



Historic Farmsteads

Preliminary Character Statement: South West Region



ENGLISH HERITAGE



The Countryside Agency
**Landscape
Access
Recreation**



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

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Summary: South West Region

I LANDSCAPE AND AGRICULTURAL CONTEXT

NATIONAL FRAMEWORK

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

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

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

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

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

REGIONAL PATTERNS

Dispersed settlement, with numerous isolated farmsteads and hamlets of medieval origin and the occasional remnants of communal farming, forms a significant part of the settlement pattern in the counties of Devon and Cornwall, the western edges of Dorset and Somerset and the Forest of Dean. The majority of

Gloucestershire (excluding the Forest of Dean), Somerset and Dorset has, in contrast, a relatively low level of dispersed settlement with nucleation – and traces of open-field farming – increasing towards the east and south-east of the Region. Settlement in the chalk areas of Wiltshire and Dorset is strongly concentrated in the river valleys.

Differentiation of farming practices is evident as early as the 11th century. By the 16th century arable farming was concentrated in the vales of Somerset and Dorset, in the South Hams of Devon and along the coastal strip of Cornwall and north Somerset. Combined with sheep farming, it had become well established across the Dorset and Wiltshire chalk and in the Cotswolds. The areas of sheep and corn farming on the chalklands of Dorset and Wiltshire intensified production with the development of watermeadows allowing larger flocks of sheep to be kept, in turn improving soil fertility with their dung, and through the enclosure and ploughing of the downs. Pastoral farming dominated much of the Region from the 14th century on account of its generally mild winters, heavy rainfall and cool summers. By the 17th century a large proportion of the arable land had been converted to pasture for cattle or sheep or given over to other uses such as orchards. Cider production became a speciality from Gloucestershire to east Cornwall. As national markets developed, parts of the Region such as east Cornwall and north Devon focused on the rearing of stock, which was moved eastwards into Somerset, Dorset and Wiltshire for fattening to supply the growing populations of London and other major towns and cities across the south. Other parts of the Region, for example on the heavier soils of north Wiltshire and east Devon, specialised in dairying with some farms having little or no arable.

2 BUILDING MATERIALS

NATIONAL FRAMEWORK

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

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

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

REGIONAL PATTERNS

There is a great abundance and variety of good building stone, ranging from the chalk of the southern downlands to the honey-coloured Jurassic oolite of the Cotswolds and the red sandstones of mid-Devon lias; from the limestone of southern Gloucestershire and Somerset, to the slates and granites of west Somerset, northern Devon and Cornwall.

The South West region is recognised as the principal area of England for earth-built structures. Much of Devon and parts of Cornwall and Somerset have numerous farm buildings constructed out of earth (cob), one of the cheapest materials available to the farmer; the differing soils used give each area its own local character.

Across the Region different thatching techniques using combed wheat, long straw or water reed have different characteristics and are important, if subtle, elements in creating local distinctiveness. Devon and Dorset have the highest concentration of listed thatched buildings in the country. In Devon in particular combed wheat reed has been used for centuries.

There is a scatter of cruck-framed buildings across the Region formed of large, curving timbers that form the main trusses of a building. Jointed crucks are concentrated in Devon, west and south Somerset and west Dorset, and together with other architectural features (such as the lateral chimneystacks found on farmhouses) form part of a shared cultural tradition with south-west Wales.

Aisled barns, principally concentrated in the South East and parts of the East of England, are found in small numbers in the east of the Region.

3 FARMSTEADS

NATIONAL FRAMEWORK – FARMSTEAD TYPES

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

- *Linear plans*, where houses and farm buildings are attached, were ideally suited to small farms (usually stock rearing and dairying), especially in northern pastoral areas with little corn and longer winters where there was an obvious advantage in having cattle and their fodder (primarily hay) in one enclosed building. They now display a wide range in

scale, from large steadings of independent Pennine yeoman-farmers to the smallholdings of miner-farmers.

- *Dispersed plans*, comprising clusters and unplanned groupings of separate buildings, were more widespread. They now range from those of hamlets, where the buildings of different owners were often intermixed, to large-scale individual steadings, some of which were of high status.
- *Loose courtyard plans* became most strongly associated with large and/or arable farms. The buildings are built around a yard with or without scatters of other farm buildings close by.
- *Regular courtyard plans*, where the various functions were carefully placed in relation to one another in order to minimise the waste of labour, and where the manure could be conserved, were built – at first on large estates – from the later 18th century.

REGIONAL PATTERNS – FARMSTEAD TYPES

This Region displays very strong contrasts in farmstead scale and type, often intermingled in the same area. There is a marked contrast, however, between the farmstead plans found in the pastoral farming areas and the arable-based areas where larger-scale loose courtyard plans predominate.

The medieval longhouses of the South West, with a particular concentration around Dartmoor, form a distribution of national significance.

Later linear farmsteads are a feature of Cornwall, Bodmin Moor and Dartmoor (where many of the early to mid-19th-century intakes around Bodmin Moor were being worked by part-timers in local industries) and the sheltered vales extending into Exmoor.

Throughout the Region loose courtyard plans were associated with large and gentry farms in the period before 1750. By the early 19th century, loose courtyard layouts were largely confined to arable areas (particularly in the Cotswolds, the Dorset and Wiltshire downs, the Mendips and the coastal fringe of Somerset).

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.

In contrast to other regions, the influence of estates is rarely reflected in regular farmstead plans. 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.

NATIONAL FRAMEWORK – BUILDING TYPES

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

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

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

REGIONAL PATTERNS – BUILDING TYPES

Barns. There is a huge variation in the scale of threshing barns, from the arable downlands and vales to the very small-scale barns typical of mid-Devon. There are many examples of combination barns, with livestock accommodation and cart sheds at one or both ends of the barn (as in Gloucestershire, the claylands of north Wiltshire and Somerset) or accommodated underneath the threshing barn. The latter are concentrated in Somerset, Devon and Cornwall, and range from small-scale barns with external steps to large bank barns – the principal concentration of these outside Cumbria. Aisled barns are largely confined to the chalk downs in the east of the Region.

In the eastern vale and downland landscapes of the region there exist many highly specialised farmstead buildings including **staddle barns** in the eastern downlands, **detached granaries** set either on brick arches or staddle stones and **stabling** dating from the 17th century.

Cattle were commonly housed in enclosed **cow houses** or **shelter sheds** but the use of bank barns in Cornwall, Devon and Somerset and, in the pastoral landscapes of Devon and west Somerset, the highly-specialised **linhay** (open-fronted cattle sheds with hay lofts dating from the 16th century) are regionally characteristic building types.

1.0 Introduction

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

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

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

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

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

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

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

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

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The objectives of this document are:

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

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

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

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

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

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

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

agricultural history of the Region.

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

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

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

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

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

2.0 Understanding Context and Character

2.1 LANDSCAPE CHARACTER AND CHARACTERISATION

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

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

The South West Region extends over the Joint Character Areas listed in Figure 1B. Whenever the text cross-refers to the Joint Character Areas, they will be listed by their number (i.e. JCA 152). The key characteristics and a detailed description and map for each Character Area are available from the Countryside Agency's website (www.countryside.gov.uk/lar/landscape). The web addresses for each JCA are detailed in Section 11.

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

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

For characterisation see:

www.english-heritage.org.uk/characterisation

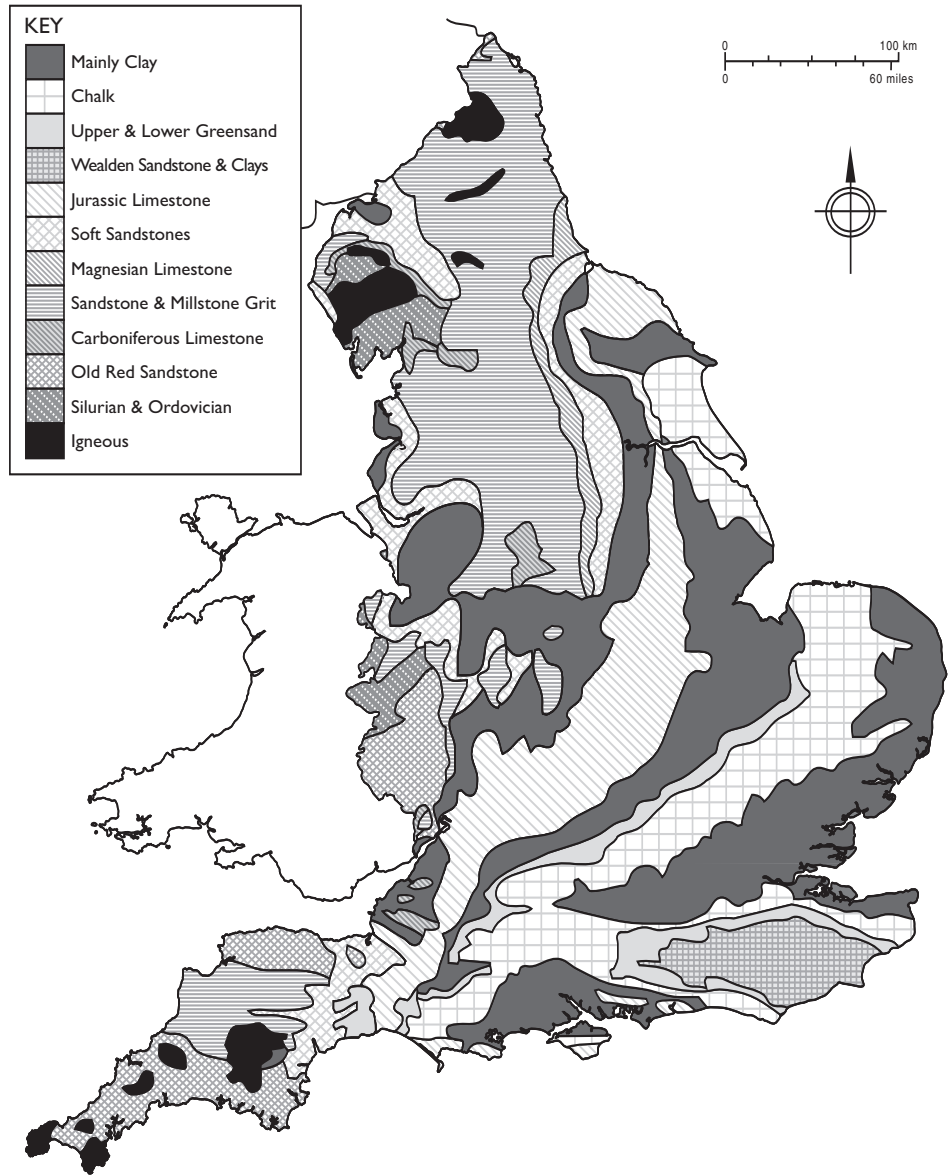
2.2 THE CHARACTER OF THE SOUTH WEST REGION: AN INTRODUCTION

The Government Region of the South West comprises the historic counties of Cornwall, Devon, Dorset, Somerset, Wiltshire and Gloucestershire, and includes the largely urban areas of Bristol, Swindon and the Bournemouth and Poole conurbation. The area presents a great diversity of landscape character areas, from open, windswept moorland rich in wildlife and archaeology in Cornwall, Devon and Somerset, to the gently rolling small-scale well-hedged landscapes of woods, farms and villages in South Devon; from the prominent wooded hills of the Quantocks and Mendips, to the low-lying fens, marshes and pastures of the Somerset Levels and Moors crisscrossed by drainage ditches and punctuated by small settlements.

The diversity of landscape character is strongly influenced by the varied geology of the South West Region. Large areas of chalk and limestone are a key characteristic of much of Dorset, Wiltshire, Gloucestershire and extensive parts of Somerset. North of the Mendips, undulating chalk downland intercut by numerous river valleys forms the dominant landscapes of the Dorset Downs and Cranborne Chase, the Salisbury Plain and West Wiltshire Downs, and the Berkshire and Marlborough Downs. To the north lies the limestone belt of the Cotswolds, which links north Wiltshire and Gloucestershire, the broad valleys of the Severn and Avon vales and the well-wooded area of the Forest of Dean and Lower Wye.

Around and between the chalk and limestone hills of Dorset, sandy heaths, green hills and clay vales are found. Red sandstone in the Devon Redlands gives mid-Devon a strong character expressed through its red soils, and

IA Geology Map of England
 England displays a huge diversity in geology, with a greater variety in small areas than anywhere else in Europe. The South West Region has a very varied geology offering a wide range of building materials. The different stones available for walling and roofing make a major contribution to local distinctiveness.
Based upon Solid Geology. Source: Defra/BGS, NERC; by permission of the British Geological Survey IPR/52-65C. © Crown copyright OS Licence no. 100042054



earth-walled and stone buildings. The granite areas of West Penwith, Bodmin Moor and Dartmoor provide the backbone for Cornwall and central Devon with clays, shales and slates over much of Somerset and the rest of Devon and Cornwall.

The Region has the highest proportion of land in agricultural use (80%) of any English region. The Region experiences relatively high rainfall, especially in Devon and Cornwall, and cooler summers with mild winters, which favour pastoral farming. Soil type and quality is another factor: compared with the other English regions there is a below-average area of farmland within the best two grades of land quality but the Region has the highest level of grade 3 agricultural land rated as good to moderate. The grade 1 land is concentrated in the Vale of Pewsey, around Newent in Gloucestershire, on the sandy soils of South Somerset, in the valleys of the Rivers Exe and Culm, and to the west and north of Taunton. The arable lands within the Region lie mainly in the east on the chalk and limestone areas of Dorset, Wiltshire and Gloucestershire.

2.3 THE CHARACTER OF RURAL SETTLEMENT

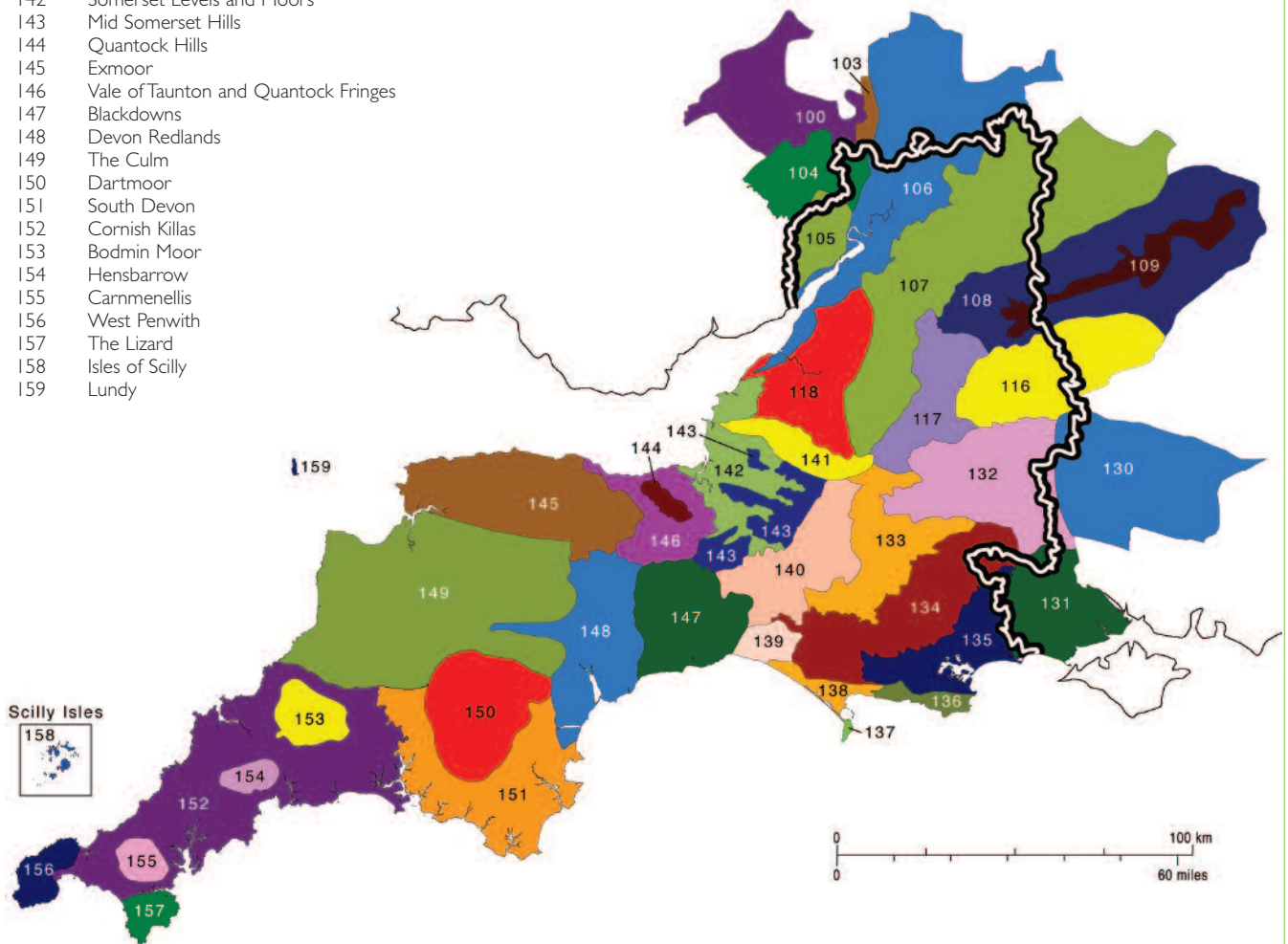
2.3.1 NATIONAL FRAMEWORK

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

Re-arranging previously communal fields or common pasture land into self-contained private land units

JCA number	JCA name	Also located within adjacent Regions
100	Herefordshire Lowland	
103	Malvern Hills	
104	South Herefordshire and Over Severn	West Midlands
105	Forest of Dean and Lower Wye	West Midlands
106	Severn and Avon Vales	West Midlands
107	Cotswolds	West Midlands and South East
108	Upper Thames Clay Vales	South East
109	Midvale Ridge	South East
116	Berkshire and Marlborough Downs	South East
117	Avon Vales	
118	Bristol, Avon Valleys and Ridges	
130	Hampshire Downs	South East
131	New Forest	South East
132	Salisbury Plain and West Wiltshire Downs	South East
133	Blackmoor Vale and Vale of Wardour	
134	Dorset Downs and Cranborne Chase	South East
135	Dorset Heaths	South East
136	South Purbeck	
137	Isle of Portland	
138	Weymouth Lowlands	
139	Marshwood and Powerstock Vales	
140	Yeovil Scarplands	
141	Mendip Hills	
142	Somerset Levels and Moors	
143	Mid Somerset Hills	
144	Quantock Hills	
145	Exmoor	
146	Vale of Taunton and Quantock Fringes	
147	Blackdowns	
148	Devon Redlands	
149	The Culm	
150	Dartmoor	
151	South Devon	
152	Cornish Killas	
153	Bodmin Moor	
154	Hensbarrow	
155	Carnmenellis	
156	West Penwith	
157	The Lizard	
158	Isles of Scilly	
159	Lundy	

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



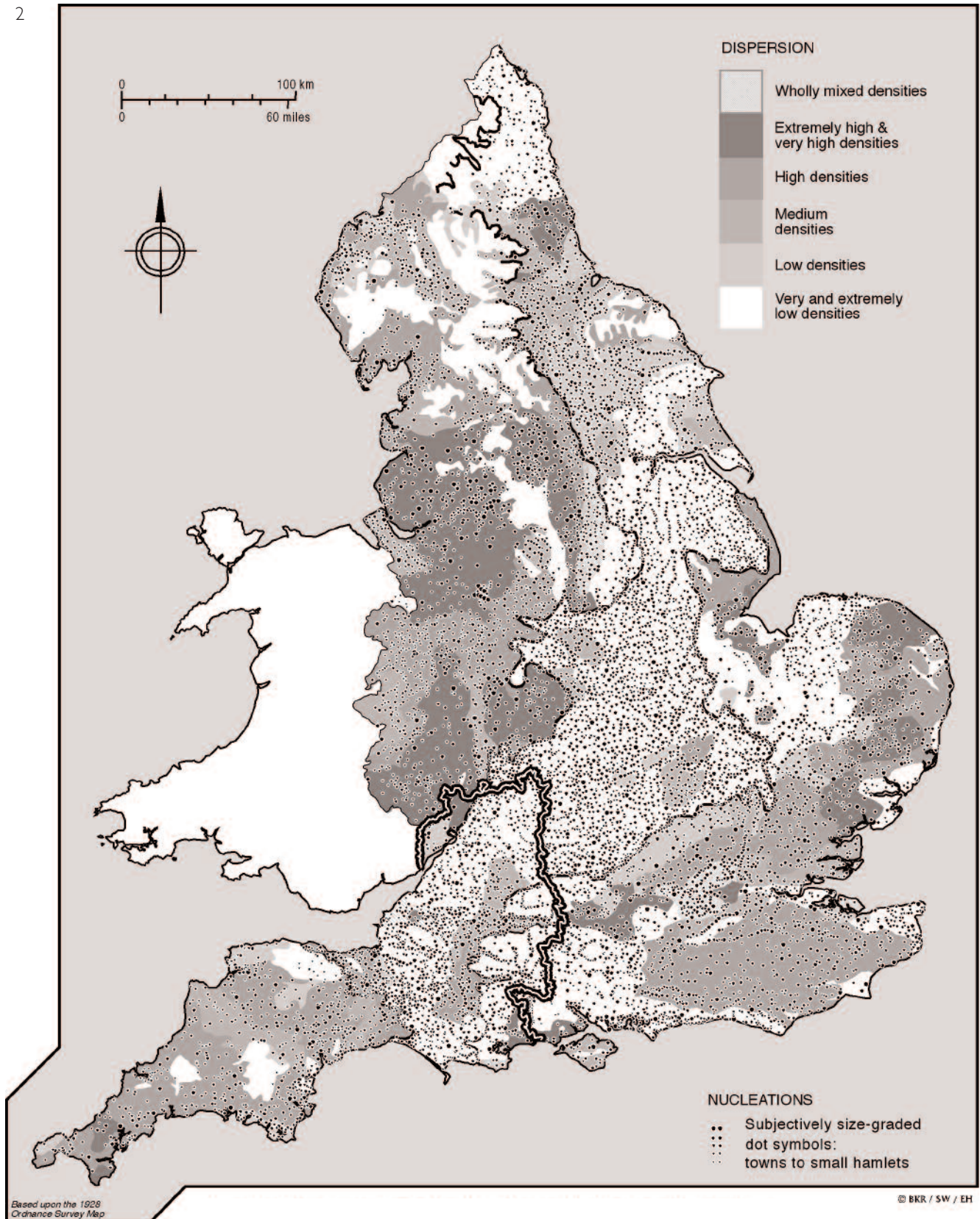
enabled the rationalisation of formerly scattered holdings, allowing better management of livestock and rotation of crops. This process of enclosure – evident from the 14th century and even earlier – resulted in the immediate or gradual establishment of new isolated farmsteads out in the fields. It could be undertaken on a piecemeal basis, or in one single phase, the latter form of enclosure being typically more regular in its appearance. Enclosure by

parliamentary act, some of which formalised earlier agreements, often resulted in new designed landscapes. Parliamentary enclosure was concentrated in the period 1750 to 1880.

English Heritage has commissioned work on mapping these patterns of settlement in the English countryside, now published as *An Atlas of Rural Settlement in England* (Roberts & Wrathmell 2000) and *Region and Place, A*

2 Rural settlement in England. Rural settlement can broadly be divided into two types: nucleated villages, and dispersed farmsteads and hamlets. Figure 2 presents an analysis of the settlement pattern of England in the mid-19th century which identifies three 'provinces'. The Central Province, mostly characterised by nucleated settlement and once dominated by communal fields, stretches from Dorset, through Gloucestershire, the East Midlands, Yorkshire and along the north-east coast. This area is flanked by a South-Eastern Province covering the area from east Dorset and Wiltshire to East Anglia, and a Northern & Western Province. In these Provinces settlement is mostly dispersed. The South West Region is divided between all three Provinces with the Central Province in much of the east except on the Wiltshire and Dorset chalk, which falls into the South-Eastern Province (despite settlement being predominantly nucleated), and the Northern and Western Province in the south-west peninsula. Based upon 'England: Rural Settlement in the mid-19th century'. Source: *An Atlas of Rural Settlement in England* (2000) © English Heritage / Roberts, B.K. and Wrathmell, S.

2



Study of English Rural Settlement (Roberts & Wrathmell 2002). In summary, it has been demonstrated that a Central Province mostly characterised by nucleated settlement and, by the 14th century, communal fields which occupied the great majority of the land area, is flanked by a South-Eastern Province and both a Northern and Western Province where settlement is mostly dispersed (Figure 2).

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

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

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

In some areas, the remains of earlier, including pre-Roman, farmsteads are visible as crop-marks or earthworks close to existing farmsteads or villages (see Roberts 1976 and Taylor 1983 for a useful introduction). While research is demonstrating that existing parish and field boundaries possibly originate from very early, even pre-Roman, field and estate boundaries, it is exceptionally rare for present farmstead sites – as in Cornwall's West Penwith – to display such continuity.

2.3.2 RURAL SETTLEMENT IN THE SOUTH WEST REGION

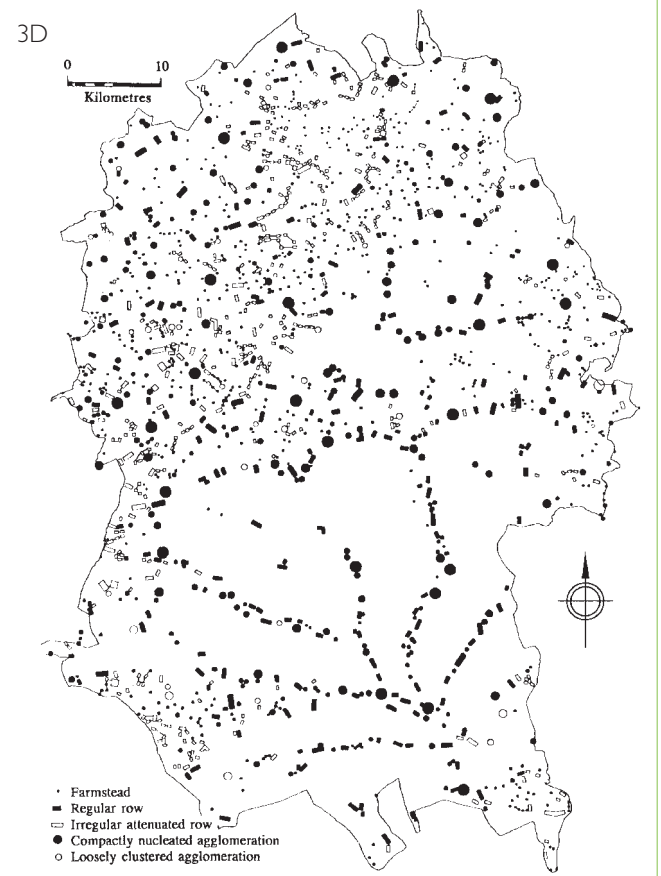
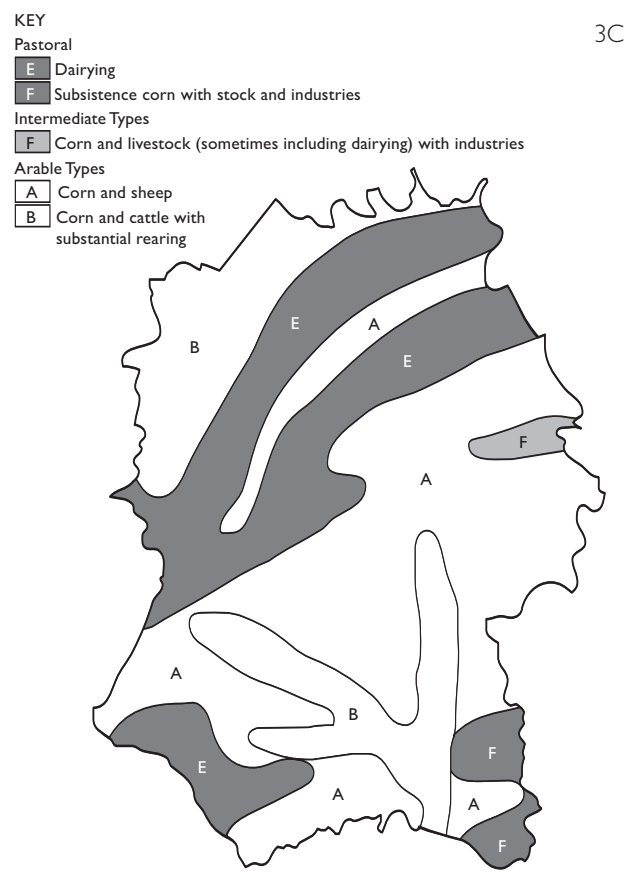
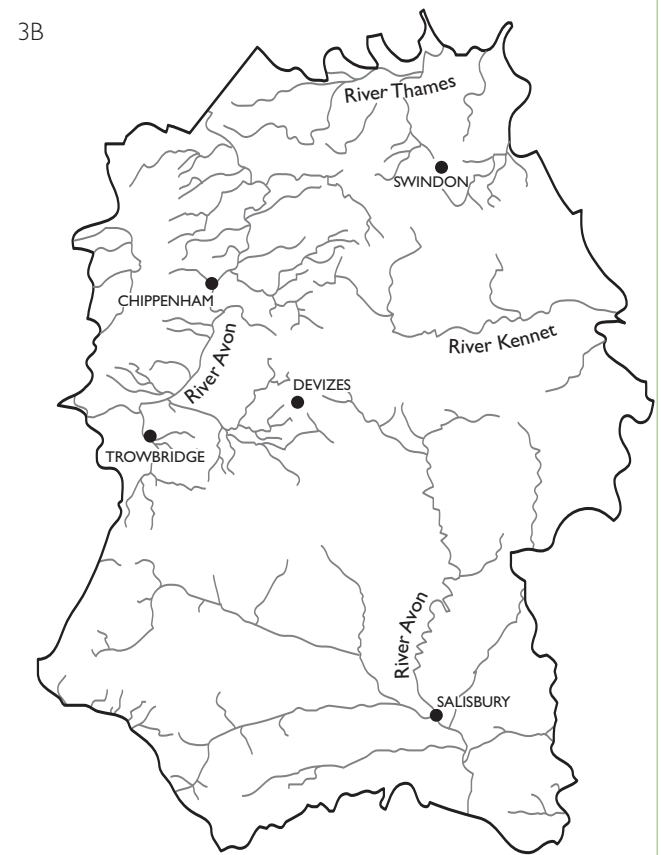
Dispersed settlement, with numerous isolated farmsteads and hamlets of medieval origin, forms a significant part of the settlement pattern in the counties of Devon and Cornwall and in other areas such as the western edges of Dorset and Somerset and the Forest of Dean. In these areas, most present farmsteads can trace their origins to the 14th century or earlier: there were, for example, between 12 and 15,000 farmsteads in late-14th-century Devon (Hallam 1988, p.237) – over 90% of the present total. In parts of Cornwall and Devon a number of farmsteads and their associated fields can trace their origins back to the Bronze Age or Iron Age. Enclosure was complete in many areas by the 16th century, characteristically retaining curved shapes of medieval strips to at least one of the longer sides. Some of these enclosures are quite large in scale, the result of acquisition by wealthier farmers of many strips prior to enclosure. Larger-scale enclosures are associated with high-status barton farms.

The majority of Gloucestershire (excluding the Forest of Dean), Somerset and Dorset lie within the Central Province. These areas have, in contrast to Devon and Cornwall, a relatively low level of dispersed settlement with nucleation – and traces of open-field farming – increasing towards the east and south-east of the Region (Roberts & Wrathmell 2000). In some smaller areas, however, there is evidence of a mixture of nucleated villages and anciently established farmsteads and hamlets in the settlement pattern. An area with a higher level of dispersed settlement combined with nucleated settlement runs through Blackmoor Vale in north Dorset, along the boundary between Wiltshire and east Somerset and on into the claylands of north-west Wiltshire and the Vale of Gloucester.

Many villages in the chalk areas of Wiltshire and the eastern chalk of Dorset appear to have been laid out in a planned fashion during the medieval period (Taylor 1970; Lewis 1994). The lack of water on the downs was probably one of the major factors in the development of this settlement pattern; the river valleys are clearly marked by lines of settlement. Enclosure of the open fields was underway by the 15th century resulting in often large fields that reflect the earlier pattern of strips with gently curving field boundaries. Small fields, similarly reflecting their origins as former strips, tend to cluster around settlements. On the higher downs regular enclosure is more typical with large fields and straight boundaries dating from the 18th and 19th centuries, although occasionally areas of earlier enclosure are seen on the downland.

The links between geology, topography, agriculture and settlement can be seen clearly in the maps of Wiltshire

3 This series of maps shows the relationships between landscape, settlement patterns and agricultural regions. The contrast between the 'chalk and the cheese' is particularly evident. On the chalk downland of much of the south and east of the county, sheep and corn farming was dominant and settlement was concentrated in the villages along the river valleys. Here farms could be large, even by national standards. On the heavier soils of the north-west of the county is the 'cheese' – a dairying area where settlement is dispersed with many hamlets and isolated farmsteads. Historically, farms in this area were small. 3A Based upon Wiltshire topographical divisions. Source: *The Medieval Landscape of Wessex* (1994) p.173. © Carenza Lewis; 3B Based upon Wiltshire drainage pattern. Source: *The Medieval Landscape of Wessex* (1994) p.173. © Carenza Lewis; 3C Based upon Farming regions of the South. Source: *The Agrarian History of England and Wales, Thirsk, J. Vol. 4* (1967) © Cambridge University Press; 3D Based upon Patterns and Processes in the Medieval Settlement of Wiltshire. Source: *The Medieval Landscape of Wessex* (1994) p.174. © Carenza Lewis



(Figure 3), a county that exhibits strong contrasts between the northern claylands and the southern downlands: in the claylands, small and dispersed farmsteads, ancient enclosure, specialisation in dairying

from the 17th century; in the downlands, large farmsteads often concentrated in villages, sheep and corn farming, and 18th- and 19th-century enclosure with the construction of new steadings and outfarms.

3.0 Building Materials

3.1 NATIONAL OVERVIEW

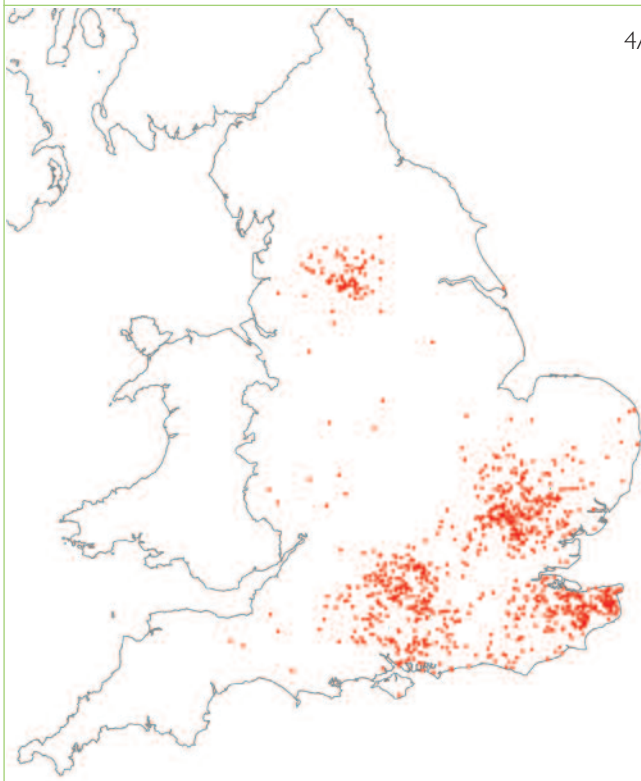
Farm buildings were frequently altered and re-roofed, and survivals can display evidence for successive phases of rebuilding, marked by straight joints in masonry or indications of mortise holes and joints in timberwork.

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

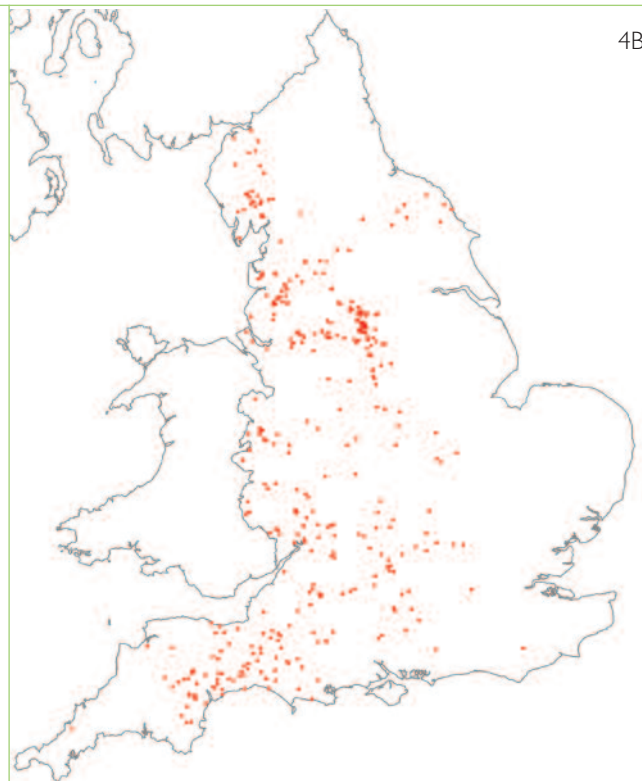
into inland areas. Buildings in stone and brick, and roofed with tile or slate, increasingly replaced buildings in clay, timber and thatch from the later 18th century. Mass-walled buildings comprise the majority of listed agricultural buildings (67%), with timber framing accounting for just over one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

There are strong regional and local differences in roof construction and carpentry, as is still demonstrated by the distribution of aisled and cruck buildings (Figures 4 and 5). From the medieval period, the unit of reference in timber-framed and mass-walled buildings became the bay, the distance between principal roof trusses. These bays could also mark out different areas of storage within barns and other buildings (see 3.1.1.3). Iron bolts, straps and tension bars became increasingly common, often in combination with imported softwood, in the 19th century. Textbooks such as Waistell's *Designs for Agricultural Buildings* (1827) and Stephens's *Book of the Farm* (1844) helped to promote more standardised forms of construction. Metal roofs were used from the 1850s for covered yards and other buildings on expensive planned

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



4A



4B

5A Aisled barn, Cressing Temple, Essex. One of the earliest barns in England, one of two barns surviving from an estate of the Knights Hospitaller and erected with timber felled between 1259 and 1280. © *English Heritage / Michael Williams*

5B Barn at Cross Farm, Burgh-by-Sands, Cumbria, showing the full crucks of the interior of a late 17th-century clay-walled barn. This is one of a group of such barns on the Solway Plain, dating from between the 14th and 17th centuries. © *Jen Deadman*

6 Listed earth-walled agricultural buildings in England. Survival is more extensive than this map indicates. Cob agricultural buildings are concentrated in the South West Region and extend across Dorset and Wiltshire in this Region and Hampshire, Berkshire, Oxfordshire and Buckinghamshire (South East Region). In parts of East Anglia unfired blocks of clay (clay lump), were widely used in the 19th century. Clay-walled buildings also survive in the Solway Plain in Cumbria and the Fylde of Lancashire. Few buildings constructed in mud-and-stud, the earth-walling tradition of the East Midlands, now survive. © *Crown copyright. All rights reserved. English Heritage 100019088. 2005*



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

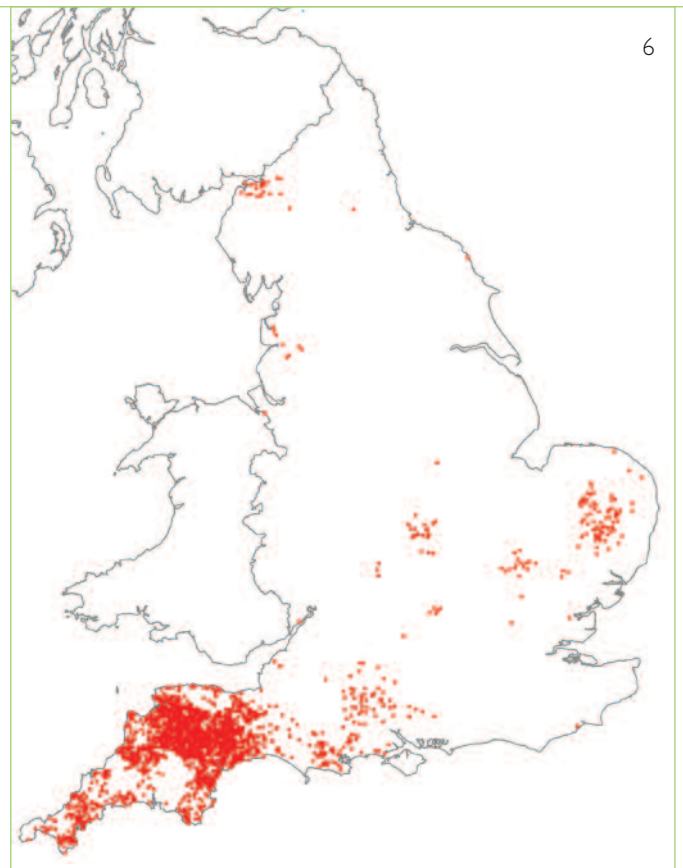
3.1.1 WALLING

3.1.1.1 Temporary structures

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

3.1.1.2 Mass walling

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



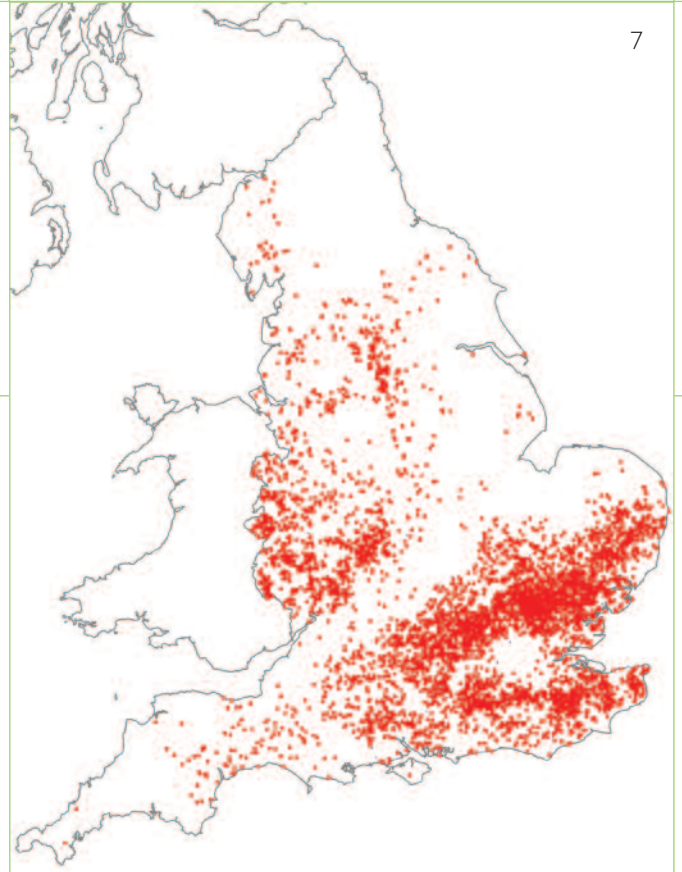
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3.1.1.3 Timber frame

Timber-framed buildings are concentrated in the East of England, the South East and the West Midlands. The basic vocabulary of construction had been developed by the 13th century – notably the use of sophisticated jointing techniques, particularly at the junction of the main posts and roof trusses (the so-called bay divisions), and timber sills raised off the ground on dwarf walls. Climate and patterns of land use and ownership have affected the availability of timber and, together with cultural factors, have influenced the distribution, appearance of distinct traditions in timber framing and the framing of roof

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

7



trusses for mass-walled buildings (Smith 1965; Stenning & Andrews 1988; and Figures 4 and 7). The infill between the timber frames would either be wattle and daub (a clay and straw mix), brick (often a later addition) or simply left as a wattle framework. Timber planks, either rebated or slotted like wattle, were also used but now only survive in very rare instances. External walling and render can also disguise evidence of earlier timber framing, including cruck and aisled construction.

3.1.1.4 Timber cladding

In parts of the country – particularly in the South East, East of England and the western part of the West Midlands – timber frames were often clad in horizontally fixed weatherboarding. Hand-sawn hardwood boarding is now rarely found, as machine-sawn softwood was increasingly used from the late 18th century.

Weatherboarding is either applied to a whole building (most commonly in regions in the South East and the southern part of the East of England) or to the upper portions of sidewalls (a common use in the West Midlands). Vertical boarding is mainly found in the South East. This had cover strips to prevent the ingress of rain; surviving examples date from the late 19th century. Hit-and-miss timber boarding, sometimes known as Yorkshire boarding, has been widely in use as cladding since the 1970s, since it provides good ventilation and meets modern animal welfare requirements.

3.1.1.5 Corrugated iron

See 3.1.2.3.

3.1.2 ROOFING

3.1.2.1 Thatch

Thatch was common in large parts of the country, and farmers used a wide range of locally available materials: heather, bracken, reeds, rushes, grass, turf, and straw from oats, barley, wheat and rye. Thatch, predominantly made of wheat straw or water reed, is now mainly confined to southern England and East Anglia (Figure 8). Heather and bracken was, until the 19th century, used in upland areas of moorland and heath, such as Dartmoor; the Pennines, the North York Moors and the Cheviots. Solid thatch, where the whole of the roof space was filled with materials such as heather or gorse with a straw or reed

topcoat, was formerly widespread but is now very rare (Moir & Letts 1999, pp.103–4).

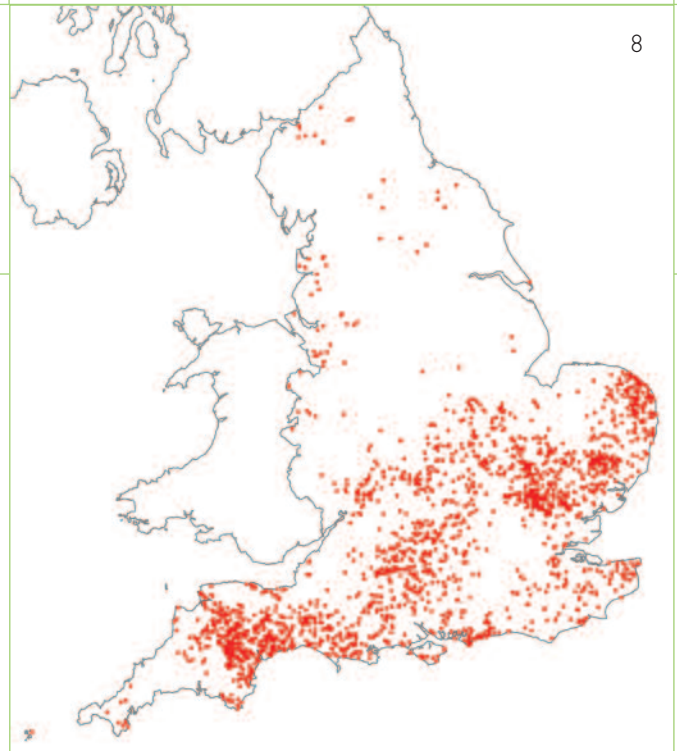
3.1.2.2 Plain clay tiles and stone slates

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

3.1.2.3 Corrugated iron and other prefabricated modern materials

Corrugated iron was used in England from the 1820s, initially for industrial buildings. Although several pioneering firms were producing portable corrugated-iron-clad buildings by the 1850s, it did not come into general use for new farm buildings (particularly on so-called Dutch Barns for protecting harvested hay and corn crops, see 6.4.1) until the farming depression of the 1880s made cheaper materials desirable. By the First World War, corrugated iron was in general use for the repair of roofs on farm buildings, particularly thatch. It was also used for the walling of model farmsteads built to a budget (Wade Martins 2002, p.175) and for smallholders' buildings in areas such as the New Forest.

8 Listed thatched agricultural buildings in England. Particularly evident is the concentration of surviving thatch – the majority of which in agricultural buildings is listed – in southern England, despite its widespread replacement by materials such as corrugated iron from the late 19th century. Rebuilding, and reproofing in slate and tile, has removed the evidence for its formerly extensive use (in straw, heather and bracken) from much of northern England. Such a map presents an obvious invitation to future analysis and research. © Crown copyright. All rights reserved. *English Heritage 100019088. 2005*



8

From the 1940s, asbestos cement cladding and a variety of insulating products found their way on to the farmstead. Hit-and-miss vertical boarding (also known as Yorkshire boarding) has been used as cladding since the 1970s.

3.2 BUILDING MATERIALS IN THE SOUTH WEST

3.2.1 WALLING (Figure 9)

3.2.1.1 Stone

Within much of the South West Region there is a great abundance and variety of good building stone, ranging from the chalk of the southern downlands to the honey-coloured Jurassic oolite of the Cotswolds and the red sandstones of mid-Devon lias; from the limestone of southern Gloucestershire and Somerset, to the slates and granites of west Somerset, northern Devon and Cornwall. Cut and dressed stonework was used for the most high-status and formal farm complexes and, where rougher masonry was used, for the details and surrounds of quoining, the copings and kneelers to gable ends, doors and windows.

3.2.1.2 Earth

Much of Devon and parts of Cornwall and Somerset have numerous farm buildings constructed out of earth (known in the South West as cob), one of the cheapest materials available to the farmer: the differing soils used give each area its own local character. The concentration of earth-built structures found in parts of the South West Region is highly characteristic, forming one of the principal areas nationally where this building technique was used (Figure 6). Documents show that it was formerly more widespread. In Cornwall cob and thatch buildings survived on many farms until improvements, especially after the 1790s, brought their replacement by stone, tiled and slated buildings (Potts 1974; Worgan 1811). In the chalkland area of Wiltshire and Dorset chalk-mud was used for smaller farm buildings and boundary walls.

3.2.1.3 Timber

Timber framing is common across the chalk of Wiltshire where the buildings would usually be covered with weatherboarding or the panels infilled with brick or wattle and covered with daub, but it is less common on the Dorset chalklands where building stones from nearby

areas were preferred. Timber framing is also concentrated in the Vale of Gloucester and Forest of Dean, its use being replaced by brick and stone from the later 17th century (at a high social level) and more generally from the late 18th century. Roof construction of the 17th century or earlier tended to use timbers with greater dimensions than those used later, especially in areas where timber was in short supply, such as Cornwall. Imported softwood was increasingly used in the 19th century. Within Devon, Somerset and Gloucestershire in particular, many barns, including stone and cob examples, were built using cruck or jointed cruck roof construction. Crucks are generally large, curving timbers that form the main trusses of a building. Jointed crucks are concentrated in Devon, west and south Somerset and west Dorset, and together with other architectural features (such as the lateral chimneystacks found on farmhouses) form part of a shared cultural tradition with south-west Wales. There is a scatter of true crucks – where the same curved timber was used from base to apex – over much of the Region (except for Cornwall where there are no recorded examples), with a marked concentration in the Vale of Gloucester (Alcock 2002 and Figure 4).

3.2.1.4 Brick

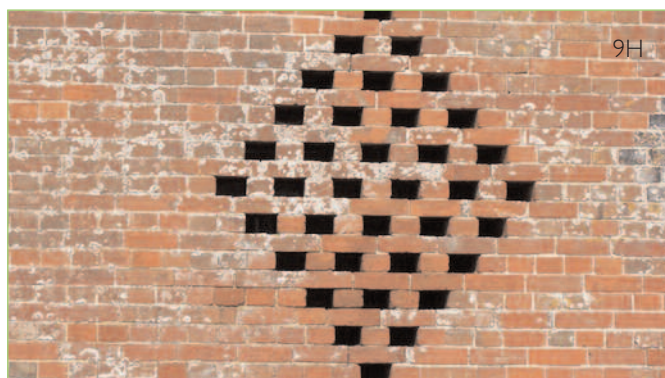
From the 17th century, brick began to be used in farm buildings as a display of fashion and wealth in some areas, particularly where there was a lack of good building stone such as on the chalk of Wiltshire and in the Vale of Gloucester. Apart from a number of stable and barn buildings in Wiltshire and Dorset, it did not come into general use until the 19th century and then only in the clay vales and chalk uplands. In the chalk areas buildings of banded brick and flint became the standard building style in the mid- to late 19th century. In some

9 Examples of walling materials in the South West Region

- A Granite, Dartmoor. Granite is hard to work, and rarely was it finished for farm buildings. More commonly it was picked from moorland and roughly worked, prior to bedding in earth mortar. (Dartmoor) © *Jeremy Lake*
- B Old Red Sandstone, Exmoor. The sandstone splits easily into relatively thin pieces and is typically used as unworked rubble. In some field boundaries the stones were laid at an angle or in a herringbone fashion. (Exmoor) © *Bob Edwards*
- C Limestone, Cotswolds, Gloucestershire. Limestone was easily worked and built into roughly coursed walling, and even dressed and ashlar work for farm buildings. (Cotswolds) © *Bob Edwards*
- D Chalk cob, Wiltshire. Built on a brick plinth, the layers of cob or 'lifts' are clearly visible. As with many agricultural buildings the cob has been left unrendered. In some cases it was given some protection with a chalk slurry and only rarely was it rendered, the typical treatment for

domestic cob buildings. (Salisbury Plain and West Wiltshire Downs)

- © *Bob Edwards*
- E Cob in Devon using the characteristic red earth. Whereas chalk cob rarely incorporates brick or stone quoins, here stone is used to form the corners of the buildings. (Exmoor) © *Bob Edwards*
- F Weatherboarding. The typical wall covering for timber-framed agricultural buildings across Wiltshire and parts of Dorset and Somerset in particular. (Dorset Downs and Cranborne Chase) © *Bob Edwards*
- G In the Vale of Gloucester, where there is also a strong timber-framing tradition shared with that of the southern West Midlands, brick in-filling of the panels formed by the framing is characteristic. (Severn and Avon Vales) © *Jeremy Lake*
- H Brick. Locally made bricks can give a distinctive character to farm buildings as can the use of details such as the pattern of ventilation holes in this Dorset barn, a characteristic of the area. (Dorset Downs and Cranborne Chase) © *Bob Edwards*



10 Examples of roofing materials in the South West Region

A & B Thatch. Straw thatch is an important roofing material across Devon and Dorset. Combed wheat reed is characteristic of Devon (A) whilst in Dorset both combed wheat and longstraw thatching (B) was widely practised. Water reed was not widely used in the Region. (A Dartmoor; B Dorset Downs and Cranborne Chase)
A © Eric Berry; B © Bob Edwards

C, D & E Stone capable of being slit into thin sheets for making roofing slates is found in several parts of the Region including the Cotswolds (C) Purbeck (D) and north and west Cornwall (E). Each has its own character, both in terms of the colour of stone and the size of the slates produced. (C Cotswolds; D South Purbeck; E Cornish Killas)
C & D © Bob Edwards; E © Eric Berry

F Clay tiles. In areas where there was no local stone suitable for making slates plain clay tiles offered an alternative thatch, in some areas

replacing thatch from the 18th century onwards. Where local clay for brick and tile making was available, such as north Wiltshire and the Vale of Gloucester, tiles became the usual roofing material (Dorset Downs and Cranborne Chase) © Bob Edwards

G Pantiles. Bridgwater in Somerset became the main production centre for pantiles in the Region from the mid-18th century and their use spread across the eastern part of the Region, aided from the mid-19th century by the expanding railway network. (Dorset Heaths)
© Bob Edwards

H Welsh slate. Across most of the Region the use of Welsh slate increased as the railways made transportation easier and cheaper. Along the north coast of Cornwall, Devon and Somerset Welsh slate has had a longer usage as it was brought to these areas by boat. (Dorset Downs and Cranborne Chase) © Bob Edwards



areas, such as north Devon and north Somerset, brick was often used for the quoins and window dressings.

3.2.2 ROOFING (Figure 10)

3.2.2.1 Thatch

Over considerable parts of the Region the predominant roofing material was straw for thatching, surviving examples being concentrated in Devon and Dorset, which have the highest concentration of listed thatched buildings in the country. This was a by-product of arable farming and so was generally cheap and available on most farms. Across the Region different methods of processing and applying the straw were used. In Devon in particular combed wheat reed – uncrushed straw applied with the stems lying in the same direction and the butts exposed at the surface – has been used for centuries. It is a characteristic feature of the county and a nationally significant aspect of the Region's built heritage. Across much of the remainder of the Region, longstraw – straw that has been bent and bruised through threshing and with the heads and butts of the straw mixed – was the dominant thatching style. In a few limited areas, managed reed beds provided water reed for thatching (for example at Abbotsbury in Dorset) but it is probable that most reed available was used to provide a key for plaster on ceilings and stud walls in houses. Other materials used for thatching, especially as a base coat beneath straw, include heather, which was also used on Dartmoor as a topcoat, and bracken and gorse. Devon, Dorset, Somerset and Gloucestershire may contain a few surviving examples of solid thatch roofs where the whole of the roof void is filled with thatching material. Most solid thatch roofs are under threat from destruction through neglect or by repairs that often

replace the solid thatch with a conventional roof of rafters and battens (Moir & Letts 1999, pp.103–4). Rope thatch, a tradition found elsewhere in the Atlantic seaboard areas of Scotland, Wales and Ireland, was used in West Cornwall and the Isles of Scilly; pantile and slate now cover their former steep roof pitches.

3.2.2.2 Slate

The limestone of the Cotswolds and Purbeck in Dorset can be split into thin slates due to its bedding and used on roofs. Slate used elsewhere in the Region has metamorphosed from shale. In the late 18th century, Devon and Cornwall were responsible for one-fifth of British slate production (Moir & Letts 1999, p.18). Of greatest importance to the appearance of farm buildings was the widespread introduction of Welsh slate, although the northern coasts of Devon and Cornwall had been exposed to Welsh slate from an early date (Moir & Letts 1999, p.18). Buildings designed to have slate roofs are often noticeably different to those that were built for other roofing materials, as it requires a much shallower roof pitch than either thatch or tiles.

3.2.2.3 Tiles

Clay tiles, which were used only sparingly and for high-status buildings before the 18th century, became more widely introduced to parts of the Region towards the end of that century. Plain tiles, for example, are characteristic of the Vale of Gloucester. Pantiles, manufactured at Bridgwater in Somerset, are a strong contributor to countryside character across Somerset, Dorset and east Devon. Outside of this area of the South West and the Isles of Scilly, they are also found throughout eastern England from Northumberland to Norfolk.

4.0 Agricultural History and Farm Buildings

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

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

4.1.1 UPTO 1550 (Figures 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 policies were also a major factor in the rationalisation of holdings and the emergence of larger farms.

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

Farmstead design was being affected by the widespread introduction of new types of building and layout, and from the 1840s by the widespread extension of mechanisation (for preparing feed and threshing), the increasing availability of mass-produced fittings and materials, and the adoption of industrial and scientific principles to the accommodation and feeding of ever-increasing numbers of livestock. The building of planned steadings for some estates and wealthy farmers, in the period up to 1840 concentrated in the eastern lowlands, was accompanied by the rebuilding or adaptation of many thousands of existing steadings with cattle yards and buildings, and the replacement of the traditional threshing barn by the multi-functional and much smaller mixing barn (see Figure 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 (Betty 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 occurred 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 Ebbel 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.

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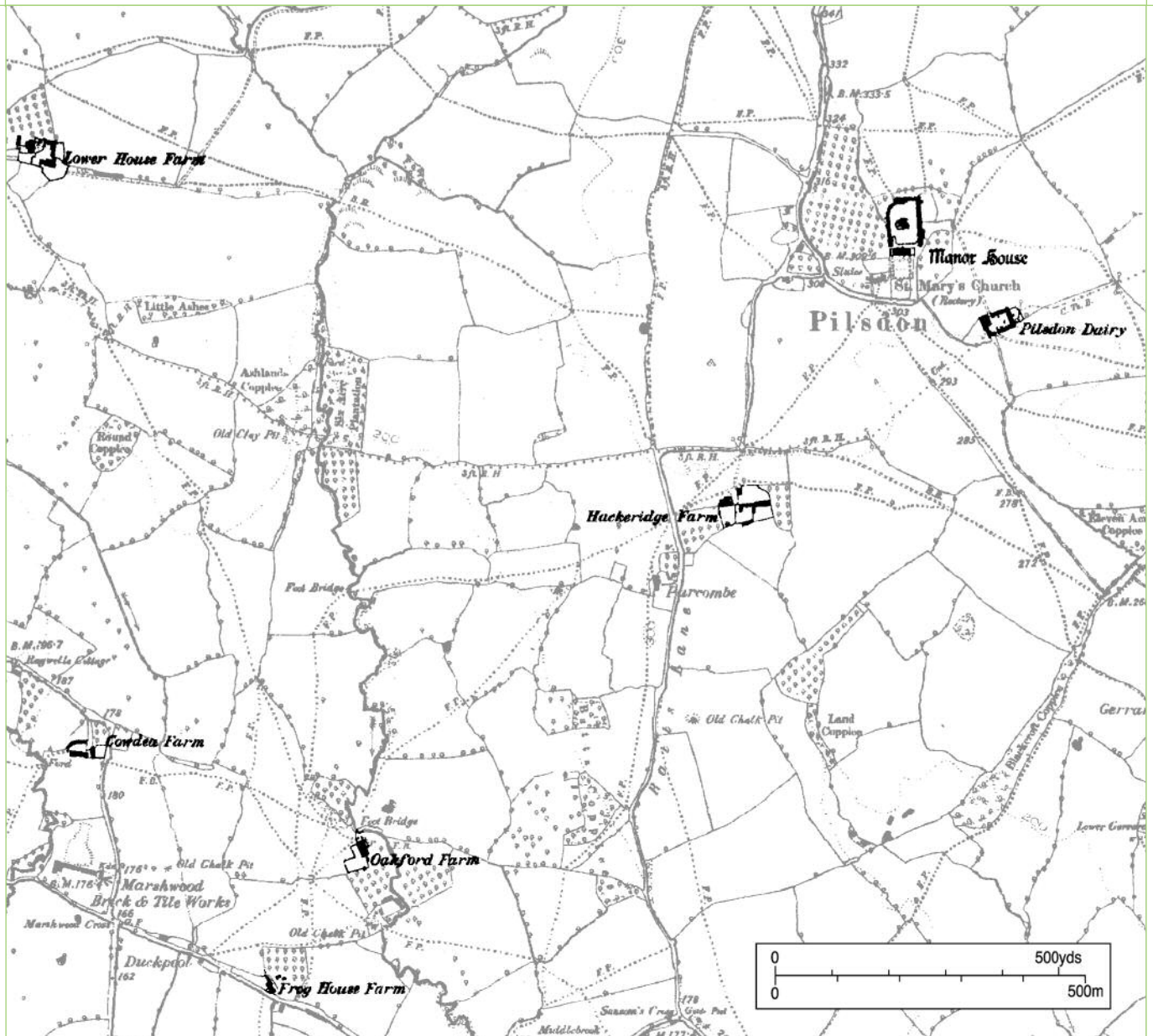
4.2.7 Blackmoor Vale and Vale of Wardour (JCA 133)

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. 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.



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.

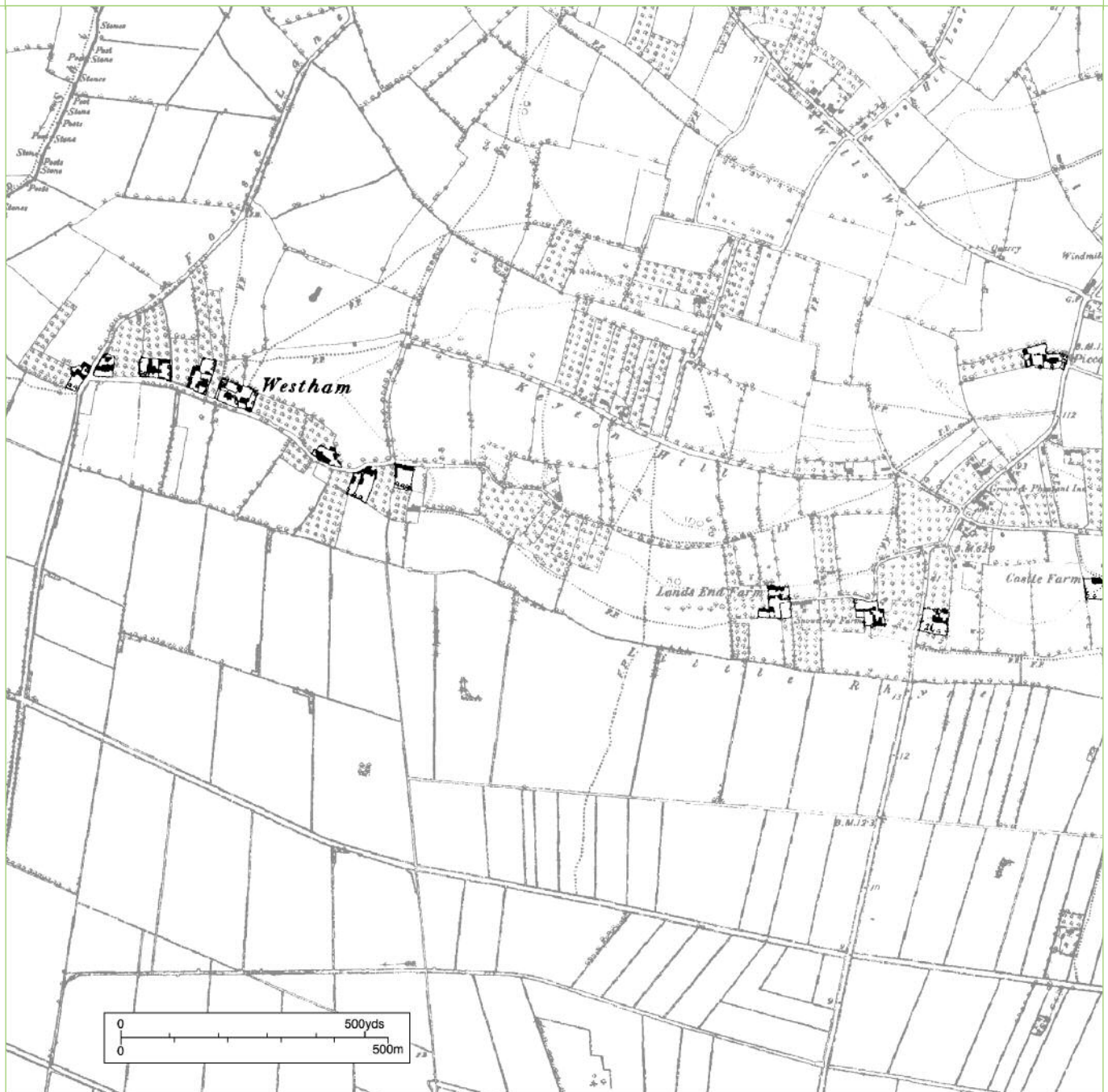
4.2.10 Marshwood and Powerstock Vales (JCA 139) (Figure 12)

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



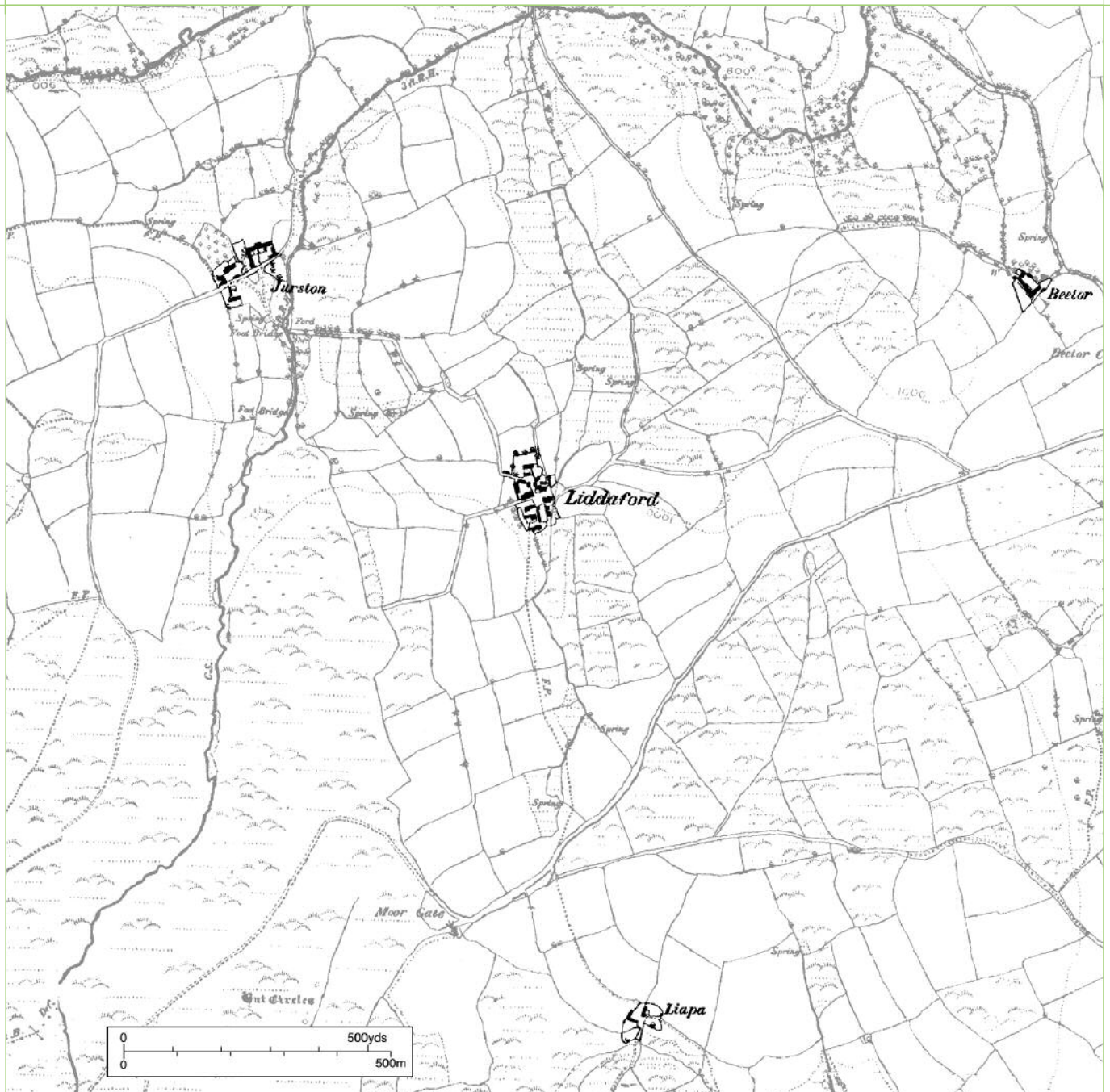
enclosed by agreement although open field farming was generally typical of south Somerset into the 18th century. In the Vale of Sherborne, however; pastoral farming (specifically dairying) was more important – arable providing subsistence corn only.

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 maltings 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 (Carmenellis), 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

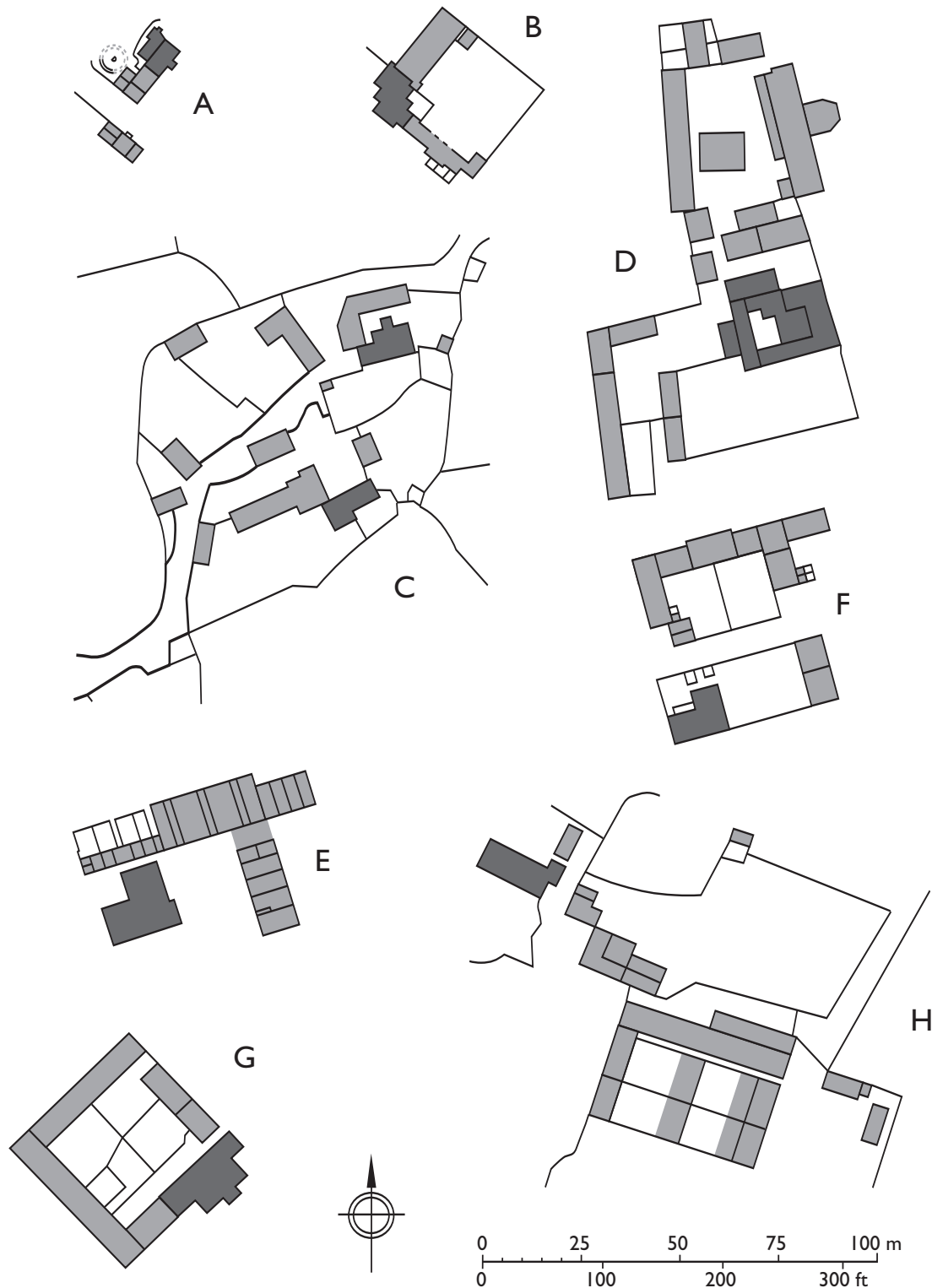
looked toward or away from the yard. Internal access between dwelling house and farm buildings was a feature of farmyard architecture in much of Europe. However, in England from the 13th century it became much more common to have separate entrances, even where buildings and houses were joined. The role 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.

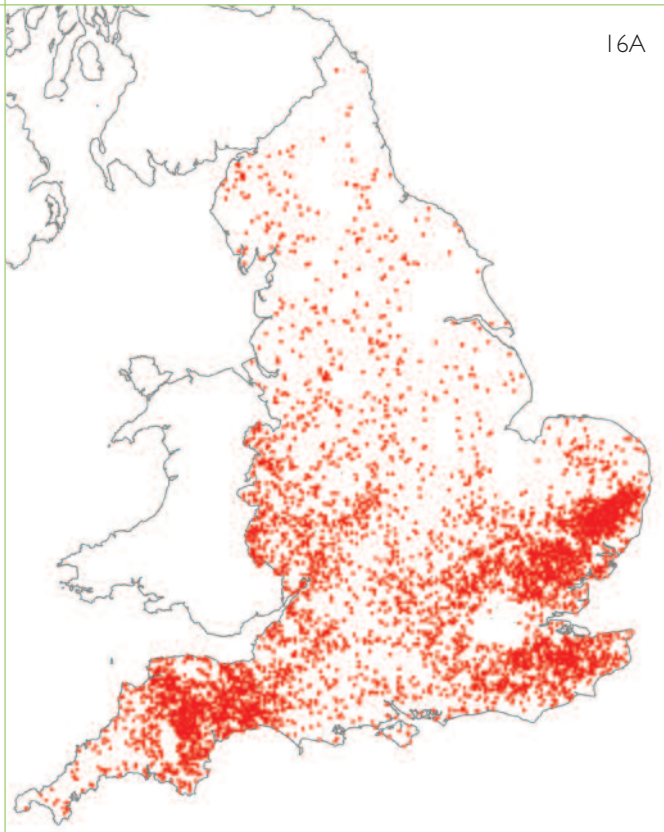
15 Farmstead plan types (Farmhouses are shaded darker)

- 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

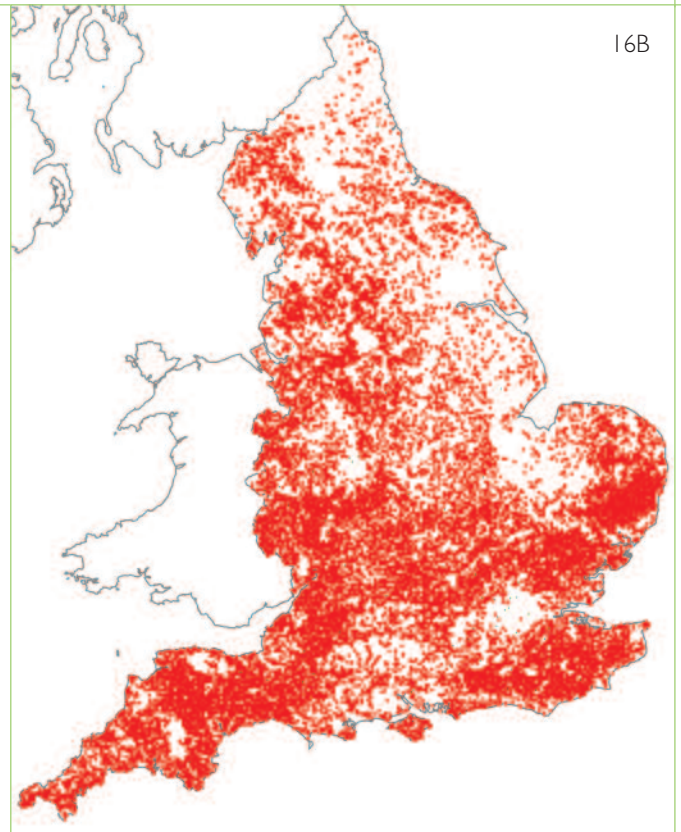
- may form one side of the yard, which may have agricultural buildings to only one or two of the remaining sides.
- E Regular courtyard L-plan. Two attached ranges form a regular L-shape. The farmhouse is detached from the agricultural buildings.
- F Regular courtyard U-plan. The yard, in this example 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. © Crown copyright. All rights reserved. English Heritage 100019088. 2005



16A



16B

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

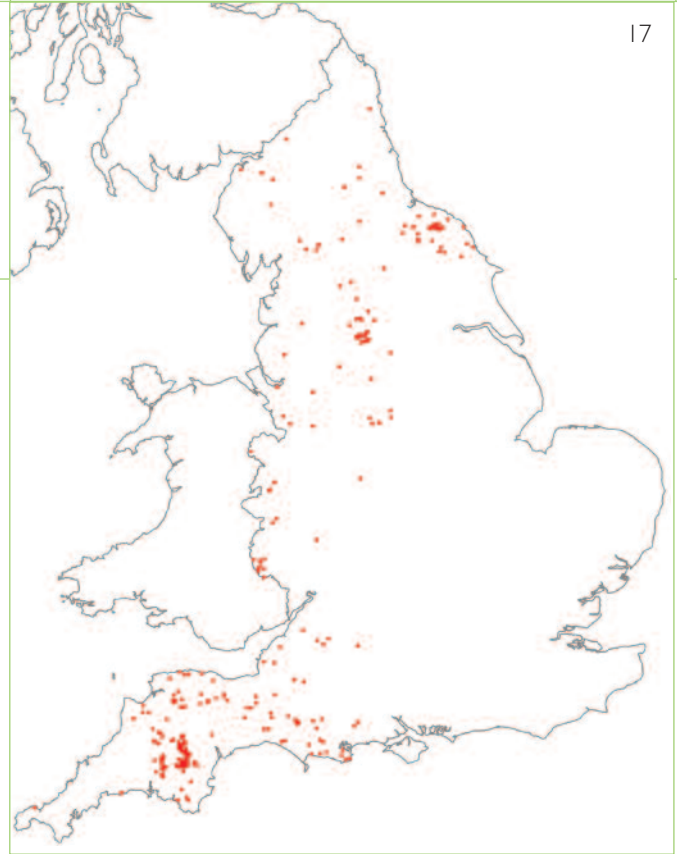
This group comprises farmsteads with farm buildings attached to, and in line with, the house. It includes some of the earliest intact farmsteads in the country.

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.

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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.

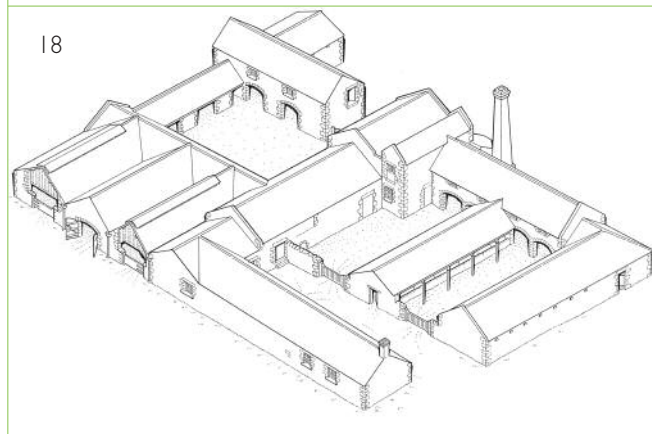
5.2 FACTORS INFLUENCING FARMSTEAD CHARACTER

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*



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 BARNES

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,

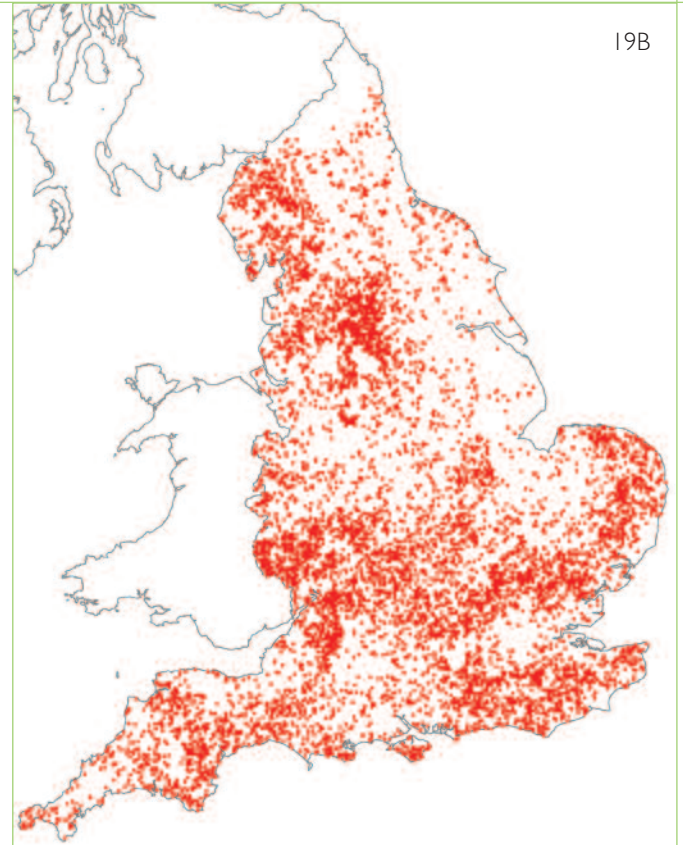
19 Distribution maps of listed barns in England, pre-1550 (19A) and 1550–1750 (19B)

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.

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19A



19B

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

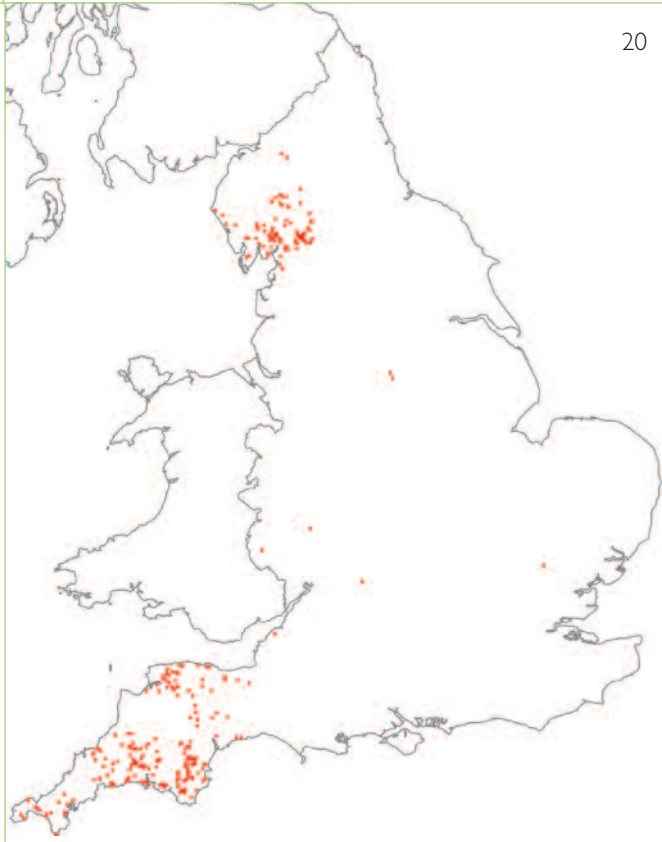
There is increasing evidence in many parts of the country for threshing barns to have originated from at least the 17th century as combination barns, which incorporated other functions in the main body of the barn such as the housing of livestock. These ranged from the end bays of the barn to the aisles 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. © Crown copyright. All rights reserved. English Heritage 100019088. 2005



20

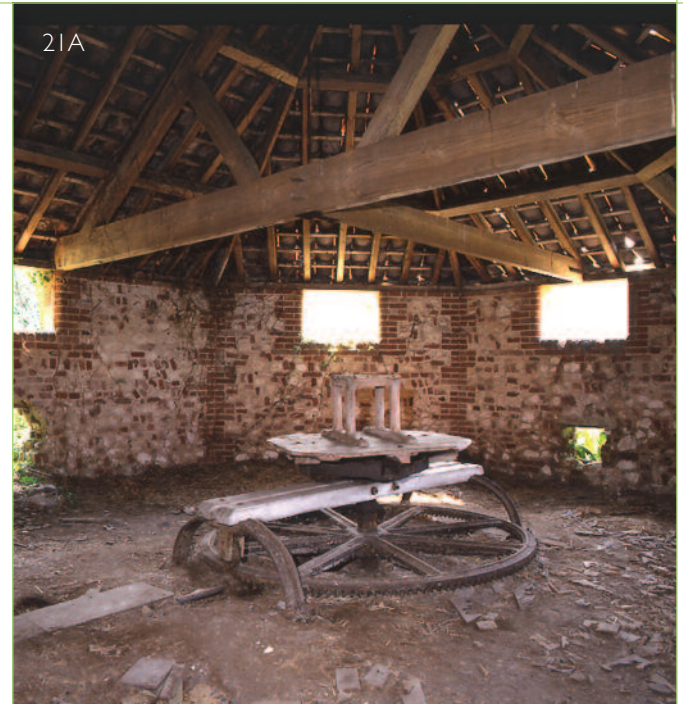
The uptake of machinery varied across the country. In areas where labour was expensive mechanisation found favour, horse engine houses and evidence for water power being most common in the lowlands of Yorkshire and the Humber and the North East, in parts of the West Midlands and in the South West peninsula (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).

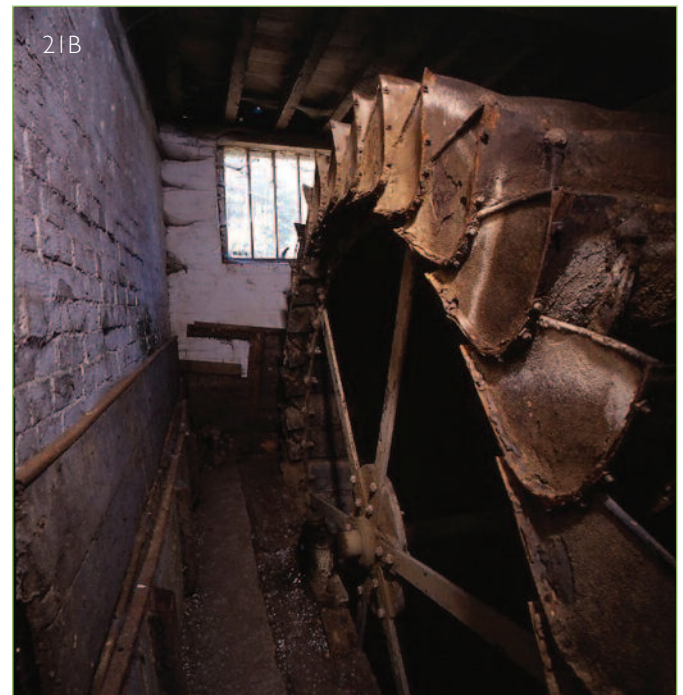
The introduction of the portable steam engine and threshing machine meant that tackle could be taken to the stack. This was widespread by the 1850s, and heralded the end of the traditional barn as a processing building.

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



21A



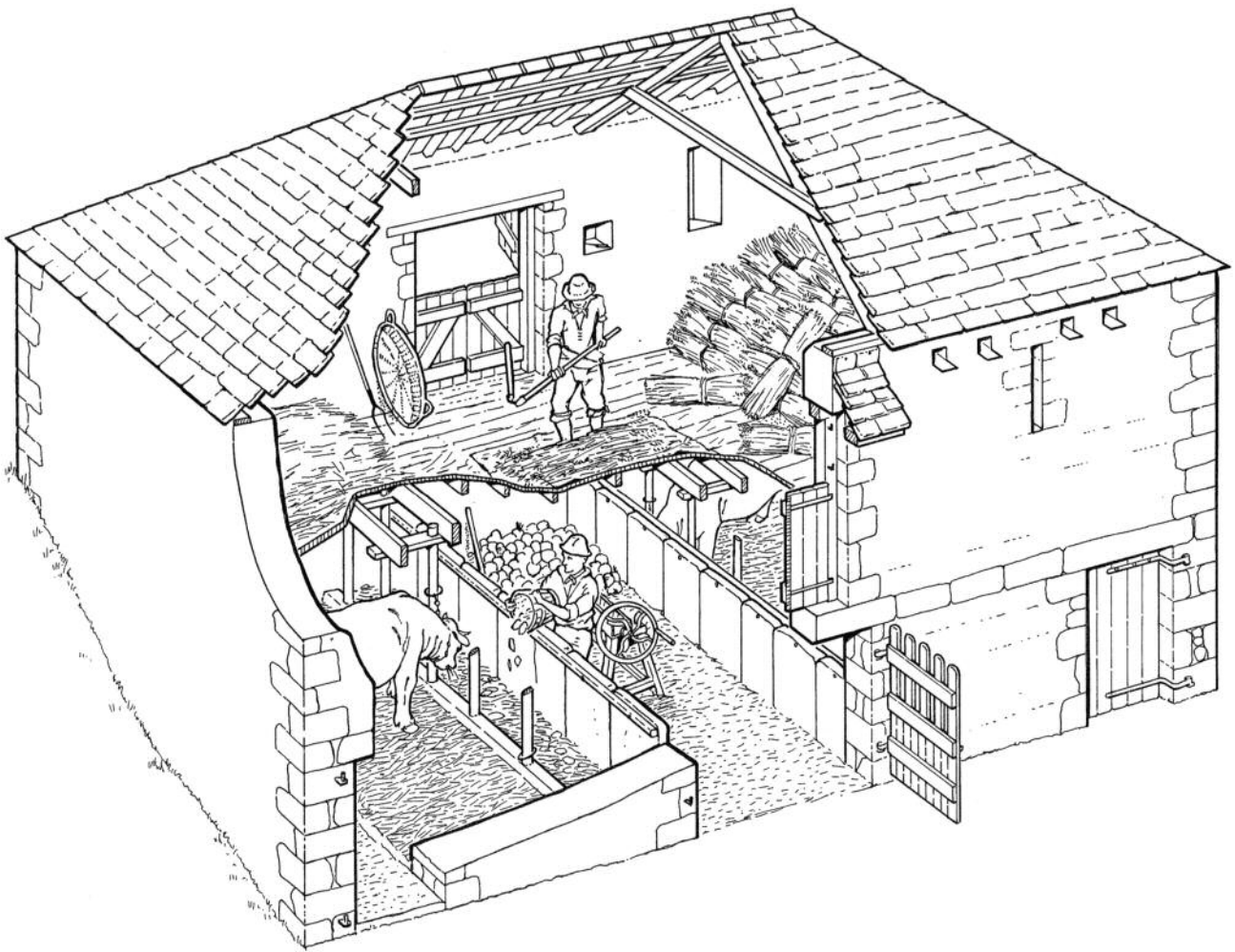
21B

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 shippens 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 shippen with a hayloft over: (Dorset Heath) © 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 areas 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 lincays (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*



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:

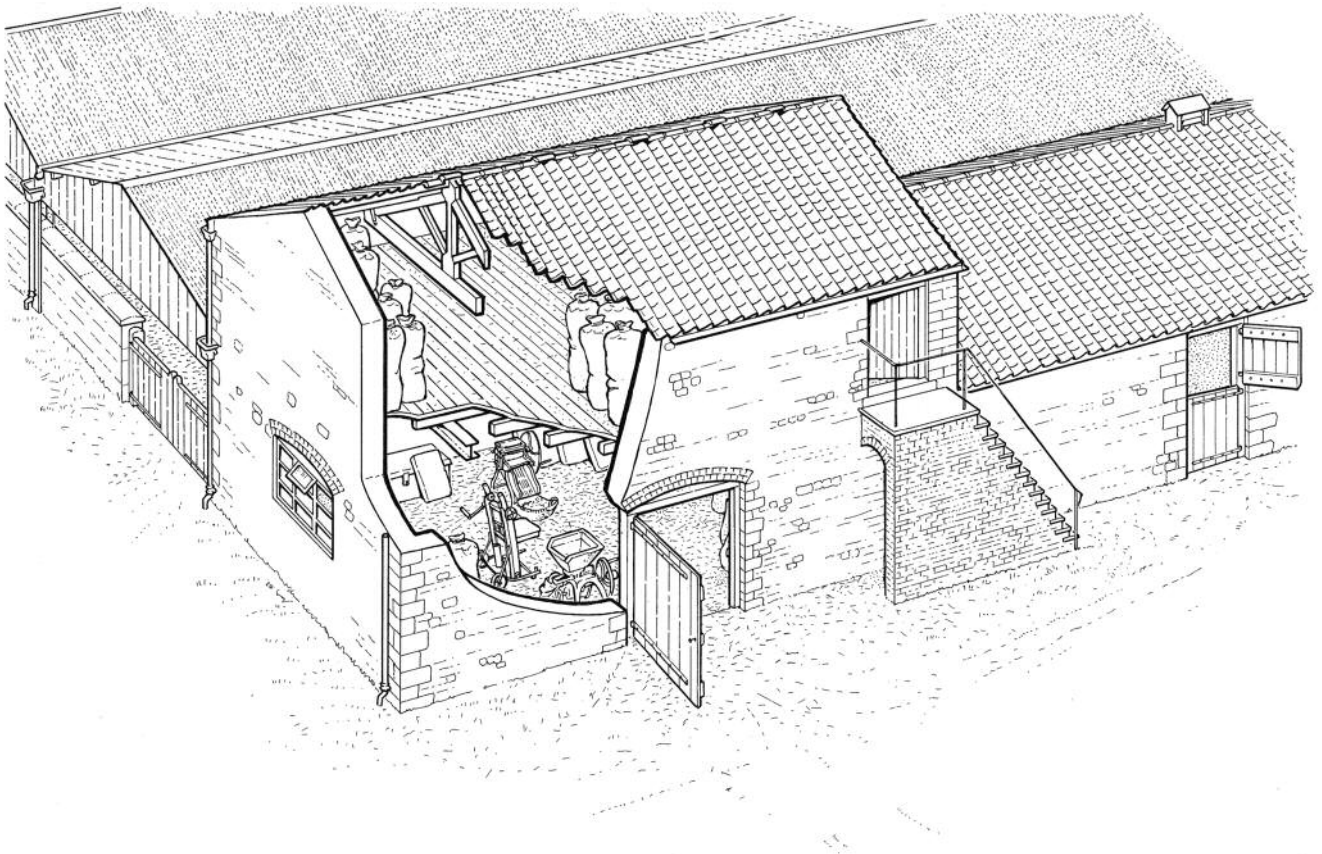
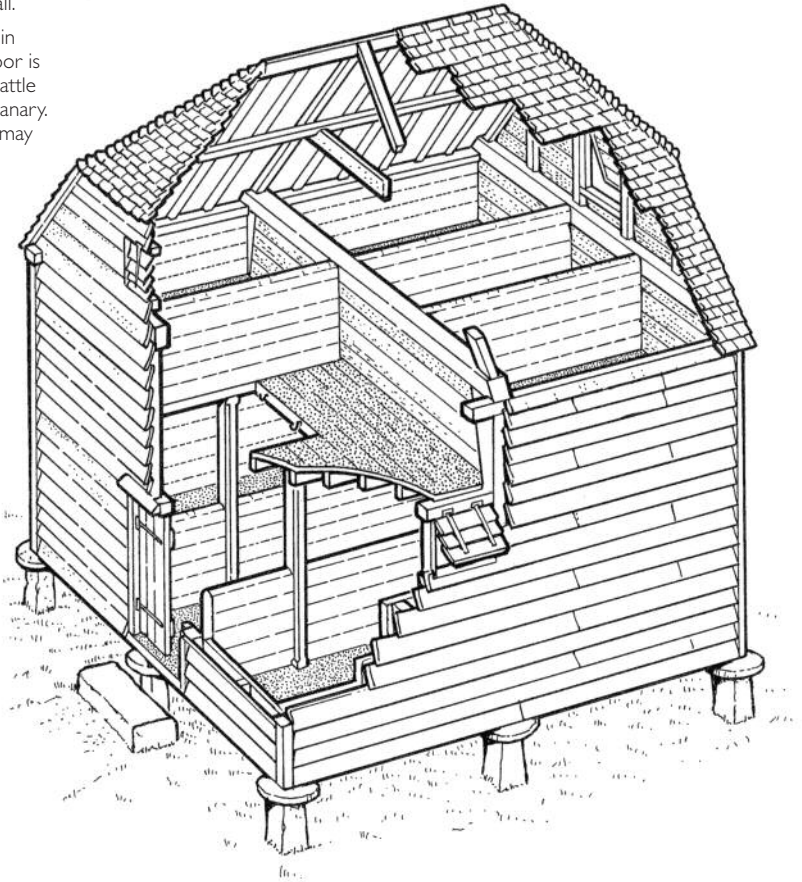
- The lofts of farmhouses, a practice common before 1750.
- Small, square or rectangular structures raised above ground level on mushroom-shaped staddle stones or brick arches and accessed by moveable wooden steps. Internally, they may have been fitted with wooden partitions to create grain bins. They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

© English Heritage



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 BARNES AND OTHER CROP-RELATED BUILDINGS

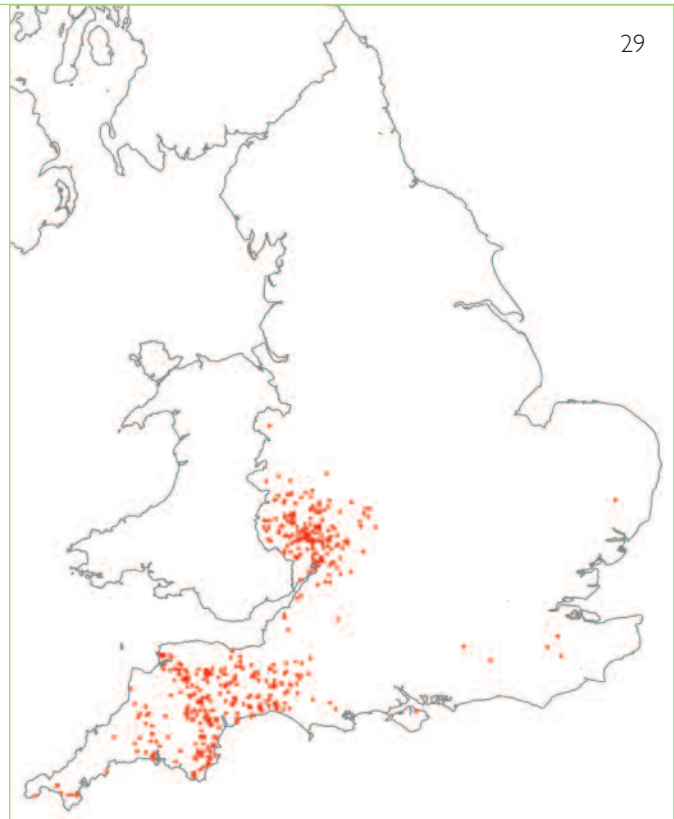
6.4.1 NATIONAL OVERVIEW

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



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 overwintering 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 fittings of cider houses, namely cider presses and mills, are very rare.

7.0 Key Building Types: Animals and Animal Products

7.1 CATTLE HOUSING

7.1.1 NATIONAL OVERVIEW (Figure 31)

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

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

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

Characteristic features of cattle housing include:

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

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

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

7.1.1.1 Longhouses (Figure 33A)

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

7.1.1.2 Ox houses

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

7.1.1.3 Combination barns

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

7.1.1.4 Open-fronted sheds

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

31 Cattle housing

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

- D A range of looseboxes, easily distinguishable by its rows of doors providing access to individual cubicles for fattening. (North Northumbrian Coastal Plain)
- E The interior of a covered yard, on a home farm of the mid-19th century. (Shropshire, Cheshire and Staffordshire Plain)
- A, B & C © Jen Deadman; D & E © English Heritage / Michael Williams



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

7.1.1.5 Lean-tos (outshots)

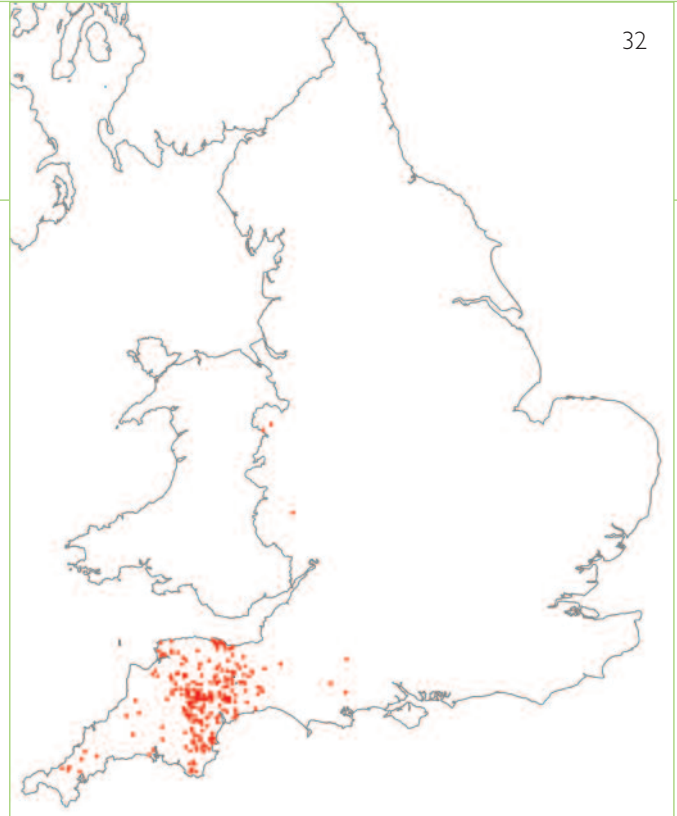
These were attached to other buildings (particularly barns) and farmyard walls, either as part of the initial

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

7.1.1.6 Free-standing cow houses

These comprised either single-storey ranges, or two-

32 Distribution of listed linhays in England. Linhays are concentrated in Devon, extending into Cornwall and south-west Somerset. As with bank barns, this map only represents listed linhays; many examples of mid- to late 19th-century date are not listed but form part of a highly distinctive and locally characteristic group of buildings. © Crown copyright. All rights reserved. English Heritage 100019088. 2005



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

7.1.1.7 Looseboxes (Figure 31D)

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

7.1.1.8 Covered yards

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

7.1.2 CATTLE HOUSING IN THE SOUTH WEST

(Figures 32 & 33)

Longhouses, with their byre for cattle forming part of the house, show that bringing the animals indoors was common practice in parts of the Region at least from the medieval period (see 5.1.1). Documentary evidence suggests that cattle were over-wintered in buildings throughout the South West in the medieval period, but no structures have survived (Fox in Miller 1991, p.313). Buildings for cattle were common by the 17th century in

Wiltshire, where surviving examples of 17th century or earlier cow houses (and possibly ox houses and stables) have been identified (Slocombe 1989, pp.62–3). Such buildings are highly significant and extremely rare in a national context.

The linhay comprises one of the earliest forms of cattle housing that can be found in England. Examples date from the 16th century, and many are pre-19th century in date. The linhay is a highly distinctive regional building type confined, with few exceptions, to Devon, east Cornwall and adjacent parts of Dorset and Somerset (Figure 32). It is an open-fronted cattle shelter with an open-fronted hayloft above, the shorter and milder winters (in contrast to northern England) meaning that cattle could be accommodated in open-fronted buildings, and the hay protected from prevailing wind and rain. The hay might be stored on a floor created by poles or might be properly floored. In the latter case there was often a space along the rear of the upper floor to allow hay to be dropped to the feed racks below. There are variations in design and construction across Devon and into Somerset; in some the usually open front is partly walled with full-height openings little wider than a usual doorway to a shippin. Linhays can range in size from a single bay to L- and U-shaped ranges of over twenty bays, and are always associated with yards for cattle. It is quite usual to find that part or all of the open-fronted side, especially the upper part, was later boarded up: this was an alteration associated, at least in parts of the Region such as north Devon, with the development of the dairying industry (and the need to shelter cattle indoors) in the later 19th century. The linhay can face into the principal farmyard or be set within its own yard.

33 Cattle housing in the South West Region

- A A Dartmoor longhouse. Originally humans and animals shared the same entrance but as living standards rose the byre to the right, down-slope from the house, was provided with a separate entrance. (Dartmoor) © *Pete Gaskell*
- B A regular courtyard consisting of linhays ranged around three sides of the yard. (Devon Redlands) © *Bob Edwards*
- C Before the widespread provision of buildings for cattle, they would be sheltered in the farmyard during winter, protected from the prevailing wind by the barn. Sheds could be built against the side of the barn as in

- this Gloucestershire example, where an enclosed cow house and an open-fronted shelter shed were built on either side of the porch on the yard side of the barn. (Cotswolds) © *Bob Edwards*
- D Open-fronted shelter sheds. As awareness of the importance of providing adequate shelter for cattle spread in the 19th century open-fronted shelter sheds were added to many farmsteads, often adjoining the barn. This example has a cob rear wall with brick piers but timber frame; weatherboard and brick were also widely used. (Dorset Downs and Cranborne Chase) © *Bob Edwards*



Surviving linhays and documentary evidence suggest that the building type was in use from the 16th century at least (Alcock 1963; Morgan 1996; Child 2001, pp.71–2; Wade Martins 2001, p.49). It also has variants in western France, from Normandy to Bordeaux, and south-eastern Wales.

In many parts of the Region, commentators of the late 18th and early 19th centuries were making disparaging remarks about the want of turnips for feed, the lack of winter shelter for stock and the resultant waste of manure. Late 18th-century and early 19th-century commentators lamented the general lack of buildings for animals on the smaller farms characteristic of the pastoral areas in Cornwall, Devon, Somerset and parts of Gloucestershire, and the resultant loss of valuable manure (for example, Worgan 1811, p.24). By the mid-19th century the situation had improved, although it was still felt that there could be more investment in farm

buildings for cattle in many parts of the Region (for example Karkeek 1845, p.461). (Barnwell & Giles 1997, p.98). The greatest number of surviving buildings related to cattle housing in the Region date from the second half of the 19th century or early 20th century. This reflects the increased acceptance of the value of housing cattle in terms of improved health, controlled feeding and the preservation of manure, and the greater numbers of cattle found in some parts of the Region, for example in Devon where the dairy herd doubled between 1866 and 1930 (Child 2001, p.72).

The cattle-rearing industry that dominated parts of Devon and Cornwall has left little trace by way of buildings, except small-scale calf houses (Barnwell & Giles 1997, p.98). By contrast, loosebox ranges and cattle yards with shelter sheds are a frequent sight in Somerset and other eastern parts of the Region, where these cattle were fattened.

For many farms in Cornwall, Devon and adjacent parts of Somerset, a combination barn fulfilled at least part of the requirements; the ground floor provided either fully enclosed housing for cattle, open-fronted shelters for loose cattle, or stables or ox houses beneath the first floor barn, granary and hayloft (Barnwell & Giles 1997, pp.108–14; see 6.1.1 and Figure 20). These combination buildings may be associated with other forms of cattle housing such as linhays in planned farmstead groups. In other parts of the Region, as we have seen, cattle could be housed in lean-tos attached to barns or in the end bays of barns.

7.2 DAIRIES

7.2.1 NATIONAL OVERVIEW

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

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

Dairying for urban markets was already a specialised enterprise by the 1750s, and winter feeding and the ousting of less-productive breeds by the Dairy Shorthorn (after 1820) boosted yields. By the 1850s, butter production for the market was concentrated around towns, and the first small dairy factories started production around 1870. Cheese making in East Anglia gave way to cereal farming and fattening after 1800

(Holderness in Mingay 1989, pp.160, 158). Commercial cheese making and foreign imports (from the colonies) made inroads from the 1860s, and by around 1914 farmhouse butter was being sold only in Devon and Cornwall, and cheese made only in Cheshire, Leicestershire and the vales of Dorset and Somerset (Whetham 1978, pp.11, 15). Changes in hygiene regulations and the centralisation of production through the 20th century had a major impact on dairies, with the majority becoming redundant to their original use. Changes in use may have resulted in the removal of fixtures such as slate or stone shelves for cooling the milk.

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

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

7.2.2 DAIRIES IN THE SOUTH WEST

The majority of dairies in the South West formed part of the farmhouse, although some detached dairy houses were built: in the Vale of Gloucester, for example, (Thirsk 1984, p.189) and north Wiltshire. None of the timber-framed dairies in the former area are known to have survived; a small number of stone ones remain in the latter. In some cases a cheese loft was located over the dairy. It is probable that there are former dairy buildings and cheese lofts surviving that have not been recognised as such and have been considered as simple outbuildings or stores.

7.3 STABLES

7.3.1 NATIONAL OVERVIEW

After the barn, the stable is often the oldest building on the farmstead. The high value of horses to the running of the farm meant stables were well built and often placed near the house, with easy access to the fields, and given a certain level of architectural and decorative treatment.

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

A few stables dating to before 1700 have been identified in local surveys, while many more date from the 18th century. One of the reasons for this rise in number was the decline in the use of oxen.

The size of stabling was, like granaries and cart sheds, loosely linked to the arable acreage of the farm. The number of horses needed to work a farm changed little until the arrival of the tractor, with one horse for every 20 acres being the frequently quoted figure. Smaller farms still needed a team of horses, so even a 50-acre farm might well have four horses. Most farms still kept a few working horses until the 1950s, and they were finally replaced by tractors during the 1960s. Farmsteads, and the farmyards attached to manor and gentry houses, often had stables for riding and coach horses, the upper floors commonly being used as accommodation for stable hands. These were usually well appointed and in some cases were used as displays of wealth and status, incorporating architectural detailing not found on most other farm buildings.

Stable interiors are characterised by:

- Horses commonly stalled in pairs with wooden stall divisions between them to stop them kicking each other (Figure 34). Cast-iron stable fittings often replaced wooden ones. More elaborate stalls and mangers were usually confined to the riding-horse rather than carthorse stable, but on many small farms the riding horse would have been kept alongside the working animals. In early (pre-1750) examples, the stalls are across the end walls while in later examples the stalls are along the side walls, allowing more scope for lengthening the building and thus housing more horses.
- A manger and hayrack, the latter often accessed from a drop from the hayloft above. Other types of fodder, such as crushed oats and bean straw, became more general after the mid-19th century.
- Floors, cobbled and from the mid-19th century of engineering brick, sloping to a drainage channel.
- A ladder to the loft.
- The harness was usually kept in a separate room and chaff boxes were built in to the structure for storing feed. Small cubby-holes for keeping grooming brushes, medicines or lanterns were often built into the walls.

Stable exteriors are characterised by being:

- Usually two-storey, with pitching openings and ventilation to the first-floor loft and an external staircase. The upper floor sometimes provided accommodation for farm labourers or stable lads. Despite textbook advice on the tainting of the hay, the



practice of housing horses below haylofts persisted, partly because of the perceived need to protect horses from chills and draughts. Single-storey stables, commonly with cast-iron ridge vents, were built from the later 19th century.

- Well lit, with windows ideally opening to the east to catch the early morning light. The door was wider and higher than that in the cow house.

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

7.3.2 STABLES IN THE SOUTH WEST (Figure 35)

The stables of the South West Region are very diverse in character, ranging in scale from small in pastoral areas to large for the horse-teams of arable-based farms. They can be detached structures with upper-floor haylofts or be integrated into combination ranges. Examples in the east of the Region date from the 18th century and even earlier in rare cases, but are commonly 19th century further west.

In parts of the South West the use of oxen for ploughing continued into the 19th century, limiting the number of working horses and, therefore, the number and size of stables required. Working oxen were provided with much inferior housing compared to the horses, which were thought to require ample light and ventilation. It is suggested that ox houses can be identified through the slightly longer standings (Hoskins 1970, p.46) although the examination of possible ox houses within Cornish chall barns failed to positively identify them as being built for oxen (Barnwell & Giles 1997, p.114). One has been identified on a very large gentry farmstead on the northern fringes of Exmoor (Jones 2004).

35 Stables in the South West Region

- A A stable of at least 17th-century date forming part of one of the most complete groups of medieval farm buildings in the country. Ham stone walling and thatch. (Yeovil Scarplands) © Bob Edwards
- B A stable similar in form to A but of 18th-century date. (Weymouth Lowlands) © Bob Edwards
- C A 19th-century stable range associated with a large arable farmstead. (Berkshire and Marlborough Downs) © Bob Edwards

- D A stable forming part of a range of buildings including linhays and cow houses. (Exmoor) © Bob Edwards
- E A small stone-built stable with hayloft and an attached open-fronted two-bay shed which may have been a cart and implement shed. (Exmoor) © Bob Edwards
- F A 19th-century brick stable with attached pigsties. Note the rows of stone slates at the eaves, a characteristic feature of much of Dorset. (Dorset Heaths) © Bob Edwards



7.4 PIG HOUSING

7.4.1 NATIONAL OVERVIEW

One or two pigs were kept on most farms, although the pigs often ran with other livestock in the fields, or roamed about the yard, rather than having their own

dedicated housing. Pigs were most commonly kept in dairying areas or market-gardening areas, such as the Fens, where whey or potatoes were available for feed. The only requirements for special accommodation were for farrowing, final fattening and accommodation of the boar. On most farms only a few pigs were kept for

36 Pigsties in the South West Region

Apart from pigsties with corbelled stone roofs sometimes found in Cornwall, the pigsties of the South West Region have few distinctive features other than their building materials. Most have a small yard attached to the shelter and they may have hatches and chutes for feeding. Generally these buildings are extremely vulnerable from neglect as they offer little opportunity for other uses. (A Bodmin Moor; B Dorset Heaths)
© Jeremy Lake © Bob Edwards

domestic use and here they were normally fed on kitchen scraps or whey (a by-product of dairying) and so sties were often placed near the kitchen or dairy. Sometimes they were also integrated into the planning of the farmyard, commonly on larger farms where commercial fattening was practised. Any pre-19th-century examples are of great rarity.

Characteristic features of pigsties are:

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

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

7.4.2 PIG HOUSING IN THE SOUTH WEST

(Figure 36)

Pigsties found in the South West can range from small, crudely built shelters made from stone slabs and boulders or earth to well-built ranges for many animals with small walled yards (Lake 1989, p.38). One would expect them to be a common sight in the dairying parts of the Region; in the dairying areas of Devon, however, it was common practice to leave pigs in yards or simply running with other stock in the fields (Child 1991, p.91). In north Devon and Cornwall they were integrated into the planning of yards where cattle breeding was the major industry, and in Cornwall they are both a common sight and very diverse in their planning (Barnwell & Giles 1997, pp.116–17).

7.5 SHEEP HOUSING

7.5.1 NATIONAL OVERVIEW

The great importance of sheep farming to many areas of the country is not reflected in surviving farm buildings. In medieval times it was common practice to provide



sheep houses, or berceries, even in the south of England. Apart from possible medieval timber-framed sheepcotes in Hampshire (Lewis et al 1988, p.113–15) there is only earthwork evidence for these buildings, but documentary sources show that in Gloucestershire at least they ranged from between eight and eighteen bays (Dyer 1995, p.149). Barns, when empty, were sometimes used for shearing and sorting the wool.

In Cumbria and elsewhere in northern England a building similar in appearance to a field barn was provided for the hogs or yearling sheep to give them protection over their first winter. Low floor-to-ceiling heights and upper-floor haylofts are characteristic features of these buildings. The low ceiling to the ground floor below a hayloft is the characteristic feature of hogg houses. Sheep housing in other areas is associated with outfarms, such as on the southern downlands.

Before the adoption of enclosures of rough grazing in upland areas sheep were kept on both the low-lying commons and high moors to which nearly all farmers had access. The only times of year when all the sheep would be gathered together was for shearing and salving and dipping. Salving involved the boiling of Stockholm tar and tallow to make a mixture that was smeared all over the coat to protect against lice and scab as well as keep the fleece waterproof through the harsh winter. The practice of salving was carried out until the introduction of compulsory dipping as protection from scab in the

37 Sheep housing in the South West Region

Buildings specifically for sheep are rare in the South West Region.

- A On this outfarm in west Dorset (see also Figure 40) a single-storey shelter shed has a low eaves height suggesting that it was intended for use by sheep rather than cattle. The roof of the shelter is also of interest as it is a rare example of solid thatch, the whole of the roof space being filled with gorse and thatched with a coat of straw. (Weymouth Lowlands) © Bob Edwards
- B In Devon, south-west Somerset and across parts of Dorset field shelters were once relatively common. Ordnance Survey maps often called these buildings linhays, although it is likely that many served to shelter sheep. (Exmoor) © Bob Edwards

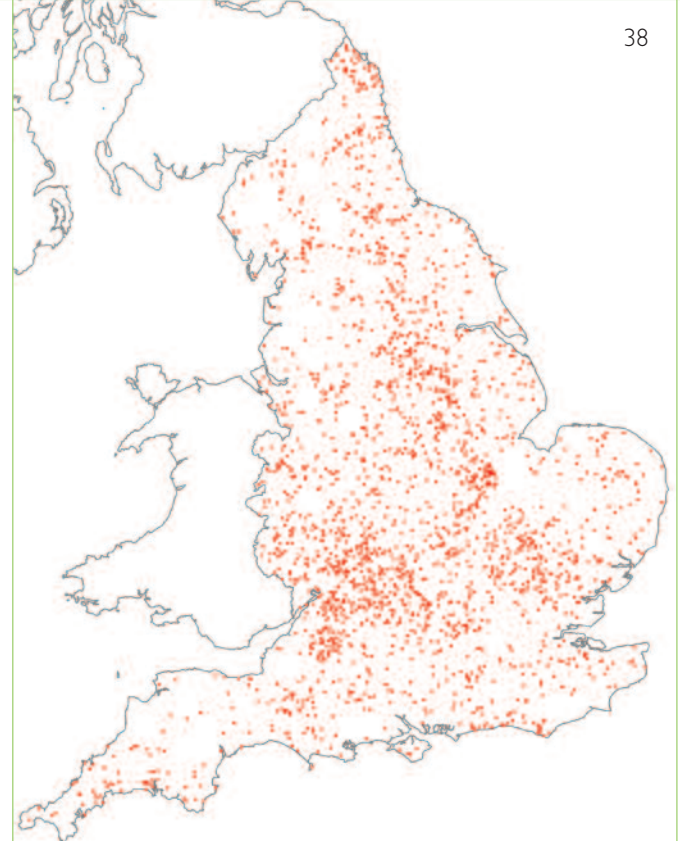
38 Distribution of listed dove-cotes in England. This distribution includes both free-standing dove-cotes and dove-cotes that are incorporated into other buildings. Although dove-cotes are found in all Regions, their concentration within Roberts and Wrathmell's Central Province from Gloucestershire to Northumberland is notable. Within this area manorial control was strongest and the higher numbers of dove-cotes may reflect this. © Crown copyright. All rights reserved. English Heritage 100019088. 2005



37A



37B



38

early 20th century and very few of the sheds used for salving survive. As well as salving, sheep were also washed or dipped. Sheep washing was often carried out in ponds or streams where the watercourse might be artificially deepened or walled or, more unusually, sheep were dipped in specially constructed tanks. Enclosures funnelled towards the water's edge have been found. In areas where watermeadows were a feature of the landscape sheep dips are sometimes found built in to the system of leats and sluices.

7.5.2 SHEEP HOUSING IN THE SOUTH WEST (Figure 37)

Although there is medieval documentary evidence for sheep houses in parts of the Region, such as on the chalk of Dorset and Wiltshire (for example, Page 1996), no early buildings for sheep have survived or been recognised. The sites of some of these sheep houses on the downs have been observed as earthworks. Some

18th- and 19th-century outfarm complexes were provided with open-fronted shelters within a yard, the low eaves height being the only indicator that the shelter was intended for sheep (Figure 37). Similarly, in Devon some field barns, often called linhays on Ordnance Survey maps, are likely to have provided shelter for sheep.

As elsewhere in the country, the farmyard and the barn (when empty in spring and summer) would have been utilised for handling and clipping.

7.6 DOVES AND POULTRY

7.6.1 NATIONAL OVERVIEW (Figure 38)

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



39A

39 Dovecotes in the South West Region

- A The corbelled stone roof of this beehive dovecote is a distinctive method of construction that is only found in the south-west and north-east parts of England. (Cornish Killas) © Eric Berry
- B Medieval circular dovecote. Note the low doorway and the stone slates at the eaves with plain tiles above, a typical roofing style in Dorset. (Dorset Downs and Cranborne Chase) © Bob Edwards
- C A square 18th-century dovecote attached to a service range of the farmhouse. (Salisbury Plain and West Wiltshire Downs) © Bob Edwards
- D Nest boxes incorporated into the gable end of a barn. The construction of nest boxes into the walls of other buildings was commonplace during the 18th and 19th centuries. (Somerset Levels and Moors) © Bob Edwards



39B



39C



39D

commonly associated with gentrified or manorial farms.

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

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

Studies have shown that the distribution of dovecotes may in part be affected by the robustness of the building material. For example, a study of Gloucestershire dovecotes suggests that the brick or timber-framed dovecotes typical of the Vale of Gloucester have fared less well than the stone-built examples of the Cotswolds.

At the time of the Gloucestershire survey the author noted that the surviving dovecotes of the Vale were in noticeably poorer condition (Ariss 1992, p.14).

During the 17th and early 18th centuries the restrictions on keeping doves were lifted and small-scale accommodation for doves can be found built into other farm buildings. However, as cereal prices rose and improved methods of farming were adopted the popularity of pigeons declined. Investigation of a farmstead should include a search for small groups of nest boxes, which may be tucked away at the top of a gable or over a gateway.

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

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

7.6.2 DOVES AND POULTRY IN THE SOUTH WEST (Figure 39)

There are a small number of dovecotes found in Cornwall that have corbelled stone roofs. This building technique is found in Brittany, Devon and Cornwall, south Wales and Ireland, and can also be found on other small structures such as pigsties and ash houses (Lake 1989, p.55). The limited number of these structures makes them particularly significant nationally. Generally, however, the dovecotes of the South West do not exhibit any particular regional characteristics, although the use of local building materials or techniques gives a locally distinct character to this building type (McCann & McCann 2004). There is a clear pattern in the use of timber framing and stone for the dovecotes in Gloucestershire, for example, with timber being typical of the Severn valley and stone on the Cotswolds (Ariss 1992, pp.13–14). Dovecotes are concentrated in the north of the Region, particularly in Gloucestershire and Wiltshire (OAU 1995 and Figure 38). A survey of dovecotes in Gloucestershire has shown that internal fittings such as wooden nest boxes are extremely rare (there is only one known example) and there are only four dovecotes that retain a potence (Ariss 1992, pp.29–30).

8.0 Key Building Types: Other Farmstead Buildings

8.1 OUTFARMS AND FIELD BARNES

8.1.1 NATIONAL OVERVIEW

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

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

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

8.1.2 OUTFARMS AND FIELD BARNES IN THE SOUTH WEST (Figure 40)

Outfarms are mainly found in the chalkland areas and the Cotswolds but they can also be found in the Mendips and Somerset Levels, one of the principal cattle-fattening regions. Field barns were probably more common as a feature prior to the amalgamation of holdings in the 19th century, many in Wiltshire being marked on early maps (Slocombe, 1989, p.23).

Highly characteristic of the South Hams are field barns built gable-end into the slope, which both housed and threshed the crop and provided accommodation for cattle; they typically face into walled cattle yards, and are

predominantly of late 18th- to mid-19th-century date.

Roughly constructed field shelters for cattle can also be identified from documents and fieldwork in Devon and Cornwall, in the West Penwith area for example.

In parts of Devon and Somerset linhays were frequently isolated from the farmstead, although survivals are now very rare. Some linhays were provided with a yard area indicating that the production of manure was an important aspect in their construction. Others may have served simply as shelter sheds for cattle in the fields and convenient storage places for the hay grown nearby. Although most closely associated with Devon, the use of the term 'linhay' relating to isolated buildings extended as far east as Blandford in Dorset.

8.2 MINOR AND MISCELLANEOUS BUILDINGS

8.2.1 NATIONAL OVERVIEW

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

8.2.2 MINOR AND MISCELLANEOUS BUILDINGS IN THE SOUTH WEST (Figure 41)

Generally, the range of other farmstead buildings found in the South West Region are similar to those found

40 Outfarms in the South West Region

- A An outfarm on the edge of the chalk downs in Dorset. A five-bay threshing barn and a single-storey shelter shed stand within a walled enclosure set within regular fields probably created in the 19th century. The height of the eaves of the shelter suggests that it was intended for sheep rather than cattle. (See also Figure 37) (Weymouth Lowlands)
© Bob Edwards
- B Standing alone in 19th-century enclosures on Exmoor, this field barn stood within a yard and provided shelter for cattle on the ground floor with a hayloft, and possibly a threshing floor, above. (Exmoor)
© English Heritage



41 Other buildings

- A Ash houses were small, usually rectangular or circular structures, where ash from the domestic fires could be deposited and stored before being taken to be spread on the fields. They appear to only be found in Devon and Cornwall. (Dartmoor)
© Pete Gaskell
- B Flower growing is an important aspect of the agriculture of the Isles of Scilly where glasshouses are a common feature. (Isles of Scilly)
© Jeremy Lake



across the country, differing only in the local materials used in their construction. Perhaps the only small farmstead building that is particularly associated with the South West is the ash house (Figure 41), the distribution

of which is concentrated in Devon and Cornwall. Some ash houses are built in stone rubble with corbelled roofs, a building tradition mainly found in the west of England and Wales.

9.0 Glossary

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

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

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

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

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

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

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

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

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

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

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

Yorkshire boarding See Hit-and-miss boarding.

10.0 Sources

10.1 GENERAL SOURCES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

British Agricultural History Society
Historic Farm Buildings Group
Local Historian

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

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11.0 Joint Character Area Descriptions: URLs for PDF Documents

- 1 **North Northumberland Coastal Plain** www.countryside.gov.uk/Images/JCA01_tcm2-21114.pdf
- 2 **Northumberland Sandstone Hills** www.countryside.gov.uk/Images/JCA02_tcm2-21115.pdf
- 3 **Cheviot Fringe** www.countryside.gov.uk/Images/JCA03_tcm2-21116.pdf
- 4 **Cheviots** www.countryside.gov.uk/Images/JCA04_tcm2-21117.pdf
- 5 **Border Moors and Forests** www.countryside.gov.uk/Images/JCA5_tcm2-21066.pdf
- 6 **Solway Basin** www.countryside.gov.uk/Images/JCA6_tcm2-21068.pdf
- 7 **West Cumbria Coastal Plain** www.countryside.gov.uk/Images/JCA7_tcm2-21069.pdf
- 8 **Cumbria High Fells** www.countryside.gov.uk/Images/JCA8_tcm2-21070.pdf
- 9 **Eden Valley** www.countryside.gov.uk/Images/JCA9_tcm2-21071.pdf
- 10 **North Pennines** www.countryside.gov.uk/Images/JCA10_tcm2-21072.pdf
- 11 **Tyne Gap and Hadrian's Wall** www.countryside.gov.uk/Images/JCA11_tcm2-21073.pdf
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- 13 **South East Northumberland Coastal Plain** www.countryside.gov.uk/Images/JCA13_tcm2-21121.pdf
- 14 **Tyne and Wear Lowlands** www.countryside.gov.uk/Images/JCA14_tcm2-21122.pdf
- 15 **Durham Magnesian Limestone Plateau** www.countryside.gov.uk/Images/JCA15_tcm2-21123.pdf
- 16 **Durham Coalfield** www.countryside.gov.uk/Images/JCA16_tcm2-21124.pdf
- 17 **Orton Fells** www.countryside.gov.uk/Images/JCA17_tcm2-21074.pdf
- 18 **Howgill Fells** www.countryside.gov.uk/Images/JCA18_tcm2-21075.pdf
- 19 **South Cumbria Low Fells** www.countryside.gov.uk/Images/JCA19_tcm2-21077.pdf
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- 21 **Yorkshire Dales** www.countryside.gov.uk/Images/JCA21_tcm2-21079.pdf
- 22 **Pennine Dales Fringe** www.countryside.gov.uk/Images/JCA22_tcm2-21125.pdf
- 23 **Tees Lowlands** www.countryside.gov.uk/Images/JCA23_tcm2-21126.pdf
- 24 **Vale of Mowbray** www.countryside.gov.uk/Images/JCA24_tcm2-21128.pdf
- 25 **North Yorkshire Moors and Cleveland Hills** www.countryside.gov.uk/Images/JCA25_tcm2-21129.pdf
- 26 **Vale of Pickering** www.countryside.gov.uk/Images/JCA26_tcm2-21131.pdf
- 27 **Yorkshire Wolds** www.countryside.gov.uk/Images/JCA27_tcm2-21132.pdf
- 28 **Vale of York** www.countryside.gov.uk/Images/JCA28_tcm2-21133.pdf
- 29 **Howardian Hills** www.countryside.gov.uk/Images/JCA29_tcm2-21134.pdf
- 30 **Southern Magnesian Limestone** www.countryside.gov.uk/Images/JCA30_tcm2-21135.pdf
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- 44 **Central Lincolnshire Vale** www.countryside.gov.uk/Images/JCA44_tcm2-21143.pdf
- 45 **Northern Lincolnshire Edge With Coversands** www.countryside.gov.uk/Images/JCA45+47_tcm2-21144.pdf
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- 49 **Sherwood** www.countryside.gov.uk/Images/JCA49_tcm2-21147.pdf
- 50 **Derby Peak Fringe** www.countryside.gov.uk/Images/JCA50_tcm2-21148.pdf
- 51 **Dark Peak** www.countryside.gov.uk/Images/JCA51_tcm2-21087.pdf

- 52 **White Peak** www.countryside.gov.uk/Images/JCA52_tcm2-21149.pdf
- 53 **South West Peak** www.countryside.gov.uk/Images/JCA53_tcm2-21088.pdf
- 54 **Manchester Pennine Fringe** www.countryside.gov.uk/Images/JCA54_tcm2-21089.pdf
- 55 **Manchester Conurbation** www.countryside.gov.uk/Images/JCA55_tcm2-21090.pdf
- 56 **Lancashire Coal Measures** www.countryside.gov.uk/Images/JCA56_tcm2-21091.pdf
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- 58 **Merseyside Conurbation** www.countryside.gov.uk/Images/JCA58_tcm2-21096.pdf
- 59 **Wirral** www.countryside.gov.uk/Images/JCA59_tcm2-21097.pdf
- 60 **Mersey Valley** www.countryside.gov.uk/Images/JCA60_tcm2-21098.pdf
- 61 **Shropshire Cheshire and Staffordshire Plain** www.countryside.gov.uk/Images/JCA61+62_tcm2-21100.pdf
- 62 **Cheshire Sandstone Ridge** www.countryside.gov.uk/Images/JCA61+62_tcm2-21100.pdf
- 63 **Oswestry Uplands** www.countryside.gov.uk/Images/JCA063%20-%20Oswestry%20Uplands_tcm2-21174.pdf
- 64 **Potteries and Churnet Valley** www.countryside.gov.uk/Images/JCA064%20-%20Potteries%20and%20Churnet%20Valley_tcm2-21175.pdf
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- 73 **Charnwood** www.countryside.gov.uk/Images/JCA73_tcm2-21155.pdf
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- 77 **North Norfolk Coast** www.countryside.gov.uk/Images/JCA077%20-%20North%20Norfolk%20Coast_tcm2-21180.pdf
- 78 **Central North Norfolk** www.countryside.gov.uk/Images/JCA078+084%20-%20Central%20North%20Norfolk%20+%20Mid%20Norfolk_tcm2-21181.pdf
- 79 **North East Norfolk and Flegg** www.countryside.gov.uk/Images/JCA079%20-%20North%20East%20Norfolk%20and%20Flegg_tcm2-21182.pdf
- 80 **The Broads** www.countryside.gov.uk/Images/JCA080%20-%20The%20Broads_tcm2-21183.pdf
- 81 **Greater Thames Estuary** www.countryside.gov.uk/Images/JCA081%20-%20Greater%20Thames%20Estuary_tcm2-21184.pdf
- 82 **Suffolk Coast and Heaths** www.countryside.gov.uk/Images/JCA082%20-%20Suffolk%20Coasts%20and%20Heaths_tcm2-21185.pdf
- 83 **South Norfolk and High Suffolk Claylands** www.countryside.gov.uk/Images/JCA083%20-%20South%20Norfolk%20and%20High%20Suffolk%20Claylands_tcm2-21186.pdf
- 84 **Mid Norfolk** www.countryside.gov.uk/Images/JCA078+084%20-%20Central%20North%20Norfolk%20+%20Mid%20Norfolk_tcm2-21181.pdf
- 85 **Breckland** www.countryside.gov.uk/Images/JCA085_tcm2-21187.pdf
- 86 **South Suffolk and North Essex Clayland** www.countryside.gov.uk/Images/JCA086%20-%20South%20Suffolk%20and%20North%20Essex%20Clayland_tcm2-21188.pdf
- 87 **East Anglia Chalk** www.countryside.gov.uk/Images/JCA087%20-%20East%20Anglian%20Chalk_tcm2-21189.pdf
- 88 **Bedfordshire and Cambridgeshire Claylands** www.countryside.gov.uk/Images/JCA88_tcm2-21158.pdf
- 89 **Northamptonshire Vales** www.countryside.gov.uk/Images/JCA89+94_tcm2-21159.pdf
- 90 **Bedfordshire Greensand Ridge** www.countryside.gov.uk/Images/JCA090_tcm2-21190.pdf
- 91 **Yardly-Whittlewood Ridge** www.countryside.gov.uk/Images/JCA91_tcm2-21160.pdf
- 92 **Rockingham Forest** www.countryside.gov.uk/Images/JCA92_tcm2-21161.pdf
- 93 **High Leicestershire** www.countryside.gov.uk/Images/JCA93_tcm2-21162.pdf
- 94 **Leicestershire Vales** www.countryside.gov.uk/Images/JCA89+94_tcm2-21159.pdf
- 95 **Northamptonshire Uplands** www.countryside.gov.uk/Images/JCA95_tcm2-21163.pdf

- 96 **Dunsmore and Feldon** www.countryside.gov.uk/Images/JCA96_tcm2-21164.pdf
- 97 **Arden** www.countryside.gov.uk/Images/JCA097%20-%20%20Arden_tcm2-21191.pdf
- 98 **Clun and North West Herefordshire Hills** www.countryside.gov.uk/Images/JCA098%20-%20Clun%20and%20North%20West%20Herefordshire%20Hills_tcm2-21192.pdf
- 99 **Black Mountains and Golden Valley** www.countryside.gov.uk/Images/JCA099%20-%20Black%20Mountains%20and%20Golden%20Valley_tcm2-21193.pdf
- 100 **Herefordshire Lowlands** www.countryside.gov.uk/Images/JCA100%20-%20Herefordshire%20Lowlands_tcm2-21194.pdf
- 101 **Herefordshire Plateau** www.countryside.gov.uk/Images/JCA101+102%20-%20Herefordshire%20Plateau%20+%20Teme%20Valley_tcm2-21195.pdf
- 102 **Teme Valley** www.countryside.gov.uk/Images/JCA101+102%20-%20Herefordshire%20Plateau%20+%20Teme%20Valley_tcm2-21195.pdf
- 103 **Malvern Hills** www.countryside.gov.uk/Images/JCA103%20-%20Malvern%20Hills_tcm2-21196.pdf
- 104 **South Herefordshire & Over Severn** www.countryside.gov.uk/Images/JCA104%20-%20South%20Herefordshire%20and%20Over%20Severn_tcm2-21197.pdf
- 105 **Forest of Dean and Lower Wye** www.countryside.gov.uk/Images/JCA105%20-%20Forest%20of%20Dean%20and%20Lower%20Wye_tcm2-21198.pdf
- 106 **Severn and Avon Vales** www.countryside.gov.uk/Images/JCA106%20-%20Severn%20and%20Avon%20Vales_tcm2-21199.pdf
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- 108 **Upper Thames Clay Vales** www.countryside.gov.uk/Images/JCA108%20-%20Upper%20Thames%20Clay%20Vales_tcm2-21201.pdf
- 109 **Midvale Ridge** www.countryside.gov.uk/Images/JCA109%20-%20Midvale%20Ridge_tcm2-21202.pdf
- 110 **The Chilterns** www.countryside.gov.uk/Images/JCA110%20-%20Chilterns_tcm2-21203.pdf
- 111 **Northern Thames Basin** www.countryside.gov.uk/Images/JCA111_tcm2-21204.pdf
- 112 **Inner London** www.countryside.gov.uk/Images/JCA112_tcm2-21516.pdf
- 113 **North Kent Plain** www.countryside.gov.uk/Images/JCA113_tcm2-21533.pdf
- 114 **Thames Basin Lowlands** www.countryside.gov.uk/Images/JCA114_tcm2-21554.pdf
- 115 **Thames Valley** www.countryside.gov.uk/Images/JCA115_tcm2-21205.pdf
- 116 **Berkshire and Marlborough Downs** www.countryside.gov.uk/Images/JCA116%20-%20Berkshire%20and%20Marlborough%20Downs_tcm2-21206.pdf
- 117 **Avon Vales** www.countryside.gov.uk/Images/JCA117%20-%20Avon%20Vales_tcm2-21207.pdf
- 118 **Bristol, Avon Valleys and Ridges** www.countryside.gov.uk/Images/JCA118%20-%20Bristol,%20Avon%20Valleys%20and%20Ridges_tcm2-21208.pdf
- 119 **North Downs** www.countryside.gov.uk/Images/JCA119_tcm2-21553.pdf
- 120 **Wealden Greensand** www.countryside.gov.uk/Images/JCA120_tcm2-21552.pdf
- 121 **Low Weald** www.countryside.gov.uk/Images/JCA121_tcm2-21571.pdf
- 122 **High Weald** www.countryside.gov.uk/Images/JCA122_tcm2-21572.pdf
- 123 **Romney Marshes** www.countryside.gov.uk/Images/JCA123_tcm2-21573.pdf
- 124 **Pevensey Levels** www.countryside.gov.uk/Images/JCA124_tcm2-21631.pdf
- 125 **South Downs** www.countryside.gov.uk/Images/JCA125_tcm2-21629.pdf
- 126 **South Coast Plain** www.countryside.gov.uk/Images/JCA126_tcm2-21630.pdf
- 127 **Isle of Wight** www.countryside.gov.uk/Images/JCA127_tcm2-21660.pdf
- 128 **South Hampshire Lowlands** www.countryside.gov.uk/Images/JCA128_tcm2-21661.pdf
- 129 **Thames Basin Heaths** www.countryside.gov.uk/Images/JCA129_tcm2-21662.pdf
- 130 **Hampshire Downs** www.countryside.gov.uk/Images/JCA130%20-%20Hampshire%20Downs_tcm2-21209.pdf
- 131 **New Forest** www.countryside.gov.uk/Images/JCA131%20-%20New%20Forest_tcm2-21210.pdf
- 132 **Salisbury Plain and West Wiltshire Downs** www.countryside.gov.uk/Images/JCA132%20-%20Salisbury%20Plain%20and%20West%20Wiltshire%20Downs_tcm2-21211.pdf
- 133 **Blackmoor Vale and Vale of Wardour** www.countryside.gov.uk/Images/JCA133%20-%20Blackmoor%20Vale%20and%20Vale%20of%20Wardour_tcm2-21212.pdf
- 134 **Dorset Downs and Cranborne Chase** www.countryside.gov.uk/Images/JCA134%20-%20Dorset%20Downs%20and%20Cranborne%20Chase_tcm2-21213.pdf
- 135 **Dorset Heaths** www.countryside.gov.uk/Images/JCA135%20-%20Dorset%20Heaths_tcm2-21214.pdf
- 136 **South Purbeck** www.countryside.gov.uk/Images/JCA136%20-%20South%20Purbeck_tcm2-21215.pdf
- 137 **Isle of Portland** www.countryside.gov.uk/Images/JCA137+138%20-%20Isle%20of%20Portland%20%20+%20Weymouth%20Lowlands_tcm2-21216.pdf

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- 140 **Yeovil Scarplands** www.countryside.gov.uk/Images/JCA140%20-%20Yeovil%20Scarplands_tcm2-21218.pdf
- 141 **Mendip Hills** www.countryside.gov.uk/Images/JCA141%20-%20Mendip%20Hills_tcm2-21219.pdf
- 142 **Somerset Levels and Moors** www.countryside.gov.uk/Images/JCA142+143%20-%20Somerset%20Levels%20and%20Moors%20+%20Mid%20Somerset%20Hills_tcm2-21220.pdf
- 143 **Mid Somerset Hills** www.countryside.gov.uk/Images/JCA142+143%20-%20Somerset%20Levels%20and%20Moors%20+%20Mid%20Somerset%20Hills_tcm2-21220.pdf
- 144 **Quantock Hills** www.countryside.gov.uk/Images/JCA144%20-%20Quantock%20Hills_tcm2-21221.pdf
- 145 **Exmoor** www.countryside.gov.uk/Images/JCA145%20-%20Exmoor_tcm2-21222.pdf
- 146 **Vale of Taunton and Quantock Fringe** www.countryside.gov.uk/Images/JCA146%20-%20Vale%20of%20Taunton%20and%20Quantock%20Fringes_tcm2-21223.pdf
- 147 **Blackdowns** www.countryside.gov.uk/Images/JCA147%20-%20Blackdowns_tcm2-21224.pdf
- 148 **Devon Redlands** www.countryside.gov.uk/Images/JCA148%20-%20Devon%20Redlands_tcm2-21225.pdf
- 149 **The Culm** www.countryside.gov.uk/Images/JCA149%20-%20The%20Culm_tcm2-21226.pdf
- 150 **Dartmoor** www.countryside.gov.uk/Images/JCA150%20-%20Dartmoor_tcm2-21227.pdf
- 151 **South Devon** www.countryside.gov.uk/Images/JCA151%20-%20South%20Devon_tcm2-21228.pdf
- 152 **Cornish Killas** www.countryside.gov.uk/Images/JCA152%20-%20Cornish%20Killas_tcm2-21229.pdf
- 153 **Bodmin Moor** www.countryside.gov.uk/Images/JCA153%20-%20Bodmin%20Moor_tcm2-21230.pdf
- 154 **Hensbarrow** www.countryside.gov.uk/Images/JCA154%20-%20Hensbarrow_tcm2-21231.pdf
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- 157 **The Lizard** www.countryside.gov.uk/Images/JCA157%20-%20The%20Lizard_tcm2-21234.pdf
- 158 **Scilly Isles** www.countryside.gov.uk/Images/JCA158%20-%20Isles%20of%20Scilly_tcm2-21235.pdf
- 159 **Lundy** www.countryside.gov.uk/Images/JCA159%20-%20Lundy_tcm2-21236.pdf