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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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.

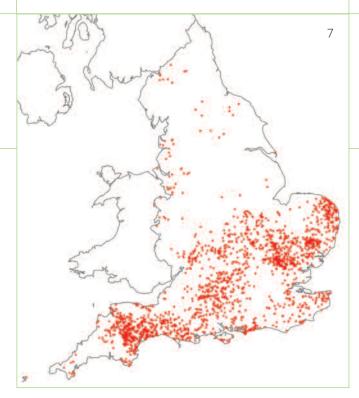
3.2 BUILDING MATERIALS IN THE NORTH WEST

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; Ġ Śolway 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. (Shropshire, Staffordshire and Cheshire Plain) © Jen Deadman, except F and G © Jeremy Lake

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 'wrostler' 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









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

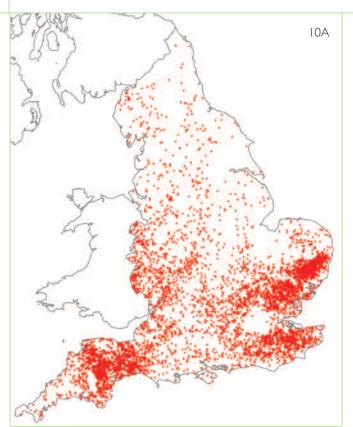
All survivals of this period are of great rarity and significance. The best-known survivals are the great barns of secular and especially ecclesiastical estates. These

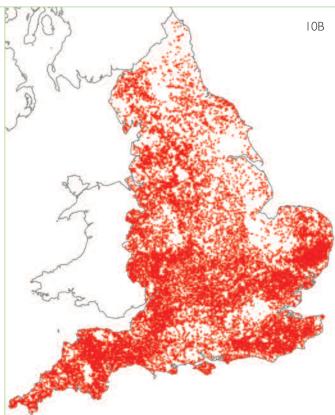
comprised the foci of farmyards with ancillary buildings that have been almost completely swept away, for which documentary but very little archaeological evidence exists. The great cattle ranches (vaccaries) of the northern uplands have left no traces in terms of built fabric, although their impact 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





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.

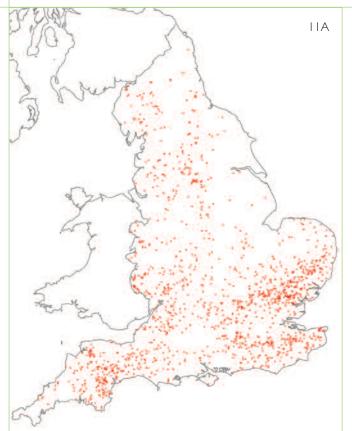
4.1.3 1750 TO 1880

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

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 polices 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 everincreasing 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 I750–I840 period are far less common than those of the post-I840 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 largescale 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 postwar 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 massproduced 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 multipurpose 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 2.1after 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.cgc.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 intercommoned 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 openclosed 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 (ICA 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,

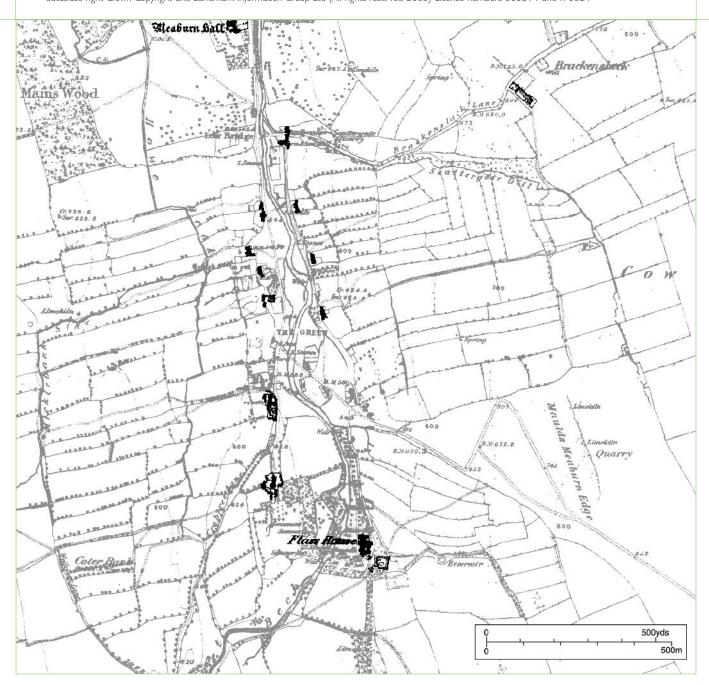
4.2.1.3 The Cumbrian Fells – Cumbria High Fells (JCA 8) and South Cumbria Low Fells (JCA 19)

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-14thcentury 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 Dentdale 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.

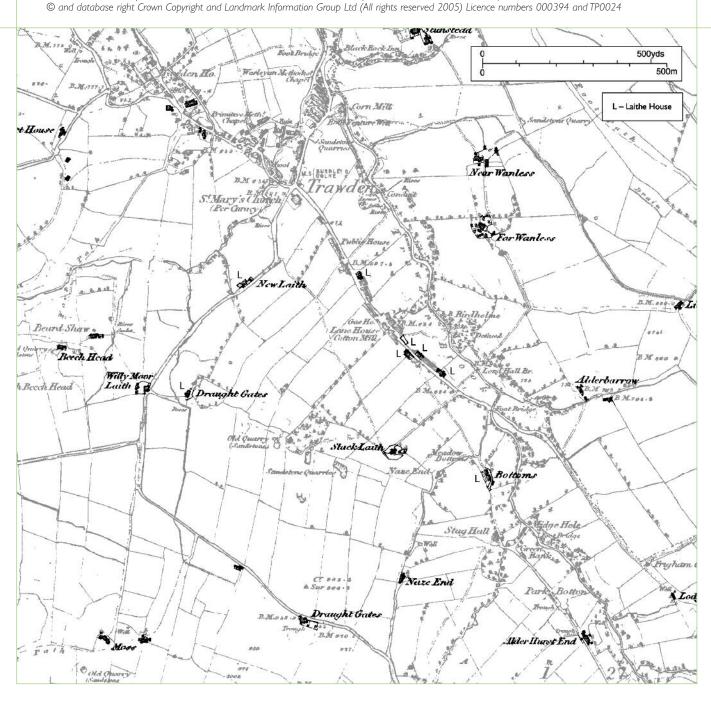
For more on the Dark Peak, a small part of which lies within this Region, see East Midlands. For more on South West Peak see West Midlands.

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 byemployments, 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.



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).

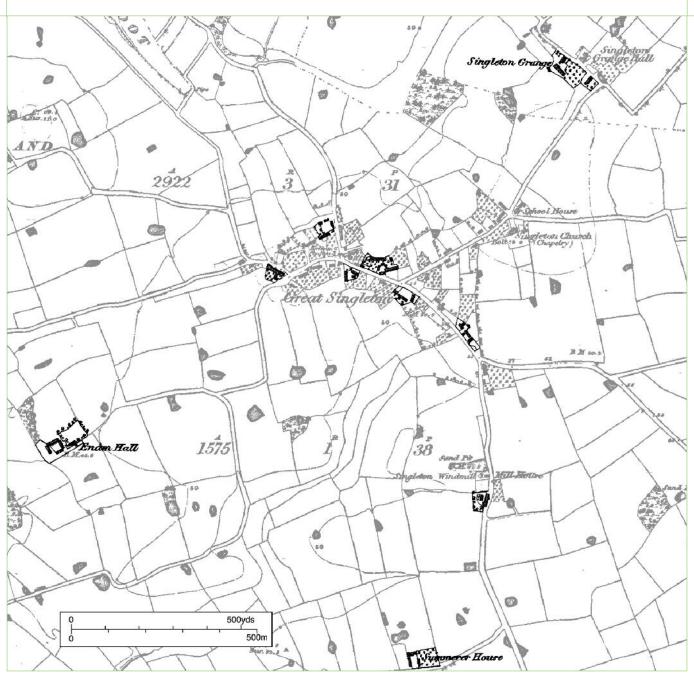
4.2.2.3 Lancashire Plains and Valleys – Lancashire and Amounderness Plain (JCA 32), Lancashire Coal Measures (JCA 56), Lancashire Valleys (JCA 35), Manchester Conurbation (JCA 55), Sefton Coast (JCA 57), Merseyside Conurbation (JCA 58) and Mersey Valley (JCA 60) (Figure 14)

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).

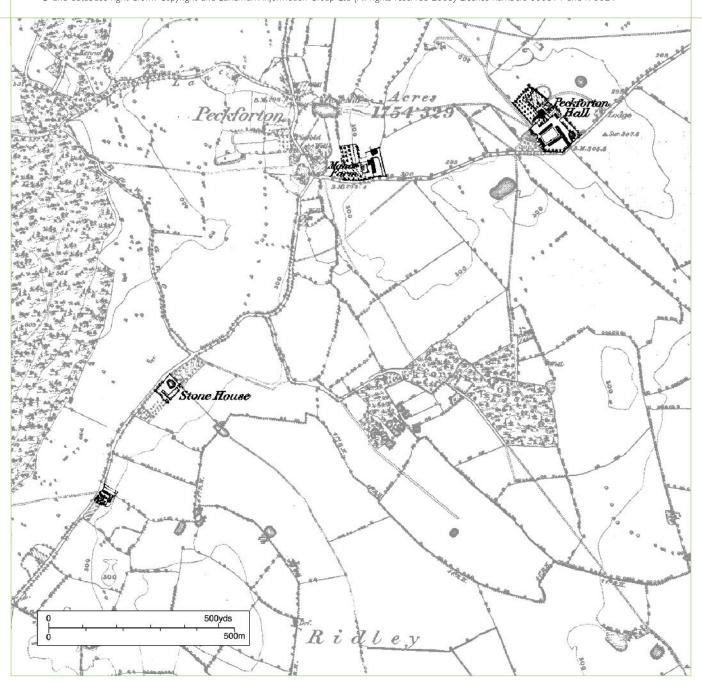
The Ribble Valley floodplain (Lancashire Valleys) is dominated by pre-17th-century irregular enclosure associated with villages and dispersed farmstead, the dominant field forms to the north-east being more planned and rectilinear, reflecting episodes of moorland enclosure along the fringes of the Forests 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. | 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 multifunctional 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 southwest 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.