Appendices

Glossary of Terms

Epoch.	Subdivision of the geologic period. Generally based on glaciological ice ages of glacial (colder) periods and interglacial (warmer, more temperate climate) periods.
Quaternary.	Subdivision of the Neogene period. Not a period in the geological sense, start of the mini ice age. Inlcudes 2 further subdivisions – the Pleistocene and the Holocene.
Pleistocene	Subdivision of the Quaternary, dates to 1.8Ma – 11,000 BP. This epoch sees the first evidence of human technology with the Palaeolithic period.
Devensian	This refers to the first major glacial period of the Pleistocene dating to 110,000 –12,000 BP.
Anglian	This is the fourth glacial period of the Pleistocene (300,000-455,000 BP). The main terrace deposited in this period is though to be Harefield Terrace.
Palaeolithic	This is an archaeological term referring to the first period of technological development. It began with the development of the first tools and continued until the introduction of agricultural techniques. There are three separate divisions of the Palaeolithic – Lower (2.5Ma-120,000 BP) finds broadly consist of hand axes; Middle (300,000-30,000 BP) finds now include flaked tools; and Upper (40,000-11,000 BP).
Levallois Technology	This refers to a distinctive flint knapping technique developed during the Middle Palaeolithic.
Holocene.	This is the fourth epoch following the Pleistocene. End of the recent glaciation and rise of the modern civilisation. 11,000 BP - present. The Palaeolithic dates to the Pleistocene whilst Mesolithic until the present refers to the Holocene.
Mesolithic	This archaeological period coincides with the beginning of the geologic Holocene epoch. The general period dates to 8500 - 4500 BC.
Neolithic	This archaeological period dates to 4500 – 2300 BC and marks the introduction of farming in Europe.

Appendix 1: Archaeological Background

Geological Timescale

A short geological summary is set out below in order to set human remains in context. The earliest human occupation of Britain is currently dated to c 700,000 years ago (Parfitt et al, 2005). From that period Britain's climate passed through 17 alternating warm and cold stages, including several major glacial episodes (ice ages) of which the best understood are the Anglian (c 478,000 to 423,000 years ago) and the Devensian (c 110,000 to 12,000 years ago. Before the Anglian glaciation, the Proto-Thames flowed along the dip-slope of the Chiltern Hills on its way to East Anglia and the sea. When the Anglian ice front reached the Vale of St. Albans blocking this early channel the river diverted south to its present course creating as a by-product the tributary valley of the River Colne (Wymer, 1999). The alternation of warm and cold stages resulted in the creation of river terraces formed by successive deposition and erosion events. The classic sequence of Middle Thames terraces in the Slough/Beaconsfield area is one of the best studied Pleistocene deposits in Britain (Bridgland, 1994). The earliest geological deposits of this period found in the study area are the pre-Anglian Winter Hill gravels found in the north around Denham aerodrome. Outcrops of the Black Park, Boyn Hill, Lynch Hill and Taplow/Denham river terrace deposits dating between the Anglian and Devensian glaciations are also found in the area. The floor of the valley is made up of the most recent gravel deposits, the Colney Street Gravel on which lie early Holocene peat, tufa and alluvial deposits in places sealing a buried land surface of late Pleistocene/earliest Holocene date and filling or covering a multitude of palaeochannels in a braided river system.

Palaeolithic Period (700,000-8500 BC)

Evidence of ancient humans principally takes the form of struck flint and tools (e.g. hand axes) most often found in or closely associated with river gravels. It is thought that this evidence reflects episodic occupation of Britain during periods of more favourable climate. Archaeologically, these pre-modern human occupation phases are divided into the Lower and Middle Palaeolithic based on differences in stone tool technology (Stringer, 2006; Wymer, 1999).

The Middle Thames Valley, of which the Colne Valley Park is a part for this consideration, provides a comparatively wealthy dataset for early hominins with a number of important sites in the Park itself and surrounding area with a particularly high concentration of known sites in the south. There is no definite evidence for Anglian or Pre-Anglian occupation but a number of Lower Palaeolithic finds have been made along the valley, both in the study area and upstream. Most have produced only a few artefacts, often in rolled condition but the site at Normer Hill, Denham has produced 91 artefacts including 12 hand axes, some in mint condition, indicating an in-situ or near in-situ site. Large numbers of artefacts have also been found associated with the Lynch Hill gravels at Iver and the Langley Silt Complex around West Drayton although the finds are reported to be rolled rather than in fresh condition. Iver and West Drayton also have evidence for rare Middle Palaeolithic occupation, some potentially from undisturbed sites (Wymer, 1999). Overall the study area has significant potential for Lower/Middle Palaeolithic archaeology and related palaeo-environmental remains within or associated with geological deposits dating between the Anglian and Devensian glaciations. The

area has particular potential to address research questions related to the earliest human presence; the onset of the Middle Palaeolithic (Levallois technology); the potential for palaeo-environmental evidence and questions related to the nature and chronology of the brick earth and associated sites.

Modern humans arrived in Britain near the end of the Pleistocene Epoch at a time when Britain was still linked to the continent and the Thames was a tributary of the ancient Rhine – this is known as the Upper Palaeolithic. The Lower Colne Valley has a distinct concentration of nationally rare Late Upper Palaeolithic open-air sites dating to the end of the last cold stage c 10,000 BC. In-situ sites have been found at Three Ways Wharf, Uxbridge; Church Lammas, Staines and New Denham (Lewis, 2000; Wessex Archaeology, 2005). All these sites are of national importance, the first two sites are particularly notable for their association with faunal assemblages. They probably represent temporary camps. Taken together with the immediately succeeding Mesolithic period these sites indicate the exceptional potential of the Colne Valley to address questions related to the re-colonisation of Britain and adaptation to rapid climate and environmental change.

Overall, the study area has a rich Palaeolithic heritage and considerable potential for geo-morphological modelling to predict future discoveries of important Palaeolithic sites (cf. Nixon et al, 2002; Silva, 2007). There is an intimate relationship between these sites, the sand and gravel deposits of the valley and discoveries made during mineral extraction.

Mesolithic Period (8500-4500 BC)

With the end of the glacial Pleistocene period, the Mesolithic was marked by significant changes with a warmer and wetter climate leading to the growth of forests, marshes and fens, this period also saw an increase in deciduous trees such as oak, lime and elm at the expense of pine and birch (Cockburn et al: 1969). More complicated tool assemblages have been attributed to this period with the addition of heavier flint tools for tree felling and boat making.

Several Mesolithic sites and findspots have been discovered as a result of gravel extraction, in particular along the Batchworth to Denham lake series in the north of the Park. Lacaille also documents a series of early Mesolithic finds including flint assemblages, bone and environment analysis in the mid twentieth century, in particular from Boyers Pit, Denham and Sandstone, Iver (Lacaille, 1963). Excavations carried out prior to road and motorway construction have also added considerably to our knowledge of this area, as for example, under the current path of the A413 at Gerrards Cross where Barfield discovered evidence for a Mesolithic flint industry (Barfield, 1977). Environmental evidence is also known from the Misbourne Valley running through the Colne Valley Park into Gerrards Cross and as far as Great Missenden (Farley, 2007). Later excavations in this area prior to construction of the M25 around Mopes Farm suggest the possibility of an axe factory site that may have continued in use well into the Neolithic (*ibid*.). Further south, excavation work around Alderbourne have also indicated Mesolithic occupation (*ibid*.).

The Sanderson factory site excavated by the Museum of London Archaeology Service (MoLAS) in 2004, revealed a scatter of approximately 3000 flints and bone fragments dating to the Early Mesolithic, making it roughly contemporaneous with the important

Mesolithic site at Three Ways Wharf at Uxbridge where numerous flint assemblages have been recorded surrounding a series of camp sites (MoLAS). Analysis of pollen preserved in peat deposits sealed below the Sanderson factory revealed evidence of woodland and marshy environments developing in the early post-glacial period. Numerous other occupation sites and findspots dating to the Mesolithic have been discovered in the London Borough of Hillingdon around Uxbridge and Harefield and on a preferred mineral site to the south of New Denham. Just outside the boundaries of the Colne Valley Park, recent excavations at the site of Heathrow Terminal 5 have also uncovered evidence in the form of flint scatters and a few pits dating to the Mesolithic suggesting continued activity in the area (Framework Archaeology). In contrast to the early Mesolithic, fewer late Mesolithic sites are recognised in the study area as settlement seems to have moved higher up the valley (Holgate, 1995)

The Colne Valley has an exceptional nationally significant resource of undisturbed in-situ early Mesolithic occupation sites with associated animal bone and waterlogged environmental evidence. Some locations have the potential to preserve organic artefacts such as wooden boats, fishing or hunting equipment of extreme rarity. There is the potential to investigate the range of behaviours and subsistence strategies practiced across a local landscape, possibly focussed on a base camp at Three Ways Wharf. Geo-morphological modelling to study the resource and predict future discoveries is strongly recommended.

Neolithic Period (4500-2300 BC)

The Neolithic period is marked by the introduction of farming practices in Europe and an increase in population. A causewayed camp interpreted as a specialised centre for trade and social activities excavated at Yeoveney Lodge points to a more sophisticated society at this time. Finds from this site include pottery as well as flint and stone tools some of which indicate that the site was embedded within long distance exchange networks linked to Wales and the Lake District (Lewis et al, 2006). A Middle Neolithic brush and timber pile structure has been excavated on the Thames riverbank at Runnymede Bridge. Associated environmental evidence indicates a mixed grassland and lime/oak woodland with localised wetland (Needham, 1991). Further to the northeast lies the 4km long Stanwell/Heathrow Cursus, a ditched linear monument interpreted as a ceremonial routeway. Excavations at Heathrow culminating in recent works at Terminal 5 have uncovered evidence for a substantial ceremonial/ritual complex focussed around the Stanwell Cursus and including a second Cursus monument dating to approximately 3600-3300 BC as well as horseshoe-shaped enclosure, posthole complex and several artefact scatters (Lewis et al, 2006). Together, this evidence suggests that the main focus of Neolithic activity lay towards the southern end of the park on the first terrace river gravels and along the Thames itself. Nevertheless, a number of flint assemblages have also been discovered across the Park suggesting a fairly widespread pattern of settlement and movement in the landscape.

Bronze Age (2300 - 700 BC)

During this period a pattern of semi permanent settlement emerges, in some places sites commonly in use during the Mesolithic continued to be visited throughout the Neolithic and well into the Bronze Age (Biddulph, 2007). The channels and marshes bounding the rivers of the Colne Valley Park would have become increasingly important in the Bronze Age both as a resource and as a means of communication and travel and the

majority of records follow the braiding of the rivers. Individual finds include a polished greenstone axe from the Colne Brook in Iver (Biddulph, 2007). Signs of permanent agricultural and pastoral activities begin to emerge in the middle Bronze Age with the Heathrow Terminal 5 excavations showing a landscape of fields, trackways, settlements and waterholes dating to approximately 1700-1150 BC that no doubt stretched into the southern half of the Colne Valley Park (Framework Archaeology). Bronze Age field systems have also been recorded as Church Lammas, Poyle, Stanwell and most recently at the Lea, Denham (Kidd, 2007). These are amongst the earliest archaeologically visible large-scale field systems in Britain. It has been suggested that the fields were laid out predominantly for pastoral agriculture and appear in clusters along the Thames Valley, each one associated with a high- status or "aggrandised" settlement (Yates, 1999). An unusually well preserved and artefactually rich late Bronze Age waterfront site excavated in response to the construction of the M25 at Runnymede Bridge is the most important individual site of this period in the study area and presumably drew upon a wide territory including the Colne Valley. The main structures comprised a piled waterfront and rectangular building. Environmental evidence suggests a much more open grassland environment than that of the Neolithic (Needham, 1991).

Ring ditches visible as cropmarks on aerial photographs are often interpreted as ploughed out early Bronze Age barrows, although both earlier and later dates are possible. Several ring ditches are recorded on Staines Moor and a double ring ditch at Thorney Lane is a scheduled ancient monument. Limitations on aerial archaeology imposed by the proximity to Heathrow have almost certainly explained the lower level of discoveries from aerial survey compared to other areas of river gravel further up the Thames.

The southern part of the Colne Valley Park has thus produced evidence of regional and national importance for the study of the Bronze Age. The extent to which these early field systems spread up the Colne Valley and onto the higher ground around it is a subject for further study. Further aerial survey of the valley would be desirable.

Iron Age (700 BC- AD43)

In the wider region beyond the study area, the Iron Age provides some of the first evidence for long-lived settlements including hillforts, the iconic defensive structures of the period. Within the study area however, evidence for Iron Age occupation is surprisingly sparse with no evidence for hillforts or other major sites yet recognised. There are possible sites at Iver, Staines, Denham and Harefield. An early Iron Age occupation site at Thorney Farm has also been recorded along with several associated finds including substantial pottery remains that indicate occupation in the area well into the Romano-British period (Denington & Gallant, 1965). Hillfort type defended enclosures are known around the study area notably Seven Ways Plain, Burnham Beeches (Bucks); Bulstrode Camp, Gerrards Cross (Bucks) and Caesar's Camp, Heathrow. The latter site was excavated in 1944 revealing within it a Romano-Celtic temple with Iron Age antecedent (Grimes and Close-Brooks, 1993). At Heathrow Terminal 5 the Bronze Age landscape appears to have continued to be used into the Iron Age with a small nucleated settlement being inserted into the field system in the middle Iron Age followed by total reorganisation in the late Iron Age (Lewis et al, 2006). Excavations currently underway at The Lea, Denham will help clarify how typical Heathrow is of the wider valley. Nevertheless, the sparsity of evidence for this period

remains striking compared to both the frequency of earlier prehistoric occupation and the ubiquity of Iron Age sites further north in Buckinghamshire and Hertfordshire. In this respect the Park is more akin to Greater London possibly reflecting the role of the river as a tribal boundary in this period (Wait and Cotton, 1999). Also, perhaps the marshy conditions of the valley limited its attraction for settlement and farming beyond grazing.

Further research into the nature and extent of Iron Age settlement and activity is needed to address these questions. Certainly it is not difficult to find riverine and wetland environments which were attractive in the Iron Age (e.g. Dorney Rowing Lake, Fengate, Somerset Levels) so the current situation appears somewhat anachronistic.

Romano-British (AD43-400)

Again, surprisingly little in the way of evidence has been recognised from this period although its proximity to Londinium would have assured farmers in the area had access to imported goods and the development of roads and waterways in the area would have begun at this time. No villas are known within the study area despite the proximity of a small town at Staines and a villa at Sarratt (Herts). Two possible Roman roads across the Colne Valley Park have been suggested to have been laid out during this period, such as Shire lane, now little more than a country track, and the path of the modern A413 but thus far conclusive evidence is lacking. Distinctive sites include a Roman enclosure at Yeoveney and an unusual later Roman burial site at Denham with bustum cremation burials possibly suggestive of a immigrant population from the Rhine area. Outside the Colne Valley Park, field systems laid out in the Bronze Age were reorganised for later Roman agriculture, with further evidence of continued settlement at Heathrow (Framework Archaeology). Other examples of Roman field systems have been recorded around Ickenham, Harmondsworth and East Bedfont and at The Lea, Denham.

Again the relative sparsity of evidence for Roman occupation is surprising given the level of modern development in the area and relative visibility of this period even to untrained observers. There is a need of further research that to some degree is being met by recent minerals sites in and around the Park, notably at Denham and Wexham where substantial Roman sites have been investigated.

Saxon Period (400-1066)

During the early/middle Saxon period the Colne Valley may have formed the western boundary of a people known as the "Middle Saxons". While several settlement sites have been recorded in the Colne Valley Park, in particular in the south around Wraysbury and Stanwell Moor, comparatively little archaeological evidence has been discovered within the Park, although rather more are recorded around West Drayton. West Drayton is also known to have been granted to St Paul's Cathedral by king Athelstan in AD 939 (Biddulph, 2006). The only pagan burials are a 5th century inhumation recorded at Wraysbury, and another burial from Harmondsworth.

In the 9th and 11th centuries invading Viking armies briefly held London. Nevertheless in the late Saxon period London rapidly developed to become the principal town of the re-united England. A possible 9th century battle site is recorded at Thorney Farm based on interpretation of documentary evidence from the Anglo-Saxon Chronicle of a battle fought between the Saxons and retreating Danes in AD 893.

During the late Saxon period much of the land within the Park was owned by a small number of lords and religious houses. The lands of Rickmansworth, Woodoaks and Pynesfield manors were granted to the abbey of St Albans by the Saxon lord Offa (Page: 1908), whilst the manors of Denham and Denham Durdents were granted to Westminster Abbey by Wulfstan. Westminster Abbey were also granted the manor of Staines by Edward the Confessor (Reynolds: 1962). Countess Goda is known to have controlled much of Harefield while Azor was the principal thegn of Stanwell (Reynolds: 1962). Little else is known about the Park until the Domesday book of 1086 and early Saxon evidence primarily survives in the form of place name evidence with many of the modern names within the Park having their origins in Saxon words such as Iver, originally referred to as 'Evreham' in the 'Chronicles of St Aetherlweard' (893).

Several areas in and around the Colne Valley Park are listed in the Domesday Book of 1086, these references indicate an established pattern of settlement and industry in the Park by the end of the Saxon period and suggest the potential for further archaeological evidence in the area. Unsurprisingly, the major landowners of the time included several religious houses; the Abbot of St Peter's of Westminster held principal lands at Staines, Rickmansworth and Denham including significant areas of woodland and meadowland and a total of nine mills, three fisheries, two weirs at two arpents of vineyards at Staines. The Abbot of la Trinite, Rouen held significant areas of land in Harmondsworth including large areas of woodland and one weir while the Canons of St Paul's owned land in West Drayton just outside the Colne Valley Park. Secular landowners at the end of the Saxon period include Walter FitzOther who held land at Horton Manor and at Stanwell for the King, this included four mills, three weirs and some areas of meadowland. Iver, its land and manors, were principally held by Robert D'Oilly and comprised extensive ploughland, meadowland and woodland as well as four fisheries, three mills and two arpents of vineyards. Wraysbury was held by Robert Gernon and included four fisheries along the river Thames and two mills. Harefield areas were owned by Richard son of Count Gilbert and included two mills and four fishponds as well as extensive areas of woodland and finally the small manor of Hillingdon was held by Earl Roger and included only one weir. The Domesday Book gives a clear impression of the extent and variety of industrial activity in the Colne Valley landscape at this time including the presence of some vineyards.

Medieval Period (1066-1540)

A major factor influencing the Colne Valley during the medieval period was its proximity to the growing metropolis of London and the Royal Court at Windsor. The eleventh to early fourteenth centuries were marked by a significant increase in settlement and industry in the Colne Valley Park with the establishment of new settlements such as Colnbrook along with the growth of historic centres through the granting of markets and fairs. Only two settlements within the Colne Valley Park are listed as having markets and fairs; Denham was the first settlement to be granted both in 1227 although Lay Subsidy Taxes in 1334 indicate it remained relatively small (£40) in comparison to the later market and fair granted to Iver in 1353 that was estimated to bring in £120.

The historic centre of Denham, first mentioned in the Domesday Book as forming part of the holdings of St Peter of Westminster, is later referred to as a *burgo* in 13th and 14th century documents from Westminster Abbey (Victoria County History: 1925). Three important fourteenth century aisled buildings of this estate survive at Denham: the main manor (Denham Court), a sub-manor (Savay Farm) and a stewards house (The Old

Bakery) (Pevsner and Williamson, 1960, 52). The medieval village of Iver is also mentioned in the Domesday Book as forming part of the estate of Robert D'Oilly (Williams: 400). The rights to hold market in this village was later granted to Lord Neville in 1351 and the rights to hold fairs to the Deans and Canons of Windsor in the 15th century (Lewis: 1848). Whilst never a market town the earliest reference to Wraysbury Manor and lands dates to 1086 when it was passed to the Crown (Williams: 411), by the 18th century much of the parish formed the estate of G Harcourt of Ankerwycke House (Lewis: 1848). Other medieval settlements are indicated by moated sites, of which there are several in the vicinity of Langley and Iver. At least one of these, at Trenches Farm, may be associated with Langley Park whilst the others may be the sites of small manors or the farmsteads of wealthy freemen. Many other elements of the area's historically dispersed settlement pattern probably originated in the medieval period but relatively little is known about this process due to lack of investigation. Similarly the field systems associated with medieval settlements have not been researched – it is likely that open or common fields existed in the study area and were enclosed in the late medieval or early post-medieval period to create the hedged field systems recorded on the earliest maps. As this enclosure occurred much earlier than the equivalent process in the north of the county it is much harder to study.

Several religious houses held a significant presence in the Park prior to the Dissolution of the Monasteries such as the Benedictine Priory of Ankerwycke comprising the lands of Alderbourne Manor as well as Ankerwycke House, founded in c.1160 by Gilbert de Muntfichet, then lord of Wraysbury and survived until the first purge of monastic houses in 1536 (Page: 1905). The Priory of Harmondsworth was commuted to the alien Benedictine Abbey of Sainte-Trinite du Mont in Rouen following the Norman conquest while the Harefield commandery formed part of the house of Knights Hospitallers (Cockburn et al: 1969). In 1215 King John signed the Magna Carta at Runnymede, which formed the basis for modern English law. The medieval period also saw a rise in affluence and power among the elite. It was the medieval period that saw the first private landscaped gardens being created at historic houses such as Chalfont Park and Huntsmoor, as well as more ostentatious displays of wealth and pious charity (e.g. the settlement of the Benedictine priory at Ankerwycke by Gilbert de Muntfichet).

A deer park had been established at Langley by 1202 (Cantor and Hatherly, 1977) and seems to have had significant royal connections before it passed firmly into royal hands in the Tudor period, at which point it was reorganised with the creation of a court garden, possibly at Trenches Farm (Phibbs, forthcoming). Another deerpark was laid out by the Westminster Abbey Estate at Denham between 1367 and 1369, apparently making use of land freed up by the Black Death (Chevenix-Trench and Fenley, 1979).

During the medieval period the study area also saw a significant increase in the use of the river with mills beginning to line the banks and meadows along the river Colne. A significant number of fisheries and fishponds were also granted to religious houses such as Ankerwycke Priory and private houses such as Southlands Manor during the period. Early signs of pottery industries have been recorded under what is now J16 of the M25 where 3 complete kilns and one partial dating to the early 12th century have been recorded (Farley & Leach, 1988). This kiln sites seems to have gone out of use by the 14th century. Industrial activity also saw a significant increase during the later medieval period with evidence of numerous watermills lining the rivers in and around the Colne Valley Park including Frays Mill in Uxbridge built by the 14th century and powered by the artificially cut Fray's river.

The study area was crossed by two major medieval roads recorded on the Gough Map (dated c 1360) linking London to Bristol and Oxford and later on Ogilby's strip maps in *Britannica*. The paths of these medieval roads follow the lines of the modern A4020 from London to Buckingham and the A4 from London to Maidenhead.

Overall, there has been little archaeological investigation of the local medieval rural settlement pattern that probably reflects its dispersed nature lacking the obvious foci of deserted and shrunken medieval villages typical of the Midlands. Nevertheless, it is increasingly being recognised that dispersed settlement patterns can profitably be investigated and that the so-called "Thames sub-province" within which the Colne Valley lies poses specific research questions and challenges (Roberts and Wrathmell, 2000, 42-43). Other themes that could be pursued relate to the growing influence of London on trade and society and of the royal court. Urban and industrial sites, manors, major estates and parks are all of interest in this respect and suggest that the Colne Valley Park has rather more potential than has hitherto been recognised.

Post-Medieval/Modern Period (1540-present day)

Settlement

Settlement patterns probably changed little between 1500 and 1900, the historic villages of the Colne Valley Park include Wraysbury (settled from Neolithic times); Iver (Saxon); and Denham, Harefield, Stanwell Moor and Horton (Early Medieval). Colnbrook, Heronsgate and Maple Cross date to the post medieval period; Colnbrook principally evolved due to the improved road system put in place following the introduction of the Colnbrook Turnpike Trust while Maple Cross essentially developed in the early twentieth century from a core centre of around four houses. Isolated farmsteads, cottages and Manor houses have been recorded in the Park in relative abundance however, and from 1700 onwards they were particularly common. Several historic parks survive ranging from very small such as Ladywalk in Heronsgate to the very large such as Langley and Black parks; historic farmsteads do survive although most commonly their original function has fundamentally changed.

Communications

The modern period saw the arrival first of the Grand Junction Canal in 1797 and later the railways that for the most part cross east-west across the Park towards London. The Slough branch to the canal was a late addition to the canal network in England, built in the 1900's, it was one of the last stretches of canal to be built. The medieval framework of roads and droveways have stayed remarkably intact considering the level of development in the Park, modern improvements such as tarmacking and straightening of some roads have been undertaken but the most significant development to communications has been the construction of the three motorways in the 1970's and 1980's.

Industry

In the medieval and early medieval periods, industry in the Colne Valley Park consisted of corn mills tied to the agricultural industry of the time, by the modern period however, a great many of these mills had been converted to other uses including paper, copper and timber production. Early records describe an abundance of mills along the river Colne estimated at 30-40, however very few survive in the landscape and often they have been converted or left derelict. In the late 19th and early 20th century, the watercress industry also thrived along the river Colne, especially in the north of the Park from Denham up to

Rickmansworth and numerous watercress beds with their associated leats have been recorded in this report. Little remains of this industry, however, due to the level of aggregates extraction undertaken in the north. Several twentieth century industries have also emerged in the Park including several military sites around Langley and Iver and four pillboxes in Rickmansworth, three of which survive. The parish of Denham is also home to Pinewood and Denham film studios with a number of sets recorded in the HER/SMR database.

Appendix 2: Outreach Programme

Talks:

Saturday 24th February.   5pm start.   Colne Valley Visitor Centre

45 minute talk followed by a 15-minute question time.

Saturday 17th March.   5pm start.   Colne Valley Visitor Centre

45 minute talk followed by a 15-minute question time.

The Colne Valley talk will be a short presentation displaying the outcomes of the Colne Valley Park historic landscape characterisation project and highlighting it potential uses and benefits to the community. The project aimed to produce an in depth study of the landscape of the Colne Valley over the past 200 years in order to help guide the Partnership with future planning policies and conservation measures. The talk will aim to show the changes to the landscape through the growth of settlement and tourism, mineral extraction and the transport network. Key areas of interest for the talk will include the agrarian landscape through changes in farmsteads and estates; changes to hedgerows and boundaries; and the growth of the transport network through the introduction of canals, railways and motorways.

Walks:

Figure 1: Location of walks in the Colne Valley Park

Three walks were chosen on the basis of their location at differing points throughout the Colne Valley as well as the variation of historic landscape in the area. The routes were chosen from a selection of circular walks created and maintained by the Colne Valley Partnership.

The majority of these walks use short cuts; some have been altered to follow shorter paths in order to keep them under 2 and a half hours.

Bucks CC led Events
Sunday 7th January   Grand Union Canal Walk
10am start   3hr (6 mile)
Sunday 11th February   Rickmansworth Walk
10am start   2hr (5 mile)
Sunday 17th March   Wraysbury Walk
10am start   2hr (4 ½ miles)
Groundwork led Events
Sun 31st Jan   Riverbank ways walk
Sun 18th February   The Diversity of Ankerwycke
Sun 4th March   Slough Canal narrowboat cruise
Sun 18th March   Denham 9 stiles dawdle
21-25 March   Picture the past
Sun 31st March   Birth of a historic town

Appendix 3: General

Table 1: Sources

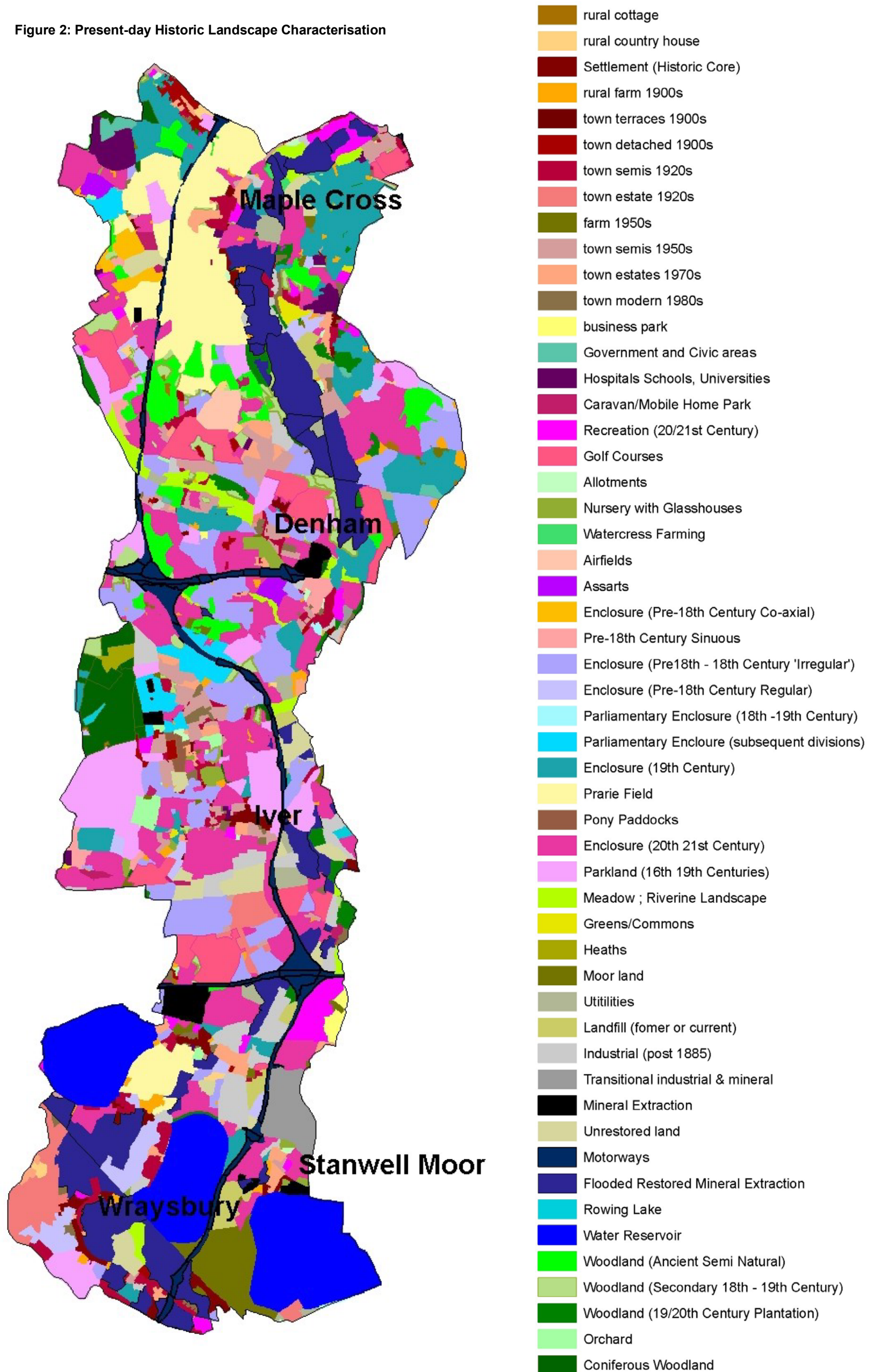| Source producer	Source location	Application to CVP Project
Bucks CC	Bucks HLC General Methodology http://www.buckscc.gov.uk/archaeology/hlc_and_mksm/hlc_draftconsultation.htm	Stage 1. General mapping
Bucks CC	Chilterns HLC Methodology	Stage 2. Routeways and watercourses
Bucks CC	Historic Landscape Zones	Stage 3: Character assessments and management zones
Berkshire Records Offices	Enclosure Maps http://www.berkshireenclosure.org.uk/find_via_parish.asp	
English Heritage	Living Buildings in a Living Landscape http://www.helm.org.uk/upload/pdf/Living-Buildings-Long-Version.pdf	Stage 2. Historic farmsteads
English Heritage	Historic Farmsteads: Preliminary character Statement. http://www.helm.org.uk/upload/pdf/Historic-Farmsteads-South-East-part1.pdf	Stage 2. Historic farmsteads
Hampshire CC	Farmsteads in the landscape Landscapes journal.	Stage 2. Historic farmsteads
Herts. CC	Hertfordshire Minerals Historic Environment Characterisation Project	Stage 1. General mapping
Wolverhampton city council	Black Country Urban Survey	Stage 1. General mapping

Table 2: Data Sets Used

Source Owner	Data Set
Bucks CC	HLC for Bucks
	SMR data
Surrey CC	HLC for Spelthorne
	SMR data
Herts. CC	HLC for Rickmansworth
	SMR data
Berks CC	SMR data
Greater London SMR	SMR data
NMR	Listed buildings for Colne Valley
English Heritage	Parks and Gardens
English Heritage	OS Epoch 3
English Heritage	OS Epoch 4
NMR	SAMs

Table 3: Data Sets Produced

Name	File Format	Type	Bucks CC Location	Description
Colne_Valley_Park_HLC	Layer File .SDE Format	Polygon	N:\Apps\UserApps\ GIS\Overlays\ Custodians\Archaeology	General HLC for Park
Colne_Valley_Routeways	Layer File .SDE Format	Polyline	N:\Apps\UserApps\ GIS\Overlays\ Custodians\Archaeology	Routeways Data for Park including total routes and water ways
Colne_Valley_Farms	Layer File .SDE Format	Polygon	N:\Apps\UserApps\ GIS\Overlays\ Custodians\Archaeology	Farmsteads and Estates Data
Boundaries	Geodatabase & Shapefile	Polyline	N:\Apps\UserApps\GIS\Ov erlays\Teams\Archaeology\ Colne Valley Park\Colne_Valley_Datase ts.mdb	Boundaries Data for Park
Encl_ownership	Geodata-base	Polygon	N:\Apps\UserApps\GIS\Ov erlays\Teams\Archaeology\ Colne Valley Park\Colne_Valley_Datase ts.mdb	Additional information: lost farmland by 18th century ownership
Waterway_attributes	Geodata-base	Point	N:\Apps\UserApps\GIS\Ov erlays\Teams\Archaeology\ Colne Valley Park\Colne_Valley_Datase ts.mdb	Additional information: attributes along rivers, taken from OS 1880
Historic_zone_cvp	Geodata-base	Polygon	N:\Apps\UserApps\GIS\Ov erlays\Teams\Archaeology\ Colne Valley Park1 Historic_zone_cvp	Historic landscape zones for the Colne Valley Park

Figure 2: Present-day Historic Landscape Characterisation

Maple Cross

Denham

Iver

Stanwell Moor

Wraysbury

- rural cottage
- rural country house
- Settlement (Historic Core)
- rural farm 1900s
- town terraces 1900s
- town detached 1900s
- town semis 1920s
- town estate 1920s
- farm 1950s
- town semis 1950s
- town estates 1970s
- town modern 1980s
- business park
- Government and Civic areas
- Hospitals Schools, Universities
- Caravan/Mobile Home Park
- Recreation (20/21st Century)
- Golf Courses
- Allotments
- Nursery with Glasshouses
- Watercress Farming
- Airfields
- Assarts
- Enclosure (Pre-18th Century Co-axial)
- Pre-18th Century Sinuous
- Enclosure (Pre18th - 18th Century 'Irregular')
- Enclosure (Pre-18th Century Regular)
- Parliamentary Enclosure (18th -19th Century)
- Parliamentary Encloure (subsequent divisions)
- Enclosure (19th Century)
- Prarie Field
- Pony Paddocks
- Enclosure (20th 21st Century)
- Parkland (16th 19th Centuries)
- Meadow ; Riverine Landscape
- Greens/Commons
- Heaths
- Moor land
- Utitilities
- Landfill (fomer or current)
- Industrial (post 1885)
- Transitional industrial & mineral
- Mineral Extraction
- Unrestored land
- Motorways
- Flooded Restored Mineral Extraction
- Rowing Lake
- Water Reservoir
- Woodland (Ancient Semi Natural)
- Woodland (Secondary 18th - 19th Century)
- Woodland (19/20th Century Plantation)
- Orchard
- Coniferous Woodland

Table 4: Comparison of HLC codes from other Surrey and Hertfordshire.

Broad Type	HLC type	SURREY (relevant codes only)	HERTS (relevant codes only)	BUCKS
Enclosure	Pre 18th century enclosure regular	106 –medium-large regular fields 17-18th century		Er
	Pre 18th century sinuous			Eu
	Enclosure pre 18th century 'co-axial'		Pe	Ec
	Enclosure pre 18th century irregular		If	Ei
	Parliamentary enclosure 18th/19th century	110/111 – regular fields, straight boundaries – parliamentary		Ee
	Parliamentary enclosure subsequent			Es
	Enclosure 19th century	702	Pf	En
	Enclosure prairie			Ep
	Enclosure 20th century	701	Te	Et
	Meadow			Mw
	Pony paddocks			eh
	Unimproved/rough land			Ui
Open land	Heath	704 – moorland		Ht
	Commons and green			Cm
	Common arable			of
Parkland	Parkland 16th – 19th century	902 – 19th century parkland	Ip	Pp
Land use	Assarts			As
	Allotments		Ag	Ag
	Nursery	302 - nurseries		Ng
	Watercress beds			Fw
Woodland	Woodland ancient semi natural		Aw	Wa
	Woodland secondary 18th century			Ws
	Woodland 19th/20th century			Wp
	Woodland coniferous plantation			Wc
	Orchard		At	Wo
Water	Riverine landscape	702 – misc. valley floor		Rl
	Flooded restored mineral extraction	1102? – active/disused gravel workings	Rl	Mf
	Rowing lake			Rr
	20th century lakes			Tl
	Reservoirs	1203 – reservoirs/pumping stations		Rw
Industrial	Mineral extraction	1102? – active/disused gravel workings		Me
	Mineral extraction disused	1102? – active/disused gravel workings		De
	Industrial post 1885	1201 – industrial complexes	In	In
Recreation	Caravan parks/mobile homes			Cc
	recreation	1007 – sports centres	Tl	Tr
	Golf courses			tg
Civic	Hospitals/schools/universities			Hs
	Government/town halls			Gc
	Utilities			Ut
Communications	Motorways	1304 – motorway junctions	Mr	Mr
	airfields			ap
Commercial	Commercial trading/business estates			Cr
Rural settlement	Rural Farms old 1900s			Rf
	Rural farms modern 1950s			Fm
	Country house			Rh

	Country cottages			Rc
Urban settlement	Settlement historic core predating maps	805 – village/hamlet pre 1811		Se
	19th century terraces	804 – common edge/roadside waste settlement		Tt
	19th century detached/isolated			Td
	1920/30s housing	814 – medium estates 1811-1940		Te
	1920/30s semis			Ts
	1940/50s semis	816? – small to medium estates post 1940s		Tf
	1970s housing – council estates	816? – small to medium estates post 1940s		Tc
	1980-2000 modern housing			Tm

Table 5: Attribute Table for CVP project.

Field name	Derivation	Basis
Id no.	Auto	Bucks HLC
Place	Free text	Bucks HLC
Character	observation	Bucks HLC
Morphology	Observation	Bucks HLC
Morphology internal boundaries	Observation	Bucks HLC
Internal boundary change	Observation	Bucks HLC
No. of fields	Observation	Bucks HLC
Place name	Observation	Bucks HLC
Water feature	Observation	Bucks HLC
Clearings	Observation	Bucks HLC
Trees	Observation	Bucks HLC
Buildings	Observation	Bucks HLC
Roads	Observation	Bucks HLC
Aerial photographs	Interpretation	Bucks HLC
OS Landline	Interpretation	Bucks HLC
NG 10k 1983-1996	Interpretation	Added CVP
NG 10k 1972-1990	Interpretation	Added CVP
NG 10k 1969-1970	Interpretation	Added CVP
NG 10k 1964-1970	Interpretation	Added CVP
NG 10k 1955-1962	Interpretation	Bucks HLC
OS 1944-1953	Interpretation	Added CVP
OS 1944-1951	Interpretation	Added CVP
OS 1938	Interpretation	Added CVP
OS 1931-1938	Interpretation	Added CVP
OS 1919-1927	Interpretation	Added CVP
OS 1913-1914	Interpretation	Added CVP
OS 1900 2nd edition	Interpretation	Added CVP
OS 1878-1880 1st edition	Interpretation	Bucks HLC
Enclosure/tithe maps –1799-1850	Interpretation	Added CVP
OS 2" surveyors 1822-1835	Interpretation	Bucks HLC
Bryant Map 1825	Interpretation	Bucks HLC
Jeffreys Map 1790	Interpretation	Bucks HLC
Date of enclosure	Interpretation	Bucks HLC
Relict features	Interpretation	Bucks HLC
Origins of enclosure	Interpretation	Altered for CVP
Date	Interpretation	Altered for CVP
Confidence level	Interpretation	Bucks HLC
notes	Free text	Bucks HLC
Digitiser	Auto	Bucks HLC
Date	Auto	Bucks HLC
Polygon area	Auto	Bucks HLC

Addition to the Bucks CC HLC Methodology for Origins of field in database table. This field attempts to summarise previous characterisation for the area using one of the following codes. This list was based on the Bucks CC HLC methodology but expanded on for the purposes of this project.

Code	Description
AENC	Ancient or old enclosure
ENAF	Enclosed from older fields
RENC	Recreation from enclosure
IENC	Industrial from enclosure
PENC	Parkland from enclosure
SENC	Settlement from enclosure
MENC	Minerals from enclosure
LENC	Land use from enclosure
WENC	Secondary woodland from enclosure
CENC	Communications lines from enclosure
COMM	Commons/heathland
RECH	Reclaimed from commons/heathland
MICH	Minerals from commons/heathland
WACH	Water from commons/heathland
ANCG	Ancient woodland
RENC	Recreation from enclosure
ASST	Assarted from woodland
EWOO	Enclosed from woodland
SWOO	Settled from woodland
SECG	Secondary woodland general
SPLN	Secondary woodland plantation
WAWO	Water from woodland
WCOM	Woodland from commons
PARK	Parkland
EPAR	Enclosure from parkland
IPAR	Industrial from parkland
MPAR	Minerals from parkland
WPAR	Woodland from parkland
RPAR	Recreational from parkland
EMIN	Enclosure from mineals
UMIN	unrestored from minerals
SMIN	Settlement from minerals
WMIN	Woodland from minerals
RMIN	Recreational from minerals
LMIN	Landuse from minerals
RIND	Recreational from industrial
SIND	Settlement from industrial
ESET	Enclosed from settlement
WSET	Woodland from settlement
ISET	Industrial from settlement

Appendix 4: Farmsteads

Table 6: Date of Enclosure and Tithe Awards.

Parish	Date Enclosure	Date Tithe
Iver	1801	-
Denham	-	1845
Gerrards Cross	-	1840
Langley marish	1815	-
Datchett	1833	-
Ditton	1822	-
Wraysbury	1803	-
Horton	1799	-
Rickmansworth	-	1839
Stanwell		1840
Staines		1843
Harmondsworth	1819	-
Harefield	1813	-

Table 7: Attribute table for farmsteads stage.

Broad Section	Field Name	Sample Data	Key	Sources
	Object ID	1		Automatic
Farmstead	Place	Berkyn Manor farm	1	OS master map
	Morphology of farm	DIS	2	OS master map
	Character of farm	WOR	3	Web research
	Size	L	4	OS master map
	Condition	2	5	Map sources
Estate	Character of estate	N/A	6	N/A
	Estate attachment	N/A	7	Observation
Sources	Aerial photographs	Hf	8	Map sources
	OS master map	Hf	8	Map sources
	S (1970's)	Hf	8	Map sources
	S_1 (1950's)	Hf	8	Map sources
	S_12 (1920's)	Hf	8	Map sources
	OS 1900	Hf	8	Map sources
	OS 1st edition	Hf	8	Map sources
	S 1800-50	Hf	8	Map sources
	OS 2" surveyors	Hf	8	Map sources
	Bryants map	Hf	8	Map sources
	Jeffreys map	Hf	8	Map sources
	Historic	Hf	8	Map sources
	Enclosure owner	N/A	9	Map sources
Interpretation	Major on-site relicts	MOA	10	Derived from original HLC
	Origins	ANSE	10	Derived from original HLC
	Period	I	10	Derived from original HLC
	Confidence	CERT	10	Derived from original HLC
	Notes	Former manor house with moat, arable farm. Owner Rayner family.	10	Web research, map sources, where known owners past and present will be included
Administration	Digitiser	R Beckley	11	Derived from original HLC

	Date	15/08/06	11	Derived from original HLC
	Hectare		11	Derived from original HLC
	Shape		11	Derived from original HLC
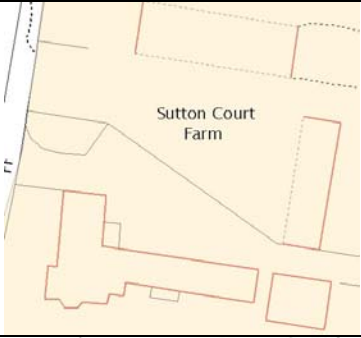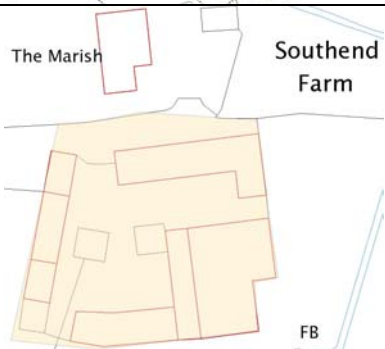
Key to Attribute Table.
Farmsteads
1. Name.
Farm name as listed on master map. Berkyn Manor Farm, Horton.
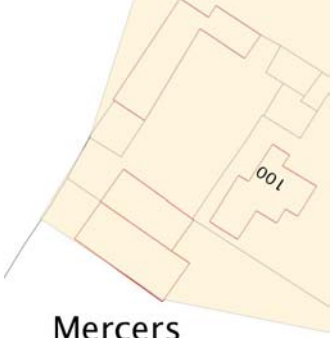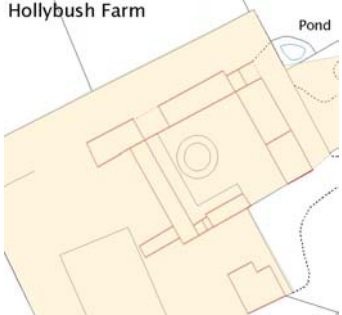
2. Morphology of Farmstead.
In a recent publication, EH outlined some basic character types for farmstead plans that should be used in identifying farmstead types within HLC projects. These character types will be used as a basis for farmstead classification in the Colne Valley Park, although some codes may be require adaptation for the specifics of the region. Character types will be based on the current layout of the farm.

Code	Definition	Number of eg	Example
LIN*[adaptation]	Linear plan. House and farm buildings in a line or single building.	29 in total, 18 surviving farms	Warren Farm
LPL	L shape plan. Possible evolved from linear plan.	17 in total, 11 surviving farms	Sutton Court Farm
DIS	Dispersed. No evidence of planning, possibly where two farms intermix. Common in areas of ancient enclosure.	26 in total 24 surviving	Alderbourne Farm
CLO	Loose courtyard. Detached buildings arranged around a yard, possible signs of gradual growth over time with some pattern to them.	10 in total 8 surviving	The Marish, Southend Farm, FB

Code	Definition	No.	Image
COL	Regular courtyard L plan. Regular courtyard plan more frequently date from post 1750, reflect ideas on efficient working practices and stock management (more frequent therefore on pastoral farms). L shape commonly on small-medium farms.	11 total 10 surviving	Mercers Farm
COU	Regular courtyard U plans. U shape commonly on small-medium farms.	22 in total, 15 survive	Watergate Farm
COR	Full regular courtyard. Enclosed square plan	12 total, 7 survive	Hollybush Farm Pond

3. Character

This assesses the current character and purpose of the farmstead. The typology used here is based in part on EH management options for farmsteads and buildings and in part on observations from the CVP project.

Function	Code	Definition	No. of eg.
Agricultural	WOR	Working farm. Continued usage of farm for agricultural purposes with an associated estate.	55, 21 surviving
	CON	Conversion. Converted use of farm to other agricultural purposes such as stables, kennels etc.	15
Adaptive	RES	Residential. Converted farmhouse or farm buildings now used for residential and no longer associated with a working estate.	43
	BUS	Business. Diversification of farm into office complex or commercial business.	16

4. Size

This is applicable to both the farmstead and the farm estate and simply assesses the size of the polygon. Estate size parameters may change as this phase progresses. Based on Bucks HLC method.

Code	Definition	No. of eg.
S	Farmsteads: farms of 1-5 individual buildings Estate: estate size less than 20 ha	33
M	Farmsteads: farms of 5-10 individual buildings	32

	Estate: estate size 20-50 ha	
L	Farmsteads: farms of 10+ individual buildings Estates: estate size 50+ha	30

5. Condition
This will be used to assess changes to farmsteads over time and will be graded according to the stability of the farm unit.

Code	Definition	No. of eg.
0	No change to farm unit	34
1	Addition of 1-5 buildings	26
2	Addition of over 5 buildings	26
3	Loss of 1-5 buildings	6
4	Loss of over 5 buildings	3
5	Complete loss	34

Estates
Base mapping began with the field systems from the enclosure awards and were then divided from then on to accommodate later change.

6. Character of landscape.
This classifies the primary function of the estate. This field relates in particular to the following two fields examining the extent of the estate at the time of the earliest dates available and it may also be useful to include a further field assessing the original character of the estate as noted on enclosure and tithe maps.

Code	Definition	No. of eg.
ARB	Arable farming	1729.5
PAD	Pasture farming	2605.4
NA	Non agricultural land	526.61

7. Sources list.
For the relevant time-slices for this project several map sources have been combined in order to allow for complete coverage of the entire CVP area.

Source	Date range
Historic Maps – Jeffreys, Bryant, Rocque	1770-1830
Tithe and Enclosure maps	1799-1845
OS surveyors 2"	1822-35
OS 1st edition	1876-86
OS 2nd edition	1898-1900
1920/30s mapping	1913-1914* EH supplied 1919-1927 1931-1938 1932-1938 *EH supplied
1950/60s mapping	1955-1962
1970/80s mapping	1972-1980 1983-1996
Modern/21st century	Aerial photographs 1999 Aerial Photographs 2003 Master map 2005

8. Ownership at Enclosure.
This field lists code for fields of principal known ownership taken from enclosure and tithe awards. It was used as a quick reference guide for historic ownership in the Colne Valley Park and can be used in conjunction with the additional dataset on encl_ownership. Fields left blank indicate no known ownership or small holdings too insignificant for this survey.
Codes Used for Enclosure Ownership

Broad type	HLC code	Ownership
General	Rd	Roads
	Rv	Rivers
	Cm	Commons/moorland
	Ho	Housing
	Ti	Tithes

	op	Overseers of the poor
Ditton/datchet	Ab	Arthur bold
	Tg	Thomas green
	Jg	John Goodwin
	Lm	Lord montagu
	Hi	H isherwood
Horton	Tw	Thomas Williams
	Lh	Lazarus Holderness
	Jw	John Whitaker
Wraysbury	Ac	Ashby and chandler
	Tr	Trustees of will gill
	Wg	Will gill
	Md	Marquis of Devonshire
	Jh	J s Harcourt
	Hp	I h Harcourt powell
	Vi	The vicar
	Dw	Dean and canons of windsor
	Wt	William taylor
	Tb	Thomas buckland
Langley Marish	Rb	Robert Harvey bart
	Js	John Sullivan
	Rs	Robert style
Denham	Bw	Benjamin way
	Aw	Mary anne way
	Mb	M e brereton
	Br	Roland briggs
	Sh	St Thomas' hospital
	Rg	Reverend glebe
	Gb	Lord George Boston
	Dr	Mortimer Drummond
	Iv	Edward and James ives
	th	Thomas hamlet
Harefield (Hillingdon)	Cb	C b bart
	Ba	R banister
	Sp	R g spelding
	Gc	Major general cook
	Ja	Joseph Ashby
	Dh	Daniel hill
	Wi	D wilkensterry
	Nn	Nathaniel Newdegate
	Gi	Gibbons bart
	Eh	Edmund hill
	Cn	Charles Newdegate
	Jp	Jane parker widow
	Tc	Thomas Coates bane
Rickmansworth	Jf	Joseph fellows
	Kg	Kings college, cambs
	Tk	Thomas kidston
	Ht	William hunt
	Ps	Trustees of peter shellevan
	we	Marquis of Westminster
Staines	as	Thomas Ashby
	Cf	Charles finch
	hg	Brook Hamilton gill
Stanwell	gi	Gibbons bart
	Eh	Edmund hill
Iver	ct	Christopher tower
	Rh	Richard higginson
	Iv	Lord sperling, Iver manor

Interpretation.

This information will for the most part be taken directly from the original HLC and only changed where new information may warrant. This section includes the following fields;

9. Major Relict features.
Should the farm or field contain any relict features or landscape they will be included in this section, such examples might include the following;

Code	Definition
MOA	Moat
CAS	Castle/manor
RID	Ridge and furrow
REL	Religious house/ priory

10. Origins of:
These codes will be taken from the original bucks HLC project and are unlikely to change.

11. Period:
Farms and fields will be classified according to the following table;

Code	Definition
I	Jeffreys maps – pre 18th Century
Ia	Tithe, enclosure and OS 2" maps - 1800-1850
Ii	OS 1st and 2nd editions - 1870-1900
Iia	1913-1938
Iii	1944-1962
Iiia	1972-1983
iV	Modern farmland

12. Confidence:
Level of certainty concerning information used in the table.

13. Notes:
Free text field to allow non-quantifiable information.

14. Administration
The final section will include spatial information automatically generated by ArcView as well as fields for digitiser's name and date of digitisation.

Additional Datasets

Enclosure Ownership

This dataset was taken from the original HLC and re-digitised in order to provide basic mapping of field systems lost since the time of enclosure. The purpose of this was to provide a more holistic view of the landscape at the time of enclosure. It is comparable to the field listing enclosure ownership in the Farmsteads dataset

Manors

This dataset provides a rapid survey of the manors, country houses and lodges listed within the Colne Valley Park. It is designed to complement the Farmsteads data by providing the location of the main country seats for the Park as well as a short history of their ownership.

Field Name	Sample Data	Description
Name	Newlands Park	Name of structure
Survival	Y	Whether house survives
Owners	1770, Sir Henry Gott	Lists previous owners of note
Notes	1910-1921 H Harben	Lists last known owner of House

Appendix 5: Boundary Mapping.

Table 8: Attribute Table for boundary mapping

Broad Type	Field Name	Sample data	Information
Administration	ID		6
Boundary	Type	HED	1
	Morphology	Str	2
Survival	survival	5	3
	End period	Iii	4
Source	OS landline	N	5
	OS 1970s	Y	5
	OS 1950s	Y	5
	OS 1920s	Y	5
	0S 1900s	Y	5
	1850s	Y	5
Administration	Digitiser	R Beckley	6
	Date	03/10/06	6

Key to Attribute Table
1. Type
This field will classify individual boundaries according to their current characteristics.

Type	Definition
HED	Hedgerow, internal boundary not bordering a road
TRE	Predominately tree lined boundary
FEN	Fence - modern fencing either of barbed wire or wood
ROA	Roadside hedged boundary
PAR	Partial boundary- boundary that peters out part way through a field

2. Boundary morphology
This will be based on Bucks HLC methodology.

Code	Definition
Str	Straight
Cur	Curving
Sin	Semi-straight
Wav	Wavy

3. Survival
This is similar to the end period column however this field is concerned more with the length of time a particular boundary was in use. This will not be used for modern field boundaries but rather only those that date to the earliest available map sources.

CODE	DEFINITION
1	Pre-1850 only
2	Pre-1850-1900
3	Pre-1850-1920s
4	Pre-185o-1950s
5	Pre-1850-1970s
6	Pre-1850-modern, still surviving
0	Modern field boundaries

4. End period
This field relates to the point at which the field boundary no longer exists.

Broad name	Code	List of sources
Modern	Iii a	OS mastermap
1970s	Iii	OS 1983 ed
		OS 1972 ed
1950s	Ii a	1955-1962
1920s	Ii	1913-1914
		1914-1926 *EH supplied
		1919-1927
		1920-1926 * EH supplied
		1931-1938
		1932-1938 *EH supplied

		1934-1938 * EH supplied
1900s	I a	OS 2nd edition 1898-1900 OS 1ST edition 1876-86
1850s	I	OS surveyors 1822-35 Enclosure maps c. 1830 Tithe maps c. 1800

5. Sources list

Field	Source	Date range
1850s	OS surveyors 2"	1822-35
	Tithe Maps	1836
	Enclosure Awards & maps	Pre 1845
1900	OS 1st edition	1876-86
	OS 2nd edition	1898-1900
1920s	1920/30s mapping	1914-1926 *EH supplied 1920-1926 * EH supplied 1931-1938 1934-1938 * EH supplied
1950s	1950/60s mapping	1955-1962
1970s	1970/80s mapping	1972-1980 1983-1996
Modern	Modern	Aerial photographs 1999 Aerial Photographs 2003 Master map 2005

6. Administration

The final section will include spatial information automatically generated by ArcView as well as fields for digitiser's name and date of digitisation.

Figure 3: Field boundary loss and survival in the Colne Valley Park

Maple Cross

Denham

Iver

Stanwell Moor

Wraysbury

	Modern boundaries
	Pre 1850s-1880s
	Pre1850-1900s
	Pre 1850-1920s
	Pre 1850-1950s
	Pre 1850-1970s
	Pre 1850-Modern
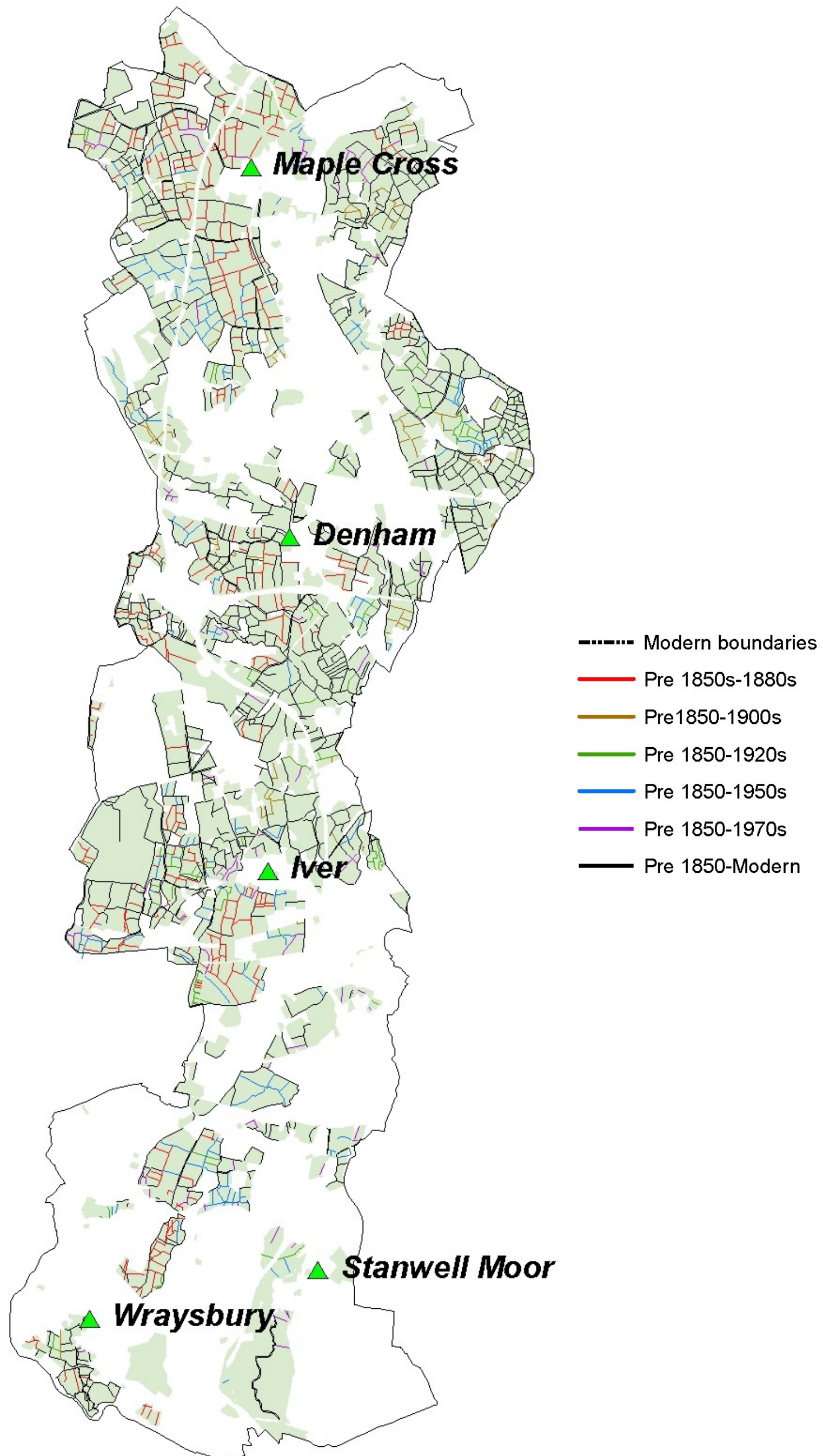
Appendix 6: Routes and watercourses.

Table 9: Attribute table for route ways.

Broad type	Field name	Sample data	Information
Route way	Name	Hill End rd	1
	Type	MRD	2
	Planned/unplanned	UPL	3
	Morphology	Con	4
	Change	1	5
	Scale	LOC	6
	Butting against	Y	7
	Crosses	N	7
	Crossed by	N	7
	Truncates	N	7
	Border	HED	8
Sources	OS landline	mrd	9
	1970s	mrd	9
	1950s	mrd	9
	1920s	mrd	9
	OS 2nd edition	mrd	9
	OS1st edition	mrd	9
	Enclosure/tithes	mrd	9
	OS surveyors	mrd	9
	Historic Maps	mrd	9
	Period	iv	10
Administration	Notes		11
	Confidence	CERT	12
	Digitiser	R Beckley	12
	Date	28/09/06	12

Key to Attribute Table

1. Name
This will be for any name listed on the master map lines layer and will include ancient names and modern numerical names. If no name is listed then will be left blank.

2. Type
This field will refer to the type of route way according to the following table. Some of these terms may not be applicable once this phase has been examined in greater detail due either to lack of evidence or because they may no longer be present within the CVP.

Broad type	Scale	Code	Definition	Chronology
Dirt tracks, primarily pedestrian	RECREATION	FOT	Footpath – those marked on OS 1st edition and master map lines as footpath.	19th century
	COLLECTOR	ROW	Rights of Way – longer footpaths and trails that cross parish and county lines	variable
	COLLECTOR	BRI	Bridle way – those marked on OS 1st edition as pathway but which may have been renamed on master map lines with the more recent term of bridleway.	Post-medieval 18th-19th century?
	COLLECTOR	TRA	Track way– wider footpaths, designed for access	19th century
	RECREATION	TRA	Wider paths noted as tracks but for recreation	19th/20th century
	LOCAL	ACC	Access routes - road built originally for access to house or field, whether later conversion to public road took place or not.	Variable, dependent, on destination

Historic roads, vehicular	ARTERIAL	RRD	Roman road - sections of road dating to roman times, they are characterised by straight sections deviating/curving for geological/natural or ancient settlement features.	Approx. 509BC-330AD
	COLLECTOR	MRD	Medieval road – defined as medieval roads that are not holloways. Characteristically unplanned and winding.	Medieval/pre-dating earliest maps
	LOCAL	MLD	Medieval local roads – short stretches of roads/tracks connecting communities	Medieval/pre-dating earliest maps
18th/19th Century roads, vehicular	COLLECTOR	PRD	Parliamentary enclosure road – with the re-drawing of field boundaries at the time of parliamentary enclosure, new roads also had to be created to allow for access and the simplified division of field systems. These roads should be fairly easy to date as they are characterised by ruler straight edges bordering parliamentary enclosure systems.	19th century
	ARTERIAL	TRD	Toll road/turnpikes – toll roads were privately owned sections of road for which road users had to pay a fee. The rights to create a toll road were given by Parliament to private groups or turnpike trusts. Sections were usually little more than tracks and dirt lanes before privatisation and it was the responsibility of the trustees to improve the road and then maintain it.	1750-1880
Modern roads, vehicular	COLLECTOR	BRD	Modern B road – the majority of B roads will be re-classified from older road systems, this category will only apply to newly created B roads and may not be used at all	20th century
	ARTERIAL	ARD	Modern A road – again the majority of A roads originate from older systems, however, there is a higher incidence of newly built A roads in order to meet the demands of modern settlement and transport.	20th century
	COLLECTOR	BYP	Bypass road – purpose built roads that avoid major town centres.	20th century
	ARTERIAL	MOT	Motorway – these are purpose built, cutting across huge areas of older land, occasionally they replace older road systems.	20th century
Waterway, boats	ARTERIAL	CAP	Purpose built canal – purpose built canals originate from the earliest phase of the industrial revolution. They are characterised by ruler straight stretches of waterway, earlier phases will commonly be bordered by a towpath while later, more recent sections will not.	18th/9th century
	ARTERIAL	RVR	River – natural river courses	N/A
	LOCAL/ COLLECTOR	RVM	River, Modern – modern alterations to river courses.	N/A
	LOCAL	LEA	Leats – purpose built drainage to power mills, feed fisheries etc	Late 19th/early 20th century
	COLLECTOR	DIT	Ditches: used as county/ward boundaries	N/A
Railway, trains	ARTERIAL	RAH	Historic railway/tramway – early railway lines that are still in use today,	19th century
	COLLECTOR	RAD	Railway disused – sections of railway that are no longer in use.	Variable

| Lost route, any | N/A | LRD | Lost route way, any routes/section of route lost since OS 1st edition, | 20th century loss |
| | | LWT | Lost water way – any lost water way predominately sections destroyed to make way for modern transport | 20th century loss |

Broad Type: dirt tracks.

This will probably be one of the harder phases to do as it will require a high level of detail and may be impractical for this project in the time allowed, also tracks will be harder to date and may frequently change course or be truncated in some way.

This will primarily map all historic paths and track ways and then consider more modern additions if time allows. Historic paths will be determined on the basis of their appearance on OS 1st edition map and their continued use until the present day. Minor changes in alignment and direction will be noted but will not affect the overall cohesion of a particular pathway.

The OS 1st edition is taken as the first comparable map source with the OS mastermap series.

Access: roads marked on enclosure maps as private or those that are obviously for access to buildings and/or destinations away from the main road.

Broad Type: Historic roads.

This includes all roads that are considered metalled on the master map lines regardless of their original construction.

Roman roads: the sections of possible roman roads in the CVP area now comprise the A40 or Oxford road. Broad sections can be mapped for this type.

Holloway: this category might be difficult to discern and may be reliant upon place name evidence. Evidence for survival may be rare.

Medieval roads: roads that predate the available map sources including what information can be taken from Jeffreys and Bryants maps.

Medieval local roads: this is similar to medieval roads in date and nature but are simply smaller, more marginal stretches of road, often marked on early historic maps as lanes or unenclosed roads

Broad Type: 18th/19th century roads.

Parliamentary enclosure roads: this category will most likely be determined in relation to parliamentary enclosure, initial mapping can be carried out using enclosure awards and maps alongside the farmsteads and estates mapping phase. This type may be occur only occasionally within the boundaries of the Park.

Toll roads/turnpike systems: this category should be relatively simple to map, associated buildings and place names will also give an indication as to the length of individual toll roads. It is unknown at this point the extent of the toll road network within the Park.

Broad Type: Modern roads.

Modern B roads: this category may be disregarded in the final methodology as the majority originate as older routes. Any sections falling under this category may relate only to modern roads planned in the 20th century or those roads that have no known origin. It may be easier to combine this category with modern A roads.

Modern A roads: this will be used solely for those sections of the road network that were built in the 20th century. This category should be easy to map as they will cut across older landscapes.

Bypass roads: again it may be better for this project to combine this category with modern A and B roads as although they will be relatively easy to map they are not the focus of this particular project.

Motorways: motorways have already been mapped under the original HLC due to their significant impact on the landscape. The data from the original HLC may therefore be imported into this phase.

Lost route ways: this is a general term used for any pre 20th century route way of any level that has been lost. This will only apply to roads that appear on tithe, enclosure and historic maps as well as the OS 2" edition and the OS 6" 1st edition and which subsequently are eradicated in the 20th century.

Broad Type: Waterways.

Purpose-built canals: the majority of the canal system within the Park is likely to fall under this category. The main canals are sections of the Grand Union canal and the Slough branch of the Grand Union. Dates for both this type and the previous one should be relatively easy as documentation on canal systems are fairly widespread. Ancillary buildings for canals include boat houses for barges, it may also be possible to link a network of pubs built to service the barge men along the route. This may be possible through pub names as well as the presence of stables for tow horses, this however may be beyond the scope of this project.

Rivers: Natural river courses in the project area.

Rivers, modern: man-made alterations to river courses for a variety of reasons including diversions for the creation of lakes/reservoirs, straightening etc.

Leats: the majority of leats were created for a purpose, whether to divert and concentrate power from the main rivers to mills, to feed fisheries or for recreational/ornamental purposes.
Ditches: the majority of ditches recorded here will be the county ditches due to their historical significance.
Lost watercourses: this will refer to rivers and ditches that have been destroyed or altered. The majority of these will be lost in the 20th century due to construction of motorways, mineral extraction and occasionally urbanisation.

Broad types: railways.
Historic railways: this category refers to original sections of railways that are still in use today. This will include areas that have since been improved but where the original fabric remains.
Modern railways: this category will include 20th century changes to the railway system.
Railways disused: there are a small number of sections of older railways within the Park that are no longer used. Where possible it is hoped to include information about possible usage of sections – i.e. whether they were built solely for industrial use or for passenger transport. Like canal systems, railways should be relatively easy to date as the majority of them were built in the late 19th/ early 20th centuries.

3. Planned (PLA)/unplanned (UPL)
This field is taken from the draft methodology from the CHLC and is delineated by those planned roads that were deliberately created such as roman roads, toll roads and modern motorways and those more ancient route ways that came about through consistent use over time and may apply more to early canal conversions from rivers and holloways. This may be difficult to discern in some cases due to the map sources available as well as time constraints.

4. Morphology
This will refer to the general structure of each section of road, as routes will be mapped in sections it will therefore be possible to assign morphologies on a more detailed basis along an broader stretch of the route way. This will allow for changes in morphology due to outside factors such as geography and older structures.

Code	Definition
Win	Winding
Str	Straight
Con	contouring

5. Change
This is relevant to those route ways that have undergone change over the period in question due to outside factors such as changes in transportation and consumer needs, this may include such examples as conversion to toll road for a period of time, conversion back to a public road and then modernisation into a larger A road. This is based on the methodology laid out by CHLC.

Code	Definition
0	No change
1	1 phase of change, including widening and metalling.
2	2 phases of change, including deviation and smoothing of route.
3	3 or more phases of change

6. Scale
Changes in road names will be used to separate sections of a road as well as morphology.
This designed with primarily roads in mind although footpaths and tracks fit in quite well.

Scale	Description	Notes
Recreation	Footpaths and tracks where the sole purpose is recreational, does not include access tracks	Use: pedestrian, horse-riding, cycling. Length: any length, often truncated and realigned, most obvious in parkland and forests. Purpose: aesthetic routeways – footpaths and tracks designed to be scenic in nature can date from 18th century onwards within parkland. Relationship: ephemeral in nature, often historic rights of way, not necessarily surfaced in any way. Destination: circular if designed as recreation, especially if modern. Older footpaths would have been to link areas

Local	defined as small scale roads, primarily for access to farms, businesses, residential. On Jeffreys and Bryants map marked as lanes. Examples: tracks, access ways, used to join collector roads and arterial.	Speed limit: any Length: covers short distances before being truncated or altered in some way (e.g. widening), may be winding in nature. Purpose: social significance as well as economic (e.g. links between estate house and estate farms?); economic – serves as links between more important roads, perhaps first appearing as a kind of shortcut. Relationship: comes to abrupt halt as it reaches another route, usually only serves to join two roads at most. Destination: serves to connect over short distances, joining two communities, also access within communities. Limitations: strictly limited to connections between parish communities, may be in part ruled by topography and significant landscape features
Collector	designed to distribute traffic throughout the countryside, serves as intermediary between arterial and local roads. On Jeffreys and Bryant maps marked as cross roads or driving roads. Examples: parliamentary roads, longer medieval roads, bypass roads.	Speed limit: 30-60 Length: medium distances, greater chance of realignment and straightening. Purpose: generally engineered route ways – can be planned or unplanned but primary purpose is to convey traffic from local to arterial. Relationship: may cross one or more local routes but eventually truncated by arterial routes Destination: may pass several communities, may even link several arterial routes. Limitations: may cross parishes and even county boundary lines, extent and direction may be affected by topography and landscape features
Arterial	cut across large sections of countryside, primarily modern & overlay other road levels. Often serve to link several major towns across several counties. May also have service stations and/or industrial belt bordering it.	Speed limit: 60-70 Length: long and uninterrupted, crosses county borders Purpose: serves to connect several towns with the greatest level of efficiency. Almost always engineered routes. Relationship: cuts across other roads and landscape, often large multi lane highways Destination: will link several major towns over long distances, may converge with other major routes Limitations: none, will cross most landscape features, will serve as a stopping point for other lesser roads.

7. Relationships

BUTTING
Where lesser roads butt up against larger scale ones, possibly as a result of truncation, this is more common on local roads with only one destination.

CROSSES
Where a road of any scale crosses another, most commonly a major road will cross lesser ones

CROSSED BY
When a road is crossed by another, more important, one. This would be shown on a map as one route overlying another.

TRUNCATES
When a more recent road breaks up an older road of any scale. Roads that come to their natural end as they join another will not be regarded as truncated.

8. Borders.

This field will be used to describe any relevant features that border a given route way. This can sometimes be used in order to better define a route way. This section will only be filled in according to what can be noted on the map sources. A list of possible options includes the following, however this may be amended once this phase begins;

Code	Description
VER	Grass verges
HED	Hedgerows
FEN	Fenced
OPN	Open fields
SNK	Sunken road
SID	Railway sidings

TOW	Tow path
BUL	Built environment

9. Sources

The sources list will follow the simplified version as laid out for the earlier phases. This will include the following, some of which may not be relevant;

Source	Date range
OS surveyors 2"	1822-35
Tithe Maps	1836
Enclosure Awards & maps	Pre 1845
OS 1st edition	1876-86
OS 2nd edition	1898-1900
1920/30s mapping	1914-1926 *EH supplied 1931-1938 1934-1938 * EH supplied
1950/60s mapping	1955-1962
1970/80s mapping	1972-1980 1983-1996
Modern	Aerial photographs 1999 Aerial Photographs 2003 Master map 2005

10. Period

This will be based on the approximate date of the route way where it is possible to discern a period, there will be the generic term of pre map sources for those route ways that cannot be easily dated to a particular period.

Code	Definition
I	Pre map sources
Ii	Roman
Iii	Medieval
IV	18th century
V	19th century
Vi	20th century

11. Notes

This section will be for any subsidiary information that does not fall under any other category such as ancillary buildings on previous maps that no longer survive. Another possibility for this will be if evidence of a particular use for a given route way might be discerned, if, for example, a particular stretch of railway or canal was used specifically to transport large quantities of minerals.

12. Administration

Aspects included in this section will be administrative details such as confidence, digitiser and the date.

Additional Dataset

Waterway Attributes

Field Name	Sample Data	Information
EXTANT	Y	1
TYPE	M	2
NAME	Hythe End Paper Mill	3

This dataset was a rapid survey of the types of alterations occurring along the course of the river. It was created as a support to the Routeways data and in particular the water channels. It was carried out by assessing the presence of a given structure along the course of the water channel on the OS 1st edition map (1880) and then whether a structure in the same location is given on the current OS Master Map data. This dataset is not meant as a comprehensive survey of river adaptation and cannot necessarily indicate that the same structure has survived since 1880 but only that a structure has continued in that location. The basis for this dataset are structures marked on the 1880 map and therefore do not include modern additions.

Key To Attribute Table
   1. *Extant.*
Entry for this field is Yes or No dependant on whether it is still marked on current maps

   2. *Type*
Type of attribute recorded, the following is a list of codes.

HLC Code	Definition	Description	Number
A	Aqueduct	Modern water course built for a specific purpose either as a way for canal to cross road, rail or water or to transport water from reservoirs	2
B	Bridge	Location of structure crossing water. There is a strong indication that a given location would be in use for a extended period of time with the bridge being replaced by newer structures.	16 15 extant
F	Ford	Crossing place where a river and road meet. Indicative of a shallow point in the river.	29 4 extant
FB	Foot bridge	Bridge crossing river or leat designed for pedestrian travel only.	152 17 extant
FF	Fish farm	Location of farm specifically for fishing	3 2 extant
FP	Fish pond	Ancient fish pond	1
L	Lock	Lock along the Grand Union Canal allowing barges to descend the canal	10
M	Mill	Industrial factory most commonly powered by the river used to produce a number of materials in the Colne Valley.	20 14 extant
S	Sluice	A section of a water channel controlled by either a wooden or metal gate, used to control water levels and limit flooding	17 6 extant
W	Weir	There are a number of uses for a weir, in the Colne Valley Park they were likely used to control the power of the river in order to fuel mills, but they can also be used alongside locks in order to make rivers navigable as well as in conjunction with fish farms.	66 57 extant

   3. *Name*
This field only applies to bridges and mills.

Appendix 7: Full Historic Landscape Characterisation

HLT Example Layout:

Broad Landscape Definition

Description of Landscape Type   **HLT code**

Total Area in Hectare
Percentage of total Colne Valley Park.

Description: short summary of HLT
Period: General period attributed to HLT
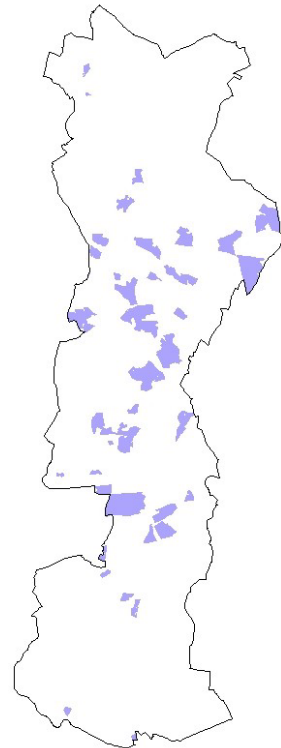
Assarts   as

36.35ha
0.30%

Description: defined as the enclosure and clearance of land for private farmland. Characterised by irregular enclosure interspersed by woodland. Rare in Colne Valley Park and only found in Buckinghamshire.

Period: Medieval – 17th century
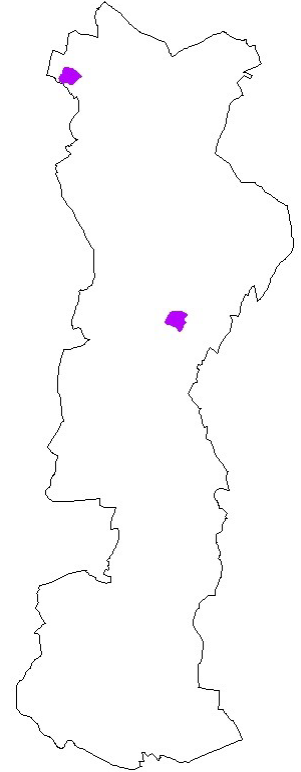
Pre 18th century enclosure regular   er

200.86ha
1.72%

Description: field systems that predate the enclosure awards and therefore the earliest reliable map source, but which follow regular patterns – indicative of early planned enclosure but with no supporting documentation. Comparatively rare, largest areas in Wraysbury.

Period: Medieval-17th century

Pre 18th century enclosure irregular   ei

733.03ha
6.26%

Description: similar to previous characterisation but field systems follow a more irregular pattern. Originates from piece meal enclosure following private agreements between landowners. Common in central zone of Park.

Period: Medieval-17th century
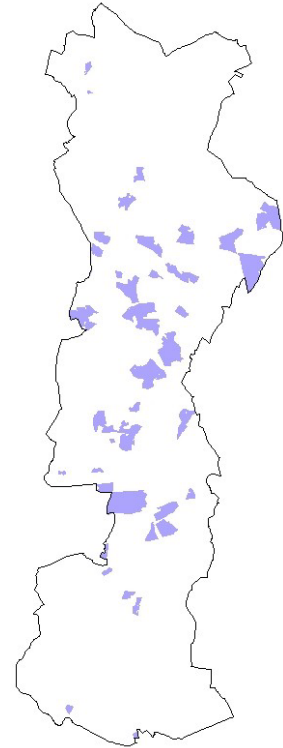
Pre 18th century enclosure co-axial   ec

51.12ha
0.44%

Description: Term used to define extensive field systems that follow the same orientation. Frequently sinuous in morphology and bordered by ancient lanes with internal borders of species rich hedgerows. Consists of small elongated individual fields. Very rare.

Period: Medieval/Pre-Medieval
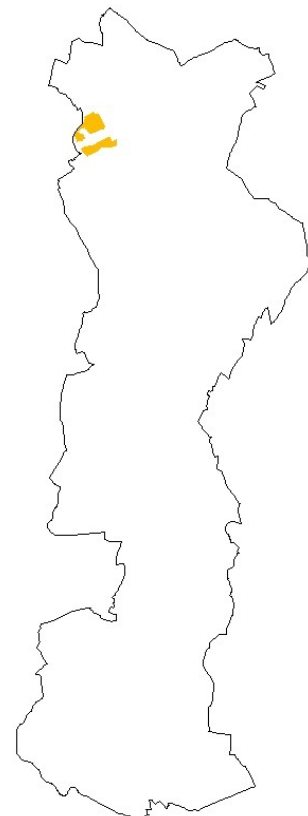
Enclosed Land

Pre 18th century sinuous   eu

583.38ha
4.98%

Description: characteristic of more ancient field systems, often follow the topology of the landscape such as valley slopes. Rare, found only in Buckinghamshire.

Period: Ancient-17th century
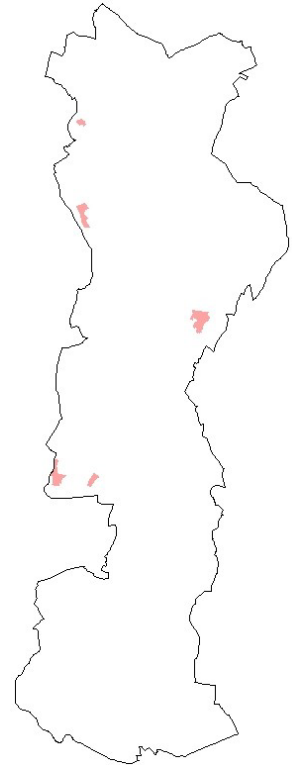
Parliamentary Enclosure   ee

5.13ha
0.05%

Description: Ruler straight field systems laid out by enclosure or tithe awards in the first half of the 19th century. Supported by documentary evidence in the form of parish map and award detailing ownership on field by field basis. Very rare.

Period: early 19th century
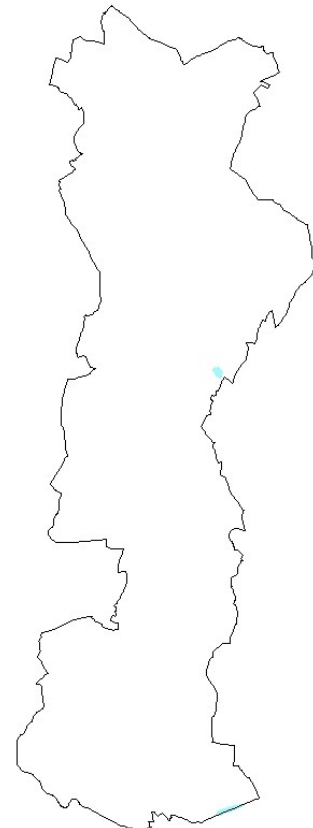
Enclosed Land

Parliamentary Enclosure subsequent   es

132.04ha
1.13%

Description: Similar to previous characterisation type but applicable to areas subdivided following allotment by enclosure award either among families or through resale. Some large areas in Buckinghamshire, particularly around Iver.

Period: mid 19th century
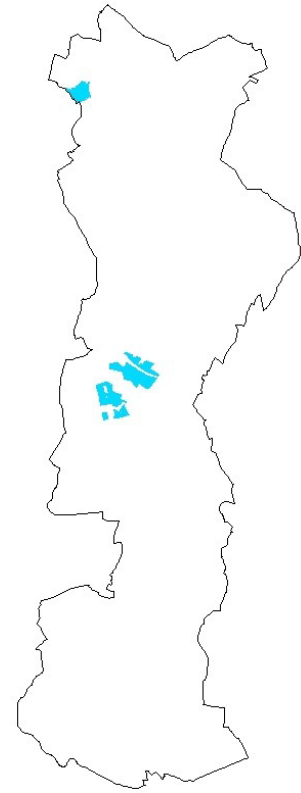
19th century enclosure   en

651.36ha
5.57%

Description: Similar to parliamentary enclosure but less exact in morphology, frequently encloses open and waste-land ignored during parliamentary enclosure. Fairly common predominately in Rickmansworth and Hillingdon borough.

Period: 19th century
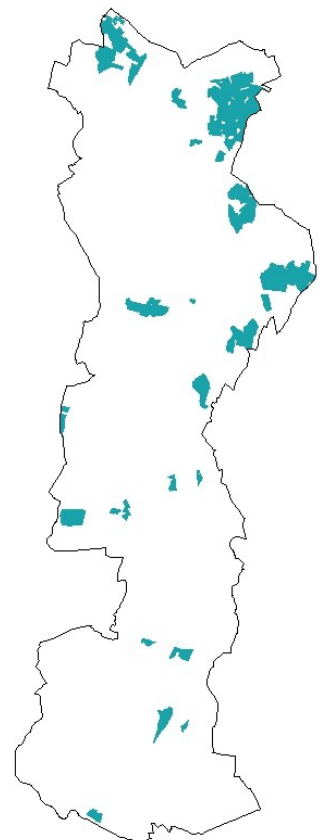
Enclosure prairie   ep

672.41ha
5.75%

Description: Modern expanses of open fields. Frequently used for arable farming only.   Brought about mostly by technological improvements to farming during the World Wars when hedgerows were seen as a barrier to productivity. Predominant in Rickmansworth.

Period: 19th-20th century
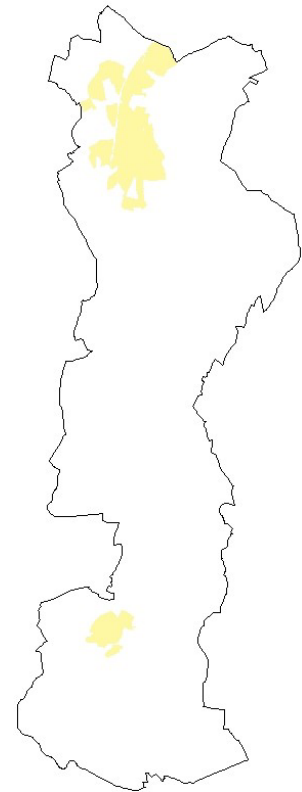
20th century Enclosure   et

1314.46ha
11.23%

Description: Vary in morphology but most frequently regular field systems, can often incorporate portions of earlier field systems. Frequent throughout the entire Park. Due to the nature of this project, it is often difficult to determine land use for agricultural purposes and land use for private purposes, and therefore 20th century enclosures may incorporate some areas of horse paddocks.

Period: 20th century
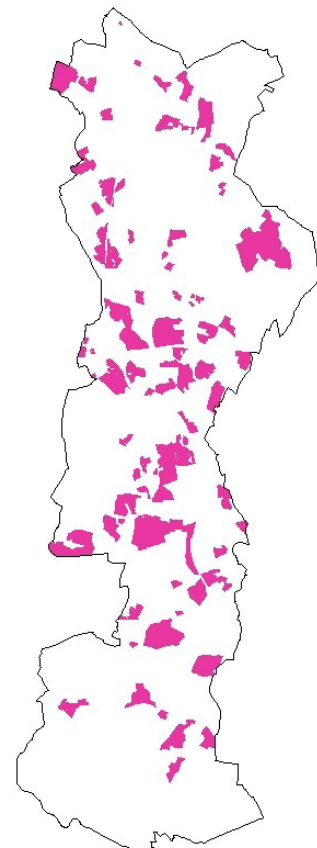
Meadows   mw

146.91ha
1.26%

Description: Frequently sinuous in morphology, meadowland is located adjacent to river channels. In use from at least the 11th century onwards for the cultivation of hay. Predominately found along the borders of the river Misbourne.

Period: Medieval-17th century
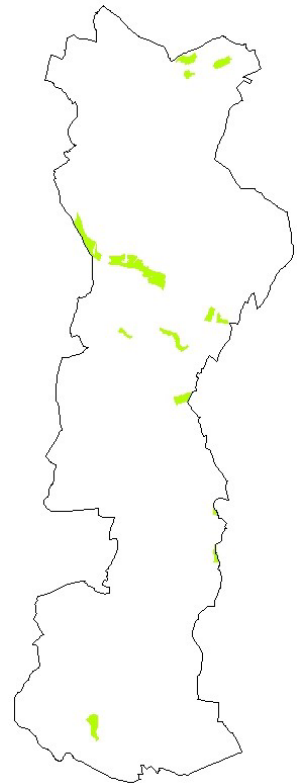
Horse Paddocks   eh

15.71ha
0.13%

Description: Privately used areas of land for equine purposes. Often subdivisions of older field systems with the outer hedgerow boundaries preserved but with internal fencepost boundaries. These field systems are characterised as areas of small regular enclosed fields. This type is poorly represented in the Colne Valley Park due to difficulties in ascertaining land usage.

Period: 20th century

Heaths   ht

18.01ha
0.15%

Description: Heath land areas are defined by a particular biodiversity consisting of low lying shrubland rather than trees or grasses. They are formed through persistent grazing of an area and are a humanly constructed habitat. They are often formed in areas of poor soils such as sand and gravel ill adapted for farming purposes. There is only one area in the Colne Valley Park at Black Park Heath.

Period: Ancient.

Commons   cm

17.71ha
0.15%

Description: Common land historically used for rough grazing, collecting fuel and certain industries often also includes tithe land. Common land is defined by Defra as land owned by one person but over which others hold rights of use for a number of purposes including grazing and the cutting of bracken. Varies in form and morphology. This type is rare in the Colne Valley Park.

Period: Ancient
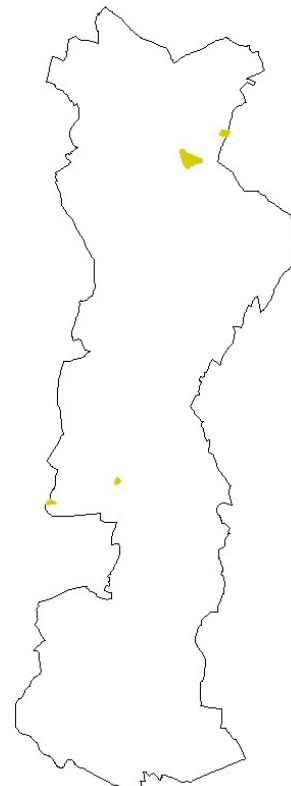
Moor land   ml

146.74ha
1.25%

Description: Moor land characteristically lies in areas of acidic soils, moors differ from heaths in that they tend to be colder and wetter which therefore produces a different mix of associated fauna. The only surviving moor in the Colne Valley Park is Staines Moor.

Period: ancient
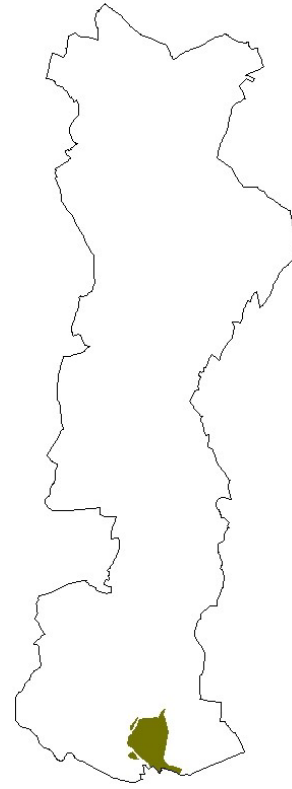
Unrestored land   un

195.47ha
1.67%

Description: Unrestored land applies to areas of former mineral sites that have not undergone significant or recognisable reclamation for any known purpose. Characteristically defined by modern scrubland and non agricultural areas, occasionally used on informal basis for recreational habits such as dog walking.

Period: 20th century
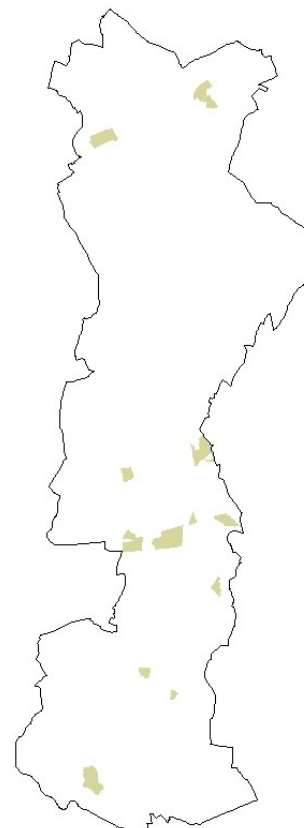
Ancient Woodland   wa

293.97ha
2.51%

Description: Species rich woodland frequently predating map sources. Extent and form of these woodlands have remained unchanged until 20th century when some shrinking of borders has occurred. Predominant in Buckinghamshire but Bayhurst Wood in Hillingdon a significant ancient woodland. Fairly common. Information for this confirmed by English Heritage Ancient Woodlands list.

Period: Medieval-17th century
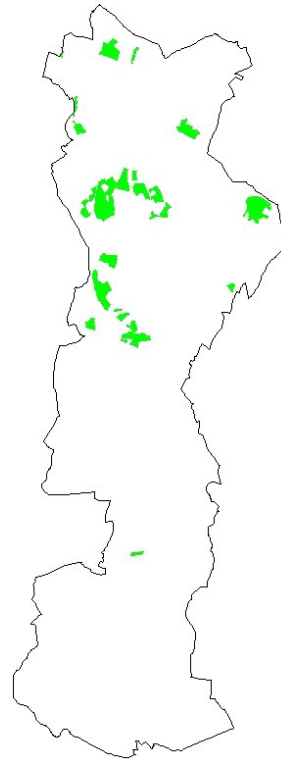
Woodland 18th – 19th century   ws

215.89ha
1.84%

Description: Characteristic of areas where woodland has regenerated that had previously been used for other purposes. Predominately in Buckinghamshire. They commonly appear first on enclosure and tithe awards.

Period: 18th – 20th century.
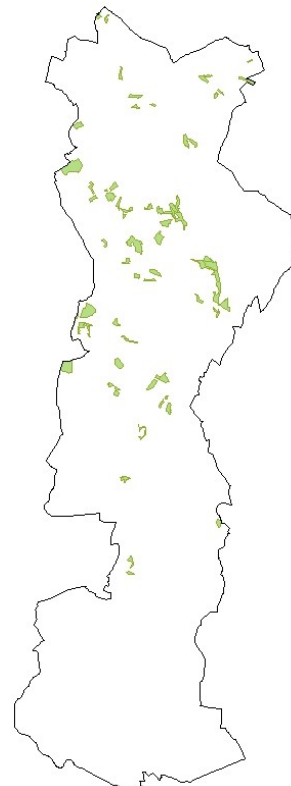
Orchard   wo

46.68ha
0.40%

Description: Deliberately planted areas of fruit growing trees. Primarily in use as 'pick your own' farms or private purposes in modern times. Were common in medieval period but have become increasingly rare and survive only in the central zones of the Colne Valley Park.

Period: 18th-19th century
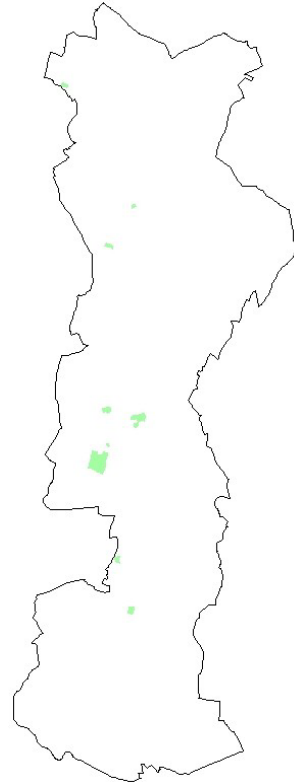
Coniferous Woodland   wc

207.92ha
1.78%

Description: characteristic of areas of planned woodland, generally consists of one or two species of tree. Not necessarily for source of timber as in the case of Black Park where the primary purpose was recreational.

Period: 18th-20th century.
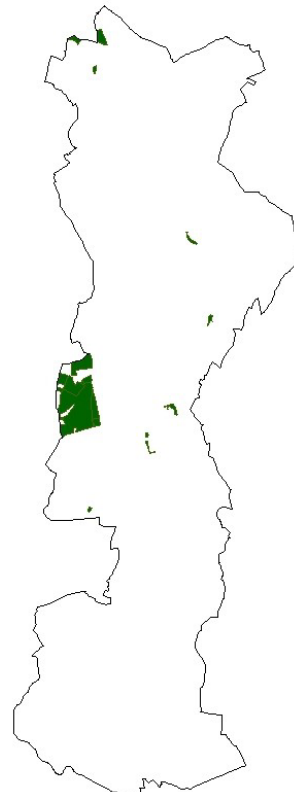
Woodland 19th/20th century   wp

130.55a
1.12%

Description: Modern plantations with a number of purposes. Morphologically small areas generally bordering water bodies. Can either be for recreation or regeneration following mineral extraction. Most common in Hillingdon borough. Several are nature reserves.

Period: 19th-20th century
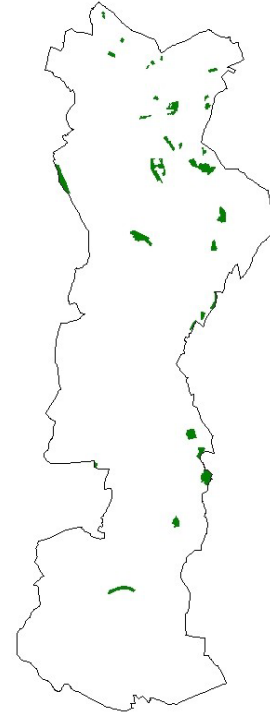
Parkland

Parkland   pp

585.44ha
5.00%

Description: Private historic landscape gardens once belonging to the landed gentry. Laid out around country houses and manors. Most designed gardens in existence today follow the school of historic landscape garden design as laid out by Brown and Repton. Surviving gardens frequently owned by either council, English Heritage or National Trust or have been converted into golf courses.

Period: 16th century to present day
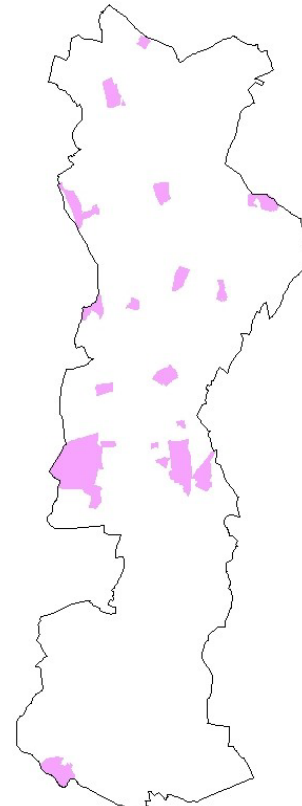
Golf courses   tg

443.93ha
3.79%

Description: Several large golf courses exist in the central and northern zones of the Park. Golf Courses involves hard landscaping which leaves little archaeology behind. Primarily evolved from historic parkland but also from former mineral sites.

Period: 20th century
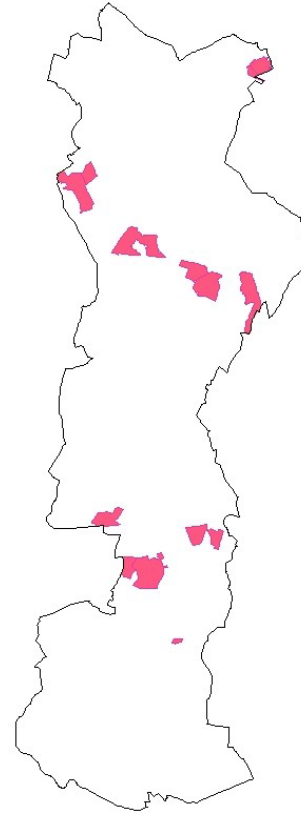
Recreation   tr

171.69ha
1.47%

Description: Modern areas of land now used solely for recreational purposes such as playing fields, walking areas or grounds associated marinas and lakes. Primarily small areas of land except for Harmondsworth Moor which underwent extensive landscaping in the late twentieth century.

Period: 20th century
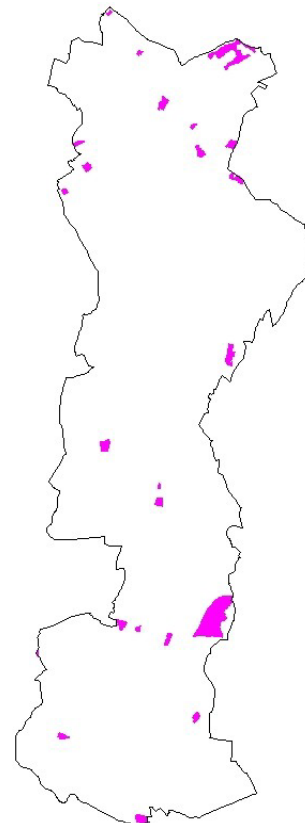
Historic settlement   se

112.99ha
0.97%

Description: Historic settlement refers to the core areas that predate the earliest maps and which survive to the present day. In this case both the OS Surveyors map (1822) and the OS 6in 1st edition 1878 have been used as the first reliable sources. This field applies to town and village core. This type occurs with some frequency throughout Bucks specifically around Iver, Denham and the Chalfonts.

Period: Pre 18th century.
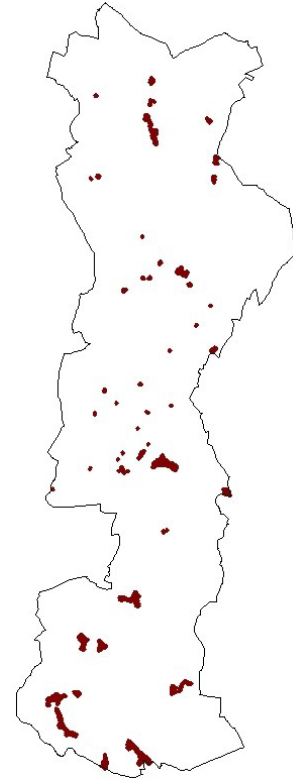
Historic farms   rf

111.26ha
0.95%

Description: Farms have broadly been divided into 2 periods; the first applies to those farms that predate the current map sources. Within the confines of the Park these seem concentrated in the northern area of Buckinghamshire. Occasionally they are situated near the edges of urbanised zones but are more often isolated.   They are fairly common throughout the Park.

Period: Pre 18th Century.
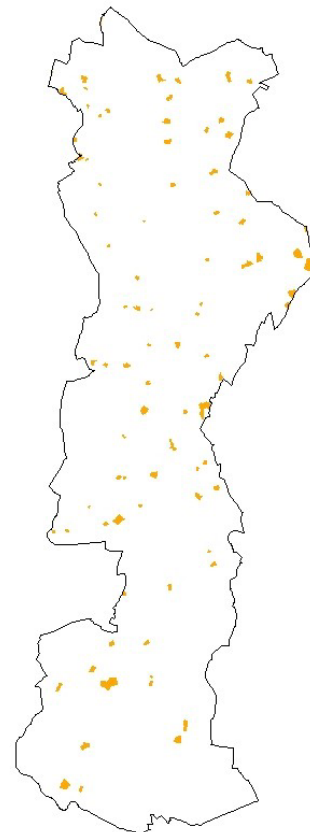
Historic Houses   rh

23.28ha
0.2%

Description: This code was used in an attempt to characterise settlement that did not necessarily fall under any other category, they are not historic houses in the same sense as Langley or Huntsmoor parks where there is a large area of parkland associated with the main house, rather they are smaller manors and lodges with a small area of parkland surrounding it or now isolated from their original setting.

Period: Pre 18th Century.
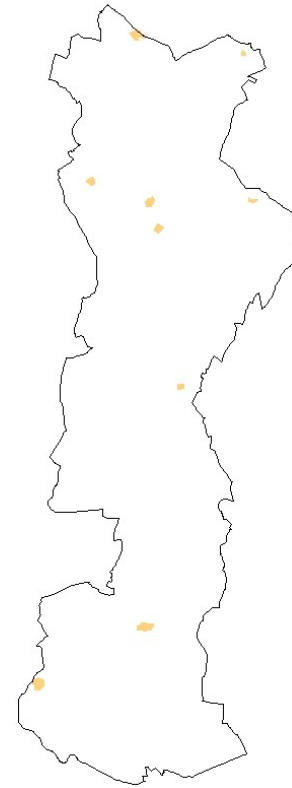
19th century detached housing   td

62.52ha
0.53%

Description: 19th century detached housing refers to those areas of settlement that commonly form part of an urban environment and which originated from a number of morphological types including nucleated, interrupted rows and common edge settlements. They are characterised by detached or semi-detached housing with small plots, they can either front onto the road or be situated further back.

Period: 19th Century.
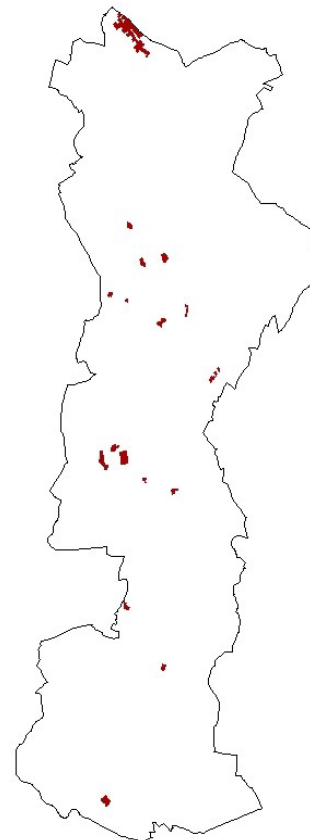
19th century terraced   tt

6.98ha
0.06%

Description: This settlement type is characterised by early terrace housing shown on the mastermap lines layer as having little or no front area and in consequence are shown to line the modern streets. This type is rare in the Colne Valley project with only one or two examples surviving on the current maps.

Period: 19th Century.
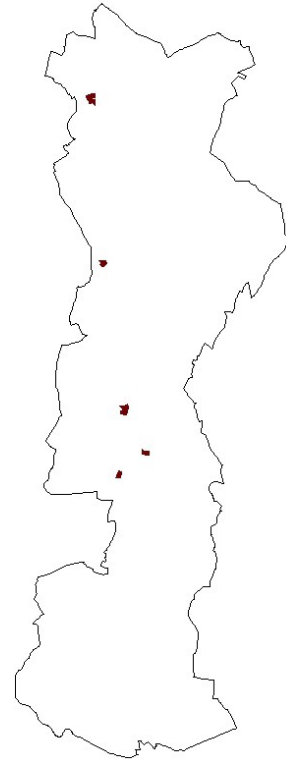
1920's estates   te

187.55ha
1.60%

Description: In this case settlement is characterised by the first instances of large-scale planned housing estates with examples of this type including Richings Park in Buckinghamshire and the borders of Knowle Green in Surrey. This shows the first organised development of large areas of land most often dating to the earlier phase of this period. Individual housing is characterised by semi-detached building in regular plots of land organised into straight planned streets and enclosed in larger estates.

Period: 20th Century.
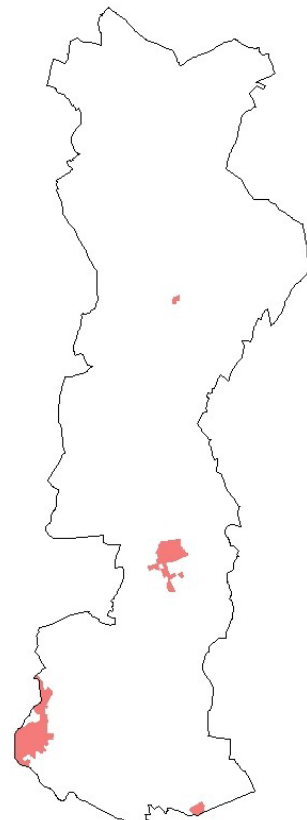
1920's semi's   ts

222.78ha
1.90%

Description: This is characterised by more piecemeal housing development usually in the same style as planned housing but in much smaller zones of land. These developments so far seem to be extensions of previous core settlement often as infilling of older interrupted rows of housing as in Love Green in Buckinghamshire. Individual housing types vary with short sections of terraced housing, semi-detached as well as detached styles. This type is fairly common in Buckinghamshire but rare in the Hertfordshire and Surrey datasets.

Period: 20th Century.
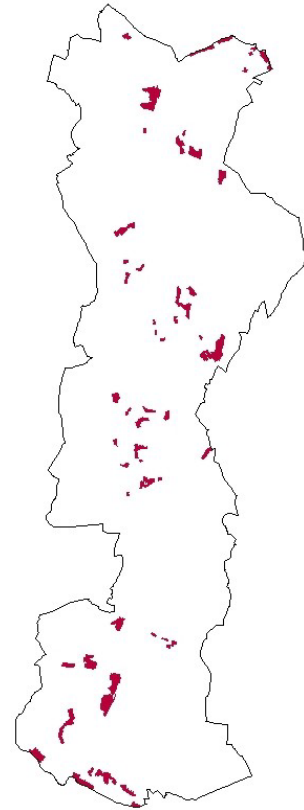
1950's housing   tf

283.61ha
1.47%

Description: This housing type is characterised by discrete development zones of varying size but still with a semi-detached housing unit. Individual housing tends towards the semi-detached style with plot sizes of a uniform but more spacious design than previous styles. From the mastermap data it seems likely that these houses are built with a driveway and/or garage to the side of the house allowing for a larger plot size between each individual semi-detached house. Houses tend to be built along a circular road system and more commonly seem to occur as infilling of common edge and interrupted rows of older housing forming larger townships. The greatest concentration of this type of housing is in Buckinghamshire around Iver Heath.

Period: 20th Century.
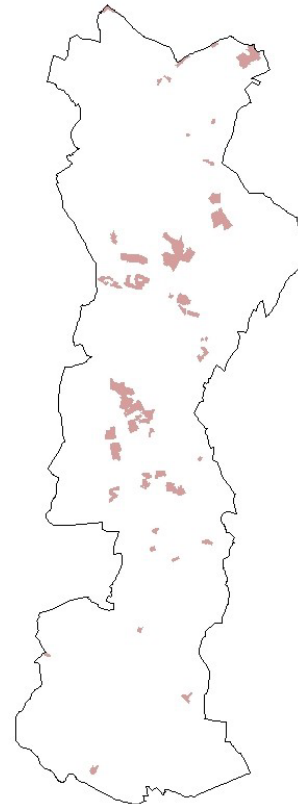
1970's housing   tc

174.62ha
1.49%

Description: 1970s housing tends to be characterised by straight edge streets and short cul-de-sacs. Individual house types largely remain the same from the 1920s with uniform semi detached housing and standardised plots with occasional sections of terracing right up to the modern period. Again this type most often appears as infilling in urbanised zones using up small tracts of open land between earlier periods of housing. This housing type is rare in both Hertfordshire and Surrey, and occurs most commonly around the major growth towns of Iver Heath, Denham Green and Denham in Buckinghamshire.

Period: 20th Century.
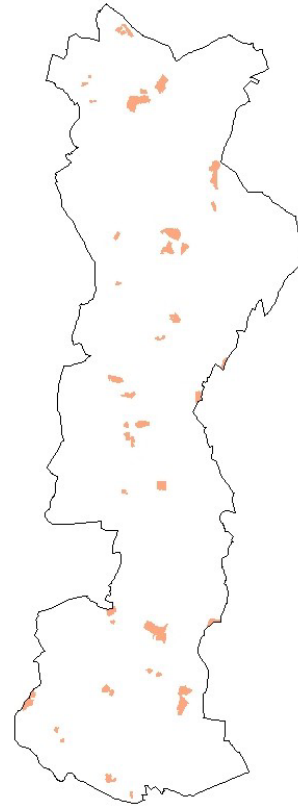
Modern Housing   tm

93.26ha
0.78%

Description: Modern housing is derived from a combination of those houses that appear on the 1983 NG 10k edition and those that appear only on the mastermap data. They tend to occur in much smaller blocks. Streets tend to be much wider including curved, straight and cul-de-sacs. Plot size varies very little however with narrow strips of land allocated to each individual semi-detached house and there is a tendency to group houses closer together, often with driveway space in front of the house rather than to the side as was more common in earlier housing. This type is again concentrated around the growth towns of Buckinghamshire and there is little evidence of it in Hertfordshire and Surrey.

Period: 20th Century.

Caravan Parks   cc

34.62ha
0.30%

Description: Areas of land given over either to permanent
mobile homes or seasonal caravan parks. Often include
elements of modern lifestyles such as washing facilities and
shopping areas

Period: 20th Century.
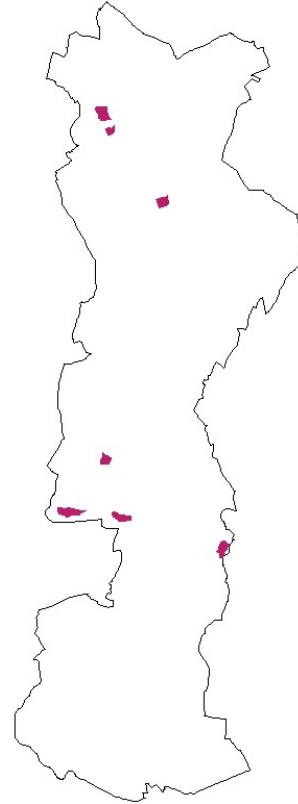
Modern Farms   fm

70.28ha
0.60%

Description: These farms appear only in the latter half of
the 20th century and occasionally only very recently. They
are much less common than older farms and appear more
regularly in the southern half of Buckinghamshire with
occasional occurrences in Hertfordshire and Surrey.

Period: 20th Century.

169
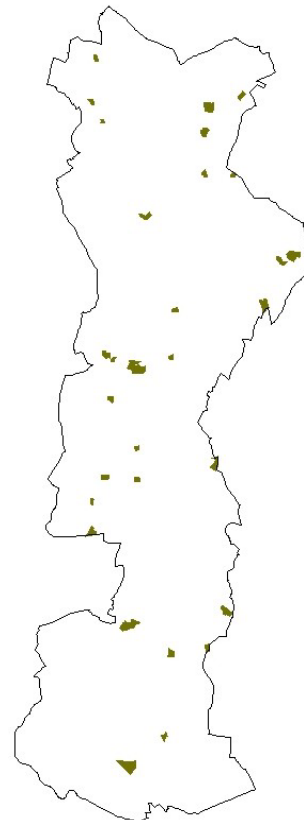
Cottages   rc

13.34ha
0.11%

Description: This term applies to small settlement zones of 1-5 cottages in isolated areas such as woodland. There are a few examples of this type in Buckinghamshire such as those around Black Park and Nockhill Wood.

Period: 20th Century.
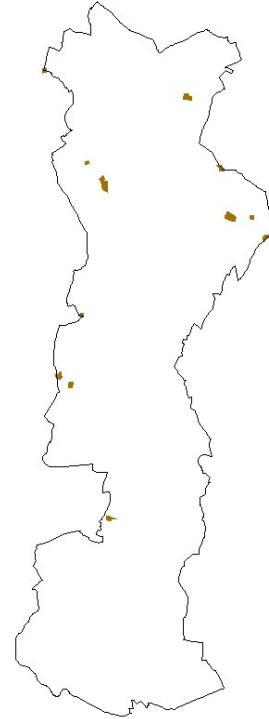
Civic

Government   gc

29.14ha
0.25%

Description: Government areas or scientific complexes including museums.

Period: 20th century
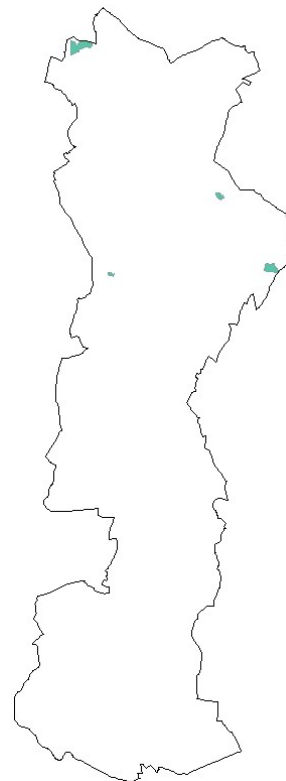
Hospitals & Schools   hs

87.15ha
0.74%

Description: Characteristically large-scale hospitals and educational facilities, most notable in the Colne Valley Park are Newlands Park college and Harefield Hospital.

Period: 20th century
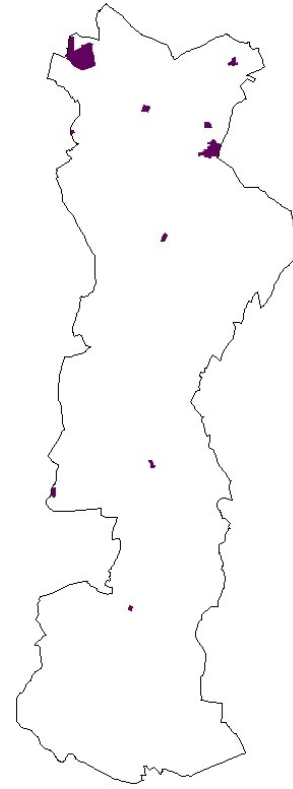
Utilities   ut

90.95ha
0.78%

Description: Landscape in use for a variety of utilities including power stations, sewage and water works.

Period: 20th century
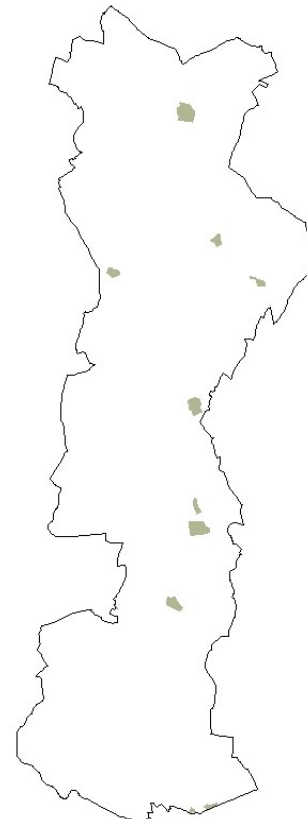
Landfill   lf

95.06ha
0.81%

Description: Areas of land either currently in use as landfill sites or have reached their conclusion with no current land use recorded.

Period: 20th century
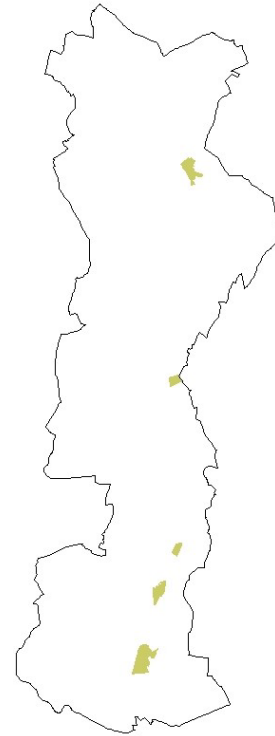
18th-20th century lakes   rr

10.58ha
0.09%

Description: Modern lakes with no obvious discernable purpose, frequently ornamental in nature. Only two examples exist in the Colne Valley Park at Black Park and a marina at Little Britain.

Period: 20th century
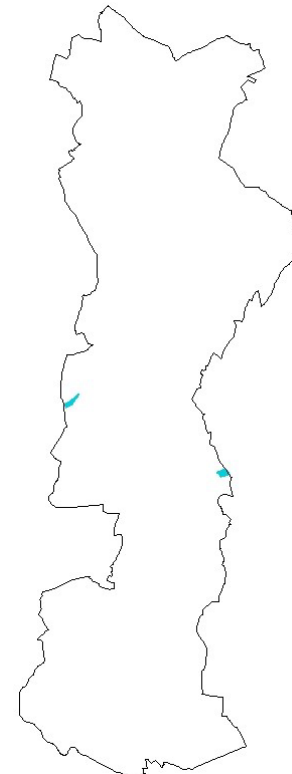
Reservoirs   rw

904.74ha
7.76%

Description: purpose built water bodies to supply water to urban areas. Several large reservoirs in the north of the Colne Valley Park around Wraysbury and Staines.

Period: 20th century
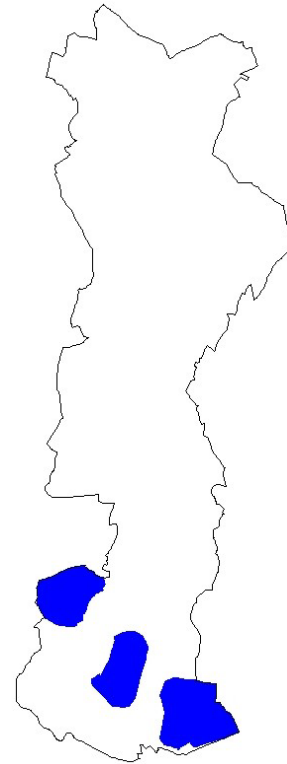
Flooded Mineral Extraction   mf

1080.89ha
9.24%

Description: former mineral extraction sites now regenerated as lakes providing wildlife habitats as well as recreational pursuits. Very common in the Park

Period: 20th century
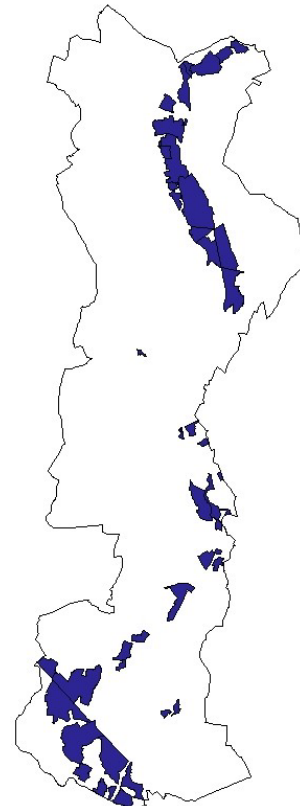
Motorway   mr

343.32ha
2.93%

Description: Major route ways dating to 1970's and 1980's that significantly dissect the Colne Valley landscape.

Period: 20th century
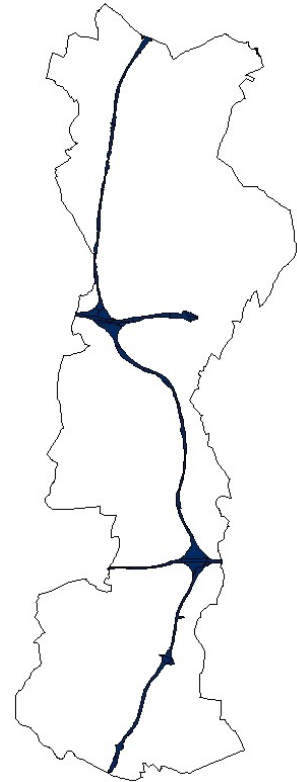
Airfields   ap

42.77ha
0.37%

Description: Civilian airfield either for commercial or leisure purposes.
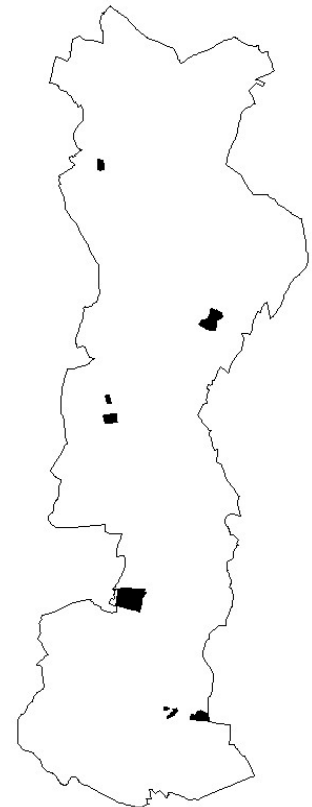
Period: 20th century
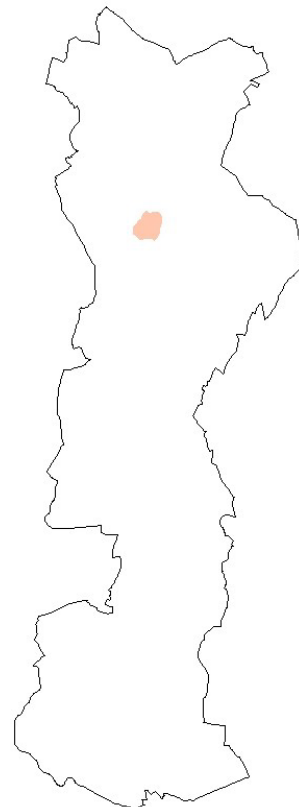
Mineral Extraction   me

101.93ha
2.93%

Description: Areas of land currently in use for mineral extraction.

Period: 20th century

Industrial   in

284.56ha
2.43%

Description: Industrial sites, primarily from modern period, including foundries, factories and industrial estates.
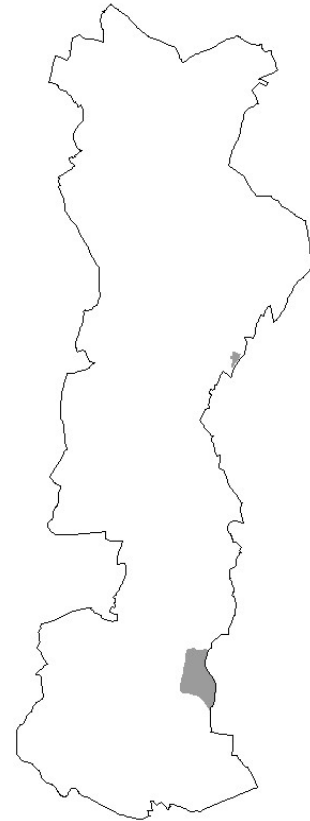
Period: 20th century
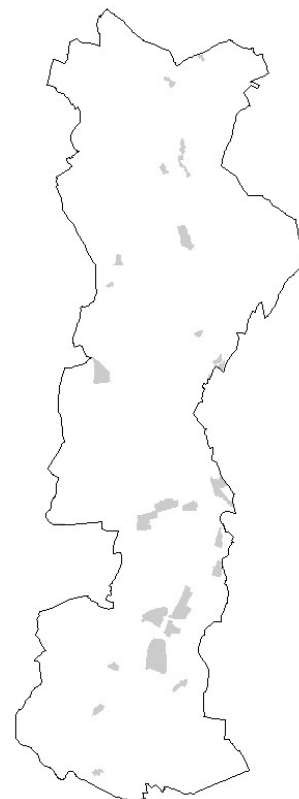
Transitional minerals or industrial sites   ti

115.49ha
0.99%

Description: Only applicable to extensive areas of land undergoing prolonged period of development, i.e. Heathrow T5.

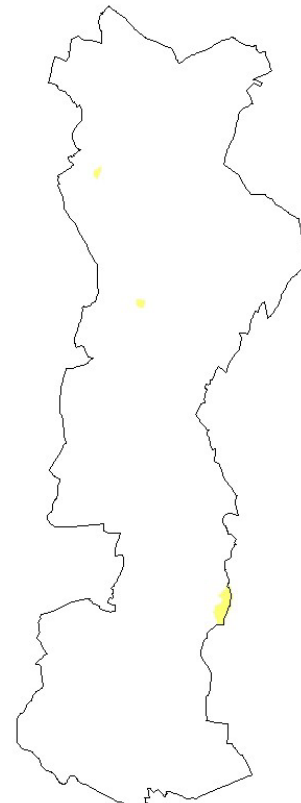**Period**: 20th century.

Commercial   cr

24.44ha
0.21%

Description: Large scale commercial or business parks such as out of town shopping centres.

Period: 20th Century.
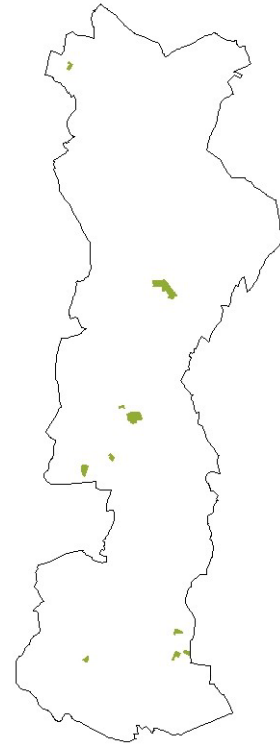
Nurseries   ng

50.34ha
0.43%

Description: Either public or private areas of land used to grow certain vegetation under controlled circumstances. Frequently include large greenhouses.

Period: 20th century
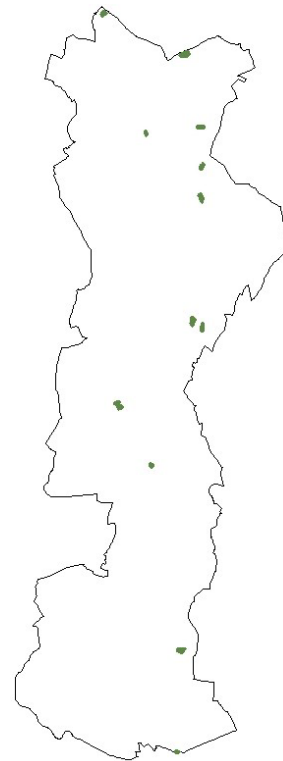
Allotments   ag

17.54ha
0.15%

Description: Areas reserved for communal gardening, a response to highly urbanised areas. Rare within the Colne Valley Park as land became increasingly valuable for redevelopment.

Period: 19th-20th century

Horticulture

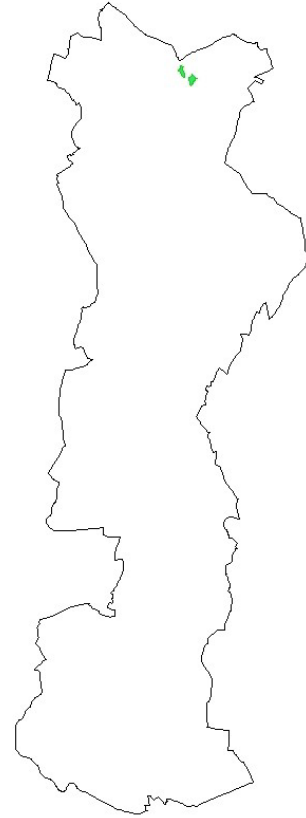### Watercress farming   **fw**

6.09ha
0.05%

Description: Watercress farming was a historically important industry in the Colne Valley Park but very little survives in the present day landscape. Characterised by areas of land bordering rivers with intricate systems of leats subdividing the landscape.

Period: 19th century

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