joint lancashire structure plan

landscape and heritage

ADOPTED SPG

2001

2016

www.lancashire2016.com

This document has been prepared by the Joint Authorities
of Blackburn with Darwen Borough Council,
Blackpool Borough Council and Lancashire County Council.

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Text is available in large format on request

এই ঠিকানায় অনুরোধ করলে এই রিপোর্ট ও প্রশ্নমালা উর্দু, গুজরাতী, বাংলা এবং পাঞ্জাবী ভাষায় অনুবাদের ব্যবস্থা করা যেতে পারে।

ઉર્દુ, ગુજરાતી, બંગાળી અને પંજાબી ભાષામાં આ રીપોર્ટ અને પ્રશ્નાવલીના અનુવાદનો પ્રબંધ, આ સરનામા પર વિનંતી કરવાથી થઇ શકશે.

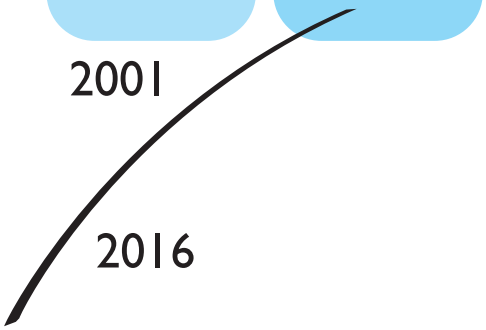
ਇਸ ਰਿਪੋਰਟ ਦਾ ਉਰਦੂ, ਗੁਜਰਾਤੀ, ਬੰਗਲਾ ਅਤੇ ਪੰਜਾਬੀ ਤਰਜੁਮਾ ਅਤੇ ਪ੍ਰਸ਼ਨਾਵਲੀ
ਇਸ ਪਤੇ ਤੇ ਮੰਗ ਕਰਨ ਤੇ ਮਿਲ ਸਕਦਾ ਹੈ।

اس پتے پر درخواست کرنے سے اس رپورٹ اور سوالنامے کا اُردو، گجراتی، پنجابی یا بنگالی زبانوں میں ترجمے کا انتظام کیا جا سکتا ہے۔

joint lancashire structure plan

landscape and heritage

supplementary planning guidance landscape and heritage



adopted by

Blackpool BC	- December 2005
Blackburn with Darwen BC	- February 2006
Lancashire County Council	- April 2006

joint lancashire structure plan

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introduction

1.1

Planning Policy Guidance Note 12[1] describes Supplementary Planning Guidance as 'a means of setting out more detailed guidance on the way in which the policies in the [development] plan will be applied in particular circumstances or areas' (paragraph 3.14). This SPG supplements Policies 20 and 21 in the adopted Replacement Joint Lancashire Structure Plan, and is consistent with national planning guidance and the Regional Spatial Strategy. It is not the role of SPG to set out criteria for decisions on planning applications that should properly be included in the plan policies themselves. Whilst it does not form part of the plan, SPG may be taken into account as a material consideration in deciding planning applications. This SPG has been subject to public consultation. The results of consultation have informed the production of the adopted SPG.

1.2

This SPG is intended to:

- Explain the application of national, regional and Structure Plan policies on landscape, biodiversity and heritage assets in a Lancashire context.
- Inform the production of District Local Plans/Local Development Frameworks, the operation of the Development Control process, developers and land use managers about the general principles of heritage conservation, and how heritage resources may be protected and enhanced through the planning process.
- Provide a strategic good practice guide for development in rural and urban environments.

Rock cut graves, Heysham

1.3

Following this introduction, Section 2 explains the landscape character approach on which Policy 20 is based, describing the 21 landscape character types identified in Lancashire, and setting out a strategy and recommendations for each landscape type. Section 3 outlines the principles behind the 'as a minimum no net loss' approach to heritage resources which is the basis of Policy 21. This is amplified and detailed guidance specific to the historic environment and to the natural heritage provided in Sections 4 and 5 respectively.

[1]*Now superseded by PPS12*

planning for landscape change

policy 20

POLICY 20: LANCASHIRE'S LANDSCAPES

LANCASHIRE'S LANDSCAPE CHARACTER TYPES ARE IDENTIFIED ON MAP 13.* DEVELOPMENT MUST BE APPROPRIATE TO THE LANDSCAPE CHARACTER TYPE WITHIN WHICH IT IS SITUATED AND CONTRIBUTE TO ITS CONSERVATION, ENHANCEMENT OR RESTORATION, OR THE CREATION OF APPROPRIATE NEW FEATURES.

IN AREAS OF OUTSTANDING NATURAL BEAUTY, PRIORITY WILL BE GIVEN TO CONSERVATION AND ENHANCEMENT OF LANDSCAPE CHARACTER. DEVELOPMENT MUST CONTRIBUTE TO THE CONSERVATION OF THE NATURAL BEAUTY OF THE AREA OF OUTSTANDING NATURAL BEAUTY.

PROPOSALS WILL BE ASSESSED IN RELATION TO:

(a) LOCAL DISTINCTIVENESS;

(b) THE CONDITION OF THE LANDSCAPE;

(c) VISUAL INTRUSION;

(d) THE LAYOUT AND SCALE OF BUILDINGS AND DESIGNED SPACES;

(e) THE QUALITY AND CHARACTER OF THE BUILT FABRIC;

(f) PUBLIC ACCESS AND COMMUNITY VALUE OF THE LANDSCAPE;

(g) HISTORIC PATTERNS AND ATTRIBUTES OF THE LANDSCAPE;

(h) LANDSCAPE BIODIVERSITY AND ECOLOGICAL NETWORKS;

(i) SEMI-NATURAL HABITATS CHARACTERISTIC OF THE LANDSCAPE TYPE;

(j) REMOTENESS AND TRANQUILLITY;

(k) NOISE AND LIGHT POLLUTION.

* This refers to map 13 in the Structure Plan. This is reproduced as map 2 in the SPG

planning framework and the landscape character approach

2.1

The approach to the identification of countryside character pursued in the Character of England project instituted by the Countryside Commission and English Nature was commended by the now replaced Planning Policy Guidance note 7 The Countryside, Environmental Quality and Economic and Social Development (1997), and suggests that it should help in accommodating necessary change without sacrificing local character. The character approach differs from designation in providing a holistic approach, which recognises that all landscapes are of value.

Landscapes are classified according to their distinctive characteristics, which allow them to be identified as particular types or areas. The assessment of landscape character and classification allows strategies to be identified to guide change to be appropriate to a particular landscape. PPS7 Sustainable Development in Rural Areas supports the use of landscape character assessments.

2.2

In response to the Countryside Commission's (now the Countryside Agency) Character of England map (Map 1) and PPG7, the County Council has produced A Landscape Strategy for Lancashire (2001) using the Countryside Agency's most recent recommended methodology (Interim Landscape Character Assessment Guidance, 1999 published in final version as Landscape Character Assessment: Guidance for England and Scotland, April 2002). This Strategy uses the Character of England map as a starting point for its landscape assessment 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.

2.3

The application of this approach has resulted in the identification of 21 landscape character types (also referred to as landscape types) across the Plan area. The map of landscape character types and urban landscape types (Map 2) is included in the adopted Joint Structure Plan. A Landscape Strategy for Lancashire identifies landscape character areas within each landscape type, and contains descriptions of character types and areas, identification of key environmental features and strategies and recommendations for each landscape type. The amount of detail in the study precludes inclusion in the Structure Plan and an explanation of the method of classification, maps, descriptions, key environmental features and strategies and recommendations for the landscape types (but not the details of the landscape character areas) have therefore been published in this document.

2.4

It is envisaged that local plans will build on Policy 20, using the supplementary guidance in support by requiring that development be informed by local landscape character as described in Sections 2.20 to 2.231 and be appropriate to the landscape character type in which it is sited, following the guidance of the landscape strategies relevant to the character type.

2.5

It will be for local plan authorities to decide whether to use this information to develop detailed local landscape character assessments using the County Landscape Strategy as a framework. The Joint Structure Plan Authorities would support and encourage the production of detailed local assessments in line with the Strategy.

2.6

The statutory designation of the Forest of Bowland and Arnside/Silverdale Areas of Outstanding Natural Beauty (Map 3) is recognised and is complemented by the landscape character approach. The primary objective of the designation is the conservation of the natural beauty of the landscape. Development in AONBs, whether in settlements or open countryside, must therefore be consistent with and contribute to the conservation of the natural beauty of the area. Additional guidance relevant to

development in the AONBs is contained within the AONB management plans, published in April 2004.

guidance

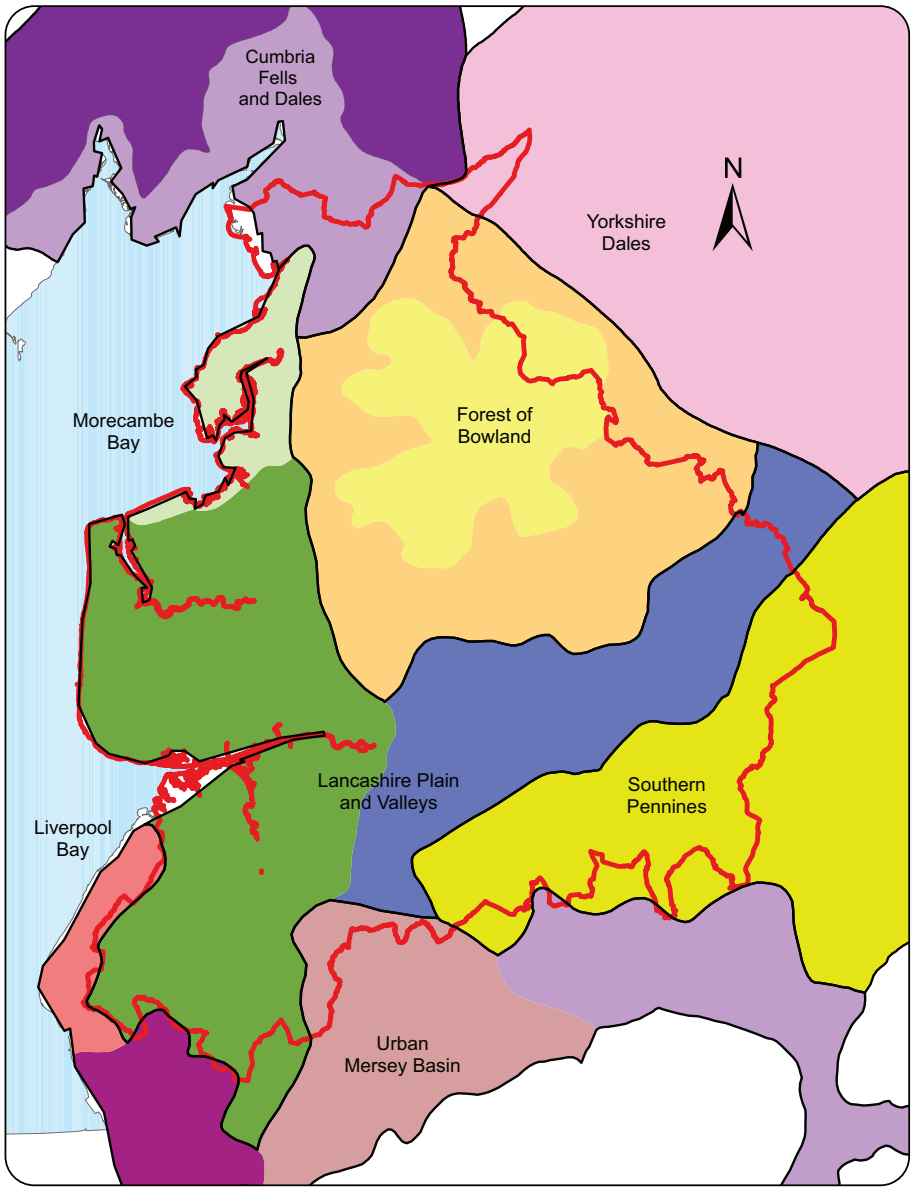
2.7

This guidance is in two parts. The first describes the key elements of the Lancashire Landscape Strategy and how, in broad terms, these should be used to guide decisions relating to the impact of development on the landscape. The second part gives details relating to each of the 21 landscape types within the County identified in the Strategy.

Sabden, Forest of Bowland AONB in winter

Woodland in the Arnside and Silverdale AONB

map 1: the character of england map



Natural Areas (English Nature)
Countryside Character Areas
(Countryside Agency)

Cumbria Fells and Dales
- South Cumbria Low Fells
- Morecambe Bay Limestones

Forest of Bowland
- Bowland Fells
- Bowland Fringe and Pendle Hill

5 0 5 10 15 Kilometres

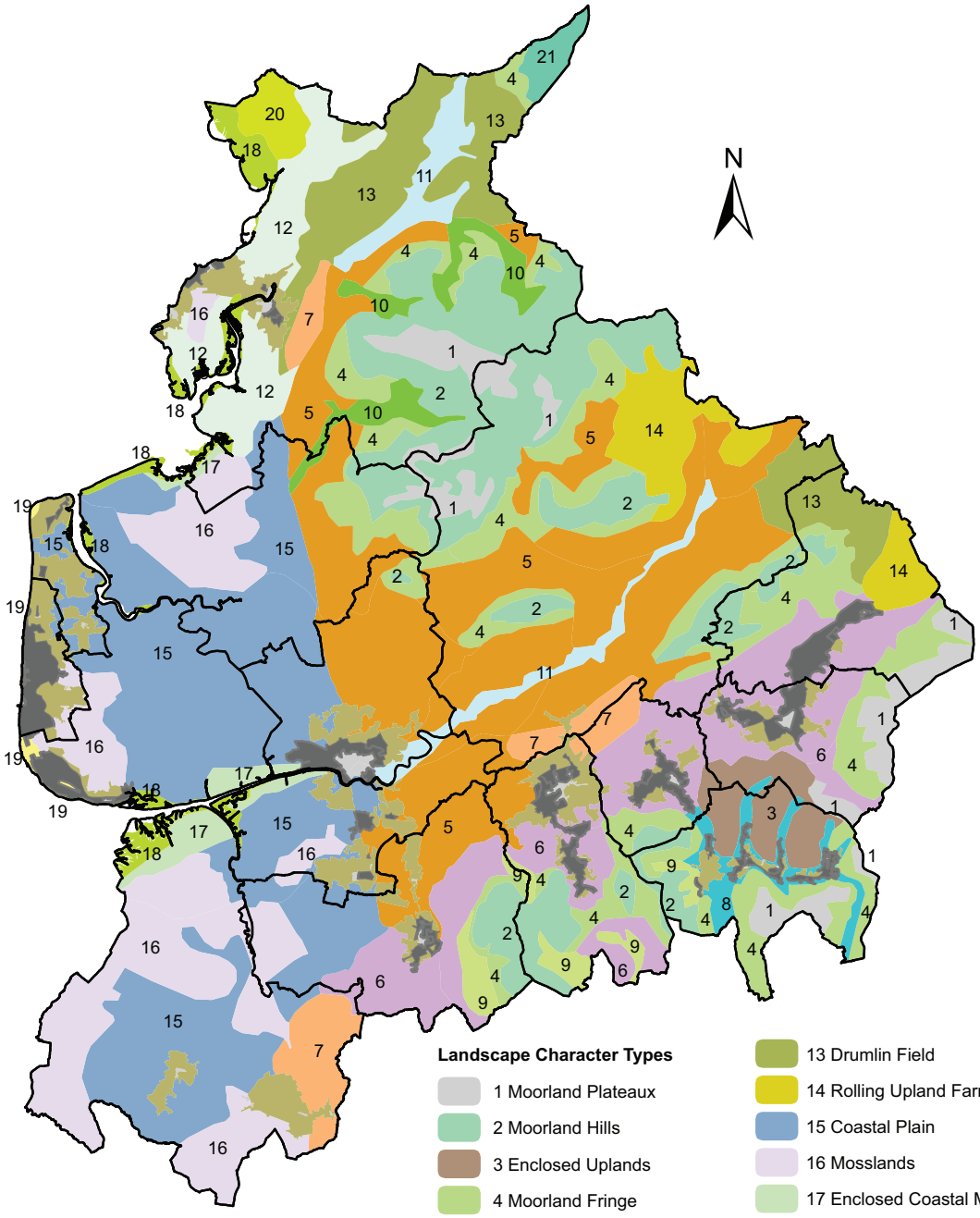
Lancashire Plain and Valleys
- Lancashire Valleys
- Lancashire and Amounderness Plain
- Morecambe Coast and Lune Estuary

Urban Mersey Basin
- Lancashire Coal Measures
- Manchester Pennine Fringe
- Merseyside Conurbation
- Sefton Coast

Southern Pennines
- Southern Pennines

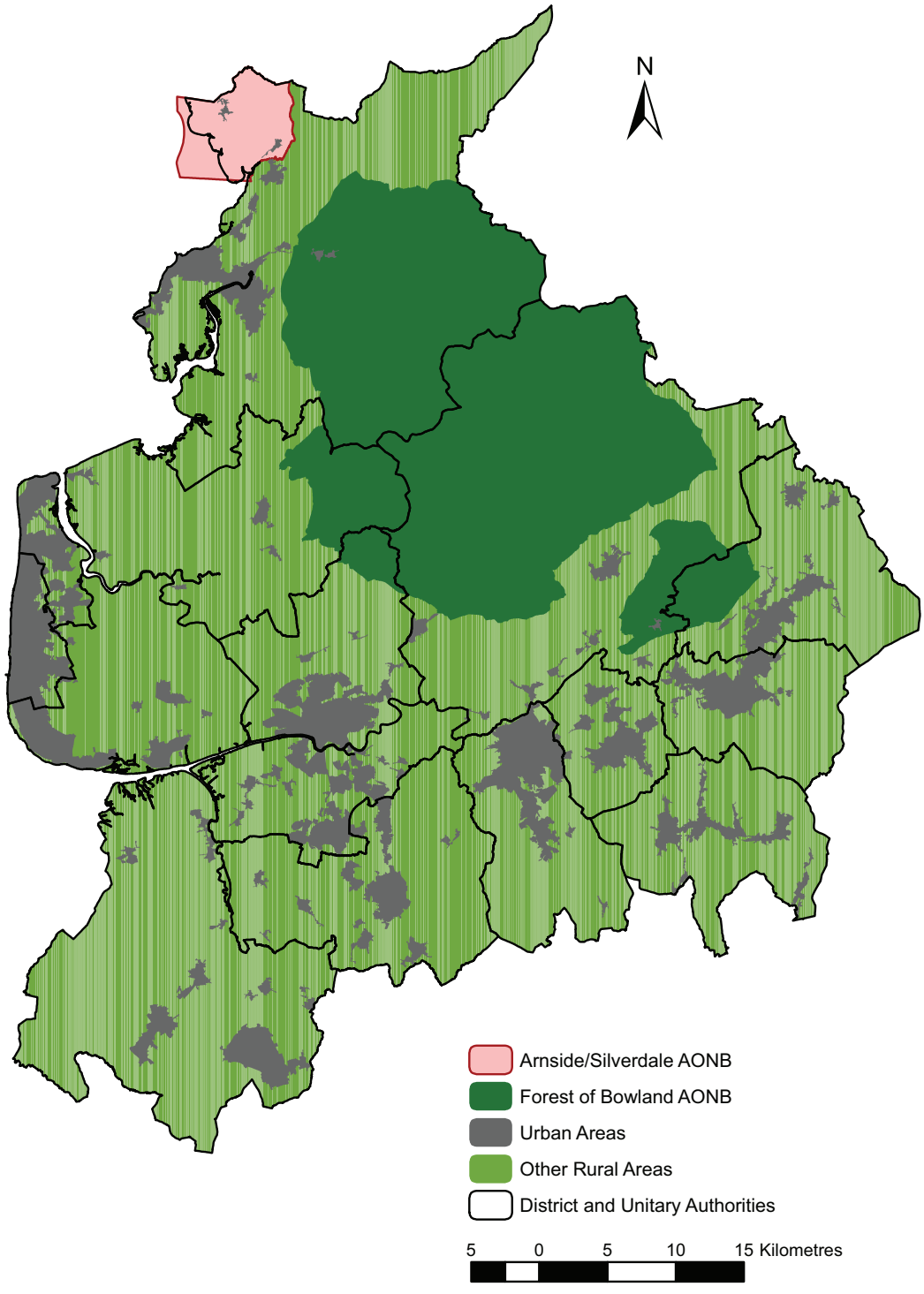
Yorkshire DalesYorkshire Dales
- Yorkshire Dales
- **Joint Structure Plan Area**

map 2: landscape character types



Sources: Lancashire County Council 2001
Ordnance Survey 2001

map 3: areas of outstanding natural beauty



Sources: Lancashire County Council 2001
Ordnance Survey 2001

part 1: the lancashire landscape strategy

Landscape Character Types

2.8

The classification of landscape character types has resulted from an analysis of the natural and man-made attributes of the landscape, in particular the geology, landform, habitats, archaeology, historic landscape character and present land use. Maps 4, 5, 6 and 7 illustrate the analyses of geology, landform, habitats and historic landscapes which have informed the classification process. The classification included a broad analysis of the urban landscape resulting in urban landscape types. In the case of the urban landscape the analysis concentrated on the pattern of streets and spaces, scale and form of buildings and nature of materials. Again, this was informed by the Historic Landscape Characterisation. Each landscape type is described, based on the combination of natural and man-made attributes that determine its character.

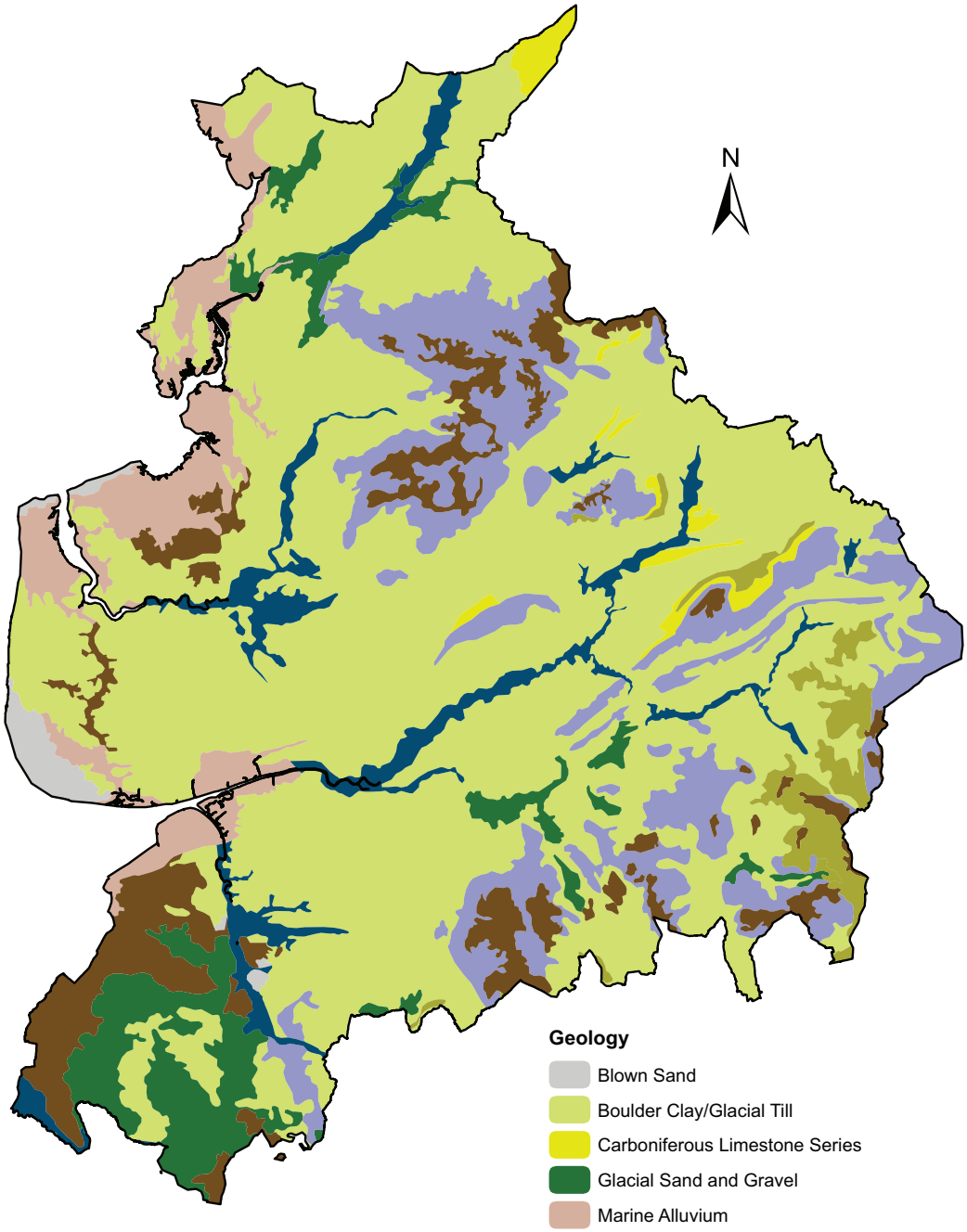
Key Environmental Features

2.9

Within each landscape character type key environmental features are identified. These are the features that make the most critical contribution to the character of the landscape and which, if damaged, would result in significant landscape change.

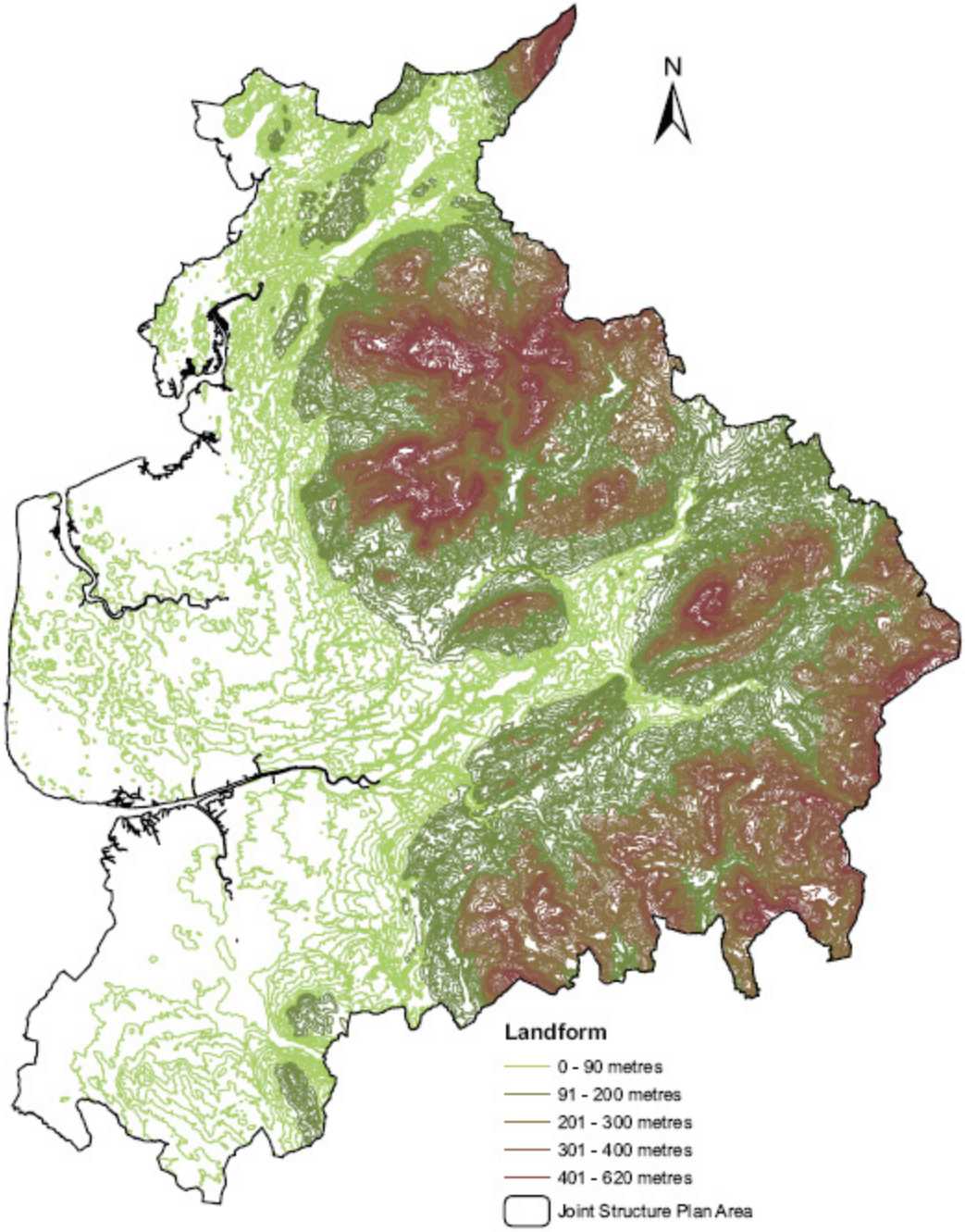
Limestone pavement, Gait Barrows Nature Reserve

map 4: geology



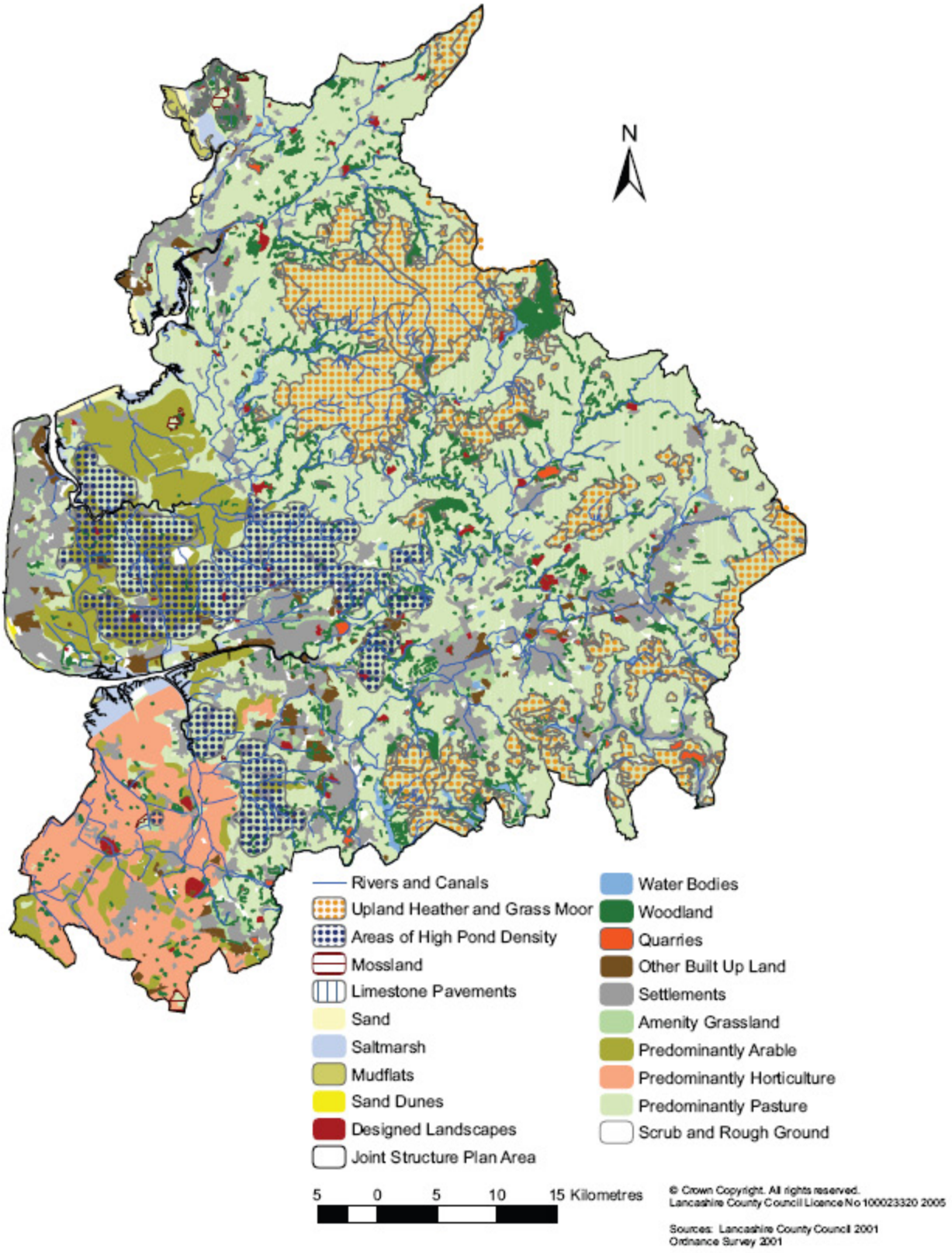
Sources: Lancashire County Council 2001
Ordnance Survey 2001

map 5: landform



Sources: Lancashire County Council 2001
Ordnance Survey 2001

map 6: habitats



Sources: Lancashire County Council 2001
Ordnance Survey 2001

Wind turbine

Forces for Change

2.10

The major forces for change in the landscape were identified across the study area. These were: built development, infrastructure, mineral extraction and landfill, agriculture and land management, forestry and woodland, tourism and recreation, water bodies and water quality and air quality and climate change. Clearly the nature of the various landscape types means that different forces for change are significant within different landscape types. The Landscape Strategy therefore identifies the local forces for change that are likely to have most impact on landscape character in each landscape type.

Landscape Strategies and Recommendations

2.11

Strategies and recommendations are identified for each landscape character type, based on the identification of key environmental features and local forces for change. This SPG includes the strategies and recommendations that guide landscape change within each landscape type.

Urban Landscape Types

2.12

The urban landscape has been broadly classified into three urban landscape types: Historic Core, Industrial Age and Suburban. It is particularly important to consider the character and relative sensitivity of urban landscapes in historic core areas, older industrial age districts and landscapes on the fringes of towns and villages, which are constantly in transition and under particular pressure for change. The study did not identify key features, local forces for change or strategies for the urban landscape types and further detailed study of the urban landscape is required to provide a similar level of guidance to that which is provided for the landscape character types. The Lancashire historic towns survey will provide a strategic framework for assessing the historic character of an area. The importance of parks and other public spaces in urban and urban fringe environments should be recognised and the descriptions of the urban landscape types can be used to inform development proposals. The policy of conservation, enhancement, restoration or the creation of new features should also be applied to the urban landscape. Landscape policy as applied to the urban landscape should take particular account of settlement pattern and settings, scale, character and condition of the built fabric, heritage, archaeology, designed spaces, nature conservation and community value. The positive aspects of the built heritage should be used as a basis for locally distinctive new development which is appropriate to the urban character. In this way the conservation of historic buildings can be a catalyst for enhancing the urban landscape.

Objective

2.13

The Joint Structure Plan sets out the overall objective for Lancashire's landscape: conserve or enhance Lancashire's landscape and its natural and man-made resources. The Objective sets the scene for the strategies and recommendations for the landscape character types.

Guiding Principles

2.14

The Policy and Supplementary Guidance is designed to accommodate and guide landscape change in a positive way. The following guiding principles are essential to the implementation of the policy and integral to the identification of landscape strategies:

- Recognise and enhance local distinctiveness.
- A positive approach towards landscape change.
- Adopt an integrated approach to landscape resources.
- Monitor landscape change.

Implementation

2.15

The planning system will implement the strategies and recommendations through the development control process. Strategies and recommendations relating to land management will be implemented through the application of planning conditions and Section 106 agreements. Other methods of implementing land management strategies are through partnerships with land owners and managers and grant aid such as DEFRA's Environmental Stewardship Schemes. The method of implementation of strategies and recommendations through planning has been indicated for each landscape character type as follows:

- Normal typeface = development control and planning conditions
- Highlighted typeface = Section 106 agreements only

Indicators and Targets

2.16

Since Policy 20 is designed to accommodate change in a positive way, there needs to be a method for measuring landscape change. To this end indicators have been identified which are both measurable and significant in terms of the Lancashire landscape. These indicators allow change to be measured on a regular (5 yearly) basis to provide information on the direction and degree of landscape change. They also allow targets to be set against which the effectiveness of the Policy can be determined. Indicators and targets have been identified in relation to woodland, hedgerows and ponds.

New planting, upstream from Loyn Bridge

Woodland

2.17

Indicators:

- Area of new native woodland in Lancashire.
- Area of native woodland planted/regenerated through development.
- Area of native woodland lost through development.

TARGET:
Increasing the area of native woodland by 15% by 2016.

Hedgerows

2.18

Indicators:

- Length of hedgerows lost through development.
- Length of hedgerows planted through development.

TARGET:
No net loss of hedgerows through development.

Ponds

2.19

Indicators:

- Number of ponds created through development.
- Number of ponds lost through development.

TARGET:
Create two ponds for every pond lost through development.

Newly laid hedge

part 2: development and the lancashire landscape strategy

Landscape Type 1: Moorland Plateaux

Landscape Character Description

2.20

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.

Key Environmental Features

2.21

A perception of remoteness, isolation and wildness because of the altitude, absence of trees and settlement, as well as expansive views. This perception is evident throughout the moorland plateaux, in isolated moorland blocks as well as larger expanses. The dramatic contrast with the surrounding urban areas and intersecting industrial valleys accentuates the perception of remoteness.

Moorland plateaux- Boulsworth Hill

Unenclosed mosaic of upland habitats, including blanket bog habitat, wet heathland, dry heathland and acid grassland which together support an internationally important range of bird species.

Heather moorland and blanket bog is of international importance, supporting a specialist flora and associated fauna (including upland bird communities) and representing a habitat of which the UK has 7-13% of the global resource.

Important archaeological landscape with much prehistoric interest (burial mounds, cairns) which provides a significant archaeological and palaeo-environmental resource.

Strong cultural associations – powerful influence on and inspiration for the writing of the Brontë sisters, among others.

Distinctive landform of terraces and gritstone edges reflecting the underlying geology and process of weathering. Frost weathered crags and regoliths are prominent features.

Quarries and hushings – several natural and quarried locations are geological SSSIs. The limestone hushings are unique nationally. Historic mineral extraction sites are a feature. Restoration programmes and natural re-vegetations are progressively integrating these features with their natural surroundings.

Landscape Strategy and Recommendations for the Moorland Plateaux

2.22

Conserve the distinctive remote character of the open moor

- Severely restrict all forms of built development and mineral extraction.
- Vertical structures should be located where topography constrains views of the site, and should avoid the interruption of prominent ridge and summit skylines.
- Avoid large-scale tree planting-natural regeneration and the planting of native woodlands may occasionally be appropriate on a small-scale in the sheltered valleys or clough heads.
- Ensure that visitor facilities such as car parks, signs and interpretation boards are not located on the Moorland Plateaux and discourage vehicular access.

2.23

Conserve the valuable mosaic of moorland habitats

- Recognise and respect the special importance of the blanket bog as a habitat and a unique archaeological or palaeo-environmental resource – the peat should not be further depleted or degraded.
- Conserve remnant ancient semi-natural woodlands.
- Monitor levels of grazing so that the quality of moorland habitats is conserved.
- Prevent the encroachment of other land uses to reduce the threat of habitat fragmentation.
- Maintain a balance between bracken and acid grassland – avoid the excessive use of herbicides to control bracken where it leads to the degradation of vegetation.
- Educate visitors so that the risk of accidental fires/vandalism is reduced as the peat is particularly susceptible and would take decades to recover.

2.24

Conserve and manage archaeological sites

- Undertake more detailed survey, assessment and evaluation of the resource.
- Use the assets of the historic environment to explain the origins and development of the moorland.
- Ensure that archaeology is recorded or not disturbed in all land management proposals.

2.25

Restore eroded areas of moorland where recreation has caused degradation

- Manage recreation on the fringes of the Moorland Plateaux by deflecting pressures from the more eroded areas and restoring degraded habitats and native woodlands.

2.26

Restore gritstone quarries

- Consider opportunities for the phased restoration of gritstone quarries, recognising that they are often prominent landscape features and have an intrinsic archaeological value, and that tree planting will rarely be appropriate.
- Retain striking landscape features and maximise opportunities for ecological and historic benefits.

2.27

Restore the degraded mosaic of upland habitats

- In particular seek to restore areas of degraded blanket bog by changing grazing regimes.
- Fill in moorland drainage grips to reverse the impacts of past drainage and re-establish active blanket bogs.
- Where feasible extend the mosaic of moorland habitats downslope into the Moorland Fringes (landscape type 4) with the aim of creating a softer transition between the grazed pastures and the upland moors.

2.28

Target for the Moorland Plateau

- None applicable.

Landscape Type 2: Moorland Hills

Landscape Character Description

2.29

The rolling Moorland Hills are generally at lower elevations than the Moorland Plateaux. Although gritstone 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 conifer 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

Trough of Bowland

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 is 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.

Key Environmental Features

2.30

Exposed upland rolling landform affords long distance views across the valleys and to distant hillsides.

A sparse settlement pattern of isolated stone farmsteads (and rarely, clustered upland valley hamlets) contributes to the characteristic sense of remoteness.

Rushy and waterlogged marginal pastures provide valuable habitats for breeding wading birds.

Dry stone walls of roughly hewn blocks with 'through stones' reflect the exposed, upland setting and provide distinctive, memorable landscape patterns.

Heather-clad hillsides produce dramatic swathes of colour in the autumn.

Semi-natural clough woodlands reflect the topography and are important wildlife habitats.

Large woodland blocks, both deciduous and coniferous, provide shelter and habitats for wildlife.

Streams and brooks create the distinctive deeply incised, narrow gullies on the smooth fell sides.

Wealth of historical and archaeological interest reflects the historic evolution of the area and exploitation of its elevated profile e.g. Bronze Age tumuli on Waddington Fell.

Landscape Strategy and Recommendations for the Moorland Hills

2.31

Conserve the distinctive historic character of the open moor

- Avoid further construction of dwellings away from existing clusters of buildings in isolated hamlets and farmsteads and encourage a built form and landscape design which respects the inherent vernacular character associated with the exposed Moorland Hills.

- Encourage the sympathetic reuse and renovation of derelict or redundant historic farm buildings, giving particular emphasis to the potential impacts of new tracks and services. Consider whether such buildings might best be conserved in a derelict state.
- Restrict ribbon development and retain characteristic open spaces and mature trees within settlements.
- Buildings and walls should be of local stone (or the nearest possible match).
- Ensure proposals for woodland creation are appropriate in terms of species, scale and shape.
- Restrict the approval of further communication masts – there may be scope to amalgamate services onto a single mast.
- Tall vertical structures should be located where topography constrains views of the site and the interruption of prominent ridge and summit skylines and long distance views is minimised.
- Visitor facilities and access routes require careful siting and design, using local materials, in these sensitive landscapes.

2.32

Conserve the wealth of archaeological landscapes in the Moorland Hills

- Avoid damage to archaeological sites through recreation, agriculture and forestry – archaeological assessment prior to all forms of development should be carried out where appropriate.
- Consider the wider setting of historic or archaeological sites in all land management and site development schemes.

2.33

Retain the characteristic pattern of gritstone walls

- Restore walls, respecting local differences in style and construction.
- Give priority to stone walls which form prominent patterns in long distance views, historic boundary walls and walls alongside footpaths/roads and near farms/settlements.

2.34

Enhance the existing valuable mosaic of moorland habitats

- Reverse drainage of blanket bog by blocking existing drainage grips.
- Encourage extensive forms of agriculture, particularly in relation to grazing.

2.35

Improve the shape and structure of existing forestry plantations

- Encourage softer plantation outlines with shapes designed to integrate with local topography and with a relatively high proportion of broadleaves – this can be achieved through the Forest Plans process.
- Incorporate biodiversity objectives into the design of plantations.
- Give priority to planting which develops links to other existing woodlands.

2.36

Restore characteristic clough woodlands

- Manage existing ancient semi-natural woodlands.
- Encourage stockproofing of woodlands to allow regeneration.
- Gradually remove invasive exotic species.

- Plant new woodlands within cloughs to link existing fragmented woods and improve habitats, shelter and scenic value, avoiding valuable existing grassland habitats or flushes.

2.37

Target for the Moorland Hills

- Increase area of native woodland.

Landscape Type 3: Enclosed Uplands

Landscape Character Description

2.38

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.

Key Environmental Features

2.39

A high, exposed undulating open plateau with a distinctive pattern of enclosure.

Network of gritstone walls and historic tracks reinforces the landscape pattern and provides evidence of the extent of upland 18th and 19th Century enclosure.

Wet/rushy pasture conveys an impression of a poorly managed landscape, but may provide habitats for breeding birds.

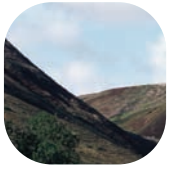
Blanket bog crowns the high summits providing landscape diversity, biodiversity and an important archaeological resource.

Abandoned coal mines with day holes and bell pits reflect the area's land use history and industrial legacy.

Quarries contribute to the character of the landscape and its hummocky, uneven landform.

Distinctive pattern of settlement at high altitude, including clusters of dwellings and short 'urban' terraces which reflect the area's industrial past as miner-farmer small holdings and squatter settlements.

Reservoirs provide water and recreational resources as well as supporting wildfowl and wader species.



Forest of Rossendale

Landscape Strategy and Recommendations for the Enclosed Uplands

2.40

Conserve the distinctive high altitude field enclosures

- Consider the management options for abandoned agricultural landholdings including allowing some areas to regenerate naturally and the management of others to promote restoration of upland habitats.
- Repair upland enclosures and stone walls giving priority to those walls which are prominent, those which are historically important, and those which continue to have a stockproofing function.
- Conserve the base course and foundation of stone walls in areas where agricultural land has been abandoned as evidence of historic moorland enclosures.

2.41

Conserve landscape features associated with historic mineral workings

- Avoid tree planting on historic mineral workings.
- Avoid re-engineering (filling in or flattening out) of spoil heaps.
- Encourage conservation and enhancement of re-colonised mineral sites which may have developed considerable biodiversity interest.

2.42

Conserve the distinctive historic settlement pattern

- Stabilise and conserve some of the abandoned farmstead ruins which represent an important part of the area's cultural history.
- Ensure new development is well integrated with the existing settlement patterns; incremental residential development and infill may be intrusive and may disrupt the distinctive pattern of isolated short terraces and clusters of buildings.
- Consider the cumulative effects of additional tall vertical structures in applications for communications masts, wind turbines and pylons.
- Discourage the proliferation of makeshift ancillary buildings associated with new residential development and small holdings.

2.43

Enhance the existing areas of blanket bog on the peat capped summits of Cribden Hill, Crawshawbooth, Lumb and Broadclough

- Promote extensive grazing regimes.
- Manage intensive recreational uses.
- Where possible raise the local water table by blocking drainage grips.
- Restrict deep excavation works, such as those required for large-scale structures such as pylons and turbines.

2.44

Enhance the abandoned quarry sites for nature conservation, recreation and heritage purposes

- Deflect visitors from dangerous, unstable parts of the quarry and from sensitive habitats and archaeological sites.
- Carry out ecological and archaeological survey before conservation/restoration proposals are formulated.
- Retain the inherent historic cultural interest of the site and the archaeological features.
- Create new habitats and retain key landscape and ecological features.
- Encourage interpretation of heritage, ecological, geological and landscape features.

2.45

Enhance the extensive interconnecting network of footpaths and packhorse trails

- Deflect recreational pressure away from sensitive upland habitats.
- Consider options for recreational use with appropriate signage and use of materials for surfacing etc.

2.46

Create broadleaved woodland on the fringes of the Enclosed Uplands

- Planting should reflect the landform and in particular avoid open upland summits.
- Where appropriate, encourage the creation of new semi-natural woodland in particular by natural regeneration of native trees in stockproofed enclosures and including vestiges of ancient semi-natural woodland. Give priority to upland oak woodland, which is a UK priority habitat.
- Encourage the regeneration of woodland along small tributary valleys and intersecting valley sides and heads that penetrate the uplands.
- Encourage woodland regeneration in areas of formerly improved agricultural land linked to new valley woodlands and avoiding areas of wildlife value.

2.47

Target for the Enclosed Uplands

- Increase area of native woodland.

Landscape Type 4: Moorland Fringe

Landscape Character Description

2.48

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.

Key Environmental Features

2.49

Dry stone walls of roughly hewn blocks with distinctive construction styles and wall copings create strong patterns within the landscape, reflect the underlying geology and are also of historical/cultural interest.

Elevated and often long distance views over the surrounding landscape from lay-bys and viewpoints.

Undulating landform with stunted hawthorns and gorsey roadsides give texture to the landscape and provide a transition between the ordered lowlands and wild uplands.

Enclosed archaeological sites, dating from the Iron Age, which survive in these marginal locations as they have not been destroyed by the intensity of activity taking place lower down in the river valleys.

Distinctive vernacular architecture of asymmetric stone dwellings housing living quarters and barns under one roof (laithe houses), stone terraced cottages and farmsteads reflect the underlying geology and provide an insight into the lifestyle of the former inhabitants.

Victorian reservoirs demonstrate the importance of the landscape for water storage as well as providing important wildfowl and wader habitats.

Small semi-natural clough woodlands are valuable ecological habitats and prominent landscape features.

Isolated farmhouses, cottages and short lines of buildings are often prominent on the steep slopes.

Landscape Strategy and Recommendations for the Moorland Fringe

2.50

Conserve the remote, multi-textured character and nature conservation interests of the Moorland Fringe

- Encourage the reversion of improved grassland within the higher enclosures to an acid grassland/heather cover – the long-term aim should be the extension of the moorland landscape downslope and reversion to a more diverse neutral grassland in lower enclosures.
- Where possible, remove invasive non-native species.
- Conserve and enhance species-rich hay meadows, wet pastures and wet flushes.
- Conserve semi-natural ancient woodlands and ensure proposals for woodland creation are appropriate in terms of species, scale and shape.

Moorland Fringe

2.51

Conserve the distinctive built character of the Moorland Fringe

- Encourage a built form which respects the simple architecture of farmsteads and cottages and reflects the characteristic settlement pattern of small, isolated clusters of dwellings and individual farmsteads.
- New built development on steep, prominent slopes should be carefully integrated into the landscape with tree planting and a network of stone walls.
- Avoid ribbon development along the steep, narrow dead-end lanes leading up to the upper slopes; it would be prominent in views to the moors and would disrupt the characteristic small-scale settlement pattern.
- Restrict new built development on the upper slopes, particularly near prominent ridge and summit skylines.
- Conserve the Victorian architecture of the reservoirs.
- The use of local building materials should be encouraged.
- Avoid small-scale 'improvements' to roads and buildings which may cumulatively have an urbanising influence, such as road widening, kerbing and road lighting.
- Seek design solutions to road safety issues which retain the character of the enclosed narrow lanes, walls and verges.

2.52

Enhance opportunities for informal recreation

- Conserve and maintain the historic network of footpaths and packhorse trails.
- Promote informal recreation through marketing, appropriate signage and good management.

2.53

Enhance the characteristic diverse landcover pattern

- Seek sustainable management options for areas of abandoned farmland to ensure that neglect does not lead to adverse change in landscape or ecological terms.

2.54

Restore local field patterns in areas where they are degraded

- Encourage the repair and restoration of stone walls, giving priority to prominent locations, such as walls alongside footpaths and those which are highly visible in gateway views.
- Use local stone and appropriate local styles of wall construction.
- Restrict commercial activities which would lead to an increase in heavy goods vehicles, such as road haulage and plant storage and therefore pressure to 'improve' lanes.

2.55

Restore and recreate valuable habitats

- Where possible, restore species-rich hay meadows, wet pastures and wet flushes using a locally native seed source.

2.56

Restore broadleaved woodland and scrub in appropriate locations at heads of valleys and near some farmsteads

- Consider the location of future planting carefully to ensure it will be well integrated with the local topography, existing landcover and field patterns.
- Ensure tree planting is associated with scrub and natural regeneration so that there is a soft transition to upland moor.
- Avoid planting in areas with important landscape features or habitats, such as unimproved grassland, landform features, striking stone wall patterns or archaeological sites.
- Manage ancient semi-natural woodland

2.57

Restore quarry sites sensitively

- Ensure quarry reclamation schemes respect the critical, prominent location in the landscape at the interface with the open moorland.
- Extensive re-engineering of landforms will generally not be appropriate.
- Seek to achieve landscape, biodiversity, archaeology and recreation objectives.

2.58

Target for the Moorland Fringe

- Increase area of native woodland.

Landscape Type 5: Undulating Lowland Farmland

Landscape Character Description

2.59

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.

Key Environmental Features

2.60

Wooded river corridors and gorges provide a sense of enclosure, sheltered habitats and distinctive patterns on the valley sides. Many are also historic sites for early water-powered industry.

Hedgerows and hedgerow trees define the field pattern in contrast with the moorland fringe farmland, where stone walls dominate over hedgerows. They also provide sheltered habitats which are important wildlife links between the wooded cloughs and outlying woodlands.

Small mixed woodlands provide important habitats and cover for wildlife and contribute to the overall appearance of a 'wooded' farmland. They reflect an important phase in landscape evolution when 19th Century estate woods and shelterbelts were developed for game shooting.

Historic villages, stone bridges and stone walls reflect the local geology; many villages are clustered at river crossing points and there is a dispersed pattern of farms and cottages on the rural roads along the valley sides.

Limestone outcrops and knolls (in some character areas) provide a sharp contrast to the gentler rolling formations of the grazing land and provide shelter for sheep. They are also important for biodiversity.

Roman remains and roads reflect the importance of the area during Roman occupation – the routes of Roman roads are visible in sections of existing roads and tracks.

Historic drove roads support woodland, scrub and tall herb strips.

Country houses and estates are important in terms of architecture and landscape design – they indicate the County's growing wealth in the 18th and 19th Centuries.

Slaidburn

Landscape Strategy and Recommendations for the Undulating Lowland Farmland

2.61

Retain the characteristic pattern of river corridor and valley side woodlands

- Encourage the natural regeneration of river corridor woodlands by excluding grazing where this does not conflict with other biodiversity interest.
- Initiate a programme for the gradual removal of conifer species where appropriate and their replacement with locally native broadleaves.
- Conserve ancient semi-natural woodlands.

2.62

Conserve the distinctive rural hedgerow network

- Encourage continued hedgerow management, re-planting gaps and planting of a new generation of hedgerow saplings to conserve the hedgerow network.

2.63

Conserve the lowland herb-rich hay meadows and unimproved neutral grasslands

- Avoid agricultural improvements and application of artificial fertilisers which decrease species diversity of these grasslands.
- Conserve species-rich grass verges and increase species diversity by management where appropriate.
- Encourage conservation management techniques, grazing and cutting regimes, which promote unimproved grassland.
- Avoid road widening, improvement works, cable and pipeline laying which would affect species-rich grass verges.

2.64

Conserve the limestone reef knolls typical of the Ribble Valley

- Encourage traditional management and conservation of limestone grassland on reef knolls.
- Enhance existing quarries by developing species-rich grassland as part of planning conditions and by undertaking a range of other habitat creation measures.
- Perpetuate groups of trees which visually mark individual reef knolls so as to minimise any adverse effects on limestone flora.

2.65

Conserve rural built features such as stone bridges, historic villages and stone walls

- Avoid road improvements which would affect the setting or structure of stone bridges or walls.

- Encourage the use of the appropriate local limestone or gritstone to ensure new buildings and materials reflect the local architecture of the area.
- Avoid using inappropriate or alien materials such as red brick and concrete tiles in historic villages.

2.66

Conserve the Roman history and industrial archaeology of the area

- Conserve Roman roads, ensuring road improvements do not obscure their continued visual presence in the landscape.
- Conserve settings of historical and archaeological features, for example the fort and Roman settlement at Ribchester.
- Conserve local features such as small farm lime kilns which signify the past use of limestone as a soil conditioner.

2.67

Conserve country houses and parkland as features of the landscape

- Conserve the settings to country houses, encouraging continued management of grounds as parkland – including planting of parkland trees.
- Ensure entrances are not affected by road alterations or built development.
- Encourage integrated management of parkland landscapes by multiple owners and discourage loss to agricultural land.
- Retain traditional parkland features such as railings, kissing gates and veteran trees.

2.68

Conserve the distinctive settings to rural settlements

- Ensure new development on the edges of villages reflects the characteristic clustered form; development should be sited to retain views to landscape features and landmarks, such as church towers on the approaches to villages.
- Avoid ribbon development which would disrupt the characteristic clustered form of settlements and the rural character of local roads.
- Maintain stone walls, which are often located on the outskirts of villages such as Slaidburn, respecting local differences in style and construction.
- Encourage tree planting as an integral part of new development, creating links with existing farm woodlands and the network of hedgerows.

2.69

Enhance the wooded character of the lowland landscape

- Promote the planting of new woodland to link existing woods and hedgerows, aiming for a continuous network of trees, hedgerows and woods where this does not conflict with other habitats of biodiversity significance.
- Encourage planting of small farm woodlands which are a feature of the lowland agricultural landscape and provide ‘stepping stones’ for wildlife between larger woodlands.
- Promote the restoration where appropriate of semi-natural habitats to increase the resource and to develop linkage and corridors for wildlife.

- Encourage use of species which are typical of the area such as lowland oak woods, alder in wetter places and ash woodland where soils are moist and/or base rich.

2.70

Restore and maintain historic rural buildings

- New built development based around the restoration of farm buildings should pay attention to the siting, scale and design of traditional rural buildings, retaining the compact form and using local materials.
- Building conversions and change of use, such as conversion of barns to residential dwellings should have regard to scale and local materials.
- Encourage the treatment of boundaries and surroundings to conversions to be in keeping with their rural setting.

2.71

Targets for the Undulating Lowland Farmland

- Increase area of native woodland.
- No net loss of hedgerows through development.

Landscape Type 6: Industrial Foothills and Valleys

Landscape Character Description

2.72

The Industrial Foothills and Valleys are complex transitional landscapes of relatively small-scale with intensive settlement. The foothills and valleys have 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 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.

Key Environmental Features

2.73

Hedgerow trees and parkland trees contribute to the well-treed character of the landscape; parkland provides opportunities for survival of specimen and veteran trees.

Semi-natural woodlands alongside watercourses are now rare and important historic landscape features as well as rich ecological habitats.

Species-rich grasslands survive locally, adding colour and biodiversity, and reflecting past land use history of small, sometimes part time farms.

Large country houses and designed parklands indicate the importance of the urban fringes as ideal locations for wealthy industrialists and provide pockets of increased species diversity.

Stone walls are an important link to past farming activities and maintain the rural essence of the area.

Older stone public buildings such as churches, halls and pubs reflect past building styles and quality.

Historic field patterns indicate past land use before the age of extensive industrialisation, urbanisation and intensive agriculture.

Mills, other industrial buildings and terraces of brick or stone reflect a strong industrial heritage associated with textile industries.

Spoil heaps, quarries and areas of reclaimed land remain as clues to the past exploitation of the land; some now support unique and other valuable habitats.

Read Village

Landscape Strategy and Recommendations for the Industrial Foothills And Valleys

2.74

Conserve valuable habitats

- Wherever possible discourage intensive agricultural practices, such as drainage and fertilisation, in areas with species-rich grasslands, hay and wet meadows.
- Conserve ancient semi-natural woodlands.

2.75

Conserve built heritage

- Identify and evaluate the resource, encouraging and making provision for the conservation of designed landscapes, buildings and their settings.

2.76

Conserve the pattern of distinctive settings to settlements

- Respect the small-scale, dispersed pattern of farmsteads and densely settled villages and maintain a clear distinction between urban fringes and rural areas.
- Restrict new development on the upper slopes of prominent hillsides.
- Maintain consistency of building materials, details and design and avoid nondescript suburban styles.
- Consider alternative designs for highway improvements which respect landscape character, aiming for a strategic approach which overcomes the cumulative impact of small-scale changes (such as highway traffic calming and lighting schemes) and incremental improvements.

2.77

Enhance the characteristic field pattern

- Encourage the restoration/repair of degraded sections of principal stone walls, giving priority to walls alongside footpaths and lanes, around settled areas and in view from the road and lane network.
- Restore hedgerows in the lower, more sheltered areas, giving priority to those which are of visual, historic or ecological importance.

2.78

Enhance opportunities for informal recreation

- Provide quality interpretation and signage which responds to local distinctiveness.
- Give careful consideration to the siting and design of car parks and visitor facilities – they should be well-screened by trees and woodlands.

2.79

Restore and enhance the existing woodland resource

- Manage and regenerate existing broadleaved woodlands.
- Augment and link existing woodlands, especially those of semi-natural origin.
- Promote shelter, screening and visual containment around settlement centres and new developments.
- Design new woodland schemes to reflect the species composition and character of existing local woodlands.
- Appropriate natural regeneration may often be more desirable than new planting.
- Reflect the historic character and design of parkland landscapes.

2.80

Restore semi-natural habitats

- Wherever possible, restore remnant species-rich grassland, hay meadows and wet meadows.
- Encourage part time farmers to take account of (and manage) the environmental features on their land when planning their farming activities.
- Encourage appropriate grazing regimes.

2.81

Create new distinctive landscapes in association with new development

- Seek opportunities for creative landscape design through new semi-natural and mixed woodland planting and habitat creation, including new greens, ponds, cycleways, avenues etc. and on land associated with existing transport corridors.
- Maximise opportunities for tree planting in association with new development and infrastructure.
- Seek opportunities for informal recreation in association with new woodland planting and habitat creation schemes and infrastructure.

2.82

Targets for the Industrial Foothills and Valleys

- Increase area of native woodland.
- No net loss of hedgerows through development.

Landscape Type 7: Farmed Ridges

Landscape Character Description

2.83

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 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 sites for reservoirs and communication masts in close proximity to urban areas.

Key Environmental Features

2.84

Rounded ridge profiles of the gritstone outcrops set them apart from the adjacent lowland agricultural landscapes and often provide important buffers between rural and urban landscapes.

Mosaic of mixed farmland and woodland forms a backdrop to the surrounding lowlands. Broadleaved woodlands on the hillsides are important visually as well as supporting valuable fern, bryophyte and bird species.

Ridge-top settlements and roads, from which there are long views over the surrounding lowlands.

Distinctive vernacular architecture including stone built villages, farmsteads and short terraces of cottages, reflect the industrial history of these areas.

In-bye pasture and hay meadows on the upper hillsides form an important element of the farmland mosaic.

Views over the surrounding lowlands from villages, footpaths, parking places and picnic sites, serve as reminders of the possible early strategic use of the ridges.

View from Millennium Footpath

Designed landscapes and country houses, some adapted for new uses, reflect the long history and suitability of the ridges for settlement.

Landscape Strategy and Recommendations for the Farmed Ridges

2.85

Conserve the character of the ridge settlements

- New development should reflect the pattern of clustered settlements of local stone buildings and short terraces to counteract the pressures for ribbon development and reflect the characteristic settlement pattern; some settlements (e.g. Mellor) are clustered but others are loose-knit, with buildings strung out along ridge top roads.
- Consider softening abrupt urban edges with woodland planting which links to the hillside woodlands.

2.86

Maintain the balance of rural landscape elements

- Resist agricultural expansion into, or close to, existing deciduous woodlands and promote their management.
- Maintain hedgerows and walls to conserve the historic field pattern.
- Encourage planting of small-scale farm woodlands which provide 'stepping stones' for wildlife between larger woodlands.
- Conserve the rural setting of individual farms by ensuring new built development does not encroach.

2.87

Conserve the hedgerow network to maintain a strong field pattern

- Manage the hedgerow network to ensure it remains intact, particularly where historic field patterns are visible.
- Wherever possible, manage hedgerows for species diversity and wildlife habitats.

2.88

Conserve the smooth, uncluttered skyline of ridges

- Minimise vertical structures on the skyline.
- Conserve views over the surrounding lowlands.

2.89

Conserve the function of the ridge as a rural buffer

- Retain the rural character of the ridge by minimising the use of urban elements such as kerbs and street lights outside settlements.

2.90

Enhance hedgerows where they appear degraded or gappy

- Plant hedgerow trees to ensure a new generation of trees replace the existing generation.
- Replant degraded sections of hedgerow which contribute significantly to the characteristic overall pattern.

2.91

Enhance settlement character

- Ensure new built development respects local materials and styles; stone built farmsteads and village buildings are characteristic.

- Enhance settings to settlements by creating attractive entrances and resisting ribbon development.
- Retain views over the lowlands which are an important historic feature of the ridge-top settlements.
- Encourage strategic tree planting as a backdrop to new development; it will form the skyline in many views.

2.92

Restore broadleaved woodlands

- Aim to extend woodlands on the ridge sides using native species.
- Encourage the planting of woodlands around settlements to provide enclosure and a rural setting to settlements.
- Give priority to the conservation and restoration of ancient semi-natural woodlands

2.93

Restore buildings and landscape features of industrial heritage and wildlife interest

- Encourage sympathetic conversion of buildings of industrial heritage.
- Retain the short terraces associated with the weaving industry.
- Conserve and enhance the nature conservation interest associated with abandoned industrial sites and structures.

2.94

Targets for the Farmed Ridges

- Increase area of native woodland.
- No net loss of hedgerows through development.

Landscape Type 8: Settled Valleys

Landscape Character Description

2.95

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.

Key Environmental Features

2.96

Deep incised valley profile with steps and terraces and deep sided cloughs reflecting the underlying geology and weathering processes.

Sense of enclosure provided by the steep-sided profile and presence of woodland, emphasising contrast with urban form.

Remnant broadleaved woodland, on the valley sides and in the side cloughs supporting important urban wildlife.

Characteristic linear pattern of terraced urban settlement on the valley floor and following the contours on the lower south facing slopes from which there are frequently views out to the woodland, pastures and the moorland edges.

Distinctive impressive stone built industrial and civic buildings of the 19th Century are the dominating elements of the built fabric.

Surviving vernacular structures such as packhorse bridges and older terraces of weavers cottages provide evidence of the important role that these valleys played in our industrial history.

Impressive feats of Victorian engineering to retain the valley sides.

Gritstone walls create a distinctive, prominent field pattern. They provide shelter and habitat for wildlife, and are also of considerable historical and cultural interest.

Settled Valleys

Landscape Strategy and Recommendations for the Settled Valleys

2.97

Conserve the distinctive character of the valley settlements

- New development should be of high density reflecting the characteristic compact, linear terraced settlement form.
- Counteract the impact of degraded urban edges with woodland planting which links to the existing valley slope woodlands.
- Encourage the use of local building materials, such as gritstone.
- Promote the conservation of and/or reuse of existing stone buildings.

2.98

Conserve and manage all existing woodlands

- Exclude grazing from clough woodlands.
- Encourage the conservation of ancient semi-natural woodlands. Where the regeneration of native species is desirable and feasible remove non-native species gradually.

2.99

Retain the characteristic pattern of gritstone walls on the valley sides

- Restore walls, respecting local differences in style and construction.
- Walls which are close to settlements, roads and public footpaths should be considered priorities for action.

2.100

Develop new opportunities for informal recreation and environmental improvements within the valleys

- Promote linear 'greenway' routes linking to the existing Irwell Valley Trail.
- Encourage measures which seek to restore or enhance river or stream networks and their habitats.

2.101

Restore broadleaved woodlands in areas where woodland cover has become denuded

- Extend and link existing woodlands along the lower hillsides and terraces to link areas of ancient woodland preserved within the deep-sided cloughs.
- Restoration should include a combination of natural regeneration and new planting.
- Give priority to woodlands around existing valley settlements to provide enclosure, particularly in areas where developments have extended up the hillsides and onto the valley terraces.
- Upland oak woodlands (recognised in the UK Biodiversity Action Plan) should also be priority for restoration/conservation.

2.102

Convert and manage buildings and landscape features of industrial heritage interest

- Support the restoration and sensitive conversion of buildings and structures of industrial heritage interest.
- Respect, conserve and enhance the nature conservation interest associated with mill lodges, races and leats.

2.103

Restore quarries

- Avoid re-engineered landforms and the use of extensive woodland belts which are rarely appropriate.
- Restore quarries which are prominent in the landscape (on the crest of the valley slopes) so that they are retained as local landscape features.
- Enhance the nature conservation and heritage value of quarries, allowing recreational uses which are sympathetic to their distinctive character.

2.104

Targets for the Settled Valleys

- Increase area of native woodland.
- No net loss of hedgerows through development.
- Create two ponds for every pond lost through development.

Landscape Type 9: Reservoir Valleys

Landscape Character Description

2.105

The Reservoir Valleys are characterised by large reservoirs constructed in the mid-late 19th 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.

Key Environmental Features

2.106

Open valley profile with gently sloping sides, influenced by glacial activity.

Dominated by numerous large reservoirs with characteristic ornate Victorian detailing. The reservoirs provide water resources and support important populations of wintering wildfowl and waders; they are also a focus for recreation.

A well-wooded landscape with broadleaved and coniferous plantations bordering and linking reservoirs. The extensive woodland creates a relatively robust landscape, able to accommodate large numbers of people.

Important semi-natural habitats, including wetlands, marginal plant communities (particularly in the draw-down zone), species-rich grasslands and hay meadows.

Remains of abandoned settlement, including farms, roads and quarries, for instance at Haslingden Grane, and general absence of modern settlement.

Evidence of historical mineral extraction in the form of mines and quarries, usually for sandstone. Many have been reclaimed and provide an important nature conservation and/or recreational resource as well as prominent landscape features.

A designed landscape at Lever Park of national historic importance.

Reservoir Valleys

Landscape Strategy and Recommendations for the Reservoir Valleys

2.107

Conserve the distinctive built character of the Reservoir Valleys

- Conserve and repair distinctive 19th Century features, such as crenellated dressed stone walls and towers.
- Conserve the historic pattern of pre-reservoir settlement and farmland on some valley slopes (e.g. Haslingden Grane).

2.108

Conserve and manage all existing woodlands

- Encourage the re-structuring of conifer plantations via the Forest Plan process (particularly in Turton-Jumbles area).
- Actively manage woodlands, replanting as appropriate to maintain well structured, diverse native woodlands.
- Remove non-native invasive species.
- Encourage natural regeneration as well as new planting, particularly in the vicinity of semi-natural ancient woodland, maintaining woodland glades where appropriate.

2.109

Conserve the important historic designed landscape at Lever Park

- Ensure new planting reflects and enhances the historic design of the park.
- Give priority to the conservation, repair and management of key landscape and architectural features, such as avenues, rides, views, bridges, cascades and embankments.

2.110

Enhance valuable wildlife habitats

- Conserve the species-rich hay meadows and pastures which are an important element alongside some reservoirs in the West Pennine Moors – management of reservoir embankments should also take account of existing or potential nature conservation interest.
- Conserve former quarries as valuable habitats – restrict planting in these areas.
- Investigate scope for manipulating water levels to maintain and create shoreline habitats – many of the reservoirs in the West Pennine Moors support important draw-down zone vegetation, including nationally important species.
- Provide artificial nesting habitats as appropriate.

  Remove non-native invasive species from key wildlife sites.
- Limit recreational disturbance at key locations for wildlife.
- Avoid creating new engineered banks, culverts and other constructed forms of water management as part of new schemes.

2.111

Enhance opportunities for informal recreation

- Maintain and repair footpaths and all visitor facilities.
- Extend footpaths along river corridors and to adjacent settlements, aiming to provide a variety of routes with access for the disabled, passive recreation and those interested in more active pursuits.
- Visitor facilities should be designed to minimise landscape impacts – they should be well screened by woodland planting.

2.112

Restore broadleaved woodland in areas where woodland cover has become denuded or highly fragmented

- Establish new semi-natural woodland in formerly wooded cloughs/gullies.
- Extend and link existing woodlands, giving priority to linking areas of ancient woodland and developing links between areas of semi-natural habitat.
- Restoration should aim at natural regeneration where appropriate.
- Encourage woodland restoration around existing buildings, campsites, picnic facilities and car parks.

2.113

Target for the Reservoir Valleys

- Increase area of native woodland.

Tarnbrook Wyre

Landscape Type 10: Wooded Rural Valleys

Landscape Character Description

2.114

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 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.

Key Environmental Features

2.115

Deeply incised, wooded cloughs create a strong pattern on the hillsides and provide sheltered habitats for wildlife.

- Upland semi-natural oak woodland which is a rare woodland type and survives in the sheltered cloughs.
- Local areas of landslip on the steep valley sides create a distinctive hummocky local topography.
- Steep landform of stepped terraces on the harder geology and steep drops where the softer shales have been eroded away.
- Waterfalls which add to the natural charm of the upper valleys.
- Herb-rich meadows and pastures and wet meadows along the valley floor are of considerable interest for nature conservation.
- Charcoal hearths, sawpits and coppice stools indicate a past history of woodland management.
- Historic mills and their associated lodges and leats which are important examples of local industrial architecture and indicate the past use of the rivers to harness power.
- Tiny valley settlements, clustered around rivers and streams, often with historic stone bridges, are contained within the steep-sided valleys.
- Occasional small reservoirs, aqueducts and gravel pits add significantly to the recreational and nature conservation value.

Landscape Strategy and Recommendations for the Wooded Rural Valleys

2.116

Conserve the secluded tranquil character of the Wooded Rural Valleys

- In general restrict development which would detract from the tranquillity of the rural valley landscape.
- New development should reflect the small-scale, clustered pattern of the existing buildings; large-scale development and standardised layouts are inappropriate.
- Ensure new buildings are well integrated with extensive broadleaved woodland or trees.
- Avoid 'urban style' lighting, construction materials and standardised details, which cumulatively can lead to the erosion of the peaceful rural landscape character.

2.117

Conserve vernacular architectural features, such as derelict mills and barns and their related landscape features

- Consider opportunities for the conversion of mills and barns to new visitor uses and rural/woodland industries.
- Aim to stabilise ruins and undertake localised woodland clearance to enhance their immediate landscape setting, as well as their contribution to the secluded 'romantic' character of the valley landscape.
- Conserve the races, mill ponds, leats and meadows which relate to the derelict mill sites, recognising and enhancing their nature conservation interests.

2.118

Conserve distinctive topographic features

- Restrict activities such as quarrying which might alter the distinctive incised ravine and gorge landform of the valleys.
- Avoid new woodland planting in areas of topographical/geological interest and consider wider views to these features when planning strategic planting schemes.

2.119

Conserve and manage existing broadleaved woodland and other semi-natural habitats

- Exclude grazing or manage grazing as appropriate.
- Gradually remove invasive non-native species.
- Conserve and manage ancient semi-natural woodlands.
- Conserve herb-rich meadows and pasture and other wet meadows.

2.120

Enhance opportunities for informal recreation

- Manage visitor access to deflect attention from the more sensitive habitats.
- Extend and manage footpaths to create an inter-connecting network.

2.121

Restore broadleaved woodland in key sites where it may be designed to enhance local landscape character

- Avoid planting near significant features, such as areas of landslip and exposed crags/edges (of visual and geological interest).
- Avoid areas of nature conservation interest e.g. species-rich grassland along the valley floor and sides.
- Aim to create an attractive balance between pasture and woodland, maximising the characteristic patchwork of light and shade.
- Give priority to planting on areas of improved pasture where woodland cover has been denuded; encourage natural regeneration, particularly in the vicinity of ancient semi-natural woodlands.

2.122

Targets for the Wooded Rural Valleys

- Increase area of native woodland.
- Create two ponds for every pond lost through development.

Landscape Type 11: Valley Floodplains

Landscape Character Description

2.123

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 communication 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.

Key Environmental Features

2.124

Open, flat floodplains subject to periodic flooding which provide fertile grazing land.

Steep wooded bluffs and terraces enclose the floodplain and provide sheltered habitats for wildlife.

Valley floodplain features such as meanders, levees, oxbows, weirs, flood defences, flax retting pools, old river channels and islands provide visual interest and variety in the floodplain landscape, as well as being of historic and nature conservation interest.

Mature spreading floodplain trees are distinctive elements of the floodplain; they provide shelter for grazing animals and are an important source of dead wood.

Settlements and stone bridges mark ancient bridging points of the river.

Numerous archaeological sites, castles and ancient settlements located along the length of the river are a testament to the use of the valleys as historic communication corridors.

Standing water and lowland bogs provide important wetland habitats.

Floodplain hay meadows and pastures which have evolved over a long period of time without much agricultural improvement and are of great value to wildlife.

Frosty morning - Crook O' Lune

Landscape Strategy and Recommendations for the Valley Floodplains

2.125

Conserve valuable floodplain habitats

- Encourage low intensity grazing in the remaining semi-natural habitats, which include mire, fen, flushes, marshy grassland and wet meadow.
- Manage riparian habitats to avoid erosion due to over-grazing, while also restricting the unchecked growth of riparian vegetation.
- Monitor levels of nutrients in river channels.
- Conserve dry grassland on bluff slopes.

2.126

Conserve a natural river form

- Avoid engineered solutions to water management, such as canalisation, bank hardening and river straightening.
- Conserve natural river floodplain features, such as meanders, oxbows, old river channels, ponds and islands.

2.127

Conserve historic and archaeological sites in the Valley Floodplains

- Avoid damage to archaeological sites through recreation, agriculture and tree planting. Archaeological assessment prior to all forms of development should be carried out where appropriate.
- Consider the setting of historic and archaeological sites when planning and implementing all landscape management action.

2.128

Enhance woodland planting on the outer fringes of the Valley Floodplains

- Consider opportunities to extend and link woodlands on the fringes of the floodplain with existing woodlands on the valley sides.
- Encourage the use of natural regeneration where appropriate.
- Avoid areas of ecological and geological interest.
- Respect the characteristic sinuous form of the floodplain bluffs and any existing floodplain fringe woodlands.

2.129

Enhance opportunities for maintaining the distinctive character of the floodplain trees

- Initiate a programme of tree planting to ensure that there is a new generation of locally native specimen floodplain trees.
- Encourage planting of native black poplar as feature trees on the floodplain from locally provenanced cuttings.

2.130

Enhance opportunities for informal recreation

- Create greenway networks along river banks which connect to urban areas.
- Ensure river bank management schemes (for habitat enhancement or water flow management) do not lead to restricted access to the river corridor.
- Manage public access to sensitive river banks and wet meadows to avoid river bank erosion due to trampling and the disturbance of key wildlife habitats.
- Provide opportunities (both physical and intellectual) to appreciate the historical and natural assets of the Valley Floodplains.

2.131

Restore wetland habitats in areas where they have been lost or degraded

- Investigate feasibility of restoring seasonal inundation to grasslands alongside water courses.
- Seek opportunities for wider wetland habitat restoration or creation on the valley floor.

2.132

Restore a natural river form in areas where it has been lost

- Seek opportunities to restore a more natural river form in areas where it has been engineered.

2.133

Ensure built development on the fringes of the floodplain is visually integrated within this rural landscape setting

- Encourage conservation of existing trees, as well as additional tree planting on the outer fringes of the floodplain. The aim should be to provide a sense of containment and a visual marker at the edge of the floodplain and some screening to soften the appearance of the built up edge.
- Localised planting of floodplain woodlands may be appropriate in some locations to screen and integrate large-scale housing, warehouse and commercial developments.
- Avoid ribbon development along transport corridors (and the floodplain) at a distance from existing settlement centres.
- Conserve long open views across and along the floodplains.
- Restore and maintain historic bridges and crossing points.

2.134

Restore sand and gravel extraction sites

- Ensure every opportunity is taken to create and manage a new range of wetland habitats to deliver biodiversity objectives.

2.135

Target for the Valley Floodplains

- Increase area of native woodland.

Landscape Type 12: Low Coastal Drumlins

Landscape Character Description

2.136

Areas of low, whaleback hills around 40m high, with broad rounded tops towards the north-west coast of the County. 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.

Key Environmental Features

2.137

Low whale-back hills – an eroded low drumlin form – surrounded by flat lowlands and shallow river valleys.

Well-managed species-rich hedgerows provide a strong field pattern and reinforce the distinctive undulating topography.

Areas of standing water with marginal fens and swamps and mosslands in lowlands between drumlins provide important wetland habitats.

Hill top copses emphasise the drumlin form and provide shelter for wildlife.

Lynchets and old field banks are a distinctive feature in some fields.

Winding country lanes provide a series of contrasting open, then enclosed views of the surrounding countryside.

Settlement is concentrated on the shallow valley slopes, above poorly-drained land; the larger towns are typically at river crossings.

Low Coastal Drumlins

Landscape Strategy and Recommendations for the Low Coastal Drumlins

2.138

Conserve the inter-drumlin wetlands

- Site sand and gravel quarries away from sensitive wetland sites.
- Avoid drainage of wetlands for built development or highway improvements.

2.139

Conserve the pattern of discrete rural settlements

- Avoid ribbon development which will lead to the amalgamation of adjacent dispersed settlements.
- Planting may help to delineate boundaries of settlements.

2.140

Conserve the hedgerow and woodland network

- Avoid further fragmentation of the hedgerow network, designing built development around the existing landscape structure and designing planting to enhance structure and wildlife habitats.
- Give priority to hedgerows which contribute to the characteristic hedgerow network and those adjacent to semi-natural grasslands.
- Avoid amalgamation of fields which will erode the strong landscape pattern.
- Conserve ancient semi-natural woodlands.

2.141

Enhance the number of rural landscape features

- Planting hedgerow trees and managing hedgerows for wildlife will enhance their status as features.
- New farm woodlands and copses should remain small in scale and enhance hill top copses as features of the landscape.
- Creation of small field ponds may add to the diversity of and enhance the nature conservation value of the landscape.

2.142

Enhance settlements

- New built development which responds to the local vernacular will enhance the character of existing settlements.
- Design cues which are taken from the historic core of settlements (rather than the enveloping new development) will be more beneficial to the settlement's overall character.
- Small-scale planting may be used to screen unsightly developments and enhance visual amenity on urban fringes.

2.143

Restore sand and gravel quarries

- Former sand and gravel quarries should be restored to a mosaic of wetland habitats.

2.144

Targets for the Low Coastal Drumlins

- Increase area of native woodland.
- No net loss of hedgerows through development.
- Create two ponds for every pond lost through development.

Landscape Type 13: Drumlin Field

Landscape Character Description

2.145

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 by 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 the 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 Gisburne Park and Hornby Park, 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.

Drumlin Field - west of the Lune at Melling

Key Environmental Features

2.146

Rounded drumlins create a distinctive undulating topography; the alignment of the drumlins reflects the direction of glacial ice flow. The lush green pasture contrasts with the colour and profile of the distant fells.

Small mixed woodlands punctuate the landscape, provide foci and give scale to the landscape.

Sheltered marshy hollows between drumlins contrast with the smooth open hilltops and provide visual texture and wetland habitats.

Strong field patterns with distinctive stone walls and hedgerows enhance landform and provide visual texture. The walls reflect the underlying solid geology.

Dispersed pattern of stone villages, hamlets and farmsteads which are sited in sheltered locations on the mid-slopes of drumlins. Larger settlements are clustered at significant road junctions or river crossings.

Historic houses and designed parkland provide visual and ecological diversity.

Landscape Strategy and Recommendations for the Drumlin Field

2.147

Conserve the character of the distinctive rolling landform

- Site vertical elements, such as communication masts and wind turbines where the undulating topography constrains views, to retain the uncluttered, open character of the landscape.
- Shelter built development within the undulating landform – avoid ridgelines or hill tops.

2.148

Conserve the character of small woodlands

- Careful visual analysis should be undertaken before extending small-scale mixed woodlands to large-scale woodlands.
- Opportunities for new planting should reflect existing scale and character, ensuring the survival of the characteristic hill top copses.

2.149

Conserve semi-natural habitats

- Conserve and restore inter-drumlin wetlands and semi-natural grasslands wherever these occur.
- Conserve and restore ancient semi-natural woodlands.

2.150

Conserve characteristic settlement patterns

- Avoid ribbon development which may detract from the characteristic dispersed pattern of groups of buildings in a rural setting.

- Ensure new development is associated with tree planting (of native trees) which links to the existing network of woods and hedgerows.
- Restrict built development on the skyline of drumlins; buildings should be sited on the mid-slopes, above poorly drained land.

2.151

Conserve historic houses and designed parkland

- Preserve the settings to country houses, encouraging continued management of grounds as parkland.
- Ensure entrances are not affected by road alterations or built development.
- Avoid loss of integrity by division into multiple ownership and retain as permanent pasture.
- Retain traditional parkland features such as railings, kissing gates and veteran trees.

2.152

Conserve field boundaries which give the landscape a strong pattern

- Maintain stone walls, particularly around clusters of buildings and settlements.
- Planting up gaps in hedgerows will enhance the hedgerow network.
- Plant hedgerow trees to promote their survival as valuable elements of the landscape.

2.153

Restore quarries to enhance landscape character

- Ensure quarry restoration has regard to landscape and biodiversity, as well as archaeological and cultural value.

2.154

Targets for the Drumlin Field

- Increase area of native woodland.
- No net loss of hedgerows through development.
- Create two ponds for every pond lost through development.

Landscape Type 14: Rolling Upland Farmland

Landscape Character Description

2.155

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 Farmland contains sites for reservoirs, wind turbines, forestry plantations and quarries.

Key Environmental Features

2.156

An intact network of drystone walls, often of limestone, creates a distinctive landscape structure and reflects the historic parliamentary enclosure of marginal land. The limestone walls are generally in good condition.

Limestone outcrops, crags and knolls occur on the exposed edges and provide a sharp contrast to the gentler rolling formations of the grazing land and provide shelter for sheep.

Lush green pastures and isolated herb-rich hay meadows and pastures provide a contrast to the muted hues of the Moorland Hills backdrop.

Winding, narrow lanes bordered by stone walls suggest a sense of enclosure in an exposed landscape.

Stunted wind-blown hawthorns and gorse on roadsides and steeper hillsides which accentuate the sense of the exposed uplands and provide important tree nesting spots for birds.

Beech stands on the steeper rocky slopes provide distinctive landmarks particularly when seen against the skyline.

Isolated stone farmsteads, stone barns and walled circular enclosures are visual features as well as being important historically and culturally; clustered stone villages are sited on south facing slopes and there are some linear settlements.

Walled lane - south west of Gisburn Forest

Landscape Strategy and Recommendations for the Rolling Upland Farmland

2.157

Conserve the character of the rural pastoral landscape

- Conserve the remaining unimproved grasslands and hay meadows by employing traditional management practices and avoiding the use of artificial fertilisers.
- Reducing existing grazing pressure will ensure pastures continue to form a contrast with the muted hues of the surrounding Moorland Hills.
- The repair of dry stone walls using traditional techniques and materials.

2.158

Conserve the rocky outcrops and limestone knolls characteristic of the landscape

- Site quarries, communication masts and wind turbines away from distinctive rocky knolls or outcrops which are visual landmarks.
- Manage limestone grasslands to meet biodiversity objectives.

2.159

Conserve stands of beech and walled enclosures

- Encourage walling around stands of beech trees to restrict grazing and allow natural regeneration of the next generation of trees.
- Maintain walled enclosures to ensure their survival.

2.160

Conserve the upland built character

- Encourage a built form which respects the grouped nature of buildings on isolated farms.
- Choice of materials is vital in this upland location; new buildings should be constructed of stone (preferably from local quarries).

2.161

Enhance the pattern of forestry

- Encourage the use of Forest Plans to minimise the impact of forest restructuring on the landscape.
- The restructuring of existing plantations should aim to create natural shapes which fit the local topography, an appropriate scale of woodland and an increase in the proportion of broadleaved species.
- Enhance and restore ancient semi-natural woodland.

2.162

Restore limestone quarries to be sympathetic to landscape character

- Quarries present an opportunity for habitat creation and management for wildlife and may provide sites of geological or visual interest.

2.163

Target for the Rolling Upland Farmland

- Increase area of native woodland.

Landscape Type 15: Coastal Plain

Landscape Character Description

2.164

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.

Key Environmental Features

2.165

Large, geometric arable fields reflecting the history of enclosure of the land and allowing long views over the landscape. This area has the highest surviving concentration of fields originating from the medieval open field system in Lancashire.

Colourful arable fields including poppies and corn marigold are important for their visual and biodiversity value and as a reflection of farming history.

Marl pit and brick pit ponds reflect past extraction of clays and provide an important wildlife habitat for aquatic plants, great crested newt and a wide range of aquatic invertebrates, including some rare species.

Historic brick built farms including highly distinctive red brick barns with ornate brickwork detailing reflect the culture and history of the working landscape.

Estate plantations, shelter belts and parkland trees provide a sense of enclosure, a backdrop to views and shelter for wildlife.

Pockets of semi-natural woodland along brooks and watercourses provide valuable shelter and habitats for wildlife (such as flocks of pink-footed geese), as well as recreational potential and links with the historic landscape.

Meandering rural lanes respond to the local landform and provide a contrast in experience from the straight lanes of the surrounding Mosslands.

A potentially rich archaeological record within the peat on the fringes of the Mosslands may provide clues as to early settlement and land use before drainage and improvement.

Coastal Plain, Burscough

Landscape Strategy and Recommendations for the Coastal Plain

2.166

- Conserve distinctive field patterns and related landscape features and landforms
- Encourage retention and enhancement of hedgerows and hedgerow trees especially in relation to hedgerows of visual, historic and wildlife importance.
- Initiate programmes of tree planting, particularly on the fringes of settlements and in locations where trees will help to screen infrastructure and other developments.
- Retain alignments of roads and tracks and restrict over-engineered alterations.
- Restrict further future landraising or other waste management developments in areas not previously affected by landfill to avoid damage to field patterns or interruptions to long views over the landscape.

2.167

Conserve remnants of former agricultural habitat mosaics

- Protect and conserve wet and other semi-natural agricultural grasslands.
- Encourage the conservation and restoration of arable field margins with traditional arable weeds.

2.168

Conserve remaining field ponds

- Restrict infilling of ponds and their loss as a result of development (through the development control process).
- Ensure new development retains field ponds and promotes their conservation as landscape features.
- Wherever possible, create new field ponds.
- Develop buffers around field ponds designed to provide terrestrial habitat and visual diversity as well as to minimise the impacts of pollution/eutrophication from agricultural run-off.

2.169

Enhance the distinctive character and landscape setting of rural settlements

- Resist infill ribbon development along open lanes
- Retain and enhance historic landscape features, including verges, hedgerows and open spaces within settlements.
- Encourage the use of local materials, particularly in older settlements.
- Encourage tree planting using native species (including black poplar of local provenance where appropriate)) within and on the fringes of rural settlements to improve views and approaches to the built edge.
- Retain existing field boundaries and use as a framework for new development.
- Avoid introduction or proliferation of suburban building styles, materials and layouts.
- Consider the landscape setting of historic buildings and restrict inappropriate new development in such areas.

2.170

Enhance the river corridor landscapes

- Encourage habitat enhancement e.g. creation of wet fringes, riverside woodlands, pools, riffles and meanders.

- Protect water courses from the impacts of eutrophication by adopting best practices for the application of agricultural fertiliser and pesticides, creating buffer zones and encouraging programmes for nutrient removal.
- Minimise the number of pollution incidents caused by a variety of built developments by developing appropriate arrangements for water catchment and run-off.

2.171

Enhance opportunities for informal recreation

- Improve access to water courses for angling and walking (including disabled access).
- Ensure development proposals protect and enhance on-site features and promote wider access to water courses.

2.172

Enhance landscapes associated with major infrastructure developments such as the M6 and M55 corridors

- Improve drainage arrangements to limit pollution and flood water retention.
- Consider tree planting in areas where it can integrate new development or infrastructure, but take care to avoid mass tree planting in characteristic open landscapes and avoid screening key views.

2.173

Restore, retain, manage and replant hedgerows and hedgerow trees

- Encourage hedgerow laying, replanting and gapping up, giving priority to those hedgerows which contribute to the overall hedgerow pattern and those which provide links between hedgerows and to semi-natural habitats.
- Encourage the use of headlands and field margins to arable fields to reduce damage by agricultural machinery.
- Where possible restore the historic structure and character of designed landscapes by encouraging parkland tree planting, boundary repair and the retention of designed features.

2.174

Restore broadleaved woodlands particularly in the vicinity of watercourses

- Encourage planting in riparian buffer zones wherever this will not conflict with access requirements for flood defence purposes or ecological interests.
- Manage grazing levels and introduce fencing to allow regeneration of existing woodlands.
- Conserve and restore ancient semi-natural woodland.

2.175

Restore completed sand and gravel workings

- Former sand and gravel workings should be restored to a mosaic of wetland habitats including appropriate informal recreation.

2.176

Targets for the Coastal Plain

- Increase area of native woodland.
- No net loss of hedgerows through development.
- Create two ponds for every pond lost through development.

Landscape Type 16: Mosslands

Landscape Character Description

2.177

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 hedges are restricted to the straight, narrow roads which cross the Mosslands and shelter belts, often of poplar or Scots 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.

Key Environmental Features

2.178

Low lying flat landscape, which provides extensive uninterrupted views for great distances.

Market gardening and arable production are highly productive and provide a pattern of colours and textures year round.

Remnant mosses and fen carr are important semi-natural wetland habitats which provide a glimpse of the landscape before it was drained and exploited for agriculture in the late 18th and 19th Centuries.

Field patterns which are distinctive and preserve the historic patterns of mossland reclamation.

Drainage ditches form an important network of semi-natural wetland habitats especially in West Lancashire.

Rural roads and tracks, which are unlit and provide clear views of the night sky in the area. Many are raised on embankments with ditches, culverts and bridges.

Farms and isolated houses at end of dead-end tracks on low sand and gravel or boulder clay ridges; loose-knit, linear settlements are strung out along embanked roads.

Potentially rich archaeological sites, which are gradually revealed as the remaining traces of peat are desiccated and blown away. The peat contains evidence of early settlement on the fringes of the Mosslands, which were exploited for reeds/rushes, grazing and fuel.

Landscape Strategy and Recommendations for the Mosslands

2.179

Conserve the distinctive character and landscape structure of the Mosslands

- Limit development in the Mosslands, particularly that which obscures views of the flat open landscape.
- Conserve woodland blocks, particularly those associated with historic landscapes.

Downholland Moss

- Maintain large geometric field patterns and avoid the amalgamation of fields.
- Counteract the impact of abrupt built edges (on low ridges) with wooded planting as buffers.
- Avoid new lighting in the landscape.
- Limit the extent of mineral and peat extraction with restoration to wetland habitats.

2.180

Conserve historic settlement patterns and building styles

- Conserve the wider landscape setting of older houses and historic halls.
- Avoid ribbon and other development which would detract from the characteristic rural settlement pattern.
- Avoid the use of incongruous building materials and building styles.
- Encourage small-scale planting in association with new development to help integrate it within the landscape, while framing the characteristic long views.

2.181

Conserve important habitats

- Conserve relict areas of mossland supporting vegetation of nature conservation value.
- Conserve the hunting grounds and nesting sites of barn owls.
- Retain roosting sites and feeding grounds, especially long grass and water habitats for bats. Special care should be taken in the conversion or renovation of farm buildings.
- Avoid the formation of habitat links between grey and red squirrel populations and manage existing woodlands to encourage red squirrels.
- Encourage management of arable field margins as refuges for scarce weed species and food sources for seed eating birds.
- Conserve the important network of drainage ditches and bank-side habitats and woodlands as semi-natural habitats.
- Encourage practices which preserve winter feeding grounds for geese and swans.
- Monitor levels of water abstraction to retain key wetland habitats.
- Monitor water quality, particularly downstream of major industry.

2.182

Enhance the character and wildlife value of watercourses and their environs

- Encourage the retention and improvement of riparian habitats, particularly in areas where water courses are intensively managed.
- Restrict surface water run-off from new developments.

- Explore options for introducing meanders, ox-bows, reed beds and other areas of open water and riparian buffer zones to maximise habitat value and minimise the impacts of water borne pollutants.

2.183

Enhance the character and landscape setting of settlements

- Careful siting, design and the use of local materials is essential in this open, flat landscape where most development is likely to be prominent.
- Encourage natural regeneration and discourage the use of non-native species in hedges and on the edges of settlements.
- Limit tree planting to areas where there is established tree cover.
- Site vertical structures where the screening effects of existing shelter belts and buildings minimises their impact on long distance views.

2.184

Restore the relict mosslands

- Raise local water tables and seal the margins of the remaining relict mosslands by blocking existing drainage channels.

2.185

Target for the Mosslands

- Create two ponds for every pond lost through development.

Landscape Type 17: Enclosed Coastal Marsh

Landscape Character Description

2.186

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 saltmarsh 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 intensive areas of wetland support a rich wildlife.

Key Environmental Features

2.187

Level, expansive tracts of large-scale farmland with a geometric field pattern allow long views to distant land marks.

Drainage ditches are important semi-natural wetland habitats in a man-made environment.

Sea dykes support a more diverse and natural land cover, including species-rich grassland and gorse scrub. Banks, ditches and boundaries preserve the historic sequence of coastal reclamation and corresponding changes in drainage technology.

Areas of open water and flooded grasslands provide valuable wetland habitats and a feeding ground for geese and other birds.

Coastal grazing marsh provides important feeding grounds for wintering geese, swans and waders and for rare upper saltmarsh plant communities.

Remnant areas of marsh are important refuges for local wildlife.

Areas of raised land resulting from landfilling activities form areas of high ground which may resemble coastal cliffs.

Hesketh New Marsh

Landscape Strategy and Recommendations for the Enclosed Coastal Marsh

2.188

Conserve the expansive landscape and remote character of the Enclosed Coastal Marsh

- Conserve the dead-end lanes which restrict through traffic.
- Resist infill ribbon development alongside open lanes.
- Conserve the characteristic long views to the Ribble Estuary from the farmland inland by siting infrastructure development such as pylons, turbines and masts where existing screening from shelter belts and buildings interrupts views, and by resisting further future landraising proposals in areas previously affected by waste management developments.
- Conserve the historic pattern of coastal reclamation sea dykes and defences.

2.189

Conserve valuable wetland habitats

- Restrict the drainage of adjacent farmland.
- Create buffer zones to minimise the impacts of water borne pollutants on wetlands.
- Encourage the management of dykes and ditches for nature conservation, as well as water management.
- Monitor water quality to ensure that all new developments meet water quality standards.
- Avoid further reclamation of remnant areas of marsh by landfilling and landraising and avoid ecologically insensitive flood defence works.

2.190

Enhance opportunities for informal recreation

- Encourage the development of connecting footpaths and cycleways which link the Estuary to settlements inland and complete the remaining sections of the Lancashire Coastal Way.
- Provide interpretation facilities.
- Deflect visitors from the more sensitive wetland habitats.

2.191

Restore wetland habitats and species

- Promote the restoration of marshes from reclaimed land where possible to enhance wildlife value.
- Encourage planting of native black poplar from locally provenanced cuttings.

2.192

Target for the Enclosed Coastal Marsh

- Create two ponds for every pond lost through development.

Warton Sands, south of Silverdale

Landscape Type 18: Open Coastal Marsh

Landscape Character Description

2.193

Saltmarshes 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.

Key Environmental Features

2.194

Valuable saltmarsh habitats which provide relatively undisturbed habitats for numerous wetland flora and fauna. The remaining ungrazed marshes (restricted to the Wyre Estuary) are particularly attractive and valuable in ecological terms. The saltmarshes of Morecambe Bay are some of the most important examples of this habitat in Britain.

Maze of creeks, channels, gutters, drainage ditches and brackish pools which etch a distinctive pattern in the surface of the marsh and which are important semi-natural habitats.

Coastal clay cliffs adjoining the open marsh support a rich assemblage of wild flowers.

Historic roads/tracks and bridges allowing access to the sea, which indicates the progressive drainage and settlement of the area, and evidence of important coastal industries, such as the brine wells to the west of Pilling.

Relict land uses including ruined sea walls, lines of stakes marking successive retreats of sea defences, landing jetties, salt evaporation pans, fisheries, ferry points, dry docks and quays.

Expansive sandbanks, mudflats and shallow waters provide habitats for a range of worms, crustaceans and shellfish, as well as an ideal spawning and nursery area for fish and even basking sharks.

Bird life brings movement – the area is important as a feeding ground for geese, swans, ducks and waders and the saltmarshes are a vital link for migrating birds.

Landscape Strategy and Recommendations for the Open Coastal Marsh

2.195

Conserve valuable wildlife habitats

- Monitor and control levels of grazing on the Morecambe Bay saltmarshes.
- Monitor and control discharges from local water courses to ensure the risk of contamination and eutrophication is minimised.
- Avoid further reclamation by landfilling, landraising and other activities.
- Avoid further enclosures of saltmarsh and ecologically insensitive flood defence works.
- Conserve the plant communities on coastal clay cliffs.
- Manage ditches and drainage channels to maximise wildlife benefits and maintain an appropriate balance between freshwater and saltwater.

2.196

Conserve the expansive landscape and tranquillity of the Open Coastal Marsh

- Keep built development and infrastructure to an absolute minimum.
- Any built structure should be constructed to minimise visual impact in views across the marsh.

2.197

Enhance coastal defences

- Manage the use of coastal defences for informal recreation which is compatible with wildlife conservation interest.
- Wherever possible, consider 'soft' engineering options which will maximise benefits to wildlife habitats.

2.198

Enhance opportunities for informal recreation

- Improve interpretation facilities in relation to wildlife, natural and historic features, including the history of successive reclamation and coastal defences.

- Ensure boardwalks and signed trails provide access to circular routes while avoiding the risk of erosion.
- Deflect visitor pressure from the more sensitive nature conservation sites.
- Site car parks away from sensitive coastal marsh habitats.

2.199

Target for the Open Coastal Marsh

- None applicable.

Landscape Type 19: Coastal Dunes

Landscape Character Description

2.200

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. Annes 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.

Key Environmental Features

2.201

Hummocky landform provides sheltered hollows and microclimatic zones within its core.

Windswept grassland and bare sand which conveys a sense of exposure to coastal elements and allows unobscured views out to sea.

Valuable habitats, including dune slacks, dune heath, shingle and sandy shingle, all of which are recognised as a priority for conservation in the UK Biodiversity Action Plan.

Potential archaeological sites in areas where evidence of human activity is buried beneath shifting dunes – and in the inter-tidal area.

St. Annes Dunes are a remnant of a largely natural landscape type, rare in terms of the limited extent of human modification.

Sand dunes at Lytham St Annes

Landscape Strategy and Recommendations for the Coastal Dunes

2.202

Conserve dune systems

- Avoid further fragmentation by development including golf courses.
- Maintain the role of natural coastal processes in coastal defence.
- Monitor the area of sand dunes and rates of accretion/erosion of sand especially in relation to storms, sand extraction and the impact of constructed defence schemes elsewhere on the coast.

2.203

Conserve natural sand dune vegetation

- Restrict vehicular access.
- Minimise the potential for erosion by trampling, grazing or mowing.
- Restrict invasion by sea buckthorn, gorse, birch and pine.
- Manage the dune habitats to meet biodiversity objectives.

2.204

Enhance opportunities for informal recreation

- Design visitor facilities to minimise landscape impacts and ensure they are sited well inland from sensitive dune systems.
- Provide boardwalks to give access to the dunes without risking damage by erosion.
- Monitor and control levels of litter and fly-tipping.

2.205

Restore natural dune grasses in areas where they have become degraded

- Fence off areas suitable for restoration of sand dune vegetation so that there is minimal risk of trampling while the grasses become established.
- Restore/create dune slack habitat.

2.206

Target for the Coastal Dunes

- None applicable.

Landscape Type 20: Wooded Limestone Hills and Pavements

Landscape Character Description

2.207

The Wooded Limestone Hills and Pavements are 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

Wooded Limestone Hills

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.

Key Environmental Features

2.208

Semi-natural broadleaved woodlands and yew woodlands (many of them SSSIs) are highly valued for their cultural and conservation interest. Yew provides winter colour and contrast with the native ash woodlands, ancient examples of which contain small leaved lime and show evidence of former coppicing.

Species rich semi-natural calcareous grasslands are of particular importance for rare flora and insects, particularly butterflies.

Rocky outcrops, limestone scars and limestone pavements provide microclimates for rare plants. The Morecambe Bay Pavements (e.g. Gait Barrows NNR) are classified as a Special Area of Conservation.

Abandoned limestone quarries, ironstone and copper mines colonised by vegetation are often valuable habitats for wildlife or used for recreation.

Lime kilns reflect the processing of lime for limewash, plaster and later as a soil conditioner and are features in the landscape.

Wetlands including pools, reed beds (Leighton Moss) and a marl lake (Hawes Water) provide contrast to the dry hills and support nationally rare birds including bittern, marsh harrier and bearded tit.

Dry stone walls are a distinctive silver colour and well maintained – they are visually attractive and provide ecological and cultural interest.

Semi-natural broadleaved woodlands (including coppiced woodlands) shelter wildlife and are valued for their cultural and conservation interest.

Visible historic features, such as the hill fort at Warton Crag, industrial archaeology, areas of parkland and historic field patterns are of cultural interest. Parkland landscapes include valuable habitats for veteran trees.

Landscape Strategy and Recommendations for the Wooded Limestone Hills and Pavements

2.209

Conserve the diverse mosaic of habitats

- Discourage the conversion of unimproved grazing to improved pasture and amenity grassland in order to maintain bio-diversity, particularly of the limestone grasslands, and prevent run-off into adjacent areas.

- Discourage the drainage of wetland habitats and encourage the restoration and management of such features.
- Resist amalgamation of farms to conserve the scale of buildings and pastures.
- Avoid intensification of farming in specific areas and decline in others which would alter the balance, colour and texture of landcover and landscape elements.
- Conserve the integrity of all limestone pavements and other outcrops.

2.210

Conserve landscape condition and natural beauty

- Promote the conservation and maintenance of hedgerows and walls, encouraging permanent agricultural workforce who undertake routine maintenance.
- Control erosion of sensitive landscapes, using signs and careful location of car parks/visitor facilities to direct visitors away from sensitive habitats.
- Visitor facilities and car parks should pay particular attention to siting and design, using local materials and avoiding urbanising elements.

2.211

Conserve traditional management techniques

- Encourage management of diverse grassland meadows for hay crops rather than intensive silage production.
- Encourage conservation woodland management practices such as coppicing and pollarding.
- Encourage appropriate grazing management.

2.212

Conserve the character of the woodland and farmed landscapes

- Conserve ancient semi-natural woodlands and encourage the management of small farm woodlands, giving priority to woodlands and hedgerows which provide links between semi-natural habitats.
- Control the rise in horse paddocks and try to maintain historic field boundaries rather than post and rail fences which are incongruous elements.

2.213

Conserve the traditional farming landscape

- Support new and existing rural enterprises, particularly where these promote the continued viability of farms, that are in keeping with landscape character and quality, and are of particular benefit to the local economy.

2.214

Characteristic wooded landscapes

- Give priority to the conservation and enhancement of ancient semi-natural woodlands.

2.215

Restore landscape condition

- Encourage the restoration of hedgerows and walls where they have been removed, and promote the conservation and restoration of ancient field patterns.

2.216

Restore redundant buildings

- Encourage sympathetic new uses for historic farm buildings, paying particular attention to the scale, character and use of materials of existing farm buildings.

2.217

Restore redundant quarries

- Manage redundant quarries in a sympathetic manner, having regard to their visual, wildlife, recreational, geological and historic interest. Many quarries present an opportunity for habitat creation, management for wildlife and for interpretation of historic and natural features.

2.218

Targets for the Wooded Limestone Hills and Pavements

- Increase area of native woodland.
- No net loss of hedgerows through development.
- Create two ponds for every pond lost through development.

Warton Crag

Landscape Type 21: Limestone Fells

Landscape Character Description

2.219

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.

Key Environmental Features

2.220

Upland limestone fells support important semi-natural grassland plant communities.

Underground cave systems provide geological interest and attract cavers and potholers to the area.

Ancient semi-natural woodland within gills and on steeper slopes are important for uncommon plants.

Heather-clad hillsides produce dramatic swathes of colour in late summer.

Limestone pavements provide sheltered environments for rare plants and ferns.

Dry stone walls and field barns reflect the exposed, upland setting and underlying geology and provide distinctive, memorable landscape patterns.

Long straight enclosure walls of later 18th or early 19th Century date, reflecting past land management of the high fells.

Landscape Strategy and Recommendations for the Limestone Fells

2.221

Conserve the distinctive limestone features of the open fells

- Manage access to avoid damage to sensitive habitats e.g. limestone cliffs, screes and pavements.
- Encourage maintenance of limestone walls and field barns to retain the historic field patterns of the fells.

2.222

Conserve the remote character of the fells

- Opportunities for wind turbine and communication mast developments are extremely limited in this sensitive landscape. Vertical structures should be located where topography constrains views and interruption of prominent skylines is avoided.
- Any proposals for future visitor facilities require careful siting and design – using local materials – in this sensitive landscape.

2.223

Conserve characteristic clough woodlands

- Manage ancient semi-natural woodlands.
- Stockproof and manage grazing in remaining broadleaved woodland to allow natural regeneration.

2.224

Enhance the existing valuable mosaic of upland habitats

- Manage heather moorland to encourage heather regeneration.

2.225

Target for the Limestone Fells

- Increase area of native woodland.

Limestone outcrop, Leck Fell

Urban Landscape Types
Historic Core

Urban Landscape Character

2.226

Today the Historic Core is typically a relatively small, characterful area at the heart of Lancashire's larger settlements. An historic church and market place are often sited at the central convergence point of the principal radial routes. Most Historic Core has 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 Core is the organic, winding arrangement of streets and alleys and the distinctive character of historic public buildings.

Preston Flag Market

Industrial Age (1800-1930)

Urban Landscape Character

2.227

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.

2.228

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.

Back yards, Colne

Suburban (1930 onwards)

Urban Landscape Character

2.229

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.

2.230

Early suburban housing (1930 to 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 1960s 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.

2.231

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. Further guidance on maintaining urban character is provided in Section 4 (4.26 to 4.27)

Suburbs, South Lancaster

protecting the natural and manmade heritage

policy 21

LANCASHIRE'S NATURAL AND MAN-MADE HERITAGE

LANCASHIRE'S NATURAL AND MAN-MADE HERITAGE WILL BE PROTECTED FROM LOSS OR DAMAGE ACCORDING TO THE HIERARCHY OF DESIGNATIONS OF INTERNATIONAL, NATIONAL, REGIONAL, COUNTY AND LOCAL IMPORTANCE. THE STRONGEST LEVELS OF PROTECTION WILL BE AFFORDED TO THOSE HERITAGE RESOURCES OF INTERNATIONAL AND NATIONAL IMPORTANCE.

SITES, AREAS, FEATURES AND SPECIES OF HERITAGE IMPORTANCE WILL BE CONSERVED AND, IN APPROPRIATE CIRCUMSTANCES, ENHANCED AND RE-ESTABLISHED TAKING ACCOUNT OF:

(a) THEIR RARITY, VULNERABILITY, ANTIQUITY OR COMPLEXITY;

(b) THEIR CONTRIBUTION TO THE COUNTYWIDE NETWORK OF SITES AND FEATURES, TO THE CHARACTER OF THEIR LOCATION AND SETTING AND TO NATIONAL AND COUNTY BIODIVERSITY AND THE LIKELY IMPLICATIONS OF CLIMATE CHANGE ON HERITAGE ASSETS;

(c) POSITIVE OPPORTUNITIES AFFORDED BY DEVELOPMENT FOR THE CONSERVATION, MANAGEMENT OR ENHANCEMENT OF HERITAGE RESOURCES.

WHERE, IN EXCEPTIONAL CIRCUMSTANCES, UNAVOIDABLE LOSS OR DAMAGE TO A FEATURE OR ITS SETTING IS LIKELY AS A RESULT OF A PROPOSED DEVELOPMENT, MEASURES OF MITIGATION AND COMPENSATION WILL BE REQUIRED TO ENSURE THERE IS, AS A MINIMUM, NO NET LOSS OF HERITAGE VALUE. SUCH MEASURES MAY INCLUDE THE CREATION OF APPROPRIATE NEW HERITAGE RESOURCES, ON OR OFF-SITE.

Some general principles – the 'as a minimum no net loss' approach

3.1

The underlying principle of Structure Plan Policy 21 is to protect and enrich Lancashire's overall heritage resource. The policy approach of 'as a minimum no net loss' in the value of natural and man-made heritage assets recognises that whilst change and new development are both inevitable and desirable, this should not be at the expense of the County's environmental heritage. This approach should not be seen as a constraint but as offering the opportunity, through appropriate and well-designed development, to enhance the existing capital of natural and man-made heritage. The policy and this central principle are supported and explained by the following guiding principles.

Bowland Fells

A Hierarchy of Designations

3.2

The 'as a minimum no net loss' policy approach does not mean protecting every site or feature in situ, although there will be a strong presumption against development adversely affecting sites or areas of national and international importance or their settings. An important measure of the degree of protection afforded to a heritage asset will be its position within the hierarchy of designations comprising, in descending order, sites or features of international, national, regional, county, and local importance, with the first-named assigned the greatest level of protection. The hierarchies of designations relevant to historic and nature conservation sites are shown below in Sections 4.10 and Figure 5.1.

Irreplaceability

3.3

Every effort should be made to avoid loss or damage to sites or features of significant heritage value that are irreplaceable, that is, they cannot for practical purposes be replaced or re-created. Such 'critical environmental capital' includes all sites or features of national or international importance, and also sites or features of regional/county importance whose loss would be significant beyond the immediate locality and would be difficult or impossible to replace for practical purposes. In the case of the natural environment, such sites of importance at the regional/county level have already been identified in Lancashire as Biological or Geological Heritage Sites (see Sections 5.3 and 5.4). No parallel assessment of sites at the regional/county level has presently been carried out for the historic environment apart from the designation of Conservation Areas, and sites are assessed on their individual merits as and when the need arises (see Section 4.13).

Information-based Decisions

3.4

It is good practice to identify all issues affecting a proposed development at the earliest possible stage. The presence of a designated site or a protected species, for example, can have considerable implications for a development. It is equally important that decisions about development proposals that are likely to affect environmental assets are made on the basis of objective information about those assets, and on a clear understanding of the likely impact of development upon them. This will involve consulting the relevant existing site-based records and may also involve surveys of specific sites or features in the field if adequate data is to be obtained. Account should also be taken of views on the relative value of particular heritage assets expressed by the local community.

3.5

Specialist archaeological services, including advice on planning applications and the management of relevant databases, are presently provided for all District Councils and Unitary Authorities in Lancashire by Lancashire County Council. A similar service in relation to ecology is provided for the Unitary Authorities and some District Councils. Most of these services are the subject of a service level agreement that is reviewed annually.

Networks and Setting

3.6

The importance of an individual site or feature may be greatly enhanced by its setting, or by its proximity to or association with related sites or features. In some cases this will include the wider landscape or townscape setting, for example, the extensive medieval field system associated with a village or farmstead, a network of small woodlands linked by hedges, a mill with adjacent workers' housing or the wider rural setting of a historic house and its parkland. Development proposals should aim to maintain this continuity and the integrity of historical or ecological networks and linkages.

Positive Opportunities

3.7

The statutory planning system provides many opportunities for the conservation and enhancement of the natural and historic environment. Equally, the appropriate management of these heritage assets can contribute directly towards the quality and success of the development. Development proposals that include positive land-use proposals to conserve and enhance heritage assets or, where appropriate, extend public access to them, and to deliver UK and Lancashire Biodiversity Action Plan objectives, will be encouraged.

Avoidance, Mitigation and Compensation

3.8

Every effort should be made to avoid damage to heritage resources and their settings, particularly where the resource is irreplaceable. Damage to a heritage site, area, feature or species can usually be avoided by the careful location or sensitive design of a proposed development.

3.9

Policy 21 acknowledges that development that would damage a heritage site or feature, may exceptionally be allowed because of other overriding considerations in the public interest. These considerations relate to the need for the development and whether there are alternatives to the proposal. Alternatives include a reduction in scale or redesign of the development, and whether it can be accommodated on a suitable site elsewhere.

3.10

Where avoidance is impossible or impracticable, development proposals should include measures to mitigate damage to the heritage resource. These may include measures to relocate all or part of the resource, to restrict the timing of development operations, to control working methods, and to protect features to be retained.

3.11

Mitigation measures will be required to demonstrate as a minimum no net loss of any heritage asset. Where it is impossible to mitigate the impacts of the development, or only partial mitigation is possible, compensation will be required through the provision of appropriate assets elsewhere which are at least equivalent to the potential loss. In order to ensure the permanent success of any mitigation or compensation measures it will essential for the long-term management of these measures to be secured by planning conditions or legal agreements. Compensation may include the provision of educational or interpretative material and, in the case of archaeological

Bird's-eye primrose, a Nationally Scarce plant and a Lancashire BAP species

resources, compensation may include excavation, recording and publication of the resource. Government guidance (for example PPG16 Paragraph 25) indicates that the mere provision of such mitigation will not be sufficient justification for planning permission to be granted.

Enhancement and Re-establishment

3.12

'Appropriate' enhancement, re-establishment or creation of heritage sites or features in the context of the 'as a minimum no net loss' approach means that such measures should be sympathetic to the positive aspects of the character, location and setting, and to the condition of existing heritage resources present, and to the existing or proposed use of the land in question. Certain types of habitat, in particular, may be satisfactorily re-created, but the creation of new features should not be to the detriment of existing resources of heritage value. For example, care should be taken to ensure that new woodland planting does not damage or destroy non-woodland habitats of equal or greater heritage value already on the site. Strictly speaking, historical features cannot be re-created in the same sense, but enhancement may well be feasible as, for example, where the original fenestration is restored to a building of historic value that has previously undergone unsympathetic modernisation.

3.13

Indicators and Targets

Policy 21 is based on the principle of, 'as a minimum no net loss' of heritage assets, which is taken to include enhancement or re-establishment in appropriate situations. The indicators below are a measure of performance against the policy which relate the as a minimum no net loss approach specifically to the statutory planning system.

Indicators:

- Proportion of Local Plans containing policies consistent with the 'as a minimum no net loss' approach.
- Proportion of local authorities that have measures in place to identify and review heritage resources to which policies apply.
- Proportion of planning permissions conforming to the 'as a minimum no net loss' approach.
- Percentage of planning permissions affecting heritage features with conditions and/or management agreements promoting the conservation and/or enhancement of the interest.

Target: No net loss of heritage assets, networks or settings.

India Mill Chimney, Darwen

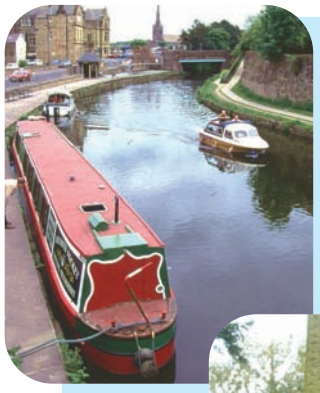
lancashire's historic environment

Background

What is the Historic Environment?

4.1

Lancashire has been shaped and modified by humans over the past 10,000 years. The history of the last Millennium is evident in the character of the County's historic towns, villages and farmland. It includes individual buildings, (both those traditionally perceived as 'historic' and those relating to the County's industrial past), and archaeological sites, which may range from extensive prehistoric earthworks to the location of a single lost artefact. Listed Buildings and Scheduled Monuments include those buildings and structures which are recognised to be of national significance; whilst many other buildings and archaeological sites of regional/county/local significance are recorded on the Lancashire Sites and Monuments Record. The historic environment also includes discrete and recognisable historic areas, such as village centres, town neighbourhoods or ornamental parks and gardens, many of which may be designated as Conservation Areas or Registered Parks and Gardens of Special Historic Interest. These assets are summarised below:

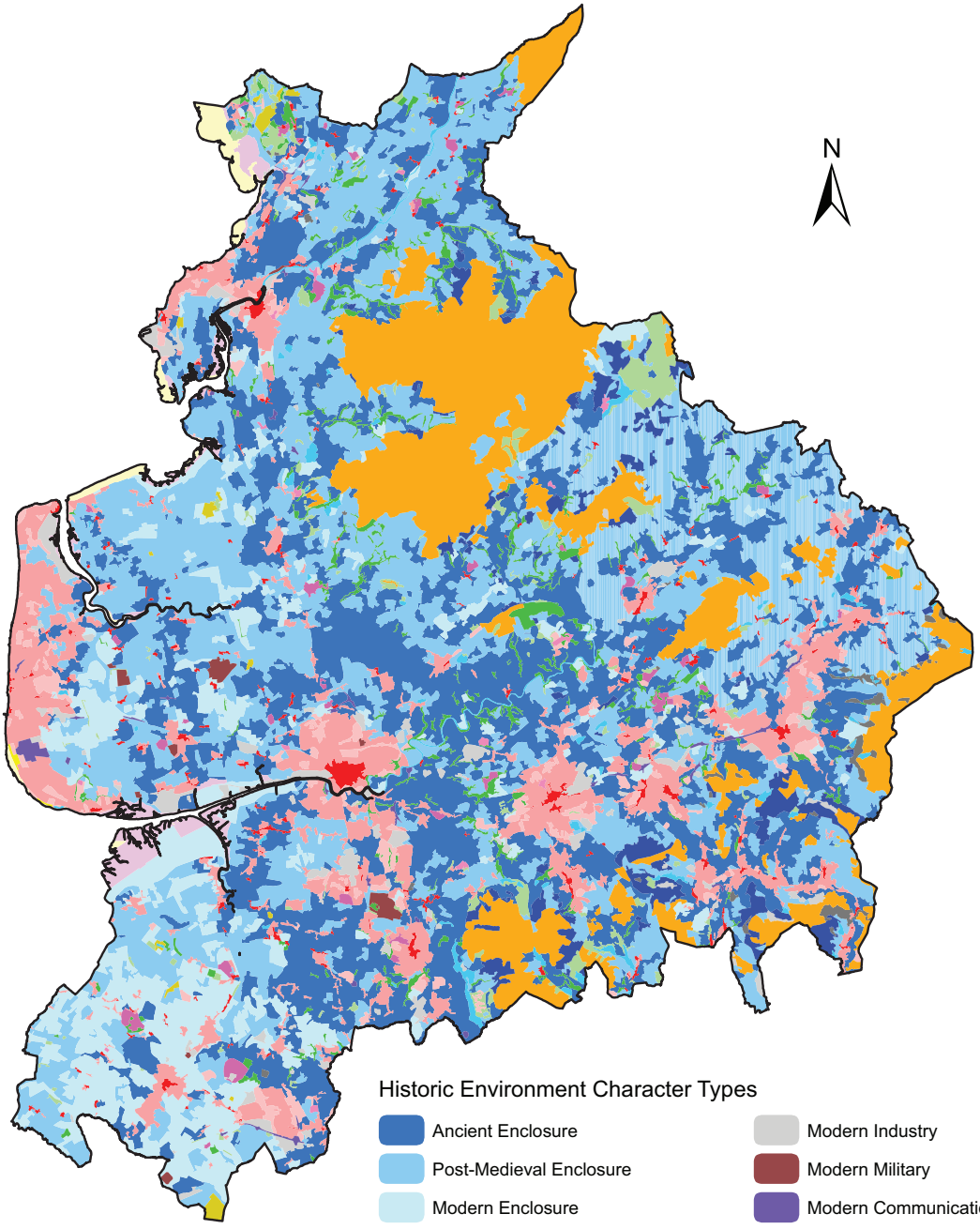


Lancaster Canal

The Sigurd Cross, Halton

Designation	Grade/period	Number
Listed Buildings	Grade I	69
	Grade II*	250
	Grade II	5026
Conservation Areas	———	185
Registered Parks and Gardens	Grade II*	2
	Grade II	29
Scheduled Monuments	———	135
Known Archaeological Sites	Prehistoric	589
	Roman	614
	Early medieval	70
	Medieval	1157
	Post-medieval	15854
	Multi-period	757
	Unknown date	2485

map 7: historic environment character types



Historic Environment Character Types

- Ancient Enclosure
- Post-Medieval Enclosure
- Modern Enclosure
- Ancient and Post-Medieval Woodland
- 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
- Coastal Rough Ground
- Saltmarsh
- Dunes
- Sand and Mudflats
- Joint Structure Plan Area

5 0 5 10 15 Kilometres

Sources: Lancashire County Council 2001
Ordnance Survey 2001

4.2

There is also an historic dimension to the wider landscape of Lancashire's towns and countryside: the differing patterns and types of field boundaries, the arrangement of roads and footpaths and the distribution of settlement and land use are all the construction of humans in the past. Even aspects of the landscape which are thought of as natural, or 'wild' – ancient woodland, saltmarsh or upland moors and fells – have been influenced and dramatically changed since prehistoric times by our ancestors. This historic dimension to the whole landscape (as opposed to individual assets within it) has been mapped as part of the Lancashire Historic Landscape Characterisation Programme and the Lancashire Historic Towns Survey. These record the distinctive, historic dimension of today's urban and rural environment in Lancashire (J. Ede and J. Darlington The **Lancashire Historic Landscape Characterisation Programme** Lancashire County Council 2002). The result of the Historic Landscape Characterisation Survey has been the identification of historic environment character types that survive today (Map 7). Equally the Historic Towns Survey is identifying **urban environment character types** within the surveyed towns and will result in the production of a strategic framework for the management of the urban environment. Policies for the protection of landscape character, including its historic dimension, are covered by Policy 20, and in Section 2 of this SPG.

Why is the Historic Environment Important?

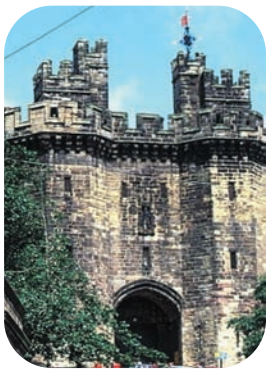
4.3

Lancashire's historic assets are valuable and significant, both in themselves and for their contribution towards education, recreation and the economic life of the County, and the quality of life enjoyed by both residents and visitors. The historic environment is part of the fabric of everyday life. It is also part of a common inheritance – the material legacy of the achievements and aspirations of earlier communities. An awareness of the past gives people and places an identity and significance. The imprint of human history gives localities their distinctive character and marks their individuality, as neighbourhoods and as part of the wider countryside. It also has a real economic benefit, especially in terms of heritage-led regeneration, leisure and tourism.

4.4

However, the historic environment also represents a non-renewable resource that is often very susceptible to damage, destruction or the erosion of character.

Milestone, Tunstall and 17th Century datestone, Whittington



Lancaster Castle

Accrington, 1961

There are many threats, including urban and rural development, road and pipeline construction, abandonment and neglect, mineral extraction, forestry and agriculture, so protection and enhancement, balanced against the need for sustainable economic growth and development, is paramount. Development also brings with it many opportunities both for the historic environment to provide real economic benefits to regeneration proposals and for development to enhance individual sites and local character.

4.5

Local Authorities have a responsibility to safeguard the historic environment (see Section 4.7) in order that existing and future generations may enjoy the rich variety and diversity of an area's heritage. The Joint Structure Plan Authorities seek to establish a sustainable approach to managing change in the historic environment. The Joint Authorities believe that historic assets, areas and their settings remains should not be needlessly destroyed and therefore take an active role in their management, conservation and recording through the planning process.

Planning Framework

National and Regional Policy

4.6

A small proportion of historic buildings and archaeological sites have statutory protection either as Listed Buildings under the Planning (Listed Buildings and Conservation Areas) Act 1990 or as Scheduled Monuments under the Ancient Monuments and Ancient Areas Act 1979. Area-based protection is confined to the designation and controls provided under the designation of Conservation Areas.

4.7

The remaining historic buildings, sites, areas and landscapes are dealt with on their merits following government advice in the form of Planning Policy Guidance 15 Planning and the Historic Environment (DoE/DoNH 1994) and 16 Archaeology and Planning (DoE 1990). That advice is supported by policies relating to historic buildings, archaeology, historic landscapes and development within the North West Regional Spatial Strategy.

Structure Plan Policy

4.8

In addition to Policies 20 and 21 other policies, such as that on housing, also incorporate guidance concerning the management of change within the historic environment. In particular Policy 13 recommends that area based appraisals should be implemented when substantive proposals for renewal are under consideration. Such appraisal should inform the weighting given between housing refurbishment and clearance. Guidance is also given on the need to retain urban character in new development on cleared sites.

Guidance

4.9

This guidance is split into two parts. The first expands on the guiding principles underpinning the 'as a minimum no net loss' approach, insofar as these apply specifically to the historic environment. The second gives more detailed guidance on procedures and good practice in relation to listed and historic buildings, scheduled ancient monuments, archaeological sites, and on the maintenance of urban character.

Part 1: The 'as a minimum no net loss' approach

The Hierarchy of Designations

4.10

One measure of the degree of protection afforded to a heritage asset will be its position within the hierarchy of designations: the greatest protection assigned, in descending order, to sites or features of national, regional, county and local importance. In terms of historical environment assets the hierarchy is as follows:

Hierarchy	Asset type
National importance:	Scheduled Monuments (SM) Listed Buildings (Grade I, II* and II) Parks and Gardens of Special Historic Interest (Grade I, II* and II) Nationally Important Archaeological Remains (undesignated)
Regional and County importance:	Conservation Areas Sites of Archaeological Interest (undesignated) Important hedgerows (defined by the Hedgerow Regulations 1997)
Local importance:	Designations of local value identified in District Local Plans

Other Sites and Features of National Importance

4.11

Not all historic buildings, sites or areas of national significance have been afforded the formal protection of designation. The historic building stock is continually being appraised by English Heritage's thematic listing programme, and individual structures may be added to the list through the process of 'spot-listing'. Similar mechanisms are in place for the identification and assessment of Conservation Areas and Registered Parks and Gardens.

4.12

Sites of national importance to archaeology include those that are scheduled as monuments under the Ancient Monuments and Archaeological Areas Act 1979 and nationally important unscheduled monuments. This distinction reflects the fact that not all nationally important remains will necessarily be scheduled (see PPG16 paragraph 16), and that a significant number of potentially schedulable monuments have yet to be assessed through English Heritage's monument protection programme. In these instances the differentiation between nationally important sites of archaeological interest and those that are of regional or county importance is made on an assessment of individual sites' merits on a case-by-case basis.

4.13

As a guide to the relative importance that would be accorded to an undesignated site or feature in the event of a development proposal, the County Council will apply the Secretary of State's criteria for scheduling monuments which comprise an assessment based upon period, rarity, documentation, group value, survival/condition, fragility/vulnerability, diversity and potential. This will be supplemented by an assessment

of the site's contribution towards the historic character and distinctiveness of the County. Sites of historic County distinctiveness comprise both standing buildings and archaeological sites that are typical of the County, serving both to characterise and distinguish the area in a national and regional framework. The categories of sites involved are set out in Appendix 1.

Irreplaceability

4.14

Whilst in situ conservation is the preferred option for most significant historic environment assets, some features can be preserved by record, survey and excavation. Others are so important because of their rarity, vulnerability, period or complexity that they should be regarded as irreplaceable. In addition to the general principles outlined in Section 3 above, consideration should be given to the following criteria, and judgements based upon them made with reference to the Lancashire Sites and Monuments Record (see Section 4.23 below) and other datasets held by local authorities:

- Rarity. There are some site and building categories that in certain periods are so scarce that all surviving examples should be considered for preservation. In general, however, a selection must be made which portrays the typical and commonplace as well as the rare. This process should take account of all aspects of the distribution of a particular class of monument or building, both in a national and a regional context.
- Vulnerability. A single ploughing or unsympathetic treatment can destroy highly important archaeological evidence from some field monuments. There also exist standing structures of particular form or complexity whose value can again be severely reduced by neglect or careless treatment.
- Period. All types of monuments that are especially characteristic of a particular historical period should be considered for preservation.
- Complexity. Some monuments and buildings may be considered of greater value because they contain a combination of high quality features.

Networks and Setting

4.15

The importance of an individual archaeological site or building may be greatly enhanced by its proximity to other sites and features; and by both its immediate setting and its wider landscape or townscape context. Equally a landscape or townscape is more than the sum of its parts and can be badly affected by an ill-judged addition or alteration. Therefore, the impact of development on land adjoining heritage assets must also be considered. New development should, where possible, maintain the continuity, integrity or linkages of networks by having regard to the grouping and spacing of features within an area, their setting, structure and layout.

Part 2: Development in the Historic Environment

Listed and Historic Buildings

4.16

Lancashire's built heritage includes historic buildings of many sizes, periods and types, ranging from the humblest barn to the grandest mansion. This remarkable richness and variety reflects the distinctive aspects of

the County's history. Many historic buildings are protected by Listing because of their special architectural or historic interest. The main purpose of Listing is to ensure that buildings are not altered, extended or demolished before full consideration has been given to such proposals. Listing a building does not prohibit change. Instead it seeks to influence the way in which change happens by requiring the owner or developer to apply for Listed Building Consent for works that would affect the building's character.

4.17

The majority of buildings are not Listed, but many still make a significant contribution to the character of the County and the local scene. The impact of development proposals on these regionally and locally important historic structures warrants due consideration through the planning process (see PPG15).

4.18

Guidance on the protection and enhancement of Listed and other historic buildings recommended by Policy 21 is provided at a district level by District Development Plans and any associated SPG. The remainder of this guidance concentrates on the information required to support applications for development or Listed Building Consent.

4.19

In order to determine an application for Listed Building Consent, or a planning application concerning an historic building, Local Planning Authorities must have sufficient information to understand (Planning (Listed Buildings and Conservation Areas) Act 1990 and PPG15):

Midland Hotel, Morecambe

- the significance of the building;
- the exact nature of the proposals and their likely effects on the special interest of the building and its setting.

4.20

Recording can inform conservation and development proposals and guide sensitive management and interpretation. It can also increase an owner's awareness of a building's value and significance. Sympathetic alteration and economic re-use of an historic building can only be achieved effectively through a good understanding of the building's history, development, functions, materials, and present condition. Successful conservation and development therefore relies on adequate documentation. This is why the planning guidance recommends that historic buildings are recorded and analysed prior to change.

Building recording, Whalley

Guidance for Listed and Historic Buildings

4.21

(a) Early consultation with the Lancashire County Archaeology Service and the appropriate District Conservation Officer, preferably at the planning and design stage of a conservation or development project, can aid and inform decision-making, avoid later problems and save money.

(b) The most sensible way to develop a scheme is first to gain an understanding of the building's historic interest, relate this to the proposed changes, and then examine the likely effects. For example, will the alterations obscure or remove an important feature of the building's history, or will the proposals bring a derelict building into appropriate new use?

(c) On the basis of this initial appraisal, it may be necessary to undertake more detailed recording. Clearly not all buildings need to be understood in the same detail; different circumstances will demand different responses. The scope and level of recording will be dependent on a number of factors such as the type and complexity of the building and the nature and scale of proposed works. The recording may include a 'desk-top' assessment of existing information about the building and/or an evaluation of the building's design, construction, evolution, function and context, including photographs and measured 'as existing' drawings.

(d) The report on this work should accompany the Planning and/or Listed Building Consent application, and include an assessment of the historical development and significance of the building and any features of special interest, paying particular attention to those areas that are likely to be affected by the proposed works. The Local Planning Authority is entitled to defer a decision until this information is available.

(e) Recording is worthwhile in assisting both the formulation of proposals and in obtaining consent. In most instances it is not an expensive exercise.

(f) Where a proposal has been granted consent but entails alteration or loss of historic fabric applicants may be asked to make provision for a further scheme of recording. This may be secured by use of voluntary or legal agreement or by Planning Conditions.

(g) For instance, it may be necessary to arrange the recording of hidden features that might be revealed during the course of works or more detailed analysis of the parts of the building to be destroyed. It is important that these records are made in advance of repair and conservation and before partial or total loss of fabric through alteration, destruction or concealment. Afterwards the record should be deposited with an appropriate archive. Such recording should be an integral part of the works schedule and project budget.

(h) In most cases, recording historic buildings should be carried out by a suitably experienced contractor/consultant according to a brief approved by the Lancashire County Archaeology Service and the District Conservation Officer.

Historic Parks and Gardens

4.22

The importance of the contribution made by fine parks and gardens to the quality of our surroundings has only generally been appreciated in recent years. Their character and appearance need to be protected from unsympathetic changes and, where appropriate, enhanced by restoration. A number in conservation areas have already been designated in historic parks and gardens in the County.

4.23

The National Heritage Act 1983 enabled English Heritage, as part of its role in promoting conservation, to compile the Register of Parks and Gardens of Special Historic Interest in England. The register identifies the most important known examples of designed landscape, which range from medieval deer parks and knot gardens to 18th Century 'romantic' landscaped grounds and Victorian public parks to 20th Century suburban gardens. Owners and others are encouraged to appreciate, maintain and enhance these sites although no special statutory protection is extended to sites on the register. Local planning authorities are however expected to consider their importance and provide adequate protection for them and their settings when determining planning applications. They are required to consult English Heritage.

4.24

All sites on the register are considered to be of special historic interest, but their individual importance varies. As with Listed Buildings, sites are graded by comparative assessment and are ranked grade I (of exceptional interest) grade II* (of great historic interest) and grade II (of special historic interest). The grading of the park or garden is independent of any Listed Building or other individual historical site within it. Sites can be added to or removed from the register, and English Heritage is currently assessing new sites in Lancashire for inclusion.

4.25

A list of locally important parks and gardens has been prepared by Manchester Metropolitan University for English Heritage and Lancashire County Council (Historic Designed Landscapes of Lancashire, 1998). The majority of these parks and gardens are not currently registered, but many still make a significant contribution to the character of the County and the local scene. The impact of development proposals on these regionally and locally important historic areas warrants due consideration through the planning process.

4.26

English Heritage encourages all owners to prepare a conservation plan to help evaluate the significance of their historic landscape and guide its management. They can give advice through their Parks and Gardens

Archaeological Excavation, Lancaster

team and have a limited scheme of grant aid for the restoration of Grade I and II* sites. Advice on the management of historic landscapes can also be obtained from the Landscape and Archaeology Services of the County Council's Environment Directorate, who will also comment on any planning applications affecting designed landscapes or their settings, both on or off the register.

Guidance for Historic Parks and Gardens

4.27

Where a proposal is likely to affect an historic park or garden or its setting, early consultation with English Heritage, the appropriate District Conservation Officer and the County Council's Archaeology and Landscape Service is advised.

Proposals for changes to an historic park or garden should be carefully considered and include a heritage assessment of the design, history, character and features of the park or garden.

Opportunities for the restoration of an historic park or garden should be considered carefully in the context of a heritage assessment, its current and future use and maintenance.

Developers should undertake full recording of any historic parks and gardens where development may affect the context or setting of the park or garden.

Scheduled Monuments

4.28

The Ancient Monuments and Archaeological Areas Act 1979 provides statutory protection for nationally important archaeological sites in England and Wales. With the exception of certain permitted works, which are covered by the Ancient Monuments (Class Consents) Order 1994, Scheduled Monument Consent must be sought from the Secretary of State for works of alteration, demolition, or repair. This procedure is separate from the planning process, and consent is likely to be required in addition to planning permission.

Guidance for Scheduled Monuments

4.29

(a) The Secretary of State must be informed about any work that might affect a monument above or below ground, and English Heritage gives advice to the Government on each application. In assessing each application the Secretary of State will try to ensure that damage done to protected sites is kept to a minimum.

(b) Written consent must always be obtained before any work can begin. Application forms are available from English Heritage's North West regional office.

(c) It is a against the law to damage a Scheduled Monument by carrying out works without consent, to cause reckless or deliberate damage and to use a metal detector or remove an object found with one without a licence from English Heritage

(d) Grants – there are a range of grant incentive schemes for owners, including programmes run by DEFRA for farmers or

through Environmental Stewardship for land managers generally. English Heritage makes grants to help with major repairs.

(e) Those planning development on, or adjacent to, a Scheduled Monument should contact the Archaeology Service of Lancashire County Council's Environment Directorate and English Heritage's North West regional office at the earliest opportunity for advice.

Archaeology

4.30

Applications other than those that affect designated buildings, sites or features will also be assessed against the Lancashire Sites and Monuments Record. The LSMR is a register of known archaeological and historic sites in the County, and is maintained and managed by the County Council's Archaeology Service. The assessment will show whether there are any known or potential archaeological remains within or adjacent to the proposed development and will determine the need to obtain further information.

Guidance for Archaeology

4.31

(a) Those involved in proposals for development that are large-scale, located in historic towns or village or likely to result in considerable below ground disturbance, are advised to make early contact with the Archaeology Service of Lancashire County Council's Environment Directorate, preferably at the planning and design stage of a development. This can aid and inform decision-making, avoid later problems and save time and money.

(b) An initial examination of the LSMR, prior to the submission of a planning application, will show whether there are any known or potential archaeological remains within or adjacent to the proposed development and will determine the need to obtain further information.

(c) On the basis of this preliminary appraisal, it may be necessary to obtain more detailed information about the impact of a development proposal upon the historic environment. Such work should be carried out by a professionally qualified archaeological contractor according to a brief approved by the County Council's Archaeology Service. The work may include: desk-based assessment – a detailed review and analysis of existing information about a site; and/or field evaluation – a survey or trial excavation designed to assess the nature of archaeological remains within the proposed development area. Techniques may include field-walking, geophysical survey and trial trenching.

(d) The report on this work should accompany the planning application, and include an assessment of the archaeological effects of the development and any measures proposed to reduce its impact. The Local Planning Authority may defer a planning decision until this information is available.

(e) Where archaeological remains exist the first option to be considered is preservation in situ. To achieve this, the archaeological impact of the development should be minimised by, for example, sympathetic foundation design or amendments to the layout. This is often the most cost-effective solution. If this is not feasible, then detailed archaeological recording (normally by means of

excavation and survey) and publication is the second best option. Such work will provide a lasting record of Archaeological evidence unavoidably destroyed by development. Similarly, where works to an historic building are proposed there may be a need for an archaeological record of the structure to be made.

(f) In other cases, particularly small-scale projects, recording of archaeological remains that come to light during the course of development may be advised; this is known as a watching brief and should be carried out by a qualified archaeologist.

(g) Archaeological implications are a material consideration for the Local Planning Authority when making a planning decision. If further archaeological work is necessary this can be secured, either by use of legal agreement or by Planning Conditions.

(h) It is national and local practice that the costs of archaeological work made necessary by development should, in most circumstances, be borne by the developer.

Maintaining Urban Character

4.32

The towns of Lancashire are a unique, distinct and irreplaceable asset representing the investment of centuries of skills and resources. The need for change within towns is both desirable and necessary – indeed the diverse character of the urban historic environment is the product of such change in the past. Government policies and approaches to national and regional regeneration, and the 'brownfield' agenda, will ensure increased pressure for change within urban areas. But such change should take place in the context of the historic environment in order to protect the best of the past and to afford the opportunity for heritage-led regeneration.

Guidance for Maintaining Urban Character

4.33

In the light of the Structure Plan Policies 20 and 21, both for the conservation of individual heritage assets and for maintenance of the County's distinctive townscapes, development proposals should acknowledge and respect the following broad principles:

(a) Lancashire has a diverse and locally distinct range of townscapes. These are all a product of the past and vary because of different local styles, industries, personalities and materials.

(b) Townscape is important; it gives people and places an identity and a significance. It gives localities their distinctive character and marks their individuality. It enhances quality of life and provides a sense of belonging.

(c) Change is inevitable and desirable, but needs to be managed in order to preserve that which is valued.

(d) Proposals for change on a townscape scale should include an assessment of the existing (historic) character of area and its surrounds, and an assessment of the impact of proposals upon such character. A strategic framework for this assessment will be in place through the County-wide historic towns survey carried out by Lancashire County Council. More detailed local studies, such as Conservation Area Appraisals, town studies or area master-plans may also already be in place.

(e) Where there exists a high quality historic townscape, then consideration should be weighted towards heritage-led regeneration and renewal by refurbishment and restoration.

(f) Where the heritage-led regeneration option is not taken, and renewal takes place through either major site redevelopment or housing clearance then proposals should contribute positively to the character of urban landscape, and enhance local distinctiveness.

(g) Neither approach precludes new design or innovation; indeed it encourages the opposite within a regionally and locally sympathetic framework.

Field barn, Cantsfield

New Development in keeping with it's surrounding character, St. Annes

The Lord Nelson Inn, Nelson

lancashire's natural environment

Salthill Quarry, a geological SSSI, Biological Heritage Site and Local Nature Reserve

Background

Statutory and Non-Statutory Nature Conservation Sites

5.1

Wild plants and animals of some sort occur virtually everywhere, but certain sites or areas, because of the particular habitats, species or other natural features they support, make a particularly important contribution to the natural heritage of the County. Such sites are very diverse, ranging from ancient semi-natural woodlands and grasslands scattered along valley bottoms and sides (and their watercourses), to the moors and fell-tops in the east and the surviving (or re-created) wetlands and maritime habitats in the west. They include 'artificial' sites, such as ponds and reservoirs, certain arable fields, road and track-sides, and occasionally even abandoned industrial land.

Clear Beck Meadow SSSI

Worsaw Hill, a Geological SSSI and Biological Heritage Site

Statutory Sites

5.2

As in the case of the historic environment, a hierarchy of nature conservation designations exists; some of these take account of geological as well as of wildlife importance (see Sections 5.4 and 5.5). Statutory nature conservation sites are generally of either national (Sites of Special Scientific Interest or SSSI; National Nature Reserves) or international significance (Special Protection Areas; Special Areas of Conservation; Ramsar Sites). Limestone Pavement Orders are also a designation of national importance (but see Section 5.32). The level of importance of statutory Local Nature Reserves varies from site to site, whilst they are generally of regional/county significance, some may carry a national or international designation or conversely have no designation at all.

Biological Heritage Sites

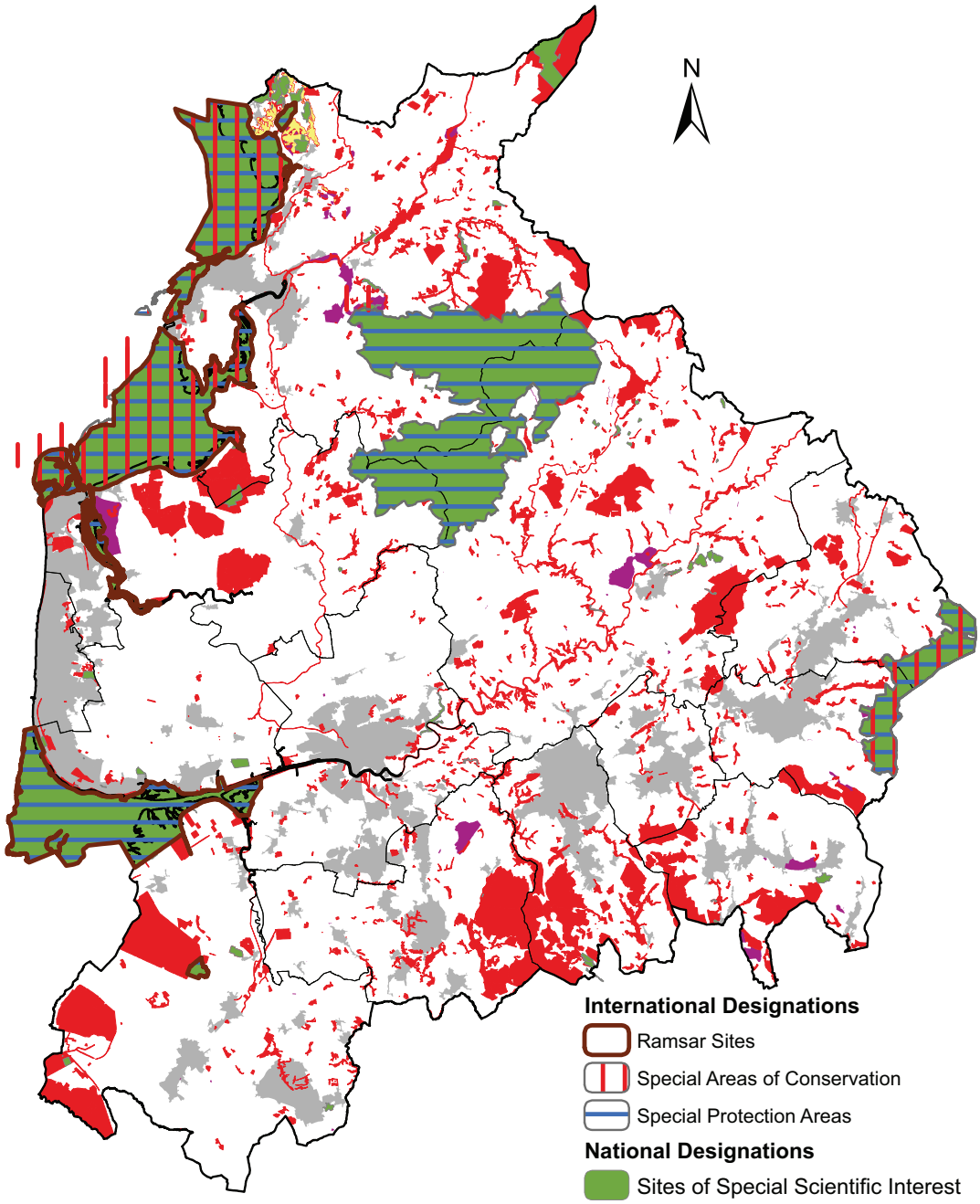
5.3

Biological Heritage Site (BHS) is the name given to non-statutory wildlife sites in Lancashire that are considered to be of at least county importance. Along with the international and national sites, they are considered to comprise the priority biodiversity resource in Lancashire. Other wildlife sites of more local importance are identified in several Local Plans in Lancashire. Collectively, but not exclusively, non statutory wildlife sites together with

FIGURE 5.1: NATURE CONSERVATION DESIGNATIONS

Importance	Site Designation	Explanation
Sites of International Importance	Ramsar Site	Listed under the Convention on Wetlands of International Importance.
	Special Protection Areas (SPA)	Designated under the EC Directive on the Conservation of Wild Birds
	Special Areas of Conservation (SAC)	Designated under the EC Directive on the Conservation of Natural Habitats and Wild Fauna and Flora (the Habitats Directive).
Sites of National Importance	National Nature Reserves (NNR)	Sites declared under Section 19 of the National Parks and Access to the Countryside Act 1949 or Section 35 of the Wildlife and Countryside Act 1981.
	Sites of Special Scientific Interest (SSSI)	Sites notified under Section 28 of the Wildlife and Countryside Act 1981. They may be notified for their biological and/or geological importance.
	Limestone Pavement Orders (LPO)	Sites designated by the County Council under Section 34 of the Wildlife and Countryside Act 1981.
Sites of Regional/County Importance	Local Nature Reserves (LNR)	Sites designated by Local Authorities under Section 21 of the National Parks and Access to the Countryside Act 1949.
	Biological Heritage Sites (BHS)	Sites identified by the Biological Heritage Sites Partnership comprising professional ecologists from Lancashire County Council, English Nature and The Wildlife Trust in Lancashire. They are collectively, along with the International and National Sites, considered to be the priority biodiversity resource of Lancashire.
	Geological Heritage Sites (GHS)	Regionally Important Geological and Geomorphological Sites (RIGS) in Lancashire. Sites are identified by specialists in the Lancashire RIGS Group and endorsed by the County Council.
Sites of District (Local) Importance	Variously named	Sites identified by District Councils in Lancashire as sites of significance in a District context. Whilst these sites have a demonstrable nature conservation interest, their value to the local community is normally an important factor in their identification.

map 8: nature conservation designations



5 0 5 10 15 Kilometres

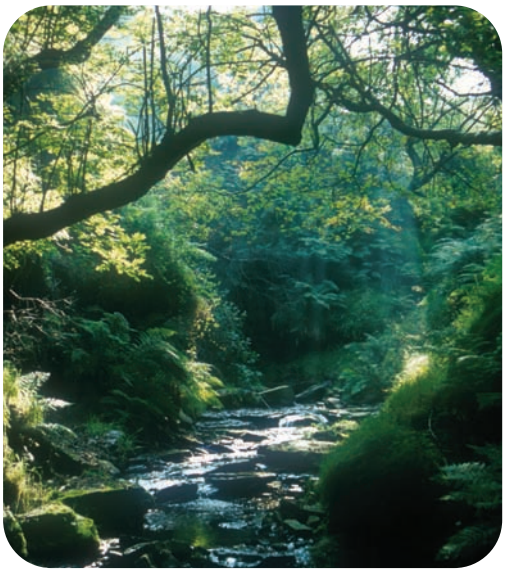
Sources: Lancashire County Council 2001
Ordnance Survey 2001

International Designations
- Ramsar Sites
- Special Areas of Conservation
- Special Protection Areas

National Designations
- Sites of Special Scientific Interest
- Limestone Pavement Orders

Regional Designations
- Biological Heritage Sites
- Regionally Important Geological Sites
- Urban Areas
- District and Unitary Authorities

Great crested newt, a European Protected Species



A clough woodland BHS in West Pennine Moors

statutory wildlife sites may be considered to cover a significant proportion of habitats found in Lancashire referred to in the list of 'Habitats and species of principal importance for the conservation of biological diversity in England' prepared pursuant to Section 74(2) of the Countryside and Rights of Way Act 2000. Biological Heritage Sites are selected using the Guidelines for Site Selection produced by the BHS Partnership comprising professional ecologists from English Nature (Cheshire to Lancashire Team), the Wildlife Trust for Lancashire, and Lancashire County Council, and published by LCC.

Geological Heritage Sites and RIGS

5.4

Sites that are nationally important for geological research are also notified by English Nature as SSSIs. Geological Heritage Sites are of at least County importance: they were originally known as 'RIGS' – Regionally Important Geological and Geomorphological Sites – and continue to be referred to as such. They are identified by geological specialists in the Lancashire RIGS Group for their scientific importance, as well as for their education, historical or aesthetic value.

5.5

Biological and geological interests are not mutually exclusive, sometimes occurring on a single site. Hence a site may, for example, be recognised as being both a geological SSSI and a Biological Heritage Site. Collectively, Biological Heritage Sites, Geological Heritage Sites and other sites of more local interest recognised by District Councils in Lancashire, formerly comprised the 'Sites of Conservation Importance' (or SINCs) referred to in the now cancelled PPG9. These sites are now covered and referred to as Regional and Local Sites under paragraph 9 of PPS9 'Biodiversity and Geological Conservation'. The hierarchy of nature conservation designations is shown in Figure 5.1 and the distribution of nature conservation sites is shown on Map 8.

Protected Species

5.6

A number of wild animal and plant species in Lancashire receive special protection under

Noctule Bat, a European Protected Species

Water vole, a species covered by the Wildlife and Countryside Act 1981

the law. Some are classified as European Protected Species under the Conservation (Natural Habitats, &c) Regulations 1994 (generally referred to as the 'Habitats Regulations'), which implements EC Directive 92/43/EEC. The species currently concerned in Lancashire are shown in Appendix 3.

5.7

A larger number of animal, bird and plant species are protected under Schedules 1, 5 or 8 of the Wildlife and Countryside Act 1981 (as amended). The species concerned that are known to occur in Lancashire are shown in Appendix 4. Through the Wildlife and Countryside Act all wild birds are protected from disturbance at the nest. In addition, badgers are protected under the Protection of Badgers Act 1992. In the Countryside and Rights of Way Act 2000, the Government lists habitats and species that are considered of principal importance for conservation of biological diversity in England (Section 74(2) lists 'Habitat and species of principal importance for the conservation of biological biodiversity in England'). The species concerned that are know to occur in Lancashire are shown in Appendix 5. Developers and others are recommended to find out whether any of the species contained in the lists of 'Habitats

Wet Woodland, a UK BAP Priority Habitat

High brown fritillary, a Lancashire BAP species.

and species of principal importance for the conservation of biological diversity in England' (Section 74(2) of the Countryside and Rights of Way Act 2000) are likely to be affected by a development proposal.

Biodiversity Action Plans

5.8

At the "Earth Summit" in Rio de Janeiro in 1992 the UK Government, along with more than one hundred other countries, signed The Convention on Biological Diversity. This convention is seen as an integral part of long-term sustainability and is closely allied to Agenda 21. The signatories to the Convention on Biological Diversity agreed "to develop national strategies, plans and programmes for the conservation and sustainable use of biological diversity", the UK Government's response being the development of Biodiversity Action Plans (BAPs). These provide a national framework for conserving biological diversity, setting out specific objectives and targets for key species and habitats in the UK. Local

Biodiversity Action Plans are seen as the means by which national action can be translated to action at the local level.

5.9

The UK Biodiversity Group has issued a series of national habitat and species BAPs, and the Lancashire Biodiversity Action Plan, produced by the Lancashire Biodiversity Partnership, is available on the website at www.lbap.org.uk. Many of the UK BAP priority habitats and species are included in the lists of 'Habitats and species of principal importance for the conservation of biological diversity in England' (Section 74(2) of the Countryside and Rights of Way Act 2000). The Government through Working with the grain of nature: a biodiversity strategy for England, (DEFRA, October 2002), sets out the strategy for biodiversity and sees the integration of biodiversity into local and regional policies and programmes as one of the delivery mechanisms. The Planning Policy Statement 9 – Biodiversity and Geological Conservation has firmly embedded biodiversity in planning.

Ecological Networks and 'Lifescapes'

5.10

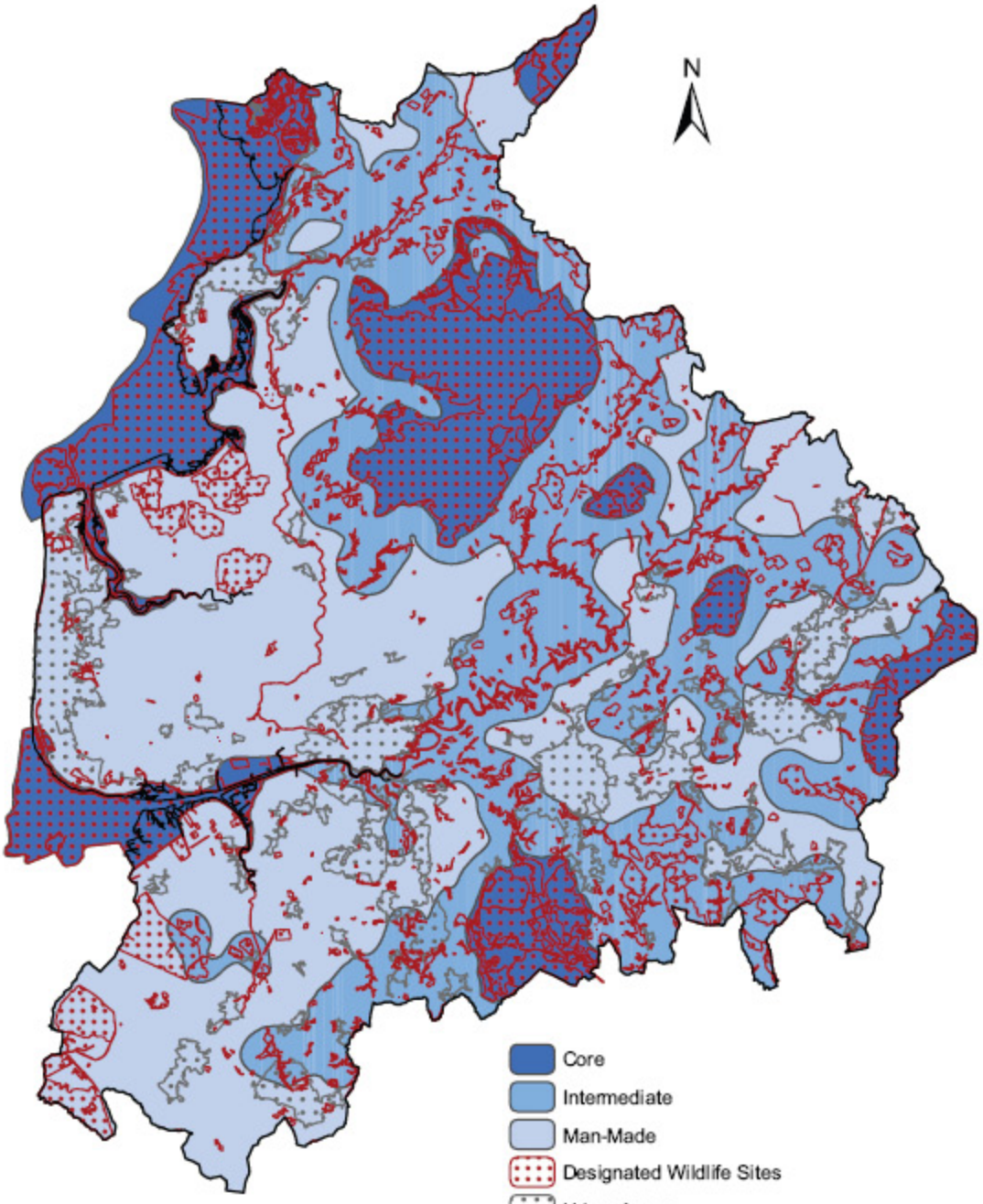
Most landscapes are made up of mosaics of vegetation and land use 'patches' in which wildlife resources have become increasingly fragmented, with habitats and species often isolated upon relatively small areas of land. Thus, rivers streams and canals, hedgerows, ponds and small woodlands that provide links between major wildlife sites often provide valuable contributions to the biological diversity of an area. The concept of ecological networks recognises actual and potential linkages and uses them as a framework to target action for biodiversity. Thus wildlife links and corridors can be re-established, and habitats created and developed, in ways and in locations such that priority biodiversity resources may be conserved more effectively or restored to viable levels. It is recognised that such considerations are of vital importance if the existing diversity of wild species in Lancashire is to be passed on to future generations. The term 'lifescapes' is now also being applied to ecological networks embracing social and community considerations.

5.11

Map 9 (which appears as Map 14 in the Joint Lancashire Structure Plan) shows the principal variations in the broad character of Lancashire's natural heritage, based on an analysis of designated nature conservation sites, the extent of any semi-natural habitat, the diversity of habitats present, and the diversity of breeding bird species. Three broad natural heritage zones are shown; a core zone, an intermediate or mixed zone, and a man-made zone. It should be noted that, due to the lack of comparable data from other local authority areas outside and adjoining the county boundary, a certain amount of 'edge effect' is apparent on this

Darwen Valley Parkway, a Biological Heritage Site and an important community resource embracing the "lifescape" concept.

map 9: natural heritage zones



Sources: Lancashire County Council 2001
Ordnance Survey 2001

map. Thus there is a possibility that some areas close to the county boundary shown as 'intermediate' or 'man-made' should more correctly appear as 'core' or 'intermediate' respectively. However, this does not affect the overall pattern of natural heritage variation that the map aims to show.

5.12

Each of the three zones has its own particular characteristics insofar as the nature, abundance and distribution pattern of its natural heritage is concerned. The characteristics of each of these zones have implications for the way in which the Policy 21, particularly (b), is implemented in practice. It is important to recognise that the 'as a minimum no net loss' approach applies to all 3 zones, but will not necessarily be interpreted in the same way. Further explanation of these zones and their application is given in Sections 5.13 to 5.15 and 5.34.

5.13

The **Core Zone** includes those substantial tracts of land or coast where semi-natural habitats and vegetation are predominant. The most extensive examples comprise the moors and fells of north and east Lancashire, and the inter-tidal and adjacent coastal areas, but a wide variety of important habitats are represented. They support distinctive assemblages of wild plants and animals including many rare or very localised species that are often intolerant of disturbance or changed habitat conditions. Whilst parts of the core zone comprise extensive areas of single types of habitat, other sections may support moderately to exceptionally high diversities of different habitats and species. They are usually (but not always) highly protected by nature conservation designations, and are often of national or international importance. Continuity over time, minimisation of adverse human impacts, and management so as to maintain the most favourable conservation condition possible should be the main outcome of policy implementation.

5.14

The **Intermediate or Mixed Zone** also contains irreplaceable habitat areas of high quality and long-standing which are typically of regional/county importance. Typical sites include ancient woodlands on steep valley slopes, and old species-rich agricultural grasslands. However, apart from a few major links provided by the principal watercourses for example, these habitats are generally smaller in extent and more or less fragmented as 'islands' in a wider (mainly rural) landscape that is essentially man-made. Some urban fringe areas are included in this zone where connectivity between habitats is relatively high. Such sites are often a refuge for scarce and declining species whose populations are increasingly dependent on site management which takes deliberate account of their needs. Unlike the core zone, however, relatively few of these sites enjoy any statutory protection. The integrity and protection of such islands is important, but so too are the form and pattern of habitat creation measures which aim to consolidate and increase connectivity in such situations.

5.15

The **Man-made Zone** comprises urban areas and intensively managed farmland in which major semi-natural habitat areas are relatively few and far between. It also includes areas severely degraded in an ecological sense by heavy grazing or neglect in the hills of East Lancashire. Over large areas, the most important habitats are typically either small

Natural Heritage Zone - Core Zone *- Aerial photograph of Arnside-Silverdale AONB, an area where semi-natural habitats predominate including intertidal, coastal, calcareous grassland, woodland, open water, swamp and limestone pavement. Wildlife sites comprise those of International, National and County importance.*
(see page 87).

Natural Heritage Zone - Intermediate or Mixed Zone – *Aerial photograph showing fragmented ancient woodland associated with the River Ribble. Woodland fragmentation is visible particularly following the river, on bluff slope and along tributary streams. Un-improved and semi-improved grasslands are poorly represented. Wildlife site mainly comprise those of County importance.*

Man-made Zone(Rural) – *Aerial photograph showing pattern of intensive arable cultivation in West Lancashire. Landscape planting along major roads provides habitat diversity, as does relict vegetation along watercourses. Wildlife sites, where they exist, are generally isolated.*

Man-made Zone(Urban) – *Aerial photograph showing an East Lancashire urban landscape. Intermediate Zone penetrates through connecting features such as watercourses, canals, railway, roads and urban greenspace. Wildlife features particularly BHS may be involved but others of community "Lifescape" value are more significant (see paragraph 5.7).*

(such as ponds, copses, gardens and patches of underused or abandoned land) and/or linear (rivers, streams, canals and ditches and their margins, hedgerows, road or trackside verges, operational and abandoned railways and field edges). Of these, the major watercourses in particular may form the basis of habitat mosaics, 'corridors' of significant nature conservation importance on the edge of urban areas, and physical links with the intermediate and core zones. Many of these habitats are themselves man-made, and cannot for the most part be regarded as 'critical capital' in that, in general, they are not irreplaceable. However, the application of the 'as a minimum no net loss' approach should result in the re-establishment of lost habitats and the creation of new habitat links. In this way the policy should make a valuable contribution to the development and enhancement of valuable wildlife habitat networks in this zone. Thus, it will also serve to enhance the quality of life for urban and suburban residents by developing new opportunities to experience some of the variety of the natural heritage close at hand. It should also be noted that certain habitats within this zone are important for protected species.

Planning Framework

National and Regional Policy

5.16

From a planning viewpoint, the most powerful legislative provisions are contained within the Conservation (Natural Habitats, &c.) Regulations 1994, which apply to any development proposals directly or indirectly affecting European Protected Sites or Species. The basic legislative framework at national level for nature conservation is contained within the Wildlife and Countryside Act 1981 (as amended), with additional provisions within the National Parks and Access to the Countryside Act 1949, the Protection of Badgers Act 1992, the Hedgerows Regulations 1997 and the Countryside and Rights of Way Act 2000.

5.17

Planning Policy Statement 9 (PPS9): 'Biodiversity and Geological Conservation' (ODPM 2005) sets out the Government's objectives relating to biodiversity and geological conservation in terms of promoting sustainable development; conserving, enhancing and restoring the diversity of England's wildlife and geology; and contributing to rural renewal and urban renaissance. It requires that local planning decisions on biodiversity and geological conservation are fully considered. PPS9 sets out the role of Regional Spatial Strategies and Local Development Frameworks as well as the safeguarding of international, national, regional and local wildlife sites, protected species, and ancient woodlands. It requires that other natural habitat types of principal importance be conserved and opportunities identified to enhance and add to them. In addition it recognises the value of networks and natural habitats as providing routes or stepping-stones for migration and dispersal and the need to repair the fragmentation and isolation of natural habitats. It also requires planning authorities, when considering proposals, to maximise biodiversity opportunities in and around developments. PPS9 is accompanied by the Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within Planning (ODPM Circular 06/2005/Defra Circular 01/2005). This circular provides guidance on procedures relating to sites and species, including habitats and species outside statutorily designated sites. Annex A lists species

protected under the Wildlife and Countryside Act 1981 (as amended) and Annex C lists habitat types and species of principal importance in England from Section 74(2) of the Countryside and Rights of Way Act 2000, species of which are a material consideration in the determination of planning applications. In addition, a good practice guide on local wildlife sites is due to be published in the near future to accompany PPS9.

5.18

The North West Regional Spatial Strategy (Appendix 6) (Policy ER4 Nature Conservation and Biodiversity) places requirements on planning authorities and other agencies in respect of statutory sites and protected species and to ensuring that the overall nature conservation resource is protected and enriched through conservation, restoration and re-establishment. It further places a requirement to protect irreplaceable wildlife resources, ensuring that there is as a minimum no net loss in the biodiversity resource and returning key resources to viable levels, reversing habitat fragmentation and setting up ecological frameworks and wildlife corridors. Consideration is given to climate change upon vulnerable habitats and species.

Guidance

The 'as a minimum no net loss' approach

5.19

The underlying principle of Policy 21 of the Structure Plan is to protect and enrich Lancashire's overall heritage resource. The policy approach 'as a minimum no net loss' in the value of natural heritage assets recognises that whilst change and new development are both inevitable and desirable, this should not be at the expense of the County's environmental heritage. In terms of natural heritage these assets may at one extreme be features recognised by a local community to internationally important wildlife sites or species at the other. Fundamental in this approach is the need for a full and detailed assessment of the natural environment to adequately inform the decision making process. The decision making process will balance the need for the development against the importance of the site in terms of the hierarchy of designations, the quality of the natural asset, irreplaceability, ecological networks and biodiversity. The general principles of this approach are set out in paragraphs 3.1 to 3.12 and these should be read with this and the next section in respect of the natural environment.

5.20

Whilst protection of existing natural resources is central to Policy 21, the enrichment through opportunities offered through the development control process is also important. In this respect the development control process is seen as one mechanism for the delivery of biodiversity action, targets and objectives of which should be used to provide appropriate guidance.

5.21

There are three themes behind the approach of 'as a minimum no net loss': 'protection', 'restoration' and 're-establishment'. These three themes also underlie biodiversity action nationally. Through this, protection or conservation of heritage resources in situ is seen as the first order of priority. It is expected that every effort will be made to

accommodate the particular interests of the biological or geological resource in any development proposals. Only where there is no alternative should development impacting upon natural heritage assets be considered. In such a circumstance restoration and/or re-establishment of heritage resources of an appropriate type and scale such that there will be as a minimum no net loss is of paramount importance. This forms the basis of mitigation and/or compensation measures.

Part 1: The First Steps – Evaluation for the 'as a minimum no net loss' approach

Desktop Study

5.22

In evaluating any proposed development it is important to determine whether or not any natural assets are involved. A desktop study is normally the most appropriate first step in the process of identifying existing assets. Sources to search include local plan/LDF proposals maps, English Nature web sites, Lancashire County Council web sites and local centres holding data.

Field Surveys

5.23

Planning applications involving and/or affecting wildlife assets should be accompanied by the appropriate type and level of survey and assessment to enable the determination of the application on the basis of "as a minimum no net loss". The type of survey appropriate for a particular proposed development will depend very much on the site and the features, habitats and species involved. Both the nature of the development proposed and the nature of the site itself will influence the type of surveys that are needed; for example, developments involving quarries raise geological interests.

(a) Typically most developments where natural assets are involved will need a survey carried out to the NCC/English Nature Phase 1 Habitat Survey with detailed target notes or an enhanced Phase 1 Habitat Survey, or a Phase 2 Habitat Survey methodology, with habitat mapping according to the National Vegetation Classification. In determining the level of survey, Phase 1 Survey is regarded as a broad-brush methodology most appropriate for larger areas involved in habitat networks, connectivity and addressing de-fragmentation, whilst Phase 2 Surveys provide the detail required for individual site assessment. Other subject areas that may warrant survey, depending upon the site, include hedgerows (Hedgerow Regulations methodology), 'veteran' trees, breeding birds, wintering and passage birds, mammals (including badgers and water voles), reptiles, amphibians, invertebrates and geology/geomorphology. Road schemes may need deer surveys for safety considerations.

Common frog

(b) Where it is known or suspected that Protected Species may be affected by a proposed development, it is recommended that developers seek expert ecological advice at an early stage to determine the presence or absence of such species and the likely impact of the proposed development upon them. By way of illustration from those species that are most frequently encountered in Lancashire, great crested newts may be utilising terrestrial habitat 500 metres away from their breeding pond, otters utilise significant lengths of rivers, badgers may inhabit both rural habitats and urban greenspace, whilst the modification or demolition of buildings may involve roosting bats or breeding barn owls. For guidance lists of Internationally and Nationally Protected Species known to occur in Lancashire are provided in respect to the Conservation (Natural Habitats &c.) Regulations 1994, the Wildlife and Countryside Act 1981 (as amended) and Section 74(2) of the CROW Act 2000 in Appendices 2, 3 and 4. Where European Protected Species are involved a full survey and method statement demonstrating how the population will be maintained will be required to accompany any planning application (see 5.26 and 5. 27(b) below).

(c) Any development affecting a pond has ecological implications and planning applications should be accompanied by an appropriate survey, preferably carried out according to the Lancashire Pond Biodiversity Methodology. This methodology has been devised following the sampling of the biological diversity of ponds across Lancashire, and provides an overview of the species that occur in ponds in the County. In this respect it



enables assessments of individual ponds to be placed in context for development control purposes. The Lancashire Pond Biodiversity Methodology and proforma survey sheets can be obtained from the County Council's Environment Directorate.

Evaluation of Impact

5.24

The results from the desktop study and the field survey provide the basis for a full and thorough evaluation of the impact of any proposed development. The terms of reference of such an assessment should include the hierarchy of designations, the quality of the natural asset, irreplaceability, ecological networks and biodiversity. In this way the need for the development will be balanced against the impact upon the natural heritage.[1]

Part 2: Development and the Natural Heritage

5.25

Policy 21 of the Structure Plan aims to protect Lancashire's natural heritage following the principle of 'as a minimum no net loss'. In line with national and regional planning guidance, a hierarchical approach is taken to the protection of wildlife and other assets, with the highest level of protection afforded to sites and species of international and national importance. The hierarchy of wildlife and geological sites concerned in Lancashire is given in Figure 5.1. It should be recognised that not all sites that qualify as

[1]Since the adoption of the SPG, the Institute of Ecology and Environmental Management has produced 'Guidelines for Ecological Impact Assessment in the United Kingdom. These guidelines may be viewed on www.IEEM.net

nationally or internationally important have been so designated. The Register of Biological and Geological Heritage Sites contain a number of sites that fall into this category. In addition Local Nature Reserves, whilst statutory, can and do span the spectrum from international, regional, county and local designations or simply have no such designation at all. With regard to European and Nationally Protected Species, populations of these will in many instances be distributed outside both statutory and non-statutory wildlife sites. Lists of Internationally and Nationally Protected Species known to occur in Lancashire are provided in respect to the Conservation (Natural Habitats &c.) Regulations 1994, the Wildlife and Countryside Act 1981 (as amended) and Section 74(2) of the CROW Act 2000 in Appendices 3, 4 and 5.

Internationally and Nationally Designated Sites and Protected Species

5.26

Any development proposal that directly or indirectly affects a statutory nature conservation site, i.e. Site of Special Scientific Interest, National Nature Reserve or European Site (see Section 5.27(a) below) or

Lune Estuary SSSI part of the Morecambe Bay SPA, SAC and Ramsar Site.

Protected Species (see Section 5.27(b) below) must be the subject of consultation with English Nature (Cheshire to Lancashire team). Extensive guidance on procedures relating to International and National Sites and Protected Species is provided in the Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System, ODPM Circular 06/2005/Defra Circular 01/2005, accompanying PPS9.

5.27

The Conservation (Natural Habitats, &c.) Regulations 1994 apply to any developments proposals affecting directly or indirectly European Protected Species or Protected Sites. The latter include Special Protection Areas and (candidate) Special Areas of Conservation.

(a) Developers are urged to consult English Nature at the earliest possible opportunity where European Protected Sites may be involved. Under Regulation 48(1) an appropriate assessment must be undertaken, and will need to be sufficient for the planning authority to determine whether the proposal would adversely affect the integrity of the site. The planning authority will assess the proposal in terms of Regulations 48, Regulations 49 and Regulations 54(3), in consultation with English Nature. These Regulations specify parameters for the determination of planning applications affecting European Protected Sites, including exceptional circumstances under which such developments may proceed.

(b) The presence or the suspected presence of a European Protected Species on a site, at which planning permission is to be sought, will require a full assessment of

the state of the species population on and adjacent to the site. A method statement is required detailing how the conservation needs of that species will be maintained during and after development. In determining a planning application involving European Protected Species, planning authorities must ensure that such proposals pass three tests before they may derogate from the protection afforded by the Conservation (Natural Habitats, &c.) Regulations 1994. The three tests are:

(i)
that the development is "in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment" (Regulation 44(2)(c));

(ii)
that there is "no satisfactory alternative" (Regulation 44(3)(a)); and

(iii)
that the derogation is "not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range" (Regulation 44(3)(b)).

Local planning authorities should consult English Nature and other relevant conservation bodies over the validity of any survey findings and suitability of proposed mitigation. It should be recognised that even with a valid planning permission there is a need for a Defra licence to derogate from the provisions of the Conservation (Natural Habitats &c.) Regulations 1994 before works affecting a protected European species may be implemented.

Non-statutory Sites

5.28

Biological Heritage Sites and Geological Heritage Sites respectively are the names given to non-statutory wildlife and geological sites in Lancashire that are at least of county significance. Development proposals that directly or indirectly affect a Biological and Geological Heritage Site should be subject to an appraisal at an appropriate level sufficient to determine the impact. It is important to recognise that some Biological and Geological Heritage Sites may be of sufficiently value to qualify as national or even international sites; by way of illustration several Biological Heritage Sites have been elevated to Sites of Special Scientific Interest and further elevated to either Special Protection Areas or Special Areas of Conservation within a twelve-month period.

Whilst planning guidance and Policy 21 of the Joint Lancashire Structure Plan require the highest level of protection to be afforded to sites of international and national importance, Biological and Geological Heritage Sites that qualify as national sites but are un-designated should be considered in terms of their importance rather than their level of designation.

Hedgerows, Ponds and Other Habitat Features

5.29

Other features such as rivers, field boundaries including hedgerows, ponds, 'veteran' trees and small woods often provide valuable contributions to the biological diversity of an area. The importance of such features, because of their linear nature or as functioning 'stepping-stones', is recognised in paragraphs 11 and 12 of PPS9 and in

Regional Spatial Strategy for the North West. Such features are likely to be important elements in wildlife corridors, ecological networks and 'lifescapes'.

5.30

In view of the significance of such features and their function as stepping-stones or linkages in the wider landscape habitat matrix, consideration should always be given to their retention and enhancement. Where this is not feasible, the 'as a minimum no net loss' approach involves replacement or relocation of habitats or features of at least similar type and equivalent nature conservation value.

(a) Hedgerows themselves are a material consideration in determining planning applications. Whilst a valid planning application overrides the protection of an Important Hedgerow afforded by the Hedgerow Regulations, the presence of an Important Hedgerow on a development site will be regarded as a material consideration above and beyond that afforded to hedgerows in general. In addition certain hedgerows are considered to be 'distinctive' in the context of Lancashire's natural heritage. For example the hedgerows with a high proportion of holly fringing the Bowland Fells and the West Pennine Moors are considered to be representative of the former woodlands of the type classified as 'old oak woods with Ilex and Blechnum in the British Isles' of Annex 1 on the EC Habitats Directive 92/43/EEC. A broad classification of hedgerow types, including types that are considered to be 'distinctive' in terms of Lancashire's natural heritage, is given in Appendix 7. The presence of such 'distinctive' hedgerows should be regarded as a planning consideration.

(b) Ponds are normally of artificial origin but progress over many years through a natural succession of conditions that ultimately lead to their disappearance. Whether permanent or seasonal, they are valuable wildlife habitats in all stages of succession and in a wide variety of

Leeds - Liverpool Canal, a Biological Heritage Site functioning as a wildlife link and "stepping stones"

Reedbed, a UK BAP priority habitat developed around a former industrial lagoon.

Field pond, a valuable wild life hibitat

locations. Every effort should be made, therefore, to avoid any unnecessary loss of ponds through development (see also Section 5.22(c). Developers are encouraged to incorporate the creation of new ponds (and associated wetland) wherever feasible within development proposals which are in scale and character with the landscape and which provide rich and varied wildlife habitats.

(c) 'Veteran' trees, as well as occurring in ancient woodlands, may often occur in other habitats including parklands, hedgerows, naturalistic urban greenspace, historic urban parks and in association with former buildings. Whilst such trees are important genetically, they are also of particular value for biodiversity. Cavities provide bat roosts and trunks, limbs and branches may support uncommon mosses, liverworts and lichens; whilst dead-wood can support rare fungi and invertebrates. English Nature has defined 'veteran' trees as "trees that are of interest biologically, culturally or aesthetically because of their age, size or condition", *Veteran Trees: A guide to good management,* English Nature 2000. Every effort should be made to avoid loss, as the age of such trees means that they are, to all intent, irreplaceable in a realistic time scale. Where loss is unavoidable compensation will need to equate age with the quantity of replacement trees. In addition felled veteran trees should be retained as close as possible to where they grew and ideally in association with any retained mature trees or woodland.

Other Geological Features

5.31

From a practical planning viewpoint, geological features in general can be divided into two types, of which the first will require greater protection from development:

- 'Integrity' sites include irreplaceable features of strictly limited extent. Typical sites may include mineral and fossil deposits, limestone landforms ('karst'), river and coastal landforms. Limestone pavements are a particularly important feature in Lancashire.
- 'Exposure' sites consist of surface occurrences of formations that are extensive underground. Typical sites include active and disused quarries, cuttings, coastal cliffs, foreshore exposures, natural inland outcrops, stream sections and mines. Triassic sandstones, for example, are extensive underground but outcrop at the surface only in a few places in Lancashire.

Limestone Pavements

5.32

Limestone pavement is a Priority Habitat under the EC Directive on the Conservation of Natural Habitats and Wild Fauna and Flora (the 'Habitats Directive'). The best examples in Lancashire are notified as SSSIs, which collectively make up an important part of the Morecambe Bay Limestones SAC. Other areas of pavement are identified as BHSs, whilst most pavements in Lancashire are also protected by Limestone Pavement Orders under Section 32 of the Wildlife and Countryside Act 1981, as amended. However, the international importance of limestone pavements is recognised, whether or not designated a SAC. Limestone pavement will therefore be given the same

level of protection through the development control process commensurate with its international importance.

Biodiversity

5.33

Biodiversity is now embedded in planning through PPS9 and its accompanying Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within Planning, ODPM Circular 06/2005/Defra Circular 01/2005. PPS9 paragraphs 11, 14 and 16 deal with biodiversity and the 'Habitats and species of principal importance for the conservation of biological diversity in England' listed in Annex C of the accompanying Government Circular. The presence of these habitats and species will be an important consideration in the planning process. In addition Local Biodiversity Action Plans contain habitats and species of importance in the local context that will need to be taken into account. PPS9 recognises that development offers many opportunities for biodiversity benefits through good design and that local planning authorities should maximise such opportunities in and around development using planning obligation (see Part 3 – Appropriate Habitat Creation and Restoration – The Biodiversity Option).

Ecological Frameworks, Networks and 'Lifescapes' – Natural Heritage Zones

5.34

The characteristics of the three Natural Heritage Zones (Core, Intermediate and Man-made) are developed in paragraphs 5.13-5.15. In considering development proposals, its location within a strategic natural heritage zone should be considered.

- Development within Core Zones, due to the general predominance of key features of natural heritage, should be subject to a most rigorous assessment to determine the level of any impact and the effect upon the wider area. Such a measure is commensurate with the importance of the heritage features that make up the Zone. The strongest levels of protection should be the presumption, in the absence of over-riding need, as the density of cover of heritage interest in this zone makes avoidance difficult.
- Development within the Intermediate or Mixed Zone should also be subjected to the most rigorous assessment over impacts where wildlife assets are directly or indirectly involved. Whilst the more extensive wildlife assets may typically be of a regional or county significance, nationally and internationally important sites occur. However, wildlife assets are in general somewhat isolated and fragmented. Hence avoidance in this Zone becomes feasible and developers are urged to avoid heritage assets in favour of other suitable locations. Whilst policy implementation here should protect the integrity of wildlife assets, it should aim to reduce habitat fragmentation through habitat restoration and re-establishment.
- Development within the Man-made Zone directly or indirectly affecting wildlife assets should also be the subject of a rigorous assessment. In this Zone such features tend to be severely fragmented and small or reduced to narrow strips along linear features. In some areas the only wildlife asset may be the boundary feature itself. This does not mean to imply

that the wildlife assets are necessarily always less valuable in terms of biodiversity, merely that they are more dispersed. In fact relict semi-natural and secondary habitats may be the only examples for a considerable distance and as a result take on an enhanced significance. In addition small-scale habitats supporting European Protected Species are a feature of this Zone as are internationally important populations of wintering wildfowl. Whilst avoidance may be feasible in rural areas, it may be less so in urban areas. In rural and urban areas in this Zone 'quality of life' issues may be a consideration as both may suffer, but for different reasons, from limited access to wildlife habitats and resources. Policy implementation in this Zone should on the one hand result in the conservation and restoration of important resources whilst on the other result in the re-establishment of lost and severely fragmented habitats.

- Ecological networks, links and 'lifescapes' are important mechanisms in the dispersal of wildlife in response to climate change. In this respect planning decisions should, within the 'as a minimum no net loss' approach, not only prevent further habitat fragmentation but also take every opportunity to increase connectivity.

Mitigation and Compensation

5.35

Where, in exceptional circumstances, unavoidable loss or damage to a site or feature is likely as a result of a proposed development, measures of mitigation and compensation will be required of appropriate type and level to ensure there is as a minimum no net loss of heritage value.

Measures to be considered in this context may include:

- Retention or restoration of key habitats/features on the development site;
- Re-establishment/creation of new habitat(s) on or off site;
- Aftercare and sympathetic management of key habitats/features on or off site;
- Provision of access for education and/or scientific research.

5.36

Proposals for mitigation or compensation should take account of the opportunities to assist the delivery of UK and Lancashire Biodiversity Action Plan objectives and targets. In the case of geological sites, such measures may also involve the retention of key features or the exposure of replacement features. Each site will be to some degree unique, and specialist ecological/geological advice should be sought for specific site/feature mitigation and compensation measures. Such specialist advice may also be needed during the construction phase of the development.

5.37

Planning obligations through Section 106 Management Agreements are seen as a principal mechanism for ensuring long-term mitigation and compensation measures. Management required to maintain or restore a favourable conservation status on a site is a major element within the 'as a minimum no net loss approach'.

BAP Habitat in Lancashire	Lancaster	Wyre	Ribble Valley	Blackpool	Fylde	Preston	South Ribble	West Lancashire	Chorley	Blackburn with Darwen	Hyndburn	Burnley	Pendle	Rossendale
Broadleaved and mixed woodland	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Scrub	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Species-rich neutral grassland	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Calcareous grassland	*		*											
Limestone pavement	*													
Moorland/Fell (blanket bog and upland heathland)	*	*	*			*			*	*	*	*	*	*
Rivers and streams	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Reedbed	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Fens, marshes and swamps	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Mossland	*	*			*	*	*	*						
Lowland heath	*	*		*	*	*	*	*	*					
Arable fields and arable field margins	*	*		*	*	*	*	*	*					
Sand dune and coast grassland	*	*		*	*									
Coastal shingle	*	*		*	*									
Saltmarsh, mudflats and sandflats	*	*		*	*	*	*	*						
Species-rich hedgerows	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ponds and mill lodges	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Urban habitats	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Part 3: Appropriate Habitat Creation and Restoration – The Biodiversity Option

5.38

Mitigation or compensation measures may often involve elements of habitat re-establishment/creation or restoration. If these are to be effective and sustainable in heritage terms, it is important that works are carried in accordance with basic ecological principles. Thus they should aim, firstly, to reflect and strengthen the natural geographical distribution of habitats in Lancashire and, secondly, to work with and to maximise the opportunities to contribute to the implementation of the UK and Lancashire Biodiversity Action Plans (BAP) offered by the site and the type of development concerned. The table above is a guide to which types of BAP habitat in Lancashire are appropriate for habitat restoration and/or re-establishment/creation through the planning process, in terms of geographical area (by District).

Development Type	Appropriate UK BAP Priority Habitats	Lancashire BAP Habitats
Sandstone and gritstone quarries	Upland heathland	Moorland and fell
	Lowland heathland	
	Lowland meadows	Species-rich neutral grassland
	Lowland mixed deciduous woodland	Broad-leaved woodland
	Upland oakwood	Broad-leaved woodland
		Scrub
Limestone quarries	Lowland calcareous grassland	Calcareous grassland
	Lowland mixed deciduous woodland	Broad-leaved woodland
	Upland mixed ashwoods	Broad-leaved woodland
		Scrub
	Fens	
	Wet sites:	
Sand and gravel quarries	Reedbeds	Reedbeds
	Fens	
	Lowland meadows	Species-rich neutral grassland
	Wet woodland	Broad-leaved woodland
		Ponds and mill lodges
	Dry sites:	
	Lowland meadows	Species-rich neutral grassland
	Lowland heathland	
	Lowland mixed deciduous woodland	Broad-leaved woodland
Landfill sites	Lowland meadows	Species-rich neutral grassland
	Lowland heathland	
	Lowland mixed deciduous woodland	Broad-leaved woodland
	Upland oakwood	Broad-leaved woodland
Urban developments (housing, urban greenspace, golf courses, highways, leisure and recreation facilities etc.)		Scrub
		Urban
		Ponds and mill lodges
	Lowland meadows	Species-rich neutral grassland
	Lowland mixed deciduous woodland	Broad-leaved woodland
	Wet woodland	Broad-leaved woodland
		Scrub
	Reedbeds	Reedbeds
	Lowland heathland	
Wind farms	**Lowland sites:**	
	Lowland heathland	
	Lowland meadows	
		Species-rich neutral grassland
	Lowland raised bog	Mosslands
	Cereal field margins	Arable Fields and Arable Field Margins
	Coastal sand dunes	Sand dune (coastal grassland)
	Coastal saltmarsh	
	Lowland mixed deciduous woodland	Broad-leaved woodland
		Scrub
	Upland sites:	
	Blanket bog	Moorland and fell
	Upland heathland	Moorland and fell
	Lowland meadows	Species-rich neutral grassland
	Upland hay meadow	Species-rich neutral grassland
	Upland oakwood	Broad-leaved woodland
	Upland mixed ashwoods	Broad-leaved woodland
		Scrub

Ulnes Walton , a wetland habitat created as compensation

5.39

Different types of development offer different opportunities to deliver BAP targets. It is desirable and more effective to work with nature to develop wildlife habitats appropriate to the site and its locality. Whilst each site will have its own particular combination of opportunities for habitat creation, a general indication of those habitats, including UK BAP habitats, appropriate to various types of major development is as follows:

Appropriate Species

5.40

Habitat creation and restoration will more effectively contribute to the delivery of Lancashire BAP objectives by the species composition most closely mimicking that of the natural/semi-natural equivalent. In all instances material of local genetic stock should be sought although it may only prove possible to obtain British provenance. Material of foreign origin is inappropriate and should not be used.

A Synopsis of BAP Habitats

Woodland

5.41

Native woodlands consist of species that have naturally colonised Lancashire since the last ice age, 10,000 years ago. Those native woodlands that are believed to have existed prior to 1600 are termed ancient semi-natural. The main types of native woodland that occur in Lancashire, together with their typical situations, are listed in Appendix 3. All ancient semi-natural woods in the County have been managed in the past and may now contain a number of introduced species such as beech and sycamore. Woodlands that have arisen since 1600 are termed secondary. They may either be planted or have developed naturally. Such woodlands usually contain species that are not native to the County.

5.42

The establishment of woodland is a principal component of many habitat creation and/or restoration projects. However, to maximise the delivery of biodiversity objectives there is a need to consider the native woodland types of the locality and plant the appropriate species. Such woodland planting is referred to as creating new native woodlands and further guidance on this is given in Appendix 9. The species to plant in order to establish each type of native woodland appropriate to Lancashire are shown in Appendix 10; this information is also available on Lancashire County Council's website at **www.lancsenvironment.com.**

Scrub and Shrubland

5.43

Scrub and areas dominated by shrubs are usually regarded as a transitional habitat in the development of woodland from another habitat. It is, however, a valuable habitat in its own right and has a significant biodiversity value, particularly when associated with other habitats. Shrubs are frequently planted as part of landscaping schemes in both urban and rural locations. The planting of shrubland with appropriate native species in a designed juxtaposition of habitats can enhance biodiversity opportunities alongside development. Management of the habitat to ensure that succession to woodland is retarded is a key requirement maintaining the habitat and associated habitats.

Species-rich Grassland

5.44

Grassland, like woodland is a principal component of many landscaping schemes. Species-rich grassland, whether neutral or calcareous has suffered massive losses over the UK and for this reason both types are UK BAP priority habitats. Whilst ancient species-rich grassland, with its ecological complexity, cannot readily be re-established/created, it is non-the-less possible to create grassland swards with the potential to help to redress the loss over time.

Wild flower grassland providing a biodiversity feature on urban amenity grassland

5.45

Most commercially available wild flower seed mixtures contain species inappropriate to Lancashire and therefore are in this respect not ideal to redress losses in biodiversity. Appendix 11 lists the of grassland types found in Lancashire that are the most appropriate as a basis for grassland creation schemes and projects, whilst Appendix 8 gives further details of suitable species and establishment and aftercare techniques. This information is also available on Lancashire County Council's website at www.lancsenvironment.com.

Blanket Bog

5.46

Blanket bog is one of the principal BAP habitats in Lancashire. Formerly it covered most of the moorland plateaux to depths often well in excess of 2 metres and extended considerable distances down the flanks of the moors. Drainage, burning and water catchment works through the construction of drainage 'grips' have degraded the resource, although in most areas not sufficiently so as to preclude restoration. Lancashire's mild wet climate, and now relatively clean air, provides the ideal conditions for the growth of Sphagnum moss, one of the main builders of peat and bog habitat. In this respect Lancashire's uplands are in a far better condition than many other upland areas in northern England. In addition to the biodiversity importance of this habitat there is growing

recognition that active blanket bog is an effective CO_2 sink and therefore valuable in efforts to combat climate change.

5.47

The Core Natural Heritage Zones are regarded as containing some of the best blanket bog resource in the county and the region, even though little if any is in a favourable condition. However, in areas where there has been a cessation of intensive pressure recovery is evident particularly in parts of the West Pennine Moors. Elsewhere past drainage and periodic burning prevent recovery.

5.48

Developments involving moorland should seek to repair the hydrological integrity of the peat profiles in order to raise the watertable, the aim being to restore active blanket bog growth. A variety of mechanical techniques involving 'grip' blocking are appropriate from constructed ladder dams in major grips to hay/heather bails in smaller grips.

Upland Heathland

5.49

The true extent of upland heathland in Lancashire is obscured, as areas of degraded blanket bog supporting dwarf shrub (heather and bilberry) vegetation may not be readily distinguishable. Upland heathland is generally associated with thin peat and mineral soils. In this respect secondary heath is often associated with former mineral workings where grazing is restricted.

5.50

The re-establishment/creation of upland heath is a BAP objective that can readily be delivered in the restoration of upland quarries. Methods involving the spreading of heather bails have proved successful in various situations. The creation of upland heathland with its dwarf shrub vegetation may provide a pre-requisite for blanket bog re-establishment on thin peat and mineral soils over the long-term.

Mossland/Lowland Raised Bog

5.51

This habitat was once an extensive feature of the Man-made (Rural) Natural Heritage Zone of lowland Lancashire. Due to drainage and intensive horticulture only small pockets of mossland supporting relict and fragmented semi-natural vegetation survive. In terms of restoration through development, it is considered that where developments elsewhere require off-site mitigation/compensation measures, then this may in certain circumstances be possible to direct resources towards recognised relict mossland sites. Mechanical methods of maintaining a perched water-table and in reducing habitat fragmentation are key factors.

Lowland Heathland

5.52

Like upland heathland this habitat may be readily created in restoration of mineral extraction sites. In lowland Lancashire acidic sand extraction sites are the most suitable and offer the opportunity for re-establishment/creation of this scarce habitat. Distribution of heather from bails is likely to be affective. Lowland heathland may form a mosaic with Lowland acidic grassland.

Rivers and Streams

5.53

Watercourses, such as rivers and streams, represent and important features in terms of biodiversity. All too often in the past they have been culverted or canalised to the detriment of biodiversity. Enhancement of rivers and streams for biodiversity may involve the restoration of natural processes, removal of retaining walls, opening of culverts or their incorporation in landscaping schemes.

Reedbeds

5.54

Where developments involve standing water, the creation of reedbed is an option that can be delivered in a reasonably timescale. However, reedbed is most valuable adjacent to open water so water depths of at least 2 metres are necessary if the reed is not to colonize the whole waterbody. Establishment has proved successful where transplants are planted along the waters edge (only slightly immersed) and protected from the attention of waterfowl.

Fens, Marshes and Swamps

5.55

Fens, marshes and swamps incorporate a range of wetland habitats from small upland flushes to extensive fens and swamps supporting tall-herb communities. They are generally a valuable biodiversity resource. Inevitably they will be very site specific, although fen, marsh and swamp habitats may readily be associated with other habitats such as Ponds and mill lodges, Reedbeds and Rivers and streams. Habitats involving tall-herbs such as Meadowsweet *(Filipendula ulmaria)* may be re-established in 'marshy' locations, however, upland flushes will depend on suitable water seepage and involve much technical ecological expertise.

Sand Dunes

5.56

Sand dunes as a BAP habitat encompasses mobile dunes through coastal grassland to dune heath. Whilst the sand dunes themselves are a consequence of natural processes they are important in terms of a natural sea defence. Where suitable locations and conditions exist the restoration and re-establishment coastal grassland and dune heath would be significant outputs from development, although it is expected that opportunities will be rare.

Coastal Shingle

5.57

Coastal shingle is a rare habitat feature in Lancashire for similar reasons to that of sand dune. Works involving coastal defences may appropriately consider the restoration of shingle habitat. However, succession may be a major constraint in the long-term in re-creation of this habitat where natural coastal processes are not available.

Saltmarsh

5.58

Much loss of saltmarsh has resulted from past developments and agriculture. Opportunities through development to re-establish saltmarsh are expected to be limited, although they may form part of developments involving 'managed retreat'. Restoration of this habitat may be feasible where developer's landholdings extend into degraded saltmarsh

Ponds and Mill Lodges

5.59

Ponds are very much a feature of the Man-made (Rural) Natural Heritage Zone. The creation of replacement ponds is often required due to a loss through development and in the past has often been part of the translocation of protected species. Ancient field ponds have developed over a long period and cannot readily be re-created. However, in the creation of new ponds, particularly where these are intended as replacements, works should involve the phase translocation of sediment and vegetation from the donor pond. Establishment over a five-year period will be generally necessary to ensure success. Timing of construction is normally crucial to ensure that there is adequate rainfall to fill the excavation; long-term management problems can result from the invasive Reedmace or Bulrush *(Typha latifolia)* seeding on to bare clay or mud when ponds fail to fill with water.

5.60

Mill lodges are a legacy of Lancashire's industrial past and generally associated with Man-made (Urban) Natural Heritage Zone. Whilst not generally as old as field ponds they have developed as a biodiversity resource over the years and replaced older wetland features lost to Victorian and Edwardian developments.

5.61

In order to maintain biodiversity, where ponds and mill lodges are retained in developments; consideration is necessary in-order to ensure that there is no change in local hydrology such to result in a drawdown in water level; and that appropriate long-term management of the pond and surrounding area will ensure the survival of the specific features of interest. Adequate guidance exists elsewhere for the creation of wildlife ponds. Ponds in residential developments frequently degenerated in interest as a consequence of becoming 'duck ponds'; such problems need to be addressed by prescriptive management plans.

Species-rich Hedgerows

5.62

Species-rich hedgerows are integral biodiversity features of both the Intermediate and Man-made Natural Heritage Zones. They are important not only in their own right as a biodiversity resource but as components in links and corridors connecting semi-natural habitats.

Species-rich hedgerow, functioning as a habitat link

5.63

In many instances development can be designed in ways to respect the hedgerow network, however, in others losses may be unavoidable. In such a circumstance hedgerows of appropriate species composition need to be re-established in a way to maintain or enhance biodiversity and connectivity. However, a hedgerow is more than simply a line of shrubs, it may also comprise a hedge bank, ditch or a herbaceous verge. In re-establishment to compensate loss or damage, the re-creation of such features along with the translocation of hedge bank, ditch or verge vegetation should be included as normal practice.

5.64

In addition to the Important Hedgerows of the Hedgerow Regulations some hedgerow types are considered to be 'distinctive' in the context of Lancashire's natural heritage (Appendix 6). Where these existing hedgerows may be included as a part of a development, such as a curtilage to a property or within urban greenspace, measures through planning conditions and/or obligation are needed to prevent a gradual shift in composition from native to non-native exotic species.

Arable Fields and Margins

5.65

The open habitat created by the regular management of arable fields provides conditions for certain UK and Lancashire BAP animal and plant species. Over the last few decades many of these have declined through intensive agricultural practices. However, this habitat is relatively easily re-created and has the potential to enhance developments that have the capabilities of maintaining annually the open habitat required. Such conditions are provided by winter digging, rotavation or ploughing. Many annual arable weeds are very colourful – the red of corn poppy and yellow of corn marigold and provide seeds for a number of bird species. In addition Lancashire is nationally important for purple ramping-fumitory a species strongly associated with arable farmland.

Urban

5.66

The urban environment lies principally but not exclusively in the Man-made (Urban) Natural Heritage Zone. Imaginative developments offering the protection of urban greenspace and encapsulated countryside, its re-establishment through habitat creation to address 'quality of life' have the potential to contribute to a number of BAP objectives. Careful design and prescriptive management will optimise delivery.

appendices

Appendix 1: Site types of Historic County Distinctiveness

Period	Features and Landscapes associated with:
Prehistoric	Prehistoric remains on the uplands, particularly relating to the Bronze Age.
	Palaeoenvironmental material conserved within upland and lowland peat.
Roman	Forts and roads.
	Native civilian enclosed and unenclosed settlements.
Early medieval/ Medieval	Saxon/Anglian and Scandinavian crosses. Motte, bailey castles.
	Dispersed pattern of settlement.
	Hunting forest and 'vaccaries' (cattle ranches).
Post-medieval/ Industrial	Vernacular building tradition AD1600-1800, typified by envelope mouldings and datestones.
	Gentry houses, often associated with extensive ornamental grounds and parkland.
	16th-19th Century buildings and structures related to the 'dual economy'.
	16th-19th Century field barns and aisled barns.
	Campaigns of mossland, saltmarsh and moorland reclamation.
	Textile mills and related structures.
	Quarrying and mining, including stone, coal, iron ore, limestone 'hushing' and lead.
	18th and 19th Century bridges.
	Transport, particularly turnpikes, packhorse roads, canals and railways.
	18th and 19th Century churches and non-conformist chapels.
	Victorian townscapes associated with the expansion prompted by industry and manufacturing, including coastal resorts.
	Abandoned farmsteads on the moorland fringes, often associated with Victorian and later water catchment areas.

Appendix 2: Register of Parks and Gardens of Special Historic Interest in Lancashire

Name	Grade
Ashton Gardens, Lytham St Annes	II
Ashton Memorial Gardens and Williamson Park, Lancaster	II
Astley Hall, Chorley	II
Avenham Park, Preston	II
Avenham Walk, Preston	II
Bold Venture Park, Darwen	II
Capernwray Hall, Lancaster	II
Clitheroe Castle Park	II
Corporation Park, Blackburn	II
Gawthorpe Hall, Ightenhill	II
Haslam Park, Preston	II
Hoghton Tower	II
Lancaster Cemetery (Lancaster Moor)	II
Lever Park, Rivington	II
Lytham Hall	II
Miller Park, Preston	II
Moor Park, Preston	II
Preston Cemetery (New Hall Lane Cemetery)	II
Promenade Gardens, Lytham St Annes	II
Queen's Park, Blackburn	II
Queen's Park, Burnley	II
Rivington Gardens	II
Scarisbrick Hall	II
Scott Park, Burnley	II
Stanley Park, Blackpool	II*
Stonyhurst College, Hurst Green	II*
Sunnyhurst Woods, Darwen	II
The Harris Knowledge Park (Formerly The Harris Orphanage)	II
The Willows, Preston	II
Thompson Park, Burnley	II
Towneley Park, Burnley	II
Whitehall Park, Darwen	II
Whitworth Cemetery, Whitworth, Rossendale	II
Woodfold Park, Pleasington	II
Worden Park, Leyland	II

Appendix 3: Species in Lancashire Protected Under the Conservation (Natural Habitats, &c) Regulations 1994

Animal Species	Occurs in Lancashire	Plant Species	Occurs in Lancashire
Bats, (all species)	Throughout	Fern, Killarney	Distribution imperfectly known
Dolphins, porpoises and whales	Off shore	Lady's Slipper	Lancaster District
Dormouse	Probably extinct	Water-plantain Floating-leaved	Discovered at one locality in Rossendale in 2005, may be found elsewhere
Newt, Great Crested	Throughout the county but more frequent towards the west		
Otter, Common	Ribble, Lune and Keer catchments		
Toad, Natterjack	Re-introduced in Lancaster formerly Extinct		
Turtles, Marine	Off shore		

Appendix 4: Species in Lancashire Protected Under Schedule 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended)

Breeding Birds Protected by Schedule 1 Wildlife and Countryside Act 1981 as amended

Common Name	Scientific Name	Comments
Avocet	Recurvirosta avossetta	
Bittern	Botaurus stellaris	
Corncrake	Crex crex	
Crake, Spotted	Porzana porzana	
Crossbill, Common	Loxia curvirostra	
Garganey	Anas Querquedula	
Godwit, Black-tailed	Limosa limosa	
Goshawk	Accipiter gentilis	
Gull, Mediterranean	Larus melanocephalus	
Harrier, Hen	Circus cyaneus	
Harrier, Marsh	Circus aeruginosus	
Hobby	Falco subbuteo	
Kingfisher	Alcedo atthis	
Merlin	Falco columbarius	
Owl, Barn	Tyto alba	
Peregrine	Falco peregrinus	
Plover, Little-ringed	Charadrius dubius	
Quail, Common	Coturnix coturnix	
Redstart, Black	Phoenicurus ochruros	
Ruff	Philomachus pugnax	
Spoonbill	Platalea leucorodia	Nested once in 1999
Tit, Bearded	Panurus biarmicus	

Animals Protected by Schedule 5 Wildlife and Countryside Act 1981 as amended

Common Name	Scientific Name	Comments	9(1)	9(4)(a)	9(4)(b)	9(5)	9(4)(A)	9(2)
Adder	Vipera berus		●*			●		
Atlantic stream (white-clawed) crayfish	Austropotamobius pallipes		●*			●		
Bats, all species	Vespertilionidae and Rhinolophidae		●	●	●	●	●	●
Butterflies:								
Northern Brown Argus	Aricia artaxerxes					●		
Duke of Burgundy Fritillary	Hamearis lucina							
High Brown Fritillary	Argynnis adippe					●		
Pearl-bordered Fritillary	Boloria euphrosyne					●		
White Letter Hairstreak	Stymonida w-album					●		
Large Heath	Coenonympha tullia					●		
Dolphins	Cetacea (all species)		●	●	●	●	●	●
Dormouse	Muscardinus avellanarius	Extinct?	●	●	●	●		●
Frog, Common	Rana temporaria					●		
Lizard, Viviparous	Lacerta vivipara		●*			●		
Marten, Pine	Martes martes		●	●	●	●		●
Mussel, Freshwater Pear	Margaritifera margaritifera		●	●	●	●		●
Newt, Great Crested (Warty)	Triturus cristatus		●	●	●	●		●
Newt, Palmate	Triturus helveticus					●		
Newt, Smooth	Triturus vulgaris					●		
Otter, Common	Lutra lutra		●	●	●	●	●	●
Porpoise	Cetacea (all species)		●	●	●	●		●
Slow-worm	Anguis fragilis		●*			●		
Snake, Grass	Natrix helvetica (natrix)		●*			●		
Squirrel, Red	Sciurus vulgaris		●	●	●	●		●

Appendix 4: Species in Lancashire Protected Under Schedule 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended) CONTINUED

Toad, Common	Bufo bufo				●		
Toad, Natterjack	Bufo calamita	●	●	●	●		●
Turtles, Marine	Cheloniidae and Dermochelyidae	●	●	●	●		●
Vole, Water	Arvicola terrestris						
Whale	Cetacea (all species)	●	●	●	●	●	●

Plants Protected by Schedule 8 Wildlife and Countryside Act 1981 as amended

Common Name	Scientific Name	Comments
Bluebell	Hyacinthoides non-scripta	(in respect of S.13(2) only)
Fern, Killarney	Trichomanes speciosum	
Lady's-slipper	Cypripedium calceolus	
Water-Plantain, Floating-leaved	Luronium natans	

Key

9(1) = S.9(1) intentionally kill, injure or take any wild animal of such a listed species;

9(4)(a) = S.9(4)(a) intentionally or recklessly damage or destroy or obstruct access to any structure or place which any animal of a listed species uses for shelter or protection (at any time when the animal is not there);

9(4)(b) = S. 9(4)(b) intentionally or recklessly disturb an animal of a listed species whilst it is occupying such a structure or place which it uses for that purpose;

9(5) = S.9(5) sell, transport or trade in an animal of a listed species whether alive or dead, or any part of its or any thing derived from it;

9(4)(A) = S9(4)(A) intentionally or recklessly disturb a dolphin, whale or basking shark wherever it may be;

9(2) = S.9(2) possess or control a living or dead animal of a listed species. Or any part of it or anything derived from it.

* = Denotes that only partial protection is afforded under Section 9(1) for this species. The Adder, Viviparous Lizard, Slow-worm and Grass Snake, are only protected under Section protected under section 9(1) from being taken.

Appendix 5: A Guide to the Occurrence of Species of Principal Importance (Section 74 (2) Countryside and Rights of Way Act 2000 and Annex C of the Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their impact within Planning, ODPM Circular 06/2005/DEFRA Circular 01/2005) in Lancashire

Species listed below are those currently known to occur in Lancashire. The table is for guidance purposes only; the lack of a record from any Local Authority Districts should not be taken as a definitive indication of species absence. Habitat requirements for individual species should be used to assess the likelihood of presence and hence the appropriateness of field survey.

Species	Habitat	1. Lancaster	2. Wyre	3. Ribble Valley	4. Blackpool	5. Fylde	6. Preston	7. West Lancashire	8. South Ribble	9. Chorley	10. Blackburn with Darwen	11. Hyndburn	12. Burnley	13. Pendle	14. Rossendale
Vertebrates															
Amphibians															
Bufo calamita **Natterjack Toad**	Re-introduced into a coastal location	*													
Triturus cristatus **Great-crested Newt**	Ponds, small reservoirs and ditches in both rural and urban areas	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Birds															
Alaudia arvensis **Skylark**	Arable fields, meadows, pasture and moorland	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Botaurus stellaris **Bittern**	Reedbeds with open water	*			*										
Caprimulgus europaeus **Nightjar**	Open-wooded mosslands and moorland fringe														
Carduelis cannabina **Linnet**	Open scrubby areas, moorland fringe and hedgerows	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Crex crex **Corncrake**	Meadows and fields with dense vegetation														
Emberiza schoeniclus **Reed Bunting**	Reed beds, fens, mires and ditches	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Melanitta nigra **Common Scoter**	Marine environments off the Lancashire coast	*	*		*	*		*							
Miliaria calandra **Corn Bunting**	Arable farmland	*	*			*		*	*						
Muscicapa striata **Spotted Flycatcher**	Woodland, parks, churchyards, and large gardens with mature trees	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Passer montanus **Tree Sparrow**	Farmland, strongly association with arable, nesting in tree trunks and nesting-boxes	*	*	*	*	*	*	*	*	*			*	*	*

Species	Habitat	1. Lancaster	2. Wyre	3. Ribble Valley	4. Blackpool	5. Fylde	6. Preston	7. West Lancashire	8. South Ribble	9. Chorley	10. Blackburn with Darwen	11. Hyndburn	12. Burnley	13. Pendle	14. Rossendale
Birds															
Perdix perdix **Grey Partridge**	Arable farmland, meadows, un-cultivated land and open scrub	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Pyrrhula pyrrhula **Bullfinch**	Woodland, scrub, hedgerows and scrubby urban habitats	*	*	*			*	*	*	*	*	*	*	*	*
Streptopelia turtur **Turtle Dove**	Arable farmland with hedgerows					*		*	*						
Tetrao tetrix **Black Grouse**	Upland mosaics of moorland, scrub and species-rich grassland, Bowland			X											
Turdus philomelos **Song Thrush**	Wooded areas, scrub, hedgerows, urban green-space and gardens	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Mammals															
Arvicola terrestris **Water Vole**	Mainly associated with well-vegetated banks of ponds, rivers, canals and drainage ditches	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Delphinus delphis **Common Dolphin**	Open sea and coastal waters	*	*		*	*		*							
Lepus europaeus **Brown Hare**	Arable farmland, meadows, pastures, open scrubland and woodland	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lutra lutra European Otter	Riparian habitats through to estuaries and possibly coastal waters	*	*	*	*	*	*	*	*						
Phocoena phocoena **Harbour Porpoise**	Coastal waters	*	*		*	*		*							
Pipistrellus pipistrellus **Pipistrelle Bat**	All types of rural and urban habitats, frequently making use of domestic buildings and trees	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Rhinolophus hipposideros **Lesser-horseshoe Bat**										?					
Sciurus vulgaris	Woodlands with conifers	X		X				*	X	X					
Red Squirrel	in lowland Lancashire														
Tursiops truncatus	Open sea and coastal	*	*		*	*		*							
Bottlenose Dolphin	waters														
Invertebrates															
Bees															
Osmia parietina **A mason bee**	Amongst rocks and in dead wood, dry stone walls and limestone pavements	*													

Species	Habitat	1. Lancaster	2. Wyre	3. Ribble Valley	4. Blackpool	5. Fylde	6. Preston	7. West Lancashire	8. South Ribble	9. Chorley	10. Blackburn with Darwen	11. Hyndburn	12. Burnley	13. Pendle	14. Rossendale
Beetles															
Ernoporus tiliae **Bast bark Beetle**	Broad-leaved woodland, in the bark of recently dead or dying twigs and small, thin boughs of small-leaved lime and possibly other Tilia species	*													
Butterflies															
Argynnis adippe **High-brown Fritillary**	Coppiced limestone woodland and limestone pavements	*													
Boloria euphrosyne **Pearl-bordered Fritillary**	Coppiced limestone woodland and limestone pavements	*													
Crustaceans															
Austropotamobius pallipes **White-clawed Crayfish**	River Ribble where it may still survive in tributary streams, also a pond in Rossendale			*											*
Flies															
Doros conopseus **A hoverfly**	Limestone grassland edged by scrub or woodland, often in association with brambles	*													
Lipsothix nigristigma **A cranefly**	Associated with wet, rotten wood in streams and marshy areas in ravine woodland -first UK record Clayton-le-Dale, Lancashire 1924			*					*		*				
Molluscs															
Margaritifera margaritifera **Freshwater-pearl Mussel**	River Lune where the population is declining and the River Ribble from where a empty shell was found in 19—	*		*											
Vertigo angustior **Narrow-mouthed Whorl-snail**	In Lancashire transition zone between limestone pavement and scrub woodland, also boggy grassland and coastal marshes elsewhere in UK	*													

Species	Habitat	1. Lancaster	2. Wyre	3. Ribble Valley	4. Blackpool	5. Fylde	6. Preston	7. West Lancashire	8. South Ribble	9. Chorley	10. Blackburn with Darwen	11. Hyndburn	12. Burnley	13. Pendle	14. Rossendale
Moths															
Hydrelia sylvata **Waved Carpet**	Wet and damp woodland of alder, birch and willow	*													
Lycia zonaria Britannica **Belted Beauty**	A species of sand dune habitat and in Lancashire upper salt marsh	*				?									
Trichopteryx polycommata **Barred-toothed Stripe**	Scrub and open woodland, usually on limestone, with Ligustrum vulgare (Wild Privet) and Fraxinus excelsior (Ash)	*													
Lower Plants ***Fungi***															
Hygrocybe calyptraeformis **Pink Meadow-cap**	Occurs in un-improved and semi-improved grassland	*		*						*	*				
Microglossum olivaceu **An earth tongue**	Occurs in grassland and deciduous woods	*													
Hydnellum concrescens		*													
A tooth fungus Phellodon confluens		*													
A tooth fungus Phellodon melaleucus		*													
A tooth fungus															
Mosses and Liverworts															
Fissidens exiguus **Tiny fern-moss**	An aquatic species of sandstone rocks in streams and rivers with some shade	?													
Weissia rostellata **Beaked Beardless-moss**	An ephemeral species of sandy alluvium and exposed soil (reservoir draw-down zones and arable fields)			*											
Pallavicinia lyellii **Veilwort**	On peat	*													

Species	Habitat	1. Lancaster	2. Wyre	3. Ribble Valley	4. Blackpool	5. Fylde	6. Preston	7. West Lancashire	8. South Ribble	9. Chorley	10. Blackburn with Darwen	11. Hyndburn	12. Burnley	13. Pendle	14. Rossendale
Higher Plants															
Vascular Plant															
Alchemilla minima **An alchemilla**	Short sward flushed calcareous grassland and Carex panicea (Carnation Sedge) flushes, Leck	*													
Cypripedium calceolus	Open limestone woodland and scrub in Arnside	*													
Lady's-slipper Orchid	–Silverdale AONB – re-introduction at a number of confidential sites														
Fumaria purpurea **Purple Ramping-fumitory**	A species of arable fields and open habitats (hedgebanks) subject to summer desiccation. Occurs as an occasional casual elsewhere	*	*		?	*		*	*		c				c
Galeopsis angustifolia **Red Hemp-nettle** Limonium britannicum	Fine limestone scree, limestone pavement and coastal shingle Coastal shingle and old stone sea defences	X	*												
A rock sea-lavender															
Juniperus communis **Juniper**	Limestone pavements and open woodland, scrub and grassland normally on limestone	*													
Trichomanes speciosum **Killarney Fern**	Occurs as a gametophyte in deep rocky recesses	*		*								*			

KEY

* Recorded in a Local Authority District
? Uncertain record in Local Authority District
X Possibly extinct in Local Authority District
c Casual occurrence in Local Authority District

Appendix 6: North West Regional Spatial Strategy- Policy ER4 Nature Conservation and Biodiversity

Planning authorities and other agencies in their plans, policies and proposals will afford the strongest levels of protection to:

- sites with international and national nature conservation designations in the Region, encompassing: Ramsar sites, Special Protection Areas, Special Areas of Conservation, National Nature Reserves and Sites and Special Scientific Interest; and
- statutorily protected species.

Planning authorities and other agencies in their plans, policies and proposals should ensure that the overall nature conservation resource in the North West is protected and enriched through conservation, restoration and re-establishment of key resources by:

- affording the highest level of protection and management to those resources which are important and irreplaceable within practical timescales;
- ensuring that there is as a minimum no net loss in the value of other biodiversity resources in the Region;
- returning key biodiversity resources to viable levels by promoting the restoration and re-establishment of habitats and species populations in accordance with the targets set out in the UK and Local Biodiversity Action Plans. In identifying areas for habitat restoration and re-establishment, particular attention should be paid to reversing habitat fragmentation and species isolation and ensuring the appropriate management of wildlife corridors that are important for migration and disposal of wildlife. In implementing the above, local authorities should set out a coherent and functional ecological framework which identifies priority biodiversity resources, areas of land which have the potential for returning these resources to viable levels and wildlife corridors;
- ensuring that the implications of climate change for biodiversity and nature conservation are fully understood and taken into account. Climate change will have positive and negative impacts on different species and habitats, and policies and plans should be sufficiently flexible to climate induced stresses on vulnerable habitats and species. Measures such as those listed above should be employed to ensure their protection, along with the use of buffer zones and the management of wildlife within their surrounding landscapes. Authorities will need to seek advice from and liaise with other agencies that specialise in nature conservation and climate change and use a collaborative approach across regional and local authority boundaries where appropriate; and
- apply the principle of "enhancing existing capital" when considering all new development proposals which will impact on biodiversity.

Planning authorities and other agencies in their plans, policies and proposals must take into account the Regional Biodiversity Audit, English Nature's Regional Biodiversity Targets in Appendix 1, Local Biodiversity Action Plans and initiatives related to the implementation of National Action Plans.

Appendix 7: Broad Lancashire Hedgerow Classification Including 'Distinctive' Hedgerows in the context of Lancashire's Natural Heritage

The following classification is aimed at providing assistance in assessing hedgerows in Lancashire. The broad types draw upon the National Vegetation Classification (NVC) as well as edaphic and climatic factors in Lancashire. Within the classification some hedgerow types are widely distributed over England and are here termed 'widespread', others are more local and considered 'distinctive' in the context of Lancashire's and its natural heritage. Whilst most hedgerows in Lancashire will fit the classification, it should be recognised not all will fall neatly into one or other type.

Broad hedgerow type	Description	Character
Ubiquitous Hawthorn Hedges	The ubiquitous field hedge of Lancashire and much of England, usually species poor.	Widespread
Mixed Ash Hedgerows	In Lancashire normally associated with limestone areas and those with base-rich drift deposits. They are allied to the NVC W8 Fraxinus excelsior-Acer campestre-Mercurialis perennis woodland type.	Widespread
Mixed Oak Hedgerows	A mixed hedgerow with oak trees with a moderate to species-rich assemblage of woodland flora. They are found over a wide area of England and are allied to the NVC W10 Quercus robur-Pteridium aquilinum-Rubus fruticosus woodland type.	Widespread
Alder-Ash Hedgerows	A mixed hedgerow usually moderate assemblage of wet woodland flora. They are allied to the NVC W7 Alnus glutinosa-Fraxinus excelsior-Lysimachia nemorum woodland type and other wet woodland types (BAP Wet Woodlands). In addition to alder and ash other woody species include bird cherry, grey willow and bay willow.	Distinctive
Upland Ash Hedgerows	A mixed hedgerow of Bowland and other eastern upland areas of Lancashire where limestone or calcareous drift deposits occur. These hedgerow types tend to be species-rich with a diverse ground flora. It is allied to the NVC W9 Fraxinus excelsior-Sorbus aucuparia-Mercurialis perennis Woodland type (BAP Upland Ash Woodland). In addition to ash and rowan, bird cherry, grey willow, eared willow, downy-rose and raspberry are often frequent components.	Distinctive
Upland Oak Hedgerows	A mixed hedgerow of generally low species diversity and usually associated with acidic Pennine areas in upland and upland fringe locations. It is allied to the NVC W11 Quercus petraea-Betula pubescens-Oxalis acetosella, W16 Quercus spp.-Betula spp.-Deschampsia flexuosa and W17 Quercus petraea-Betula pubescens-Dicranum majus woodlands types (BAP Upland Oak Woodland). In addition to oak, rowan, birch and holly; eared willow, bilberry, wood sorrel, bluebell, wavy hair-grass, lady fern, broad buckler-fern, lemon-scented fern, scaly male-fern and hard fern may be found.	Distinctive

Broad Character hedgerow type	Description	
Lancashire Holly Hedges	A hedgerow type seen at its best along the mild, wet western fringe of the Pennines through Chorley, South Ribble, Blackburn with Darwen, Ribble Valley, Preston, Wyre and Lancaster Districts. It is allied to the upland woodland types but is best considered to be representative of the "41.53 old oak woods with Ilex and Blechnum in the British Isles" of Annex 1 on the EC Habitats Directive 92/43/EEC. As a hedgerow it can vary from almost single species holly to a mixed hedge where holly is particularly well represented. It is often associated with oak either as a hedgerow component or as mature trees. This hedgerow type is considered to comprise 50% or more holly.	Distinctive
North West – Mixed thorn hedges with Damson standard	A hedgerow type distinctive from Cheshire through the Lancashire Plain to Southern Lakeland in Cumbria. Some Prunus may be large shrubs rather than form conventional standards and involve Bullace or other varieties of Prunus.	Distinctive
Coastal Scrubby Hedgerows	Hedge banks in coastal areas on clay/sandy soils with gorse, blackthorn and hawthorn in exposed situations. They are allied to the NVC W22 and W23 woodland types.	Widespread

Source: LCC April 2003.

Appendix 8: The Main Native Woodland Types in Lancashire
(NVC Code = National Vegetation Classification Category)

Woodland Zone	NVC Code	Woodland Types	Appropriate Situation
Lowland	W6	Riverside Alderwood	Seasonally waterlogged sites, often by lowland watercourses
	W8	Lowland Mixed Broadleaved Woodland	Well-drained, base-rich, lowland sites on limestone and boulder clay
	W10	Lowland Oakwood	Neutral or rather acid soils on the plain and lower valley slopes of the upland fringe. The most common type of native woodland in Lancashire
Upland Fringe	W7	Ash-Alder Woodland	Damp valley slopes with groundwater seepages and along streamsides
	W9	Upland Mixed Broadleaved Woodland	Well-drained base-rich upland fringe sites (sometimes over limestone)
Upland	W11	Upland Oakwood	Neutral or rather acid soils on the larger valley sides and lower hills
	W16/17	Upland Oak-Birch Woodland	Upland clough or gill sites on strongly acid soils

Source: Lancashire County Council.

Appendix 9: Creating New Native Woodlands in Lancashire

What are New Native Woodlands?

6.4

Native woodlands consist of species which have naturally colonised Lancashire since the last ice age, 10,000 years ago. Those native woodlands which are believed to have existed prior to 1600 are termed ancient semi-natural. All ancient semi-natural woods in the County have been managed in the past and may now contain a number of introduced species such as beech and sycamore. Woodlands which have arisen since 1600 are termed secondary. They may either be planted or have developed naturally. Such woodlands usually contain species that are not native to the County. The aim of this note is to provide guidance on the creation of woodland using species native to Lancashire and appropriate to a site. These are called new native woodlands.

Why Plant New Native Woodlands?

6.5

The establishment of new native woodlands has a number of environmental benefits. They may:

- be good for wildlife;
- be more diverse than traditional forestry plantations;
- increase landscape appeal;
- offer multiple land use: income generation with nature conservation;
- reduce erosion;
- enlarge and link existing woodlands;
- improve air quality;
- provide shelter for stock;
- be valuable sporting assets.

Some of these benefits may be shared by other types of new woodland.

Woodland Design

6.6

When a new native woodland is planned, thought must be given to a number of aspects of design including:

- location;
- design at the landscape scale;
  use of natural colonisation;
- species choice for planting;
- planting patterns.

Location

6.7

Sites must be located with the requirements of future management in mind. This is particularly important if commercial management is an aim. Site conditions will have a major influence on woodland design.

Design at the Landscape Scale

6.8

New native woodlands must be sensitively sited. They should ideally be located so as to link or extend existing important habitats, such as ancient woodlands, or adjacent to watercourses. This will facilitate their colonisation by desirable species of plants and animals over time.

6.9

It may be inappropriate to plant on sites which have existing high conservation value such as Sites of Special Scientific Interest, County Heritage Sites or important archaeological sites. New planting should complement the existing landscape of the area. It should take account of the landform and the existing pattern, size and shape of local woodlands. Open areas within the wood and the use of variable tree spacing may also help to enhance or minimise any landscape impact.

6.10

This approach is being developed in the County as the Lancashire Biodiversity Network. This should help to identify and prioritise woodland creation sites to maximise environmental benefits.

Using Natural Colonisation

6.11

In theory natural colonisation of unwooded sites is preferable to planting for the creation of new native woodlands. It should result in a more natural matching of trees and shrubs to the local conditions. The resulting woodland should have a more diverse structure and natural appearance. Natural colonisation has the added benefit that it is more likely to conserve local genetic distinctiveness and diversity than planting. It may also cost less.

6.12

However, there are many instances where natural colonisation may not be considered the appropriate mechanism: for example, the desirable seed species may not be locally present, site conditions may be unfavourable for tree seed germination or timescale may be insufficient to achieve a rate of regeneration adequate to qualify for grant aid.

6.13

By leaving open space in a planting scheme the woodland habitat and structural diversity can be enhanced and the opportunity for natural regeneration remains.

6.14

The use of natural colonisation does not preclude the need for management. Patch scarification, tree protection and weed suppression may be required, as may the control of undesirable regenerating tree species and browsing animals may need to be controlled.

Species Choice for Planting

6.15

When planting is considered appropriate, care should be taken to select the appropriate species for the site conditions. Suitable species for use in Lancashire are shown in Appendix 10. Rare woodland types and species have been excluded from this table. The species included are based on local knowledge of the semi-natural woodlands of Lancashire. The woodland types described and their relationship to site factors has been derived from the results of the National Vegetation Classification, a national programme to classify the vegetation types of Britain.

6.16

It is highly desirable to use trees and shrubs of local provenance (planting stock derived from the original Lancashire population of a species) when planting new native woodland. Such material is becoming more widely available from commercial sources. It can be appropriate to use locally gathered seed and cuttings but this will have a significant impact on the character of the trees. This may be an important consideration if commercial forestry is a high priority.

Planting Patterns

6.17

Semi-natural woodlands can show a great variety of structure and species composition even within a single woodland type. This variety arises through a combination of natural site factors and management history. The planning and planting of new native woodlands should reflect this variety but should be based upon actual site conditions. The initial planting will have a profound effect on the final appearance of the woodland.

6.18

Planting intimate mixtures of species (as opposed to groups of a single species) will almost certainly result in the faster growing pioneer species out competing the ultimately desired species. It should therefore generally be resisted. Some species will not establish well in a new woodland due to exposure and other factors. These species tend naturally to colonise more mature woodlands. They may colonise a new native woodland or they could be planted at a later stage.

Get to Know your Site

6.19

When developing proposals for a new native woodland scheme it is important to establish a sound knowledge of the site. Existing site conditions, such as altitude soil and geology, will determine what is appropriate. The existing vegetation will often provide a useful insight into site conditions. Are there any factors which constrain the establishment of woodland? These may include existing features of nature conservation or archaeological value. What types of woodland would naturally occur? Is natural regeneration, planting or a combination of both appropriate?

Weed Control

6.20

It is important that competition is controlled for the first two seasons following planting to ensure the best possible chance of survival. There are a two basic ways of achieving this: physical or chemical. Great care should be exercised if the chemical approach is chosen and herbicides are to be used. As a general principal, the choice and application of herbicides should be as specific as possible. In establishing new native woodland it is frequently desirable to retain those herbs which are already present and form a natural component of the woodland herb layer. Particular caution should be exercised on wetland sites or adjacent to water courses. Expert advice is available.

Appendix 10: Species Recommended for Planting in New Native Woodland Schemes in Lancashire

Trees	NATIVE WOODLAND TYPES								
			Lowland		Upland Fringe			Upland	
	W6	W8	W10	W7	W9	W10	W11	W16	W17
Alder	●			●	○				
Ash	○	●	○	●	●	○			
Aspen		○	○						
Downy Birch	○			○	●	●	●	●	●
Silver Birch		○	●						
Bird Cherry				○	○				
Wild Cherry		○	○						
Holly		○	○	○	○	○	○		
Pedunculate Oak	○		●						
Sessile Oak		●			○	●	●	●	●
Rowan		○	○	○	●	○	○	○	○
Goat Willow	○	○		○					
Crack Willow	●								
Shrubs									
Blackthorn		○	○	○		○			
Guelder Rose		○	○	○		○			
Hawthorn		●	●	●	○	●	●		
Hazel		●	●	●	●	●	●		
Grey Willow	●	○		●	○				

- There is currently some concern over the spread of Phytophthera disease in alder. There may be circumstances where it is inappropriate to plant this species.
- Closed circles (●) are major components; open circles (O) minor components in a planting mix.
- Woodland-type codes refer to the National Vegetation Classification. Note that W10 occurs in both lowland and upland fringe situations. For further information see Creating New Native Woodlands by John Rodwell and Gordon Patterson (Forestry Commission Bulletin 112).
- This table is for general guidance only; variations in the way the species listed are combined may be appropriate to suit individual site conditions.
- Other native tree or shrub species may also be appropriate on certain sites, but expert advice should be obtained before using them. Other species may be appropriate on very difficult or unusual sites.
- Expert advice is also recommended on the relative proportions of the species shown to suit individual sites.
- When planting trees adjacent to rivers consent may be required from the Environment Agency or local authority. This ensures that access for flood defence operations can be maintained.

Appendix 11: Semi-Natural Species-Rich Grassland Types in Lancashire

6.23

The most typical species-rich neutral grassland in Lancashire belong to the National Vegetation Classification (NVC) types:

- MG5 – Knapweed-crested dog's-tail (Centaureo-Cynosurretum cristati) grassland.

However, the lowland and upland meadow types:

- MG4 – Meadow foxtail – Greater burnet (Alopecurus pratensis-Sanguisorba officinalis);
- MG3 – Sweet vernal-grass – Wood Crane's-bill (Anthoxanthum odoratum-Geranium sylvaticum); and
- MG8 – Crested dog's-tail – Marsh marigold (Cynosurus cristatus-Caltha palustris)

are now all rare. Opportunities through habitat creation to replicate MG5 and, in suitable moist lowland locations, MG4 grasslands should be an objective of habitat creation and/or restoration.

6.24

Limestone or calcareous grassland is restricted to specific areas of the County, Morecambe Bay and parts of the Ribble Valley and Bowland; they typically comprise:

- CG2 – Sheep's-fescue – Meadow oat-grass (Festuca ovina-Avenula pratensis) grassland;
- CG9 – Blue moor-grass – Limestone bedstraw (Sesleria albicans-Galium sterneri) grassland; and
- CG10 – Sheep's-fescue-Common bent-Wild thyme (Festuca ovina-Agrostis capillaries-Thymus praecox) grassland.

The CG9 grassland community is typical only of the Morecambe Bay limestones area and is very rare in the Ribble Valley. In considering habitat creation and/or restoration in terms of biodiversity natural colonisation from adjacent relict habitat or the spreading of "green hay" is the best option.

Appendix 8 gives further guidance on wild flower grassland establishment in Lancashire and is available on Lancashire County Council website at **www.lancsenvironment.com.**

Sources: Lancashire County Council. British Communities Volume 3 Grasslands and Montane Communities (J.S. Rodwell et al. 1992)

Appendix 12: Creating New Herb-Rich Grassland in Lancashire

6.25

Most commercially available wild flower seed mixtures contain species inappropriate to Lancashire and are therefore not ideal to redress losses in biodiversity. As a general principal that wild flower seed/plugs used in landscaping should be specify of originating from native NW England genetic stock or at least be of guaranteed native British provenance. Such seed is now readily available from specialist commercial suppliers. The supplier used should have adopted Flora Locale and Plantlife's Code of Practice for collectors, growers and suppliers of native flora. "Green hay" has in certain instances proved successful and may be worth considering as an option where a longer restoration period is possible. The maximum wild flower and grass seed sowing rate should not exceed 5g/m2.

6.26

The following species are typical of species-rich grasslands across the County. It is recommended that for general usage the wild flower component of a seed mixture should contain about ten herb species from this list.

Recommended Species

Grasses
Agrostis capillaris
Anthoxanthum odoratum
Briza media
Cynosurus cristatus
Festuca rubra ssp rubra
Poa trivialis

Dry
Achillea millefolium
Campanula rotundifolia
Centaurea nigra
Conopodium majus
Hypochoeris radicata
Lathyrus pratensis
Leontodon autumnalis
Leontodon hispidus
Leucanthemum vulgare
Linum catharticum
Lotus corniculatus
Pilosella officinarum
Plantago lanceolata
Primula veris
Prunella vulgaris
Ranunculus acris
Ranunculus bulbosus
Rhinanthus minor (may be over sown in early autumn)
Rumex acetosa
Sanguisorba officinalis
Stachys officinalis
Stellaria graminea
Succisa pratensis

Damp
Achillea ptarmica
Ajuga reptans
Caltha palustris
Cardamine pratensis
Crepis paludosa
Filipendula ulmaria
Lotus peduncularis
Lychnis flos-cuculi
Valeriana dioica

Establishment and Aftercare

6.27

For a wild flower grassland scheme to succeed on made ground attention must be paid to initial ground formation, seedbed preparation and management during the establishment phase and subsequently.

6.28

Management proposals should take account of the following:

- Sowing should take place between August-October or March-mid May.
- In the first year of establishment the sward should be cut to 50mm whenever a height of 100mm is reached. The arisings should be removed.
- In situations of autumn sowing, over-sowing with yellow-rattle (Rhinanthus minor) the following autumn, whilst not essential, provides better establishment of this species Yellow-rattle is hemiparasitic and can help to reduce the vigour of grasses.
- For years 25 following sowing use a weed wipe to treat any invasive weed species (e.g. broad-leaved and curled docks, thistles, knotweed etc.)
- A single yearly cut is usually inadequate. Three cuts to 5070mm per year are likely to be required: Spring (mid-late April), Summer (mid July-mid August, after yellow-rattle has set seed), End of season (October).

landscape & heritage

joint lancashire structure plan

Joint Advisory Committee for Strategic Planning

Blackpool Council

Lancashire County Council

Blackburn with Darwen

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