclosure may be traced in the modern landscape where field boundaries follow the line of the ridge and furrow producing hedge lines with a characteristic reverse S or dog-leg morphology.

1.8.9.4 Agricultural improvements accelerated during the 18th century which included new scientific systems for the breeding of cattle and sheep and new approaches to crop rotation and drainage (Campion, G. 2006). New planned farms began to develop away from the nucleated villages. The enclosure patterns also became more planned in appearance from the late 18th century with many boundaries being redrawn and laid out formally by surveyors. This reorganisation had a dramatic impact both upon the landscape and people; with a growth of larger holdings employing a growing range of mechanised agricultural innovations, coupled with a continued shift in emphasis away from arable towards pasture, all contributed towards population movements. Prior to enclosure, the majority of the population was located on the eastern side of the project area; the less fertile and shallower soils over a significant parts of western Leicestershire had resulted in a far lower density of population. This picture was changing dramatically by the late 18th century and can be linked not only to changes in the predominant agricultural regime but also to the move towards industrialisation occurring in the western half of the project area.

1.8.9.5 The continued decline in woodland cover across the project area is another important theme with, during the early 17th century, the complete disafforestation of Leicester Forest and a significant reduction in the number of trees across what was the traditionally well wooded area of Charnwood (Hartley, R. F. 2000). This process of disafforestation would also appear to be

occurring with Leighfield Forest.

1.8.9.6 For the earlier part of the post-medieval period the major industries of the project area continued to be farming and the wool and leather trades. Slate quarrying was important in the Swithland and Groby areas and arounf Coleorton by 1500 coal mining had become a well-organised industry. The hosiery industry also became established during this period with the first reference to a stocking-frame coming from Hinckley in 1640. By 1812 there were over 13,000 frames in workshops mainly in the western part of Leicestershire. By the end of the 18th century power spinning of wool and worsted using steam power had been introduced into Leicestershire and despite initial resistance to mechanisation a large number of mills were built during the first decades of the 19th century. Associated industries also developed in the western parts of Leicestershire including dyeing and finishing works and elastic web manufacture, incorporating a rubber thread into knitted fabric.

1.8.9.7 Boot and shoe manufacturing was another major manufacturing industry and by the late 19th century had developed into an industry producing footwear for markets beyond the local area. By the end of the 19th century and the beginning of the 20th a large number of multi-storey boot and shoe factories had been built, many specialising in ladies and children's footwear, both in Leicester and the fast developing suburbs such as North Evington and Humberstone (Neaverson, P. 2000).

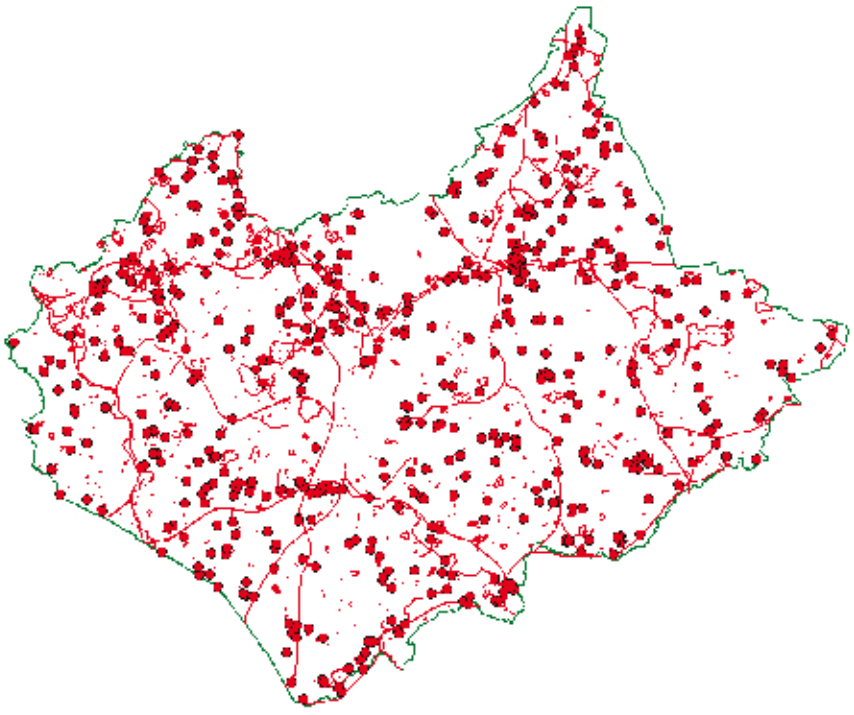


Figure 19. Post-medieval Sites and Find Spots Recorded on the Historic Environment Record

1.8.9.8 As they became more mechanised both the textile and the boot and shoe industries required support trades, prompting many blacksmiths to start making needles for knitting machines and nails and rivets for shoe making. Millwrights became machine makers and a number of general engineering companies were established in Leicester and also Loughborough, many of

which were specialist businesses such as The Brush Company with its core business in electrical engineering and transport.

1.8.9.9 Extractive industries increased in importance during the 19th century and again these were concentrated on the western side of Leicestershire; deep coal mining was underway early on during the 19th century. In both the north-west, central (Barrow Upon Soar) and east of Leicestershire limestone was burnt to produce lime for mortar and cement and used for agricultural improvement. Limestone was also extensively quarried in Rutland and the even grained stone taken from the quarry at Ketton was particularly suited to the 17th and 18th century fashion for a smooth ashlar finish on buildings (Stocker, D. 2006).

1.8.9.10 Also to become, and remaining, important was the quarrying of stone, sand and gravel. Coal and mineral resources are concentrated in western Leicestershire and their presence is responsible for industries which as well as having a dramatic, if localised, effect upon the landscape have stimulated urban growth in this part of the county.

1.8.9.11 The transport infrastructure has been to some extent linked to industrial growth and urban expansion. Several routes across the study area follow the routes of Roman roads and by the beginning of the 19th century almost 300 miles of road had been turnpiked. During the late 18th century improvements opened the River Soar for navigation first as far as Loughborough and then later to Leicester to form part of the Grand Union Canal, the construction of which was driven by the need to move coal and stone.

1.8.9.12 Railways also played a significant role in facilitating the growth of Leicestershire's fast developing industrial base. The Leicester and Swannington line opened in 1832 in order to bring coal into Leicester and throughout the rest of the 19th century the rail network continued to expand across the county.

1.8.9.13 The growth of industry and large scale coal and mineral extraction in Leicester and western parts of the county coupled with improved transport links impacted upon the settlement pattern. In Leicester, along the River Soar and in the coalfield of the north-west of the county, urban expansion was rapid, whilst at the same time in the east of the project area the population was in decline.

1.8.9.14 Across the study area there are 6,373 sites or find spots recorded on the Historic Environment Record which fall either entirely or partly within the early post-medieval period, the distribution of which is shown in Fig. 19.

1.8.10 Modern

1.8.10.1 The period from 1900 to the present day has seen dramatic and rapid changes in the character of the landscape both locally and on a national level. In the countryside particularly since the Second World War, agriculture has become increasingly mechanised and intensive. Large scale field boundary loss has during this period occurred right across the study area with the highest levels of hedge removals most apparent in east Leicestershire and Rutland. There has also been a significant loss of ridge and furrow earthworks across the study area. The price of grain and other crops can be subject to dramatic variations; when spikes in the market make it economically viable new areas of ridge and furrow are ploughed and crops sown; as a consequence landscape scale features with origins in the Anglo-Saxon period are lost for what is often a very short-term economic gain. In recent years some attempt has been made to halt this process through programmes such as the Higher Level Stewardship Scheme administered by Natural England. These can offer farmers financial incentives for sympathetic maintenance of important historic or archaeological features and landscapes.

1.8.10.2 The management of woodland has over the course of this period also become more industrialised and the requirements for timber during both the First and Second World Wars considerably affected levels of broadleaved tree cover. One significant development during the second half of the 20th century saw the replanting of ancient woodlands with conifers. This has had a radical effect upon the native flora and consequently fauna of those areas which changes to accommodate the new conditions. This is a practice which has in recent years been halted with recent initiatives aimed at encouraging woodland regeneration with native broad leaved species. The establishment of the National Forest has also been a significant development which has dramatically increased levels of woodland cover in areas of north-west Leicestershire.

1.8.10.3 Improvements to the transportation network have included the building of major roads and motorways such as the M1 and M69 across the study area. Improved transport infrastructure has facilitated the growth of industries providing a stimulus to urban expansion. The road network itself can also be seen as a significant landscape element influencing greatly the character of an area.

1.8.10.4 Over the course of the 20th century the urban centres, most notably Leicester and the towns in western Leicestershire, have expanded considerably. This sits in contrast with the eastern parts of the project area where beyond the larger market towns, which have experienced some growth, population densities remain much lower. Eastern Leicestershire and Rutland remains characterised, to a large extent, by nucleated villages which have experienced relatively little growth during the 20th century.

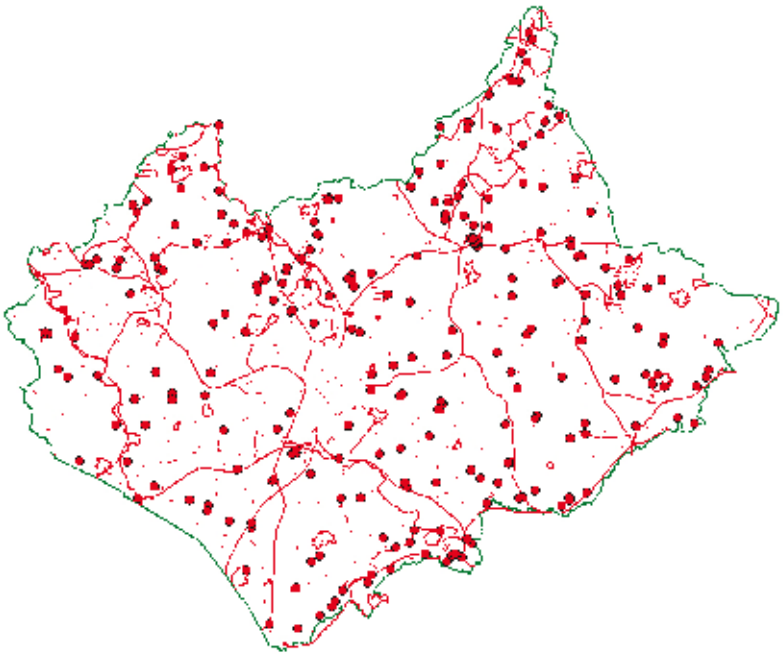


Figure 20. Modern Sites and Find Spots Recorded on the Historic Environment Record

1.8.10.5 Across the study area there are 3,216 sites or find spots recorded on the Historic Environment Record which fall either entirely or partly within the modern period, the distribution of which is shown in Fig. 20.

1.9 Methodology

1.9.1 Defining Polygons

1.9.1.1 The project was predominantly a desk based exercise drawing from a variety of data sources. The data gathering process was followed by analysis where the landscape of the project area was defined firstly by its Broad Character Type; then, at a more refined level, by its Historic Landscape Character Type. This was carried out through the mapping of areas, utilising the County Council's Geographic Information System (GIS) package, MapInfo. The process of characterisation is one which is relatively straightforward. Areas sharing predefined attributes are mapped as polygons within MapInfo each covering a discrete geographical area. It is these polygons which through the analysis of HLC attributes can be assigned a single historic landscape character type. These form the basic building blocks for HLC.

1.9.1.2 The mapping process for the LLR HLC can be viewed as being relatively mechanistic. The method uses attempts to draw out the broad patterns which can be identified at a landscape level. Each of the HLC polygons is defined on the basis that most of the area included can be interpreted as belonging to the same attribute group or HLC Broad Type, for example woodland or enclosed land. Within each of these polygons a common set of attributes is dominant so, for example, if an area is defined as belonging to the Enclosed Land attribute group then all of the enclosures should have common characteristics. To illustrate, a group of enclosures that are predominantly large, rectilinear and have straight boundaries will probably be defined as belonging to the Planned Enclosure HLC Type. Most of the area within a polygon will also be interpreted as having the same previous landscape character. So, for example, a polygon may contain evidence of medieval strip, perhaps through the presence of ridge and furrow earthworks, this will allow a Previous Character Type of Strip Fields to be assigned to the polygon.

1.9.2.3 Generally, in rural areas, the minimum size for LLR HLC polygons was 1ha since it becomes more difficult to determine landscape character for areas smaller than this. Within an urban context it is possible to define areas at a smaller size. These were generally small areas of growth or redevelopment within or around the fringes of settlements. However, for the purposes of the project, where possible, an effort was made to avoid small polygon sizes.

1.9.2.4 The methodological approach adopted for the LLR HLC is, for the most part, an attribute based one; meaning descriptive criteria and the use of field morphology are employed to determine current HLC Types. This attribute led approach, in which a series of rules are applied to each polygon helps to maintain a level of objectivity and consistency throughout the characterisation process.

1.9.2. Data Structure and Capture

1.9.2.1 Each of the polygons created through the mapping process has data attached. The structure of the LLR HLC data is largely determined by the HLC module of the exeGesIS HBSMR database. However the Broad Types, HLC Types and associated attributes are tailored to meet the requirements of the study area. These attributes are analysed in order to create the final Historic Landscape Character Types.

1.9.2.2 Each of the landscape units within the database and associated GIS polygons are assigned to a basic classification category. These basic classifications are known as Broad Types. For the LLR HLC there are to twelve Broad Types which are listed below.

Character Code	**Broad Attribute Types**
UNE	Unenclosed Land
FIE	Fields and Enclosed Land
ORC	Orchards and Allotments
WDL	Woodland
IND	Industrial
EXT	Extractive
MIL	Military
OPR	Ornamental, Parkland and Recreational
SET	Settlement
CAM	Civic and Commercial
TRA	Transportation
WVF	Water and Valley Floor

1.9.2.3 Each of these Broad Types is further divided into more specific Historic Landscape Character Types (e.g. Piecemeal Enclosure, Small Assarts, etc.). Each landscape unit must be assigned a Broad Type, and different attributes are defined for the HLC polygon, depending on which Broad Type it has been assigned. Other data is also recorded for the HLC polygon, including Period and multiple Previous HLC Types. This system allows each landscape unit to be allocated a specific HLC Type through analysis of the data collected, to ensure a measure of objectivity and a standardised approach to the HLC process.

1.9.2.4 The first level of data capture is set out in the upper section of the HLC data form (Figure 21). Each time a new record is created a unique identifying number is assigned to it. Key information is then entered.

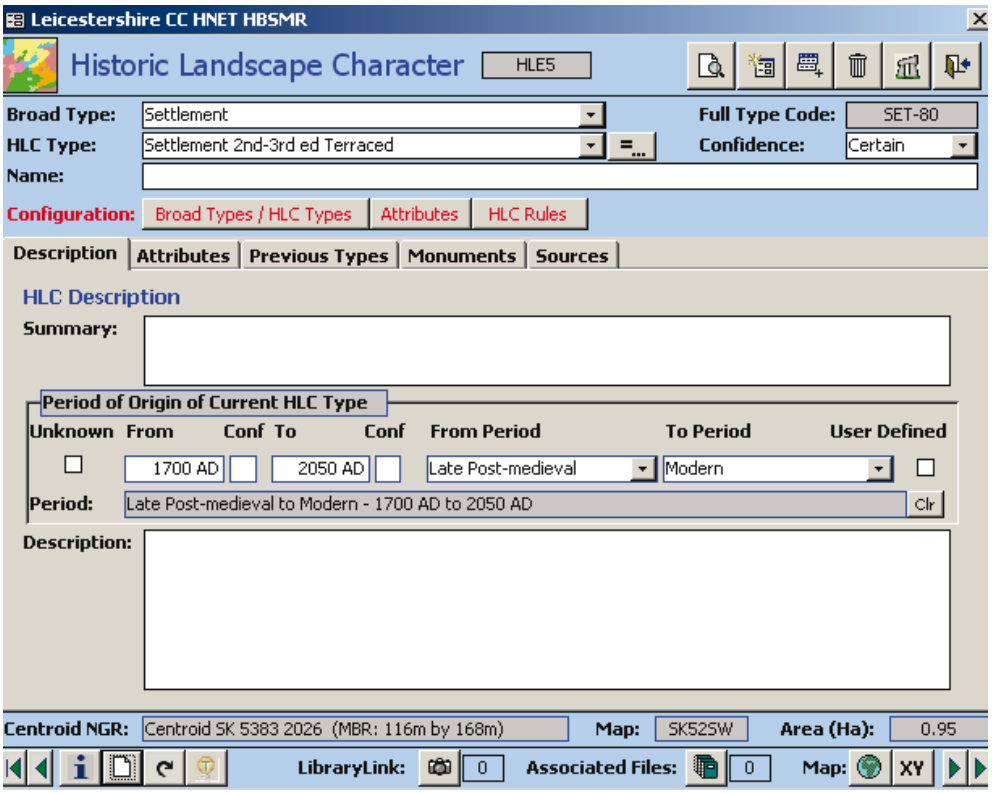


Figure 21. Historic Landscape Character Detail Form

• ***Broad Type*** – this is chosen from the previously configured picklist of Broad Attribute Types already outlined. This field is compulsory and other data may not be entered until a Broad Type has been assigned.

• ***HLC Type*** – this is the sub-classification of the Broad Type and can be either chosen from a previously configured picklist or allocated on the basis of pre-configured rules by clicking the 'Determine Type' button. HLC Types are listed below.

• ***Full Type Code*** - this field consists of the Broad Type code, followed by the HLC Type code, with a hyphen separating the two. The codes for each type are created by the system administrator during configuration, and the appropriate code for a record is generated automatically by the system when the types are allocated to a record.

• ***Confidence*** - The interpretation of a landscape unit's character as determined. For the purposes of the LLR HLC confidence will be classified as either 'Certain' (indicating that there is no doubt about the interpretation), 'Probable' (suggesting that the interpretation is highly probable i.e. over 80% chance) or 'Possible' (suggesting that an interpretation is possible but not certain i.e. over 50% chance).

• ***Name*** – this is a free text box which in most cases will not be used except in situations where a landscape unit also forms an identifiable and named site such as a landscape park.

• ***Configuration*** – this is available for system administrators only. By clicking on one of the configuration buttons the system administrator is taken to the relevant configuration screen. The HLC module will allow for the configuration of new HLC Types with associated attribute rules whilst characterisation is in progress.

1.9.3 Rule-Based Determination of HLC Types

1.9.3.1 HLC Types can be allocated to an HLC record on the basis of a set of pre-defined rules. Within the HBSMR HLC module these rules consist of defined parameters against which each HLC record is tested. If the data collected for an HLC record matches these defined parameters, the user can choose to assign to the record the resulting HLC Type specified by the rule to which the record conforms. Once a Broad Type and any other relevant data has been entered into an HLC record, clicking the 'Determine Type' button will display the Matching HLC Types dialog box, showing the ID number of the rule to which the record conforms, and the resulting HLC Type attached to that rule (Figure 22).

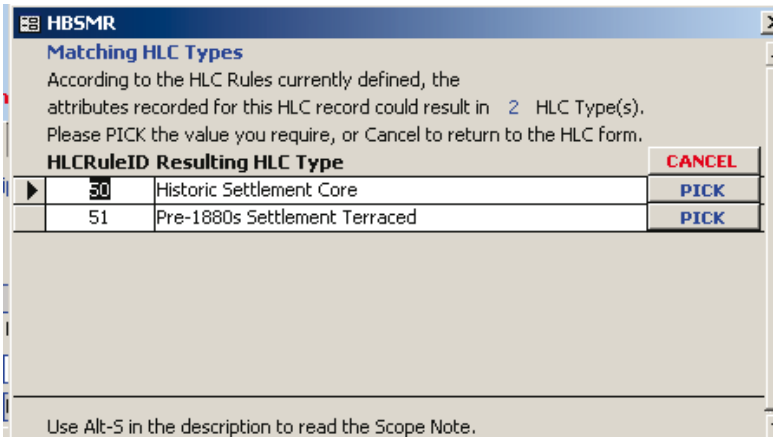


Figure 22. Historic Landscape Character Matching Types Form

1.9.3.2 Records may conform to more than one rule. When this happens a list of all the rules to which the record conforms is displayed. It is possible at this stage to either choose to pick an HLC Type, in which case the dialog box closes and the resulting HLC Type is stored in the HLC Type field, or cancel the operation, in which case the dialog box closes and no changes are made to the data. HLC Types may also be allocated manually by selecting one from the pull-down list instead of using the 'Determine Type' button.

1.9.4 The Main Form

1.9.4.1 The main form of the HBSMR HLC module consists of a series of tabs. The first of these is the Description Tab (see Figure 21). This has two free text fields for a Summary and Description, both of which are optional. Also to be filled in under this tab is a Period of Origin for the Current HLC Type. The Period of Origin of the current HLC Type is entered and stored in the same way as the Period information is entered elsewhere in the HBSMR, and uses the same look-up table.

1.9.4.2 Each of the Broad Types can be associated with up to eight attributes. This helps to maintain objectivity and consistency when it comes to assigning HLC Character Types. Attributes first need to be configured through the administrator's Attribute Type configuration form and associated with a broad Type. When a Broad Type is now chosen the attributes will appear on the Attributes Tab (Figure 23) with each attribute field having a pull-down list of values.

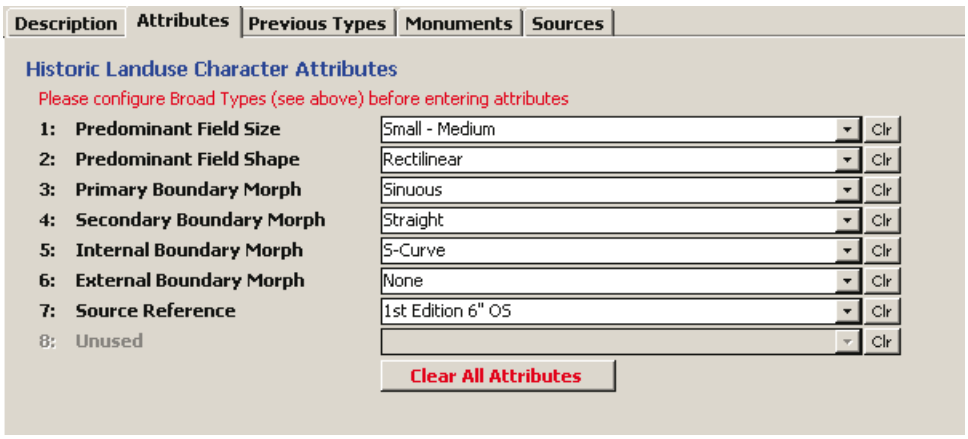


Figure 23. Historic Landscape Character Attributes Tab

1.9.4.3 Attribute groups will have attributes attached; these are defined when a polygon is assigned to a group. Attributes are determined by reference to a variety of source data. Below is a summary of the attribute groups.

Attribute Group	Attribute
Unimproved Land	Enclosed (Yes/No)
	Elevation (higher ground [≥ 244m], lower ground [< 244m]
	Ground Type (heathland, rough pasture, other common)
Fields and Enclosed Land	Predominant Field Size (small, small-medium, medium-large, large-very large)*
	Predominant Field Shape (irregular, rectilinear)
	Predominant Boundary Morphology (straight, sinuous, curvilinear)
	Secondary Boundary Morphology (straight, sinuous, curvilinear, none)
	Other Internal Boundary Morphology
	Other External Boundary Morphology (sinuous, settlement edge, line of communication [e.g. road, canal, railway], woodland, none)
	Percentage of fields lost since 1st Ed 6" OS
	Interpretation of previous character
Orchards and Allotments	Present on 1st ED 6" OS (yes, no)
	Orchards/Allotments (orchard, allotment)
Woodland	Ancient Semi-Natural Woodland (yes, no)
	Forestry Commission Designation (Broadleaved, Coniferous, Felled, Mixed, Shrub, Young Trees, None)
	Present on 1st Ed OS Map (yes, no)
	Predominant Boundary Morphology (straight, sinuous, curvilinear)
Industrial	Source Reference
Extractive	Type of Extraction (Stone, Sand and gravel, Open cast coal, Deep coal, Clay, Gypsum)
	Active / Inactive
Military	Type of Installation (Airfield, Barracks, Depot)
	Current Use (Abandoned, Active but used for other purposes, Still used by the military)
Ornamental, Parkland and Recreational	Type (Garden or designed landscape, Golf course, Race course, Sports ground/fields, Other parkland
Settlement	Type (Historic Settlement Core, Pre-1880s Settlement Terraced, Pre-1880s Settlement Semi Detached, Pre-1880s Settlement Detached, Settlement 1st-2nd ed Terraced, Settlement 1st-2nd ed Semi Detached, Settlement 1st-2nd ed Detached, Settlement 2nd-3rd ed Terraced, Settlement 2nd-3rd ed Semi Detached, Settlement 2nd-3rd ed Detached, Settlement 3rd-4th ed Terraced, Settlement 3rd-4th ed Semi Detached, Settlement 3rd-4th ed Detached, Settlement Pre-1970s Terraced, Settlement Pre-1970s Semi Detached, Settlement Pre-1970s Detached, Settlement Post-1970s Residential Development, Country House, Farm Complex.
Civic and Commercial	Type (Municipal and civic, Educational, Hospitals, Commercial and retail)
Transportation	Type (Major road junction, Train station/sidings, Canal lock/basin, Service station, Civil airports/airfields.
Water and Valley Floor	Type (Marsh, Open water, Raised bog/ moss, Floodplain)
	Natural Open Water (Yes, No)
	Artificial Water Body (Lake or pond, marl pits, reservoir)

* For the purposes of the LLR HLC field size is defined as follows.
Small Fields =<2ha
Small-Medium Fields = 2.1-4ha
Medium-Large Fields = 4.1-8ha
Large-Very Large Fields = >8.1ha

1.9.5 Previous Character Types

1.9.5.1 The HBSMR HLC module allows for the entry of multiple Previous Broad and HLC Types (Figure 24) to be recorded for each of the landscape areas. Previous Types have to be configured by the administrator which may then be selected using pull-down lists. Determination of the Previous HLC Type may be seen as perhaps less objective than for the Current Type since this is determined by the HLC officer's own analysis of the map data and not determined through rule based criteria. However so long as the officer is aware of these criteria and bears them in mind when ascribing a Previous Type to a polygon an adequate level of consistency can be maintained. The date of origin for an HLC polygon can be entered in the Period box. A Confidence box provides a field in which it is possible to measure the degree of certainty about the interpretation of a polygon's previous landscape character. Free text notes may also be entered within the Previous Types Tab to record any other relevant information.

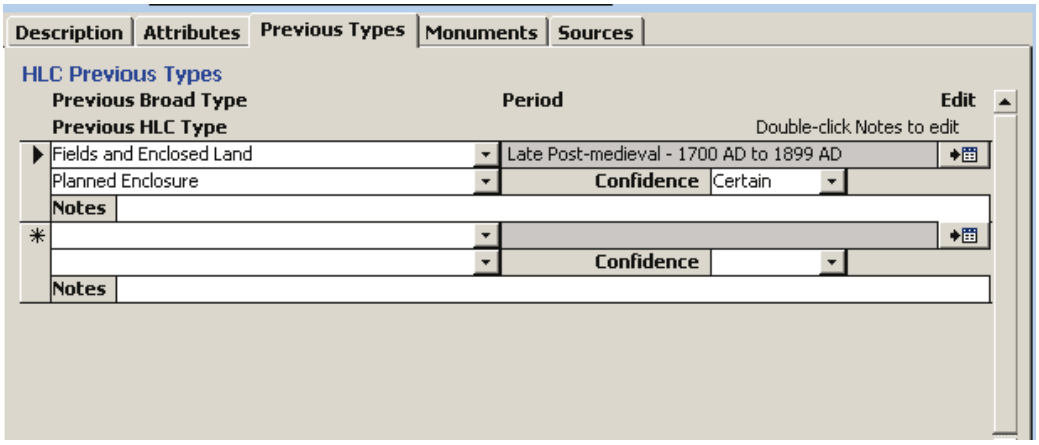


Figure 24. Historic Landscape Character Previous Types Tab

1.9.5.2 The two remaining tabs on the Main form are the Monuments Tab and the Sources Tab. The first of these allows the user to record any associated monuments linked to an HLC area. The second allows for sources directly related to an HLC record to be recorded.

1.9.6 Current Historic Landscape Character Type Definitions

1.9.6.1 Each of the polygons created through the HLC process will be assigned a current historic landscape character type. These character types along with their definitions are listed below.

Unenclosed Land

Historic Landscape Character Type	HLC Code	Description and Interpretation
Heathland	UNE-1	Generally below 244m OD this category distinguishes areas of heathland as identified by English Nature's Lowland Heathland Inventory.
Other Commons	UNE-2	This includes areas of common land which do not fall into the above category this includes areas of low lying ground which may have been used for communal grazing but which on the basis of place name evidence do not appear to have been heathlands.

Enclosed Land

Historic Landscape Character Type	HLC Code	Description and Interpretation
Irregular Squatter Enclosure	FIE-3	Field systems characterised by small irregular fields with boundaries dominated with a sinuous or curvilinear morphology. Often associated with networks of lanes, access tracks or small cottages these field systems have an unordered appearance. These systems may be associated with quarries, mining or other industrial activity. Often indicative of encroachment onto common land in the post-medieval or industrial periods.
Rectilinear Squatter Enclosure	FIE-4	The morphology of these field systems is one of small rectilinear fields with straight boundaries and has a more planned appearance than 'irregular squatter enclosure' and again often associated with networks of lanes, access tracks and small cottages. These systems may be associated with quarries, mining or other industrial activity. Often indicative of encroachment onto common land in the post-medieval or industrial periods.
Paddocks and Closes	FIE-5	Small irregular fields distinguished from the 'other small fields' character type by their location on the edge of settlements. These will in many cases represent small meadows and paddocks.
Small Assarts	FIE-6	Small irregular or rectilinear fields which appear to have been created through woodland clearance. Typically these will border or occur close to areas of ancient woodland.
Large Assarts with Sinuous Boundaries	FIE-7	Large irregular or rectilinear fields probably created through the clearance of woodland. This category includes fields which have been created through the post-1880s amalgamation of small assarts. This character type will border or occur in close proximity to areas of ancient woodland.

Planned Woodland Clearance	FIE-8	Small and large rectilinear or irregular field patterns typically having straight boundaries which appear to have been created through woodland clearance. These will either border or occur in close proximity to areas of ancient woodland.
Small Irregular Fields	FIE-9	Areas of small irregular fields not assigned to one of the other historic landscape character types. Includes small meadows and closes not occurring next to settlement boundaries.
Piecemeal Enclosure	FIE-10	This character type may be defined as field systems created out of the medieval open fields by means of informal, presumably verbal, agreements between farmers wishing to consolidate their holdings (Beresford, 1949). This process appears to have been underway in Leicestershire around the late 16th and early 17th centuries. Enclosure within this category will be characterised by small irregular or rectilinear fields with at least two boundaries exhibiting an 's-curve' or 'dog-leg' morphology indicating that they are following boundaries of former strip fields.
Re-organised Piecemeal Enclosure	FIE-11	Small irregular or rectilinear fields that have lost 10% or more field boundaries since the 1st ed 6" map, or areas of large irregular or rectilinear fields. In both cases at least two field boundaries will have an 's-curve' or 'dog-leg' morphology. These enclosure patterns have developed through a process of amalgamation of fields created through piecemeal enclosure. This will, in most cases have occurred since the publication of the 1st Ed. 6" OS map.
Drained Wetlands	FIE-12	This character type includes small or large, irregular or rectilinear fields. Most of the boundaries will be defined by the course of drainage ditches, some boundaries may also follow water courses.
Planned Enclosure	FIE-13	Either small or large enclosures with a predominantly straight boundary morphology giving a geometric, planned appearance. Laid out by surveyors these field patterns are the result of later enclosure during the 18th and 19th centuries. Included in this character type are commons enclosed by Act of Parliament.
Planned Enclosure Containing Ridge and Furrow	FIE-14	Either small or large enclosures with a predominantly straight boundary morphology giving a geometric, planned appearance. Laid out by surveyors these field patterns are the result of later enclosure during the 18th and 19th centuries. These fields will contain extant ridge and furrow earthwork remains visible on the GIS air photo layer
Other Small Rectilinear Fields	FIE-15	Area of small rectilinear fields not falling into one of the other character types. This group will include small meadows and closes not occurring next to settlement boundaries.
Other Large Rectilinear Fields	FIE-16	Large rectilinear fields exhibiting a significant number of sinuous boundaries, which cannot be assigned to one of the other character types. This group will include enclosure patterns created through the amalgamation of fields since the publication of the 1st Ed. 6" OS map.

Large Irregular Fields	FIE-17	Large irregular fields exhibiting a significant number of sinuous boundaries, which cannot be assigned to one of the other character types. This group will include enclosure patterns created through the amalgamation of fields since the publication of the 1st Ed. 6" OS map.
Very Large Post-War Fields	FIE-18	Very large fields, over 8.1ha and often significantly larger, created since the publication of the 1st Ed. 6" OS map. In most cases this will be the result of Post-War agricultural improvements intended to meet the requirements of intensive arable cultivation.

Orchards and Allotments

Historic Landscape Character Type	HLC Code	Description and Interpretation
Pre-1880s Orchards	ORC-19	Orchards marked on both the 1st Ed. 6" map and on the modern OS map base. These will date to the post-medieval or early to mid 19th century.
Post-1880s Orchards	ORC-20	Orchards which are marked on the modern OS map base but are absent from the 1st Ed. 6" OS map. These orchards will have been planted at some point over the past 125 years.
Pre-War Allotments	ORC-21	Allotments laid out prior to the Second World War and marked on the 1950s OS map and the modern OS map base. This category will include 19th century "pleasure gardens".
Post War Allotments	ORC-22	Allotments marked on the modern OS map base but which do not appear on the 1950s map. Consequently these allotments will probably have been laid out at some point over the last 50 years. It should be noted however that the OS were inconsistent in their recording of allotments.
Pre-1880s Nursery/Horticulture	ORC116	Areas marked on 1st Ed 6"/25" OS as Nurseries or containing greenhouses probably for commercial horticultural purposes.
Post-1880s Nursery/Horticulture	ORC117	Areas not marked on 1st Ed (as above) OS but which appear on the modern OS map layers as nurseries or containing greenhouses probably for commercial horticultural purposes.

Woodland

Historic Landscape Character Type	HLC Code	Description and Interpretation
Broadleaved Ancient Woodland	WDL-23	Woods identified by the Forestry Commission as being broadleaved and designated by English Nature as 'Ancient Semi-Natural'. This category will include the county's oldest woods some of which are likely to date to at least the medieval period. These areas have the potential for containing well preserved archaeological sites and relict landscapes dating to the Roman and prehistoric periods.
Mixed Ancient Woodlands	WDL-24	Woods identified by the Forestry Commission as being mixed and designated by English Nature as 'Ancient Semi-Natural'. This category will include the county's oldest woods some of which are likely to date to at least the medieval period, however some parts may have been planted with coniferous species. These areas have the potential for containing well preserved archaeological sites and relict landscapes dating to the Roman and prehistoric periods.
Replanted Ancient Woodlands	WDL-25	Woods designated by English Nature as Ancient Semi-Natural but identified by the Forestry Commission as containing conifers or young trees. It follows that theses areas represent woods which are likely to have been cleared/felled and replanted during the 19th or 20th century.
Broadleaved Woods with Sinuous Boundaries	WDL-26	Woods identified by the Forestry Commission as having a predominantly broadleaved component and which have sinuous boundaries. Whilst not designated as 'Ancient Semi-Natural' these areas may potentially contain fragments of older managed woodlands.
Mixed Woods with Sinuous Boundaries	WDL-27	Woods identified by the Forestry Commission as being mixed and which have sinuous boundaries. These areas may represent stands of older woodland colonised by or partially planted with conifers.
Coniferous Woodland with Sinuous Boundaries	WDL-28	Woodland designated by the Forestry Commission as coniferous and having sinuous boundaries. In most cases these are likely to represent plantations.
Other Woods with Sinuous Boundaries	WDL-29	Woods with no Forestry Commission designation. This is usually because they are less than 2ha. in size or identified as having either been felled or containing young trees. The boundaries of these areas have a predominantly sinuous morphology.
Broadleaved Plantation	WDL-30	Identified by the Forestry Commission as broadleaved. Here straight boundary morphology or the wood's name will suggest plantation at some point during the 19th or 20th century.
Mixed Plantation	WDL-31	Identified by the Forestry Commission as mixed. Here straight boundary morphology or the wood's name will suggest plantation at some point during the 19th or 20th century.

Coniferous Plantation	WDL-32	Identified by the Forestry Commission as coniferous. Here straight boundary morphology or the wood's name will suggest plantation at some point during the 19th or 20th century.
Other Plantation	WDL-33	Woods with no Forestry Commission designation. This is usually because they are less than 2ha. in size or identified as having either been felled or containing young trees. Here straight boundary morphology or the wood's name will suggest plantation at some point during the 19th or 20th century.

Industrial

Historic Landscape Character Type	HLC Code	Description and Interpretation
Post-1880s Industrial Complex	IND-34	Modern industrial complexes type unidentified. Includes industrial estates, large factories. Most of these will have a late 20th century date.
Pre-1880s Industrial Complex	IND-35	Industrial complexes type unidentified. Includes industrial estates, large factories and sewage farms. Most of these will have a late 18th or 19th century date.
Derelict Industrial Land	IND-36	Former industrial sites which have been cleared and had no subsequent development on them.
Other Works	IND-109	This category includes sites such as water treatment plants, power stations and sub-power stations covering an area over 1ha.
Engineering and Metal Working	IND-112	Industrial complexes and factories identified by OS mapping as being for engineering or metal working.
Textiles, Boot & Shoe and Associated Industries	IND-113	Industrial complexes and factories identified through the OS as being associated with the textile or boot and shoe industry. This category will include hosiery and lace making, dyeing and associated warehousing.

Extractive and Landfill

Historic Landscape Character Type	HLC Code	Description and Interpretation
Stone Quarries	EXT-37	Stone quarries in active use. Will normally be large modern quarries run by aggregates/ construction companies.
Abandoned/Restored Stone Quarries	EXT-38	Disused Stone Quarries. This category will usually consist of larger stone quarries created during the 19th and early 20th century. This category also includes areas that have been through some process of landscape restoration.
Sand and Gravel Quarry	EXT-39	Active Sand and gravel extraction identified through LCC Minerals and Waste GIS data and Modern OS Mapping.
Abandoned/Restored Sand and Gravel Quarry	EXT-40	Abandoned Sand and gravel extraction sites identified through LCC Minerals and Waste GIS data and Modern OS Mapping. This category also includes areas that have been through some process of landscape restoration.
Open Cast Coal Mines	EXT-41	Active open cast coal mines identified through LCC Minerals and Waste GIS data and Modern OS Mapping.
Abandoned/Restored Open Cast Coal Mines	EXT-42	Abandoned open cast coal mines identified through LCC Minerals and Waste GIS data and Modern OS Mapping. This category also includes areas that have been through some process of landscape restoration.
Abandoned/Restored Deep Coal Mines	EXT-43	Abandoned deep coal mines identified through LCC Minerals and Waste GIS data and Modern OS Mapping. This category also includes areas that have been through some process of landscape restoration.
Clay Extraction	EXT-44	Active brick and fire clay extraction identified through LCC Minerals and Waste GIS data and Modern OS Mapping.
Abandoned/Restored Clay Extraction	EXT-45	Abandoned brick and fire clay extraction sites identified through LCC Minerals and Waste GIS data and Modern OS Mapping. This category also includes areas that have been through some process of landscape restoration.
Gypsum Extraction	EXT-46	Active gypsum extraction site identified through LCC Minerals and Waste GIS data and Modern OS Mapping.
Abandoned/Restored Gypsum Extraction	EXT-46	Abandoned gypsum extraction sites identified through LCC Minerals and Waste GIS data and Modern OS Mapping. This category also includes areas that have been through some process of landscape restoration.
Landfill	EXT-115	Landfill sites recorded on the LCC Minerals and Waste GIS TAB. These will generally have a post-war date and typically be former quarry sites.

Military

Historic Landscape Character Type	HLC Code	Description and Interpretation
Barracks/Training Ground	MIL-48	Current military bases identified from modern OS map base. Most of these will have been built during the 20th century.
Military Depots	MIL49	Military storage facilities identified from the modern OS map base.
Former Ordnance Depot Now Used For Other Purposes	MIL-50	Areas characterised as having been used for munitions storage, typically during the Second World War, but are currently used for other purposes such as industrial units or storage although the military architecture continues to form the dominant historic landscape type.
Abandoned Ordnance Depot	MIL-51	Areas characterised as having been used for munitions storage, typically during the Second World War which have now been abandoned but continue to form the dominant historic landscape type.
Military Airfield	MIL-52	Areas identified from the modern OS map base as active military airfields or airbases.
Military Airfield Abandoned	MIL-53	Areas given over as military airfields, probably constructed during the Second World War which have since been abandoned but retain runways and other features identifying them as airfields.

Ornamental, Parkland and Recreational

Historic Landscape Character Type	HLC Code	Description and Interpretation
Parks and Gardens	OPR-54	Parks and gardens identified from the Leicestershire HER, the Historic Parks and Gardens Register and Cantor and Squires' study of the Leicestershire's Parks and Gardens and which can still be identified in the present day landscape. In most cases this will be the result of emparkment during the post-medieval or 19th century but may also include elements of earlier medieval parkland.
Golf Course	OPR-55	Golf courses identified as such from the current OS map base.
Sports Fields	OPR-56	Modern sports fields and stadia identified as such from the current OS map base.
Other Parkland	OPR-57	Other forms of parkland, recreational or ornamental landscapes which do not fall into any of the above categories. This character type will include playing fields and caravan parks.
Cemeteries	OPR-58	Areas identified from the modern OS map base as formally laid out cemeteries. These will typically date to the 19th and 20th centuries.
Racecourse	OPR-110	Horse racing tracks
Public Open Space	OPR-111	Areas of land accessible to the public commonly in an urban context and which have undergone a degree of landscaping, can include wider roadside verges.
Village Greens	OPR-119	Area of common land, often within the historic core of a village, typically used for recreational purposes

Settlements

Historic Landscape Character Type	HLC Code	Description and Interpretation
Historic Settlement Core	SET-59	Historic settlement cores suggested by morphology or data held in the HER. In most cases these represent the extent of the settlement either by the end of the medieval period OR by the beginning of the 19th century. The distinction between the two is made via the period category in the current historic landscape character component of the database.
Pre-1880s Settlement Terraced	SET-60	This category defines the extent of terraced settlement as marked on the 1st edition 6" OS map. In most cases this will effectively define the historic settlement core. However, for those settlements with an identified Historic Settlement Core this category will provide a measure of settlement growth since the period defined by the historic core (e.g. either over the course of the post-medieval and 19th century).
Pre-1880s Settlement Semi Detached	SET-61	This category defines the extent of semi detached settlement as marked on the 1st edition 6" OS map. In most cases this will effectively define the historic settlement core. However, for those settlements with an identified Historic Settlement Core this category will provide a measure of settlement growth since the period defined by the historic core (e.g. either over the course of the post-medieval and 19th century).
Pre-1880s Settlement Detached	SET-62	This category defines the extent of detached settlement as marked on the 1st edition 6" OS map. In most cases this will effectively define the historic settlement core. However, for those settlements with an identified Historic Settlement Core this category will provide a measure of settlement growth since the period defined by the historic core (e.g. either over the course of the post-medieval period or the 19th century).
Settlement 1st-2nd ed Terraced	SET-63	This category defines terraced settlement built after the publication of the 1st edition OS and which appears on the 2nd edition OS.
Settlement 1st-2nd ed Semi Detached	SET-64	This category defines semi detached settlement built after the publication of the 1st edition OS and which appears on the 2nd edition OS.
Settlement 1st-2nd ed Detached	SET-65	This category defines detached settlement built after the publication of the 1st edition OS and which appears on the 2nd edition OS.
Settlement 2nd-3rd ed Terraced	SET-80	This category defines terraced settlement built after the publication of the 2nd edition OS and which appears on the 3rd edition OS.
Settlement 2nd-3rd ed Semi Detached	SET-81	This category defines semi detached settlement built after the publication of the 2nd edition OS and which appears on the 3rd edition OS.
Settlement 2nd-3rd ed Detached	SET-83	This category defines detached settlement built after the publication of the 2nd edition OS and which appears on the 3rd edition OS.

Settlement 3rd-4th ed Terraced	SET-84	This category defines terraced settlement built after the publication of the 3rd edition OS and which appears on the 4th edition OS.
Settlement 3rd-4th ed Semi Detached	SET-85	This category defines semi detached settlement built after the publication of the 3rd edition OS and which appears on the 4th edition OS.
Settlement 3rd-4th ed Detached	SET-86	This category defines detached settlement built after the publication of the 3rd edition OS and which appears on the 4th edition OS.
Settlement Pre-1970s Terraced	SET-87	This category defines the limit of terraced settlement Built after the publication of the 4th edition OS and prior to the 1970s.
Settlement Pre-1970s Semi Detached	SET-88	This category defines the limit of semi detached settlement Built after the publication of the 4th edition OS and prior to the 1970s.
Settlement Pre-1970s Detached	SET-89	This category defines the limit of detached settlement Built after the publication of the 4th edition OS and prior to the 1970s.
Settlement Post-1970s Terraced	SET-90	This category defines the limit of terraced settlement shown on the current 1:10,000 or 1:2,500 HLCA base maps. Where other settlement categories exist, it provides a measure of settlement growth since the 1970s (Following the pilot phase this Type was replaced by Post-1970s Residential Development).
Settlement Post-1970s Semi Detached	SET-91	This category defines the limit of semi detached settlement shown on the current 1:10,000 or 1:2,500 HLCA base maps. Where other settlement categories exist, it provides a measure of settlement growth since the 1970s. (Following the pilot phase this Type was replaced by Post-1970s Residential Development).
Settlement Post-1970s Detached	SET-92	This category defines the limit of detached settlement shown on the current 1:10,000 or 1:2,500 HLCA base maps. Where other settlement categories exist, it provides a measure of settlement growth since the 1970s. (Following the pilot phase this Type was replaced by Post-1970s Residential Development).
Country House	SET-97	Denotes large rural/semi rural buit-up areas usually associated with parkland or designed landscapes. Usually 18th or 19th century in date.
Farm Complex	SET-98	Denotes areas covered by farm houses and associated outbuildings.
Flats and Apartments	SET-103	Multi storey residential buildings. (Following the pilot phase this Type was replaced by Post-1970s Residential Development where appropriate.).
Post 1970s Residential Development	SET-118	This category defines the limit of settlement shown on the current 1:10,000 or 1:2,500 HLCA base maps. Where other settlement categories exist, it provides a measure of settlement growth since the 1970s.

Civic and Commercial

Historic Landscape Character Type	HLC Code	Description and Interpretation
Municipal and Civic	CAM-66	This category includes areas within larger settlements defined by the presence of large civic buildings such as libraries, museums and town halls. This category will include complexes performing similar functions at out of town or urban fringe locations.
Educational	CAM-67	Educational establishments such as colleges, universities and school complexes.
Hospitals	CAM-68	Large hospital complexes.
Commercial and Retail	CAM-69	Large stores, commercial districts and retail parks identified from the current OS map base. These areas will include car parking.
Religious	CAM114	Buildings, complexes and associated grounds which serve a religious function, includes churches, temples, mosques and synagogues.

Transportation

Historic Landscape Character Type	HLC Code	Description and Interpretation
Major Road Junctions	TRA-70	Major road junctions and roundabouts over 1ha in size. These will date from the later half of the 20th century onwards.
Train Stations and Sidings	TRA-71	This category defines train stations, large sidings and cuttings as marked on the current 1:10,000 OS map.
Canal Locks/Basin	TRA-72	This category defines canal locks, basins or wharfs marked on the current 1:10,000 OS map.
Service Stations	TRA-74	Service areas typically associated with motorways and the larger trunk roads and marked on the modern OS map base.
Civil Airports	TRA-75	Airports and airfields for civil use. A number of these will have formerly been for military use and given over to civil use after the Second World War.
Disused Airfields	TRA-120	Disused airports and airfields. Most, if not all, of these will have formerly been for military use and given over to civil use after the Second World War.

Water and Valley Floor

Historic Landscape Character Type	HLC Code	Description and Interpretation
Miscellaneous Floodplain Fields	WVF-76	Areas of enclosure on river floodplain not falling into the Enclosed Land attribute group character types. These are fields which will have traditionally been used as meadows. Areas falling into this category type have the potential for containing the preserved earthwork remains of water meadows.
Artificial Lake/Pond	WVF-77	Lakes or ponds which can be recognised as artificial through the presence of retaining earthworks and/or dams. Include within this character type are ornamental lakes, recreational facilities such as modern fish ponds, flooded quarries and ponds associated with former industrial activity.
Reservoir	WVF-78	Bodies of water created specifically for the purposes of water supply and marked as such on the current maps. These will generally date to the late 19th and 20th centuries.
Natural Open Water	WVF-79	Expanses of open water over 1ha which have natural origins. Typically these will occupy basins formed during the last glaciation.
Moss/Raised Bog	WVF-101	Areas of unimproved peats, formation of which will typically have begun in the prehistoric period. Conditions in theses environments will favour the preservation of organic remains. These also sustain ecologically rich wetland habitats.
Marsh	WVF-102	Areas marked as marsh on the modern OS map base.

1.9.7 Previous Historic Landscape Character Type Definitions

1.9.7.1 The former historic landscape character is recorded through the 'Previous Types' form within the HLC module of HBSMR. It is not always possible to identify or suggest the previous landscape character of a polygon and when this is the case this part of the form will be left blank. However, where a previous character is identified this will usually be done through previous editions of the OS maps or will have been inferred from the current historic landscape character. So, for example, piecemeal enclosure will be assumed to have been derived from medieval strip fields. The HLC module allows for multiple Previous Broad and HLC Types to be entered so it will be possible to chart several phases of change in the character of the landscape.

1.9.7.2 In most cases the same character types, descriptions and HLC codes are used for 'Previous Types' as for 'Current Character Types'. There are however some additions and amendments. These changes are most notable for HLC Types falling within the Woodland Broad Type. The Forestry Commission's inventory of woodland types is a key data set for the identification current HLC Types is based largely upon the interpretation of aerial photography taken between 1991 and 2000. There would be difficulties in applying this interpretation to earlier character types, consequently a shorter list of HLC Character Types are used for Previous Woodland HLC Types. The full list of Previous Character Types is set out below.

Unenclosed Land

Previous Historic Landscape Character Type	HLC Code	Description and Interpretation
Heathland	UNE-1	Generally below 244m OD this category distinguishes areas of heathland as identified by English Nature's Lowland Heathland Inventory.
Other Commons	UNE-2	This includes areas of common land which do not fall into the above category, this includes areas of low lying which may have been used for communal grazing but which on the basis of place name evidence do not appear to have been heathlands.

Enclosed Land

Previous Historic Landscape Character Type	HLC Code	Description and Interpretation
Irregular Squatter Enclosure	FIE-3	Field systems characterised by small irregular fields with boundaries dominated with a sinuous or curvilinear morphology. Often associated with networks of lanes, access tracks or small cottages theses field systems have an unordered appearance. These systems may be associated with quarries, mining or other industrial activity. Often indicative of encroachment onto common land in the post-medieval or industrial periods.
Rectilinear Squatter Enclosure	FIE-4	The morphology of these field systems is one of small rectilinear fields with straight boundaries and has a more planned appearance than 'irregular squatter enclosure' and again often associated with networks of lanes, access tracks and small cottages. These systems may be associated with quarries, mining or other industrial activity. Often indicative of encroachment onto common land in the post-medieval or industrial periods.
Paddocks and Closes	FIE-5	Small irregular fields distinguished from the 'other small fields' character type by their location on the edge of settlements. These will in many cases represent small meadows and paddocks.
Small Assarts	FIE-6	Small irregular or rectilinear fields which appear to have been created through woodland clearance. Typically these will border or occur close to areas of ancient woodland.
Large Assarts with Sinuous Boundaries	FIE-7	Large irregular or rectilinear fields probably created through the clearance of woodland. This category includes fields which have been created through the post-1880s amalgamation of small assarts. This character type will border or occur in close proximity to areas of ancient woodland.

Planned Woodland Clearance	FIE-8	Small and large rectilinear or irregular field patterns typically having straight boundaries which appear to have been created through woodland clearance. These will either borer or occur in close proximity to areas of ancient woodland.
Small Irregular Fields	9	Areas of small irregular fields not assigned to one of the other historic landscape character types. Includes small meadows and closes not occurring next to settlement boundaries.
Piecemeal Enclosure	FIE-10	This character type may be defined as field systems created out of the medieval open fields by means of informal, verbal agreements between farmers wishing to consolidate their holdings (Beresford, 1949). This process appears to have been underway in Leicestershire around the late 16th and early 17th centuries. Enclosure within this category will be characterised by small irregular or rectilinear fields with at least two boundaries exhibiting an 's-curve' or 'dog-leg' morphology indicating that they are following boundaries of former strip fields.
Re-organised Piecemeal Enclosure	FIE-11	Small irregular or rectilinear fields that have lost 10% or more field boundaries since the 1st ed 6" map, or areas of large irregular or rectilinear fields. In both cases at least two field boundaries will have an 's-curve' or 'dog-leg' morphology. These enclosure patterns have developed through a process of amalgamation of fields created through piecemeal enclosure. This will, in most cases have occurred since the publication of the 1st ed. 6" OS map.
Drained Wetlands	FIE-12	This character type includes small or large, irregular or rectilinear fields. Most of the boundaries will be defined by the course of drainage ditches, some boundaries may also follow water courses.
Planned Enclosure	FIE-13	Either small or large enclosures with a predominantly straight boundary morphology giving a geometric, planned appearance. Laid out by surveyors these field patterns are the result of later enclosure during the 18th and 19th centuries. Included in this character type are commons enclosed by Act of Parliament.
Planned Enclosure Containing Ridge and Furrow	FIE-14	Either small or large enclosures with a predominantly straight boundary morphology giving a geometric, planned appearance. Laid out by surveyors these field patterns are the result of later enclosure during the 18th and 19th centuries. These fields will contain extant ridge and furrow earthwork remains visible on the GIS air photo layer.
Other Small Rectilinear Fields	FIE-15	Area of small rectilinear fields not falling into one of the other character types. This group will include small meadows and closes not occurring next to settlement boundaries.

Other Large Rectilinear Fields	FIE-16	Large rectilinear fields exhibiting a significant number of sinuous boundaries, which cannot be assigned to one of the other character types. This group will include enclosure patterns created through the amalgamation of fields since the publication of the 1st ed. 6" OS map.
Large Irregular Fields	FIE-17	Large irregular fields exhibiting a significant number of sinuous boundaries, which cannot be assigned to one of the other character types. This group will include enclosure patterns created through the amalgamation of fields since the publication of the 1st ed. 6" OS map.
Very Large Post-War Fields	FIE-18	Very large fields, over 8.1ha and often significantly larger, created since the publication of the 1st ed. 6" OS map. In most cases this will be the result of Post-War agricultural improvements intended to meet the requirements of intensive arable cultivation.
Tofts and Crofts	FIE-99	Former house plots where the dwellings typically lined a road or lane and the plots ran back to a common boundary line.
Strip Fields	FIE-100	This category identifies area which are likely to have formed part of medieval open fields, the presence of which can be suggested through the presence of piecemeal enclosure or ridge and furrow earthwork remains.

Orchards and Allotments

Previous Historic Landscape Character Type	**HLC Code**	**Description and Interpretation**
Pre-1880s Orchards	ORC-19	Orchards marked on both the 1st ed. 6" map and on the modern OS map base. These will date to the post-medieval or early to mid 19th century.
Post-1880s Orchards	ORC-20	Orchards which are marked on the modern OS map base but are absent from the 1st ed. 6" OS map. These orchards will have been planted at some point over the past 125 years.
Pre-War Allotments	ORC-21	Allotments laid out prior to the Second World War and marked on the 1950s OS map and the modern OS map base. This category will include 19th century "pleasure gardens".
Post War Allotments	ORC-22	Allotments marked on the modern OS map bas but do not appear on the 1950s map. Consequently these allotments will have been laid out at some point over the last 50 years.

Woodland

Previous Historic Landscape Character Type	HLC Code	Description and Interpretation
Ancient Broadleaved Woodland	WDL-104	Woods classified by English nature as 'Ancient Semi-Natural' but no longer having a broadleaved composition according to the Forestry Commission's Woodland Habitat Survey. For the purposes of HLC it is therefore assumed that theses are areas are ones that would have formerly have been characterised as ancient broadleaved woodland.
Other Broadleaved Woodland	WDL-105	Areas marked on earlier editions by the OS map as being broadleaved but not classified by English Nature as 'Ancient Semi-Natural' and have changed composition. This category includes areas of broadleaved woodland that have been cleared over the past 120 years.
Mixed Woodland	WDL-106	Areas marked as mixed woodland on earlier OS editions but have either changed composition or since been cleared over the past 120 years.
Plantation Woodland	WDL-107	Woods with a morphology or name as marked on the 1st ed OS which suggests that they represent plantations but have since changed in character. This category includes plantations over 1ha that have been cleared over the past 120 years.

Industrial

Previous Historic Landscape Character Type	HLC Code	Description and Interpretation
Post-1880s Industrial Complex	IND-34	Modern industrial complexes. Includes industrial estates, large factories and sewage farms. Most of these will have a late 20th century date.
Pre-1880s Industrial Complex	IND-35	Industrial complexes. Includes industrial estates, large factories and sewage farms. Most of these will have a late 18th or 19th century date.
Derelict Industrial Land	IND-36	Former industrial sites which have been cleared and had no subsequent development on them.
Engineering and Metal Working	IND-112	Industrial complexes and factories identified by OS mapping as being for engineering or metal working.
Textiles, Boot & Shoe and Associated Industries	IND-113	Industrial complexes and factories identified through the OS as being associated with the textile or boot and shoe industry. This category will include hosiery and lace making, dyeing and associated warehousing.

Extractive

Previous Historic Landscape Character Type	HLC Code	Description and Interpretation
Stone Quarries	EXT-37	Stone quarries in active use. Will normally be large modern quarries run by aggregates/ construction companies.
Abandoned Stone Quarries	EXT-38	Disused Stone Quarries. This category will usually consist of larger stone quarries created during the 19th and early 20th century.
Sand and Gravel Quarry	EXT-39	Active Sand and gravel extraction identified through LCC Minerals and Waste GIS data and previous OS Map editions.
Abandoned Sand and Gravel Quarry	EXT-40	Abandoned Sand and gravel extraction sites identified through LCC Minerals and Waste GIS data and previous OS Map editions.
Open Cast Coal Mines	EXT-41	Active open cast coal mines identified through LCC Minerals and Waste GIS data and previous OS Map editions.
Abandoned Open Cast Coal Mines	EXT-42	Abandoned open cast coal mines identified through LCC Minerals and Waste GIS data and previous OS Map editions.
Abandoned Deep Coal Mines	EXT-43	Abandoned deep coal mines identified through LCC Minerals and Waste GIS data and previous OS Map editions.
Clay Extraction	EXT-44	Active brick and fire clay extraction identified through LCC Minerals and Waste GIS data and previous OS Map editions.
Abandoned Clay Extraction	EXT-45	Abandoned brick and fire clay extraction sites identified through LCC Minerals and Waste GIS data and previous OS Map editions.
Gypsum Extraction	EXT-46	Active gypsum extraction site identified through LCC Minerals and Waste GIS data and previous OS Map editions.
Abandoned Gypsum Extraction	EXT-46	Abandoned gypsum extraction sites identified through LCC Minerals and Waste GIS data and previous OS Map editions.
Deep Coal Mines	EXT-108	Areas of former deep coal mining activity marked on previous OS Map editions.

Military

Previous Historic Landscape Character Type	HLC Code	Description and Interpretation
Barracks/Training Ground	MIL-48	Military bases identified and marked on previous OS Map editions and which have since changed in landscape character. Most of these will have been built during the 20th century.
Military Depots	MIL-49	Military storage facilities identified from previous OS Map editions and which have since changed in landscape character.
Military Airfield	MIL-52	Areas identified from previous OS Map editions as military airfields or airbases and which have since changed in landscape character.

Ornamental, Parkland and Recreational

Previous Historic Landscape Character Type	HLC Code	Description and Interpretation
Parks and Gardens	OPR-54	Parks and gardens identified from the Leicestershire HER, the Historic Parks and Gardens Register and Cantor and Squires' study of the Leicestershire's Parks and Gardens and can still be identified in the present day landscape. In most cases this will be the result of emparkment during the post-medieval or 19th century but may also include elements of earlier medieval parkland.
Golf Course	OPR-55	Golf courses identified as such from previous OS map editions and which have since changed in character.
Sports Fields	OPR-56	Modern sports fields and stadia identified as such from previous OS map editions and which have since changed in character.
Other Parkland	OPR-57	Other forms of parkland, recreational or ornamental landscapes which do not fall into any of the above categories. This character type will include playing fields and caravan parks.
Cemeteries	OPR-58	Areas identified from previous OS map editions as formally laid out cemeteries and which have since changed in character. These will typically date to the 19th and 20th centuries.
Deer Park	OPR-82	Parks and gardens identified from the Leicestershire HER, the Historic Parks and Gardens Register and Cantor and Squires' study of the Leicestershire's Parks and Gardens and which can still be identified in the present day landscape. In most cases this will be the result of emparkment during the post-medieval or 19th century but may also include elements of earlier medieval parkland.

Settlements

Previous Historic Landscape Character Type	HLC Code	Description and Interpretation
Historic Settlement Core	SET-59	Historic settlement cores suggested by morphology or data held in the HER. In most cases these represent the extent of the settlement either by the end of the medieval period OR by the beginning of the 19th century. The distinction between the two is made via the period category in the current historic landscape character component of the database.
Pre-1880s Settlement Terraced	SET-60	This category defines the extent of terraced settlement as marked on the 1st edition 6" OS map. In most cases this will effectively define the historic settlement core. However, for those settlements with an identified Historic Settlement Core this category will provide a measure of settlement growth since the period defined by the historic core (e.g. either over the course of the post-medieval and 19th century).
Pre-1880s Settlement Semi Detached	SET-61	This category defines the extent of semi detached settlement as marked on the 1st ed. 6" OS map. In most cases this will effectively define the historic settlement core. However, for those settlements with an identified Historic Settlement Core this category will provide a measure of settlement growth since the period defined by the historic core (e.g. either over the course of the post-medieval and 19th century).
Pre-1880s Settlement Detached	SET-62	This category defines the extent of detached settlement as marked on the 1st edition 6" OS map. In most cases this will effectively define the historic settlement core. However, for those settlements with an identified Historic Settlement Core this category will provide a measure of settlement growth since the period defined by the historic core (e.g. either over the course of the post-medieval and 19th century).
Settlement 1st-2nd ed Terraced	SET-63	This category defines terraced settlement built after the publication of the 1st edition OS and which appears on the 2nd edition OS.
Settlement 1st-2nd ed Semi Detached	SET-64	This category defines semi detached settlement built after the publication of the 1st edition OS and which appears on the 2nd edition OS.
Settlement 1st-2nd ed Detached	SET-65	This category defines detached settlement built after the publication of the 1st edition OS and which appears on the 2nd edition OS.
Settlement 2nd-3rd ed Terraced	SET-80	This category defines terraced settlement built after the publication of the 2nd edition OS and which appears on the 3rd edition OS.
Settlement 2nd-3rd ed Semi Detached	SET-81	This category defines semi detached settlement built after the publication of the 2nd edition OS and which appears on the 3rd edition OS.
Settlement 2nd-3rd ed Detached	SET-83	This category defines detached settlement built after the publication of the 2nd edition OS and which appears on the 3rd edition OS.

Settlement 3rd-4th ed Terraced	SET-84	This category defines terraced settlement built after the publication of the 3rd edition OS and which appears on the 4th edition OS.
Settlement 3rd-4th ed Semi Detached	SET-85	This category defines semi detached settlement built after the publication of the 3rd edition OS and which appears on the 4th edition OS.
Settlement 3rd-4th ed Detached	SET-86	This category defines detached settlement built after the publication of the 3rd edition OS and which appears on the 4th edition OS.
Settlement Pre-1970s Terraced	SET-87	This category defines the limit of terraced settlement Built after the publication of the 4th edition OS and prior to the 1970s.
Settlement Pre-1970s Semi Detached	SET-88	This category defines the limit of semi detached settlement Built after the publication of the 4th edition OS and prior to the 1970s.
Settlement Pre-1970s Detached	SET-89	This category defines the limit of detached settlement Built after the publication of the 4th edition OS and prior to the 1970s.
Settlement Post-1970s Terraced	SET-90	This category defines the limit of terraced settlement shown on the current 1:10,000 or 1:2,500 HLCA base maps. Where other settlement categories exist, it provides a measure of settlement growth since the 1970s.
Settlement Post-1970s Semi Detached	SET-91	This category defines the limit of semi detached settlement shown on the current 1:10,000 or 1:2,500 HLCA base maps. Where other settlement categories exist, it provides a measure of settlement growth since the 1970s.
Settlement Post-1970s Detached	SET-92	This category defines the limit of detached settlement shown on the current 1:10,000 or 1:2,500 HLCA base maps. Where other settlement categories exist, it provides a measure of settlement growth since the 1970s.
Medieval Settlement	SET-93	Denotes areas of deserted settlement, often visible as earthwork remains and identified through the HER.
Monastic Foundations	SET-94	Areas associated with monastic foundations of the medieval period.
Roman Occupation	SET-95	Areas of know Roman occupation occupying over 1ha.
Pre-Medieval Occupation	SET-96	Known areas of occupation pre-medieval in date and not Roman in character. This category will include prehistoric occupations sites such as hill forts.
Country House	SET-97	Denotes large rural/semi rural areas usually associated with parkland or designed landscapes. Usually 18th or 19th century in date.
Farm Complex	SET-98	Denotes areas covered by farm houses and associated outbuildings.
Flats and Apartments	SET-103	Multi storey residential buildings.
Post 1970s Residential Development	SET-118	This category defines the limit of settlement shown on the current 1:10,000 or 1:2,500 HLCA base maps. Where other settlement categories exist, it provides a measure of settlement growth since the 1970s.

Civic and Commercial

Previous Historic Landscape Character Type	HLC Code	Description and Interpretation
Municipal and Civic	CAM-66	This category includes areas within larger settlements defined by the presence of large civic buildings such as libraries, museums and town halls. This category will include complexes performing similar functions at out of town or urban fringe locations.
Educational	CAM-67	Educational establishments such as colleges, universities and school complexes.
Hospitals	CAM-68	Large hospital complexes.
Commercial and Retail	CAM-69	Large stores, commercial districts and retail parks identified from the current OS map base. These areas will include car parking.

Transportation

Previous Historic Landscape Character Type	HLC Code	Description and Interpretation
Train Stations and Sidings	CAM-71	This category defines train stations and large sidings as marked on previous OS map editions and which have since changed in character.
Canal Locks/Basin	CAM-72	This category defines canal locks, basins or wharfs marked on previous OS map editions and which have since changed in character.

Water and Valley Floor

Previous Historic Landscape Character Type	HLC Code	Description and Interpretation
Miscellaneous Floodplain Fields	WVF-76	Areas of enclosure on river floodplain not falling into the Enclosed Land attribute group character types. These are fields which will have traditionally been used as meadows. Areas falling into this category type have the potential for containing the preserved earthwork remains of water meadows.
Artificial Lake/Pond	WVF-77	Lakes or ponds which can be recognised as artificial through the presence of retaining earthworks and/or dams. Include within this character type are ornamental lakes, recreational facilities such as modern fish ponds, flooded quarries and ponds associated with former industrial activity.
Reservoir	WVF-78	Bodies of water created specifically for the purposes of water supply and are marked as such on the current maps. These will generally date to the late 19th and 20th centuries.
Natural Open Water	WVF-79	Expanses of open water over 1ha which have natural origins. Typically these will occupy basins formed during the last glaciation.
Moss/Raised Bog	WVF-101	Areas of unimproved peats, formation of which will typically have begun in the prehistoric period. Conditions in these environments will favour the preservation of organic remains. These also sustain ecologically rich wetland habitats.
Marsh	WVF-102	Areas marked as marsh on earlier OS editions.