



# Historic Farmsteads

## Preliminary Character Statement: North West Region



ENGLISH HERITAGE



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# Acknowledgements

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This document is one of eight Preliminary Character Statements which provide information on the characteristics of traditional farm buildings in each Region. They can be viewed and downloaded at [www.helm.org.uk/ruraldevelopment](http://www.helm.org.uk/ruraldevelopment) and at [www.ahds.ac.uk](http://www.ahds.ac.uk).

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# Summary: North West Region

## I LANDSCAPE AND AGRICULTURAL CONTEXT

### NATIONAL FRAMEWORK

Patterns of land use were very varied, reflecting cultural factors as well as climatic conditions and the physical structure of the landscape. The distribution of farmsteads, their dates of foundation and their relationship to the farming landscape are intimately linked to **historical patterns of fields** and **settlement** in the landscape. Areas of nucleated settlement, concentrated in a central band running from Northumberland into Somerset and Dorset, are associated with villages whose communally farmed townfields were subject – at varying rates – to amalgamation and enclosure by tenants and landlords from the 14th century. This process was often associated with the creation of new holdings and farmsteads within the new enclosures. Areas of dispersed settlement, where farmsteads are either isolated or grouped in hamlets and surrounded by originally smaller townfields and more ancient patterns of enclosure, are most strongly characteristic of western and parts of eastern and south-eastern England. Between the two extremes are areas that contain both nucleated and dispersed settlement to varying degrees.

**Agricultural development in England** can be divided into the following major periods:

- *Up to 1750* Economic boom in the 12th and 13th centuries, which included the development of large farms on monastic and secular estates, was followed by contraction of settlement and the leasing out of estates after the famines and plagues of the 14th century. The period from the 15th century was characterised by a general increase in agricultural incomes and productivity and the emergence – particularly from 1660 – of increasingly market-based and specialised regional economies. Substantially complete farm buildings of this period are rare, and provide the first evidence for the development and strengthening of regional traditions and building types. Many surviving farmsteads in upland areas, with farm buildings attached to their farmhouse, survive from the later 17th and 18th centuries. It is otherwise very rare for farmsteads to have more than a house and barn dating from this period.
- *1750 – 1880* This is the most important period of farm building development, the production of farmyard manure by cattle playing a major role in increasing agricultural productivity. The increased output of this period was encouraged by rising grain

prices and the demands of an increasingly urban population, and was enabled by the expansion of the cultivated area (especially from the 1790s to 1815), the continued reorganisation and enlargement of holdings and the final phase of the enclosure of open fields – concentrated in the Midland counties. Substantial improvements in animal husbandry were made with the development of improved breeds and a greater awareness of the importance of the need for housing, particularly for cattle, which hastened fattening and meant that manure could be collected and stored better. The high-input/high-output systems of the 'High Farming' years of the 1840s to 1870s were based on the availability of imported artificial fertilisers, manures and feeds.

- *1880 – 1940* There was little fresh investment due to the long farming depression in this period, notable exceptions being some estates and continuing developments in dairying areas. Hygiene regulations in the inter-war period resulted in intense forms of housing for pigs and poultry, and the replacement of earlier forms of housing for dairy cattle by new forms of cow house with concrete floors and stalls, and metal roofs and fittings.
- *1940 to present* The 1937 Agriculture Act anticipated the need to increase self-sufficiency, and the Second World War witnessed a 60% rise in productivity. This was the result of the growth in livestock numbers, increasing scientific and government control and guidance, more specialised systems of management and the conversion to arable of permanent pasture. The Agriculture Act of 1947 heralded the intensification and increased specialisation of farming in the post-war period, accompanied by the development of government and industry research and guidance. The Government provided grants to cover the capital cost of new building under the Farm Improvement Scheme (introduced 1957). The introduction of wide-span multi-purpose sheds in concrete, steel and asbestos met increasing requirements for machinery and for the environmental control of livestock and on-farm production, particularly of milk.

### REGIONAL PATTERNS

The predominant pattern, established by the end of the medieval period, is of largely dispersed settlement with many hamlets and isolated farmsteads. These either result from the colonisation of areas by individual peasant colonisers or have developed from monastic stock farms established in the 12th and 13th centuries.

Nucleated villages are concentrated in some lowland areas such as the Eden valley, west Cumberland coastal belt and the Solway Plain in the north of the Region, where they are intermixed with isolated farmsteads and hamlets, and in other coastal plain areas further south.

There was often a complex intermingling of both open communal and enclosed arable and meadow land around farming settlements, and a diversity of communal farming strips and anciently enclosed land can be read in the modern landscape. Most of the Region's common arable, meadow and pasture had been enclosed by the 1750s, pockets of communal open-field farming – such as in northern lowland Cumbria – surviving into the 19th century. Despite the strong distinctions between the Region's upland and lowland zones, a defining characteristic of this Region is the amount of uncultivated or intermittently cultivated land, in the form of upland moor or lowland moss. Vast areas of remaining lowland moss and upland moor were enclosed from the end of the 18th century to the middle of the 19th century, the pressure to create more productive pasture and especially arable land – and an increased desire on the part of customary tenants to lease or own their land outright – resulting in a dramatic new landscape of large square fields and straight boundaries.

Because of its wet climate and predominantly upland terrain coupled with heavy clay soils on the lowlands, much of the Region was best suited to pastoral agriculture. Cattle were the mainstay of the farming economy. From the 15th century, there was a general extension of pasture for livestock farming throughout the Region. This resulted in large-scale sheep farming to supply wool for the burgeoning woollen and textile industry, and – particularly after import bans were imposed on Irish cattle in the 1660s – the opening of Cumbria and Galloway in Scotland to the supply and fattening of Scottish beef cattle onto lowland England. The large-scale rebuilding of farmsteads in upland and northern lowland zones was also facilitated by favourable terms of tenancy, which underpinned the development of a strongly independent class of farmer. Throughout the Region the period from the later 17th century saw a decline in arable in upland and other pastoral areas, only larger farms and those in the drained eastern lowlands of Lancashire appearing to retain large quantities of arable. There was a corresponding increase – sometimes in parallel with industrial diversification – of rearing, dairying and fattening, with large increases in the amount of land under permanent pasture through the transfer of arable to pasture, dairying and cheese production for local and distant markets (particularly in the Lancashire and Cheshire Plain), and much more large-scale sheep farming. Cattle remained a far more important source of income than sheep in the Region as a whole.

## 2 BUILDING MATERIALS

### NATIONAL FRAMEWORK

The use of locally available materials, combined with local vernacular traditions, makes a fundamental contribution to local and regional diversity.

Long-rooted traditions such as earth walling, thatch and timber frame, survived much longer on farm buildings than farmhouses. Buildings in stone and brick, roofed with tile or slate, increasingly replaced such buildings from the later 18th century.

Standardised forms of construction, including softwood roof trusses, developed across the country in the 19th century, often reflecting the availability of materials such as Welsh slate transported along the canals and, later, the railways. Corrugated iron was used from the late 19th century as a cheap means of replacing or covering roofs (particularly thatch) in poor condition.

### REGIONAL PATTERNS

A great diversity of building stone is available across the Region. This variety in colour, texture and form ranges from the dark grey or purple slate of the Lakeland area to the limestones of south Cumbria and Morecombe Bay, the Millstone Grit sandstone of the Pennines and the less weather-resistant New Red Sandstone of parts of south Lancashire and Cheshire. Stone of a more porous nature, such as some sandstones, was often rendered or whitewashed. More regularly finished stone became more common in the late 18th and 19th centuries, especially for storeyed farm buildings and farmhouses, and is associated with the more widespread introduction of lime mortar (earth mortar being the standard bonding before this time). Watershot masonry, where the outer face is tilted to throw water off the walls, is a technique that was used in upland areas between the late 18th and mid-19th centuries.

In both upland and lowland areas cobbles, rounded either by glacial or water action, were widely found in streambeds and in glacial outwash, and were readily available for structural use. They were used particularly where better-quality quarried stone was scarce, such as the Solway Plain and west Cumberland. They were used either whole, well bedded in clay, or halved with the cut surface forming the outside face. Huge cobbles were frequently used in foundations.

The Region has two of the major concentrations of earth-walled structures in England. In the Fylde of Lancashire, before the 17th century, it was widely applied to timber studs set on a stone slab base, similar to the mud-and-stud tradition of eastern Ireland. In the Solway Plain area, a comparatively greater number of more substantially built clay buildings, including cruck-roofed

barns and longhouses – comparable to examples across the border in Scotland and those of the South West Region – have survived. Most date from between the 17th to mid-19th centuries, although there are 15th-century examples. Clay walling was commonly retained for barns and other farm buildings whilst the house might be built in stone.

The present distribution of timber-framed buildings is confined almost entirely to the Lancashire and Cheshire Plains, where farmhouses far outnumber farm buildings using this technique. Where timber framing survives it is typically square-panel framing, part of a shared regional tradition with the West Midlands.

Brick is a characteristic feature of the Cheshire Plain, Wirral, the Lancashire Plain and Morecombe Bay area.

Over considerable parts of the Region the local stone can be split into thin slates for roofing; for example, Cumberland slate, stone flags, imported Welsh slate.

Clay roof tiles are characteristic of the Cheshire Plain.

### 3 FARMSTEADS

#### NATIONAL FRAMEWORK – FARMSTEAD TYPES

The scale and form of farmstead plan types are subject to much variation and are closely related to farm size and status, terrain and land use. It was far more common for the houses on farms in northern and western England to be attached to the farm buildings. By contrast, even small farms in the South East and East Anglia were characterised by detached houses and separate buildings, often loosely arranged around the sides of a yard.

- *Linear plans*, where houses and farm buildings are attached, were ideally suited to small farms (usually stock rearing and dairying), especially in northern pastoral areas with little corn and longer winters where there was an obvious advantage in having cattle and their fodder (primarily hay) in one enclosed building. They now display a wide range in scale, from large steadings of independent Pennine yeoman-farmers to the smallholdings of miner-farmers.
- *Dispersed plans*, comprising clusters and unplanned groupings of separate buildings, were more widespread. They now range from those of hamlets, where the buildings of different owners were often intermixed, to large-scale individual steadings, some of which were of high status.
- *Loose courtyard plans* became most strongly associated with large and/or arable farms. The buildings are built around a yard with or without scatters of other farm buildings close by.
- *Regular courtyard plans*, where the various functions were carefully placed in relation to one another in

order to minimise the waste of labour, and where the manure could be conserved, were built – at first on large estates – from the later 18th century.

#### REGIONAL PATTERNS – FARMSTEAD TYPES

The predominant farmstead plan of the uplands was the linear layout. Linear or parallel plans continued to be used on smaller holdings in lowland areas throughout the Region, and in both areas large numbers survive from the century after 1650, when growing prosperity and the merger of holdings prompted a large-scale rebuilding programme. There are also many examples of linear farmsteads dating from the late 18th century, sometimes easily distinguished by symmetrical farmhouses and attached bank barns. A regionally distinct linear plan-type is the *laithe house*, the word 'laithe' or 'lathe' being a northern English dialect word for a combined barn and cow house. The house and farm buildings are usually of one build, but there is no cross passage or inter-connection between them. Typical of the central and southern Pennines, but also found in Cumbria and Bowland and Rossendale in Lancashire, examples date from the mid-17th century but are not common until after 1750, with a concentration in the 1780 to 1840 period. They typically served farms of about 30 acres or less, and are most densely concentrated in the Pennine part of West Yorkshire and Lancashire, where dual income from farming and industry – primarily textiles, but also lead working – enabled smallholdings to be economically viable.

From the mid-18th century larger lowland farms would typically be served by a farmstead ranged around a courtyard. In Cumbria they are the finest examples in a national context of planned groups incorporating bank barns in courtyards of buildings, with the house on one side, and courtyard farms are found on larger arable-based holdings throughout the Region.

On the Lancashire and Cheshire Plains where dairying was predominant the most common farmstead layout adopted from the late 18th century was the L- or T-shaped plan, although on some larger farms a U-plan was adopted. Dairy farms typically had a combined barn and fodder house built at right angles to the cow house range, often separated by a cart entry for loading hay and corn into the first-floor lofted areas. Pigsties would usually be placed close to the house, either attached to the L-shaped range or as an individual element of the farmstead.

#### NATIONAL FRAMEWORK – BUILDING TYPES

The functions of crop processing and storage and the accommodation of animals and birds determine the variety of building types, which could house one or a combination of functions. The principal types are listed below.



**Barns** are generally the largest farm buildings to be found on farms. They were either designed solely for storing and processing the corn crop, these being most common in areas of arable production, or as combination barns to incorporate many functions. Threshing machines, usually powered by horses accommodated in a projecting wheel house, were introduced from the later 18th century. Split-level mixing barns developed in many regions from the later 18th century as a result of the widespread introduction of machinery for processing corn and fodder. The introduction of the portable steam engine and threshing machine in the 1850s heralded the end of the traditional barn as a building for storage and processing.

**Field barns** were built in areas where farmsteads and fields were sited at a long distance from each other, and where holdings were intermixed. **Granaries** were either detached or built over stables and cart sheds. **Cart sheds** often faced away from the farmyard and were typically close to the stables and roadways, giving direct access to the fields. **Stables** were normally two-storey well-lit buildings with a hayloft above. **Cow houses** were typically built for dairy cattle. The folding of stock in strawed-down yards and feeding them with root crops became more general from the later 18th century, together with the subdivision of yards into smaller areas and the construction of **shelter sheds** and **looseboxes**. **Pigs** were undoubtedly kept on most farms and particularly on dairying establishments, where there was a ready supply of whey on which to feed them. **Dovecotes** were built to house pigeons, which provided variety to the diets of high-status households and a rich source of manure.

## REGIONAL PATTERNS – BUILDING TYPES

The importance of cattle in the agricultural economy is more evident in the farm buildings of the North West than in any other Region.

The **bastle house** is a building type particular to the Border area of northern England. The cattle were housed on the ground floor, usually with the doorway in a gable end, and the domestic space in a room above was accessed by a ladder or later an external staircase. Bastle houses generally date from the 16th to the 17th centuries and reflect the need to make family and stock secure.

**Threshing barns** that functioned only as a building for crop processing are uncommon in this Region. Combination barns that incorporated several functions – including the threshing of the corn crop, animal housing, fodder storage and sometimes a cart shed – are typical of the Region and were being constructed in the North West in a variety of forms from the medieval period.

It is the way that a diversity of uses, particularly housing cattle, are incorporated into the building (using horizontal and/or vertical divisions) that lead to the distinctive forms of combination barns seen in the North West. Most of these combination barns are wholly or part-lofted, with entries for cattle in one or both ends. These include a large group of aisled barns dating from the 15th to mid-17th centuries concentrated around the South Pennines, but also extending into Lancashire. In Cumbria and the northern upland parts of Lancashire are found multi-functional bank barns, normally using a natural slope to provide level access to both floors. Bank barns are a distinctive and characteristic feature of the Region. The only other part of the country where they are found, although not in the same abundance as in Cumbria, is in adjoining parts of the North East and in the South West counties of Devon, Cornwall and Somerset.

**Granaries, cart sheds** and other individual functions most often appear in combination with others in continuous ranges.

The hay barn is a common feature of many larger pastoral farms – and a distinctive feature of this Region. They are sometimes built to substantial proportions and given decorative treatment in both the form and detail of the ventilation patterns, particularly in the farmsteads of the Cheshire Plain.

The upland parts of the Region – particularly in Cumbria – has some notable pre-19th-century examples of field barns. These include bank barns dating from the 17th century, buildings for housing cattle and sheep. In Cumbria, particularly on the lower pastures of the eastern Lakeland and other hilly areas, a building similar in appearance to a field barn was provided for the hogs or yearling sheep to give them protection over their first winter.

# 1.0 Introduction

If the land is best suited for tillage, then the outhouses must be adapted to the purposes of keeping cattle for plowing; of holding and thrashing corn; and of preserving straw, &c. for winter food. In the counties where oxen plow, ox-houses must exceed the quantity of stabling: if where horses only are used, stables alone will be sufficient. If the land seems to promise fairest for pasturage, then cow houses, suckling-houses, sheepcots, dairies, and fattening houses must predominate; and if for grass, much barn-room seems unnecessary.

*The Complete English Farmer*, 1771, quoted in Wiliam 1986, p.67

Farm buildings are the leitmotif of the countryside. It seems appropriate to describe them with a musical term for they are thematic, and the resonance of their forms, colours and textures within the scenery is that of sound, overall and orchestrated. Here and there is the solo instrument, spectacular in its own right, but much more important is the orchestral effect.

Darley, Gillian (1981) *The National Trust Book of the Farm*, The National Trust, London, p.7

Historic farmsteads and their buildings make a fundamental contribution to the richly varied character of our countryside, and illustrate the long history of farming and settlement in the English landscape. England displays a huge diversity in geology, with a greater variety in small areas than anywhere else in Europe, which combined with varied farming practices has resulted in a great diversity of materials and types of farmstead.

It is clear, however, that we know far more about the nature and processes of change affecting land cover and field pattern than we do about agriculture's built environment and its contribution to countryside character and local distinctiveness. Furthermore, we know far less about the working than the domestic buildings of the farmstead. Recent research has made initial efforts to address this issue, and has made it clear how the domestic and working buildings of the farmstead are subject to very different processes of change (Gaskell & Owen, 2005).

English Heritage is now undertaking to develop this knowledge base in order to inform diverse future outcomes, such as the targeting of grant aid and the development of character-based policies for the sustainable reuse of farm buildings. This document is one of eight regional *preliminary character statements* that aim to promote better and more accessible understanding of the character of farm buildings. It is important, as a first step in this process, to present an information base for a broad diversity of users with an interest in researching,

understanding and managing historic farmsteads. It has therefore been written as a sourced synthesis of information, drawing together information that will enable the farmsteads of each Region to be better understood within the national context of farmstead and agricultural development, and their surrounding fields and settlements. As this is a preliminary statement, it and future work will benefit greatly from information and comments. These will be gratefully received at the following e-mail address:

**[jeremy.lake@english-heritage.org.uk](mailto:jeremy.lake@english-heritage.org.uk)**

The objectives of this document are:

- To provide an information base and introduction to the subject.
- To place the development of the farmsteads and farm buildings of the North West Region within their national context.
- To demonstrate, with examples, how the *present* stock of farmsteads and their buildings reflects the diversity of farming, settlement and landscape character in the North West Region.
- To provide broad guidance on the value and survival by period and functional type.

An accompanying policy booklet has also been prepared, which makes the case for urgent action and considers

the importance of historic farm buildings, their value and their future. See *Living buildings in a living landscape: finding a future for traditional farm buildings*, at [www.helm.org.uk/ruraldevelopment](http://www.helm.org.uk/ruraldevelopment).

In each of the following sections, the national overview is presented immediately before the regional statement. For example, on the topic of barns, the national overview describes the development, variety and uses of barns nationally while the regional statement describes the variety that can be seen in the barns of the Region.

**Section 2** provides an introduction to characterisation and briefly describes the landscape character of the Region, examining the pattern of rural settlement across the Region.

**Section 3** describes the predominant building materials used for farm buildings nationally and in the Region.

**Section 4** provides a brief introduction to the agricultural history of England with particular reference to the development of farmsteads and farm buildings divided into the major periods, supported by statements relating to the survival and significance of farm buildings from each period. This is followed by a summary of the

agricultural history of the Region.

**Section 5** provides a national and regional background of types of farmsteads and farm buildings.

**Sections 6, 7 and 8** provide a national and regional overview of key building types.

**Section 9** provides a Glossary of terms both familiar and unfamiliar to the reader (e.g. dairy, linhay, enclosure).

**Section 10** provides a list of national and regional sources for further reference.

It is also important at this stage to outline a distinction in terminology. 'Traditional' is a term often used to describe farm buildings pre-dating 1940, after which modern building materials (concrete, steel, asbestos sheet) and revolutions in farming technology and farmstead planning marked a sharp divide with previous practice. 'Historic' is more encompassing, as it includes farmsteads of all dates, irrespective of changes in form and material; it has been used in this document in order that the reader can view the history of farm buildings, and their change and adaptation over the centuries, within their broad historical context.

# 2.0 Understanding Context and Character

## 1.1 LANDSCAPE CHARACTER AND CHARACTERISATION

Landscape character is defined as a distinct and recognisable pattern of elements that occur consistently in a particular type of landscape. Particular combinations of geology (Figure 1A), landform, soils, vegetation, land use, field patterns and human settlement create character. Character makes each part of the landscape distinct, and gives each its particular sense of place. Landscape-scale techniques for understanding and guiding future change, now brigaded under the heading of characterisation, have developed since the 1990s. These have developed as multi-disciplinary and holistic tools for understanding the whole rural environment, its capacity to absorb change and its links to community values and needs.

During the 1990s the Countryside Commission worked with English Nature and English Heritage to identify Joint Character Areas (159 in total) for the whole of England, each of these resulting from a combination of factors such as land cover, geology, soils, topography, and settlement and enclosure patterns. These are now being used as the framework for the delivery of advice and the targeting of resources for many aspects of the rural environment, most recently to farmers under the Higher Level Stewardship Agri-Environment schemes, and local authorities have taken forward this methodology for Landscape Character Assessments on a finer scale. These are also being used as the spatial framework for reporting change in the countryside, in the Countryside Quality Counts project (see [www.cqc.org.uk](http://www.cqc.org.uk)).

The North West Region extends over the Joint Character Areas listed in Figure 1B. Whenever the text cross-refers to the Joint Character Areas, they will be listed by their number (i.e. JCA 152). The key characteristics and a detailed description and map for each Character Area are available from the Countryside Agency's website ([www.countryside.gov.uk/lar/landscape](http://www.countryside.gov.uk/lar/landscape)). The web addresses for each JCA are detailed in Section 1.1.

Human impact has been central to the development and present character of landscape. Historic Landscape Characterisation (HLC), which is being developed by English Heritage with its county and local partners, is using GIS mapping techniques to deepen our understanding and perception of the long historical development of our landscapes. The practical applications of HLC now include development plans, a broad range of conservation and enhancement strategies, strategic land-use planning and similar initiatives, and research and academic implications (Clark, Darlington & Fairclough, 2004; Rippon, 2005, 100–142).

Pilot work is now indicating that the density and time-depth of farmsteads, and the rates of survival of different types of steading and building, are closely related to patterns of historically conditioned landscape character and type (Lake & Edwards 2006). This work represents a shift in focus away from individual buildings to a more question-based and holistic approach, one that uses landscape to both reflect and inform the patterning of the built environment. Recording and understanding at a local scale can both test and refine these broad-based, contextualised statements and contribute towards a more integrated understanding of both buildings and landscapes.

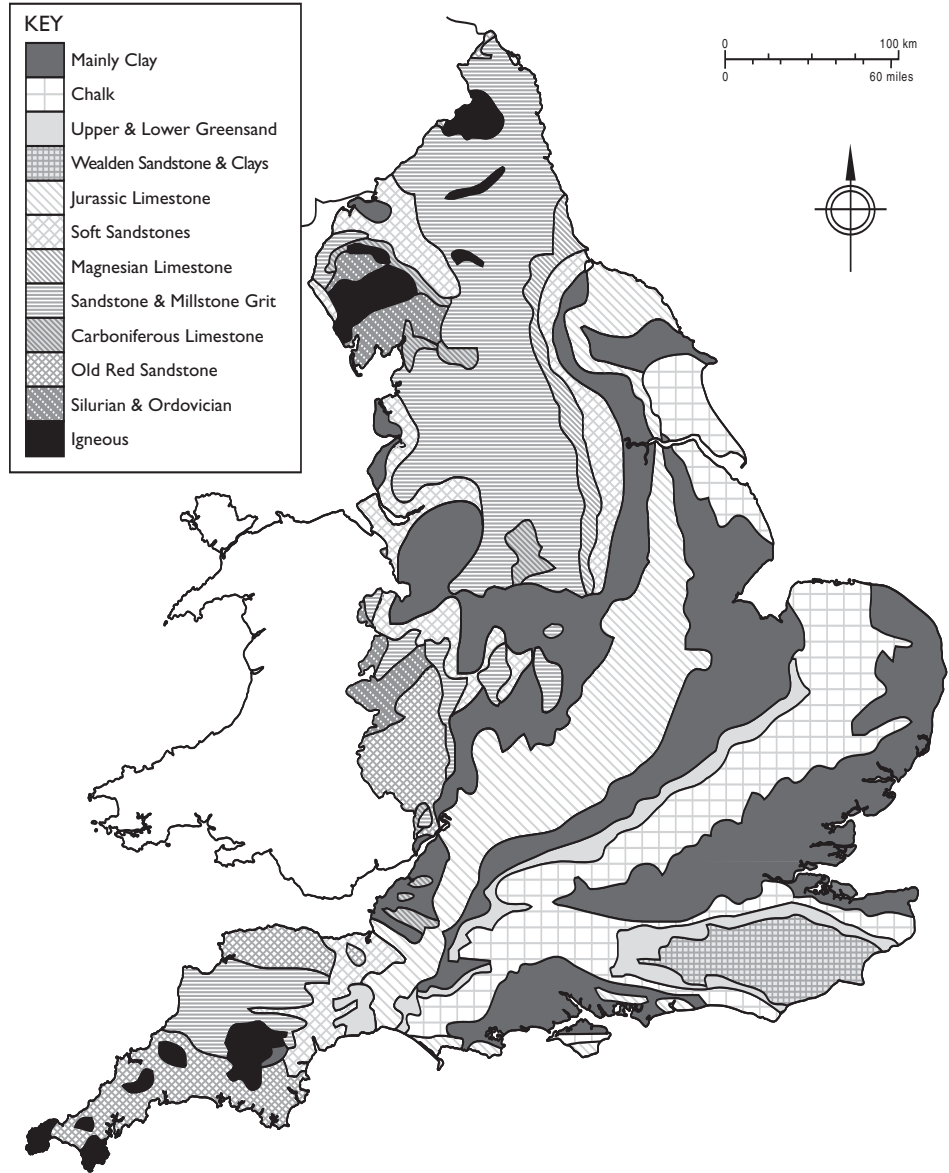
For characterisation see: [www.english-heritage.org.uk/characterisation](http://www.english-heritage.org.uk/characterisation)

## 2.2 THE CHARACTER OF THE NORTH WEST REGION: AN INTRODUCTION

The Government Region of the North West covers the counties of Cumbria (comprising the historic counties of Cumberland and Westmorland together with the detached portion of Lancashire to the north of Morecombe Bay covering the Furness and Cartmel districts), Lancashire and Cheshire. The Region presents a wide variety of landscapes and character areas.

Cumbria is dominated by the mountainous area of the Lake District, erupting in a mass of old hard slates and granites. To the north-east of this area, along the Cumbrian coastal plains and over much of the southern half of the Region sandstones and mudstones prevail with heavy clay soils derived from glacial drift. The Pennine uplands dominate the east of the Region, and stretch from the Scottish border through to the Peak District of Derbyshire. Here the hard, coarse, massive and uncompromising Millstone Grit sandstones predominate. A band of carboniferous limestone surfaces west to east through Clitheroe into Yorkshire whilst further south lie the coal measures of the Lancashire Valleys. The transitional zone from fell to plain through central Lancashire and into Cheshire is mostly of red sandstone. To the west, the sandstones are for the most part heavily overlain with marls, clays and recent glacial deposits; the central area comprises soils of varying proportions of clay and sand; to the east the soils are light and sandy. Few English counties present so little geological variety as Cheshire, where apart from the sandstone outcrop of the Overton-Peckforton Ridge, the plains to the west and east are broadly covered by glacial drift.

IA Geology map of England  
 England displays a huge diversity in geology, with a greater variety in small areas than anywhere else in Europe. The North West Region has a varied geology providing sandstone and limestones for both walling and roofing. The availability of good stone across most of the Region means that it is the dominant building material and is a major contributor to local distinctiveness. In the south of the Region the clays of the Cheshire Plain were used for brick and tile making.  
*Based upon 'Solid Geology' Source Defra/BGS, NERC: by permission of the British Geological Survey IPR/52-65C. ©NERC/Crown copyright. OS Licence no. 100042054*



The Border Moors and North Pennines have always been thinly settled, its land suited to rough grazing and now predominantly sheep run. Around the Lake District with its acidic, infertile soils and steep-sided valleys, which eventually open westward to the Eden Valley, lie drier, milder districts with more fertile land characterised by glacial drift or alluvial deposits. The Eden Valley contains some of the richest agricultural land in Cumbria and consists of improved pasture with a significant coverage of arable crops. To the north and west, in the Coastal Plain and Solway Basin, areas of improved, intensively managed pasture are grazed by store cattle, small dairy herds and sheep, in gently undulating countryside.

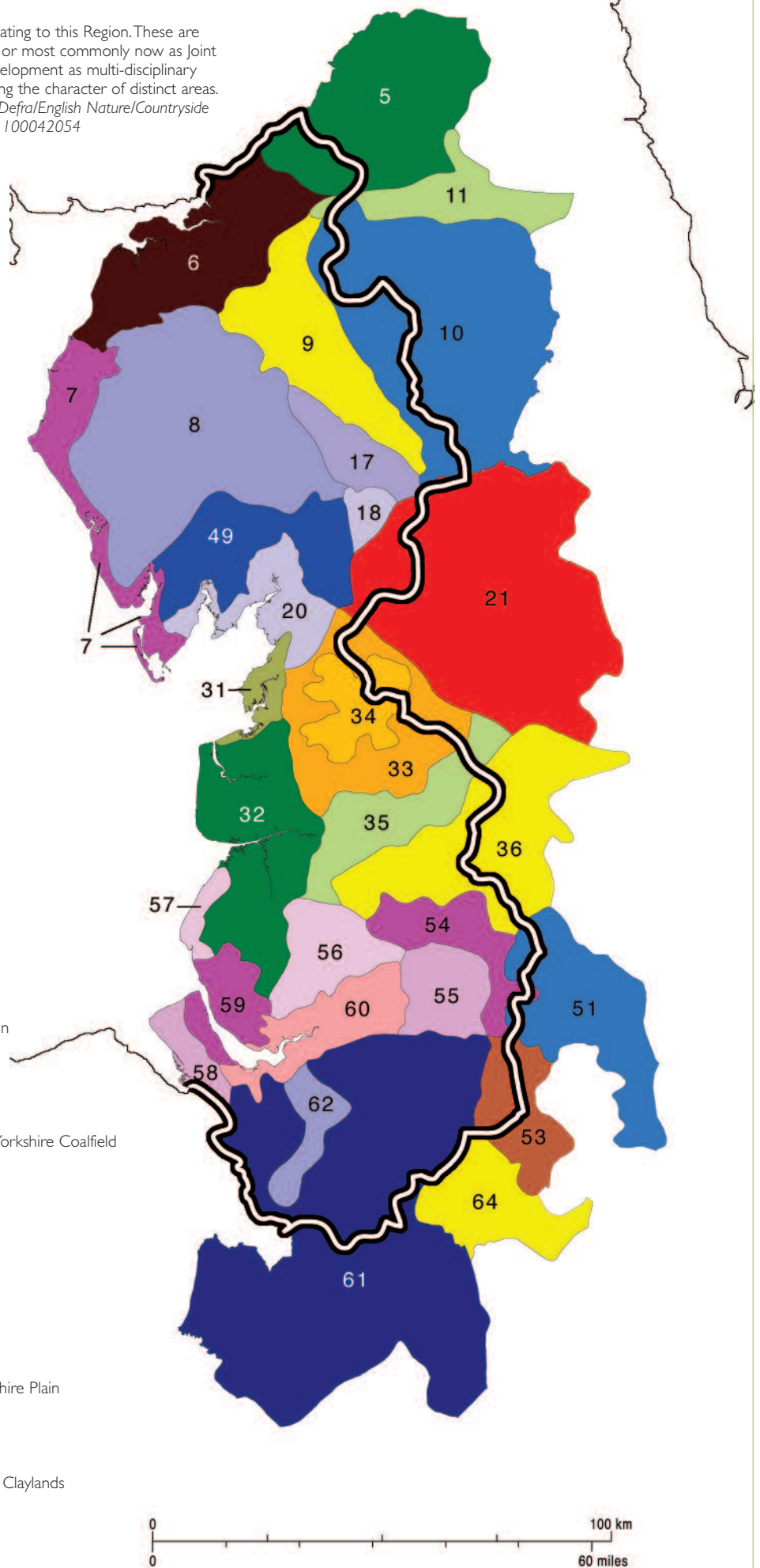
The Southern Cumbrian Fells, including the Furness District, were subject to forest clearance from the medieval period but continued to sustain coppice-based industries (notably iron and gunpowder) into the 20th century. The climate is favourable to fruit growing and amenable to stock rearing. Moving southwards are further moorland and gritstone fells – the Bowland and Pennine Dales (including Rossendale and Trawden) from

the South Pennines and Peaks landscapes to the south – with rough pasture, heather and large areas of blanket peat and areas of reclaimed moorland pasture on the periphery. On the Bowland Fringe and the central area of the Ribble valley, the land supports permanent pasture, mostly improved for dairy and livestock farming.

The Ribble and other river valleys bisect the landscapes of the Pennine Dales and South Pennines, and drain through the Lancashire Plain. North to south they comprise the Lune, Wyre, Ribble and Irwell. Together with the Mersey Valley to the south, these valleys are historically important corridors for movement, settlement and for drainage within the Region.

The western part of Lancashire, from the limestone of Morecombe Bay southwards towards Liverpool, contains high-grade agricultural land. The Lancashire Plain to the north is predominantly improved pasture, whilst further south and into the central area between the Ribble and the Mersey the soils are lighter, resulting in highly productive arable land.

IB This map shows the Character Areas relating to this Region. These are known as Countryside Character Areas or most commonly now as Joint Character Areas, this reflecting their development as multi-disciplinary means of mapping, defining and describing the character of distinct areas. Based upon Joint Character Areas. Source: Defra/English Nature/Countryside Agency. ©/Crown copyright OS Licence no. 100042054



JCA number	JCA name
5	Border Moors and Forests
6	Solway Basin
7	West Cumbria Coastal Plain
8	Cumbria High Fells
9	Eden Valley
10	North Pennines
11	Tyne Gap and Hadrian's Wall
20	Morecambe Bay Limestones
21	Yorkshire Dales
22	Pennine Dales Fringe
31	Morecambe Bay and Lune Estuary
32	Lancashire and Amounderness Plain
33	Bowland Fringe and Pendle Hill
34	Bowland Fells
35	Lancashire Valleys
36	Southern Pennines
37	Yorkshire Southern Pennine Fringe
38	Nottinghamshire, Derbyshire and Yorkshire Coalfield
49	Sherwood
50	Derbyshire Peak Fringe
51	Dark Peak
52	White Peak
53	South West Peak
54	Manchester Pennine Fringe
55	Manchester Conurbation
56	Lancashire Coal Measures
57	Sefton Coast
58	Merseyside Conurbation
59	Wirral
60	Mersey Valley
61	Shropshire, Cheshire and Staffordshire Plain
62	Cheshire Sandstone Ridge
63	Oswestry Uplands
64	Potteries and Churnet Valley
67	Cannock Chase and Cank Wood
68	Needwood and South Derbyshire Claylands
69	Trent Valley Washlands
72	Mease/Sence Lowlands

Beyond the Plain, north-west and into the Fylde, the peninsula between the estuaries of the Wyre and Ribble, soils derived from glacial drift are heavy, and the Region consequently has much permanent grassland. The flat, rolling landscape is historically renowned for its cattle rearing and dairy farming, river meadows and large areas of inland moss. These were improved beyond recognition by the mid-19th century.

Bisected by the distinctive Sandstone Ridge landscape is the Cheshire Plain, a unified landscape extending into North Shropshire and adjacent parts of Staffordshire (West Midlands Region) dominated by dairying, merging with more mixed and arable farming to the north and south-east. It is possessed of broad lowlands of clay loam soils upon marl, interspersed with peat mosses and hemmed in on the east by the South West Peak of moorland. The predominant land use is the production of grass for dairy cattle, sustained by its mild and wet climate.

## 2.3 THE CHARACTER OF RURAL SETTLEMENT

### 2.3.1 NATIONAL FRAMEWORK

Farmland has historically been divided into arable for growing corn and other crops, and meadow for hay and grass. In the past, farmers also had access to fallow land, land laid open after the harvest and areas of rougher common ground for grazing livestock. Patterns of settlement in the countryside varied from large, nucleated villages to dispersed settlement areas with scattered, isolated hamlets and farmsteads, both being closely related to the patterns of fields and their associated boundaries in the surrounding landscape. There were many variations between the two extremes of communal open fields with their scattered holdings, which typically developed around larger nucleated settlements, and the anciently enclosed fields of isolated farmsteads and hamlets.

Re-arranging previously communal fields or common pasture land into self-contained private land units enabled the rationalisation of formerly scattered holdings, allowing better management of livestock and rotation of crops. This process of enclosure – evident from the 14th century and even earlier – resulted in the immediate or gradual establishment of new isolated farmsteads out in the fields. It could be undertaken on a piecemeal basis, or in one single phase, the latter form of enclosure being typically more regular in its appearance. Enclosure by parliamentary act, some of which formalised earlier agreements, often resulted in new designed landscapes. Parliamentary enclosure was concentrated in the period 1750 to 1880.

English Heritage has commissioned work on mapping these patterns of settlement in the English countryside, now published as *An Atlas of Rural Settlement in England* (Roberts & Wrathmell 2000) and *Region and Place, A Study of English Rural Settlement* (Roberts & Wrathmell 2002). In summary, it has been demonstrated that a Central Province mostly characterised by nucleated settlement and, by the 14th century, communal fields which occupied the great majority of the land area, is flanked by a South-Eastern Province and both a Northern and Western Province where settlement is mostly dispersed (Figure 2).

In areas of *nucleated settlement* in the medieval period and later, the majority of farmsteads were sited in villages and the surrounding land dominated by communally managed open fields, where the holdings of individual farmers were inter-mixed and farmed in rotation as meadow or arable land. Many open field systems were created during the period from the 9th to the 12th centuries, replacing earlier dispersed patterns of settlement with nucleated villages with communally managed fields, many of which were clearly planned by estates.

Farmsteads in areas of *dispersed settlement* are commonly isolated or clustered in hamlets. They are commonly medieval in origin (pre-14th century generally) and often surrounded by ancient and irregular patterns of field boundaries, including the reclamation of woodland or waste. Typically smaller and more numerous than the open fields of Midlands villages, these fields were either farmed from the outset as compact farming units or contained the scattered holdings or strips of individual farmers that were farmed on a communal basis. Areas of pasture and rough grazing were typically far greater in extent than in areas of nucleated settlement, and have again been subject to varying rates of enclosure from the 14th century.

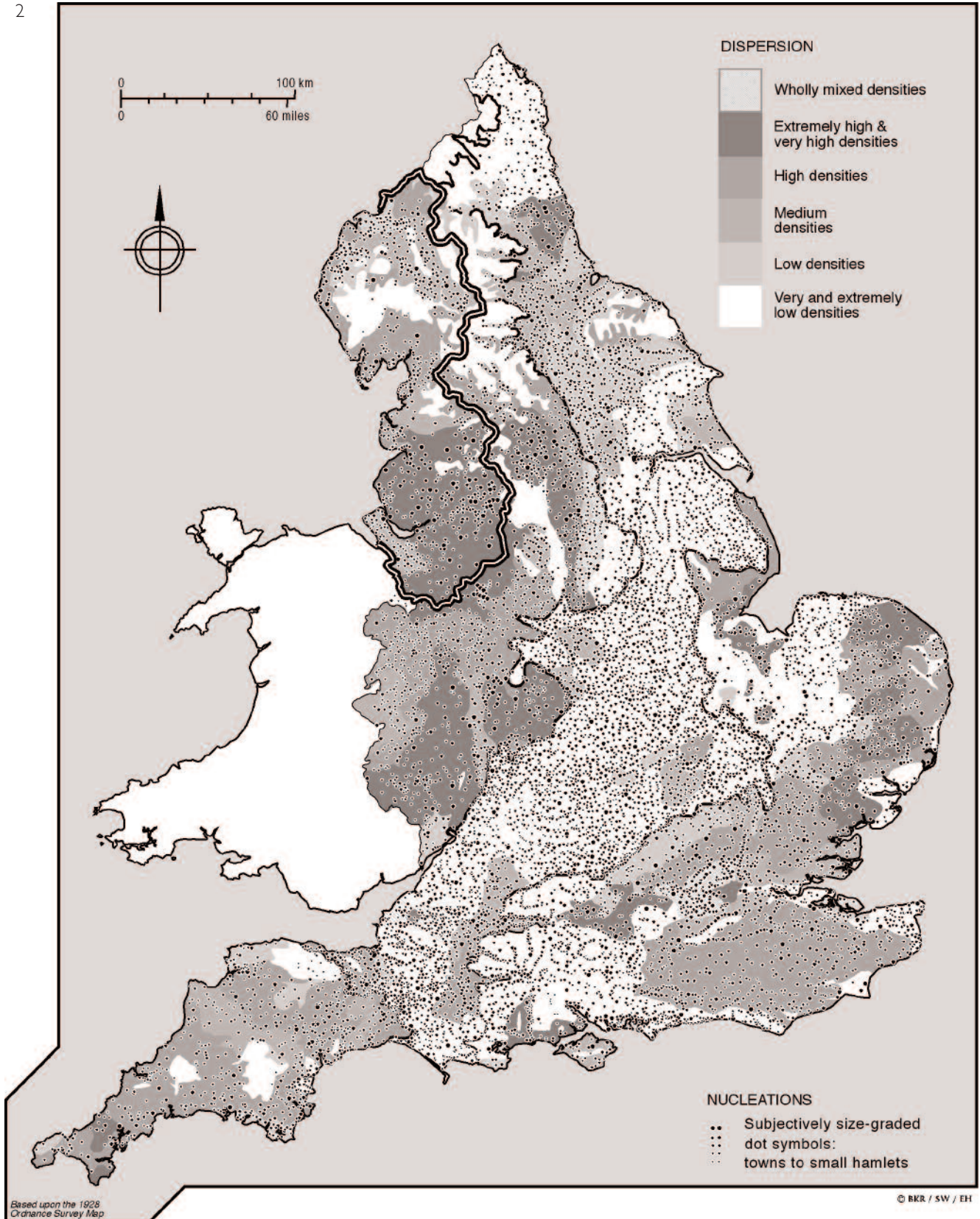
Between the extremes of nucleation and dispersion are the areas that to some degree included both villages and scattered farmsteads and hamlets. In these areas, nucleated villages again originated from developments between the 9th and 12th centuries, but were often intermixed with isolated farmsteads that date from both the medieval period or earlier and from the later enclosure of open fields and common meadow and pasture.

In some areas, the remains of earlier, including pre-Roman, farmsteads are visible as crop-marks or earthworks close to existing farmsteads or villages (see Roberts 1976 and Taylor 1983 for a useful introduction). While research is demonstrating that existing parish and field boundaries possibly originate from very early, even pre-Roman, field and estate boundaries, it is exceptionally

2 Rural settlement in England. Rural settlement can broadly be divided into two types: nucleated villages and dispersed farmsteads and hamlets. Figure 2 presents an analysis of the settlement pattern of England in the mid-19th century that identifies three 'Provinces'. The Central Province, mostly characterised by nucleated settlement and once dominated by communal fields, stretches from Dorset, through Gloucestershire, the East Midlands, Yorkshire and along the north-east coast. This area is flanked by a South-Eastern Province covering the area from Dorset and Wiltshire to East Anglia, and a Northern & Western Province. In these Provinces settlement is mostly dispersed. The North West Region lies wholly within the Northern and Western Province. The density of dispersed settlement varies across the Region. On the Cheshire and Lancashire Plains the density is very high: the Lancashire and Amounderness Plain, the Lancashire Valleys and the areas around Manchester had the highest density of dispersed settlement in England in the 19th century. The settlement of the Region does not solely consist of dispersed settlement; in areas such as the Solway Plain and the Eden Valley settlement is predominantly nucleated with low levels of dispersed settlement.

Source: *An Atlas of Rural Settlement in England (2000)* ©English Heritage/Roberts, B.K. and Wrathmell, S.

2





rare for present farmstead sites – as in Cornwall's West Penwith – to display such continuity.

### 2.3.2 RURAL SETTLEMENT IN THE NORTH WEST

The North West Region lies wholly within Roberts and Wrathmell's Northern and Western Province and has a distinctive pattern of settlement and farming broadly similar to that of the North East and parts of Yorkshire, where settlement is largely dispersed with many small hamlets and isolated farmsteads. The greatest density of dispersed settlement is to be found in the south of the Region in the Cheshire Plain and Lancashire Lowland areas, where a great deal of woodland remained in the 14th century. As elsewhere in the Region, there was little systematic rotation of crops. Small, open arable fields would either be interspersed with extensive pasture or clustered around settlements and surrounded by grazing land. Many of these dispersed hamlets and villages are of medieval origin, as evidenced by the high number of

moated sites and place names incorporating the affix 'green' (Roberts & Wrathmell 2000, pp.53–4). Small areas of the southern part of the Region, such as the Wirral, contain more nucleated villages.

In the northern part of the Region scattered farmsteads and hamlets are found within the mountain valleys of the Lake District. Place names and the location of these settlements suggest that they may originate from seasonal summer grazings or industrial activities such as mining or quarrying (Roberts & Wrathmell 2000, p.53). North of the upland mass of the Lake District, the Eden Valley, west Cumberland coastal belt and Solway Plain are characterised by a very different pattern of settlement, with nucleated villages intermixed with linear hamlets and isolated farmsteads. In Lancashire the villages of the Fylde appear to be rebuildings or extensions of existing villages planned in the 12th or 13th centuries as a result of population pressure.

# 3.0 Building Materials

## 3.1 NATIONAL OVERVIEW

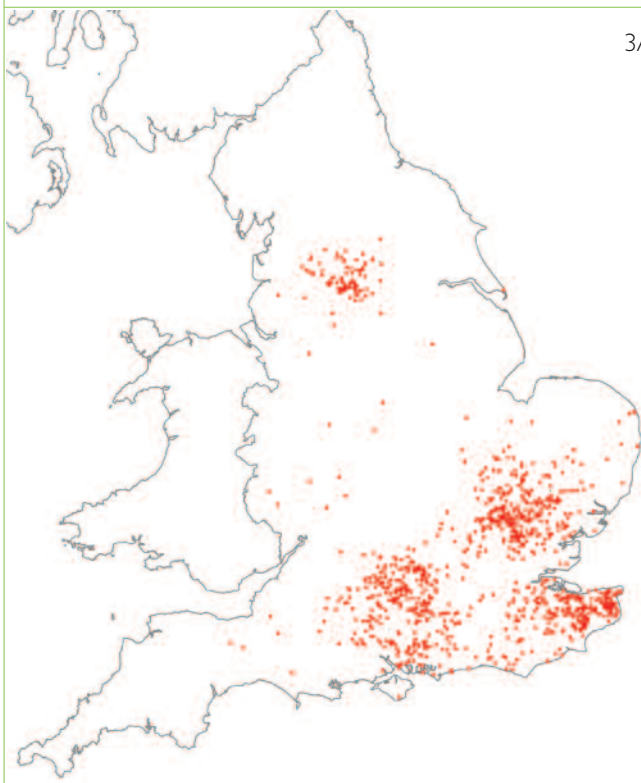
Farm buildings were frequently altered and re-roofed, and survivals can display evidence for successive phases of rebuilding, marked by straight joints in masonry or indications of mortise holes and joints in timberwork.

The present stock of farm buildings displays strong local and regional variation. This is the result of a range of factors, particularly England's huge diversity in geology, the status of the owner, availability of resources managed in the local landscape and the cost of manufactured materials (Rackham 1972; Moir 1997). Long-rooted traditions such as earth walling and thatch in Cornwall and timber frame in Norfolk, survived much longer on farm buildings than farmhouses, and were not overtaken by increasingly fashionable and robust forms of construction (such as stone in parts of Cornwall, brick in Norfolk) until the early to mid-19th century (Potts 1974; Lucas 1997). The coastal shipping trade had for many centuries allowed the transport of building materials, but the arrival firstly of canals and then railways allowed the easier transportation of building materials into inland

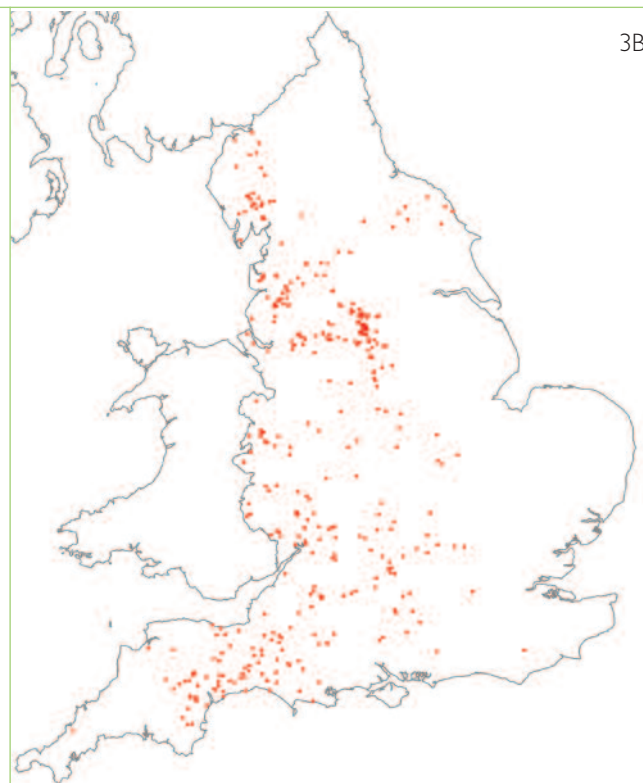
areas. Buildings in stone and brick, and roofed with tile or slate, increasingly replaced buildings in clay, timber and thatch from the later 18th century. Mass-walled buildings comprise the majority of listed agricultural buildings (67%), with timber framing accounting for just over one quarter of entries.

There are strong regional and local differences in roof construction and carpentry, as is still demonstrated by the distribution of aisled and cruck buildings (Figures 3 and 4). From the medieval period, the unit of reference in timber-framed and mass-walled buildings became the bay, the distance between principal roof trusses. These bays could also mark out different areas of storage within barns and other buildings (see 3.1.1.3). Iron bolts, straps and tension bars became increasingly common, often in combination with imported softwood, in the 19th century. Textbooks such as Waistell's *Designs for Agricultural Buildings* (1827) and Stephens's *Book of the Farm* (1844) helped to promote more standardised forms of construction. Metal roofs were used from the 1850s for covered yards and other buildings on expensive planned

3 The distribution of listed aisled (left) and cruck (right) barns in England. Aisled construction, used for domestic buildings from the 12th century at the highest level in society, was suited to the storage and constructional requirements of large barns. The weighting of the distribution is southern English, stretching into the south of the East of England Region, with outliers being generally of a high status and dating from before 1550; a notable concentration in northern England is in the Halifax–Huddersfield area, where the wealth derived from a combination of farming and the cloth industry in the 15th and 16th centuries led to the construction of a notable group of aisled houses and barns. Aisled construction continued to be employed in southern England into the 19th century. Crucks in domestic buildings have a date range from the mid-13th to the mid-17th centuries, examples in the north of England being generally later in date, whereas in agricultural buildings the earliest survivals are 15th century and the latest (in the southern Pennines) early 18th century. There is a wide variety of forms in cruck construction.  
© Crown copyright. All rights reserved. English Heritage 100019088. 2005



3A



3B

4A Aisled barn, Cressing Temple, Essex, one of the earliest barns in England and one of two 13th-century barns surviving from an estate of the Knights Hospitaller erected with timber felled between 1259 and 1280. (South Suffolk and North Essex Claylands)

B Barn at Cross Farm, Burgh-by-Sands, Cumbria, showing the full crucks to the interior of a late 17th-century clay-walled barn. This is one of a group of such barns on the Solway Plain, dating from between the 14th and 17th centuries. (Solway Basin)

A © English Heritage / Michael Williams;

B © Jen Deadman



farmsteads, but did not come into general use – mainly for covered yards – until the end of the 19th century. Pre-fabricated buildings in iron were manufactured and exported from the 1840s, the most well known on the farmstead being the Dutch barn (see 6.4.1), popular from the 1880s. Factory-made prefabricated buildings, built to standard widths applicable to a wide variety of uses, have since the 1950s been the standard building type used on farms. The principal materials are summarised below.

### 3.1.1 WALLING

#### 3.1.1.1 Temporary structures

As could be expected, the most fragile structures are documented from excavation or archives (for example the Wiltshire vicarage stable 'enclosed with hurdle work' in Hobbs [ed] 2000, xvi and p.438) but have not survived. A long-standing building tradition, where posts were set directly in the ground with no definable bay structure, is documented from excavation and has survived in use for single-storey structures (including 18th-century cart sheds and 20th-century tractor sheds) to the present day (Lake 1989, p.43).

#### 3.1.1.2 Mass walling

Mass-walled buildings now dominate the traditional farm building stock, almost exclusively so in the three northern regions. Stone and brick display a wide variety of treatment, their use reflecting not only the availability of materials but also the status of the farm and its owner. Large parts of England – particularly in the South East, South West, East of England, the East Midlands and the North West – display different traditions of walling in earth, dating from the 14th century (Figure 5). Concrete was used from the 1860s on some farms, for example for silage clamps, but did not achieve general use until after the 1950s.

#### 3.1.1.3 Timber frame

Timber-framed buildings are concentrated in the East of England, the South East and the West Midlands. The basic vocabulary of construction had been developed by the 13th century – notably the use of sophisticated jointing techniques, particularly at the junction of the main posts and roof trusses (the so-called bay divisions), and timber sills raised off the ground on dwarf walls. Climate and patterns of land use and ownership have affected the availability of timber and, together with cultural factors, have influenced the distribution, appearance of distinct traditions in timber framing and the framing of roof trusses for mass-walled buildings (Smith 1965; Stenning & Andrews 1988; and Figures 3 and 6). The infill between the timber frames would either be wattle and daub (a clay and straw mix), brick (often a later addition) or simply left as a wattle framework. Timber planks, either rebated or slotted like wattle, were also used but now only survive in very rare instances. External walling and render can also disguise evidence of earlier timber framing, including cruck and aisled construction.

#### 3.1.1.4 Timber cladding

In parts of the country – particularly in the South East, East of England and the western part of the West Midlands – timber frames were often clad in horizontally fixed weatherboarding. Hand-sawn hardwood boarding is now rarely found, as machine-sawn softwood was increasingly used from the late 18th century. Weatherboarding is either applied to a whole building (most commonly in regions in the South East and the southern part of the East of England) or to the upper portions of sidewalls (a common use in the West Midlands). Vertical boarding is mainly found in the South East. This had cover strips to prevent the ingress of rain; surviving examples date from the late 19th century. Hit-and-miss timber boarding, sometimes known as Yorkshire

5 Listed earth-built agricultural buildings in England. Survival is more extensive than this map indicates. The Region has two of the major concentrations of earth-walled structures in England. In the Fylde of Lancashire, before the 18th century, it was widely applied to timber studs set on a stone slab base, similar to the mud-and-stud tradition of eastern Ireland. In the Solway Plain area, a comparatively greater number of more substantially built clay buildings – comparable to examples across the border in Scotland and those of the South West Region – have survived, mostly dating from between the late 17th and mid-19th centuries, including cruck-roofed barns and longhouses. Clay walling was commonly retained for barns and other farm buildings whilst the house might be built in stone. © Crown copyright. All rights reserved. English Heritage 100019088. 2005

6 Listed timber-framed barns in England. Although listing concentrates on the generally best-preserved sample of surviving buildings, this map broadly shows the extent of present survival. Note the separation – marked by the limestone belt running from Dorset to Yorkshire – of the major concentrations in south-east and central southern England and western and northern England, where separate traditions of carpentry and framing developed. The map also reveals much about patterns of loss, and particularly rebuilding in stone and brick, over the centuries. There is a sharp boundary, for example, between the claylands of south Norfolk and Suffolk and the lighter soils of Breckland and north Norfolk, where brick had generally replaced timber frame by the 19th century. The absence of timber frame in the North East, where again it is documented, is notable. Such a map presents an obvious invitation to future analysis and research. © Crown copyright. All rights reserved. English Heritage 100019088. 2005

boarding, has been widely in use as cladding since the 1970s, since it provides good ventilation and meets modern animal welfare requirements.

### 3.1.1.5 Corrugated iron

See 3.1.2.3.

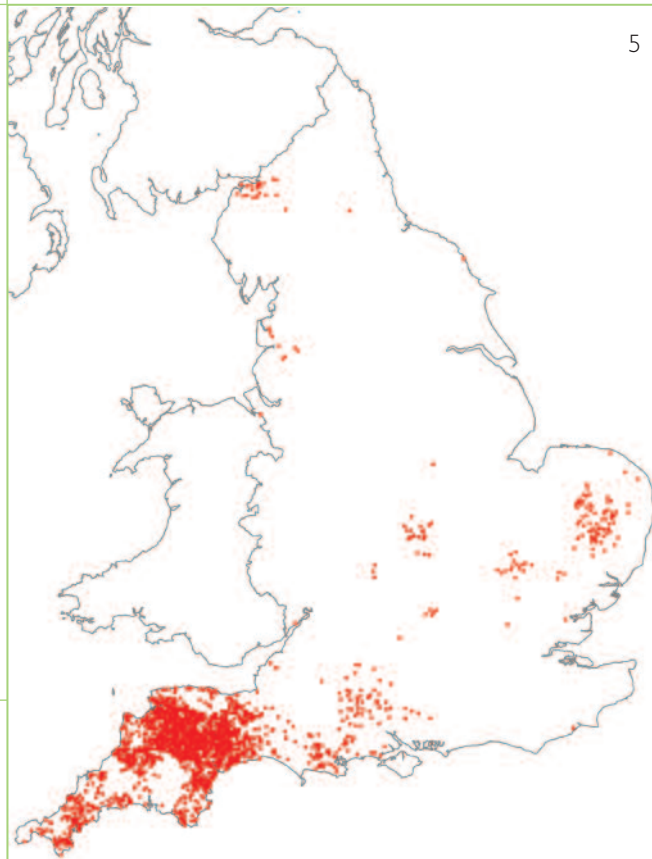
## 3.1.2 ROOFING

### 3.1.2.1 Thatch

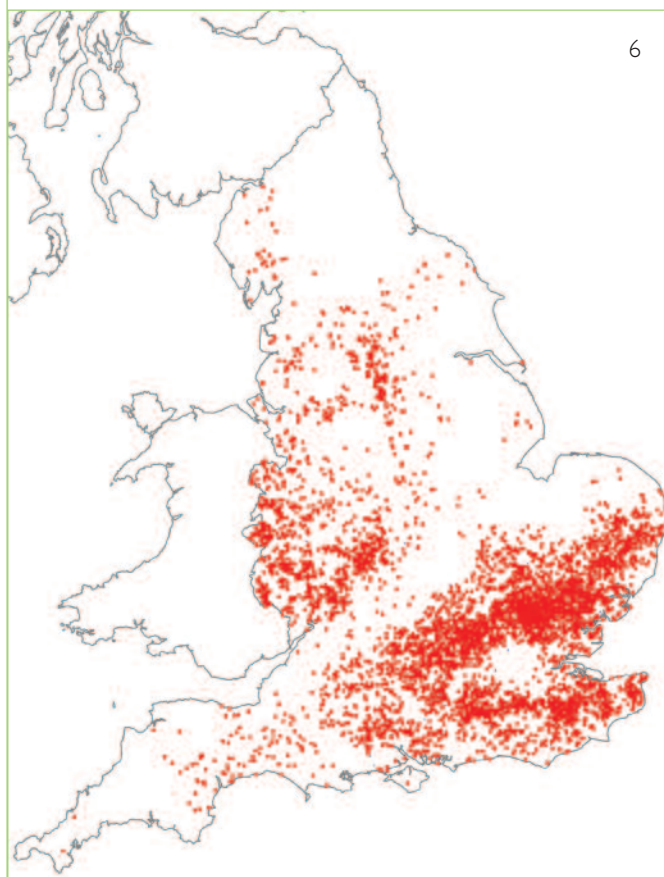
Thatch was common in large parts of the country, and farmers used a wide range of locally available materials: heather, bracken, reeds, rushes, grass, turf, and straw from oats, barley, wheat and rye. Thatch, predominantly made of wheat straw or water reed, is now mainly confined to southern England and East Anglia (Figure 7). Heather and bracken was, until the 19th century, used in upland areas of moorland and heath, such as Dartmoor, the Pennines, the North York Moors and the Cheviots. Solid thatch, where the whole of the roof space was filled with materials such as heather or gorse with a straw or reed topcoat, was formerly widespread but is now very rare (Moir & Letts 1999, pp.103–4).

### 3.1.2.2 Plain clay tiles and stone slates

These materials were used at a high social level from the medieval period and are found in many parts of the country. Their use became increasingly widespread after the later 18th century, along with stone and brick walling, supplanting smaller farm buildings built of timber, earth and thatch in many parts of the country. The coastal trade and improved communications also enabled the widespread introduction of pantiles – instantly recognisable with their distinctive curved profile – into parts of the South West and across large areas of the eastern counties from north Essex to Northumberland, and of Welsh slate into many inland areas.



5



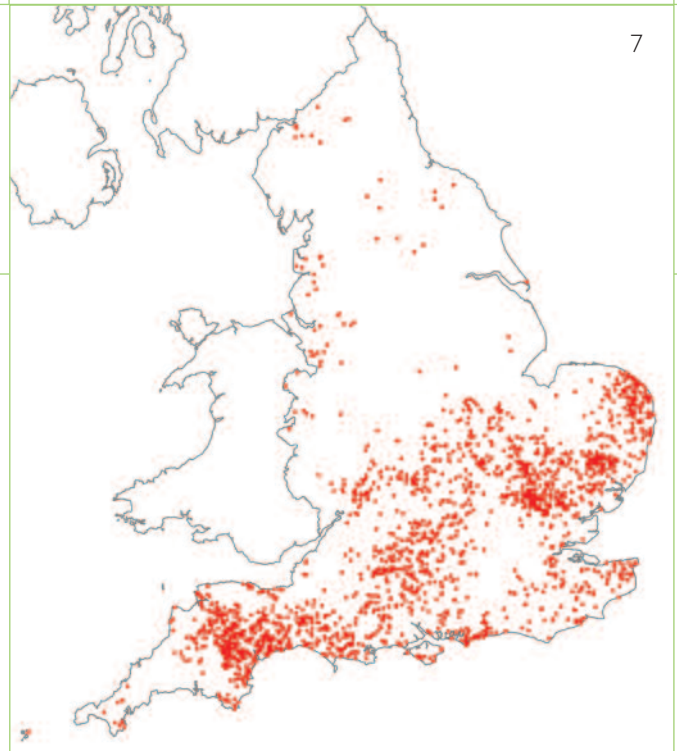
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### 3.1.2.3 Corrugated iron and other prefabricated modern materials

Corrugated iron was used in England from the 1820s, initially for industrial buildings. Although several pioneering firms were producing portable corrugated-iron-clad buildings by the 1850s, it did not come into

7 Listed thatched agricultural buildings in England. Particularly evident is the concentration of surviving thatch – the majority of which in agricultural buildings is listed – in southern England, despite its widespread replacement by materials such as corrugated iron from the late 19th century. Rebuilding, and reproofing in slate and tile, has removed the evidence for its formerly extensive use (in straw, heather and bracken) from much of northern England. Such a map presents an obvious invitation to future analysis and research.  
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7



general use for new farm buildings (particularly on so-called Dutch Barns for protecting harvested hay and corn crops, see 6.4.1) until the farming depression of the 1880s made cheaper materials desirable. By the First World War, corrugated iron was in general use for the repair of roofs on farm buildings, particularly thatch. It was also used for the walling of model farmsteads built to a budget (Wade Martins 2002, p.175) and for smallholders' buildings in areas such as the New Forest. From the 1940s, asbestos cement cladding and a variety of insulating products found their way on to the farmstead. Hit-and-miss vertical boarding (also known as Yorkshire boarding) has been used as cladding since the 1970s.

## 3.2 BUILDING MATERIALS IN THE NORTH WEST

### 3.2.1 WALLING (Figure 8)

#### 3.2.1.1 Stone

A great diversity of building stone is available across the Region. This variety in colour, texture and form ranges from the dark grey or purple slate of the Lakeland area to the limestones of south Cumbria and Morecombe Bay, the Millstone Grit sandstone of the Pennines and the less weather-resistant New Red Sandstone of parts of south Lancashire and Cheshire. Stone of a more porous nature, such as some sandstones, was often rendered or whitewashed. More regularly finished stone became increasingly common in the late 18th and 19th centuries, especially for storeyed farm buildings and farmhouses, and is associated with the more widespread introduction of lime mortar (earth mortar being the standard bonding before this period). By the 19th century, some distinctive masonry styles had developed, such as the use of watershot masonry where the outer face is tilted to throw water off the walls.

In both upland and lowland areas cobbles, rounded either by glacial or water action, were widely found in streambeds and in glacial outwash, and were readily available for structural use. They were used particularly where better-quality quarried stone was scarce, such as the Solway Basin and West Cumbria Coastal Plain. They were used either whole, well bedded in clay, or halved with the cut surface forming the outside face. Huge cobbles were frequently used in foundations.

#### 3.2.1.2 Earth

The Region has two of the major concentrations of earth-walled structures in England. Clay was one of the cheapest and most readily available materials in lowland parts of the Region and it was often used for farm buildings, either as mass walling built on a stone plinth or as daub to wattle in timber framing. In the Fylde of Lancashire, before the 18th century, it was widely applied to timber studs set on a stone slab base, similar to the mud-and-stud tradition of eastern Ireland (Watson & McClintock 1979, pp.15–17). Clay buildings were usually rendered or whitewashed to protect them from the elements. One of the advantages of clay was that walls could be erected by unskilled labour, thus dispensing with the services of a trained mason, bricklayer or carpenter. In the Solway Plain area, a comparatively greater number of more substantially built clay buildings – comparable to examples across the border in Scotland and those of the South West Region – have survived, dating from between the 15th and mid-19th centuries, including cruck-roofed barns and longhouses (Jennings 2003). Most are associated with the building boom that commenced in the late 17th century. Clay walling was commonly retained for barns and other farm buildings whilst the house was often built in stone (Jennings 2003, pp.166–8).

Turf walling was probably once widespread in the Cumbrian Lowlands but no turf buildings survive.

#### 3.2.1.3 Timber

The abundance of stone for building over much of the northern part of the Region in particular, combined with a shortage of timber in upland areas and some lowland areas (particularly the Solway Plain and the Fylde) from



- 8 Examples of walling materials in the North West Region
- A & B Clay walling. In the Solway Plain substantial solid-walled buildings were built with the local clay. In the Fylde of Lancashire there was a mud-and-stud tradition of applying clay to studwork whilst in other lowland areas clay was used as daub on wattle. (A Solway Basin; B Shropshire, Staffordshire and Cheshire Plain)
- C Timber-framing is confined almost entirely to the Lancashire and Cheshire Plains, where farmhouses far outnumber farm buildings using this technique. (Shropshire, Staffordshire and Cheshire Plain)
- D–G Building stone varies from the millstone grit of the Pennines (D) to slate laid dry (E) or coursed and finely-worked slate (F) and sandstone (G). (D Southern Pennines; E South Cumbria Low Fells; F Vale of Eden; G Solway Basin)
- H On the plains of Cheshire and Lancashire the clay was used for brick-making and widely replaced timber framing for farm buildings from the 18th century, sometimes combined with the local red sandstone.
- © Jen Deadman, except F and G © Jeremy Lake

9 Examples of roofing materials in the North West Region  
 Before the 19th century the use of thatch was common, even in areas where there was local stone suitable for splitting into slates. However, it is now a rare feature of roofs of the North West Region, although it sometimes survives beneath corrugated metal sheet on some farm buildings in the Fylde. More often it has been replaced by stone slates, (A and B) plain clay tiles (C) or Welsh slate (D), which was used in the Region relatively early due to its accessibility through coastal shipping. The ridge of A has interlocking 'wroster' slates. A South Cumbria Low Fells; B and C Shropshire, Staffordshire and Cheshire Plain; D Lancashire and Amounderness Plain)  
 A-C © Jen Deadman; D © Jeremy Lake

9B



9A



9C



9D



at least the 16th century, has resulted in the present distribution of timber-framed buildings being confined almost entirely to the Lancashire and Cheshire Plains (Pearson 1985, pp.23–4). The use of timber framing for farm buildings continued into the late 17th and 18th centuries but there are few survivals, as their replacement with brick and slate buildings from the late 18th century was widespread. Where timber framing survives it is typically square-panel framing. More elaborate framing, also part of a shared regional tradition with the West Midlands, can be seen in farmhouses of the area.

Throughout the Region crucks were commonly used for roof construction into the 18th century, but have rarely survived. Recent work in a parish near Kendal by Blake Tyson has indicated that the number of known cruck buildings should be nearly doubled (Tyson 2000, p.183). There is a concentration in the southern Lakes, some survivals in Upper Ribblesdale, and substantial 15th- to 17th-century examples survive in barns on the home farms of gentry estates in lowland Lancashire and Cheshire. Simple tie beam trusses, strengthened by vertical king posts or braces were typical of farm buildings from the 17th century onwards throughout the Region. Reuse of earlier timbers is very common.

### 3.2.1.4 Brick

Brick began to be used in farm buildings associated with higher status properties in the Region from the 17th century. At this date its use in preference to other local building materials was usually as a display of fashion and wealth. The use of brick increased throughout the 18th century and became common in the 19th century where access to building stone was limited.

Generally, brick is a characteristic feature of the Cheshire Plain, Wirral, the Lancashire Plain and Morecombe Bay area. In the latter area brick is the dominant building material, with the occasional use of stone.

## 3.2.2 ROOFING (Figure 9)

### 3.2.2.1 Thatch

Thatch and bracken continued to be used for roofing until the late 18th century. Where there was arable farming straw was available for thatching and it is clear from historical sources that in parts of the Region long straw thatch was once common on farm buildings. For example, on the Rufford Hall Estate in Lancashire thatch was largely replaced by slate in the second half of the 19th century (Moir & Letts 1999, pp.15–6). In the early 19th century it was noted that most of the older farm buildings were generally thatched (Holland 1813, pp.82–3).

Straw 'stapple' thatch was also widely used on the Solway Plain, typically to a low pitch built on a turf underlayer capable of being patched as required, but there are now few surviving examples. John Holt was surprised to see that thatch was the usual form of roofing in what is now South Lakeland District, 'in a county where slate abounds and straw sells at an advanced price' (Holt 1795, p.16). By 1868, the

change to stone and slate was almost complete in Cumberland, 'the ancient thatched buildings having nearly all disappeared' (Webster 1868, p.26). In the Lancashire Fylde straw thatch was widely used (Watson & McClintock 1979, p.16) and many buildings still retain straw thatch under a corrugated iron covering. In upland areas and the lowlands of Cumbria other thatching materials such as heather could be used also, sometimes in combination with turf (Jennings 2003, p.120).

### 3.2.2.2 Slate

Over considerable parts of the Region the local stone could be split into thin slates that were used for roofing. In many cases slates of differing sizes were graduated, with the smaller slates set higher on the roof and large slates at the eaves. Improved transportation with the development of canals and railways allowed easier movement of goods including stone slates, which were used more widely across the Region and into neighbouring Regions. By the late 17th century slate was commonly used for houses in the Lake District (Winchester 2003, pp. 139).

In the Pennines sandstones could also be split to create large tiles. Although improved transportation allowed for an increased use of Welsh slate, this material had long been available in parts of the Region through the use of coastal shipping routes. By the 19th century Welsh slate was commonly used on new farm buildings, particularly in lowland areas.

### 3.2.2.3 Tiles

Clay roofing tiles were not widely used in the Region, due to the availability of local stone and slate and imported Welsh slate. Its principal area of use is in the Cheshire Plain.



# 4.0 Agricultural History and Farm Buildings

The existing stock of traditional farm buildings results from centuries of change and development. As a general rule, farmhouses (see 5.1) pre-date farm buildings, even in areas of 18th- and 19th-century enclosure. Larger-scale and higher-status buildings, which were consistently used for the same purpose or capable of being adapted to later uses, generally have the greatest chance of survival. It follows that barns are the overwhelming type of building to have survived from before 1750, and that steadings adapted or built anew in the later 18th and 19th centuries have retained evidence for a greater diversity of functions. Rates of survival differ both regionally and locally, but placing a building within its broad national and historical context will enable decisions on their wider value to be made.

## 4.1 AN INTRODUCTION TO ENGLISH AGRICULTURAL HISTORY AND FARM BUILDINGS: THEIR DEVELOPMENT, SURVIVAL AND SIGNIFICANCE

### 4.1.1 UPTO 1550 (Figures 10 & 11)

The 12th and 13th centuries were characterised by rising population, the colonisation of new land (through the drainage of fens, clearance of woods and expansion of farming on to upland moors) and the direct commercial management by estates of their land, whether this was dispersed among other holdings or ring-fenced in its own boundaries. The Church was a particularly active landlord, and monastic orders such as the Cistercians ran their estates from both home (or demesne) farms and outlying granges, which could be very large in scale (commonly 3 to 1000 acres in size). Climatic changes in the second decade of the 14th century, with increased rainfall and lower temperatures, led to famine. These troubles, compounded by pestilence (the Black Death of 1349 and subsequent epidemics), resulted in a sharp fall in population and the contraction or desertion of settlements on marginal soils. Direct cultivation by landlords continued on some home farms, but in most areas farms on estates became leased out – in whole or in part – to tenants, a process often accompanied by the breakdown of traditional customary tenancies. Other developments which accelerated from the 14th century included the amalgamation of farms into larger holdings, the enclosure of former communally farmed strips, and a steady growth in productivity sustained by greater emphasis on pastoral farming, new techniques and rotations of crops.

#### 4.1.1.1 Survival and Value

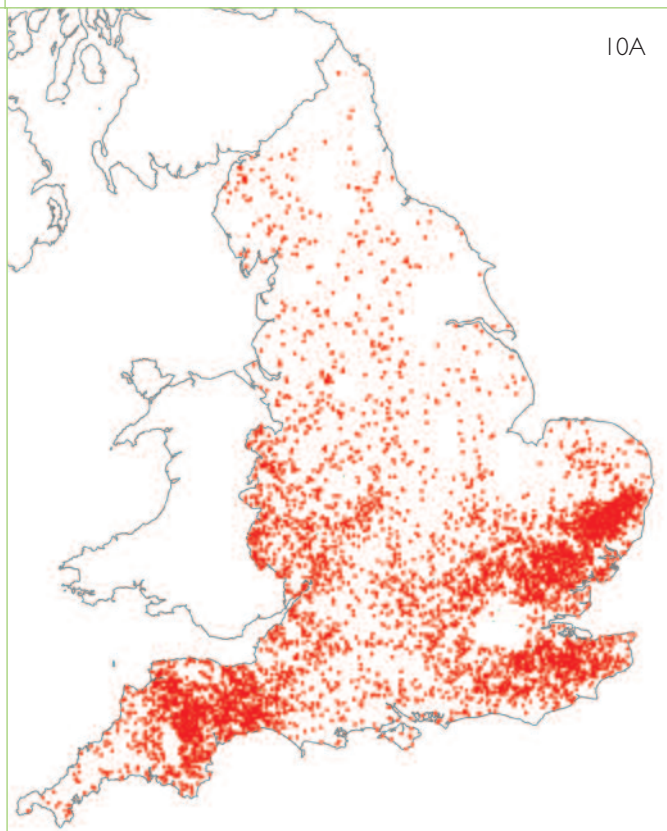
All survivals of this period are of great rarity and significance. The best-known survivals are the great barns of secular and especially ecclesiastical estates. These

comprised the foci of farmyards with ancillary buildings that have been almost completely swept away, for which documentary but very little archaeological evidence exists. The great cattle ranches (vaccaries) of the northern uplands have left no traces in terms of built fabric, although their impact on the landscape is still legible. Archaeological and documentary records – the latter particularly after 1350 – are similarly the main source of evidence for the farmsteads of peasant farmers, and for the emergence of a wealthier class of tenants and freehold farmers from the 13th century. In recent years evidence has brought to light farmhouses and occasionally barns of a wealthier class of farmers (both customary tenants and freeholders), providing the first evidence for wealth generated solely from local agriculture and of a class of farmers counted as among the wealthiest in Europe. These structures are concentrated in mid-Devon, the southern half of the West Midlands and in particular the South East and southern East Anglia.

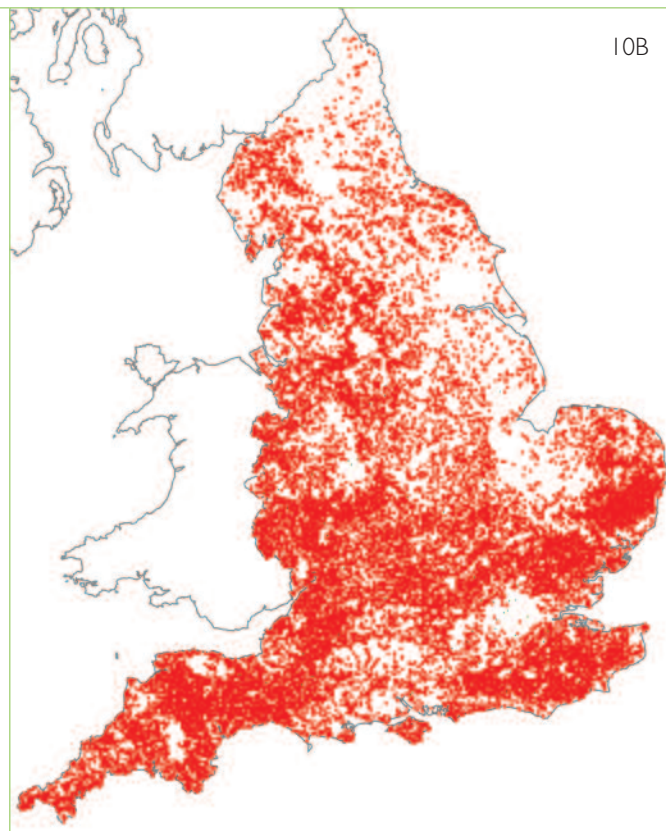
### 4.1.2 1550 TO 1750 (Figures 10 & 11)

Larger farmers and landowners initially benefited from the great land sales that followed the Dissolution of the Monasteries in the 1530s, while most farmers gained from rising prices and favourable leases. Agricultural productivity – particularly of grain – was spurred by a doubling of population from between 2.5 and 3 million to over 5 million by 1660, and an associated rise (by six times) in grain prices. After 1650, a fall in grain prices, a rise in cattle prices and demand from London and other growing urban markets, led to a rise in cattle rearing in the north of England, and of the dairy industry and specialised produce (such as hops and cider) in other areas. Improvements in transport, including the coastal and river trade, provided access to new markets. New rotations and crops, particularly clover, grasses and turnips, had become established by the end of this

10 Distribution of listed farmhouses in England, pre-1550 and 1550–1750. There is an obvious danger in making sweeping generalisations from such maps, but they do present valid questions for future analysis and research. Wealth derived from arable farming, including the proximity to the London market, dairying and fattening, wool and cloth production are obvious from the pre-1550 map. Here the distribution is thinnest for large parts of northern England, where rebuilding in stone – particularly from the late 17th century – had made its mark by 1750. Notable by their continuing thin distributions are the Lincolnshire and Yorkshire Wolds and Northumberland, where agricultural improvements and the re-planning of landscapes resulted in extensive rebuilding and re-siting of farmsteads after 1750. © Crown copyright. All rights reserved. English Heritage 100019088. 2005



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period on the light soils of East Anglia and adopted with varying success in other parts of the country. This period is strongly marked by the continuing process of enclosure and the related process of exchange and consolidation of farm holdings, the growth of farm size (especially in corn-producing areas), large estates and the widespread development of a landlord–tenant system. Landowners, notably the county gentry, emerged as ‘influential pioneers of new crops and new systems of farming’ (Thirsk 1984, p.xxiii). The consolidation of estates and holdings are reflected in the continuing – and in more anciently enclosed areas often the final – phase of enclosure. The national market became more integrated from the later 17th century, in tandem with the emergence of specialised regional economies. This, and the development and strengthening of local building traditions, are also reflected in the layout and design of both farmhouses and more substantial farm buildings.

#### 4.1.2.1 Survival and Value

Substantially complete farm buildings of this period are rare. They will often provide the first surviving evidence for the development and strengthening of regional traditions and building types: for example, the timber-framed West Midlands barns that replaced earlier small cruck barns; the linear farmsteads of the North Pennines; the development of bank barns in Cumbria; the growth of the southern English downland farmsteads with their

associated large barns. The smaller farms of anciently enclosed pastoral areas are the most likely to retain fabric dating from this period, although it is very rare for farmsteads to have more than a barn and house.

#### 4.1.3 1750 TO 1880

Agricultural productivity sustained a massive increase in population, which had risen from around 6 million in 1750 to over 16.7 million by 1851 and 26 million in 1881. This was the most important period of farm building development, commonly divided by agricultural historians into two periods: before and after 1840. Probably under 25% of the land area of England remained unenclosed by 1750, and the majority of this was enclosed by 1815. This was a process at first concentrated on the Midland clays (for the management of land as pasture for fattening) and then – from the start of the Napoleonic Wars in the 1790s – on the expansion of the cultivated area onto poorer and lighter soils such as the northern moorlands and the southern downlands, and poorly-drained land such as the Fens and the Lancashire mosses.

In the ‘High Farming’ years of the 1840s to 1870s, high-input/high-output systems – based on the availability of imported artificial fertilisers and manures (superphosphates, nitrates, guano and bones) and feeds such as oilcake brought on to the farm – replaced the

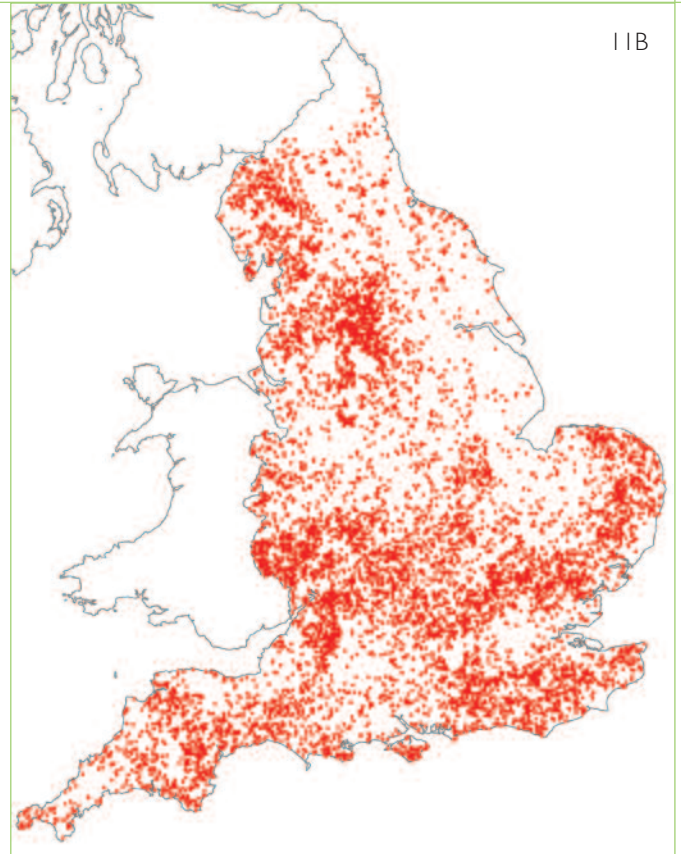
## 11 Distribution maps of listed barns in England, pre-1550 and 1550–1750

The great majority of substantially complete pre-1750 barns have been listed. These maps pose important questions for future research. In the pre-1550 map, the concentrations in a belt around London, the southern Pennines and from the Feldon of Warwickshire into mid Devon conceal a wide range of sizes and types of barn, stretching from large aisled barns to relatively modest barns, which have not been replaced in later centuries due to farm size and other factors. Many of the outliers, such as in Cornwall and Durham, represent the building of substantial barns on ecclesiastical estates in the medieval period. In the 1550–1750 period, regional patterns of building and survival emerge more strongly, such as the concentration stretching from the Lancashire Plain to the southern Pennines, and the relative absence of pre-1750 barns in the planned landscapes of eastern and central England most profoundly affected by the agricultural improvements of the post-1750 period. The distribution for threshing barns of the 1750–1880 period reinforces rather than adjusts this distribution. Such maps present an obvious invitation to future analysis and research.

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'closed circuit' methods that relied on farm-produced feeds and manure. A major development – as observed by the agricultural journalist James Caird writing in the 1850s – was an increased distinction between the intensively cropped landscapes of the eastern half of the country, and the wetter and more pastoral-based economies of the western half.

There were several key drivers behind this development:

- Higher grain prices from 1750, peaking during the Napoleonic Wars (1794–1815), were joined from around 1840 by a steady increase in meat and dairy prices, both the result of population growth and the demands of an increasingly affluent urban population.
- The strengthening of a national market, facilitated by the ever-expanding transport infrastructure (of canals, improved river and road communications and the railways) and the growing importance of middlemen, both of which facilitated the marketing of food.
- Marked increases in land prices from the 1760s. This increased the incentive especially of estates to invest, outgoings on repairs and improvements occupying an increasing share of gross rentals from this period to as much as 25% by the 1850s (Mingay 1989, pp.602–3).
- Increasing interest and involvement by government: for example through the Board of Agriculture set up in 1793 (and which immediately set about the commissioning of its famous county studies in order to gather information on best practice); and from the late 1840s the establishment of loan companies for buildings and drainage, which added to the development of a national banking system.
- Textbook and journal literature such as *The Book of Farm Buildings* by Stephens & Scott Burn (1861), and the examples of best practice included in J Bailey Denton's *Farm Homesteads of England* (1863). Agricultural societies, from farmers' clubs to the Royal Agricultural Society of England (RASE) founded in 1837, played an important role through their shows and publications. The Royal Agricultural College was established at Cirencester in 1845, and – as seen in the founding of the Rothamstead experimental station in 1832 – the following two decades witnessed the development of agricultural chemistry and veterinary science.
- The accelerating trend towards larger farming units, both through purchase of smaller farms by more substantial tenants and freeholders, and through estate

policy. This was especially pronounced on the poorer soils, which often required the highest levels of capital investment.

- The role of estates, through the development of the land agent profession, investment in infrastructure (especially buildings and drainage) and the encouragement through leases of improved husbandry techniques by their tenants. Estate policies were also a major factor in the rationalisation of holdings and the emergence of larger farms.
- Enclosure. This was often a major factor in increasing output, through facilitating new rotations of crops and the improvement of grassland and stock management. Expenses associated with enclosure – of fencing, hedging and ditching (as much as 50% of the cost), and occasionally the construction of new steadings and buildings (which could be 17%) – increased the incentive of small owners and occupiers with little capital to sell to larger landowners (Wade Martins 1995, p.83). An additional incentive to enclosure was the doubling of rents that could result.
- Improvements in livestock, for example the emergence by 1850 of the Shorthorn as the leading cattle breed and the replacement of the horned wool-producing varieties of sheep by sheep bred for their meat and manuring value.
- The widespread adoption of improved grasses such as sainfoin and winter feed-crops such as turnips, accompanied by the production of better seeds and farm machinery and the efficient distribution of good manure by livestock increasingly wintered in yards or buildings.
- Drainage through traditional techniques, such as bush drains and U-shaped tiles and from the 1840s tile pipes, the use of these being concentrated on the heavy soils of the Midland clays.
- The improvement of soils through liming and marling.

Farmstead design was being affected by the widespread introduction of new types of building and layout, and from the 1840s by the widespread extension of mechanisation (for preparing feed and threshing), the increasing availability of mass-produced fittings and materials, and the adoption of industrial and scientific principles to the accommodation and feeding of ever-increasing numbers of livestock. The building of planned steadings for some estates and wealthy farmers, in the period up to 1840 concentrated in the eastern lowlands, was accompanied by the rebuilding or adaptation of many thousands of existing steadings with cattle yards and buildings, and the replacement of the traditional threshing barn by the multi-functional and much smaller mixing barn (see Figure 24, bottom). In some areas, regional differences were beginning to disappear: for example, the removal of floors and walls for livestock and lofts in the combination barns in the wood pasture areas of Suffolk and the eastern Weald attest to the fact

that they were becoming part of eastern England's arable region, as recognised by James Caird who conducted a survey of British agriculture for *The Times* in 1850–51 (Caird 1852).

#### 4.1.3.1 Survival and Value

Substantially complete examples of farm buildings of the 1750–1840 period are far less common than those of the post-1840 period, when many farmsteads matured into their present form and huge numbers of buildings were erected. Some, particularly the planned farmsteads of the period, represent new developments in farmstead planning or the architectural aspirations of landowners. Others continue to be strongly representative of both the variety and development of local and regional agricultural systems and local vernacular traditions, such as granite in west Cornwall or cob in mid-Devon, and even new materials such as clay lump (as developed in large parts of Suffolk and southern Norfolk).

#### 4.1.4 1880 TO 1940

For over 100 years, agriculture had been increasingly subject to national and international fluctuations in commodity prices, to its considerable benefit in the Napoleonic Wars and the High Farming years. However, after a run of poor weather in the late 1870s, the income from arable crops that farmers had enjoyed in the 1860s collapsed (for example, by 40% in wheat between 1880 and 1900) and farming entered a severe depression. Britain, its urban economy prospering through free trade, became by the 1930s the world's greatest importer of agricultural produce, including animal fodder, from both neighbouring parts of Europe and the New World. This was the beginning of large-scale importation of grain from the American prairies, meat in refrigerated ships from New Zealand and Argentina, and cheese and bacon from Europe. More than in any preceding period, British domestic policy (the supply of cheap food) and the world market now directly affected regional variations and the supply of capital to British farmers. The result was the concentration of grain production on the drier soils of the eastern and southern counties, and in the areas that experienced the greatest contraction from the High Farming peak of grain production a focus on meat and dairy produce in order to meet urban demand. The growing demand for liquid milk and the importation of dairy produce also led to a decline in the farmhouse manufacture of butter and cheese.

The Government endeavoured to boost production through price support. Against the backdrop of the U-boat menace during the First World War it sought to reduce the country's dependency on imported grain and attempted to extend and co-ordinate both advice and legislation (over hygiene, for example) through the establishment in 1919–20 of the Ministry of Agriculture

and Fisheries and county council committees and councils, in conjunction with organisations such as the National Farmers' Union (founded 1908). However, despite an increase in net output, the rising costs of labour, feeds and other inputs, combined with the decline in prices and rising levels of imports, ensured that little was invested in fixed capital. Arrears in rent characterised the period, even in years of relative recovery (such as after 1936 in arable areas). The holdings farmed by the new class of owner-occupiers – numbering 147,000 in 1927, as against 56,000 in 1909, the biggest change in land ownership since the Dissolution of the Monasteries (Whetham 1978, pp.160–61) – were burdened with debt.

As a consequence there was little fresh investment in farm buildings other than repair and modification, and any buildings constructed tended to be of the cheapest materials. Many, such as Dutch barns, were prefabricated, and concrete and corrugated iron or asbestos sheet were being increasingly used for the refitting of cow and dairy units and the repair of traditional roofs. National and local surveys, such as the 1910 Land Valuation Survey, attest to the growing levels of disrepair, especially of pre-improvement farm buildings using traditional materials such as thatch and timber. Reduced rents and growing building costs meant that only the wealthiest farmers and landowners continued to invest in model or experimental farms, and many of these concentrated on the production of meat and dairy produce; most built very little, perhaps investing in dairy buildings or cattle sheds in an attempt to attract tenants or meet increased demand in some areas for meat and dairy produce.

The continued promotion of scientifically based agriculture was matched by the application of new ideas on ventilation and farm hygiene to farm buildings, such as the regulations for dairying introduced in 1885. This was brought into effect mostly through the conversion of existing buildings (especially stabling into dairies) and to a small degree through new-build, notably on the smallholdings owned by county councils. Milking machines, where introduced, brought considerable changes to building layout, but the spread of mechanisation was very varied. By the mid-1930s, the mobile horsepower of the growing tractor fleet exceeded that of the stationary engine; the latter form of power having itself witnessed the transition to oil engines (from the 1890s) and electric power (not widespread until the 1950s). However, horses 'remained the dominant source of power' in the western half of England, and tractors were mostly confined to holdings of 300 acres or upwards, and the arable eastern areas (Whetham 1978, p.210). In the inter-war period, cereal, poultry and dairy farmers, and pig producers using imported North American feed, were in the vanguard of cost-cutting innovation that had a strong impact on post-war developments. There were some examples of

planned steadings that in their adaptation of modern industrial theory bucked the trend (Brigden 1992).

#### 4.1.4.1 Survival and Value

Planned steadings and buildings in some areas reflected the increased importance of dairying, particularly of liquid milk – the steadings of the Tollemache and Westminster estates in south Cheshire being one such example. The inter-war period witnessed the development of more intense forms of housing for pigs and poultry, and the replacement, as a result of hygiene regulations, of earlier forms of dairy cattle housing with concrete floors and stalls, metal roofs and fittings. County councils began building new farmsteads, in mass-produced materials but in traditional form, in response to the Government's encouragement of smallholdings of up to 50 acres (20 hectares). Alongside the construction of new farm buildings, traditional farm buildings were adapted to new needs, and the use of corrugated iron (mostly for repair) has guaranteed the survival and reuse of earlier buildings, particularly the increasingly redundant threshing barn.

#### 4.1.5 1940 TO THE PRESENT

The 1937 Agriculture Act anticipated the need to increase self-sufficiency, and the Second World War witnessed a 60% rise in productivity; this was the result of the growth in livestock numbers, increasing scientific and government control and guidance, more specialised systems of management and the conversion to arable of permanent pasture. The invention of artificial fertilizer (patented by Haber and Bosch in 1910) enabled otherwise uneconomic land to be brought into production, and finally made redundant earlier forms of fertilizer. The National Farm Survey of 1941–3 (Barnwell 1993) attested to the long years of neglect of the depression, less than half of the building stock being classed as in fair condition. The Agriculture Act of 1947 heralded the intensification and increased specialisation of farming in the post-war period, accompanied by the development of government and industry research and guidance. From the mid-1950s, strongly influenced by American models, there emerged a growing body of trade and advisory literature. The first of these, produced in 1956, highlighted the dilemma of 'old buildings too good to pull down but not suitable for their new purposes' (Benoy 1956). The Government provided grants to cover the capital cost of new building under the Farm Improvement Scheme (introduced 1957). The introduction of wide-span multi-purpose sheds in concrete, steel and asbestos met increasing requirements for machinery and for the environmental control of livestock and on-farm production, particularly of milk. The national stock of farm buildings grew by a quarter between 1945 and 1960 alone. The Agricultural Research Council's *Farm Buildings Survey of England* (published 1967) estimated

that the average farmstead contained 6 pre-1914 buildings, 2.4 from 1918–45 and 2.5 built since 1945.

## 4.2 FARMING IN THE NORTH WEST

The Region is divided into upland and lowland zones. Because of its wet climate and predominantly upland terrain coupled with heavy clay soils on the lowlands, much of the Region was best suited to pastoral agriculture. Cattle were the mainstay of the farming economy, and they have had a major impact on both the Region's landscape and the built form of its farmsteads.

The North West Region presented plenty of scope for colonisation and expansion, as the numbers of farming settlements and associated fields grew in the period up to the 13th century. The growth of population, and its expansion onto thinner and more marginal soils, was checked in the 14th century by a combination of disease, bad harvests and warfare, which in the case of the latter lasted intermittently from the 1290s well into the 16th century.

The size of farm holdings has historically varied greatly across the Region, from tiny, diffused communities in the remoter upland dales with their mixed and common lands in small town fields and meadows, to larger, nucleated townships in the lowland and coastal districts where there was more cultivatable land. Farm size remained relatively small (the majority being under 50 acres) across Lancashire into the later 19th century, the major exception being the arable farms of the drained eastern lowlands (Fletcher 1961, p.19; Mutch 1981, p.127). Elsewhere, and as the opportunities for wealth from farming emerged, many landowners and tenants had by this period amalgamated other small and medium-sized farms into large holdings. This was a process clearly evident by the 16th century in Cumbria, for example, and which accelerated rapidly after the late 18th century as the county became even more integrated into the national meat and dairying market and by-employment declined in importance (Winchester 1987, p.63; Duxbury 1994; Beckett 1982, p.107). Another example was the restructuring of farms in Cheshire for the dairy industry, resulting in the reduction by around half of existing farms between 1650 and 1800 (Foster 1995, pp.30–33).

By 1550 intra-regional distinctions between the pastoral economies of the uplands and the mixed arable-based economies of the lowlands were already strong. From the 15th century, there was a general extension of pasture for livestock farming throughout the Region. This resulted in large-scale sheep farming to supply wool for the burgeoning woollen and textile industry, and – particularly after import bans were imposed on Irish cattle in the 1660s – the opening of Cumbria and Galloway in Scotland to the supply and fattening of

Scottish beef cattle onto lowland England. Throughout the Region the period from the later 17th century saw a decline in arable in upland and other pastoral areas, only larger farms appearing to retain large quantities of arable. There was a corresponding increase – sometimes in parallel with industrial diversification – of rearing, dairying and fattening, with large increases in the amount of land under permanent pasture through the transfer of arable to pasture, dairying for local and distant markets (particularly in the Lancashire and Cheshire Plain), and much more large-scale sheep farming. Cattle became a far more important source of income than sheep in the Region as a whole. Upland areas typically specialised in the rearing of store animals (i.e. young cattle), for fattening on pastures in lowland areas. In some areas, though, the extent of arable remained unaltered or increased. For example, in the Lancashire Plain demand for grain and green crops from the Liverpool and Manchester conurbations continued to make arable farming worthwhile, whilst in other areas there was a shift from corn to oats, supplying the urban markets for horse feed, as in Cheshire.

Many estate owners – both long-established and newly enriched – were transferring profits from industry and trade firstly to the development of their own parks and residences (from the late 17th century) and then to agricultural improvement (for example Garnett 1994, p.8). As in the West Riding of Yorkshire, the introduction of sheep and the textile industry transformed the economy of the southern Pennine uplands and surrounding areas. Domestic manufacture of woollen cloths in an agrarian climate naturally led to the development of a dual economy and sustained a massive population increase from the early 18th century. The rebuilding of yeoman houses seems to be directly linked to wealth gained from textile production (Pearson 1985, pp.111–117). It became possible for large sections of the Lancashire population to survive on otherwise non-viable agricultural holdings (see laithe houses, 5.3.1). The rural landscape in many places was devoted to supporting the needs of small-scale industries, for example coal extraction or growing flax and hemp. By the early 20th century, the small upland farms in the vicinity of the cotton towns specialised in milk production, importing cows in milk, feeding them on imported feed and selling them on for meat (Whetham 1979, pp.34–5).

The development of the railway network opened up new markets and allowed the transport of products such as fresh milk and butter to more distant urban markets. The increased productivity of hay and import of artificial feed enabled cattle to be kept in milk all year round. Smallholders and part-time farmers near urban areas also benefited, supplying oats, hay and straw to the towns (Hallas 2000, pp.402–10; Walton 2000, pp.389–401). The nature of the mixed and pastoral farming of the Region,

coupled with the increasing demand for animal products from its industrial cities, meant that agriculture in the North West did not experience the late 19th-century depression in farming to the same extent as the cornlands of southern England. The well-established farming systems of the Region required only minor developmental changes rather than wholesale shifts in practice.

## AREA SUMMARIES

These summaries have been compiled as preliminary statements on the agricultural development of the distinctive parts of the Region. Inevitably, these do not relate as strongly to county boundaries as distinct landscape zones. These are outlined below, either by including the Joint Character Area (JCA) title – see 2.1 – after the area heading or, if they approximate or relate to groups of JCAs, in the first line of the text. The sources for them are diverse, and include Historic Landscape Characterisation where completed, work in progress on developing historic profiles for the Joint Character Areas (see [www.cqc.org.uk](http://www.cqc.org.uk)) and sources listed in the bibliography. They are generalised statements, within which there may again be important differences in farming practice, settlement and estate patterns and landscape character.

### 4.2.1 UPLANDS

The overall character of the uplands in the northern English regions is a result of a long history of mixed grazing and small-scale arable in the valleys, of pasture on the valley sides, and seasonal grazing of the rough pasture and unenclosed commons of the higher fells. Farmsteads are either isolated or clustered in small groups on the fell sides or in the valley bottoms as hamlets. The factors common to all the areas of the uplands are presented below, followed by area summaries.

The most important animals on upland farms were cattle, providing dairy products for home consumption and young stock for fattening on lowland farms. Many parts were too wet for sheep until at least the 18th century, when improved breeds and better drainage extended the range of hill sheep farming. The most widely sown crop, and the one best suited to the short, wet summers, was oats.

A key factor was the scale of landownership, including the Crown, which made use of the higher ground as private hunting forest or chase, and which linked upland and lowland communities together 'in the form of large, compact estates, embracing a number of townships' (Winchester 1987, p.3). One major consequence for farming and landscape was the development – particularly in the 12th and 13th centuries – of interlinked farms. Particularly important in the North

West were the cattle-rearing stations (vaccaries) in the valleys of the Pennines and the western dales of the Lake District (Higham 2004, pp.113–9; Winchester 1987, p.6; Winchester 2003). Sheep farms – although not on the vast scale developed in Yorkshire – were typically located on the higher ground; Furness Abbey, for instance, being largely responsible for developing Hawkshead in Cumbria as a major wool-producing area.

Another key factor that sustained farming communities in the uplands was the huge proportion of inter-commoned grazing on the moorlands. Walled tracks were created, leading up from the valley bottom to the fell tops, giving access to the open moorland for summer grazing. Livestock were moved up and down the valley sides at different times of year: flocks of sheep grazed on the hill tops in summer and were brought down to the sheltered valley bottoms in winter and for lambing in the spring; cattle were over-wintered in buildings on the valley bottom and slopes and moved onto the hills in the late spring (see 7.1.2).

As in other parts of the northern uplands, such as the Yorkshire Dales, small-scale tenant farming – the legacy of the colonisation of upland dales by peasant farmers in the 12th and 13th centuries – remained as a strong characteristic of the upper reaches of the Pennines and the Lake District. In exchange for rent, farmers could enclose land and transfer property as they wished (copyhold of inheritance). From the 15th century, as the economy began to diversify into areas such as textile and lead production, the leasing out and subdivision of directly managed estate farms and areas of hunting chase (such as the Forest of Lancaster) led to the appearance of new holdings and farmsteads throughout the upland dales (and especially in Lancashire and Cheshire). These factors, and the vast reserves of open moorland for grazing, more than compensated for the much smaller size of farms in upland areas; the consequence was greater levels of prosperity by the mid-16th century (Winchester 1987, p.66).

Upland farms were typified by mixed arable and pasture in the valley bottoms, pasture in the valley sides and seasonal grazing of the rough upper fells. The arable land and meadows lay either in closes or in small common fields, around individual settlements or around dispersed groups of individual farmsteads. Medieval farmsteads in the upland dales could, if pioneer settlements in their own right, be ring-fenced in their own fields. Communally managed fields could be grouped around farmsteads clustered around them (as in Great Langdale, for example) or more centrally located in hamlets or villages (Winchester 1987, pp.69–72; Wade Martins 1995, p.49). A stock-proof boundary (often termed a head-dyke) typically separated an 'infield' area from an 'outfield' area of rough grazing subject to communal control (to

prevent over-grazing by individual tenants) and intermittent cultivation. Livestock was not permitted into the 'infield' area during the closed season when corn and hay were growing. The animals were allowed into the inner area in the open season after the harvest of hay and crops, their manure serving to fertilise the land.

Enclosure by agreement and the reorganisation of holdings was already making some progress in many upland parts of the Region from the 14th century. Throughout the uplands, the period after 1550 witnessed the enclosure of both infield land and valley-side pastures, enabling the growth and retention into the late summer of grass through the more systematic containment of livestock, and the dropping of their dung to enrich the land. The final process of further subdivision and enclosure, signalling the end of the traditional open-closed season, was linked to the transfer of communal cow pastures and grazing rights to individual tenants (Winchester 2003, pp.61–73). Individual farms were thus created out on of the moorland sides between the 15th and 19th centuries, typically set within their distinctive 'intakes' of enclosed land. In the Lake District, as elsewhere in the Region, a pattern emerged over this period of specific tenants being allotted defined areas of fells (Winchester 1987, p.88). Vast areas of remaining moorland were enclosed from the end of the 18th to the middle of the 19th century, the pressure to create more productive pasture and especially arable land – and an increased desire on the part of customary tenants to lease or own their land outright – resulting in a dramatic new landscape of large square fields and mile after mile of straight boundary walls. In Cumberland alone 39,515 acres of waste were enclosed by parliamentary acts between 1760 and 1800 (Bainbridge 1942, p.63).

#### 4.2.1.1 Border Moors and Forests (JCA 5)

Medieval or earlier origins are likely for the scattered valley hamlets and farmsteads. Seasonal grazing in the uplands from the prehistoric period has left patterns of small shieling settlements, some adopted for permanent settlement in later centuries. Cross-ridge dykes, sheep stalls and other scattered enclosures reflect centuries of pastoral farming, especially following the expansion of the 17th to 18th century. Reduced border hostility in the 17th century and an improved climate led to more settled agricultural practices, and agricultural improvement driven by landlords. Areas within the valleys were taken under plough to a far greater extent than ever before, and pastoral farming also expanded.

#### 4.2.1.2 North Pennines (JCA 10).

The development of the area's distinctive patterns of tracks and droves is the product of the mixture of cattle rearing and cereal production that was still practiced in the medieval period. The lower reaches of the main dales have historically supported arable cultivation as well as

pasture, and were generally enclosed by 1750. The middle and upper dales are almost entirely pastoral with small hay meadows – a pattern with medieval if not earlier origins. They were mostly subject to enclosure from the 17th century, maintaining long-standing divisions of in-bye and out-bye leading out to extensive grazing rights on the adjoining moorland. There was a further increase in farms from the 17th century, connected to the lead industry, and the establishment of large farming estates, coinciding with the formalisation and intensified exploitation of mineral rights in the 18th and 19th centuries. The moorland summits and plateau were used as common grazing pasture. Despite extensive enclosure in the late 18th to mid-19th century, 27% remains common land.

For more on this area, see North East.

#### 4.2.1.3 The Cumbrian Fells – Cumbria High Fells (JCA 8) and South Cumbria Low Fells (JCA 19)

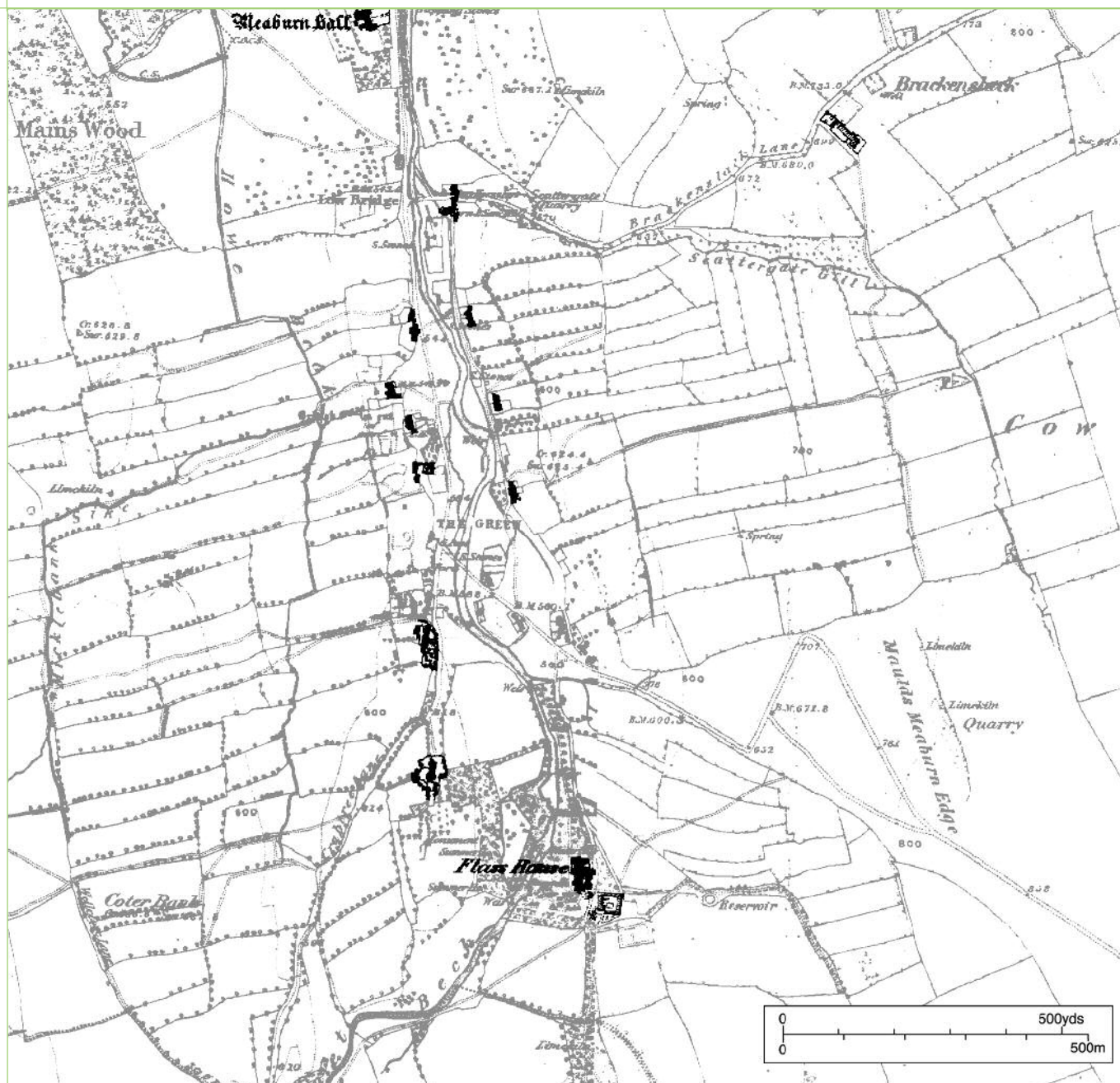
The pattern of small nucleated villages and hamlets and dispersed farmsteads is thought to be mostly 12th and 13th century in origin, the result of estates letting their tenants colonise the land. Relict ridge and furrow and lynchets (for example at Wythop) attest to the pre-14th-century extent of arable cultivation. The combination of fast-flowing water and an abundance of raw materials led to a proliferation of industries from the medieval period, including metal-ore mining and smelting, and wool production. In the upland Fells of Cumbria the period 1600 to 1750 made the most lasting imprint on the buildings and landscape. Increased prosperity, from both farming and the industries of the southern Lakeland area, particularly spinning and cloth making, resulted in a wave of rebuilding that swept across the area in the 17th and 18th centuries, leaving a stock of dated long, low, stone farmhouses stretching far up the fertile vales into the fells. The rebuilding of the farmhouses was accompanied by an increase in the provision for winter housing for cattle on gentry estates (see 6.1.2). On smaller farms it was not until the period after 1750 that increases in herd size from the average 6–10 head of cattle, which could be housed in the lower end of a farmhouse, required the construction of new animal housing (Marshall 1980, pp.512–13). Oats, grown both as a fodder crop for horses and also for porridge and oat cakes, made up as much as half of the cereals grown. Industrial crops included hemp and flax, which were grown in small quantities on most farms and provided winter employment (Dickenson 1852, pp.230–235).

As elsewhere, the period 1750 to 1820 saw a move towards farm amalgamation and with this an increase in the size of farms (Bailey & Culley 1794, p.205; Pringle 1794, pp.299, 301; Garnet 1849, p.36) although – sustained by the lack of a powerful gentry class – farms of between 40 and 100 acres were still the most



## 12 Farmsteads in the landscape: Maulds Meaburn (Eden Valley)

This village lies in the Lyvennet valley, and probably dates from a reorganisation of the landscape in the 12th century, when earlier isolated farmsteads were abandoned for villages surrounded by their common fields. Back lanes separate the strips from the tofts of the medieval village. Behind the tofts of the medieval village, which in their varying sizes represent the abandonment and amalgamation of farm holdings over time, lie strips which retain traces of ridge and furrow. Meaburn Hall to the north was rebuilt in the 16th to 17th century. The majority of the linear farmsteads date from the 17th century, although the majority of both the attached and detached farm buildings were rebuilt or newly constructed between the late 18th and mid-19th centuries. The steadings within the village have been mostly converted to other uses. Based on 1st Edition OS 6" map 1843–1890. © and database right Crown Copyright and Landmark Information Group Ltd (All rights reserved 2005) Licence numbers 000394 and TP0024



numerous (Dickenson, 1852, p.220). Sheep became a prominent feature of the Cumbrian fells from the mid-18th century. In open and enclosed fields alike, the farming continued to be determined by the yield of the land; a crop of grain was grown year after year for nine to twelve years, until the yields declined and then the land was put back to grass (Bailey & Culley 1794, p.19).

### 4.2.1.4 Orton Fells (JCA 17), Howgill Fells (JCA 18) and Yorkshire Dales (JCA 22)

The pattern of pastoral husbandry in this area is long established. In the medieval period the Orton Fells, for

example, was a centre of sheep-rearing for quality fleeces based principally around the granges of large monastic houses (including the Premonstratensian Abbey at Shap). Within the valleys there is a low density of small farming hamlets and isolated farmsteads, some dating from the establishment (in the 12th and 13th centuries) and letting (from the 14th century) of vaccaries (stock farms). Strip enclosures to the rear of the properties and droveways or outgangs lead out to the common land. The present settlement pattern was formalised in the medieval period, probably in the 12th to 13th century as a result of woodland clearance, with well spaced

nucleated/linear villages clustered around spring lines on the margins of the Orton Fells. The Howgill Fells mostly comprises rough grazing, the practice of farming families in adjacent valleys holding rights to seasonal grazing and other benefits extending back to the medieval period and further.

Many of the farms along Dentedale in the Yorkshire Dales date from the 12th and 13th centuries, and a predominantly pastoral economy developed linked to the textile industry.

For more on the Yorkshire Dales see Yorkshire and the Humber.

#### **4.2.1.5 Forest of Bowland and Bowland Fringe and Pendle Hill (JCAs 33 and 34)**

The central fells and moorland formed part of the medieval hunting forest of the Earldom of Lancaster. Increased population pressure led to woodland clearance and colonisation of the Bowland fringes in the 12th to 13th century, based around a cattle-rearing economy. Many farms developed from the 15th century as vaccaries and parts of the Forest were leased or sold off, the consequence being a landscape of scattered farms and irregular fields, especially to the north, to the south of the Bowland Fringe and in the Hodder Valley. Local landowners also created private deer parks, which themselves became much desired features of country estates: for example, around Pendle Hill and the upper reaches of the Hodder valley. Much of the higher common land and the lower fellsides within the Forest of Lancashire, especially to the west of the Bowland Fells, remained unenclosed until taken into large rectilinear grazing enclosures, primarily for sheep: this commenced in the 16th century, small areas of upland enclosures being created through Parliamentary Acts. By the later 19th century, most farms in this area specialised in the supply of milk, butter and mutton to urban markets (Fletcher 1961, p.19).

#### **4.2.1.6 Southern Pennines (JCA 36), Manchester Pennine Fringe (JCA 54) and Dark Peak (JCA 51) (Figure 13)**

Over this area cattle rearing and some fattening was joined by sheep rearing for wool from the 15th century. This area experienced early growth of the textile industry, giving rise to distinctive patterns of yeoman-clothier farmsteads and minor gentry farmsteads, some of these relating to early estate centres. Large barns of pre-1750 date, both aisled and cruck, are consequently found in this area (see 6.1.2). Small and irregular fields are typically clustered around settlements, either the product of medieval assarting from woodland or 17th- and 18th-century weavers' subsistence plots. There is also a distinctive pattern of field and farmsteads associated with miner-farming in the Rossendale Hills, by-

employment throughout this area sustaining small farms and distinctive laithe houses (see 5.3). Larger-scale enclosure on valley sides date from at least the 15th century; walled tracks gave access to seasonal grazing on the moorlands, which were subject to more regular enclosure in the later 18th and 19th centuries. In addition to the grazing of sheep, a major activity in the South West Peak from the 13th century in particular, the heather moorlands were conserved for grouse shooting from the early 19th century. The canals from the mid-18th century opened up much of this area's industries, including coal mining and quarrying, to trade via the west coast ports.

For more on the Dark Peak, a small part of which lies within this Region, see East Midlands. For more on South West Peak see West Midlands.

### **4.2.2 LOWLANDS**

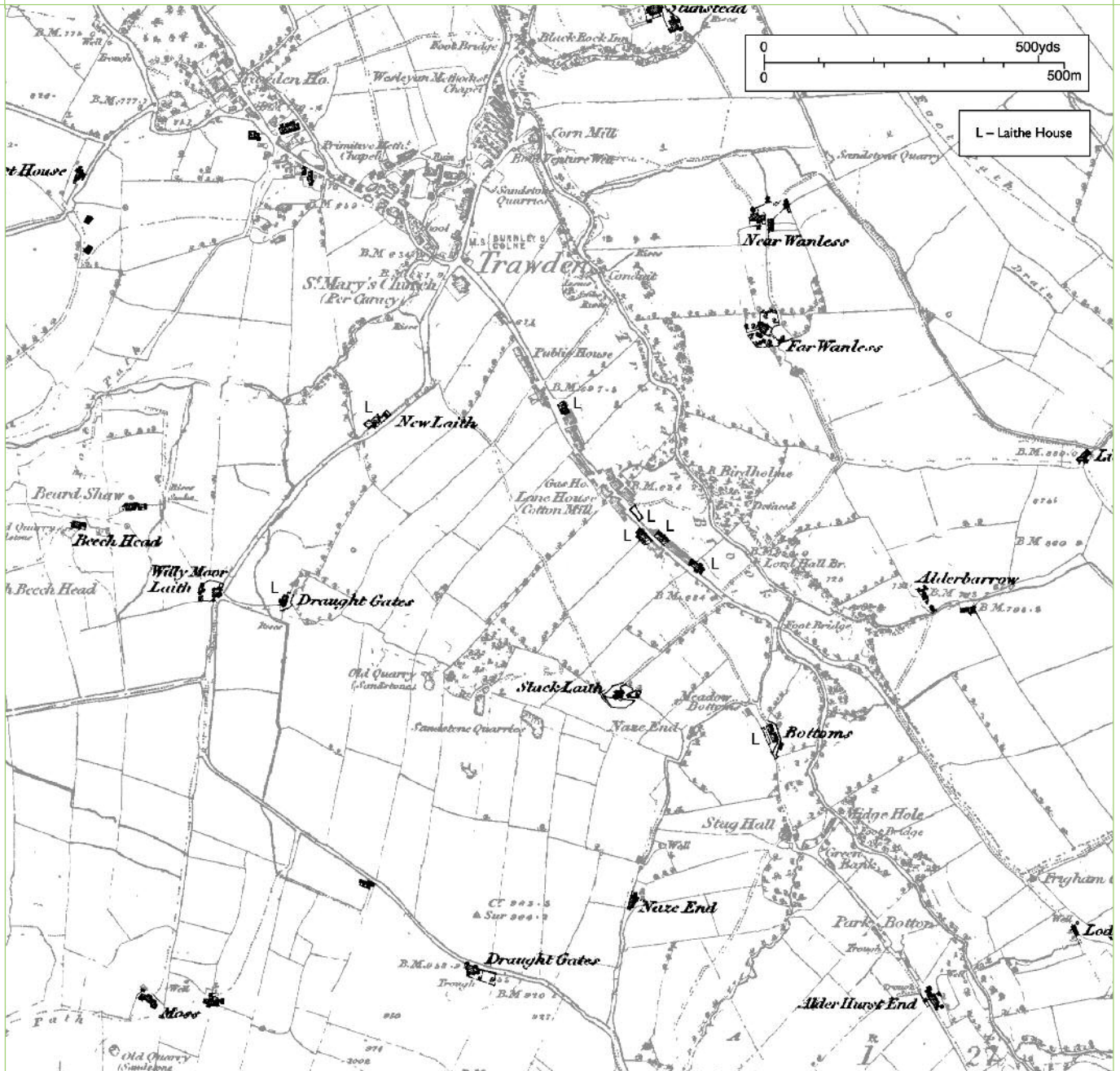
Lowland areas in the Region were, in contrast to the uplands, characterised by a much greater variety and richness of soils and more communally managed land, in the form of strips or small pieces located in open fields or interspersed amongst woodland, lowland moor and marsh. Most lowland communities operated an open- or common-field system, but generally without the strict rotations and fallow of the three-field system of the Midlands as the scarcity of drier land meant that a fallow year was economically unviable. As in the uplands, a pattern emerged in many areas of the more intensively cropped 'infield' being separated from an outfield area subject to intermittent cultivation. Most of the Region's common arable and pasture had been enclosed by the 1750s, pockets of communal open-field farming – such as in northern lowland Cumbria – surviving into the 19th century. The result is the predominance of anciently enclosed landscapes carved out of the woodland in Cheshire and central Lancashire, and exploitation of the upland dales and fells as pasture. In the medieval period, 20% of the lowlands comprised wetlands (the so-called mosses) and moorland (Higham 2004, p.6), used as common grazing and a source of fuel and other by-employments, which was subject to drainage and enclosure from the 16th century and particularly after the 1850s.

#### **4.2.2.1 West Cumbria Coastal Plain (JCA 7), the Solway Basin (JCA 6) and the Eden Valley (JCA 9) (Figure 12)**

From the earliest times, the Cumbria Coastal Plain, the Solway Plain and the Eden Valley had a different system of husbandry and society to their adjacent upland areas. Villages were more usual than the scattered isolated settlements and hamlets of the upland parts of the Region, with more arable cropping and fattening. Earthworks and other evidence indicate that the villages were predominantly formed in the 12th and 13th centuries and replaced an earlier pattern of dispersed

13 Farmsteads in the landscape: Trawden (Southern Pennines)

Most of the isolated farmhouses, including three paired groups (Stunstead, Wanless and Beardshaw Head) and those in and around Hill Top, date from the later 17th century, by which time income from the textile industry – typically coupled with farming – had made the wider parish one of the wealthiest in this part of the Pennines. Some of the farmstead sites – and the patterns of enclosure around them – date from after the disafforestation of the Forest of Trawden in 1507. Industrialisation increased the nucleation of settlement in Trawden itself, the southern spur of which, extending to the mill, was developed with laithe houses (many absorbed into terrace rows) surrounded by late and regular patterns of enclosure. Laithe houses also associated with later patterns of enclosure extend northwards from Hill Top. Based on 1st Edition OS 6" map 1843–1890.  
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settlement, still partly visible in the medium to high densities of dispersed farmsteads in the landscape (Roberts 1996; Roberts & Wrathmell 2000, pp.52–3). Extensive areas of rough grazing – including the mosslands of the Cumbrian plain – and of common pasture characterised the area, although as in upland areas this was subject to increasing rates of enclosure (and new farmsteads) from at least the 15th century. Large common fields played an important role in the medieval farming system, and patterns of curved strips are often preserved in the form of later field boundaries running from the village street to the limits of the arable

land, particularly in the Eden valley and the Solway Plain. In some areas enclosure was complete by the 18th century, as in much of the West Cumbria Coastal Plain, where fields are medium to small scale, in contrast to the predominant large-scale and late enclosures of the Eden Valley.

The bulk of crops was used as fodder for livestock, particularly the production of store cattle and sheep. The production of wool – linked to medieval monastic houses such as Furness and Holme Cuttram – was eclipsed from the 17th century by the fattening of cattle.

There was a marked concentration of cattle in northern Cumbria and the Solway Basin (also known as the Solway Plain) as these areas had easy access to the main cattle fairs. The number of farmers keeping cattle through the winter (and thus needing in-wintering facilities) also increased from the late 17th century with the increase of the Scottish cattle trade. Dairying was more important on the smaller farms. Mid-19th-century reports suggest that not only was there an increase in the growing of turnips, particularly on the lower areas where increased drainage was making it possible, but also in the cultivation of wheat. This change from dairying and grazing to corn and fatstock had been noted by the late 18th century (Bailey & Culley 1794, p.199). This would mean that more buildings and yards would be needed, not only to house and manage stock, but also to process and store corn.

The Cumbrian gentry and peerage, although small in number (only 5% of the farms in Cumberland and Westmorland were owned by large estates), had a major influence on the development of agriculture in these lowland areas through the promotion of selective animal breeding, improved cropping techniques (such as turnips and clover) and new courtyard steadings on their home farms.

#### **4.2.2.2 Morecambe Bay Limestones (JCA 20) and Morecambe Coast and Lune Estuary (JCA 31)**

Lime, which with marl was an important boost to fertility through the Region, was being made in kilns in numerous places around Morecambe Bay where wheat as a grain crop was being introduced from the 1660s (Marshall 1980, p.513). In contrast to the coastal plain and valleys of the Morecambe Bay Limestones, the grazing of livestock formed the predominant aspect of the limestone outcrops and hills until larger areas were ploughed up from the late 18th century. There are large areas of pre-17th-century irregular enclosure, particularly around settlements, but much of the area is dominated by enclosures of the 17th to 19th century this is particularly the case with the mosslands of the Morecambe Coast and Lune Estuary, which retains evidence for small-drainage in the medieval period but was much affected by drainage from the late 17th century, firstly by windmills and later by steam power. The drained land was used for both arable cropping and grazing livestock. By the mid-19th century the land around the bay was naturally well drained and let in large farms, 'producing beautiful crops of wheat, oats or barley, turnips and seeds' (Garnett 1849, p.35). The supply of arable produce and roots to yard-fed beef cattle declined in importance over the course of the 19th century, as the need to supply Barrow-in-Furness and other emerging urban markets grew (Fletcher 1961, p.19).

#### **4.2.2.3 Lancashire Plains and Valleys – Lancashire and Amounderness Plain (JCA 32), Lancashire Coal Measures (JCA 56), Lancashire Valleys (JCA 35), Manchester Conurbation (JCA 55), Sefton Coast (JCA 57), Merseyside Conurbation (JCA 58) and Mersey Valley (JCA 60) (Figure 14)**

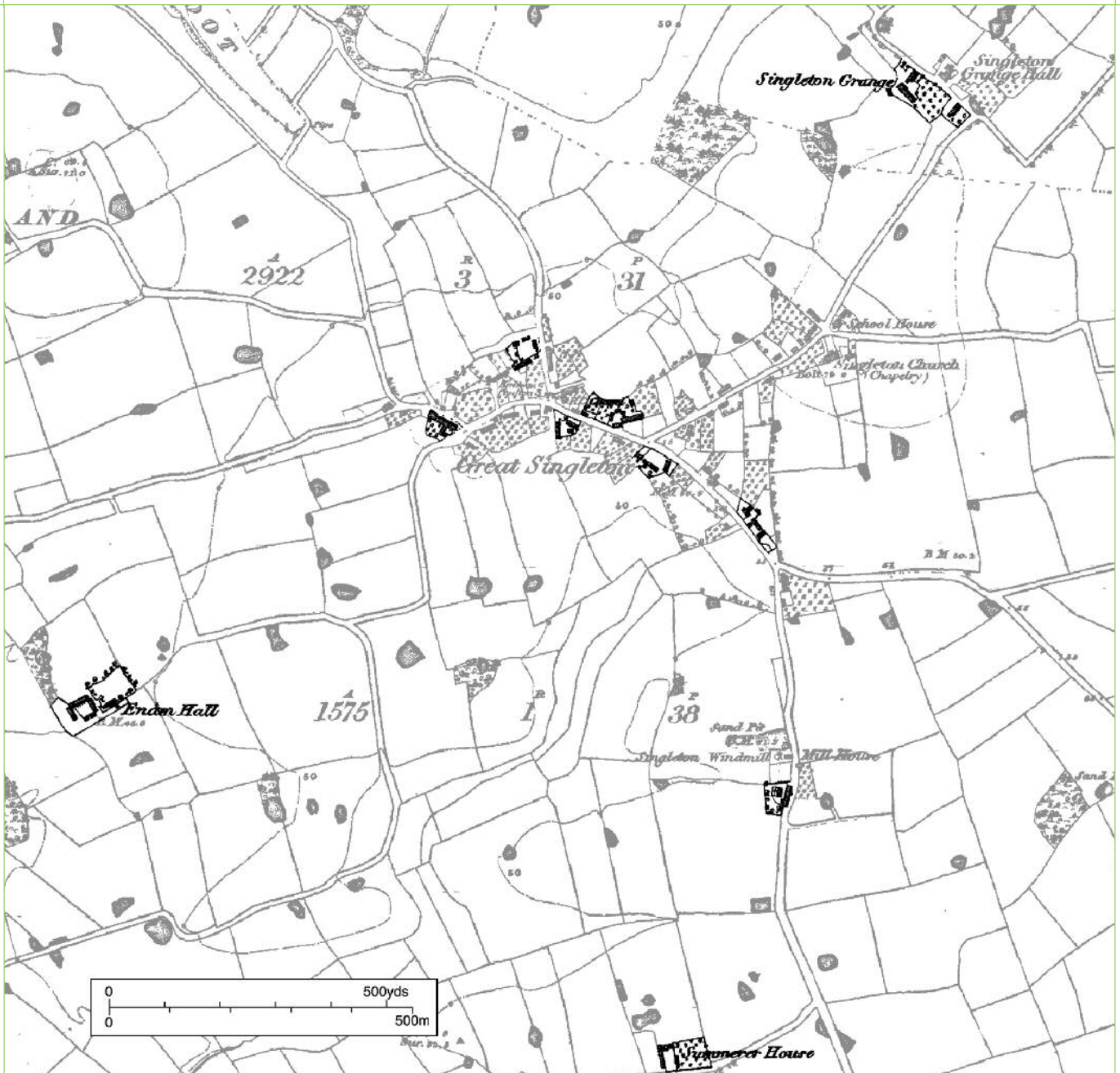
This is a complex landscape of mostly dispersed settlement, small areas of medieval open field, and extensive pasture – the latter including coastal marshes (as in the Sefton Coast connected by parallel roads and tracks to inland areas), lowland mosses and heath – the eastern fringes with access to upland moor. Wealthier farmers and the gentry were able to build substantial farmsteads and farmhouses between the 15th and 17th centuries, the economies of estate centres in the Lancashire Valleys in particular being linked to the surrounding uplands. Large barns of pre-1750 date, both aisled and cruck threshing and combination barns, are consequently found in the Lancashire Valleys and the Lancashire Coal Measures (see 6.1.2). From the 16th century onwards this area saw a gradual progression from a predominantly rural economy with a traditional pattern of settlement and land use into one in which industry, including coal, metal working and textiles, played a greater part. This had a significant impact on the landscape and agriculture of the area – through the loss of land to the expanding towns, the growing of flax for the textile industry, demand for produce, and in some instances the purchase of farms by the owners of the factories. This latter was not primarily for their agricultural value, but as a means of gaining control over the water supplies that powered their machinery.

Many of the townships in lowland Lancashire contained large areas of wetland (mossland), which supplied important resources such as peat and rough grazing for local communities. Between the 12th and 14th centuries, population pressures drove small-scale drainage works to bring the drier edges of the mosslands into cultivation. This process was resumed on a far larger scale from the late 17th century, aided by windmills and from the early 19th century by steam pumps, and despite being hindered by repeated flooding, was successfully completed by the 1850s. The wetlands of the Fylde (Lancashire and Amounderness Plain) also emerged, as a consequence of drainage, as an important area for grain production and, increasingly in the 19th century, dairying (Fletcher 1961, p.18). The principal area of post-1750 enclosure lies in the former mosslands to the north of the Ribble, especially north of the River Wyre, and in a large, slightly more fragmented arc along the western edge of the area south of the Ribble Estuary. The process of reclamation produced a more rectilinear landscape of medium- to large-scale fields and new farmsteads. By the early 20th century, the arable farms of this area were also

#### 14 Farmsteads in the landscape: Singleton (Lancashire and Amounderness Plain)

This map shows a landscape of few nucleations but high numbers of small hamlets and scattered farmsteads set within fields that are generally of early enclosure. Some of the fields immediately surrounding Great Singleton have the slightly curving boundaries suggestive of former strips. Most of the farmsteads are small and consist of loose courtyards; only Summerer House at the south edge of the map appears to have a regular L-plan farmstead. This landscape has undergone major change since the late 19th century with the large-scale removal of field boundaries and the straightening and removal of some roads. Based on 1st Edition OS 6" map 1843–1890.

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producing market produce, chickens and eggs for the industrial towns, some on a very large scale (Whetham 1979, pp.34–5).

The Ribble Valley floodplain (Lancashire Valleys) is dominated by pre-17th-century irregular enclosure associated with villages and dispersed farmstead, the dominant field forms to the north-east being more planned and rectilinear, reflecting episodes of moorland enclosure along the fringes of the Forests of Trawden and Pendle in the period 1600 to 1850. This area, mixed husbandry from the medieval period, specialised in the supply of milk and butter to the

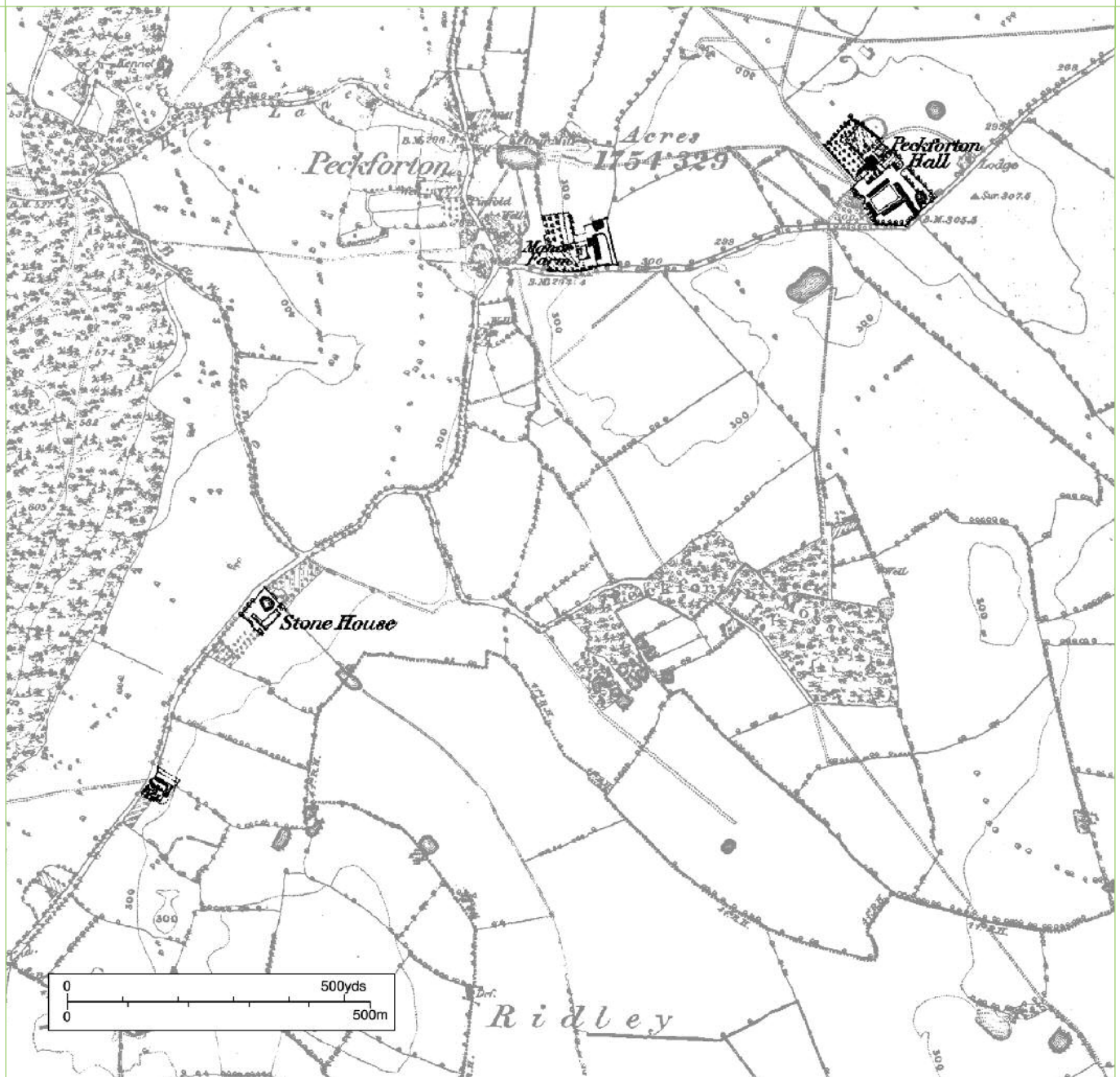
surrounding towns by the later 19th century (Fletcher 1961, p.18).

In the Lancashire Coal Measures the density of dispersed settlement and the expansion of the towns and villages reflects the development of industry between the 17th and 19th centuries, beginning with the mining of coal seams, the Lancashire cotton industry and continuing into the development of glass and copper production and diverse manufacturing. For the most part this area and the Mersey Valley is characterised by successive changes to the underlying pattern of ancient fields: improvements and modifications in the 18th, 19th and 20th centuries

#### 15 Farmsteads in the landscape: Peckforton (Cheshire Sandstone Ridge)

Although originating as a landscape of early enclosure, the generally smaller fields of early enclosure with hamlets and scattered farmsteads, this is an estate landscape with only two main farms: one a large T-plan, the other an 1870s L-plan. In this area many of the large estates developed through the amalgamation of small farms from the 18th century. Based on 1st Edition OS 6" map 1843–1890.

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matched to urban demands. The resulting pattern was predominantly arable to the north of the Mersey and mixed with dairying (the cheese industry) to the south. To the east mosslands were reclaimed for arable in the early to mid-20th century in characteristically broad and regular fields with few raised boundaries.

#### 4.2.2.4 The Wirral

There is some ancient enclosure relating to dispersed farmsteads, but in this area the communal fields that related to its nucleated villages were enclosed in the 18th and 19th centuries; arable cropping for nearby urban centres was much more prevalent than in adjacent areas.

#### 4.2.2.5 Cheshire Plain Shropshire Staffordshire and Cheshire Plain (JCA 61) Cheshire Sandstone Ridge (JCA 62) (Figure 15)

From the earliest times Cheshire has been grassland country, with no more land under the plough than was necessary to feed stock. It is in origin a landscape of ancient enclosure and very high levels of dispersed settlement (as in the southern half of the adjacent Lancashire Plain), with blocks of more large-scale and regular enclosure such as on the Cheshire Sandstone Ridge and in areas profoundly affected by farm amalgamation and the activities of estates. Traditionally – and since the 14th century – cattle rearing and fattening has taken place in the north of the county and dairying

in the south and west where soils are heaviest (Hewitt 1929, pp.56–9). By the 16th century families with 10 to 50 acres and generous common rights formed the stable core of Cheshire's rural communities. In the forests of Macclesfield and Delamere a different system of grassland farming was adopted, where both cattle and sheep were reared and forest husbandry employed.

The distinctive slow-ripening cheese of the Cheshire Plain, an area which extended into adjacent parts of Shropshire, Staffordshire and Wales, was being produced on a commercial scale from the 16th century, for example on farms around Nantwich, in order to supply the army en route to the port of Chester (Lake 1983, pp.30–31). From the late 17th century, Cheshire cheese was exported via the ports of Liverpool and Chester, transported on the Trent and Severn to supply London and other markets and – from 1739 – the Navy. After 1770, the development of the canal system facilitated access to burgeoning industrial markets in the West Midlands and the North West. Agricultural developments to meet this demand were spearheaded by large farms (including tenants renting them from the demesnes of gentry) and estates, notable features being a massive increase in the dairy herd sustained by improvements in the management of cows and pastures, and the development through amalgamation and enclosure of ring-fenced dairy farms (Foster 1994).

In the 19th century the newly created northern urban markets provided the stimulus for the change to liquid milk production, as did the increasing competition from foreign cheeses; yet it did not necessitate a fundamental change in agriculture. The rapid development of the industrial towns also demanded a considerable increase

in production, requiring ongoing improvements in farming techniques and an intensification of production – with grain grown for fodder and its byproduct (straw) for bedding. As a pastoral area, Cheshire's experience of the post-Napoleonic and late 19th-century depression was less intense than that of grain-producing areas.

By the 18th and 19th centuries, over half of the agricultural land in Cheshire was lying on estates of over 3,000 acres. Holland noted in 1813 that not only were there considerable numbers of smaller landlords, but also an active land market had drawn into the county a large number of new landowners who had made their money in trade, such as the Daintrys of North Rode, who built a number of courtyard steadings in east Cheshire in the 1820s (Barnwell & Giles 1997, pp.122–3).

Although the 19th century heralded a great improvement in the management of grassland, and greater efficiency achieved by more economic building design and refined dairying practices, it also brought some changes to the traditional landscape pattern of the county. Landowners engaged in the large-scale reorganisation of their holdings often completely rebuilt farmsteads, with Georgian and Victorian farms and country houses replacing less substantial dwellings. In the north east of the county in particular, large estates with extensive associated parks were established, often replacing the basic settlement pattern of dispersed farmsteads, hamlets and small villages. Rebuild was frequently the theme rather than an adaptation of the old, with a consequent loss not only of traditional farm buildings but clues to earlier farming traditions. The Crewe, Tollemache and Westminster estates were especially active in the centre and west of the county.

# 5.0 Farmstead Types

## 5.1 NATIONAL OVERVIEW

Farmsteads perform several basic functions: providing shelter for farmers and their families; the housing and processing of crops; the storage of vehicles, implements and fodder; the management and accommodation of livestock. Building functions can be usefully distinguished between crop processing and storage (barns, hay barns, cider houses, oast houses and farm maltings, granaries) and the accommodation of animals (cow houses and shelter sheds, ox houses, stables, pigsties) and birds (dovecots and poultry houses). These functions can either be accommodated within individual specialist structures or combined with others into multi-functional ranges.

The great diversity of farmstead plans (Figure 16) provides a very direct reflection of the degree to which these farm-based functions are located in specialist or combination structures and ranges. The resulting diversity of form and scale is the direct outcome of the significant variation in farming practice and size that occurs both over time and from place to place. Individual farm buildings, for example, could be:

- Small-scale and highly dispersed, as in the wood–pasture landscapes of the Kentish Weald and the Suffolk clays;
- Set out in strong linear groupings, especially in northern pastoral areas with little corn and longer winters and where there was an obvious advantage in having cattle and their fodder (primarily hay) under one roof;
- Arranged around yards, examples being the large aisled barn groupings of the southern English downlands and the large planned layouts built in accordance with ideas being spread through national literature and contacts.

A critical factor in farmstead planning is also the relationship of the farm buildings to the working areas within and around the farmstead and the farmhouse. The major working areas were trackways to surrounding fields and local markets, ponds and cart washes, the areas for the movement of vehicles and animals, the accommodation of animals and the platforms where hay and corn would be stacked, the latter prior to threshing in the barn. The size of the areas for stacking corn (known as rickyards in most of the country) varied according to local custom and the extent of arable crops kept on the farm.

Local tradition and status were the principal reasons for whether the house was accessed through the yard and buildings were attached, or whether the house

looked toward or away from the yard. Internal access between dwelling house and farm buildings was a feature of farmyard architecture in much of Europe. However, in England from the 13th century it became much more common to have separate entrances, even where buildings and houses were joined. The role of women in the farmyard was commonly restricted to 'milking cows, feeding pigs and calves, making butter and cheese, tending poultry, and occasionally tending with the hay and corn harvests' (Whetham 1978, p.81). This led to the integration into the house of processes such as brewing and dairying, and a formal separation of the house and gardens from the farmyard, especially in the case of post-1750 remodellings and larger farms typically over 150 acres. In such instances, the house could face toward its own home close or garden.

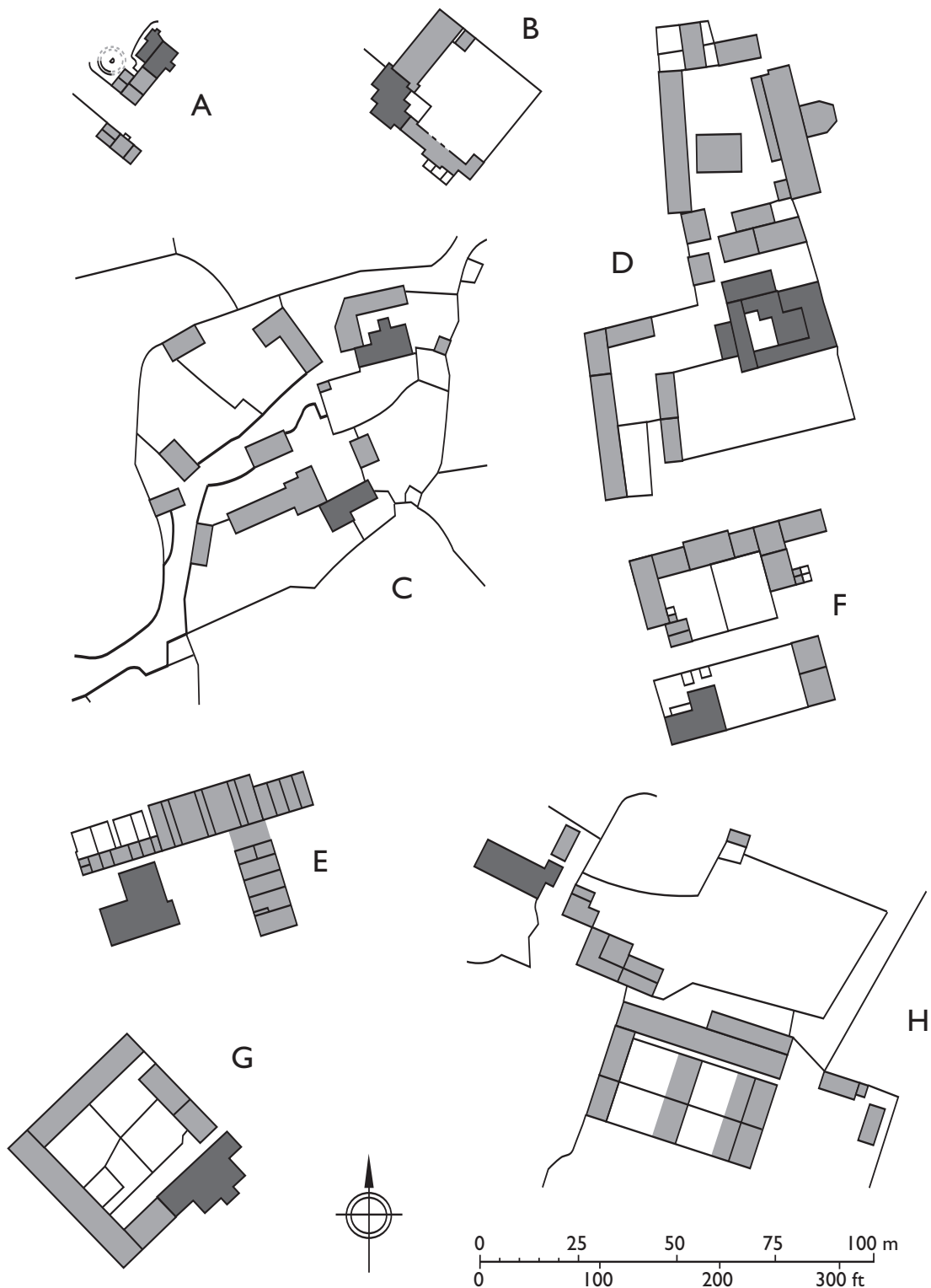
The development of the farmhouse has been the subject of regional and national studies (Barley 1961, for example). Farmhouses can tell us much about the former prosperity and development of steadings, such as the major phases of rebuilding that affected parts of southern England in the 15th to early 17th centuries and the wealth introduced through cattle rearing in parts of northern England in the century or so after 1660. In summary, the most common farmhouse plan of the medieval period, traceable to the 12th century, has the main entrance in one side wall to an entrance passage (usually with a door opposite) that separated an open hall (to allow smoke from the fire to escape through the roof) from a lower end, which could house a kitchen, services and in some areas livestock. The hall served as the main living and eating room, status and space determining whether there would be an inner chamber (for sleeping or a private area) beyond. By the end of the 16th century, farmhouses in most areas of England (except in the extreme south-west and the north) had been built or adapted into storeyed houses with chimneystacks. There was a strong degree of regional variation, for example in the positioning of the chimneystacks and their relationship to the main entrance. From the later 17th century, services in some areas were being accommodated in lean-tos (outshots) or rear wings. From the mid-18th century houses that were more symmetrically designed (with central entrances, chimneystacks on the end walls and services placed to the rear of the front reception rooms) became standard across the country. As a general rule, farms over 70 acres needed to look beyond the family for additional labour, and so rooms for live-in farm labourers – usually in the attic or back wing of the house – became a feature of many farmhouses.



16 Farmstead plan types (farmhouses are shaded darker)

- A Linear plan. House and farm building attached and in line. This is the plan form of the medieval longhouse but in upland areas of the country in particular it was used on small farmsteads up to the 19th century.
- B L-plan including the farmhouse. Such plans can be a development of a linear plan or can represent a small regular courtyard plan (see E-G, below).
- C Dispersed plan. Within this small hamlet the farm buildings of the two farmsteads are intermixed, with no evidence of planning in their layout or relationship to the farmhouses. Dispersed plans are also found on single farmsteads where the farm buildings are haphazardly arranged around the farmhouse.
- D Loose courtyard. Detached buildings arranged around a yard. In this example the yard is enclosed by agricultural buildings on all four sides with the farmhouse set to one side. On smaller farms the farmhouse may form one side of the yard, with agricultural buildings to only one or two of the remaining sides.
- E Regular courtyard L-plan. Two attached ranges form a regular L-shape. The farmhouse is detached from the agricultural buildings.
- F Regular courtyard U-plan. The yard, in this example divided into two parts, is framed by three connected ranges. Again, the farmhouse is detached.
- G Full regular courtyard. The yard is enclosed on all sides by buildings including, in this example, the farmhouse. Other examples are formed by agricultural buildings on all sides with the farmhouse built to one side.
- H Regular courtyard E-plan. This plan form (and variations of it with additional ranges) may be found on some of the larger planned farmsteads where livestock were a major part of the agricultural system. Cattle were housed in the arms of E, the 'back' of which provided space for fodder storage and processing.

*Drawn by Stephen Dent © English Heritage*



The predominant farmstead plan types, which are closely related to farm size, terrain and land use, are listed below. There are many variations on these themes, particularly in the manner in which fully evolved plan groups can, as a result of successive rebuilding, contain elements of more than one plan type.

### 5.1.1 LINEAR PLANS

This group comprises farmsteads with farm buildings attached to, and in line with, the house. It includes some of the earliest intact farmsteads in the country.

The earliest examples of linear plans are *longhouses*, which served as dwellings for farmers' families and housing for cattle. Each longhouse had a common entrance for the farmer's family (accommodated at the up-slope end of the building) and livestock, the cow house being marked usually by a central drain and a manure outlet at the lower gable end. Longhouses were often found grouped together and associated with strip farming of the surrounding fields. Documents and archaeological excavation indicate that they had a widespread distribution in the north and west of the British Isles in the medieval period, but that in much of lowland England they were either absent or being replaced by yard layouts with detached houses, barns and cow houses from the 14th century (see, for example, Gardiner 2000 and Figure 17). Such re-buildings are commonly believed to be associated with the decline of smaller peasant farmers and the emergence of a wealthier peasant class. Longhouses, and their variant types with separate entrances for livestock and farmers, continued in use in parts of the South West, the Welsh borders and the northern uplands and vales into the 18th and 19th centuries. Those built in or before the 17th century were originally entered from a passage, which also served as the entrance to the house. However, during the 18th century social pressures led to the provision of a separate dividing wall and byre door; and to the demolition of some byres and the conversion or rebuilding of others to domestic or new agricultural use (barns, for example). The piecemeal rebuilding and conversion of both lower end and house-part that this permitted tended to discourage total reconstruction, inevitably limiting the ability to respond effectively to changing requirements. These later changes are clearly visible in the buildings, as is evidence about the size and layout of the original byres, and of the arrangement of the passage (against which the stack heating the main part of the house was positioned) that once formed the common entrance to these longhouses as a whole. The initial dominance of the longhouse in some areas is significant, since, as a house type capable of almost infinite adaptation, it exerted considerable influence on the subsequent evolution of farmsteads.

Linear layouts (including the *laithe house* of the Pennines) are now most strongly associated with the hill farms of northern England (North East, North West and Yorkshire and the Humber). A major reason for the persistence of the layout in northern England was that it was suited to smaller farms (of 50 acres or less) needing fewer buildings – other than for the storage of subsistence levels of corn for the household and livestock, and the housing of some milk cattle, poultry and pigs. The close proximity of farmer and livestock during the winter months was another factor, cattle being stalled indoors from October to May. It was also a layout ideally suited to building along the contours of a hillside and so this farmstead plan remained in use in upland areas of England into the 19th century.

Linear plans have often evolved as a result of gradual development, for example in the rebuilding of a lower end for the cattle as service area for the house, and the addition of new cow houses, stabling and barns in line. Linear layouts will often be associated with loose scatters or even yard arrangements of other farm buildings.

### 5.1.2 PARALLEL PLANS AND L-SHAPED PLANS

These invariably enclose two sides of a yard, and often represent developments from earlier linear plans, if they have not been constructed in a single phase. L-shapes often evolve from the addition of a barn or byre to an original linear farm, or can represent the partial re-organisation of a dispersed plan. They are typically found on farms in the 50- to 150-acre bracket, and can be formal or highly irregular in appearance, with or without scatters of other farm buildings.

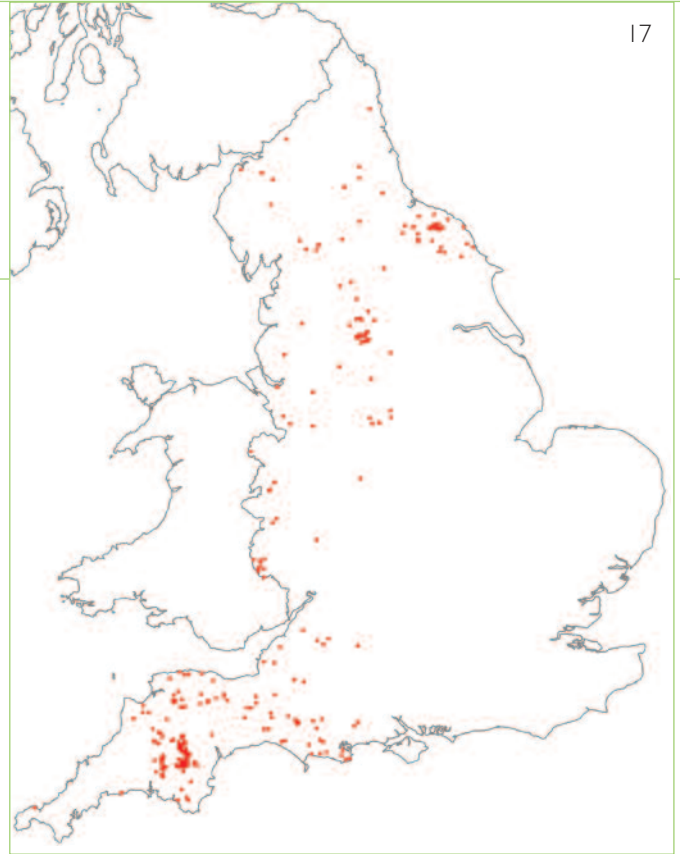
### 5.1.3 DISPERSED PLANS

The buildings of this group appear to be arranged haphazardly around the farmstead. Dispersed plans are typically found on smaller farms in stock-rearing or dairying areas, where a large straw yard for cattle was not required. They can range in size from the very small – for example a farmhouse and combination barn – to large groups of two or more blocks or individual structures, some or all of which may combine a variety of functions.

### 5.1.4 LOOSE COURTYARD PLANS

This group is characterised by single or double yards flanked by buildings on three or four sides, with or without scatters of other farm buildings close by. There are excavated and documented examples of this layout dating from the 13th century (in Hallam 1988, pp.860, 889) associated with: the base courts of large baronial and episcopal establishments; with moated manorial sites (where the farm buildings were arranged either within or outside the moat); and with the farms of an emerging wealthier class of peasant, the latter often replacing two or more previous steadings with

17 Distribution of listed longhouses in England. Surviving longhouses – a proportion of which have been recognised as such in listing descriptions – represent only a small proportion of a building type that was once prevalent across large parts of western and northern England. The concentration of a fine group of surviving longhouses on the eastern fringes of Dartmoor is particularly prominent. Recent research has shown that in some areas such as north Yorkshire many village-based farmhouses have longhouse origins that have previously not been recognised.  
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longhouses (Le Patourel in Miller 1991, pp.843–65). This plan became most strongly associated with large arable farms: for example, many farmsteads on the downlands of southern England have one or more barns providing shelter to a south-facing yard (as recommended but not always followed), typically bordered by a stable, granary and later shelter sheds.

### 5.1.5 REGULAR COURTYARD PLANS

Formal courtyard layouts, where the barns, stables, feed stores and cattle shelters were ranged around a yard and carefully placed in relation to one another in order to minimise the waste of labour, and where the manure could be conserved, were recommended from the mid-18th century and many are documented from this period, although no surviving groups can be dated before the 1790s. The earlier examples are courtyard or U-plan with the barn forming the central block, and shelter sheds, stables and enclosed cow houses the two side wings. The fourth side could be no more than a wall with a gateway, or contain further sheds or smaller buildings such as pigsties, or be distinguished by a house (usually looking away from the yard). From the 1820s and 1830s, extra yards made E or even double-E plans.

The ultimate examples of courtyard farmsteads are the planned and model farms of the late 18th- and 19th-century estates (Figure 18), the ideas for which were widely disseminated in textbooks and journals (Wade Martins 2002). They are generally associated with holdings over 150 acres, and are far less likely than the other plan types to be associated with other loose scatters of buildings.

## 5.2 FACTORS INFLUENCING FARMSTEAD CHARACTER

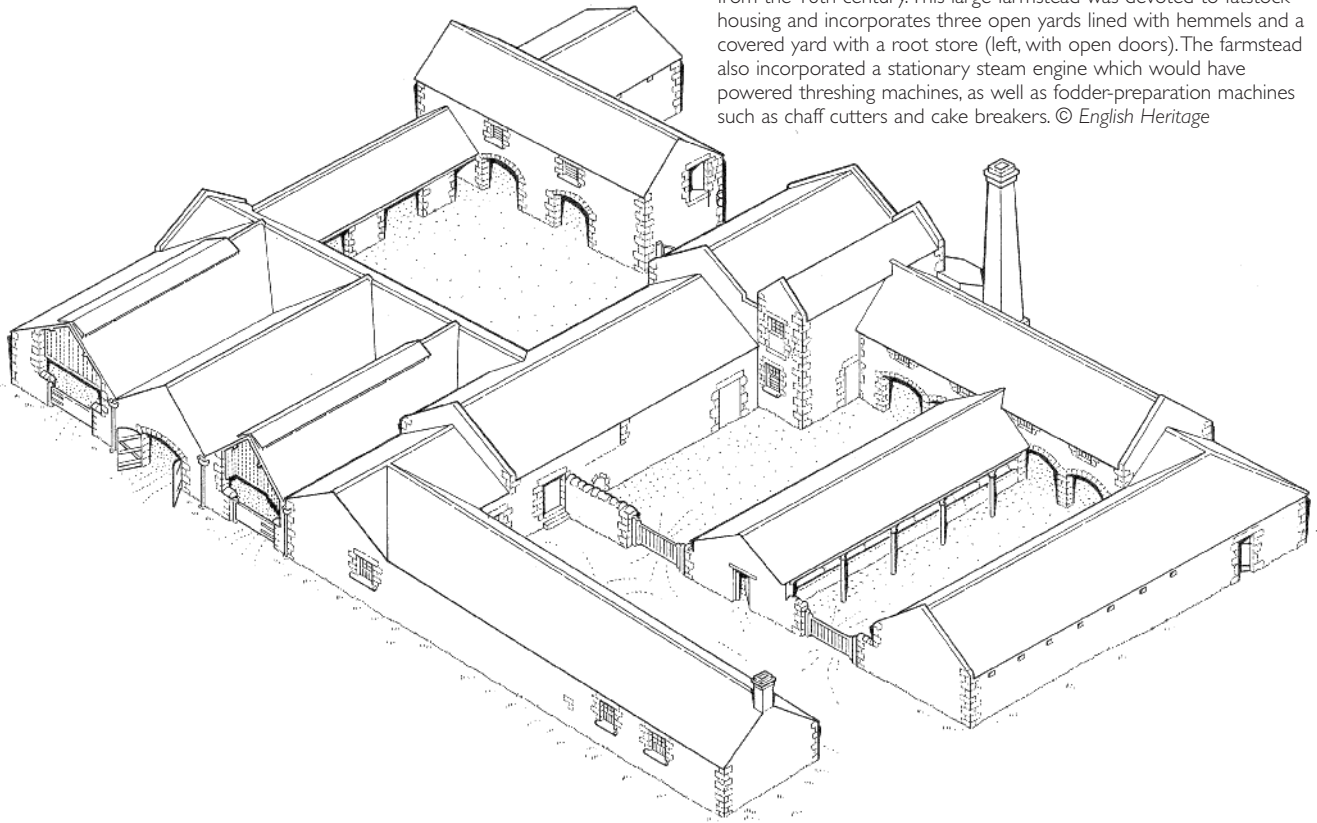
The occasional merging of plan types can make the variations on these principal themes seem almost infinite. The identification and analysis of the broad patterns of plan types can reveal much about the impact of the factors that influence farmstead character.

### 5.2.1 FARM SIZE

Generally, larger holdings were more likely to be provided with larger and/or more buildings. In the 18th and 19th centuries, the 'contemporary rule of thumb was that a man was needed for every 25 or

30 acres of arable and every 50 or 60 of pasture' (Mingay 1989, p.953). Statistics on the numbers of farms by size can be misleading: although 71% of holdings were under 50 acres as late as 1880 (Howkins 1994, p.53), the proportion of land area taken up by small farms was much smaller and regionally very varied. By the 1850s, medium-size farms – typically mixed arable holdings – were between 100 and 299 acres, and occupied nearly half of England's acreage; as much as one third was taken up by large farms of over 300 acres, these being best placed to invest in 'High Farming' (Mingay 1989, p.950). Farms of 500 acres and above were found on the chalk downlands of southern England, and in the Lincolnshire and Yorkshire Wolds: 1000 acres was not uncommon in these areas (Prince in Mingay 1989, p.82). These farms had greater access to capital and were usually associated with corn production, which typically demanded more labour for carting, harvesting and threshing and increasingly for yard and stock management: strawing-down yards, lifting the heavy manure-laden straw into middens and carts and spreading it on the fields. Smaller farms, typically found in dairying and stock-rearing and fattening areas, required fewer large buildings and were less likely to have the capital to expend on rebuilding farmsteads to fit with developing agricultural practice. The very smallest (of under 50 acres) thrived in fruit-growing and market-gardening areas (often clustered around urban sites), and in locations such as west Cornwall and the Pennines where there was gainful by-employment in industry – for example the weaver-farmers of the West Riding linear-plan farms, noted by

18 A large regular courtyard plan (North Northumberland Coastal Plain Character Area), dating from the early to mid-19th century and placed within a landscape affected by large-scale reorganisation and enclosure from the 18th century. This large farmstead was devoted to fatstock housing and incorporates three open yards lined with hemmels and a covered yard with a root store (left, with open doors). The farmstead also incorporated a stationary steam engine which would have powered threshing machines, as well as fodder-preparation machines such as chaff cutters and cake breakers. © English Heritage



Caird (1852), who kept dairy cattle on holdings of around 20 acres, supplying nearby towns with milk (Mingay 1989, p.940).

### 5.2.2 ESTATE POLICY

Estates, and thus landlords and their agents, have been massively important in English rural history, with tenants occupying some 85% of the farm area until the land transfers of the early 20th century mentioned in 4.1.4 above (Mingay 1989, pp.943–4). The character of an area thus can be strongly influenced by the estate of which it was part. Family insignia, estate-made bricks and the styling of cast-iron windows or ventilation grills can all give a unity to buildings over several parishes and this is as true of farm buildings as of cottages and village schools. Typically, and observable from 1350 onwards (Le Patourel in Miller 1991, p.846), improvements by landlords were aimed at attracting good tenants in either times of plenty (when capital expenditure could secure an increase in rent) or depression (when it could forestall a decrease). By the mid-17th century, home farms were being developed as examples of best practice for tenants. Between 1650 and 1750 landlords assumed increasing responsibility – in comprehensive lease agreements – for fixed capital works (particularly barns and houses) and after 1750 the influence of estates can be seen in the planning and design of buildings and entire complexes for home farms and tenant farms (Thirsk 1985, pp.72, 235; Thirsk

1967, pp.680–81; Wade Martins 2001). Estates often erected new buildings in order to attract tenants with the working capital to invest in their land and thus, through increased productivity, maintain rents at a high level. The policies of larger estates often discriminated against smaller holdings and the maintenance of their buildings. County studies (for example, Wade Martins 1991) have demonstrated how varied estate policy in similar areas could be, despite the rise of the land agent as a professional class, increasing access to farming literature and the ironing out of many glaring inconsistencies in estate practice by around 1850. The small estate is less well understood (e.g., Collins et al 1989).

### 5.2.3 LOCAL VARIATION OF FARMING SYSTEMS

The type and form of built fabric display regional variations that are more firmly linked to the broad pattern of land use and its landscape context (whether wood pasture, enclosed or open landscapes). In East Anglia the older timber-framed, evolved farmstead groups with ample barn provision and multi-functional buildings are associated with the small, well-hedged fields typical of the wood-pasture regions, while the large planned farms of brick or brick and flint are found on the later enclosed areas of heath (Wade Martins 1991; Wade Martins & Williamson 1999). The differences within Wiltshire are also clearly demonstrated by the farm buildings: the chalkland typically has loose courtyard

### 19 Farmstead plans in the North West Region

Linear plans are predominant in the upland areas of the Region with sometimes long ranges of buildings of different dates (A Ribble Valley, Lancashire Valleys). The laithe house, a house and combination farm building of one date is typical of smallholdings where farming and industrial activities such as textiles were combined. There is no interconnection between the house and the farm building (B Southern Pennines). Courtyard plans are generally associated with the lowland parts of the Region. In the Cheshire Plain, for example, reorganisation of farmsteads in the 18th and early 19th centuries usually resulted in the construction of L-plan farmsteads. (C Shropshire, Staffordshire and Cheshire Plain) © Jen Deadman

19A



19B



19C



plan steadings with their large-scale barns serving specialist corn and sheep husbandry; the smaller farms associated with dairying and cheese production in the northern wood-pasture area are of a more dispersed plan (Slocombe 1989). The yard management of stock also displayed a strong variation dependent on regional or estate practice. Thus the long-established practice of buying store cattle in spring and selling them on in the autumn survived longest in areas with rich grasslands, such as the Somerset Levels and the east Midlands, in contrast to Norfolk and the eastern lowlands where yards were filled over winter, even during the lean years for the beef industry in the 1930s (Whetham 1978, pp.290–91).

#### 5.2.4 INTERNAL WORKINGS OF THE FARMYARD

The layout of the farmyard should firstly be seen in relationship to its immediate setting: of crop storage and processing buildings to the fields; of yards, platforms for corn, haystacks and cart sheds to trackways. Secondly, an important characteristic is the degree to which the layout of the farmstead was related to function. The planning of farmsteads to maximise efficiency engaged an increasing number of writers from the 1740s, who generally rated traditional layouts poorly against the perceived benefits of ordered and ideally planned layouts that minimised, for example, the time it took to process a stack of corn, transport the straw to the cattle yard and grain to the granary or mixing room. Many such writers, however, did not display sufficient understanding

of the other factors – land use, terrain, weather, farm size, location in village or open countryside – that dictated layout. The most comprehensive analyses of local farming systems in relationship to farmstead layout are contained in Barnwell & Giles (1997).

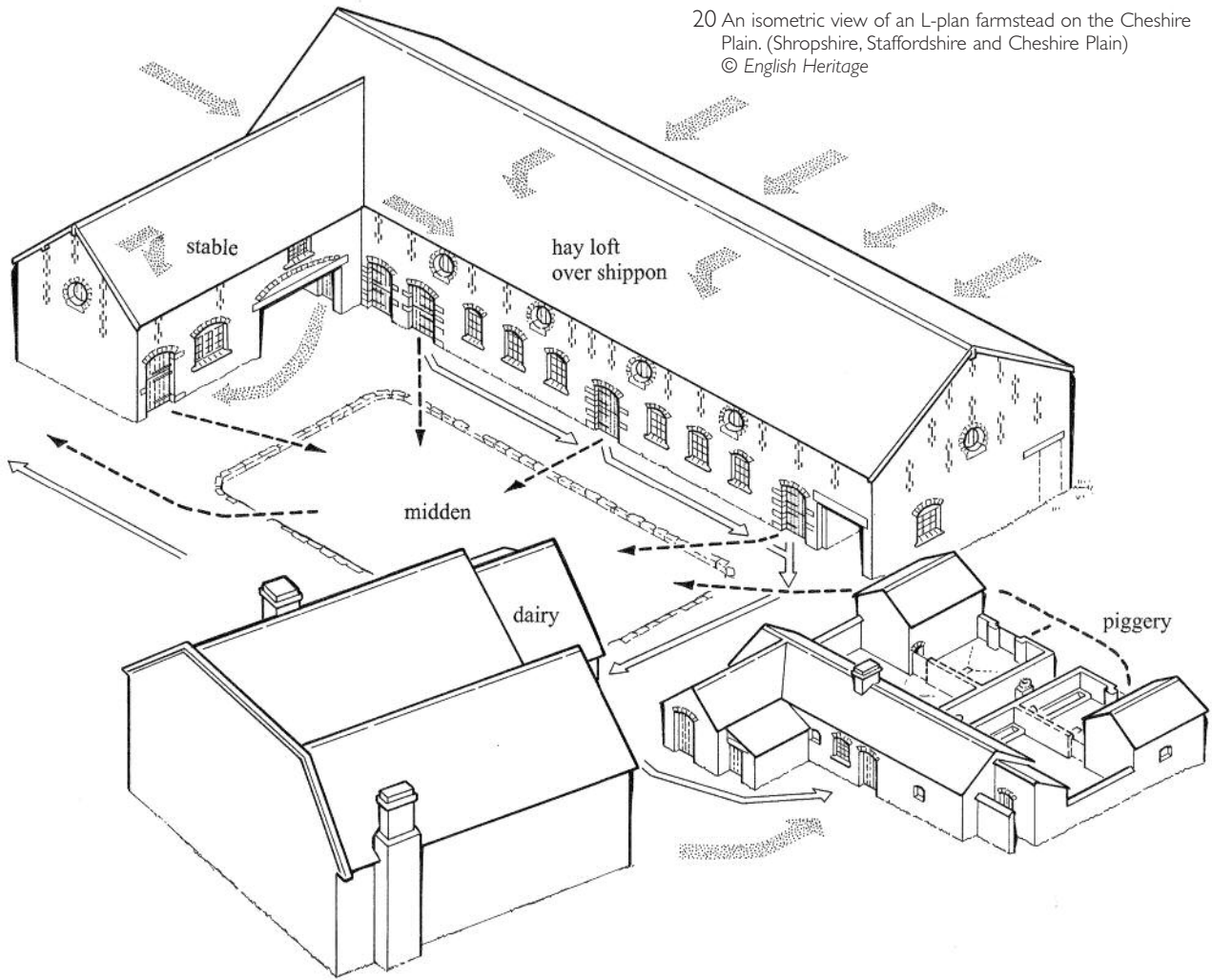
#### 5.2.5 DEVELOPMENT OF FARMING SYSTEMS

Archaeological evidence from deserted medieval settlements has shown how linear plans, including longhouses, were replaced by loose courtyard arrangements as owners prospered and their holdings grew larger (Lake 1989, pp.81–2; Gardiner 2000). Evidence from the tithe maps and first-edition 25-inch maps for sample Norfolk parishes showed that nearly half the farms were of an irregular layout in 1840 with very few regular E- or U-shaped courtyard plans. By 1880 dispersed layouts had reduced to an eighth, with E- and U-plans accounting for about a quarter of farms (Wade Martins 1991, p.199).

### 5.3 FARMSTEAD PLANS IN THE NORTH WEST

The plan forms of farmsteads in the Region display massive differences in terms of scale. Dispersed plans are common throughout the Region, the principal differences being between the defensible bastle houses and linear farmsteads, mostly now concentrated in upland landscapes, and the courtyard steadings of the coastal lowlands and inland vales. The small-to-medium sized

20 An isometric view of an L-plan farmstead on the Cheshire Plain. (Shropshire, Staffordshire and Cheshire Plain)  
© English Heritage



farms of upland areas were less likely to undertake complete reorganisations of the farmstead and so traditional buildings were added to, typically as more cattle were kept, resulting in parallel and dispersed plans. In the textile-producing areas of Lancashire and Yorkshire the 'fold' pattern was common and involved several cottages sharing a common yard. Blake Tyson's work on reconstructing Cumbrian farmsteads from documentary sources is outstanding in a national context (see Bibliography, 10.2).

### 5.3.1 FARMHOUSES

In all cases the farmhouse plays a key role in the layout of the farmstead. The plan forms of houses, particularly for the period up to the 1750s, are subject to considerable regional variation. Single-depth linear layouts, with services (including the dairy) at one end or in an outshut were common by the mid-17th century. Milk houses and dairies were typically incorporated into house plans (Pearson 1985, pp.88–95). In some examples, the services would be provided in a rear wing. In contrast to upland areas, where a plan with the chimneystack backing onto an entrance passage was certainly dominant by the 17th century, lobby-entrance houses (so-called because they had the main entrance into a lobby built against the chimneystack) became increasingly popular in lowland areas and in isolated

pockets (such as Borrowdale in the Lake District). In all parts of the Region, symmetrically designed double-depth houses with central entries and services contained in the rear rooms were being built after the 1750s. They are commonly associated with the later rebuilding of earlier steadings or the construction of new enclosure and regular plan farmsteads.

### 5.3.1 BASTLE HOUSES

The bastle house is a building type particular to the Border area of northern England (Figures 21 and 22). Over 200 examples are known in Northumberland with the distribution extending into Cumberland, the North Pennines and south of the Tyne Gap as far as Allendale, Weardale and the South Tyne Valley (Ryder 2004, p.265). Nineteen defensive bastle houses dating from the 16th and 17th centuries have been identified in Cumbria, all within 20 miles of the Scottish border (Ram, McDowell & Mercer 1970, pp.74–79; Brunskill 1978). The cattle were housed on the ground floor, usually with the doorway in a gable end, and the domestic space was in a room above, accessed by a ladder or later an external staircase. With stone walls up to 1.2m thick, the bastle house and its walled enclosure (the barmkin) offered farmers a defensive retreat where the family and stock could be secure from cattle rustlers in an area that remained lawless into the 17th century. Bastle houses

21 Distribution of listed bastle houses in England. Bastle houses are only found along the Borders area of northern England and reflect the turbulent history of the area.  
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generally date from the 16th to the 17th centuries although some are earlier (see North East for further details on bastle houses).

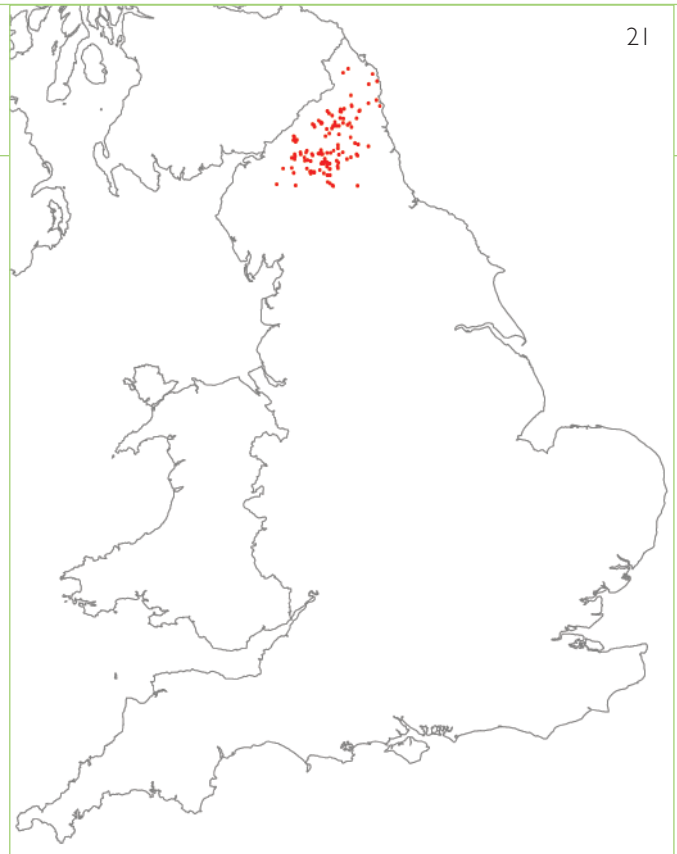
### 5.3.3 LINEAR PLANS

Linear plans are found throughout the Region, being uncommon in the Lancashire and Cheshire lowlands and predominant in many upland areas. They are associated with houses of hearth-passage plan and symmetrical houses of post-1750 date, with farm buildings of different dates attached and in line with the farmhouse. They vary greatly in scale, from substantial examples found from the South Pennines through to the Solway Plain to the laithe houses (see below) of the southern Pennines. In upland areas there was an increase in cattle numbers during the 18th century and in linear groups specialised in dairying and the rearing of stock, with little provision for corn. Linear farmsteads were described by Bailey and Culley in their report on Cumberland: 'Where farms are so very small, no great extent of offices is wanted; a barn, a byre for housing their cattle in winter, and a small stable, are in general all that is necessary... they are mostly at each end of the farmhouse' (Bailey & Culley 1794, p.208). As farm size increased, so did the number of buildings required, particularly for housing cattle, which were normally in-wintered for up to six months in upland areas of northern England (Grundy 1970, pp.3–5). A second range of buildings could be built along the valley side, parallel to the farmhouse, their design constrained by the dictates of the landscape. Very few linear plans are without a scatter of subsidiary buildings, and some developed into plans of two or three blocks of attached buildings.

Linear farmsteads can also be found absorbed into courtyard and L-plan steadings. Such later rebuilding of elements of these ranges, or conversion from agricultural to domestic use, can make the identification of early linear layouts difficult (Messenger 1973, p.49).

#### 5.3.3.1 Longhouses

Longhouses are recorded and documented throughout the Region, for example in the Solway Plain (Jennings 2003, pp.33–51), but intensive fieldwork in some areas – for example the Lancashire Pennines (Pearson 1985, p.15) – has not revealed the same densities of numbers as in neighbouring Yorkshire. Before the 17th century single-storey longhouses were typical in the Fylde (part of the Lancashire Plain area), but from the early 17th century these buildings were largely superseded. From the early 18th century cross-wings and outshots became common features of farmhouses of the area.



By the later 18th century double-pile farmhouses were typical (Watson & McClintock 1979, pp.21–8).

#### 5.3.3.2 Laithe Houses

A regionally distinct linear plan-type shared with adjoining parts of Yorkshire and the Humber is the laithe house, the word 'laithe' or 'lathe' being a northern English dialect word for a combined barn and cow house (RCHME 1986, p.178). The house and farm buildings are usually of one build, and there is no cross passage or inter-connection between the domestic and agricultural parts; both the roofline and the width of the various components may differ. Typically the farm buildings housed corn, cattle and occasionally other functions (such as stabling). Examples date from the mid-17th century but are not common until after 1750, with a concentration in the 1780–1840 period. They typically served farms of about 30 acres or less. They are found in Cumbria and Bowland, and are most densely concentrated in the Pennine part of West Yorkshire and Lancashire, where dual income from farming and industry – primarily textiles, but also lead working – enabled smallholdings to be economically viable (RCHME 1986, pp.178–83; Brunskill 1987, pp.106–10). The weaver-farmers of the West Riding as noted by Caird in 1851, for example, kept dairy cattle on holdings of around 20 acres, supplying the nearby towns with milk (Mingay 1989, p.940).

#### 5.3.4 DISPERSED PLANS

Dispersed plans occur throughout the Region, particularly in lowland areas and including high-status groups. Sixteenth-century records of farmsteads in

## 22 Bastle houses

Bastle houses were fortified farmhouses, usually of high status, in which the family lived at first-floor level. This was accessed by a ladder that could be withdrawn in times of trouble, with their cattle housed on the ground floor. Thick stone walls, small window openings and added steps

up to the first floor are characteristic features. Bastle houses reflect the turbulent history of the borders area of the north of England, especially between the mid-16th and early 17th centuries. (A and B Cheviot Fringe)

© Jen Deadman



Cumbria mention houses, barns and cow houses, implying that they were separate buildings (Denyer 1991, p.133; Tyson 1994), evidence for barn and livestock under one roof being more unusual (Tyson 2000, p.184). Some 19th-century estate maps show that in some areas dispersed plans – and possibly the separation of functions into individual structures – were commonplace prior to rebuilding into more unified plans (Messenger 1975, pp.330–33).

### 5.3.5 COURTYARD PLANS, INCLUDING L-PLANS

From the 18th century farms of over 150 acres in many of the lowland areas would typically be served by a farmstead ranged around a courtyard. Courtyard arrangements were still rare in Cumberland in the 1790s (Bailey & Culley 1794, p.208). However, almost 60 years later, 'The open square form of ground plan, with the dwelling forming one side and the out-offices the other three and the dung heap in the centre of the enclosed space [was said to be] the most common arrangement of the modern farm yard' (Dickenson 1852, p.277). Many of these 'improved' farmsteads in the lowlands of Cumbria incorporated bank barns into their layouts (Wade Martins, 2001; Lund 2002, p.42), including those of Lord Lonsdale on his estates around Lowther. These were far more practical, and are the finest examples in a national context of planned groups incorporating bank barns in courtyards of buildings with the house on one side (Messenger 1975, pp.26–351). These farmsteads, and the

landscapes around them, formed 'islands of planned countryside' amongst the predominant landscapes formed by customary tenants, marked by more irregular patterns of enclosure that often preserve patterns of medieval cultivation (Winchester 2005, pp.43–7). Courtyard plans can occur in upland areas, all being associated with improving estates from the late 18th century.

L-plan groups are found throughout the Region, and as has been noted above can be developments from linear ranges. There are large examples of L-plan and courtyard groups in the Eden Valley and the Lancashire and Amounderness Plain, in the former area associated with stock fattening and in the latter with dairying as well as fattening. On the Lancashire and Cheshire Plains, where dairying was predominant, the most common farmstead layout was the L-plan, although on some larger farms a U-plan was adopted (Morgan & Miller, 1990; Barnwell & Giles 1997, p.126). Dairy farms typically had a combined barn and fodder house built at right angles to the cow-house range, often separated by a cart entry for loading hay and corn into the first-floor lofted areas. Pigsties would usually be placed close to the house, either attached to the L-shaped range or as an individual element of the farmstead. This type of broad L-shaped plan can be found throughout the Cheshire Plain, and remained a predominant feature from the early 19th century to the inter-war period (Barnwell & Giles 1997, p.144). T-shaped plans similarly occur.



# 6.0 Key Building Types: Crop Storage and Processing

The analysis of key building types presented here could be presented by function rather than building type, as many functions relate to parts of buildings or parts of entire ranges or farmstead types. As the relationship between farmstead form and function has been outlined in Section 5, Section 6 will comprise a conventional overview of the key functional types. It will be noted in some regions that so many of these functions are combined in one combination barn or farmstead type that they cannot be easily teased out as a separate theme. Nevertheless, the national framework sections do present an overview of on-farm functions, and where relevant their rarity and survival, that are applicable nationally.

## 6.1 BARNs

### 6.1.1 NATIONAL OVERVIEW

In the British Isles and other parts of northern Europe, the harvested corn was often stored and processed inside a barn. After threshing – typically a process that occurred gradually over the winter months – the straw usually remained in the barn awaiting its use as bedding for livestock, while the grain destined for market or next year's seed would be stored either in the farmhouse or in a purpose-built granary.

Barns are often the oldest and most impressive buildings on the farm and are characterised by:

- Internal space for the storage of the unthreshed crop and an area (the threshing floor) for beating by flail the grain from the crop and for winnowing the grain from the chaff in a cross draught. This was also an area for the storage of straw after threshing.
- Externally, typically large opposing doors on the side walls to the threshing floor; although the size of openings is subject to much regional variation. Barns on large arable farms commonly had large threshing doors, sometimes with porches, into which a laden wagon would draw up and unload the crop. In some parts of the country the crop would be forked into the barn through pitching holes, and the threshing doors would be much smaller. Small winnowing doors sufficed in many pastoral-farming areas.
- Blank external walls, in mass-walled buildings often strengthened by buttresses or pilasters. Mass-walled barns usually had ventilation slits or patterned ventilation openings, and the wattle or lath infill to timber-framed barns was often left exposed. In some

areas, the crop would be unloaded from a cart or wagon into the barn through pitching holes.

The distinctive form and plan of barns remained comparatively little altered between the 13th and 19th centuries. Surviving pre-1750 barns represent only a small proportion of the original population, their date, scale and landscape context being major factors in determining their survival. There is only one complete survivor of the 2–2,900 tithe barns that existed on Cistercian estates in the pre-1550 period (Brunskill 1982, p.35). Local studies have indicated that small and pre-18th-century barns are most likely to survive on farm holdings of less than 150 acres that have not experienced major growth in subsequent centuries (Wade Martins 1991, p.160). These are concentrated in landscapes of ancient enclosure, improving estates and the process of enclosure in the post-1750 being linked to often wholesale rebuilding.

Major variations were in the five following areas.

#### 6.1.1.1 Plan form

In the most common form of plan the threshing floor was in the centre, although it could be sited off-centre or at one end. A greater span was enabled by aisled barn construction, either in single or double aisles. This was common in East Anglia and the South East (Rigold 1971 and 1973), and for high-status buildings outside that area, including a group mostly dating from between 1570 and 1650 in the Pennines (Clarke 1972 and 1974).

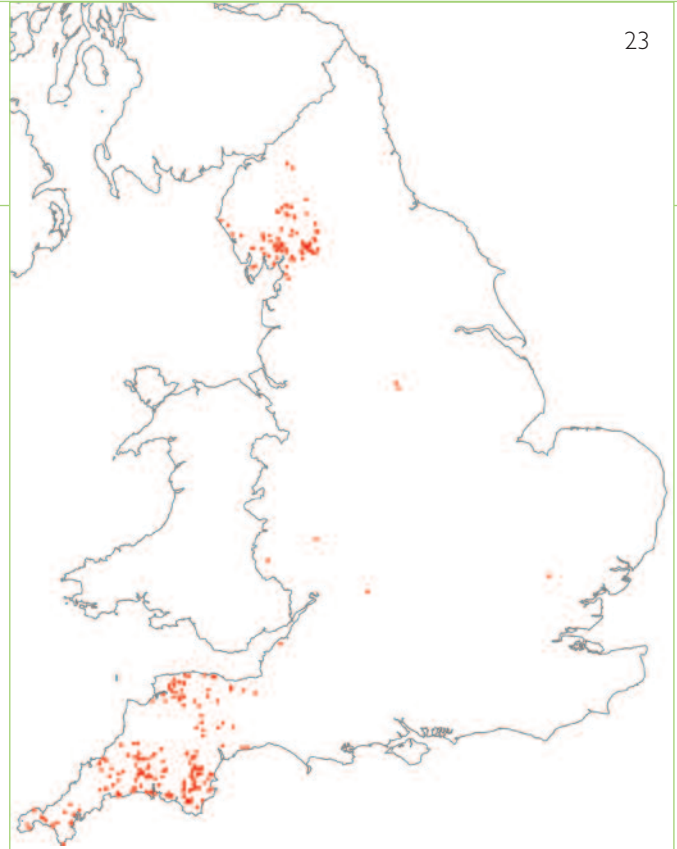
Outshots or projecting lean-tos were commonly added to barns, for housing carts, livestock and other functions. The number of additional external openings indicates accommodation for other functions, ranging from minor doors enabling the barn to house functions such as clipping sheep when empty, to lofts and stabling,

### 23 Distribution of listed bank barns in England

The concentration of bank barns in Cumbria and in Devon, Cornwall and south-west Somerset in the South West Region, is clear from this map. However, this map does not reflect the true density of bank barns as the majority dating from the mid-19th century are not listed.

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#### 6.1.1.2 Size

Barn size can be strongly indicative of the former extent of arable and holding size, ranging from very small in dairying or stock-rearing areas, to very large on the much larger holdings of arable areas. The practice of mowing rather than cutting by sickle the corn crop, widespread by the 19th century, also had an impact on barn size, as large quantities of straw – ready for feeding cattle in the yard – would need to be accommodated.

In the medieval period it was common practice to house all the crop in the barn, but in later centuries the unthreshed crop could be raised off the ground by a platform or by staddle stones (see 6.2 and Figure 28), and stored in an open yard (rickyard) or a staddle barn. Examples of the latter, typically of late 18th- to early 19th-century date, survive on the downland farms of Hampshire, south Wiltshire and east Dorset. Ricking was not a common practice in southern England until the 19th century, but was noted by observers as being common in northern England and Staffordshire in the 17th century (Colvin & Newman 1981, p.97; Peters 1969, p.65).

#### 6.1.1.3 Combination barns

There is increasing evidence in many parts of the country for threshing barns to have originated from at least the 17th century as combination barns, which incorporated other functions in the main body of the barn such as the housing of livestock. These ranged from the end bays of the barn to the aisles of Pennine barns or the ground floors of split-level buildings. Multi-functional two-level barns, including bank barns and their variants (Figure 23), were increasingly adopted from the late 18th century (and noted by the writers of the county reports for the Board of Agriculture) – often along with the introduction of mechanisation – in many areas of England (Barnwell & Giles 1997, p.156).

#### 6.1.1.4 Evidence for mechanisation

The introduction of machine threshing after its invention in 1786 led to the erection in existing barns of additions to house machinery, for chopping and crushing fodder as well as threshing grain. Early machines were powered by horse engines in special-purpose semi-circular buildings, which projected from the barn and were commonly known as 'gin gangs' in the north of England. Steam, water and wind power were also used (Figure 25). The uptake of machinery varied across the country. In areas where labour was expensive mechanisation found favour; horse engine houses and evidence for water

power being most common in the lowlands of Yorkshire and the Humber and the North East, in parts of the West Midlands and in the South West peninsula (especially Cornwall). In the southern counties, where labour was cheap and abundant until the 1850s or later, few barns bear evidence for the introduction of machinery (Hutton 1976).

From the early 19th century the traditional barn began to be replaced by large multi-functional buildings with threshing and fodder-processing areas linked to granaries, straw storage and cattle housing. These could project from the north of courtyard plans (as was common in Northumberland) or be integrated into other types of plan. In some areas, such as the eastern lowlands from Nottinghamshire northwards, the barn was from the 1850s reduced to a small feed-processing room (Figure 28, bottom).

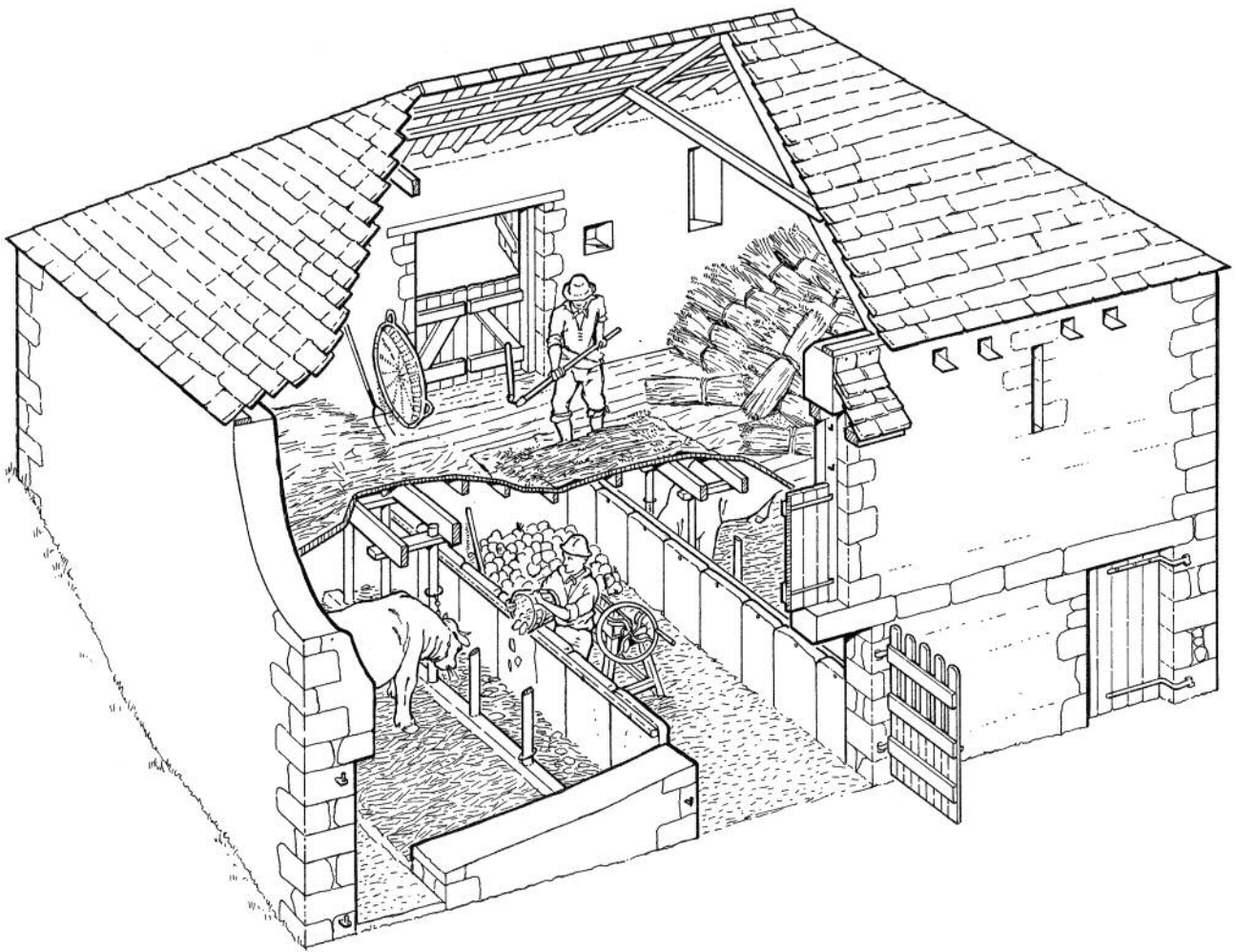
The introduction of the portable steam engine and threshing machine meant that tackle could be taken to the stack. This was widespread by the 1850s, and heralded the end of the traditional barn as a processing building.

Features relating to the use of power are highly vulnerable and rare, particularly horse wheels.

#### 6.1.1.5 Evidence for reuse and adaptation

Careful inspection of barn interiors may reveal evidence for reused timbers (a common practice), in addition to former floors, partitions, doors and windows. This may well indicate that a present open space was divided off

24 A bank barn showing the first-floor barn over ground-floor shippons and a fodder-preparation area. This example is a true bank barn in that it is built into a bank giving ground-level access to the entrance of the first-floor barn. Some bank barns called 'variant bank barns' have the upper level access at the end. The North West Region contains the earliest bank barns in the country. © English Heritage



at one end or even provided with an additional floor. The high point of barn building occurred during the 18th and early 19th centuries, as grain yields rose and new land came into cultivation. Additions were commonly made to existing barns or additional barns built. It is also likely that where a barn was originally multi-purpose, the animal housing was removed and a separate barn or cow house built.

Mechanical threshing had removed the need for a threshing floor and the uses to which the barn was put changed. As cattle gained in importance at the end of the 19th century barns were converted into mixing houses for fodder. The introduction of steam-powered machinery (whether fixed or mobile) usually involved the cutting of a hatch in the barn wall in order to allow belting to enter. Alterations might well involve the dividing of the building with partition walls and floors.

### 6.1.2 BARNs IN THE NORTH WEST (Figure 26)

Barns that functioned only as a building for crop processing, characterised by a central or off-centre pair of opposing doors, are encountered from the Solway Plain to the Lancashire Valleys, the South Pennines and

the Cheshire Plain. High-status examples in these areas can be cruck-framed and exceed five bays in length, and relate to large farmsteads of the home farms of gentry estates; they are all of pre-1750 date. However, buildings that incorporated several functions – including the threshing of the corn crop, animal housing, fodder storage and sometimes a cart shed – are typical of the Region and were being constructed in the North West in a variety of forms from the medieval period. These range from large high-status examples, concentrated in the southern Lancashire lowlands and uplands. It is the way the combination of uses are incorporated into the building (using horizontal and/or vertical divisions) that lead to the distinctive forms of barns seen in the North West.

#### 6.1.2.1 Aisled barns

In the north of England there is a large group of aisled barns concentrated around the South and West Yorkshire Pennines, but also extending into the Lancashire Plain and Valleys and the South Pennines. The distribution of the northern aisled barns was first studied in the 1970s, when only twelve were known in the Lancashire Pennines. Some of these examples are late

25 Power in barns: national examples

- A A projecting horse engine house attached to a barn. (North Yorkshire Moors and Cleveland Hills)
  - B The interior of a horse engine house that contains a rare example of an in situ horse gin. (North West Norfolk)
  - C A water wheel, providing power to the feed-processing machinery in a home dairy farm, remodelled in the 1890s. (Breckland)
  - D A farmstead that incorporated a fixed steam engine to drive threshing and other crop- and fodder-processing equipment. (Cheviot Fringe)
  - E The use of portable steam engines often left no physical evidence within the barn structure but in some cases drive shafts and fly wheels survive in-situ. (Dorset Downs and Cranborne Chase)
- A & D © Jen Deadman; B & C © English Heritage / Michael Williams; E © Bob Edwards

25A



25B



25C



25D



25E



medieval, but most appear to have been built between 1570 and 1650 (Clarke 1973). Many are associated with larger landholdings. The northern aisled barns vary greatly in size, construction and appearance. They are between three and eleven bays long with either single aisles or, more commonly, aisles on both sides of the building. Whilst almost all now have stone walls, some

have been shown to have originally been timber framed with the wall framing later replaced in stone. In Lancashire the roof trusses are usually of king post construction.

The form of the aisled barn offered great versatility. It provided a large floor area that could serve a

## 26 Barns in the North West Region

Most barns in the Region are combination buildings incorporating housing for animals as well as crop-processing and storage areas. The division between these functions can be horizontal as in bank barns (A and B), or vertical as in on-the-level barns, such as aisled (C and D).

- A & B Bank barns. A is a 'true' bank barn in that the threshing floor is accessed in its long side whereas in the 'variant' bank barn the upper level access is at the gable with the building set end-on into the slope. (A Penrith, Eden Valley; B Cumbria High Fells)
- C A large group of aisled barns dating from the 15th to mid 17th centuries is concentrated around the South Pennines extending into Lancashire. This high-status barn built c.1605 is of nine bays with ox-stalls, added in c1610 in part of one of the aisles, and stables. (Lancashire Valleys)

D A typical on-the-level barn with a central threshing floor and shippons arranged across the width of the building to either side accessed by cross passages at each end. Although quite plain, the chamfers to window and door openings and inside, an aisled timber-frame, indicate a possible 17th-century date. (Lancashire Valleys)

E A rare survival of a timber-framed threshing barn of three bays with cow houses added later. The barn dates from the 16th century. (Shropshire Staffordshire and Cheshire Plain)

F A large early 17th-century cruck threshing barn of seven bays with brick walls. (Lancashire Valleys)

A, C, D and E © Jen Deadman; B © Jeremy Lake; F © 357557 Mr Roy Finch. Taken as part of the Images of England Project

26A



26B



26C



26D



26E



26F



multi-purpose function, incorporating both a storage area for hay and crops and stalls for cattle. Such barns typically have wide aisles, often nearly as wide as the nave, achieved by the use of relatively low-pitched roofs, and often separate doorways into the areas where cattle

were stalled. The survival of fittings such as stall divisions is rare.

### 6.1.2.2 Partitioned barns

These comprise on-the-level barns with horizontal

divisions separating the storage and processing area from stabling or cattle housing. They are found throughout the Region and date from the late medieval period. In upland areas, the earliest examples of barns – dating up to and including the 17th century – comprise single-storey, dry-stone wall structures, three or four bays long, the roofs often supported on crucks with a threshing floor and an adjacent walled-off cow byre. Sometimes the dividing wall has gone, but a separate entrance survives that would presumably have originally led into a cow house, which could also have internal access from the barn itself.

Laithe Houses (see 5.3.1) include combination barns with high, arched entrances to a barn (hay and corn) with stabling and a cow house (often for as little as six cattle) at one end.

### **6.1.2.3 'Lancashire Barns', and barns with a gable entries to lofted cow houses**

Another distinctive arrangement, concentrated in an area from the South Cumbria Low Fells to the north of the Cheshire Plain, is the so-called 'Lancashire barn' (Brunskill 1982, p.109) where the downhill end of the barn is broadened to take normally two rows of stalls for cattle, with three doorways in the gable end giving access to the central feeding passage and manure passages. The extra width of the cow house end of the barn is achieved by an outshot usually on the front of the building. They are usually lofted and the byre may also be approached from the threshing floor. A small number of Lancashire barns survive from the 17th century associated with high-status sites but most date from the century after 1750 (Brunskill 1987, p.113).

Also common in this same area, with surviving examples dating from the 17th century, are barns with gable-end entries to cow houses: these typically have three doors (see Figure 33E).

### **6.1.2.4 Barns with lofted animal houses with side entries at both ends**

Another distinctive form of combination barn can be found across the lowland parts of the Region: a building of three, four or five bays comprising a threshing bay and cow house, with a loft over one side of the threshing floor and either a further lofted cow house or a stable at the other. The entrances to the animal accommodation are set in the side walls. Examples date from the 17th century, and are concentrated in the Pennines from the Dark Peak northwards.

In Cheshire barns pre-dating 1800 are relatively rare meaning there is little evidence for 18th-century barns incorporating cattle housing at ground-floor level as is seen in the neighbouring dairying area of North Shropshire (West Midlands Region). By around 1800

there are examples of specialised buildings similar to those found in Lancashire, particularly in the Fylde area, with lofted cow houses either side of a threshing bay/fodder storage and processing area (Barnwell & Giles 1997, pp.128–30). These occur also in the Solway Plain.

### **6.1.2.5 Bank Barns**

In Cumbria and the northern parts of Lancashire (from Morecambe Bay northwards) are found multi-functional bank barns, normally using a natural slope to provide level access to both floors. Bank barns are a distinctive and characteristic feature of the north of the Region. The only other parts of the country where they are found, although not in the same abundance as in Cumbria, is in adjoining parts of the North East and in the South West counties of Devon, Cornwall and Somerset.

Contemporaries commented that bank barns had several advantages in that by combining many of the functions and buildings of the farmstead under one roof, they reduced the cost of construction and maintenance (Whittaker 2001, p.14). They enabled animals to be fed and strawed down without movement from building to building and in hilly areas they made ideal use of sloping ground.

A distinction can be drawn between 'variant bank barns', built across the slope, and 'true bank barns' built along the slope.

Variant bank barns are generally earlier in date, with many examples being of pre-1750 date. Buildings of this form are found throughout the upland landscapes of northern Europe, and allow livestock to be accommodated on part of the ground floor. The gable was always built into the bank, with the barn projecting into the valley. It was thus able to use the cross drafts for winnowing grain and providing better ventilation across the livestock accommodation below (Denyer 1991, p.135). Access to the byres was usually at the gable end at the lower level with a central manure/feeding passage, and sometimes in the side wall. These 'variant bank barns' are said to be more common in eastern than western valleys, with a particular concentration in the Lune Valley, and were constructed throughout the 18th century (Brunskill 1987, p.116). There are also examples of these in the Dark Peak and elsewhere in the Pennines.

The earliest examples of the classic form of true bank barn built along the slope may be late medieval, the documentary and building evidence indicating that large-scale examples were built on gentry estates from the late 16th century and became widespread after 1750 (Tyson 1979, pp.88–9, 93; Tyson 1980, pp.113–126; Brunskill 1987, pp.115–17). Seventeenth-century examples tend to be high status and large, extending to as many as 13 bays (Whittaker 1989, pp.22–3) but as the

- 27A The interior of a granary over a cart shed showing the grain bins, which allowed different grains, and even the crop from different years, to be kept separate. (North West Norfolk)
- B Ventilation was important to keep the stored grain dry. Air circulation could be achieved through small windows with shutters, hit-and-miss ventilation grilles, windows with fixed louvers or, in this example, adjustable louvers. (Hampshire Downs)
- A © English Heritage / Michael Williams; B © Bob Edwards



form became more widely used and extended down the social scale, smaller examples are typical. By the mid-19th century Dickenson could report that bank barns were the most frequently found type of barn (Dickenson 1852, p.277) although the lack of ventilation in 'the old underhoused cow house' where the headroom was generally too low, the floor roughly paved, uneven and undrained, was recognised as a problem by the mid-19th century when the conversion of the ground floor into a 'barn room' and the building of new cow houses was recommended (Webster 1868, p.27). Their design became increasingly standardised as they became an accepted part of the 'improved' 19th-century farmyard. Not all bank barns are built into a slope; some have a ramp to the upper floor.

Some south Lakeland bank barns have a characteristic first-floor covered gallery projecting along the face of the barn, usually on the side away from the main doors. Although they were often called 'spinning galleries' it is unlikely that they were ever used for spinning but they did provide shelter for the doors to the livestock below and gave some additional drying and storage space. Other regional variations include the use of stone cheeks and, in the south, brackets to support the pentice over the double doors to the threshing floor. The threshing floor was usually located above a central cart shed, although this element is absent from Langdale examples. A small number were not built into the slope, the upper floor being accessed from steps.

#### 6.1.2.6 Mechanisation

The threshing machine was also introduced in the first half of the 19th century, so that by 1851 it was, according to Dickenson, 'very general over all the grain-growing parts of the county (Cumberland)'. This involved the provision of some sort of power source. Dickenson found it surprising that in contrast to other counties such as Devon and Somerset with their fast-flowing streams, little advantage was taken of waterpower in Cumberland. Horses were far more usual, and horse engines were usually housed in round houses built on the sides of barns. In 1849, in west Cumberland, there were 306 threshing machines, of which 71 were driven by water, seven by steam, one by wind and all the rest by horses. In east Cumberland, however, water was being used more frequently (Dickenson 1852, p.241).

Horse engines were installed on the larger lowland farms from the early 19th century to work threshing

and feed-preparation machinery. Wind power was much more unusual, and a windmill at Curwen's model farm at Schoose near Workington (West Cumbria Coastal Plain) is a unique survival. By the mid-19th century steam engines were being installed on the largest of farms, but in contrast to the North East are rarely found in this Region.

There is in contrast very little evidence for mechanisation in the pastoral landscapes of Cheshire, where fodder processing did not require as much energy in conversion into food as arable until the introduction of oil engines in the early 20th century (Barnwell 2000, p.175).

## 6.2 GRANARIES

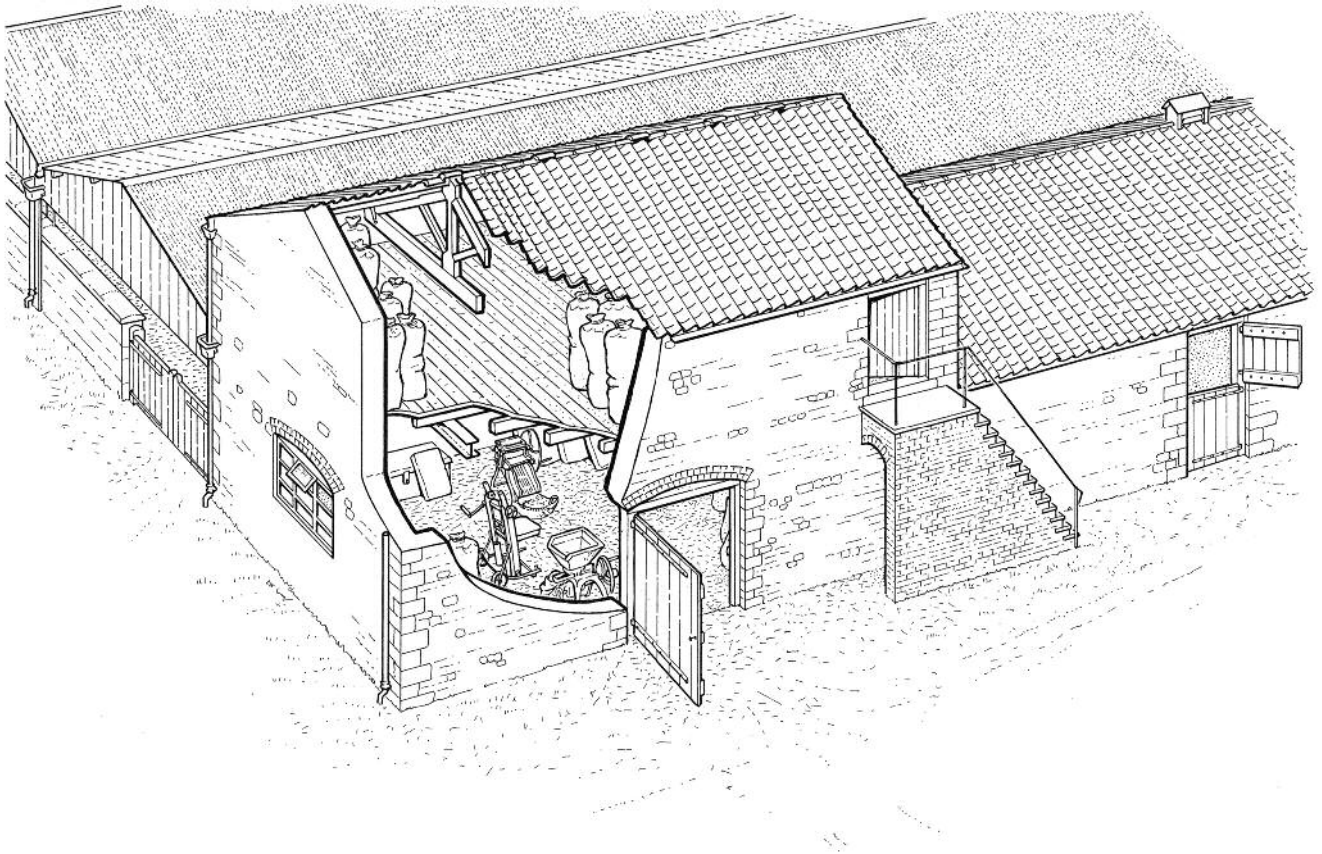
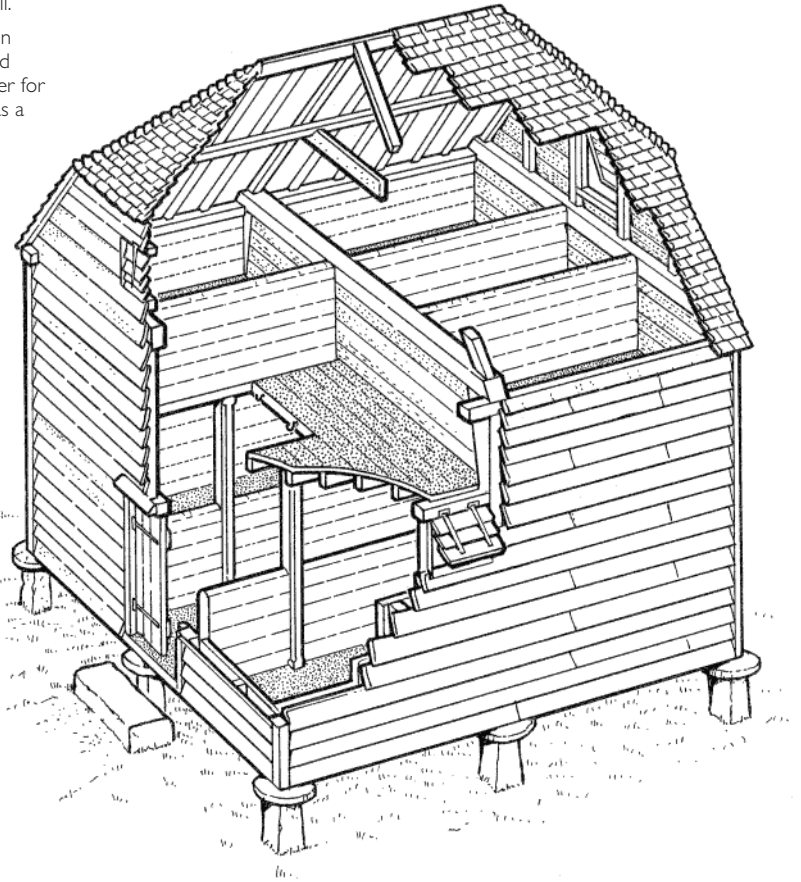
**6.2.1 NATIONAL OVERVIEW** (Figures 27 & 28) Once threshed, grain needed to be stored away from damp and vermin. It would be sold off the farm or retained for animal feed. A small number of specialist granaries built by large landowners, in particular the monastic institutions, survive from the 14th century. Most granaries are of late 18th- and 19th-century date, the

## 28 Granaries

Top: A free-standing timber-framed granary on staddle stones. This example has two floors and is fitted with grain bins on both levels. Staddle stone granaries are concentrated in a band from Wiltshire to Essex and in South East England with occasional examples being found as far west as Cornwall.

Bottom: Granary occupying the first floor of a mixing barn in Lincolnshire. In this mid-19th-century building the ground floor is devoted to the preparation and storage of fodder for cattle whilst the first floor, reached by external steps, was a granary. In similar buildings in this area only part of the building may have a loft for grain storage.

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29A



29 Granaries and cart sheds in the North West Region

Granaries are almost always combined with other functions, either as a loft in a linear farmstead range (A Cumbria High Fells) or within a combination barn (Eden Valley). Similarly, cart sheds are usually found within a larger range (C Shropshire Staffordshire and Cheshire Plain) A and C © Jen Deadman; B © English Heritage / Michael Williams

29B



29C



need for more storage for grain often coinciding with the necessity for more cart and implement space at a time when commercial farming and markets were expanding and more implements introduced on farms. The construction of detached granaries raised off the ground, along with the heightening of plinth walls to timber-framed barns, was also a reaction to the threat posed by the rapid spread of the brown rat from the early 18th century (McCann 1996).

Internally granary walls were usually close-boarded or plastered and limewashed, and the floor made of tight-fitting lapped boards to prevent loss of grain. Grain bins, or the slots in vertical timbers for horizontal planking used to make them, are another characteristic feature: close-boarded partitions allowed different crops to be kept separate (Figure 28). Window openings were typically small, and, with ventilation being the main objective, the openings were generally either louvers, sliding vents or grilles.

Grain was typically accommodated in:

- The lofts of farmhouses, a practice common before 1750.
- Small, square or rectangular structures raised above ground level on mushroom-shaped staddle stones or brick arches and accessed by moveable wooden steps. Internally, they may have been fitted with wooden partitions to create grain bins. They were clearly

related to the helm, which, according to documents from the 15th to 17th centuries, comprised timber platforms on staddle stones and were concentrated in the Midland counties (Dyer 1984; Needham 1984; Airs 1987; Barley 1990, pp.165–7): none have survived or been excavated. Most are of late 18th- or 19th-century date. Examples abound in Cambridgeshire, Berkshire, Sussex, Hampshire and Wiltshire, but extend into Dorset, Devon and Cornwall. Free-standing granaries are commonly timber-framed, clad in weatherboard or infilled with brick, but brick or stone examples have been found, particularly at the western edge of their distribution. The larger free-standing granaries were of two or even three floors (Figure 27).

- The upper floors of farm buildings, most commonly barns – observable from the 14th century (Le Patourel in Miller 1991, p.872) – and from the 17th century in the South East and East Anglia, much later further north and west, above cart sheds (see 6.3.1). Exteriors are usually marked by shuttered windows for ventilation. The side walls are sometimes weatherboarded, even in regions where weatherboarding is unusual, again to help ventilation. Examples date from the 17th century in arable areas. A separate external stair often gave access to the granary door (Figures 28 & 29). There was often a trap door into the cart shed below with a hoist beside it to allow for the loading of sacks. The granary

floor had to withstand heavy weights so was stoutly built. In a few instances the granary was situated over cowsheds or stables, but generally this was frowned upon because the damp and smells from the animals below could taint the grain. Because of the value of the crop, granaries were often the only farm building to be locked, sometimes with a dog kennel or goose house under the steps to deter thieves.

A very small number of pre-18th-century detached granaries have survived, and timber-framed granaries – detached or located over cart sheds or stables – are clearly far less likely to have survived to the present day than examples in stone or brick. Interior fittings such as grain bins and features such as louvered windows are particularly vulnerable when a change of use is contemplated.

### **6.2.2 GRANARIES IN THE NORTH WEST** (Figure 29)

There are no known examples of granaries on staddle stones in the Region. In lowland areas granaries were typically located above stables or cart sheds, but do not form prominent elements in the group. On many upland farms the production of grain was of minor importance and the small quantities stored would often be kept in the farmhouse, or (more rarely) in a room accessed by steps and forming part of the house or a combination building. Where purpose-built structures existed they invariably formed part of another building, being either above a cart shed – for example as carts were introduced in the Hawkshead area of the South Cumbria Low Fells (Denyer 1991, 122) – or located on the first floor of a combination barn.

The wet climate of Cumbria, which could make grain growing and harvest a hazardous affair, led to efforts being made both to protect the cut crop and to dry the grain. Pringle, writing of Westmorland in 1797, thought that the barns were large enough to house all the cut crop before threshing (Pringle 1797, p.300) but 60 years later, Dickenson described open-sided Dutch-style barns (see Glossary, 10.0) on cast-iron pillars with timber roofs that were being erected to shelter corn stacks in Cumberland. These rather impermanent structures are unlikely to survive, but some more solid examples of masonry and brick have survived. Traditionally corn stacks were round and placed on stone pillars to protect them from damp and rats (Dickenson 1852, pp.233–4) but surviving examples are very rare.

## **6.3 CART SHEDS AND IMPLEMENT SHEDS**

### **6.3.1 NATIONAL OVERVIEW**

The cart shed housed not only carts for transporting muck to fields, the harvest to the steading and grain to market, but also the implements needed (primarily for arable cultivation) on the farm. It could also

accommodate the coach or pony trap. Left outside, wooden implements could shrink and crack in the sun, while rain and snow caused iron to rust, jamming any moving parts. Cart sheds often faced away from the farmyard and were often close to the stables and roadways, giving direct access to the fields. They have been found as additions to barns, but are more commonly found as detached single- or double-storey buildings, in the case of the latter invariably with a first-floor granary (see 6.2.1). The size of cart-shed ranges serves as a rough indication of the former arable acreage of the farm. In some parts of the country, often in pastoral areas, the difficult terrain meant that wheeled vehicles were not widely used and so cart sheds tended to be few and smaller, perhaps of only one or two bays. One bay was sometimes enclosed with a wide door for the storage of small implements, or perhaps a pony trap. Cart sheds and implement sheds with lockable doors did not appear in any great numbers until the mid-19th century, when horse-drawn hoes, and later reapers and mowing machines, became more prevalent (Walton 1973; Mingay 1989, pp.532–44).

Examples of pre-19th-century date, concentrated on estate farms and in the arable lowlands, are extremely rare.

### **6.3.2 CART SHEDS IN THE NORTH WEST** (Figure 29)

The implements required for a mainly pastoral system were limited. Few drills or hoes were to be found in Cumberland and Westmorland in the 1790s (Bailey & Culley 1797, p.213; Pringle 1797, p.308). Generally, in upland areas such as the Lake District and the Pennines, carts were a relatively late introduction, with sledges being the more usual method of transport until the 19th century. Single-bay cart sheds are the most common type. Many bank barns incorporate a cart bay beneath the winnowing door on the upper floor. In lowland Cumbria where there was more arable farming, separate open-sided cart sheds with a granary over are found, although few date from before the 19th century. In lowland Lancashire and Cheshire cart sheds nearly always form part of one of the main ranges of buildings – again usually over cart sheds or stables – and are rarely detached structures. Generally they are smaller than cart sheds found in predominantly arable areas in other parts of England.

## **6.4 HAY BARNs AND OTHER CROP-RELATED BUILDINGS**

### **6.4.1 NATIONAL OVERVIEW**

Hay would be kept in lofts over the cow house and stable, stored in stacks or in purpose-built barns. The latter differed from corn barns in that they were open-sided to allow a good flow of air through the hay. They comprised little more than a roof supported on brick,

30A



30 Hay barns in the North West Region

Hay barns are commonly found on the pastoral farms of the North West Region. Most date from the 19th century and may be found located in the fields or at the main farmstead. Those of large lowland farms can be impressive buildings with decorative ventilation patterns in the brickwork.

(A South Cumbria Low Fells; B Solway Basin; C Shropshire, Staffordshire and Cheshire Plain)

A © Jennifer Deadman; B © Jeremy Lake; C © 404733 Mr Michael Tuck  
Taken as part of the Images of England Project

30B



30C



stone or iron piers with solid gable walls. They mostly date from the second half of the 19th century, and are more typical of the wetter pastoral west than the arable east. A very small number of timber hay barns with adjustable roofs – as commonly survive in the Netherlands – survive intact, mostly in Yorkshire. The agricultural depression from the 1870s meant that dairy farming was one of the few branches of farming to remain profitable, leading to an increase in the production of hay. This period saw the introduction of some of the first mass-produced iron farm buildings, such as Dutch barns for hay storage, and also of airtight clamps for the preservation of silage. Silage towers were built in small numbers in the inter-war period, but were not generally adopted until the 1960s (Shaw 1990).

As the use of fodder crops, such as turnips, and over-wintering of cattle became countrywide, there developed a need to store the fodder in earth clamps or small rooms. In some of the better-planned farmsteads the root and fodder stores would be incorporated into the cattle housing, usually located close to where the cattle were stalled with access between the two. On smaller farmsteads the root store was either a separate building or formed part of a combination building, perhaps being associated with a granary or workshop. At present, it is not possible to identify any particular features of these buildings, other than the building materials, that are regionally characteristic.

Some areas of the country developed a specialisation in the production of particular crops such as hops or fruit. In some cases these crops required the construction of particular buildings that are regionally characteristic: for example, the oast house/hop kiln of the South East and West Midlands and the cider house of Herefordshire and the South West.

Small kilns for drying corn and particularly malt for brewing have been recovered through excavation (Le Patourel in Miller 1991, p.875) and a small number of much larger and more solidly constructed examples survive from the 17th century, especially in the North West and South West. Surviving examples of corn-drying kilns, concentrated in upland farming areas, are very rare. The processing of corn to flour was undertaken in mills normally powered by water or wind. Mill buildings are often found isolated from farmsteads but occasionally they can form part of the farmstead.

#### 6.4.2 HAY BARNs AND OTHER CROP-RELATED BUILDINGS IN THE NORTH WEST (Figure 30)

A common feature of many larger pastoral farms was the hay barn. This was usually a separate structure with open sides that allowed adequate ventilation of the hay whilst keeping it dry. In some parts of the Region the hay barn could be built in the fields whilst in lowland areas throughout the Region they typically form part of the farmstead. They could be built to substantial proportions

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and given decorative treatment in both the form and detail of the ventilation patterns, particularly in the farmsteads of the Cheshire Plain.

In northern and upland areas of the Region it was not always possible to fully ripen the grain sufficiently by natural means, and so corn-drying kilns were used. Farmers usually shared a kiln, which when built for communal use would often be located on common land. The kiln consisted of a firing chamber with a drying floor

above. Sometimes the kiln was built into a bank so that both the firing chamber and the drying floor could be tended from ground level. Occasionally a kiln was incorporated into another farm building. From the 18th century it became usual to add kilns to a water mill, leading to farmstead kilns being abandoned (Brunskill 1987, pp.96–7). The few examples that survive had slate drying floors supported on stone joists. From the later 18th century, perforated clay tiles typically replaced the slate floors.

# 7.0 Key Building Types: Animals and Animal Products

## 7.1 CATTLE HOUSING

### 7.1.1 NATIONAL OVERVIEW (Figure 31)

There are great regional differences in the management of cattle and the buildings that house them. This extends to how they are described in different parts of the country: for example, 'shippon' in much of the South West; 'byre' in northern England; 'hovel' in central England. Stalls, drains and muck passages have also been given their own local vocabulary.

Evidence for cattle housing is very rare before the 18th century, and in many areas uncommon before the 19th century. The agricultural improvements of the 18th century emphasised the importance of farmyard manure in maintaining the fertility of the soil. It was also recognised that cattle fattened better and were more productive in milk if housed in strawed-down yards and buildings, and fed with carefully measured quantities of nutritious turnips and imported feed. There is hardly a farmstead without 19th-century adaptations for increased livestock accommodation.

The introduction of hygiene regulations early in the 20th century for the production of milk resulted in new floors, windows and stall arrangements being inserted. Animal welfare standards are also important; cows on farms seeking Soil Association assurance require more than double (at 6 square metres) the space of tethered beasts in traditional cow houses. Some, particularly under split-level barns, are too low for modern usage and so have been preserved by abandonment or occasional use by sheep.

Characteristic features of cattle housing include:

- Externally, lower and wider doorways than stabling, with wall ventilation slits (adjustable sliding ventilators from the early 19th century) and holes in gable ends or side walls for the throwing out of muck (especially in areas with limited straw for bedding, where cattle were wintered indoors).
- Internally, ceilings were typically low and there was very little light. Hay was stored above in lofts, and in some examples (such as the Pennines) on either side in 'sink mows', increasing the warmth and airlessness. It was not until the later 19th century that the importance of a well-ventilated cow house became fully appreciated. The size of the haylofts increased as more cows were kept and the production of hay rose; their ceilings were higher and air ducts went from the cow house up on to the roof above the hay barn.

- Interior stalling and feeding arrangements. Cows were usually tethered in pairs with low partitions of wood, stone, slate and, later, cast iron between them. As the breeding of stock improved and cows became larger, the space for the animals in the older buildings became limited and an indication of the date of a cow house can be the length of the stalls or the width of the building. Feeding arrangements can survive in the form of hayracks, water bowls and mangers for feed.
- Variations in internal planning, cattle being stalled along or across the main axis of the building and facing a wall or partition. They were fed either from behind or from a feeding passage, these often being connected to fodder rooms from the late 18th century.

In the following descriptions of buildings for cattle the wide variety in the means of providing accommodation for cattle, both over time and regionally, can be seen .

#### 7.1.1.1 Longhouses

In this type of building the family and animals used a common entrance and the cattle (typically prized dairy cattle) were stalled at one end, usually the end down-slope. Examples (often high status in terms of their size, detail and construction) survive in parts of the north and west of England and are usually the only evidence for cattle housing before the 17th century. They were more widespread in the medieval period (see 5.1.1 and Figure 17).

#### 7.1.1.2 Ox houses

Oxen were the favoured animals for draught work on the farm in the medieval period, although in some parts of the country horses were already replacing them.. They survived in some areas into the 19th and even 20th centuries. Ox houses can be very difficult to identify, the most distinguishing feature being wide doorways and wider-than-average stalling (see 7.3.2).

#### 7.1.1.3 Combination barns

See 6.1.2. These were used for cattle accommodation from the 17th century, and in northern aisled barns from at least that period.

#### 7.1.1.4 Open-fronted sheds

The earliest of these were the two-storey linhays of the South West, with cattle accommodated below a hayloft. Shelter sheds, facing on to yards and either with haylofts above or simply single-storey, were increasingly built from the mid-18th century. Cattle yards with open-fronted sheds were typical of mixed farming areas where cattle

### 31 Cattle housing: national examples

- A & B Wooden cow stalls and slate cow stalls, the latter as found throughout the northern uplands. (A Durham Coalfield Pennine Fringe; B Yorkshire Dales)
- C Cow houses needed to be well ventilated, by either slits in the wall or windows. Horizontal sliding hit-and-miss ventilators, as here, achieved wide popularity in the mid- to late 19th century. (Vale of York)

- D A range of looseboxes, easily distinguishable by its rows of doors providing access to individual cubicles for fattening. (North Northumberland Coastal Plain)
- E The interior of a covered yard, on a home farm of 1875. (Shropshire, Cheshire and Staffordshire Plain)
- A-C © Jen Deadman; D & E © English Heritage / Michael Williams



were housed on the steading as fatstock and for their manure. Common internal fittings were mangers and hayracks, and sometimes stalls.

#### 7.1.1.5 Lean-tos (outshots)

These were attached to other buildings (particularly barns) and farmyard walls, either as part of the initial

phase of build or (particularly if the barn is pre-1750 in date) a later addition. These could be either open-fronted or closed with doorways to individual cow houses or looseboxes.

#### 7.1.1.6 Free-standing cow houses

These comprised either single-storey ranges, or two-

storey ranges with haylofts. Pre-19th-century examples of the former include the neathouses of the claylands of Suffolk and examples of both types are found in the West Midlands. In cattle-rearing areas calf houses have also been found; typically they are smaller in scale and often sited close to the house.

#### **7.1.1.7 Looseboxes** (Figure 31D)

Mostly dating from the 1850s, these served as accommodation for sick or calving beasts, bulls or most commonly fatstock. They comprised individual boxes or more usually a row of boxes with a central or rear feeding passage. The latter were usually distinguished externally by continuous rows of doors. There was often a feeding passage along behind them, with a feed store at one end. If used for fatstock, the floor of the boxes was sunken and the manure would build up in them during the winter. They reflected a realisation that warm and dry conditions would promote weight gain (through minimising heat loss) and retain the quality of the manure. Double rows would have a central feeding passage and were to be found on many farms by 1860.

#### **7.1.1.8 Covered yards**

By the 1850s it had been proved by agricultural chemists that the nutritional value of manure would be better preserved if it were under cover, and as costly feeds produced richer manures, the incentive to protect them was great. The problem was that it could be difficult to provide enough ventilation, but this could be overcome by complex systems of louvers and shutters. Some continued to be built as the depression in grain prices focused attention on livestock production. The best-known examples of covered yards are on the most expensively designed model farms of the mid- to late 19th century, almost all of them being estate-owned. The introduction of roofs to existing yards became general in fatstock areas from the late 19th century and especially after 1940. Dairy cattle are now typically housed in portal-framed sheds erected in the post-war period.

### **7.1.2 CATTLE HOUSING IN THE NORTH WEST** (Figures 32 & 33)

The movement of livestock (particularly cattle) to summer pastures on the high ground (a process known as transhumance) had been a key component in the economies of upland valleys probably since the prehistoric period. The summer grazing grounds, characterised by groups of huts, typically developed into permanently occupied farms or even hamlets as transhumance was abandoned in favour of permanent farmsteads. (Adams & Carne 1995, pp.91–2). Townships were typically allotted defined areas of waste, which were in turn subdivided between farming tenants and communally managed in order to prevent overgrazing

and the encroachments of individual ownership onto common land. The summer grazing grounds, by the early 16th century called shielings, were characterised by groups of stone, timber or turf huts, of rectangular or circular form (Coggins 1992, p.81). They typically developed into permanently occupied farms or even hamlets, as transhumance was abandoned in favour of permanent farmsteads. This practice survived longest – into the 17th century – in the North Pennines and Cheviots where the instability of the Borders area had also inhibited the expansion of settlement (Winchester 1987, pp.3, 7; Adams & Carne 1995, p.92). Shielings are readily distinguishable from the archaeological remains of farmsteads (although later use has obscured the origins of the latter), which are marked by enclosures for holding livestock and stack stands for winter fodder (Hillelson 1984; Ramm, McDowell & Mercer 1970, p.7). They were dry-stone walled structures located above the 1000ft contour and none survive in a complete enough form to be able to suggest how the interiors were arranged (Denyer 1991, pp.3–4). No other buildings would have been necessary and the great majority are now ruinous, although a small shieling hut has been located in Warndale Bottom at Buttermere, Cumbria (Ramm, McDowell & Mercer 1970, p.35).

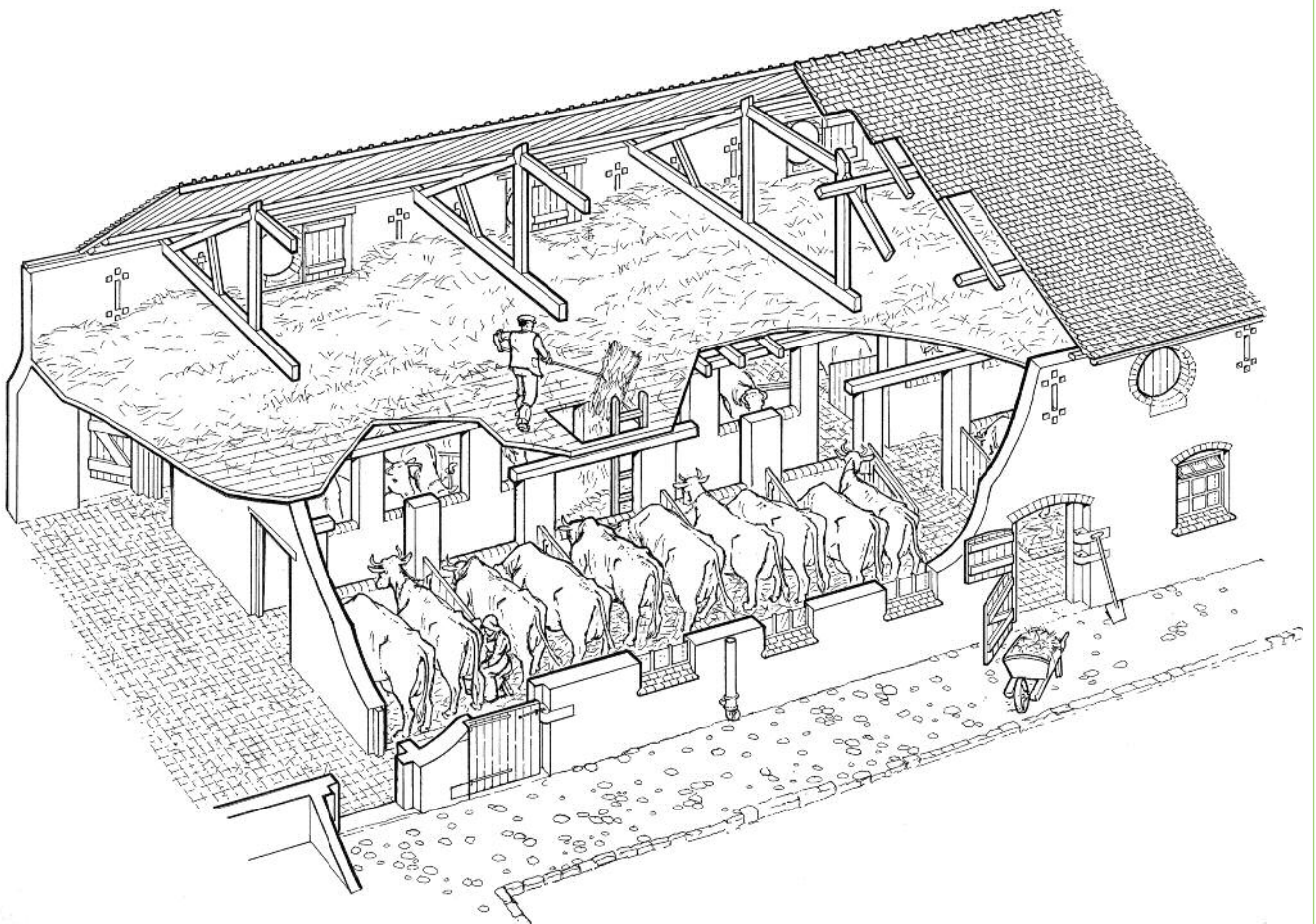
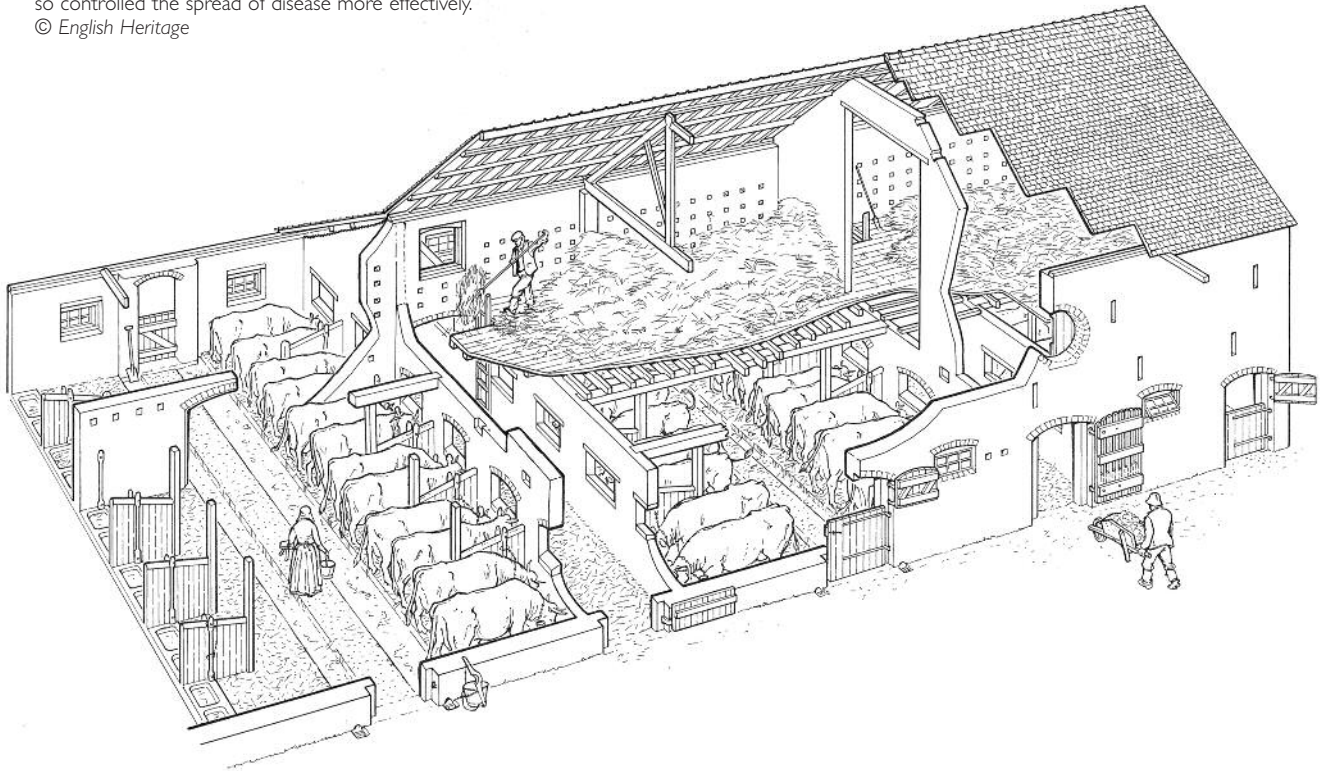
Cattle have long been a mainstay of the Region's agricultural economy, and this Region holds some of the country's earliest surviving buildings featuring cattle housing. As we have seen, cattle housing has had a major impact on the form and plan of the Region's barns and also its field barns (see 6.1.2 and 8.1.2). Detached fully lofted cow houses date from the late 17th century in the Lancashire Plains and Valleys and the southern Pennine uplands, but pre-1800 examples are rare and often associated with gentry or wealthier farms. By the mid-19th century they were standard on dairy farms in Lancashire and Cheshire. Fully enclosed cow house ranges were also commonly joined to the barn at right angles often with a cart entrance or driftway between. These cow houses were known as 'cross shippens' and were usually lofted throughout.

Cow houses usually provided accommodation for between eight and twelve animals, except on the smaller farms in more remote upland areas. The standings allowed for two cows between each division, with vertical stone slabs set within wooden frames dividing the stalls (Denyer 1991, p.98). The animals were tethered in these stalls for the winter with a manger along the wall in front of them. Cattle could be stalled across the width of the building or along its length (Figure 32). 'Cross shippens' were often served by a central feeding and manuring passage accessed by a door in the gable end; examples date from the 17th century. From the early 19th century, wider buildings

32 Cut-away drawings of cow houses in the North West Region

Cattle were typically tethered in a line across the width of the cow house (A a cross-shippon) until the later 19th century, when it became usual to tether the beasts along the length of the building (B a lengthwise shippon) with a feeding passage along the centre and manure passages along the side walls. Buildings of the later type usually provided better ventilation and so controlled the spread of disease more effectively.

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### 33 Cattle housing in the North West Region

In the North West Region cattle housing often formed part of a combination barn (A Vale of Eden) (see also Figure 26). Two-storey cow houses are common and range from small buildings housing just a few beasts on small upland farms (C showing cow house to left of taller stable door) to the large ranges of shippons on the dairy farms of

the lowlands which would include fodder-processing areas. (B Shropshire Cheshire and Staffordshire Plain; C Bowland Fringe and Pendle Hill; D Eden Valley; E Lancashire Valleys F Shropshire, Staffordshire and Cheshire Plain) A © Jeremy Lake; B, D and E © Jen Deadman; C © 182605 Mr Charles Satterly, taken as part of the Images of England Project; F © English Heritage / Michael Williams

33A



33B



33C



33D



33E



33F

were being built, which had entrances in both side walls and gable ends, the latter to a long axial passage into which cattle would face: these served as both a feeding passage and a source of cross-ventilation. Increasingly from the mid-19th century the stalls

were being turned round and placed across the building in back-to-back blocks with doors in the front wall to serve each group, the cattle facing a vented passageway into which fodder could be dropped from above.

34 A typical stable interior for working horses, showing the stalls that prevented the horses biting and kicking each other; the hay rack and cobbled floor. (Dorset Downs and Cranborne Chase) © Bob Edwards



## 7.2 DAIRIES

### 7.2.1 NATIONAL OVERVIEW

The dairy, where milk was stored and turned into butter or cheese, was usually located within the farmhouse (at its service end or in a rear room) or located in a lean-to at the rear of the house. Some dairies were separate buildings but, as the women of the household usually managed the dairy, they were normally situated close to the house. Within the dairy, which was commonly cool and damp, milk was poured into large shallow pans and the cream left to rise to the top before it was skimmed off and churned (usually with a plunger) in order to make butter. New types of churn appeared in the mid-19th century, the most important invention being the centrifugal separator in 1890. On some estates, the individual dairy building could be quite ornate in design; they were often circular, with a tall conical roof and plenty of ventilation, cool tiled floors and a low marble, slate or tiled shelf running almost all the way around inside.

Cheeses were made from the preservation and treatment of the curd, the solid mass that separates from the thin whey: harder cheeses were made from skimmed milk, softer cheese such as Cheshire from whole milk. After pressing, it needed space for storage. In areas where cheese making was important the dairies often had a room above called a cheese loft, where cheese was stored while maturing, or there would be a separate cheese house, the equivalent of the arable farmer's granary. In the 19th century more ornate dairy buildings were built on some of the larger farms, often located within the garden of the farmhouse rather than in the working farmyard.

Dairying for urban markets was already a specialised enterprise by the 1750s, and winter feeding and the ousting of less-productive breeds by the Dairy Shorthorn (after 1820) boosted yields. By the 1850s, butter production for the market was concentrated around towns, and the first small dairy factories started production around 1870. Cheese making in East Anglia gave way to cereal farming and fattening after 1800 (Holderness in Mingay 1989, pp.160, 158). Commercial cheese making and foreign imports (from the colonies) made inroads from the 1860s, and by around 1914 farmhouse butter was being sold only in Devon and Cornwall, and cheese made only in Cheshire, Leicestershire and the vales of Dorset and Somerset (Whetham 1978, pp.11, 15). Changes in hygiene regulations and the centralisation of production through the 20th century had a major impact on

dairies, with the majority becoming redundant to their original use. Changes in use may have resulted in the removal of fixtures such as slate or stone shelves for cooling the milk.

The sale of liquid milk had become massively important in many areas by the early 20th century (Whetham 1978, pp.9–10). The stand for milk churns, often built at the farm gate to save the milk cart or lorry from having to come to the farmstead, and the abandonment of all but a handful of farmhouse dairies and cheese rooms for new milk-production plants were the other visible consequences of these developments.

The industrialisation of much of the dairy industry meant that the majority of farm dairies were redundant by the mid-20th century. Where the dairy was part of the farmhouse it is usual to find that it has been brought into domestic use, typically resulting in the removal of any fittings associated with butter or cheese making. Any survivals of dairy equipment in situ are rare. Detached dairy buildings may also have been brought into an alternative use, again usually resulting in the removal of associated fittings. Surviving historic dairies are both rare and highly vulnerable. Cheese rooms are now especially rare and hard to identify.

### 7.2.2 DAIRIES IN THE NORTH WEST

Although many farms in the dairying parts of the Region concentrated on the production of cheese, the processing of the milk was nearly always undertaken by the farmer's wife in a dairy incorporated within the main body or attached to the rear of the house. The cheeses would also be stored in a cheese room, sometimes located over the dairy. Specialised equipment included whey vats, cheese ovens and hoists.

## 7.3 STABLES

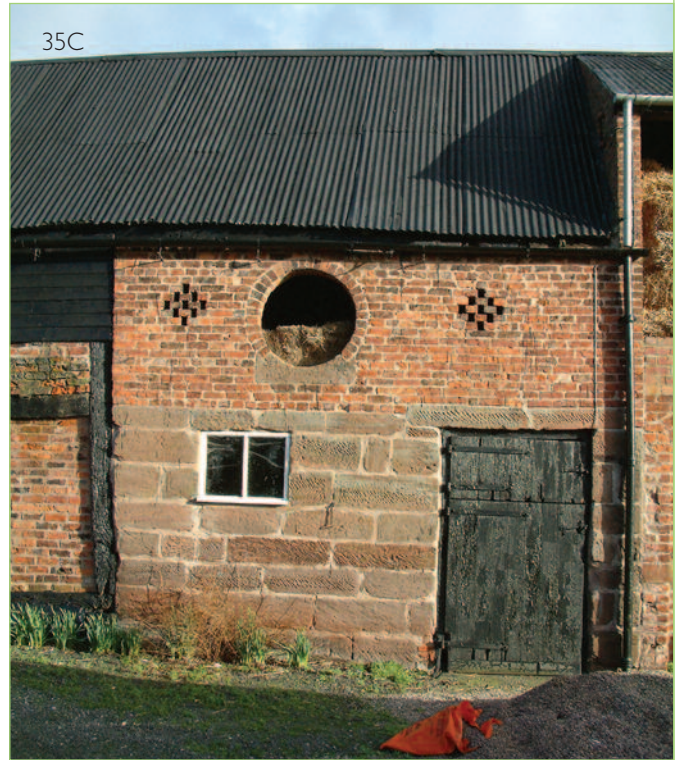
### 7.3.1 NATIONAL OVERVIEW

After the barn, the stable is often the oldest building on the farmstead. The high value of horses to the running of the farm meant stables were well built and often placed

### 35 Stables in the North West Region

Stables are found on many farmsteads and can include housing for working oxen (A) but they are nationally very rare. The small and predominantly pastoral farms of much of the North West did not require large teams of working horses and so stables in the Region are often relatively small and combined with other functions.

(A Lancashire and Amounderness Plain; B Bowland Fringe and Pendle Hill; C and D Shropshire, Staffordshire and Cheshire Plain).  
A © Jeremy Lake; B © 182605 Mr Charles Satterly, taken as part of the Images of England Project; C © Jen Deadman; D © English Heritage / Michael Williams



near the house, with easy access to the fields, and given a certain level of architectural and decorative treatment. A few stables dating to before 1700 have been identified in local surveys, while many more date from the 18th century. One of the reasons for this rise in number was the decline in the use of oxen.

The size of stabling was, like granaries and cart sheds, loosely linked to the arable acreage of the farm. The number of horses needed to work a farm changed little until the arrival of the tractor, with one horse for every 20 acres being the frequently quoted figure. Smaller farms still needed a team of horses, so even a 50-acre farm might well have four horses. Most farms still kept a few working horses until the 1950s, and they were finally replaced by tractors during the 1960s. Farmsteads, and the farmyards attached to manor and gentry houses,

often had stables for riding and coach horses, the upper floors commonly being used as accommodation for stable hands. These were usually well appointed and in some cases were used as displays of wealth and status, incorporating architectural detailing not found on most other farm buildings.

Stable interiors are characterised by:

- Horses commonly stalled in pairs with wooden stall divisions between them to stop them kicking each other (Figure 34). Cast-iron stable fittings often replaced wooden ones. More elaborate stalls and mangers were usually confined to the riding-horse rather than carhorse stable, but on many small farms the riding horse would have been kept alongside the working animals. In early (pre-1750) examples, the stalls are across the end walls while in later examples

the stalls are along the side walls, allowing more scope for lengthening the building and thus housing more horses.

- A manger and hayrack, the latter often accessed from a drop from the hayloft above. Other types of fodder, such as crushed oats and bean straw, became more general after the mid-19th century.
- Floors, cobbled and from the mid-19th century of engineering brick, sloping to a drainage channel.
- A ladder to the loft.
- The harness was usually kept in a separate room and chaff boxes were built in to the structure for storing feed. Small cubby-holes for keeping grooming brushes, medicines or lanterns were often built into the walls.

Stable exteriors are characterised by being:

- Usually two-storey, with pitching openings and ventilation to the first-floor loft and an external staircase. The upper floor sometimes provided accommodation for farm labourers or stable lads. Despite textbook advice on the tainting of the hay, the practice of housing horses below haylofts persisted, partly because of the perceived need to protect horses from chills and draughts. Single-storey stables, commonly with cast-iron ridge vents, were built from the later 19th century.
- Well lit, with windows ideally opening to the east to catch the early morning light. The door was wider and higher than that in the cow house.

As stables were usually well-lit buildings they tend to be less vulnerable to changes that affect their character externally. Carthorse stables are far less likely to retain floor surfaces, internal stalls and fitments (such as saddle hooks) than riding-horse stables. Many stables, particularly those located within ranges that included cow houses, were converted into dairies when modern electrically powered milking and cooling machinery was introduced from the 1950s.

### 7.3.2 STABLES IN THE NORTH WEST (Figure 35)

By the end of the 18th century horses provided motive power for all farm work in the Region, as well as carrying packs. Free-standing stable buildings are documented from the 17th century, often replacing earlier oxen houses (Tyson 1980, p.119; Messenger 1975, p.332). They are most commonly found in the lowland parts of the Region. As with many other buildings of the farmstead in the Region, stables usually formed part of multi-functional ranges of buildings rather than being separate structures. They were sometimes found adjoining one side of a farmhouse, with the cow byre and barn on the other or forming part of a combination barn. They were usually under a hayloft, with a hay drop from the loft into the hayrack below. Proportionally more horses were kept on some of the smallest farms near the industrial areas where carting liquid milk and other produce was a

secondary activity of the farm (Dickenson 1852, p.218). Free-standing and lofted or unlofted stables are typically mid-19th-century or later date, reflecting contemporary concerns over the housing of horses and requirements for higher, airier buildings.

## 7.4 PIG HOUSING

### 7.4.1 NATIONAL OVERVIEW (Figure 36)

One or two pigs were kept on most farms, although the pigs often ran with other livestock in the fields, or roamed about the yard, rather than having their own dedicated housing. Pigs were most commonly kept in dairying areas or market-gardening areas, such as the Fens, where whey or potatoes were available for feed. The only requirements for special accommodation were for farrowing, final fattening and accommodation of the boar. On most farms only a few pigs were kept for domestic use and here they were normally fed on kitchen scraps or whey (a by-product of dairying) and so sties were often placed near the kitchen or dairy. Sometimes they were also integrated into the planning of the farmyard, commonly on larger farms where commercial fattening was practised. Any pre-19th-century examples are of great rarity.

Characteristic features of pigsties are:

- Single-storey structures, with a gable entry to a first-floor hen house where lofts occur.
- Low entrances.
- Individual yards in some regions.
- Their construction in rows of three or more small and unlit boxes, often with a chute through the front wall into the feeding trough down which the swill could be thrown.
- A small chimneystack, marking the position of a boiler house for boiling swill for pig feed. These are most commonly found where pigs were kept on a commercial scale.

Imported feed sustained the growth of the pig industry in the inter-war period, more specialist producers taking the Danish or Scandinavian system as a model for the industrial housing of pigs. The American battery system of housing poultry was used for pigs from the late 1920s.

### 7.4.2 PIG HOUSING IN THE NORTH WEST

Despite the importance of dairying to parts of the Region, such as the Cheshire Plain, and the fact that 19th-century observers reported that the breeding and fattening of pigs was widespread, there is little physical evidence for large numbers of pigs being kept before the mid-19th century, even where other early buildings survive. They are uncommon, for example, in the Solway Plain (Jennings 2003, p.108). Shelters tended to be temporary in nature, or pigs were left to wander the fields. There are also few buildings surviving from the

### 36 Pigsties: national examples

Generally pigsties have few regionally distinct features other than their building materials (A North Yorkshire Moors and Cleveland Hills). Most have a small yard attached to the shelter (B Shropshire, Staffordshire and Cheshire Plain) although in the Yorkshire and Humber Region pigsties without a yard are commonly found (C North Yorkshire Moors and Cleveland Hills). Typically pigsties have hatches and chutes for feeding and some form part of a larger range of buildings and can be

combined with poultry housing (D South East Northumberland Coastal Plain). Generally these buildings are extremely vulnerable to neglect as they offer little opportunity for other uses although the solid construction of pigsties in this Region mean that possibly more survive than in some other Regions.

A–C © JenDeadman;

D © English Heritage / Michael Williams

36A



36B

36C



36D



latter period, although historic map evidence often shows the presence of piggeries (Barnwell & Giles 1997, pp.142–4)

## 7.5 SHEEP HOUSING

### 7.5.1 NATIONAL OVERVIEW

The great importance of sheep farming to many areas of the country is not reflected in surviving farm buildings. In medieval times it was common practice to provide sheep houses, or berceries, even in the south of England. Apart from possible medieval timber-framed sheepcotes in Hampshire (Lewis et al 1988, p.113–15) there is only earthwork evidence for these buildings, but documentary sources show that in Gloucestershire at least they ranged from between eight and eighteen bays (Dyer 1995, p.149). Barns, when empty, were sometimes used for shearing and sorting the wool.

In Cumbria and elsewhere in northern England a building similar in appearance to a field barn was provided for the hogs or yearling sheep to give them protection over

their first winter. Low floor-to-ceiling heights and upper-floor haylofts are characteristic features of these buildings. The low ceiling to the ground floor below a hayloft is the characteristic feature of hogg houses. Sheep housing in other areas is associated with outfarms, such as on the southern downlands.

Before the adoption of enclosures of rough grazing in upland areas sheep were kept on both the low-lying commons and high moors to which nearly all farmers had access. The only times of year when all the sheep would be gathered together was for shearing and salving and dipping. Salving involved the boiling of Stockholm tar and tallow to make a mixture that was smeared all over the coat to protect against lice and scab as well as keep the fleece waterproof through the harsh winter. The practice of salving was carried out until the introduction of compulsory dipping as protection from scab in the early 20th century and very few of the sheds used for salving survive. As well as salving, sheep were also washed or dipped. Sheep washing was often carried out in ponds or streams

where the watercourse might be artificially deepened or walled or, more unusually, sheep were dipped in specially constructed tanks. Enclosures funnelled towards the water's edge have been found. In areas where watermeadows were a feature of the landscape sheep dips are sometimes found built in to the system of leats and sluices.

### 7.5.2 SHEEP HOUSING IN THE NORTH WEST

Sheep formed a significant if less important part of the farming system in the North West than in other northern regions. Before the enclosures of rough grazing in upland areas sheep were kept on both the low-lying commons and high moors to which nearly all farmers had access. The enclosure of the commons meant that many thousands of sheep were sold off, and it was not until the 1820s and '30s when turnip culture was increasing, that large flocks were re-established.

Upland farms typically made use of existing buildings for shearing sheep, and the patterns of surrounding walls indicate that they were built for the sorting and handling of sheep. In common with other northern upland landscapes, communal sheepfolds and folds next to streams for washing can be found in upland grazing areas, and small openings (sheep creeps) built in field boundaries. The remains of medieval sheep houses can also be visible as earthworks (Moorhouse 2003b, pp.328–9, 338–41). Sheep were traditionally kept close to the farm over winter in upland areas, and on pastures in more sheltered spots. Along the Pennines field barns are characteristic. Some of these buildings, as in the North West and Yorkshire, were intended for the sheltering of sheep, evidenced by the low floor height at ground floor below the hayloft.

In Cumbria, particularly on the lower pastures of the eastern Lakeland and other hilly areas, a building similar in appearance to a field barn was provided for the hogs or yearling sheep to give them protection over their first winter. In the western Lakeland access to lower pastures where the sheep would be sheltered during the harshest weather was easier and so hogg houses were less common. These buildings had a similar appearance to field barns but had a characteristic feature of a low ceiling to the ground floor below a hayloft (Brunskill 1982, p.80; Bailey & Culley 1794, p.249). Although late 18th-century observers suggested that the practice of keeping sheep under cover in winter had ceased, there is building and documentary evidence to show that they continued to be built into the mid-19th century at least (Tyson 1982, p.161). The manure that built up in the hogg houses could be moved out and used in the surrounding fields. Hogg houses dating from the 18th century are typical of the high sheep country in parishes such as Patterdale, another distinctive feature being their association with handling enclosures

and – in the early 19th century – the enclosure of rough upland grazing.

## 7.6 DOVES AND POULTRY

### 7.6.1 NATIONAL OVERVIEW (Figures 37 & 38)

The construction of a dovecote indicated the status of the owner, as in the medieval period the keeping of doves or pigeons was usually restricted as a manorial right. The birds provided fresh meat and eggs as a supplement to the already varied diets of wealthier people, while the manure was also valued (see McCann 1991). As a consequence, dovecotes were often the object of considerable display and decoration, and commonly associated with gentrified or manorial farms.

Dovecotes are usually square or circular towers with pyramidal or conical roofs, but a number of varying forms have been found, including tun-bellied dovecotes (where the walls bulge outward slightly before tapering upward) and beehive dovecotes with corbelled stone roofs. There are also lectern dovecotes, which are square or rectangular with a mono-pitch roof, and a small number of octagonal dovecotes that are usually of 18th- or 19th-century date. Externally, perching or sunning ledges formed either in stone, brick or timber have been found. Later dovecotes often incorporated other functions such as granaries or stables. As the keeping of pigeons became more widespread, nesting boxes were incorporated into other farmyard buildings, for example the gable ends of barns.

Internally the walls were lined with nest boxes. In the earliest examples the nest boxes were sometimes formed in the thickness of the wall but usually they were in stone, brick or wood. Dovecote doorways were low to discourage the birds from flying out and often a potence, a central pivoted post with arms supporting a revolving ladder, provided access to the nest boxes for collection of the squabs and eggs. Surviving internal fittings are of great rarity, notably potencies and nest boxes (especially the removable wooden types).

Studies have shown that the distribution of dovecotes may in part be affected by the robustness of the building material. For example, a study of Gloucestershire dovecotes suggests that the brick or timber-framed dovecotes typical of the Vale of Gloucester have fared less well than the stone-built examples of the Cotswolds. At the time of the Gloucestershire survey the author noted that the surviving dovecotes of the Vale were in noticeably poorer condition (Ariss 1992, p.14).

During the 17th and early 18th centuries the restrictions on keeping doves were lifted and small-scale accommodation for doves can be found built into other farm buildings. However, as cereal prices rose and

37 Distribution of listed dovecotes in England

This distribution includes both free-standing dovecotes and dovecotes that are incorporated into other buildings. Although dovecotes are found in all Regions, their concentration within Roberts and Wrathmell's Central Province, from Gloucestershire to Northumberland and extending into north Oxfordshire, is notable. Within this area manorial control was strongest and the higher numbers of dovecotes may reflect this.

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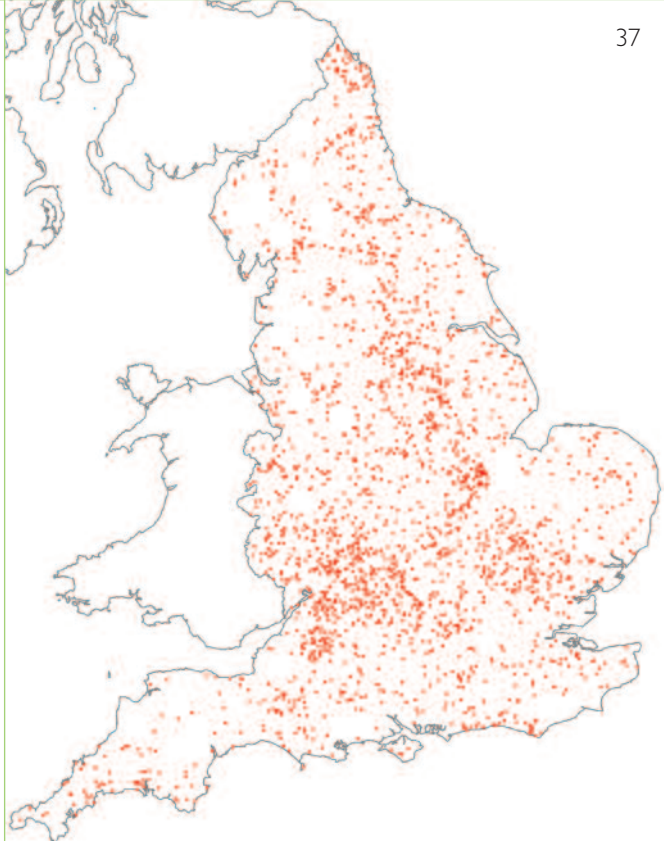
38 Buildings for birds in England

A A 'beehive' type dovecote with a roof constructed of corbelled stone. This form of dovecote is only found in North East England and in the South West peninsula. (North Yorkshire Moors and Cleveland Hills)

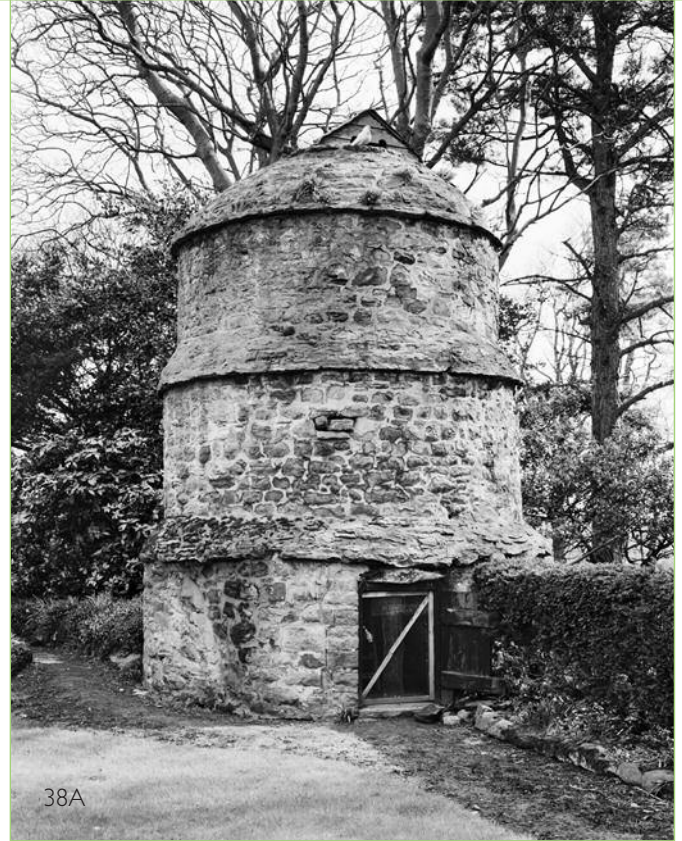
B Medieval circular dovecote. Note the low doorway. (Dorset Downs and Cranborne Chase)

A © English Heritage; B © Bob Edwards

(continued over)



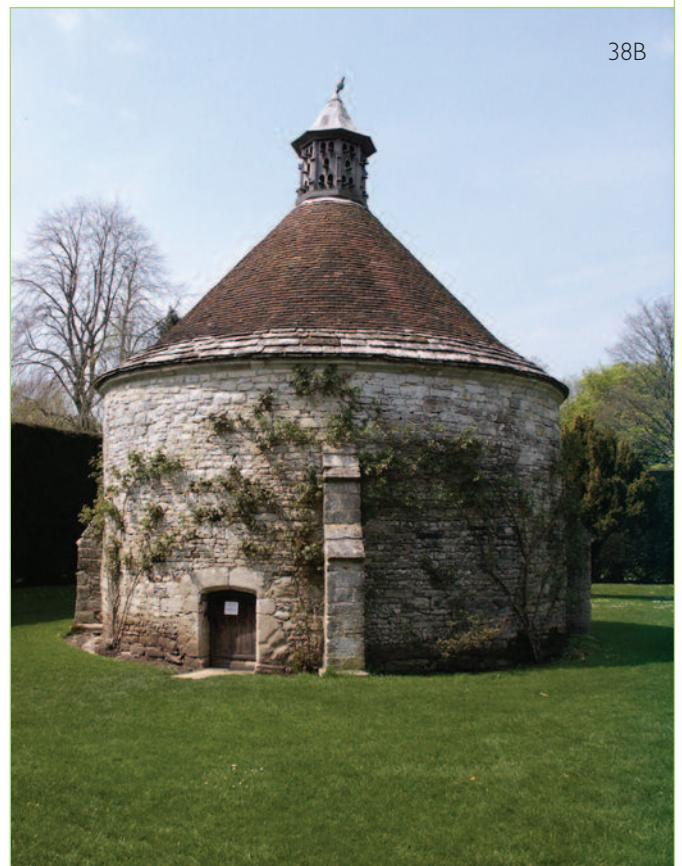
37



38A

improved methods of farming were adopted the popularity of pigeons declined. Investigation of a farmstead should include a search for small groups of nest boxes, which may be tucked away at the top of a gable or over a gateway.

Poultry keeping was usually the preserve of the farmer's wife and so the hen house was usually close to the farmhouse. This location was also chosen because poultry were often fed on kitchen scraps and looked after from the farmhouse. 'Accommodation for poultry is a modest, though necessary adjunct to all farm homesteads. The busy farmer himself pays little attention as a rule to the feathered tribe, but a thrifty wife knows too well the profit attached to them,' (Clarke 1899, p.172). Geese could be housed in free-standing pens or alcoves in farmyard walls. Hens usually ran freely about a farmyard, but were encouraged to nest safely away from predators and so that the eggs could be collected. Hen houses usually included a small pop hole for the hens as well as a full-sized door for human access for feeding and egg-collection. The walls were lined with nest boxes. As is still the case, hen houses were usually relatively short-lived buildings and there are few survivals that can be described as historic. Where historic examples do



38B

38C



38 Buildings for birds in England (continued)

- C A square stone-built dovecote with stepped gables probably dating from the 16th century. (Vale of Pickering)
  - D Seventeenth-century timber-framed dovecote. Internally the nest boxes of this building are made from stone rubble, but wooden nest boxes and, in the East of England Region, clay bats forming the nest boxes are also found. (Herefordshire Lowlands)
  - E Octagonal brick dovecote dating from the 18th century. (Tees Lowlands)
  - F Nest boxes incorporated into the gable end of a bank barn in Cumbria. (South Cumbria Low Fells)
  - G Hen house built over a pigsty. Probably late 19th century. (Vale of York)
  - H Goose pen built against a farmyard boundary wall. (Herefordshire Plateau)
- C © English Heritage; E & H © Bob Edwards; F & G © Jen Deadman; D © 149817 Mr Chris Tresise, taken as part of the Images of England project

38D



38F



38E



38G



38H





survive they usually form part of another building, such as a pig house: it was thought the chickens would keep the pigs warm and the pigs would frighten foxes away. The combination of a hen house located above a pig house was described as a poultingery in some areas (for example in North Shropshire and Northumberland). These could be associated with a boiler house with a chimney for feed preparation.

### **7.6.2 DOVES AND POULTRY IN THE NORTH WEST**

Dovecotes are not a particularly numerous or characteristic feature of the North West Region, being

almost totally absent from the upland areas and present in only low numbers in areas such as the Lancashire and Cheshire Plains. In Cumbria and northern Lancashire dovecotes are concentrated along the Eden and Lune valleys but even in these areas their numbers are low.

Except for a small number of tun-bellied dovecotes, in which the walls bulge slightly outwards before tapering to a corbelled stone cap (OAU 1995, p.25), the dovecotes of the Region do not display any particular Regional variation other than in the use of local materials.

# 8.0 Key Building Types: Other Farmstead Buildings

## 8.1 OUTFARMS AND FIELD BARNES

### 8.1.1 NATIONAL OVERVIEW

Field barns and outfarms, sometimes with a cottage beside them, can be prominent landscape features. Outfarms were usually created on larger farms or in areas where the farmsteads remained in the villages after enclosure, resulting in some fields being distant from the main farmstead. These complexes usually took the form of a yard that was often fully or partly enclosed by buildings. The outfarm saved on labour in that the harvested crop from the surrounding fields did not have to be carried back to the farmstead, and its straw turned into manure which, in turn, did not have to be carted back out to the distant fields.

Field barns were built in areas where farmsteads and fields were sited at a long distance from each other or where fields were interspersed with the land of other farms. Isolated field barns, cow houses and sheep houses are documented from the medieval period in upland areas (Le Patourel in Miller 1991, p.865). In some cases, such as the Craven Dales of Yorkshire or in the South Hams of Devon, they could be multi-functional buildings for cattle, corn and hay. The small and numerous field barns of the North Yorkshire Dales were built for a specialist dairy industry. In arable areas they were often simply threshing barns, which after 1770 were a typical part of outfarm groups.

39 Outfarms and field barns in the North West Region  
The field barns of the Lake District are a particularly characteristic feature of that part of the Region. Field barns provided accommodation for cattle (A) or sheep (B), usually with a hayloft over; although some hogg houses (field shelters for yearling sheep) have the animal housed

on the first floor with access from higher ground on one side of the building. Bank barns can also be found set away from the farmstead (C). Whilst most field barns are enclosed buildings, some are simple open-fronted shelters (D). (A–D Cumbria High Fells)  
© Jen Deadman



#### 40 Minor and Miscellaneous Buildings in the North West Region

In and around farmsteads in the North West Region there can be a range of small structures and features of historic interest including peat houses, dog kennels, mounting blocks, and fences made of huge slabs of

stone. Such features are often vulnerable through a lack of maintenance but can add to the character of the farmstead.

© Jen Deadman



Field barns and outfarms have always been vulnerable to dereliction once redundant. The widespread introduction of artificial fertilisers, bale silage production and the centralisation of farming activities are key factors in the abandonment and dereliction of field barns and outfarms.

#### 8.1.2 OUTFARMS AND FIELD BARNs IN THE NORTH WEST (Figure 39)

The allocation of specified areas of upland grazing to individual farms or groups of farms was often the precondition to the building of outlying huts or permanent buildings – for bracken, peat, sheep (see 7.5.2) or cattle – on the open fells (Winchester 1987, p.90). Many were built as cattle numbers increased in the 17th and 18th centuries, and the upland parts of the Region – particularly in Cumbria – has some notable pre-19th-century examples of field barns. Many are variant bank barns (see 6.1.2.5). Sometimes, as at the one built at Crostenrigs, Troutbeck, in 1733, there were stables as well as cattle stalls under the loft. It is interesting, however, that the building is described in the documents as a 'hogg house', suggesting that at this date the term could be used to describe any outlying farm building for animals (Tyson 1982, pp.156–7). Crostenrigs is one of a cluster of barns along a former drove road providing a routeway for moving hay and cattle between fields.

As well as the main cow house and barn on the farmstead, larger farms in lowland areas also included isolated free-standing field barns so that hay could be stored in a loft, reducing the need to cart it back to the main farmstead, and the cattle or sheep could be housed below, allowing for manure to be moved easily onto the surrounding fields in the spring. Examples are generally early to mid-19th century in date.

## 8.2 MINOR AND MISCELLANEOUS BUILDINGS

### 8.2.1 NATIONAL OVERVIEW

A range of other, smaller, buildings have also been found in a farmstead. Every farmyard would have had a water supply, either a pond, a nearby stream or a well, which could be enclosed in a well house. Fast-flowing water would also be used (see 6.0) to process grain into flour and wool into textiles, although evidence for mills or loom shops is very rare on surviving farms. Fuel for heating, in the form of timber or turf, would also be kept close to the house; specialist houses for peat, such as in Eskdale (Cumbria) are very rare. Some farmyards had recesses in the walls called bee boles to house a straw skep beehive. Occasionally a farm had its own slaughterhouse but many of these buildings do not have any characteristic external features, although internal features often included a higher ceiling and possibly a wheel to raise carcasses. Detached structures or rooms with chimneystacks served a diversity of functions: boil houses for animal (usually pig) feed; smithies (most frequently found on large farms, and located close to cart sheds); or washhouses. Farm dogs were often accommodated beneath the flights of steps that led up to lofts. Kennels for hunting dogs are found in hunting areas and are typically low, single-storey buildings similar to pigsties, with attached individual yards enclosed by metal railings.

### 8.2.2 MINOR AND MISCELLANEOUS BUILDINGS IN THE NORTH WEST (Figure 40)

Between the 16th and 18th centuries, a lively trade in bark destined for the tanning industry developed in north Lancashire and south Cumbria, the bark being peeled in spring/early summer and stored in barns or purpose-built outhouses (Parsons 1997, p.89). None of these have survived as built structures.

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A very small number of peat houses, of 18th- and 19th-century date, have survived in the Lake District in Cumbria; none are known to have survived in any other of the northern regions (Winchester 2003, pp.130–31).

More than 150 bee boles and related structures survive in Cumbria, which shares with the South West peninsula

the principal concentration of these in England – on account of the high rainfall (Walker & Crane 1991).

Accommodation for seasonal workers, detached or as first-floor lofts, are common in Lancashire and termed 'paddy lofts or houses' (for example, Lewis & Warhurst 1987, p.4).

## 9.0 Glossary

- Aisled barn** A barn in which increased width was obtained through the use of aisles – narrow extensions along one or more sides or ends of the barn. A series of posts stand in the place where the walls of an unaisled building would run. The roof is carried on beyond the line of the aisle posts so the height of the walls is reduced and the visual mass of the roof increased.
- Allotment** An area of land allotted to a farmer, often at the time of enclosure. The word changes meaning in the later 19th century to mean 'land allotted to villagers for growing their own fruit and vegetables'.
- Arable** Land cultivated for the growth of crops.
- Bank barn** A combination barn of usually two storeys. Through constructing the barn against a bank, both floors can be entered from ground level. Typically bank barns have a threshing barn, sometimes with a granary and hayloft, and over housing for cattle. The ground floor may be open-fronted or enclosed. Bank barns are characteristic of the Lakeland area of the North West Region and parts of Devon, Somerset and Cornwall in the South West Region. They could be placed across the slope or along the slope, the latter having the lower floor often accessed from doors close to or in one gable end.
- Barn** A building for the storage and processing of grain crops, and for housing straw. See also Combination barn.
- Berceries (sheep houses)** Medieval name for sheep houses – shelters provided for sheep usually in areas of grazing away from the farmstead.
- Byre** (see **shippon** and **hovel**) Dialect term for cow house, commonly used in Yorkshire and the North East.
- Cart shed** A building for housing carts and farm implements. Cart sheds are usually open-fronted buildings sited close to a road or track into the farmstead. One bay of a cart shed may be portioned off and provided with doors to create a secure storage area for smaller implements. In many areas cart sheds are combined with first-floor granaries.
- Catch meadow system** Similar to watermeadows. A system of drains cut along a hillside and made to overflow on to the pasture below in winter, encouraging the early growth of grass. Also known as field gutter systems.
- Chaff box/chaff house** Storage for the chaff, or outer husks of crops, a typical by-product of threshing. Chaff was used as fodder for horses.
- Cider house** A building for the milling and pressing of cider, found in the South West and the West Midlands. It usually forms part of a combination range, and is marked by a wide doorway.
- Cob** A term used for earth-walled buildings in the south and west of England. Cob buildings are heavily concentrated in Devon and Dorset and are also found in Wiltshire.
- Combed wheat reed** A method of thatching in which all the straw is laid in the same direction with butts down. The stems of the straw are not bruised or crushed as with longstraw. The finished roof resembles reed thatch rather than longstraw.
- Combination barn** A barn that also housed cattle or horses, and sometimes other functions such as cart sheds and granaries. Combination barns can be two-storey or single-storey buildings. They include bank barns.
- Convertible husbandry** A system whereby some fields were brought into arable cultivation for a short period – usually until the soil was exhausted – and then returned to pasture for a number of years. This system was commonly found in upland areas of the country.
- Coping** Usually flat stones but sometimes bricks laid on the top of a wall to prevent water getting into the core of the wall: for example, on the top of a gable wall of a building where the roofing material abuts the gable wall rather than covers it.
- Covered yard** A cattle yard that is fully covered by a roof – the aims of which were to protect the nutrients in the manure collecting in the yard from being washed away by the rain and to provide an environment where cattle would fatten more quickly.
- Cow house** An enclosed building for cattle in which the animals are normally tethered in stalls.
- Cruck, Raised cruck, Jointed cruck** A pair of curved timbers, usually halved from the same tree trunk, that form an A-frame extending from the ground to the apex of the roof. A raised cruck has the feet of the crucks raised off the ground, usually embedded in a masonry wall. Jointed crucks are individual cruck blades formed by two timbers joined together.
- Dairy** A building, or more often a room within the farmhouse, where milk was processed to make cheese and butter.
- Daub** A mixture of clay and straw applied to wattle infill of timber-framing to make a wall.
- Demesne farm** A manorial farm managed directly as opposed to land within the manor farmed by tenants.
- Dipping** The washing of sheep by immersing them in water.
- Dispersed settlement** Settlement consisting of scattered, isolated farmsteads and small hamlets. Dispersed settlement is the predominant settlement form over much of western parts of England, and an area extending from East Anglia to the South East.
- Dovecote** A building, or part of a building, providing nest boxes for pigeons or doves.

- Downland** The higher land of the chalk areas of the country. These areas typically had a poor, thin soil and were the preserve of sheep which grazed on the extensive, unenclosed areas. This form of management suppressed the growth of scrub and allowed a rich flora to establish.
- Dutch barn** Now used to describe an iron-framed, open-fronted building for the shelter of hay or corn. They typically date from the late 19th to the mid-20th centuries.
- Enclosure Enclosed land.** Enclosure of land may have occurred at an early date – possibly medieval and in a few rare cases in the prehistoric period. In other areas open fields or common land was enclosed either by agreement or, in the 18th and 19th centuries, by act of parliament.
- Fallow land** Land left uncultivated, allowing it to rest. In a 3-field open field system one field was left fallow by rotation each year.
- Farmstead** The homestead of a farm where the farmhouse and some or all of the farm buildings are located.
- Fatstock** Farm animals reared for meat.
- Field Barn** A building set within the fields away from the main farmstead, typically in areas where farmsteads and fields were sited at a long distance from each other. Field barns are often combination buildings providing storage for hay or straw and shelter for animals.
- Flail** An implement comprising two linked wooden sticks used to beat grain from the ear (see Thrashing).
- Granary** A building for storing grain before it has been milled. Granaries are usually at first-floor level to prevent rodents and damp damaging the grain. They could be free-standing structures or be an enclosed upper floor above a cart shed or stable.
- Grange** A farmstead belonging to and run by a monastic house.
- Grazier** A person who farms grazing animals, typically for meat or wool.
- Half-hipped roof** A roof in which the gable wall rises above the height of the eaves but does not extend to the apex. The upper part of the gable has a short sloping roof with rafters lying axially (in the same line of the orientation of the building). In a fully hipped roof, axial rafters are of the same length as the rafters of the main roof slopes.
- Hay barn** A structure to shelter but ensure the adequate ventilation of hay. They are typically open-sided structures with roofs supported on high brick, stone, timber or iron piers.
- Hay loft** Storage for hay above cart shed or stables.
- Hayrack** A rack made of wood and from the later 19th century often made in iron, in which hay could be placed to be eaten by cattle, horses or sheep.
- Hemmels** Small open-fronted cattle shelters with their own yards, mostly found in the North East.
- Hipped roof** A roof with slopes at the gable ends of equal or similar length to the side slopes. The gable walls do not rise up to the apex but are of similar height to the side walls. The top ends of the rafters that do not extend to the ridge are carried on a hip rafter.
- Hit-and-miss timber boarding** (also called **Yorkshire boarding**) Usually vertical boarding forming a wall to animal housing which has gaps between the boards to provide ventilation for the animals.
- Holding** A farm.
- Hovel** A dialect term for cow house, formerly common in parts of the Midlands and central southern England.
- Hurdle work** Hurdles, usually made from hazel or another pliable wood woven to form fence panels, were arranged to form temporary enclosure for animals, especially sheep.
- Husbandry** Farming, the management of the production of crops and animals.
- Infield-outfield system** A type of agriculture practised in pastoral (usually upland) areas, where the fields closest to the farmstead or settlement were the most intensively cropped and animals were only permitted to graze after the hay or corn crop was cut. Beyond was rough grazing for sheep and cattle, which was occasionally ploughed for corn.
- Kneeler** A stone, often shaped, which supports the stone coping to the gable end.
- Laithe house** A linear range of one construction comprising a farmhouse with attached barn and usually a stable. There is no internal link between the house and the agricultural element of the range. Laithe houses are usually associated with small part-time farmers who were often involved in the textile industries of the Pennines.
- Lean-to** A building, usually a later addition, which is constructed against the side of a larger building. Lean-tos typically have a mono-pitch roof.
- Lias** A form of limestone, typically split into thin pieces.
- Linear farmstead** A farmstead where the farmhouse and agricultural buildings are ranged in a line, usually attached to each other.
- Linhay** Two-storeyed building with open-fronted cattle shelter with an open-fronted hay loft or tallet above characteristic of Devon and south Somerset. The tallet may be constructed as a conventional floor or simply created from poles. Historically the term linhay was used to refer to a wider range of buildings including field barns.
- Loosebox** An individual cubicle for housing fatstock, found in the form of lean-tos attached to barns or other buildings, or as continuous ranges with an optional central or rear feeding passage.
- Longhouse** A building that housed humans and cattle under one roof and in which there was direct access from the accommodation into the byre. The byre was always built down-slope from the accommodation.

- Originally animals and humans used the same entrance but as living standards changed the animals were often provided with separate access.
- Longstraw** Term used to describe a thatching method where the ears and butts of the straw are mixed. The stems of the straw are bruised and crushed and the result is a generally looser coat than combed wheat reed or water reed. The appearance of the roof is quite different from combed wheat reed and water reed, with a much thicker covering of straw.
- Manger** An open trough in a stable or cowshed from which horses or cattle could eat.
- Mass-walled building** Buildings where the walls are constructed of solid materials such as stone, earth or brick as opposed to timber-framed walling.
- Meadow** A field maintained for providing grass for grazing and for making hay.
- Midstrey** Term used in southern England and East Anglia for the projecting porch to a threshing barn.
- Nucleated settlement** Settlement pattern consisting mainly of villages with relatively few isolated farmsteads or hamlets.
- Oast house** A building in which hops are dried.
- Oolite** An easily worked form of limestone from the Jurassic period.
- Open-field system** A system in which farmland was held in common with the strips of individual farmers intermixed across several fields. Open-field systems rarely had hedges between strips or fields. Over time the strips were usually consolidated and eventually enclosed. Enclosure of open fields results in characteristic field patterns where the boundaries form an elongated reversed 'S'.
- Outfarm** A barn with animal accommodation either within the barn or separately, located away from the main farmstead, which avoided transporting straw and manure to and from distant fields.
- Outshot** See Lean-to.
- Pantiles** Clay roofing tiles with a wavy profile. Originated in Holland and became popular along the north-east coast. Also made in Somerset.
- Pastoral farming** Farming system based predominantly on the rearing or fattening of stock. Pastoral areas are usually predominantly grassland but in some areas arable cultivation was also important, providing fodder crops for the animals as well as corn crops for domestic use.
- Pasture/pasturage** Grazing land.
- Piecemeal enclosure** The enclosure of areas of land field by field, possibly through assarting, as opposed to the wholesale enclosure of large tracts of land and the creation of large field systems.
- Pigsty** A small building for housing pigs. Typically built as individual boxes, individually or in rows and with external feeding chutes. They were often built with their own individual yards.
- Pilaster** An ornamental rectangular column projecting from a wall.
- Portal-framed shed** Mass-produced iron-framed shed usually clad in metal sheeting.
- Poultiggery** A building combining a pigsty at ground level with a poultry house in a loft above.
- Processing room** A room in a farmstead where fodder for animals would be prepared, usually with the aid of machinery such as chaff cutters, cake breakers and root crushers.
- Quoin** The stones or brickwork set at the corner of a building. Where poor-quality building stone was used it was difficult to form corners to a building so the quoins would be made out of bricks or a better quality stone that could be worked square.
- Rickyard** A yard, usually sited close to the barn, in which the harvested corn crops could be stored in ricks to await threshing. The ricks would be built on raised platforms to protect the grain from rodents and thatched to protect from rain.
- Ridge and furrow** Long, parallel ridges of soil separated by linear depressions, caused by repeated ploughing using a heavy plough.
- Ring-fenced** A term to describe a farm in which all the fields are held in a compact block as opposed to being intermixed with the fields of other farmers.
- Root and fodder stores** Room often located close to or incorporated within the cattle housing.
- Salving** The rubbing of a tar-based mix into sheep, in order to guard against ticks, etc.
- Shelter sheds** Open-fronted structures for cattle facing on to cattle yards.
- Shippon** A dialect term for cow house, commonly used in the North West and the South West peninsula.
- Silage clamp** An airtight container for the storage of freshly cut grass.
- Stable** A building for housing horses or working oxen.
- Staddle barn** Threshing barn, usually timber framed and raised on staddle stones. Staddle barns date from the later 18th and early 19th centuries and may be an attempt to counter the greater predation of the brown rat.
- Staddle stone** Staddle stones usually comprise two stones: an upright column that is capped by a circular stone of larger diameter, typically with a rounded top, together forming a mushroom shape. Staddle stones prevented rodents climbing up into granaries, ricks and staddle barns.
- Stall** A standing for a cow or horse within a byre or stable. Stalls are usually divided by wooden or stone partitions to prevent animals biting and kicking each other.
- Thrashing (or Threshing)** The removal of grain from the ears of corn crops. Threshing by hand involved hitting the ears with a flail.
- Threshing barn** See barn.
- Tillage** The tending of land to prepare it for a crop.

**Tithe** A payment of a tenth of crops and produce paid to the Rector of the church for his maintenance. Payment in kind was generally changed to a cash payment in the mid-19th century although this occurred earlier in some parishes.

**Topography** The features of the landscape; its hills, rivers, roads, woods and settlement.

**Vaccary** A stock farm for cattle. Most vaccaries are of 12th- or 13th-century origin, and were built for ecclesiastical or lay lords. They are concentrated in the Pennines.

**Watermeadow** A valley-floor meadow that was subject to controlled flooding using a system of drains and sluices to encourage early grass growth, providing spring food for sheep. The flooding brought nutrients on to the land, improving hay crops. Watermeadows

were first developed in the West Midlands but became a characteristic feature of the chalk river valleys of Wessex.

**Wattle** An interwoven panel usually made from hazel used to infill timber framing. Wattle could be covered in daub or left uncovered if more ventilation was required.

**Wheel house** A structure which housed a horse-engine for powering threshing machinery, and typically found projecting from barns. Also known as a gin gang in northern England.

**Winnowing** The separation of grain from the chaff, usually achieved by throwing the grain into the air and using the wind to blow the lighter chaff away from the grain.

**Yorkshire boarding** See Hit-and-miss boarding.



# 10.0 Sources

## 10.1 GENERAL SOURCES

The great barns of the medieval period were the first farm buildings to attract the attention of artists and antiquarians, from the 18th century. In the early 20th century this interest broadened out to studies of other iconic building types, such as Arthur Cooke's *A Book of Dovecotes* (1920), and their inclusion in the famous regional landscape studies published by Batsford (*The Face of Britain*). A milestone in the serious academic study of the subject was the publication of a regional study by J.E.C. Peters (1969), which was followed a year later by Nigel Harvey's inspirational general history of the subject (1970, 2nd edition 1984). Peters has usefully summarised his work in a booklet (1981, 2nd edition 2003) and studies examining farm buildings in their broader national and regional contexts have been taken forward by Brunskill (1982, revised 1987), Darley (1981), Lake (1989) and Wade Martins (1991). Individual studies

have been published in the journal of *The Historic Farm Buildings Group*, founded in 1985. A major project by the Royal Commission for Historical Monuments in England, which targeted sample areas for recording, was published in 1997 (Barnwell & Giles 1997). There are a small number of county-wide studies, for example in Kent (Wade in Giles & Wade Martins 1994, pp.26–27) and Surrey (Gray 1998).

Despite an increasing level of interest in historic farm buildings, some of the smaller, less impressive building types have not been subject to the level of study and research that buildings such as barns have received. Therefore there is a limited understanding of the regional variations that may be encountered. As a consequence, the National Overview texts provided in this document for farmstead and building types are sometimes longer than their regional summaries.

There are a number of sources that provide a good overview of agricultural history and the development of farm buildings including:

The Board of Agriculture *General View of the County of...*, published from 1795 to 1814 describe the state of agriculture in individual counties at the time. They often include a map of agricultural regions and a section of farm buildings. They are inevitably biased towards the large, publicity-conscious and 'improving' farmers and estates. County *Directories* from the second half of the 19th century often include essays on different aspects of the county, such as agriculture.

The British Association for the Advancement of Science published regional studies to coincide with the venues of their annual meetings in the 1950s and '60s. Many contain useful chapters on geology and agriculture.

The various volumes of *The Agrarian History of England and Wales* (Collins, Hallam, Thirsk, Miller, Mingay, Whetham) include essays by leading scholars.

James Caird (1852) *English Agriculture in 1851–2* is a collection of county essays written for *The Times*.

Haggard R. (1902) *Rural England* describes English agriculture county by county.

Hall, A.D. (1913) *A Pilgrimage of British Farming* describes farming in various counties in 1913.

The *Journal of the Royal Agricultural Society* has prize and regional essays on farming and farm buildings, especially useful for the mid- and late 19th century.

The *Victoria County Histories* are of variable use. The more recent volumes contain chapters on agricultural history and buildings.

The *Vernacular Architecture Group* has produced, besides its journal, a comprehensive national and regional bibliography (see Hall, Michelmores and Pattison for reference).

Barnwell, P.S. & Giles, C. (1997) *English Farmsteads 1750–1914* contains a short general introduction, a general concluding chapter and regional studies from west Berkshire, south Lincolnshire, north Northumberland, east Cornwall and central Cheshire.

Brunskill, R.W. (1982) *Traditional Farm Buildings of Britain* gives a very useful farming and building overview.

Darley, G. (1981) *The National Trust Book of the Farm* contains a general introduction followed by regional studies.

The revised Pevsner's *Buildings of England*, published county by county, often have useful introductions on landscape regions and building types.

Many county archaeological and historical journals include relevant articles. National journals of particular interest include those of the following societies:

British Agricultural History Society  
Historic Farm Buildings Group  
Local Historian

Society for Medieval Archaeology  
Society for Post-Medieval Archaeology  
Rural History  
Society of Architectural Historians  
Society for Landscape Studies  
Vernacular Architecture Group

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# 11.0 Joint Character Area Descriptions: URLs for PDF Documents

- 1 **North Northumberland Coastal Plain** [www.countryside.gov.uk/Images/JCA01\\_tcm2-21114.pdf](http://www.countryside.gov.uk/Images/JCA01_tcm2-21114.pdf)
- 2 **Northumberland Sandstone Hills** [www.countryside.gov.uk/Images/JCA02\\_tcm2-21115.pdf](http://www.countryside.gov.uk/Images/JCA02_tcm2-21115.pdf)
- 3 **Cheviot Fringe** [www.countryside.gov.uk/Images/JCA03\\_tcm2-21116.pdf](http://www.countryside.gov.uk/Images/JCA03_tcm2-21116.pdf)
- 4 **Cheviots** [www.countryside.gov.uk/Images/JCA04\\_tcm2-21117.pdf](http://www.countryside.gov.uk/Images/JCA04_tcm2-21117.pdf)
- 5 **Border Moors and Forests** [www.countryside.gov.uk/Images/JCA5\\_tcm2-21066.pdf](http://www.countryside.gov.uk/Images/JCA5_tcm2-21066.pdf)
- 6 **Solway Basin** [www.countryside.gov.uk/Images/JCA6\\_tcm2-21068.pdf](http://www.countryside.gov.uk/Images/JCA6_tcm2-21068.pdf)
- 7 **West Cumbria Coastal Plain** [www.countryside.gov.uk/Images/JCA7\\_tcm2-21069.pdf](http://www.countryside.gov.uk/Images/JCA7_tcm2-21069.pdf)
- 8 **Cumbria High Fells** [www.countryside.gov.uk/Images/JCA8\\_tcm2-21070.pdf](http://www.countryside.gov.uk/Images/JCA8_tcm2-21070.pdf)
- 9 **Eden Valley** [www.countryside.gov.uk/Images/JCA9\\_tcm2-21071.pdf](http://www.countryside.gov.uk/Images/JCA9_tcm2-21071.pdf)
- 10 **North Pennines** [www.countryside.gov.uk/Images/JCA10\\_tcm2-21072.pdf](http://www.countryside.gov.uk/Images/JCA10_tcm2-21072.pdf)
- 11 **Tyne Gap and Hadrian's Wall** [www.countryside.gov.uk/Images/JCA11\\_tcm2-21073.pdf](http://www.countryside.gov.uk/Images/JCA11_tcm2-21073.pdf)
- 12 **Mid Northumberland** [www.countryside.gov.uk/Images/JCA12\\_tcm2-21120.pdf](http://www.countryside.gov.uk/Images/JCA12_tcm2-21120.pdf)
- 13 **South East Northumberland Coastal Plain** [www.countryside.gov.uk/Images/JCA13\\_tcm2-21121.pdf](http://www.countryside.gov.uk/Images/JCA13_tcm2-21121.pdf)
- 14 **Tyne and Wear Lowlands** [www.countryside.gov.uk/Images/JCA14\\_tcm2-21122.pdf](http://www.countryside.gov.uk/Images/JCA14_tcm2-21122.pdf)
- 15 **Durham Magnesian Limestone Plateau** [www.countryside.gov.uk/Images/JCA15\\_tcm2-21123.pdf](http://www.countryside.gov.uk/Images/JCA15_tcm2-21123.pdf)
- 16 **Durham Coalfield** [www.countryside.gov.uk/Images/JCA16\\_tcm2-21124.pdf](http://www.countryside.gov.uk/Images/JCA16_tcm2-21124.pdf)
- 17 **Orton Fells** [www.countryside.gov.uk/Images/JCA17\\_tcm2-21074.pdf](http://www.countryside.gov.uk/Images/JCA17_tcm2-21074.pdf)
- 18 **Howgill Fells** [www.countryside.gov.uk/Images/JCA18\\_tcm2-21075.pdf](http://www.countryside.gov.uk/Images/JCA18_tcm2-21075.pdf)
- 19 **South Cumbria Low Fells** [www.countryside.gov.uk/Images/JCA19\\_tcm2-21077.pdf](http://www.countryside.gov.uk/Images/JCA19_tcm2-21077.pdf)
- 20 **Morecambe Bay Limestones** [www.countryside.gov.uk/Images/JCA20\\_tcm2-21078.pdf](http://www.countryside.gov.uk/Images/JCA20_tcm2-21078.pdf)
- 21 **Yorkshire Dales** [www.countryside.gov.uk/Images/JCA21\\_tcm2-21079.pdf](http://www.countryside.gov.uk/Images/JCA21_tcm2-21079.pdf)
- 22 **Pennine Dales Fringe** [www.countryside.gov.uk/Images/JCA22\\_tcm2-21125.pdf](http://www.countryside.gov.uk/Images/JCA22_tcm2-21125.pdf)
- 23 **Tees Lowlands** [www.countryside.gov.uk/Images/JCA23\\_tcm2-21126.pdf](http://www.countryside.gov.uk/Images/JCA23_tcm2-21126.pdf)
- 24 **Vale of Mowbray** [www.countryside.gov.uk/Images/JCA24\\_tcm2-21128.pdf](http://www.countryside.gov.uk/Images/JCA24_tcm2-21128.pdf)
- 25 **North Yorkshire Moors and Cleveland Hills** [www.countryside.gov.uk/Images/JCA25\\_tcm2-21129.pdf](http://www.countryside.gov.uk/Images/JCA25_tcm2-21129.pdf)
- 26 **Vale of Pickering** [www.countryside.gov.uk/Images/JCA26\\_tcm2-21131.pdf](http://www.countryside.gov.uk/Images/JCA26_tcm2-21131.pdf)
- 27 **Yorkshire Wolds** [www.countryside.gov.uk/Images/JCA27\\_tcm2-21132.pdf](http://www.countryside.gov.uk/Images/JCA27_tcm2-21132.pdf)
- 28 **Vale of York** [www.countryside.gov.uk/Images/JCA28\\_tcm2-21133.pdf](http://www.countryside.gov.uk/Images/JCA28_tcm2-21133.pdf)
- 29 **Howardian Hills** [www.countryside.gov.uk/Images/JCA29\\_tcm2-21134.pdf](http://www.countryside.gov.uk/Images/JCA29_tcm2-21134.pdf)
- 30 **Southern Magnesian Limestone** [www.countryside.gov.uk/Images/JCA30\\_tcm2-21135.pdf](http://www.countryside.gov.uk/Images/JCA30_tcm2-21135.pdf)
- 31 **Morecambe Bay and Lune Estuary** [www.countryside.gov.uk/Images/JCA31\\_tcm2-21080.pdf](http://www.countryside.gov.uk/Images/JCA31_tcm2-21080.pdf)
- 32 **Lancashire and Amounderness Plain** [www.countryside.gov.uk/Images/JCA32\\_tcm2-21082.pdf](http://www.countryside.gov.uk/Images/JCA32_tcm2-21082.pdf)
- 33 **Bowland Fringe and Pendle Hill** [www.countryside.gov.uk/Images/JCA33\\_tcm2-21083.pdf](http://www.countryside.gov.uk/Images/JCA33_tcm2-21083.pdf)
- 34 **Bowland Fells** [www.countryside.gov.uk/Images/JCA34\\_tcm2-21084.pdf](http://www.countryside.gov.uk/Images/JCA34_tcm2-21084.pdf)
- 35 **Lancashire Valleys** [www.countryside.gov.uk/Images/JCA35\\_tcm2-21085.pdf](http://www.countryside.gov.uk/Images/JCA35_tcm2-21085.pdf)
- 36 **Southern Pennines** [www.countryside.gov.uk/Images/JCA36\\_tcm2-21086.pdf](http://www.countryside.gov.uk/Images/JCA36_tcm2-21086.pdf)
- 37 **Yorkshire Southern Pennine Fringe** [www.countryside.gov.uk/Images/JCA37\\_tcm2-21136.pdf](http://www.countryside.gov.uk/Images/JCA37_tcm2-21136.pdf)
- 38 **Nottinghamshire Derbyshire and Yorkshire Coalfield** [www.countryside.gov.uk/Images/JCA38\\_tcm2-21137.pdf](http://www.countryside.gov.uk/Images/JCA38_tcm2-21137.pdf)
- 39 **Humberhead Levels** [www.countryside.gov.uk/Images/JCA39\\_tcm2-21138.pdf](http://www.countryside.gov.uk/Images/JCA39_tcm2-21138.pdf)
- 40 **Holdemess** [www.countryside.gov.uk/Images/JCA40\\_tcm2-21139.pdf](http://www.countryside.gov.uk/Images/JCA40_tcm2-21139.pdf)
- 41 **Humber Estuary** [www.countryside.gov.uk/Images/JCA41\\_tcm2-21140.pdf](http://www.countryside.gov.uk/Images/JCA41_tcm2-21140.pdf)
- 42 **Lincolnshire Coast and Marshes** [www.countryside.gov.uk/Images/JCA42\\_tcm2-21141.pdf](http://www.countryside.gov.uk/Images/JCA42_tcm2-21141.pdf)
- 43 **Lincolnshire Wolds** [www.countryside.gov.uk/Images/JCA43\\_tcm2-21142.pdf](http://www.countryside.gov.uk/Images/JCA43_tcm2-21142.pdf)
- 44 **Central Lincolnshire Vale** [www.countryside.gov.uk/Images/JCA44\\_tcm2-21143.pdf](http://www.countryside.gov.uk/Images/JCA44_tcm2-21143.pdf)
- 45 **Northern Lincolnshire Edge With Coversands** [www.countryside.gov.uk/Images/JCA45+47\\_tcm2-21144.pdf](http://www.countryside.gov.uk/Images/JCA45+47_tcm2-21144.pdf)
- 46 **The Fens** [www.countryside.gov.uk/Images/JCA46\\_tcm2-21145.pdf](http://www.countryside.gov.uk/Images/JCA46_tcm2-21145.pdf)
- 47 **Southern Lincolnshire Edge** [www.countryside.gov.uk/Images/JCA45+47\\_tcm2-21144.pdf](http://www.countryside.gov.uk/Images/JCA45+47_tcm2-21144.pdf)
- 48 **Trent and Belvoir Vales** [www.countryside.gov.uk/Images/JCA48\\_tcm2-21146.pdf](http://www.countryside.gov.uk/Images/JCA48_tcm2-21146.pdf)
- 49 **Sherwood** [www.countryside.gov.uk/Images/JCA49\\_tcm2-21147.pdf](http://www.countryside.gov.uk/Images/JCA49_tcm2-21147.pdf)
- 50 **Derby Peak Fringe** [www.countryside.gov.uk/Images/JCA50\\_tcm2-21148.pdf](http://www.countryside.gov.uk/Images/JCA50_tcm2-21148.pdf)
- 51 **Dark Peak** [www.countryside.gov.uk/Images/JCA51\\_tcm2-21087.pdf](http://www.countryside.gov.uk/Images/JCA51_tcm2-21087.pdf)

- 52 **White Peak** [www.countryside.gov.uk/Images/JCA52\\_tcm2-21149.pdf](http://www.countryside.gov.uk/Images/JCA52_tcm2-21149.pdf)
- 53 **South West Peak** [www.countryside.gov.uk/Images/JCA53\\_tcm2-21088.pdf](http://www.countryside.gov.uk/Images/JCA53_tcm2-21088.pdf)
- 54 **Manchester Pennine Fringe** [www.countryside.gov.uk/Images/JCA54\\_tcm2-21089.pdf](http://www.countryside.gov.uk/Images/JCA54_tcm2-21089.pdf)
- 55 **Manchester Conurbation** [www.countryside.gov.uk/Images/JCA55\\_tcm2-21090.pdf](http://www.countryside.gov.uk/Images/JCA55_tcm2-21090.pdf)
- 56 **Lancashire Coal Measures** [www.countryside.gov.uk/Images/JCA56\\_tcm2-21091.pdf](http://www.countryside.gov.uk/Images/JCA56_tcm2-21091.pdf)
- 57 **Sefton Coast** [www.countryside.gov.uk/Images/JCA57\\_tcm2-21095.pdf](http://www.countryside.gov.uk/Images/JCA57_tcm2-21095.pdf)
- 58 **Merseyside Conurbation** [www.countryside.gov.uk/Images/JCA58\\_tcm2-21096.pdf](http://www.countryside.gov.uk/Images/JCA58_tcm2-21096.pdf)
- 59 **Wirral** [www.countryside.gov.uk/Images/JCA59\\_tcm2-21097.pdf](http://www.countryside.gov.uk/Images/JCA59_tcm2-21097.pdf)
- 60 **Mersey Valley** [www.countryside.gov.uk/Images/JCA60\\_tcm2-21098.pdf](http://www.countryside.gov.uk/Images/JCA60_tcm2-21098.pdf)
- 61 **Shropshire Cheshire and Staffordshire Plain** [www.countryside.gov.uk/Images/JCA61+62\\_tcm2-21100.pdf](http://www.countryside.gov.uk/Images/JCA61+62_tcm2-21100.pdf)
- 62 **Cheshire Sandstone Ridge** [www.countryside.gov.uk/Images/JCA61+62\\_tcm2-21100.pdf](http://www.countryside.gov.uk/Images/JCA61+62_tcm2-21100.pdf)
- 63 **Oswestry Uplands** [www.countryside.gov.uk/Images/JCA063%20-%20Oswestry%20Uplands\\_tcm2-21174.pdf](http://www.countryside.gov.uk/Images/JCA063%20-%20Oswestry%20Uplands_tcm2-21174.pdf)
- 64 **Potteries and Churnet Valley** [www.countryside.gov.uk/Images/JCA064%20-%20Potteries%20and%20Churnet%20Valley\\_tcm2-21175.pdf](http://www.countryside.gov.uk/Images/JCA064%20-%20Potteries%20and%20Churnet%20Valley_tcm2-21175.pdf)
- 65 **Shropshire Hills** [www.countryside.gov.uk/Images/JCA064%20-%20Potteries%20and%20Churnet%20Valley\\_tcm2-21175.pdf](http://www.countryside.gov.uk/Images/JCA064%20-%20Potteries%20and%20Churnet%20Valley_tcm2-21175.pdf)
- 66 **Mid Severn Sandstone Plateau** [www.countryside.gov.uk/Images/JCA066%20-%20Mid%20Severn%20Sandstone%20Plateau\\_tcm2-21177.pdf](http://www.countryside.gov.uk/Images/JCA066%20-%20Mid%20Severn%20Sandstone%20Plateau_tcm2-21177.pdf)
- 67 **Cannock Chase and Cank Wood** [www.countryside.gov.uk/Images/JCA067%20-%20Cannock%20Chase%20and%20Cank%20Wood\\_tcm2-21178.pdf](http://www.countryside.gov.uk/Images/JCA067%20-%20Cannock%20Chase%20and%20Cank%20Wood_tcm2-21178.pdf)
- 68 **Needwood and South Derbyshire Claylands** [www.countryside.gov.uk/Images/JCA68\\_tcm2-21150.pdf](http://www.countryside.gov.uk/Images/JCA68_tcm2-21150.pdf)
- 69 **Trent Valley Washlands** [www.countryside.gov.uk/Images/JCA69\\_tcm2-21151.pdf](http://www.countryside.gov.uk/Images/JCA69_tcm2-21151.pdf)
- 70 **Melbourne Parklands** [www.countryside.gov.uk/Images/JCA70\\_tcm2-21152.pdf](http://www.countryside.gov.uk/Images/JCA70_tcm2-21152.pdf)
- 71 **Leicestershire and South Derbyshire Coalfield** [www.countryside.gov.uk/Images/JCA71\\_tcm2-21153.pdf](http://www.countryside.gov.uk/Images/JCA71_tcm2-21153.pdf)
- 72 **Mease/Sence Lowlands** [www.countryside.gov.uk/Images/JCA72\\_tcm2-21154.pdf](http://www.countryside.gov.uk/Images/JCA72_tcm2-21154.pdf)
- 73 **Charnwood** [www.countryside.gov.uk/Images/JCA73\\_tcm2-21155.pdf](http://www.countryside.gov.uk/Images/JCA73_tcm2-21155.pdf)
- 74 **Leicestershire and Nottinghamshire Wolds** [www.countryside.gov.uk/Images/JCA74\\_tcm2-21156.pdf](http://www.countryside.gov.uk/Images/JCA74_tcm2-21156.pdf)
- 75 **Kesteven Uplands** [www.countryside.gov.uk/Images/JCA75\\_tcm2-21157.pdf](http://www.countryside.gov.uk/Images/JCA75_tcm2-21157.pdf)
- 76 **North West Norfolk** [www.countryside.gov.uk/Images/JCA076%20-%20North%20West%20Norfolk\\_tcm2-21179.pdf](http://www.countryside.gov.uk/Images/JCA076%20-%20North%20West%20Norfolk_tcm2-21179.pdf)
- 77 **North Norfolk Coast** [www.countryside.gov.uk/Images/JCA077%20-%20North%20Norfolk%20Coast\\_tcm2-21180.pdf](http://www.countryside.gov.uk/Images/JCA077%20-%20North%20Norfolk%20Coast_tcm2-21180.pdf)
- 78 **Central North Norfolk** [www.countryside.gov.uk/Images/JCA078+084%20-%20Central%20North%20Norfolk%20+%20Mid%20Norfolk\\_tcm2-21181.pdf](http://www.countryside.gov.uk/Images/JCA078+084%20-%20Central%20North%20Norfolk%20+%20Mid%20Norfolk_tcm2-21181.pdf)
- 79 **North East Norfolk and Flegg** [www.countryside.gov.uk/Images/JCA079%20-%20North%20East%20Norfolk%20and%20Flegg\\_tcm2-21182.pdf](http://www.countryside.gov.uk/Images/JCA079%20-%20North%20East%20Norfolk%20and%20Flegg_tcm2-21182.pdf)
- 80 **The Broads** [www.countryside.gov.uk/Images/JCA080%20-%20The%20Broads\\_tcm2-21183.pdf](http://www.countryside.gov.uk/Images/JCA080%20-%20The%20Broads_tcm2-21183.pdf)
- 81 **Greater Thames Estuary** [www.countryside.gov.uk/Images/JCA081%20-%20Greater%20Thames%20Estuary\\_tcm2-21184.pdf](http://www.countryside.gov.uk/Images/JCA081%20-%20Greater%20Thames%20Estuary_tcm2-21184.pdf)
- 82 **Suffolk Coast and Heaths** [www.countryside.gov.uk/Images/JCA082%20-%20Suffolk%20Coasts%20and%20Heaths\\_tcm2-21185.pdf](http://www.countryside.gov.uk/Images/JCA082%20-%20Suffolk%20Coasts%20and%20Heaths_tcm2-21185.pdf)
- 83 **South Norfolk and High Suffolk Claylands** [www.countryside.gov.uk/Images/JCA083%20-%20South%20Norfolk%20and%20High%20Suffolk%20Claylands\\_tcm2-21186.pdf](http://www.countryside.gov.uk/Images/JCA083%20-%20South%20Norfolk%20and%20High%20Suffolk%20Claylands_tcm2-21186.pdf)
- 84 **Mid Norfolk** [www.countryside.gov.uk/Images/JCA078+084%20-%20Central%20North%20Norfolk%20+%20Mid%20Norfolk\\_tcm2-21181.pdf](http://www.countryside.gov.uk/Images/JCA078+084%20-%20Central%20North%20Norfolk%20+%20Mid%20Norfolk_tcm2-21181.pdf)
- 85 **Breckland** [www.countryside.gov.uk/Images/JCA085\\_tcm2-21187.pdf](http://www.countryside.gov.uk/Images/JCA085_tcm2-21187.pdf)
- 86 **South Suffolk and North Essex Clayland** [www.countryside.gov.uk/Images/JCA086%20-%20South%20Suffolk%20and%20North%20Essex%20Clayland\\_tcm2-21188.pdf](http://www.countryside.gov.uk/Images/JCA086%20-%20South%20Suffolk%20and%20North%20Essex%20Clayland_tcm2-21188.pdf)
- 87 **East Anglia Chalk** [www.countryside.gov.uk/Images/JCA087%20-%20East%20Anglian%20Chalk\\_tcm2-21189.pdf](http://www.countryside.gov.uk/Images/JCA087%20-%20East%20Anglian%20Chalk_tcm2-21189.pdf)
- 88 **Bedfordshire and Cambridgeshire Claylands** [www.countryside.gov.uk/Images/JCA88\\_tcm2-21158.pdf](http://www.countryside.gov.uk/Images/JCA88_tcm2-21158.pdf)
- 89 **Northamptonshire Vales** [www.countryside.gov.uk/Images/JCA89+94\\_tcm2-21159.pdf](http://www.countryside.gov.uk/Images/JCA89+94_tcm2-21159.pdf)
- 90 **Bedfordshire Greensand Ridge** [www.countryside.gov.uk/Images/JCA090\\_tcm2-21190.pdf](http://www.countryside.gov.uk/Images/JCA090_tcm2-21190.pdf)
- 91 **Yardly-Whittlewood Ridge** [www.countryside.gov.uk/Images/JCA91\\_tcm2-21160.pdf](http://www.countryside.gov.uk/Images/JCA91_tcm2-21160.pdf)
- 92 **Rockingham Forest** [www.countryside.gov.uk/Images/JCA92\\_tcm2-21161.pdf](http://www.countryside.gov.uk/Images/JCA92_tcm2-21161.pdf)
- 93 **High Leicestershire** [www.countryside.gov.uk/Images/JCA93\\_tcm2-21162.pdf](http://www.countryside.gov.uk/Images/JCA93_tcm2-21162.pdf)
- 94 **Leicestershire Vales** [www.countryside.gov.uk/Images/JCA89+94\\_tcm2-21159.pdf](http://www.countryside.gov.uk/Images/JCA89+94_tcm2-21159.pdf)
- 95 **Northamptonshire Uplands** [www.countryside.gov.uk/Images/JCA95\\_tcm2-21163.pdf](http://www.countryside.gov.uk/Images/JCA95_tcm2-21163.pdf)

- 96 **Dunsmore and Feldon** [www.countryside.gov.uk/Images/JCA96\\_tcm2-21164.pdf](http://www.countryside.gov.uk/Images/JCA96_tcm2-21164.pdf)
- 97 **Arden** [www.countryside.gov.uk/Images/JCA097%20-%20%20Arden\\_tcm2-21191.pdf](http://www.countryside.gov.uk/Images/JCA097%20-%20%20Arden_tcm2-21191.pdf)
- 98 **Clun and North West Herefordshire Hills** [www.countryside.gov.uk/Images/JCA098%20-%20Clun%20and%20North%20West%20Herefordshire%20Hills\\_tcm2-21192.pdf](http://www.countryside.gov.uk/Images/JCA098%20-%20Clun%20and%20North%20West%20Herefordshire%20Hills_tcm2-21192.pdf)
- 99 **Black Mountains and Golden Valley** [www.countryside.gov.uk/Images/JCA099%20-%20Black%20Mountains%20and%20Golden%20Valley\\_tcm2-21193.pdf](http://www.countryside.gov.uk/Images/JCA099%20-%20Black%20Mountains%20and%20Golden%20Valley_tcm2-21193.pdf)
- 100 **Herefordshire Lowlands** [www.countryside.gov.uk/Images/JCA100%20-%20Herefordshire%20Lowlands\\_tcm2-21194.pdf](http://www.countryside.gov.uk/Images/JCA100%20-%20Herefordshire%20Lowlands_tcm2-21194.pdf)
- 101 **Herefordshire Plateau** [www.countryside.gov.uk/Images/JCA101+102%20-%20Herefordshire%20Plateau%20+%20Teme%20Valley\\_tcm2-21195.pdf](http://www.countryside.gov.uk/Images/JCA101+102%20-%20Herefordshire%20Plateau%20+%20Teme%20Valley_tcm2-21195.pdf)
- 102 **Teme Valley** [www.countryside.gov.uk/Images/JCA101+102%20-%20Herefordshire%20Plateau%20+%20Teme%20Valley\\_tcm2-21195.pdf](http://www.countryside.gov.uk/Images/JCA101+102%20-%20Herefordshire%20Plateau%20+%20Teme%20Valley_tcm2-21195.pdf)
- 103 **Malvern Hills** [www.countryside.gov.uk/Images/JCA103%20-%20Malvern%20Hills\\_tcm2-21196.pdf](http://www.countryside.gov.uk/Images/JCA103%20-%20Malvern%20Hills_tcm2-21196.pdf)
- 104 **South Herefordshire & Over Severn** [www.countryside.gov.uk/Images/JCA104%20-%20South%20Herefordshire%20and%20Over%20Severn\\_tcm2-21197.pdf](http://www.countryside.gov.uk/Images/JCA104%20-%20South%20Herefordshire%20and%20Over%20Severn_tcm2-21197.pdf)
- 105 **Forest of Dean and Lower Wye** [www.countryside.gov.uk/Images/JCA105%20-%20Forest%20of%20Dean%20and%20Lower%20Wye\\_tcm2-21198.pdf](http://www.countryside.gov.uk/Images/JCA105%20-%20Forest%20of%20Dean%20and%20Lower%20Wye_tcm2-21198.pdf)
- 106 **Severn and Avon Vales** [www.countryside.gov.uk/Images/JCA106%20-%20Severn%20and%20Avon%20Vales\\_tcm2-21199.pdf](http://www.countryside.gov.uk/Images/JCA106%20-%20Severn%20and%20Avon%20Vales_tcm2-21199.pdf)
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- 109 **Midvale Ridge** [www.countryside.gov.uk/Images/JCA109%20-%20Midvale%20Ridge\\_tcm2-21202.pdf](http://www.countryside.gov.uk/Images/JCA109%20-%20Midvale%20Ridge_tcm2-21202.pdf)
- 110 **The Chilterns** [www.countryside.gov.uk/Images/JCA110%20-%20Chilterns\\_tcm2-21203.pdf](http://www.countryside.gov.uk/Images/JCA110%20-%20Chilterns_tcm2-21203.pdf)
- 111 **Northern Thames Basin** [www.countryside.gov.uk/Images/JCA111\\_tcm2-21204.pdf](http://www.countryside.gov.uk/Images/JCA111_tcm2-21204.pdf)
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- 115 **Thames Valley** [www.countryside.gov.uk/Images/JCA115\\_tcm2-21205.pdf](http://www.countryside.gov.uk/Images/JCA115_tcm2-21205.pdf)
- 116 **Berkshire and Marlborough Downs** [www.countryside.gov.uk/Images/JCA116%20-%20Berkshire%20and%20Marlborough%20Downs\\_tcm2-21206.pdf](http://www.countryside.gov.uk/Images/JCA116%20-%20Berkshire%20and%20Marlborough%20Downs_tcm2-21206.pdf)
- 117 **Avon Vales** [www.countryside.gov.uk/Images/JCA117%20-%20Avon%20Vales\\_tcm2-21207.pdf](http://www.countryside.gov.uk/Images/JCA117%20-%20Avon%20Vales_tcm2-21207.pdf)
- 118 **Bristol, Avon Valleys and Ridges** [www.countryside.gov.uk/Images/JCA118%20-%20Bristol,%20Avon%20Valleys%20and%20Ridges\\_tcm2-21208.pdf](http://www.countryside.gov.uk/Images/JCA118%20-%20Bristol,%20Avon%20Valleys%20and%20Ridges_tcm2-21208.pdf)
- 119 **North Downs** [www.countryside.gov.uk/Images/JCA119\\_tcm2-21553.pdf](http://www.countryside.gov.uk/Images/JCA119_tcm2-21553.pdf)
- 120 **Wealden Greensand** [www.countryside.gov.uk/Images/JCA120\\_tcm2-21552.pdf](http://www.countryside.gov.uk/Images/JCA120_tcm2-21552.pdf)
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- 124 **Pevensey Levels** [www.countryside.gov.uk/Images/JCA124\\_tcm2-21631.pdf](http://www.countryside.gov.uk/Images/JCA124_tcm2-21631.pdf)
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- 126 **South Coast Plain** [www.countryside.gov.uk/Images/JCA126\\_tcm2-21630.pdf](http://www.countryside.gov.uk/Images/JCA126_tcm2-21630.pdf)
- 127 **Isle of Wight** [www.countryside.gov.uk/Images/JCA127\\_tcm2-21660.pdf](http://www.countryside.gov.uk/Images/JCA127_tcm2-21660.pdf)
- 128 **South Hampshire Lowlands** [www.countryside.gov.uk/Images/JCA128\\_tcm2-21661.pdf](http://www.countryside.gov.uk/Images/JCA128_tcm2-21661.pdf)
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- 131 **New Forest** [www.countryside.gov.uk/Images/JCA131%20-%20New%20Forest\\_tcm2-21210.pdf](http://www.countryside.gov.uk/Images/JCA131%20-%20New%20Forest_tcm2-21210.pdf)
- 132 **Salisbury Plain and West Wiltshire Downs** [www.countryside.gov.uk/Images/JCA132%20-%20Salisbury%20Plain%20and%20West%20Wiltshire%20Downs\\_tcm2-21211.pdf](http://www.countryside.gov.uk/Images/JCA132%20-%20Salisbury%20Plain%20and%20West%20Wiltshire%20Downs_tcm2-21211.pdf)
- 133 **Blackmoor Vale and Vale of Wardour** [www.countryside.gov.uk/Images/JCA133%20-%20Blackmoor%20Vale%20and%20Vale%20of%20Wardour\\_tcm2-21212.pdf](http://www.countryside.gov.uk/Images/JCA133%20-%20Blackmoor%20Vale%20and%20Vale%20of%20Wardour_tcm2-21212.pdf)
- 134 **Dorset Downs and Cranborne Chase** [www.countryside.gov.uk/Images/JCA134%20-%20Dorset%20Downs%20and%20Cranborne%20Chase\\_tcm2-21213.pdf](http://www.countryside.gov.uk/Images/JCA134%20-%20Dorset%20Downs%20and%20Cranborne%20Chase_tcm2-21213.pdf)
- 135 **Dorset Heaths** [www.countryside.gov.uk/Images/JCA135%20-%20Dorset%20Heaths\\_tcm2-21214.pdf](http://www.countryside.gov.uk/Images/JCA135%20-%20Dorset%20Heaths_tcm2-21214.pdf)
- 136 **South Purbeck** [www.countryside.gov.uk/Images/JCA136%20-%20South%20Purbeck\\_tcm2-21215.pdf](http://www.countryside.gov.uk/Images/JCA136%20-%20South%20Purbeck_tcm2-21215.pdf)
- 137 **Isle of Portland** [www.countryside.gov.uk/Images/JCA137+138%20-%20Isle%20of%20Portland%20%20+%20Weymouth%20Lowlands\\_tcm2-21216.pdf](http://www.countryside.gov.uk/Images/JCA137+138%20-%20Isle%20of%20Portland%20%20+%20Weymouth%20Lowlands_tcm2-21216.pdf)

- 138 **Weymouth Lowlands** [www.countryside.gov.uk/Images/JCA137+138%20-%20Isle%20of%20Portland%20%20+%20Weymouth%20Lowlands\\_tcm2-21216.pdf](http://www.countryside.gov.uk/Images/JCA137+138%20-%20Isle%20of%20Portland%20%20+%20Weymouth%20Lowlands_tcm2-21216.pdf)
- 139 **Marshwood and Powerstock Vales** [www.countryside.gov.uk/Images/JCA139%20-%20Marshwood%20and%20Powerstock%20Vales\\_tcm2-21217.pdf](http://www.countryside.gov.uk/Images/JCA139%20-%20Marshwood%20and%20Powerstock%20Vales_tcm2-21217.pdf)
- 140 **Yeovil Scarplands** [www.countryside.gov.uk/Images/JCA140%20-%20Yeovil%20Scarplands\\_tcm2-21218.pdf](http://www.countryside.gov.uk/Images/JCA140%20-%20Yeovil%20Scarplands_tcm2-21218.pdf)
- 141 **Mendip Hills** [www.countryside.gov.uk/Images/JCA141%20-%20Mendip%20Hills\\_tcm2-21219.pdf](http://www.countryside.gov.uk/Images/JCA141%20-%20Mendip%20Hills_tcm2-21219.pdf)
- 142 **Somerset Levels and Moors** [www.countryside.gov.uk/Images/JCA142+143%20-%20Somerset%20Levels%20and%20Moors%20+%20Mid%20Somerset%20Hills\\_tcm2-21220.pdf](http://www.countryside.gov.uk/Images/JCA142+143%20-%20Somerset%20Levels%20and%20Moors%20+%20Mid%20Somerset%20Hills_tcm2-21220.pdf)
- 143 **Mid Somerset Hills** [www.countryside.gov.uk/Images/JCA142+143%20-%20Somerset%20Levels%20and%20Moors%20+%20Mid%20Somerset%20Hills\\_tcm2-21220.pdf](http://www.countryside.gov.uk/Images/JCA142+143%20-%20Somerset%20Levels%20and%20Moors%20+%20Mid%20Somerset%20Hills_tcm2-21220.pdf)
- 144 **Quantock Hills** [www.countryside.gov.uk/Images/JCA144%20-%20Quantock%20Hills\\_tcm2-21221.pdf](http://www.countryside.gov.uk/Images/JCA144%20-%20Quantock%20Hills_tcm2-21221.pdf)
- 145 **Exmoor** [www.countryside.gov.uk/Images/JCA145%20-%20Exmoor\\_tcm2-21222.pdf](http://www.countryside.gov.uk/Images/JCA145%20-%20Exmoor_tcm2-21222.pdf)
- 146 **Vale of Taunton and Quantock Fringe** [www.countryside.gov.uk/Images/JCA146%20-%20Vale%20of%20Taunton%20and%20Quantock%20Fringes\\_tcm2-21223.pdf](http://www.countryside.gov.uk/Images/JCA146%20-%20Vale%20of%20Taunton%20and%20Quantock%20Fringes_tcm2-21223.pdf)
- 147 **Blackdowns** [www.countryside.gov.uk/Images/JCA147%20-%20Blackdowns\\_tcm2-21224.pdf](http://www.countryside.gov.uk/Images/JCA147%20-%20Blackdowns_tcm2-21224.pdf)
- 148 **Devon Redlands** [www.countryside.gov.uk/Images/JCA148%20-%20Devon%20Redlands\\_tcm2-21225.pdf](http://www.countryside.gov.uk/Images/JCA148%20-%20Devon%20Redlands_tcm2-21225.pdf)
- 149 **The Culm** [www.countryside.gov.uk/Images/JCA149%20-%20The%20Culm\\_tcm2-21226.pdf](http://www.countryside.gov.uk/Images/JCA149%20-%20The%20Culm_tcm2-21226.pdf)
- 150 **Dartmoor** [www.countryside.gov.uk/Images/JCA150%20-%20Dartmoor\\_tcm2-21227.pdf](http://www.countryside.gov.uk/Images/JCA150%20-%20Dartmoor_tcm2-21227.pdf)
- 151 **South Devon** [www.countryside.gov.uk/Images/JCA151%20-%20South%20Devon\\_tcm2-21228.pdf](http://www.countryside.gov.uk/Images/JCA151%20-%20South%20Devon_tcm2-21228.pdf)
- 152 **Cornish Killas** [www.countryside.gov.uk/Images/JCA152%20-%20Cornish%20Killas\\_tcm2-21229.pdf](http://www.countryside.gov.uk/Images/JCA152%20-%20Cornish%20Killas_tcm2-21229.pdf)
- 153 **Bodmin Moor** [www.countryside.gov.uk/Images/JCA153%20-%20Bodmin%20Moor\\_tcm2-21230.pdf](http://www.countryside.gov.uk/Images/JCA153%20-%20Bodmin%20Moor_tcm2-21230.pdf)
- 154 **Hensbarrow** [www.countryside.gov.uk/Images/JCA154%20-%20Hensbarrow\\_tcm2-21231.pdf](http://www.countryside.gov.uk/Images/JCA154%20-%20Hensbarrow_tcm2-21231.pdf)
- 155 **Carnmenellis** [www.countryside.gov.uk/Images/JCA155%20-%20Carnmenellis\\_tcm2-21232.pdf](http://www.countryside.gov.uk/Images/JCA155%20-%20Carnmenellis_tcm2-21232.pdf)
- 156 **West Penwith** [www.countryside.gov.uk/Images/JCA156%20-%20West%20Penwith\\_tcm2-21233.pdf](http://www.countryside.gov.uk/Images/JCA156%20-%20West%20Penwith_tcm2-21233.pdf)
- 157 **The Lizard** [www.countryside.gov.uk/Images/JCA157%20-%20The%20Lizard\\_tcm2-21234.pdf](http://www.countryside.gov.uk/Images/JCA157%20-%20The%20Lizard_tcm2-21234.pdf)
- 158 **Scilly Isles** [www.countryside.gov.uk/Images/JCA158%20-%20Isles%20of%20Scilly\\_tcm2-21235.pdf](http://www.countryside.gov.uk/Images/JCA158%20-%20Isles%20of%20Scilly_tcm2-21235.pdf)
- 159 **Lundy** [www.countryside.gov.uk/Images/JCA159%20-%20Lundy\\_tcm2-21236.pdf](http://www.countryside.gov.uk/Images/JCA159%20-%20Lundy_tcm2-21236.pdf)