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 UP TO 1550 (Figures 16 & 19)

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 16 & 19)

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

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 '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 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 25, 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 SOUTH WEST

Much of the Region, already well settled by the year 1100, experienced the growth of farmsteads on to marginal land, and the expansion of arable cultivation, as a result of population pressure in the 12th and 13th centuries. Deserted farmstead sites high on Bodmin Moor and Dartmoor (most notably at Hound Tor) stand

as evidence for medieval arable farming well beyond the present-day limits of cultivation. After the Black Death, and in some areas before, there was a general reduction in arable land to sheep and cattle farming. Many farmsteads in the pastoral-based area of the Region result from the shrinkage of farming hamlets, a process that commenced in the 13th century and became especially marked in emerging pastoral areas in the 15th century (Fox in Miller 1991, pp.165–9). In Exmoor it continued into the 19th century (Riley & Wilson-North 2001, p.121).

By the 14th century a distinctive feature of both Devon and Cornwall had emerged – 'free tenants with large landholdings' – and was further reinforced by the transfer of large blocks of land after 1350, giving rise in some areas to compact farms of 100 acres or over by the early 16th century (Hallam 1988, p.675; Fox in Miller 1991, p.725). Larger farms emerged in the north and east of the Region also. In the Cotswolds this created a long-term restructuring of farm sites, with villages on higher ground abandoned and their fields converted to open grazing land for sheep, while arable was concentrated on the valley sides. The growth of cloth manufacture in the southern Cotswolds, Wiltshire and Somerset helped to diversify the rural economy.

Of major importance to the future character of the Region was the emergence in many areas of strong pastoral farming economies. The upheavals of the 14th century generally led to a reduction in arable land and the development of pasture for dairying or the rearing and grazing of stock. A clear distinction arose between areas able to specialise in the rearing of cattle (such as much of Cornwall, north and mid Devon), dairying and rearing (east Devon), dairying (by the 16th century the Vale of Gloucester and east Devon/west Dorset) and long-standing arable areas such as around Bristol, the South Hams of Devon, the coastal areas of south Cornwall and west Somerset and the Vale of Taunton Deane. In most of Cornwall and north Devon stock rearing emerged as a major industry from the 15th century, many of the animals reared being moved eastwards into Somerset and Dorset for fattening. Wealthier farmers wintered their stock in home closes on the fringes of Exmoor and Dartmoor, in addition to using the moors for summer grazing (Thirsk 1967, p.77). The Somerset Levels, north-east Somerset, west and north Dorset, north-west Wiltshire and the Vales of Gloucester and Berkeley had developed by the 17th century into specialised fattening areas supplied not only by Devon and Cornwall, but also with animals from South Wales and Ireland. Where dairying was important – in north Wiltshire, west Dorset, the Vales of Gloucester and Berkeley, in east Devon and west Dorset – pigs were usually kept, consuming the by-products of the dairy. London provided one of the main markets for the fattened animals and also for cheese, in addition to the local markets (Thirsk 1967, pp.67–77). Thus developed a visible contrast between the larger farmsteads, more regular fields and compact holdings of the South Hams of Devon, where arable-based mixed farming had predominated since the 11th century, and the smaller steadings and intermixed holdings of mid-, north and east Devon (Hoskins 1954, p.93; Marshall 1796; Vancouver 1808, p.160; Fox in Miller 1991, p.191).

Orchards for the production of cider – already produced for export in the medieval period (Hallam 1988, p.395) – also replaced arable from at least the 15th century in Somerset, Devon, Gloucestershire and, to a lesser extent, in west Dorset (Thirsk 1984, pp.192–3, 382–4). Important improvements in the cultivation of fruit trees and cider making were developed in the South West. In some areas much of the cider was consumed locally, often as part of the labourers' pay, but the Region also supplied the London market and other parts of the country. The number of orchards gave the cider-producing parts of the Region a wooded character. Within the farmsteads, cider making required a cider-press and in the later 18th century it was said that in parts of Gloucestershire 'a cider-mill house was almost as necessary as a barn' on a farm (Marshall 1796).

Observers of the agriculture of Devon and Dorset in the mid- to late 18th century were often disparaging about the unwillingness of many farmers to utilise new crops or, where they were grown, about the quality of the husbandry or the lack of advanced rotations (Young 1771, pp.395, 409; Claridge 1797, p.49). Some parts of the Region, such as the arable Vale of Taunton Deane, were relatively quick to introduce new crops such as artificial grasses that produced more hay and improved the soil for succeeding corn crops, and root crops such as turnips, but the acceptance of these new crops was not widespread until the mid-19th century (Thirsk 1984, pp.363–5). Traditional farming methods were indeed slow to change, but had been adapted over centuries to local conditions: for example, the practice of convertible husbandry in Cornwall and Devon, whereby permanent pasture was broken up and farmed as arable for two or three seasons, which persisted from the medieval period (or earlier) into the 19th century. In the chalklands of Wiltshire and Dorset, the importance of wool as a cash crop, associated with the 'folding' of sheep on corn, continued to serve as the anchor of the farming system from the 13th to the 19th centuries (Page 1996). In the 17th century, the creation of watermeadows in the chalk valleys of Wiltshire and Dorset produced a major improvement to the productivity of the land. These systems controlled flooding of meadows adjacent to rivers during winter to bring nutrients over the meadow and protect the grass from the coldest winter temperatures (Bettey 1987, pp.25–9). This advanced the

spring growth of the grass, providing the sheep flocks with an early 'bite' when the winter feed store was diminishing and when the downland grass had not begun to grow. It also dramatically improved the crops of hay that could be obtained. The winter food store could now support larger flocks, increasing soil fertility and so improving grain yields from the arable lands that were manured by folding the sheep on the fallow land. Wiltshire, Dorset and neighbouring Hampshire became the heartland of the watermeadow systems in the country, although the technique was not confined to these counties and examples can also be found in Devon and Somerset. Although sheep and corn had long been the mainstay of the agriculture of the chalklands, the increased size of the flocks of sheep grazing the downland emphasised its character. The Dorset chalklands were described in 1793 as being 'covered with numerous flocks of sheep scattered across the downs' (Claridge 1793, p.6). It was later claimed that there was 'no better farming in the kingdom' partly in recognition of the benefits of watering the meadows (Ruegg 1854, p.400). By the early 18th century, enclosure in parts of the Cotswolds, which enabled the sowing of new grasses in rotations, paved the way for the return of arable farming to the higher ground, the use of the valleys for pasture and meadow, and an increase in cattle numbers (Thirsk 1984, p.179). Such techniques had played an important role in sustaining productivity, and the continuing importance of hay for livestock was boosted by early bites of spring grass offered by the Region's mild climate. Catch meadow systems, where watercourses were adapted to follow the contours of the land, were developed elsewhere.

There was a sharp increase in cattle numbers across the Region in the second half of the 19th century, accompanied by the increased use of imported fodder, cattle housing and more secure leases that encouraged tenants to invest in new farming methods. This period was one of major change, characterised by an increase in livestock specialisation and where capital expenditure was often directed towards providing improved housing for stock. The development of liquid milk production – facilitated by the railway network – enabled the Region to supply the markets such as London, Oxford, Bristol and Bournemouth. From the middle of the 19th century the national increase in demand for meat, milk and vegetables provided a buoyant market for products suited to the Region's pastoral systems, and for the second half of the 19th century and early 20th century, sheep and cattle breeding and dairying were the mainstays of the agricultural economy. In Devon and Cornwall this development was accompanied by massive increases in the acreage of fodder crops. During the High Farming period, mid-Devon developed from being predominantly pastoral to become a major arable region. The chalkland areas saw the ploughing-up of large areas of sheep walks, with increases in both stocking densities and cereal output supported by artificial fertilisers and roots and oil-cake feeding of sheep (Wilmot 2000, pp.411–26).

After the late 1870s, following a series of bad harvests, falling grain prices and rising labour costs, the arable acreage across the Region fell dramatically and returned to close to or below the levels of the late 1830s. In Wiltshire, for example, the acreage under wheat and barley fell by 66% between 1871 and 1911, with a corresponding increase in permanent pasture. The sheep–corn areas were also badly hit by a rapid fall in the price of wool and, in some areas, by heavy losses in the number of sheep due to sheep rot caused by the wet seasons of the late 1870s. In response, chalkland farmers turned to milk production and less intensive farming systems with some of the downland arable reverting to pasture. In Devon, the South Hams principal arable district of the county became an important cattle-rearing district (Wilmot 2000, pp.411–26). The improved rail networks also allowed the development of market gardening in areas such as the Tamar valley, the area around Penzance and Falmouth, the Plymouth hinterland and the sheltered valleys of the north Devon coast; the Isles of Scilly became a major exporter of flowers, and glasshouses are still a noticeable feature of its landscape. In parts of the Region, the tourist industry was beginning to stimulate local markets and specialised produce (Whetham 1978, pp.40–41). Generally, the historical predominance of pastoral farming and its further development meant that the Region's farmers were less badly hit by the depression in British farming that continued into the early 20th century.

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) and sources listed in the bibliography.

Upper Thames Clay Vales, Midvale Ridge and New Forest (JCAs 108, 109, 131)

These are mostly in the South East, where they are more fully described.

4.2.1 Severn and Avon Vales (JCA 106)

The strong transitional nature of this area is reflected in

its patterns of landscape, architecture and settlement. To the west of the Severn (in the West Midlands) the present enclosure patterns, generally small to medium scale and irregular, derive from the piecemeal enclosure of medieval common field cores, and a complex intermingling of assarted fields, common land and common arable. The predominant pattern to the east of the Severn, by contrast, is piecemeal enclosure of the formerly extensive common arable fields, generally subject to enclosure from the 14th century and complete by the 18th century. Arable has historically been most concentrated on the heavy but fertile soils of the Lias Clay landscapes to the east. The Vales of Gloucester and Berkeley, much of the latter drained in the Roman period and in the 12th/13th centuries, provided rich pastures for cattle and for over-wintering sheep brought down from the Cotswolds. Cheese production was a major industry by the 18th century, combined with the fattening of pigs on whey. Also from at least the 17th century fruit orchards, particularly for cider and perry, became a major feature of this area.

4.2.2 **Forest of Dean and Lower Wye** (JCA 105)
From at least the late 17th century the agriculture of the area has been primarily characterised by dairying with some livestock rearing, arable being concentrated on the free-draining soils of the plateau south of Coleford. Holdings are generally small and field sizes variable, from small to medium, of medieval to 19th-century date. Larger fields developed on the arable-based plateau where farms were typically larger. Much of the squatting that encroached onto areas of former Forest common ocurred during the late 18th and early 19th centuries.

4.2.3 **The Cotswolds** (JCA 108)
Thin, well-aerated, brashy soils derived from limestone are common on the plateau and steeper slopes, particularly to the west. More fertile, deeper, clayey soils of alluvial origin are present along the valley floors and on lower-lying land to the south and east. The decline of open-field agriculture, evident by the late 14th century, was followed in many areas by the conversion of common-field arable into open pasture for grazing sheep; the major exception to this was the scarp slopes and the steeper valleys around Stroud where a more pastorally based cattle economy continued within the framework of anciently enclosed fields. By the 17th century sheep rearing was concentrated in the north and cloth-making to the south. The next major phase in the arable exploitation of the Cotswolds was linked to the agricultural improvements of the 18th and 19th centuries, when much of the high plateau was enclosed.

4.2.4 **Berkshire and Marlborough Downs, Salisbury Plain and West Wiltshire Downs, Dorset Downs and Cranborne Chase** (JCAs 116, 132 and 134) (Figure 11) See also South East document.

In common with other chalk downland areas sheep and corn have been the dominant agricultural elements since the medieval period at least. Open fields with common arable were located on the lower valley sides with downland providing grazing for huge flocks of sheep. Through folding the sheep on the fallow land (bringing the flock into moveable hurdled enclosures each night where they manured the arable land) the fertility of the soil was maintained and their wool also provided an important source of income. On the meadows relatively small numbers of cattle were kept for milk and fattening.

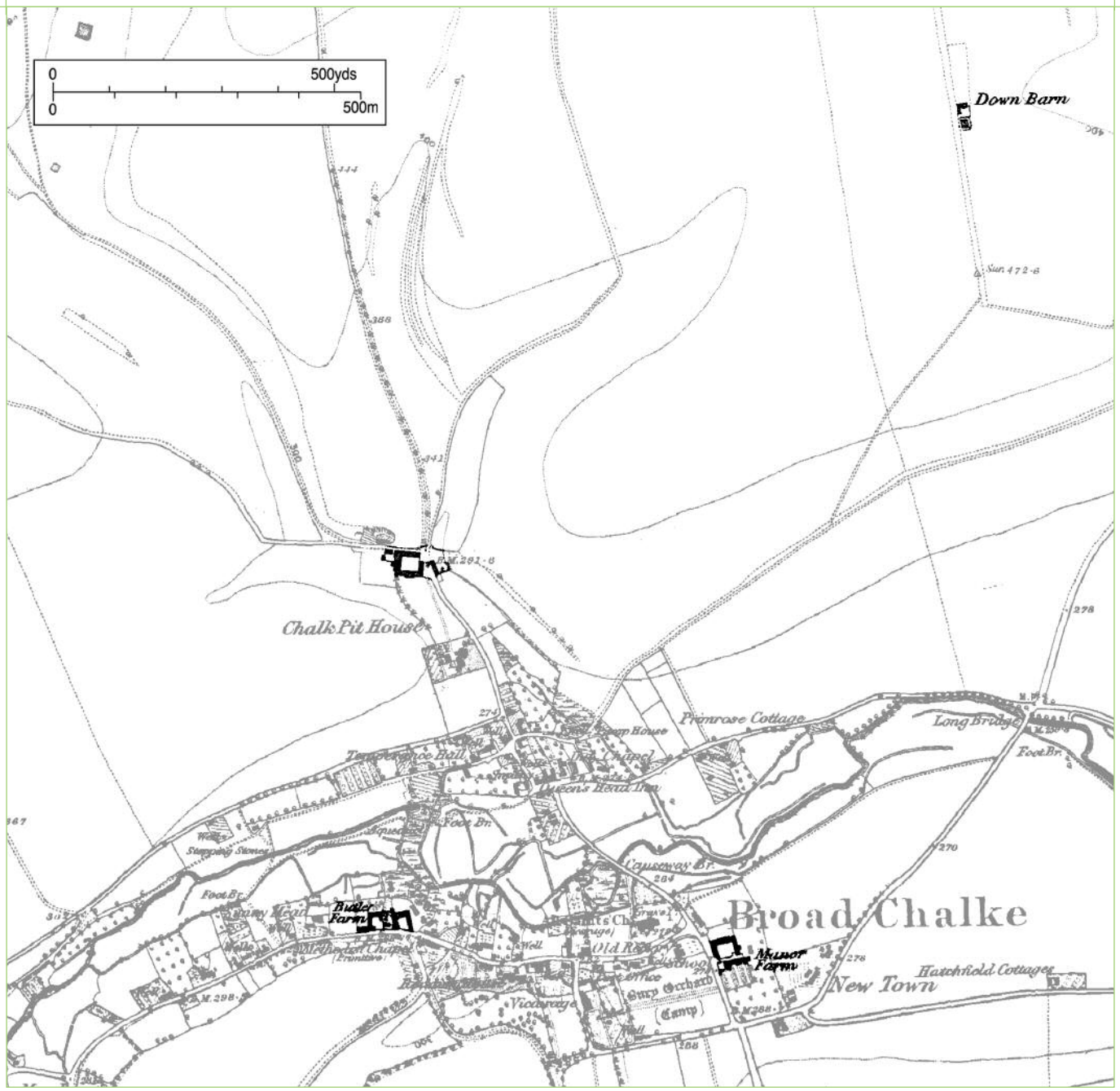
Although large areas of downland remained unenclosed until the 18th and 19th centuries, the enclosure of the common arable began by the 15th century and by the 16th century large farms were developing, often based on leased estates of major ecclesiastical landowners and through the engrossing of the holdings of smaller farmers with farmsteads largely concentrated in the villages (Figure 11). This resulted in the creation of some of the largest farms in the country.

The wealth of the downland farmer was largely tied to the price of grain and wool: hence prosperity during the Napoleonic Wars when cereal prices rose and the extent of arable was increased; post-war contraction; the High Farming years of the mid-19th century; and then the collapse of cereal and wool prices from the late 1870s. Some farmers looked to other farming methods, such as stock rearing or dairying, whilst others concentrated on increasing their corn production, this time with the use of artificial fertilisers, as corn still produced the best return from the light chalkland soils.

4.2.5 **Avon Vales, Bristol, Avon Valleys and Ridges** (JCAs 117 and 118)
This area, a major centre of broadcloth production from the late 14th to 18th centuries, has a long historical intermixture of arable, concentrated on areas of chalk and limestone, and pasture uses on its extensive claylands. It was a major dairying area from at least the 16th century, converting from cheese to the production of liquid milk after the mid-19th century.

4.2.6 **Mendip Hills** (JCA 141)
The plateau – with its mix of well-drained loams and more acidic and poorly-drained soils – was used as grazing lands for sheep and cattle from the Neolithic period, and in the medieval period and later as open sheepwalks for supply of wool to the cloth industry in surrounding towns and villages. Late 18th-century improvers initiated an extensive programme of capital-intensive arable farming boosted by manure from yard-fed cattle. This was not sustainable in the long term, and by the mid-19th century much had reverted to sheep and cattle pasture.

11 Farms in the landscape: Broad Chalke, Wiltshire (Dorset Downs and Cranborne Chase). Broad Chalke lies in the valley of the River Ebble cutting across the chalk downland of Wiltshire. The parish stretches across both sides of the valley, extending up onto the downs where outfarms were built. The village contained all the historic farmstead sites, which by the late 19th century had been reduced to only three courtyard farmsteads. The chalk downs of Wiltshire and Hampshire (South East Region) witnessed extensive enclosure by agreement of the common fields and downland and the rise of the 'capitalist farmer' (farmers who leased large holdings), as early as the 17th century. The loss of the sheep-fold and common grazing drove out many small tenant farmers who were reduced to working as wage labour on the remaining farms that, by national standards, were very large.
Based on OS 1st Edition 6" map 1843–1890.



4.2.7 Blackmoor Vale and Vale of Wardour (JCA 133)
This area was historically one of mixed farming, with arable in open fields surrounding the villages and pasture available on the heavier, wet clays and within some of the woodlands. Increasing specialisation from the late 16th and 17th centuries resulted in a contraction of arable in favour of dairying, including cheese production, cattle grazing and sheep; the Blackmoor Vale became one of the prime cattle fattening areas of the South West, with London being the main market, the cattle driven to market along well-established droves.

4.2.8 South Purbeck; Weymouth Lowlands/Isle of Portland (JCAs 136 and 138)
Medieval strip lynchets on the coastal headlands and steeper valley sides are evidence for extensive arable farming in the medieval period. Much of these marginal areas were given over to pasture for sheep from the 14th century. The chalk provided extensive common grazing, particularly for sheep, and was partly subject to conversion to arable from the late 18th century although much open downland survives. Mixed farming was typical in the valley of the River Corfe where settlements had access to downland, arable on the side of the valley and

12 Farms in the landscape: Pilsdon, Dorset (Marshwood and Powerstock Vales). The Marshwood Vale in West Dorset is an anciently enclosed landscape with a predominantly dispersed settlement pattern of small farmsteads linked by narrow lanes and footpaths. The heavy clay soil, the highly irregular field pattern and the small size of the fields indicate that this is an assarted landscape where there was limited arable. This area was one of relatively late development and, although the process of clearance was underway by the 11th century, it was not complete until the late medieval period and many of the farmsteads bear names that date from the 12th to 14th centuries. By the late 19th century farmsteads were typically loose courtyards whilst the largest had regular courtyards. Some of the smallest farms had only a single, usually detached, range of farm buildings.
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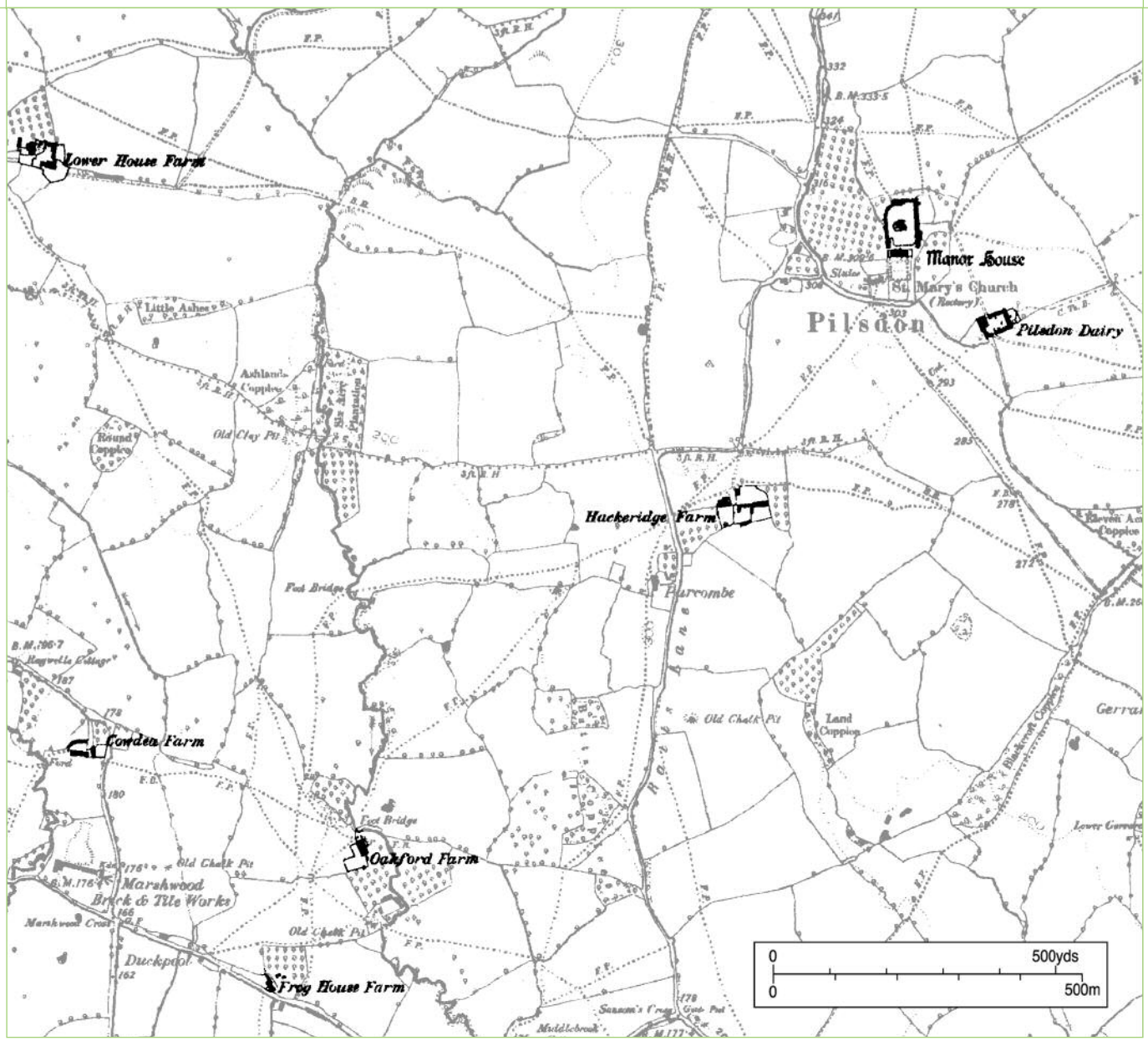


good meadowland in the valley. Dairy farming increased in the later 19th century, supplying the expanding towns of Bournemouth and Poole with liquid milk, assisted by the arrival of the railway through to Swanage. On the Isle of Portland open field farming was characteristic, and arable historically predominant.

4.2.9 Dorset Heaths (JCA 135)

Other than small encroachments, the heathlands largely only provided rough grazing until the 17th century when some larger-scale attempts at reclamation were made, with limited success. In the 19th century some large estates attempted further improvement schemes, some of which have also reverted back to heath. In the valleys there was some arable, and arable extends from the adjacent chalk downlands (see 4.2.4) into the fringes of the area.

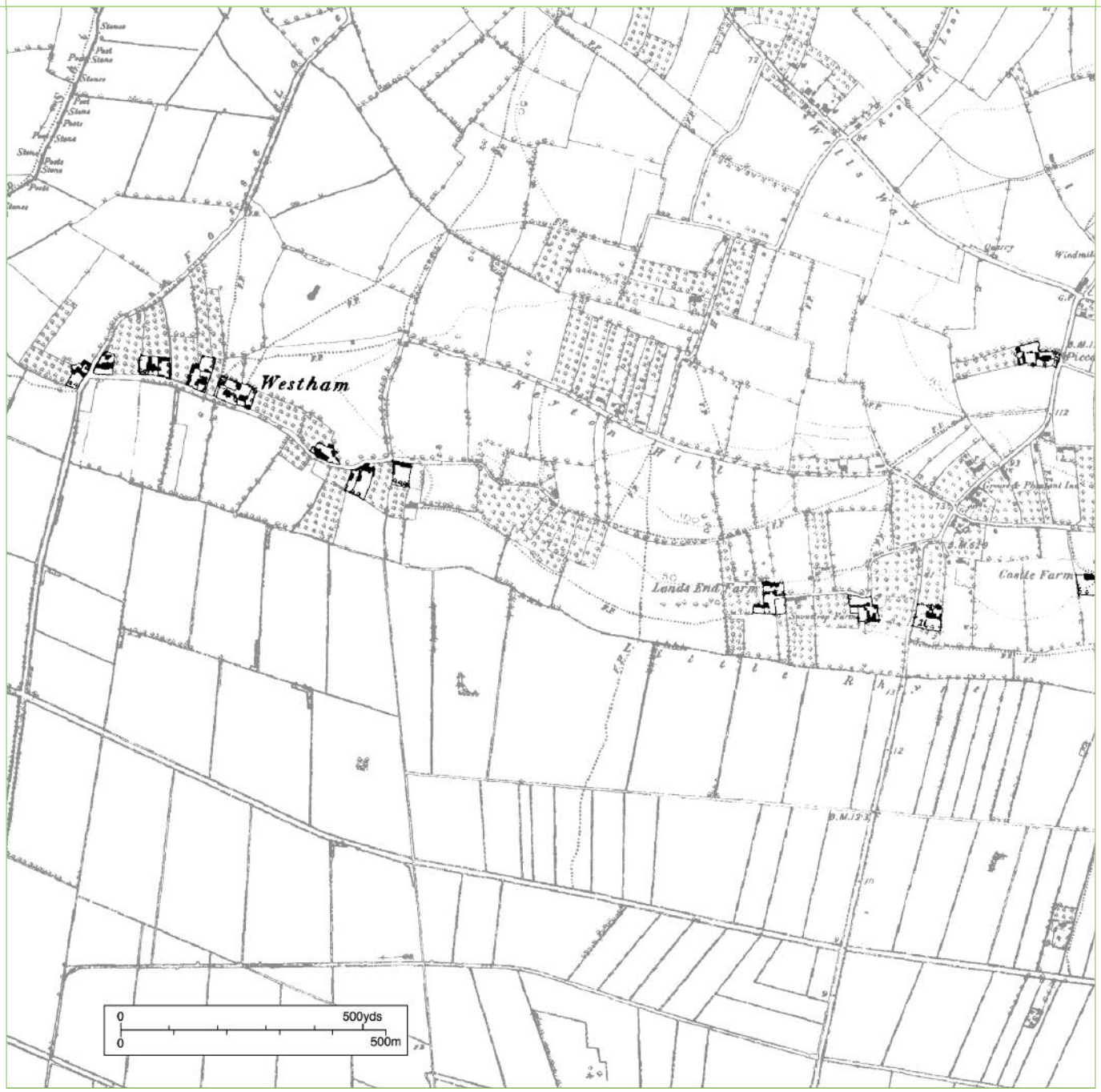
4.2.10 Marshwood and Powerstock Vales (JCA 139) (Figure 12)

This was a major dairying area from at least the 16th century, the individual farms (mostly the result of woodland clearance in the 10th to 13th centuries) converting from cheese to production of liquid milk after export was facilitated by rail from the mid-19th century.

4.2.11 Yeovil Scarplands (JCA 140)

Across much of the area arable with cattle, particularly for dairying, was the predominant agricultural system with open fields being typical. These fields were largely

13 Farmsteads in the landscape: Westham, Somerset (Somerset Levels). Westham and Heath House in central Somerset are irregular row settlements lying on rising ground immediately at the fen edge. The hamlets consist of irregularly spaced farmsteads looking across the flat fen. To the north many of the small fields have slightly curved boundaries indicating that the fields were created out of open field strips. The straight, regular boundaries of the late-enclosed fen stand in marked contrast. Associated with most of the farmsteads are small orchards. The farmsteads consist of mainly L-plans and small loose courtyards with buildings of 19th-century date although there are occasional linear ranges. *Based on OS 1st Edition 6" mapping 1843-1890 © and database right Crown Copyright and Landmark Information Group Ltd (All rights reserved 2005) Licence numbers 000394 and TP0024. © Bob Edwards*

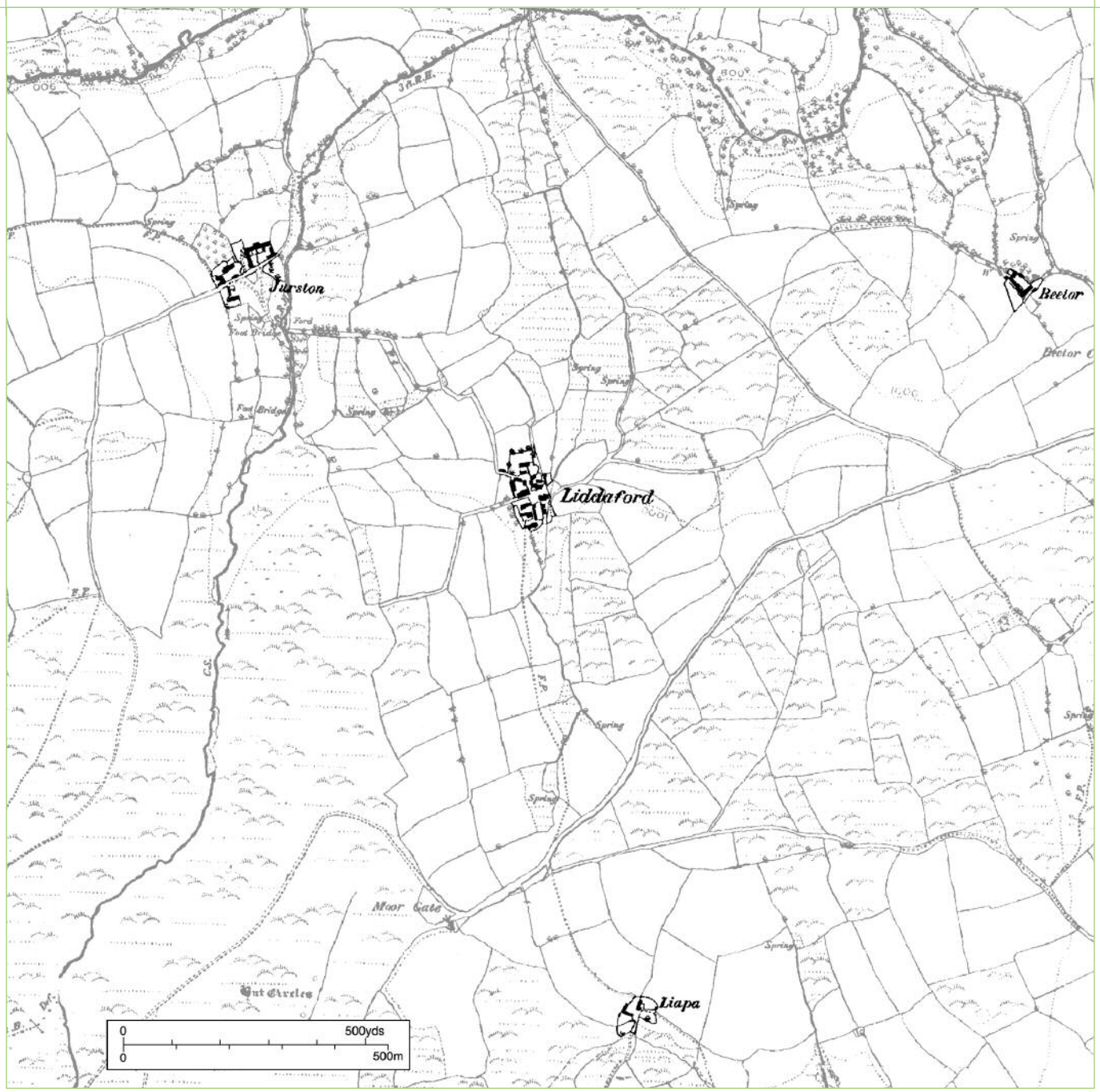


enclosed by agreement although open field farming was generally typical of south Somerset into the 18th century. In the Vale of Sherborne, however, pastoral farming (specifically dairying) was more important – arable providing subsistence corn only.

4.2.12 Somerset Levels and Moors / Mid Somerset Hills (JCAs 142-3) (Figure 13)

The present pattern of settlement, concentrated on the coastal clay belt and much more sparse in the inland peat moors, results from thousands of years of drainage and reclamation. A major period of inland reclamation was largely driven by ecclesiastical estates (primarily Glastonbury Abbey) from the late 11th to the 13th and early 14th centuries; renewed efforts in the 17th century included the drainage of Meare Pool and Aller Moor from the 1620s. Drainage was again renewed between the 1770s and the 1840s – enabled by steam power (commencing with the stations at Westonzoyland in 1830 which drained the Parret valley). Fattening and dairying became the major industry on the Levels and Moors, with a greater historical diversity of farming – including cider orchards – on the higher ground.

14 Farmsteads in the landscape: Lettaford (Dartmoor). Lettaford (shown as Liddaford on this late 19th-century map) is a small hamlet on the edge of Dartmoor consisting of three farmsteads, each with a longhouse and separate barns and animal buildings. Surrounding the hamlet is a mosaic of mainly irregular, small fields, some of which appear to have reverted to moorland and probably represent fields brought into cultivation periodically and then left for up to 20 years to recover. Beyond the fields to the south-west of the hamlet is the open moor. *Based on OS 1st Edition 6" mapping 1843-1890 © and database right Crown Copyright and Landmark Information Group Ltd (All rights reserved 2005) Licence numbers 000394 and TP0024.*



4.2.13 Exmoor and the Quantock Hills (JCAs 144–5)
This area has a long history of mixed arable and pasture with arable concentrated in the coastal vales and headlands, which has access to areas of coastal marsh for grazing. In the 1840s landowner Frederick Knight initiated an ambitious programme of reclamation and enclosure on the former Royal Forest of Exmoor, with the development of fifteen new farmsteads. Arable cultivation expanded considerably from the late 18th century, the major period of arable exploitation of the former Royal Forest of Exmoor taking place after its enclosure in the 19th century, largely reverting to sheep grazing from the 1870s.

4.2.14 Vale of Taunton and Quantock Fringes (JCA 146)
This area was very agriculturally prosperous in the post-medieval period, and noted for its meadowland and fruit growing. From the 18th century the arable lands were enriched by new crops such as turnips and artificial grasses. On the coastal areas there was grazing land for cattle.

4.2.15 Blackdown Hills (JCA 147)
Arable was historically concentrated on coastal chalk areas, with coastal salt marshes on the Axe providing rich grazing land. The higher ground, marked by generally poor and acidic soils, reverted to grazing from the 14th

century but from the late 18th century was subject to enclosure and arable tillage. Pastoral farming (in particular for dairying) developed from the 14th century in the valleys.

4.2.16 **Devon Redlands** (JCA 148)
Fertile and freely-draining red-brown earths have supported a mixed farming economy. From the late 14th century to the 18th century, arable was very limited in scale (with the major exception of the lower, flatter land and especially around Exeter) and stock breeding predominated, geared to the export of cattle on the hoof. Arable increased from the late 18th century, peaking in the mid-19th century, but from the 1870s moving back to a combination of stock rearing, fattening and dairying. Orchards for the production and export of cider became a strong feature of this area, increasing in number from the 15th century.

4.2.17 **The Culm** (JCA 149)
Much of the area's infertile soil (derived from the shales of the Culm Measures) was characterised by a cattle-rearing economy from the 15th century. Arable cultivation was historically concentrated on the coastal headlands of the Hartland peninsula and around Bude, and expanded considerably from the late 18th century. The arrival of the railways stimulated the development of a dairy industry in the late 19th century, and most of the farms – many purchased as freeholds in the land sales of the early 1920s – have remained small by national standards. It is now predominantly a dairying area although beef cattle and sheep are also significant. The cider industry developed on a large scale to the east of the area, close to Exeter, although not on as large a scale as the Devon Redlands or South Devon.

4.2.18 **Dartmoor** (JCA 150) (Figure 14)
The economy from the 15th century was primarily pastoral in nature, with the rearing of cattle for export on the hoof a major feature and more intensive mixed farming (including cider production to the south) on the fringes of the area. Arable cultivation expanded considerably in some areas from the late 18th century.

4.2.19 **South Devon** (JCA 151)
Arable-based mixed farming in the South Hams had predominated since the 11th century, and the remains of 18th- and 19th-century malthouses on the tidal inlets and elsewhere testify to the export of malted barley. This was the major cider-producing area of Devon. Dairy farming was predominant from the late 19th century in areas close to railway lines and thus access to the liquid milk trade. Market gardening and orchards developed from the 18th century as a characteristic feature of the Tamar Valley.

4.2.20 **Cornwall**
This includes much of the Culm and JCAs 152 (Cornish Killas), 153 (Bodmin Moor), 154 (Hesbarrow), 155 (Carnmenellis), 156 (West Penwith) and 157 (The Lizard), and part of JCA 149.

Cattle rearing was the principal form of farming in Cornwall, with arable historically concentrated in some coastal areas, principally around Padstow and Wadebridge to the north and along the south coast. The improved rail networks from the later 19th century facilitated the development of market gardening in the area around Falmouth, and of liquid milk production.

The dominance of livestock production by the early 19th century involved a majority of the land being laid to grass, and turnips and other fodder crops being grown on arable to feed cattle and in turn enrich the land with their manure. Cattle were either exported on the hoof for fattening further east (mainly in Somerset) or fattened for local consumption, including Plymouth and the provisioning of ships at its naval base. Better fodder crops and rotations of crops, and the housing of livestock, underpinned a substantial increase in cattle numbers from the mid-19th century. Some of the more fertile brown earths in low-lying areas (for example the Lynher Valley) were more intensively cultivated (Barnwell & Giles, 1997, pp.96–7).

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 15) 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.

15 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 are usually either a development from a linear plan or resemble 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, which may have agricultural buildings to only one or two of the remaining sides.

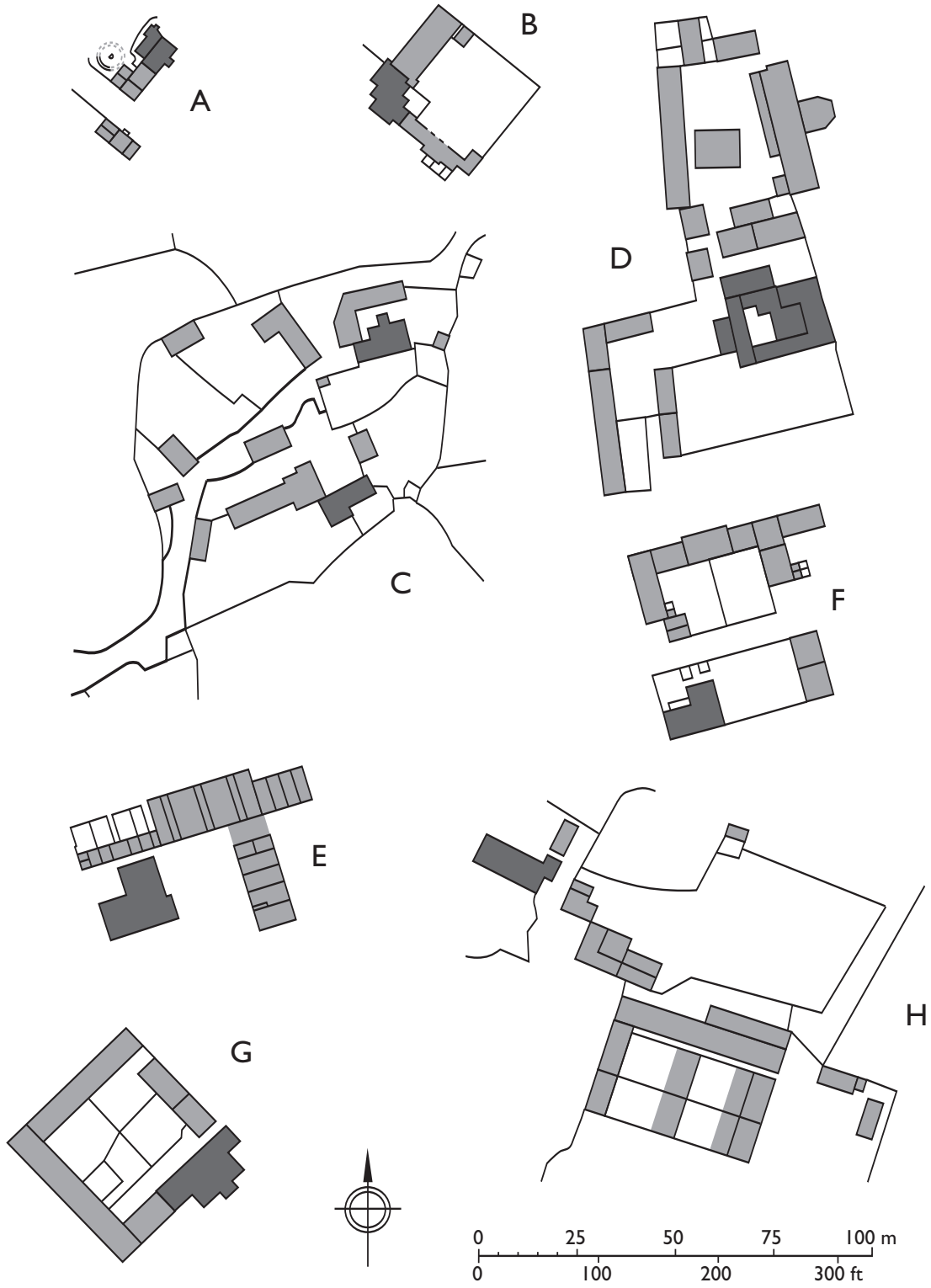
E Regular courtyard L-plan. Two attached ranges form a regular L-shape. The farmhouse is detached from the agricultural buildings.

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.

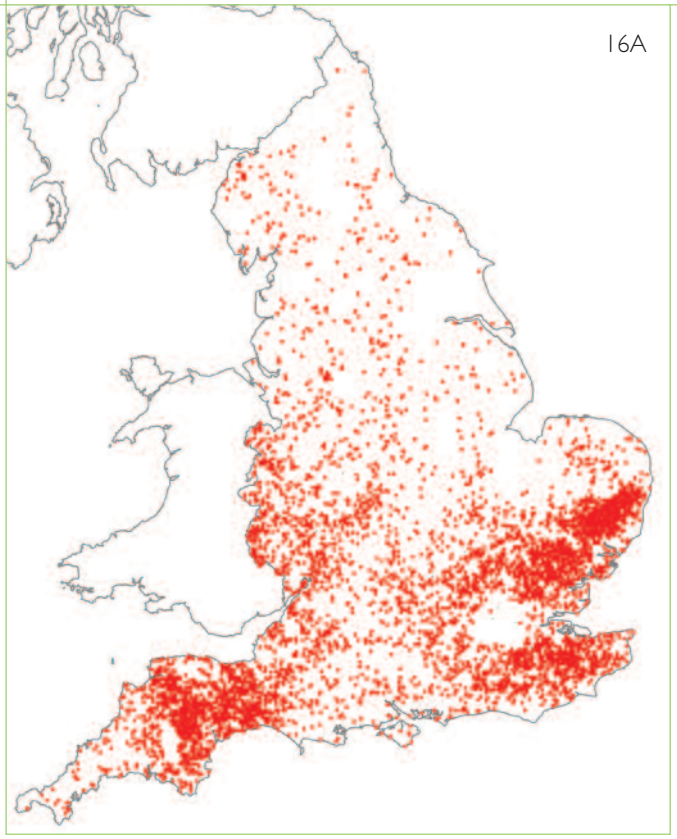
G Full regular courtyard. The yard is enclosed on all sides by buildings including, in this example, the farmhouse. Other examples are formed by agricultural buildings on all sides with the farmhouse built to one side.

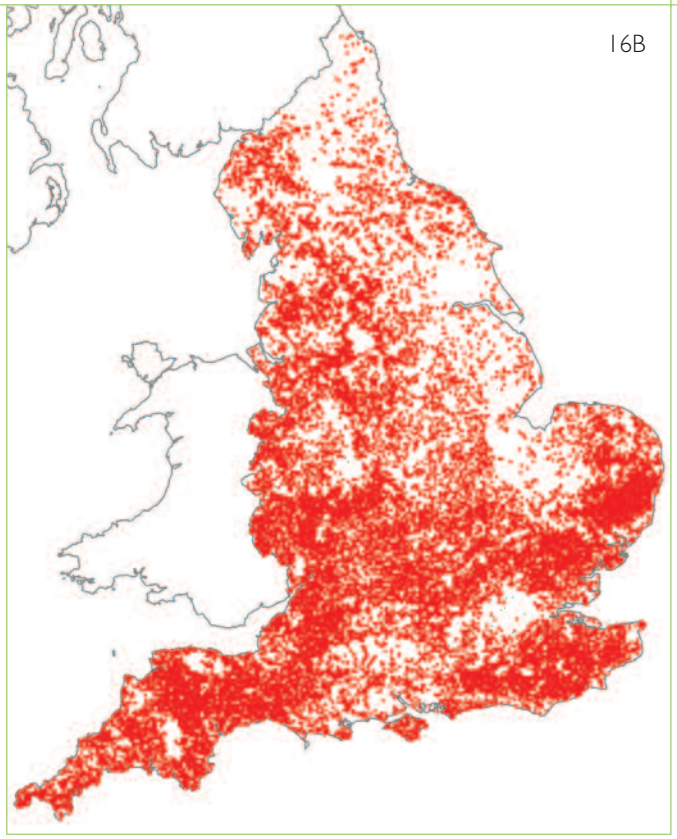
H Regular courtyard E-plan. This plan form (and variations of it with additional ranges) may be found on some of the larger planned farmsteads where livestock were a major part of the agricultural system. Cattle were housed in the arms of E, the 'back' of which provided space for fodder storage and processing.

Drawn by Stephen Dent © English Heritage



16 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.



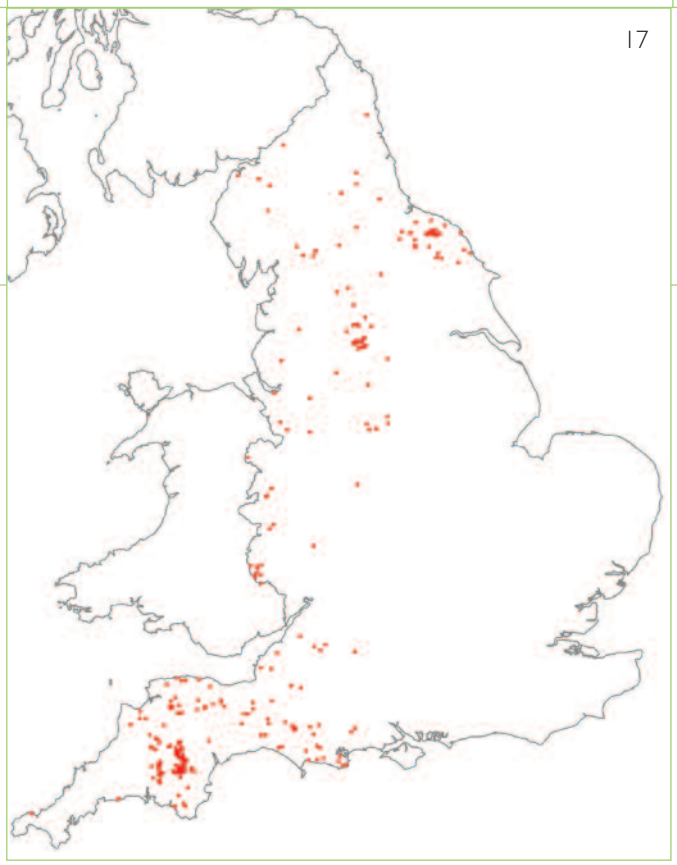


The predominant farmstead plan types, which are closely related to farm size, terrain and land use, are listed below. There are many variations on these themes, particularly in the manner in which fully evolved plan groups can, as a result of successive rebuilding, contain elements of more than one plan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



17 Distribution of listed longhouses in England. Surviving longhouses – some 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.

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

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 incorporated 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*

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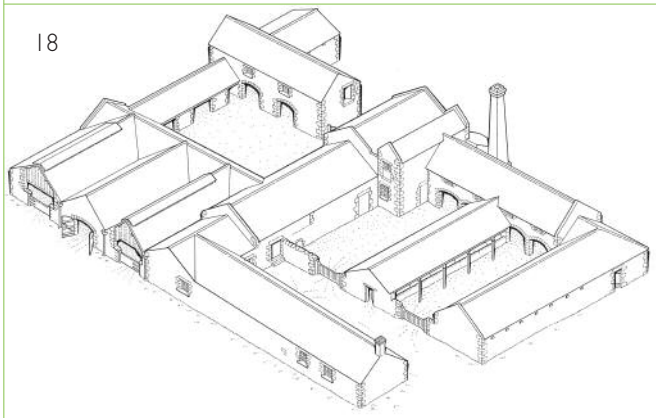


5.2.2 ESTATE POLICY

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 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 SOUTH WEST

Farmsteads retaining a substantially complete set of medieval buildings and plan form are extremely rare nationally. The longhouses of the South West, with a particular concentration around Dartmoor, form a distribution of national significance. There are few examples of larger farmsteads with courtyard plans that retain medieval buildings. An important courtyard group of buildings survives at Stoke-sub-Hamdon, Somerset, which includes two barns, a cart shed and 17th-century stables (probably built on the site of an earlier stable range) arranged to form two yards (Lake 1989, p.69).

There are few complete building groups that survive from before the 18th century. Tight courtyard plans relating to houses, and which could include farm buildings, were widely adopted in Cornwall (Chesher 1968, p.119), and throughout the Region loose courtyard plans were associated with large and gentry farms in the period before 1750. There is a marked contrast between the farmstead plans found in the pastoral farming areas and the arable-based areas where larger-scale loose courtyard plans predominate.

5.3.1 DISPERSED LAYOUTS

In areas as far apart as West Cornwall and the Vale of Gloucester, not only holdings but also the farm buildings could be intermixed in a seemingly random scatter of buildings. Whilst these could be condemned by observers (such as Billingsley 1797, p.203, in his account of Somerset agriculture), it should be noted that smaller farmsteads could tolerate minor inefficiencies. As outlined in 5.3.3 below, many dispersed and linear plans developed around yards as cattle numbers – and the need to house them – increased in the 19th century.

5.3.2 LINEAR FARMSTEADS

Excavation and field survey in areas such as Dartmoor and Bodmin Moor have recovered the layout of abandoned medieval hamlets: for example, Hound Tor on Dartmoor. These settlements had a characteristic mix of steadings arranged around cattle yards and longhouses of different sizes with one or two detached outbuildings, including a small barn (Johnson & Rose 1994, pp. 94–8). The hamlet at Lettaford on the edge of Dartmoor is a remarkable survival of this type of settlement (Figure

33A). The recent discovery of longhouses in well-appointed buildings in the Bristol area (Hall 1983, pp.12–15), on the eastern fringes of Exmoor (recent surveys of National Trust property) and in east Cornwall (recent discovery near Liskeard), suggests that their use was once far more widespread than their present distribution would suggest.

Linear farmsteads are dispersed over the Region, except in the chalk downlands (for example in Slocombe 1989, p.22). They are a particular feature of Cornwall, Dartmoor, Bodmin Moor and the sheltered vales extending into Exmoor. For example, many of the early to mid-19th-century intakes around Bodmin Moor were being worked by part-timers in local industries; their linear steadings (with attached combination barns) on average served 42-acre farms (half the size of pre-1808 moorland farms) and accommodated eight to ten cattle (Johnson & Rose 1994, pp. 98–100; Peter Herring, Cornwall Archaeological Unit, notes).

5.3.3 COURTYARD LAYOUTS

Generally it was not until after the 1840s that some degree of rationalisation occurred with farmsteads re-organised around yards. In Cornwall few farm buildings pre-date 1800 and the rebuilding of farmsteads around yards in the early to mid-19th century was invariably accompanied by farm amalgamation (Barnwell & Giles 1999, pp.96, 98; Wade Martins 2002, p.210). The rebuilding and rationalisation of yards with dispersed layouts between the tithe surveys of the 1840s and the Ordnance Survey maps of the early 20th century (which resulted in the appearance of L- and U-shaped complexes built around cattle yards in all areas of Devon), was the result of firstly the intensification of livestock farming from the 1840s and then its meteoric rise from the 1870s: grassland exceeded arable by 1889 and the number of dairy cattle doubled between 1866 and 1930, partly as a result of the post-1870s depression (Wilmot 1999, p.301; Child 2001, p.72; Wade Martins 2001, pp.20–54).

By the early 19th century, loose courtyard layouts were largely confined to arable areas (particularly in the Cotswolds, the Dorset and Wiltshire downs and the coastal fringe of Somerset), where 200- to 1000-acre farms had replaced small farms by the mid-18th century (Thirsk 1984, pp.322, 332). Later in the 19th century, the farmstead layouts of two to three barns were typically augmented by shelter sheds for cattle. Generally the buildings of the arable areas were much better provided for. Observers in around 1800 noted that on older holdings in Gloucestershire there was a 'superabundance' of farm buildings and that on some farms there were as many as four barns. Their recommendation was that less money should be spent on building barns and that some of the existing barns should be converted to other uses such as chaff houses (Rudge 1807, p.52; Bravender 1850, p.175). In Dorset, in complete contrast, the fact that few buildings appeared to be required was hailed as a positive benefit (Claridge 1793, p.31) although the standard requirement was listed as a full range of buildings, including two barns or one two-storey barn, an ox-house and cattle sheds. Along the north Exmoor coast, relatively large farms had loose courtyard and U-plan farmsteads dating from the 18th and early 19th centuries (Riley & Wilson North 2001, pp.122–3).

Where enclosure of downland, common or moor occurred it often led to the creation of new farmsteads set within the newly enclosed fields. Loose courtyard layouts were also built for the early 19th-century farmsteads associated with the enclosures of the Mendips, where 11,000 acres were affected (Havinden 1981, pp.203–22). In Wiltshire in the 1850s the Earl of Pembroke invested heavily in new farms on his 39,000-acre estate around Wilton, where he created mixed farms of 500 acres. The larger landholders built many other new farms on the enclosed downland of Wiltshire and Dorset in the mid-19th century. Such landlords recognised the importance of providing good buildings to attract the best tenants who would farm intensively and pay a higher rent.

In contrast to other regions the influence of estates is rarely reflected in regular farmstead plans. Across parts of the Region, the generally small size of most farms presented obstacles to the construction of planned and model groups. Even in Devon, a county with one of the highest number of landowners listed at over 3,000 acres in 1871, there are few model farmsteads (Wade Martins 2002, p.211). In Somerset, some were built in the Bristol area (mostly after the 1840s), and the Acland and Knight families were active in the north Exmoor area. In Cornwall only a minority of estates are known to have built planned courtyard farmsteads (Wade Martins 2002, p.210).

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.

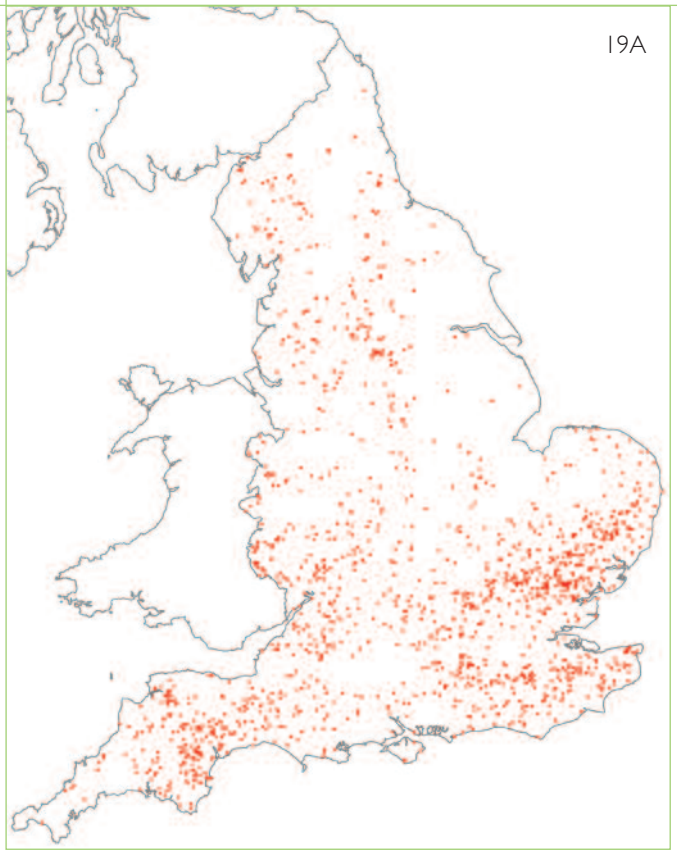
Major variations were in the five following areas.

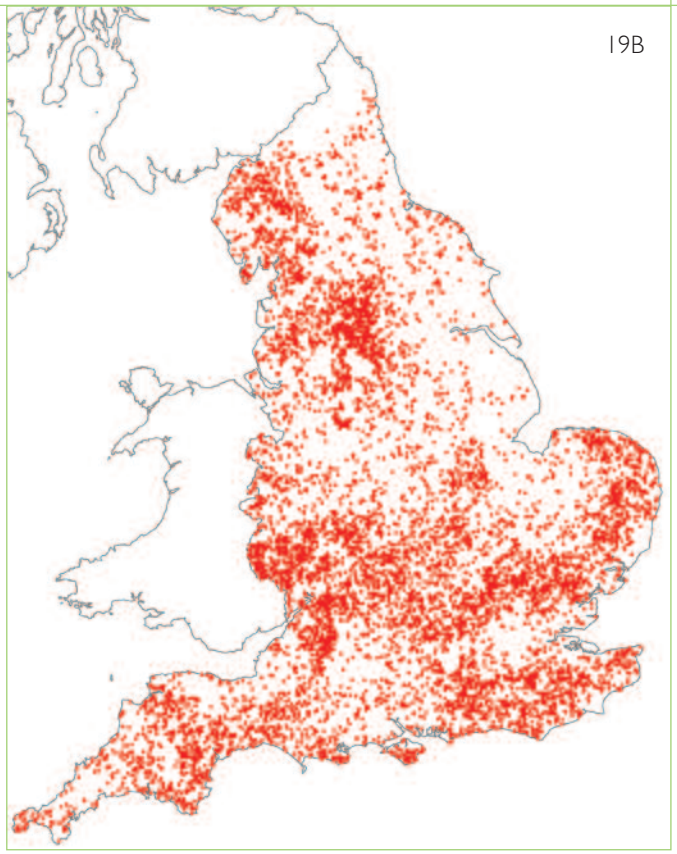
6.1.1.1 Plan form

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,

19 Distribution maps of listed barns in England, pre-1550 (19A) and 1550–1750 (19B)
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 that 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.





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 25), 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 (Figure 20). Multi-functional two-level barns, including bank barns and their variants, 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).

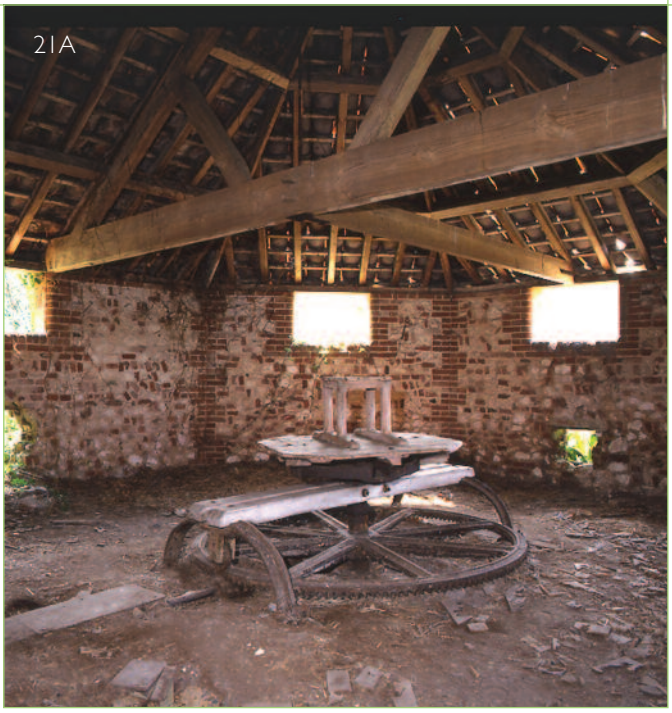
6.1.1.4 Evidence for mechanisation

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 21).

20 Distribution of listed bank barns in England
The concentration of bank barns in Devon, Cornwall and south-west Somerset in the South West Region, and in Cumbria, is clear from this map. However, this map does not reflect the true density of bank barns in the South West where the majority of these buildings date from the mid-19th century and are mostly not listed.

21 Power in barns
A A rare example of an in situ horse gin, sited in a projecting wheel house. (North West Norfolk) © *English Heritage/Michael Williams*
B A water wheel, providing power to the feed-processing machinery in a home dairy farm, remodelled in the 1890s. (Breckland) © *English Heritage/Michael Williams*


20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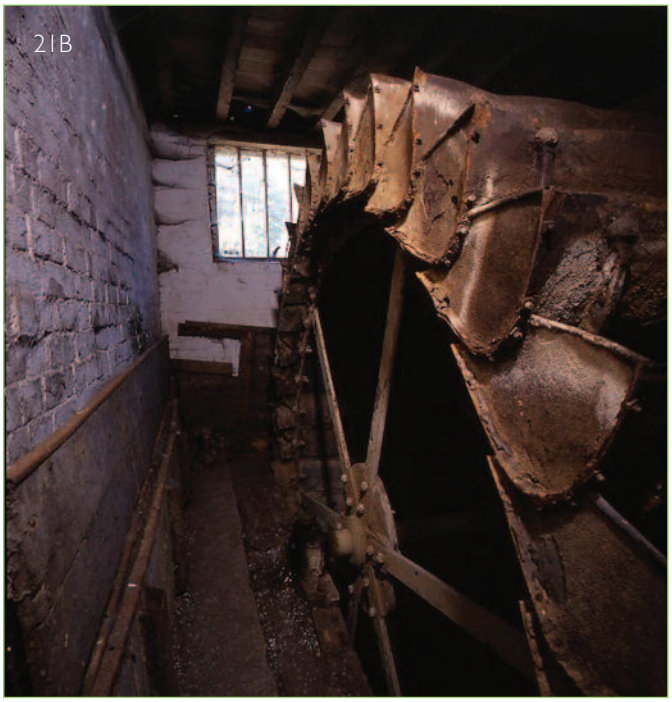

21B

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 25, bottom).

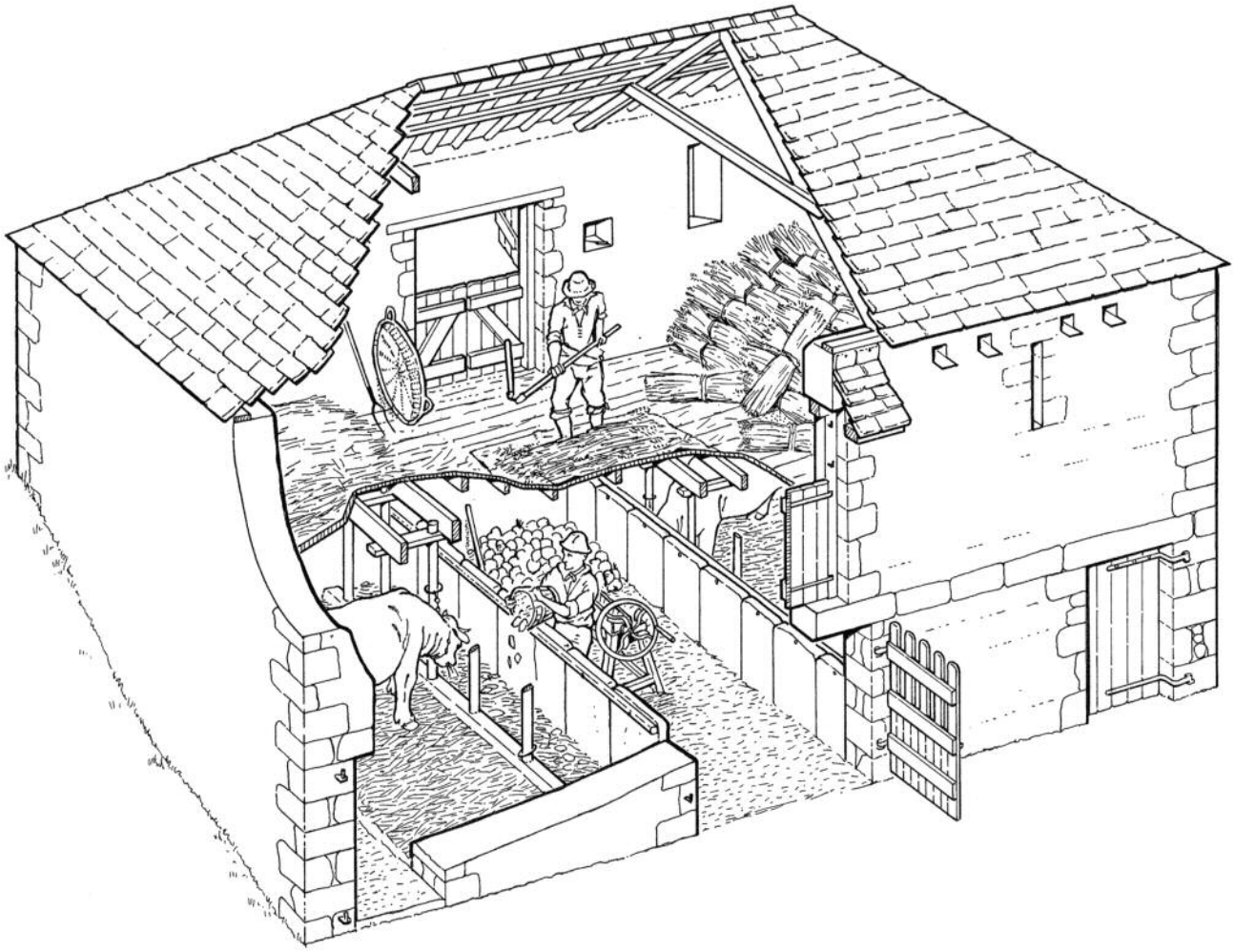
The introduction of the portable steam engine and threshing machine meant that tackle could be taken to the stack. This was widespread by the 1850s, and heralded the end of the traditional barn as a processing building.

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 at one end or even provided with an additional floor. The high point of barn building occurred during the 18th

22 A Cornish bank barn or 'chall 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. In Cornwall some chall barns were built on level ground, with steps giving access to the first-floor barn. © *English Heritage*



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 SOUTH WEST
(Figures 22 & 23)

6.1.2.1 Threshing Barns
Although only a very small proportion of the original number of medieval barns have survived, the counties of Somerset, Wiltshire and Gloucestershire retain some very notable examples of medieval barns. These were mostly built for the estates of Benedictine Abbeys, such as the group built for and around Glastonbury Abbey. Far fewer secular barns survive (for example, Winterbourne, South Gloucestershire) and those that have are likely to represent the higher quality barns of their period.

In the traditional arable areas of Wiltshire and Dorset (see 4.2.4), and in the Cotswolds, farmsteads are usually dominated by one, two and sometimes three large barns. Lean-tos for cattle, either original or later additions, are common, and one end of the barn is sometimes partitioned off for a lofted stable or cow house. Wiltshire is the only county of the South West Region to have a significant number of aisled barns of medieval to early 19th-century date, as in the southern part of the East of England and South East Regions. These barns can have eight or ten bays and sometimes two threshing floors, although five or six bays with a single threshing floor are more usual. The roof was usually half-hipped and thatched with straw, now often replaced with corrugated tin or asbestos sheeting. The walls are mostly covered with weatherboarding, although a few earlier examples may have been wattle panels. In

23 Barns and Crop Storage in the South West Region

A Monastic barn at Bradford-on-Avon. This large medieval barn, built by one of the wealthy monasteries of the Region, provided storage and processing space for the grange farm and storage for tithe, the proportion of crops paid to the church by ordinary farmers. (Cotswolds) © *Bob Edwards*

B A cruck-framed barn in north west Gloucestershire where Midland timber-framing traditions extend into the Region. The brick infilling is a later addition, possibly replacing wattle or wattle and daub. (Severn and Avon Vales) *134272 Taken as part of the Images of England project © Mr John Keighley*

C A characteristic aisled timber-framed and thatched barn located in a village set in a chalk stream valley in Wiltshire. The size of the barn with its seven bays and two threshing floors indicates the importance of corn in this area. (Salisbury Plain and West Wiltshire Downs) © *Bob Edwards*

D Typical of many Cotswold farmsteads is this five-bay barn built in limestone with a central porch and coped gables. The door and hayloft door above show that this barn was a combination building, probably incorporating a stable at one end. (Cotswolds) *408135 Taken as part of the Images of England project © David J Lewis*

(continued overleaf)

the early to mid-19th century the construction was more often in brick or brick and flint, with slate roofs.

In the Cotswolds the prevalence of good building stone means that most barns are stone-built; they are typically of five bays with a central threshing floor. Gabled roofs of stone slate, and porches (sometimes full-height with first-floor granaries) were common. There are many substantial surviving examples of the pre-1750 period, concentrated in village centres or areas where there had been enclosure by agreement. Commentators from the 18th and early 19th centuries were mainly complimentary about the quality of the Cotswold barn, describing them as 'above mediocrity' and noting that they tended to be of a greater height than most areas (Marshall 1796, pp.18–19). However, there were concerns that too much capital was being expended upon barns rather than other buildings, especially cattle sheds, and that even moderately sized farms would have several barns, at least one of which, it was suggested, should be converted to other uses such as chaff houses (Bravender 1850, p.175). Timber-framed barns, predominantly of the pre-1750 period, can be found in the Vale of Gloucester and the Forest of Dean reflecting the Midland timber-framing traditions in their use of square-panel framing. The other principal arable areas where larger barns are present are the Mendips, the Vale of Taunton Deane, the South Hams of Devon, the northern coastal fringe of Somerset and the coastlands of Cornwall.

6.1.2.2 Combination barns

In pastoral areas barns tend to be smaller in size (those of mid-Devon being particularly small in scale) than those found in the eastern chalklands or the Cotswolds, or are fewer in number on a single farmstead. Once built, barns in pastoral areas were not subject to the same demands for increased capacity as in arable areas, which explains for example the higher incidence of pre-1750 barns in the dairying and stock-rearing parts of east and mid-Devon (Wade Martins 2001 and Figure 19).

Agricultural improvement from the mid-18th century demanded more and better organised farm buildings,

23 Barns and Crop Storage in the South West Region (continued)

E A Cornish bank barn. Facing on to a yard, this bank barn, locally called a 'chall barn', provided accommodation for cattle in shippons at ground level and on the first floor a threshing barn with ground-level access at the rear and a granary accessed by steps at one end. During the early to mid-19th century many cob and thatch farm buildings were replaced by the multi-functional bank barn. (Cornish Killas) © *Bob Edwards*

F Staddle barns are principally found in eastern Wiltshire and in Berkshire and Hampshire in the South East Region. Most seem to date from the later 18th and early 19th centuries and may be a response to the increased predation of the brown rat. Whilst smaller examples may have served simply as granaries, the larger staddle barns were clearly barns with opposed doors and threshing floors. The limited access these buildings provide means that most are redundant. (Salisbury Plain and West Wiltshire Downs) © *Bob Edwards*

G Farmsteads created on reclaimed heathland of Dorset were typically provided with brick-built barns for fodder processing and storage rather than threshing and the storage of straw. Attached to the far end is a stable or shippon with a hayloft over. (Dorset Heaths) © *Bob Edwards*

H Rick stands. Whereas in areas such as the chalklands of Wiltshire it was usual to store the harvested crop in the barn, thus requiring large barns and often more than one barn, in some areas it was usual to store the harvested crop outside, using the barn for processing and storing the straw and, sometimes, the grain. In these area the barns tend to be smaller. These stone-built stands with overhanging edges provided bases for ricks of unthreshed corn. Originally they would have been rendered which, with the overhang, prevented vermin climbing up to the crop. (Dartmoor) © *Pete Gaskell*


23E


23F


23G


23H

requiring significant capital investment that was not always available in some parts of the Region. The south-western counties of the Region contain many examples of bank barns dating from the later 18th century and broadly similar to those of Cumbria, with the first-floor barns reached by an earth bank; they were noted as recent introductions by the Board of Agriculture commentators for Somerset and Cornwall (Billingsley 1793; Worgan 1811). Devon and Cornwall have the majority of these buildings, but the distribution extends into Somerset and Dorset (Figure 20). As in Cumbria, cattle were accommodated on the ground floor, with later examples of bank barns built wider to accommodate more and bigger cattle and provide more space for feeding and manuring (Figure 22). They differ from the Cumbrian examples, however, in that – especially on larger farms with extensive yards for fattening such as parts of east Cornwall or the northern fringes of Exmoor – they could have open-fronted cow houses or they could be built on level ground with the first floor accessed by steps. These large-scale bank barns face into yards, and can be found associated with other forms of cattle housing including linhays (see 7.1.2). The Cornish variant, built to a much smaller scale and with the upper floor often served by steps, is known as the 'chall barn' (as noted by Worgan in 1811); on some farms, they comprised the only farm building. In the South Hams area of Devon a variation on this building type, some of which date from the 17th century, can be found where the gable end is set into the bank rather than the long side.

Besides these examples, there are many other examples of early 19th-century and earlier barns with accommodation for cattle and horses, commonly at one end.

24 Power in barns

A An east Devon combination barn with a wheel house or horse gin attached to the rear. (Blackdowns) © *Jeremy Lake*

B This waterwheel attached to the side of the barn is clearly a later addition. (South Purbeck) © *Bob Edwards*

24A

24B

6.1.2.3 Mechanisation (Figure 24)

One of the earliest examples of steam power applied to threshing survives at Trewithen, on the Probus estate in Cornwall, where a split-level barn (now listed grade I) was adapted in 1811 by the engineer Richard Trevithick (Harvey 1988, p.108; Lake 1989, p.124). The lack of easy access to coal over much of the Region resulted in the limited uptake of steam-power on farms before the introduction of mobile engines from the 1840s. Horse- and water-power was more common, the former often in open circular walks rather than engine houses; many of the latter are mid-19th century in date. There was little demand for mechanisation in Dorset and Wiltshire until wage rates began to increase in the second half of the 19th century. Split-level combination barns, which differed from bank barns in that they had very small areas for storing and processing the corn crop, were most commonly associated with regular courtyard groups of the mid- and later 19th century, although – particularly in the Severn Vale and Forest of Dean – they can occur with less regular groups.

6.2 GRANARIES

6.2.1 NATIONAL OVERVIEW (Figures 25 & 26)

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 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 25). Window openings were typically small, and, with ventilation being the main objective, the openings were generally either louvers, sliding vents or grilles.

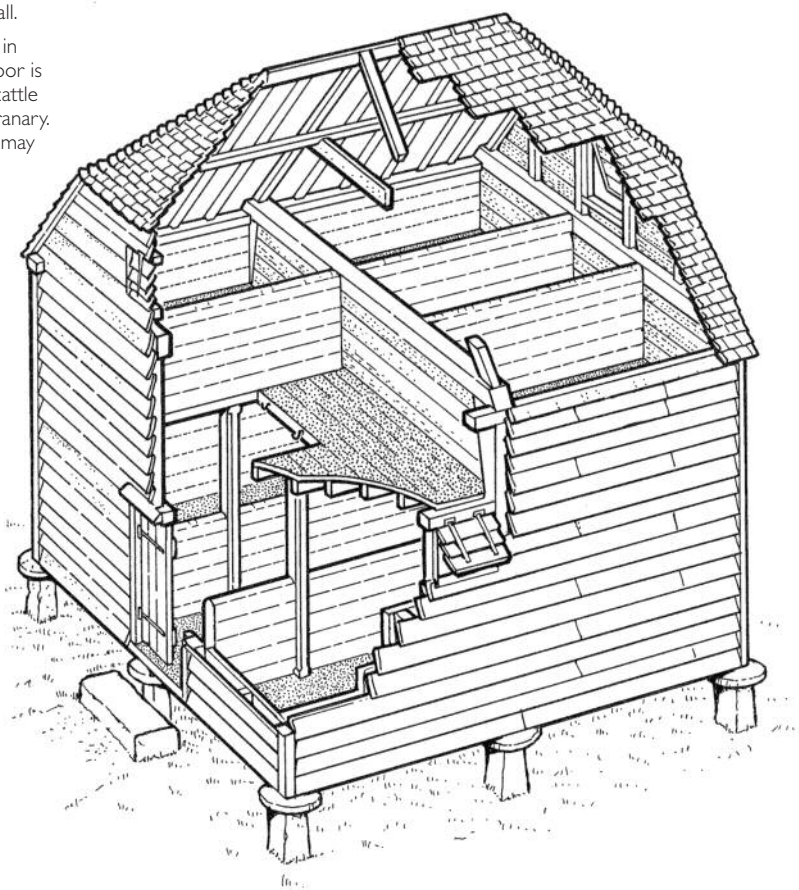
Grain was typically accommodated in:

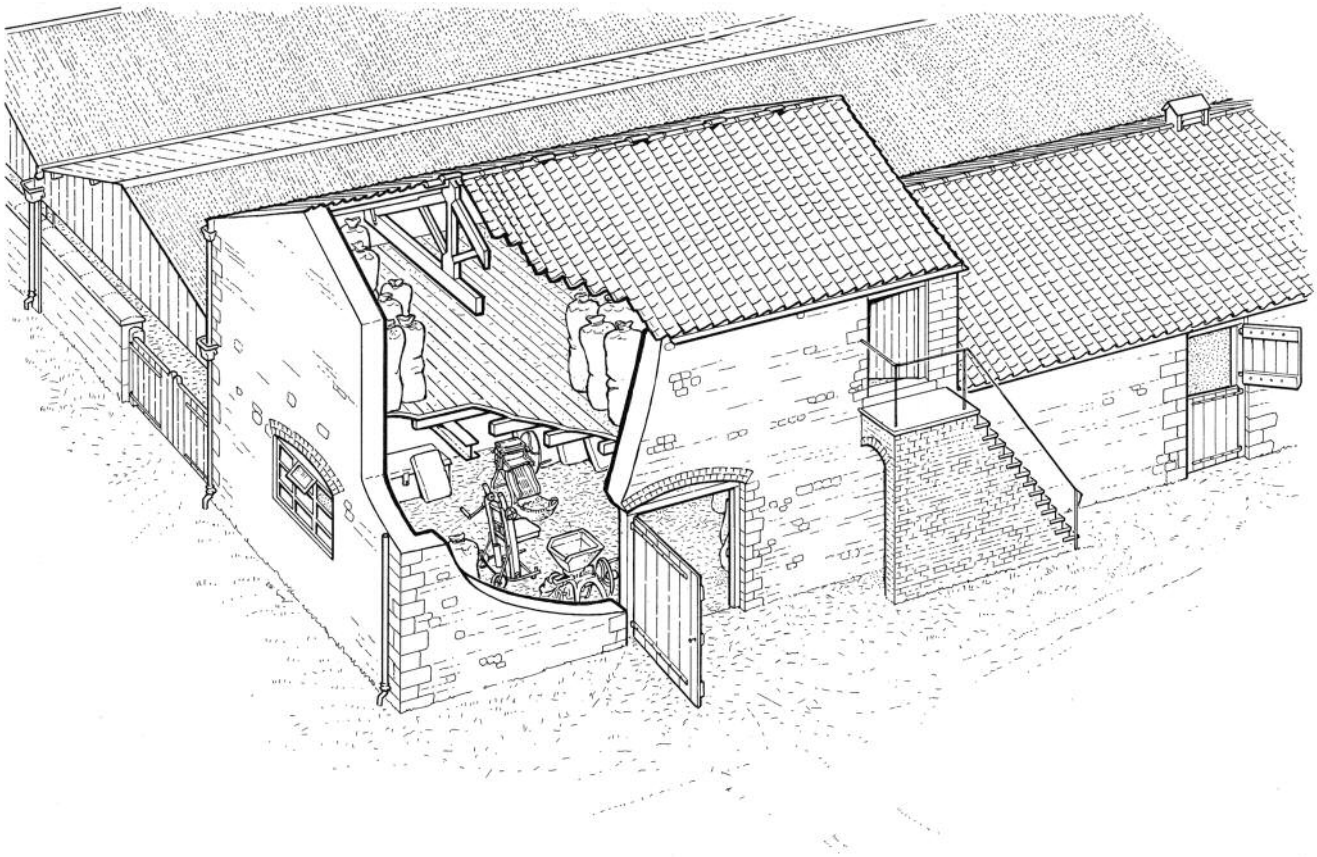
- The lofts of farmhouses, a practice common before 1750.
- Small, square or rectangular structures raised above ground level on mushroom-shaped staddle stones or brick arches and accessed by moveable wooden steps. Internally, they may have been fitted with wooden partitions to create grain bins. They 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 26).
- 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

25 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 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.





26 A 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. © *English Heritage / Michael Williams*

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. © *Bob Edwards*

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 (Figure 25). 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 SOUTH WEST (Figure 27)

Fewer than ten medieval granaries have survived nationally, and so the purpose-built granary that was originally set on stone piers at the Shaftesbury Abbey grange in Bradford-on-Avon, Wiltshire, is highly significant. In much of the Region, granaries are found located over other buildings such as cart or implement sheds, or form part of the upper floor of bank or chall barns. Some barns have had a loft inserted at one end to serve as a granary. The chalkland areas of Wiltshire and, to a lesser degree Dorset (see 4.2.4), tend to look towards the South East for their building influences. The free-standing granary built on staddle stones is most commonly found in southern England and southern East Anglia. There are some in east Cornwall and Devon, possibly rare survivals in view of the much higher survival of stone and iron staddles for rick stands or granaries in these areas. Timber was the favoured material for these granaries, with the framing covered by weatherboarding. In Dorset, brick granaries built on arches are often found. Most granaries in the Region date from the 18th and 19th centuries but are difficult to date precisely. The use of cast iron staddles will usually indicate a later 19th-century structure, as will a shallow roof pitch, machine-sawn timber and slate roof.

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.

27 Granaries in the South West Region

A A rare example of a medieval free-standing granary, part of the monastic grange at Bradford-on-Avon, Wiltshire. (Cotswolds) © *Bob Edwards*

B & C Free-standing timber-framed granaries on staddle stones. The smaller granary in B was possibly used to store seed corn. Such granaries are characteristic of the south-east of England and southern East Anglia where the timber-framing is typically weatherboarded, although examples are found as far west as Cornwall (C) where the framing is slate hung. (B Salisbury Plain and West Wiltshire Downs; C The Lizard) B *Taken as part of the Images of England project © Mr Brian Harvey ARPS;* C © *Eric Berry*

D Brick granary on arches. Across the chalk areas of Dorset 18th-century free-standing granaries are more usually brick-built, standing on arches to prevent dampness spoiling the grain stored within, than timber-framed as in Wiltshire. (Dorset Downs and Cranborne Chase) © *Bob Edwards*

E Granary at first-floor level within a regular courtyard farmstead in Devon. The granary is located at the end of a range of buildings and close to the farmhouse, a typical location for many granaries providing an extra degree of security (Devon Redlands). © *Bob Edwards*

F Cart shed and granary. This flint and brick building with Welsh slate roof is typical of the later 19th century. It incorporates cast iron piers supporting the front wall of the first-floor granary. A central loft door is provided with a hoist to assist in loading and unloading sacks of grain. (South Purbeck) © *Bob Edwards*


27A


27B


27C


27D


27E


27F

28 Cart sheds in the South West Region
A Detached three-bay cartshed with granite monoliths forming the posts to the front elevation. (West Penwith) © *Eric Berry*
B Thatched cart shed attached to the gable end of the barn close to the road passing the farmstead. (Dorset Downs and Cranborne Chase) © *Bob Edwards*
C A Cotswolds cart shed with a gable entry. Again, the cart shed lies adjacent to the road passing through the farmstead. (Cotswolds) © *Bob Edwards*
D A 19th-century regular courtyard farmstead built on the newly enclosed downland of Wiltshire. The cart shed forms part of the ranges built around the yard but the openings face outwards on to a trackway leading to the fields. (Dorset Downs and Cranborne Chase) © *Bob Edwards*


28A


28B


28C


28D

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 SOUTH WEST (Figure 28)

Cart sheds, either single-storey or with upper-floor granaries, date from the 18th century, exceeding four or more bays in length in the main arable areas of the Region. Cart sheds in the pastoral areas tend to be smaller, sometimes having only one or two bays. Cart sheds tend to be a later development in Cornwall and Devon where the use of wagons was relatively rare until the late 18th century. The topography of these counties made the use of pack animals and sleds preferable to the use of wheeled vehicles. The same was probably true for other parts of the Region where the terrain was difficult. One of the main characteristics of cart sheds around Dartmoor and in Cornwall is the use of granite monoliths to form the posts of the open side of the cart shed.

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, 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

29 Distribution of listed cider houses in England. This map clearly shows the historic importance of cider making in the South West Region, particularly in Devon and east Cornwall, and in the south-west corner of the West Midlands Region. © *Crown copyright. All rights reserved. English Heritage 100019088. 2005*

30 Cider houses in the South West Region
Cider houses are rarely easily distinguished from their outward appearance and the cider press has often been removed from inside and the building put to other uses. Where the cider house is a detached building it is often found set apart from the other farm buildings. (Dartmoor) © *Pete Gaskell*

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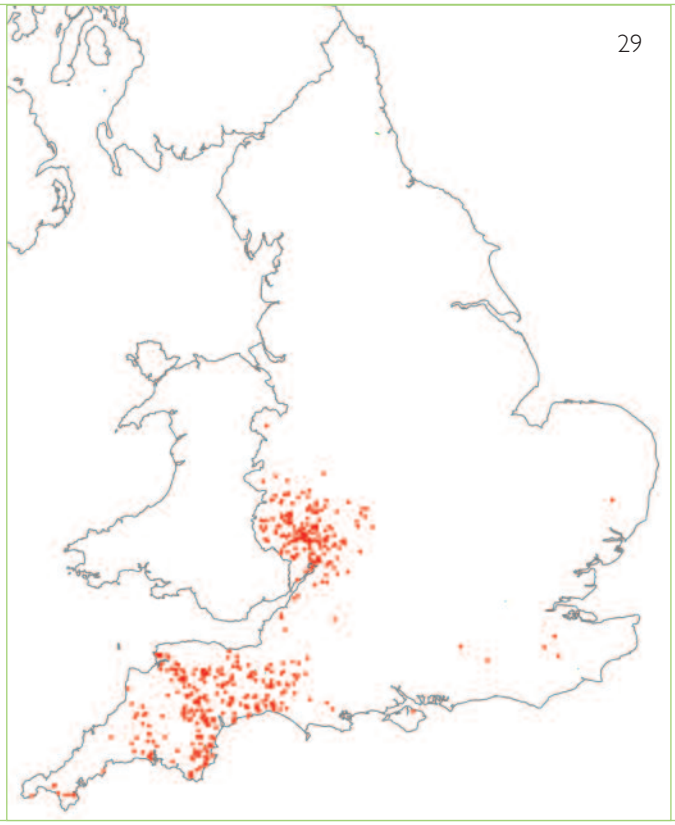

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as Dutch barns for hay storage, and also of airtight clamps for the preservation of silage. Silage towers were built in small numbers in the inter-war period, but were not generally adopted until the 1960s (Shaw 1990).

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 (Figure 29).

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, CIDER HOUSES AND OTHER CROP-RELATED BUILDINGS IN THE SOUTH WEST

Hay was stored on ricks, in linhays (see 7.1.2) and other open-fronted sheds, and in the lofts above stables and cattle housing (see 7.1.1). There are a small number of open-sided hay barns with stone piers supporting the roof in west and north Dorset and in parts of Somerset, usually dating from the 19th century. Many are orientated to face away from the prevailing south-westerly wind and rain.

The commercial production of cider is documented from the medieval period. East Cornwall, west Somerset, south Devon, parts of Gloucestershire (the Forest of Dean) and west Dorset, together with Herefordshire in the West Midlands Region, form the premier cider-making area of England (Figure 29). It was said, for example, of parts of Gloucestershire that a farmstead was not complete without a cider house (Marshall 1796, p.39). Cider houses are frequently incorporated into other buildings ranged around the yard. Where the cider house is a separate building it usually does not have any particular external characteristics, other than a wide doorway allowing for the passage of barrels. Cider could be kept for far longer than beer, and thus on some farms where cider was grown for export cider houses were built with storage for barrels. Interior fitments of cider houses, namely cider presses and mills, are very rare.