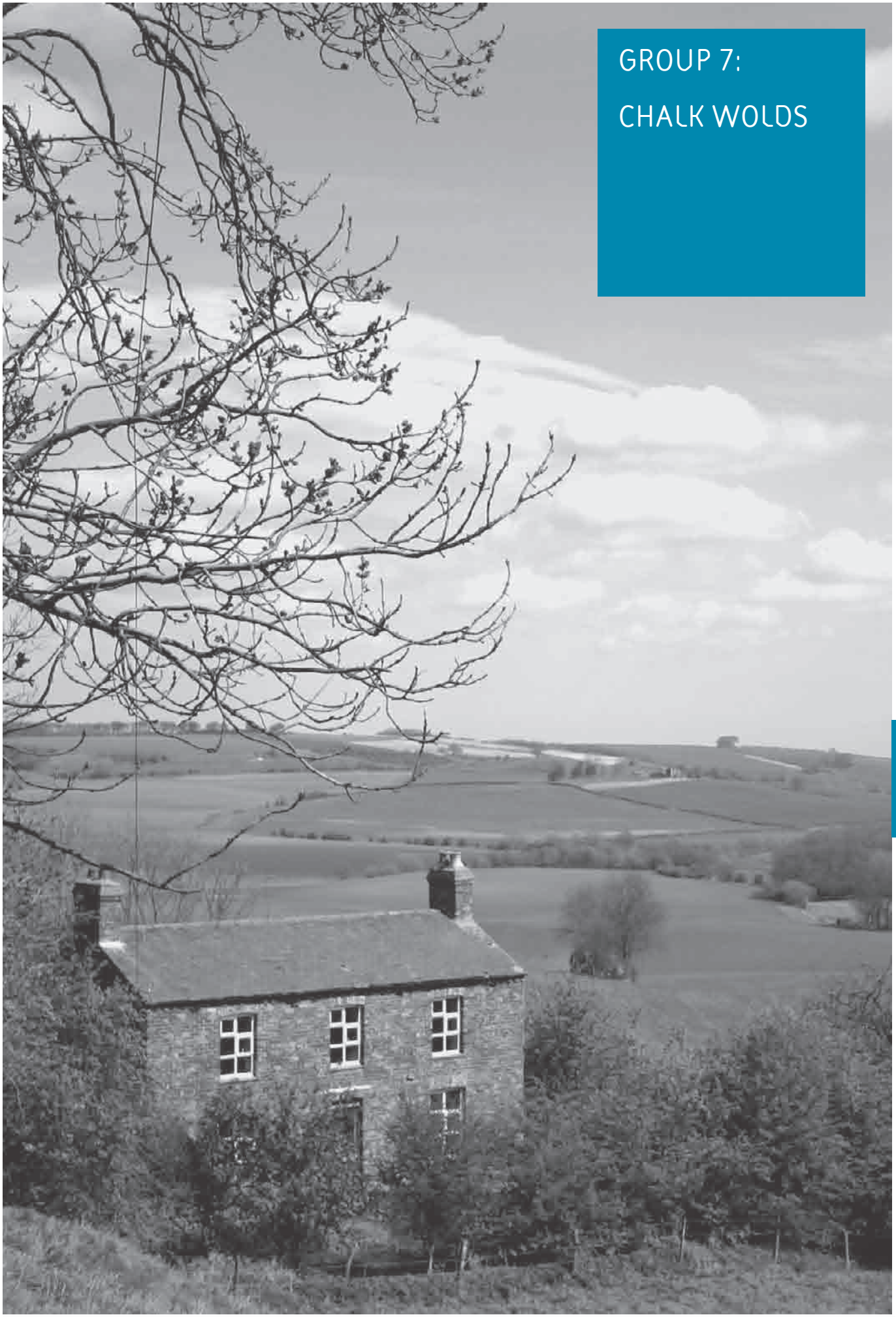
GROUP 7:
CHALK WOLDS



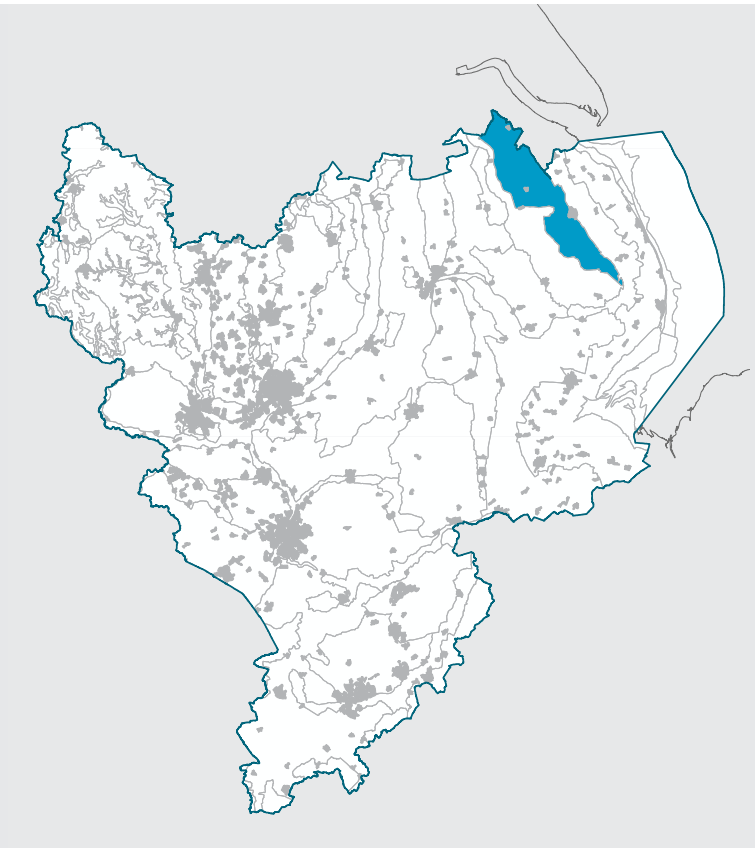
GROUP 7
PAGES 209-226

Sparse settlement and isolated farm buildings are characteristic of the Chalk Wolds (© Lincolnshire Wold Countryside Service/N Gurnhill)

7A:

CHALK WOLDS

Former drove road with wide verges (© Lincolnshire Wold Countryside Service/D Furlong)



KEY CHARACTERISTICS

- Open, elevated and gently dipping chalk plateau dissected by a system of valleys including dry valleys that create a pronounced rolling landform;
- Huge expanses of field and sky across the plateau top with extensive views emphasising the large scale of the landscape;
- Intensively farmed character extending across the plateau with large scale rectilinear fields predominantly under arable cultivation with restored and mechanically maintained hedgerows increasingly evident;
- Changing crop patterns dominate the plateau top contrasting markedly with the numerous secluded valleys with their lush pastures and wooded slopes
- Sparse woodland cover on the plateau tops confined to occasional shelter belt plantations and beech clumps; Woodlands on steeper slopes and particularly within the valleys that dissect the plateau;
- Sparse settlement pattern on plateaux; elsewhere a dispersed pattern of small nucleated villages, often of Saxon and medieval origin located in sheltered valleys and spring-line villages at junction of the Chalk Wolds and Clay Wolds;
- Diverse Lower Cretaceous geology exposed in valleys provide a source of building materials that is represented in buildings constructed in the local vernacular;

- Plateau crossed by former drove roads with wide verges that support herb rich grassland; and
- Area rich in archaeological features, notably ridge-top ancient roads and trackways, prehistoric features such as long and round barrows, deserted or shrunken medieval villages and west east salters' roads convey the sense of a long period of occupation.

LANDSCAPE CHARACTER

The Chalk Wolds Landscape Character Type has a strong unity and distinctive character defined by the open and elevated rolling plateau, broad sweeping views, and intensively managed arable land with its seasonally changing field and cropping patterns. A network of steep valleys including numerous dry valleys dissects the plateau area resulting in the pronounced rolling landform. In contrast to the open and expansive landscape of the upland plateau areas, the valleys have a more secluded character with sheltered and 'hidden' areas and steeper slopes.

The woodland cover across much of the open plateau is sparse and limited to occasional small blocks of woodland including beech clumps. However, the valleys support a lush vegetation with many areas of woodland hugging the steeper slopes as well as in the valley bottoms.

The Chalk Wolds landscape is associated with a long period of occupation resulting in a rich archaeological heritage with visual remnants of ancient tumuli and deserted or shrunken medieval villages. Ancient routeways and former drove roads also cross the plateau, the latter characterised by wide herb rich grass verges and species rich hedgerows.

To the east of the main area of the Chalk Wolds, extensive deposits of glacial till mask the underlying chalk with a gently sloping ridge dipping to the east before merging with the Fen and Marsh Fringe Farmlands. This is the most heavily wooded part of the Chalk Wolds where numerous blocks of woodland are interspersed with cultivated arable and pasture fields. This deeply rural area has an isolated and remote feel. The ridge-top salters' roads, spring-line villages and archaeological features are notable features within this part of the broader type.

PHYSICAL INFLUENCES

The chalk that underlies the Chalk Wolds Landscape Character Type is more than 100m in depth and forms part of a much wider outcrop that extends from the Yorkshire Wolds to the south coast of England, in East Sussex and in Dorset. Prior to the deposition of the Chalk, the marine conditions that prevailed during the Lower Cretaceous Period provided a sequence of deposits that is unique to the East Midlands Region.

The topography of the Chalk Wolds has been extensively and dramatically modified by glacial and periglacial activity. In the final glacial period that peaked around 30,000 years ago the ice sheet did not reach the East Midlands but numerous meltwater channels were created as it melted, while melting permafrost led to much instability on steep slopes resulting in landslides. The Landscape Character Type therefore presents notable remnants of ancient coastal cliff lines, glacial spillways and meltwater channels, ponded lake systems and glacial tills and gravels all of which have played important roles in shaping the drainage pattern and the form of the current landscape.

The Chalk Wolds are marked by numerous small disused chalk quarries where the chalk has been dug for local use as agricultural lime and hard core. Chalk is also extracted from a few quarries for both aggregate and industrial purposes, including lime production for steel manufacture and industrial fillers, for constructional purposes and agricultural use.

The chalk scenery offers excellent geodiversity interest with a variety of geomorphological features and quarries representing much of the chalk sequence. In view of the range of geological

exposures and geomorphological features, it is important that practices are in place for their care, maintenance and management, and the promotion of their educational and interpretational interest.

With the exception of the area masked by till, woodland cover across the Chalk Wolds Landscape Character Type is low, but nevertheless is an important landscape and habitat component. Much of the present day woodland was planted during the parliamentary enclosures of the late 18th and early 19th centuries providing a mix of small game coverts, parkland, tree belts and avenues. Small plantations and clumps of predominantly beech, with some ash, sycamore and pine, are still dotted around the Chalk Wolds, and where they occur, form conspicuous landscape features that punctuate the otherwise open plateau landscape.

The steep slopes within the many glacially modified valleys and spillways, particularly in the eastern section of the Chalk Wolds, are more difficult to cultivate and often support fine examples of woodlands on these marginal and undisturbed areas. The largest blocks of woodland in the Chalk Wolds occur in the south east where the pattern merges into the neighbouring Fen and Marsh Margin Farmlands Landscape Character Type. There is very limited ancient woodland with a rare example occurring at Tetford Wood.

The chalk is one of the main aquifers of the East Midlands. Chalk streams are one of the most important wildlife habitats in the Chalk Wolds, originating from springs from the chalk aquifer that emerge in the higher parts of the plateau and which flow over the chalk for a substantial distance. Springs occur either at the edge of the chalk where it meets the clay or where water rises through the chalk along structural weaknesses. Typical chalk streams are shallow and wide with a gravel bed. The flow is stable and the clear mineral-rich water supports a high diversity of plants and animals, notably brown trout, brook lamprey, spined loach, eel, water vole and otter as well as important invertebrates.

The soils across the Chalk Wolds closely reflect the underlying geology. Shallow lime rich soils predominate across the plateau but in valley bottoms, freely draining lime rich loamy soils are evident. Although much of the Wolds has long been under the plough, grassland habitats remain an important albeit often localised landscape and wildlife resource. The majority of the Chalk Wolds' grasslands and rough pastures are found on the steep slopes where soils are thin and the ground hard to cultivate, in the valley bottoms as lush pastures and wet flushes, and in disused quarries.

Grass verges associated with the network of roadsides and green lanes are a distinctive landscape feature of the Chalk Wolds with some as wide as 20 metres. Those found alongside the former drovers roads and other ancient routeways commonly provide the most flower-rich verges and are thought to be remnants of pre-enclosure pastures.

In the past the verges were used for grazing flocks of sheep en route to the coastal grazing marshes. Until quite recently many of the wide verges in the Wolds were cut and baled by farmers, providing a useful source of 'long acre' hay, however, this activity has diminished in the past decade. The verges continue to provide an important additional grassland habitat, often acting as linear corridors for birds, small mammals and insects.

Calkwell Hill Chalk Wolds (© Neil Pike, Natural England)

CULTURAL INFLUENCES

The Chalk Wolds has a rich cultural heritage signified by the wealth of archaeological and historic landscape features that is present including some of the oldest human remains in Britain. Every period of human habitation has left its mark on the landscape through a wide variety of cultural features.

The oldest known evidence of human activity on the Chalk Wolds dates from the Palaeolithic period, with an important stratified site at Welton le Wold. By the Neolithic period the Wolds had become a cultural focal point. Indeed, the Chalk Wolds has an exceptional ritual landscape including the densest distribution of long barrows in the country and an important grouping of round barrows. Significant settlement and burial sites can be traced through the Bronze and Iron Ages and analysis of prehistoric and Roman remains shows that many Iron Age centres were superseded as Roman settlements. The ridge top route of Bluestone Heath Road and Barton Street provided an important trackway throughout the prehistoric period and into more recent times.

During early medieval times this was one of the most densely populated parts of England but with the rapid decline of the population following the Black Death and the rise in wool production many villages became depopulated hence the numerous deserted villages. Other features include distinctive stone churches that are constructed in the locally available stone from the Lower Cretaceous rock formations. In more secluded valley areas, particularly in the north eastern part of the Chalk Wolds, there are remnants of the pre-enclosure landscape. In more recent times, the regimented pattern of enclosure fields is evident albeit many having since been enlarged following the amalgamation of fields. Although there are no extensive parklands, smaller estates are a particular feature and often include modest Tudor or Georgian country houses, together with Victorian farmsteads and farm workers cottages.

A large number of Anglo-Saxon cemeteries, such as the one at South Elkington, show the continued importance of the area for ritual purposes. The Wolds was important in the formative years of Christianity in the county with a very early monastery at Partney. Substantial numbers of remains date from the medieval period, with numerous monasteries and nunneries and one of the highest concentrations of deserted medieval villages in England.

More recent cultural and social change in the Chalk Wolds Landscape Character Type has resulted in further features within the landscape notably a number of now disused airfields that were established in the First and Second World War, taking advantage of the flat landform and strategic location on the east coast of England. Settlement is widely dispersed across the Chalk Wolds with a pattern of small nucleated vernacular villages that nestle into the wooded and secluded valleys, their presence often identified by landmark church towers and spires constructed in the local Lower Cretaceous stone that is exposed in the valleys below the chalk. Across the plateau tops there is a pattern of widely dispersed farms and occasional isolated dwellings.

Chalk Wolds (© Carol Paterson, Natural England)

AESTHETIC AND PERCEPTUAL QUALITIES

The Chalk Wolds Landscape Character Type has a strong unity of character with a simple and recurring palette of features. The repetitive rhythm of the folded rolling landform of the open plateau is particularly distinctive, with the regular pattern of the extensive arable fields further emphasising this simplicity.

This is a landscape of large scales where the wide expanses of the large fields meet vast skies and afford extensive and exhilarating outward views across the plateau as well as to adjoining areas. Settlement on the plateau tops is sparse which further emphasises a sense of emptiness and isolation, as well as tranquillity.

The presence of numerous archaeological features within the landscape conveys a sense of continuity and the long period of time that man has settled in and moved through the Chalk Wolds.

In contrast to the open wolds, the secluded and secret valleys that dissect the plateau have a more intimate and inward looking character. Within these valleys there is an intricate pattern and balanced relationship of features, notably the woodlands on the steeper slopes, valley bottom pastures, and rural villages often dating from the Saxon and medieval periods with many dwellings constructed in the local vernacular and locally sourced stone. These combine to convey the sense of a long settled rural landscape that is in harmony with its surroundings.

LANDSCAPE CHANGE AND MANAGEMENT

BUILT DEVELOPMENT

Forces for Change

Built development is affecting the pattern and character of rural settlements. Development on village margins can be particularly damaging, creating visual intrusion and resulting in the loss of surrounding landscape features. There is also an increase in conversion of traditional farm buildings into housing, further damaging architectural and historic character.

The Chalk Wolds is also increasingly being affected by noise and light pollution particularly where there is redevelopment of hilltop settlements and brownfield sites such as alternative uses for former airfields, including small scale industrial expansion.

Shaping the Future Landscape

The aim should be to protect the distinctive character of the landscape and nucleated settlement pattern, ensuring development is appropriate in terms of design and scale. Specific mechanisms include Village Design Statements for those villages most prone to infill development and expansion to help integrate new development into the landscape and ensure the appropriate use of vernacular styles and building materials that harmonise with local character. There should also be a place for the use of best practice innovative architectural and planning solutions that take inspiration from local distinctiveness and character whilst utilising eco-friendly and high quality design. As well as Village and Town Design Statements, Conservation Area Appraisals can also be important tools.

The impacts of light and noise pollution need to be carefully considered with any future development proposals with the aim of minimising impacts through careful design and use of appropriate planning conditions.

INFRASTRUCTURE

Forces for Change

Green lanes and the grass verges associated with the network of drovers roads are a distinctive landscape feature of the Chalk Wolds; however, these are under threat from lack of management and inappropriate planting. The Chalk Wolds is under continuing threat from telecommunication infrastructure, creating visual landmarks in this predominantly open landscape and reducing the sense of remoteness and isolation.

Shaping the Future Landscape

The aim should be to manage the historic road network, ensuring their continued contribution to biodiversity and landscape character.

The aim should be to protect the character of the landscape by siting masts away from visually prominent locations. Increased sharing of masts and sites by operators should be considered, along with removal of redundant masts.

ENERGY PROVISION

Forces for Change

Wind energy schemes are not characteristic of this landscape. However, there are two sizeable wind energy schemes in the neighbouring coastal Fens near Mablethorpe and Conisholme that can be viewed from the Chalk Wolds. Given the Government's commitment to increasing energy from renewable sources, further schemes may be proposed both within and adjacent to the Chalk Wolds, adding further visual intrusions. The cumulative impacts of further schemes will need careful consideration as there are likely to be increasing effects upon the views both within and beyond the Chalk Wolds.

Shaping the Future Landscape

The aim should be to protect the character of the landscape by siting wind energy schemes away from visually prominent locations and ensuring installations are of an appropriate size and scale. There is potential for strategic regional and sub regional level guidance on commercial wind energy schemes, including cumulative impact, informed by the EMRLCA and other studies. In addition, planning guidance for the siting and design of wind energy schemes should be produced at the county and/or district level where necessary, establishing the most appropriate sites for development and setting out the criteria against which new applications will be assessed. This could also be extended to cover developments of a similar size and scale, such as telecommunications infrastructure.

MINERALS AND WASTE

Forces for Change

The chalk that underlies the Chalk Wolds landscape has been quarried for centuries, and there are numerous small disused chalk quarries where the Chalk has been dug for local use as agricultural lime and hard core. In addition there are a few working quarries on the fringes of the landscape. These can be visually intrusive, reduce the sense of tranquillity in more remote areas, and have adverse effects on heritage features and wildlife habitats.

Shaping the Future Landscape

The aim should be to protect the open character of the landscape by siting extraction sites away from visually prominent and sensitive locations. The impact on long distance views from surrounding villages and towns should also be considered. Where extraction does occur, it will be necessary to plan for their restoration and after-use, ensuring appropriate landscape, geodiversity, biodiversity, educational and recreational benefits.

Chalk Wolds (© Carol Paterson, Natural England)

AGRICULTURE AND LAND MANAGEMENT

Forces for Change

There is marked evidence of agricultural intensification and farm amalgamation, accompanied by a move towards arable production. This has resulted in the loss or damage of many typical landscape features, including traditional patterns of field boundaries, areas of pasture, and semi-natural habitats, contributing to a more homogenous landscape. The loss of pasture is particularly evident around settlements, where grazing animals and smaller field sizes contribute to the setting and structure of several villages. Chalk streams are also an important feature of the landscape.

Shaping the Future Landscape

The aim should be to protect existing rural landscape features, whilst encouraging positive management of those features lost or under threat. The restoration of hedgerows should be given priority, along with an increase in grassland creating a stronger and more mixed pattern of land use.

Wherever possible, new hedge planting schemes should help provide connectivity via habitat links to neighbouring hedgerows, copses and woodland. Priority should be given to schemes that follow historic boundaries. Grassland creation should favour high and steep ground, and where there is strong heritage interest, in addition to the encouragement of low input grassland adjacent to streams.

FORESTRY AND WOODLAND

Forces for Change

Woodland cover across the Chalk Wolds Landscape Character Type is generally low, consisting of small, isolated plantations and copses. However, woodland is an important landscape component, contributing to the mosaic of different land use and habitat types and helping to integrate development into the landscape. There has been a general neglect and lack of management with many of the woodlands, following the widespread reduction in demand for traditional woodland products.

Shaping the Future Landscape

The aim should therefore be to plan for new small-scale woodlands around key settlements and more intimate and low lying areas, ensuring the open character of this landscape is maintained. The aim should also be to manage existing trees and woodland, encouraging new planting to ensure a diverse age and ecological structure. Consideration should also be given to the creation of woodland edge habitats, enhancing their contribution to landscape and biodiversity character, and strengthening links with restored hedgerows and grassland areas. Further plantings and management to reinforce the pattern of distinctive 'beech clump' woodlands should be encouraged, many of which are located on prominent hilltop locations.

Such proposals should be undertaken in collaboration with the Forestry Commission, the Lincolnshire Wolds Countryside Services (LWCS) and local landowners. Financial support may be available largely through the English Woodland Grant Scheme with further opportunities possible via LWCS Grants Scheme and Sustainable Development Fund. The relationship between the Lincolnshire Wolds and the Fens should also be considered, ensuring some transition within existing woodland patterns whilst retaining the wider distinction between the two Landscape Character Types. Future woodland planting within the adjacent coastal marshes needs to be carefully planned to avoid the interruption of popular views from the eastern Chalk Wolds ridge (the fossil sea cliff).

TOURISM AND LEISURE

Forces for Change

The Lincolnshire Wolds has much to offer as a tourist destination and is increasing in popularity. Although much of the tourist activity is within the existing villages and market towns, new development in the countryside, such as picnic areas, caravan sites and holiday lodges, can cause visual intrusion and result in the loss of landscape features and character. The affect is particularly evident in locations with little or no settlement.

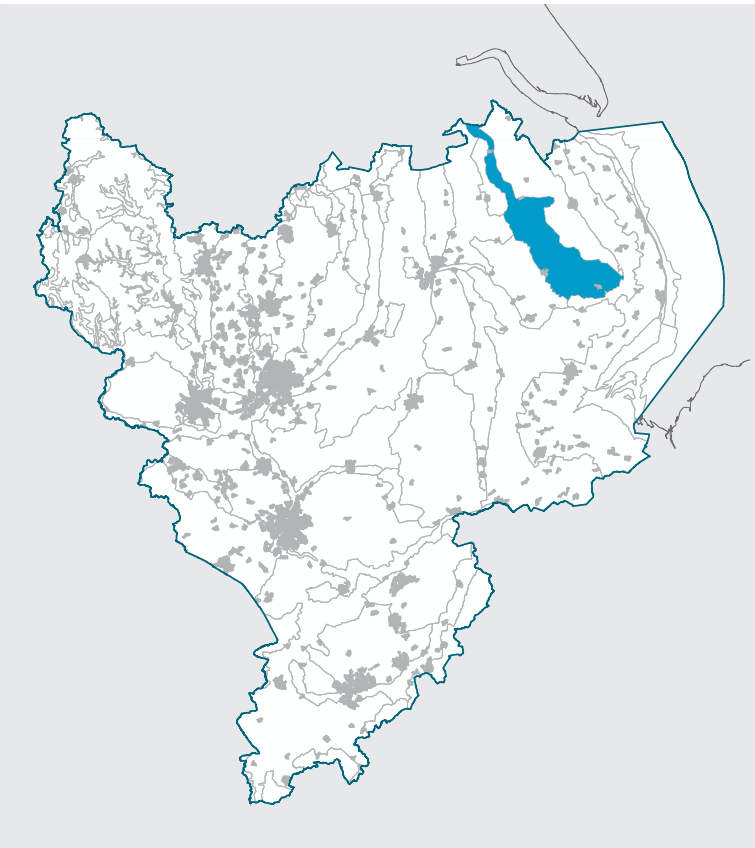
Shaping the Future Landscape

The aim should be to protect the distinctive open character of the landscape and consider the visual impact of any new tourist facilities. Planning guidance for the design and siting of new tourist facilities should be produced at the county and/or district level where necessary, establishing the most appropriate sites for development whilst ensuring facilities respond to projected demand. In addition, the diversification of farms to provide attractions and accommodation should be carefully managed to ensure a balance is struck between maintaining rural character and supporting the rural economy.

7B:

WOLDS SCARPS, RIDGES AND VALLEYS

Pronounced escarpment with rounded ridge tops (© Lincolnshire Wold Countryside Service)



KEY CHARACTERISTICS

- Pronounced escarpment with rounded ridge top profile at north western section of the Chalk Wolds, with exposed scars of chalk, and ironstone outcrops;
- Steep, hummocky scarp slopes with land cover of rough pasture and scrub, intermittent copses and larger blocks of mainly deciduous woodland including, some wet pastures and distinctive ridge top beech clumps along summit ridge;
- Complex landform with areas of landslips and wet flushes particularly at junction of chalk and Lower Cretaceous rocks and spoil heaps associated with old ironstone working;
- Panoramic and exhilarating views from top of escarpment to the Wooded and Unwooded Vales to the west;
- Scarp dissected by minor watercourses, dry valleys and spring lines;
- Few settlements on scarp except for occasional farmsteads; distinctive pattern of spring line villages at foot of escarpment with older buildings constructed in Lower Cretaceous limestone and ironstone;
- Elevated undulating landscape of prominent chalk ridges bisected by deep combes and wide river valleys in the southern section of the type;

- Mosaic of mixed pastoral and arable land in the southern section, enclosed by mature hedgerows and intermittent woodlands, a network of narrow winding roads and a dispersed pattern of small nucleated villages; and
- Area rich in archaeological features with ancient trackways, burial mounds and deserted medieval villages and drovers roads signifying a long period of settlement of the area.

LANDSCAPE CHARACTER

The Wolds Scarps, Ridges and Valleys Landscape Character Type is represented in the East Midlands region as the western limit of the chalk outcrop in Lincolnshire where it forms a prominent west facing escarpment. The panoramic views that are obtained from the summit ridge of the escarpment across the Wooded and Unwooded Vales to the west and more limited views to the crest of the rolling Chalk Wolds to the east convey a sense of elevation and exhilaration. The escarpment slopes are steep and with a sometimes hummocky appearance, with the landform convoluted by a sequence of valleys associated with springs that rise on the scarp slopes. There are also working chalk quarries on the escarpment, notably the Mansgate Quarry, near Caistor.

A mosaic of rough pasture, scrub vegetation and intermittent woodland extends across these slopes and supports an area rich in wildlife. Woodlands often cap the steepest slopes or are located within the folds of the valleys, further emphasising the landform. While settlement is generally absent on the slopes, a number of spring-line villages are located at the foot of the scarp, forming a distinctive feature. Many of the older dwellings and churches within these villages are constructed from the Lower Cretaceous sandstones and limestones that are exposed at the base of the main chalk escarpment. Ancient trackways such as Caistor High Street follow the summit ridge and, together with features such as tumuli and long barrows, are indicative of occupation of the area since prehistoric times.

The southern extension of the Wolds Scarps, Ridges and Valleys has a much more complex landform and land use. This is attributable to the exposure of a succession of Lower Cretaceous and Upper Jurassic rocks that occurs in this area together with areas of glacial drift deposits. The differing characteristics and erosional responses of these rock formations in relation to the chalk, as well as the intermittent areas of drift materials, has resulted in a more convoluted and angular landform with a succession of ridges and valleys as well as outliers of the more resistant rock formations. The prominent ridges and internal facing escarpments are dissected by deep combes and wide river valleys and support a patchwork of pastoral and arable fields, woodland, hedgerows, country estates and parkland, and a network of rivers and streams. Many river valley floors are marshy and alder carr woods are present. As with the northern section of the escarpment, the southern part of the Wolds Scarps, Ridges and Valleys also displays evidence of a long period of occupation. Prehistoric barrows and earthworks are common on hill tops together, with routes of Roman roads, medieval moated sites and deserted medieval villages.

Wolds Scarps, Ridges and Valleys (© Carol Paterson, Natural England)

PHYSICAL INFLUENCES

The Wolds Scarps, Ridges and Valleys Landscape Character Type marks the western limit of the outcrop of Cretaceous rocks within the East Midlands Region. The Upper Cretaceous Chalk present here is a much reduced thickness than to the east but is nevertheless represented as a prominent escarpment, particularly to the north between North Willingham and Nettleton where there are extensive views to the west across the lowland vales of the coversands. The chalk has been quarried at a number of locations and while a number are now disused, working quarries are still evident, as at Mansgate Quarry, near Caistor.

Where the Chalk has been removed through erosion, Lower Cretaceous rocks have been exposed forming a complex series of secondary escarpments and ridges and valleys. This is particularly pronounced in the southern section of the Landscape Character Type where the Rivers Bain, Waring and Lymn have cut through the chalk to expose these older rock formations, including the Upper Jurassic Kimmeridge Clay. These rocks are also evident at the lower section of the more pronounced chalk escarpment in the north.

The Lower Cretaceous sequence commences with the Spilsby Sandstone followed by the iron rich Claxby Ironstone, after which sequences of mudstones, limestones and sandstones form the Tealby Formation. In the southern and central Wolds, the Tealby Formation is succeeded by the Roach Formation comprising clay, sand and pebbles of quartz and ironstone, and then the Carstone Formation, a gritty iron-rich sandstone followed by the pink limestone of the Red Chalk (Hunstanton Formation).

The differential resistance and variable characteristics of the Lower Cretaceous rocks have given rise to the changing landform patterns as well as the presence of landslides, for example at Nettleton and Hainton, with some extensive landslides in the underlying Kimmeridge Clay that have been induced by springs at the base of the Spilsby Sandstone. There are also areas of wet flushes. The harder bands of rock have also proved suitable as building stones. Buildings constructed in the rich brown hues of the Caxby Ironstone, and the paler honey colour of the Tealby Limestone, such as at Tealby Church and the hill top medieval church at Walesby, are tangible links with the underlying geology. In the southern part of the Wolds Scarps, Ridges and Valleys the green brown hues of the Spilsby Sandstone is evident.

The chalk is one of the main aquifers of the East Midlands. A number of 'mixed geology' chalk streams rise or flow through the Wolds Scarps, Ridges and Valleys, comprising the shorter courses of Nettlelton Beck and the Rase in the north that dissect the chalk escarpment, and the Bain, Waring and Lymn that rise in the Chalk Wolds before descending across Lower Cretaceous sands, clays and ironstones that form a series of low hills and ridges with gravel terraces. Within the valleys of the Bain and Lymn, the Kimmeridge Clay that outcrops has resulted in the creation of marshy and poorly-drained vales where nationally important alder carr woodlands occur. The streams provide important habitat for trout, eel, water vole, otter and numerous invertebrates.

The soil patterns closely reflect the bedrock and superficial geology. To the north, the plateau tops and slopes of the escarpment are dominated by light lime rich soils, below which there is a striking variation of colour and texture reflecting the underlying Red Chalk and Lower Cretaceous beds. Within the Lymn Valley, the outcropping Spilsby Sandstone has resulted in well-drained, sandy loams, but in the lower reaches, and in the Bain valley there are deep, coarse permeable loams except where the presence of Kimmeridge Clay gives rise to heavier clay soils and localised wet areas.

As with the Chalk Wolds, the chalk scenery of the Wolds Scarps, Ridges and Valleys offers excellent geodiversity interest with a variety of geomorphological features and quarries representing the chalk sequence. In view of the range of geological exposures and geomorphological features, it is important that practices are in place for their care, maintenance and management, and the promotion of their educational and interpretational interest.

CULTURAL INFLUENCES

In common with the Chalk Wolds to the east, the Wolds Scarps, Ridges and Valleys Landscape Character Type bears evidence of a long period of occupation from prehistoric times. There are significant Mesolithic remains in the southern part of the Landscape Character Type, particularly in the Lymn valley, and prehistoric barrows and earthworks are common on hill tops. Ancient trackways also follow the upper sections of the Wold Scarps, Ridges and Valleys, often commanding extensive views. The Bluestone Heath Road, which forms the eastern boundary of the type, is particularly noteworthy and also the High Street which follows the top of the escarpment in the northern section. The line of a west east aligned Roman road can be traced through the southern section of the Wolds Scarps, Ridges and Valleys, notably at Tetford. This route linked Lincoln and the east coast and was used for the coastal salt industry.

In the northern section of the Wolds Scarps, Ridges and Valleys, settlement avoided the steep slopes of the chalk escarpment favouring the shallower slopes at the base of the escarpment where there were richer soils and a source of water from the chalk springs. The spring line villages remain a distinctive feature of the Landscape Character Type.

In the more complex landscape of the Wolds Scarps, Ridges and Valleys to the south a number of settlements were established during the Saxon period, and subsequently by the Danes as is evident in the many place names ending in 'by'. Although well populated by the early medieval period, villages were progressively abandoned from the 12th century culminating in the late 14th century linked to the Black Death, climate fluctuations, enclosure and the development of the wool trade. This area now has one of the highest concentrations of deserted and shrunken medieval villages in England.

While the parliamentary enclosures had an influence on the southern section of the Wolds Ridges and Valleys many areas escaped the wholesale rationalisation of the landscape into geometric field enclosures and a pattern of smaller scale irregular fields, winding roads and sunken lanes and a more intimate and enclosed character is still evident. A patchwork of fields also extends across the escarpment slopes in the north of the type, although the steepest slopes remain uncultivated with scrub and woodland.

Despite the economic and social changes of 20th and 21st centuries the landscape of the Wolds Scarps, Ridges and Valleys has remained largely unaffected. Expansion on the perimeter of settlements, local road improvements and isolated features such as telecommunication masts at high locations are evident but the overall impression is that of a quiet rural landscape.

Peak Fringe near Kelstedge (© Martin Banham, Natural England)

AESTHETIC AND PERCEPTUAL QUALITIES

The visually imposing rising slopes of the chalk escarpment to the north and the more rugged and complex succession of scarps, ridges and valleys to the south of the type present a dramatic and varied landscape. The commanding views from the northern escarpment are particularly exhilarating encompassing the expanse of the vales to the west and more limited views to the crest of the rolling Chalk Wolds to the east that is followed by the ancient trackway of Caistor High Street. While the summits of the ridges to the southern section of the Wolds Scarps, Ridges and Valleys also afford expansive views, the more convoluted and complex landform and the series of valleys creates a more varied and sometimes enclosed landscape.

The influence of the chalk is dominant, with its simplicity of colour and effect on landform profiles, particularly in the northern scarp. In contrast, however, the older Lower Cretaceous rock formations that outcrop at the base of the chalk have resulted in a more colourful and varied landscape, with their differing qualities evident in a range of building materials and soils.

In the southern section of the Wolds Scarps, Ridges and Valleys the mosaic of land uses with pastoral and arable fields, hedgerows, woodlands, country estates and parkland, rivers and streams all contribute to the perception of a quiet and deeply rural area. Although the many archaeological features are tangible reminders of earlier periods of occupation and length of time that this area has been settled, there is nevertheless an impression that many areas have undergone little change over the last few centuries.

LANDSCAPE CHANGE AND MANAGEMENT

BUILT DEVELOPMENT

Forces for Change

Modern residential development is affecting the historic villages and hamlets, eroding their architectural and historic character. Development on settlement margins can also be particularly damaging, creating visual intrusion and resulting in the loss of surrounding landscape features. Localised settlement expansion and infilling has often occurred following formulaic designs with minimal consideration to the local vernacular.

While it is important to maintain the open and undeveloped character, there is evidence of abandonment of farms and cottages, along with depopulation of some rural villages, due to the degree of isolation and lack of local services. This can result in the loss of local identity and create visual detractors.

Shaping the Future Landscape

The aim should be to protect the open and undeveloped character of the landscape and limit the visual impact of any new development. Ideally new development should be sited close to existing settlement; however, care should be taken not further diminish settlement character. Specific mechanisms and advice should include reference to Town and Parish Plans and Village Design Statements for those villages and market towns most prone to infill development and expansion. As well as Village and Town Design Statements, Conservation Area Appraisals can also be important tools. There should also be a place for the use of best practice innovative architectural and planning solutions that take inspiration from local distinctiveness and character whilst utilising eco-friendly and high quality design.

The aim should also be to protect against further decline of rural communities, ensuring appropriate support for the rural economy and links to services in larger settlements.

INFRASTRUCTURE

Forces for Change

Road improvements are commonplace, including straightening of existing routes and new 'by-pass' schemes designed to alleviate congestion within the villages. This has an urbanising effect and brings a degree of standardisation to the countryside. The Wolds Scarps, Ridges and Valleys is under less threat from telecommunications masts due to the more complex landform. However, infrastructure on the summit of the scarp would severely detract from the simple but dramatic open skyline.

Shaping the Future Landscape

The aim should be to protect the existing character of the rural road network, whilst having regard to safety requirements. Any new roads should be carefully planned and designed to provide positive environmental and landscape enhancements. The aim should also be to manage historic routes, ensuring their continued contribution as biodiversity and recreational corridors.

The aim should be to protect the character of the landscape by siting potential telecommunications masts and other large developments away from visually prominent locations.

MINERALS AND WASTE

Forces for Change

The chalk that underlies the Wolds Scarps, Ridges and Valleys has been quarried for centuries, and there are currently some quarries still operating. These can be visually intrusive, reduce the sense of tranquillity in more remote areas, and have adverse effects on heritage features and wildlife habitats.

Shaping the Future Landscape

The aim should be to protect the open character of the landscape by siting extraction sites away from visually prominent and sensitive locations. The impact on long distance views from surrounding villages and towns should also be considered. Where extraction does occur, it will be necessary to plan for their restoration and after-use, ensuring appropriate landscape, geodiversity, biodiversity, educational and recreational benefits.

Wolds Scarps, Ridges and Valleys (© P Clarke, Natural England)

AGRICULTURE AND LAND MANAGEMENT

Forces for Change

There is marked evidence of agricultural intensification resulting in the loss or damage of many typical landscape features, including chalk grassland and field boundaries. This weakens the pattern of land-use and contributes to a more homogenous landscape. Rivers and streams are also an important feature of the landscape.

Energy crops, in particular Miscanthus, are being cultivated to meet renewable energy targets. These are fast growing and tall crops that can radically change the appearance of the landscape. There is also a requirement for storage and processing facilities, which along with other new agricultural buildings, can reduce the sense of remoteness in rural areas and cause visual intrusion. There are a large number of traditional agricultural buildings, many of which provide important heritage and visual features but are often in a poor state of repair. Sympathetic restoration should be encouraged.

West Keal Scarp Wolds (© Neil Pike, Natural England)

Shaping the Future Landscape

The aim should be to protect existing landscape features, whilst encouraging positive management of those features lost or under threat. The restoration of hedgerows should be given priority, strengthening the pattern of land use. Furthermore, grazing should be reintroduced where appropriate, increasing the extent and quality of grassland whilst meeting and sustaining local and regional market needs. The creation of grassland along watercourses should also be considered, enhancing their visibility, whilst increasing the occurrence of semi-natural habitats. Hedgerow maintenance and restoration should seek to enhance local landscape and biodiversity through enhanced cutting schedules with new planting schemes focusing on historic boundaries and increased connectivity between woodland and copses.

The aim should be to protect the distinctive open character of the landscape and consider the visual impact of energy crops and associated facilities. New structures should be located away from visually prominent locations and close to existing settlement and infrastructure where possible. Although the introduction of energy crops will be more difficult to manage, grant applications to Natural England or the Forestry Commission may require an assessment of landscape and visual impacts.

FORESTRY AND WOODLAND

Forces for Change

Woodland cover varies across the landscape, with generally more woodland towards the southern section of the Wolds Scarps, Ridges and Valleys and distinctive clumps along the summit ridge. New woodland planting would therefore generally be appropriate, reinforcing the character and increasing overall woodland coverage in the region.

New woodland could also be used in and around settlements to integrate new development into the landscape and contain future growth. All new schemes do require sensitive planning to minimise any undesirable impacts particularly upon prominent viewpoints and heritage assets. There is also a general neglect and lack of management of existing woodlands.

Shaping the Future Landscape

The aim should be to plan new woodland creation in appropriate areas and around key settlements. The aim should also be to manage existing trees and woodland, encouraging new planting to ensure a diverse age and ecological structure. Consideration should also be given to the creation of woodland edge habitats, enhancing their contribution to landscape and biodiversity character, and strengthening links with restored hedgerows and grassland areas.

Such proposals should be undertaken in collaboration with the Forestry Commission, the Lincolnshire Wolds Countryside Service (LWCS) and local landowners, and financial support may be available largely through the English Woodland Grant Scheme with further opportunities possible via the LWCS Landscape Grants Scheme and Wolds Sustainable Development Fund.

TOURISM AND LEISURE

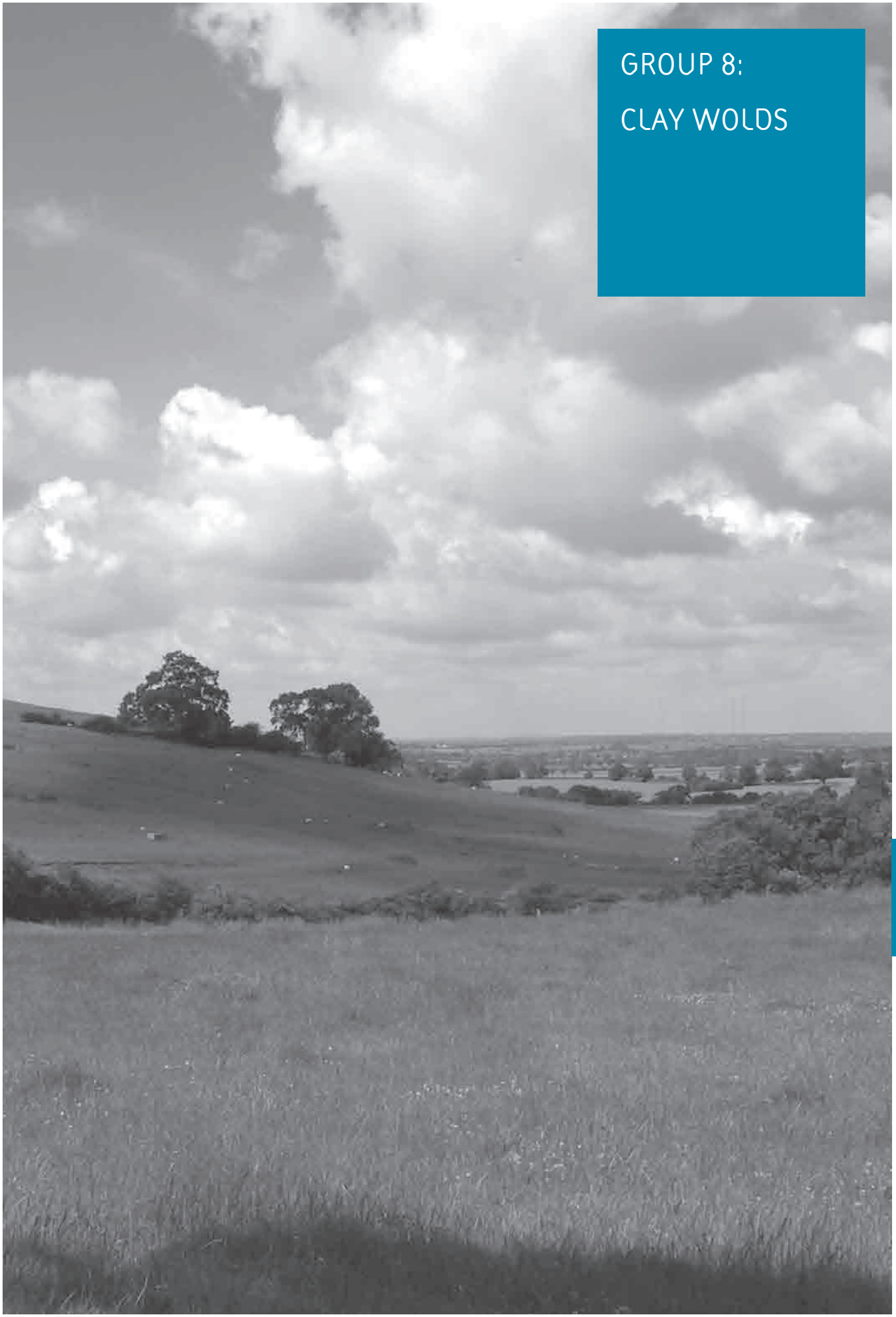
Forces for Change

The Lincolnshire Wolds is a popular tourist destination. Although much of the tourist activity is within the existing villages and market towns, new development in the countryside, such as picnic areas and camping sites, can cause visual intrusion and result in the loss of landscape features. The affect is particularly evident in locations with little or no settlement.

Shaping the Future Landscape

The aim should be to protect the distinctive open character of the landscape and consider the visual impact of any new tourist facilities. Planning guidance for the design and siting of new tourist facilities should be produced at the county and/or district level where necessary, establishing the most appropriate sites for development whilst ensuring facilities respond to projected demand. In addition, the diversification of farms to provide attractions and accommodation should be carefully managed to ensure a balance is struck between maintaining rural character and supporting the rural economy.

GROUP 8: CLAY WOLDS



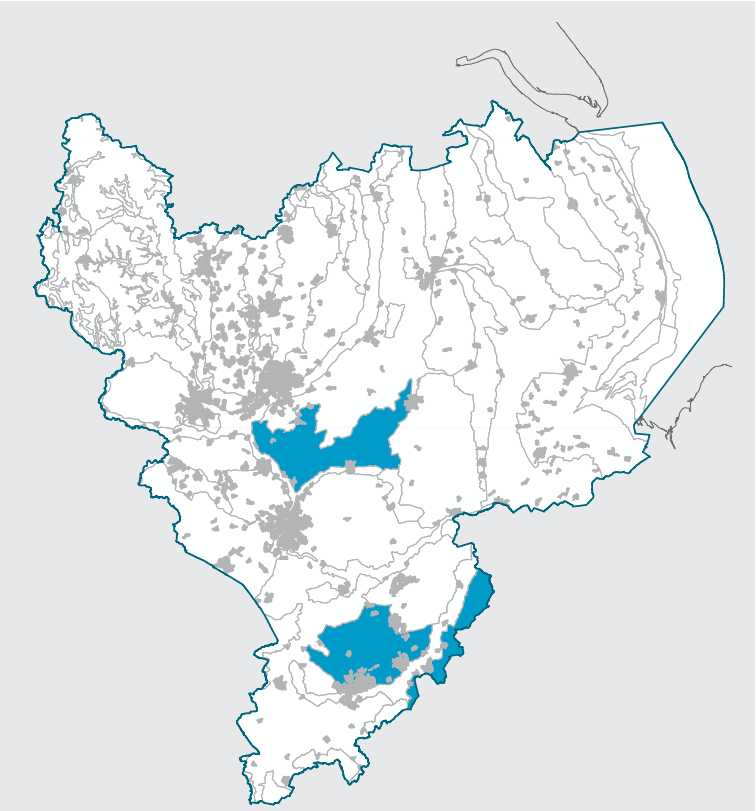
Prominent scarp slopes are characteristic of the Clay Wolds (© River Nene Regional Park/M Williams)

GROUP 8
PAGES 227-234

8A:

CLAY WOLDS

Well treed character from hedgerows, hedgerow trees, copses and small woodlands
(© River Nene Regional Park/M Williams)



KEY CHARACTERISTICS

- Broad plateaux overlain by thick mantle of till surrounded by undulating ridges and valleys, and prominent scarp slopes;
- Clay plateaux drained radially by streams occupying arrow valleys creating rolling landform;
- Mixed farming but with mainly arable on the plateau tops and pasture on steep sloping land and along valleys; hedged fields generally medium to large scale, with some evidence of amalgamation;
- Well treed character from hedgerows, hedgerow trees, copses and small woodlands despite limited areas of large woodland;
- Sparse settlement pattern of small villages and farms with little modern development;
- Ironstone and limestone churches and vernacular buildings, but brick the most abundant and -widespread building material;
- Frequent and prominent ridge and furrow close to villages;
- Quiet and remote, often empty character with expansive views contrasting with more intimate and intricate areas close to villages; and
- Damming of several valleys to create reservoirs which have localised impact on landscape character.

LANDSCAPE CHARACTER

The Clay Wolds Landscape Character Type represents a distinctive elevated plateau farmland landscape across thick belts of boulder clay separated by rolling valleys. Historically, the intractable clays of the plateau appear thinly settled, with settlements generally gravitating to the more easily worked soils on the neighbouring slopes and valleys. Remnants of this pattern of settlement remain evident in the modern landscape, and many of the elevated clays are sparsely settled, and retain a remote, sometimes empty character, enhanced by panoramic views over the surrounding landscape possible from their fringes. The valleys drain radially from the uplands and form a major component of the River Nene and several tributaries of the Trent. Here the landscape is more intricate and intimate, with long distance views obscured by landform and vegetation. Villages remain small and rural, although their built character is dominated by the use of brick.

The historic character of the landscape is dominated by hedged fieldscapes dating to the 18th and 19th centuries, albeit overlain onto a much older pattern of sinuous boundaries and routes across the hills. Other influences are limited to occasional rail routes winding through the landscape and reservoirs. In more recent decades, the removal of hedgerows and increased reversion to cereal farming has had a subtle influence on landscape character.

Clay Wolds, Nottinghamshire near East Leake.
(© Martin Banham, Natural England)

PHYSICAL INFLUENCES

The Clay Wolds Landscape Character Type occupies various bedrock geology formations, including Lias Group mudstones, Ooidal limestones and the Marlstone Rock and Northampton Sand Formations, the latter two of which have been used extensively as a building stone and are represented in the local vernacular of buildings within many of the villages. Jurassic mudstones are also extensive to the east of the Nene, stretching into neighbouring Cambridgeshire. Whilst influencing the elevation and main landform features, such as the escarpment and outliers that rise above the Vale of Belvoir, the surface expression of the bedrock is often subdued by a thick mantle of glacial till which also softens landform features to create a smooth, gently undulating landscape, interspersed with often steep sided valleys. The steep slopes in mudstone may be subjected to landslides.

The clay wolds to the south and east of Nottingham and east of Northampton offer only limited potential for features of geodiversity interest with very few exposures but some geomorphological features. The area to the north of Northampton offers much more potential. With the many former ironstone and building stone quarries and more pronounced geomorphological features, it is important that practices are in place for their care, maintenance and management, and the promotion of their educational and interpretational interest.

The streams that rise on the elevated plateaux flow into the surrounding river valleys in a radial drainage pattern. The influence of these valleys on landscape character is significant; the streams having eroded convex sloped valleys that are, in part, responsible for creating the undulating landform.

The superficial covering of till was deposited by glacial ice and is formed from unlithified rocks, sands and clays that have their origins as far north as Yorkshire, Lancashire and beyond. The covering was once more extensive, but has since been eroded by the numerous streams draining these low hills and deposited in the valleys of the major rivers, first as gravels and then as muds and silts. As such, the clay mantle now occupies only the more elevated areas and watersheds between the valleys, allowing the underlying geology to emerge at the fringes of the landscape.

On the plateaux and other more elevated areas, the soils derived from the till are lime-rich, loamy and clayey with impeded drainage. They are characteristically stony and contain a wide range of pebbles and rock fragments, indicating that the underlying tills have diverse geological origins. Where the clay overburden has eroded to expose the underlying Marlstone Rock and Northampton Sand Formations, soils are free draining, slightly acid but base-rich.

Despite the impeded drainage of the clays, cereal cultivation predominates across the fertile soils and gentle topography of the plateaux and gently sloping hills and valleys. Indeed, some areas are particularly intensively farmed through field amalgamation and the cultivation of single crops across wide areas. However, pastures are conspicuous on steeply sloping topography along valleys and close to villages. Here, field patterns tend to be more intricate and a wider range of land uses combine to create a more colourful and textured character than that of the simpler and more expansive plateau tops.

Widespread improvement and cultivation has diminished the nature conservation interest of the agricultural landscape. However, isolated areas of species rich grassland remain and are noted for their biodiversity value. Woodlands are also locally important, although not generally a dominant feature. Ancient woodlands are limited in scale and tend to be located on the thick clays. Evidence also suggests that these are often at the edge of parishes, perhaps indicating they were retained as communal resources at the fringes of the best and most readily cultivated land. Elsewhere, larger woodlands are a feature of parklands, valley sides and steep sloping scarps overlooking the Vale of Belvoir. Small geometric broadleaf copses and coverts are also an important landscape feature, providing cover for game and other farmland species.

Hedgerow trees, notably oak and ash, and lines of trees fringing watercourses also add to the wooded character of the landscape. Whilst the scale of fields, and therefore the distance between boundaries limits their ability to reduce the open character of the landscape, hedgerows are also locally important, providing visual containment and networks of habitat through the agricultural landscape.

CULTURAL INFLUENCES

Evidence of prehistoric settlement and activity on the Clay Wolds is limited. It is possible that the intractable clays would have been a constraint to the early exploitation as a consequence of primitive plough technology. However, the intensive arable farming of the past few decades may have removed evidence of prehistoric and Roman fields and farms.

Early Anglo Saxon occupation may also have been limited, and it is unclear whether the Saxon and Scandinavian place names evident represent consolidation of pre-existing farms and settlements or mark a new phase of occupation in the mid to late Saxon period. The repeated reference to 'Wolds' in place names, almost all of which occur on the till deposits, is indicative of open hill pastures, perhaps interspersed with woodland. Such resources would have been carefully managed as communal grazing and timber reserves. The distribution of settlements is also of note. The majority of villages appear to have been established at the edges of the thick till mantle, indicating that the elevated areas were managed as communal grazing, with open fields on the free draining soils of the slopes and lower lying areas. Remnants of ridge and furrow also support this, with most surviving areas lying on the fringes of the clay and where the clay mantle has been removed to expose the underlying bedrock.

Parish boundaries, established in the late Saxon period, and perhaps indicating much older divisions, also allude to this pattern of settlement and system of land management. Parish boundaries appear to show that valuable upland grazing resources were equitably divided amongst settlements on the lower ground. It is interesting to note that many ancient woodland sites survive on the fringes of several parishes, perhaps indicating that woodlands marked boundaries and were shared by neighbouring communities.

During the early medieval period, it is also possible that large areas of the landscape fell under forest law. For example Rockingham Forest once extended to Northampton, and would have included much of the landscape of the Clay Wolds west of Kettering. The Bromswold, mentioned in the 11th century tale of Hereward the Wake, once extended east from the Nene towards the River Great Ouse and is also significant. However, it is not clear to what degree such 'forest' areas were wooded, and evidence suggests that much of the land was cleared by the time of the Domesday survey.

There appears to have been piecemeal enclosure of the landscape from the 15th century onwards, and wide areas may have been thinly populated and dominated by sheep grazing. This goes some way to explain the thinly settled character of the landscape, small villages and few farms. Indeed it is possible that many areas remained unenclosed until the 18th and 19th centuries. During this time, the landscape was divided up as part of parliamentary and non parliamentary enclosures, resulting in today's pattern of rectangular hedged fields set within a more sinuous pattern of older enclosures, winding lanes and watercourses. Many village cottages and farms were also built or rebuilt in brick at this time. Whilst some limestone or ironstone buildings are evident, particularly in churches, brick is the dominant material.

During the 19th and 20th centuries agricultural improvement allowed arable cultivation to become more widespread and recent decades have seen hedgerow removal to create larger fields to accommodate modern farm machinery. Whilst industrialisation has not been a significant influence on the landscape, and villages have retained their rural character, the modern period has seen the construction of several rail lines across the Clay Wolds landscape, airfields and several reservoirs, notably in the valleys north of Northampton such as Pitsford Water, Hollowell and Thorpe Malsor.

Clay Wolds (© Graham Murray, Natural England)

AESTHETIC AND PERCEPTUAL QUALITIES

Despite being a productive agricultural landscape, in close proximity to several large towns, the absence of buildings and people across wide areas of the elevated clay landscape imparts a distinctive, albeit subtle, remote character. Where particularly long distance views are possible a sense of exposure prevails. This contrasts with the more settled character along river valleys. Here landform, small woodlands and hedgerow trees serve to limit views and create a more intimate landscape.

The predominance of brick in many farms and villages gives a unity of character, and implies relatively late settlement of the landscape. However, areas of ridge and furrow and ancient churches, as well as sinuous field boundaries and country lanes are suggestive of a much longer period of settlement and exploitation.

Colours and textures across the landscape are generally simple and muted, largely as a result of large fields of single crops. Where hedgerow removal or absence of management is in evidence, a declining character is perceived. More intact areas surrounding villages, perhaps displaying arable and pasture farming, wet meadows and areas of woodland, provide an important contrast, particularly where hedgerows are well maintained and form continuous unbroken networks.

LANDSCAPE CHANGE AND MANAGEMENT

BUILT DEVELOPMENT

Forces for Change

Large scale modern mixed-use development is evident on the fringes of larger settlements in the south of the Clay Wolds, such as Northampton, Wellingborough and Kettering, creating visual intrusion and extending the urban fringe. These settlements are targeted for further growth as they are located within the MKSM Growth Area. There is also pressure for residential development in the villages around the towns, which are popular with commuters, eroding architectural and historic character. The impact of the new development on the setting and views of churches is particularly important, as these are distinctive local landmarks.

Shaping the Future Landscape

The aim should be to protect the character of the countryside and consider the visual impact of any new development. Specific mechanisms include best practice innovative architectural designs and planning solutions and the planting of new trees, helping to integrate new development into the landscape.

In urban areas, care should also be taken to prevent coalescence, ensuring separation is maintained between the urban fringe and surrounding settlements. In rural areas, village expansion should generally be avoided in open, elevated areas where development would damage the sense of remoteness and expansive views. Many settlements would benefit from Village and Town Design Statements, guiding the design and scale of new development and ensuring the appropriate use of vernacular styles and building materials. As well as Village and Town Design Statements, Conservation Area Appraisals can also be important tools.

ENERGY PROVISION

Forces for Change

Given the Government's commitment to renewable energy provision, elevated areas of the Clay Wolds Landscape Character Type may be under pressure for wind farm development. Such development can create visual landmarks and reduce the sense of remoteness and isolation.

Shaping the Future Landscape

The aim should be to protect the character of the landscape by appropriately siting and designing new wind energy installations. There is potential for strategic regional and sub regional level guidance on commercial wind energy schemes, including cumulative impact, informed by the EMRLCA and other studies. In addition, planning guidance should be produced at the county and/or district level where necessary, establishing the most appropriate sites for development and setting out the criteria against which new applications will be assessed.

AGRICULTURE AND LAND MANAGEMENT

Forces for Change

While the rural landscape retains a mixed land use, with areas of pasture and arable, there is evidence of agricultural intensification, resulting in the loss or damage of many typical landscape features. This includes loss of hedgerows and hedgerow trees and damage to areas of ridge and furrow and other earthworks. There is also proliferation of new, large scale agricultural buildings, reflecting the loss of smallholdings and the general increase in farm size.

Shaping the Future Landscape

The aim should be to protect the structure and unity of the landscape and consider the impact of changes to farming practices. Consideration should be given to the management of those features lost or under threat. In particular the restoration of hedgerows should be given priority, creating a stronger pattern of land use and reinforcing the well-treed character. Management plans may also be appropriate for areas of ridge and furrow and other earthworks, to identify those areas most at risk.

The aim should also be to manage new agricultural development, ensuring development is appropriate in terms of type, scale and location. New large scale agricultural buildings should be carefully sited, away from visually prominent locations and amongst existing buildings where possible. Specific design guidance for farmsteads may be appropriate, establishing the criteria for new development.

FORESTRY AND WOODLAND

Forces for Change

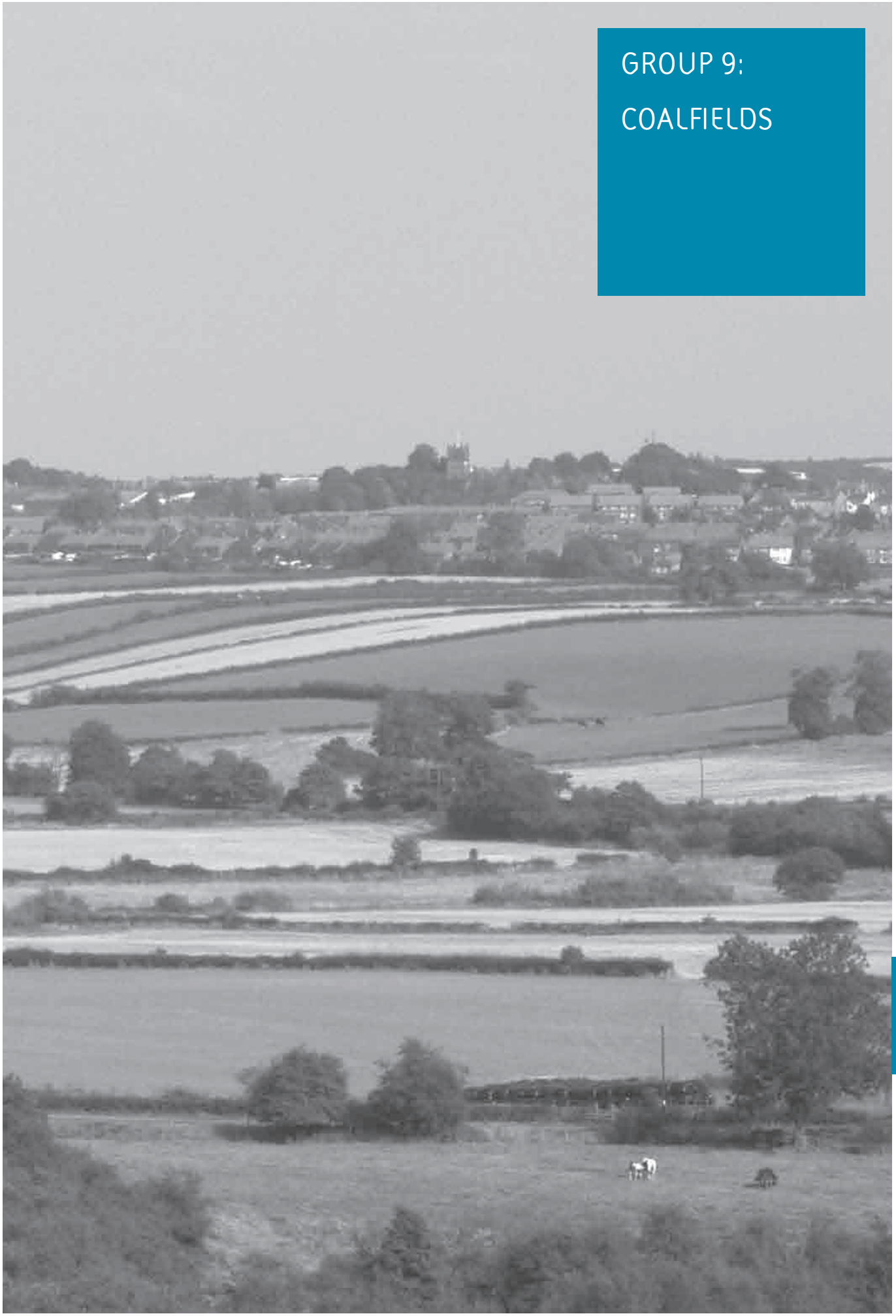
Woodland cover varies across the landscape, with generally more woodland within upland areas. New woodland planting would therefore generally be appropriate, reinforcing the character and increasing overall woodland coverage in the region. New woodland could also be used in and around settlements to integrate new development into the landscape and contain future growth. There is also a general neglect and lack of management, resulting in the decline of woodlands and hedgerow trees although where field sports, notably hunting, are practiced this will ensure the longer term management of woodlands as game coverts.

Shaping the Future Landscape

The aim should be to plan for new woodland creation in appropriate areas and around key settlements. The aim should also be to manage existing trees and woodland, encouraging new planting to ensure a diverse age and ecological structure. Consideration should also be given to the creation of woodland edge habitats, enhancing their contribution to landscape and biodiversity character, and strengthening links with restored hedgerows and grassland areas.

Such proposals should be undertaken in collaboration with the Forestry Commission and local landowners, and financial support may be available through the English Woodland Grant Scheme.

GROUP 9: COALFIELDS



Small towns and villages are characteristic of the Coalfields (© Derbyshire County Council)

GROUP 9
PAGES 235-244

9A:

SETTLED COALFIELD FARMLANDS

Undulating landform of low hills and ridges (© Derbyshire County Council)

KEY CHARACTERISTICS

- Undulating landform of low hills and ridges, and shallow valleys with local variations reflecting the differing characteristics of the underlying Coal Measures geology;
- Evidence of past and present exploitation of area with former mine sites, pit heaps, clay pits, disused railway lines, tramways, canals and opencast coal and clay working areas;
- Substantial areas of intact agricultural land with mixed farming predominating, varied field sizes and hedgerows but with localised areas of small fields and dense hedgerows;
- Scattered, small broad-leaved woodlands, copses and linear tree belts and some relict ancient semi-natural woodlands; more extensive woodlands and plantations associated with the restoration of former mining areas and also within The National Forest;
- Heathy vegetation associated with steeper slopes and uncultivated land;
- Small towns, villages, hamlets and scattered farmsteads constructed from local Coal Measures sandstone, with some villages expanded as sprawling mining settlements with red brick former mining terraces and ribbon development;
- Network of narrow winding lanes between urban areas; and
- Strong cultural identity and industrial archaeological interest associated with history of coal mining.

LANDSCAPE CHARACTER

The Settled Coalfield Farmlands Landscape Character Type occurs in two discrete areas within the East Midlands Region. The largest area is located within an approximately 10 -12 km wide belt of land extending from the north of Derby and Nottingham to the northern perimeter of the region and the Sheffield conurbation. To the south, a much smaller area is located in the north western part of Leicestershire and extending into the southern margin of Derbyshire, coinciding with the Leicestershire and South Derbyshire Coalfield. This northwest to south east aligned area is located between the Charnwood Forest area to the north east and the broad valleys and lowland areas associated with the Rivers Mease and Sence. It includes the settlements of Swadlincote, Ashby de la Zouch and Measham and extends up to the eastern perimeter of Coalville.

The character of this Landscape Character Type is closely related to the physical manifestation of the underlying Carboniferous Coal Measures geology where the changing sequence of rocks and their relative resistance has given rise to the undulating landform of low hills and ridges separating a sequence of shallow valleys. Superimposed on this physical form are the profound effects of the extensive exploitation of the coal seams within these rocks, as well as clay deposits. As a consequence of the rich mineral resources, the Derbyshire and Nottinghamshire Coalfields, and further south the Leicestershire and South Derbyshire Coalfields have seen constant change and development since the industrial revolution. This is manifested in the character of the landscape which displays a complex mosaic of often disparate and fragmented land uses that bear testimony to the progressive exploitation of the area. Urban and industrial development and evidence of past and present mining and related activities are widespread features across the Landscape Character Type and provide a constant reminder of the legacy of the coal mining industry. Despite this, their presence has contributed to a strong cultural identity and the numerous former mine sites, pit heaps, clay pits, disused railway lines, tramways and canals are a rich industrial archaeological resource and contribute to the Landscape Character Type's unique sense of history. However, an agricultural landscape of mixed farming with a predominance of pasture, and a complex of narrow winding lanes, still remains in a number of areas. This serves as a reminder of a once more extensive area of rural farmland that permeated the landscape before the imposition of mining activities and industrial uses.

The settlement pattern reflects the process of change and development. While many rural villages and scattered farmsteads remain, with older buildings often constructed in the local Coal Measures sandstone, many villages have been expanded into sprawling mining settlements with red brick former mining terraces and ribbon development.

Although the Landscape Character Type has a generally low woodland cover, there are nevertheless notable fragments of ancient woodland as well as a mosaic of small woods and copses within farmed areas and ribbons of dense streamline vegetation. Occasional areas of heathy vegetation are present on the sandy soils that overlie sandstone outcrops, and are remnants of a once much wider heathland cover. New plantations are also evident often in association with the restoration of derelict land or open cast coal mining areas. This is particularly notable within the Leicestershire and South Derbyshire area where extensive woodlands have been established as part of The National Forest.

Morton Tip (© Derbyshire County Council)

PHYSICAL INFLUENCES

The Settled Coalfield Farmlands are underlain by the Upper Carboniferous Coal Measures. The sequence of rock formations and presence of coal and other mineral resources is key to determining not only the characteristics of the landform but also the historic and cultural development of the area.

The productive coal bearing strata are divided into the Pennine Middle and Lower Coal Measures. The Lower Coal Measures consist of proportionately greater amounts of sandstone and fewer seams of coal and crop out towards the northern perimeter of the Landscape Character Type within the East Midlands. This more elevated area of hills and valleys is included within the Wooded Slopes and Valleys Landscape Character Type. The Middle Coal Measures consists of narrow bands of sandstone and many successive coal seams and encompasses the majority of the Settled Coalfield Farmlands, creating a broadly undulating landscape of ridges and valleys.

Access to sites and areas of geodiversity interest is limited with very few exposures remaining, although new opencast workings offer potential sites of interest. However, there are good geomorphological features and also many examples of the mining legacy in industrial heritage features, all of which will benefit from care, maintenance and management, and the promotion of their educational and interpretational interest.

A number of rivers flow across the Settled Coalfield Farmlands within the Nottinghamshire and Derbyshire section notably the Rother and its tributary the Doe Lea in the north and the Erewash which flows south to the Trent and forms the boundary between the two counties for a substantial part of its course. These generally flow in broad valleys with alluvial floodplains. Whilst there are no major rivers in the Leicestershire and South Derbyshire coalfield a number of brooks and streams rise on the higher land that forms the watershed between the Rivers Mease and Sence to the south west, and the Soar to the north east. Their courses are defined by a succession of shallow valleys that dissect the broader landform pattern.

Although the industrialisation of the coalfield area has altered the landscape's visual and ecological integrity, small fragmented remnants of the pre-industrial landscape are still evident and are testimony of a once much richer resource. Isolated areas of ancient semi-natural woodland are present representing fragments of a more extensive woodland cover. More recently, plantations and new woodlands have been established particularly in association with the restoration of derelict land and open cast coal mining areas and notably within The National Forest in the southern representation of the type.
Valuable wetland habitats have established within the lower lying land associated with the rivers and streams. The coal and other mineral exploitation activities within the type have also resulted in the creation of areas of biodiversity interest notably the marginal land associated with the networks of canals and disused railway lines and the numerous waterbodies that have developed as a consequence of subsidence arising from mining operations. These and other areas of post industrial land are often of biodiversity value, albeit at a local level.

The soils within the Settled Coalfield Farmlands are generally poor and predominantly heavy, clayey to loamy in texture and seasonally waterlogged. These traditionally support dairy farming but in some areas, where soils are freer draining over sandstone, there is a stronger presence of arable farming. Mining activity has resulted in the disturbance of soils and decline in their quality, particularly in association with open cast coal mining and where the standards of soil storage and restoration practices have been compromised.

There are few remaining areas of heathland, but the presence of localised patches of sandier acid soils that occur in some areas overlying the sandstone outcrops, has resulted in the development of 'heathy' habitats. A once more widespread presence of this former habitat, particularly on the ridges, hill summits and steeper slopes, is indicated by place names such as Heather Lee and Moor Top in Derbyshire and Heather and Normanton-le-Heath in Leicestershire.

CULTURAL INFLUENCES

Widespread exploitation of the Coalfields in the last two centuries has eradicated much of the archaeological evidence of the past occupation of the land up to the Roman period and indicators are limited to upstanding remains and discoveries of artefacts. The Domesday survey indicates that the Coalfields were well wooded at the time with a settlement pattern of nucleated villages. By medieval times clearance of much of the original forests had resulted in a landscape of villages, hamlets and scattered farmsteads, with former common land characterised by small clusters of wayside cottages. In the Nottinghamshire and Derbyshire Coalfield the piecemeal enclosure and felling systems resulted in a pattern of open fields particularly around settlements in the east but with more irregular woodland clearance further west. Hunting forests and deer parks were also established, and along with the open fields and commons, were gradually enclosed, privately at first, and later by the Parliamentary Enclosure Acts. This diverse history of enclosure has resulted in a variable field pattern across the Landscape Character Type. There are also a number of historic estates and associated castle or halls within the Landscape Type, notably Bolsover Castle and Sutton Scarsdale Hall, which is now a ruin. These occupy prominent ridge top locations and are clearly visible from the M1.

The industrial revolution had a profound effect on the Coalfield areas with major changes to the landscape beginning in the early 19th century with the development of deep mining across the exposed coalfield. However, mining of the coal reserves began much earlier than this with evidence that the Romans excavated the coal, where surface outcropping seams were easily accessible. Mining is also documented from the 13th century onwards, as is evident in the north eastern part of the Leicestershire and South Derbyshire Coalfield in the Newbold and Coleorton area where a dispersed pattern of settlements developed to serve the local small scale mining operations. Although mining was widespread across the Coalfields in the 16th to 18th centuries, activities were still at a local level, substantiated by the presence of bell pits and shafts constructed to reach the shallow seams.

The dramatic expansion of the coal industry from the 1830s reached its climax in the last quarter of the 19th century. A huge inward migration of people to work in the mines resulted in an extensive building programme to house the new mine workers and their families, accompanied by ancillary industries, services, railways and other infrastructure to serve the coal mining operations and the expanding population. Many of the quiet agricultural villages were rapidly expanded to accommodate this sudden influx of population; their scale and character was transformed as red brick terraces which emerged in stark contrast to the traditional village buildings which were typically constructed in the local sandstone. The previously predominantly agricultural landscape was therefore replaced in some areas by one where industrial and related activities dominated.

This pattern has since been reinforced by 20th and early 21st century development, particularly housing and roads, and notably the M1 in the Nottinghamshire and Derbyshire section of the Landscape Character Type. This overlaying of new developments and route patterns has resulted in further dissection of the agricultural landscape leaving isolated blocks of land surrounded by urban and suburban settlements and causing fragmentation of the network of older historic roads and lanes. Industry has continued to transform much of the agricultural landscape, with the expansion of light industry, technology and related industries widely evident together with large scale industrial warehouses and sheds close to the M1. Further expansion of many of the mining settlements has also taken place with large housing and industrial estates and amalgamation of some villages into larger urbanised areas. Historic settlement patterns are rapidly becoming overlain and disguised by modern development. The effects of opencast coal mining and the progressive restoration of the spoil heaps has also introduced new landforms, woodlands and field layouts to create a juvenile and emerging landscape in many areas.

AESTHETIC AND PERCEPTUAL INFLUENCES

The Settled Coalfield Farmlands is a complex and varied Landscape Character Type encompassing a wide range of often disparate land uses. The overall perception is of a landscape that has experienced, and continues to undergo, significant change and development.

The diversity of the landscape character is derived from the interplay of a densely settled and heavily industrialised landscape intermixed with pockets of mainly pastoral farmland. Where farmland and villages have escaped the effects of industrial development, a quiet and simple rural character representative of the pre-industrial landscape is characteristic. The simplicity of such areas represents a strong contrast with surrounding areas where landscape change has been profound. Here, degraded areas or emerging restored post industrial land uses are common.

Although a significant proportion of the land area continues to be managed for agricultural production, the association with heavy industry and the legacy of the coal mining activities remains a significant influence on the perception of this landscape. Features such as pit heaps and closely spaced mining settlements, often prominently situated on ridgelines, as well as canals and disused and active railway lines are a reminder of the rapid industrialisation of this area during the 18th and 19th centuries. In contrast to this, there are also a number of historic houses that occupy ridge top locations and form iconic landmarks within the landscape, such as Bolsover Castle and Sutton Scarsdale Hall.

The unique period of development of the Settled Coalfield Farmlands, founded on the rich mineral resources and association with the industrial revolution, lies at the heart of the Landscape Character Type's strong cultural identity and the palpable sense of mining heritage.

LANDSCAPE CHANGE AND MANAGEMENT

BUILT DEVELOPMENT

Forces for Change

The Settled Coalfield Farmlands is a densely settled landscape, with many of its towns and villages rapidly expanding during industrial expansion in the 19th century. Large scale development pressure continues today, with further growth targeted for the identified Growth Points. The demand for housing, commerce and industry on the fringes of larger towns can create visual intrusion and result in the loss of rural areas. Modern development is also affecting smaller settlements, with new residential development on the village margins, creating a new urban edge to the countryside. There is also proliferation of smaller, residential developments along arterial roads, reducing the sense of remoteness and enclosing views.

Shaping the Future Landscape

The aim should be to manage growth, ensuring development is appropriate in terms of type, scale and location and considers the visual impact of any new development. Best practice innovative architectural and planning solutions that take inspiration from local distinctiveness and character whilst utilising eco-friendly and high quality design, and planting of new trees around settlement fringes should also be encouraged, helping to integrate new development into the landscape.

In urban areas, planning guidance to resist settlement coalescence may be appropriate, ensuring strategic gaps between main towns and satellite settlements are maintained. In more rural areas, Village Design Statements may be appropriate, ensuring appropriate use of vernacular styles and building materials. As well as Village and Town Design Statements, Conservation Area Appraisals can also be important tools.

INFRASTRUCTURE

Forces for Change

There is widespread influence of transport routes, with major roads such as the M1, A42 and A38 crossing the landscape. Continued improvement to roads, including new junctions and widening, further fragments the landscape and reduces the sense of tranquillity, whilst also generating further development. Road improvements are also commonplace on more minor roads, better connecting isolated villages with larger towns and cities. In addition, new or improved roads are evident, serving new residential and commercial developments around existing settlements.

Shaping the Future Landscape

The aim should be to manage the expansion of the transport network, ensuring improvements are carefully planned and designed to provide positive environmental and landscape enhancements, whilst having regard to user and safety requirements. The aim should also be to protect the existing character of the rural road network, ensuring improvements are sympathetic to the prevailing character.

ENERGY PROVISION

Forces for Change

Given the Government's commitment to renewable energy provision, elevated areas of the Settled Coalfield Farmlands Landscape Character Type may be under pressure for wind farm development on the ridgelines. Such development can create visual landmarks, reduce the sense of remoteness and isolation, and affect the setting of historic houses where these occupy ridge top locations and form notable iconic features in the landscape.

Shaping the Future Landscape

The aim should be to protect the character of the landscape by appropriately siting and designing new wind energy installations. There is potential for strategic regional and sub regional level guidance on commercial wind energy schemes, including cumulative impact, informed by the EMRLCA and other studies. In addition, planning guidance should be produced at the county and/or district level where necessary, establishing the most appropriate sites for development and setting out the criteria against which new applications will be assessed.

MINERALS AND WASTE

Forces for Change

The coal mining industry had a significant impact on the landscape and there continue to be ongoing pressures for opencast coal extraction. The development of bell pits, collieries, spoil tips and infrastructure has altered the character of many rural areas, and the decline of the coal industry is now leading to their replacement with new forms of industry. This typically includes large industrial estates and business parks, as experienced at Markham Vale. As with other forms of built development, this can create visual intrusion resulting in the loss of surrounding landscape features.

Shaping the Future Landscape

The aim should be to manage the redevelopment of former coal mining sites, ensuring new development is appropriate to the landscape and visual context and that heritage features are retained, providing a link with the industrial and agricultural past and a focal point for new development. Coalfield reclamation also offers significant opportunities for new recreation, creation of wildlife sites and access to sites of geodiversity interest including geological exposures.

AGRICULTURE AND LAND MANAGEMENT

Forces for Change

There is marked evidence of agricultural intensification resulting in the loss or damage of many typical landscape features, including field boundaries and remnants of semi-natural vegetation. This weakens the pattern of land use and contributes to a more homogenous landscape. Furthermore, farm buildings are being sold off for residential conversion, bringing a degree of suburbanisation to the countryside.
Energy crops, in particular Miscanthus, are being cultivated to meet renewable energy targets. These fast growing and tall crops can radically change the appearance of this open, exposed landscape. There is also a requirement for storage and processing facilities, which along with other new agricultural buildings, can reduce the sense of remoteness in rural areas and cause visual intrusion.

Shaping the Future Landscape

The aim should be to protect existing landscape features, whilst encouraging positive management of those features lost or under threat. In particular the restoration of hedgerows should be given priority, along with an increase in grassland and pasture, creating a stronger and more mixed pattern of land use.

The aim should also be to protect the distinctive open character of the landscape and consider the visual impact of changes to land use or buildings. In relation to energy crops, new structures should be located away from visually prominent locations, and close to existing settlement and infrastructure. Although the introduction of energy crops will be more difficult to manage, grant applications to Natural England or the Forestry Commission may require an assessment of landscape and visual impacts. In relation to the conversion of rural buildings, development should be of appropriate design and scale.

FORESTRY AND WOODLAND

Forces for Change

Although woodland cover is generally low over many parts of the landscape type it is nevertheless a significant component where large and medium woodlands have been established in association with large-scale reclamation programmes of former coalfields. In particular, there has been a significant increase in woodland coverage around Swadlincote, in the southern Settled Coalfield Farmlands, as a consequence of The National Forest programme. The Greenwood Community Forest in Nottinghamshire is also a notable strategic initiative that has provided the catalyst for additional woodland and tree planting. New woodland planting would therefore be appropriate, helping to increase the overall woodland coverage in the region and restore derelict and contaminated land.

Shaping the Future Landscape

The aim should be to plan new woodland around key settlements and other suitable locations, creating sites for recreation, education, and nature conservation. Consideration should also be given to the management of existing trees and woodland, encouraging new planting to ensure a varied age structure and to create woodland edge habitats, which along with the restoration of hedgerows, will to help create a mixed pattern of land use and enhance biodiversity.

For those areas that lie within The National Forest, design guidance for woodland creation should be in accordance with the National Forest Strategy, 2004-14 that has been consulted on and endorsed at the national level. The aim should be to plan for new woodlands, ensuring new planting schemes take full advantage of opportunities to enhance nature conservation and recreation, whilst respecting the pattern and scale of the landscape. The National Forest Strategy highlights the potential for large scale plantations and community woodlands in this landscape type, complementing the pattern of the large scale fields . In addition, a range of other tree and woodland planting is recommended including farm woodlands in more open area. Where possible, new woodlands would be linked with existing semi-natural woodland, together with improvements to hedgerows and riparian habitats along streams and rivers.