

APPENDIX 5: LANDSCAPE EVOLUTION

This information has been taken from the Nottingham Landscape Guidelines published in 1997 undertaken by Nottinghamshire County Council.

Magnesian Limestone Ridge

*'There is still much to learn about the development of the landscapes of the **Magnesian Limestone Ridge**. Considered to have been a remote wooded area, of late interest to settlers, it has often been considered only as part of Sherwood Forest. While this latter is indeed true, it is not the whole story which, for the want of detailed study, can only be sketched in outline and with some imprecision.*

Little coherent can be said about the prehistoric and Roman landscapes of the region. Evidence of some of the earlier human occupation and activity in the East Midlands, during the later Ice Ages and after, comes from Creswell Crags. The caves of the limestone gorge provided shelter for the hunter-gathers who 12,000 years ago moved through a landscape which was gradually changing from tundra to birch and pine forest and would eventually develop into mixed oak forest, with alder, oak, elm and lime. While Creswell is the best known and studied, other gorges in the Magnesian Limestone have caves which were occupied by both people and animals at these early dates, and also later. Human occupation of significance has yet to be demonstrated at Pleasley Vale, but the full potential of this gorge, which appears to be considerably filled, has not been explored.

*Later human activity on the **Magnesian Limestone Ridge** is indicated by the stone tools and fabrication debris of hunter-gatherer groups and of the first farmers and settlers of the Neolithic and the Early Bronze Age, which are found on the surfaces of ploughed fields. The effect of these people on the landscape can only be guessed, but it is to be expected that clearance for agriculture and the grazing of domesticated livestock, after 5000 BC, were the small beginnings of a long-term process of woodland diminution. Such human interference in the forests is often seen as the cause of a national decline in elm after 4000 BC and more locally of lime and pine and an increase in hazel after 1600 BC.*

*Modern land uses, and perhaps a lack of survey, have resulted in few cropmarks (differential crop growth over buried archaeological remains) in this region. There is however no reason to believe that it was any less favoured than others for settlement during later prehistory and the Roman period. It is to be expected that by the end of the first millennium BC the woodland here will have been substantially cleared and the brown earths cultivated. As in later generations, woodland may have been largely confined to those areas too steep to plough or too inaccessible for grazing. Such woodland as there was, during the Roman period at least, is likely to have been managed, much probably as coppice. Coppiced hazel from the Roman site at Menagerie Wood, in the **Sherwood** region outside Worksop, might have been brought in from here.*

*Roman settlement on the **Magnesian Limestone Ridge** is demonstrated by finds of Roman pottery and a number of coin hoards. Roman villas at Mansfield Woodhouse and Oldcotes will have been the centres for large estates. These lie outside the normal distribution of villas, and they may have more in common with the villas of Yorkshire which show a marked attraction to the Magnesian Limestone. At the risk of reading more than a mutual appreciation of the soil qualities of the limestone into this common choice of geology, this distribution may reflect a border territory of greater antiquity between the Iron Age tribes. This may be an origin for the long-lived importance of the*

north-western boundary of Nottinghamshire as a division between regions and kingdoms in the Saxon period.

*What happened at the end of the Roman period is not clear, but the result was a dramatic change in the landscape of the **Magnesian Limestone Ridge**. The region will have shared in the general decline in population during the 4th and 5th centuries and experienced social and economic change as Roman institutions and organisations withered. Settlement contracted towards the western margins against the clays of the Coal Measures or river valleys, where there was a greater variety of resources. Woodland regenerated in some areas, particularly in those which were more marginal. This goes some way to explaining the well-wooded aspect of the north-western county border, for the boundary runs along the Magnesian Limestone to include only its eastern fringes in Nottinghamshire and the landscape here needs to be read against developments in Derbyshire. In other areas, perhaps greater in proportion, woodland regeneration was probably limited and the change was to limestone heath maintained by the grazing of stock. That large open areas survived into the Saxon period is indicated by the place names of Mansfield and Ashfield where the suffix "field" implies a landscape largely cleared of wood. While it may be possible to argue that such a name could originate in the heathland which was similarly developing on the Sherwood Sandstones nearby, later land use on the Magnesian Limestone points to a common visual impact. Ashfield is clearly a regional name, as may have been Mansfield; its prefix "ash" indicates the presence of ash trees. Another district name was Lindrick, as in Carlton in Lindrick. Here the name means "the ridge on which lime trees grow", but where the ridge was or how extensive the lime woods were cannot be identified, for this district clearly covered a wide area most of which lay in what is now South Yorkshire. Lime woods are also indicated in the place name Linby, the second element of which may point to Scandinavian settlement in the late 9th or early 10th century. That there was room to accommodate newcomers is shown by other names with the element bi and the frequency of names with the suffix leah, now "ley", found on the **Magnesian Limestone Ridge** and adjoining **Nottinghamshire Coalfield**, which means "clearing". This also implies woodland, and perhaps rather more of it on the clays of the **Nottinghamshire Coalfield**, but does not necessarily imply the late settlement of West Nottinghamshire which earlier historians have deduced.*

*In 1086 the **Magnesian Limestone Ridge** was part of the most thinly populated part of Nottinghamshire. Most communities, particularly the larger ones in the south, were located along its western edge where they could both cultivate the Coal Measures clays and exploit the woodland, grazing and game of the Magnesian Limestone. In the north west of the County communities were on the whole small, situated by rivers or streams, and had small areas of arable while exploiting the woods and heaths on both the Magnesian Limestone and Sherwood Sandstone for grazing. Domesday Book records considerable tracts of woodland in the region, but much of this was wood pasture, which points to the mixture of heaths and woods already described, partly on the basis of the Domesday Book entries.*

*The general emptiness of the region encouraged the Norman kings to bring it under Forest Law. It is likely that the southern part of the **Magnesian Limestone Ridge**, the part entirely within Nottinghamshire, had been traditionally part of Sherwood. Assuming the "shire" of "Shire-wood" to equate with the County, this name can be little or no older than its first written appearance in the 10th century, when Nottinghamshire was first created. The meaning behind the name remains obscure. It may mean no more than the woodland on the border of the Shire; the woodland which distinguishes being within from being without the Shire. Alternatively, it may refer to much more ancient rights to its resources held by the King, nobility or communities elsewhere in the County. Under Henry II, Forest Law was extended across all of Nottinghamshire north of the Trent but this was cut back by Henry III in 1232 to embrace only the countryside of the*

Magnesian Limestone Ridge and the **Sherwood** region south of the River Meden. Northwards, however, the extensive royal woods and game preserves which extended into the Magnesian Limestone remained subject to the Forest officials, and to all intents and purposes still under Forest Law.

Henry III's redefinition and reaffirmation of the traditional Forest was in part a response to the effect of rising population generating new settlement and expanding arable and grazing. As we have already seen, this process had begun much earlier on the **Magnesian Limestone Ridge** but in the 12th and 13th centuries became more marked, with existing villages growing and new communities appearing, often with the name elements of Woodhouse or, less frequently here, Moorhouse. The comparative emptiness of this region and the neighbouring **Sherwood** region in the 11th century, and the low value of their profits, made these suitable areas for the creation of hunting parks and donation for the establishment of monasteries. Of the twelve monasteries and nunneries founded in Nottinghamshire, eight were within or immediately adjacent to these two regions, with three being on the Magnesian Limestone and two more lying close by. By 1343 the last monastery in the County was founded at Beauvale. At this time there was so little land in the region that was not locked into the economies of other monastic estates or local manors and communities, that the endowment promised to this new foundation is unlikely to have been fully completed.

The woodland of the **Magnesian Limestone Ridge** was under continual pressure during the Middle Ages. Villages grew; Mansfield, the chief administrative centre in the south of the region since perhaps as early as the 7th century, became a market town, and Mansfield Woodhouse, Sutton, Kirkby and Hucknall Torkard became significant communities. In the north, however, village growth was more modest and much settlement expansion took the form of single farms or tiny hamlets carving their lands out of the woodland. Documents referring to the region regularly mention timber-cutting for building, usually carefully controlled by the King, and woodland clearance and encroachment by both individuals and communities. In 1349 the King himself cleared Linby Hay of timber to fence in his new park at Bestwood. By the later Middle Ages, woodland cover will have become very patchy except where conserved by the management of monastic estates and in the parks of a few lords who maintained detailed interest in the affairs of their estates. Even here, woods will have been sectors or compartments only within the parks which throughout the Middle Ages were increasingly turned over to tillage and the grazing of livestock. In general, it appears that more woods survived in the north of the region than in the south.

Communities on the **Magnesian Limestone Ridge** doubtless suffered as much as any other in the Black Death of 1349 and subsequent visitations of plague. The effect of these in the 14th century reduced the national population by over one third. In Nottinghamshire, it appears that outbreaks of disease were not consistent from one place to another; while one community might be struck badly, another might escape almost completely. Clear indication of both its presence and power in the region comes from the monasteries, the heads of which all succumbed in the year 1349-1350. There is however no evidence that any community in this region disappeared as a direct consequence of the plague. The 14th century epidemics did however usher in a period of protracted change in society and economy. With reduced population and social change, there was a swing away from arable production towards livestock husbandry. In the south of the **Magnesian Limestone Ridge**, where communities' arable was largely on the Coal Measures clays, this probably had comparatively little effect in landscape terms, as grazing was already the principal land use on the Magnesian Limestone. Wool, the fulling of it, the dyeing of it and the weaving of it, was an important industry in mediaeval Mansfield. In the north of the region and for those communities which were largely on the limestone, some reorganisation was probably necessary as over the 15th and 16th centuries a farming regime of convertible husbandry was established. How novel this

was may be doubted, for it is likely that all the communities using the limestone heaths and woods followed the same practice as those involved on the Sherwood Sandstones, of making temporary enclosures and cultivating them for a fixed period of years after which they were allowed to revert to their former state. In these areas also, the need to enclose in order to achieve flexibility in land use may not have been pressing, as the fields of the smaller settlements and individual farms may have already been made up of closes originating in piecemeal assarts from woodland.

The 16th and 17th centuries saw a reinforcement of one form of landscape in the **Magnesian Limestone Ridge**, that of parks associated with the country houses of the nobility and gentry. The transfer of monastic sites and estates into lay hands was in part the foundation of this, as was the fashion for displaying status through building and ornamentation. Monastic woods and hedges at places like Newstead and Wallingwells did not disappear, therefore, but were maintained by the new owners and reinforced by new planting. New parks were added to ancient manor houses, as probably at Strelley during the 16th century and as at Annesley in the later 17th century, leaving the older mediaeval parks to the farmland they had already largely become. And new houses, such as Hardwick, just over the county boundary but with a park which crossed into Nottinghamshire, and Shireoaks, were equipped with parks and ornamental gardens. This parkland contributed and still contributes to the maintenance of a wooded aspect in the **Magnesian Limestone Ridge**, which was reinforced by the larger ornamental gardens and plantations of the wealthy around their houses in the 18th and 19th centuries.

With much of its area given over to common grazing, enclosure only became general in the **Magnesian Limestone Ridge** during the late 18th and early 19th centuries. In that age of agricultural improvement and development, the common wastes were considered to be anachronistic and inefficient. The market for animal products was expanding. Industry was developing in West Nottinghamshire bringing in new population, and the canal and river network gave access to further afield. Laid out by surveyors, this enclosure landscape is still visible on the map and on the ground in the large regular and rectangular fields which contrast with the more piecemeal fields around their periphery.

Animal husbandry dominated the agricultural economy of the region during the 19th century and the first half of the 20th century, but the suitability of much of its soils for cultivation is reflected by a rise in arable from the late 19th century. Large scale conversion to arable during the Second World War was maintained thereafter by government and EEC farming policies. Increased mechanisation resulted as elsewhere, in the loss of hedgerow and other boundaries, but while sometimes locally dramatic this is less marked than in some other landscape regions in the County.

It was industry which created the modern landscape of the **Magnesian Limestone Ridge**, particularly in the south. There had been industrial activity, small-scale and local, throughout the Middle Ages and after. Stone quarrying was perhaps the most significant of these, supplying prestige buildings such as churches and manor houses. Mansfield Stone in particular had a repute which extended well beyond the region. Equally, the local importance of charcoal and lime burning and of corn milling, powered by both wind and water, should not be ignored. As already mentioned, wool processing and cloth making were important and these were the foundation for the first phase of industrial expansion in the later 18th century and early 19th century, which centred on textile production. Through both the development of domestic framework knitting and the construction of textile mills, people were drawn into the region, beginning a rise in population. Many of the new mills and the houses of their workers in towns, villages and the countryside were built in local stone. This perpetuated the natural tradition of the region, which had begun with the houses of the nobility and gentry in the 16th and 17th centuries and had continued with the town houses of Mansfield and other larger communities. In a region where stone was more readily available than brick, it was

natural that, as humbler dwellings were improved, stone should be used. By the end of the 18th century, even the most humble dwelling was likely to be built in stone or, depending on locality, stone and brick. In consequence, the farms and houses of the region still bestow upon it a distinctive building character.

Some of the development for textile production was locally very significant, with large mill buildings and water engineering to power them, as may still be seen at Pleasley Mills, Nether Langwith, Mansfield and in the Leen Valley. The major and more general transformation came with the development of deep mining in the second half of the 19th century. Pit heads, waste heaps, and housing now become major landscape features and the rural, agricultural character of many villages was submerged. Even more significantly, the infrastructure to serve the pits and their communities cut across and disrupted the earlier patterns of the landscape. The first example of this was the Mansfield - Pinxton tramway, linking Mansfield to the Cromford Canal, opened in 1819. This was followed later by tramways and railways which paid no particular respect to existing boundaries. After the Second World War, although railways continued to be important for bulk transport of coal in particular, they were overtaken for other purposes by road transport. Road construction and improvements and continued expansion of housing have therefore been major elements in more recent landscape development.

*For all the modern development, the **Magnesian Limestone Ridge** remains an area in which a long history can be seen in its landscape. Together with the **Nottinghamshire Coalfield**, the depth and interest of this landscape is too little appreciated. It is certainly under researched in almost every dimension, including its industrial heritage. Improving both the understanding and appreciation of the history of change and continuity, and of the forces behind these, is essential to maintaining and enhancing its landscape character.*

Landscape types could occur at any location within the country where there are similar physical resources and historical patterns of land use. In reality the landscape types possess a distinctively local character, because they share the broad characteristics of the regional character area, or represent a particular aspect of that character.'

Sherwood

*'The present landscape of the **Sherwood** region is dominated by the artefacts of aristocratic estates and agricultural reform, largely laid down in the 18th and early 19th centuries, and by those of late 19th and 20th century industry, particularly coal mining. This has been an area in which changes in land use, however long they took to effect, have been radical and clear cut, in contrast to the piecemeal evolution evident in other regions in Nottinghamshire. Underlying the long history of the **Sherwood** region, and a key determinant in the pattern of stability and change within it, is the essential character of its geology and resulting soils. The porosity of the Sherwood Sandstones and consequent fragility of the soils in general have placed limits upon the sustainability of farming here. Advances in agricultural methods from the 18th century until today may appear to have pushed out those limits but the qualities of the land continue to present agricultural challenges which can be overcome only at a cost, financial and environmental. It remains to be seen if this cost can be both supported and mitigated or if within the vastly complex modern economic structures there will be a reversion to land uses which respect the basic qualities of this region.*

*Traditionally, the **Sherwood** region has been regarded as an area where settlement and land use were restricted by poor soils, woodland and forest law. While these restraints must be acknowledged, this is anything but the full story which is far more interesting and complex.*

As in the rest of Nottinghamshire, a forest landscape will have developed here after the end of the Ice Ages. There is as yet scant direct evidence for the composition of this primeval forest but it may be surmised, on the basis of later millennia, to have been mixed birch and oak with a greater variety of species in the river valleys and on the less arid soils of its margins. The presence of early prehistoric hunter-gatherer groups is demonstrated by the occasional finding of stone tools on the surface of ploughed fields. With the exception of a possible burial mound at Haywood Oaks there is no evidence of the funerary and other ritual monuments which characterise the Neolithic and Bronze Age landscapes elsewhere. Again, occasional finds of objects, such as Beaker pottery at Thoresby, or of stone tools and stone axeheads, these latter being interestingly high in frequency in this region, testify to a continuing but sparse human presence, perhaps focused on the river valleys. Even this, however, could have had some locally substantial effect upon the woodland cover, through slash and burn agriculture and more particularly the grazing of domestic animals, to produce thinnings and clearings and the establishment of pieces of heath.

*While clearance of woodland and the development of agriculture and settlement proceeded apace elsewhere, particularly in the Trent Valley and the regions adjacent to it, the **Sherwood** region appears to have been relatively unoccupied during most of the late prehistoric period. Indeed, it is possible that it constituted a border zone between the political, social and economic organisation of tribes. This does not mean that it was untouched, however. As woodland diminished elsewhere, its timber resource may have become more attractive, and its use as a source for animal fodder and for grazing, perhaps involving transhumance as place names hint in the post-Roman period, is likely to have increased with resulting local, and perhaps not so local, changes in woodland composition and extending clearance. As earlier, settlement in the river valleys should not be discounted.*

This picture changes dramatically with the Roman period. In the mid 1970s, aerial reconnaissance and photography over the north of the region suddenly revealed an integrated landscape of field boundaries, trackways and settlements, long since levelled. Subsequent research has shown that this landscape is substantially Roman in date, although Late Iron Age origins are possible. North of a line between Warsop and Bevercotes, this landscape is largely coherent and evidently planned, with more than one phase evident in some localities. Covering an area in excess of 100 sq miles, it extends into South Yorkshire. The social structure and economy represented by these remains is still under debate. Evidence from field walking and a limited number of excavations at Dunstan's Clump, Menagerie Wood near Worksop, and Chainbridge Road in Lound, indicates that most of the settlements were of low status, in contrast to those on its eastern margins in the Idle Valley or the villas known on the Magnesian Limestone to the west. Only one site producing objects of types normally associated with Roman villas has been identified so far in this area. As to the function of the fields, understanding is hampered by the acidity of the sandy soils which normally destroys bone so that evidence about livestock is largely lacking. Given the experience of both mediaeval and modern farmers in this region, long term arable cultivation may not have been sustainable despite the possibility of an almost virgin soil and a slightly warmer climate. An equally striking analogy, however, is the similarity in size between the fields of this Roman landscape and those of 16th and 17th century enclosure in the south of Nottinghamshire. Perhaps this, together with the mediaeval and more modern history in this region of grazing, particularly of sheep, may suggest a mixed agricultural regime of rotating crops, grasses and animal husbandry.

Whatever the social and economic interpretation of this landscape may be, the evidence of the aerial photographs shows that the woodland of this area was substantially cleared by early in the Roman period. This clearance was not necessarily entire, however. The presence of coppiced hazel at Menagerie Wood, if not imported from another region such

as the **Magnesian Limestone Ridge** immediately to the west, may hint at surviving pockets of wood which, on this evidence, are likely to have been carefully managed resources.

Woodland survival may have been somewhat greater in the more southerly areas of the **Sherwood** region. As one progresses south, the cropmarks of this Roman landscape become more disjointed until, as Nottingham is approached, they consist of occasional settlements and patches of fields. How far this is a valid observation, or if it is the product of variables in survey and modern land use or of post-Roman soil erosion, awaits further research. Pending this, it is still possible that this difference in cropmark density could reflect a difference in the intensity of Roman settlement and land use between the north and south of the region, with more woodland and presumably more heath produced by rough grazing surviving in the south.

The end of the Roman period was marked by another great turning of the landscape, in which the region became again relatively unpopulated and the Roman field systems largely abandoned. The date of this change and the reasons and processes involved are as yet unclear. General population decline and changes in social organisation and economy beginning in the later Roman period and continuing and developing in the 5th and 6th centuries are perhaps explanation enough. Soil exhaustion and erosion, contributing to the late Roman deposition of alluvium in the Trent Valley, may also have played a part. In all events the early Roman level of settlement and land use clearly became unsustainable. Settlement moved out of the region, probably relocating on the more fertile soils on its margins and beyond, and otherwise contracted to favourable sites in the river valleys. In consequence, woodland regenerated by expanding out from existing pockets and by establishing itself anew. The region was not given up, however. Apart from such farms as may have continued or developed in river valley locations, the communities around its margins used it as a grazing resource in balance with their arable on the clays and other soils of adjacent regions. This use explains the siting of many communities around the margins of the region where settlement is poised between the differing agricultural resources of contrasting geologies.

Thus it was that, in the centuries around and after the end of the Roman period, the landscape developed which is now thought of as characteristically Sherwood Forest. Low in population, with space enough to attract Scandinavian settlement in the late 9th and early 10th centuries, identifiable by place names ending in *by*, this was a countryside of large and smaller areas of dense and not so dense oak and birch wood and of large and small tracts of sandland heath with gorse, ferns and grass. The woods served as game reserves, sources of timber and smallwood, and as fodder and grazing, and were in smaller or greater part managed to these ends. Much of the heath originated in areas of Roman woodland clearance, particularly around the margins of the south of the region where place names incorporating the element *feld*, e.g. Mansfield, Ashfield, Farnsfield, may indicate open country at an early date, that was kept open by grazing and temporary small areas of cultivation.

It was to this landscape, and more particularly to the area south of the Meden, that the term **Sherwood** was applied. Assuming the "shire" of "Shire-wood" to equate with the County, this name can be little or no older than its first written appearance in the 10th century, when Nottinghamshire was first created. The meaning of this name remains uncertain. It may mean no more than the woodland on the border of the Shire, the woodland which distinguishes being within from being without the Shire. Alternatively, it may refer to much more ancient rights, to woodland resources held by the king, nobility, or communities within the County.

In 1086, the **Sherwood** region was the most sparsely settled area of Nottinghamshire, low in arable, with much woodland almost wholly recorded as wood pasture, exploited

by larger settlements around its rim and fewer smaller ones within it. Such was its emptiness that Norman kings soon brought it under Forest Law, probably consolidating existing royal rights, to maintain its stocks of deer and other game. Under Henry II, Forest Law was extended across all of Nottinghamshire north of the Trent, but this was cut back by Henry III to embrace only the countryside of woods and heaths on the Magnesian Limestone and the Sherwood Sandstones south of the Meden. However, extensive royal woods and game preserves north of the Meden and elsewhere remained subject to the Forest officials, effectively maintaining Forest Law over most of the region throughout the Middle Ages and later.

Henry III's redefinition and reaffirmation of the traditional Forest was in part a response to the effects of rising population in generating new settlement and expanding arable agriculture. Initially, the emptiness of the Magnesian Limestone and Sherwood Sandstones and the low value of the profits there made these suitable areas for the creation of hunting parks, most famously by the king at Nottingham and Clipstone, and to be donated for the establishment of monasteries. Of the twelve monasteries and nunneries founded in Nottinghamshire, eight were within or immediately adjacent to this area, where sufficient unencumbered land was available to endow them without significant damage to the financial interest of their benefactors. Considerable blocks of land in the **Sherwood** region thus passed into monastic control. The 12th and 13th centuries also saw the expansion of existing settlements and the creation of new ones, often marked by the epithet of Woodhouse, or less frequently in this region, Moorhouse. By 1300, while the region remained thinly settled and more apparently untamed than the rest of the County, there was little land which was not locked into the economies of royal or monastic estates or of local manors and communities.

Indeed, however it may appear to modern communities, this was a highly managed environment in which the central dynamic was the sustainability of one economic regime, the maintenance of the traditional woodland and heathland resource, against the pressures of another, demanding land to till and grazing for animals. This tension is typified in the emparking of the largest of the royal parks in the County, at Bestwood, in 1350. Here from the first, as had developed in other royal and aristocratic parks, the enclosure encompassed a number of functions and land managements. There was woodland for timber and game, heath and grassland for grazing stock and deer, and rabbit warrens and arable fields for foodstuffs and fodder. Resources and activities which might be scattered through widely separated estates elsewhere were brought together in one locality created out of a single area of royal woodland and heath and held in balance by management. Even with positive management, much less without it, the woodland could not be maintained against the economic pressures towards clearance by felling, tillage and grazing.

Despite recovering from an apparent failure to replace trees felled in the 12th century, which led to a dearth of timber dating to the 14th century in buildings, and despite strict control of felling in the Royal woods of Birklands and Bilhaugh, royal interest in the maintenance of woods and heaths of the region was spasmodic. It was at best undermined by the private interests of the local nobility, who supplied the principal officials of the Forest, or by the ancient rights of communities to common pasture, and at worst negated by royal indifference or distraction by other concerns. Royal woods and lands were leased out or granted away, and the application of Forest Law became more a process of raising rents on lands long cleared by individuals and communities than a means of habitat conservation. Throughout the later 12th, 13th and 14th centuries, documentary references paint a picture of continual piecemeal enclosure, assarting and illegal encroachment by the great and the small, individuals and whole communities. Tree by tree almost, the woodland was gradually eroded. By the 16th century virtually only the core woods of the surviving royal estates and parks, Birklands, Bilhaugh, Rounwood, Mansfield, Clipstone, Bestwood, and a few others on monastic estates and elsewhere,

remained. By the later 17th century, when royal rights in the Forest had been largely appropriated by the great landowners and after the best trees on the royal estates had been sold off by the Commonwealth, it was difficult to find useful timber in the surviving woods.

With so few settlements and so little permanent arable lying within the region, there is little trace of the social and economic changes of the period 1350 to 1600. The area did not remain untouched, however. It may be that the reduced demand for tillage from the reduced population in the 15th and early 16th centuries slowed the degradation of the woods by increasing grazing land outside the area and by decreasing any pressure to change the traditional land uses within it. Equally, the growing importance of animal husbandry in this period could well have been met by the traditional common pasturage owned by communities within and adjacent to the region. Further, animal husbandry, particularly sheep raising, was already well established as a major enterprise on some monastic estates, Rufford Abbey's sheepwalk at Morton Grange in Babworth being the classic example.

Common pasture meant there was no need to enclose for animal husbandry, but the region shared in the trend towards farm engrossment and piecemeal enclosures nevertheless. Traditional agricultural practice had long involved supplementing the sometimes small areas of permanent arable, the infield, with temporary enclosures in the Forest. Within these, cultivation was allowed for a limited number of years after which the enclosure was thrown down, the fields levelled and the exhausted soil allowed to revert to scrub, heath and grass. This "Breck" system was to continue unchanged until formal enclosures arrived in the 18th and 19th centuries. For now, portions or all of the permanent arable were enclosed, primarily to allow for improved crop rotation and closer stock management. This produced the pattern of relatively small, hedged fields found close into villages bordering the region, particularly on the east, where enclosure was limited. Within the region, however, all or most of the comparatively small open arable fields might be enclosed. All the infield of Carburton, for example, had been enclosed by 1619 and was largely under grass. The region was not isolated from, nor unaffected by, the economic trends and changing agricultural practices of the day, therefore. Rather, both traditional land uses and an ability to adapt predisposed it to meet the changing economic order, when social organisation, agricultural knowledge and techniques developed so as to overcome the inherent difficulties presented by the land.

The foundation for economic growth and changes in the landscape was the dissolution of the monasteries. Grants or sales of the monastic sites and estates to leading members of the aristocracy and gentry gave power and influence in the region to a handful of families. For some 200 years these concentrated on converting or replacing monastic buildings, building and rebuilding, to produce great country houses and developing extensive parklands around them for ornament, sport and animal husbandry. The creation of a virtual chain of these properties through the region, from Wollaton, Annesley, Newstead, Rufford, Clumber, and Thoresby to Worksop, gave much of it a new name, "The Dukeries". After the Reformation the aristocratic landowners here began investing in new building and reordering and restocking their parks, and the 18th century in particular saw much new development. Many of the aristocratic landowners of this period became progressive agriculturists. They saw profit in timber and undertook large-scale plantation schemes both within their parks, where new species were also introduced and the woods served also as ornamentation, and on their estates at large. The legacy of this is still with us in the well-wooded aspect of significant parts of the region, for which these 18th century plantations were the foundation. They also invested in the development of agriculture on the sandlands, building upon the mixed farming regimes and diversification of crops, particularly root crops which had been introduced into the area by the beginning of the 17th century, and experimenting with

fertilisers and crop rotations. Most importantly, they encouraged their tenant farmers to follow.

The result was the enclosure, through a succession of private Acts of Parliament, of most of the open heath and commons in the region and the creation of new farms outside the villages. With few existing land divisions to consider, much of this enclosure was geometrically laid out in field sizes considerably larger than those of earlier enclosed areas. Defined by fences or hedges, dominated by "quickset" hawthorn, this new "surveyor's" landscape is still a striking feature of the region, on the map and on the ground.

*The region thus underwent a veritable "Agrarian Revolution" in the later 18th century. This was based on the intensification of animal husbandry, particularly sheep rearing, which was sustained by the cultivation of root crops and rotational grass, the fertility of the land being maintained by manure and early artificial fertilisers. As a consequence, in the early 19th century the **Sherwood** region was the most advanced farming area of the County.*

The physical framework of this region's landscape, established at the end of the 18th century and the beginning of the 19th, has been essentially maintained through today. There have been significant alterations, however, and none more marked than the appearance of industry, particularly coal mining. The earliest modern industrial development was the Chesterfield Canal, cut across the region in the 1770s. But it was the advent of deep mining in the 1850s which brought the major impacts. Throughout the later 19th and 20th centuries coal mines were sunk progressively eastwards across the region, introducing often lofty pithead buildings and structures, and large-scale waste heaps, into the landscape. To house the miners and those who serviced them new villages were built and new estates which have virtually swallowed the original villages to which they were appended. Infrastructure was developed, initially railways and more latterly roads; Worksop and Mansfield developed as commercial centres. Such has been the extent and scale of mining and its associated development that much of the region has become synonymous with the coal industry.

In parallel with industrial development, the agricultural countryside remained relatively prosperous, responding to economic circumstances by changing balances in production. The basic reliance on animal husbandry saw the area through the 19th century. The First World War put emphasis on corn growing and, close to Nottingham and other towns, potatoes, followed by a reversion to livestock after the War. From the 1920s sugar beet began to replace turnips; by 1950 these had all but disappeared from the rotational repertoire. The Second World War again returned the emphasis to corn growing, but this time there was no substantial return to livestock. Government and European policies and the introduction of modern fertilisers have maintained the region's farmlands almost wholly under arable since. In many places this has brought alterations to the enclosed landscape through the demolition of hedgerows and boundaries to create wide open spaces suited to manoeuvring large machinery.

*The industrial development and agricultural changes of the last 125 years are the latest additions to a long history of landscapes in this area. The combination of these with the landscapes created in the 18th and early 19th centuries, the parks, the woods, the Forestry Commission plantations and the enclosure fields, leaves a distinct impression on the modern visitor. Indeed, the **Sherwood** region has always been the most distinctive region of Nottinghamshire.'*