

APPENDIX 4.2 LANDSCAPE CHARACTER BASELINE

30. Southern Magnesian Limestone

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Introduction

As part of Natural England's responsibilities as set out in the Natural Environment White Paper¹, Biodiversity 2020² and the European Landscape Convention³, we are revising profiles for England's 159 National Character Areas (NCAs). These are areas that share similar landscape characteristics, and which follow natural lines in the landscape rather than administrative boundaries, making them a good decision-making framework for the natural environment.

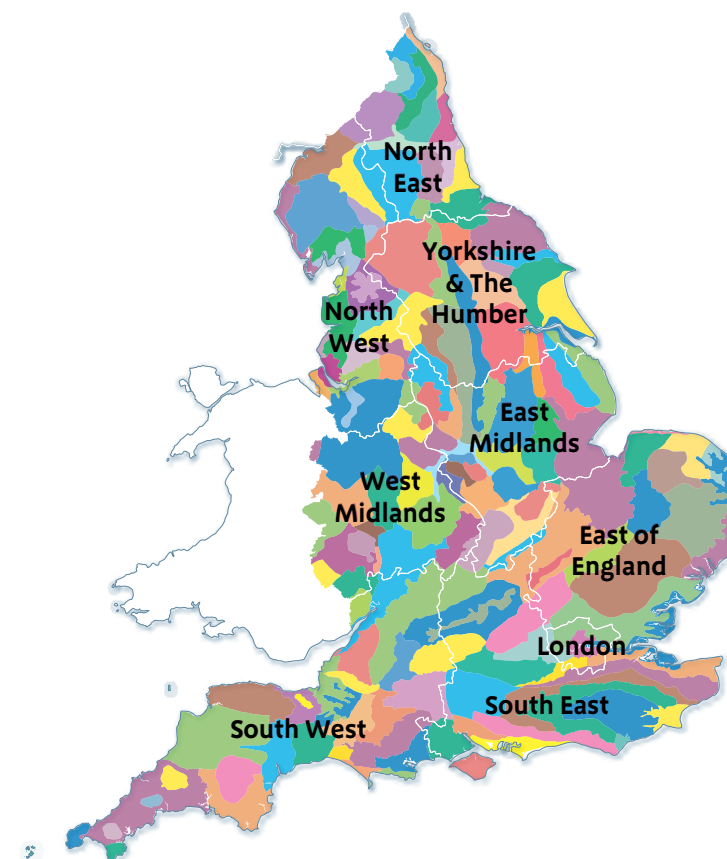
NCA profiles are guidance documents which can help communities to inform their decision-making about the places that they live in and care for. The information they contain will support the planning of conservation initiatives at a landscape scale, inform the delivery of Nature Improvement Areas and encourage broader partnership working through Local Nature Partnerships. The profiles will also help to inform choices about how land is managed and can change.

Each profile includes a description of the natural and cultural features that shape our landscapes, how the landscape has changed over time, the current key drivers for ongoing change, and a broad analysis of each area's characteristics and ecosystem services. Statements of Environmental Opportunity (SEOs) are suggested, which draw on this integrated information. The SEOs offer guidance on the critical issues, which could help to achieve sustainable growth and a more secure environmental future.

NCA profiles are working documents which draw on current evidence and knowledge. We will aim to refresh and update them periodically as new information becomes available to us.

We would like to hear how useful the NCA profiles are to you. You can contact the NCA team by emailing ncaprofiles@naturalengland.org.uk

National Character Areas map



¹ The Natural Choice: Securing the Value of Nature, Defra (2011; URL: www.official-documents.gov.uk/document/cm80/8082/8082.pdf)

² Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services, Defra (2011; URL: www.defra.gov.uk/publications/files/pb13583-biodiversity-strategy-2020-111111.pdf)

³ European Landscape Convention, Council of Europe (2000; URL: <http://conventions.coe.int/Treaty/en/Treaties/Html/176.htm>)

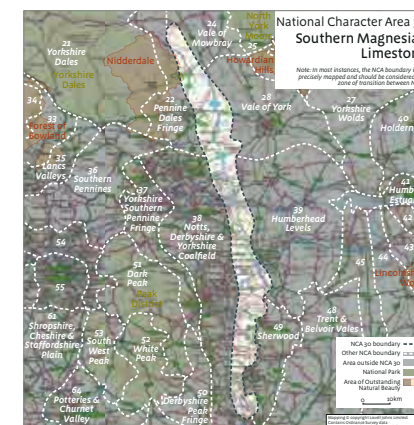
Summary

The Southern Magnesian Limestone National Character Area (NCA) is mainly defined by the underlying Permian Zechstein Group, formerly known as the Magnesian Limestone. It creates a very long and thin NCA that stretches from Thornborough in the north down through north Derbyshire to the outskirts of Nottingham further south. The limestone creates a ridge, or narrow belt of elevated land, running north–south through the NCA, forming a prominent landscape feature. The geology has influenced many aspects of the landscape, from use of its limestone resource as a local building material to the specialised limestone grasslands associated with limestone areas.

The presence of the ridge, and the drift deposits covering much of it, has produced light, fertile soils that have attracted settlement for more than 13,000 years. The important archaeological evidence and mammal fossils found at Creswell Crags and the impressive barrows and henge monuments at Thornborough Henges (three intact henges) are nationally important geological and archaeological features that provide a historic link to the story of human settlement and society within the area and beyond. Opportunities to maintain the landscape setting of these important sites and increase access to and engagement with them need to continue to be secured.

The NCA comprises of open, rolling arable farmland enclosed by hedgerows, with plantation woodlands, historic estate properties and parkland. The localised networks of grasslands and semi-natural habitats have become fragmented, and many species face challenges moving through the NCA. In places, rivers and dry valleys dissect the plateau from west to east, creating wetland habitats. Impacts on this agricultural landscape include limestone, coal and some sand and gravel extraction, associated infrastructure and tips; many of which have now been restored. The pace of settlement and industrial development expansion has been greater in the north than in the south, but the landscape still retains its essential rural character.

Sustainable food production is important in this largely rural area, to maintain the quality of the fertile soils and reduce erosion. The farmed landscape also contributes to the tranquillity of this NCA, and is valued as a contrast to the more urban, industrialised areas to the west and where major road infrastructure crosses the NCA. Parkland trees and plantations associated with country estates give a well-wooded feel in some areas of the NCA. There are more wooded areas within the NCA now than were recorded at the time of *Domesday Book*.



Click map to enlarge; click again to reduce.

Managing and maintaining these key landscape characteristics will be important in retaining the 'essence' of the Southern Magnesian Limestone NCA. There is a need to promote sustainable agriculture and appropriate hedgerow and woodland management and planting. Appropriate habitat enhancement and links are fundamental to this, along with guiding suitable development and appropriate mitigation of the impacts of changes to the landscape.



The three henges at Thornborough are of national importance and form part of a complex Neolithic and bronze-age ceremonial landscape.

Statements of Environmental Opportunity

- **SEO 1:** Protect the underlying geology and range of historic landscape features, including the extensive Palaeolithic, Neolithic and bronze-age monuments, as part of the wider landscape and the evidence and time-depth of the area's historic evolution. Increase opportunities to improve access to, understanding of and enjoyment of historic features within the landscape, as well as their links to biodiversity and underpinning geodiversity.
- **SEO 2:** Protect and manage existing semi-natural habitats, including grasslands, wetlands and woodlands; and increase the area of semi-natural habitats, restore and create new areas, and create networks and links between habitats, to make their ecology more resilient and to afford increased movement of species.
- **SEO 3:** Protect the overall rural landscape and maintain its highly tranquil quality, managing the arable landscape to ensure the continued production of quality crops while also enhancing landscape features such as field boundaries and improving biodiversity, soil quality, reduction of soil erosion, water quality and flood risk management.
- **SEO 4:** Promote the successful incorporation of any future major land use changes, directing them where they can enhance the existing landscape and seeking optimum design to obtain the greatest net benefits, such as to minimise visual impact on the wider landscape, incorporating green infrastructure and creating new access to enhance recreational opportunity for people to experience wildlife.

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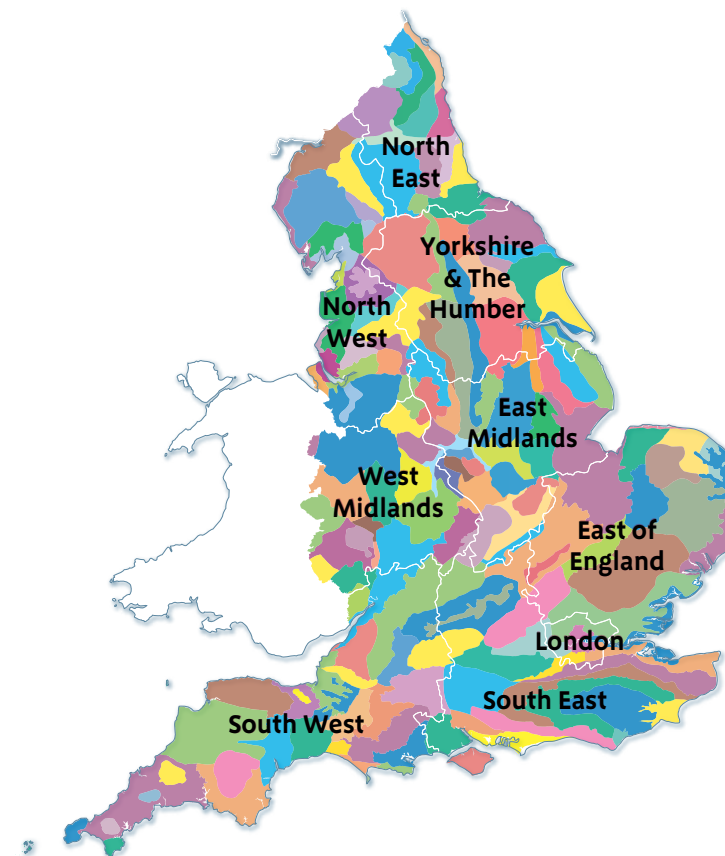
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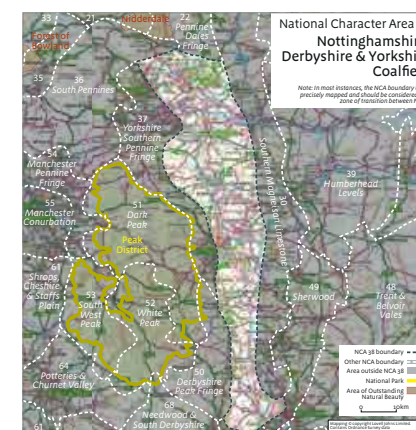
Summary

The Nottinghamshire, Derbyshire and Yorkshire Coalfield is an area that has seen great change over the past few centuries. The impact of widespread industrialisation and development on the landscape and settlement pattern within the National Character Area (NCA) is clear, influencing the visual and ecological landscape. The geological deposits of coal and iron, along with the water supply, brought mass industrialisation to the area to exploit these resources. A generally low-lying area, with hills and escarpments above wide valleys, the landscape embraces major industrial towns and cities as well as villages and countryside. Over half of the NCA (64 per cent) is currently designated as greenbelt land; this maintains some distinction between settlements and represents areas that are often under pressure for development and changes in land use. Very little of the NCA is designated for geology or nature conservation, but instead the landscape is dotted with many pockets and patches of habitat where species find refuge. This is often on land that was once worked for minerals or occupied by major industry, and as these enterprises have declined the land they once dominated has opened up with opportunities to create a new landscape which will continue to provide a strong sense of place for local populations.

The large populations of the towns and cities within the NCA mean that there will be opportunities to better engage people with the natural and historical environment, creating new access and recreational openings that deliver a better quality of life while also helping people and wildlife to adapt to a changing climate.

The NCA is an important area nationally for history, especially in relation to industrialisation and the story of its impact on the landscape. Opportunities should be taken to restore and maintain historical features in the landscape and to explore how they can be interpreted and used to educate and engage people with the landscape.

Rivers and waterways are an important feature in the landscape, often linking rural and urban areas and increasingly providing green corridors and tranquil settings for both people and wildlife. The source of the water is outside the NCA, as is the case for a number of ecosystem services, and the large population means that the area is a key user of ecosystem services (such as water) that are provided by surrounding NCAs. A key challenge will be to improve links between this NCA and others in order to get a better understanding of the delivery of ecosystem services and how they can be improved.



Statements of Environmental Opportunity

- **SEO 1:** Restore and enhance existing areas and create new landscapes through the inclusion of woodland and networks of green infrastructure to raise the overall quality of design and location of new developments. Regeneration and restoration of industrial sites should seek to create green infrastructure that links fragments of the natural environment, leading to a functioning network for wildlife and access and recreational amenities for people.
- **SEO 2:** Protect and manage the archaeological and historical environment to safeguard a strong sense of cultural identity and heritage, particularly mining heritage, and use the area's distinctive sense of place to inspire interpretation and new development. Engage local communities with their past by enhancing the early, industrial and mining landscapes through restoration of key features of sites and improving access and interpretation.
- **SEO 3:** Conserve, enhance and expand areas and corridors of semi-natural habitat such as grasslands and woodlands to create a functioning ecological network that links the fragmented patches of habitats through urban and sustainably farmed environments, thus assisting species and habitat adaptation to climate change, reducing soil erosion and diffuse pollution.
- **SEO 4:** Manage, enhance and extend wetland habitats associated with the rivers Aire, Calder, Dearne, Don, Rother and Erewash and their tributaries to increase the landscape's ability to naturally and sustainably manage flooding, improve water quality, and increase the resilience of these habitats, the riverine landscape and associated species to climate change.



Rother Valley Country Park restored from opencast coal mining and a popular visitor destination for local residents in Rotherham, Sheffield and north-east Derbyshire.

ARABLE FRINGE FARMLAND

Landscape character

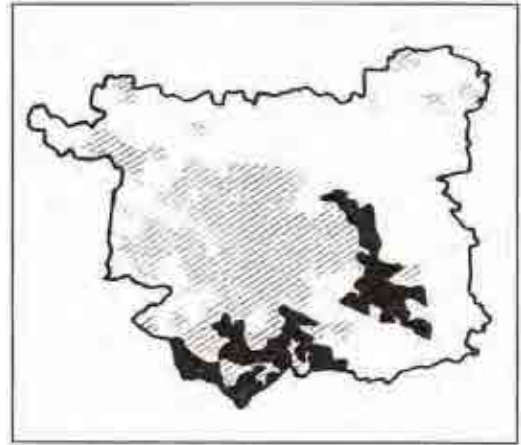
The arable fringe farmland landscape type occurs around the southern and eastern fringes of Leeds and is found in six landscape units: East Leeds Fringe (LCM3); Kippax and Swillington Fringe (LCM4); Rothwell Fringe (LCM5); East Ardsley Fringe (LCM6); East Morley Fringe (LCM7) and the South Morley Fringe (LCM8).

It is a landscape of actively farmed land, containing a mixture of landscape influences, all dominated by human activity such as housing, industrial areas, quarries, tips, amenity land, recreation grounds, neglected or disturbed land. The farmland tends to consist of mainly small scale arable fields, with horticultural crops such as broccoli, rhubarb and potatoes common throughout.

Some of the farmland, particularly in the south of Leeds, is under intense public pressure, with urban fringe uses such as caravan storage, scrap yards and horse grazing in pockets of degraded pasture, in evidence. Often the structure of the landscape has, or is starting to break down, with fields being amalgamated and with many hedgerows becoming low cut or gappy. Some of the non-arable areas are well used by the local community for both authorised and unauthorised recreational uses, providing a valuable amenity resource.

Forces for change

The arable fringe farmland landscape type is under pressure from the encroachment of urban activities such as the development of new roads, industrial commercial and residential areas, and mineral extraction activities.



Some of the land is degraded, under-used agricultural land, with activities such as horse grazing apparent. In addition, there has been a gradual deterioration of farmland features such as hedgerows which has emphasised the fragmented and generally neglected nature of this landscape. Future change could occur with new highway developments, new residential and commercial development and mineral extraction activities such as opencast coal mining.

Management strategy and guidelines

The overall management strategy for the pastoral fringe farmland landscape type should be a combination of restoration of the predominantly arable farmland features where these are in decline, combined with enhancement through new woodland planting, where the existing character has been lost completely. The arable fringe farmland offers the greatest opportunities for new large scale woodland planting, particularly in the landscape units to the south and south east of Leeds. Management guidelines which are applicable for all the landscape units within the arable fringe farmland landscape type are described below. Detailed management strategies and guidelines for the individual landscape units are described in a separate document, using the references listed above.

- *Seek to control the adverse effects of horse grazing in inappropriate locations.*
In recent years, there has been an increasing demand for the use of land for horse grazing, particularly around the fringes of urban areas. In places this has had a significant impact on the landscape with the proliferation of temporary structures and ancillary buildings with impoverishment of pasture due to overgrazing. Where possible, these adverse effects of horse grazing should be controlled, as they can introduce a 'suburbanising' influence into rural landscapes.
- *Enhance tree cover through large scale planting as part of a wider woodland planting scheme for the urban fringe area*
There is scope for significant woodland planting in the arable fringe landscape type, particularly in the East Morley Fringe and Rothwell Fringe landscape units. In these areas, fragmentation has occurred to such an extent that much of the landscape structure has been lost. This has produced an open large scale landscape which has the capacity to accept quite large areas of planting. The siting and design of new woods will need to be carefully planned and could be undertaken in connection with a wider scheme for the urban fringe area. New planting should be targeted along linear features such as streams and becks, railway lines, roads and motorways and form part of a screening programme for particularly intrusive industrial and commercial developments. However, there will also be significant opportunities for planting outside these areas, as part of a wider planting programme for the area.
- *Conserve and enhance the value and continuity of streamlines and enhance their value as landscape, wildlife and recreational corridors.*
Although not particularly numerous, pastoral and wooded streamlines form important linear landscapes and wildlife resources or corridors, particularly as they tend to be surrounded by intensively farmed land and urban fringe land uses. Where these areas occur, they should be conserved as a priority, but opportunities should be sought for creating new habitats on areas of farmland along stream corridors. Natural regeneration of woodland should be encouraged and where appropriate, new planting should be undertaken to extend and enhance the corridors. This could then form the basis of larger scale planting, perhaps in association with a scheme for the wider area, extending out from the valleys on to the surrounding higher ground. However, care should be taken to maintain a diversity of waterside habitats in addition to the woodland. Consideration should also be given to encouraging recreational access along the valleys, where this is not already available.
- *Conserve and enhance tree cover along field boundaries, through regeneration and replanting of boundary trees.*
A priority for this landscape could be to enhance the areas of fringe farmland through new planting, while maintaining a diversity of land uses and maintaining areas of intact viable farmland. In the more intact areas of farmland, tree cover along hedgerows, particularly along the lower slopes and within the valleys is a characteristic feature. To maintain and enhance this, natural regeneration of boundary trees should be encouraged wherever possible or replanting should be carried out using locally occurring species such as oak and sycamore. Lines of trees along hedgerows can then act help to join and reinforce new areas of planting.

- *Where opportunities exist, consider restoring areas of former parkland.*
Although landscaped parks are not a particular feature within this landscape type, there are some isolated remnant areas. As well as their historical importance, parklands provide diversity and interest in the landscape. True parkland in permanent grassland with large scattered trees is in decline. Wherever possible, consideration should be given to reinstating areas of former park and new planting to replace old trees.
- *Conserve and restore primary hedge lines and manage them more positively as landscape features.*
In general, this landscape is characterised by a large-scale, regular field pattern, which in the most part has become very fragmented and is in decline. Where tree cover is weak, which is true for most of the fringe farmland, this pattern becomes more significant and it is important to try and avoid further fragmentation of the landscape through hedgerow removal. In particular, primary hedgelines alongside roads and farm boundaries should be conserved and managed more positively. This would allow hedges to grow thicker and taller and where they have been removed, consideration should be given to replacement planting. This type of management would be particularly appropriate in areas which are adjacent to or outside any areas identified for large scale new tree planting as part of the Forest of Leeds Strategy.

DEGRADED RIVER VALLEY

Landscape character

The degraded river valley landscape type can be found in only one landscape unit the Lower Aire Valley (LCM20). It is characterised by an open, broad river valley, with gently sloping sides, leading down into a degraded landscape, dominated by human activity. The valley is covered by a chaotic mix of spoil heaps and lagoons linked to past and present mining activities, major excavations, and industrial buildings.

Although most of the area is degraded, intact isolated pockets of arable farmland still occur alongside areas of parkland. The degraded river valley is a continually changing landscape, with new areas of restored land and wetland areas forming increasingly attractive features as they develop. The valley forms a major communication corridor, with lines of pylons, roads and canals clearly evident.

Forces for change

The degraded river valley landscape type has undergone a tremendous amount of change due mainly to past and present mineral extraction, landfill and industrial activities, which have left a legacy of derelict and degraded land. Where activities have ceased, some of the restored sites are beginning to mature, forming important wildlife habitats and landscape features and further influencing landscape change.

There are pockets of more intact parkland and arable farmland landscapes which have undergone less change in recent years although there appears to have been a decline in the condition of traditional parkland and characteristic farmland features. These areas are under pressure from urban fringe and



development pressures, such as road building proposals, particularly along the edge of the main built-up area of Leeds and around former mining settlements.

Management strategy and guidelines

The overall management strategy for the degraded river valley should be a combination of enhancement through the creation of a new landscape character, combined with restoration and conservation of the more intact areas of parkland and arable farmland. Enhancement could take the form of new woodland planting and the creation of a diverse range of habitats, particularly in areas which are degraded and despoiled as a result of past extraction and industrial activities.

Management guidelines which are applicable for the degraded river valley landscape type are described below. Detailed management strategies and guidelines for the individual landscape unit are described in a separate document, using the reference listed above left.

- *Restoration proposals for mineral workings should be based on an assessment of landscape character in order to assess whether reinstating the original landscape or creating a new landscape is most appropriate.*

Restoration of mineral workings in the Lower Aire Valley can result in a number of different end points, such as a return to arable land or the creation of new habitats such as open water, scrub and woodland. This can result in the creation of a new type of landscape. As such, restoration schemes should take account of how the site relates to the surrounding wider landscape in order to assess the most appropriate way in which to either reinstate the original landscape or create a new landscape. Restoration of individual sites should be designed as an integral part of a wider scheme for the whole valley.

- *Retain and enhance river channel diversity and marginal vegetation.*

The river and canal channels are major features within this landscape type. Where the ecological value has declined, there is much scope for improvement through sensitive management. The retention of a diverse range of features such as meanders, shallows, cliffs and backwaters is very important. River margins are important and tree, scrub and plant growth on river banks should be retained and protected and consideration given to suitable design, where new channel diversion schemes are proposed. All these features have an intrinsic value and are integral to the visual and aesthetic quality of the riverside environment.

- *Identify opportunities for recreating riverside wetland habitats*

In recent years within the degraded river valley, new wetland habitats have emerged as extraction activities have ceased. These habitats have become particularly important for wildlife and help to give an element of naturalness to the

river landscape. Any existing wetlands should be conserved and in addition, opportunities should be sought for creating new wetlands in areas where extraction activities have been completed.

- *Enhance tree cover through small to medium scale woodland planting.*

There is scope within most of the degraded river valley landscape type for woodland planting. This is particularly the case, where mineral extraction activities have ceased leaving degraded and despoiled land with good opportunities for enhancement. The siting and design of new woods will need to be carefully planned, and undertaken as part of a wider programme for the whole area. Care should be taken to try and frame views from within, and from the outside, rather than to totally block them off. New planting could be targeted, where possible, on slightly rising ground, but particular care should be taken to shape the edges of the new woods. Where possible the natural regeneration of woodland should be encouraged as this can lend a more natural feel to the landscape. Where planting is carried out, deciduous planting would be preferable, although mixed woodlands would be acceptable as long as edges and sky lines are sensitively handled.

- *Enhance the continuity of the river and canal channels through encouragement of natural regeneration of bankside trees.*

Scattered waterside trees and scrub are important features contributing to the riverside environment. To maintain this effect, natural regeneration of trees should be encouraged, but care should be taken to maintain a variety of habitats alongside the river margin, and to avoid ecologically important sites such as unimproved grasslands and wetlands. Larger scale woodland planting along the valley floor close to the watercourses should be avoided.

- *Enhance tree cover through regeneration and replanting of field boundary trees .*
Hedgerow trees and hedges alongside roads and lanes are not a particularly significant feature at present within the degraded river valley landscape. However, where they do occur, on the slightly higher ground within the intact arable farmland, they have the effect of reinforcing the impression of enclosure. To maintain and enhance this, natural regeneration of hedgerow and roadside trees should be encouraged wherever possible, although replanting could be undertaken if necessary, using locally occurring native tree species.
- *Conserve and restore, areas of existing parkland.*
Although parks are not a common feature within this landscape, the parkland that does remain for example at Swillington, provides diversity and interest in the landscape of the river valley. With the river valley having undergone so much change in the past, this emphasises the need to conserve and manage areas which have remained relatively intact. Wherever possible it is important to retain the peaceful pastoral character of traditional parkland and to encourage new planting to replace old trees. Planting should respect the original design intentions of individual parks, or where there are several layers of design, it may be necessary to identify a particular stage of development which reflects the most important historical context. Where opportunities arise through incentives such as the Countryside Stewardship scheme to help manage existing areas, these should be investigated.
- *Seek to control field amalgamation and hedgerow loss, restoring hedges where these have been lost or are in poor condition.*
Field pattern is an important visual element along the arable farmland parts of the degraded river valley, particularly when viewed from adjacent high ground. The fields are bounded by mixed and thorn hedgerows which arc in many places becoming thin and gappy, or have been lost completely, only to be replaced by wire fencing, which results in a more open, neglected landscape. Replacement hedgerow planting or restoration through more appropriate management should be encouraged in these areas, although they should not be allowed to grow tall as this would have the effect of over enclosing the river valley.

WOODED FARMLAND

Landscape character

The wooded farmland landscape type occurs mainly within the Eastern Limestone Belt and can be found in four landscape units: Methley Park (LCM17); West Bramham (ELB5); Aberford (ELB6); and Ledsham to Lotherton (ELB7). It forms gently rolling or undulating areas of large scale arable farmland characterised by large blocks of mixed woodland. Many of these woodland blocks are sharp edged and regular in shape, forming part of old and existing estate holdings.

In contrast, strips of semi-natural woodland form attractive, softer features along valley becks. Both these types of woodland help create a well wooded horizon when the area is viewed from within. Pockets of pasture occur around some of the settlements and around large houses, but the open arable fields predominate.

These tend to be bordered by low gappy hedgerows, with only occasional hedgerow trees breaking up the simple pattern. Small rural villages and isolated, generally large farm buildings, lie scattered within these areas.

Forces for change

The main influence on the evolution of the wooded farmland areas has been the development and management of much of the land as part of large parkland and estate holdings. This has tended to result in the simple but characteristic pattern of large areas of mixed plantations and intervening areas of arable farmland. This pattern has remained largely intact, although changing agricultural practices have resulted in a gradual decline in the condition of hedgerows, which tend to be low cut and gappy, and a consequential fragmentation of the field pattern. Future change could occur with proposed new commercial or highway development in the area.



Management strategy and guidelines

The overall management strategy for the wooded farmland landscape type should be one of conservation of the characteristic features. In some areas, this should be combined with a careful balance of restoration, where parkland and farmland features are in decline. Enhancement through new planting may be appropriate, but this should reinforce the existing pattern of tree cover rather than creating a new character.

Management guidelines which are applicable for all the landscape units within the wooded farmland landscape type are described below. Detailed management strategies and guidelines for the individual landscape units are described in separate documents, using the references above.

- *Conserve and enhance the pastoral and wooded continuity of the narrow valleys and enhance their value as landscape, wildlife and recreation corridors.*
The isolated pastoral and wooded valleys lying along small becks or streams form key linear features and important landscape and wildlife corridors in an otherwise cultivated area. To maintain this value, areas of pasture should be retained and consideration given to returning bankside arable fields to grassland. In addition, natural regeneration of bankside trees should be encouraged and consideration given to encouraging recreational access along the valleys.

- Conserve and restore existing parkland and where opportunities arise, consider restoring areas of former parkland.*

Landscaped parks and their surrounding estates are the distinctive feature of this landscape, providing much of the woodland cover so characteristic of this area. As well as their historical importance, these parklands provide diversity and interest in the landscape. True parkland throughout the Leeds district is in decline, with some areas being taken into intensive agricultural production, which emphasises the need to conserve and manage these existing areas. Wherever possible it is important to retain the peaceful character of traditional parkland and to encourage new planting to replace old trees. Planting should respect the original design intentions of individual parks, which may involve historical research and drawing up a restoration plan. Where opportunities arise through incentives such as the Countryside Stewardship scheme to help manage existing areas, these should be investigated.
- Conserve the wooded character of mature roadside trees.*

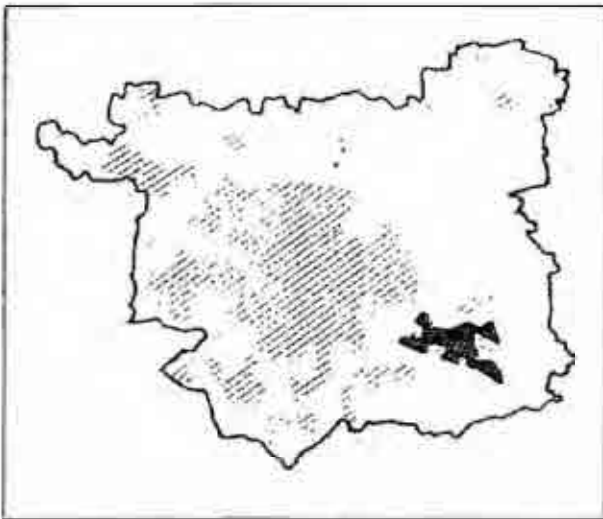
Roadside trees are important features along some roads, helping to increase the well wooded nature of this landscape type. Many of these trees are mature and form remnants of tree avenues which were planted as part of the designed parkland and estates which are common throughout. These mature trees need to be retained until other trees have grown to replace them. To maintain and enhance this tree cover, new planting should be carried out, using species planted in the original avenue designs.
- Conserve existing tree cover and enhance where tree cover is weaker, through medium scale planting.*

Due to the well wooded nature of this landscape, there are probably limited opportunities for significant amounts of new planting. However, where the tree cover is weaker, there may be opportunities for medium scale planting to enhance and complement the overall wooded effect. Woods up to field size may be appropriate, but care should be taken not to block off views through the landscape. Small woodland may appear out of scale in this landscape type
- New planting along woodland edges should favour native trees.*

The gently rolling nature of this landscape is such that woodland edges are the most prominent features. As a result a major part of many large woods cannot be seen. These woods are suited to commercial forestry operations, although if lines of conifers appear along woodland edges they can present an unnatural appearance. This effect could be softened by the inclusion of well shaped and scaled, irregularly spaced groups of broadleaves to vary species height and diversity.
- Conserve and restore all primary hedgerows and manage them more positively as landscape features.*

The landscape of the wooded farmlands is characterised in the main by a large scale regular field pattern infused with large blocks of woodland. Field pattern is not a dominant visual influence where woodland cover is strong. However, where tree cover is weaker, the field pattern becomes more significant and here it is important to avoid any further fragmentation of the landscape. In particular, it is important to conserve primary hedgelines, along roadsides, bridleways, footpaths and farm and parish boundaries. In addition, they should be managed more positively as landscape features, planting up individual gaps where appropriate.
- Conserve the wooded linear earthworks.*

One of the characteristic features of the wooded farmland are the linear earthworks, which are prominent due to their scrub and woodland cover. As well as their historic importance, these earthbanks provide important linear tree cover, which has the visual effect of linking together separate areas of woodland. These earthbanks should be conserved and their wooded cover managed to conserve and enhance their value.



Landscape character

An area of gently undulating arable fringe farmland extending from the parkland of Temple Newsam in the west, to Kippax in the east and encompassing, in addition, the settlements of Swillington and Great Preston. The area can largely be defined by its association with the Lower Aire Valley as the land drops steadily down towards it, with views of the power station and spoil tips common throughout. On the higher ground, the fields tend to be large, regular and open, with low cut gappy hedgerows. Smaller pockets of mainly degraded horse pasture occur around the fringes of settlements and along the narrow valleys which lead down towards the Aire. Within these narrow valleys, strips of semi-natural woodland line the becks, creating a more enclosed field pattern and providing a pleasant contrast with the more open structureless arable land elsewhere. Woodland occurs in isolated copses and around settlements, such as Kippax, where the trees sit prominently on top of the high ground at Townclose Hills. Throughout, urban fringe land uses are evident, this 'fringe feel' emphasised by activities such as land filling and quarrying and the views which can be gained over the degraded Lower Aire Valley to the south.

"From Swillington to Great Preston, we obtain fine views of Oulton, Rothwell and Woodlesford. On the crest of the hill beyond, the spire of Garforth church forms an interesting landmark" (Edmund Bogg 1904)

"A deep valley runs between Great Preston and Kippax and on the hillside and crest of the ridge,

Key characteristics

- gently undulating fringe farmland
- large open arable fields on high ground
- smaller fields of horse pasture
- strip woodland along becks
- small wooded copses
- low gappy hedgerows
- landfill and quarrying activities
- views over the Lower Aire Valley

the town clusters finely, the church tower presiding high above the roofs (Edmund Bogg 1904)"

Forces for change

The Kippax and Swillington Fringe has a close association, both physically and historically with the Lower Aire Valley and the associated mineral extraction activities. As such, opencast coal mining, quarrying and landfill activities are in evidence and have influenced landscape change and the development of the settlements over the years. Some of the farmland within the area is degraded, under-used agricultural land, with activities such as horse grazing also apparent, particularly around the fringes of Swillington and Kippax. In addition, there has been a gradual deterioration of farmland features such as field boundaries, particularly on the more open arable areas.

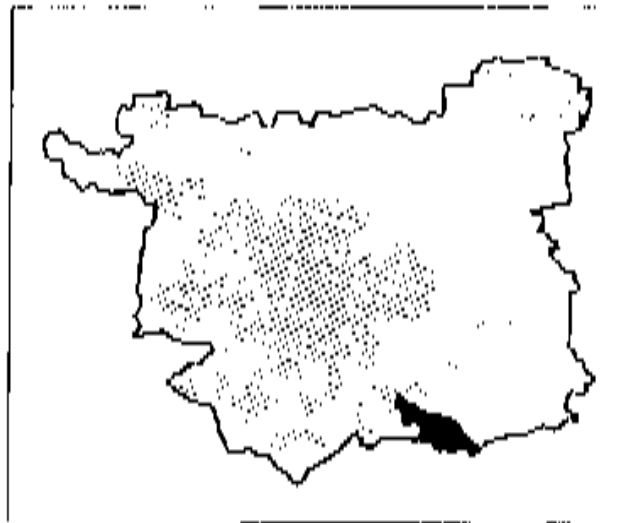
Management strategy and guidelines

The overall management strategy for the Kippax and Swillington Fringe should be a combination of restoration of the characteristic features within the landscape where these are falling into decline, combined with enhancement through new woodland planting, in areas where the character has been lost completely.

All guidelines relating to the arable fringe farmland landscape type are applicable for the Kippax and Swillington Fringe landscape unit (see

Part 2). Additional site specific guidelines are detailed below:

- *seek to control spread of horse grazing and further degradation of pasture around the fringes of Swillington and Kippax;*
- *instigate a programme of tree planting and encourage natural regeneration, designed to screen any intrusive landfill sites or quarries. New planting should be carried out as part of any wider planting programme for the area and should be designed so as to maintain views over the Lower Aire Valley.*



Landscape character

Lying between the visible M62 motorway, the River Calder, and the main A639 road and extending up to the urban edge of Rothwell, this area is dominated by the wooded farmland around Oulton and Methley Parks. Surrounded by areas of degraded and disturbed land to the north along the Aire Valley and in the west around the South Leeds fringe, this area provides a valuable oasis of intact countryside. The Methley estate is split up into pockets of farmland lying around large houses and farms, such as Clumpcliffe, Park Farm and the private Woodside Hospital. Blocks of planted mixed woodland such as Moss Carr Wood and Almhouses Wood, form a patchwork pattern with fields of pasture, arable and rough grassland. When viewed from the lower ground around, the eye is drawn through gaps in the woodland, creating an inviting feature, and suggesting further views from the higher ground above. Designed features such as a fish pond nestle within the woodland, unseen and inaccessible within the farmed setting. Further out from the wooded areas, larger fields of arable farmland occur. Although there are generally few boundary trees, particularly in the north of the area, many of the hedgerows are overgrown, giving an impression of wooded cover. To the north west of the area, the listed Oulton Park provides a significant area of golf course, with the old parkland trees providing a good structure and base for the areas of more recent planting. Apart from the isolated and sometimes highly visible buildings such as the sports centre at Oulton, the settlements of Rothwell, Oulton, Methley and Methley Junction,

Key characteristics

- undulating wooded farmland
- mixed arable and pastoral fields
- small strips of rough pasture and scrub
- remnants of designed parkland features
- overgrown hedgerows
- isolated hedgerow trees
- golf course
- mixed plantations

with their occasional sharp urban edges, form the main built up areas.

Forces for change

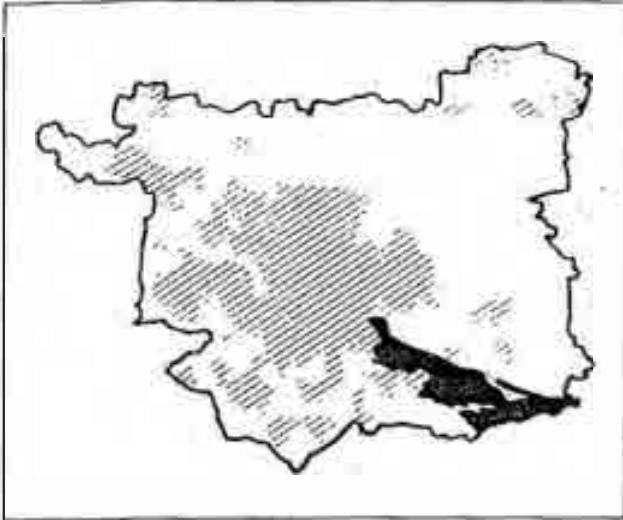
The main influence on the evolution of the area has been the development and management of the land as part of the large parkland and estate holdings of Methley Park and Oulton Park. In Oulton Park, this has resulted in the development of a golf course and at Methley, a characteristic pattern of large areas of mixed plantations and the intervening areas of arable and pastoral farmland. This pattern has remained largely intact even though the surrounding areas have been severely degraded following large scale industrial activities. However, there has been a gradual decline in the condition of these features as a result of changing agricultural practices and new amenity land uses. Hedgerows for example have become neglected and overgrown in parts and low cut and gappy in others, resulting in a gradual fragmentation of the field pattern.

Management strategy and guidelines

The overall management strategy for Methley Park area should be a careful balance of conservation of the features which make up the wooded farmland character of the landscape, combined with restoration, where parkland and farmland features are in decline. Enhancement through new planting may be appropriate, particularly in the east of the area, but this should reinforce the existing pattern of tree cover rather than creating a new character.

All guidelines relating to the wooded farmland landscape type are applicable for the Methley Park landscape unit (see **Part 2**). Additional site specific guidelines are detailed below:

- *enhance the wooded cover of the area through encouragement of natural regeneration and medium scale planting, particularly between Park lane and the railway line;*
- *instigate a programme of small scale planting to help soften the western urban edge of Methley Junction. This should be designed as part of a wider planting programme for the area;*
- *instigate a programme of small scale planting to help screen visually intrusive buildings such as the sports centre at Oulton and sections of highways such as the M62 motorway;*
- *conserve and enhance tree lines or avenues along roads such as Park Lane and the road leading up to Clumpcliffe;*
- *conserve and enhance the pattern of hedgerow trees through the encouragement of natural regeneration or the replanting of locally occurring native trees where appropriate.*



Key characteristics

- *broad river valley*
- *degraded, despoiled and restored land*
- *extraction works and industrial buildings*
- *remnant parkland areas*
- *major river and canal and wetlands*
- *pockets of intact arable land*
- *featureless regular restored arable fields*
- *power station cooling towers*

Landscape character

Degraded river valley of the Lower Aire, stretching from the prominent cooling towers of Skelton Grange power station east along the valley to Castleford. The broad valley, bounded by gently rising ground on either side, has been despoiled by years of human activities, resulting in a landscape of man-made features such as spoil heaps, lagoons industrial buildings and plant. Major transport routes such as the Aire and Calder Navigation, and the Leeds-Castleford railway line traverse the valley with the river itself meandering slowly, its original course diverted as the valley undergoes continual change. Although the majority of the valley is degraded or despoiled, there still remain pockets of attractive intact parkland landscapes, such as at Swillington, and areas of farmland. Due to the contrast in character of these areas within the wider valley landscape, they are described as three separate sub-units of the Lower Aire: wetlands and waterways; Swillington and Leventhorpe; and the Aire arable farmland.

Wetlands and waterways

Extensive complex of wetlands and waterside land, lying adjacent to the River Aire and the Aire and Calder Navigation. The irregularly shaped wetlands are lagoons and flashes, linked to past mining and extraction activities, many of which, including Ledston and Fairburn Ings have become important areas for wildlife, particularly birds. Trees and scrub have begun to colonise around the edges, helping to give some form of unity to an otherwise fragmented area. Although many areas are in the process of undergoing restoration, there

still remain large intrusive spoil heaps, extraction works and industrial buildings such as sewage works, close to the waters edge. However, the waterways provide a valuable resource and an important corridor for wildlife and recreation.

Swillington and Leventhorpe

Swillington and Leventhorpe form the last remaining remnant of the large estates which once existed in this area. Characterised by small scale pasture and wooded hedgerows, the area provides an intact and attractive core to the Lower Aire Valley. Strips of woodland such as that surrounding Cockpit Round, an oxbow lake, and tree avenues for example at Swillington Bridge and leading up to Swillington House, form the main wooded cover, with isolated parkland trees dotted throughout.

Arable farmland

Areas of farmland on either side of the valley, some undisturbed and intact and others having been restored to agriculture following restoration of mineral workings. Where the field pattern has remained intact, for example to the north of Allerton Bywater and along Methley Lane, field boundaries can form positive features, although they are generally neglected and in need of restoration. Elsewhere, the round featureless mounds of restored workings provide bleak and exposed farmland, bounded by large regular fence lines. Trees occur in isolated small coverts or plantations, for example north of Allerton Bywater, along isolated field boundaries and as

linear features along roads or the railway embankment.

Forces for change

The Lower Aire Valley has undergone a tremendous amount of change since the area was first affected by mineral extraction, landfill and industrial activities. Much of this change has left a legacy of derelict and degraded land for example at the old Rothwell Colliery site and some of these activities will continue for many years. Where activities have ceased, some of the restored sites are beginning to mature, forming important wildlife habitats and landscape features and further influencing landscape change along the valley. Significant landscape restoration will result from the major restoration schemes proposed within the Lower Aire Valley, for example at St. Aidan's, Rothwell Colliery, Skelton and Savile Colliery. Alongside the more degraded areas, lie pockets of more intact parkland and arable farmland landscapes which have undergone less change in recent years. They are however, under pressure from urban fringe and development pressures, such as road building proposals, particularly along the edge of the main built up area of Leeds and around former mining settlements in the valley. Within these areas, there appears to have been a gradual decline in the condition of traditional parkland and characteristic farmland features.

Management strategy and guidelines

The overall management strategy for the Lower Aire Valley should be a combination of **enhancement** through the creation of a new landscape character, restoration and conservation. In the wetlands and waterways area, enhancement could take the form of new woodland planting and the creation of a diverse range of habitats, particularly in areas which are degraded and despoiled as a result of past extraction and industrial activities. Restoration is required in areas of arable farmland, where traditional farmland features such as field boundaries are in decline, although enhancement through new planting would also be appropriate in these areas. In the area of more intact parkland around Swillington and Lavenhorpe, the strategy should be one of conservation of characteristic parkland features where these remain, combined with restoration of these features where they have fallen into decline or have been lost completely.

All guidelines relating to the degraded river valley landscape type are applicable for the Lower Aire Valley landscape unit (see Part 2). Additional site specific guidelines are detailed as below:

Wetlands and water ways

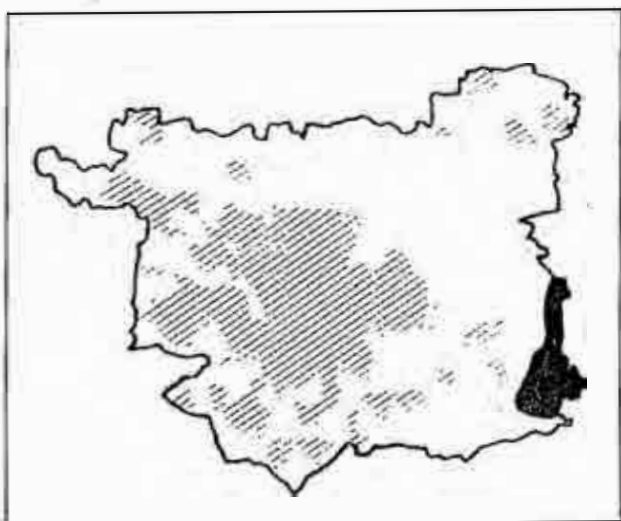
- *instigate a programme of small to medium scale tree planting at Hulton Moor, extending from the area of encapsulated countryside. This should be designed as an integral part of any wider woodland planting programme and should aim to reinforce the wooded nature of Temple Newsam estate;*
- *encourage natural regeneration of scrub and woodland at sites where major restoration is proposed or required, such as St. Aidan's and the Rothwell Colliery site and seek to integrate these sites with any wider planting programme for the area*

Swillington and Lavenhorpe

- *conserve and enhance the pattern of parkland trees around Swillington Bridge and the tree lines and avenues leading up to Swillington House, through new planting*

Arable farmland

- *maintain and enhance, through natural regeneration, the tree and scrub cover along the railway embankment;*
- *maintain and enhance the pattern of small wooded coveris and plantations on the rising ground north of Allerton Bywater;*
- *maintain and enhance through new planting where appropriate, prominent lines of trees along roads, for example east of Mickleton;*
- *instigate a programme of small to medium scale tree planting around the smooth rounded spoil tip to the east of Swillington. This should be designed as an integral part of any wider woodland planting programme.*



Landscape character

Area of gently rolling, large scale **wooded farmland** crossed by the valleys of the Mill Dike which runs towards the lower lying Vale of York in the east and the Ledsham Beck which drops to the River Aire in the south. The open regular fields of arable farmland are dominated by the treed horizons of the parkland estates of Lotherton and Ledston Halls. Here the estates, with their parkland trees, and designed landscape features such as tree avenues and deer parks add variety to an otherwise simple and rather featureless arable landscape. Variety is also provided by the isolated strips of pastoral farmland along becks such as Ledsham Beck. The sharp edges of the mixed woodland such as Quarryfield and Beacon Plantations, which characterise the area around Ledston, contrast with the softer edges of semi-natural woodland and remnant beech avenues leading up to Ledston Hall. Together, they create a landscape with wooded horizons, although if one looks outwards, views of the disturbed and complex Aire Valley stretch out to the south. If one looks in to the area from the Aire Valley, the elevated grounds of Ledston Hall are potentially inviting. Farm buildings occur throughout, with white walls and red tiled roofs contrasting with the newer and larger modern buildings which have been added on to the traditional core. Ledsham, the largest settlement in the area, is a charming village, with a peaceful and picturesque 'old world' look.

Key characteristics

- gently rolling wooded farmland
- parkland estates
- large regular arable fields
- mixed plantations
- beech avenues
- semi natural woodland along becks
- isolated strips of pasture along becks
- views over the Lower Aire Valley

"Ledsham is a charming village, nestling in a secluded dell. Here, no sound of manufacture or rough traffic disturbs the pastoral sweetness. Undulating slopes rise about it and pretty nooks of wood fringe its borders" (Edmund Bogg 1904)

Forces for change

The main influence on the evolution of the Ledsham to Lotherton area has been the development and management of the land as part of the large parkland and estate holdings of Ledston House and Lotherton Hall that form the bulk of the land area. This has resulted in the simple but characteristic pattern of large areas of mixed plantations and the intervening areas of arable farmland. This pattern has remained largely intact, although changing agricultural practices have resulted in a gradual decline in the parkland features and in the condition of hedgerows, which tend to be low cut and gappy and a consequential fragmentation of the field pattern. Future change within this area could occur with the proposed road developments and improvements associated with the A1 and A63.

Management strategy and guidelines

The overall management strategy for this area should one of **conservation** of the features which make up the wooded farmland character of the landscape, combined with a careful balance of **restoration**, where parkland and farmland features are in decline. Enhancement through new planting may be appropriate, but this should

reinforce the existing pattern of tree cover rather than creating a new character.

All guidelines relating to the wooded farmland landscape type are applicable for the Ledsham to Lotherton landscape unit (see **Part 2**). Additional site specific guidelines are detailed below:

- *retain the isolated strips of pastoral farmland along becks such as Ledsham Beck;*

- *conserve and enhance strip woodland around the edge of Ledston Hall;*
- *conserve and enhance through new planting, the avenue of beech trees which once formed the link between Ledston Hall and the Lodge.*

Chapter 4: Landscape Character Types

The most obvious influence on the landscape has been the development of industry, transport infrastructure and a rapid growth in population and urban expansion in the C19th and C20th. Prior to this the District reflected the Medieval pattern of small market towns, villages and small isolated farmsteads. The coal industry in particular has dominated in economic terms and by its impact on the environment. Wakefield District is in the heart of the Yorkshire Coalfield. The collapse of the industry and closure of all the deep mines in the District has left significant areas of the landscape in need of reclamation and restoration. Many restoration schemes have now been completed and the District has an improving landscape which includes several country parks that are beginning to mature and develop ecologically.

The character of the District is predominantly urban, dominated by the city of Wakefield and the five towns of Castleford, Pontefract, Normanton, Featherstone and Knottingley in the north of the District. The south is largely rural, but in the south eastern area many villages have developed into coal mining towns such as Hemsworth, South Kirkby and South Elmsall. It is impossible to find anywhere in the District unaffected by human activity, even the more ancient semi-natural areas often contain traces of long abandoned minerals workings. In Wakefield the M1 and M62 converge forming busy corridors with extensive modern business park and distribution developments that are significant detractors to the quality of the landscape. The power station at Ferrybridge is a dominant landmark which is visible throughout many parts of the District. The networks of pylons, telecommunications masts, railways and roads have significant and cumulative impacts on the District adding to the feeling of urban sprawl and fragmentation of the landscape. Traffic noise generally impinges on even the most rural localities. There is also a significant amount of light pollution affecting the District.

In rural areas the intensification of agriculture has virtually obliterated the traditional concentration of pasture on the Coal measures and arable on the Limestone Escarpment. Technical advances and subsidies have tended to favour a cereal monoculture that dominates the rural landscape of the District. Pasture and meadow have declined, while hedgerows, woodland, heathland, wetland and other landscape elements have been extensively removed. Few ancient woodlands and hedgerows survive, and they are generally in a fragmented and unmanaged or mismanaged condition. Around some of the old villages fragments of the medieval field systems survive, however most of the settlements have become increasingly urbanised and the countryside is of urban fringe as

opposed to rural in character. There are few examples of vernacular buildings as a result of clearance and redevelopment, especially in the south eastern part of the District. Elsewhere suburbanisation and unsympathetic alterations obscure elements of local character and distinctiveness.

Despite the detractors the District's landscape is generally pleasant in character and has some interesting features such as the Limestone Escarpment, Calder Valley, Woolley Edge and Coxley Valley. There are a number of ancient monuments such as Pontefract Castle, Sandal Castle, and South Kirkby hillfort; the historic parks of Nostell and West Bretton; the National Mining Museum at Caphouse, and numerous conservation areas and listed buildings distributed throughout the District. Wakefield District benefits from a network of footpaths, cycle routes, bridleways and canal towpaths that link the urban areas to the countryside and recreational areas such as Yorkshire Sculpture Park, Pugneys lake, Anglers Country Park, Newmillerdam, Hemsworth Water Park, Heath Common and Pontefract Park.

4.1 Summary of landscape character types

(i) COAL MEASURES

Most of the District consists of coal measures with alternating sequences of sandstone and shale. These have eroded to form a rounded, rolling topography of hills, ridges and shallow valleys. The River Calder flows through the Coal Measures in an east to north easterly direction, converging with the River Aire at Castleford. Glaciation has contributed to the shaping of the valleys, which broaden out and become increasingly shallow to the east. Alluvial deposits in the valley bottoms form more fertile soils, although these have been exploited for gravel, particularly around Wakefield and Horbury. The River Went and its tributaries form a shallow basin in the eastern part of the District, this region has fertile alluvial soils but is prone to flooding. The Coal Measures comprise part of the most productive area of the West Yorkshire Coalfield, and have been worked by both deep mining and opencasting, consequently this has triggered extensive urban growth. Clay was an important material associated with coal mining, pottery and bricks have been produced at works adjacent to many collieries within the District. The sandstone has been quarried extensively. It is fine grained and was used for constructing dry stone walls and dwellings. Sand was also used in glass manufacturing.

CALDER VALLEY

The valley consists of a flat flood plain of varying widths through which the River Calder meanders, the river is cut by the Calder & Hebble and the Aire & Calder Navigations. The valley bottom widens significantly at Pugneys and Welbeck to the east of Wakefield, and opens out at the confluence with the River Aire north of Castleford.

The valley has distinctly steep edges and terraces at the western side at Ossett and Kirkthorpe, which gradually diminish as the river passes eastwards. The valley cuts through the Coal Measures and sandstone outcrops that form the edges, and these have been accentuated by quarrying around Ossett and Horbury.

In the valley bottom the alluvial deposits form terraces and large quantities of gravel have been extracted around Horbury and Wakefield. Further east the legacy of coal mining has left significant areas of open land in need of restoration such as the workings and tips of Welbeck.

The valley bottom has large areas of open water, many as a result of mineral extraction. There are also a significant number of smaller natural flashes, oxbows and wetlands. Some pockets of unused land between the canal and river contain wetlands and scrub.

In the areas of washland a few meadows have survived, the valley sides are used for both rough grazing and arable agriculture in the western part of the valley. Moving eastwards intensive arable use predominates on the gentler slopes and valley floor.

The Calder valley is a corridor of considerable ecological importance. To the east of Wakefield the valley contains several important wetland sites, many of which are of Sites of Scientific Interest and/or Local Nature Reserves.

There is little woodland in the valley, it tends to survive around escarpments such as at Kirkthorpe, or in abandoned quarries and coal workings. There are few hedgerows, those which survive are in decline and largely unmanaged.

The Calder valley has significant recreational value. To the west the steep valley sides offer excellent vantage points at Storrs Hill and Sandal Castle. There are expanses of publicly managed open space such as Pugneys Country Park which are linked by a network of footpaths, cycle routes, and the canal towpath.

The Calder Valley is also a major transport corridor and important in terms of employment having industrial areas alongside the river. The M1 cuts the Calder Valley between Horbury and Wakefield. The Trans-Pennine and North East railways dissect the valley, large sidings and a number of abandoned mineral lines link into the main tracks. The valley bottom contains a significant number of old mills and diverse industrial uses. Some areas are in need of regeneration such as Wakefield Waterfront and the old power station site.

WENT RIVER BASIN

The area is defined by the River Went and its tributaries, Little Went, Went Beck, Hessle Beck, and Barr's Drain. The basin is essentially flat and low lying, rising to the west around High Ackworth, and to the south around Badsworth and Thorpe Audlin.

It is characterised by parkland landscapes with areas of woodland and trees planted in meadow. This landscape survives within the Nostell estate and the villages of High Ackworth and Low Ackworth. Nostell is protected as a Historic Park and Garden, Ackworth as a Conservation Area.

There are open lakes at Nostell and wetlands that follow the courses of Hardwick, Hessle and Went Becks. Nostell Lakes and the Brickworks Quarries are Sites of Scientific Interest. However to the east much of the land has been drained, so there are few wetlands or areas of open water.

The Went Basin area is intensively farmed with few areas of trees and a decreasing cover of hedgerows and hedgerow trees. The arable landscape consists of large open fields where many boundaries have been removed leaving a flat open landscape. On Badsworth Moor the openness is accentuated as the land begins to rise towards the Limestone Escarpment.

The area has had some coal and clay extraction but has not been exploited to the detriment of the landscape. The Went Basin has retained its rural character and its villages have not experienced the major urban expansion of the neighbouring Northern and South East Coalfields.

NORTHERN COALFIELD

The Northern part of the District consists of large urban areas, surrounded by intensively farmed countryside. A significant area can be classed as urban fringe. Wakefield City and Castleford are centred at crossing points of the River Calder and Aire respectively. The towns of Normanton, Pontefract, Featherstone and Knottingley expanded largely as a result of the coal industry in the late C19th.

The highest land is to the western side of the District and gradually falls away to the east forming gently undulating lowland. The landscape consists of large open fields that are intensively farmed, with few areas of trees and a decreasing cover of hedgerows and hedgerow trees. Many hedgerows have been removed as a consequence of intensifying agriculture and mining. Surviving hedgerows are in decline and ancient landscape patterns have virtually been obliterated. Ackton Wood is a rare example of Ancient Woodland.

Arable agriculture is dominant, particularly cereals and oilseed, whilst vegetables and rhubarb are common on the rich soils around Wakefield. In the past Wakefield had an important cattle market, now very few livestock can be seen, with horse keeping being the main type of grazing.

There are significant areas of common land at Heath, Warmfield and Sharlston, which comprise of rough grassland and scrub, and give these areas a distinctive character. Heath common and village are protected as a Historic Landscape and Conservation Area. The smaller villages of Heath, Kirkthorpe, and Warmfield have retained their rural character.

There are large areas of recreational land on the urban fringe such the playing fields and golf course on the former Lofthouse Colliery site, and Pontefract Park and Racecourse.

The area is bisected by the Calder Valley and M1 corridor running north-south and the M62 corridor which runs east-west. The motorways are dominant features and act as significant barriers between settlements.

Much of the area has been mined for coal and there are still some large areas of land in need of restoration and regeneration. There have also been a number of opencast workings which have been restored back to agricultural and recreational uses.

SOUTH EAST COALFIELD

Many villages developed into small towns as a result of coal mining in the early C20th. The subsequent collapse of the industry has led to derelict sites and social deprivation, although reclamation is ongoing. The landscape has been extensively remodelled by mining and restoration to intensive agricultural use. As a result the landscape has lost most of its ancient elements and has a fragmentary, over exploited character.

The area consists of shallow vales with settlement on low ridges. This area forms a natural bowl through which flow Frickley Beck, Langthwaite Beck and Hague Hall Beck. There are areas of open water at Hemsworth and South Kirkby.

There are areas of common land at South Hiendley and significant areas of wide verges and scrub associated with past industrial uses.

There are very few hedgerows and hedgerow trees, and very little woodland. A few plantations survive but intensive agriculture has resulted in the removal of most of the woodland and hedges in the area and few traces of ancient field systems survive.

Around the beck bottoms and the collieries a number of wetlands and wild degraded areas survive. Part of South Kirkby colliery is now restored and consists of a young country park landscape with woodland plantations, open water and grassland with orchids. These are linked by an important network of footpaths, cycle routes and bridle ways forming the SESKU Ringway.

There is a high ridge to the west from South Kirkby through South Elmsall towards Upton. The ridge was inhabited in the Iron Age and Romano British periods. Earthworks of an enclosure survive at South Kirkby, together with extensive cropmarks of settlements, field systems and tracks.

SOUTH WEST COALFIELD

The south western part of the District is the fringe of a zone of transition between Pennine foothills and lowland river valley. The western part the highest part of the District. The highest point is Woolley edge, which has a steep escarpment to the west. Beacon Hill on Woolley Edge is the highest point at 176m. The landscape undulates and falls away towards the east of the District.

The area is cut through with the steep sided valleys of Coxley Beck, Blacker Beck, and Bull Cliff Beck, which feed into the River Calder, and Bentley Beck running into the River Dearne. These valleys tend to be steep sided and wooded.

This area is characterised by village settlements on high ridges. The area retains its rural character, and has escaped the urbanisation of the South East Coalfield. Villages have expanded for residential rather than industrial reasons. The area has been mined for coal and iron since the medieval period, however few traces remain following restoration.

Arable agriculture is the predominant land use. Traditional Coal Measures pasture has been lost as more intensive farming techniques have been employed. As a result significant amounts of hedges and woodland have been removed.

There are Important areas of woodland, including ancient woodland at Stony Cliffe and Perkin Woods. More woods and hedgerows survive in this South West Coalfield than elsewhere in the District, although this has been eroded.

Dry stone walls of local sandstone also form some boundaries, which are unique to the south western side of the District, but these tend to be fragmentary and poorly maintained. Around some of the villages traces of old boundaries survive with smaller fields and paddocks. Most of the fields have been enlarged however.

The old parks are still important features within the landscape. They occupy large tracts of the landscape and have important recreational uses for residents and visitors to the District, such as the Yorkshire Sculpture Park and Newmillerdam Country Park. There are significant areas of protected sites for nature conservation throughout the South West Coalfield. There are also commons at Emroyd and Stockmoor. A good network of footpaths, some bridleways and cycle routes links these areas.

The disused Barnsley Canal (SSI) runs through the area in a north-south direction. There are major areas of open water at Walton Hall, Anglers Country Park and Cold Hiendley and Winterset Reservoirs.

(ii) LIMESTONE ESCARPMENT

The Magnesian Limestone outcrops to a ridge that runs down the eastern edge of the District from Castleford and Knottingley, through Pontefract, Darrington, Wentbridge, Upton and South Elmsall. The escarpment is fairly low with a rounded, rolling profile. Its western edge forms a prominent scarp, with a relatively flat ridge that gently dips down to the east.

The limestone varies from thin, crumbly layers mixed with clay and marl, to thicker outcrops. The underlying limestone dates from the Permian era, and was formed in a salty, inland sea. A notable SSSI is the Stomatolite reef at South Elmsall.

The landscape around Knottingley and Pontefract has become urbanised, however the area to the south east remains rural. Soils formed from the limestone and the overlying glacial drift deposits are very fertile with some grade 2 agricultural land and most of the area is under intensive arable agriculture.

Many of the hedgerows have been removed giving an open landscape which stretches eastward. The fields are very large but still retain some of the curved boundaries of Medieval furlongs. Where hedges survive they are usually flailed low thorn hedges, often with gaps and there are few hedgerow trees. Some hedgerow relics can be found around the villages where fragments of the old enclosure patterns survive.

Woodland is generally scarce, and is confined to plantations or on steep slopes. There are significant areas of woodland at Wentbridge, Went Hill and Upton Beacon, together with scrub and trees along the escarpment edge. The edge to the north of Wentbridge consists of calcareous scrub which is unique to the District. There are areas of ancient woodland at Fryston Park and Holywell Wood.

The River Aire and Aire & Calder Navigation cut through the Limestone Escarpment at Castleford and Knottingley. The valley bottom is flat with washlands, oxbows and reed beds. In Knottingley limestone was quarried extensively and was burnt to produce lime for agriculture and the chemical industry. Limestone was also used to construct dwellings and boundary walls, however limestone buildings are now extremely rare following redevelopment and urbanisation in the late C19th and early C20th.

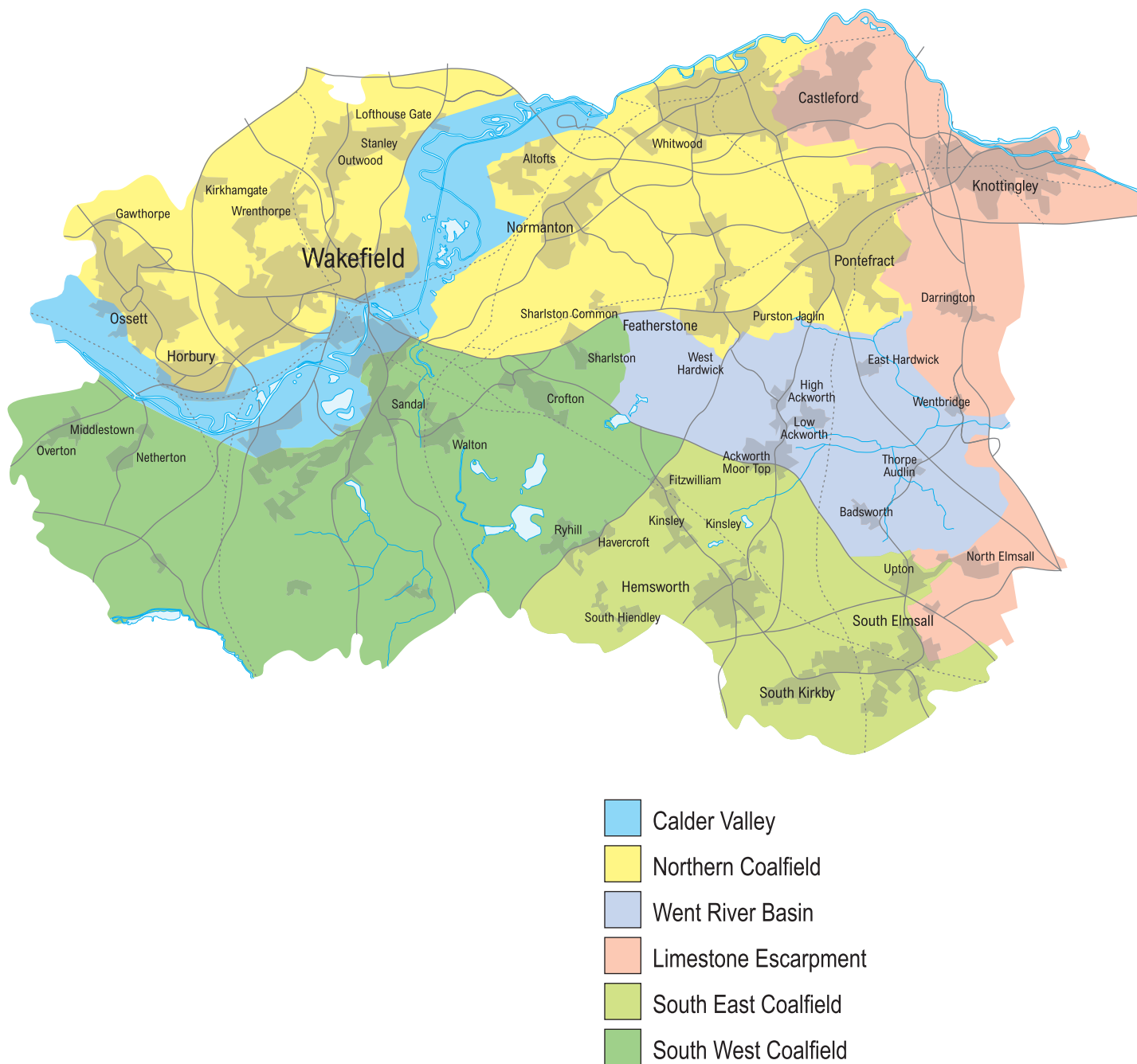
The escarpment is also cut by the River Went forming a narrow gorge at Wentbridge. There are prominent outcrops at Upton Beacon and in Pontefract, where the Wash Dyke cuts through the escarpment.

There is a fairly well developed green network along the limestone ridge from Went Hills into Brockadale SSSI. Wentbridge Ings SSSI is an important area of Magnesian Limestone grassland and scrub. At the foot of the escarpment there is an upwelling of springs and wetlands along the River Went.

There are extensive views from the top of the escarpment across the Went Basin towards Pontefract and towards Knottingley, where the skyline is dominated by the power station. The A1 is also a dominant feature in the landscape.

The area is of considerable archaeological value, having a Neolithic Henge, an Iron Age chariot burial and extensive cropmarks of Prehistoric and Romano British settlements. The escarpment was a prehistoric ridgeway route and is traversed by the Roman Great North Road to Castleford and York.

Landscape Character Types



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Calder Valley



4.1.1 CALDER VALLEY

The valley consists of a flat flood plain of varying widths through which the River Calder meanders, which is cut by the Aire and Calder Navigation. There are distinctly steep edges and terraces to the valley at Storrs Hill, Ossett, which rises 60m from the river level, and at Heath and Kirkthorpe which rises to 30m. Elsewhere the valley sides are less steep, gradually diminishing as the river passes eastwards. The valley bottom widens significantly at Pugneys and Welbeck to the east of Wakefield, and opens out at the confluence with the River Aire north of Castleford.

There is little woodland in the valley, it tends to survive around escarpments such as Hartley Bank Wood, Netherton, and at Heath and Kirkthorpe, or in abandoned quarries and coal workings. There are few hedgerows, those which survive are in decline and largely unmanaged. The valley bottom has large areas of open water, many as a result of mineral extraction such as Horbury Lagoon, Pugneys and Southern Washlands. There are also a significant number of smaller natural flashes, oxbows and wetlands. Some pockets of unused land between the canal and river contain wetlands and scrub, particularly around Horbury Junction and Horbury Bridge.

The Calder valley is a corridor of considerable ecological importance and significant recreational value. To the east of Wakefield the valley contains several important wetland sites, many of which are of Sites of Scientific Interest and/or Local Nature Reserves. To the west of Wakefield the steep valley sides offer excellent vantage points at Storrs Hill and Sandal Castle. There are expanses of publicly managed land at Pugneys Country Park, Horbury Lagoon, Millfield Lagoon, Thornes Municipal Golf Course, and Thornes Park in Wakefield. These are linked by a network of footpaths, cycle routes, and the canal towpath.

The Calder Valley is also a major transport corridor and important in terms of employment having industrial areas alongside the river at Healey, Horbury and Wakefield. The M1 cuts the Calder Valley between Horbury and Thornes. There are also a number of abandoned mineral railways and spurs linking into the Trans-Pennine and North East railways that dissect the valley. The valley bottom contains a significant number of old mills and diverse industrial uses, including sidings, which vary in environmental quality in terms of occupancy, types of use, state of repair and visual impact on their neighbourhoods. There are some areas in need of regeneration such as Horbury Bridge and parts of Wakefield Waterfront and the old power station site. Significant areas of open land have been blighted by coal workings and tips such as Welbeck (due to be restored by 2018), and the derelict Newmarket Silkstone Colliery to the north of Wakefield.



River Calder towards Kirkthorpe from Stanley



View of Calder and Hebble Navigation at Netherton



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Northern Coalfield



4.1.2 NORTHERN COALFIELD

The Northern part of the District is predominantly urbanised. A range of industry has contributed to expansion: wool, grain, coal, clay and chemicals have all been important to the economy. Much of the area has been mined for coal and there are large areas of land which have been blighted by spoil tips. There have also been a number of open cast workings which although restored, have obliterated any traces of the historic landscape. The highest land is in the western side of the District, the towns of Ossett, Horbury and Wrenthorpe village are located on this. Wakefield City and Castleford are centred at crossing points of the River Calder and Aire respectively. The towns of Normanton, Pontefract and Featherstone expanded largely as a result of the coal industry, and its subsequent collapse has left parts of the area in economic decline and in need of regeneration. The surviving open landscape is intensively farmed with few areas of trees and a decreasing cover of hedgerows and hedgerow trees, much of it is urban fringe and is of an ecologically degraded character. The largely arable landscape consists of large open fields.



Parkland at Heath

NORTH AND WEST WAKEFIELD, OSSETT AND HORBURY

This is an area of undulating land defined by the River Calder and the District boundary. The land rises from the river valley and is dissected by the Low Laithes Beck valley and the Wrenthorpe valley (Balne and Alverthorpe Becks). The valleys radiate north westwards from Wakefield. Ossett and Horbury are situated on a high ridge, and the oldest cores of settlement are generally located on spurs or ridges of high ground, although urban development in Wakefield has encroached into the floodplain. The M1 cuts through in a north-south direction, is a dominant feature in the valley and acts as a significant barrier between Ossett/Horbury and Wakefield City. Much of the area is urbanised, and the remaining countryside exhibits many characteristics of the urban fringe.

There are very few areas of woodland and open water, surviving elements appear to be as a result of recent plantation and restoration. Many hedgerows have been removed as a consequence of intensifying agriculture and open cast mining. Surviving hedgerows are in decline, ancient landscape patterns are virtually obliterated. Arable agriculture is dominant, particularly cereals and oilseed, whilst vegetables and rhubarb are common around Wakefield. In the past Wakefield had an important cattle market, now very few livestock can be seen, with horse keeping being the main type of grazing. There are large areas of recreational land on the urban fringe such as Low Laithes Golf Course, the playing fields and golf course on the former Lofthouse Colliery site, and the golf course at Hatfeild Hall.



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NORMANTON, FEATHERSTONE, HEATH AND SHARLSTON

This is an area of undulating land rising eastwards from the River Calder towards the Limestone Escarpment at Pontefract, with high points around Heath, Warmfield and Pontefract.

There are significant areas of common land at Heath, Warmfield and Sharlston, which comprise of rough grassland and scrub, and give these areas a distinctive character. Heath common and village are protected as a Historic Landscape and Conservation Area. The smaller villages of Heath, Kirkthorpe, and Warmfield have retained their rural character despite the impact of coal mining and expansion in the late C19th/earlyC20th. Remnants of ridge and furrow survive, as do a few areas of woodland, and hedgerows with trees. However these are gradually being eroded through intensifying agricultural practices and inappropriate management.

The towns of Normanton and Featherstone have undergone significant expansion in the last century as a result of the coal and clay industries. The landscape is typically urban fringe with some degraded areas as a result of derelict workings (tragically the historic area of Newland Hall/St Johns), urban sprawl and more recent expansion of housing and industrial developments. Significant areas of open land have been opencast and restored to agricultural use. Many of the older field boundaries have been removed and intensive arable agriculture predominates.

CASTLEFORD AND PONTEFRACT (part)

The area is bounded by the River Calder and River Aire to the north, and the Limestone Escarpment to the east. The area is bisected by the M62, which runs east - west forming a dominant feature in the valley and acting as a significant barrier between Castleford and Pontefract. The area is predominantly urban, and there are large areas of derelict land. Much of this is allocated for employment development, such as the former Glass Houghton Colliery site. There is a band of land under intensive agriculture to the west and along the motorway corridor where few mature trees and hedgerows survive apart from Ackton Wood. A significant area within the southern half of the motorway corridor consists of Pontefract Park and racecourse, and restored workings now in mixed recreational and agricultural use.



Open fields at Heath



Open fields at Ackton

Right: Heath common and village

Limestone Escarpment



4.1.4 LIMESTONE ESCARPMENT

This area is defined by its underlying geology. The limestone outcrops to a ridge that runs down the eastern edge of the District from parts of Castleford, and Pontefract, through Knottingley, Darrington, Wentbridge, Upton and South Elmsall. On the west are steep escarpments, the ridge is relatively flat dipping down to the east. There are outcrops at Pontefract and Upton Beacon. The landscape around Castleford and Pontefract have become predominantly urban, however the area to the south east remains rural and is intensively farmed.

DARRINGTON, WENTBRIDGE, SOUTH ELMSALL AND UPTON

The escarpment is cut by the River Went which forms a narrow gorge at Wentbridge. The escarpment has considerable archaeological value, having extensive cropmarks of Prehistoric and Romano British settlements. Around South Elmsall the escarpment becomes a less obvious although high ridge around Dale Lane, now covered by large industrial buildings. This area was extensively settled in the Iron Age and is adjacent to the line of a Roman road to Castleford.

There are significant areas of woodland at Wentbridge, Went Hill and Upton Beacon, (some ancient), together with some hedgerow scrub and trees along the escarpment edge. A significant feature is Bates Hill at Carleton. The top of the escarpment is intensively farmed. Many of the hedgerows have been removed giving an open prairie landscape to the east stretching to, and beyond, the A1. Consequently the A1 is a dominant feature in the landscape.

There are a number of wetlands at the foot of the escarpment and in the Went Valley. The escarpment edge to the north of Wentbridge consists of calcareous scrub which is unique to the District. There is a fairly well developed green network along the limestone ridge from Went Hills into Brockadale SSSI. Wentbridge Ings SSSI is an important area of Magnesian Limestone grassland and scrub.

KNOTTINGLEY

The River Aire and Aire and Calder Navigation cut through the limestone escarpment. The valley bottom is flat with washlands and reed beds, whilst the sides have terraces and limestone walls. The area is predominantly urban in character and is dominated by industrial development and derelict mineral workings. Agricultural land is intensively farmed, very few hedges and trees survive.



Limestone Escarpment view towards Wentbridge



Top of Limestone Escarpment view towards Ferrybridge

CASTLEFORD AND PONTEFRACT (part)

In Pontefract the Wash Dyke cuts through the outcrop, this spur forms the core of the earliest medieval settlement in the town. There are a number of areas of woodland at Fryston Park, Well Wood and Holywell Wood, some of which is ancient. Elsewhere there are few mature trees and hedgerows. The river valley bottom includes a number of wetlands and oxbows. In the vicinity of Ferrybridge power station there are important archaeological remains from the prehistoric period including a Neolithic Henge, Bronze Age burials, and Iron Age/Romano British settlements.



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