Lancashire County Council

Forest of Bowland
Area of Outstanding Natural Beauty

Landscape Character Assessment





September 2009

cba

FOREST OF BOWLAND
Area of Outstanding Natural Beauty

NATURAL ENGLAND

CHRIS BLANDFORD ASSOCIATES
environment landscape planning

Lancashire County Council

Forest of Bowland Area of Outstanding Natural Beauty

Landscape Character Assessment

Approved	D. Watkins
	Dominic Watkins
Position	Director
Date	30th September 2009
Revision	Final Report

CONTENTS

APPENDICES

FIGURES

The Forest of Bowland Area of Outstanding Natural Beauty (AONB) Landscape Character Assessment was commissioned by Lancashire County Council Environment Directorate, with financial support from the Forest of Bowland AONB Unit and Natural England.

The study was prepared for Lancashire County Council by Chris Blandford Associates.

Published in July 2009
Lancashire County Council/Forest of Bowland AONB

Copies of this document are available from:

Forest of Bowland AONB
The Stables
4 Root Hill Estate Yard
Whitewell Road
Dunsop Bridge
Clitheroe
Lancashire
BB7 3AY

Email: bowland@lancashire.gov.uk
Web: www.forestofbowland.com

Text available in large format upon request

EXECUTIVE SUMMARY

The Forest of Bowland Area of Outstanding Natural Beauty (AONB) is a nationally protected landscape and internationally important for its heather moorland, blanket bog and rare birds. It was designated as a landscape of national significance due to a variety of factors: the grandeur and isolation of the upland core; the steep escarpments of the Moorland Hills; the undulating lowlands; the visual contrasts between each element of the overall landscape; the serenity and tranquillity of the area; the distinctive pattern of settlements; the wildlife of the area; and the landscape's historic and cultural associations.

The Forest of Bowland is still 'undiscovered territory' for many people. The AONB forms part of the extensive Pennine Chain, which extends eastwards into the Yorkshire Dales National Park and southwards across Lancashire. The unique landscape character of the Forest of Bowland reflects its historical and present day management for farming and sporting activities, from the royal forest of medieval times, to the sporting estates of the present day. This has had a taming influence on the landscape.

The AONB Management Plan for the Forest of Bowland (2009-14) identifies a need to carry out a detailed assessment of the local distinctiveness of the AONB at scale of 1:25,000. In December 2008, Lancashire County Council commissioned Chris Blandford Associates to prepare a Landscape Character Assessment for the Forest of Bowland AONB. The study is being joint-funded by a Steering Group consisting of Natural England, Forest of Bowland AONB and Lancashire County Council.

The Landscape Character Assessment has confirmed the diversity of the Forest of Bowland's landscapes, identifying, mapping and describing 14 Landscape Character Types and 82 Landscape Character Areas within only 803 square kilometres. This Assessment seeks to provide a framework for developing a shared understanding of the current character of the Study Area's landscapes and its future management needs.

It is intended to be a reference document for everyone with an interest in the future planning and management of the AONB – including residents, businesses, national and local agencies, farmers and other land managers. The Assessment also seeks to provide an inspirational source of ideas and guidance to help encourage locally appropriate management and use of land in ways that conserve and/or enhance valued features of the landscape. In this way, the Assessment will provide an evidence base against which proposals for change can be judged in an objective and transparent manner.

We are grateful for the advice and guidance provided by the Steering Group, namely:

- Don McKay – AONB Officer
- Cathy Hopley – AONB Development and Funding Officer
- Tarja Wilson – Lancashire County Council Countryside Officer (North and West Bowland)
- Steven Brereton – Lancashire County Council: Specialist Advisor (Landscape)
- Susannah England - Natural England

We would also like to acknowledge historic landscape contributions from:

- Nigel R.J. Neil – Neil Archaeological Services
- James Riley – Landscape Architect

In addition, we appreciate inputs from Lancashire County Council Countryside Officers – David Oyston and David Padley, Jon Hickling – Natural England, Peter Jepson – Lancashire County Counil and illustrations from Sue Flowers. We would also like to acknowledge the representatives of organisations who attended the stakeholder consultation workshops (see Appendix F for details).

1.0 INTRODUCTION

1.1 Background

1.1.1 In December 2008, Lancashire County Council commissioned Chris Blandford Associates (CBA) to prepare a Landscape Character Assessment for the Forest of Bowland Area of Outstanding Natural Beauty (AONB)[1]. The study is being joint-funded by a Steering Group consisting of Natural England, Forest of Bowland AONB and Lancashire County Council.

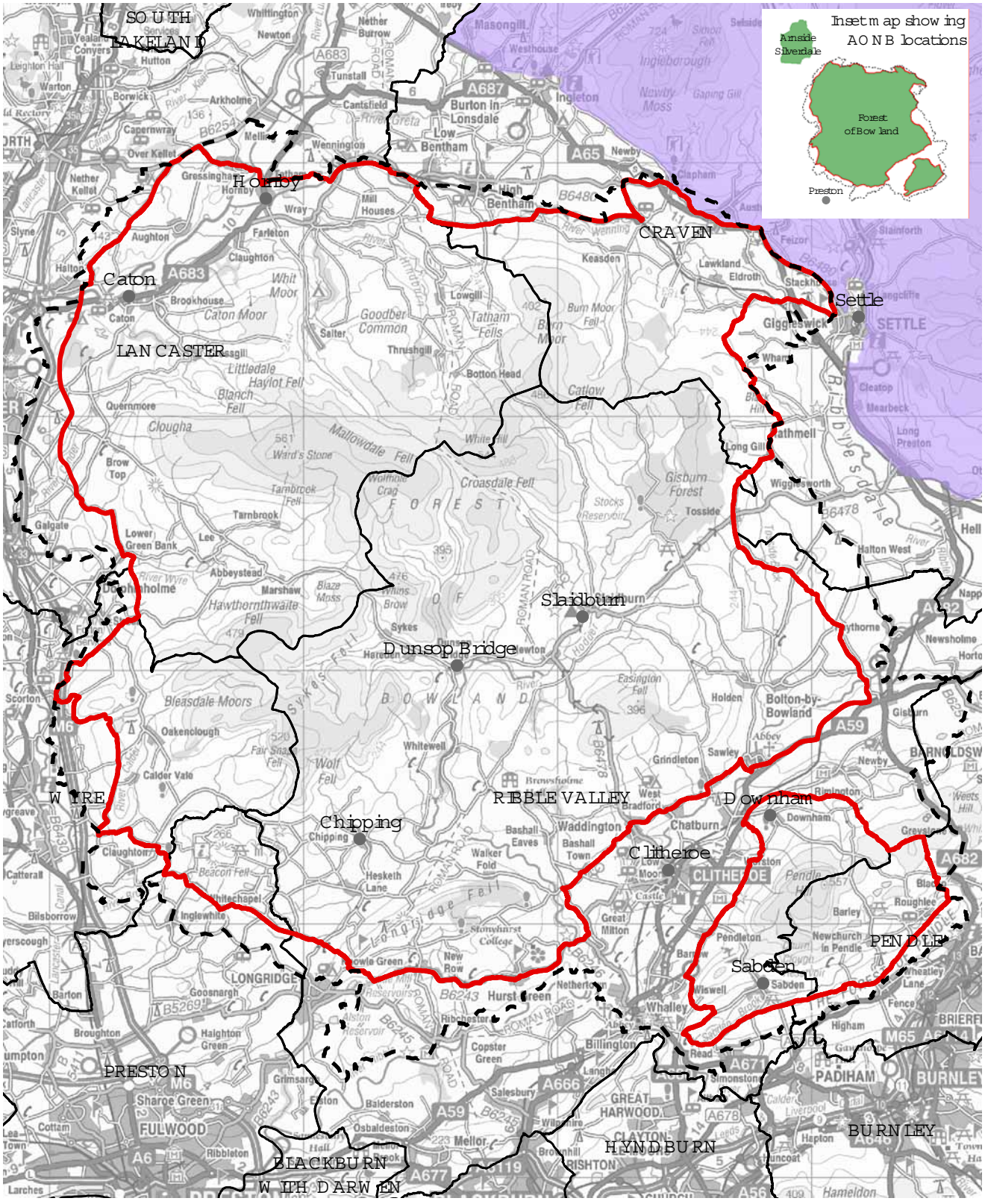
1.1.2 Situated in the North West of England, the Forest of Bowland Area of Outstanding Natural Beauty (AONB) covers 803 square kilometres of rural land in the counties of Lancashire (730 sq.km) and North Yorkshire (73 sq.km) (see **Figure 1.1**). The Rivers Lune and Ribble run along the northern and southern boundaries of the area. To the west is the Fylde plain, while the eastern side of the AONB boundary follows the edge of the Yorkshire Dales National Park for a short distance. On its south-eastern edge, Pendle Hill forms a discrete landscape feature, which is geologically linked to the rest of the AONB but separated from the main area by the valley of the River Ribble.

1.1.3 The Forest of Bowland is one of two Areas of Outstanding Natural Beauty within Lancashire and is partly situated within the following Local Authority areas:

- Preston City Council
- Pendle Borough Council;
- Lancaster City Council;
- Ribble Valley Borough Council;
- Wyre Borough Council;
- Craven District Council.

1.1.4 The Forest of Bowland is a nationally protected landscape. The Bowland Fells are nationally important for their blanket bog, heather moorland, wet heath and flushed plant communities, as well as their upland breeding bird community (reflected in their definition as a Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI). The Fells are also of international importance for their breeding raptors (most notably hen harrier, merlin and peregrine), whilst the heath and blanket bog support golden plover, meadow pipit, skylark, whinchaf and wheatear. The fell fringes and lower lying areas of farmland also support lapwing, curlew, redshank and snipe. The AONB is managed by a partnership of landowners, farmers, voluntary organisations, wildlife groups, recreation groups, local councils and

[1] Details of the Project Brief and individuals involved in the preparation of the Study can be found in **Appendices A and B**.



KEY

Study Area

Forest of Bowland Area of Outstanding Natural Beauty (See section 1.3.4)

District/Borough Administative Boundaries

Yorkshire Dales National Park

0 2 4 km

S:\projects\11109301 Forest of Bowland\GIS\Projects\Figures\11109301-FoB_1-1_The-Study-Area.mxd

CHRIS BLANDFORD ASSOCIATES
www.cba.uk.net
SEPTEMBER 2009

FOREST OF BOWLAND AONB
LANDSCAPE CHARACTER ASSESSMENT

Figure 1.1
The Study Area

government agencies, who work to protect, conserve and enhance the natural and cultural heritage of this special areas.

1.1.5 In 2006 the UK formally ratified the European Landscape Convention, which brings a commitment to:

- Recognise landscapes in law as an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage and a foundation of their identity;
- Establish and implement landscape policies aimed at landscape protection, management and planning;
- Establish procedures for the participation of the general public, local and regional authorities and other parties;
- Integrate landscape into regional and town planning policies and also cultural, environmental, agricultural, social and economic policies, as well as in any other policies with possible direct or indirect impact on landscape and;
- Establish and implement landscape policies, establish procedures for stakeholder participation and integrate landscape into broader policy.

1.1.6 The Convention aims to encourage public authorities within member states to adopt policies and measures for the protection, management and planning of all landscapes, whether outstanding or ordinary, that determine the quality of people's living environment. The Convention specially encourages local authorities to introduce exemplary and long lasting policies or measures to protect, manage and plan landscapes.

1.1.7 The European Landscape Convention defines landscape as:

'An area, as perceived by people, whose character is the result of action and interaction of natural and/or human factors'.

View of Roeburndale valley

1.1.8 At the Regional level, the North West Regional Spatial Strategy[2] highlights the need for integrated enhancement and protection of the Region's environmental assets. Policy EM1 states the need for 'detailed landscape character assessments and strategies, set in the context of the North West Joint Character Area Map', which will be used to 'identify priority areas for the maintenance, enhancement and/or restoration of that character'.

1.1.9 The North West Regional Landscape Partnership (with support from Natural England) is developing a Regional Landscape Character Framework for the North West. The project aims to help implement and promote the principles of the European Landscape Convention in the North West. It seeks to deliver a regional landscape character framework which:

- Provides a consistent, justified, hierarchical, geographical and environmental framework for the existing Landscape Character Assessment (LCA) resource;
- Encompasses existing, recognised landscape frameworks such as National Character Areas, as well as local-level landscape character information;
- Links information on pressures, forces for change, management needs, guidelines etc. to the Framework as appropriate;
- Allows existing landscape information to be better used and developed for spatial planning, land use and land management; and
- Has the potential to be developed in the future, as a means of engaging interested members of the general public.

1.1.10 This Landscape Character Assessment is consistent with the North West Regional Landscape Character Framework.

1.1.11 The Countryside and Rights of Way Act (CRoW) 2000 placed a statutory duty on local authorities to prepare a Management Plan for AONB's in their areas and review the plans every five years. The new Management Plan[3] for the Forest of Bowland identifies a need to carry out a more detailed assessment of the local distinctiveness of the AONB at a scale of 1:25,000 within the framework of the existing Landscape Character Assessment for Lancashire County[4], undertaken at a scale of 1:50,000.

[2] North West Regional Strategy to 2021, Government Office for the North West
[3] April 2009-March 2014, Forest of Bowland AONB Unit.
[4] Environmental Resources Management (ERM) October 1999.

1.2 Purpose of the Assessment

1.2.1 This Assessment seeks to provide a framework for developing a shared understanding of the current character of the AONB's landscapes, the forces for change affecting these landscapes and its future management needs.

1.2.2 It is intended to be a reference document for everyone with an interest in the future management of the AONB – including residents, businesses, planning policy and development control officers, national and local agencies, farmers and other land managers. The Assessment also seeks to provide an inspirational source of ideas and guidance to help encourage locally appropriate management and use of land in ways that conserve and/or enhance valued features of the landscape. In this way, the Assessment will provide an evidence base against which proposals for change can be judged in an objective and transparent manner.

1.2.3 The specific aims and objectives of the Assessment are:

Aims

- To provide an up-to-date and detailed 1:25,000 scale Landscape Character Assessment of the whole of the Forest of Bowland AONB area using Lancashire County Council's Landscape Character Assessment as a framework.

Objectives

- To describe the Forest of Bowland AONB landscape's current appearance and show how it has evolved in terms of human influences and physical forces;
- To classify the landscape into distinct Landscape Character Types and Landscape Character Areas by undertaking a Landscape Character Assessment, involving desk study, field survey, identification, mapping and description;
- To identify key environmental features, forces for change, landscape sensitivity and capacity for change, make recommendations, develop guidelines and identify targets for Landscape Character Types and Areas, to inform the future development of landscape policy, management plans and landscape strategies;
- To involve a range of communities, partners and stakeholders in the development of the Landscape Character Assessment; and
- To promote public awareness of landscape character, the importance of landscape conservation and enhancement and, significantly, the guiding principle that all landscapes matter.

Applications of the Landscape Character Assessment

1.2.4 Specific applications of the assessment and guidelines are:

- To inform the development and implementation of AONB Management Plan policies, conservation and grant aid schemes and land use planning policies;
- To act as a tool for spatial planning use within the AONB;
- To assist with the assessment of individual planning applications;
- To understand a location's sensitivity to development and change;
- To develop future strategies for conserving and/or enhancing the landscape, local distinctiveness and sense of place;
- To help formulate priorities and prescriptions for land management advice offered by the AONB and partners;
- To provide an assessment that can inform and respond to other landscape, cultural and historical strategies;
- To engage with partners and communities to improve understanding of the character of the AONB's landscape;
- To monitor landscape change within the AONB.

1.3 Approach and Methodology

1.3.1 The overall approach for undertaking the Landscape Character Assessment is based on the latest published national guidance[5], taking into account current best practice. Landscape Character Assessment addresses both the analytical process of character assessment (or 'characterisation'), which involves identifying, mapping, classifying and describing landscape character, and the evaluative process of developing guidelines for informing planning and land management decisions.

1.3.2 The study is based on an integrated approach that takes into account more than just the visible components of landscape. It is about the relationship between people, place and nature. The approach recognises that historical and cultural associations and the total experience of landscape through all the senses, and through knowledge, are integral to defining landscape character and its distinctiveness. Some components of landscape character are tangible features capable of being mapped and measured, whilst others are more intangible and less easy to define objectively. The components of the landscape are its:

- visible physical components (e.g. landform, buildings, vegetation);

[5] Landscape Character Assessment – Guidance for England and Scotland (Countryside Agency/Scottish Natural Heritage, 2002).

- visible spatial components (e.g. scale, pattern, colour, texture); and
- non-visible components (e.g. sense of tranquillity, wildness, and cultural associations).

A farmer feeding sheep

1.3.3 These components of the landscape that combine to form landscape character, vary considerably from place to place, and usually provide such a unique combination of components that it is distinctive and not quite like anywhere else. This gives a sense of place and identity unique to each area. Landscape observation, description and classification necessarily involve objective and subjective matters; this Study embraces these subjective elements by confining description to the components of the landscape rather than recording the assessor's responses to it.

The Trough of Bowland

The Study Area

1.3.4 The Study Area is shown on **Figure 1.1**. As agreed with the Steering Group, the Study Area includes the Forest of Bowland AONB and 'complete' Landscape Character Areas which extend outside the AONB boundaries. This approach takes into account the fact that landscape character units may not necessarily coincide with administrative boundaries and helps to place the AONB's landscapes in the context of Lancashire's landscapes as a whole (see Section 3.0 for details). In some cases the Landscape Character Type and Area boundaries are contiguous with the AONB boundary. This is purely coincidental.

The Study Process

1.3.5 The study process is illustrated on **Figure 1.2**. This illustrates the iterative nature of the overall process and highlights the relationship between the distinct but linked character assessment and evaluation stages involved in the preparation of the Landscape Character Assessment and Landscape Guidelines.

Desk Study

1.3.6 This stage of the process involved the review of relevant background reports, aerial photographs, other data and mapped information (including topography, geology, land cover and vegetation) to develop a series of map overlays to assist in the identification of areas of common character (draft Landscape Character Types and Areas) at a scale of 1:25,000:

- **Landscape Character Types** – generic units of landscape with a distinct and recognisable pattern of elements, such as trees, hedgerows or streams that occur consistently throughout the type; and

- **Landscape Character Areas** – discrete geographical areas (within each Landscape Character Type) with a distinct and recognisable pattern of elements that occur consistently throughout the area.

Field Survey

1.3.7 Following desk study, the draft Landscape Character Types and Areas were tested and refined in the field, via a series of survey visits. The field surveys sought to capture those elements of each Landscape Character Type/Area, which were unlikely to be evident from desk information, such as aesthetic and perceptual qualities; and to identify the current condition of

landscape elements. Field Survey forms were used to record information (for an example, see **Appendix E**).

Classification and Description

1.3.8 This stage of the process refined and finalised the Landscape Character Types and Areas and mapped their extents, based on the information collected. Clear descriptions of the character of each Landscape Character Type/Area were then prepared.

1.3.9 Within this Study, Landscape Character Areas (discrete geographical areas with a unique sense of place and combination of landscape, aesthetic and perceptual elements, including pattern, sounds and views) nest within each of the defined Landscape Character Types.

1.3.10 The Landscape Character Types provide a spatial framework within which generic forces for change, land management issues and guidelines for managing landscape change can be developed. The Landscape Character Areas reflect distinctive variations in local character within each Landscape Character Type, based on desk study and visual analysis of how different patterns of physical and cultural attributes/features combine with perceptual qualities such as scale, pattern, and cultural associations, etc to create areas of distinctive landscape character that are unique.

Evaluation

1.3.11 The character of the landscape varies across the Study Area as a result of different patterns of physical, cultural, historical and ecological characteristics. The landscape is not static, and will continue to change in response to a range of social, economic and environmental factors. The scale and speed of change have all increased with technological progress, and landscapes have different capacities to tolerate change.

1.3.12 Landscape character has evolved over time in response to traditional ways of building and utilising the land that respected natural constraints and used natural, locally available materials and techniques. In considering potential future changes it is important to understand and respect this historical context, to appreciate why features are like they are, to inform today's decision making.

1.3.13 The evaluation process involved making judgements about the inherent sensitivities/vulnerabilities of a landscape, its capacity to accommodate different forces for change and its current condition. These judgements were used to develop guidelines that highlight needs and opportunities for managing landscape change to inform land use planning and land management decisions.

1.3.14 Indicators have also been developed to assist in monitoring changes in the landscape character of the AONB.

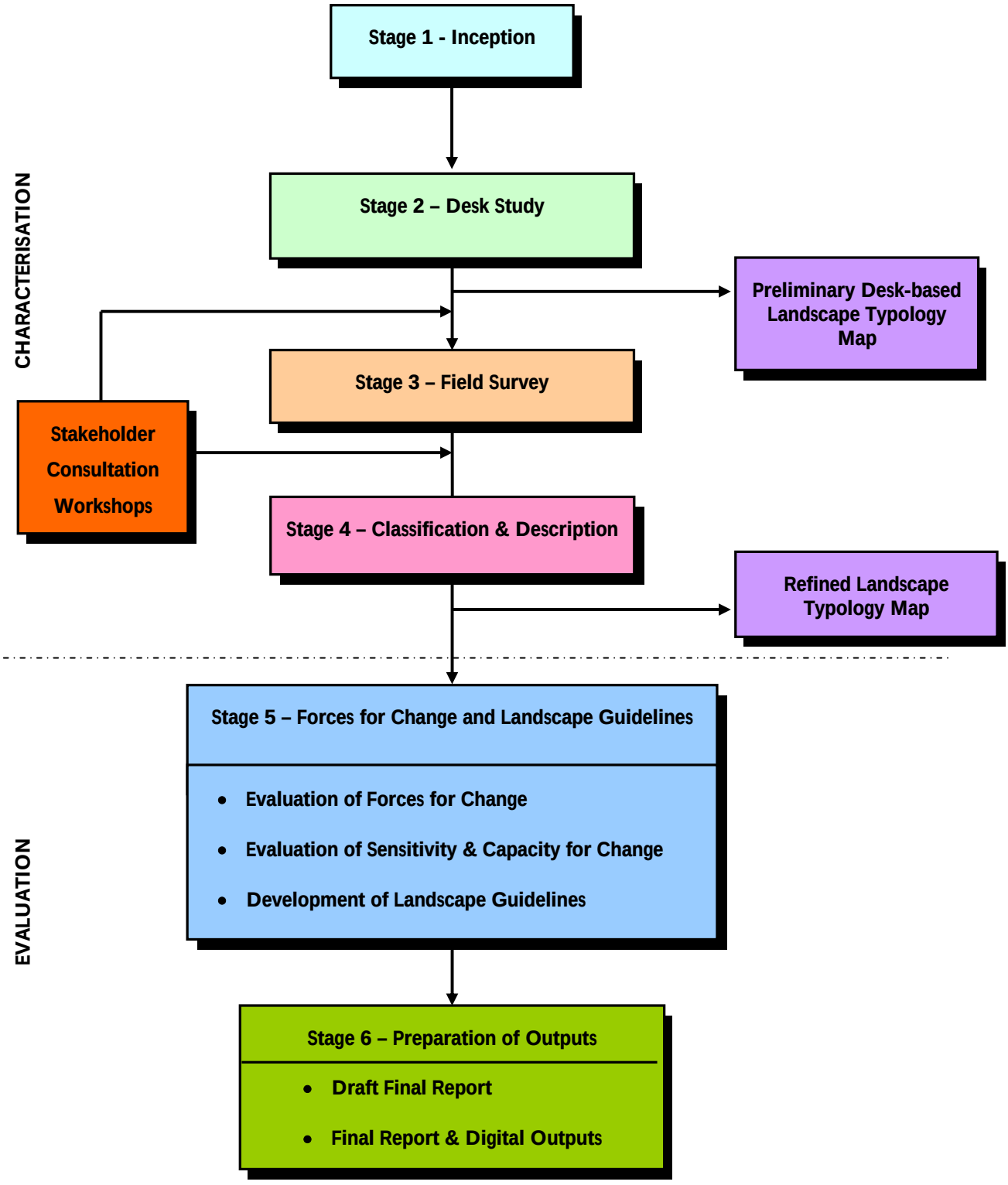


Figure 1.2 – Study Process

Stakeholder Consultation

1.3.15 Major landowners and managers, statutory agencies and other key stakeholder organisations have been involved in the process of developing the Landscape Character Assessment. The informative and positive feedback from consultation has helped to strengthen the evidence base by incorporating the views of both communities of interest and place. Engaging stakeholders in the project has also helped promote awareness of the value of the Landscape Character Assessment as a tool for informing planning and land management decisions.

1.3.16 The process involved consulting organisations within the AONB Partnership and other key stakeholder groups through two stakeholder workshops (see **Appendix F** for details).

1.3.17 Full details of the study methodology are provided in **Appendix C**.

1.4 Structure of the Report

1.4.1 The remainder of the report is structured as follows:

- **Section 2.0: Evolution of the Landscape** – provides an overview of the landscape, describing the physical and historical influences on the landscape and identifies the key forces for change affecting landscape character today.
- **Section 3.0: Landscape Classification Hierarchy -** describes the context provided by the hierarchical classification of Landscape Character Areas and Types defined at the national, regional and county levels. Within this context, the classification of Landscape Character Types and Landscape Character Areas defined within the Forest of Bowland is presented;
- **Section 4.0: Landscape Character Descriptions –** provides the detailed descriptions or 'profiles' describing and evaluating each of the identified Landscape Character Types and Areas and provides proposed guidelines for managing landscape change;
- **Section 5.0: Future Forces for Change** - provides an overview of the forces on the landscape which may result in future changes to landscape character, and;
- **Section 6.0: Monitoring Landscape Change** - sets out indicators for monitoring landscape change in the AONB.

2.0 EVOLUTION OF THE LANDSCAPE

2.1 Introduction

2.1.1 The present day landscape of the Forest of Bowland is a product of the physical and human influences that have shaped its basic structure and appearance. In particular, the underlying geology and the processes of erosion and deposition have had a profound effect on the landscape, influencing not only landform, soils and vegetation communities, but also the human activities dependent upon or affected by them. In turn, the basic appearance of the landscape has been superimposed by the results of man's activities, changing natural vegetation patterns to suit human needs and introducing man-made elements into the landscape.

Late Mesolithic Period c.11000 BC

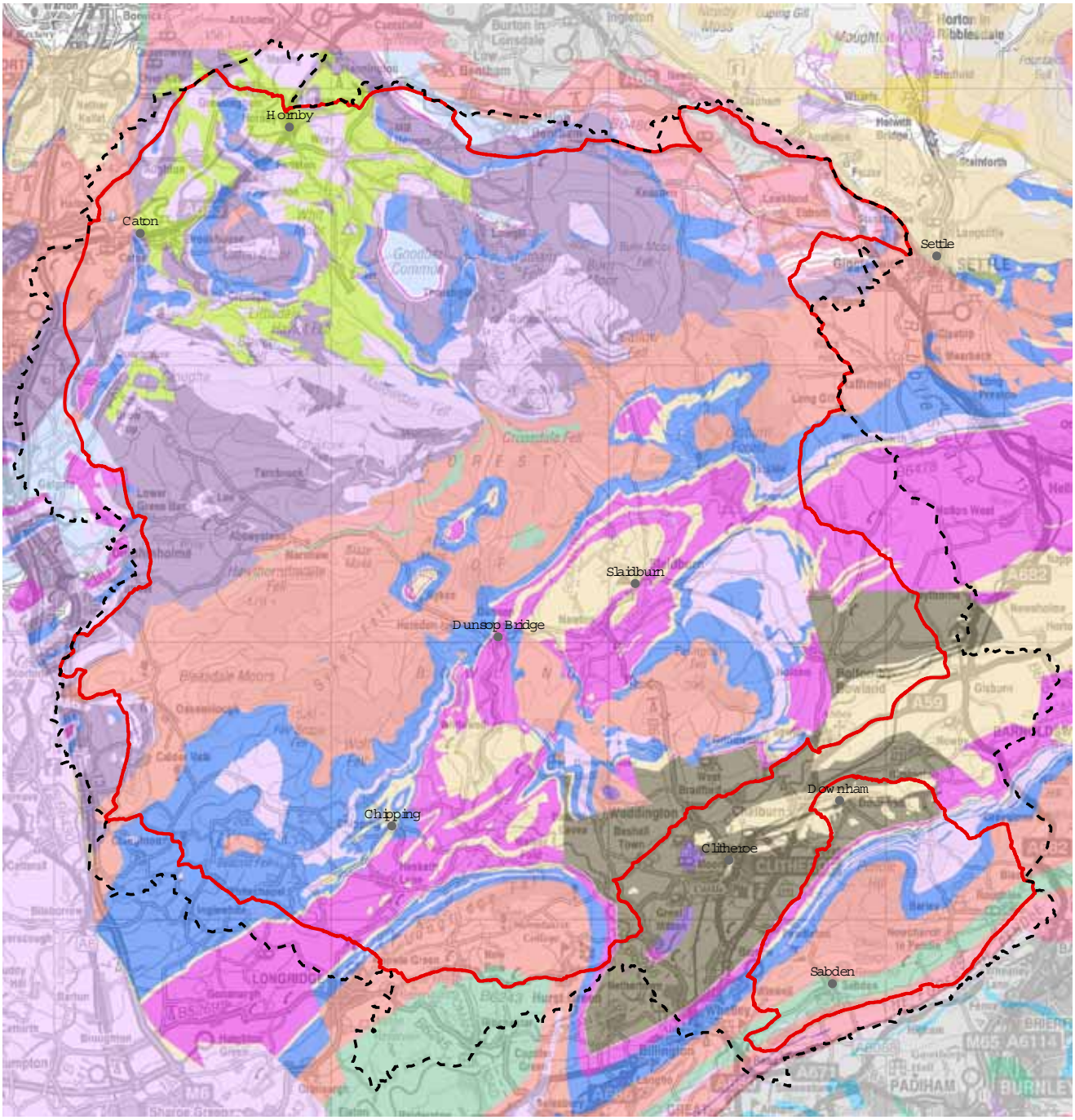
Post-Medieval – early 19th century

2.2 Physical Influences on Landscape Character

Geology and Glaciation

2.2.1 The underlying solid geology of the Study Area is shown on **Figure 2.1**. The oldest deposits date from the Lower Carboniferous period (350 to 333 Million years ago) and include limestones, shales and sandstone rocks. These deposits were formed within fluctuating seas, which once covered the Study Area, resulting from variations in size of the south polar ice sheet. They are very resistant to erosion and form the core of the rounded hills of the Bowland Fells and the Pendle Hill outlier. The deposits also occur in the Ribble Valley, near Clitheroe. Where they are located close to the surface, they are visible within the landscape in the form of the small, isolated hills or 'reef knolls' within the Hodder and Ribble Valleys.

2.2.2 In the Upper Carboniferous 'Westphalian' period (333 and 318 Million Years ago) coarse sandstones, gritstones and shales were deposited in the Study Area (see **Figure 2.1**) , forming slowly subsiding deltas and large river floodplains and estuaries. Later, these rocks were



KEY

Geology

- Shale
- Gritstone
- Mudstone
- Limestone
- Sandstone
- Siltstone
- Tuff
- Coal Measures
- Chert
- Mudstone, Siltstone and Sandstone
- Sandstone and Mudstone
- Mudstone and Siltstone
- Siltstone and Sandstone

- Study Area
- Forest of Bowland Area of Outstanding Natural Beauty

0 2 4 km

S:\projects\11109301 Forest of Bowland\GIS\Projects\Figures\11109301-FoB_2-1_Geology.mxd

CHRIS BLANDFORD ASSOCIATES
www.cba.uk.net

SEPTEMBER 2009

FOREST OF BOWLAND AONB
LANDSCAPE CHARACTER ASSESSMENT

Figure 2.1
Geology

uplifted to form the fell tops of the broad gritstone plateau within the central Bowland Fells. In places, these deposits are visible as surface outcrops within the landscape, such at Ward's Stone and Clougha Pike. The softer bands of sandstone have eroded to create low scarps, valleys and cloughs, which radiate from the fell tops. The interface between gritstones and shales has resulted in many of the flushes/springs present throughout the Bowland Fells, most notably the large flush systems present within the Calder Valley (i.e. up to the Arbour), those present below Hawthornwaite Fell (i.e. Black Clough to the Marshaw Wyre) and also those present within the Brennand Valley, which support important flushed plant communities including nationally and regionally scarce plant species. Others occur at Arrow Bank and also on the northern most Fells below Clougha, Ward's Stone, Greenbank and Botton Head Fells. The large rush dominated flushes on Hare Appletree Fell are the largest of their kind on the Bowland Fells.

2.2.3 During the last Ice Age in the Pleistocene and Holocene periods from around 2.5 million years ago, the underlying rocks were heavily modified by the effects of glaciation. At the glacial maximum, around 18-20,000 years ago, an ice sheet covered the whole of the AONB. Glacial erosion smoothed the outline of the fells, creating the distinctive profile of the AONB's landscape. During this period, the climate fluctuated markedly and softer, unconsolidated deposits of clays, sands and gravels were left by retreating ice sheets. Meltwater deposits are clearly visible within the present-day landscape, in the form of small hills and hollows of the drumlin fields in the north and east of the Study Area. The impact of meltwater is also visible on the moorland fringes, especially on west-facing slopes and above major river valleys such as the Lune, where both erosion and deposition is visible. In places, escaping meltwaters have created new side valleys or cut through solid rock, creating meltwater channels such as the dells to the north of Clougha Pike. The ice was the thickest in the valleys and was the last to melt, resulting in new sections of river channels being cut through resistant bedrock. In several places, this resulted in the creation of glacial diversion channels and gorges. These are visible within the course of the Rivers Wyre and Brock and also along the Ribble Valley at Gisburn.

2.2.4 The diversity of the Study Area's geology and geomorphology is reflected in the range of sites of conservation interest within the Study Area (see **Figure 2.3**). These include for example:

- Clitheroe Reef Knolls (Site of Special Scientific Interest – SSSI);
- Little Mearley Clough (SSSI);
- Bowland Fells (SSSI);
- Hodder River Section (SSSI);
- Halton Gorge and Quernmore Valley (Regionally Important Geological Site – RIGS);
- Condor Head (RIGS);
- Artle Beck Gorge (RIGS);

- Dinkling Green (RIGS).

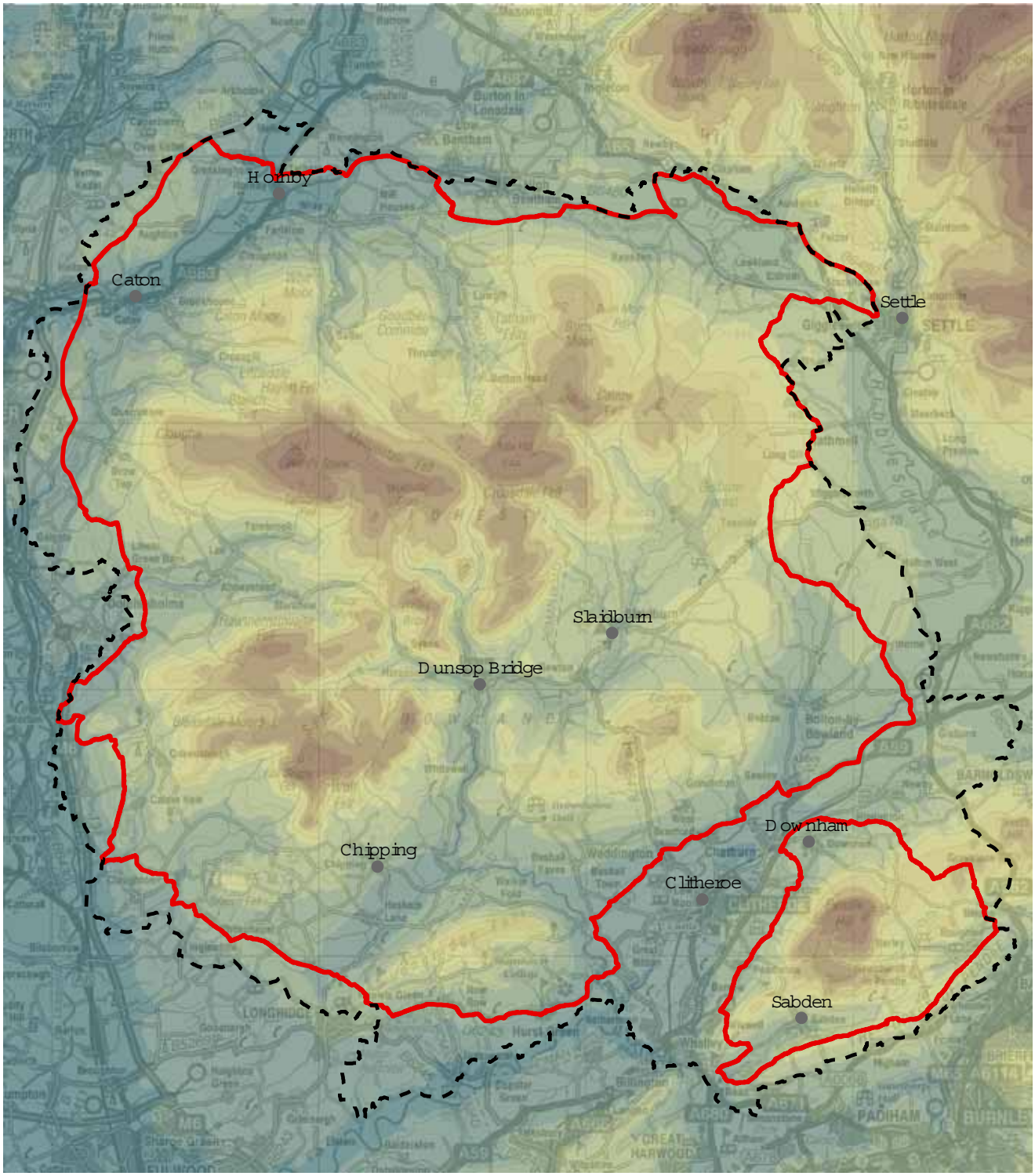
Landform, drainage and climate

2.2.5 The landform of the Study Area (**Figure 2.2**) is strongly influenced by the underlying geology, and the effects of glacial and hydrological processes. The highest landform encompasses the flat plateaux at the top of the Bowland Fells, to the north of Slaidburn and Chipping and on Pendle Hill, to the north of Sabden. Here, the landscape ranges in elevation from 405-561 metres AOD. Adjacent to the high plateaux, a series of pronounced hills are dominant features within the landscape of the Study Area, ranging from 345-545 metres AOD, to the northwest of Chipping and Slaidburn and forming Pendle Hill, to the south of Clitheroe.

2.2.6 At the edges of the hills, topography slopes steeply downwards from 300 metres to 150 metres, forming a transitional zone between the high, pronounced hills and the lower surrounding, gently undulating landscape (0-200 metres AOD) which covers much of the periphery of the Study Area. Within this expanse of undulating lower landscape, pronounced hills (outliers of the central area of plateaux and hills) are key features within the landscape at Longridge Fell and north-west of Grindleton (Waddington and Easington Fells).

2.2.7 Within the central core of the Study Area, the erosive action of water flowing off the main hill summits has cut deep ravines or 'cloughs' through the harder gritstone, forming a radial pattern of drainage from the higher ground. Some of these stream-courses follow the lines of faults, such as the Artle Beck and Foxdale Beck, while others follow the lines of strike or strata, such as the River Roeburn. The resistance of the underyling rock has resulted in steep valley profiles, and terraced cross-section downstream-profiles. Most of the Principle Rivers of the Study Area and their tributaries arise in the central upland core, including the Hodder, Wyre, Roeburn and Hindburn. The Ribble and Hodder drain the southern flanks of the Bowland Fells. These broad valleys, framed by the escarpments of the fells to the north and the moors to the south, broadly pick out the less resistant mudstones and limestones from the harder Millstone Grit rocks which form the fells.

Hodder Valley, near Dunsop Bridge



KEY

Elevation (m)

0 - 45	345 - 405
45 - 105	405 - 465
105 - 165	465 - 545
165 - 225	545 - 720
225 - 285	
285 - 345	

Study Area

Forest of Bowland Area of Outstanding Natural Beauty

0 2 4 km

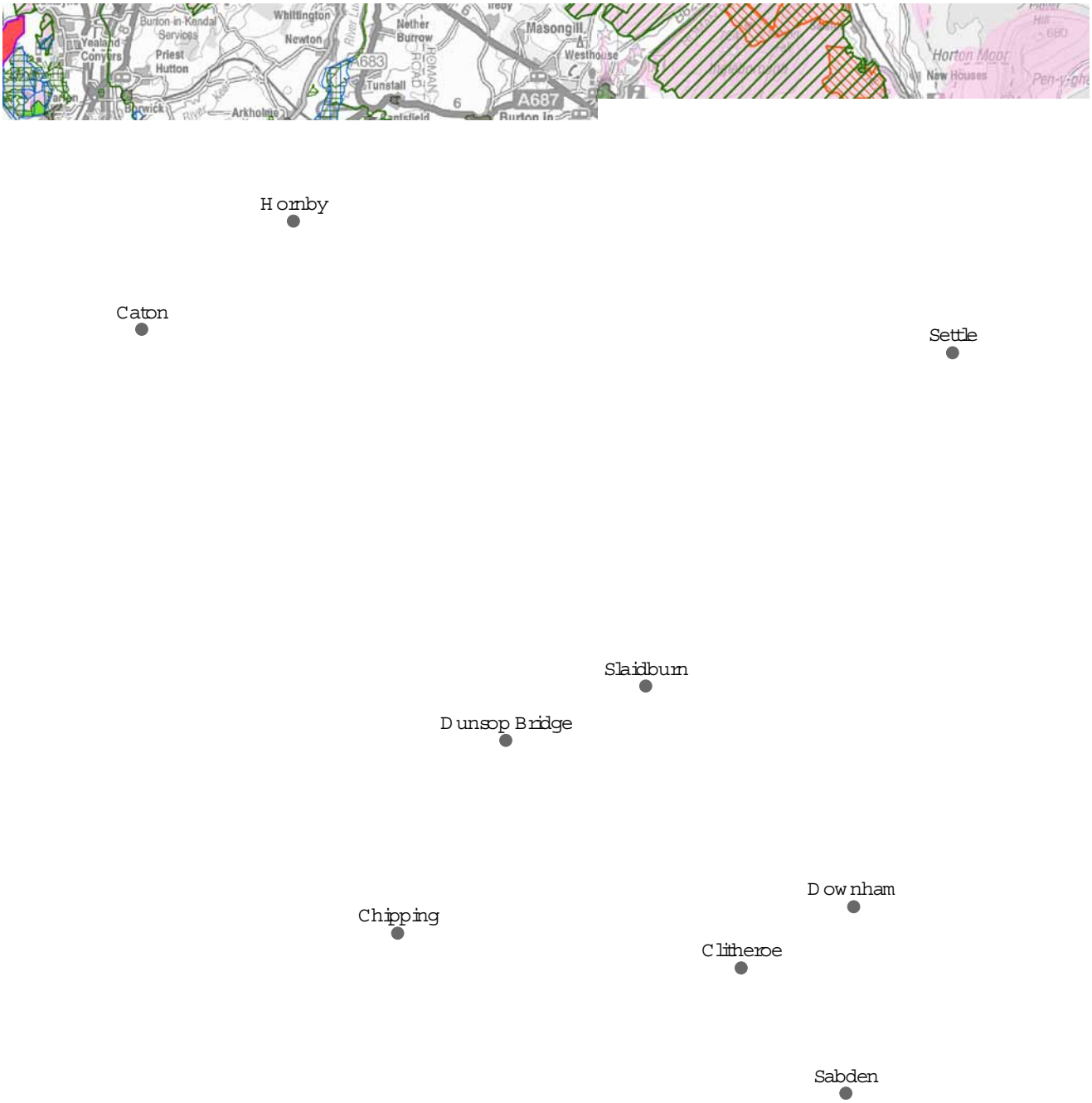
S:\projects\11109301 Forest of Bowland\GIS\Projects\Figures\11109301-FoB_2-2_Topography_Drainage.mxd

CHRIS BLANDFORD ASSOCIATES
www.cba.uk.net

SEPTEMBER 2009

FOREST OF BOWLAND AONB
LANDSCAPE CHARACTER ASSESSMENT

Figure 2.2
Topography and Drainage



S:\projects\11109301 Forest of Bowland\GIS\Projects\Figures\11109301-FoB_2-3_Nat-Cons-Desm.xd

CHRIS BLANDFORD ASSOCIATES
www.cba.uk.net

SEPTEMBER 2009

FOREST OF BOWLAND AONB
LANDSCAPE CHARACTER ASSESSMENT

Figure 2.3
Conservation Designations

2.2.8 To the north of the central fells, the corridor of the River Lune flows east-west across the northern edge of the AONB. This river corridor contrasts with the upland rivers and has formed a wide flood plain within the softer shales and limestone of the fringing lowlands to the north. The floodplains of the rivers Ribble, Lune and lower Hodder are characterised by superficial deposits of river sediments, or alluvium and silt.

2.2.9 Deposits of peat are formed from the dead remains of Sphagnum mosses and Cotton grass in particular, whilst the peat deposits themselves, which 'clothe' the Fells, support specialist blanket bog communities which are easily damaged by over grazing and/or bad moorland burning practices, unless carefully controlled. Large areas of deep peat on the Fells unfortunately now only support degraded blanket bog plant communities because of past management practices. As such, large areas of 'deep peat' are now covered by dwarf shrub (i.e. heather dominated) plant communities as a result of past gripping and moorland burning practices (which have led to peat on the Fells drying out and in some areas being exposed resulting in hagg development and also badly eroded areas of peat notably on top of Hawthornthwaite Fell/ Langden Head, Brennand Fell and Tarnbrook Fell).

2.2.10 The remaining upland areas support soils of the Belmont series that are typically acid, coarse and loamy, often with impeded drainage. Traditionally this poorer land has been converted by drainage and fertiliser and lime application to better grazing in more prosperous times, and then allowed to revert under harsher economic conditions. The limits of enclosure around the moorland edges have therefore fluctuated through time. Large areas of pasture on the Belmont series, which are typically acidic with poor drainage, are dominated by rush (i.e. improved fields which are reverting back to more natural plant communities through neglect of drainage). These support nationally important wading bird populations of lapwing, snipe, redshank and curlew.

View of farmland near Tatham

2.2.11 Much of the remainder of the Study Area is covered by soils based on slightly calcareous 'till' (boulder clay) derived from Carboniferous parent material. These soils are typical of flat or gently-sloping land below 300m and are poorly drained. Much of this land is under permanent grassland but some of the better land on these soils is fertile in-bye, essential for the economic viability of farming and suitable for limited cultivation. By far the best soils occur in the valleys of the Lune, Ribble and Hodder and are associated with brown earth or alluvial gley soils that provide good mixed-farming land and are suitable for the development of deciduous woodland. Those soils, which are slightly calcareous based on till, and cover vast areas of the Study Area, would have supported herb rich pastures and hay meadows as part of past upland farming systems. Since the Second World War, most of these have now disappeared due to the intensification of farming processes. The few that remain are concentrated within the Slaidburn area the Hindburn and Roeburndale Valleys and also Tarnbrook dale.

Hay making at Hareden Farm

Habitats

2.2.12 The Study Area supports a diverse range of wildlife habitats including moorland and mire, semi-natural woodland, coniferous plantation, species-rich grasslands, rushy pasture, rivers and water bodies, which in turn support a wide variety of plant and animal species (see **Figure 2.4**).

2.2.13 The moorland summits of the central Bowland Fells experience conditions of high rainfall, poor drainage and low temperatures. They are dominated by heath and blanket bog, interspersed with areas of upland pasture, especially on the lower slopes, generally below the fell wall. Deep accumulations of peat (formed from the dead remains of Sphagnum mosses and Cotton grass in particular) occur on the entire high plateau. In places this has been severely eroded,

KEY

UK Biodiversity Action Plan Habitats

- Lowland Beech and Yew Woodland
- Lowland Calcareous Grassland
- Lowland Dry Acid Grassland
- Lowland Heathland
- Lowland Meadows
- Lowland Mixed Deciduous Woodland
- Lowland Raised Bogs
- Purple Moor Grass and Rush Pastures
- Undetermined Grassland
- Undetermined Woodland
- Upland Calcareous Grassland
- Upland Hay Meadow
- Upland Heathland
- Upland Mixed Ashwoods
- Upland Oakwoods
- Wet Woodland

- Study Area
- Forest of Bowland Area of Outstanding Natural Beauty

0 2 4 km

S:\projects\11109301 Forest of Bowland\GIS\Projects\Figures\11109301-FoB_2-4_UKBAPHabs.mxd

producing a distinctive landscape of pillars and small cliffs of peat topped by heather-dominated vegetation (peat haggs) above exposed gravel or sometimes bedrock. This is notable on top of Hawthornthwaite Fell/ Langden Head, Brennand Fell and Tarnbrook Fell). The subtle changes in underlying bedrock between limestones and gritstones are often displayed in the vegetation cover of the Moorland Hills. Grassland on underlying limestone often appears greener, whilst on gritstone it appears darker green and often includes sedge and rush.

2.2.14 Only a few areas of 'active' blanket bog which are still extremely wet, supporting abundant sphagnum mosses, now remain on the Bowland Fells. These occur mainly on the upper most parts of some Fells most notably on Botton Head, Lamb Hill, Marshaw, Brennand, Whitendale and Croasdale Fells, as well as parts of the Bleasdale Moors (Luddocks and Holme House Fells). Plant communities of heather and bilberry are associated with the dry heath and are generally found on the steep valley slopes. Blanket bog, dominated by heather and cottongrass, tends to cover the tops of the ridge of the fells. Cranberry and crowberry are also characteristic species.

2.2.15 The steep hillsides of Pendle Hill (to the south of Clitheroe) support acid grassland, whilst its plateau summit is dominated by degraded blanket bog and sparse heather moorland plant communities. Acid grasslands within the moorland mosaic are characterised by wavy hair grass, mat grass, heath rush and sheeps sorrel. On lower ground, bracken forms extensive stands on valley slopes.

View of Pendle Hill

2.2.16 The maintenance of heath has provided an excellent habitat for red grouse (for which the moors are managed) and for breeding raptors. The heath and blanket bog also support moorland birds, including golden plover, meadow pipit, skylark, whinchat and wheatear.

Heather burning

2.2.17 The fells are incised by a series of fast-flowing rivers, giving rise to steep cloughs with occasional trees and lush wooded valleys on lower slopes. These rivers support a range of birds including sandpiper, oystercatcher, dipper and grey wagtail, whilst tree cover adjacent to open moorland is ideal for woodcock, redstart, spotted flycatcher and ring ouzel.

2.2.18 Radiating out from the central upland core of the Bowland Fells, the deeply-incised wooded cloughs and river valleys are a key feature of the landscape within the Study Area. Dense, broad-leaved woodlands cling to the steep valley sides of the lower fells. At higher levels, these woodlands are dominated by oak and birch, whilst on the lower slopes they are wetter in places, with Alder and mixed Ash woodland.

View along Langden Valley

Clough Woodland

2.2.19 Extensive areas of predominantly semi-natural ancient woodland (dominated by oak, ash and birch, with wych elm and wild cherry) are concentrated on the ridges, slopes and valley sides of many of the river valleys, including the Hindburn, Roeburn, Wyre, Calder, Ribble and Hodder. Alder and willow are also characteristically associated with the Brock, Wyre and Calder. In the landscapes around Clitheroe, field maple forms a component of the woodland.

2.2.20 On higher ground sessile oak scrub, with occasional rowan, is fragmented and occurs on the steep slopes of the fells and in the cloughs. The narrow valleys of Roeburndale, Hindburndale, Artledale and Littledale support oak and birch woodlands, with a typical ground flora of bilberry, bluebell, wood anemone, wood-sorrel and ramsons. Within the lower parts of the valleys, woodlands are dominated by oak and ash, with birch, wild cherry, alder and rowan. These woodlands often have a rich ground flora, including dog's mercury, woodruff, enchanter's nightshade, primrose, bluebell, wood anemone, wood-sorrel and broad buckler fern. Within the woodlands, steep wet flushes support great horsetail, great wood-rush, pendulous sedge, marsh hawk's beard, yellow pimpernel, bugle and opposite-leaved golden saxifrage.

2.2.21 The different types of woodland provide habitats for a wide range of species, including badgers, foxes, bats, pied flycatchers, redstart, tree pipit, tawny owl, great spotted woodpecker and sparrow hawk.

2.2.22 The largest area of coniferous plantation within the Study Area is at Gisburn Forest, with smaller occurrences on Longridge Fell and Pendle Hill. The main species within the plantations are Sitka spruce, Norway spruce, larches and pines. In addition to these species, Gisburn Forest also encompasses a patchwork of ancient semi-natural woodland and unimproved pasture. Young plantations often support small mammal populations, which attract birds of prey such as kestrel and short-eared owl. In addition, they may support meadow pipits and grasshopper warblers. Mature plantations generally have a limited ground flora, but may support foxglove, bluebells and ferns, in addition to blackbirds, warbler, linnet, whitethroat, songthrush and chaffinch.

2.2.23 Within the Study Area, hay meadows occur in some of the valleys (see **Figure 2.4**), whilst limestone grasslands are associated with the reef knolls of the Ribble Valley. Herb-rich meadows are located in the limestone areas around Slaidburn and along the valleys of Tarnbrook and Hindburn. There are also small patches of unimproved neutral hay meadows on the fringe of the Study Area. The Wenning, Hodder, Tarnbrook and Wyre river valleys support unimproved neutral pastures. Limestone grassland occurs in the Slaidburn and Clitheroe areas, with the largest single area at Worsaw Hill near Clitheroe.

Myttons meadows

2.2.24 The meadows support a wide range of wild flowers and grasses, including pignut, yellow rattle, great burnet, betony, common bistort, lady's mantle, knapweed, common spotted orchid, tway blade, ox-eye daisy and meadow buttercup. The herb-rich grassland supports a wide range of butterflies and other insects, as well as breeding curlews and other waders. Species-rich roadside verges are a key feature of the landscape within the Study area. They often provide a refuge for meadow and calcareous grassland flowers.

Orchids within Myttons meadows

2.2.25 Within the Study Area, parts of the moorland fringe support soils which are typically acidic, coarse and loamy, with impeded drainage. This poorer land has been converted to better grazing by drainage and the application of fertilisers and lime during prosperous times and then allowed to revert, under harsher times, to rushy pasture. Species-poor, rush-dominated marshy

grassland is relatively widespread on the lower fells, particularly to the north and east of Slaidburn and also on Longridge Fell and Pendle Hill. On lower ground patches of marshy pastures and occasional fen meadows occur.

2.2.26 Areas of reclaimed pasture are often dominated by rushes and Yorkshire fog on the edges of the moorland, whilst in other areas wet ground is dominated by purple moor-grass. Species-rich rush pastures may include cuckoo-flower, common marsh bedstraw, bog stitchwort, forget-me-not, ragged robin, marsh pennywort, wild angelica and common spotted orchid. The rushy pastures provide an important breeding ground for waders and also support a large number of insects, including many species of moths and flies.

2.2.27 Thirteen percent of the AONB is designated as a Site of Special Scientific Interest (SSSI) for its habitats and geological features (see **Figure 2.3**). The extensive heather moorlands of the Bowland fells are internationally important as a habitat for upland birds and have been designated as a Special Protection Area (SPA) under the European Birds Directive in recognition of this. They are also nationally important for blanket bog, heather moorland and flushed plant communities.

2.3 Human and Cultural Influences on Landscape Character

Prehistoric Period

2.3.1 Human activity flourished during the Upper Palaeolithic (c. 40,000-8,000 BC), when glaciations were interspersed with long periods of warmer climate. Britain was still joined to continental Europe at this time and during periods of intense cold, such as the last glaciation (25,000-12,000 years ago), populations retreated away from the area to warmer parts of the continent.

Late Glacial Period c. 11000 BC

2.3.2 At the start of the Mesolithic period (c.8000-4000 BC) the climate began to improve, glacial ice sheets retreated and meltwaters separated Britain from the continent. The climate became warmer and wetter and by c.6500BC pine forests had given way to deciduous woodland. Reassessment of the extent of prehistoric settlement in the North West has shown that many known sites require re-interpretation, and in some cases revision of dating. The evidence of finds of artefacts should be seen in the context of our gradually developing knowledge of upland prehistoric settlement. Although not represented by above-ground features, Mesolithic settlement in the seventh to fifth millennia BC is evidenced on the edge of the AONB in the form of flint and chert artefacts and waste flakes from Crook of Lune (from where over 1400 artefacts have now been recovered) and from Halton.

Late Mesolithic Period c.6000 BC

2.3.3 During the Neolithic period (c.4000- 2500 BC) there was a move from hunting and gathering towards farming, which is visible within the archaeological record in the forms of querns, sickles, pottery and polished stone axes. Some of the first evidence of communal burial has also been recorded from this period. Only one Neolithic chambered cairn is known in Lancashire at the Pikestones, on Anglezarke Moor, outside the AONB. Archaeological field survey undertaken in response to erosion of the Anglezarke/Rivington Moors has shown the high potential for locating a wide range of previously unrecorded prehistoric settlement and ritual sites, from very temporary Mesolithic activity lasting a few hours to a possible new Neolithic chambered tomb. Detailed survey of this type has yet to be undertaken within the Forest of Bowland AONB. All attest to human presence at these times but the overall understanding of prehistoric Bowland is limited – for example, there are no known settlement sites.

2.3.4 In the Bronze Age period (c.2500-750BC) new types of flint tool and pottery design were introduced, alongside metalworking techniques. Within the Study Area, traces of prehistoric activity begin to survive above ground from the third millennium BC in the form of a small number of monuments including the cairn on Parlick Pike and the nearby Bleasdale Circle. The latter comprised a timber circle 11metres in diameter, contained within a penannular ring ditch, surrounding a central feature which probably contained cremations in Collared Urns. The whole complex was later covered by a mound and 46m diameter circle or palisade. The earlier phase has been radiocarbon dated to c. 2200 BC, but this date is not considered reliable. The Manor Farm, Borwick ring ditch and inhumation burials (which lie just outside the north-west corner of the AONB) are more reliably dated to 1740-1640 BC, with a secondary burial in c. 890-790 BC. This site revealed both the complex nature of Bronze Age burial practice, and also the longevity of significance of such monuments as landscape features. There were Bronze Age cemeteries in typical skyline positions around Lancaster, in the Bowerham and Lancaster Moor (now Williamson Park) areas, and many hill top cairns are thought to have 'served as markers of territory'. Lowland burial mounds exist more rarely, as for example at the confluence of the rivers Ribble and Calder south-east of Stonyhurst.

Early Bronze Age c. 2500 BC

2.3.5 During the Iron Age (750BC - AD79), iron working technology was introduced to Britain from the continent. The number of known later prehistoric settlement sites within the AONB boundary is small, and it is largely impossible, without excavation, to separate Iron Age settlements from the first millennium BC from those of the Romano-British period, and there is evidence to suggest that this type of settlement continued into the Early Medieval, pre-Norman Conquest period. From a number of excavations on round houses of this period in Lancashire in recent years, the closest to the study area is that at Barker House Farm, south of Lancaster

University. Unexcavated examples at the Cragg, Littledale are probably Iron Age, as may be the very complex enclosed settlements and field systems at High Park, Cowan Bridge, a short distance outside the AONB. The nearby enclosed settlement at Castle Hill, Leck, is a particularly fine example of upland late prehistoric settlement, for which evidence is now beginning to appear more frequently in Lancashire. However, Prehistoric people have left a lasting impression upon the wider landscape, in particular assisting the formation of the upland moor through clearance and cultivation.

Roman Period

2.3.6 During the Roman period (79 - 410 AD) the most enduring landscape change to take place in the Study Area was the construction of the Roman road network. At least two are known to cross the Study Area. One runs north from Manchester to the Fort at Ribchester, then on to Over Burrow Fort in the Lune Valley, before continuing on to Carlisle. The limited development that has occurred in the upland moor has allowed much of the route to survive undamaged for the past 2000 years, while one section visible from Jeffrey Hill has become fossilised in the field boundary pattern. The second road runs from Kirkham in west Lancashire the Lancashire Fylde, to York via Ribchester passing to the north of Downham as it crosses through the AONB. The northbound route is particularly clearly defined, for example, north of Cherry Tree House, on its first approach to the River Hodder, and north of Cow Ark where it departs from the line of the modern road. A road from Ribchester to Galgate south of Lancaster is likely to have passed through the south-west corner of the AONB, while a number of routes through the Lune Valley may also have existed. At least some of the Roman roads in the AONB have been shown to continue in use for many centuries into the medieval period, until they failed to satisfy local administrative and economic requirements.

Roman Period c. 100 AD

2.3.7 Known Roman monuments include pottery kilns discovered at Quernmore, a milestone found near Caton and an iron roasting hearth. The kilns appear to have been producing pottery and tiles from the first to the mid second centuries, predominantly for the fort at Lancaster.

Early Medieval Period

2.3.8 After the Roman occupation, much of the Roman infrastructure ceased to be used. Prior to the Norman conquest (1066), Lancashire was influenced by Saxon and British realms. Place names prove to be one of the few sources of information about these societies as they did not keep documents. They suggest that well into the seventh and eighth century the county was populated by British speaking peoples. For example, the place name Bowland is believed to be derived from 'Bu' - the Old Norse word for cattle. There are many other examples in the landscape including the Norse 'thwaite', as in Hawthornthwaite, which indicates where a clearance was undertaken for arable land. Places such as Pendleton contain the British word 'penno', which means a prominent steep ended hill. The best known of these is Pendle Hill, which can literally be translated to 'hill hill hill' as the Saxons added the suffix 'hill' to its original British name 'Penno' producing Pennehill, which was later corrupted to Pendle and which has become known as Pendle Hill.

2.3.9 A significant number of place names display combined British and Anglo Saxon influences and by the late sixth century the tribal kingdoms of North Lancashire were absorbed into Anglian Nothumbria. By the ninth century, place name evidence suggests a gradual and peaceful settlement of hitherto unused land by Hiberno-Norse peoples. The Ribble Valley is likely to have functioned as a major routeway from the Viking York kingdoms to the Irish kingdoms.

2.3.10 Some settlements in Bowland are likely to have been in existence at this time. For example, the Domesday record reveals that Grindleton was head of a large early medieval estate.

Medieval Period

2.3.11 By the end of the medieval period the foundations of the modern landscape had been laid. Field and settlement patterns were established, with dispersed farmsteads across much of the upland area and nucleation occurring in the more fertile and hospitable valleys. Commons, waste and woodland were all comprehensively managed. Importantly, it was during the medieval period that Royal Forests were established across the Study Area. The concept of Royal Forests dates from the late 6th century AD. The word 'forest' is derived from foris, which 'implied land set apart or placed in defence and subject to special conditions imposed by the royal will'. The system was a Norman import at the Conquest of 1066. If the king 'alienated' – i.e. let or sold – the whole part of one of his forests, then this became a 'chase'.

Medieval Period c. 1300 AD

2.3.12 Today, the Forest of Bowland is a name that has been given to the AONB, but in the Middle Ages, just a portion of the Bowland Fells was actually part of the Royal Forest of Bowland. There were four other Royal Forests within the modern boundaries of the AONB, all belonging to the earldom of Lancaster – Bleasdale to the west, which included the Forest of Bowland after 1311, Quernmore, Wyresdale and Pendle. There was also a chase belonging to Hornby Castle, located in the Roeburn and Hindburn valleys in the north. Forests were places for the hunting of deer, not for trees as the name might suggest and the designation of much of the area as Forest had a controlling impact upon the landscape, restricting development and prohibiting change. The desire of the King to hunt prevented landowners from clearing and extending cultivated areas, planting hedgerows to deter deer from eating crops and creating or expanding settlements within the Royal Forests.

2.3.13 Officially, Forest Law was not revoked until 1507. However, Forests were costly to administer and maintain and in the later medieval period a move towards enclosed deer parks began, these being smaller and more manageable. Deer parks have left their mark upon the modern Forest of Bowland AONB landscape. A map showing the location of Deer Parks within the Study Area is shown in **Appendix H (Figure H1)**. In some areas the deep bank and ditch of the park pale that once surrounded a park survives, but more commonly place names including 'park' and 'laund' (meaning a clearing where deer grazed) indicate their former locations. It is possible that many salter place-names may be contractions of the Latin saltatorium indicating 'deer leaps'. These encouraged deer to enter a park from open country, but they could not exit it because of the breadth of the ditch within the park pale. There are three examples of potential saltatoriums within the Forest of Bowland AONB; two on the boundary of Leagram Park and another at High Salter, which permitted transfer of deer from the Forest of Bowland

into Roeburndale Forest. See **Appendix H** for descriptions of the Deer Parks within the Study Area.

2.3.14 In addition to the Royal Forest in medieval times, an increasingly high percentage of the land was used for stock-rearing, known as vaccaries. The word vaccaria (from the Latin vacca, 'cow') clearly had several meanings, being used both of a building to house cattle, but also and more commonly to indicate a whole cattle-rearing establishment. Vaccaries are recorded throughout northern England. An example within the Forest of Bowland is that within the Bleasdale 'round' below Fairsnape and Parlick Fells. Other examples include Fairsnape, Catshaw, Dinkling Green and Barley. A map showing the approximate location of former vaccaries within the Study Area is shown in **Appendix H (Figure H2)**[6]. There is little or no evidence of the Forest of Bowland vaccaries having physical boundaries until a very late period, by which time they were vaccaries in name only. The notional boundaries nevertheless remained remarkably constant over time. Some place-names suggest that horse studs may also have been an element of the work of vaccaries, as at Stod Hey in Fair Oak vaccary.

2.3.15 The landscape was also being used for extensive sheep grazing, evidenced by the existence of sheepwalks, sheepfolds and sheepwashes[7]. A 'sheepwalk' can be defined as an area of fell and associated in-bye land used for extensive sheep grazing. Sheep were gathered and brought down off the fells several times a year for 'washing', 'salving', 'clipping', 'tupping' and to be taken to market. Sheep were gathered off the fells and penned in sheepfolds near the wash or dub. In the landscape, stone walled enclosures and broken stone walls near to streams/brooks are evidence of redundant sheepfolds and associated washing places[8]. A combination of natural landscape features such as watercourses or gullies and man-made boundaries (usually drystone walls) were used to assist in bringing the stock off the fells. Some of these exit or entry points to the fell were funnel shaped to feed into a wide track or enclosure. Washfolds were built near to streams/brooks so a ready supply of water was available for spring washing. Water was often diverted from the stream/brook into a culvert or the stream was temporarily dammed. Washing was carried out in early June and can be recorded back to the 16th century. Salving the sheep (the smeering into the fleece a mixture of tar with butter or whale grease was carried out in late autumn).

2.3.16 Washing was necessary due to the salve from the previous autumn and peat and grit in the fleece. Clean, washed wool was worth more to the wool board. The smear helped to keep the sheep warm and free from scab and other parasitic diseases. Both washing and salving were

[6] Based on information provided by Neil Archaeological Services, March 2009.
[7] Based on information provided by Tarja Wilson, July 2009
[8] Based on information within 'Old Sheepwashes of Bowland and Chipping' (compiled by F Marginson and H Wallbank, 2007).

replaced by dipping in the first decades of the 20th century (dipping became compulsory in 1905). Within the drystone walls, a creep hole may still be evident. Creep holes provided a way for sheep to pass from one field to another, especially if there were also cattle in the fields. They also provided a mechanism by which sheep could be counted. Potential examples of the above features within the Study Area can be seen on Parlick and Saddle Fell (near Chipping), Dunsop Fell (near Slaidburn), Hareden Fell/Totridge (near Dunsop Bridge), Oakenclough/Calder/Stake House Fells (Bleasdale) and Mallowdale Pike (near Wray).

Sheep washing, Higher Underwood, Newton Fell, c 1920's

Lamb Hill sheepfold before restoration

2.3.17 During the Medieval Period (AD 1066-1500), monastic sites were established in the Forest of Bowland. Monastic houses such as Fountains and Furness and probably also Sawley and Whalley Abbeys in and adjacent to the AONB were famous for their stock-farms. Grange Hall, at one time called Gradalehals and now under Stocks Reservoir, is thought to have been the site of a vaccary belonging to Kirkstall Abbey.

Industry and the Modern Period

2.3.18 The Industrial Revolution generally had little impact on the Study Area's landscapes, unlike much of Lancashire and Yorkshire. Devoid of coal reserves and away from the main valleys with fast flowing streams to power the industrialisation of the wool and cotton industries, the Forest of Bowland was largely ignored by the builders of turnpike road, canals and railways. Instead, the traditional patterns of rural life have been maintained by a small number of landowners. However, there are some signs of industrial activity including small-scale lime production, quarrying, mining and paper and cotton mills, which have influenced the landscape and many local villages. This activity has left clear signs in the landscape including remnant lime kilns used to make quicklime for building and field improvement.

A view of Sugarloaf from Knowlemere

2.3.19 Quarrying of sandstone at Wray, Ellel, Whittington, and the slopes of Clougha was generally on a small scale. Flagstone and slate quarries are found at Clougha and Claughton Moor. Quernstones were also prepared on the fells at Clougha. Littledale Slate quarries in the Forest of Bowland include Black Hole, Cabin Works, Seafe Gap, Watery Works, and Old Town. Backsbottom Quarry was an important slate quarry, dating from the early seventeenth century.

Bricks were also produced in the Study Area using local shales, such as the Claughton Manor Brick Company opened in c.1896 and the former Brookhouse Brick Company, which closed in the 1960's. Lime burning was undertaken at Chatburn, Downham and Twiston during the 18th century. After 1850, limestone extraction and cement making became major industries around Clitheroe and Chatburn. Associated with this, and the construction of mills, the development of the railway, led to a growth in industrialisation within the Ribble Valley.

Claughton aerial ropeway

2.3.20 Mills were also a common feature in the landscape from the 19th century. By 1830 there were seven mills in the Lune Valley working cotton, silk, worsted and linen. Mills were reliant on water power and were therefore often located adjacent to watercourses. This resulted in the creation of associated features such as lodges, reservoirs and mill races. At Caton there were at least five mills for various purposes in use from 1780 or earlier until about 1970. Gresgarth Hall corn mill operated from 1780 until 1815 became a threshing mill in 1843 and later a saw mill. Forge Mill was a cotton mill built c.1796 on the site of a former iron forge. Willow Mill is the best remaining local example of an early water-powered textile mill, the earliest parts dating from before 1790. There were also mills at Galgate, Halton and Bentham, with smaller factories at Wray, Wyresdale, Holme, Burton-in-Lonsdale and Catterall. Calder Vale, within the AONB, near Garstang, remains operational today as a mill community. The Ribble Valley was also a key location for early stages of industrialisation in the cotton industry. Twenty four mills were built within the Ribble Valley between 1850 and 1865. Associated with this, handloom weaving was undertaken at many sites within the Study Area, including Chatburn

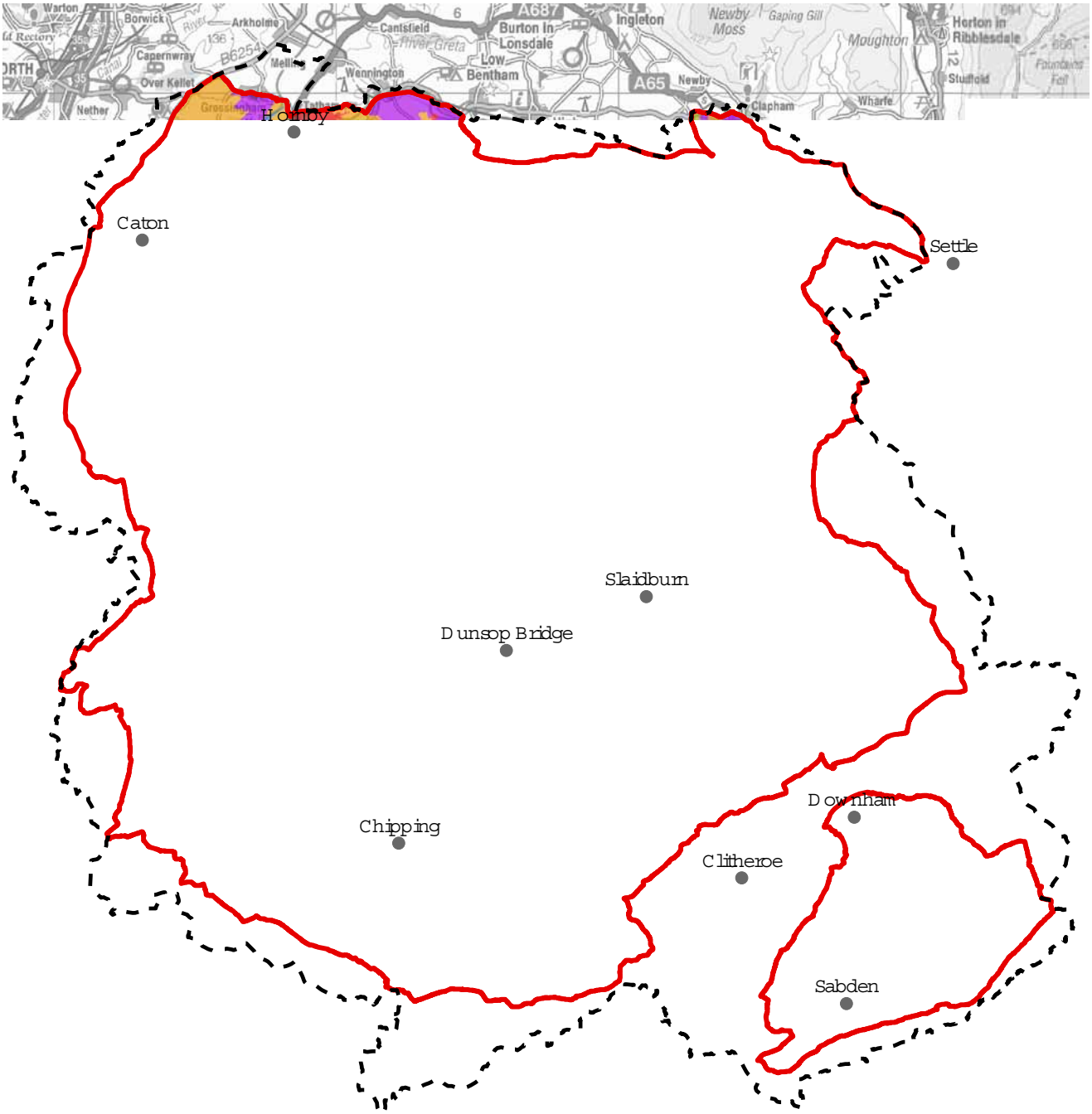
(which was the centre of activity during the first half of the 19th century), Rimington, Grindleton, Slaidburn, Newton and Bolton-by-Bowland. Carding and jenny workshops are also thought to have existed along the smaller streams of the area, for example at Sabden and spindle making also took place in Chipping. Sabden was a farming valley from the 13th century onwards and the remains of 'vaccary walls' from this time can still be seen in some areas. From the 19th century, the farms prospered as they supplied milk, wool and meat to the nearby developing towns of East Lancashire. Sabden also developed its own industries, with calico printing, cotton spinning and weaving all taking place at the Union, Victoria and Cobden mills. Union mill carried on weaving until 1964, and today it houses Pendle Antique centre; whilst Victoria mill became a carpet factory in its later life. Richard Coben was an important figure in the 1840s Free Trade movement and he founded Sabden Primary School in the village in 1836 – one of the first in the country to be independent of any church.

2.3.21 Mining within the Study Area is thought to have begun in the medieval period. Much of the mining was small scale, for lead. Two phases of mining are thought to have occurred in the nineteenth century[9], centred within the Brennand and Whitendale valleys. At Whitendale and Brennand mines there appears to have been mining activity prior to 1800. Other mining sites within the Study Area include those at Sykes, Newton Fell, Dinkling Green, Roeburndale, Burghill Moor, Ings End and Moor End (near Rimington). Small lead mines were also opened at Harrop Fold in the nineteenth century, however it is thought that these quickly proved to be unprofitable.

Historic Landscape Character

2.3.22 The Lancashire Historic Landscape Characterisation Project (HLC) was devised to enhance understanding of the historic landscape and its development. Landscapes within the Study Area were included within this project, which divided the area into sixteen different historic landscape character types. These describe the current landscape within each type in terms of its predominant historic character and origins. As shown on **Figure 2.5**, these include: open and enclosed land, woodland, settlement, recreation, ornamental landscapes, industry and major water bodies. One of the aims of the Lancashire HLC Project was to input into the Lancashire Landscape Strategy, which has informed the definition of a landscape typology for the Study Area (see Section 3.0). Further detailed information on the different types of historic landscape can be found within the accompanying report to the Lancashire HLC Project[10].

[9] Based on information within Industrial Heritage: A Guide to the Industrial Heritage of the Ribble Valley.
[10] Lancashire Historic Landscape Characterisation Programme: A repot on the context, method and results for Lancashire, Blackburn with Darwen and Blackpool Areas (2002), J. Ede with J. Darlington on behalf of Lancashire County Council and English Heritage.



KEY

Historic Landscape Character Types

- Ancient and Post Medieval Settlement
- Ancient Enclosure
- Ancient and Post Medieval Industry
- Ancient and Post Medieval Ornamental
- Ancient and Post Medieval Wood
- Lowland Moss and Grassland/Sc
- Modern Enclosure
- Modern Industry
- Modern Ornamental
- Modern Recreation
- Modern Settlement
- Modern Woodland
- Moorland
- Post-Medieval Enclosure
- Reverted Moorland
- Water

- Study Area
- Forest of Bowland Area of Outstanding Natural Beauty

0 2 4 km

S:\projects\11109301 Forest of Bowland\GIS\Projects\Figures\11109301-FoB_2-5_HLC.mxd

CHRIS BLANDFORD ASSOCIATES
www.cba.uk.net

SEPTEMBER 2009

FOREST OF BOWLAND AONB
LANDSCAPE CHARACTER ASSESSMENT

Figure 2.5
Historic Landscape Character Types

2.4 The Landscape Today

Land Cover and Management

2.4.1 Today the Study Area remains a predominantly rural landscape. The higher areas are dominated by moor, heath and rough grassland, whilst the lowland fringes encompass a patchwork of improved pasture and meadows. Agriculture is the dominant land use within the Study Area. Rough grazing is also a major land use on the moors and heaths of the hills and plateaux. The dominance of permanent pasture is a reflection of the relatively damp climate of the Forest of Bowland and the suitability of the soils for grassland. Sheep and beef farming predominate throughout the uplands, whilst dairying is a major land use in the Ribble and Lune Valleys and much of the lowland farmland. The landscape of the Study Area is dotted with a pattern of small hamlets and villages, which are connected by a network of narrow lanes. More extensive urban development within the Study Area is focused on the Ribble Valley outside the AONB around the town of Clitheroe.

View from Hookcliffe

2.4.2 Extensive areas of moorland within the Study Area are managed specifically for grouse shooting. This has resulted in the installation of a number of access tracks for shoots, shooting butts and cabins within the landscape.

Gamekeepers on the Fells

2.4.3 Woodland within the Forest of Bowland consists of a combination of small deciduous and coniferous woodland patches, and linear woodland along river and brook corridors. Along these river and brook corridors, much of the broadleaved native woodland is ancient and semi-natural (for example within Roeburndale, Hinburndale, Littledale and parts of Wyresdale). In addition, pockets of ancient woodland are found on the steep-sided river and stream slopes of the Ribble and Lune River catchments. Several of the patches of planted deciduous and mixed woodlands occur on estates and formal parkland, such as at Abbeystead, Downham and Quernmore. The only sizeable area of plantation is Gisburn Forest, which was planted in the 1950's and contains pockets of ancient semi-natural, deciduous woodland. In more recent years, patches of plantation woodland have been planted at Gisburn and on Thrusgill and Longridge fells.

View of Hindburndale

2.4.4 In the late 19th century, legislation was enacted to empower the Fylde Waterworks Company to provide a water supply to the developing industrial towns and coastal resorts of Lancashire. The Corporation of Preston waterworks were also permitted to take water from the upper reaches of the Hodder, with intakes built on the Langden and Hareden streams in addition to a brick culvert, which carried water to storage reservoirs in Longridge (to the south of the AONB). The Blackburn Corporation also obtained an Act of Parliament in 1877 to gather water in the Dunsop intakes at Whitendale and Brennand. Many of the pipes were laid underground, although aqueducts were needed near Thorneyholme and over the Ribble at Dinckley. This legacy of successive generations of water gathering has left its impression upon the landscape of the Study Area, notably at Stocks Reservoir, constructed between 1922 and 1932 by the Fylde Water Board to service Blackpool and the coastal region. This resulted in a dramatic change to the landscape of the Hodder Valley, flooding the hamlets of Dalehead and Stocks in Bowland. Today, the largest single landowner within the AONB is United Utilities, which manages a large area of the fells primarily for water catchment, supplying Fylde and Blackpool. The course of the Haweswater aqueduct also crosses the Study Area (forming part of the Manchester supply system) and introduces associated engineered features to the landscape.

Field Patterns and Boundaries

2.4.5 The field patterns and boundaries within the Study Area date from several periods and include both modern and ancient features. Many boundaries survive from the medieval landscape and some from earlier periods. However, the landscape is dominated by hedgerows and walls which were established during successive periods of enclosure between the sixteenth and nineteenth centuries. Ancient Enclosure (shown in purple on the map) and Post-Medieval Enclosure (shown in orange on the map) is concentrated within the lowland valleys and farmlands around the periphery of the Study Area.

View of field pattern and boundaries

2.4.6 Ancient hedgerows line field boundaries, roads and lanes. They predominate in lowland areas, whilst drystone walls are characteristic of the moorland hills and fringes. The underlying geology of the Study Area is often reflected in the pattern and type of drystone walls. The central Bowland fells, which rise to the north of Slaidburn and west of Chipping are underlain by a combination of gritstones and limestones. Gritstone walls tend to exhibit rough hewn blocks of stone with parallel rows of through stones or rounded boulder stones, whilst limestone walls consist of large blocks, which are often crumbling as a result of the softer nature of the rock. Water rounded stones from the glacial deposits are often a feature of field walls and farm buildings near water courses and valley bottoms.

Croasdale sheepfold

Settlement and Buildings[11]

Building Materials

2.4.7 The rocks of the Study Area are the source and main design influence of the local vernacular buildings. The gritstone of the high central moorland dominates the northern parts of Bowland, the southern areas around Waddington and Longridge fells and Pendle itself. Within the Ribble Valley, the Hodder above Dunsop Bridge and beyond Slaidburn exposed limestones yield both building stone and lime for mortar and agriculture.

Downham village

[11] Information within this section of the report provided by James Riley – See Appendix B.

2.4.8 In the north east parts of the Study Area, from Bowland Knotts through Eldroth as far as the Ribble near Settle, exposed gritstone outcrops have been partly quarried away for field walls and local farmsteads. Waddington Fell and Longridge in the south west are the sites of larger quarry workings, each of a distinctive colour and some still in use. Small scale limestone quarries and adjacent limekilns remain visible in Whitewell and Slaidburn areas. Larger scale quarries east of Clitheroe have significantly altered the local topography, removing a large part of the small hillocks which were a feature of the river valley between the castle and Downham. Views of Chatburn and the Ribble valley from the hills are now dominated by the cement works.

2.4.9 Quarried gritsone and limestone is visually sharply irregular in the rubble construction of farm buildings or drystone field walls. The capping stones of field walls in gritstone are often laid angled to drain rainwater. Local triangular shaped limestone or gritstone copings perform the same function. Dressed or coursed gritstone was originally used only in churches or more important domestic buildings. By the 19th century dressed or coursed gritstone became more common in the main facade of farmhouses or "model" farm buildings. Quarried limestone was usually rendered for waterproofing. Its removal in recent decades has been replaced by hard cement pointing.

Early Buildings

2.4.10 The earliest surviving and most prominent buildings which feature in the Bowland scenery are the castle at Clitheroe and the medieval churches which survive in the main villages. Largely complete early churches survive in the south at Chipping, Slaidburn and Bolton by Bowland. Medieval towers of early churches survive at Waddington, Clitheroe and Downham where 19th century neo-gothic "restorations" of churches in turn replaced 18th century restorations. In the north part medieval churches survive at Caton and Hornby. Over Wyredale and Tosside are 17th/18th century as is Newchurch in Pendle (with a 16th century tower). All other churches are 19th century foundations.

Gentry Houses

2.4.11 The earliest larger houses of the local gentry are late 16th or 17th century in origin. The most prominent and important is Stonyhurst below Longridge, where the Shireburns fine house can still be identified among the Jesuits 19th century collegiate additions. Fine early 18th century gardens and early 18th century garden buildings also survive, as do 17th century almshouses in the village. Other significant early houses include Hammerton Hall above Slaidburn, an Elizabethan house of recognisable Pennine Style. Browsholme Hall (home of the Parker family for 500 years) was similar in design until Wyatville's alterations at the beginning of the 19th

century. Lawkland in the north east corner of the AONB is of the same period but more characteristic of north Lancashire or Westmorland.

Stonyhurst

Hurst Green

Whiteholme Hall, Slaidburn

2.4.12 Handsome late 18th or very early 19th century large classical houses are found at Downham (incorporating the Assheton's earlier building) below Pendle, and at Quernmore in the north west where the Gibson family of Preston built a new house on the old Clifford Estate. Nearby Gresgarth Hall is castellated and early 19th century "Gothic" incorporating an earlier Pele tower. The handsome contemporay grounds were further embellished at the end of the 20th century by their owner, the renowned garden designer Arabella Lennox-Boyd. Later 19th century houses include Hornby Castle on the north edge of Bowland.

2.4.13 A number of smaller late 16th/early 17th century houses survive, again of the Lancashire Pennine type. The best are on Pendle, Sabden Hall and Roughlee Hall, and in south Bowland, Harrop Hall, near Slaidburn. A similar house at Whitewell is now incorporated into the 19th century buildings of the famous Inn at Whitewell. At Slaidburn, the 18th century Townhead of the Wigglesworth's has recently been sold from the King-Wilkinson estate after being left unoccupied for decades. The early 19th century Leagram Hall above Chipping was replaced in the 1960's by a smaller classical house for the Weld-Blundell estate. Again, fine 19th century parkland, grazed by White Park Cattle, surrounds the modern house.

The Inn at Whitewell

19th Century Estates

2.4.14 Sales in the 1830's and 1840's of the landed part of Clitheroe Castle estate brought the Peels from their prosperous dyeworks in Accrington to Knowlmere in the Hodder Valley west of Slaidburn. A new house was built and plantations made to ornament the estate. Further west a branch of the Towneleys from Burnley bought the Whitewell Estate. Their resident agent improved and remodelled many of the tenant farms and built a Roman Catholic church at

Dunsop Bridge. Wide eaves, slate roofs and distinctive sash windows characterise the new farmhouses. Model farmbuildings with lower pitched hip roofs appear in the farmyards. All introducing a new form of building to this part of Bowland. The estate woodlands include conifers, especially around Thorneyholme, the new principle house and estate church. The Whitewell Estate is currently owned by the Duchy of Lancaster.

2.4.15 At Slaidburn the King-Wilkinsons by amalgamation through marriage and purchase united three or so land holdings into a sizeable estate by the latter part of the 19th century. Substantial new houses were built at Whiteholme and Dunnow. Mid 19th century tree plantings have created a parkland setting for the whole village, by then largely estate owned. Tennant farms were improved, barns and farmhouses rebuilt albeit in a less distinctive style than at Whitewell. A stranger improvement visually was the cement rendering of old buildings (including the parish church) at the end of the 19th century. Much of the outlying eastern part of the estate was sold in the 1920's.

2.4.16 At Bolton by Bowland the Bolton Hall estate is best recalled by the layout of the village at the fine 18th century gates to Bolton Hall. Widely spaced picturesque houses and rows of cottages, church, pub, former parsonage and school all survive despite the demolition of the Hall and break-up of the estate. Below Pendle at Downham, the Asshetons rebuilt their house in the 1830s, in handsome severe classical style by Webster of Kendal and rebuilt the parish church in perpendicular style in 1910. The village itself comprises older stone cottages and farmbuildings. The surrounding deep leafy lanes are bordered by traditionally laid hedges, carefully trimmed to favour hedgerow trees. Further west the Starkie estate, though shorn of its principle house, retains its extensive 19th century woodlands stretching down to Padiham where the modern bypass has severed the Gothic entrance arch from its park.

2.4.17 Abbeystead at Wyresdale on the west side of Bowland was established in the late 19th century as a major sporting estate on Bowland, and remains so to this day. The house was built in Elizabethan style by the Earls of Sefton from Liverpool. Their estate buildings, woodlands and gardens in the valley all compose a romantic whole below extensive, well managed grouse moors above. Since the middle of the 20th century, Abbeystead has been part of the Grosvenor Estate.

2.4.18 The differing land ownership of estates is reflected in the distinctive local vernacular colours of house and farm window frames and doors. Examples include; Downham Estate (green) Abbeystead Estate (grey) Huntroyd Estate (red), Bleasdale (green) and King Wilkinson Estate (white).

Farmsteads

View of Catlow Farm

2.4.19 Outlying farmsteads in the valleys and more often fringes of Bowland remain the most conspicuous buildings in the landscape. All the older buildings are stone walled with either stone slated roofs or later, the blue slate of 19th century rebuilding. Often in the smaller remote farms the house and main barn forms one building, a continuation of the longhouse tradition which predates stone building. In some parts of Bowland 19th century examples can be found. The earliest houses retain small stone mullioned windows and the headstone over doorways is often dated with the initials of the owner. The houses are thick walled and low lying, making best use of what shelter the landform of the farm can offer. Additional shelter from the dominant west wind is often provided by small farm woods or plantations. These are the farms of the higher remoter parts of Bowland. Good examples survive in the deep northern valleys; Littledale, Roeburndale and Lowgill. Several survive around Dale Head at the top of the Hodder Valley, although many were destroyed following the building of Stocks Reservoir in the 1920's when Forestry Commision plantations replaced open farmland. Stephen Park in Gisburn Forest is a good example showing its development through the 17th and 18th centuries. Many of the farmsteads within the Study Area were also built along springlines.

2.4.20 Many of the larger, more prosperous farms along the east and southern edges of the AONB were modernised and rebuilt during the 18th and early 19th centuries. The farmhouses are taller and larger, often of recognisable Georgian style with sash windows arranged in three bays on the principle south facing facade. At the rear are smaller north facing windows and a tall central staircase window, sometimes round headed. Examples can be seen in the wide

Ribble Valley towards Settle or above Clitheroe, as well as on the edges of the larger villages. Barns, too, are larger with lower pitched roofs.

2.4.21 More modern twentieth century additions to these larger farms include extensive pre-fabricated covered yards. Earlier examples built around the 1960's are roofed and walled in pale coloured corrugated cement asbestos similar in form to the black painted corrugated iron of earlier 20th century farm buildings. Later 20th century examples are often even larger. Steel frames support coated steel roofs and timber "Yorkshire boarded" side walls. The character of the larger modernised farmsteads retains, on a larger scale, the workman-like character of their smaller neater predecessors. Groups of simple buildings sit within the wider landscape of their surrounding farmland, which even with the clutter of silage clamps and machinery of modern agriculture does not really disturb. This established rural character is changed or even lost when old farmsteads and barns are sold off and converted as landholdings are amalgamated to meet the needs of modern farming.

Old and new farm buildings within the landscape

3.0 LANDSCAPE CLASSIFICATION HIERARCHY

3.1 Introduction

3.1.1 This section describes the context provided by the hierarchical classification of Landscape Character Units defined at the national and county levels. Within this context, the classification of Landscape Character Types and Landscape Character Areas defined for the Forest of Bowland is presented.

3.1.2 The descriptions of individual Landscape Character Types and Areas in Section 4.0 should be read in conjunction with this information to ensure that the contextual relationship with the wider landscape is understood.

3.2 National Landscape Context

3.2.1 The Character of England map[19] provides the national framework for more detailed assessments carried out at local level. The National Character Areas defined at 1:250,000 scale provide the context for defining boundaries of landscape character units within Lancashire and the Forest of Bowland.

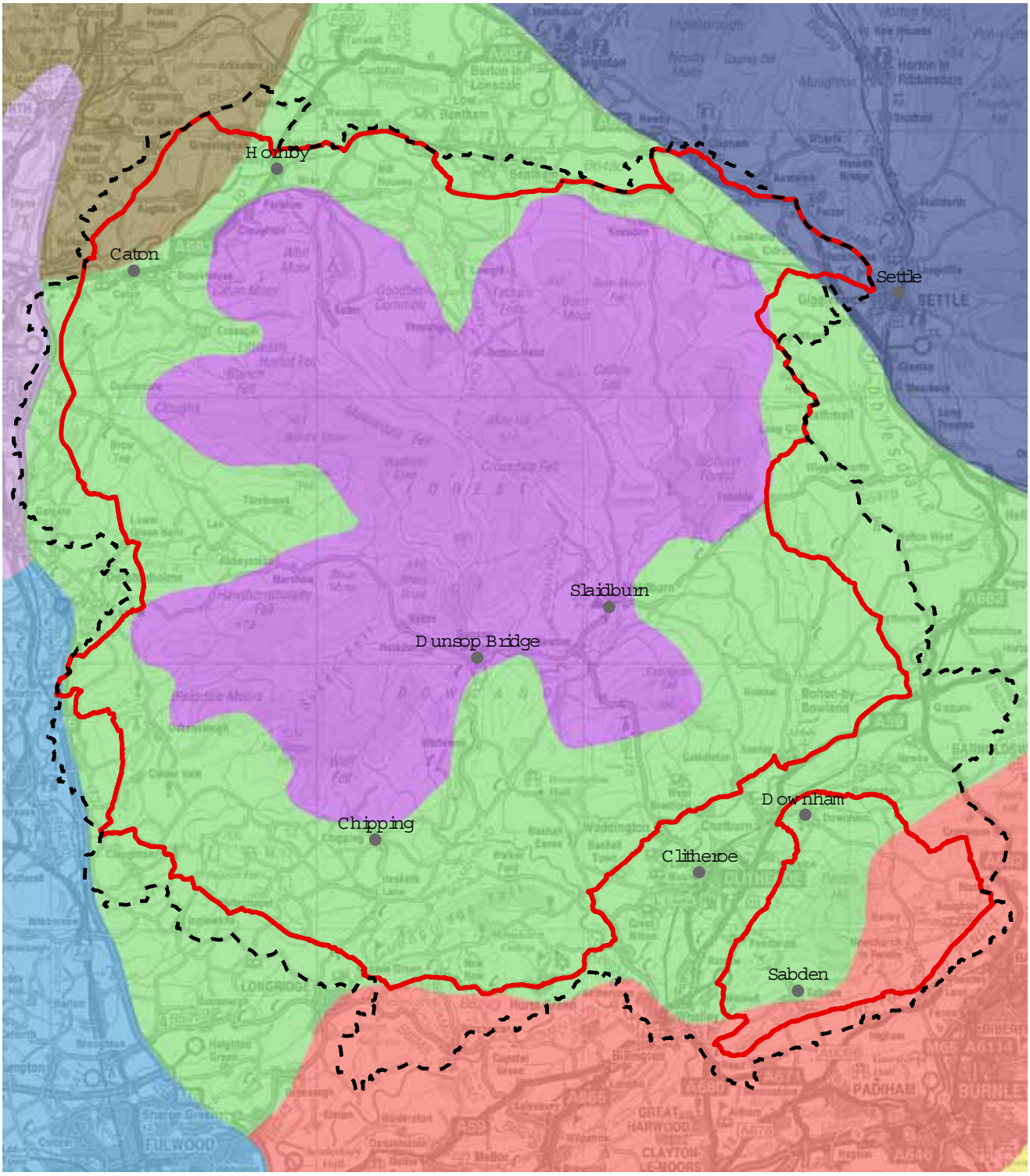
3.2.2 As illustrated on **Figure 3.1**, the Forest of Bowland is covered by the following National Character Areas:

- Morecambe Bay Limestones (20);
- Yorkshire Dales (21);
- Bowland Fringe and Pendle Hill (33);
- Bowland Fells (34);
- Lancashire Valleys (35).

3.3 Regional Landscape Context

3.3.1 As described within section 1.1.9, the North West Regional Landscape Partnership (with support from Natural England) is developing a Regional Landscape Character Framework for the North West (see **Figure 3.2**). This project identifies Landscape Character Types for the entire North West Region. Within the Study Area, emerging mapping (June 2009) has identified a range of Landscape Character Types, including Open Moorland Plateau, Upland Valleys, Upland Fringes and Ridges, Valley Meadowlands, Drumlin Farmlands and Industrial

[19] Character of England Map (Countryside Agency, English Nature, RDS, English Heritage, updated 2006)



KEY

- Bowland Fells (34)
- Bowland Fringe and Pendle Hill (33)
- Lancashire Valleys (35)
- Morecambe Bay Limestones (20)
- Morecambe Coast and Lune Estuary (31)
- Lancashire and Amounderness Plain (32)
- Yorkshire Dales (21)
- Study Area
- Forest of Bowland Area of Outstanding Natural Beauty

0 2 4 km

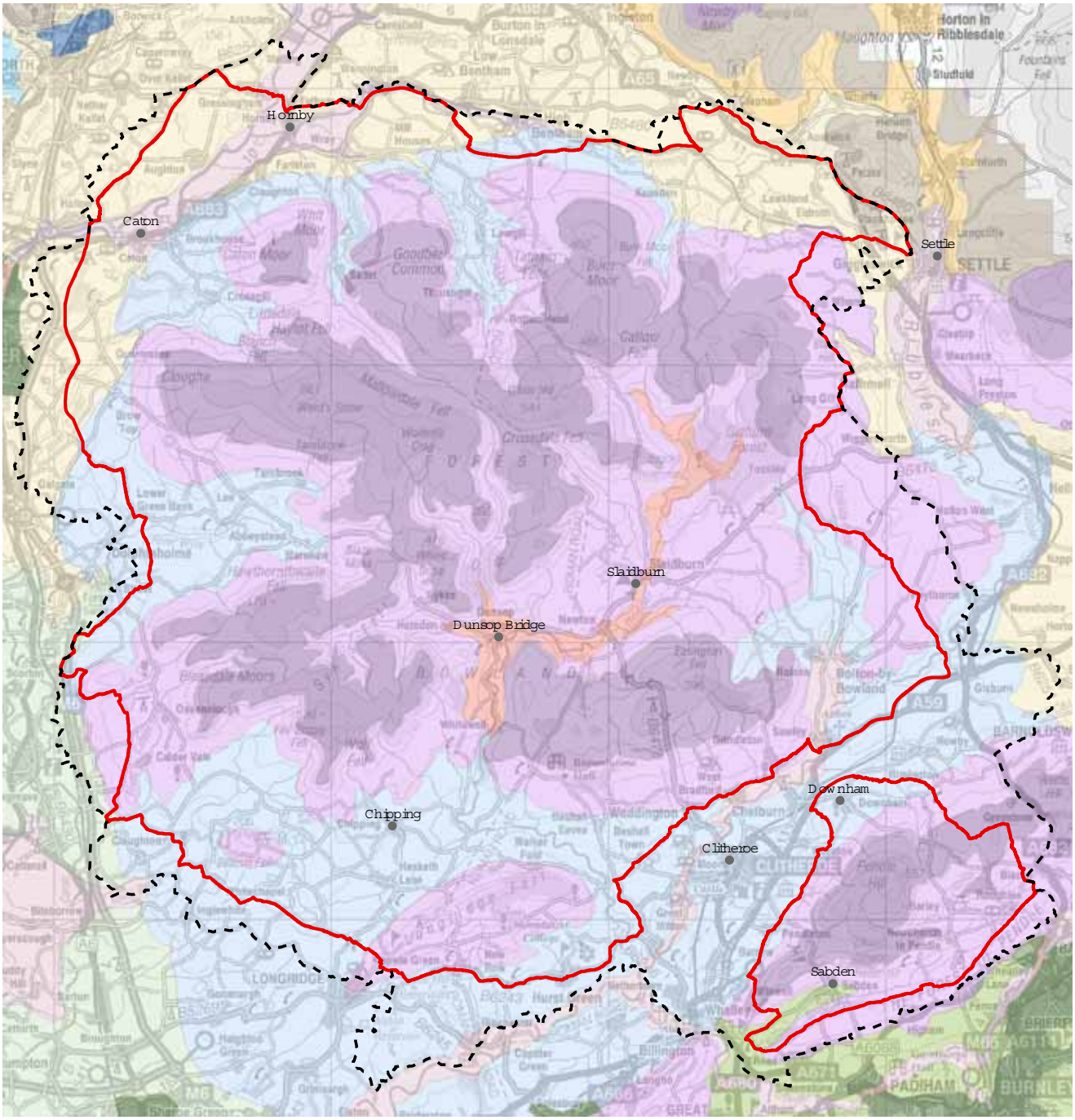
S:\projects\11109301 Forest of Bowland\GIS\Projects\Figures\11109301-FoB_3-1_CharacterEngland.mxd

CHRIS BLANDFORD ASSOCIATES
www.cba.uk.net

SEPTEMBER 2009

FOREST OF BOWLAND AONB
LANDSCAPE CHARACTER ASSESSMENT

Figure 3.1
Character of England Map - National Character Areas



KEY

Regional Landscape Character Types

- Drumlin Farmlands
- Industrial Foothills and Fringes
- Limestone Dales
- Limestone Uplands
- Lowland Settled Plains
- Mosslands
- Open Moorland Plateau
- Saltmarshes
- Upland Fringes and Ridges
- Upland Valleys
- Urban
- Urban River Valleys
- Valley Farmlands
- Valley Meadowlands

- Study Area
- Forest of Bowland Area of Outstanding Natural Beauty

0 2 4 km

S:\projects\11109301 Forest of Bowland\GIS\Projects\Figures\11109301-FoB_3-2_Reg_lac_chtm.mxd

CHRIS BLANDFORD ASSOCIATES
www.cba.uk.net

SEPTEMBER 2009

FOREST OF BOWLAND AONB
LANDSCAPE CHARACTER ASSESSMENT

Figure 3.2
North West Regional
Landscape Character Framework

Foothills and Fringes. Once finalised, these Regional Landscape Character Types will provide a framework for the definition of Landscape Character Types at the local level. As the Regional mapping was in preparation at the same time as the Forest of Bowland Landscape Character Assessment was being undertaken, consistency has been sought between both classifications.

3.4 County Landscape Context

3.4.1 Set within the framework provided by National Character Areas, the Lancashire Landscape Character Assessment[20] classifies the landscape within the Forest of Bowland AONB into 10 separate Landscape Character Types and 31 Landscape Character Areas (see **Figure 3.3**). The Lancashire Landscape Classification provides the framework for the definition of more detailed Landscape Character Types and Areas within the Forest of Bowland. It also provides information on landscape character for landscapes at the periphery of the AONB, outside the Study Area.

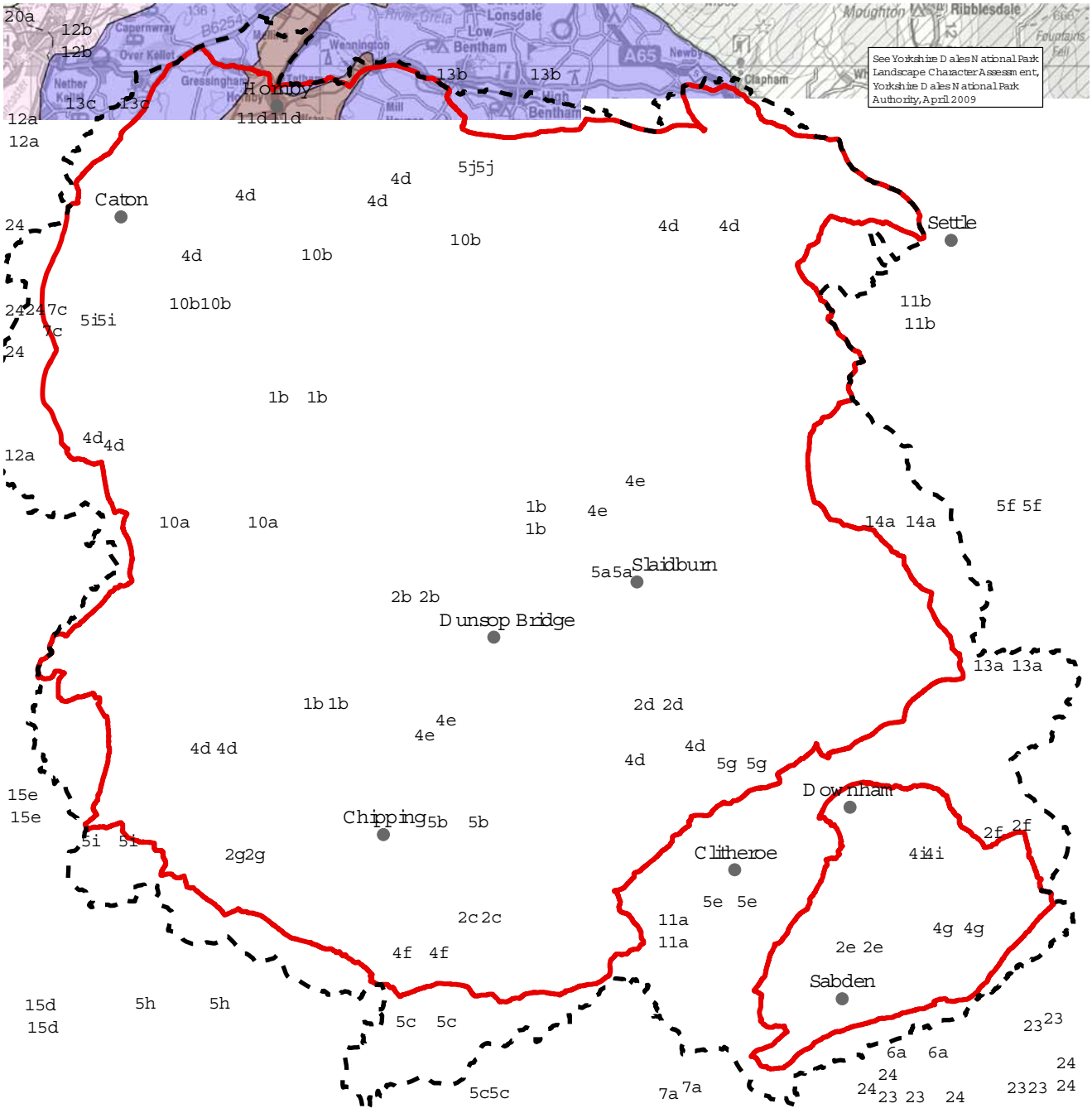
3.4.2 Descriptive information on the landscape character, physical influences and human influences of each of the 10 identified Lancashire Landscape Character Types is contained within the Lancashire Landscape Character Assessment Report.

3.5 The Forest of Bowland Landscape Classification

Defining a Landscape Character Typology for the Forest of Bowland

3.5.1 As required by the brief (see **Appendix A**), the Landscape Character Types identified within the Lancashire Landscape Character Assessment form the framework for those Local Landscape Character Types that have been identified within the Forest of Bowland, as a result of desk work analysis and verification in the field. This Study has identified 14 Landscape Character Types (at a scale of 1:25,000) which nest within the existing Lancashire County Landscape Character Types, as shown within the Table 1:

[20] A Landscape Strategy for Lancashire – Landscape Character Assessment, October 1999, Environmental Resources Management (ERM) for Lancashire County Council.



S:\projects\11109301 Forest of Bowland\GIS\Projects\Figures\11109301-FoB_3-3_Lanc_LCA-LCT.mxd

Table 1: Correlation between Lancashire and Bowland Landscape Character Types

LANCASHIRE LANDSCAPE CHARACTER TYPES (1:50,000 Scale)	BOWLAND LANDSCAPE CHARACTER TYPES (1:25,000 Scale)
1: Moorland Plateaux	**A. Moorland Plateaux**
2: Moorland Hills	**B. Unenclosed Moorland Hills** **C. Enclosed Moorland Hills**
4: Moorland Fringe	**D. Moorland Fringe**
5: Undulating Lowland Farmland	**E. Undulating Lowland Farmland** **F. Undulating Lowland Farmland with Wooded Brooks** **G. Undulating Lowland Farmland with Parkland** **H. Undulating Lowland Farmland with Settlement and Industry**
6: Industrial Foothills and Valleys	(See 3.5.3)
7. Farmed Ridges	**N. Farmed Ridges**
10. Wooded Rural Valleys	**I. Wooded Rural Valleys**
11. Valley Floodplain	**J. Valley Floodplain**
13. Drumlin Field	**K. Drumlin Field**
14. Rolling Upland Farmland	**L. Rolling Upland Farmland** **M. Rolling Upland Farmland with Woodland and Reservoir**

3.5.2 For those Landscape Character Types defined with the Lancashire Landscape Character Assessment that have also been identified within the Forest of Bowland, consistency has been sought in terms of the description of the Landscape Character Description and Physical Character of the landscape.

3.5.3 As set out within Table 1 above, the 'Industrial Foothills and Valleys' Landscape Character Type (identified within the Lancashire Landscape Character Assessment along the south-eastern edge of the Pendle Hill outlying area of the AONB) was omitted from the Forest of Bowland Landscape Typology. After field survey verification, it was considered that the boundary of this Landscape Character Type (which predominantly occurs to the south of the AONB) does not extend into the Study Area. Views across the Industrial Foothills and Valleys Landscape Character Type are, however, a key characteristic of this area of landscape within the Study Area.

3.5.4 Where possible, Landscape Character Types within the AONB were given the same name as those Landscape Character Types defined within the Lancashire Landscape Character Assessment to ensure a consistent approach.

3.5.5 For those Landscape Character Types that continue outside the boundaries of the Study Area, reference is made to the corresponding relevant Landscape Character Type within the

Lancashire Landscape Strategy or within existing neighbouring Landscape Character Assessments[21].

3.5.6 The methodology used to define the landscape character typology for the Forest of Bowland is provided in **Appendix C**.

Landscape Character Types

3.5.7 **Figure 3.4** shows the distribution of Landscape Character Types defined within the Study Area. They have a distinct and relatively homogenous composition and pattern of physical and cultural attributes - including geology, landform, hydrology, land cover/ecological habitats and historical land use. Landscape Character Types are generic in form, and may occur in different areas of the AONB. Examples include:

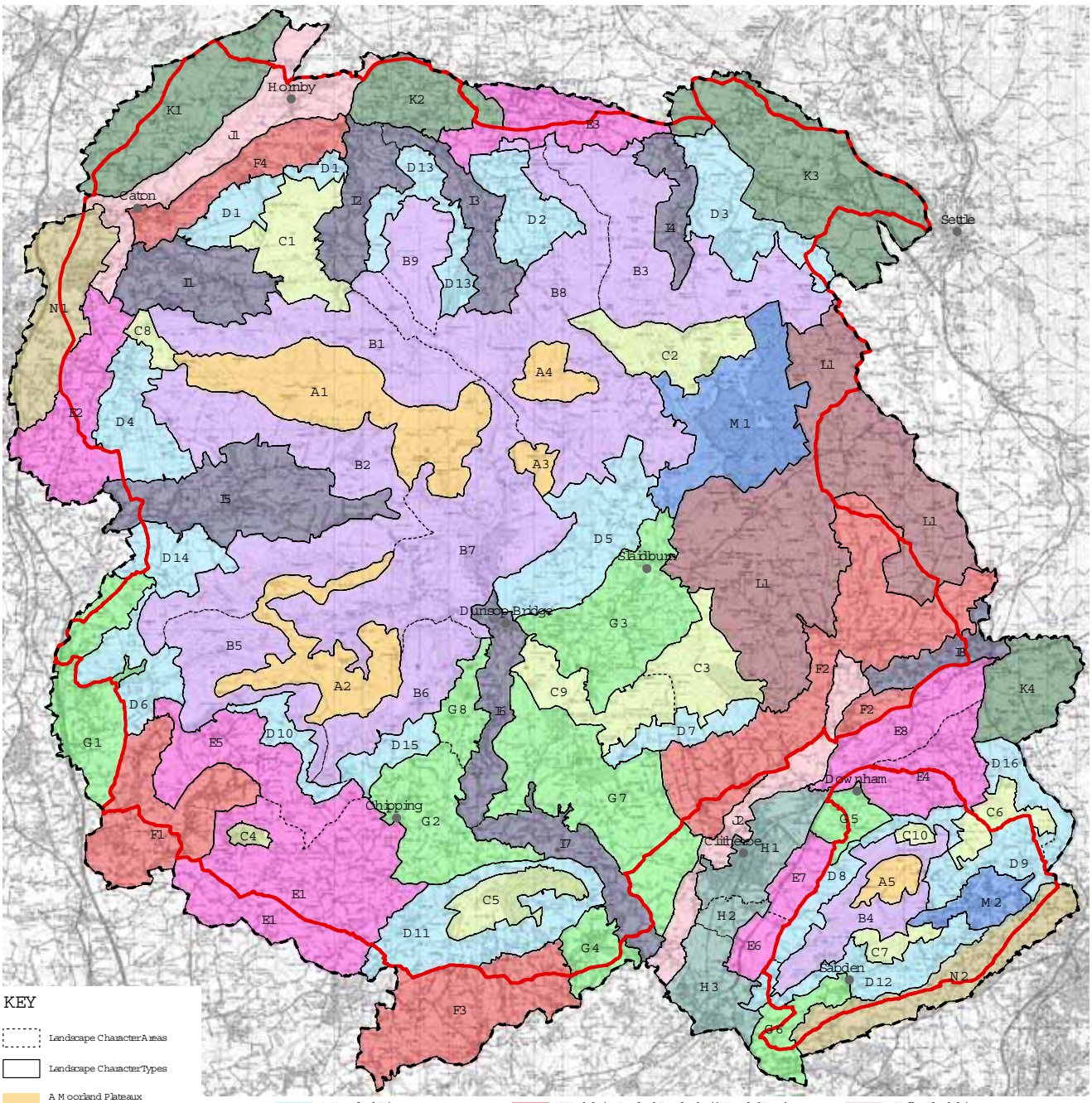
- Moorland Plateaux;
- Undulating Lowland Farmland with Parkland; and
- Drumlin Field.

3.5.8 The 14 Landscape Character Types that have been defined within the Forest of Bowland are set out within Table 2 below:

Table 2: Bowland Landscape Character Types

Bowland Landscape Character Types
A: Moorland Plateaux
B: Unenclosed Moorland Hills
C: Enclosed Moorland Hills
D: Moorland Fringe
E: Undulating Lowland Farmland
F: Undulating Lowland Farmland with Wooded Brooks
G: Undulating Lowland Farmland with Parkland
H: Undulating Lowland Farmland with Settlement and Industry
I: Wooded Rural Valleys
J: Valley Floodplain
K: Drumlin Field
L: Rolling Upland Farmland
M: Forestry and Reservoir
N: Farmed Ridges

[21] Craven District (Outside the Yorkshire Dales National Park and Forest of Bowland AONB) Landscape Appraisal, Final Draft, October 2002, Landscape Design Associates for Craven District Council;
Yorkshire Dales National Park Landscape Character Assessment, March 2001, Estell Warren Landscape Architects for the Yorkshire Dales National Park Authority.



S:\projects\11109301 Forest of Bowland\GIS\Projects\Figures\11109301-FoB_3-4_LCT_LCA.mxd

CHRIS BLANDFORD ASSOCIATES
www.cba.uk.net

SEPTEMBER 2009

FOREST OF BOWLAND AONB
LANDSCAPE CHARACTER ASSESSMENT

Figure 3.4
The Forest of Bowland Landscape Classification

Landscape Character Areas

3.5.9 **Figure 3.4** also shows the distribution of the 82 Landscape Character Areas within the Forest of Bowland AONB. These nest within the Landscape Character Types identified above and have a distinct and recognisable pattern of elements and perceptual qualities such as scale, pattern, and cultural associations which are geographically unique.

3.5.10 The following Landscape Character Areas have been identified within the Forest of Bowland:

A: MOORLAND PLATEAUX
A1: Ward's Stone
A2: Brown Berry Plain and Holdron Moss
A3: Baxton Fell
A4: White Hill
A5: Pendle Hill

B: UNENCLOSED MOORLAND HILLS
B1: Mallowdale
B2: Abbeystead
B3: Burn Moor Fell
B4: Pendle Hill
B5: Bleasdale
B6: Wolf Fell to Mellor Knoll
B7: Langden
B8: Croasdale to Lythe
B9: Goodber Common

C: ENCLOSED MOORLAND HILLS
C1: Caton Moor
C2: Crutchenber
C3: Easington
C4: Beacon Fell
C5: Longridge Fell
C6: Twiston
C7: Lingbobs and Stainscombe
C8: Birk Bank
C9: Newton and Birkett
C10: Downham

D: MOORLAND FRINGE
D1: Caton Moor
D2: Tatham
D3: Kettlebeck
D4: Hare Appletree
D5: Beatrix to Collyholme
D6: Nicky Nook
D7: Moorcock
D8: Pendleton
D9: Wheathead
D10: Bleasdale
D11: Longridge
D12: Upper Sabden Valley
D13: Park House
D14: Abbeystead

D15: Wolf-Burnslack
D16: Middop

E: UNDULATING LOWLAND FARMLAND
E1: Whitechapel
E2: Quernmore
E3: Forest of Mewith
E4: Rimington
E5: Bleasdale
E6: Pendleton
E7: Worston
E8: Dudland and Gisburn

F: UNDULATING LOWLAND FARMLAND WITH WOODED BROOKS)
F1: Calder Vale and Brock Valley
F2: Bolton by Bowland to Waddington
F3: New Row
F4: Caton

G: UNDULATING LOWLAND FARMLAND WITH PARKLAND
G1: Wyresdale
G2: Little Bowland
G3: Upper Hodder
G4: Hurst Green
G5: Downham
G6: Sabden
G7: Browsholme
G8: Dinkling Green – New Laund

H: UNDULATING LOWLAND FARMLAND WITH SETTLEMENT AND INDUSTRY
H1: Clitheroe and Chatburn
H2: Higher and Lower Standen
H3: Barrow and Whalley

I: WOODED RURAL VALLEYS
I1: Littledale
I2: Roeburndale
I3: Hindburndale
I4: Keasden
I5: Over Wyresdale
I6: Upper Hodder
I7: Lower Hodder
I8: Ribble

J: VALLEY FLOODPLAIN
J1: Lune
J2: Ribble

K: DRUMLIN FIELD
K1: Gressingham
K2: Lower Tatham
K3: Lawkland
K4: Coronation

L: ROLLING UPLAND FARMLAND
L1: Harrop Fold

M: FORESTRY AND RESERVOIR
M1: Gisburn
M2: Barley

N: FARMED RIDGES
N1: Quernmore
N2: The Heights

3.5.11 As acknowledged by the latest guidance,[22] landscape is a continuum and character does not in general change abruptly on the ground. More commonly, the character of the landscape will change gradually rather than suddenly, and therefore the boundaries between landscape character units should be considered to reflect zones of transition in many cases. In addition, the boundaries have been defined and mapped at a scale of 1:25,000, and the assessment is therefore only suitable for use at this scale. This should be taken into consideration when the assessment is being used to inform decision-making in relation to development and land management proposals at the local level.

[22] Countryside Agency/Scottish Natural Heritage (2002) Landscape Character Assessment – Guidance for England and Scotland