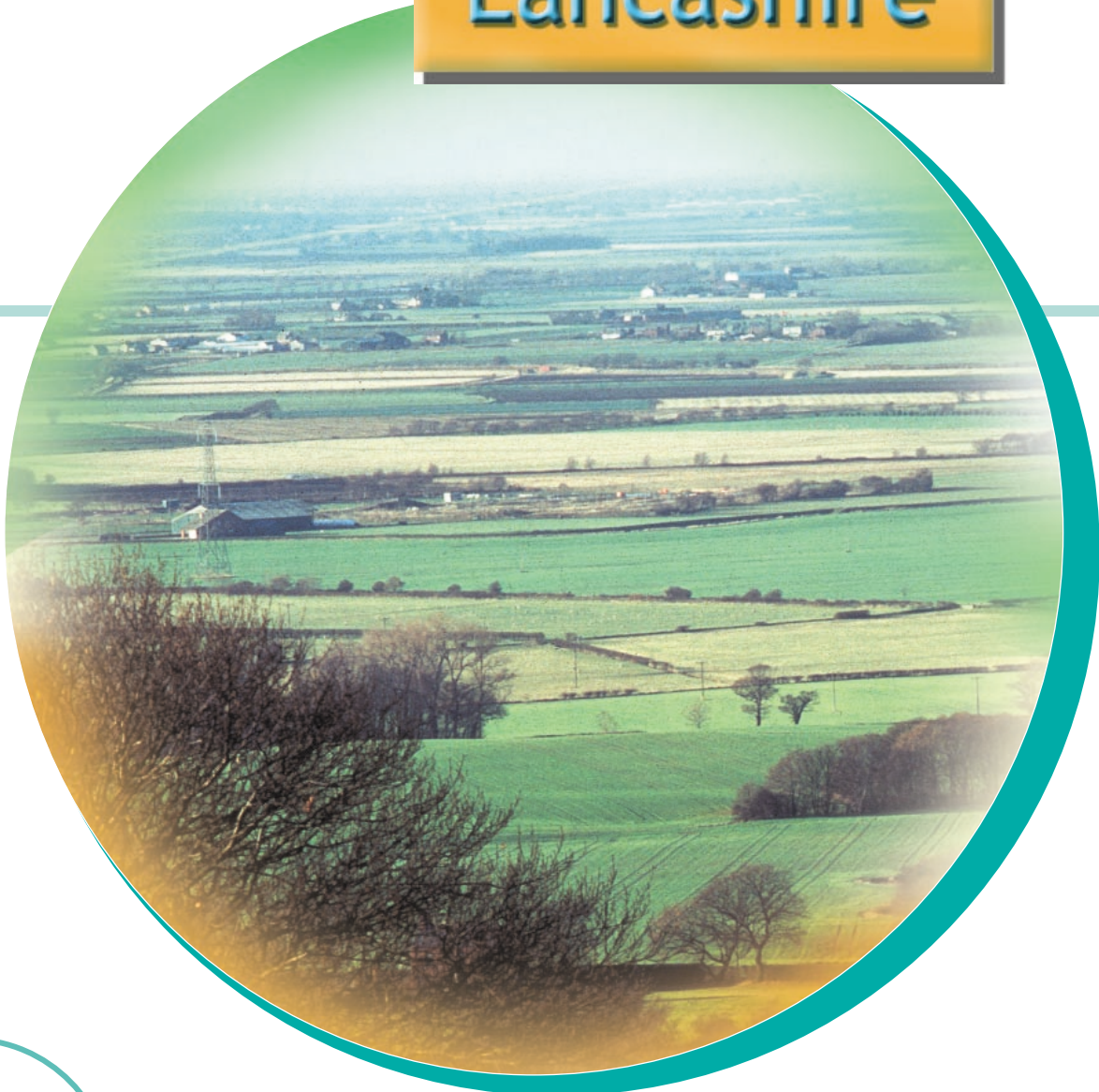


A Landscape Strategy for Lancashire



*Landscape
Character Assessment*

**Lancashire
County
Council**
Environment Directorate



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**Environment Directorate
Lancashire County Council
Cross Street
Winckley House
Preston PR1 8RD
Web: www.lancashire.gov.uk
Tel: 01772 264115**

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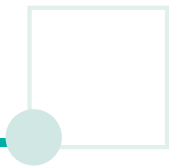
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The study was prepared for Lancashire County Council by:
Environmental Resources Management
Eaton House, Wallbrook Court,
North Hinksey Lane, Oxford OX2 0QS



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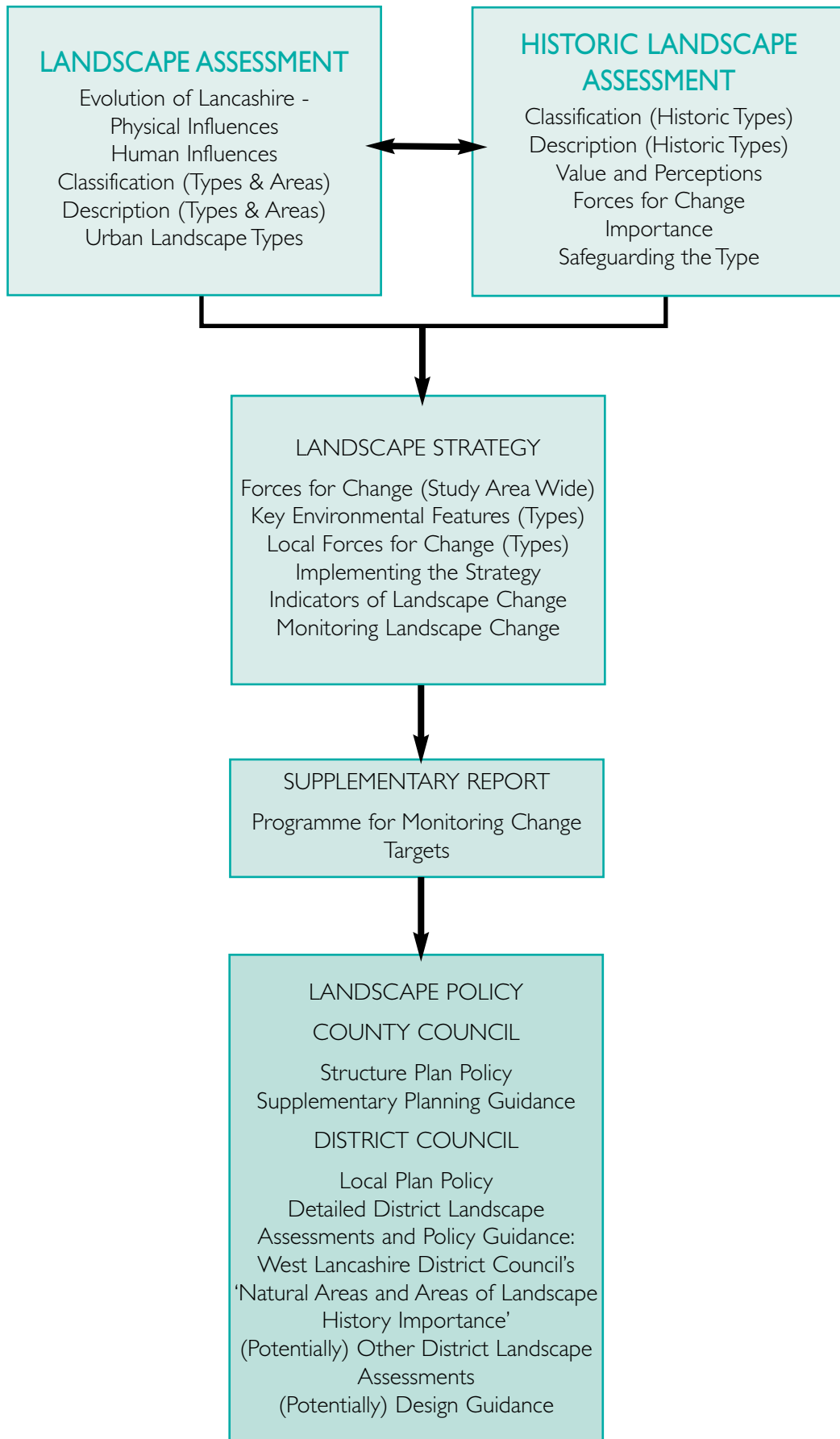
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A Landscape Strategy for Lancashire Landscape Character Assessment

Flow Diagram showing links between the landscape assessment, historic landscape assessment and production of landscape strategy and landscape policy.



I Introduction

In October 1999, Environmental Resources Management (ERM) were commissioned by Lancashire County Council, in partnership with the Countryside Agency, District Councils, Blackburn with Darwen Unitary Authority, North Yorkshire County Council and Craven District Council, to undertake a comprehensive integrated landscape and assessment of Lancashire including the urban areas and to produce a landscape strategy informed by the landscape character assessment process.

The overall study consists of two separate reports; a *Landscape Character Assessment* and a *Landscape Strategy*. This first report, the landscape character assessment, is an objective description and classification of the Lancashire landscape. It forms the basis for the evaluation and guidance provided in the landscape strategy.

The timescale of the *Landscape Strategy* is to be concurrent with and reviewed during the review period of the next Joint Lancashire Structure Plan 2001-2016.



Photo 1. Downholland.

I.1

The Scope and Context for this Study

The study area is shown on *Figure 1*. It includes all of the administrative county of Lancashire, and Blackburn with Darwen Unitary authority and part of the Craven District of North Yorkshire up to the boundary of the Yorkshire Dales National Park.



Photo 2. Sabden, Forest of Bowland in winter.

This area was included to provide detailed assessment of the whole of the Bowland Fells, Bowland Fringe and Pendle Hill and Lancashire Valleys Countryside Character Areas as defined in the *Character Map of England*. For the purpose of the report the Study is referred to as a *Landscape Strategy for Lancashire*.

The landscape character assessment uses as a starting point the Countryside Agency's *Character Map of England* (*Figure 2*), and incorporates as far as possible information from a number of earlier landscape assessments carried out across the county, as well as making reference to studies in adjacent areas. (*Figure 3*). In 1993 the County Council carried out a landscape evaluation for the purposes of the Structure Plan Review based on Countryside Commission guidance⁽¹⁾ to identify landscape character areas within the County. These landscape character areas have formed the basis for landscape policy in the Lancashire Structure Plan 1991-2006. Landscape character assessments have also been carried out in recent years in the two Areas of Outstanding Natural Beauty (Arnsdale/Silverdale and the Forest of Bowland), in the South Pennines (Countryside Agency Character Area 36) in West Lancashire (Natural Areas and Areas of Landscape History Importance) and Wyre Districts, and in the adjacent authorities of Sefton and Cumbria. Significantly, this assessment has been informed by the historic landscape assessment of Lancashire carried out by the County

(1) Countryside Commission (1987) Landscape Assessment: a Countryside Commission Approach, CCD 18, Countryside Commission, Cheltenham.

Archaeology Service, which commenced in January 1999. The project characterised the distinctive, historic dimension of Lancashire's urban and rural environment and is complementary to this landscape character assessment.

The Flow Diagram overleaf shows the relationship between landscape assessment, historic and strategy.

This assessment draws together previous work, producing a comprehensive integrated character assessment using up-to-date recommended methodology. Where existing District guidance is operative as in West Lancashire, the Landscape Strategy will complement it and should encourage the production of further detailed District assessments and guidance.

1.2

Purpose of the Landscape Character Assessment

This landscape character assessment adopts an holistic approach which considers the landscapes of Lancashire as a mosaic of different landscape types and character areas, each with particular characteristics and subject to particular forces for change. The assessment is intended to provide an understanding of the area's landscape and to form a basis for the landscape strategy and guidelines.



Photo 3. Low tide Morecambe Bay.

The study as a whole will inform the new Structure Plan and local plan policies on landscape, as well as supplementary planning guidance. It will also assist local planning officers in development control and will guide and inform project planning and landscape management by the Lancashire Countryside Service. The strategy is also intended to fulfil a wider remit by helping to promote public awareness of landscape character and the importance of conservation and enhancement of landscape.

The landscape character assessment has four main objectives:

- *to outline how the landscape of Lancashire has evolved in terms of physical forces and human influences;*
- *to classify the landscape into distinct landscape types identifying key characteristics and sensitivities and providing principles to guide landscape change;*
- *to describe the current appearance of the landscape, classifying it into distinct zones of homogeneous character, summarising the key features of each landscape character area;*
- *to describe the principal urban landscape types across the County, highlighting their historical development.*

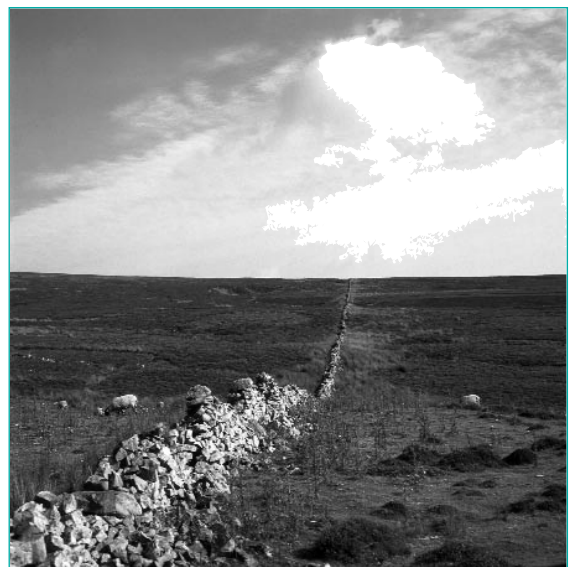


Photo 4. Enclosure walls and heather.

1.3

Approach and Methodology

The study used accepted, systematic methods of landscape assessment ⁽¹⁾ supplemented by the new guidance on landscape character assessment ⁽²⁾. The main tasks were:

- *familiarisation with the study area through overlay mapping, desk study and compilation of material onto detailed field survey forms.*
- *site survey including completion of field survey forms for character areas, mapping of landscape types and landscape character areas at 1:50,000, and preparation of a photographic record.*
- *background research into the geological and physical evolution, human influences on the landscape, and ongoing land use change and development pressures.*
- *consultations with key individuals and organisations to assist the team in understanding local landscape character and forces for change.*
- *report preparation, including descriptions of landscape character types, landscape character areas and the physical and human influences which have shaped their character.*

Development of a sound landscape classification laid the foundations for all subsequent work.

1.4

Structure of the Report

This report presents a full description and classification of the landscapes within the study area, together with an analysis of its geology and topography, and the historic evolution of patterns of land cover, land use and settlement. It will provide a valuable source of information for planning and land management in Lancashire.

The landscape patterns that we see today have evolved gradually over thousands of years, through both natural and human forces. The Report begins, in **Section 2**, by describing the principal influences that have shaped the landscape in the county. Important and distinctive geological, cultural, historic and habitat features are highlighted, and their distribution is described.

This sets the scene for **Section 3**, which reviews landscape character across the study area, presenting the classification of landscape character types, urban landscape types and character areas and drawing attention to those characteristics and features that are particularly distinctive, rare or special. Such characteristics and features may be found even among the non designated landscapes; and an important aspect of the new approach to landscape is to recognise that all landscapes matter.



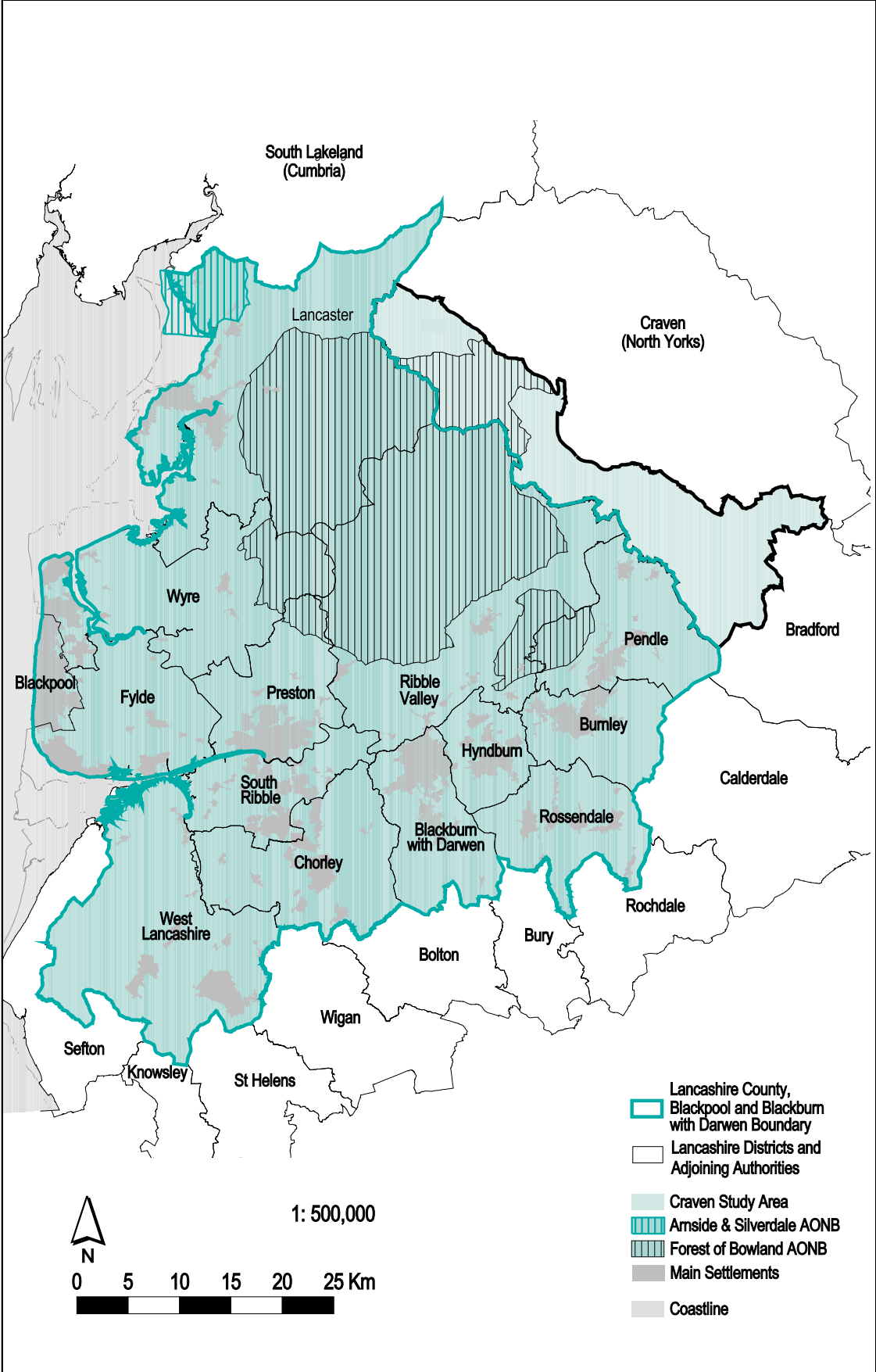
Photo 5. Aughton across the Lune Valley.

Section 4 describes the principal urban landscape types found within the study area. The description is accompanied by notes on the evolution of urban form.

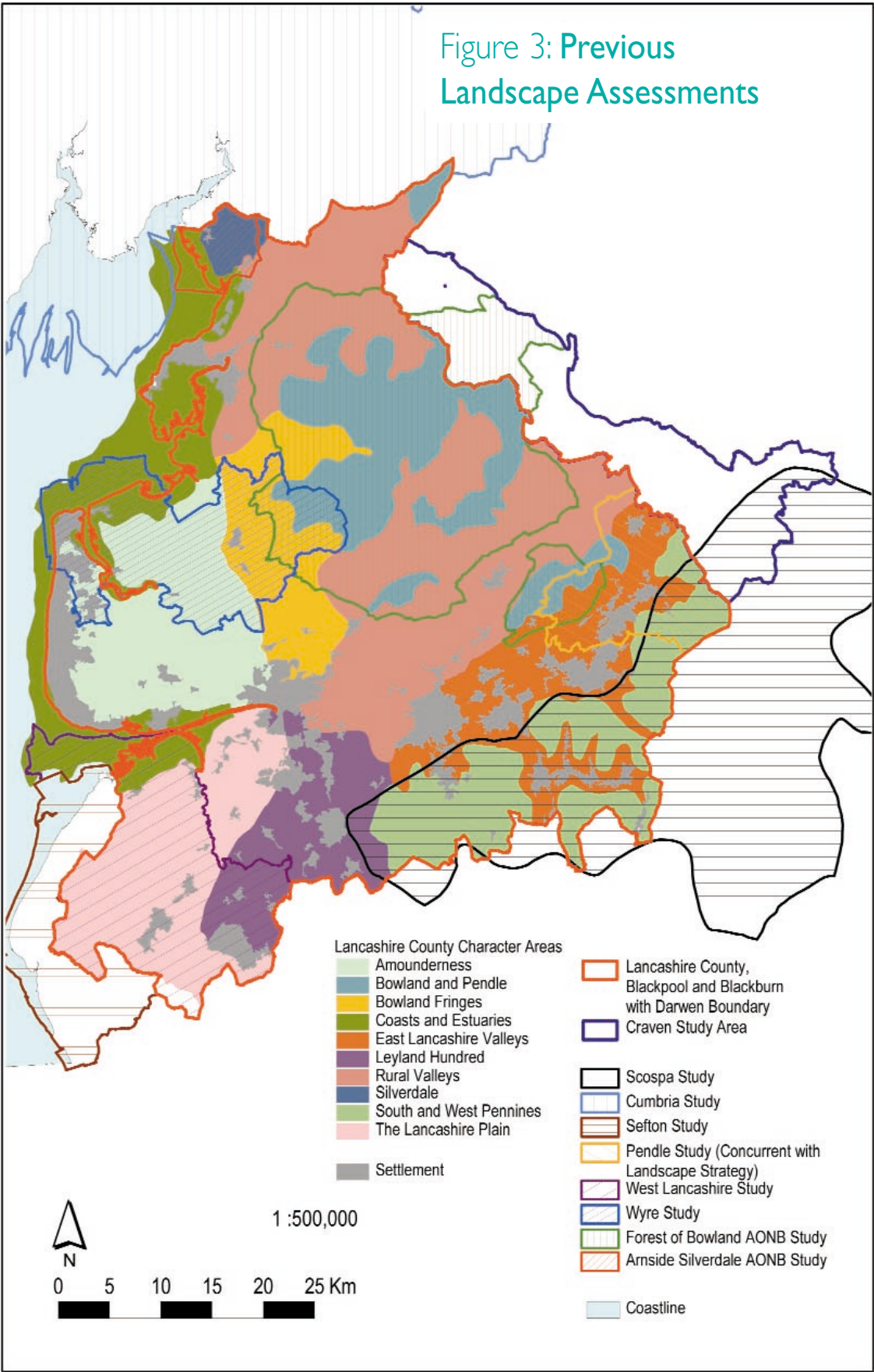
The report concludes with a **glossary** of key terms, a **bibliography** and acknowledgements of the steering group and consultees who contributed to the study.

(1) Countryside Commission (1993) Landscape Assessment Guidance, CCP 423, Countryside Commission, Cheltenham.
 (2) Countryside Agency and Scottish Natural Heritage (1999) Interim Landscape Character Assessment Guidance.

Figure 1: Study Area







2

The Evolution of Lancashire

In the Lancashire study area, it is the irregular juxtaposition of contrasting rocks that forms the basic structure of the landscape. But geology is not the only factor to have shaped the landscape; the intricate interplay of geology, geomorphology, pedology, biogeography and human activity have all had a significant influence. *Figure 4* shows the range of historic landscape types found in Lancashire; it identifies broad but distinctive patterns of fields, settlements and land cover which have developed through a long history of human habitation and exploitation. The spatial distribution of resources, such as water power, coal, metals, building stone and timber; the development role of technology and the distribution of agriculture are all key influences on the most recent and visible layer of the landscape ⁽¹⁾.

2.1

Physical Influences

2.1.1

Geology and Topography

The underlying geology of Lancashire (*Figure 5*) is comparatively simple and is formed from four major rock types from three main geological periods. Rocks of the Upper Carboniferous include the Millstone Grit and Coal Measures. The Lower Carboniferous rocks include the limestones of Silverdale and the Ribble Valley which run through Clitheroe into Yorkshire. Permian and Triassic rocks include the sandstones and mudstones which make up the west of the county. The underlying geology, combined with climate and topography, has had a profound influence over the industrial development of Lancashire. Geology is reflected most noticeably in the distribution and variety of building materials used across the county.

These geological strata are covered by layers of glacial and fluvio-glacial sediments which date from the end of the Pleistocene Ice Age. These form a skin of superficial deposits, or drift, which in places are so thick as to eradicate all visual clues as to the nature of the underlying solid geology. This drift is

modelled and shaped by fluvial, marine, aeolian and frost processes which combine to create distinctive features and landscapes.

The county can be divided into three broad topographic zones - the lowlands, the uplands and the river valleys (*Figure 6*). The lowlands are generally formed of Permian and Triassic rocks which are overlain by thick deposits of glacial drift, blown sand, peat, alluvium and silt. These are soft, gently rolling landscapes interspersed with eskers (gravel ridges) and low hillocks (drumlins). Occasionally higher and more irregular relief, such as the ridges around Chorley and Leyland, indicates that the underlying rocks have emerged from beneath the drift. Most of the uplands are formed from Carboniferous rocks which rise high above the plain; they are characterised by features such as boulder erratics. The gritstone plateaux are surrounded by steep glacier smoothed slopes. In the Silverdale area limestone has created a characteristic landscape of crags and valleys and other limestone features.

2.1.2

Natural Features

English Nature's *Natural Areas*, reflect the distribution of wildlife habitats and natural features throughout the countryside as determined by their underlying geology, past land use patterns and the cultural history of individual areas (see *Figure 2*). They provide a framework for planning and implementation of nature conservation objectives and Biodiversity Action Plan (BAP) targets. Some Natural Areas are conterminous with the Countryside Agency's *Countryside Character Areas* (CCAs), whilst others encompass two or more *Countryside Character Areas*.

(1) Whittow, John, *Geology and Scenery in Britain*, Chapman & Hall, 1992.

Box 2.1 Natural Areas in Lancashire - Key Characteristic Habitats ⁽¹⁾

Natural Areas	Key Characteristic Habitats
Cumbria Fells & Dales (only Morecambe Bay Limestones CCA in Lancashire)	<ul style="list-style-type: none"> ● extensive limestone pavements, rock ledges and crevice vegetation ● limestone coastal cliffs overlooking extensive saltmarshes ● mixed ash woodland, juniper scrub and yew woodland ● lowland calcareous grassland, and herb rich neutral pastures ● calcareous lakes and reedbeds (Leighton Moss is the largest reedbed in NW England) ● remnant lowland raised bogs
Lancashire Plain & Valleys	<ul style="list-style-type: none"> ● arable field margins, ditches and boundary hedgerows ● lowland wet grasslands, including coastal and floodplain grazing marshes ● isolated fragments of species-rich neutral grasslands, ● fragments of lowland raised bogs ● small pockets of lowland heathland and acid grassland ● large numbers of small field ponds throughout the coastal plain
Forest of Bowland	<ul style="list-style-type: none"> ● extensive areas of blanket bog on fells ● extensive areas of wet and dry upland heathland ● purple moorgrass and rush pastures on upland fringes ● upland oak and mixed ash woodlands in cloughs and valleys ● fast flowing streams and rivers ● fragments of herb-rich neutral hay meadows in valleys ● small areas of upland calcareous grassland on limestone outcrops
Southern Pennines	<ul style="list-style-type: none"> ● extensive areas of blanket bog on moorland tops ● impoverished areas of wet and dry upland heathland ● large areas of upland acid grassland ● frequent springs and flushes ● fast flowing streams and rivers, and reservoirs ● some upland hay meadows in valleys ● grasslands upland oak and mixed ash woodlands in valleys
Urban Mersey Basin	<ul style="list-style-type: none"> ● lowland oak and mixed ash woodland ● arable field margins and boundary hedgerows ● small pockets of herb-rich neutral grassland ● fragmented areas of lowland raised bogs ● large numbers of small field ponds
Yorkshire Dales (only Leck Fell in Lancashire)	<ul style="list-style-type: none"> ● limestone pavements, rock ledges, crevice and gorge vegetation ● upland calcareous grassland on limestone outcrops ● upland mixed ash woodlands in cloughs and valleys ● large areas of wet and dry upland heathland ● frequent springs and flushes ● fragmented areas of basin and valley mires
Liverpool Bay	<ul style="list-style-type: none"> ● large expanses of saltmarsh within the Ribble Estuary (some of the most extensive in the country) ● extensive areas of inter-tidal sand and mudflat ● fragmented areas of sand dune along the Fylde coast
Morecambe Bay	<ul style="list-style-type: none"> ● large expanses of ungrazed saltmarsh on the Wyre estuary ● extensive areas of inter-tidal sand and mudflat (second largest in the UK) ● intertidal and subtidal boulders and cobble skears with associated mussel beds ● vegetated shingle ● occasional brackish pools on the landward side of sea walls

(1) English Nature, Natural Areas in the North West Region, English Nature, 1999.

Figure 7 provides a broad indication of the principal habitats found in Lancashire. Habitats such as moorland, scrub, woodland, pasture, arable fields and marsh are derived from the complex interplay of geology, soil and landform, but the influence of man in clearing and settling the land is a key determinant of land cover and, ultimately, habitat value.

2.2

Human Influences ⁽¹⁾

2.2.1

Palaeolithic (c.500,000-8000 BC)

Palaeolithic culture flourished during the Pleistocene, when glaciations were interspersed with long periods of slightly warmer climate. Britain was still joined to continental Europe at this time and in periods of intense cold – such as the last glaciation 25,000–12,000 years ago - populations retreated to the warmer parts of the continent; although even during the glacial periods they made seasonal food gathering forays into the area that is present-day Britain.

Evidence has been discovered at Poulton-le-Fylde where a skeleton of an elk was unearthed which displayed evidence of hunting. It is thought that the elk survived being hunted, but that it escaped and died of its wounds, sinking into a muddy pool complete with one of the hunters spearheads.

Apart from this find, evidence of this period is relatively unknown in Lancashire although recent work in the wetlands has indicated that further investigation may reveal more evidence of occupation. For instance evidence of Upper Palaeolithic activity was discovered on the fringes of the permanent snowfields of the Lake District and in the tundra around what is now Morecambe Bay.

2.2.2

Mesolithic (c.8,000-4000 BC)

Gradually, as the climate improved at around c.8500 BC, the glacial ice sheets retreated and meltwaters separated Britain from the Continent. The climate became warmer and wetter and by c.6,500 BC pine forests had given way to denser, deciduous woodland. Oak and elm would have occupied slightly

better drained slopes, whilst exclusively oak woodland was predominant on poorly drained low-lying ground.

The Mesolithic is far better represented in the archaeological record than the Palaeolithic. The improved climatic conditions suited settlement by large numbers of people and bands of hunter gatherers roamed the upland and lowland landscapes of Lancashire following the herds and collecting wild food. A site at Rushy Brow, Anglezarke showed remains of temporary shelters and flint implements. It is thought to represent a temporary hunting camp of this period. Flint scatters discovered in the uplands between Saddleworth and Burnley, indicate that there were other seasonal summer hunting camps in the hills. These are important finds as some of the flint and chert implements were from Lincolnshire and east Yorkshire and indicate that regular long distance trade had already become established during the Mesolithic.

2.2.3

Neolithic (c.4000-2,500 BC)

A shift from hunting and gathering to a settled agrarian society characterises the Neolithic period. In the archaeological record, this change is manifested by the appearance of new artefact types – querns, sickles, pottery and polished stone axes which began to replace the cruder tools of the Mesolithic period. Neolithic finds are more widespread than those of the earlier Mesolithic and may indicate more successful clearance and settlement of the densely wooded lowlands.

Environmental remains, such as pollen from the lake muds and peats of the Lancashire mosses confirm that vegetation cover was extensively altered by the arrival of farming. Climatic deterioration in the latter part of this period into cooler wetter conditions probably combined with human clearance of the forests and the impact of their grazing animals to reduce tree cover and encourage the formation and growth of peat mosses across large tracts of the county. Sophisticated stone axes, arrowheads and other implements provide evidence of Neolithic occupation throughout Lancashire. Evidence of trade is shown by the finds of stone axes from the Langdale area of Cumbria. Elsewhere in the

(1) The principal source for the information in this section is Crosby, Alan, A History of Lancashire, Phillimore 1998.

UK new types of site emerged in the Neolithic, including permanent settlement and large ceremonial monuments, although evidence is rare in Lancashire. There is evidence of burial in large ridge cairns however; for example at High Park, above Leck Beck.

2.2.4

Bronze Age (c.2,500 –750 BC)

Metalworking technology, along with new types of flint-tool and pottery design were introduced from continental Europe at the start of this period. Cereal crops and stock rearing remained the mainstays of the economy, although changes in social organization were reflected in the increasing numbers of burial and ceremonial sites with round barrows and cairns, which many archaeologists now see in the context of ritual landscape form. These are evident throughout the Lancashire landscape.

In the Late Bronze Age, radical social and economic change led to the declining use of cairns and round barrows in favour of cemeteries which are less traceable features, and to the introduction of new ceramic styles, including jars, bowls and cups. Evocative sites dating from this period can be found at High Park, above Leck Beck and at Portfield above Whalley, where settlements suggest occupation from the Neolithic. During this period, the continuing deterioration in the climate to colder and wetter conditions appears to have forced early Bronze Age farming activities down from the higher fells, which may have been utilised for formal or informal pastoral farming by the end of the period.

Accidental finds in the mosses of the Fylde and south of the Ribble, where conditions are right for preservation of organic matter, have revealed bog bodies, burials, traces of wooden structures and trackways, as well as implements of stone and bronze. At Preston Dock in 1855, 30 human skulls were discovered along with two dugout canoes, 60 pairs of deer antlers, 43 ox skulls, two pilot whale skulls and a bronze spear head. These finds may possibly indicate the presence of some sort of marsh dwelling.



Photo 6. Roman Ruins, Ribchester

2.2.5

The Iron Age (c.750BC-AD79)

Iron working was among the new technologies introduced to Britain from the continent in the Iron Age period. Population growth led to competition for land and the development of a more territorial society; hillforts and defensive enclosures were manifestations of this social shift. Nothing is known of the political or territorial organisation of the area until just before the Roman conquest although it is known that most of the region was controlled by the Brigantes. The Setantii, one of the smaller tribes ruled by the Brigantes, are believed to have occupied the Lancashire Plain and its adjacent foothills.

The visible remains of the Iron Age within the landscape are generally confined to hillforts at Castercliffe and Warton Crag and a number of defended farmstead sites.

2.2.6

Roman Period (AD 79-410)

The Roman invasion of Britain started in AD43 with a landing on the south coast. Pacification of the indigenous tribes and the establishment of client kingdoms on their fringes progressed over the years, with the establishment of formal tribal capitals (Civitas) in romanised towns and a military road network, guarded by a series of forts. In Lancashire Roman military activity may well have slightly preceded the formal and well documented advances of Agricola in AD79, although traces are few. Agricola's campaigns,

which may have been prompted by the destabilisation caused by internal conflict within the controlling Brigantian tribe, utilised ship-borne troops who landed in the estuaries as well as a land army. Forts were established or formalised at Dowbridge near Kirkham, Ribchester, Lancaster and Over Burrow, although the first of these seems to have had only a short life ⁽¹⁾. These sites seem to have been rebuilt during the AD 120s and a military style although not necessarily formally fortified industrial settlement was established at Walton-le-Dale, probably to supply goods to the Roman Army.

Pre-Roman settlement was widespread and continued under Roman occupation. Some of the native populations were relatively unaffected whereas others took advantage of opportunities for trade and adopted more Romanised practices. Roman army engineers built more substantial roads with metalled and cambered surfaces, to expediate the movement of soldiers, food and equipment. Naturally these roads were also exploited as trade and communication routes. The Roman road network in Lancashire grew around the principal south-north route from Manchester through Ribchester to Over Burrow and Cumbria and the west-east route from Kirkham-Ribchester along the Ribble Valley into Yorkshire. Some sections of these roads were quickly abandoned for long distance travel and are consequently well preserved and can be traced for miles; others, including routes which stayed in use and were thus worn out and rebuilt on many occasions, can be difficult to trace. Another road travelled from Manchester to Lancaster along the margin of the plain although details of its route are uncertain. Despite their low survival rates, Roman roads can be seen in the course of modern routes, lanes and in the lines of hedges and field boundaries. Their alignments are important and tangible traces of occupation and movement.

The Roman empire was in decline by the fourth century as weaknesses in the empire caused by political instability were exploited by barbarian raids. At Lancaster the fort on Castle Hill was reconstructed about AD330-340, probably to defend against sea-borne raiders from the Irish Sea. The economic disruption and endemic insecurity stopped the

growth of romanised civilian settlements such as Lancaster, or caused their abandonment and, after AD 400, the economy is likely to have been almost completely agricultural and rural. For the majority of the Lancashire population, lives would have continued as they had done before the Roman conquest. By the middle of the 5th century direct Roman rule had been replaced by local governance and the armies had retreated to defend more important frontiers.

2.27

British, Saxon and Scandinavian Period (AD 410-1066)

After the Roman occupation much of the Roman infrastructure ceased to be used. Prior to the Norman conquest, Lancashire was influenced by Saxon and British realms. Place names prove to be one of the few sources of information about these societies as they did not keep documents. They suggest that well into the seventh and eighth century the county was populated by British speaking peoples. Places such as Pendleton, and Penwortham, contain the British word 'penno', which means a prominent steep ended hill. The best known of these is Pendle Hill, which can be literally translated to 'hill, hill, hill' as the Saxons added the suffix 'hill' to its original British name 'Penno' producing Pennehill, which was later corrupted to Pendle and which has become known as Pendle Hill.

A significant number of place names display combined British and Anglo Saxon influences and by the late sixth century the tribal kingdoms of North Lancashire were absorbed into Anglian Northumbria. Lancashire south of the river gradually became incorporated into Northumbria and after a time Mercia.

Conversion of the Anglo Saxons to Christianity had begun in 620 and many place names ending in suffixes of 'hamm' (as at Kirkham and Heysham) and 'tun' (as at Halton and Preston) indicate centres of importance containing early churches which governed wide tracts of the surrounding countryside. Place names containing 'ecles', which in Celtic languages is derived from the Latin 'ecclesia' meaning a place of worship, are evidence of early places of Christian worship within British settlements. Such settlements include

(1) K Buxton et al., Excavations at Dowbridge, 1999.



Photo 7 Rock cut graves at Heysham Chapel.

Eccleston near Chorley and Great Eccleston in the Fylde.

By the ninth century place name evidence suggests a gradual and peaceful settlement of hitherto unused land by Hiberno-Norse peoples. The Ribble Valley is likely to have functioned as a major routeway from the Viking York kingdoms to the Irish kingdoms. At Cuerdale on the banks of the Ribble in 1840, a massive hoard of Viking silver was discovered. It was dated to around 905 and contained coins from as far afield as Afghanistan.

Place name evidence⁽¹⁾ is again testimony to the activities of a non documentary society, although it is likely that the new settlers renamed existing villages as well as establishing new sites. Goosnargh incorporates the personal name Gusan and Grimsargh that of Grimr. In south west Lancashire the suffixes 'by' meaning farm (Formby, Crosby and Roby) and 'skeith' (Hesketh) which itself means a place for horse racing, both indicate Scandinavian settlement. In the north, place names of 'lreby' (farm of the Irish) indicates settlement by Irish Norse men and other suffixes such as *fell*, *force*, *gill*, *thwaite*, *beck* and *dale* indicate more general Norse influences.

2.2.8

Medieval (AD 1066-1500)

At the time of the Norman Conquest there was no administrative district of Lancashire, and within the Domesday Book, south Lancashire was described as *inter Ripam et Mersham* meaning between the Ribble and the Mersey. North Lancashire was described as the 'Kings lands in Yorkshire'.

To ensure the security of this peripheral part of the Kingdom from the threat of attacks and uprisings, the English-held estates were confiscated and allocated to followers of the King. This was part of a policy of creating powerful lordships which could act as a front line of defence against invaders and keep the local population under control. A number of castles were therefore built at strategic and dependable locations. The early type were motte-and-bailey castles positioned to control important routeways and the local population. An example is the well preserved Castle Stede which was one of a string of at least nine castles on the Lune.

Roger de Poitou, under whom most of Lancashire was united in one lordship, established his capital manor at Lancaster by building a stone castle in this strategic location. Clitheroe was another important castle. It

(1) Eilert Ekwall, The placenames of Lancashire, Manchester University Press, 1922.



Photo 8. Textile Mill, Rossendale

was located on top of the limestone knoll and controlled the important Ribble-Aire routeway.

The county was recognised in its own right in 1181-2 when an official of the royal exchequer wrote out a separate parchment in an accounts document headed '*Lancasra quia non erat ei locus*' (Lancaster, because there is no place for it in Northumberland). Before this the area which is modern day Lancashire was included in annual financial statistics wherever there was space on the parchment rolls. After a century, this formally recognised Roger de Poitou's land grant as a county in its own right.

Following the upheaval of the conquest, the reallocation of English Lands to French nobles and the subjugation of rebellions in the north, the medieval period was one of great prosperity with economic expansion and rapid population growth. The frontiers of settlements and agricultural activity were expanded to feed new populations; new settlements were established and more difficult terrain brought into use, wetland was drained, woodlands cleared and vast tracts of pasture ploughed up. This growth was however checked in the fourteenth century by a combination of disease, bad harvests and warfare. The Black Death, which ravaged the country between 1348 and 1351, killed half of the Lancashire population. This resulted in an

important alteration in the balance of agriculture. Ploughing for arable crops was replaced by the extension of pasture for livestock farming, including large scale sheep farming to supply wool for the English and continental markets. Textile manufacture was well suited to Lancashire as the water was ideal for cloth making, and there were large tracts of land for grazing sheep. As a result of these factors, the textile industry expanded rapidly.

Over most of the county nucleated settlements were rare and most people inhabited small hamlets and isolated farmsteads. This pattern can still be seen in the countryside between Parbold, Mawdesley and Heskin and in much of the uplands. The exceptions to this pattern include the planned villages of the Fylde such as Elswick and Clifton.

In east Lancashire the 'fold' pattern was common and involved several cottages and farms sharing a common yard. Examples of this can be found at Horrocks Fold and around Wardle and Littleborough. In the uplands, where unfavourable soils, climate and topography discouraged arable farming, the 'infield-outfield' system was adopted. Crops were grown for subsistence close to settlements and the wider landscape was devoted to summer grazing. By contrast, in

the lowlands, arable farming was widespread until demand forced a change to livestock and market gardening. Most lowland communities operated an open or common field system, although this was rarely the rigid three field system of the midlands as the scarcity of drier land meant that a fallow year was economically unviable. The legacy of 'ridge and furrow' earthworks, which result from ploughing in strips, confirm that the open-field system was present. The raised strips were preserved from later ploughing by the reversion to pasture. Beyond the open arable fields, many towns had areas of common pasture which were frequently referred to as 'moors', and are still identifiable in place names such as Moor End outside Halton in the Lune valley. Surviving relict medieval landscapes can be seen in many places, for example at Longton, south west of Preston, and in the Ribble Valley.

Many of the townships in lowland Lancashire also contained large areas of wetland. The Fylde, the shores of Morecambe Bay and the broad stretch of land from the Ribble through Ormskirk included vast areas of Mossland. These areas contained many pools and lakes; Martin Mere was at one time the largest lowland lake in England, extending for some six miles. These areas, although described as 'waste' in later centuries, provided important resources for rural communities. Peat was a valuable source of fuel, reeds were used for thatching and rushes for candles. Water fowl and fish were important sources of year-round food and many acres of land were secured as rough grazing for livestock. Between 1100 and 1300 population pressures forced the drier edges of the mosslands to be regarded as potential farmland. The small scale drainage works to bring these marginal mosslands into cultivation were the precursor of one of the most important long term changes to Lancashire's landscape; that of wetland drainage.

Woodland clearance also resulted from population pressure and was widespread in the 12th and 13th centuries along the fringes of the Pennines and Bowland. These clearances are evidenced in the numerous place names which originate in this period which include the term *ryding* (cleared land) such as at Ryddings Farm at Aighton, *rod*

(clearing) such as at Blackrod and *stubbing* (clearing land of tree stumps) such as at Stubbins Nook which is near Longridge. The effect of this was the creation of a small scale intimate landscape of scattered farms linked by winding lanes and irregular fields with patches of surviving woodland on stream-sides and field edges. This landscape is still prominent in areas such as the Lune valley and the Ribble valley.

Medieval forests in Lancashire were located in the uplands. Forest in this period meant 'land set apart' and was subject to Forest Law. Woodland would have been economically important to medieval settlements as a feeding ground for swine, a source of timber for house construction, fuel, and bark for tanning, as well as for its forest animals. In Lancashire there were two main areas of forest. North of the Ribble were those of the Earldom of Lancaster which included Bowland and to the south were the forests of the Honour of Clitheroe which included Pendle and Trawden. It is probable that these forests were created soon after the Conquest as special hunting grounds. Gradually, local landowners created private deer parks which themselves became much desired features of country estates. As hunting declined in the wider landscape, vaccaries became more important. These were extensive carefully managed hillsides occupied by herds of freely wandering cattle.

Between the 12th and 14th centuries Lancashire formed part of the debatable border lands between the English and Scottish kingdoms. As a result, some of the wealthier inhabitants erected tower houses or dug defensive moats around existing halls.

Many of the industries which became important to the Lancashire economy have their origins in the medieval period. Deposits of iron ore were worked in this period and there is evidence of iron working at Pendle, Trawden, and at Quernmore on the western fringe of Bowland. Most of the coal fields were beginning to be exploited by the Middle Ages and stone quarrying was developing as a significant industry in this period. The most important industry however was that of textile manufacture, especially woollen cloths, linen and canvas. Spinning and weaving were undertaken on a domestic scale, although finishing and cleaning was carried out at a

more industrial scale within water powered mills.

It is also in the medieval period that town life gathered apace and many of the great population centres acquired urban characteristics. Initially these were formed around the markets which became established outside important churches or castles, such as Preston and Lancaster, or at manorial holdings, and soon exerted a strong pull over their surroundings. For example, surnames appearing in Preston during the medieval period suggest a large number of the town's new settlers were being attracted from the Fylde and the Ribble valley.

2.2.9

Early Modern Period (AD 1500-1750)

Lancashire's early modern period saw a gradual progression from a predominately rural county with a traditional pattern of settlement and land use into a county of industry with large towns, high levels of literacy and well developed trade and communications.

Industrialisation with its origins in textile manufacture gathered pace. The domestic manufacture of woollen cloths and fustian gained importance and provided additional income for thousands of families otherwise engaged in agriculture. This dual economy made it possible for large portions of the Lancashire population to survive on otherwise non viable agricultural holdings ⁽¹⁾. The rural landscape was in many places devoted to supplying the needs of the small scale industries; flax and hemp were grown in the west to meet the needs of the 'linen men' and other small scale manufacturers. Salt manufacture is noted as an important industry during this period There is evidence of early production from the extensive sandflats at Silverdale/Warton and Pilling/Cockerham. Salt was one of the few methods of preservation in the days before refrigeration and was extensively used as a means of preserving meat and fish.

Coal extraction similarly became more expansive and specialised to meet the demand caused by the rapidly growing population and a move to the use of coal rather than peat or wood as a domestic fuel. Deeper mines

became possible with the invention of steam driven drainage pumps, and gradually became common on the coalfields.

Religion in Lancashire up to the early modern period was dominated by Roman Catholicism, although after the Reformation Lancashire developed remarkable religious diversity, particularly after the Toleration Act of 1690. Perhaps the most notable Lancashire example of this diversity is George Fox who in 1652, on the summit of Pendle Hill, experienced a vision which later led him to the home of Thomas and Margaret Fell near Ulverston where the Quaker movement may be said to have been founded.

By the 1750's most of Lancashire's common arable and meadow was enclosed. This movement had a far reaching impact upon the moors and mosses as after the early 16th century, opportunities for greater financial returns from land drainage and improvement ensured many landowners saw reclamation of otherwise less profitable land as an attractive prospect. This was made possible and easier with improvements in technology as windmills aided increasingly ambitious drainage schemes by the early 18th century. These developments made drainage an important feature of the Lancashire landscape from the 17th century onwards. A notable example of this is the spectacular drainage of Martin Mere. Although some reclamation had begun during the medieval period, the pace of reclamation accelerated from the late 17th century and, despite being hindered by repeated flooding, was completed successfully by the 1850's. The process was aided by steam pumps and produced a vast tract of highly valuable agricultural land.

The sheep population increased during the 15th and early 16th centuries in line with the expansion of the woollen and textile industry, although after 1600 a reduction of the industry resulted in a smaller demand for sheep in the south of the county in particular. Cattle gained importance and sizeable and profitable herds appeared the mid 18th century. Dairying emerged as the mainstay of the Lancashire agricultural economy, with beef herds being driven to markets in the growing towns to meet the demand of the rapidly expanding urban population.

(1) C B Phillips and J H Smith, Lancashire and Cheshire from AD 1540, Longman 1994.



Photo 9. Stonyhurst College.

During the mid 16th century, stone or brick became the preferred building material ⁽¹⁾ and stimulated an ever increasing demand for stone and slate. Sandstone quarries in the south west, limestone quarries around Clitheroe and slates and gritstone quarries around Pendle all expanded rapidly. The majority of the half timbered halls were rebuilt, particularly in the south east of the county and now only their later stone and brick replacements survive. However the survival rate of stone and brick farmhouses is good and many remain visible today.

As industrialisation gathered pace, the transport of bulk commodities such as coal from south Lancashire, cloth from the east of the county and salt from the coastal salt pans became important. Roads were generally maintained by the manor or by religious houses prior to the Dissolution of the monasteries in the late 1530s and early 1540s. Turnpike roads maintained by trusts and funded by tolls were introduced to the county after the 1720s. It is also around this period that schemes to improve river navigation appear.

2.2.10

Industrialisation and the Modern Period (AD 1750-1900)

The gradual developments of previous centuries accelerated from the middle of the 18th century, with rapid changes to create a dynamic, industrialised society. The large scale application of technology resulted in a move

from a rural to an urban economy and placed increasing pressures on agriculture, mining, quarrying and the transport network.

Textile manufacture continued to dominate the economy of Lancashire and cotton began to become more important than wool as supply of raw cotton from the colonies became available through the ports, and the suitability of Lancashire's damp, mild climate for spinning cotton became evident. Existing water power and labour allowed this shift to be easily made. Other locally important textile industries were: silk, produced at Galgate near Lancaster and sailcloth at Kirkham. Initially the mills were water powered and located in chains along valleys, although by the early 18th century steam power was being introduced. This allowed mills to be situated close to canals and railways for easy movement of raw materials, finished products and the vast quantities of coal required by the boilers. Despite the introduction of steam power for spinning, hand looms were still used for cotton manufacture and for weaving cotton. Weaving became worth pursuing as a profession in its own right. This also required purpose built accommodation, including a loom shop which was usually recognisable by its multiple windows. These 'weavers cottages' are conspicuous in the east of Lancashire. After 1830 however, the application of steam power to weaving resulted in large factory-style weaving sheds in the towns and the decline of the cottage industry. The weaving sheds with their north facing roof lights are still a feature of East Lancashire towns.

The improvements during this period of the county's transport network were central to the success of Lancashire's expanding industrial economy. The increasing globalisation of trade from Lancashire, principally with the West Indies and the Baltic, required the expansion and creation of ports such as Lancaster, Fleetwood, Heysham and Preston to meet demand. The Corporation built one of the largest and most ambitious docks in the country at Preston which required the constant dredging of the Ribble and for which the town is still paying the debt charges. In Lancaster the establishment of St. Georges Quay in 1750-1755 reflected increasing prosperity. This was part of a boom which

the city enjoyed from the middle of the eighteenth century which has left a legacy of fine Georgian architecture. From the later 18th century the Leeds and Liverpool Canal and the Lancaster Canal were constructed. The construction of the network of Turnpike roads also accelerated in the 1750's and an important second phase of road construction occurred between 1790-1842 when 750 miles of new road were constructed following relatively direct routes.

Lancashire occupied a pioneering position in the history of the railway network. Initially wooden tracks facilitated the movement of coal tubs in the Lancashire coalfield and the introduction of iron rails followed shortly after their invention. A wave of passenger lines was constructed between 1840-60 linking industrial settlements. In the latter part of the century they played a major role in the transport of people to the newly developed coastal resorts.

The population of Lancashire increased sevenfold between 1801 and 1901. This period of 100 years saw a shift from a 10% urban population to almost 90%. This necessitated the expansion of old settlements and establishment of new towns. In the late 19th century wealthy patrons and officials made efforts to create an urban identity and stamp mature civic pride on communities. The squalid slum areas were swept away for the construction of civic buildings and railway stations. By the 1870's urban authorities passed laws imposing minimum building

standards and by the late 1880's neat brick terraces of houses were laid out to strict grid patterns. During this period quarries such as that at Britannia Quarries were blasted for gritstone which was needed to construct churches, public buildings and the great feats of Victorian engineering such as the reservoirs.

Along the coast a string of resorts appeared after the middle of the 19th century to meet the growing demand for leisure and relaxation. Blackpool and Morecambe, along with Lytham and St Annes developed from agricultural and fishing villages and attracted visitors in vast numbers

The pressures of urban population growth on the rural economy were profound and lasting. Higher levels of demand created new incentives for investment and improvement in agricultural practices. In south Lancashire reclamation of mosslands continued and some of the best agricultural land in the UK was created. Market gardening emerged as an intensive industry during the early 19th century in areas around Ormskirk and Burscough. The improved communications were essential to the success of these ventures as they provided opportunities to import ash and manure as fertilisers and export fresh produce to the cities. In the Ribble Valley and the Fylde, a switch from arable production to raising dairy herds was an important development, caused by the growing demand for fresh milk in the cities.



Photo 10. Terraced housing.

From the end of the 18th to the middle of the 19th century pressure to create more productive arable land resulted in a dramatic new landscape of large square fields enclosing areas of previously open moorland. The geometric pattern is in evidence throughout the county; endless miles of straight stone walls and verged roads replaced pre enclosure tracks and less regimented field boundaries.

Up to this period the landscape was characterised by numerous small farms although, as the opportunities for wealth from farming emerged, many landowners looked to extend their properties by purchasing adjacent freeholds. Meanwhile, a traditionally conservative and catholic gentry sought to express their wealth by rebuilding country houses in fashionable styles. Between 1800 and 1880 dwellings surrounded by attractive parkland were developed throughout the county, although many in later years became too expensive to maintain and were sold for institutional uses.

In 1842 *Barclay's Complete and Universal Dictionary* summarised the county as;

A county of England lying on the Irish Sea, and bounded by Cumberland, Westmoreland, Yorkshire, and Cheshire. It is 75 miles in length, and 30 in breadth. It is divided into 6 hundreds, which contain 27 market towns, 62 parishes, and 894 villages. This county comprises a variety of soil and face of country; there being mountains of more than 2000 feet high, in the north and eastern parts, with wide moorlands or heaths amongst them; extensive bogs or mosses, which yield only turf for fuel, and are very dangerous; and some most fertile land for agricultural purposes. it yields iron, coal, slate, and other building-stones; salt, &c. &c. Grazing is more attended to than agriculture. The fisheries, both in the rivers and the sea, are valuable. As a commercial and manufacturing county, Lancashire is distinguished beyond most others in the kingdom. Its principal manufactures are linen, silk, and cotton goods; fustians, counterpanes, shalloons, baize, serges, tapes, small wares, hats, sail-cloth, sacking, pins, iron goods, cast plate-glass, &c. Of the commerce of this county, it may suffice to observe, that Liverpool is now the second port in the United Kingdom. The principal rivers are the Mersey,

Irwell, Ribble, Lune, Leven, Wyre, Hodder, Roche, Duddon, Winster, Kent, and Calder, and it has two considerable lakes, Windermere and Coniston Water. Lancaster is the county town. Population, 1,667,054. It returns 26 members to parliament.

NB: This extract refers to the County Palatine and not the present administrative boundary

2.2.11

Recent History and Current Trends (1900- Present)

Up to World War I Lancashire was considered to be a prosperous county, famed for its industrial and commercial power; unquestionable prosperity and proud cities, many of which had grown from humble beginnings only a century before. Following the war, foreign competition, diminishing overseas trade, outdated technology and rapidly decaying inner cities threatened to undermine its success. By the 1930s the county was suffering from a protracted depression from which it has taken half a century to emerge.

The inter war decline of Lancashire's traditional industries was swift. Despite a brief boom following the war, cotton production fell dramatically. Some firms switched to synthetic fibre production, but nothing could be done to avoid the mass unemployment created by the collapse of the textile industry and its ancillary trades. Preston for example suffered 55% unemployment at this time.

Coal mining entered a rapid decline during the 1950s. This was largely due to the antiquated nature of many pits and to foreign competition, but also resulted from the unavoidable problems posed by geology and a proven lack of long term resources. By 1960 almost all pits in Rossendale and mid Lancashire had been abandoned. Today no pits are operational save a small number of shallow, open cast workings.

By the 1930s unemployment levels were very high across the whole county and, as a means of reversing the trend, the government designated 'Development Areas' where newly locating industries could gain subsidies. However by the 1980s, these were phased

out in favour of enterprise zones and development corporations, which encouraged regeneration through the private sector. These proved prosperous in the south west of the county, but less so in the north and the south east.

In recent years, sustained economic and employment growth have been concentrated in the service sector and light industry. Tourism, leisure, education, financial services, retailing and administration are also all increasing rapidly. In Preston for example, the University, Borough and County Council are by far the largest employers; the town is once again a service and market town, as it was prior to the Industrial Revolution 200 years ago.

The transport network, which grew in tandem with industrialisation, suffered as the post war decline became established. For instance in the first half of the 20th century, the canal network contracted and many miles fell derelict. This trend is however, being reversed with major schemes to rejuvenate the canals as a leisure resource. For example, a new stretch of canal is to be built to link the Lancaster Canal to the Ribble estuary. In addition there is potential for re-opening of railway stations in East Lancashire and on the west coast main line.

Despite a general decline in the transport network, the success and widespread appeal of the motor car has ensured a certain degree of growth. The 1920s saw dramatic new road schemes and later in the century the County Council planned a new motorway network. The Preston Bypass, the first motorway in the country, was opened in 1958 and in the following 20 years Lancashire saw the emergence of a well integrated transport network, which proved so successful that capacity was reached by the 1980's and has required a major new improvement scheme.

Towns and cities have suffered profound and lasting change during the 20th century due to the combined effects of population decline, suburbanisation and economic change. Overcrowding problems of the urban poor were tackled by the urban clearance programmes of the 1950s and 60s, followed by the construction of large council estates and high rise flats, although the latter proved

so unpopular that many have since been demolished. The creation of overspill communities was also tried, building on attempts in Manchester during the 1930s. As a result Skelmersdale was constructed to accommodate 70,000 of overspill population from Liverpool and rejuvenate a small mining community which was suffering severe unemployment problems. The last quarter of the twentieth century has also seen an attempt to link Preston, Chorley and Leyland into a city of five million people called the Central Lancashire New Town. New industrial areas were constructed but the vision failed to materialise as the fashion for new towns faded.

The major industrial centres all suffered war time bombing, although towns such as Preston and Blackburn escaped serious damage. These towns were substantially remodelled as a result of post war planning schemes in which 18th and 19th town centre buildings were cleared and replaced with contemporary structures.

During the 1960's nuclear industry arrived in Lancashire with the construction of the power station at Heysham and the B.N.F.L plant at Springfield in the Fylde. In more recent times windfarms have begun to appear on the west facing moorland summits providing green energy for the flourishing Lancashire population.

The countryside, despite the effects of intensification and the application of new farming methods since 1939, has enjoyed a great deal of protection, with the designation of large areas such as the Forest of Bowland, and Arnsdale and Silverdale Areas of Outstanding Natural Beauty. Other areas also enjoy protection for ecological and geological reasons such as the marshes and mud flats of the Ribble estuary and Morecambe Bay, the limestone pavements of Silverdale and the moorlands of Bowland and the South Pennines.

Enjoyment and management of the countryside for recreational purposes has been promoted since the late 1960s, with the opening for example in 1970 of the Beacon Fell Country Park and the provision of countryside recreation services particularly in the West Pennine Moors and the AONBs.

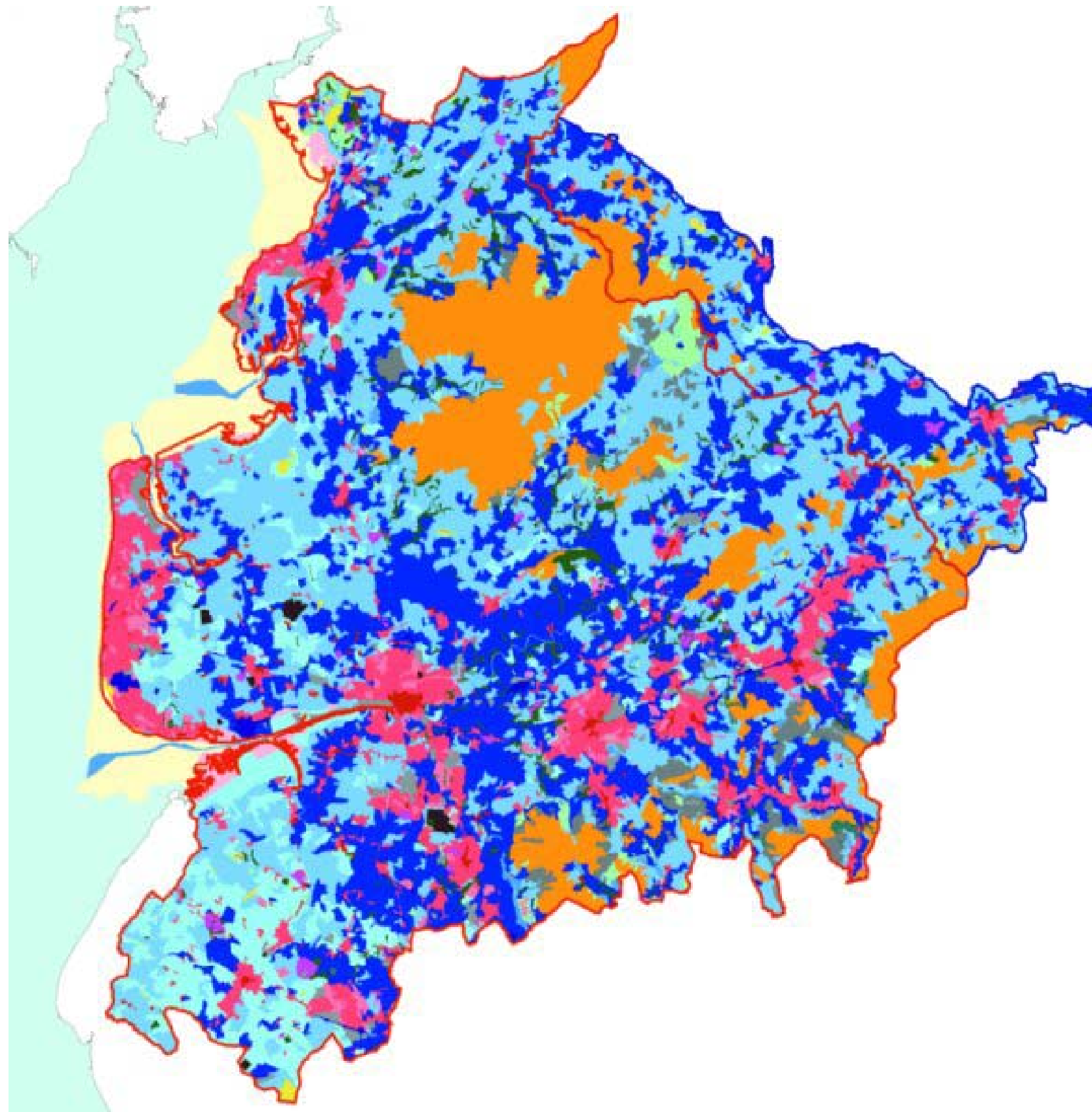
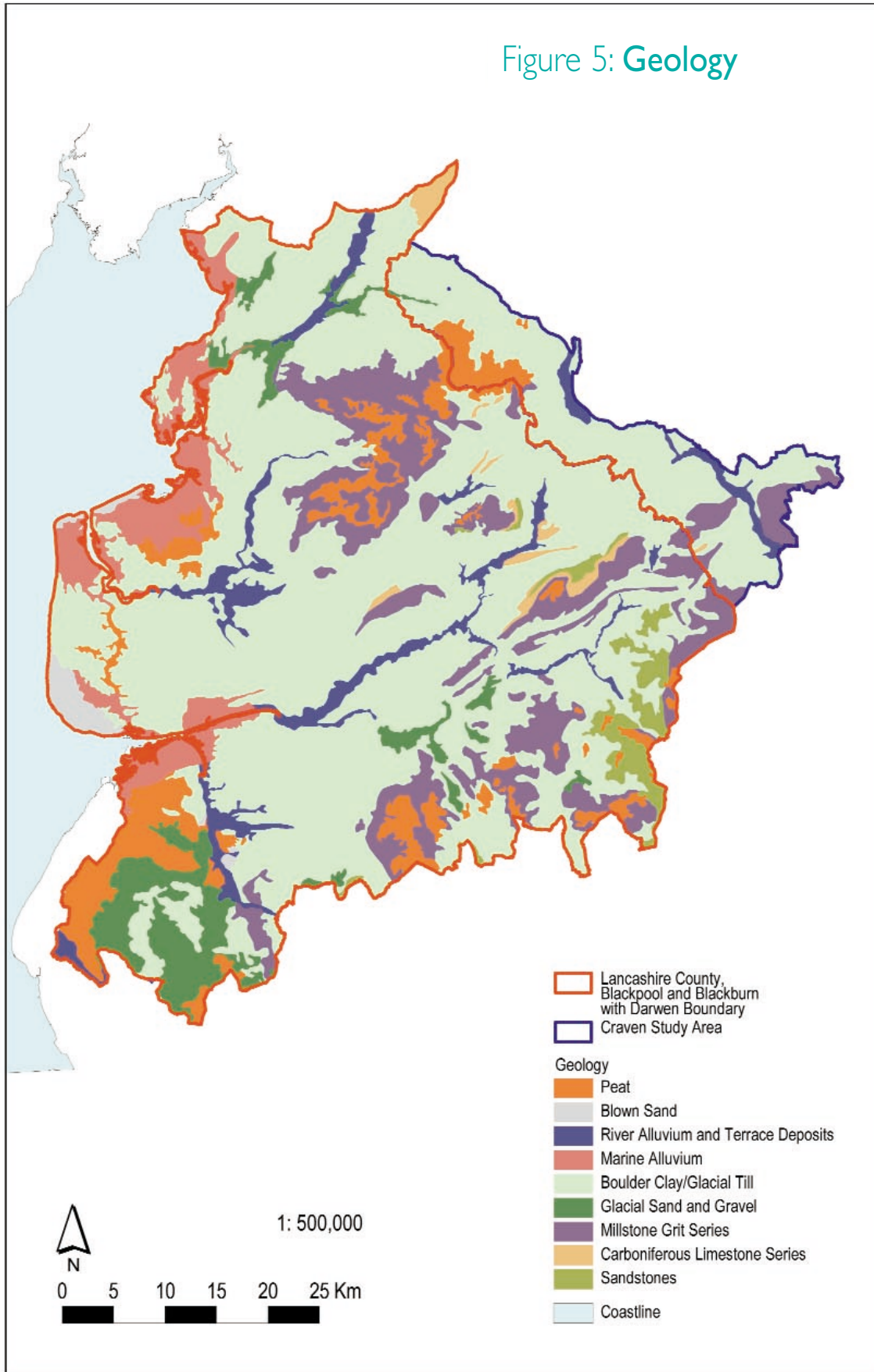


Figure 4: Historic landscape Types

- Historic Landscape Types
- Ancient Enclosure
 - Post-Medieval Enclosure
 - Modern Enclosure
 - Ancient and Post-Medieval Wood
 - Modern Woodland
 - Ancient and Post-Medieval Settlement
 - Modern Settlement
 - Modern Recreation
 - Ancient and Post-Medieval Ornamental
 - Modern Ornamental
 - Ancient and Post-Medieval Industry
 - Modern Industry
 - Modern Military
 - Modern Communications
 - Moorland
 - Reverted Moorland
 - Lowland Moss and Grassland/Scrub
 - Water
 - Saltmarsh
 - Dunes
 - Sand and Mudflats
- Lancashire County, Blackpool and Blackburn with Darwen Boundary
 Craven Study Area
 Coastline

Scale approx 1:325,000 at A3 page size

Figure 5: Geology



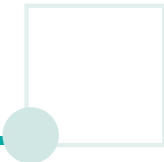


Figure 6: Landform

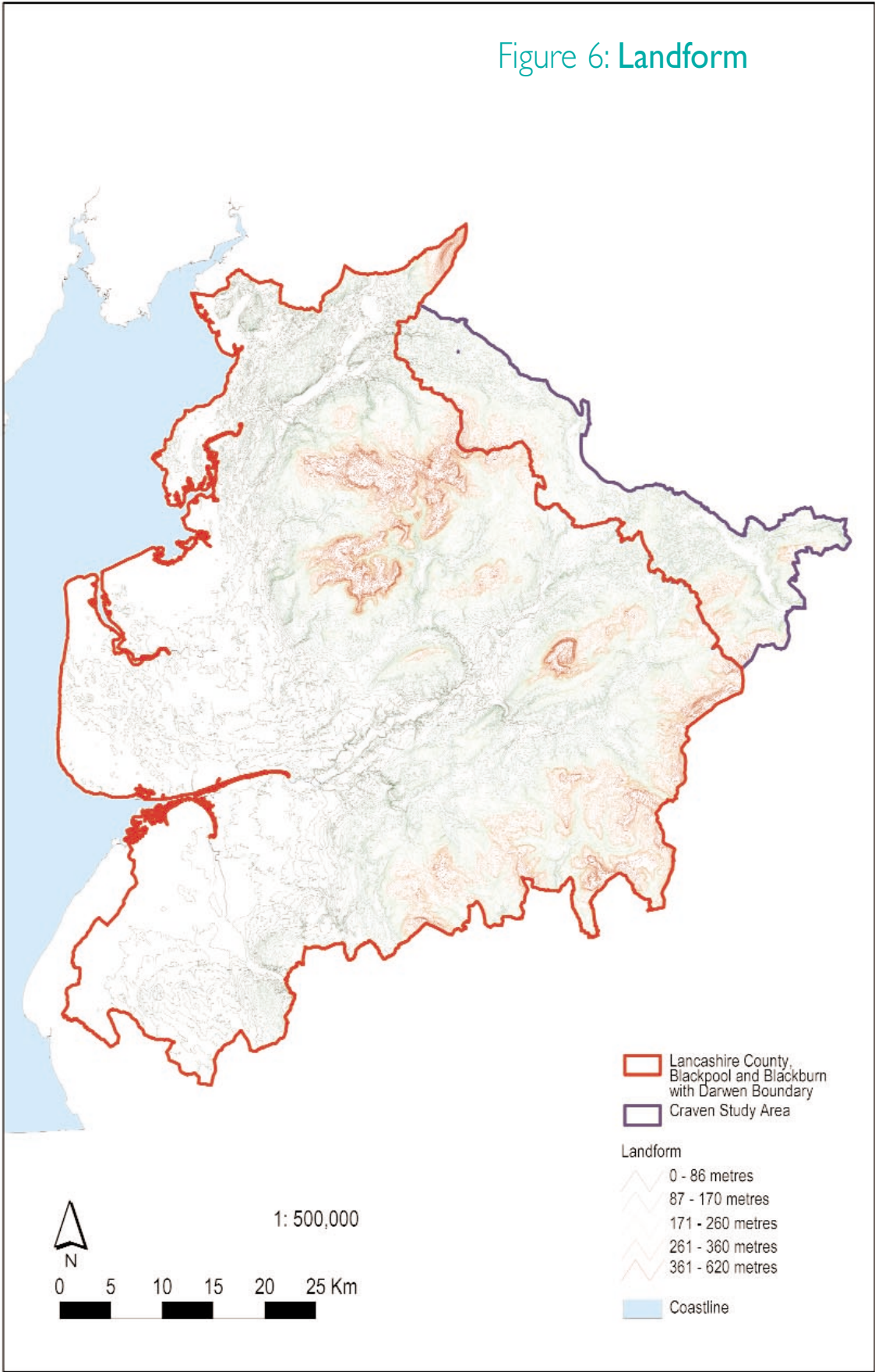




Photo 11. Upland habitats, Littledale



Photo 12. Corn Marigolds, Rufford



Photo 13. Saltmarsh, Silverdale

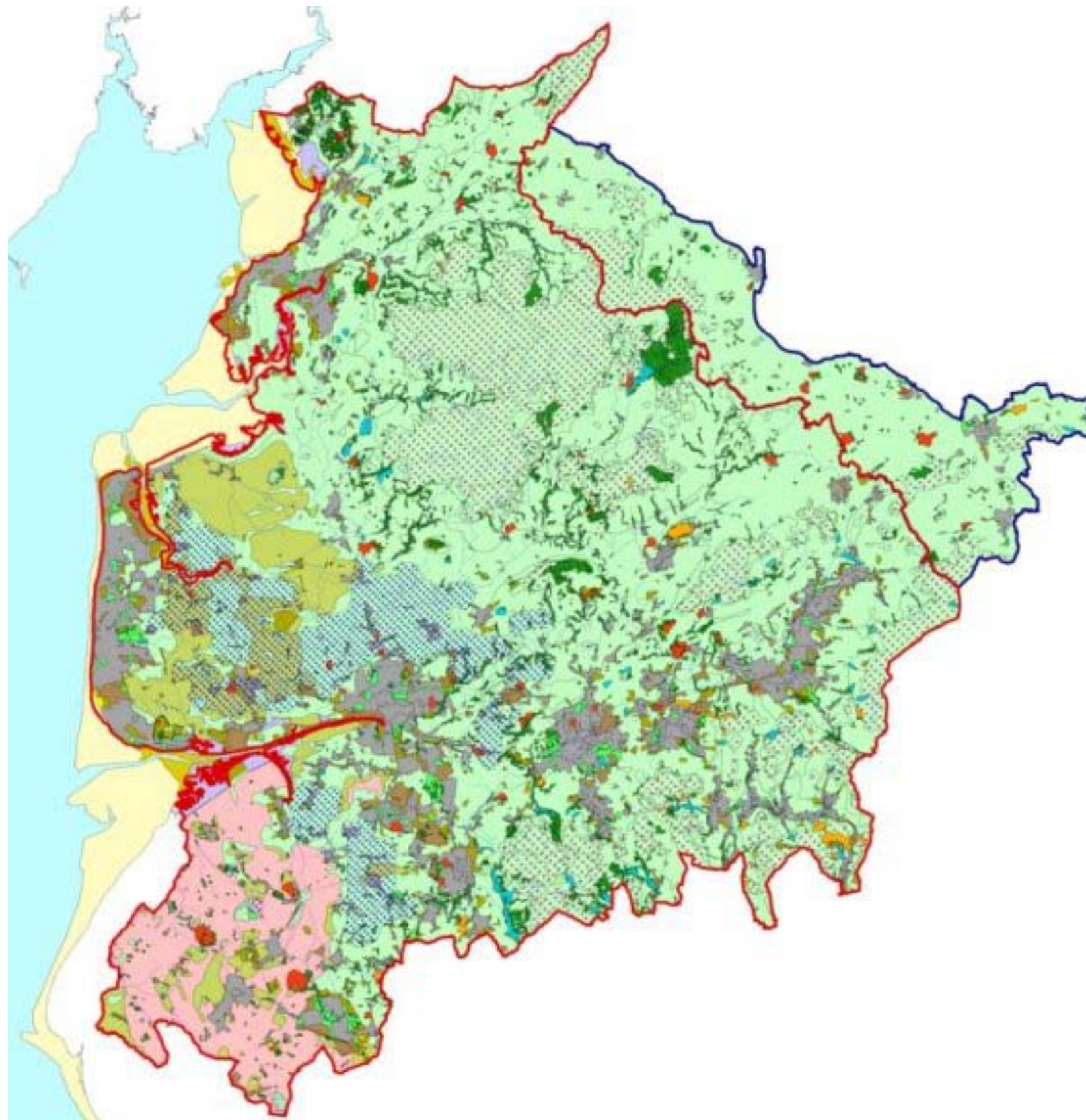


Figure 7: Habitats

-  Lancashire County, Blackpool and Blackburn with Darwen Boundary
-  Craven Study Area
-  Rivers and Canals
-  Upland Heather and Grass Moor
-  Areas of High Pond Density
-  Mossland
-  Limestone Pavements
-  Sand
-  Saltmarsh
-  Mudflats
-  Sand Dunes
-  Designed Landscapes
-  Water Bodies
-  Woodland
-  Quarries
-  Other Built up Land
-  Settlements
-  Amenity Grassland
-  Predominantly Arable
-  Predominantly Horticulture
-  Predominantly Pasture
-  Scrub and Rough Ground
-  Coastline

Scale approx 1:325,000 at A3 page size

3.

Lancashire's Landscape Character

Since the Industrial Revolution, Lancashire has been a county of contrasts; large urban centres with a legacy of historic industrial buildings are juxtaposed with the exposed uplands of the West Pennine Moors and the expansive, wild mudflats of Morecambe Bay. The county's agricultural landscapes include marginal upland pastures, the extensive grasslands and wooded river corridors of the Ribble Valley, the arable fields of the Fylde and the drained horticultural landscape of the mosslands.

Lancashire is also characterised by long views; the inter-visibility between the distinctive landscape types adds to the county's appeal. On a clear day there are views across the whole county from the high Bowland massif: north and west to the drumlins which border the North Yorkshire hills; southwards across undulating farmland to the industrial foothills which surround the conurbations of Blackburn and Burnley; and westwards to the coastal plains and mosslands which fringe the Irish Sea. Similarly, from the flat coastal mosslands, the agricultural plain or the cities of Preston and Lancaster; views eastwards to the moorland hills are a constant reminder of the contrasting landscapes which can be accessed in a thirty minute drive.

In north Lancashire, *Coastal Drumlins*, *Drumlin Fields*, *Rolling Upland Farmland* and the *Floodplain Valley* of the Lune are the predominant landscape types. These are rural areas where clipped hedges divide the landscape into a neat tapestry of grazed fields, although in the rolling upland farmland landscapes, stone walls, beech stands, knolls and rock outcrops vary the texture of the wider landscape considerably. Views of Lancaster, Morecambe and Heysham are reminders of the proximity of these landscapes to urban populations. On the coast, north of Lancaster, there is a transition from *Open Coastal Marsh* to the *Wooded Limestone Hills and Pavements* of Arnsdale and Silverdale, where dramatic cliffs, limestone pavements, and numerous archaeological sites combine to create a rare and unique

landscape. On the northern fringes of Lancashire, Leck Fell, part of the *Limestone Fells* which extend northwards and westwards into Yorkshire, is the highest point in the county.

The centre of Lancashire is dominated by the dramatic Bowland massif, where the remote and exposed *Moorland Plateaux* are surrounded by gentler *Moorland Hills* of heather moor, blanket bog and acid grassland. Here uninterrupted views across vast areas of surrounding countryside are punctuated by glacial erratics, woodland blocks, ruined farmsteads and stone walls. These also act as a reminder of the geological and human forces which have shaped what appears on the surface to be a wild and untamed landscape. The lower slopes of the *Moorland Fringes* show a gradual transition to the verdant grasslands of the *Undulating Lowland Farmland*, where there is a rich tapestry of hedged fields, farm woodlands, copses and picturesque stone villages. The *Floodplain Valley* of the Ribble weaves its way through these landscapes and contributes significantly to the aesthetic appeal of the area; the presence of numerous archaeological sites indicates its prolonged importance as a major communication route and ancient territorial boundary.

To the south of the Ribble lowlands, the urban areas of Accrington, Blackburn, Burnley, Nelson and Colne are surrounded by the small scale, complex landscape of the *Industrial Foothills and Valleys*, where remnants of mills and mill cottage terraces are a tangible reminder of the area's past. There are also large country houses and landscaped estates, which reflect the great wealth generated by entrepreneurs and patrons during the period. In south east Lancashire, the *Settled Valleys* of Rawtenstall and Bacup dissect the high plateau of the *Enclosed Uplands* and provide one of the most distinctive landscape types in the county. Along the valley floor, the dense urban development contains many clues to the area's rich industrial heritage. In the nearby *Reservoir Valleys* Victorian engineering was put to work to supply clean water to the rapidly expanding towns close by. The reservoirs and their surrounding valleys represent a valuable recreational resource. To the south east of the county, there is a steep transition to the *Moorland Hills and Moorland Plateaux* of the Pennines.

The landscape of west Lancashire is characterised by the flat or gently undulating farmland of the *Coastal Plain*. Here the large arable fields are punctuated by small deciduous woodlands and shelterbelts. These open landscapes offer a dramatic contrast to the undulating and more intimate countryside to the east. Settlement character consists of clusters of 18th and 19th century red brick farm buildings, rural villages and towns which have been heavily influenced by 20th century modernisation and development. Towards the coast, ancient peat deposits, which have been drained since the medieval period are typical. These *Mossland* areas are criss-crossed with drainage ditches and straight narrow roads which link modern farms and glasshouses. Beyond this reclaimed farmland, the *Enclosed Coastal Marshes* are defined by man-made earth bunds protecting large square fields dedicated to improved pasture. The estuaries of the Ribble, Lune and Wyre are fringed by *Open Coastal Marsh* and intertidal flats. The fine sward, etched by a maze of creeks and channels, is an attractive and much valued landscape, with a prolific birdlife.

This landscape character assessment provides a detailed review of Lancashire's landscapes. The landscape has been described and classified into landscape units of similar character. There are two types of landscape classification. Particular landform and landcover elements may combine to produce distinctive *landscape character types*. These are landscapes with a range of distinctive but generic characteristics that can recur in different areas, for example a particular type of landuse or historic field pattern. *Landscape character areas* are units of landscape which are geographically specific and have their own individual character or 'sense of place'. Whilst the current strategies relate to the landscape character types, the character areas will prove particularly useful in planning and management and in the generation of policies or actions can be applied at a local level.

The *Landscape Character Assessment* records the specific character of 21 *landscape types* and 81 *landscape character areas*, focusing on familiar local landscape patterns.

The landscape classification is shown in *Figure 8*. There is a more detailed map at 1:50,000 in the back pocket of this report. A glance back

at *Figures 4, 5, 6 and 7* will highlight the relationships between landscape character and the landform, underlying geology, habitat types and the historic development of the landscape. Together the landscape character types and landscape character areas provide a new descriptive map of the study area which draws attention to the contrasts in landscape character which we so often take for granted.

Following this introduction, each of the generic *landscape character types* is described in turn. The physical (geological, geomorphological and ecological) influences and human influences which have shaped the character of the landscape are also noted and the specific *landscape character areas* found in each landscape character type are described.

These landscape descriptions and notes on the evolution of landscape character form the basis for an analysis of landscape sensitivity and vulnerability to change. This, together with strategic recommendations for each landscape type, is found in the *Landscape Strategy* document.

The built environment of the major urban areas in Lancashire has also been characterised into three generic *urban landscape character types*. The historic processes which shaped these urban types and their appearance today are described in detail in the section following the landscape character types. The urban landscape character types are illustrated in *Figure 9*.

Landscape Character Areas

<ul style="list-style-type: none"> 1 Moorland Plateaux <ul style="list-style-type: none"> 1a. South Pennine Moors 1b. High Bowland Plateaux 	<ul style="list-style-type: none"> 10 Wooded Rural Valleys <ul style="list-style-type: none"> 10a. Wyre Valley 10b. North Bowland Valleys
<ul style="list-style-type: none"> 2 Moorland Hills <ul style="list-style-type: none"> 2a. West Pennine Moors 2b. Central Bowland Fells 2c. Longridge Fell 2d. Waddington Fell 2e. Pendle Hill 2f. White Moor/Burn Moor 2g. Beacon Fell 	<ul style="list-style-type: none"> 11 Valley Floodplains <ul style="list-style-type: none"> 11a. Lower Ribble Valley 11b. Long Preston Reaches 11c. Aire Valley 11d. Lune Valley
<ul style="list-style-type: none"> 3 Enclosed Uplands <ul style="list-style-type: none"> 3a. Rossendale Hills 	<ul style="list-style-type: none"> 12 Low Coastal Drumlins <ul style="list-style-type: none"> 12a. Carnforth-Galgate-Cockerham 12b. Warton-Borwick 12c. Heysham-Overton
<ul style="list-style-type: none"> 4 Moorland Fringe <ul style="list-style-type: none"> 4a. Trawden Fringe 4b. Rossendale Moorland Fringe 4c. Blackburn Moorland Fringe 4d. Bowland Gritstone Fringes 4e. Bowland Limestone Fringes 4f. Longridge Fell Fringes 4g. South Pendle Fringe 4h. Leck Fell Fringe 4i. North Pendle Fringe 4j. West Pennine Fringes 	<ul style="list-style-type: none"> 13 Drumlin Field <ul style="list-style-type: none"> 13a. Gargrave Drumlin Field 13b. Bentham-Clapham 13c. Docker-Kellet-Lancaster
<ul style="list-style-type: none"> 5 Undulating Lowland Farmland <ul style="list-style-type: none"> 5a. Upper Hodder Valley 5b. Lower Hodder and Loud Valley 5c. Lower Ribble 5d. Salmsbury-Withnell Fold 5e. Lower Ribblesdale (Clitheroe to Gisburn) 5f. Lower Ribblesdale (Gisburn to Hellifield) 5g. South Bowland Fringes 5h. Goosnargh-Whittingham 5i. West Bowland Fringes 5j. North Bowland Fringes 5k. Cuerden-Euxton 	<ul style="list-style-type: none"> 14 Rolling Upland Farmland <ul style="list-style-type: none"> 14a. Slaidburn-Giggleswick 14b. Lothersdale and Cringles
<ul style="list-style-type: none"> 6 Industrial Foothills and Valleys <ul style="list-style-type: none"> 6a. Calder Valley 6b. West Pennine Foothills 6c. Cliviger Gorge 6d. Adlington-Coppull 	<ul style="list-style-type: none"> 15 Coastal Plain <ul style="list-style-type: none"> 15a. Ormskirk-Lathom-Rufford 15b. Longton-Bretherton 15c. Croston-Mawdesley 15d. The Fylde 15e. Forton-Garstang-Catterall 15f. Knott End-Pilling
<ul style="list-style-type: none"> 7 Farmed Ridges <ul style="list-style-type: none"> 7a. Mellor Ridge 7b. Upholland Ridge 7c. Langthwaite Ridge 	<ul style="list-style-type: none"> 16 Mosslands <ul style="list-style-type: none"> 16a. North Fylde Mosses 16b. South Fylde Mosses 16c. Martin Mere and South West Mosses 16d. Skelmersdale Mosses 16e. Tarleton Mosses 16f. Heysham Moss 16g. Hoole and Farington Mosses
<ul style="list-style-type: none"> 8 Settled Valleys <ul style="list-style-type: none"> 8a. Irwell 	<ul style="list-style-type: none"> 17 Enclosed Coastal Marsh <ul style="list-style-type: none"> 17a. Clifton and Hutton Marsh 17b. Cockerham Coast
<ul style="list-style-type: none"> 9 Reservoir Valleys <ul style="list-style-type: none"> 9a. Rivington 9b. Turton-Jumbles 9c. Haslingden Grane 9d. Belmont 9e. Roddlesworth 	<ul style="list-style-type: none"> 18 Open Coastal Marsh <ul style="list-style-type: none"> 18a. Ribble Marshes 18b. Hest Bank-Silverdale Marshes 18c. Wyre Marshes 18d. Lune Marshes 18e. Pilling and Cockerham Marshes
	<ul style="list-style-type: none"> 19 Coastal Dunes <ul style="list-style-type: none"> 19a. Fylde Coast Dunes
	<ul style="list-style-type: none"> 20 Wooded Limestone Hills and Pavements <ul style="list-style-type: none"> 20a. Arnsdale and Silverdale
	<ul style="list-style-type: none"> 21 Limestone Fells <ul style="list-style-type: none"> 21a. Leck Fell

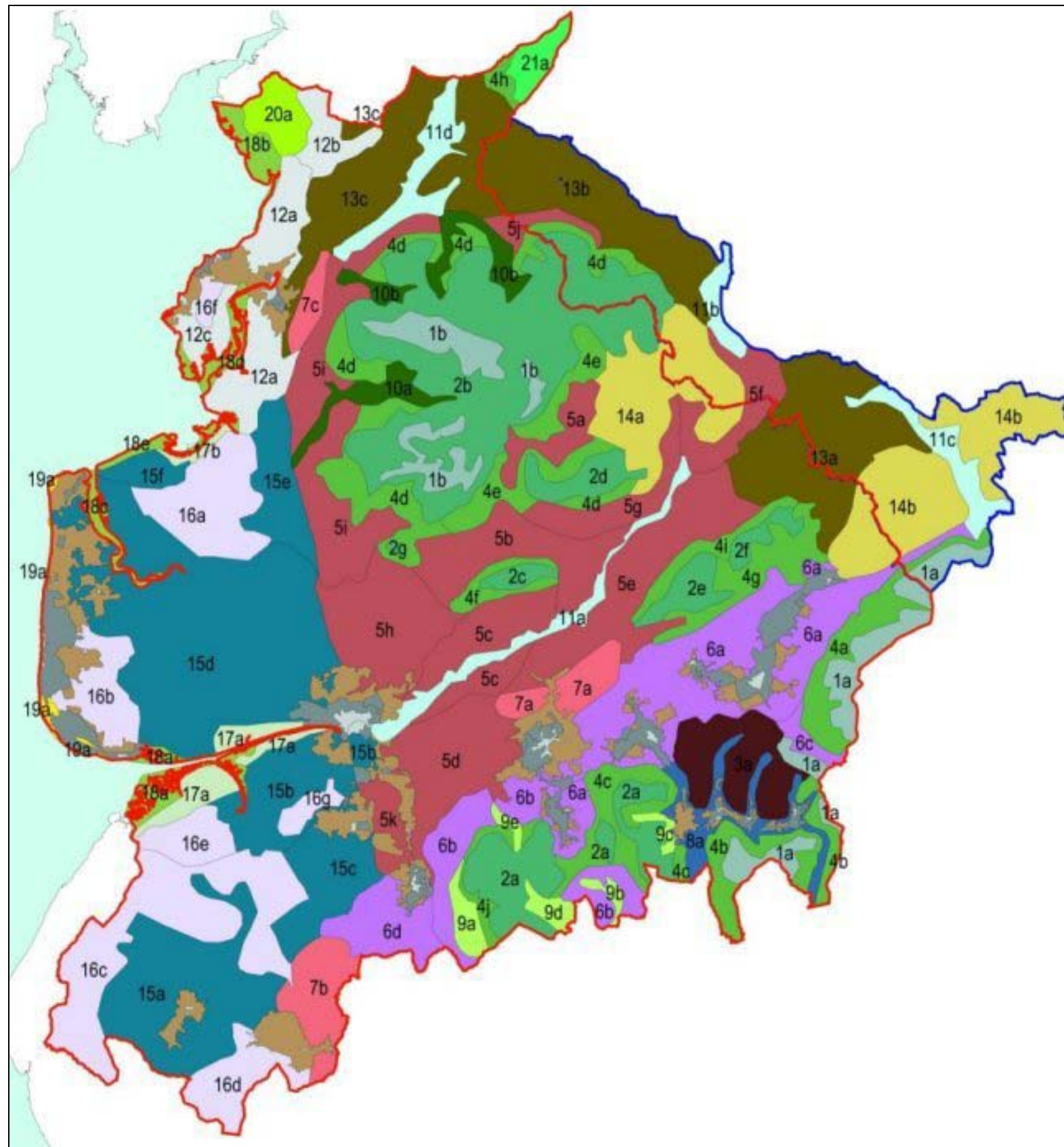
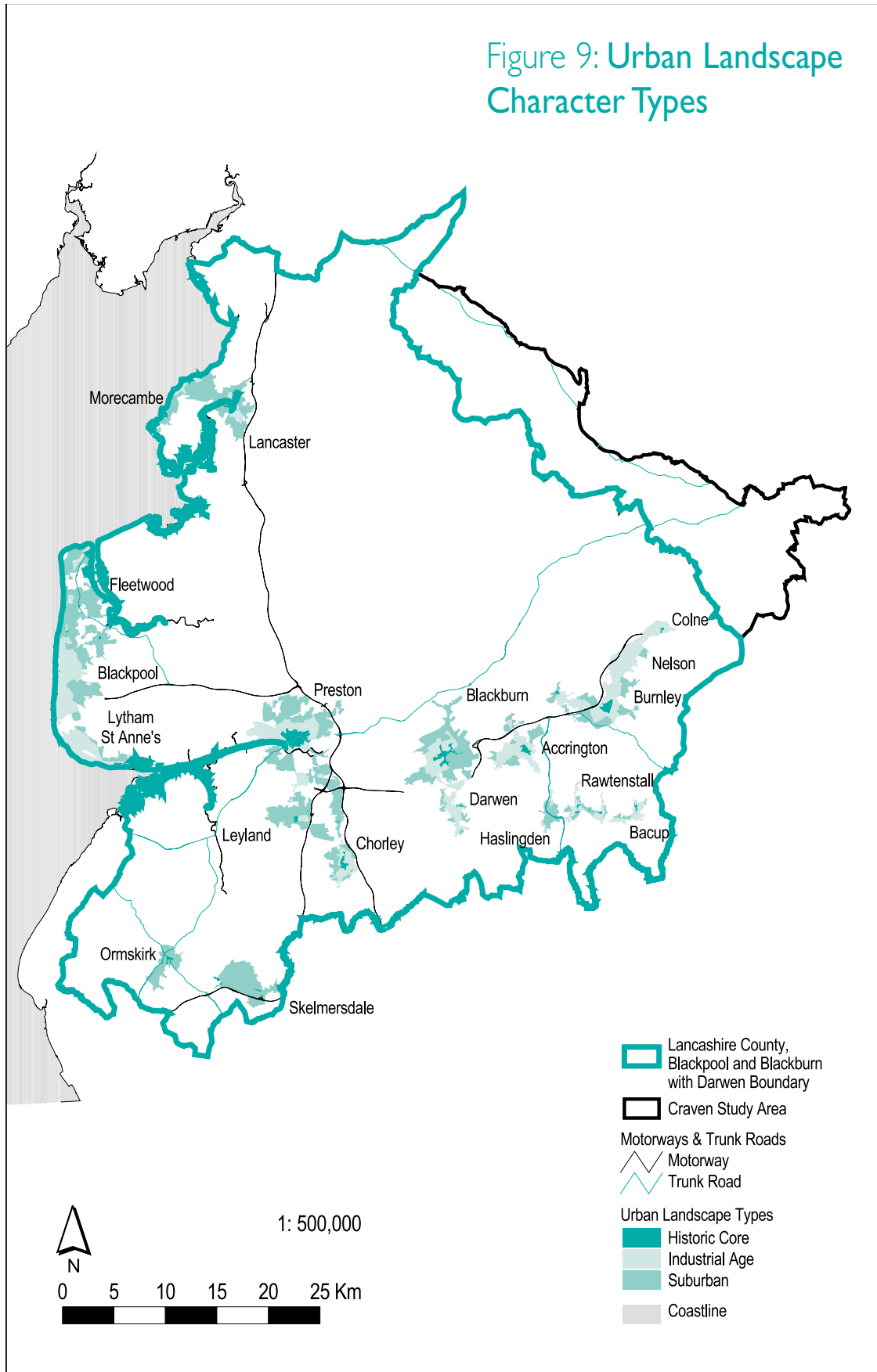


Figure 8: Landscape Character Types & Landscape Character Areas

- | | |
|---|---|
| Lancashire County, Blackpool and Blackburn with Darwen Boundary | 10 Wooded Rural Valleys |
| Craven Study Area | 10a. Wyre Valley |
| | 10b. North Bowland Valleys |
| Landscape Character Types & Areas | |
| 1 Moorland Plateaux | 11 Valley Floodplains |
| 1a. South Pennine Moors | 11a. Lower Ribble Valley |
| 1b. High Bowland Plateaux | 11b. Long Preston Reaches |
| 2 Moorland Hills | 11c. Aire Valley |
| 2a. West Pennine Moors | 11d. Lune Valley |
| 2b. Central Bowland Fells | 12 Low Coastal Drumlins |
| 2c. Longridge Fell | 12a. Camforth-Galgate-Cockerham |
| 2d. Waddington Fell | 12b. Warton-Borwick |
| 2e. Pendle Hill | 12c. Heysham-Overton |
| 2f. White Moor/Bum Moor | 13 Drumlin Field |
| 2g. Beacon Fell | 13a. Gargrave Drumlin Field |
| 3 Enclosed Uplands | 13b. Bentham-Clapham |
| 3a. Rossendale Hills | 13c. Docker-Kellet-Lancaster |
| 4 Moorland Fringe | 14 Rolling Upland Farmland |
| 4a. Trawden Fringe | 14a. Slaidburn-Giggleswick |
| 4b. Rossendale Moorland Fringe | 14b. Lothersdale and Cringles |
| 4c. Blackburn Moorland Fringe | 15 Coastal Plain |
| 4d. Bowland Gristone Fringes | 15a. Ormskirk-Lathom-Rufford |
| 4e. Bowland Limestone Fringes | 15b. Longton-Bretherton |
| 4f. Longridge Fell Fringes | 15c. Croston-Mawdesley |
| 4g. South Pendle Fringe | 15d. The Fylde |
| 4h. Leck Fell Fringe | 15e. Forton-Garstang-Catterall |
| 4i. North Pendle Fringe | 15f. Knott End-Pilling |
| 4j. West Pennine Fringes | 16 Mosslands |
| 5 Undulating Lowland Farmland | 16a. North Fylde Mosses |
| 5a. Upper Hodder Valley | 16b. South Fylde Mosses |
| 5b. Lower Hodder and Loud Valley | 16c. Martin Mere and South West Mosses |
| 5c. Lower Ribble | 16d. Skelmersdale Mosses |
| 5d. Sarnesbury-Wirrhell Fold | 16e. Tarleton Mosses |
| 5e. Lower Ribblesdale (Citheroe to Gisburn) | 16f. Heysham Moss |
| 5f. Lower Ribblesdale (Gisburn to Hellfield) | 16g. Hoole and Farington Mosses |
| 5g. South Bowland Fringes | 17 Enclosed Coastal Marsh |
| 5h. Goosnargh-Whittingham | 17a. Clifton and Hutton Marsh |
| 5i. West Bowland Fringes | 17b. Cockerham Coast |
| 5j. North Bowland Fringes | 18 Open Coastal Marsh |
| 5k. Querden-Euxton | 18a. Ribble Marshes |
| 6 Industrial Foothills and Valleys | 18b. Hest Bank-Silverdale Marshes |
| 6a. Calder Valley | 18c. Wyre Marshes |
| 6b. West Pennine Foothills | 18d. Lune Marshes |
| 6c. Cliviger Gorge | 18e. Pilling and Cockerham Marshes |
| 6d. Adlington-Coppull | 19 Coastal Dunes |
| 7 Farmed Ridges | 19a. Fylde Coast Dunes |
| 7a. Mellor Ridge | 20 Wooded Limestone Hills and Pavements |
| 7b. Upholland Ridge | 20a. Arnsdale and Silverdale |
| 7c. Langthwaite Ridge | 21 Limestone Fells |
| 8 Settled Valleys | 21a. Leck Fell |
| 8a. Irwell | Urban Landscape Types |
| 9 Reservoir Valleys | Historic Core |
| 9a. Frinton | Industrial Age |
| 9b. Turton-Jumbles | Suburban |
| 9c. Haslingden Grane | Coastline |
| 9d. Belmont | |
| 9e. Raddlesworth | |

Scale approx 1:325,000 at A3 page size

Figure 9: Urban Landscape Character Types





MOORLAND PLATEAUX

Character Areas

- 1a* South Pennine Moors
- 1b* High Bowland Plateaux

Landscape Character

The high, Moorland Plateaux are the most remote and exposed landscape type in Lancashire. They are generally characterised by a level or gently rolling landform although they may include steep high level escarpments, and are found at elevations between 300 and 600 metres. Landcover is predominantly blanket bog, and trees are generally absent. Rock outcrops occur in some areas and some moorland summits are strewn with gritstone boulders. Soils are poor and a vegetation cover of dwarf shrub heath, purple moor grass and/or cottongrass is typical of these acid moorlands. Localised erosion of the soils has exposed the underlying rocks and gravels giving rise to crags and peat hags. The plateaux have a sense of elevation and openness, with uninterrupted views across vast areas of surrounding countryside. The open landscape also creates a sense of wilderness, remoteness and space, which is further strengthened by the enormity and dominance of sky in these large scale landscapes. Colours tend to be muted, although in autumn heather moorland provides vivid expanses of colour. Typical view - photo 14 below.



Physical Influences

The underlying geology has created terraces or plateaux and escarpments. The high stream-dissected *Moorland Plateaux* occur at approximately 300-600m AOD and are composed of layers of sandstone and shales of the Millstone Grit series. Harder layers of gritstone outcrop to form distinctive features of the rugged moorland scenery. Soils are thin at such elevations - thin podsoles and gleyed clays are common although large areas of peat formed during prehistoric times and now dominate the *Moorland Plateaux*.

Gritstone crags are also a feature of the landscape; they outcrop along the hill sides where the softer shales have been eroded. The crags are of geological interest, as well as supporting a number of interesting plants. The South Pennine Moors SSSI and Bowland Fells SSSI are designated for their extensive areas of unenclosed heather moorland which support blanket bogs with species rich acidic flushes and mires. Birds of prey including hen harrier, merlin and peregrine are particularly important in some areas, as are other birds such as skylark, curlew and golden plover. Some heather moorland has been lost to grass moor due to management changes.

Human Influences

Evidence of settlement on the plateaux is rare, although mesolithic hunter-gatherers who migrated seasonally with the herds utilised the landscape. The discovery of flint and chert implements over most of these plateaux has been taken to indicate the presence of their summer hunting camps. Neolithic forest clearance and agricultural intensification in the Bronze Age on the fragile upland soils, coupled with climatic deterioration to cooler wetter conditions, is thought to have encouraged peat formation across much of these areas. There was abandonment of unproductive land and much has remained uninhabited, although considerable remains of later prehistoric and Romano British activity in the south Pennines showed it was still utilised.

Extensive areas are dominated by rough grazing. The peat (which developed from 5,000 BC) is a valuable resource as it contains a wealth of environmental and archaeological data.

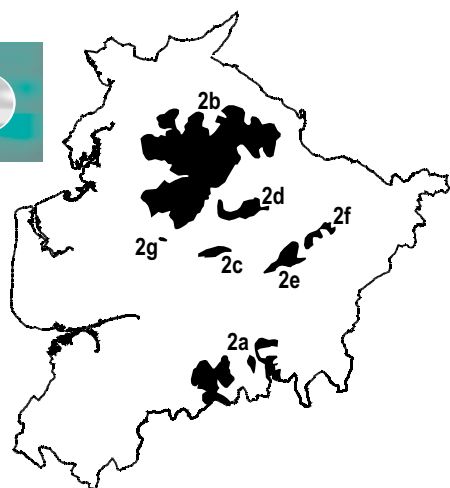
Despite a general sense of the landscape being devoid of human impacts, there are occasional boundary fences. Evidence of recent settlement and economic activity is largely restricted to the South Pennine Moors and most particularly in Rossendale. This includes occasional isolated ruined farmsteads and field barns in areas which were later left to revert to moorland. Quarries and reservoirs are evidence of Victorian and post Victorian exploitation of the Rossendale plateaux to meet the demands of the rapidly expanding industrial settlements in the lowlands. Modern exploitation includes shooting and out-grazing although traces of these activities do little to reduce to sense of isolation and remoteness.



CHARACTER AREAS - MOORLAND PLATEAUX

The Moorland Plateaux landscape type may be subdivided into two local landscape character areas comprising the Forest of Bowland in the centre of the county and the South Pennine Moors on the south-eastern border of the County.

Local	Character Areas	Description
Ia	South Pennine Moors	<i>The South Pennine Moors in the south of the study form a long high plateau, most of which lies outside the study area boundary. However, the Moorland Plateaux landscape type occurs as the fragmented moors at Scout Moor and Heald Moor as well as the vast expanse of high uninhabited moorland around Worsthorne Moor and Boulsworth Hill in the north. This large scale sweeping exposed landscape contrasts dramatically with the surrounding urban areas and intersecting industrial valleys which lie close below. Boulsworth Hill is characterised by a steep high level scarp slope. The proximity of the urban areas has affected the landscape of this character area and resource exploitation is visible in the form of electricity pylons, wind turbines, reservoirs and mineral extraction sites which appear as quarry scars on the edges of the plateaux. Disused quarries are a feature of this area and are important for specialised plant communities and species such as bats and peregrines. Britannia Quarries are a good example of stone extraction by mining. The strong skyline ridges and expansive views instill a sense of remoteness and isolation which has been a source of inspiration for writers such as the Bronte sisters. The concentration of later prehistoric and Romano British remains are important evidence of exploitation and settlement of these areas. This is a landscape which, although low in species diversity, supports nationally and internationally important populations of bird species including twite and golden plover; as a result it is particularly sensitive to change.</i>
Ib	High Bowland Plateaux	<i>The Moorland Plateaux of the Forest of Bowland occur as a series of wide flat-topped ridges scattered with gritstone boulders. These are Tarnbrook Fell, reaching 561m AOD at Ward's Stone, Baxton Fell at 469m and the ridge linking Holdron Moss, Bleasdale Moors and Brown Berry Plain which lies above 400m. These large scale flat ridge tops coincide with deposits of peat which support extensive areas of blanket bog managed as rough sheep pasture. Peat hags have developed in eroded areas, particularly along the edges of the blanket bog. These plateaux may contain important archaeological material, which as yet has largely remained undiscovered due to its low visibility and the remoteness of the landscape. The remoteness of the Bowland Moorland Plateaux and different patterns of land tenure mean they have not been severely affected by the drainage, heavy grazing, burning and pollution associated with the moorland plateaux of the South Pennine Moors. Heather moorland and blanket bog in the Forest of Bowland are recognised for their nationally important plant communities and internationally important breeding raptors and other upland birds.</i>



MOORLAND HILLS

Character Areas

- 2a West Pennine Moors
- 2b Central Bowland Fells
- 2c Longridge Fell
- 2d Waddington Fell
- 2e Pendle Hill
- 2f White Moor/Burn Moor
- 2g Beacon Fell

Landscape Character

The rolling Moorland Hills are generally at lower elevations than the higher Moorland Plateaux. Although grit crags and glacial erratics provide some texture to the smooth profiles, the steep escarpments create distinctive and dramatic landforms which are steeply incised and drained by fast flowing streams. Hillsides allow long views across wide valleys or the surrounding lowlands. Landcover is typically blanket bog, heather moor, and acid grassland although the presence of several large woodland blocks, both broadleaved and coniferous, distinguishes these lower moorland hills from the high moorland core. Colours are generally muted, although the moorland vegetation creates striking seasonal effects. The open, exposed character of the hills creates a wild and windswept experience. Small, isolated hamlets and stone farmsteads, although rare, are focal points in the landscape and fields in their vicinity are enclosed by an undulating network of stone walls: however most of this landscape lies above the upper limit of enclosure. The mosaic of upland habitats are of significant nature conservation value and there is considerable evidence of settlement and land use since prehistoric times, particularly in the form of industrial monuments and landscapes. Typical view - photo 15 below.



Physical Influences

The *Moorland Hills* are formed by the Millstone Grit series. These rocks were laid down in alternating thick bands of coarse, cemented sand and gritstone separated by weaker shales. The gritstones form the fell tops, while the softer rocks form lower areas. The slopes are of even gradient and are covered by shallow podzolised soils. Peat generally covers higher summits (above 400m). The area tends to have a soft rounded topography, the slopes having been smoothed by ice and further softened by the boulder clay mantle of glacial deposition.

The erosive action of water flowing off the main hill summits has cut deeply incised valleys, ravines or cloughs. These form a radial pattern of drainage from the higher ground. The area's physical characteristics and its land-use history has created a range of natural and semi natural habitat types, many of which are recognised as Sites of Special Scientific Interest or non-statutory Biological Heritage Sites. These form a rich mosaic of heather moorland, 'grass moor', wet flushes and springs, blanket bogs and semi-natural woodlands which support a wide range of characteristic plants and animals. In Bowland, extensive areas of the heather dominated blanket bog, have been sustained by management of grouse, which has created ideal conditions for upland wildlife such as merlin, hen harrier, curlew, peregrine and golden plover. The Bowland Fells SSSI is the largest area of semi



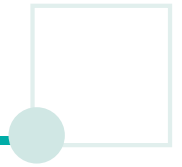
Photo 16. Langden Brook at Hareden.

natural habitat in Lancashire and constitutes mainly blanket bog and heather moorland. The largest breeding colony of lesser black backed gulls in Europe has become established on Mallowdale and Tarnbrook fells. In the West Pennine Moors heather is returning to some areas following a reduction in the grazing pressure from sheep. The deep cloughs and high level oak woods of the moorland slopes provide additional wildlife interest, as do Millstone Grit crags where they are protected from burning and grazing.

Human Influences

Mesolithic hunting camps probably existed here, although the ephemeral nature of the remains means that visible evidence is rare. Forest clearance by Neolithic and Bronze Age farmers contributed to the spread of heathland and probably mosses and blanket bog. This led to the decline in the natural woodlands which have never since recovered. Evidence of the Bronze Age is well distributed across the area. Despite early clearance it is possible that large tracts of the Moorland Hills remained under forest cover until it was felled during the Anglo-Saxon and Norse periods. Place name evidence suggests that Norse peoples settled in the spaces available in these areas; especially north of the Ribble names such as gill, fell, moss, thwaite and beck all indicating a strong Viking influence.

Parts of the Moorland Hills were included within the Royal Hunting Forests of Bowland and Pendle in medieval times and were subject to Forest Law. Wolves survived until the 17th century within the Forest of Bowland and this is reflected in place names such as Wolf Fell. Later, landscape change occurred as a result of the enclosure and improvement of moorland and woodland wastes to meadows and pasture from the middle of the 16th century; this pressure on land was created by population and economic growth. The shapes of the fields indicate the type of enclosure; irregular patterns suggest piecemeal, enclosure by individual farmers which although technically illegal, was condoned in many areas. More geometric patterns indicate systematic division of the commons, usually of the 18th and 19th century. This process created a non-nucleated settlement pattern of individual



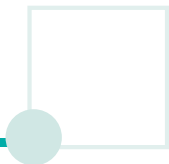
farmsteads which now forms the predominant farming unit on the Moorland Hills.

Farm buildings and boundary walls are constructed of stone and form most of the oldest buildings of the area. Whilst there has been little new development in the last 150 years, changes have occurred as a result of abandonment of farmsteads, desertion of the more marginal lands, reversion to rushy pasture and other changes in vegetation management. The suitability of the fells and popularity throughout the modern period of grouse shooting has ensured the continued management of heather moorland.

CHARACTER AREAS - MOORLAND HILLS

This landscape type occurs as outlying Moorland Hills to the west of the main Pennine Ridge (the West Pennine Moors); the centrally located Bowland Fells and its outliers Longridge Fell, Waddington Fell, Pendle Hill and White Moor/Burn Moor:

Local	Character Areas	Description
2a	West Pennine Moors	<i>The West Pennine Moors are to the west of the main Pennine ridge. The moorland occurs in a number of discrete blocks at Withnell, Anglezarke and Rivington Moors; Darwen and Turton Moors; and Oswaldtwistle and Holcombe Moors. They are generally slightly lower in altitude than those of the main South Pennine spine, although they include some notable high points, for example at Winter Hill on Rivington Moor. The hills can be seen from long distances and form a significant backdrop to the surrounding towns of Blackburn, Darwen and Accrington. The area is of considerable archaeological importance reflecting past land use and settlement history and has been the subject of some detailed archaeological research. On the West Pennines the sense of isolation is diminished because of the proximity of the urban areas, however the sense of wildness can be heightened by the contrast afforded by the dramatic and panoramic views across the adjacent urban areas of the Lancashire Plain and the East Lancashire Valleys.</i>
2b	Central Bowland Fells	<i>This distinctive landscape character is defined by land above the limit of enclosed farmland occurring on the central massif of the Bowland Fells. It encompasses the smooth heather clad profiles of the escarpment slopes on the western limit of the fells, the wide undulating areas of open craggy moorland, and the deep upland valleys within the core of the Fells. The landcover is semi-natural and is typical of acid upland areas; areas of heather moor are described as 'black moor', for example at Black Fell and areas of acid grassland, rushes or cottongrass known as 'white moor', for example at Lythe Fell. There are few intrusive elements in this landscape, although the geometric conifer plantations along the River Dunsop Valley, at Thrushgill Fell and Gisburn Forest are prominent locally and are unsympathetic to the landform'. A wind farm on Caton Moor is highly visible from the Lancashire Plain to the west and Victorian aqueducts, waterworks and water-carrying structures are a reminder of the water supply function of the Bowland Fells. However, the remoteness of the landscape is unaffected by these elements - there are few routes across the moor. The Trough of Bowland is the most popular of these, providing access to some of the most remote areas of the County. There are magnificent views from the edges of the Fells; views from the parking spot at Jubilee Tower stretch for miles across the Lancashire Plain on a clear day.</i>
2c	Longridge Fell	<i>Longridge Fell is an isolated ridge of hard millstone grit which stands proud of the softer lowlands of shale and limestone and separates the valleys of the Ribble, to the south, from the Hodder to the north. As its name suggests, it forms a long prominent ridge whose distinctive silhouette is extensively visible from the surrounding lowlands as well as the adjacent grit hillsides; making it the ideal location for a beacon in the 16th century. Its smooth, rounded profile supports moorland to the west of the summit but elsewhere this is largely obscured by an extensive conifer plantation which creates a dark ridgeline. The plantation provides many opportunities for recreation and forest walks. Picnic spots and viewpoints</i>



Local	Character Areas	Description
2d	Waddington Fell	<p><i>are all regularly visited by the local population. There is one minor road traversing the ridge which partly follows the course of a Roman Road. The line of the Roman Road can still be seen crossing the ridge at Jeffrey Hill. The ridge provides good views over the Ribble Valley.</i></p> <p><i>Waddington Fell is a grit outcrop, separated from the central core of Bowland Fells by the softer limestones of the Hodder Valley. It is largely open and supports a moorland vegetation cover of principally upland heath and acid grassland with some blanket bog. There are just two passes over the fells; one minor route at Marl Hill and another, more frequently used, road which climbs to 352m on Waddington Fell from where there are magnificent views of the surrounding lowlands. Conifer plantations are restricted to less dominant blocks compared to some of the other Bowland outliers, allowing the hills to retain their open exposed character. An active quarry and communications mast are visual detractors.</i></p>
2e	Pendle Hill	<p><i>Pendle Hill is a millstone grit outcrop with a particularly distinctive landform; its steep scarp to the north and flat plateau top gives rise to a profile which is a landmark for many miles around; a 16th century beacon was also sited on Pendle Hill at 'Big End'. The flat summit supports deep deposits of raw peat soils which infills hollows and produces a smooth undulating surface of blanket bog. The area is free from development pressure; no conifer plantations, quarries or communication masts detract from the visual appeal of the landscape. Erosion of the vegetation as a result of heavy grazing and recreational pressure is severe in places. It is only accessible by foot and there are a number of routes to the summit of this famous landmark. Views from the top at 557m are stunning.</i></p>
2f	White Moor/ Burn Moor	<p><i>An area of rounded hills to the east of Pendle Hill. The higher summits of White Moor, Burn Moor and Twiston Moor support heather moorland, with acid grassland on the lower slopes. There are occasional isolated stone farmsteads together with a network of footpaths crossing the hills, including the Pendle Way. Views from the slopes and summits are dramatic and contrasting, with the rural Ribble Valley and hills of Yorkshire stretching away to the north and east and the industrial towns of the Calder Valley with the backdrop of the South Pennines to the south.</i></p>
2g	Beacon Fell	<p><i>Beacon Fell is a small, but distinctive grit outcrop which lies to the south of the main Bowland massif, its name reminding us of the 16th century beacon which was located on it. Its natural landcover has been obscured by coniferous forestry which provides cover for a range of recreational activities. Designated as a country park, it provides outdoor recreational activities for visitors, including forest walks, and visitor facilities. The one way road system allow visitors to move freely, providing a number of pull-off points with dramatic views over the surrounding lowlands. On a clear day views stretch as far as Blackpool Tower, south Lakeland and the Isle of Man.</i></p>

3



ENCLOSED UPLANDS

Character Areas

3a Rossendale Hills

Landscape Character

The upland plateau of the Rossendale Hills has a relatively level landform with only the peat capped ridges and summits providing discernible pattern and diversity in the landscape. The distinctive character of these exposed uplands is derived from a long history of settlement and exploitation of the mineral wealth of the moors. A network of gritstone walls encloses virtually the whole of the upland area and the landscape is dotted with a network of small, remote farms. Many of these are now abandoned and in ruins as farming has retreated downslope. The area's industrial history is reflected by the landscape of miner-farmer small holdings, squatter settlements, abandoned coal mines and quarries. The overall impression is of a somewhat derelict landscape with rush infested pastures and tumbled stone walls. Views of the prominent high tension power lines which cross the plateau top, reinforce the sense of bleakness. The landscape type is only found in the Rossendale Hills. Typical view - photo 17 below.



Physical Influences

The underlying solid geology is largely formed by the Lower Coal Measure comprising bedded sandstones, shales and mudstones. Rocks of the Millstone Grit series outcrop above the valley of the River Irwell and often cap the hills. Thick peat deposits cover high flat summits such as Cribden Hill, Small Shaw Height and Swinshaw Moor. The lower topography holds deposits such as glacial boulder clay indicating the area was glaciated in the last ice age.

The distinctive sharp topography of edges and ledges characteristic of the Millstone Grit uplands is confined to the terraces above the Irwell Valley; overall the impression is of an undulating, undramatic landform. The upland is cleaved by valleys which divide the plateau into three discrete areas. Other small scale topographic variations include the undulating hummocky landforms arising from former coal workings and stone quarries. The open, elevated topography creates a feeling of space, although any sense of remoteness is diminished by the proximity of urban areas such as Accrington, Burnley, Rawtenstall and Bacup.

The vegetation is dominated by grass moor with patches of rush frequent in the less well drained pastures. Heather moorland is virtually absent, largely as a result of past land management. The peat covered ridges and summits at Cribden Hill, Swinshaw Moor and Small Shaw Height comprise purple moor grass and cotton grass. The climate, altitude and grazing pressures means that trees are largely absent from the high plateau, although small areas of woodland are associated with the reservoirs and willow scrub has begun to colonise abandoned agricultural land on the more sheltered fringes. Important wildlife sites have been identified on the peat covered peaks which comprise a mix of blanket bog, acid/base-rich flushes and acid grassland. However, compared to the open, unenclosed moorland, the nature conservation interest of the area is generally limited. The grassland habitat and rushy pasture is, nevertheless important for upland birds.

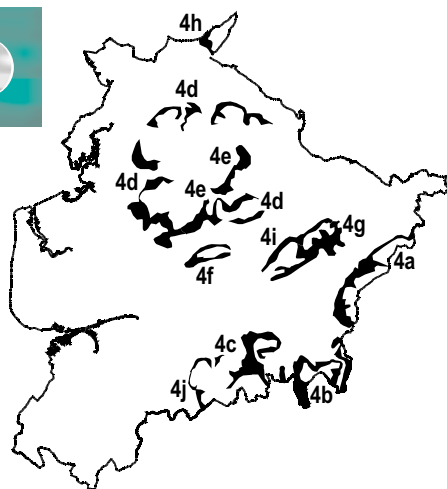
Human Influences

In the medieval period the Forest of Rossendale was established under the feudal lords as a hunting forest; forest in this period meaning land set apart with separate legal status. It covered the whole of the upland area. This area has undergone extensive change over the last 300 years. Most of the moorland common and waste of the Rossendale Hills was taken in and enclosed during the eighteenth and nineteenth centuries with robust stone walls climbing the hillsides to as much as 350m above sea level. The land was 'improved' and partially drained to create sheep pasture. Cultivation, enclosure and settlement were pushed to their limits with the final wave of enclosure embracing all but the highest summits. The coal measures present throughout this area have been mined since at least the Middle Ages, as indicated by several small scale mining sites known as 'day holes' and shallow 'bell pits'. It is likely that the scattered dwellings high up on the plateau have their origin as miner-farmer squatter settlements. A particular cultural feature of the area is the dense network of footpaths, which possibly relate to early industrial activity and high level routes linking the intersecting valleys. Water collection during the last 100 years has been important to supply the needs of the expanding urban populations and several small late Victorian reservoirs were constructed in natural depressions in the landscape. Recent history has seen a dramatic downturn in the economics of sheep farming, and the area remains on the margins of economic viability. There is a sense that farmsteads and stone walls are often poorly maintained.

CHARACTER AREAS - ENCLOSED UPLANDS

The Enclosed Uplands landscape type is found only in one geographic area on the Rossendale Hills.

4



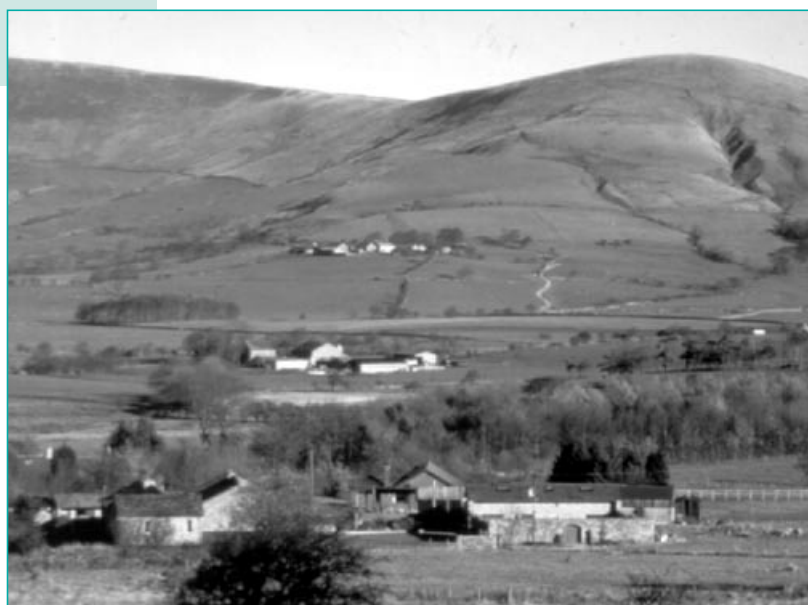
MOORLAND FRINGE

Character Areas

- 4a Trawden Fringe
- 4b Rossendale Moorland Fringe
- 4c Blackburn Moorland Fringe
- 4d Bowland Gritstone Fringes
- 4e Bowland Limestone Fringes
- 4f Longridge Fell Fringes
- 4g South Pendle Fringe
- 4h Leck Fell Fringe
- 4i North Pendle Fringe
- 4j West Pennine Fringes

Landscape Character

The fringes of moorland areas are transitional enclosed landscapes between the inhospitable moorland fells and the more intensively farmed land of the lowlands. They occur, generally above the 200m contour, throughout the study area and are characterised by a rolling landscape of marginal pastures divided by stone walls which reflect the underlying geology. Sheep grazing forms the predominant land use of these fringe areas which have often been improved either from semi-natural acidic, neutral or wet grassland. There is a great diversity of landform, colour and texture. Tree cover is sparse in these landscapes although trees are usually associated with farmsteads and gorse is common along the roadsides. Isolated stone farmsteads are often prominent on the steep slopes and are reached by dead-end lanes. There are also terraces of weavers' and other workers cottages and sparse linear settlements, particularly along the winding roads towards the foot of the slopes. There is good preservation of archaeological sites in these marginal locations as a result of the non intensive agricultural practices adopted. Typical view - photo 18 below.



Physical Influences

The Moorland Fringes are almost entirely underlain by rocks of the Millstone Grit Series. The solid geology is overlain by soils whose thickness varies according to elevation and topography; the gentler, more sheltered slopes and broad terraces above the valleys have a thicker covering of soils than the moorland summits. This landscape type occupies the high ground fringing the main moorland blocks, typically at an altitude of between 215 and 250 m above sea level, sometimes extending to 300m or above.

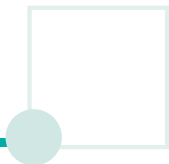
The land which remains as unimproved agricultural grassland is extremely valuable for nature conservation and, with the moorlands, forms an intimate part of the rich mosaic of upland habitats in Lancashire, especially in Bowland. Of the drier meadows, the few which are traditionally managed to produce a summer hay crop, support a range of characteristic plants including lady's mantle, sneezewort and adder's tongue. Where parts of the in-bye land are still undrained, moisture loving plants such as marsh marigold, yellow iris, ragged robin and marsh thistle thrive. Traditionally managed meadows also provide feeding grounds valuable for twite, while the wet rushy pastures support nationally important populations of birds such as curlew, redshank, lapwing and snipe. Acidic grasslands are also important for the survival of several upland bird species.

Human Influences

The hillside areas, which are set above the densely wooded valleys and below the exposed summits of the open moors, have a long history of land use and settlement. A particularly good example of this continuity is evident at High Park above Leck Beck. The comparatively small size of some land holdings results from the system of land inheritance whereby land was divided equally between sons. On good farmland this has created a landscape of scattered farmhouses in relatively close proximity. A large number of farmhouses are distinctive 'laithe houses' which were part house, part stall/hay loft. The pace of enclosure grew during the 16th and 17th centuries and continued as a result of the Parliamentary Enclosure Acts of the 18th and 19th centuries.

There are a number of important trackways including the Long Causeway from Burnley to Halifax. Whilst some may have an ancient origin, possibly dating back to the prehistoric period, the network grew from industrial pressures and the need to transport finished goods and raw materials between urban centres. The packhorse ways associated with the transport of salt and wool, form particularly distinctive features of the landscape.

Recent land use has focused upon sheep grazing; most farms have rights for summer grazing on the open moorland which forms an integral part of the hill farming system. The land has traditionally been used as in-bye land for winter grazing and to make hay in the summer to feed livestock through the winter months. The lower gentler slopes comprise older enclosures distinguished by their small size and irregular shape. On the higher slopes and steeper areas the later Parliamentary Enclosures are represented by large regular rectangular fields enclosed by robust walls. In the late 20th century, big bale silage has replaced hay making and many of the upland fields have been improved by drainage and reseeding to enhance productivity. Changes in farming practices ensure that damp pastures and hay meadows are now rare. With the decline in upland farming, more marginal farms have been abandoned and the fields taken over by rushes. Increasingly farmers are seeking to diversify to supplement falling incomes. Diversification is evident in occasional weavers' cottages which incorporated a weaving workshop.

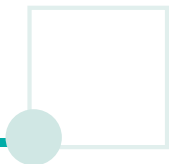


CHARACTER AREAS - MOORLAND FRINGE

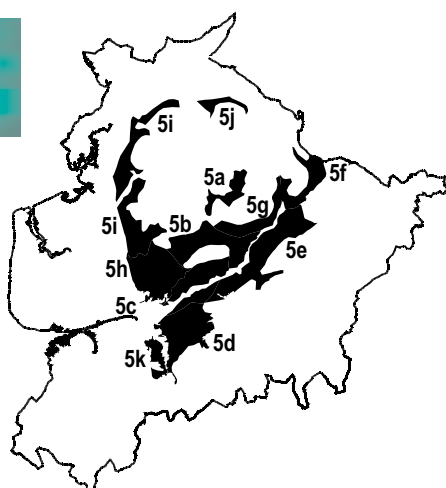
The Moorland Fringe landscape type occurs on the edges of moorland, generally above the 200m contour, throughout the study area. Their character is influenced by the underlying geology which reflects the character of buildings and field boundaries.

Local	Character Areas	Description
4a	Trawden Fringes	<i>The narrow moorland fringe of the western escarpment of the South Pennine ridge is a relatively narrow band of small-medium sized fields enclosed by gritstone walls and supplemented by post and wire fences. The grassland is generally improved, but some acid grassland remains in places. Shallow valley cloughs, containing remnants of semi-natural woodland, feed into the Calder. Many of these valley heads have been dammed to create small reservoirs at the junction with the moorland. There are also a number of small quarries which now support rich wildlife habitats. The settlement pattern is of scattered isolated local stone farmsteads. There are a number of parking and picnic places which have encouraged visitors; rubbish and fly-tipping indicate proximity to large centres of urban population. The wind farm at Coal Clough is a dramatic landscape feature on the edge of the moorland plateaux.</i>
4b	Rossendale Moorland Fringe	<i>This character area fringes the smaller, fragmented blocks of moorland within Rossendale. The moorland fringe is generally above 350m here, a higher altitude than is typical. The field patterns indicate a late stage of enclosure with large regular fields enclosed by stone walls, which are generally in a poor state of repair, and large farmhouses at the end of narrow lanes at a high altitude. The predominant land use is agriculture with a combination of sheep and cattle grazing. However, there are also strong links with the urban/industrial economy and activities such as haulage, scrap metal recycling and small scale forestry; the farm complexes frequently include large sheds/barns and makeshift structures associated with these diversification activities. Quarrying has been an important land use with both active and disused quarries seen at the junction with the moor. Most grassland is improved, but the remaining unimproved/acid grassland provides important wildlife habitats.</i>
4c	Blackburn Moorland Fringe	<i>These steep north facing slopes are cold and exposed, forming a link between the Pennine uplands and the urban fringes of Blackburn and Accrington. The character of the landscape is influenced by its proximity to these urban areas; a large number of roads and footpaths diminish its rural and remote character. It is a bleak upland landscape of fields, many reverting back to rushy moor grass due to lack of management. The walled field boundaries are also in a poor state of repair and the whole area conveys a sense of neglect. The presence of roads, traffic and views over the urban areas diminish its sense of remoteness and enclosures. The tower on top of Darwen Hill provides a local landmark.</i>
4d	Bowland Gritstone Fringes	<i>The northern and western edges of the Central Bowland Fells are marginal farmed landscapes in the narrow, steep transitional zone between upland unenclosed moorland and the lower wooded fringes of the River Lune to the north and the Lancashire Plain to the west. This area falls at a relatively low altitude, between approximately 150m and 250m AOD. It is highly rural, unaffected by exploitation of resources, and sparsely populated; isolated farm dwellings at the end of dead-end tracks</i>

Local	Character Areas	Description
		<i>are built of distinctive, dark local gritstone. The underlying geology is also reflected in the gritstone walls whose dark colour contributes to the bleak appearance of the landscape. Rough pasture, low growing gorse, bramble and small windswept hawthorns add to the texture and exposed character of the gritstone fringes.</i>
4e	Bowland Limestone Fringes	<i>These fringes contrast with the gritstone fringes in that they have a distinctive brightness of character. The underlying limestone influences the soils, vegetation and landform of the limestone fringes; although the moorland fringe occurs again between 150m and 250m AOD the landform is less dramatic and this transitional zone therefore occurs as a wider belt. The distinctive brightness is a result of the lush and greener pastures, and the strong patterns of white limestone walls and barns. The landscape of the limestone fringes is also more wooded than that of the gritstone fringes. Limestone knolls, sometimes still supporting species-rich limestone grassland, are distinctive features in these limestone fringe areas. They are seen as smoothly rounded hills, although occasional rock outcrops and the presence of disused lime kilns are other clues to the underlying geology.</i>
4f	Longridge Fell Fringes	<i>The undulating edges of Longridge Fell, are above the 150m contour line, and are influenced by its proximity to urban settlement. This area has been particularly affected by built development such as caravan parks, reservoirs, suburban development and golf courses, which offer alternative uses to agriculture but diminish its rural character. The settlement of Longridge, which overlooks the Ribble Valley, influences the character of the moorland fringe at its western end where the suburban edges of the settlement encroach into the rural upland landscape of the Moorland Fringes. Stone walls and Victorian reservoirs are particularly distinctive features of this landscape, although lack of management has led to barbed wire fences acting as stock proofing where walls are degraded and gaps have appeared. Well used roads, which travel through the area, afford excellent views to the surrounding lowlands.</i>
4g	South Pendle Fringe	<i>The South Pendle Fringe surrounds the gritstone moors of Pendle Hill, White Moor and Burn Moor. It is a highly textural landscape; gorse, rushes, wind blown trees and upland stone walls all contribute to the traditional character of the moorland fringe. Although it is a typical gritstone fringe, it is influenced by its proximity to the East Lancashire valleys below, both in terms of development and recreational pressure.</i> <i>There is a particularly dense network of footpaths and winding lanes, and the distinctive form of Pendle Hill forms a backdrop to views from them. The settlement pattern is dominated by scattered stone farmsteads and hamlets, with the villages of Barley and Roughlee nestling within the valley of Pendle Water. Tourism impact is evident at Roughlee where there are two caravan parks and at Barley, which has a visitor centre and outdoor activity centre and is the focus for outdoor activities, as well as a base for walking in the surrounding hills. The narrow valley of Pendle Water is a significant feature and contains areas of woodland, mainly conifer plantations.</i>
4h	Leck Fell Fringe	<i>The fringe of Leck Fell is notable for its large scale smooth landform, limestone walls field barns and farmsteads. Farms are marginal and pasture is rushy. The area contains a number of regular plantations and other mixed woodland, mainly associated with large estates. Leck Beck is</i>



Local	Character Areas	Description
		<i>a significant feature, traversing the area on its route from the fells to join the river Lune. High Park is an extensive area of multi-period settlement from the Neolithic to post Roman times. The presence of a medieval deer park has contributed to the excellent preservation of these early earth works.</i>
4i	North Pendle Fringe	<i>The North Pendle Fringe has a much smoother landform and more rural character than the South Pendle Fringe. Although the main features of the moorland fringe are all present, this area is sheltered from the impacts of the urban conurbations by the dramatic grit outcrop of Pendle Hill. The difference in topography may be attributed to its geology; layers of limestone and sandstone and boulder clay overlie the millstone grit on this edge producing a relatively smooth profile.</i>
4j	West Pennine Fringes	<i>A transitional landscape between the unenclosed land of the west Pennine moors and the enclosed landscape of the industrial foothills below on the west fringes of the West Pennine Moors. The underlying millstone grit is close to the surface on the moorland fringe and the landscape is characterised by marginal pastures with scattered farmsteads. As is typical of the West Pennine Moor fringes, the character is influenced by Industrial activity with reservoirs, mines and quarries scattered across the upper hillsides. A high density of public footpaths provides good public access and the wooded gardens on the hillside above Rivington Reservoir provide an unusual feature in the moorland fringe.</i>



UNDULATING LOW- LAND FARMLAND

Character Areas

- 5a Upper Hodder Valley
- 5b Lower Hodder and Loud Valley
- 5c Lower Ribble
- 5d Samlesbury-Withnell Fold
- 5e Lower Ribblesdale (Clitheroe to Gisburn)
- 5f Lower Ribblesdale (Gisburn to Hellifield)
- 5g South Bowland Fringes
- 5h Goosnargh-Whittingham
- 5i West Bowland Fringes
- 5j North Bowland Fringes
- 5k Cuerden-Euxton

Landscape Character

Generally below 150m, the Undulating Lowland Farmland lies between the major valleys and the moorland fringes. The underlying geology is largely masked by heavy boulder clays and hedgerows predominate over stone walls. This lowland landscape is traversed by deeply incised, wooded cloughs and gorges. There are also many mixed farm woodlands, copses and hedgerow trees, creating an impression of a well wooded landscape from ground level and a patchwork of wood and pasture from raised viewpoints on the fells. Some of the most picturesque stone villages of the county occur within this well settled landscape type. The towns of Longridge and Clitheroe also occur within this type, but are not typical of the settlement pattern. The area also has many country houses whose boundary walls and designed landscapes add to the species diversity and visual appeal. There is a high density of farms and scattered cottages outside the clustered settlements, linked by a network of minor roads. Typical view - photo 19 below.



Physical Influences

The Undulating Lowland Farmland forms a transitional zone between the low lying plains of soft glacial deposits and the high fells of Bowland, formed from Millstone Grit. To the west of the Forest of Bowland, running along the line of the M6, a substantial fault separates the soft Triassic rock of the lowlands from the harder Carboniferous rocks of the fells. The Clitheroe Reef Knolls SSSI, located between Worston and Downham, comprise an important geological feature. This is one of several Reef Knolls which support species-rich calcareous grassland.

This landscape type, whether composed of limestone, grit, shale or sandstone, is of gentle topography when compared to the fells and hills. Glacial action has accentuated the differences by further tempering the relief of the low-lying areas by the deposition of glacial drift. Deep drift is conspicuous where hedges predominate over stone walls, as quarrying is only possible where the drift is sufficiently thin.

Many of the woodlands which survive on the steep slopes of the deep cloughs and valley sides are of ancient origin and represent a rich natural resource. They include alder and ash woods on the base-rich soils of the valley floors grading through to lowland oakwoods and upland oak woods on the upper valley sides. Red Scar and Tun Brook Woods, situated east of Preston between Ribbleson and Grimsargh are classified as SSSI's and are important for their extensive examples of ash-wych elm woodland and alder woods. Hedges and hedgerow trees are also important as habitats in an otherwise intensively managed landscape.

Standing bodies of water are important habitats within the area; especially for birds. Rough Hey Wood, located south east of Garstang is designated as a SSSI and contains one of Britain's largest heronries.

Human Influences

The landscape proved more favourable to early settlers than the nearby uplands. At Portfield above Whalley, large earthworks of Iron Age date defend the neck of a steep-sided promontory whose flat top had been utilized since the Neolithic period. The presence of a large aisled barn of probably

18th century date points to an earlier, perhaps medieval, successful farmstead, attesting to the favourable nature of the site.

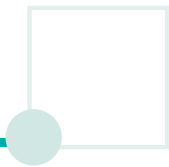
By the Roman period it is probable that much of this landscape type was already settled fairly densely and the fort established at Ribchester is known to have had some civilian government functions. Whilst Roman remains (besides roads) outside the immediate area of the forts are poorly represented in the record, the presence of Roman Kilns at Quernmore show that they exploited the natural resources of the area.

Medieval population pressures, which saw the utilisation of small areas of the mosslands elsewhere in Lancashire also led to the continuation of small woodland clearances along the Ribble and the Lune. This created a small scale intimate landscape of scattered farms linked by winding roads with irregular fields and patches of surviving woodland on stream and field edges, a landscape which has remained intact to this day.

The majority of enclosure dates from the medieval period and has created a landscape of small fields which are mostly hedged although stone walls are evident where geology lies close to the surface.

Country houses are a feature of the area and are often surrounded by parklands and well managed estates. They are evidence of the developing industrial enterprise and increasing wealth between the 16th and 19th centuries. Architecturally distinctive yeoman and gentry houses are also characteristic of this type and date from the 17th century onwards.

During the 17th century lime was used for land improvement in these lowland fringe areas and many small farm kilns remain in the landscape, along with the larger industrial kilns and quarries of the 19th and 20th century. The mining of Millstone Grit also proved to be important in this landscape type. Where suitable stone was available, querns and millstones could be quarried and manufactured to meet the needs of the population. Remains of 19th century millstone production near Quernmore can still be seen on the flanks of Clougha Pike. Lead and Silver were extracted in Rimington from the 17th century and mined and manufactured in places such as at Quernmore to meet the demands of the rapidly industrialising county.

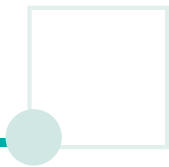


CHARACTER AREAS - UNDULATING LOWLAND FARMLAND

Undulating Lowland Farmland occurs on the lower fringes of the uplands, below about 150m AOD, across the whole study area.

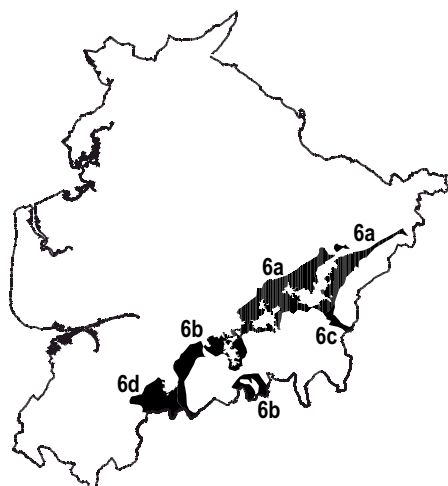
Local	Character Areas	Description
5a	Upper Hodder Valley	<i>This is a unique hidden area of settled farmland enclosed by shale and limestone uplands and the grit moorland of the Bowland Fells. It is a lush oasis in the middle of a bleak landscape. The landscape is centred around the upper River Hodder and its tributaries and is well wooded. The underlying geology is largely overlain by boulder clays although the underlying limestone is evident as outcrops known as 'Reef Knolls' as well as in the white stone walls, bridges and limestone built villages, such as Slaidburn. The Reef Knolls are particularly characteristic of this area as are stands of beech which are often visible on hill tops.</i>
5b	Lower Hodder and Loud Valley	<i>This area forms part of the Undulating Lowland Farmland to the south of the Forest of Bowland and includes the deeply incised wooded course of the Hodder below Whitewell and its tributary, the River Loud, as far as its confluence with the Ribble. The underlying bedrock is limestone which is overlain by good soils, providing lush green pastures and good tree growth. The course of the Hodder is particularly well wooded and the pattern of incised minor wooded tributaries is distinctive to this character area. The area is little affected by modern development and the picturesque limestone villages of Chipping and Waddington have retained their vernacular character.</i>
5c	Lower Ribble	<i>The Lower Ribble is an area of lowland gritstone farmland between Longridge Fell to the north and Mellor Ridge to the south. It has a distinctive broad valley landform; the north and south valley sides are separated by a flood plain which contains the meandering course of the River Ribble. There is a particularly distinctive pattern of wooded cloughs which descend the valley sides, their streams emptying into the Ribble. A complex pattern of hedges and woodland form links to these wooded cloughs, giving an overall impression of a well wooded landscape. Although a rural valley, the area is well settled; a dense network of winding country lanes and tracks link the large number of stone farm buildings. Other features of this area are the country houses and designed landscapes, for example Stonyhurst College, Huntingdon Hall and Showley Hall. The Roman settlement of Ribchester is sited at an historic crossing point of the Ribble, a tranquil village in the centre of the valley.</i>
5d	Samlesbury-Withnell Fold	<i>An area between the Ribble Valley to the north and the Industrial Foothills to the south. It is underlain by millstone grit and sandstone, but the landscape is influenced by the mantle of glacial till which covers the surface, producing a gently undulating landscape of large lush green pastures divided by low cut hedgerows and hedgerow trees. Dramatic steep sided wooded valleys wind their way through the landscape carrying the River Darwen and its tributaries. Designed landscapes and parkland associated with Samlesbury Hall, Woodfold Hall, Pleasington Old Hall and Hoghton Tower add to the overall woodland cover in this lowland landscape and Witton Country Park provides a countryside resource on the edge of Blackburn. It is also influenced by infrastructure (major road</i>

Local	Character Areas	Description
		<i>and rail routes), industrial works, the airfield at Samesbury and built development on the edges of Preston.</i>
5e	Lower Ribblesdale (Clitheroe to Gisburn)	<i>This area forms the southern valley side of the Ribble, between Copster Green and Gisburn, on the lowland fringes of Pendle Hill. It is a particularly well settled area and provides a corridor for communication routes along the Ribble Valley. The A59(T) runs the length of the area, linking the settlements of Copster Green, Whalley, Clitheroe, Chatburn and Gisburn. The railway links the valley to Blackburn and Yorkshire. This communication structure has encouraged built development and industry; the large cement works at Clitheroe is a prominent visual landmark for miles around. This character area is underlain by limestone and has some good examples of limestone reef knolls, particularly around Clitheroe; Clitheroe Castle is located on top of one of these knolls.</i>
5f	Lower Ribblesdale (Clitheroe to Gisburn)	<i>This character area follows the upper reaches of the River Ribble between Bolton-by-Bowland and Long Preston on limestone geology. It occurs on the fringes of the Slaidburn Rolling Upland Farmland between 100 and 150m AOD. It is a highly rural area which is dominated by lush green pastures divided by hedgerows with many hedgerow trees. The mixed plantation woodlands associated with estates of Bolton Hall and Halton Place and the ancient woodlands along the Ribble itself contribute to the wooded character of this landscape character area.</i>
5g	South Bowland Fringes	<i>This character area forms the lowland fringes of Waddington Fell, to the south of the Forest of Bowland. It is a well wooded area whose limestone slopes are particularly notable for their pattern of wooded cloughs - the tributaries which descend the valley side before feeding into the Ribble. The villages of Waddington, West Bradford, Grindleton and Holdon are located at the foot of wooded cloughs. Browsholme Hall has an influence over landscape character; shelter belts and beech hedges are features of the area around Cow Ark.</i>
5h	Goosnargh-Whittingham	<i>The undulating lowland farmland on the north-east fringes of Preston forms a transitional landscape between the upland landscape of the Bowland Fells to the north-east and the agricultural Amounderness Plain to the west. It is an historically interesting area on the fringe of the Forest of Bowland AONB. The landform gently descends from 150m at the moorland fringe of Beacon Fell to the 30m contour (approximately) which defines the edge of the sandstone agricultural plain of the Fylde. However, this is not a clear boundary and the visual transition from one to the other occurs across a broad area between the M6 and main Preston to Lancaster railway line. As a result of this gradual transition it demonstrates characteristics of both the Fylde and the Bowland fringes. It is a pastoral landscape which is relatively open and intensively farmed with much hedgerow loss and few trees or woodlands although hedgerows along the network of lanes are important landscape features. There are often clear views over the plain below. The area is under pressure from built development as a result of its proximity to Preston. Vernacular buildings are of local stone, although a number of incongruous materials are seen throughout the area. The area is rich in evidence for Roman occupation.</i>



Local	Character Areas	Description
5i	West Bowland Fringes	<i>A transitional landscape between the gritstone scarps of the Bowland Fells and the coastal plain of Amounderness. A fault line provides a corridor along which the motorway, road and railway run and provides a transition to the agricultural plain. However, this transition is softened by glacial deposits, for example at Galgate where the lowland farmland merges imperceptibly with the low drumlin fields. However, at Quernmore, there is a dramatic wooded ridge (7c) which forms a definite boundary between the grit lowland fell edges and the adjacent glacial landscape to the west. The transition from fringe to fell is quite striking, particularly to the north-west below Claughton Moor where it occurs over a short distance. The valleys of the Brock, Calder and Wyre are also relatively dramatic, descending from the fells in deeply incised wooded valleys. There are exceptional views of the Amounderness Plain from the hillsides and the scarps of the Bowland fells are never far away.</i>
5j	North Bowland Fringes	<i>The north-facing gritstone slopes, known as the Forest of Mewith, is an area of undulating marginal farmland on the northern edges of the Bowland Fells It is bordered by a drumlin field to the north which influences the landform of the lowland fringe; the broadly undulating landform contrasts with the steep scarps of west Bowland. This is a rural area which is crossed by a dense network of footpaths and farm tracks; a number of small stone farm holdings are found at the end of these dead-end farm tracks.</i>
5k	Cuerden-Euxton	<i>The rural character of this landscape is largely obscured by built development which has taken place since the late 1970s. Motorways and motorway junctions dominate the northern sector. The principal landscape feature is Cuerden Valley Park, based upon the woodland and valley of the river Lostock. The park is managed for nature conservation and recreational use and is an important local resource. Pockets of farmland and vernacular buildings survive as a reminder of earlier land use and settlement pattern.</i>

6



INDUSTRIAL FOOTHILLS AND VALLEYS

Character Areas

- 6a Calder Valley
- 6b West Pennine Foothills
- 6c Cliviger Gorge
- 6d Adlington-Coppull

Landscape Character

The Industrial Foothills and Valleys are a complex transitional landscape of relatively small scale with intensive settlement. The area has a more gentle landform and varied vegetation cover than that of the nearby higher ground. Trees thrive around farmsteads, along stone wall boundaries and in small-medium sized woodlands. Fields are enclosed by gritstone walls or hedgerows. There is a dense network of narrow winding lanes in the rural areas and major roads link settlements along the valley floor. Settlement is heavily influenced by a history of industrial development in the villages themselves and the neighbouring urban areas. Thus the landscape character shows a mixture of rural agricultural and industrial land uses. Gritstone is the characteristic material of farm houses, laithe houses, mills, and cottages. The frequent mill terraces, industrial buildings and more modern housing developments (often built of brick), reflect the proximity to large industrial and commercial centres and lowland clay lands. Typical view - photo 20 below.



Physical Influences

South east Lancashire is predominantly underlain by Millstone Grits and sandstones with coal measures. These measures survived because they were downfaulted or deformed into basin structures during Carboniferous/Permian times. Where increasingly thick layers of drift deposits overlie the coal, along the eastern fringes of this landscape type, extraction is limited and the landscape character is more agricultural. Where coal deposits lie closer to the surface, more extensive coal extraction has been possible and large scale exploitation, dating from the first phases of the Industrial Revolution has substantially altered the pre-industrial landscape in places.

The Industrial Foothills and Valleys are typically found between 100 and 250 m above sea level; the higher limits form the transition to the moorland fringe. The lower slopes are generally less steep with even gradients. On the whole the Industrial Foothills are gentler and more sheltered compared to the more exposed Moorland Fringes.

Nature conservation value is limited although important habitats are found in the stream valleys. The main concentrations of semi natural woodland are found within the valleys of the Calder, Sabden, Hyndburn and Pendle Water between Nelson and Accrington. Occasional private estates and designed parklands are significant locally.

Human Influences

Within the Industrial Foothills and Valleys, extraction and industry has to some extent masked the evidence of early development of the area, although in places the origins of field patterns and boundaries can be discerned. Some early sites survive, such as the Iron Age hillfort at Castercliffe, along with the intricate network of fields, tracks, lanes, scattered hamlets and villages which combine to give evidence of the historic landscape.

The origins of industrialisation of the area date to before the 16th century as a cottage industry based on a dual economy of agriculture and industry. It was dominated by weaving, with some small scale mining and manufacturing activity. Wool came from the

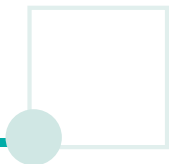
South Pennine hillsides and flax from the Lancashire and Amounderness Plain. The textile industry grew rapidly and factories appeared, which gradually replaced the domestic system. The weaving communities continued to grow and the proliferation of mills and residential development created a fragmented landscape.

Since the 1920s the textile industry has been in decline but the remains of mills and workers' houses are distinctive landscape features.

Coal mining activity increased in the mid 16th century and a number of small mines were sunk around Burnley. During the 18th and 19th centuries the shallower, more easily worked seams were being mined on an industrial scale and were employing large numbers of men. Industry required good transport links. Roads, railways and canals are conspicuous elements of the landscape and reflect the industrial age. Whilst some routes have become disused, many are still important transport routes today for commuting, commerce, industry and recreation. Evidence of coal extraction is frequently minimal due to subsequent reclamation and natural regeneration.



Photo 21. Brierfield fringe.



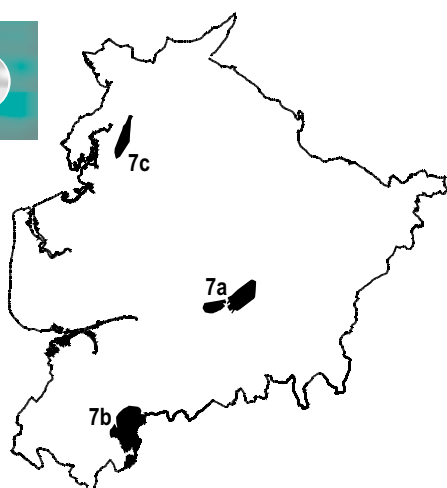
CHARACTER AREAS - INDUSTRIAL FOOTHILLS AND VALLEYS

The Industrial Foothills and Valleys landscape type occurs in two distinct character areas, both located on the Lancashire Coalfield in the south of the study area.

Local	Character Areas	Description
6a	Calder Valley	<i>This landscape character area encompasses the landscape of the broad valley of the River Calder outside the urban settlements. It extends from the moorland fringes of the South and West Pennines (to the south) and Pendle Hill and Mellor Ridge (to the north) to the urban fringes of Blackburn, Darwen, Accrington, Burnley, Nelson and Colne. Agricultural activity is productive with lush, improved pastures utilised for dairy farming as well as sheep grazing. Stone walls remain the predominant boundary type on higher ground, although there are frequently hedgerows and post and wire fencing on the lower slopes and valley bottom. The landscape is well populated; there are many houses, footpaths and large farms. Stone walls and farm buildings are important remnants of earlier landuses, particularly where modern developments threaten to obscure the visual and cultural appeal of the area. Modern houses are conspicuous for their rendering or use of alien materials and their gardens and ornamental plants. Designed landscapes, such as Huntroyde and Read Park, are important locally to the visual and cultural qualities of this character area; they also contribute an important wooded element to the landscape. Mills, mill terraces and handloom weavers houses are reminders of a very different lifestyle and are usually located closer to the centres of urban areas. The urban fringes of Colne, Nelson and Burnley exert an influence over the landscape; close to the urban edge there are pockets of neglected land and urban fringe land uses such as horse paddocks, garden centres and retail or industrial buildings.</i>
6b	West Pennine Foothills	<i>This rural area forms the rolling foothills to the West Pennine Moors. Although it has the same undulating landform, underlying geology and industrial influences as the Calder Valley, it is more rural in character. It is dominated by sheep grazed pastures and includes a number of designed landscapes, with associated country houses. The villages reflect their industrial basis with rows of terraces, and sandstone quarries are present. Urban influences include allotments, horse paddocks, street lighting and kerbs, electricity pylons, communication masts, golf courses, suburban housing and road signs. Evidence of past quarrying can be seen in the numerous remnant spoil heaps which are common landscape features, for example near Withnell. The many public footpaths are an important recreational resource from which walkers may experience distant views of the urban conurbations stretching out below them.</i>
6c	Cliviger Gorge	<i>The Cliviger Gorge is a dramatic feature which was carved out by glacial meltwaters and is significantly different to the other character areas included within this type, and indeed to any other landscape in Lancashire. It is one of the most spectacular examples of a glacially over-deepened valley in the Central Pennines and a well-loved local landscape which has affinities with other similar valleys in the Hebden Bridge area of West Yorkshire. The incision of a glacial meltwater channel along the valley has caused the tributary streams to be left 'hanging' and these are now actively cutting down into the bedrock, producing natural exposures of Carboniferous rocks which are of great geological interest and which have in the past been exploited for coal. The steep slopes also have extensive landslips with a very distinctive landform. Rocky outcrops may be seen</i>

Local	Character Areas	Description
6d	Adlington-Coppull	<p><i>high on the valley sides, most obviously at Thieveley Scout. There is scattered settlement along the A646(T) on the valley floor. There are important small blocks of woodland around the settlement of Holme Chapel. These are mostly stands of late 18th century tree planting, dominated by beech and sycamore, which is part of a wider designed landscape. Industrial remains such as the silver and lead mine at Thieveley are important as a reminder of the area's past.</i></p> <p><i>This area is bordered by the Coastal Plain to the west and the town of Chorley to the north. Much of the area lies on the Coal Measures and has been extensively mined in the past, notably at Chisnall, Birkacre and Duxbury. This industrial past is reflected in the expanded industrial settlements of Coppull and Adlington. Whilst there is some evidence of early mine shafts and adits, much of the land has been reclaimed or has re-vegetated naturally. There is also evidence of sand quarrying, some disused, some ongoing, as at Rigby House. Whilst the area is not generally well wooded, it contains important semi-natural woodland within the Yarrow Valley and plantations associated with large reclamation schemes. The area is traversed by major transport routes, including the main west coast railway and M6 motorway. A major leisure facility is located at Park Hall and a large golf course at Duxbury Park. The area is under considerable pressure for further built development.</i></p>

7



FARMED RIDGES

Character Areas

- 7a Mellor Ridge
- 7b Upholland Ridge
- 7c Langthwaite Ridge

Landscape Character

These gritstone outcrops are relatively low in comparison to the Bowland Fells and outliers, their distinctive ridge profiles set them apart from the adjacent lowland agricultural landscapes. Wooded sides, which rise sometimes dramatically from the farmed plains, are visible for miles around and provide a sense of orientation when in the lowlands. The ridges themselves support a mosaic of mixed farmland and woodland which provides a textural backdrop to the surrounding lowlands. The landscape character one side of the ridge may be totally different from the character on the other, despite their proximity to each other. The local vernacular is clustered stone built villages with scattered outlying cottages and farmsteads strung out along local roads, but more recent ribbon development and new houses display an incongruous mix of materials. There is a good network of footpaths, parking and picnic spots with views over the surrounding lowlands. The ridges also support some forestry and provide ideal sites for reservoirs and communication masts. Typical view - photo 22 below.



Physical Influences

The ridges are formed from high areas of Millstone Grit which rise dramatically from the surrounding landscape to elevations of between 140 and 230 metres. The Millstone Grit outcrops in places, but is largely overlain by Boulder clay. Upholland Ridge is orientated in a north-south direction. It is cut in two by the valley of the River Douglas which also carries a railway line and the Leeds and Liverpool Canal. The lower, eastern slopes of the ridge shelter coal deposits, which shelf gradually into the surrounding landscape.

The Mellor Ridge, which runs in an east-west direction, has been cut off from the larger mass of Pendle Hill by the River Calder. The Calder to the east, the Ribble to the north and the Darwen and Hindburn Brook to the south, have shaped the ridge by fluvial and glacial processes.

The Langthwaite Ridge is orientated north-south and is separated from the Bowland Hills by low-lying land of glacial sands and boulder clay drift. To the west lie low drumlins.

Intensive farming practices, mostly concerned with the grazing of beef, dairy cattle and sheep, limit the nature conservation value of the area, although the small woodlands associated with the steeper sides of the Upholland Ridge are important for their wildlife value.

Human Influences

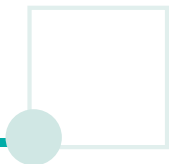
The elevated nature of the ridges and the excellent views of the valleys and Lancashire Plain have ensured that they have been important strategically and symbolically throughout history.

There is evidence of a Roman signal station at Mellor, which was strategically placed to observe the surrounding lowlands and routes along the Calder and the Ribble.

Upholland was so named to distinguish it from Down Holland, the name referring to its location on the spur of a hill.

Intensive farming in recent history threatens to remove traces of early enclosure, although the early origin of field patterns is still discernible in the landscape.

The relative height and views from the ridges have more recently attracted communication masts, housing developments and recreational activities. The ridges continue to be resources for agriculture, stone and water to supply nearby urban populations.



CHARACTER AREAS - FARMED RIDGES

Farmed Ridges occur in three distinct areas where outcropping millstone grit forms distinct ridges in the lowlands.

Local	Character Areas	Description
7a	Mellor Ridge	<i>A prominent lowland ridge which forms a south-western gritstone extension to Pendle Hill, separating the rural Ribble Valley from the industrial Calder Valley. It is under pressure for urban development, but despite this influence it appears rural in character from the surrounding valleys and provides an important buffer between the intensely urban landscape of Blackburn and the rural landscapes associated with the Ribble Valley. The prominent ridgeline is viewed from the busy A59 and M65 transport routes to the north and south respectively. There are also outstanding views from the ridge itself across the Ribble Valley to the north, over Whalley Abbey at its eastern end and across Blackburn to the south. Built development has taken advantage of these views and Mellor is sited on top of the ridge where it enjoys long views across the adjacent lowlands.</i>
7b	Upholland Ridge	<i>An intensively farmed, but wooded gritstone ridge which stretches from Harrock Hill in the north, past Upholland and the M58 into Greater Manchester and Merseyside. The Upholland Ridge forms an important buffer between the urban landscapes of the NW Manchester conurbations and the rural landscapes of the West Lancashire Coastal Plain. The productive mixed farmland is punctuated by a strong pattern of hedgerows and woodland which provides a textural backdrop to views from the surrounding lowlands. The Douglas valley is a major feature, running through the Upholland Ridge. The valley is an important transport corridor and also contains several heronries, country houses and designed landscapes including significant ornamental lakes at Wrightington Hospital. Development has taken advantage of the views - it is a well settled ridge with gritstone walls and terraces. The farmsteads, which are local stone with slate roofs, add further texture and character to the area. However, as the intensity of farming increases, field size is enlarging and hedgerows are being lost, weakening the field pattern. This is a popular recreational area for residents of the extensive local urban conurbations and there are many parking areas and viewpoints on top of the ridge, most notably at Parbold Hill, as well as a country park and golf course at Beacon Hill. Reservoirs and communication masts are again a feature of the area and a number of quarries indicate the mining of local materials for building.</i>
7c	Langthwaite Ridge	<i>This gritstone outcrop forms a prominent rounded ridge which forms a southern extension to the Docker-Kellet-Lancaster Drumlin Field. It separates the city of Lancaster and developed coastal drumlin landscape from the rural landscapes of the Bowland Fells. It is distinguished from the adjacent drumlin field by its smooth rounded form. It is typical of a farmed ridge with a rich mosaic of pasture, woodland and parkland. It forms a setting for the city of Lancaster and scattered built development takes advantage of views from the ridge. It provides suitable location for reservoirs and communication masts which stand out against the skyline. Mixed woodlands are a feature of this area, associated with the Quernmore estate and the reservoirs. The largest block is Knots Wood, managed by Forest Enterprise.</i>



SETTLED VALLEYS

Character Areas

8a Irwell

Landscape Character

The narrow, high sided valleys of the River Irwell and its tributary streams, dissect the high moorland plateau of the Rossendale Hills and provide one of the most distinctive landscape types in Lancashire. Along the valley floor the urban settlements between Rawtenstall and Bacup, which originated at river crossing points, have now merged to form a dense ribbon of urban and industrial development. The textile mills, with their distinctive chimneys, dominate the urban skyline and are a hallmark of this South Pennines landscape. Gritstone terraces form characteristic features of the hillsides and valley floor and roads are concentrated in the narrow valley floor. North facing slopes usually remain free of development and there are frequently views towards woodlands, the patchwork of in-bye pastures and the moorland edge. Broadleaved woodlands cling to the steep slopes and fill the steep valley side cloughs, reinforcing the sense of enclosure within the valleys, although the Irwell Valley has relatively little woodland. Pockets of adjacent farmland are often under-used with attendant derelict structures. Typical view - photo 23 below.



Physical Influences

The alternating geological layers of gritstone, coal and glacial deposits of sand and gravel have been cut by the swiftly flowing rivers to form a distinctive stepped valley profile. Along the steepest valley sides sheer faces of the underlying rocks are exposed and create dramatic features. Elsewhere the sides are mantled with a thin soil cover.

The deeply incised valleys, which dissect the upland landscapes, are cut by the Irwell and its tributaries. The river flows in a westerly direction, fed by a ladder pattern of tributaries from the surrounding hills. The steep valley sides are typically 200m in height with a narrow valley floor.

The woodlands on the steep slopes of the valley sides include remnants of ancient oak woodland, but are largely planted and make a vital contribution to an otherwise urban landscape. The species composition reflects the harsh industrial climate of past centuries, with a predominance of pollution tolerant species such as sycamore. With the reduction in industrial pollution, the Irwell and its tributaries provide important green links. Together with the few surviving mill lodges they provide valuable fresh water habitats.

Some of the in-bye pastures are herb-rich, whilst there are many wet flushes of wildlife importance.

On the valley floor the rivers create important green links and, with the reduction in industrial pollution, many provide valuable freshwater habitats.

Human Influences

Initially part of the medieval Forest of Rossendale (also known as Brandwood), the valleys would have been utilized from early times as routeways. Settlement in the later part of the medieval period would have focused on the "Booths" or farmsteads within the Forest. Later official and unofficial encroachment on the Forest would have expanded upon these and developed as small hamlets.

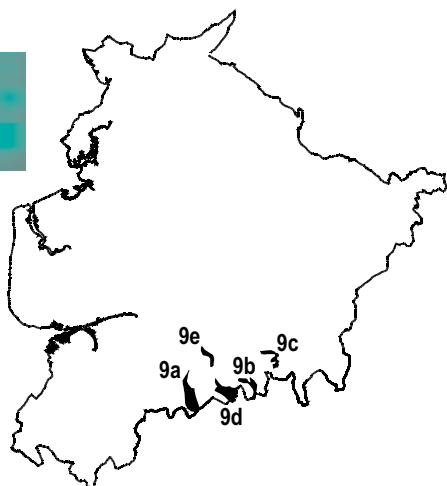
The Settled Valleys contain a remarkable legacy relating to our industrial heritage, which itself masks remnants of pre industrial

settlement and landuse. They include the early communications infrastructure of the railways and canals and the very distinctive vernacular architecture of the textile industry; the enormous factories and chimneys and the rows of Victorian terraced housing. Originally people would have exploited the water power of the rivers, particularly in the steep side valleys, but as coal became an increasingly important source of energy, the factories were concentrated in the main valley floor where major transportation routes were developed and the existing labour force could be exploited. The urban landscapes generated by the process of industrialisation are one of the special and significant features of these valleys. Urban areas, which were confined by topography, tended to grow along the bottoms of the valleys and have tight-knit urban centres. They are dominated by large textile mill buildings with terraces of stone cottages with their characteristic contrasting stonework and pointing, running along the lower valley sides. Many mill buildings survive due to their continuing use in the footwear industry as textile manufacturing has become less viable. Grand civic buildings and urban parks built on the wealth generated by the textile industry are important features of these towns as they reflect the late 19th century fashion for creating strong urban identities and improved conditions for workers in what were the squalid and overcrowded industrial towns. The towns also contain Victorian churches, chapels, schools and engineering features, often retaining the steep valley sides for housing or industrial development.

CHARACTER AREAS - SETTLED VALLEYS

The Irwell Valley is the only landscape character area associated with the Settled Valleys landscape character type within the study area. It is found in south-east Lancashire.

9



RESERVOIR VALLEYS

Character Areas

- 9a Rivington
- 9b Turton-Jumbles
- 9c Haslingden Grane
- 9d Belmont
- 9e Roddlesworth

Landscape Character

The Reservoir Valleys are characterised by large reservoirs constructed in the mid-late nineteenth century to supply water for Lancashire’s growing urban population. They are dominated by large expanses of water and their associated engineered landforms of bunds and embankments. The Victorian landscape is evident in the form of mixed woodlands, gothic architectural detailing and sturdy dressed stone walls. The valleys are predominantly rural in character with attractive areas of pasture and broadleaved woodland surrounding and linking the water bodies. The extensive woodlands and plantations allow the valleys to absorb relatively high numbers of recreational visitors from the surrounding urban areas, without becoming overcrowded and recreational use is now an important influence on landscape character. Typical view - photo 24 below.



Physical Influences

The Reservoir Valleys follow faults in the bedrock along a roughly south-east to north-west axis. The whole area was heavily glaciated during the Pleistocene and the retreat of the glaciers formed a deep overflow channel from Brinscall to Horwich. This over deepened valley is now occupied by the Anglezarke and Rivington reservoirs. The valleys contain much evidence of past mining and quarrying, especially for sandstone. The Leicester Mills sandstone quarry at Rivington with its high sandstone edge is now an important landscape feature and recreational resource. Important semi-natural woodlands survive, particularly in the Rivington and Belmont valleys. Farmland and embankments adjacent to the reservoirs are often ecologically important; species-rich hay meadows and pastures and grasslands contain nationally rare plants.

All of the reservoirs, and particularly Jumbles, Wayoh, Delph and Belmont and Rivington are important to wintering wildfowl. Belmont is also significant for the breeding wader assemblage associated with adjacent in-bye pastures. The woodlands and plantations are also valuable for breeding birds including woodcock, redstart and pied flycatcher.

Human Influences

Evidence of pre-industrial uses of the valleys include field patterns on the lower valley sides, abandoned farmsteads and features such as the medieval manor house at Turton.

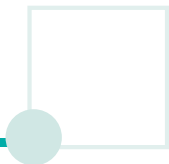
However the construction of the reservoirs and pre-reservoir mining has destroyed many early remains of land use and settlement. Evidence of later settlement is widespread throughout the valleys for example near Anglezarke remnants of 18th century lead mines containing a waterwheel pit, pumping shaft and stream sluices can still be seen.

In the mid-late 19th century the rural landscape of the valleys was transformed by the construction of numerous large water bodies to supply the growing populations of the surrounding conurbations. The appropriation of the land by the water undertakings and consequent depopulation had a significant landscape impact. The remains of these farms are still extant. The

reservoirs represent important feats of engineering and constructions, such as feeder conduits, overflow cascades and slipways, embankments and tunnels, are of historical significance. Victorian detailing of the built features of the reservoirs, including gothic style valve towers and crenellated stone walls with decorative reliefs, are important pieces of architectural heritage. Similarly remnants of construction workers' dwellings and places of worship are important reminders of the massive human input involved in their construction.

Much of the mixed woodland planting associated with the reservoirs originated as 19th century catchment plantings and continues to be managed by the water authorities today.

Lever Park is a designed landscape close to Rivington reservoir. Lord Leverhulme, the famous soap manufacturer and art collector, purchased Rivington Hall in 1904 and commissioned Thomas Mawson to design the park and gardens. These were later given to local communities as a public park. It is now an important local recreational resource and feature of the landscape.



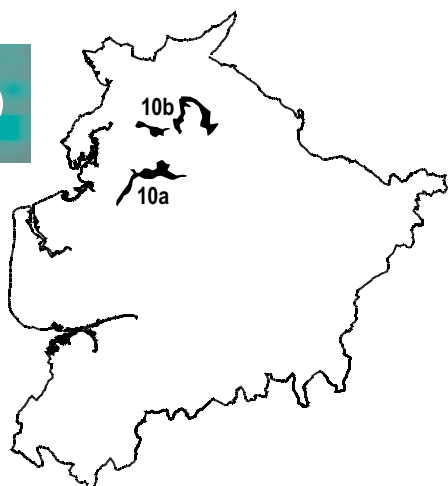
CHARACTER AREAS - RESERVOIR VALLEYS

The Reservoir Valleys are a distinctive type of flooded valley which emerge from the West Pennine Moors in the south of the study area.

Local	Character Areas	Description
9a	Rivington	<i>This wide shallow valley is almost entirely water-filled containing the three large reservoirs of Anglezarke, Upper and Lower Rivington and Yarrow. These waterbodies, built by Liverpool Corporation in the mid-nineteenth century, cover the courses of three separate streams on this western edge of the West Pennine Moors. Much of the character of the lower part of the valley is owed to the influence of Lord Levehulme who had his home at Rivington Hall. His interest in architecture and landscape design is reflected throughout the valley and includes long tree lined avenues, a network of footpaths, the Rivington Terraced Gardens and a replica of Liverpool Castle ruins on the banks of the reservoir. The listed historic landscape of Lever Park now forms part of Rivington County Park and is an extremely popular area for recreation. The landscape of the upper part of the valley is dominated by the engineering structures associated with the reservoirs, including the overflow cascades, bridges and embankments. The valley forms the transition from the high West Pennine Moors to the low-lying plain of Leyland Hundred.</i>
9b	Turton - Jumbles	<i>This valley is formed by a line of three reservoirs to the north of Bolton, two of which (Entwistle and Wayoh) supply Bolton with the majority of its drinking water. Each is surrounded by extensive woodland, much of which is in the form of conifer plantations. Originally the valleys in which these reservoirs are sited fed the Bradshaw Brook, which became a local focus of industrial activity. The success of textiles and bleaching provided the stimulus for reservoir construction in the area. Entwistle was the first in the 1830's and indeed one of the first in the country at such a scale, followed by Wayoh thirty years later, and more recently by Jumbles in 1971 to provide compensation water to Bradshaw Brook. The reservoirs are now a focus for recreation and nature conservation, with walking, fishing and informal pursuits located at Entwistle and Wayoh, and the County Park centred around Jumbles Reservoir offering more formal recreation. A feature of particular note is the Armsgrove Viaduct which carries the Bolton to Blackburn railway over the Wayoh Reservoir. The valley includes the attractive settlements of Chapel Town and Turton Bottoms.</i>
9c	Haslingden Grane	<i>The Grane valley is a somewhat remote wide valley to the west of the town of Haslingden. The valley floor is occupied by three large reservoirs; Calf Hey, Ogden and Holden Wood, while the valley sides contain a mix of coniferous and broadleaved plantations and open pastures. Quarried crags and edges overlook the valley and border the surrounding high moorland. This was once a well populated valley with farmers, quarry workers and a number of mills. The entire valley was depopulated in association with the reservoir construction in a effort to reduce the risk of waterborne diseases. Today, the scattered abandoned farmsteads, ruined cottages and pastures and packhorse tracks are remnants of the pre-reservoir landscape. The Grane valley is gradually being discovered by visitors and is increasingly used for informal recreation with car parks and footpath links established.</i>

Local	Character Areas	Description
9d	Belmont	<i>The Belmont, Delph, Springs, Dingle and Wards Reservoirs are sited in an incised valley high above Bolton. The village of Belmont, on the route of the A675, forms a focus for this area. Despite the presence of settlement it is a quiet valley with few recreational opportunities compared to the other reservoir valleys. There are a few public footpaths including the Witton Weaver's Way which passes through the coniferous plantation surrounding the Delph Reservoir. This valley is more rural than many of the other reservoir valleys; ancient woodland still clings to the steep cloughs which have not been dammed. These also contain important wetland habitats.</i>
9e	Roddlesworth	<i>The Roddlesworth and Rake Brook Reservoirs sit within an extensively wooded valley of mixed plantations above the towns of Blackburn and Darwen. A number of public footpaths pass through the valley and roads pass either side of it. It is a quiet and remote landscape dominated by the reservoirs.</i>

10



WOODED RURAL VALLEYS

Character Areas

10a Wyre Valley

10b North Bowland Valleys

Landscape Character

Deeply incised and heavily-wooded valleys radiate out from the central upland core of the Forest of Bowland. Their dramatic valley profiles have been formed from the erosive action of the fast flowing rivers which cascade through rocky gorges and channels within the Millstone Grit. The secluded, humid environment of the Wooded Rural Valleys is in stark contrast to the surrounding open moorland of the fells, providing shelter and cover for a great variety of flora and fauna. Ancient woodland, interspersed with some conifer planting and pasture, clings to the steep valley sides. Small settlements are clustered at river crossings and contained within the steep sided valleys and stone mills and bridges are a testament to the historic use of the rivers for harnessing power; these areas were also managed to supply charcoal and wood for the bobbin mills. Farmed land is confined to the edges, above the level of the wooded valley sides; pastures are sheep grazed and divided by gritstone walls. A few herb-rich pastures and meadows survive and a network of minor winding and undulating lanes dip in and out of the valleys. Typical view - photo 25 below.



Physical Influences

The Wooded Rural Valleys cut through hard Millstone Grit and radiate out from the central upland core of the Bowland landscape. Some of the valley sides expose sections of the layers of the underlying geology which includes sandstone, shale and silt.

The deeply incised, narrow valleys were formed by fast flowing streams and glacial meltwaters. Local areas of landslip are common on the steep valley sides and create a distinctive hummocky local topography. As the streams cut through sequential layers of Millstone Grit they have created a landform of stepped terraces on the harder geology and steep drops where the softer shales have been eroded away.

The valleys contain substantial areas of ancient woodland which survive as remnants of larger woods cleared for agriculture or habitation. These range from the base rich ash woodlands or alder/willow fringing the streams, to upland oak woodland along elevated parts of the valley sides. Remnant areas of wet meadow along the valley floor are also of considerable interest. This is a shady, humid environment in which ferns, mosses and other specialised plants thrive. These valleys support characteristic riparian birds such as grey wagtail, dipper and common sandpiper.

Human Influences

There is less obvious evidence of human activity in the Wooded Rural Valleys as farms are generally located above the level of the main wooded areas, however the woods are interspersed with rough pasture and narrow riverside meadows. The stone bridges, which often represent ancient crossing points are an interesting feature of the valleys.

The presence of charcoal hearths suggest a past history of woodland management. The swift streams provided water power for early industrial activity and occasional historic mill sites remain. on the valley floors, include traces of mill ponds, races, sluices and weirs. The remaining mill buildings are good examples of the local vernacular and have often been converted into private residences.

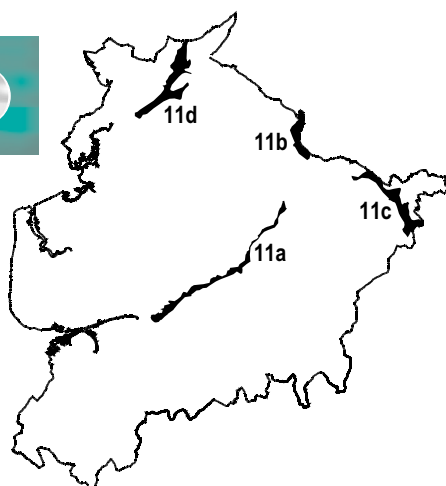
Herb-rich flower meadows have fast disappeared since the last war from these valleys due to intensive farming practices. Only a few now remain.



CHARACTER AREAS - WOODED RURAL VALLEYS

The Wooded Rural Valleys landscape type is found on the northern and western gritstone slopes of the Forest of Bowland fells.

Local	Character Areas	Description
I0a	Wyre Valley	<i>The Wyre Valley, which descends the western flanks of the Bowland Fells starting at the Trough of Bowland, is particularly characteristic of this landscape type. In the upper reaches, remnant ancient woodland still clings to the clough sides and man's activity is at a minimum. However, further downstream the result of man's influence begins to affect the character of the landscape. The historic textile village of Dolphinholme clusters in the valley bottom and there is a series of weirs along the course of the river, the first controlling water flows at the Abbeystead reservoir. Further downstream a series of open lakes (resulting from gravel extraction) has produced a unique mosaic of open water and woodland which, although picturesque, is alien to the natural environment. There are many public footpaths and lanes in the area providing access to the valley and potential threats to its seclusion and rural character. Further downstream the M6, mainline railway and parking, picnic and camping sites have eroded the secluded character of the valley.</i>
I0b	North Bowland Valleys	<i>The North Bowland Valleys of the Artle, Roeburn and Hindburn are relatively rural in character. They form the archetypal examples of this landscape type. The Roeburn and Hindburn have a particularly high proportion of remnant ancient woodland and little settlement. Waterfalls, weirs and fords are all features of this character area. Steep lanes wind their way through the gorges, crossing the river course on stone bridges. The banks of the fast flowing rivers contain evidence of former water powered mill sites.</i>



VALLEY FLOODPLAINS

Character Areas

- 11a Lower Ribble Valley
- 11b Long Preston Reaches
- 11c Aire Valley
- 11d Lune Valley

Landscape Character

The broad, flat open floodplains on the valley floors of the larger lowland rivers are subject to periodic flooding and their rich alluvial drift deposits support fertile grazing land for cattle and sheep. Although part of the wider landscape of the valleys, the floodplains have distinctive landscape patterns and land use pressures. They are characterised by large river meanders, eroded bluffs and terraces, standing water and steep wooded banks, which enclose the floodplain and determine its edge. Large fields are divided by post and wire fencing, hedgerows or stone walls and mature floodplain trees are characteristic of the pastoral landscape. The presence of Roman roads, numerous archaeological sites and motte and bailey castles along the length of these major lowland valleys suggest their early and prolonged use as important communications routes. Many settlements on the fringes of the floodplain mark important crossing points where impressive stone bridges cross the water. The floodplains themselves remain rural and unpopulated except for the visitors who fish or walk the riverside footpaths. Typical view - photo 26 below.



Physical Influences

The rivers of the *Valley Floodplains* have cut down through the underlying rocks, but the valley floors are smothered with glacial till and river gravels which bury the rocks beneath. Alluvium deposits have enriched the valley floors, creating good soils for agriculture. Within the valleys, protected hollows and undulations have preserved accumulations of peat. The Lune, Ribble and Aire Rivers all originate on the high land of the Yorkshire Dales. Their floodplains meander gently across wide green pastures, in places the river crosses a flat valley floor bordered by distinct bluffs, but elsewhere the floodplain rises gently to the undulating landscape beyond.

Classic floodplain features, such as oxbow lakes and abandoned channels, are important landscape features and wildlife habitats and indicate the shifting position the river has adopted. The river channels provide important linear freshwater and wetland habitats which support diverse aquatic plants and invertebrates, as well as birds and fish. However agricultural intensification, drainage, flood defence work and urban/industrial development ensures that nature conservation interest is concentrated in remnant areas of neutral grassland, wet meadows, domed mosses, areas of standing water and marshland.

Small areas of woodland on the valley sides and hedges and isolated trees fringing the river channels also provide important resources for nature conservation. Areas of river shingle and shallow wet margins are important for breeding birds and other wildlife, whilst eroding banks are an essential nesting habitat for kingfisher and sand martin.

Human Influences

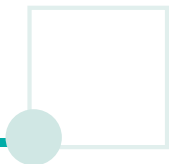
Land above the marshy valley floors of the *Valley Floodplains* have provided important routeways and communication routes since the earliest times, offering relatively easy routes through the surrounding hills and marshes.

Roman forts at Ribchester and Over Burrow overlooking the Ribble and Lune and their associated Roman roads indicate the importance of controlling these key routes

through the hills. After the invasion, the Normans, built motte and bailey castles to control important centres or routeways. Many formed part of a chain to defend a vulnerable frontier zone, for example on the Lune, at least nine such castles were constructed.

The wide valleys continue to provide an important communication route for main roads, rail lines and canals.

In general terms, the valley floodplains are devoid of settlement. The valley floors were often supported common grazing. Parliamentary enclosure is evident in the regular pattern of field boundaries. Many fields are now devoted to improved pasture, supporting the famous cheese making industry. The majority of these are hedged, but in the upland floodplain of Ribblesdale the high occurrence of river rolled boulders ensured there was enough material to construct stone walls. In places modifications of the river profile are evident in bank retention walls and low bunds, which possibly date to more intensive grazing and to increasing planting of forage crops on the floodplains after enclosure. Sands and gravels are now being worked at Higher Brockholes (Ribble).

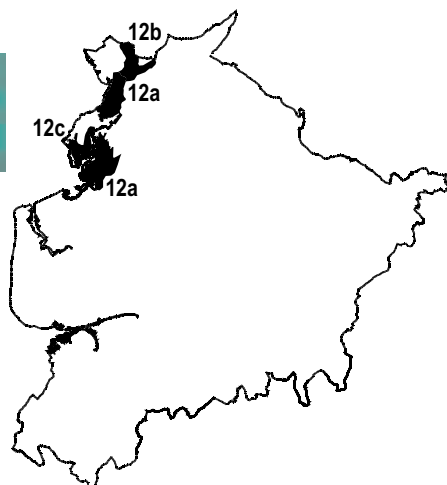


CHARACTER AREAS - VALLEY FLOODPLAINS

The *Valley Floodplains* landscape type is found on the valley floors of the course of the major lowland rivers throughout the study area.

Local	Character Areas	Description
I 1 a	Lower Ribble Valley	<i>The open flat and fertile plain of the lower Ribble is a pastoral , tranquil landscape containing the meandering course of the river. Its extent is defined by the steep wooded bluffs and terraces which enclose the floodplain. Lush green fields of semi-improved pasture are grazed by sheep and cattle. The large regular fields are defined by gappy hedgerows, supplemented by sections of post and wire, wooden fencing or stone walls. This array of materials and styles conveys a lack of visual unity despite the natural beauty of the landscape. Mature floodplain trees are notable features in this character area; ash and oak stand in the floodplain, their silhouettes striking against the open landscape. There is little settlement within the floodplain itself, but a number of large farms and country halls are positioned along the edges of the floodplain. Settlements, such as Ribchester, Great Mitton, West Bradford, Grindleton and Sawley, are also sited on the adjacent river terraces, their extremities sometimes extending onto the floodplain. There are a number of historic crossing points which coincide with these settlements where old stone bridges are important historic features of the floodplain.</i>
I 1 b	Long Preston Reaches	<i>Further upstream of the Ribble, and at a higher elevation, is the upland floodplain known as Ribblesdale. The flat plain contrasts dramatically with the surrounding steep sided drumlins and hills typical of more upland scenery. It is a particularly distinctive character area because its continuous network of stone walls has been constructed from rounded river rolled boulders. The plain is open and expansive; floodplain trees stand out a prominent visual elements. Pasture is marginal and often waterlogged with rushes growing freely. There are also areas of domed mosses and standing water within the flat valley bottom. Stone bridges are again a distinctive feature at the few crossing points. The northern part of the area is dominated by the settlements of Settle and Giggleswick. These are typical stone Yorkshire towns which have exploited the river terraces of the Upper Ribble. The valley provides an important communication route; the A65(T) and mainline railway pass along the foot of the Yorkshire Dales, crossing the floodplain below Giggleswick.</i>
I 1 c	Aire Valley	<i>The broad, deep, glacial valley of the Aire cuts through the rolling limestone uplands of the South Pennines. The valley floor is mantled with layers of glacial drift deposits which form wide green floodplains containing meandering river channels. In the more sheltered eastern parts of the valley, trees and hedges are common, the hedges supplementing the stone wall boundaries. The gravel terraces and alluvial fans which stand higher than the floor of the valley, are attractive areas for settlement. The towns which have exploited these natural features have not been confined by the restrictive landform of the narrower valleys elsewhere in the study area. The transport corridor is a distinctive feature of this landscape; the river, roads, canal and rail routes form an important and historically significant communication route through the uplands. Skipton is a historic settlement which has arisen at a junction of communication routes, but modern expansion is also evident and reflects the demand for living close to major transport routes. The patchwork of fields in the valley floor is mostly enclosed by stone walls and is almost entirely pasture. The</i>

Local	Character Areas	Description
I 1 d	Lune Valley	<p><i>landscape has good tree cover, with trees being present along some field boundaries as well as along the course of the river. The river terrace gravels and glacial sands have been exploited for sand and gravel extraction.</i></p> <p><i>The Lune floodplain is a flat floodplain surrounded by rolling drumlins and hills. The Lune is a major lowland river with a classic pastoral, tranquil floodplain; medium-large, regular fields of lush green pasture are bounded by low clipped, often gappy, hedgerows with hedgerow trees. River terraces and bluffs along the edge of the floodplain are sculptural elements which often support stone farm buildings and the remains of motte-and-bailey castles. These mottes provide visible evidence for the historic importance of the Lune as a routeway. The well preserved Castle Stede at Hornby was part of a string of at least nine castles on the Lune defending a potential route of a Scottish attack and means of controlling the local population. Stone bridges are again a feature and mark historic crossing points of the river. There is also evidence of the industrial past and present; the route of a dismantled railway is still visible in the landscape, Low Mill is a former textile mill which has been converted to housing, while the brick work's at Claughton is still in operation, linked to a clay pit on Claughton Moor via aerial ropeways.</i></p>



LOW COASTAL DRUMLINS

Character Areas

- 12a *Carnforth-Galgate-Cockerham*
- 12b *Warton-Borwick*
- 12c *Heysham-Overton*

Landscape Character

Areas of low, whaleback hills around 40m high, with broad rounded tops towards the north-west coast of the study area. The landscape is characteristically gentler and of lower altitude than that of the Drumlin Field and individual drumlins are more isolated; there are often areas of poorly drained pasture, standing water and occasionally mosses, fens and fen meadows between the drumlins. The alignment of drumlins gives the landform a distinctive grain. The strong pattern of pastures emphasises the undulating topography, with neat, low cut thorn hedges traversing the drumlins. Trees and shrubs are limited in this agricultural landscape, although small copses occur on the tops and sides of the drumlins. Scattered large farmsteads are reached by a network of winding hedged lanes and tracks, but large housing estates and industrial development are also features of the landscape today. All settlement is sited above poorly drained land on the shallow valley slopes. Minor roads and the canal wind around the drumlins while overhead powerlines and major transport routes typically cut across these areas, paying no attention to the natural landform. Coastal cliffs of boulder clay are significant features where the drumlin landscape meets the sea. Sand and gravel pits, creating lakes and ponds reflect the ongoing exploitation of the drumlins as a resource. Typical view - photo 27 below.



Physical Influences

The Low Coastal Drumlins are around 40m high. The hills, which have broad rounded tops and frequently steep sides, were created as a result of erosional and depositional processes of the glacial ice sheets moving through the area. Outwash sands and gravels, or boulder clays were moulded to form oval whaleback hills. These are isolated and generally more subdued than drumlins of the Drumlin Field landscape type. The alignment of the Low Coastal Drumlins gives a distinctive grain to the landscape and provides important evidence of the movement of the glacial ice sheets in the quaternary period.

Agricultural improvement through drainage, fertilisation and reseeded has reduced the wetland habitat to those areas which cannot readily be drained. Boulder clay coastal cliffs, which occur at Cockersands Abbey, south of Heysham Head and between Hest Bank and Carnforth are important for their semi-natural grasslands, scrub and woodland. Gravel extraction and canal construction has created important wildlife resources, valued for their open water and marginal swamp and fen habitats.

Human Influences

Whilst it is likely that these drumlins have been farmed and settled since the earliest period, medieval and later ploughing appears to have destroyed much of the physical evidence.

The introduction of Christianity was important in the development of the area; it contains many pre-conquest churches and the chapel of St. Patrick at Heysham dating from the late 7th to 9th centuries.

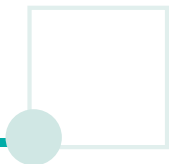
The most conspicuous element of the agricultural landscape is the regular hedged enclosures of the Parliamentary Acts, which divide the landscape up into neatly farmed units, punctuated only by small copses, wooded brooks and isolated hedgerow trees. The pattern of fields has changed little since 1850.

Large settlements have developed around key strategic or trading settlements such as Lancaster, Heysham and Morecambe. However the rest of the landscape is relatively rural,

though well settled, with villages and farms linked by winding lanes. Villages have been expanded by modern development which tends to dominate, especially along the A6.

The Low Coastal Drumlins have proved attractive sites through which to locate communication routes such as Roman roads, canals, railways and modern main roads. These weave between the higher drumlins and link large villages to the main urban areas.

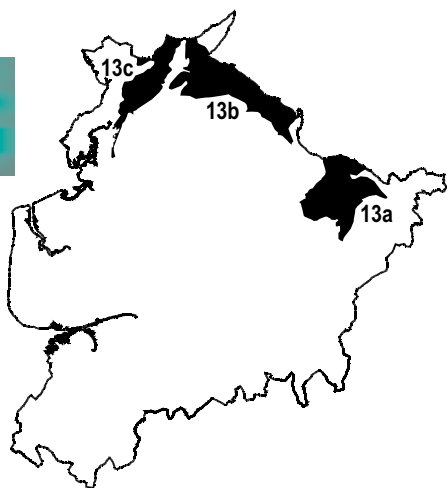
An important remnant of the industrial past is Glasson Dock. It was opened in the 1780s when the increasing size of vessels rendered access to St Georges Quay at Lancaster more difficult. After 1927 the dock was the seaward terminal of a short branch of the Lancaster Canal. Today the dock maintains some commercial trade and the canal and marina are important for leisure.



CHARACTER AREAS - LOW COASTAL DRUMLINS

Low Coastal Drumlins are found on the north-west coast of the study area where the last retreating ice sheets left a series of rounded boulder clay hills in their paths.

Local	Character Areas	Description
I2a	Carnforth-Galgate-Cockerham	<i>The Low Coastal Drumlins, on or near which Lancaster and Morecambe are built, extend along the coast behind Morecambe Bay from Cockerham in the south to Carnforth in the north. This landscape supports an extremely high proportion of built development including the large settlements of Lancaster and Morecambe and recent built development along the A6. The Low Coastal Drumlins provide a convenient transport corridor; the Lancaster Canal, M6, A6 and mainline railway run side-by-side in a north-south orientation. The canal, which weaves through the drumlins, is an important reminder of the area's industrial heritage; a branch emerges into the Lune at Glasson Dock. To the west of Cockerham settlement is sparse and dominated by scattered large scale farmsteads in contrast to the towns and large villages further north. Fields are largely of post medieval pattern, however there are areas of older enclosure and settlement, notably at Cockersand Abbey. The drumlins provide elevated points from which there are views over the salt marshes to Morecambe Bay. Near Thurnham there is a significant area of mossland lying between the drumlins, allowing long distant views towards the coast. Traditional farmsteads and older settlement cores are built of stone but the modern development is often built using red brick. Buildings on top of the drumlin hills are particularly visible. Woodland is limited to small plantations, woods associated with former estates and rarely, fragments of ancient woodland in unusual hilltop or hillside settings.</i>
I2b	Warton-Borwick	<i>The Low Coastal Drumlins around Warton are more rural in character than those immediately to the south. Large pastures are divided by low clipped hedgerows or stone walls, some of which are degraded or missing. There are areas of waterlogged, rushy pasture and standing water in the low lying areas between the drumlins. The River Keer winds its way between the low drumlins, draining into Morecambe Bay at Carnforth. Historic Halls and estates are associated with the river Keer at Capernwray and Borwick. Gravel extraction has had an impact on this landscape in the creation of open water bodies which attract wildfowl. The largest of these is Pine Lakes. There is considerable development associated with the M6, A6 and railway such as motels and a lorry park. Parking areas and caravan sites are also features of coastal parts of this area.</i>
I2c	Heysham-Overton	<i>This is a coastal area where marine transgression has caused partial drowning of the drumlin field resulting in low, washed out, drumlins at the mouth of the River Lune south of Heysham. It is a pastoral landscape with flat areas of reclaimed land where grazing is rougher and rushes mark the course of drainage channels. Hedgerows form field boundaries but there are few trees; those which exist are found sheltering the large stone built farmsteads on the low drumlin forms which protrude from the plain. Other built development, including villages and industrial development, is also restricted to the higher land and pressure for holiday accommodation has resulted in a number of static caravan parks which have become a feature of the landscape.</i>



DRUMLIN FIELD

Character Areas

- 13a Gargrave Drumlin Field
- 13b Bentham-Clapham
- 13c Docker-Kellet-Lancaster

Landscape Character

This distinctive landscape type is characterised by a 'field' of rolling drumlins. The consistent orientation of the hills gives the landscape a uniform grain, which is sometimes difficult to appreciate from within the field. The regular green hillocks are between about 100m and 200m high with steep sides and broad rounded tops. However, there are often solid rock outcrops within the field where the underlying bedrock is exposed, for example the reef knolls in the Kellet area which have been quarried for limestone. The more elevated gritstone outcrops are sometimes covered in moor, for example at Docker Moor. Pasture predominates and fields are bounded by clipped hedges or, more often, stone walls, which rise up over the hillocks accentuating the relief of the hills. Ridge and furrow patterns on drumlin sides reflect historic land uses. Narrow streams wind through the drumlins draining the field. Small mixed woodlands and the many designed landscapes associated with large country houses, for example Coniston Hall and Broughton Hall) contribute to the rural wooded character. Major roads often cross or skirt the edge of the drumlin fields; settlement is dispersed, with small hamlets and farmsteads in sheltered sites on the mid-slope of the drumlins. Typical view - photo 28 below.



Physical Influences

The Drumlin Field landscape was created by the erosion and deposition actions of glacial ice sheets. The ice moulded dense boulder clay into oval whaleback hills. The alignment of the drumlins gives a distinctive grain to the landscape and provides important evidence of the movement of the glacial ice sheets in the Quaternary period. Becks and immature rivers wind through the hills and there are occasional tarns in the hollows between them.

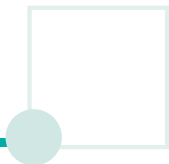
Agricultural improvement through drainage, fertilisation and reseeded has reduced the extent of valuable grassland and wetland habitats to pockets of species-rich grassland and remnant mires. Important ancient woodland survives on the steep scarp slopes above the Lune and its tributaries, whilst limestone woodland, although severely affected by quarrying is still found in the Kellet area.

Rivers and streams provide important freshwater habitats for an range of species and the small areas of swamp and tall herb vegetation associated with the margins of water bodies are important as feeding and breeding sites for amphibians and invertebrates.

Human Influences

The gentle slopes of the free draining drumlins have proved attractive areas for settlement and farming from the middle of the prehistoric period. Old English place names ending in 'ton' and 'ham' predominate, although there are some clusters of Scandinavian place names. Roman roads and other remains occur in the Craven area. Whilst there is evidence of Parliamentary enclosure on the higher ground, many fields are considerably older, some having their origins in medieval field systems.

Whilst Lancaster and other towns are on the edges of the Drumlin Field the landscape is generally rural. The landscape is generally rural with isolated historic farms, hamlets and villages linked by winding lanes. Nevertheless important transport routes including roads and railways and in one area the Leeds and Liverpool canal traverse the Drumlin Fields. The most obvious evidence of recent industry are the extensive limestone quarries of Nether and Over Kellet.



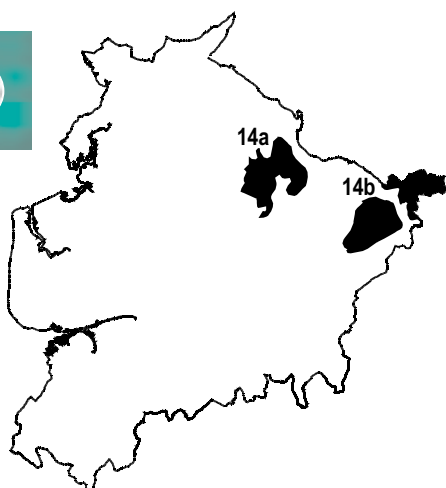
CHARACTER AREAS - DRUMLIN FIELD

Drumlin Fields occur inland, on higher land than the Low Coastal Drumlins. They are found on the edges of upland areas where the retreating ice sheets left moulded boulder clay deposits in their paths.

Local	Character Areas	Description
I3a	Gargrave	<i>This area of drumlins occurs to the east of Ribblesdale, at the far eastern edge of the study area. It is a typical drumlin field consisting of large scale regular hillocks reaching over 200m AOD. Associated with the drumlins is the localised feature of Salterford flats, a former glacial lake. Although the drumlins have been formed from boulder clay, the underlying limestone geology is evident in the stone walls and local stone buildings which punctuate the scenery. Major communication routes cross the area. The A65(T) and A59(T) cut across the landscape, bearing no relation to the grain of the drumlins; they pass through on embankments and in cuttings. The railway lines skirt around the edges of the area while the Leeds and Liverpool canal winds its way through the drumlins. The A56 and a dismantled railway follow the valley of the Earby Beck from Foulridge to Broughton. The line of the Roman road can be clearly distinguished near Barnoldswick and Thornton-in-Craven along with the remains of a Roman fort at Burwen Castle. Whilst the settlement pattern is dominated by farms, hamlets and villages, the small towns of Barnoldswick and Earby also lie on the edge of this area. There are a large number of designed landscapes in this area: Coniston Hall, Gledstone Hall, Hellifield Peel and Broughton Hall, which all enhance visual amenity locally. There are long distance views from the highest hills.</i>
I3b	Bentham-Clapham	<i>The drumlin field along the north-eastern boundary of the study area, between Kirkby Lonsdale and Giggleswick, follows the foot of the Yorkshire Dales. It therefore supports most of the infrastructure and settlement on the edge of the Dales; the A65 and A687 are amongst these major routes. The Roman road can be traced running south from Over Town, close to the Roman fort at Over Burrow. This is a neat, well maintained landscape of grazed pasture divided by a network of stone walls and neatly clipped hedgerows. Some of the hills are up to almost 200m AOD; for example Newby Moor which shows signs of marginal pasture, moorland grasses and gritstone walls. Although the field occurs at a relatively high altitude the individual drumlin forms are not always pronounced due to partial drowning of the drumlin field, particularly close to the Lune. The river courses of the Leck, Greta and Wenning wind their way through the peaceful drumlins; camping and caravan site are scattered along the banks of these picturesque wooded rivers. Scattered stone farmsteads with slate or grit stone roofs and the traditional limestone or gritstone villages of Clapham, Newby, Ingleton and Burton in Lonsdale are characteristic of the area.</i>
I3c	Docker-Kellet-Lancaster	<i>This drumlin field has a distinctive north-east, south-west grain and runs from the edge of Lancaster northwards into Cumbria. The area is underlain by limestone and is distinguished by large scale undulating hills of pasture, some formed from glacial till and others which are outcrops of limestone, or reef knolls. These are particularly evident around Over and Nether Kellet where the limestone is exposed; significantly by the extensive quarries where limestone extraction is ongoing. The smooth rolling scenery is emphasised by the network of stone walls. Greater variety of texture is provided by the isolated areas of moorland which protrude from the field, for example at Docker Moor, and the River Lune</i>

Local	Character Areas	Description
		<p><i>which cuts a gorge through the hills at Halton. This gorge provides a major transport route through the hills with a number of parking, picnic and camping sites scattered along its length. Woodlands are often associated with designed landscapes and built development takes advantage of views from the hill tops, for example the Ashton Memorial on the edge of Lancaster which sits atop a drumlin and is a landmark for miles around. The drumlins create a setting for the city of Lancaster and its university.</i></p>

14



ROLLING UPLAND FARMLAND

Character Areas

14a *Slaidburn-Giggleswick*

14b *Lothersdale and Cringles*

Landscape Character

The combination of carboniferous mountain limestone and Millstone Grit has created a soft, rolling pastoral landscape which appears verdant in views to the muted hues of the Moorland Hills. Prominent knolls and limestone outcrops on the exposed hill slopes provide a sharp contrast to the gentler rolling form of the grazed hills. Moorland grasses cover the higher summits and there are stunted hawthorns and gorse on roadsides and the steeper hillsides. The winding, narrow roads are often bounded by stone walls, giving a sense of enclosure and obscuring views. Beech stands are features of the steeper rocky slopes and outcrops and are often enclosed by a rounded boundary wall. Scattered isolated stone farmsteads with stone barns are the dominant building type, although small clustered stone villages occur on south facing slopes and there are some small linear settlements. Development is always confined by the steep topography. The Rolling Upland Farmlands are favoured sites for reservoirs, wind turbines, forestry plantations and quarries. Typical view - photo 29 below.



Physical Influences

The combined presence of Millstone Grit and limestone has created a gentle landscape of rolling hills. This is further softened by the effects of glacial gravel and clay deposits, which in places have been eroded to expose rocky outcrops. The underlying geology is also exposed by the materials used in boundary walls and in farm buildings.

The Rolling Upland Farmland is undulating in character; the majority of streams being confined to areas where Millstone Grit is dominant. The most important habitats are the freshwater streams and unenclosed moorlands, such as Glusburn and Elslack. Trees are common as individual and linear features throughout the landscape and provide local habitats and wildlife corridors. Occasional ancient woodlands survive and constitute an important ecological resource.

Despite modern agricultural practices some isolated hay meadows and herb-rich pastures of national importance have survived, particularly at Lothersdale and east of Slaidburn. Plantations, notably Gisburn Forest, which are fenced to exclude grazing, attract small mammals to the dense understorey and birds of prey such as kestrel, and the short eared owl. Due to a dense canopy, the more mature woods support fewer mammals, although species such as gold crest, coal tit, siskin, and rarely black grouse are all found in the plantations. Forest rides provide habitat for a number of uncommon plant species.

Human Influences

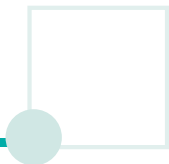
Small groups of round cairns are found in Lothersdale and Cringles in elevated positions and are evidence of early occupation.

The modern landscape is shaped by years of sheep grazing. Stone farmsteads, many of which are located next to streams, and boundary walls, illustrate the proximity of the underlying rocks. The boundaries represent what appears to be Parliamentary enclosure of once marginal land.

Roads are narrow and winding, traversing the areas to link dispersed settlements.

Reservoirs at Stocks, Elslack and Chelker reflect the demands of the rapidly expanding

urban populations in industrial centres during the Victorian period.

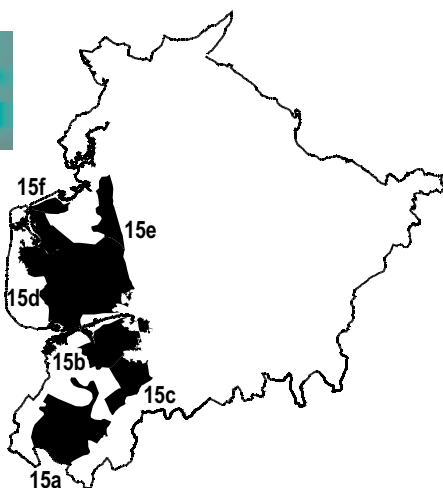


CHARACTER AREAS –ROLLING UPLAND FARMLAND

Rolling Upland Farmland occurs throughout the study area where limestone is found in combination with millstone grit, producing a large scale rolling farmed landscape.

Local	Character Areas	Description
I4a	Slaidburn - Giggleswick	<i>A large area of upland hills underlain by limestone, between the Bowland Fells to the west and the Ribble Valley to the east. The hills are drained by a series of narrow wooded becks which flow into the Hodder and the Ribble. This is a particularly rural area of intensively farmed land; regular large scale pastures are divided by a continuous network of dry stone walls. The landform becomes more convoluted towards the east, where the topography is influenced by glacial till. Pasture is marginal in the highest areas and there are a number of farms sharing their name with the moors they graze. Rocky limestone knolls, which often support stands of beech, are an important feature of the landscape as they provide texture and reference points in an otherwise open rolling landscape. Roads are winding and closely bordered on each side by dry stone walls, which themselves shelter stunted hawthorns and oaks. A large number of scattered stone farmsteads are located at the end of farm tracks where farm buildings are generally tightly grouped around the house. There are few pressures for built development in this rural area, although the landscape around the Stocks Reservoir has been dramatically influenced by the large area of open water and the plantation which surrounds it, known as Gisburn Forest.</i>
I4b	Lothersdale and Cringles	<i>The combination of limestone with Millstone Grit has created a soft landscape of rolling hills. The land is divided into a patchwork of improved pastures by stone walls, characteristically lighter than those of the gritstone areas, and punctuated by small stands of trees. Moorland is confined to the higher rounded summits where it is more extensive than in the other character areas, for example Elslack Moor and Skipton Moor. Trees are conspicuous in the landscape and produce strong patterns on the hillsides where they fill cloughs and steep crevices associated with the becks which drain them. Round cairns are found on Elslack Moor and Low Bradley Moor. Settlements are infrequent and the majority of the population is concentrated in the scattered farmsteads. This character area includes a quarry, reservoir, conifer plantations, communication masts and a wind farm, which are conspicuous in an otherwise rural and pastoral landscape.</i>

15



COASTAL PLAIN

Character Areas

- 15a Ormskirk-Lathom-Rufford
- 15b Longton-Bretherton
- 15c Croston-Mawdesley
- 15d The Fylde
- 15e Forton-Garstang-Catterall
- 15f Knott End-Pilling

Landscape Character

Generally below 50m, this landscape type is characterised by gently undulating or flat lowland farmland divided by ditches in West Lancashire and by low clipped hedges elsewhere. The Fylde landscape in particular is characterised by a high density of small marl pit field ponds. Many hedgerows have been removed to give very large fields, open road verges and long views. Although woodland cover is generally very low, these views are punctuated by small deciduous secondary woodlands, mostly in the form of shelter belts or estate plantations; they provide a backdrop to views. The history of the area as an arable landscape is reflected in the farm buildings, particularly the highly distinctive red brick barns with brickwork detailing. Settlement is relatively dense in this lowland landscape; clustered red brick farm buildings, hamlets, rural villages and historic towns are all present. Older farm sites and red brick barns are often surrounded by recent development and the many converted barns now provide characterful homes. There is a dense infrastructure network; meandering roads connect the farms and villages while major roads and motorways provide a fast route across the landscape, linking major towns. Typical view - photo 30 below.



Physical Influences

Glacial and post-glacial deposits of clays, sands and marine alluvium have completely masked the solid geology of mudstones and sandstones. However, the drift is relatively thin between Scarisbrick and Skelmersdale, exposing a broad band of sandstone. The landscape is therefore strongly influenced by the surface drift which constitutes boulder clay, penetrated by pockets of glacial sand and gravel and deposits of post-glacial blown sand which form distinctive landscape features. The landscape is gently rolling, and, until recently, peat accumulated in low-lying areas within the glacial till to form mosses which have largely been reclaimed for agriculture.

The land is highly productive and has a very low proportion of semi natural vegetation. Wildlife habitats are therefore typically small scale and fragmented. Ancient woodland is rare, although estate plantations offer important refuges for many species of flora and fauna. Carr House Green Common near Inskip is a mosaic of semi natural grasslands and scrub and a Biological Heritage Site. It is a rare survival of a Fylde landscape little changed from the 19th century.

Species-rich meadow or pasture is almost entirely restricted to small areas of secondary colonisation along man made features such as roads and railways although arable weeds such as corn marigold and poppy still persist locally. The nationally rare purple ramping fumitory occurs in a few places. Flooded marl pits which are an integral part of the agricultural landscape together with more occasional brick clay workings and subsidence pools are often rich in species diversity, for example Longton Brick Pits.

In places, low boulder clay banks mark the edge of the coastal plain and represent the boundary with either inland marsh and mere as at Holmeswood near Rufford, or with former coastal marsh before reclamation. These banks often support remnant semi-natural vegetation such as relict ancient woodland, species-rich grassland and scrub.

Human Influences

Evidence of early inhabitants of the area has been found in areas which were at the fringes of the ice sheets. The best example is at Poulton-le-Fylde, a skeleton of an elk was discovered which displayed evidence of hunting.

Environmental remains, such as pollen evidence from the lake muds and peats of the Lancashire mosses, confirm that vegetation cover was extensively altered by the arrival of Neolithic farmers, with deliberate destruction of the forests to make way for farming and settlements. In the mosses of the Fylde and to the south of the Ribble, where conditions are right for the preservation of organic materials, there is evidence that people visited and utilized the landscape from a timber trackway and stone and bronze implements. There is likely to have been settlement on higher ground fringing the mosslands. There is evidence at Pilling of Neolithic and Bronze Age settlement and at Kirkham there is an early Roman fort.

Population increased during the 12th to 13th centuries, along with changes to agricultural systems. There was a rapid extension of pasture to supply wool for the growing English and Continental markets. The regularity of street plans in many settlements of the period suggests the planned rebuilding or extension of some villages as a result of population pressure. Elsewhere settlement remained as isolated hamlets and farmsteads. This traditional settlement pattern is still evident in the landscape today between Parbold and Mawdesley. Older settlements are generally located on higher, free draining deposits and are typically brick built.

However the plain remained largely unpopulated until the early 16th century, when pressures on available land forced further improvements and reclamation of mosslands. This occurred across the landscape and at Ormskirk and Burscough some of the best agricultural land in the country was created. Market gardening became important to the local economy. Improvement also occurred on sandy soils where marl was added to the soil.

The Leeds and Liverpool Canal is a feature and created important links to the cities for

the export of produce and the import of manure and ash for fertilisers. The flat topography and strong prevailing winds have historically provided good conditions for wind power. Wind pumping mills aided the drainage of the landscape and windmills were used for grinding grain. These features still exist and can be found near Martin Mere and Pilling.

Important local industries from the early modern period include the widespread clay extraction for brick making and also the exploitation of salt from the brine wells to the west of Pilling. These have resulted in significant flooded quarries and subsidence pools respectively.

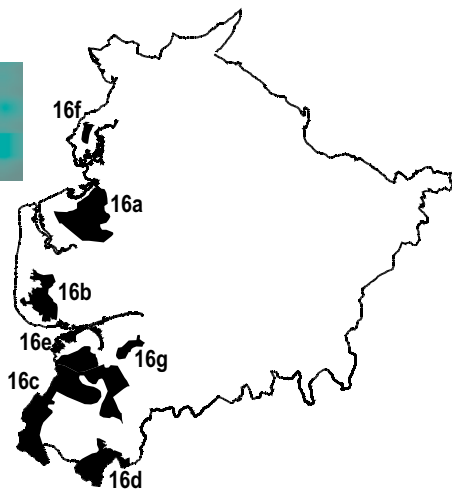
CHARACTER AREAS - COASTAL PLAIN

The Coastal Plain landscape type occurs in six distinct areas, all within the lowland landscapes of western Lancashire.

Local	Character Areas	Description
I5a	Ormskirk-Lathom-Rufford	<i>The undulating lowland farmland around Ormskirk is characterised by large fields and red brick built farms which reflect the arable agriculture typical of the area. Old red brick barns with diamond shaped detailing on the end walls are particularly characteristic of the area; many can be seen scattered amongst the residential streets of newer settlements. There are a number of designed landscapes associated with large houses, such as Rufford Old and New Halls, Scarisbrick Hall, Lathom Hall, Blythe Hall and Moor Hall, which provides some enclosure to an otherwise open landscape. This area is relatively elevated and there are some long views over the adjacent flat mosslands. The area has good conditions for wind power and wind powered corn mills, now disused or converted to private residences, are a feature of this landscape character area.</i>
I5b	Longton-Bretherton	<i>The Longton landscape character area lies close to the south-western urban fringes of Preston. The proximity to a large urban centre has influenced landscape character. The network of minor lanes is dominated by dense ribbon development and the A 59(T), now a dual carriageway, links the former villages of Hutton, Longton, Walmer Bridge and Much Hoole. Red brick is the dominant built material in these areas. The agricultural landscape is influenced by urban fringe elements such as schools, colleges, nurseries, glass houses, hotels, horse paddocks, communication masts and electricity pylons; the network of hedgerows and hedgerow oaks is gradually being eroded by these uses. The village of Bretherton has remained separate and therefore displays a more traditional character; a former windmill lies on its western edge.</i>
I5c	Croston-Mawdesley	<i>The sandstone which underlies this character area exerts a strong influence over the landscape; it is a gently undulating agricultural landscape with steep sided shallow valleys and hedged fields which support rich pasture or arable crops. The landscape is relatively well wooded, with small farm woods and wooded valleys, for example at Yarrow Valley Park. Field hedges are notable for their hedgerow oaks and high proportion of holly. Country halls, moated farms and designed landscapes provide historic and cultural links. Red brick is used throughout the area; the subdued tones of the older brick houses and farmsteads are well integrated within the landscape. Villages are traditionally clustered, but show signs of rapid expansion with ribbon development. New housing on the outskirts of settlements, which is often built of imported bricks, creates a harsh edge to villages when viewed from the surrounding countryside. Where screen planting is attempted it often incorporates alien plant species, which further urbanises the</i>

Local	Character Areas	Description
		<i>attractive rural setting. In addition to its historic rural agricultural land use, the landscape has more recently been influenced by urban fringe activities such as nurseries, schools, camp sites, hotels, equestrian centres, golf courses, traffic and built development, which indicate its proximity to the western edge of Chorley. Urbanising influences such as kerbs and lighting are increasingly evident on major roads.</i>
15d	The Fylde	<i>The gently undulating farmland of the Fylde occurs between Blackpool to the west and Preston and the M6 corridor to the east. It has been formed of boulder clay deposits which lie on soft Triassic sandstones and mudstones and is naturally poorly drained. Field ponds are a particularly characteristic feature of this area and provide important wildlife habitats. The predominant land use is dairy farming on improved pasture and lowland sheep farming with a small amount of arable on the freer draining soils. Red brick nineteenth century two storey farmsteads with slate roofs and red brick barns are dominant built features of this landscape character area; occasional windmills also reflect the historic importance of the area for corn milling. Other features of the area are the brine fields around Stalmine which have been reclaimed by ICI and form a rare and distinctive land use. Field size is large and field boundaries are low clipped hawthorn, although hedgerow loss is extensive. Blocks of woodland are characteristic, frequently planted for shelter and/or shooting and views of the Bowland fells are frequent between the blocks. There are many man-made elements; electricity pylons, communication masts and road traffic are all highly visible in the flat landscape. In addition, views of Blackpool Tower, the Pleasure Beach rides and industry outside Blackpool are visible on a clear day.</i>
15e	Forton-Garstang-Catterall	<i>This area of lowland farmland forms a transition between the fringes of the Bowland Fells and the lowland raised bog of Winmarleigh. A geological fault runs along the eastern boundary of the area and, although the motorway and railway broadly follow this line, the transition between the Millstone Grits to the east and the sandstones to the west is masked by glacial deposits and river alluvial fans which produce a gently undulating landscape. The area is a rural farmed landscape dominated by improved pasture and scattered with historic halls, farms and woodland. A network of lanes link the villages of Cockerham, Forton, Garstang and Catterall, although the A6 provides a fast route along the length of the character area. Garstang and Catterall have seen a particularly large amount of urban development and this area is affected by urban fringe activities such as golf courses, hotels and schools which have eroded the rural character of the landscape. The area forms a sudden edge with the mosslands at Winmarleigh; stone built houses on this higher land overlook the moss.</i>
15f	Knott End-Pilling	<i>The coastal plain around Pilling is an intensely farmed, settled landscape with a post medieval enclosure pattern. There are many hedgerows, some ancient in origin, and trees shelter scattered farmsteads. The farmsteads and villages are linked by a network of raised lanes and stone bridges connect farms to roads. A large amount of infill development at Stake Pool, Pilling and Knott End-on-Sea contributes an array of more modern building styles and materials. Pumped drainage continues to allow the land to support some arable crops.</i>

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MOSSLANDS

Character Areas

- 16a North Fylde Mosses
- 16b South Fylde Mosses
- 16c Martin Mere and South West Mosses
- 16d Skelmersdale Mosses
- 16e Tarleton Mosses
- 16f Heysham Moss
- 16g Hoole and Farington Mosses

Landscape Character

The Mosslands are an extremely flat, low lying landscape comprised of peat deposits which were formerly an extensive series of lowland raised mires. These are now largely reclaimed and managed for particularly intensive crop production, including market gardening and to a lesser extent, dairying. Fields are typically large in size and geometric in shape, defined by straight drainage ditches and post and wire fences. Hawthorn hedgerows are restricted to the straight, narrow roads which cross the mosslands and shelter belts, often of poplar or Scot's pine, are visible on the horizon. There are extremely long views across this open landscape and vertical elements, such as electricity pylons, are particularly visible. Older buildings and small, loose-knit linear villages are sited on low sand and gravel or boulder clay ridges on the edges of the peat. The lack of lighting and kerbs maintains a rural character, although a variety of modern building styles and materials are evident. Typical view - photo 31 below.



Physical Influences

The Mosslands are underlain by soft Triassic mudstones and sandstones, but the solid geology is deeply buried by glacial and other drift deposits. Small scale glacial features are evident, for example Marton Mere SSSI (Blackpool), was formed by water filling a glacial kettle hole formed over 14,000 years ago. Low lying peat mosses have formed over large areas of the low lying surface till which, until drained, combined with large open areas of water (principally Martin Mere, West Lancashire) to create an incredibly rich ecological resource.

The intensive drainage and farming of the mosslands means there is little semi-natural habitat left except for fragmented small areas of remnant carr woodland, natural water courses and some of the semi-improved grassland. The network of drainage ditches and channels are also of great value to wildlife. Winmarleigh Moss and Heysham Moss are designated as SSSIs and are the best examples of the few remaining uncultivated peat mosslands. Habitats here include dry heath over deep peat, mires over active sphagnum moss, birch scrub and woodland. Together they support rare insect species including the large heath butterfly and bush cricket. Martin Mere is a (Wildfowl and Wetlands Trust) reserve developed on part of the site of the original drained mere. It is now a wildfowl reserve of international value.

Farmland too is of wildlife importance as geese, swans and waders roost and feed on arable fields and pastures during the winter months.

Human Influences

The landscape is almost entirely a result of drainage from the medieval period however it is likely that incursions by all societies from the Mesolithic onwards, hunted and gathered food from the rich habitats of the Mosslands. Evidence of such activity awaits discovery in the peats of the drained mosses.

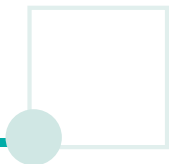
Drainage of the mosses and coastal marshes became an important feature of estate management from the early 17th century, aided by the use of windmills for pumping. New watercourses were dug, fields were

drained and small settlements and isolated brick built farms housed the largely agricultural communities. The most spectacular project was the draining of Martin Mere, begun in earnest in 1694, and completed in the 1850s, when steam pumps were available to facilitate the process. The landscape around Tarleton Moss retains much of the original network of small rectangular fields, bounded by drainage ditches.

Later drainage and agricultural use of the moss is evident in the larger, more geometric arrangement of fields, roads and farms east of Southport. Settlements on the sand and gravel or boulder clay ridges, such as Sollom and Becconsall, are potentially very important archaeologically as they represent the areas which were historically more congenial for land use and settlement on the fringes of the mossland.



Photo 32. Glasshouses near Banks.



CHARACTER AREAS - MOSSLANDS

The Mosslands landscape type occurs throughout the lowlands, in the west of the study area, and coincides with the distribution of lowland peat.

Local	Character Areas	Description
I6a	North Fylde Mosses	<i>This landscape character area, located within the Fylde, includes Pilling, Cockerham, Winmarleigh, Rawcliffe and Stalmine Mosses. Winmarleigh Moss is the largest surviving area of uncultivated peat mossland in the county. The reclaimed mosses are devoid of development, but the low islands surrounding the mosses support a network of minor lanes and modern houses. Dead end raised tracks run from the farmsteads into the mosses, where the dominant land use is improved pasture for dairy herds. The principal building material is red brick and modern styles and materials are common. The fields are large and some shelter belts of Scot's pine and beech together with occasional birch copses on dried out peat, give a sense of a well wooded horizon. Raised roads are hedged and bordered by ditches. Vertical elements such as telegraph poles and pylons are prominent in this landscape and there are distant views to Blackpool Tower, the Pleasure Beach rides and industrial development on the outskirts of Blackpool. Geese and over-wintering birds use pastures for winter feeding.</i>
I6b	South Fylde Mosses	<i>Lytham Moss, on the eastern edges of Lytham St Anne's and Blackpool, is influenced by the proximity of these urban areas. It is typical of a mossland landscape in its underlying geology, landform, drainage and land use. The rows pylons which run from east to west across the landscape to Blackpool dominate the horizon however trees in small copses and shelterbelts are more pleasing vertical elements and help provide a backdrop and sense of scale in the landscape. Just north of Lytham, Lytham Hall is an important and established landscape feature as the 18th century landscaped grounds contain many trees. The proximity of Blackpool and Lytham is influential and the presence of golf courses, camp sites, new built development and industry erode the rural and tranquil character usually associated with this landscape type. Marton Mere, located two miles to the east of Blackpool, is a SSSI which provides an attractive habitat for water birds and 35 species are known to use the mere as a breeding site.</i>
I6c	Martin Mere and South West Mosses	<i>This landscape character area occurs in pockets on the West Lancashire Plain, consistent with the deposits of peat. It is a relatively new landscape, being more recently drained than the Tarleton Mosses to the north. The area is confined by the urban form of Southport to the west and to the east and south by the Coastal Plain of Ormskirk and Chorley. It is an arable landscape of large geometric fields, geometric woodlands and small villages. Although there is much modern built development, there is important evidence of pre-drainage occupation. This occupation, along with the windmill and pumping sites, are important archaeological and historical sites. The dominant built material is red brick. There are several wetlands and meres which are of great importance ecologically; Martin Mere is a popular visitor attraction for bird watching and the area is an important winter feeding ground for over-wintering birds.</i>
I6d	Skelmersdale Mosses	<i>The reclaimed mosslands south of Skelmersdale occur between 30 and 70m AOD. They have been largely reclaimed for farming and have become an intensively farmed arable landscape interspersed with a</i>

Local	Character Areas	Description
		<i>number of small geometric woodlands. Although some sites of historic interest remain, the area has been overlain by recent enclosure and heavily influenced by new built development and also electricity pylons. Simonswood Hall and the medieval deer park represent historic settlement of the boulder clay mossland periphery. Small scale peat extraction continues in this character area today.</i>
I 6e	Tarleton Mosses	<i>This distinctive area of reclaimed moss, located to the north-east of Southport, is distinguished by its dense settlement and abundance of glass houses. It is defined to the north by the more recently enclosed Ribble estuary coastal plain and to the south by the A565(T). It is a highly productive area of market gardening; green houses indicate intensive market gardening and exploitation of the rich peat deposits. Built development is dominated by modern bungalows which have extended along banked roads between the older settlements of Tarleton, Banks and Beconsall. These older settlements are located on low ridges and contain evidence of a long settled history. Further from the smallholdings and green houses are arable fields separated by ditches and fences. Shelter belts are important to local wildlife, as are the roadside hedges, which contain views from the narrow roads into the flat surrounding landscape.</i>
I 6f	Heysham Moss	<i>Located between the built up areas of Lancaster to the east and Heysham to the west only a small part of Heysham Moss is now uncultivated. It is largely a pastoral landscape where fields are drained by straight ditches and divided by post and wire fencing, resulting an open and expansive landscape. Electricity pylons, associated with the nearby Heysham Power Station, are particularly noticeable as they cross the moss. The A683 between Lancaster and Heysham also crosses the moss, bringing traffic movement into the open landscape. The proximity of the city of Lancaster influences the character of the mossland in the north of the character area where trading estates, residential estates and caravan parks spill out onto the mosslands, obscuring the landscape pattern and eroding the rural nature of the landscape.</i>
I 6g	Hoole and Farington Mosses	<i>This small area of mossland is almost entirely fringed by settlements lying on the higher ground above the moss. The town of Leyland lies to the east, whilst to the north are a series of expanded villages running from Farington in the east to Much Hoole in the west. The small village of Bretherton lies on a ridge of higher ground to the south west. The moss is largely cultivated and is drained into the Carr and Wynott Brooks which feed into the River Douglas. However there is a pocket of moss with remnant bog vegetation at Much Hoole Moss, which is a Biological Heritage Site. The Liverpool to Preston railway crosses the moss and straight lanes penetrate into it from the edges, with associated farms and modern brick houses. A number of footpaths associated with boundary ditches link these lanes and properties.</i>

17



ENCLOSED COASTAL MARSH

Character Areas

17a Clifton and Hutton Marsh

17b Cockerham Coast

Landscape Character

The Enclosed Coastal Marshes are flat, expansive tracts of coastal land which have been recently reclaimed by drainage. The land is divided into large square fields surrounded by drainage ditches and post and wire fences or low clipped thorn hedgerows. Improved pasture predominates and is used for cattle or sheep grazing, although arable crops grow in well drained areas. The ordered enclosed marsh is sharply demarcated from the open coastal marshlands by sea dykes where gorse and other scrub is often conspicuous. Trees are generally very scarce, allowing long views across the landscape to distant factories, hills, farm buildings, pylons and tree silhouettes on the horizon. Settlement is modern and restricted to dispersed red brick farmsteads. There is a major landfill site at Clifton, with ongoing phased restoration. Agricultural improvement has tended to reduce the ecological value of these areas, although the ditches and some of the former salt marsh creeks provide important wetland habitats and the enclosed marsh provides a feeding ground for geese, swans and other over-wintering birds. Where agriculture is less intense areas of wetland support a rich wildlife. Typical view - photo 33 below.



Physical Influences

The Enclosed Coastal Marsh is characterised by marine alluvium, formed recently in geological terms, and masking the underlying sandstones and mudstones.

The flat landscapes of the Enclosed Coastal Marsh are enclosed and defined by man-made earth bunds. Agricultural improvement through drainage, fertilising and reseeded limits ecological interest mainly to hedges and ditches. Coastal fields, protected by banks, such as those around Pilling, are attractive areas to over wintering roosts and feeding sites for wildfowl. Fields which have not undergone dramatic agricultural improvement provide grazing and nesting sites for coastal birds, for example Newton and Freckleton Marshes.

Human Influences

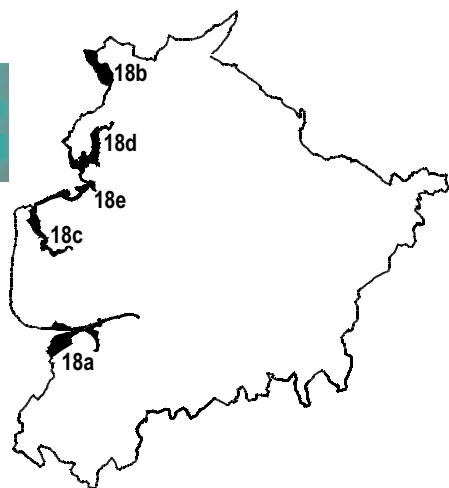
Although it is likely that the Enclosed Coastal Marsh was exploited from the earliest times for its resources, today's landscape is a result of modern large scale drainage and the enclosure of marshland. Habitation dates from the late 19th to 20th centuries and is evident in the predominance of modern brick built farms.

CHARACTER AREAS - ENCLOSED COASTAL MARSH

Enclosed Coastal Marsh occurs in two distinct areas, adjacent to the open salt marshes of the sheltered waters of the west coast of Lancashire.

Local	Character Areas	Description
17a	Clifton and Hutton Marsh	<i>Reclaimed and relatively recently enclosed marsh, located to the west of Preston, separated from the unenclosed salt marshes of the Ribble Estuary by sea dykes. Large geometric pastoral and arable fields are drained by numerous parallel ditches which produce a regimented, productive landscape. Fields are bounded by low clipped thorn hedgerows and tree cover is restricted to narrow linear plantations which function as shelter belts. There is a feeling of isolation with straight dead-end tracks ending at isolated farm houses which are constructed from a mixture of materials, but red brick is the most common. Where seas defences allow some inundation, and where agricultural practices are not intensive, areas of wet marsh exist alongside intensive agriculture, for example at Newton, Freckleton and Lea Marsh which are attractive to birdlife. The grasslands are of international importance for feeding wild geese and swans. A large landfill site is located at Clifton Marsh.</i>
17b	Cockerham Coast	<i>The enclosed salt marsh which backs the Cockerham Sands is an extremely open, exposed landscape of large geometric grazed fields drained by dykes. It is a relatively new landscape reclaimed from marsh and as a result there is no settlement, although large farm buildings of modern styles and materials are scattered along the A588, which forms the southern boundary of the character area. Hedgerows are almost entirely absent and post and wire or wooden post and rail fences provide stock-proof field boundaries. The distinct lack of vegetation cover allows extremely long views to the coastal edge. The lack of vegetation also means little shelter from sea breezes and an exposed coastal character. The bird life in this area is a feature of the landscape; fields of geese, and skies of seagulls provide dynamic scenery, whilst the fields are also important for roosting and feeding wading birds.</i>

18



OPEN COASTAL MARSH

Character Areas

- 18a Ribble Marshes
- 18b Hest Bank-Silverdale Marshes
- 18c Wyre Marshes
- 18d Lune Marshes
- 18e Pilling and Cockerham Marshes

Landscape Character

Salt marshes and intertidal flats occur around the sheltered waters of the west coast of Lancashire and extend to the low water mark. The Open Coastal Marshes are flat, expansive coastal areas formed on marine alluvium. They are separated from the Enclosed Coastal Marshes and coastal farmland by man-made sea dykes and in places by boulder clay and limestone cliffs. The simplicity of the landscape pattern is visually appealing: usually the fine sward surface is closely grazed and is etched by a maze of creeks and channels which gives texture to the flat, expansive landscape. The marshes are open, except for occasional patches of scrub just beyond the high water mark, whilst the few marshes which are ungrazed are a riot of colour in high summer. There is a striking absence of settlement or man-made features. This sense of remoteness is a dramatic contrast to the surrounding man-made landscapes. Another notable feature is the prolific bird life which brings movement to the landscape and provides a changing scene. Typical view - photo 34 below.



Physical Influences

Areas of saltmarsh and mudflats, which include areas of sandy shingle occur in the sheltered waters around estuaries and rise almost imperceptibly from the high tide level where they are often marked by low erosion cliffs of boulder clay and at Silverdale, of limestone. Most of the marshes are enclosed by man made sea dykes.

The saltmarshes are constantly changing. There is accretion by sediments at high tides and river channels continuously cut new courses. The seaward edge is characterised by a system of dendritic creeks and erosion cliff tops and there are a series of terraces within the marshes. Creek migrations and sections of creek can be cut off leaving isolated sections of water known as pans or 'flosches'.

Ecologically the salt marshes and mud flats are internationally important for their vegetation, as roosting and feeding grounds for tens of thousands of wildfowl and wading birds, including geese swans and ducks. Many species come from as far afield as Canada and Greenland. The seaward edges are characterised by pioneer species such as glasswort and seablite, whilst middle reaches are dominated by common salt marsh grass with herbs such as scurvy grass, sea thrift and sea lavender depending whether they are grazed or not. Transitions to fresh water marsh and dry land have been truncated by reclamation, but are marked by other species only slightly tolerant of salt water and occasionally by brackish pools.

A small area of sand dunes is found at Potts Corner south of Heysham and is important as it supports dune vegetation not found elsewhere on this section of coast (Knott End-Silverdale).

Some of the Wyre marshes such as Barnaby's Sands Marsh and Burrows Marsh remain ungrazed and are particularly important for their floral diversity. The open coastal marshes of the Ribble estuary are part of a major protected landscape and constitute one of the largest areas of salt marsh in Great Britain.

Human Influences

The rich resources of the coastal marshes have been exploited since the earliest times by migratory peoples or societies settling on the drier and more stable areas inland. Hunting wild game, collecting shrimps, cockles and mussels, or grazing animals on the drier landward edges all would have given great rewards.

Grazing rights on the marshes ensure that the saltmarshes have long been an important component of the local economy. The salt - marshes to the south of Silverdale are managed by common grazing of sheep and cattle and in some areas turf cutting has taken place to supply ornamental and bowling green industries. Tracks across the marsh lead to landing jetties, fisheries and historic salt working sites.

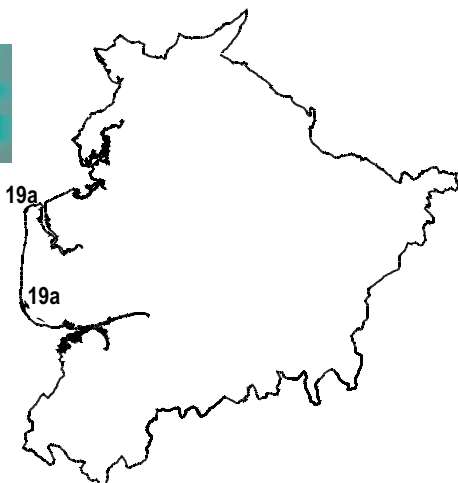
CHARACTER AREAS - OPEN COASTAL MARSH

The Open Coastal Marsh landscape type occurs in five distinct areas around the sheltered waters of the west coast of Lancashire.

Local	Character Areas	Description
18a	Ribble Marshes	<i>An extensive and expanding area of unenclosed coastal marsh occurs in the sheltered estuary of the River Ribble, most of which is protected and managed as a National Nature Reserve. This area is characterised by a fine green sward stretching out to sea. Its amorphous, natural form provides a dramatic contrast to the regular enclosures of the adjacent Hesketh Marsh and the urban form of the Warton Aerodrome. Urban buildings are never far away and provide a backdrop to views. A large number of visiting birds are encouraged by the standing water. Large numbers of waders and wildfowl are attracted to the marshes, adjacent mudflats and estuary.</i>
18b	Hest Bank-Silverdale	<i>These marshes are on a raised platform backed by cliffs of sand and clay from Hest Bank to Carnforth and by the steep limestone cliffs of the Arnside and Silverdale wooded limestone hills further north. The front edge of the platform is eroding significantly at the point where it meets the sea. The marshes are open areas of sea-washed turf, grazed by cattle and sheep, and patterned by narrow rills, winding muddy creeks and brackish pools. Traditional turf cutting activities take place resulting in a patchwork of stripped and naturally regenerating areas on the southern half of the marsh. There are a number of access points to the marsh and it is visited by many people who walk, park and picnic upon the marsh. There is a recent landfill site on the edge of the marsh at Cote Stones, as well as remnant slag heaps from the historic iron workings at Carnforth.</i>
18c	Wyre Marshes	<i>The Wyre Estuary provides a sheltered environment for the development of salt marsh. The proximity of the urban areas of Fleetwood and Cleveleys to the west affects the character of this area both visually and physically, whilst the east bank of the Wyre remains rural in aspect. Distinctive low boulder clay cliffs back the marshes in places and form linear features along the estuary. The area is relatively inaccessible to recreational users, and the salt marsh has been reduced to the west by encroaching industrial development and landfilling at Fleetwood. Unlike other coastal marshes in Lancashire however the lack of grazing gives a colourful sward of sea lavender, sea aster and other herbs in summer.</i>
18d	Lune Marshes	<i>The sheltered mouth of the Lune Estuary supports an extensive saltmarsh which stretches almost into the centre of Lancaster and provides a dramatic contrast to the built environment of the city and its industrial edges. This area includes the important remnant sand dunes at Potts Corner. There are a number of footpaths, nature trails, cycle routes and viewpoints alongside the marsh which ensures that the area is well visited and highly visible. This, and the area's proximity to the centre of Lancaster means the Lune Marshes are under pressure from visitors and from development. This is evident from the reclamation of the marshes immediately downstream of Lancaster.</i>
18e	Pilling and Cockerham Marshes	<i>The intertidal salt marsh and sands of Preesall, Pilling and Cockerham form the southern bank of the Lune Estuary. The open flats are separated from the mainland by recently reinforced sea dykes which define the southern edge of the character area. The more exposed western end, by Knott End on Sea, is characterised by sand flats while the more sheltered eastern end of the character area is more typical of a salt marsh landscape. The sands and salt marshes are of international importance as a refuge for many pink-footed geese in late winter.</i>



19



COASTAL DUNES

Character Areas

19a Fylde Coast Dunes

Landscape Character

The Coastal Dunes occur between the sea and farmland or urban land which lies inland. The landform varies from the natural form of the hummocky dunes at St Anne's to more modified areas, some of which have been levelled and are now managed as amenity grassland. The dunes are located in open and exposed sites with sea views and dominant skies. They comprise small remnants of a once extensive system in a narrow discontinuous band sandwiched between the built coastal development and the sea wall or promenade. Their extent is determined and substantially reduced by the surrounding Victorian streets, car parks, tourist accommodation and golf courses. The vegetation is dominated by semi-natural grassland which is sometimes grazed. Access is by a winding, undulating network of minor paths or from the seafront promenades. Modern buildings and car parks, set within the dunes, are often linked to tourism development and are incongruous elements against the wild scenery.

Typical view - photo 35 below.



Physical Influences

Coastal Dunes were once extensive along the Fylde coast, although holiday resort development has encroached and the landscape type is now limited to short stretches between Lytham and St. Anne's and Fleetwood. The most important remnant is the Starr Hills SSSI Local Nature Reserve at St Anne's.

The dunes formed behind wide sandy beaches which dried out at low tide allowing sand grains to be blown inland by the wind. Sand dunes show a characteristic sequence of zonation which is determined by their position in relation to the shore, mobility and age. Mobile or yellow dunes are succeeded inland by a band of grey dunes which accumulate organic matter. These fixed dunes are severely truncated by development although remnants survive, for example at Lytham golf course. The mobile dunes are an important local refuge for species such as marram grass, sea bindweed, bloody crane's - bill and burnet rose.

The grey dunes have a richer assemblage of plants including sand sedge, sheep's fescue, thyme, wild pansy and lady's bedstraw, although the degraded and limited scale of the dunes limits the species diversity. Dune heath dominated by heather is restricted to Lytham golf course.

Human Influences

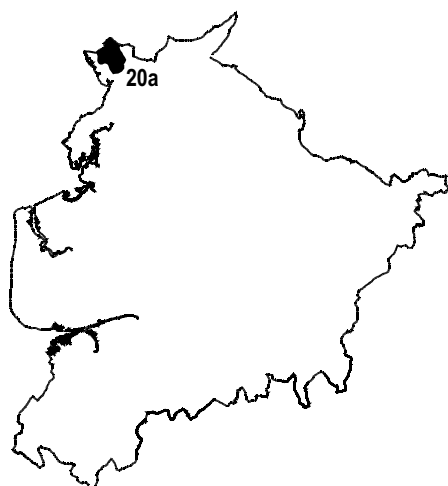
The dunes may cover evidence of ancient habitation or trackways to the shoreline and there is some evidence of historic human activity in the inter-tidal areas. The dunes themselves show no signs of habitation although hunting or trapping of rabbits and other vertebrates may have occurred on them.

In the past large quantities of sand were extracted for built development. Erosion of the remaining areas has been accelerated by unmanaged recreational use. Only in the Starr Hills Local Nature Reserve is there a programme of active management.

CHARACTER AREAS - COASTAL DUNES

The Fylde Coast Dunes are a series of small remnants representing the Coastal Dunes landscape type in the study area.

20



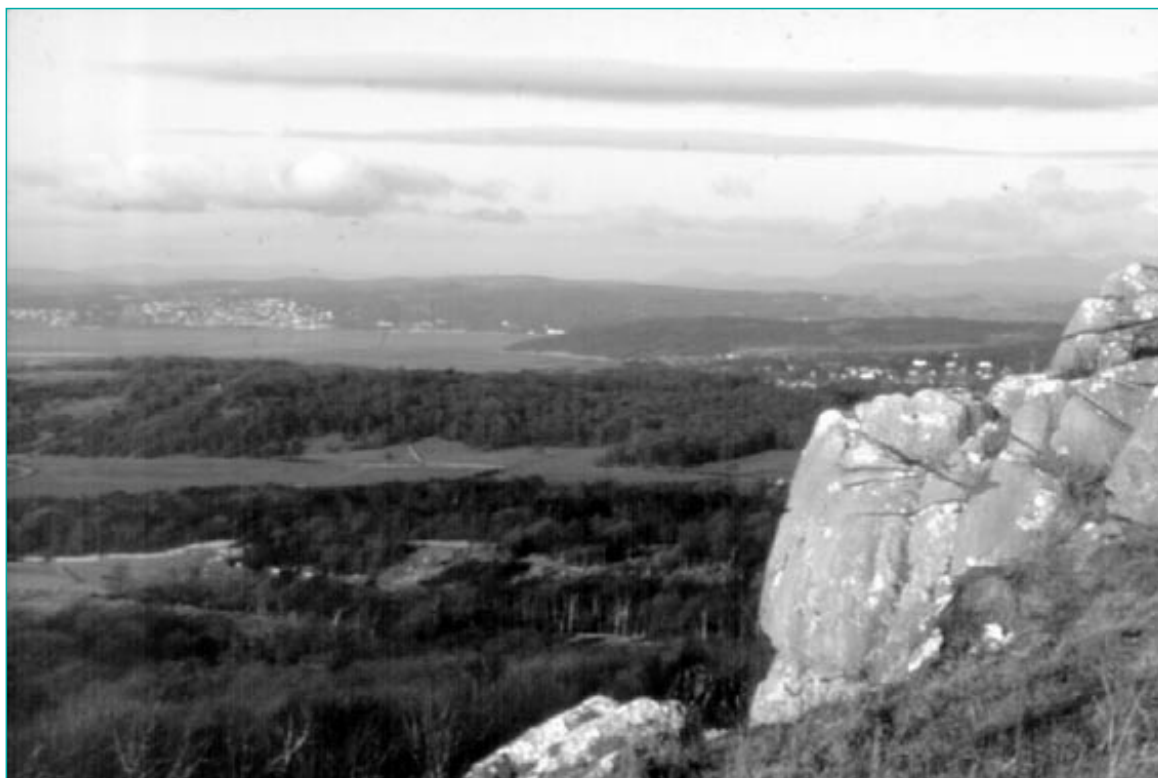
WOODED LIME- STONE HILLS AND PAVEMENTS

Character Areas

20a Arnside and Silverdale

Landscape Character

The Wooded Limestone Hills and Pavements is a diverse, small scale landscape of rolling hills, species rich grassland and scrub, ancient woodlands, rocky outcrops, limestone pavements, reed beds and pools and a small eutrophic lake, Hawes Water. Some of the land is rough grazing, much of it tending to revert to scrub woodland: like the improved pastures it is bounded by a network of limestone walls. The woodlands are particularly characteristic; ancient woodland, much of which has been formerly coppiced, is dominated by ash and hazel with oak, small-leaved lime and yew. Scattered clumps of veteran trees in the secondary woodlands indicate the presence of ancient wood pasture. The landscape is rich in visible historic features including evidence of former industry and historic field patterns; lime kilns indicate burning of lime for a variety of uses. Abandoned limestone quarries are a feature and often provide valuable habitats for wildlife, or are used for recreational activities. The parkland landscape of Leighton Hall, including some mixed woodland also adds to the variety of landscape elements within the area. Typical view - photo 36 below.



Physical Influences

The variety of landforms reflects the underlying geology of Carboniferous limestone. These rocks were deposited beneath the warm shallow waters of an ancient sea which subsequently became uplifted to form limestone hills.

During the Quaternary, huge ice sheets repeatedly covered the area, sweeping away overlying soils and eroding weaker beds of limestone. The grykes on limestone pavements have formed as the result of solution by mildly acidic rainfall. Permanent streams are absent due to the permeability of the limestone. Soils are predominantly neutral to alkaline, although in some areas fine wind blown loess creates patches of acidic soil.



Photo 37. Limestone Pavement, Gait Barrows Nature Reserve.

The area supports a rich and diverse range of natural habitats, many associated with limestone conditions. Unimproved calcareous grasslands, scrub and woodland cover much of the hills and cliff tops. The flora and fauna is outstandingly rich with many rare species including the Lancastrian whitebeam (*Sorbus lancastriensis*), which is entirely confined to the limestones around Morecambe Bay. As

livestock grazing has diminished over the last 50 years, secondary woodland has expanded considerably. Ash and birch species dominate, with oak and an understory typically of hazel, hawthorn and holly.

Scattered clumps of 'veteran' trees particularly oak, elm and yew are important features and may be remnants of ancient wood pasture. The principal areas of ancient woodland are designated as SSSIs; sites such as Cringlebarrow and Deepdale, Eaves Wood and Gait Barrows, are likely to represent truly ancient semi-natural woodland. They contain a significantly higher proportion of sessile oaks, and in particular small leaved limes. A rich woodland ground flora is able to flourish due to the light shade cast by the high proportion of ash, which has also led to important communities of fungi, invertebrates and mammals such as roe, red and fallow deer.

The hill-top mosaic of semi-natural calcareous grassland and limestone pavement outcrops provides a rich range of habitats for insects including butterflies such as the high brown fritillary, northern brown argus and duke of burgundy fritillary. In summer wild flowers carpet the limestone grasslands. Nationally rare and scarce plants occur in the grassy sward, and on the bare rocky scars and pavements.

Human Influences

The earliest evidence of human influence is found in the limestone caves at the foot of Warton Crag, although permanent habitation cannot be confirmed until the Neolithic. Pollen evidence and stone axes found at Storrs Moss indicate forest clearance and cultivation. Material discovered at Warton Crag provides evidence of ritual activity. By the Bronze Age, it is believed the area was being intensively farmed as burial mounds indicate occupation by a settled population.

An Iron Age fort on the top of Warton Crag may be indicative of the unsettled nature of the later prehistoric period.

Place name evidence suggests some Viking settlement, whilst other sites have Old English or Norman origins. The pattern of nucleated linear villages, is still evident in Yealand, Warton and Hale. Settlements were associated with

communal 'open fields' of arable land and surrounded by areas of common grazing and waste. In some places 17th century enclosure retained the furlongs of the open fields. In contrast to this farmed eastern fringe, the 'interior' supported isolated farms and communal grazing. Woodlands were a fully integrated part of the local economy and their character today reflects management practices which originate in the medieval period. Almost all of the woodlands were managed for foraging and pasture grazing for livestock, as a source of timber and by coppicing and pollarding to provide a ready source of young wood or 'poles'. The crop of young wood was of great value to the local charcoal burning iron furnaces, to the local bobbin industry and for manufacturers of a range of woodland products such as swill baskets and hurdles.

19th century enclosure, apparently late for Lancashire, and subsequent improvements led to great changes in the landscape. Many small quarries (mostly now abandoned) were developed as commercial and private enterprises by individual farmers, while others were owned communally and provided the building materials required for a parish. Limestone was also roasted in local quarries, the principal ones being at Warton Crag and Trowbarrow, to produce limewash, mortar and plaster and fertiliser. Mines for copper and iron ore are also found in the area. The mines were usually shallow workings at locations where the ore outcropped at the surface, as on top of Cringlebarrow in Yealand Redmayne.

Leighton Moss is an extensive area of wetland which is composed of a mosaic of Phragmites reed beds, open water, willow scrub and a fringe of semi-improved pasture. This area was drained and used for agriculture, however pumping ceased after the first world war and it reverted back to wetland. It is now an important bird reserve owned and managed by the RSPB. The chimney which was part of the pumping house still exists below Warton Crag.

CHARACTER AREAS - WOODED LIMESTONE HILLS AND PAVEMENTS

Arnsdale and Silverdale is the only landscape character area in the study area in the Wooded Limestone Hills and Pavements landscape character type within the study area. It is found in the far north west of the county and extends into Cumbria. This landscape character area falls within the Arnsdale and Silverdale AONB.



21



LIMESTONE FELLS

Character Areas

21a Leck Fell

Landscape Character

The high Limestone Fells on the north eastern edge of Lancashire geologically and scenically form part of the Askrigg Block in the Yorkshire Dales. Leck Fell, rising to 627m is the highest point in Lancashire. This landscape type is characterised by outstanding limestone scenery which provides important scientific interest and visual appeal. The natural features are the result of erosion by glacier ice and subsequent weathering which has produced a distinctive landscape of open moorland, rounded valleys, crags and hills. This type of landscape is particularly well known for its limestone formations such as scars, caves, gorges and limestone pavements. The dominant land use of the high fells is grazing and the landscape of dry stone walls and field barns reflects the farming traditions. Land cover is typically rough grassland and heather moor although calcareous grassland is a feature of this upland landscape. Colours are generally muted, although the heather creates striking seasonal effects. The mosaic of upland habitats are of significant nature conservation value and there is considerable evidence of settlement and land use since prehistoric times, particularly in the form of place names and field patterns. Typical view - photo 38 below.



Physical Influences

The Limestone Fells lie on the Askrigg Block, part of the Pennine Fault Block. The pre-Carboniferous rocks which form the block are exposed only in deeply cut valleys. The block is covered by Lower Carboniferous strata, comprising the Great Scar Limestone and sandstones and shales of the Yoredale Series.

These fells form steep sided, rounded hills with deeply incised rounded valleys. The fells are covered by shallow podzolised soils and peat generally covers higher summits (above 400m).

This limestone scenery is characterised by the virtual absence of surface drainage and an extensive subterranean drainage network which has resulted in cave systems and sink holes which provide geological and geomorphological interest.

The landcover is typically heavily grazed open moorland of rough grass and remnant patches of heather with little or no tree cover. There is strong biological interest in the vegetation associated with limestone pavements, cliffs, potholes and gorges. Plants of the limestone gorges include rigid buckler fern, limestone polypody and mossy saxifrage, whilst acid rocky ground supports species such as fur club moss, hard fern and beech fern. The base-rich flushes are important for pale forget-me-not, lesser club moss and pyrenean scurvy grass. The expanses of moorland support species of upland wader such as curlew, snipe and redshank. Heather moorland adds colour in late summer and is important for bilberry, cowberry and cloudberry. It also supports merlins and golden plovers. Leck Fell forms part of the Leck Beck Head Catchment Area SSSI

Human Influences

Traces of prehistoric and later activity can be seen across the fell sides. The higher, more exposed land has probably been used for summer pasture and hunting since prehistoric times, but there is evidence of settlement on suitable sites on the lower slopes. It seems probable that this represents the upper limit of extensive Neolithic to Romano-British settlement, the best preserved area of which is at High Park, on the lower moorland fringe to

the north of Leck Beck. The pasturing of animals, along with changes in the climate in the later Bronze Age, is likely to have contributed to deforestation of the open fell sides and the development of hill peat deposits. Place name evidence points to significant Norse settlement and it is likely that they continued to use the fells for hunting and pasture. By the medieval period a routeway had been established over to Dentdale and rights of 'Turbery' – the cutting of peat or turf for fuel – are recorded. The present landscape is dominated by long straight enclosure walls of later 18th or 19th century date, allowing better management of the flocks of summer-pastured sheep. More recent land management has concentrated on the heather moorland for grouse shooting, but the leisure activities of walking, climbing and potholing have also had an impact.

CHARACTER AREAS - LIMESTONE FELLS

This landscape character type occurs mainly outside Lancashire and is typical of the Yorkshire Dales National Park. The county boundary of Lancashire extends onto these fells in just one place, at Leck Fell.

4.

Lancashire's Urban landscape types

Lancashire's urban areas have grown rapidly in the last three hundred years although many may have origins deep in prehistory and physical and human influences have combined to dictate the siting and growth of settlements. Expansion, contraction, rebuilding and demolition have all left traces of past activity and it is possible in many towns to plot their development from evidence such as the type and style of buildings and the spatial arrangements of streets, roads and open spaces.

4.1

Historic Core (1100 to 1800)

4.1.1

Urban Landscape Character

Today the Historic Urban Core is typically a

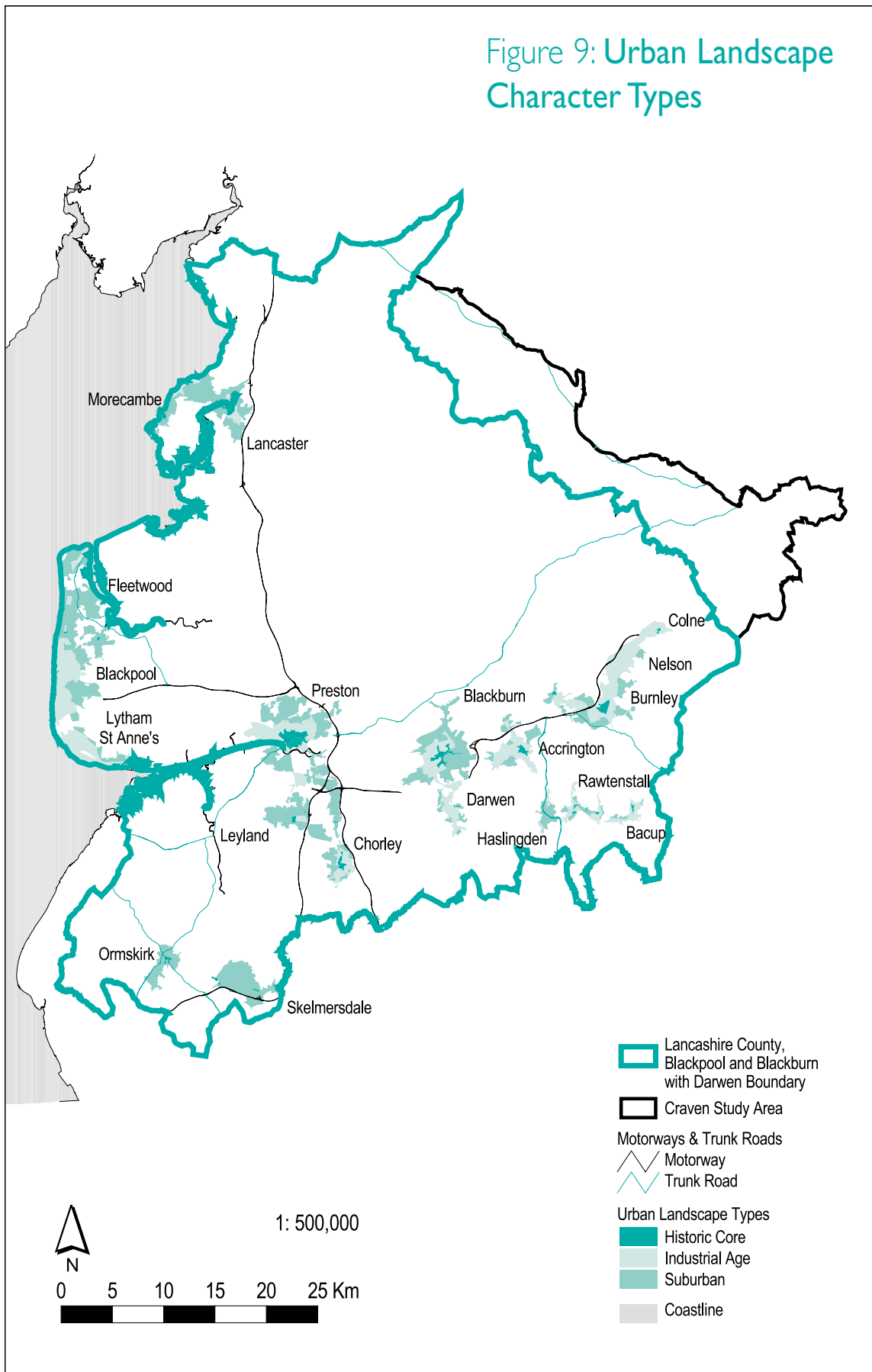
relatively small, characterful area at the heart of Lancashire's larger settlements. A historic church and market place are often sited at the central convergence point of the principal radial routes. Most Historic Urban Cores have a denser urban fabric than other parts of the town, with tall red brick or stone buildings and angular streets. There is a general lack of open space and vegetation, although market squares do survive in some towns. In some cases the historic core appears as an isolated island within later development. This may result from the demolition and re-planning of town centres, or from the fusion of isolated small towns by expansion of one or both settlements. Often the historic core is only visibly represented by the street pattern and property boundaries. Apart from churches and castles the earliest visible fabric are rare 16th and 17th century buildings, but typically the oldest buildings of the historic core are 18th or 19th century.

Overall, the most enduring feature of the Historic Urban Cores is the organic, winding arrangement of streets and alleys and the



Photo 39. Preston Flag Market.

Figure 9: Urban Landscape Character Types



distinctive character of historic public buildings.

4.1.2 Evolution

It was not until the 12th and 13th centuries that many of the county's existing settlements expanded and took on the administrative functions previously carried out by the manors. Often settlements expanded around the markets which were held outside ancient and important churches. Although small by modern standards, these towns exerted a powerful influence over the surrounding countryside. A few towns in Lancashire, such as Ormskirk, may have resulted from deliberate planning in the Norman period but the majority developed in a piecemeal way.

By the end of the medieval period Lancashire had a developing urban system. Many areas were thinly populated, but industrialisation, long distance commerce and trade were becoming increasingly important and prompted in the gradual growth of certain settlements. Growth was often restricted by the impacts of war, epidemics and economics - the urban poor of industrial towns were often overcrowded in densely-packed yards and backlands which quickly degenerated into squalid slum areas. The more prosperous inhabitants preferred to move to the relative peace, quiet and cleanliness of the urban fringe.

By 1700 large towns were extending ever outwards along main roads and the spaces between developments were being infilled by landowners selling or leasing housing sites. It is interesting to note that until the 17th century most urban buildings were timber framed, mirroring the black and white architecture evident today in Cheshire. During the second half of the 17th century however the replacement of timber by stone and brick hastened as a result of war time devastation and by accidental fires which were an ever present danger. This resulted in the loss of many excellent pieces of Tudor architecture. Despite the preference for brick in many areas, particularly in the west of Lancashire, stone was quite often used for the construction of churches and large public buildings. A few churches date back to Norman times, but most have been

substantially rebuilt, particularly in the 18th and 19th centuries.

4.2 Industrial Age (1800-1930)

4.2.1 Urban Landscape Character

The planned development typical of Victorian and Edwardian residential areas is characterised by a unity of architectural character; with small red brick or stone built terraces in working class districts and larger brick or stone semi-detached villas in broad, tree-lined streets in areas dominated by middle class residents. The street pattern is rectilinear, on a regular grid. Prominent stone public buildings, built by wealthy patrons, large public parks, promenades and urban squares are landmarks in central districts. This period left a legacy of attractive urban areas, with a formal character.

Within this urban landscape type, squares, parks and to a certain degree, urban cemeteries, contribute significantly to the quality of life enjoyed by residents and workers. Many sites retain elements of their original design and planting; for some, however, neglect, vandalism and inadequate management has created a rather utilitarian appearance.

4.2.2 Evolution

The industrialisation of Lancashire was an astonishing phenomenon, noticeable in the countryside, but most dramatic in the development of the urban areas. The teeming squalor and the awesome scale of commerce was a fascinating attraction to visitors from around the world. There was enormous demographic change, with new industries attracting workers from the surrounding countryside on a scale not experienced before.

Cotton textile manufacture was arguably the most important of Lancashire's industries. During the early phases of industrialisation, there was a shift from domestic production to factories. The Factory System, which operated from the 1790s, involved the separation of home and work. It led to the construction of massive factory complexes adjacent to long

rows of rented terraces of stone or brick and slate which ran along cobbled axial roads. They were built by speculators and mill owners who were keen to keep close control of the workforce. These early Factory Houses were generally of poor quality; they were arranged back to back with no sanitation or yards. The Police Act of 1844 effectively ended poor quality back to back housing provision in Lancashire's industrial towns and in the late 19th century the mill terrace housing was built to a higher standard. For this reason there are few (if any) examples of back to back housing surviving in Lancashire today.

As a result of the Police Act, Victorian planned housing was often located along broad, drained streets. Most houses had four rooms and a privy/ashpit accessible by a back alley, or by ginnels between houses, for the removal of refuse. Despite a bleakly utilitarian appearance, standards were much higher than in previous decades. In the west and south of the county houses were predominantly of brick, in parts of east Lancashire and in Lancaster, houses tended to be built of stone. It was also during the mid 19th century that there was a real attempt to make proper



Photo 40. Backyards, Colne.

provision for clean water. This resulted in the construction of massive reservoirs in the grit stone hills surrounding the valley towns.

The improved standard of living of the working classes and their relative affluence created a new fashion for taking vacations to escape the grime and toil by going to the seaside. Along the coast, resorts such as Blackpool, Morecambe and Lytham St Anne's grew rapidly during the Victorian period. They were designed to cater for the recreational needs of thousands of visitors, eager to spend their disposable income. The most well known of these seaside resorts is Blackpool where relatively haphazard and unplanned growth contributed to its charm. The Winter Gardens (1878), Tower (1894), sea, beach piers and amusements catered for visitors needs and railways were the principal means of transporting thousands of holiday makers to and from their destination.

By the mid 19th century Lancashire had secured the great majority of the UK's cotton operatives and other industries were also showing rapid growth and sophistication. It was during the Victorian and Edwardian periods that the old traditions of a semi-rural lifestyle gave way to an acceptance of the disciplines of living and working in large units of industrial and urban society. Urban employers were keen to enlist the goodwill of their workforce; municipal improvement using public funding and private munificence was a key feature of the period. The emergent middle classes often held positions on local councils and they were also keen to express their power and good will. These factors combined to create a phase of urban transformation.

Many towns initiated major schemes of public works, including the provision of water and sanitation and the passing of new laws setting improved standards of housing. There were also symbolic gestures, such as the construction of town halls, churches, universities, schools, hospitals libraries and art galleries. The architecture involved often reflected the tastes and aspirations of the patrons. A notable example is the Greek Revival Harris Museum and Library (1882-93) which dominates the Market Place in Preston. Public parks and urban squares are significant features of the period. These resulted from a

mixture of commercial enterprise, paternalism, civic pride and philanthropy. The naturalistic elements of their designs provided clean green spaces for the deprived urban populations. Geometric elements offered an opportunity for leisurely promenading and for civic display and refinement.

Planned industrial housing usually took place on land on the fringes of existing built up areas and in areas where earlier poor quality housing had been demolished. Public parks and municipal stone buildings were located towards the centre of the towns and would have required the demolition of earlier buildings. On the edges of the towns, away from the factories and workers' areas, the middle classes built themselves large family houses, arranged on airy, tree lined streets in suburbs. Suburban villas, quite often had large gardens, where the growing fashion for collecting exotic plants could be indulged. In the rapidly expanding tourist towns, a combination of terraces and higher quality housing was designed to accommodate workers, holiday makers, commuters and those retiring to the coast. Such development usually took place on farmland as these settlements grew outwards from their historic centres.

4.3

Suburban (1930 onwards)

4.3.1

Urban Landscape Character

This urban landscape type includes a wide variety of architectural styles and layouts. The majority of urban areas are characterised by a spacious pattern of street, low buildings, garages and gardens, although there are also examples of high-rise tower block estates, with communal amenity grassland and extensive parking.

Early suburban housing (1930-40) is typically semi-detached, built of brick and arranged in crescents and wide streets with large front and rear gardens. This type of older suburban housing often forms ribbon development along principal urban routes, with access to more recent housing estates behind. 1950s to 60s estates tend to have predominantly straight streets with some cul-de-sacs and with gardens and garages. Since the 1970s, housing development has been concentrated in relatively dense estates with cul-de-sac layouts, curved streets, small gardens and garages and are often a mixture of many different styles, frequently pastiches of old styles.



Photo 41. Suburbs, south Lancaster.

The use of many different materials, usually not of local origin and standardised architectural detailing of particular styles has resulted in a loss of regional identity; the same house designs recur across the whole country.

4.3.2

Evolution

Lancashire's urban centres have experienced profound changes from the inter war period onwards. At the time of the First World War, many older industrial centres had reached their peak populations, although the combined impacts of suburbanisation and economic decline resulted in depopulation. This process was accelerated by deliberate decentralisation, a fundamental planning strategy between 1945 and 1975.

In urban areas local authorities had inherited, by modern standards, a legacy of sub-standard 19th century housing and Lancashire's local authorities were keen to clear the slums and to develop estates on the urban fringes. Suburbanisation during the 1930s and 40s created large areas of private and council housing in estates on the fringes of the towns.

After 1945 national house building programmes and the introduction of industrialised building methods were the catalyst for widespread inner-city redevelopment and the relocation of whole communities to the edges of towns. The new estates, which included a substantial element of high rise building, were sited on the edges of towns or in redeveloped urban centres. By the end of the 1960's this type of housing was already proving unpopular and incidents of slum clearance declined, to be replaced by rehabilitation and housing improvements.

The creation of overspill communities and new towns involved social engineering and planning on an enormous scale. The most celebrated example is that of Skelmersdale which was intended to take 70,000 people from Liverpool and regenerate a small mining town with severe unemployment problems. Although the town has proved a success the social and economic difficulties it has faced has limited the population to just over fifty five thousand. Another designation, the Central Lancashire New Town (1974), originally planned to link Preston, Leyland and Chorley

into a city of half a million people. Although substantial industrial and housing areas were created, the result has been a series of expanded villages and new estates very closely linked by suburban ribbon development.

Many urban centres were transformed during this period by the combined effects of post war planning and commercial ambition. It is a common misconception that the clearance of urban centre buildings was the result of war time bombing. The undistinguished designs, which were often built of concrete during the 1960s and 70s, are conspicuous in many Lancashire towns. Such redevelopment was undertaken with little regard for the fine examples of 18th and 19th century architecture it was replacing, however some pioneering modern developments did take place, such as Preston Bus Station.

The 1980's saw an increasing appreciation of urban heritage and a new theme of urban planning has seen the use of traditional urban forms, sympathetic materials and reuse of old buildings. A notable example of this is the successful conversion of St. Marks church in Preston to flats.

The recent boom in house building is resulting in further expansion of the urban areas with the provision of new housing estates on the fringes of the towns and the development of brownfield sites in the inner urban areas.

A significant element of the urban and suburban scene are fragments of 'encapsulated' countryside and other areas of informal open land, including land formerly developed but now re-vegetated either naturally or by design. These provide important wildlife habitats (unaffected by intensive agriculture) and recreational space for local residents. Their value may be enhanced when such areas form green corridors allowing movement of wildlife between urban areas and the surrounding countryside.

GLOSSARY

Landscape Technical Terms

with an explanation of how the terms are being used in the context of the Landscape Assessment and Strategy.

Analysis - the process of breaking the landscape down, usually in descriptive terms, into its component parts in order to understand how it is made up.

Approach - the step-wise process by which a landscape assessment is undertaken.

Assessment - an umbrella term used to encompass all the many different ways of looking at, describing, analysing and evaluating landscape.

Character - a distinct pattern or combination of elements that occurs consistently in a particular landscape.

Character Area - a unique geographic area with a consistent character and identity, which forms part of a landscape character type.

Character Type - a generic term for landscape with a consistent, homogeneous character. Landscape character types may occur in different parts of the county, but wherever they occur, they will share common combinations of geology, topography, vegetation or human influences.

Characteristic - an element that contributes to local distinctiveness (eg narrow winding lanes, vernacular building style).

Classification - a process of sorting the landscape into different types, each with a distinct, consistent and recognisable character.

Description - description of what a landscape looks like. This is usually carried out in a systematic manner, but it may also include personal reactions to the landscape.

Element - a component part of the landscape (eg hedges, roads, woods).

Feature - a prominent, eye-catching element (eg wooded hilltop, church spire).

Landcover - combinations of land use and vegetation that cover the land surface.

Landform - combinations of slope and elevation that produce the shape and form of the land surface.

Landscape - the term refers primarily to the visual appearance of the land, including its shape, form and colours. However, the landscape is not a purely visual phenomenon; its character relies on a whole range of other dimensions, including geology, topography, soils, ecology, archaeology, landscape history, land use, architecture and cultural associations.

Other Technical Terms

Aeolian processes - a term pertaining to the wind. Wind-borne, wind-blown or wind deposited materials are referred to as aeolian.

Ancient woodland - woodland area which has had a continuous woodland cover since at least 1600 AD and has only been cleared for underwood or timber production. It is an extremely valuable ecological resource, with an exceptionally high diversity of flora and fauna.

Backland - an enclosed space within an urban block.

Beck - a local term in the north of England for a rapidly flowing stream.

Biogeography - the study of plant and animal distributions together with the geographical relationships with their environments over time.

Blanket bog - upland peat bog formed under conditions of high rainfall. It drapes over the moorland plateaux and obscures most topographic features. Depending on management the vegetation can vary from wet sphagnum dominated communities to moorland grasses and ericaceous shrub communities.

Brownfield site - a development site which is re-using land previously developed.

Bund - man-made mound, usually intended to provide a visual screen, often in conjunction with planting.

Cairn - a mound of rough stones built as a monument or landmark - the most common examples being clearance cairns, when stones were cleared from a field in preparation for cultivation, and funerary cairns covering graves or burial chambers.

Carr woodland - marsh or fen woodland in waterlogged terrain. Characteristic trees include alder and willow.

Chert - a hard siliceous rock, which occurs as bands or layers in sedimentary rocks. Flint is a variety of chert.

Clough - a local north England term for a small, steep-sided valley.

Cobble skear - cobble bed in inter-tidal zone.

Conurbation - extensive urban area, where two or more settlements have become linked.

Coppicing - the traditional method of woodland management in which trees are cut down to near the ground to encourage the production of long, straight shoots, which can subsequently be harvested.

Crenellated - a building with battlements or loopholes (narrow vertical slits in high walls).

Dendritic - branching, often a term applied to a network of streams which have formed on relatively uniform terrain where faulting is insignificant. An entirely random network develops due to the absence of structural controls.

Drumlin - a streamlined, elongated egg-shaped hillock of glacial drift formed under a moving glacier during the ice age. The long axis of the hillock is aligned parallel to the direction of the ice flow. Drumlins usually occur in swarms or 'fields'.

Erratic - a large rock fragment which has been transported by moving ice away from its place of origin and deposited in an area of dissimilar rock types.

Esker - a narrow sinuous ridge of partly stratified coarse sand and gravel formed by sub-glacial stream. Eskers frequently bear no relationship to the modern drainage pattern.

Eutrophic - the state of a water body when it has an excess of nutrients usually derived from agricultural fertilisers. The process by which a water body becomes overloaded with nutrients is known as eutrophication and leads to a dense plant population, the decomposition of which kills animal life by depriving it of oxygen.

Fault - a rupture or fracture of rock strata due to strain.

Flush - an area of soil enriched by transported materials, either dissolved mineral salts or rock particles. Wet flushes are found surrounding springs and rivulets and appear as bright green,

rushy areas on a hill slope.

Fluvio-glacial - a term referring to the processes and landforms related to the action of glacial meltwater.

Geomorphology - the scientific study of the origin of landforms based on a cause and effect relationship.

Ginnel - a narrow alleyway between terraced houses, to access the backyard.

Gley soils - one of the seven major groups in the soil classification of England and Wales. They are characterised by being affected by periodic or permanent saturation by water in the absence of effective artificial drainage.

Gryke - a deep cleft in a bare limestone pavement, formed by solution along a line of weakness.

Laithe house - a dwelling which incorporates a barn under the same roof.

Limestone pavement - a glacially planed and smoothed surface of bare limestone which has subsequently been dissected by vertical joints (grykes).

Marl pit - small pit resulting from the extraction of marl (a calcareous clay or mudstone) which has often subsequently been filled with water to form a small field pond.

Mere - a natural lake.

Mesolithic - (c. 8,000 - 4,000 BC) an archaeological term meaning 'middle stone' age and used to describe the culture achieved during the early Post Glacial period. It was a period of transition in the early Holocene when mankind moved from the hunter gathering practices of the Palaeolithic of the last glaciation but had not yet adopted the farming practices of the Neolithic.

Mill race - a narrow man-made channel used to divert water to power a water-mill.

Mosslands - flat low-lying, peatlands, derived from former bogs and mires, typically drained by a network of ditches and supporting intensive agriculture. Relict areas of former natural vegetation are rare.

Motte-and-Bailey Castle - the earliest form of Norman castle established along key communication routes after the Conquest. An inner courtyard was protected by simple earth and wood defences.

Neolithic - (c. 4,000 - 2,500 BC) an archaeological term used to mean 'new stone' age which describes the period of antiquity in which people began to use ground stone tools, cultivate plants and keep domesticated livestock.

Open-field system - an area of arable land with common rights after harvest or while fallow. The fields date from the medieval period and are usually without internal divisions (hedges, walls or fences). **Outcrop** - the area where a particular rock appears at the surface.

Outcrop - the emergence of a stratum, vein or rock at the surface.

Outlier - an area of younger rocks occurring in a detached location, away from the main body of similar older rocks. The intervening rocks have been removed by erosion.

Outwash sands - the extensive sands and gravels deposited by meltwater streams beyond the margins of ice sheets and glaciers .

Oxbow lake - a crescent-shaped lake occurring on a river floodplain. It originated as a river meander, but has since been abandoned after there has been lateral erosion at the neck of the meander and the river has changed course.

Palaeolithic - (c. 500,000 - 8000 BC) an archaeological term meaning 'old stone' age covering the period from the first appearance of tool-using humans to the retreat of the glacial ice and emergence of the Mesolithic.

Peat hag - mossland that has formerly been broken up; it could be a pit, break, gap or chasm in the moss, or an area of turfy or heathery ground which rises out of the peat bog.

Pedology - the scientific study of soils

Permian - the last geological period of the Palaeozoic era, extending from about 280 to 240 million years ago. In Britain continental conditions prevailed for much of the time and thick layers of red sandstone were formed.

Pleistocene - the first geological epoch of the Quaternary period, extending from about 2 million years ago to 100,000 BP. It was marked by great fluctuations in temperature with glacial periods followed by interglacial periods.

Podsol or (podzol) - a type of soil formed in cool, seasonally humid conditions where leaching is the dominant process. A true podsol is characterised by a thin layer of raw humus (organic matter) at the surface, and a black or dark brown lower section, which often contains re-deposited iron, clay or aluminium. The process by which a podsol is formed is known as Podzolisation.

Pollarding - a traditional woodland management practice in which the branches of a tree are cut back every few years to encourage new long, straight shoots for harvesting. Differs from coppicing because the cuts are made at sufficient distance from the ground to prevent them from being eaten by animals. Willow trees are often pollarded.

Quaternary - the most recent geological period of the Cenozoic era extending from about 2 million years ago to the present day and comprising the Pleistocene and Holocene epochs. This period contains evidence of many present day species of plants and animals including modern humans.

Reef knoll - a dome-like mass of limestone which has grown upwards from a reef (line of rocks in the tidal zone of a coast) in order to keep pace with the deposition of surrounding sediments. The reef knoll may be exposed by denudation and, because of its poorly developed joint system and its shape, it tends to resist erosion and to form a cone-shaped hill.

Ridge and Furrow - a distinctive form of up-and-down ploughing of long narrow strips on medieval or Saxon open-field land. The soil was thrown towards the centre of the strip, producing a high ridge surrounded by a deep furrow.

Riparian habitat - riverbank habitat

Saltpan - a shallow salt lake occurring in a small, enclosed basin.

Semi-natural vegetation - any type of natural vegetation which has been influenced by human activities, either directly or indirectly.

Triassic - the first geological period of the Mesozoic era, extending from about 240 million years ago to about 200 million years ago. It succeeded the Permian and preceded the Jurassic. In Britain it consists mainly of shales, bright red desert sandstones, marls and

pebble beds. This period witnessed the evolution of the reptiles and contains the earliest known dinosaur remains.

Turnpike road - a gated road on which a toll must be paid to allow access. Turnpikes were administered by turnpike trusts, which were authorised by a private act of Parliament to levy tolls for maintenance of the highway.

Vernacular - buildings constructed in the local style, from local materials. Concerned with ordinary rather than monumental buildings.

Veteran tree - a tree which is of great age for its species and of interest biologically, culturally or aesthetically.

Abbreviations

AOD - above ordinance datum

AONB - Area of Outstanding Natural Beauty

BAP - Biodiversity Action Plan

CCA - Countryside Character Area (refers to the broad landscape character areas described on the Countryside Agency's Character Map of England)

LNR - Local Nature Reserve

RSPB - Royal Society for the Protection of Birds

SSSI - Site of Special Scientific Interest

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Contributing Consultees

Consultation Workshops:

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The Countryside Agency – Ken Burgess

The Forestry Authority – Mike Ingoldby

Groundwork East Lancashire – Adele Adams

North West Water – Brian Tollitt

CPRE – John Nairne

The Environment Agency – Dermot Smith, Heather Airlie, Mark Atherton

Lancashire Federation of Women's Institutes
– Mary Roe

FRCA – Lucinda Thomas, Gill Travis

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– Eileen Whiteford

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Lancashire County Council – Peter Iles, Joy Ede, Don Mckay, Andrew Mullaney, John Geldard

North West Water (Forestry) – Dave Blount

Forest of Burnley – Keith Wilson

FRCA – Kirsty Mckay-Martin

NFU – Veronica Waller

Country Landowners Association – Jolyon Dodgson

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