Historic Farmsteads
Preliminary Character Statement:
North East 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**.

English Heritage is the Government's adviser on the historic environment. Central to the role of English Heritage is the advice it gives to local planning authorities, government departments and others on the conservation of historic buildings, sites and areas, archaeology on land and underwater, designed landscapes and the historic aspects of the landscape as a whole. English Heritage also has a duty to enhance people's understanding and enjoyment of their heritage and, as part of this, it manages an estate of over 400 historic properties open to the public.

The Countryside Agency is the statutory body working to conserve and enhance England's countryside. The aim of the Countryside Agency's Landscape, Access and Recreation division is to help everyone respect, protect and enjoy the countryside, protect natural landscapes, and encourage access to, enjoyment of and sustainable management and use of the countryside.

In accordance with the Natural Environment and Rural Communities Act 2006, English Nature, the Rural Development Service and the Countryside Agency's Landscape, Access and Recreation division are working towards integration as a single body: Natural England. It will work for people, places and nature with responsibility for enhancing biodiversity, landscapes and wildlife in rural, urban, coastal and marine areas, promoting access, recreation and public well-being, and contributing to the way natural resources are managed so that they can be enjoyed now and for future generations.

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Cover image: The completion of major reorganisations of parts of the Northumberland landscape in the 19th century that often completely swept away earlier villages and replaced them with new, large farmsteads that often incorporated mechanisation and included terraces of cottages for the farm labourers changed the area to one of the most advanced parts of the country. (North Northumbrian Coastal Plain) © *English Heritage / Michael Williams*

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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

Across the Region the patterns of settlement are intimately linked to the distribution of historic farmsteads. In the south-east of the Region settlement largely consists of regular, planned villages where farmsteads were often laid out around a green. Most of these villages date from the 12th and 13th centuries. The

growth of urban populations and new settlements next to collieries was concentrated in a zone from the south of the South East Northumberland Coastal Plain to the Tees Lowlands.

In the uplands along the western edge of the Region settlement has always been sparse and has tended to consist of small hamlets and isolated farmsteads – historically with access to summer grazing lands. Small settlements associated with coal mining, quarrying or lead mining are often found on former common land where smallholders combined industrial employment with farming. The many abandoned cottages and farmsteads are the result of the collapse of these industries which left small-scale farming untenable.

Because of its wet climate the upland part of the Region was best suited to pastoral agriculture. By the 15th century a pattern had emerged in upland landscapes of both open communal fields and the enclosed fields belonging to individual farms.

In contrast a more mixed arable-based economy was typical of the broader and more fertile lower upland dales, lowland and coastal districts where there was more cultivatable land organised by the 15th century around two or more open fields laid out in strips. The enclosure of these fields and the reorganisation of holdings was especially marked in lowland areas, particularly in the south of the Region, where the process accelerated in the 17th century and was essentially complete by 1750. In Northumberland, the dominance of large estates enabled the development of commercial stock farming from the later 16th century, large-scale enclosure and the replacement of villages and hamlets by large isolated steadings, often with their own groups of cottages for hired labour, on a scale comparable to the reshaping of the Scottish lowland and later highland landscapes. This Region shares with Yorkshire and Humber some of the earliest and most architecturally distinguished examples of Georgian and Victorian planned farm complexes. The most intensively farmed arable land, and the largest farms, is found along the North Northumberland Coastal Plain and South East Northumberland Coastal Plain. The farmsteads of south-east Northumberland and Durham, particularly in the coal mining areas, are generally much smaller.

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

Stone was the predominant building material of the north and west of the Region, notably hard grits and shales, fine magnesian limestone and sandstones. These can vary in colour from red and pink in the north east of the Region to buff and even a soft, multicoloured sandstone in central Durham, and are major contributors to local distinctiveness. Cut and dressed stonework was used for the most high-status and formal farm complexes and, where rougher masonry was used, for the embellishment of quoining, door and window surrounds and the copings and kneelers to gable ends. Watershot masonry, where the outer face is tilted to throw water off the walls, is a technique that was used in upland areas between the late 18th and mid-19th centuries. Brick is mainly found in the south and east of the Region, in the Tees Lowlands and the South East Northumberland Coastal Plain character areas.

Slate roofing is common in upland areas; slate was imported from Cumbria and Scotland from the mid-18th century and Welsh slate became commonly used by the mid-19th century. The south-west of Northumberland is well known for the remarkable survival of a small group of heather or 'black thatch' buildings. Pantile roofs are a distinctive feature of the lowland parts 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

Linear farmsteads, some of longhouse origin, were typical throughout most of the Region until the late 18th century when, in the north of the Region in particular, most were swept away by enclosure and estate reorganisation. Distinct types of linear farmsteads developed in the 18th and 19th centuries.

From the mid-18th century farms of over 150 acres across much of the lowland and in some of the transitional areas were typically provided with a farmstead ranged around a courtyard. This was especially marked in Northumberland, where many landowners continued to generate wealth from outside agriculture that they could then invest in their farms. The result was the creation of large-scale courtyard steadings with up to five cattle yards, very similar in form to those that appeared across the border in the Lothians. Sometimes whole settlements were replaced by these industrial-sized farmsteads and the workers' re-housed in terraces alongside the farmstead.

NATIONAL FRAMEWORK – BUILDING TYPES

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

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

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

REGIONAL PATTERNS – BUILDING TYPES

The bastle house, providing security for both the family and stock, is a building type particular to the Border area of northern England and reflecst the turbulence of the area in the 16th and early 17th centuries. Over 200 examples are known in Northumberland, with the distribution extending into Cumberland, the north Pennines and south of the Tyne Gap as far as Allendale, Weardale and the South Tyne Valley. Cattle were housed on the ground floor with domestic accommodation at first-floor level accessed by a ladder or later an external staircase. The upland tradition of providing domestic accommodation over cattle reappeared in the later 18th and early 19th centuries with the so-called byre houses of County Durham. Larger window openings and thinner walls differentiate them from bastles.

Pre-1750 barns are particularly rare in the Region; north of the Tees and Furness the only surviving medieval barns are believed to be in County Durham. These barns, usually built religious institutions, are most commonly of 15th-century date and have a central threshing floor with opposed doorways and ventilation is typically through small triangular vents.

Most barns in the Region date from the late 18th to mid-19th century and – as in lowland Scotland – evidence for early mechanisation in their planning, with distinctive wheel houses (also known as gin gangs) or fixed steam power, is an important characteristic.

Two-storey combination barns are common. By the 19th century the Northumberland barn consisted of two attached buildings: a two-storey threshing barn with the machinery at first-floor level, and a straw barn.

Combined granary/cart shed ranges with arcaded ground floors are a distinctive feature of lowland farmsteads, and are very similar in form to those built in lowland Yorkshire and Humberside.

The most regionally distinctive example of a specialist building erected for fatstock is the hemmel, typically an open-fronted shed with an arched entrance providing access to a small yard. It is found throughout the Region, on both large and small farms. Sheds for fattening sheep were recommended by some agricultural commentators in the mid-19th century and there are some farmsteads where large yards with low shelters were provided, possibly for use during winter or lambing.

The Region contains several square 'lectern' dovecotes that have a mono-pitch roof, a feature typical of Scottish dovecotes which is otherwise rarely found in England.

1.0 Introduction

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

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

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

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

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

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

English Heritage is now undertaking to develop this knowledge base in order to inform diverse future outcomes, such as the targeting of grant aid and the development of character-based policies for the sustainable reuse of farm buildings. This document is one of eight regional *preliminary character statements* that aim to promote better and more accessible understanding of the character of farm buildings. It is important, as a first step in this process, to present an information base for a broad diversity of users with an interest in researching, understanding and managing historic farmsteads. It has therefore been written as a sourced synthesis of information, drawing together information that will enable the farmsteads of each Region to be better understood within the national context of farmstead and agricultural development, and their surrounding fields and settlements. As this is a preliminary statement, it and future work will benefit greatly from information and comments. These will be gratefully received at the following e-mail address: **jeremy.lake@english-heritage.org.uk**.

The objectives of this document are:

- To provide an information base and introduction to the subject.
- To place the development of the farmsteads and farm buildings of the North East Region within their national context.
- To demonstrate, with examples, how the *present* stock of farmsteads and their buildings reflects the diversity of farming, settlement and landscape character in the North East 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 1 A), 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 North East 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).

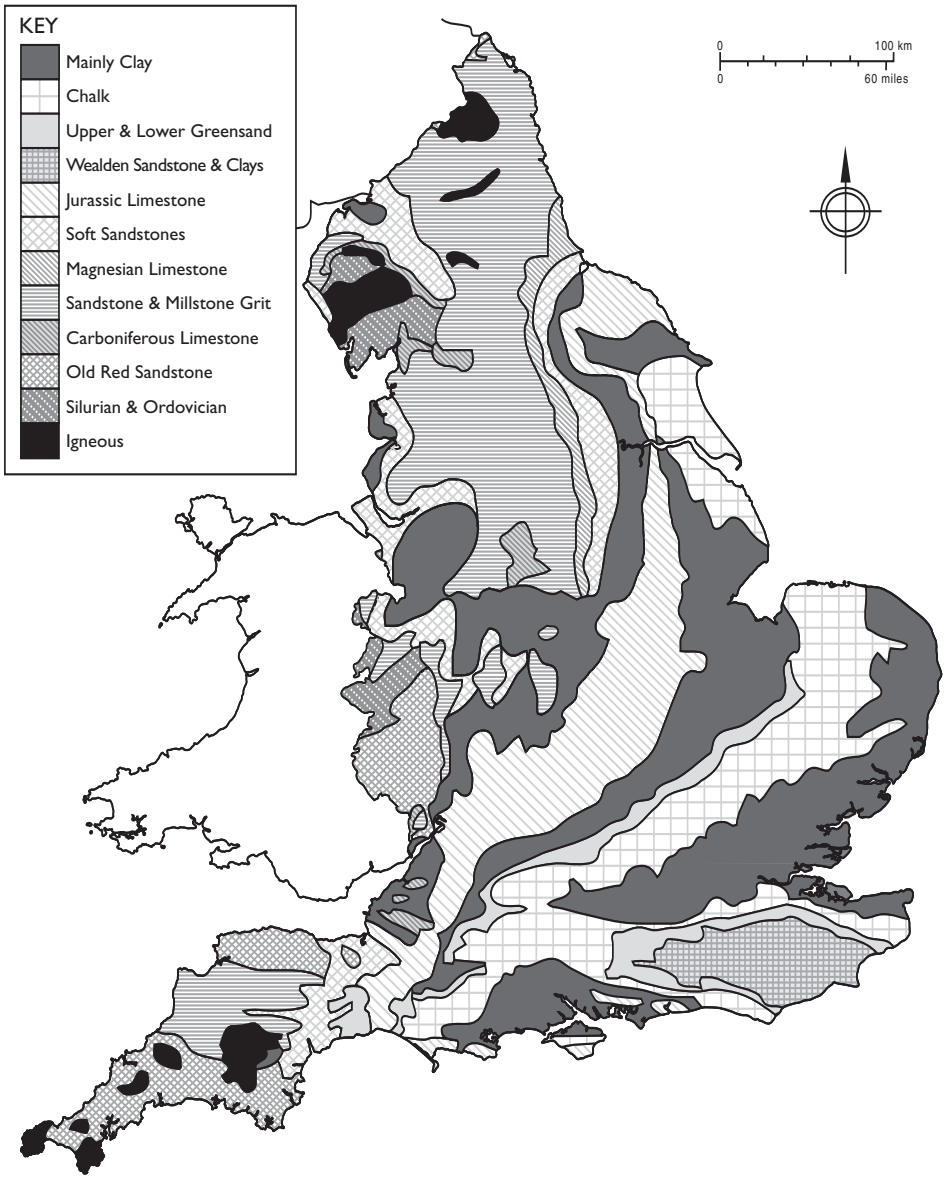
Pilot work is now indicating that the density and time-depth of farmsteads, and the rates of survival of different types of steading and building, are closely related to patterns of historically conditioned landscape character and type (Lake & Edwards 2006). This work represents a shift in focus away 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 NORTH EAST REGION: AN INTRODUCTION

The Government Region of the North East comprises the counties of Northumberland and Durham, the Metropolitan County of Tyne and Wear and the five Unitary Authority areas of Darlington, Stockton-on-Tees, Middlesbrough, Hartlepool and Redcar and Cleveland (now known as Tees Valley) in the south-eastern corner of the Region. It is bordered to the north by the volcanic massif of the Cheviot Hills rising abruptly from the coastal plain to over 750m in height, to the west by the Pennines reaching almost 900m above sea level and to the south and east by the Yorkshire Dales and Cleveland Hills. To the west of the narrow coastal plain much of the area bounded by the upland areas forms the tilted plateau of the Pennines which rises to the west. This broad plateau is dissected by a number of river valleys running eastwards towards the North Sea.

The geology of the Region is dominated by three main formations: carboniferous limestone to the north, coal measures across the central part of the Region and magnesian limestone in east Durham. The broad, low-lying plain of the Tees Lowlands at the south-eastern tip of the Region is framed by the high lands of the Cleveland Hills and the North York Moors, composed mainly of calcareous sandstone and limestone and rising to over 360m. A thick mantle of boulder clay deposited during the last ice age covers most of the Region. This gives rise to heavily textured clay soils with poor natural drainage. The floors of the main river valleys are frequently covered by lightly textured



1A Geology map of England
England displays a huge diversity in geology, with a greater variety in small areas than anywhere else in Europe. The North East Region has a varied geology providing sandstone and limestone for both walling and roofing. The widespread availability of good stone means that it is the dominant building material and is a major contributor to local distinctiveness.
Based upon 'Solid Geology' Source Defra/BGS, NERC: by permission of the British Geological Survey IPR/52-65C. ©NERC/Crown copyright. OS Licence no. 100042054

alluvial soils. These are often associated with sand and gravel deposits and are extensive in the Tees and Tyne valleys and the far north of Northumberland (Tyne Gap and Hadrian's Wall). Small areas of lighter textured soils also occur within the boulder clay. The higher ground of the Pennines, Northumberland Fells and Cheviots have varying depths of peat topsoils which are subject to frequent or permanent waterlogging (ERDP 2000). The field boundaries of the Region are predominantly stone, with hedges concentrated in the wood-pasture landscape of the south-east corner and intermixed with walls in lowland and dale landscapes.

The landscape character of the North East Region displays dramatic changes, from the uplands of the north and west to the coastal plain in the east (Figure 1B). The lavas and granites of the Cheviot massif in the north, the carboniferous rocks of the Border Fells and the north Pennines form a virtually continuous range of hills constituting the highland zone (Cheviots, North Pennines, Border Moors and Forests). The rivers that drain the 'border dales' of Northumberland (which include Upper Coquetdale, Redesdale and north Tynedale) and the 'lead dales' of South Northumberland and Durham (which include Allendale, Upper Weardale and Upper Teesdale), dissect this landscape of moorland and semi-improved grassland. Between the upland areas and the coastal plains are transitional landscapes of scarp, rolling countryside and valleys (Northumberland Sandstone Hills, Cheviot Fringe, Mid Northumberland) where areas of pastoral, mixed and arable farming can be found depending on the soils, aspect and altitude, with a combination of hedged fields and stone walls. The mineral wealth of parts of the Region, such as the Durham Coalfield Pennine Fringe, has resulted in industrial landscapes of small mining communities and open-cast mines, whilst large-scale industrialisation and urban development dominates the coastal area of the Tyne and Wear Lowlands and the eastern parts of the Durham Magnesian Limestone Plateau and the Tees Lowland. At the southern edge of the Region the sharp scarp of the North Yorkshire Moors and Cleveland Hills forms a clearly defined boundary.

JCA number	*JCA name*
1	North Northumberland Coastal Plain
2	Northumberland Sandstone Hills
3	Cheviot Fringe
4	Cheviots
5	Border Moors and Forests
10	North Pennines
11	Tyne Gap and Hadrian's Wall
12	Mid Northumberland
13	South East Northumberland Coastal Plain
14	Tyne and Wear Lowlands
15	Durham Magnesian Limestone Plateau
16	Durham Coalfield Pennine Fringe
21	Yorkshire Dales
22	Pennine Dales Fringe
23	Tees Lowlands
24	Vale of Mowbray
25	North Yorkshire Moors and Cleveland Hills

1B 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*

The climate is cool, relative to the rest of Eastern England, particularly in the spring and summer, and generally more severe. Average wind speeds are relatively high, and some coastal and upland locations suffer from severe exposure. Away from the coast, frosts occur between September and May in most years. The high ground in the west of the Region acts as a 'rain shadow' and annual rainfall is only 650mm in the Tees Valley area and along the coast. Inland, rainfall gradually increases westwards with over 1200mm on the higher fells.

The Region has relatively small areas of high-quality, Grade 2 land, which is concentrated in the river valleys of the Tweed, Tyne, Wear and Tees. Much of the west of the Region is dominated by poor- or very poor-quality land. This land is generally above 300m and is used as permanent pasture for livestock grazing. The majority of the eastern side of the Region is Grade 3 agricultural land that is divided between permanent pasture and arable. Forestry is a significant land use in parts of the region; for example, approximately 20% of Tynedale district is afforested.

2.3 THE CHARACTER OF RURAL SETTLEMENT

2.3.1 NATIONAL FRAMEWORK

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

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

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

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

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

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

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

2.3.2 RURAL SETTLEMENT IN THE NORTH EAST

The North East Region falls mainly within Roberts andWrathmell's Central Province where nucleated villages are a predominant element of the settlement pattern. Along the western edge of the Region, which comprises the highest areas of the uplands of the Pennines and the Cheviots, settlement has always been sparse and has tended to consist of small hamlets and isolated farmsteads – historically with access to summer grazing lands – although there is evidence that some of the small hamlets along the upland / lowland boundary were once substantial planned villages. The western part of the Region lies within the Northern and Western Province characterised by dispersed settlement, but north of the Tyne the boundary between the provinces is not clearly defined (Roberts & Wrathmell, 2000).

2 Rural settlement in England

Rural settlement can broadly be divided into two types: nucleated villages and dispersed farmsteads and hamlets. Figure 2 presents an analysis of the settlement pattern of England in the mid-19th century that identifies three 'provinces'. The Central Province, mostly characterised by nucleated settlement and once dominated by communal fields, stretches from Dorset, through Gloucestershire, the East Midlands, Yorkshire and along the north-east coast. This area is flanked by a South-Eastern Province covering the area from Dorset and Wiltshire to East Anglia, and a Northern and Western Province. In these Provinces settlement is mostly dispersed. The North East Region is divided between the Central Province and the Northern and Western Province. In the North Pennines, which occupy the western part of the Region, there is minimal settlement of any form due to the mountainous character of the landscape.

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

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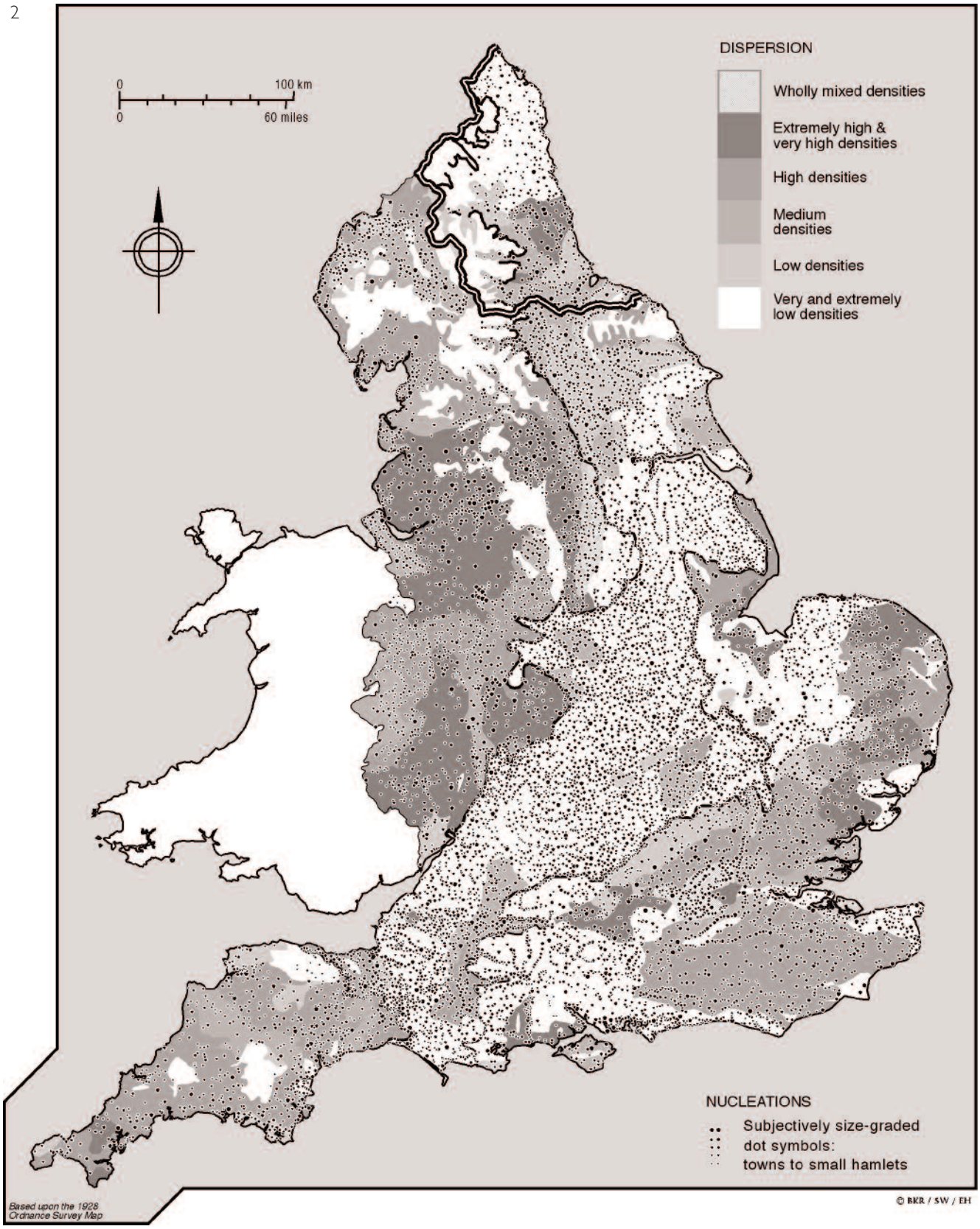


The North East of England has probably the most turbulent history of any part of the country. The 'Harrying of the North' by William the Conqueror in the late 11th century probably resulted in widespread abandonment of settlements across parts of the Region. With large areas controlled by magnates such as the prince Bishops of Durham, resettlement was often organised and resulted in the creation of regular, planned green villages. Such planned villages are characteristic of central and east Durham in particular.

Although villages are the predominant settlement form their distribution tends to be relatively thin compared with other parts of the Central Province such as Yorkshire and they are significantly smaller than Midland villages. Evidence of deserted villages suggests that the density of villages was once higher. There are particular concentrations of deserted settlements in Mid Northumberland, along the Coastal Plains and in the Tees Lowland, whilst there is little evidence for deserted settlements in the Tyne and Wear Lowlands and the northern part of the Durham Coalfield and Pennine Fringe.

In some areas (see 4.2) there has been significant post-medieval development in the settlement pattern. Enclosure by agreement resulted in the establishment of new farmsteads out of the villages, both in the lowlands and – from the late 18th century and by Parliamentary Act – the uplands.

The exploitation of the coalfields, beginning in the 12th century and expanding rapidly by the 16th, had led to the development of associated industries and an increase in population. The growth of urban populations and new settlements next to collieries was concentrated in a zone from the south of the South East Northumberland Coastal Plain to the Tees Lowlands. Prosperity led to the establishment of several large country houses in the area of the Tyne, Wear and Tees lowlands, and estates and landscaped parklands remain occasional features in the landscape. Small villages associated with coal mining, quarrying or lead mining are often found on former common land in the uplands. During the 18th and 19th centuries the upper valleys of the Tees, Wear, Derwent, Allen and South Tyne were better known for their production of lead and were subject to a period of short-lived but intensive activity very different in its impact on the landscape than the coalfields. Small settlements grew up where miners were able to supplement paltry wages with earnings from smallholdings. The evidence can be seen in the many abandoned cottages scattered along the hillsides – the result of the collapse of the industry due to foreign imports at the end of the 19th century.

3.0 Building Materials

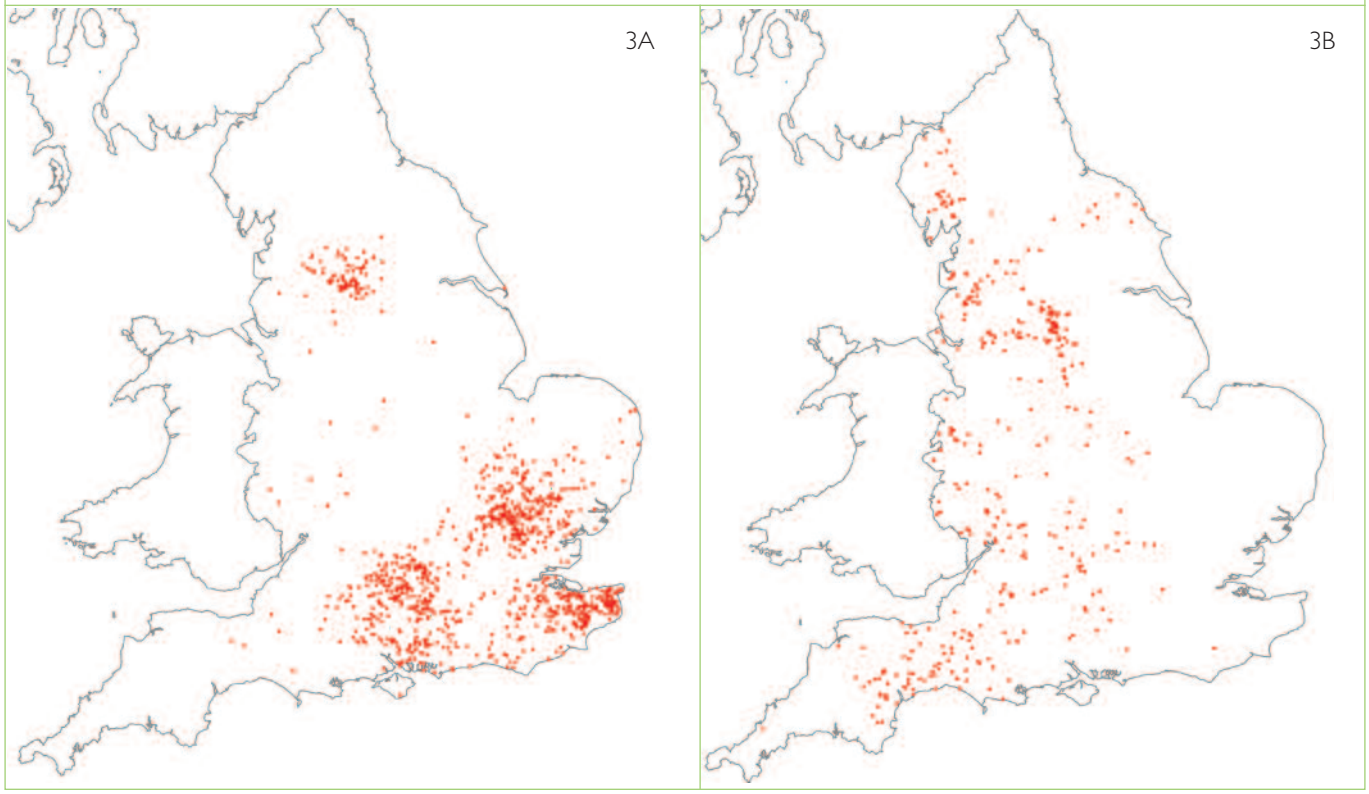
3.1 NATIONAL OVERVIEW

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

The present stock of farm buildings displays strong local and regional variation. This is the result of a range of factors, particularly England's huge diversity in geology, the status of the owner, availability of resources managed in the local landscape and the cost of manufactured materials (Rackham 1972; Moir 1997). Long-rooted traditions such as earth walling and thatch in Cornwall and timber frame in Norfolk, survived much longer on farm buildings than farmhouses, and were not overtaken by increasingly fashionable and robust forms of construction (such as stone in parts of Cornwall, brick in Norfolk) until the early to mid-19th century (Potts 1974; Lucas 1997). The coastal shipping trade had for many centuries allowed the transport of building materials, but the arrival firstly of canals and then railways allowed the easier transportation of building materials into inland areas. Buildings in stone and brick, and roofed with tile or slate, increasingly replaced buildings in clay, timber and thatch from the later 18th century. Mass-walled buildings comprise the majority of listed agricultural buildings (67%), with timber framing accounting for just over one quarter of entries.

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

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



4A Aisled barn, Cressing Temple, Essex. One of the earliest barns in England and one of two 13th-century barns surviving from an estate of the Knights Hospitaller erected with timber felled between 1259 and 1280. (South Suffolk and North Essex Claylands)
B Barn at Cross Farm, Burgh-by-Sands, Cumbria, showing the full crucks to the interior of a late 17th-century clay-walled barn. This is one of a group of such barns on the Solway Plain, dating from between the 14th and 17th centuries. (Solway Basin)
A © *English Heritage / Michael Williams;*
B © *Jen Deadman*

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

3.1.1 WALLING

3.1.1.1 Temporary structures

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

3.1.1.2 Mass walling

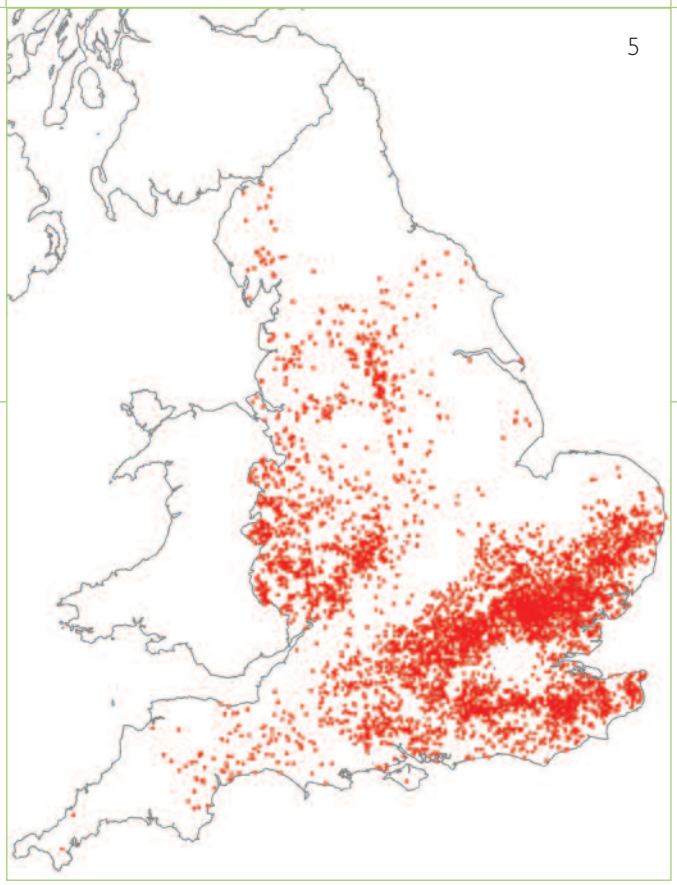
Mass-walled buildings now dominate the traditional farm building stock, almost exclusively so in the three northern regions. Stone and brick display a wide variety of treatment, their use reflecting not only the availability of materials but also the status of the farm and its owner. Large parts of England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

3.1.1.3 Timber frame

Timber-framed buildings are concentrated in the East of England, the South East and the West Midlands. The basic vocabulary of construction had been developed by the 13th century – notably the use of sophisticated jointing techniques, particularly at the junction of the main posts and roof trusses (the so-called bay divisions), and timber sills raised off the ground on dwarf walls. Climate and patterns of land use and ownership have affected the availability of timber and, together with cultural factors, have influenced the distribution, appearance of distinct traditions in timber framing and the framing of roof trusses for mass-walled buildings (Smith 1965; Stenning & Andrews 1988; and Figures 3 and 5). 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



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

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 6). 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).

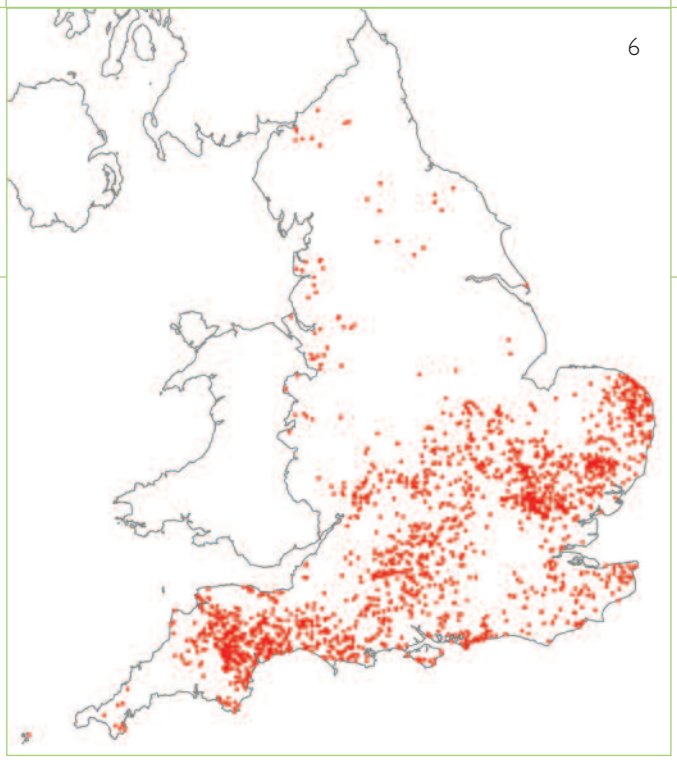
3.1.2.2 Plain clay tiles and stone slates
These materials were used at a high social level from the medieval period and are found in many parts of the country. Their use became increasingly widespread after the later 18th century, along with stone and brick walling, supplanting smaller farm buildings 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. From the 1940s, asbestos cement cladding and a variety of insulating products found their way on to the farmstead. Hit-and-miss vertical boarding (also known as Yorkshire boarding) has been used as cladding since the 1970s.

3.2 BUILDING MATERIALS IN THE NORTH EAST

3.2.1 WALLING (Figures 7 & 8)

3.2.1.1 Stone
Stonework in the Region is generally of fine quality and dates from the late 18th century, when the small houses and outbuildings built of stone rubble bedded in clay were being swept away (Bailey & Culley 1797, p.28). Stone is the universal building material in the north and west of the Region, the hard grits and shales of the North Pennines being easily distinguished from the magnesian limestone and the immensely porous sandstone that predominate elsewhere – brick or carboniferous sandstone was often used as a dressing. Northumberland is, perhaps to a greater extent than any other English county, a county of sandstone buildings, the major exception being the Cheviot massif alongside the Scottish border where the oldest rocks protrude as a



6 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.

core of granite. This sandstone varies from red and pink in colour (in the north east of the Region) to buff, and weathers very well. It was usually laid as random rubble although dressings are sometimes tooled and margined. Between the carboniferous limestone and coal measures (Tyne Gap and Mid Northumberland) is a narrow band of millstone grit.

The soft multicoloured sandstone of central Durham is everywhere evident in Teesdale and Weardale. The difference in the treatment and use of this traditional material on the wealthier and larger farmsteads of the late 17th to early 19th centuries, often sited on the lower slopes and valley bottoms, is striking when compared with the 19th-century miners' smallholdings of the upper dales. When designed to impress, the treatment of the stonework and the style of fenestration were important considerations. Cut and dressed stonework was used for the most high-status and formal farm complexes and, where rougher masonry was used, for the embellishment of quoining, door and window surrounds and the copings and kneelers to gable ends; its use can be particularly dramatic on the combined cart shed / granary ranges characteristic of the arable area of the Region. Finely worked, coursed sandstone blocks are also common to front elevations, with random rubble walling to side and rear elevations and ancillary buildings.

Watershot masonry, where the outer face is tilted to throw water off the walls, is a technique that was used in upland areas between the later 18th and mid-19th centuries. It has been recorded in Teesdale, through Weardale and up to Tynedale.

3.2.1.2 Earth
The use of mud and stud (see Yorkshire and Humber and East Midlands) is documented in the late 18th century (Frodsham 2004, pp.117, 121–3). Although there is clear documentation and surviving examples of solid earth structures in the North West and southern Scotland, there is no clear evidence of its use in this Region.

3.2.1.3 Timber
Timber for building was in very limited supply, and its use closely regulated, by the 16th century. Timber framing is thus extremely uncommon in this Region. This was particularly the case in the uplands, where stone walls replaced boundaries topped with brushwood (Winchester 2003, p.62). The use of timber framing is confined to urban centres. The few examples of medieval barns that have survived are not aisled, and aisled construction is generally absent from the Region. Cruck-framed buildings, both substantial and impermanent, were common in the Region in the medieval period (Wrathmell 1989a, pp.249–56). The most common form of surviving cruck, concentrated in the south of the Region and associated with both linear farmsteads (see 5.3.2) and farm buildings is the upper cruck; the removal of upper crucks can leave distinctive slots in the walling.

3.2.1.4 Brick
The use of brick dates from the 17th century. It is mainly found in the south and east of the Region, in the Tees Lowlands and the South East Northumberland Coastal Plain character areas. Some brick buildings date from the early to mid-18th century but brick is most commonly found used in 19th-century farmsteads. Brick can be more widely found for minor detailing, particularly for the chimneystacks to engine houses.

3.2.2 ROOFING (Figure 8)

3.2.2.1 Thatch
Thatch, heather and bracken were used for roofing, but by the 19th century – along with the Yorkshire and Humber Region and parts of the North West – its use was very rare by national standards.

Straw thatching was common in the eastern arable lowlands (Emery 1994, p.117), the Cheviot Fringe, along the Coastal Plains and the Tweed. Small pockets of thatch may still be seen, for example, at Etal on the Cheviot Fringe.

7 Examples of walling materials in the North East Region

A – E The North East is an area dominated by stone buildings. There is a wide variety of building stones, from soft limestones and porous sandstones that are frequently white-washed, to better quality sandstones and igneous rocks. The range of stones contributes greatly to local distinctiveness and landscape character. (A and B Tyne and Wear Lowlands; C and E Cheviot Fringe; D North Pennines)

F Timber-framing is rarely found in the North East although there is documentary evidence for its use. This granary (see Figure 25A) was built by Durham Cathedral Priory. (Tyne and Wear Lowlands)

G Timber boarding is rarely found on farm buildings as there is such a wealth of good building stone available. (Cheviot Fringe)

H Brick is not widely found in the Region; its use is generally restricted to the south-eastern part of the Region. (Tees Lowlands)

All photographs © Jen Deadman


7A


7B


7C


7D


7E


7F


7G


7H

8A

8B

8 Examples of roofing materials in the North East Region
A Before the 19th century the use of thatch was common but it is now a rare feature of roofs of the North East. Local thatching traditions included heather thatch and straw. (Tyne Gap and Hadrian's Wall)
B Some of the building stones of the Region are also capable of being split into slates, some of a considerable thickness, that were locally used for roofing. (North Pennines)
C Pantiles. The use of pantiles is a key characteristic of the Region, forming part of a wider distribution of pantiles that extends southwards along the eastern side of England as far as East Anglia. Plain tiles were not widely used on farm buildings. (Cheviot Fringe)
D Welsh slate. The use of Welsh slate increased as the railways made transportation easier and cheaper. Slate allowed a lower roof pitch to be used and was considerably lighter than stone slates – so less substantial and, therefore, cheaper roof trusses could be used. (Border Moors and Forests) *All photographs © Jen Deadman*

8C

8D

The south-west of Northumberland is well known for the remarkable survival of a small group of heather or 'black thatch' buildings. This technique was once general in upland areas of the Region above the area where straw or reed thatch was found, but had also been used in the lowlands (Moir & Letts 1999, p.13; Chapman 1977; Chapman 1982; Emery 1986). By the 17th and 18th centuries, its use – typically in northern England in combination with layers of turf – was mainly confined to the heath and moorland of the Pennine uplands (Emery 1994, p.117; Emery 1985, 1986). It was used until the more common use, at a vernacular level, of stone slate. Heather is a poor roofing material in that it lacks the tight, even form of straw or reed; water does not run along it so much as through it. Consequently, speed in discharging the water is important and this gives rise to steeper pitches than for lowland thatch. Proof that thatch was once commonplace is seen in the steep roof line (typically 60 degrees) evident as a scar on the gable of many buildings where the roofline has been altered – typically in the later 18th or 19th centuries – to accommodate the shallower pitch required by flags or tiles.

3.2.2.2 Slate and stone

Slate was common in the uplands, in Weardale and Teesdale in particular. Stone slate verges are found on pantile roofs in lowland areas. Cumbrian and Scottish slate was used from the mid-18th century, and Welsh slate – usually imported through the coastal ports – was used from the 1790s (Pevsner 1992, p.9). The latter only became common after the mid-19th

century, when the railways increased its availability and reduced the cost.

3.2.2.3 Tiles

Pantile roofs are a distinctive feature of the lowland parts of the Region. Like plain tiles, they had the advantage of being lighter than stone slates and so required less timberwork in the roof. They seem to have had a fairly long period of popularity. Initially imported from the Dutch Lowlands as a form of high-grade ballast, by the early 18th century they were being manufactured in the Region. Ridges were finished in clay and stone, and lower courses were commonly roofed in stone slates (Emery 1994, p.117).