Rural Housing in Lowland Scotland in the Seventeenth Century: The Evidence of Estate Papers

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Introduction

The study of what has been termed the 'peasant house' (Gailey 1962; Dunbar 1971) has attracted a good deal of attention in recent years. Much of the work has been centred on the Highlands and Islands where the survival of ancient styles of vernacular building was widespread into the nineteenth and twentieth centuries (Hall 1972). The study of rural housing in Lowland Scotland, which is here defined as comprising the whole of Scotland outside the Highlands and Islands, has likewise tended to concentrate on the period from the eve of the Agricultural Revolution, in the later eighteenth century, to the present. Reasons for this are not hard to seek.

The Agricultural Revolution in Lowland Scotland obliterated most traces of the pre-existing agrarian landscape, and survivals of vernacular building from the first half of the eighteenth century are rare. Peasant houses dating from the seventeenth century and earlier are virtually unknown (Fairhurst 1967a). Much of the work which has been done relates to the study of traditional building styles and construction techniques which survived into recent times (Fenton 1968, 1970). Documentary sources concerning rural housing are relatively abundant for this period. The late eighteenth and early nineteenth centuries witnessed an unprecedented burst of descriptive writing and commentary on the agricultural scene. The framework provided by two Statistical Accounts, the Board of Agriculture Reports and the writings of various improvers, local historians and travellers can be used to set surviving structures in context. A wealth of estate plans allows the study of rural housing at this time to be integrated with the changing contemporary landscape.

However, little attention has been paid to the study of rural housing in Scotland in periods prior to the eighteenth century. The difficulties facing such studies are clear and have been discussed by Fairhurst (1967a) and Crawford (1967). There are no surviving peasant houses pre-dating the eighteenth century. Remains of settlement sites are few in number owing to destruction by later building and cultivation. In marginal areas, where some sites have survived, the few which have been excavated have proved

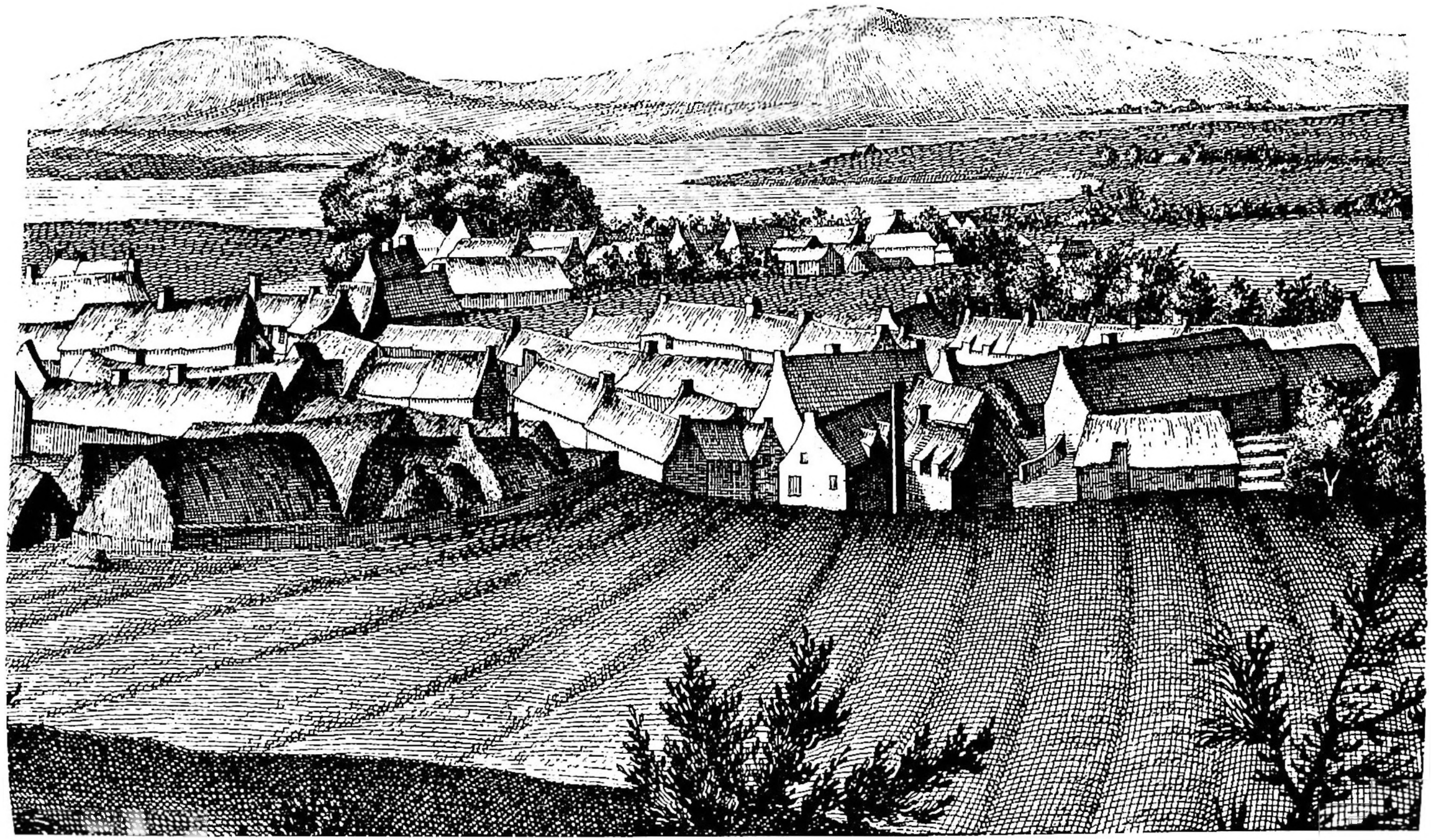

PLATE I A seventeenth-century farmsteading (left foreground) and arable rigs: part of a south-west view over Alloa and the Forth, in John Slezer's *Theatrum Scotiae*, 1693.

difficult to date. The peripheral nature of such sites automatically raises questions regarding the extent to which they are representative of the vanished rural landscape. It is a curious fact that more is definitely known about rural housing and settlement in Scotland during the Iron Age than in the seventeenth century (Crawford 1967:87).

Since there are no surviving examples to study and excavation poses such problems, only documentary sources remain to be considered as a possible means of obtaining information on pre-eighteenth century rural housing. Until recently it appears to have been generally thought that these were too sparse to allow a detailed reconstruction of any aspect of the economy and society of Lowland Scotland during the seventeenth century or earlier.

As a consequence, there has been a tendency to take the relatively abundant evidence for rural housing conditions in the earlier phases of the Agricultural Revolution and to project it back into the past. This has been done on the assumption that the rural economy of Scotland as a whole was stagnant, or even in decline, at the opening of the eighteenth century (Handley 1953; Fairhurst 1967b:196–7). This view is now becoming untenable as an increasing body of evidence points to a substantial degree of development in the agrarian economy of Lowland Scotland during the seventeenth century (Whyte 1974). Moreover, the first half of the eighteenth century was itself a period of accelerating change, and conditions at that time did not necessarily mirror those of past centuries.

Previous work on rural housing has tended, when seeking the origins of building types and construction techniques in the seventeenth century and earlier, to use only a limited number of printed sources. These have mainly consisted of the works of Scottish topographers and English travellers (Brown 1891, 1893). The latter, at least, are uniformly scathing and blatantly biased. Other information has been drawn from scattered references in a few printed court books and sets of estate accounts. One result of the reliance on such a limited and possibly unrepresentative selection of sources is that rural housing conditions have been viewed as being uniformly squalid at all levels of peasant society.

To date, little has been done to assess the value, for the study of the economy and society of Lowland Scotland, of large quantities of seventeenth-century manuscript material. However, one source of great potential value, private estate papers, has recently begun to attract attention (Whyte 1974:21–9). It contains important information on rural housing.

This paper considers the evidence of estate papers relating to rural housing in Lowland Scotland during the seventeenth century. Only collections in the Scottish Record Office and the National Library of Scotland have been studied and no attempt has been made to consult those which remain in private hands. Because of this, the present study is only an introductory survey of some themes which are considered to be significant and it is closely circumscribed by the limitations of the sources. However, the collections which have been used relate to both large and small estates spread fairly evenly through-

out Lowland Scotland. It is considered that the data which have been drawn from them are fairly representative.

The techniques of vernacular building which were in use will be considered, and then an attempt will be made to reconstruct the building types which resulted and to set them, as far as possible, in their social and economic milieu. From this, it is hoped to bring out regional variations and to examine the development of building techniques and house types during the century. Firstly, however, it is germane to consider in greater detail the nature of the manuscript evidence which has been used, as it imposes severe constraints upon the depth of the analysis.

The Source Material

Collections of estate muniments contain a great variety of manuscripts, but information relating to rural housing is mainly contained in three types of document.

Inventories of buildings, whether belonging to tenants or to home farms, are the most valuable source. They were usually drawn up for assessing repairs, or as valuations upon the entry of tenants to particular holdings so that they could be compensated for any improvements made during the course of their tenancy, or penalised for any neglect. Inventories vary greatly in the amount of detail which they contain but generally, by listing the number and function of buildings and giving an indication of their size, they provide a fairly clear picture of the character of a farmstead.

Estate accounts frequently list the quantities of material supplied by proprietors to the houses of their tenants. Additional information is sometimes available concerning the construction and repair of buildings on the home farms managed by landowners.

Tacks or leases of holdings usually contain clauses specifying the tenants' obligations regarding the maintenance of their farm buildings and the proprietors' responsibilities in supplying construction materials and labour.

Most of the data used in this study have been drawn from documents of this type, but valuable information also occurs more sporadically in other types of estate documents, particularly court books.

Building Construction

Timberwork

The sources indicate that cruck framing was the standard method of constructing farm buildings in Lowland Scotland at this time. The only exceptions were some houses constructed with clay whose walls may have been fully load-bearing, and houses which were built with lime mortar. The use of cruck frames, or couples as they were generally known, was widespread from the Solway to Aberdeenshire. The cruck trusses were the most important and valuable part of a tenant's house. By the seventeenth century, Lowland Scotland was in many places almost treeless (Kirk 1892:8–17), and there was a chronic shortage of native timber for construction. Scotland had to import some

90 per cent of her timber requirements, principally in the form of Norwegian softwood (Smout 1960).

The expense of providing imported timber for the construction of tenants' houses was offset in parts of Galloway, the Borders and the fringes of the Highlands, areas which were distant from the sea, by the presence of remnants of natural woodland. These allowed many proprietors to supply their tenants with timber at little cost (S.R.O. GD 157 702). However, such sources of wood appear to have been very much wasting assets by this time. Oak and ash wood was preferred to fir timber for crucks where it was available (S.R.O. GD 188 2; GD 186 12/2), but the use of hardwoods was probably fairly restricted by the seventeenth century.

Owing to the strict management of surviving natural woodland and the difficulty and expense of buying foreign wood, the provision of timber was almost invariably the responsibility of the proprietor. Tacks generally specified that the proprietor was bound to provide the 'great timber', which included the cruck trusses and, in some cases at least, the purlins (pans) and rafters (cabers) (N.L.S. Minto Charters CB 144 11; S.R.O. GD 34 441). Because of this, it was rare for a tenant to be allowed to remove his roof timbers when he left a holding, as appears to have been more common in the Highlands (Grant 1961). The only usual exception to this was where a tenant had constructed a building at his own expense, in which case he normally had the alternative of financial compensation (S.R.O. GD 248 700; GD44 44 30). Examples of tenants being permitted to take away their roof timbers are recorded (Barron 1892), but in general, tenants were bound to leave their houses as they found them, although instances of the illegal removal of roof timbers are not unknown (Littlejohn 1906:II.428, 435).

Because of the expense of providing timber for tenants' houses, landlords tended to be parsimonious by postponing the replacement of unsound cruck trusses for as long as possible. This sometimes resulted in houses which were in a poor state of repair. The situation was probably aggravated by the fact that while proprietors were usually bound to provide the timber, they did not often pay for the expense of having it erected by professional wrights. Some half-dozen instances of craftsmen being employed in the construction of tenants' houses are known, but they are greatly outnumbered by references which indicate that the tenant was his own carpenter.

This niggardly attitude provoked some violent protests from the tenantry. In 1682, the tenants of the baronies of Hailes and Traprain in East Lothian were forced to 'complean exceedingly with the badnes of there houses. [The proprietor] . . . at there entry were oblidged to repare them which was never done' (S.R.O. GD 6 1687). An inventory of buildings in the barony of Thornton, also in East Lothian, records the provision of timber 'to John Murray's stable that fell and almost destroyed his horse', and to Adam Manderston 'for his dwelling house that fell to the ground' (S.R.O. GD 6 1532). Even in such situations, proprietors continued penny-pinching by supplying short pieces of timber to shore up rotten cruck trusses rather than replace them. A survey of repairs needed to houses on the Leven estates in Fife in 1682 contains entries

such as 'John Mitchell in Craigencatt is weak both in the couples timber and walls and some of his couples are broken and therefore will be needfull to be taken down and repaired . . .' (S.R.O. GD 26 631).

If such practices were common then the standard of construction must frequently have been low. This goes a long way towards explaining why no seventeenth-century cruck-framed buildings have survived in Lowland Scotland. It also indicates that cruck blades must have been commonly constructed in more than one piece. Such a practice would have been particularly likely when imported timber was used, for it would presumably have come in straight sections without the natural curves which could have been readily shaped into single cruck blades. The sources do not provide enough information to suggest the types of cruck framing which were in general use, however.

Roofing

Contrary to some suppositions (Smout 1969:139; Handley 1953:76), straw was far from unknown as a roofing material in seventeenth-century Lowland Scotland. Its use is widely recorded in eastern Scotland from Kincardineshire to Roxburghshire, in Central and Southern Ayrshire, and in Dumfries-shire. With the exception of Aberdeenshire and the Moray Firth coast, from where there are as yet no records of its use at this time, the distribution corresponds roughly with those areas which, from their rent structures, are known to have concentrated on arable farming (Whyte 1974:330–4), and which are likely to have had a relative abundance of straw. The accounts of the Buccleuch estates at Dalkeith, Midlothian and the Panmure estates in Angus (S.R.O. GD 224 943 3; GD 45 18 18) indicate that, as in England (Innocent 1916) the straw of wheat and rye was preferred to that of bere and oats. Such straw was longer and stronger than other kinds. As oat straw was generally considered to be superior to wheat or rye as a fodder (Sinclair 1813:1. 391), there was probably little conflict between these uses.

Rye, although grown quite widely in Lowland Scotland at this time (Whyte 1974: 145–6), was seldom produced in any quantity. However, the purposes behind the cultivation of small quantities of rye are uncertain and the possibility that it was deliberately grown for thatching should not be overlooked (Innocent 1916:191). Wheat was grown more widely, and in greater quantity (Whyte 1974:144–5), but the distribution of straw thatch is wider still and it is probable that bere straw was used in many areas, as was the case in the Highlands at a later date (Grant 1961:158).

The nature of the evidence makes it impossible to be certain whether, in any of the recorded instances, straw was the sole roofing material. However, in many cases the references relate specifically to a thatch of turf and straw. Houses with turf roofs occurred in both upland and lowland areas. In pastoral districts, where straw was too precious as a fodder to use for thatching, turf may frequently have been the only roofing material, or may have been used in conjunction with heather. The paring of turf from

arable land in fallow, or the over-intensive stripping of it from the commonty, particularly in arable areas where pasture was in short supply, could be detrimental to the farm or the estate as a whole. The first practice was usually banned and the second carefully regulated. At Raith in Fife, and Penicuik in Midlothian, tenants were restricted in the amount of turf that they could use for roofing and in the latter example were compelled to use straw and turf together rather than turf alone (S.R.O. GD 26 2 2; GD 18 695).

Heather was used as a roofing material in Galloway, Ayrshire and the North-East, but was probably more widespread to judge by the number of references to the regulation of the pulling of heather in court books. In one or two cases heather was used for fuel, but in others it was probably destined for roofing. Later writers considered that it formed a very durable thatch, preferable to straw in some ways, although rather heavy. Bearing in mind the standards of roof construction, this may have restricted its use to some degree.

Slate was rarely used for roofing tenants' houses. It was difficult to obtain and expensive to transport. In addition, it was heavier than thatch and required more closely-spaced roof timbers (Smith 1967:788). Considering the expense of timber, its rarity is not surprising. On some estates tenants were actually forbidden to roof their houses with it (S.R.O. GD 26 2 2). Slate was in widespread use for the houses and outbuildings of home farms at this time, though not invariably. The stables at Cassillis House in Ayrshire and Castle Kennedy in Wigtownshire were thatched with heather in 1650 (S.R.O. GD 25 9 50,64). Even the superior dwelling houses possessed by the tenants of Lasswade, which will be considered below, were roofed with straw and turf (S.R.O. GD 18 695). The only certain examples of slate being used for tenants' houses come from Mangerton in Liddesdale, where there was a quarry close at hand, and from North Berwick (S.R.O. GD 237 4; GD 110 697).

Broom and whin were in general use, with twigs and small branches, as underlays for turf, straw or heather, to secure them to the rafters. These interwoven layers of brushwood were sometimes referred to as 'wattles' (S.R.O. GD 188 2). There was widespread concern to maintain supplies of broom by planting it on dykes and in special 'broom parks' (S.R.O. GD 30 612; GD 28 1648), as well as conserving supplies on commonties. The sources are vague with regard to the ways in which the thatch was finished off and secured. The use of ropes of straw and heather is mentioned (S.R.O. GD 25 9 64), but it is not clear how they were laid out and secured.

Walling

As tenants were rarely compensated for the cost of providing and building the walls of their houses, they constructed them as cheaply as possible from materials occurring on, or in the immediate vicinity of, their farms. The availability of particular materials varied from place to place but the principal ones were stone, clay, turf and wattle.

Stone was expensive and difficult to transport even over short distances, but could be obtained fairly readily from the larger stones removed from cultivated land, or from small quarries on the commonty. It is likely that there would usually have been a supply of stone available around most farmsteads from former buildings and that the entering tenant would have needed to find relatively little new stone unless he was engaged in a major expansion of his farmstead. The use of stone for walling was widespread in Lowland Scotland, generally in combination with turf or clay. However, the fact that the walls of cruck-framed buildings did not have to carry the weight of the roof may have caused many tenants to restrict the use of stone to the foundations and bottom courses on which to rest the cruck trusses, the upper parts of the walls being built of turf which was lighter to transport and handle. Stone and turf construction, whether in alternate courses as described by Fenton (1968), or with a substantial bottom layer of stone, appears to have been a common building technique. It is known from the North-East to the Borders and Ayrshire.

Clay was used for walling in Eastern Scotland from the Moray Firth to Teviotdale, and in the South-West. This distribution is similar to that found by Fenton for the eighteenth and nineteenth centuries (Fenton 1970). In many cases the clay was used as a mortar for stone, allowing chimneys and gables to be constructed, but still in conjunction with cruck-framing (S.R.O. GD 30 1537; GD 16 27 67). In other references to clay alone it is not certain whether it was used as mortar or as the major construction material.

There are no clear instances of the use of wattle for the walls of peasant houses in Lowland Scotland at this time. In every case where the term 'wattle' is used, it appears to relate to a thatch underlay. This evidence, admittedly negative, supports Gailey's theory that the use of wattle for the walls of tenants' houses died out at a comparatively early date in Lowland Scotland compared with the Highlands (Gailey 1962:238). It is possible, however, that it remained in use for the houses of sub-tenants at this time. Such dwellings are rarely accorded the detailed descriptions which are available for tenants' houses. This in itself suggests that they were constructed of impermanent materials like turf and wattle, which were not worth listing in valuations.

Perhaps the most important development in building construction in Lowland Scotland during the seventeenth century was the growing use of lime mortar. Previously it has been assumed that lime mortar was not used for tenants' houses on any scale before the nineteenth century (Dunbar 1966:229). However, estate papers indicate that its use was widespread on the east coast, particularly around the Forth and Tay estuaries, but extending as far north as Aberdeenshire and south into Roxburghshire, Lanarkshire and Galloway.

Lime had been known to tenant farmers over a wide area of Lowland Scotland since the early decades of the century at least. At this time the use of agricultural lime underwent a major expansion in a belt of country which had access to limestone, and to coal for burning it, extending from Fife and East Lothian to Central Ayrshire.

Compared with agriculture, building construction required relatively small quantities of lime. A long distance trade in it by coastal and overland transport existed by the seventeenth century for building and repairing the houses of the gentry (S.R.O. GD 45 18 645; GD 224 943 7). It was only a matter of time before lime mortar became available for tenants' houses in those areas which had immediate access to it. The earliest known instance of its use was on the Aberdour estate in Fife in 1625 (S.R.O. GD 150 2012). However, the bulk of the references relate to the period 1660–1700, and it is likely that the use of lime mortar became more widespread during the period of prosperity which occurred between the Restoration and the onset of the famines of the later 1690s. Although most of the known examples come from areas close to sources of limestone and coal, the use of lime mortar in areas such as Teviotdale, Galloway and Angus indicates that transport costs were sufficiently low to allow its use for tenants' houses in areas outside the immediate vicinity of limestone outcrops. The full implications of the advent of lime mortar will be considered below.

Some of the references in inventories indicate that the houses concerned were gable-ended. Houses with gables are recorded throughout Lowland Scotland and are sometimes specifically associated with clay mortar. The construction of gable ends suggests that the walls of the houses concerned must have been fairly strong and should have been capable of bearing the weight of the roof. Yet many of these buildings were definitely cruck-framed. This may argue a lack of confidence in the load-bearing ability of the walls. However, it could also be a manifestation of the tendency, noted by Gailey in the Highlands at a later date, to continue using crucks despite the presence of walls which were capable of supporting the roof (Gailey 1962:233). If this was the case then the universality of cruck-framing in seventeenth-century Lowland Scotland may be in part a cultural survival, particularly among the houses of the wealthier tenants, although crucks were doubtless still essential in the houses of the majority of smaller tenants.

It is more difficult to distinguish hip-ended buildings from the sources. The only cases where this can be done are where the details of the timber supplied for roofing are sufficient to record the provision of tail-posts, which appear to have been the timbers supporting the hipped end of a building (S.R.O. GD 16 27 41). However, the presence of these is only recorded in a few instances. It is not possible at present to draw any conclusions from the distributions of gables and hip-ended houses in Lowland Scotland at this period.

House Types

The prevailing design of peasant house over much of Lowland Scotland at this time was the long-house. This is suggested by the recurring combination of dwelling (sit-house, fire-house), byre and barn together in inventories of farm buildings. That these were all under one continuous roof is sometimes explicit. In other cases this is implied by reference to one or more of the units being supported by a single cruck truss. The

construction of free-standing buildings with hipped ends, supported by a single cruck frame, seems unlikely and such descriptions probably relate to a two-bay division in a continuous long-house where the end crucks were listed under the adjoining units.

An incidental feature of the long-house plan was its economy in the use of building materials. This may help to explain its survival until a relatively late date in many parts of Scotland. The building of dwelling house, byre and barn together, divided by light internal partitions, would have required less material for walls and roof than the construction of three separate buildings. With a hip-ended structure there would also have been a saving in roof timbers compared with three single units. The long-house design clearly reduced the work of the tenant and the expenditure of the proprietor, though whether this was fortuitous or not cannot be determined.

The size and layout of seventeenth-century long-houses in Lowland Scotland conformed to a general pattern but varied in detail. A layout with the byre between the dwelling and the barn is the most common among surviving inventories. Such buildings may have had a common entrance for human beings and animals by means of a passage which separated the dwelling from the byre but this is impossible to discern from the documents. However, in cases where the barn stood between the byre and the house it must be presumed that each had a separate entrance, although the possibility that the byre could have been entered by internal doors through the barn cannot be discounted.

Many farms, particularly in arable areas, required provision for the work horses which undertook ploughing, harrowing and general carriage duties. The stable was usually placed next to the byre, but in at least one example it was situated next to the dwelling with the byre at the far end, separated from it by the barn.

References to accommodation for sheep are few although it has been generally assumed that, before the introduction of improved breeds into Scotland in the eighteenth century, sheep were normally housed in winter. This practice was certainly recommended by some seventeenth-century improvers (Donaldson 1697:97). However, references seem to indicate that sheep were normally housed in small, partly-covered folds separate from, though adjoining, the main farm buildings.

Inventories and other documents do not measure buildings in terms of bays, the spaces between the cruck frames, as was common in medieval England (Addy 1933:55). In Scotland, the bay was not a unit of taxation. Instead, buildings were measured by the number of cruck frames supporting them. As these were the most expensive items in construction, this method gave an immediate indication of the relative value, as well as the size, of a particular structure. The quantity of timber used in rafters, purlins and roof trees appears to have been regarded as being directly proportional to the number of cruck frames used. This suggests that there was a rough standardisation in the spacing of the crucks. The few instances where the number of couples is given together with internal measurements indicates that the bay width varied between about 7 and 11 feet, the average of about 9 feet agreeing with the figure which Walton suggested as being common among surviving Scottish cruck-framed dwellings (Walton 1956:118).

Information relating to the width of cruck-framed buildings indicates a considerable standardisation between 14 and 16 feet with only a single example reaching 17 feet.

The data show a wide range of sizes for the dwelling part of the long-house, ranging from one couple up to fourteen. The smallest houses must have consisted of a single room and were probably heated by a central open hearth. However, dwellings as primitive as these are relatively uncommon in inventories. Houses of two or three couples, probably large enough to allow some division of the living space, were more frequent. Fifty-five out of the ninety-four examples where the size of the dwelling is known were of two and three couples compared to only fourteen with one couple. Twenty-five were of five or more couples. The houses of cottars and sub-tenants receive less attention in inventories. They appear to have been smaller on the whole. Eighteen of the fifty-four recorded examples were of one, and thirty-one of two couples, although occasional cottar-houses of three and four couples are known.

It would be a mistake, however, to imagine that the house of every tenant farmer in Lowland Scotland at this time was a simple three-unit long house with the family living in the cramped confines of one or two rooms. The variations in the sizes of the dwellings themselves indicate considerable differences in wealth and status among the tenants who inhabited them.

Tenants of larger holdings possessed more substantial houses with more complex internal layouts and more durable structures. A house at Bridgend of Lintrathen in Angus, inventoried in 1656, comprised a hall, back chamber, inner chamber and pantry, extending in all to eight couples. The windows were glazed and the house possessed at least one chimney (S.R.O. GD 16 27 67). This type of house may be considered as an intermediate one where the long-house plan survived but where the house had developed substantially from the smaller one- and two-roomed examples.

The factor's house at Belhelvie, Aberdeenshire, described in 1705, was more sophisticated still. Thomas Innes, the factor, must have been a man of some consequence locally. He was a member of the class of more enterprising and substantial tenants who possessed larger holdings and who branched out into other occupations besides farming. Men of this class were becoming increasingly numerous throughout Lowland Scotland in the second half of the seventeenth century. In this case, Innes received a salary from the Earl of Panmure for acting as his factor, and he also engaged in small-scale trading ventures (S.R.O. GD 45 20 27–37). However, he was primarily a farmer, holding about a ploughgate of land (nominally 104 Scots acres), no more than many others on the estate.

His house, extending to fourteen couples, was gable-ended and built of stone with clay mortar. Parts of the walls, possibly around the doors and windows, were lime-mortared. There were four rooms on the ground floor and four glazed windows. Part of the house at least was lofted with deals, and a timber stair gave access to the upper rooms. The walls were carried high enough to enable four glazed windows to light the first floor. One or more single-storey ranges of outbuildings were attached to the house.

They included a kitchen and pantry, three barns, four byres and a peat house (S.R.O. GD 45 20 214). Considering the number of buildings involved, it is more likely that they were grouped around some sort of courtyard rather than constructed end to end.

It is difficult to estimate how prevalent houses of this size were at this time. This farm was not particularly large: holdings of two, three and even four ploughgates occur frequently in seventeenth-century rentals. There is evidence that the pace of agrarian change quickened during the seventeenth century, particularly after the Restoration, with an increasing trend towards commercialisation in agriculture (Whyte 1974). The muniments of estates throughout Lowland Scotland demonstrate that tenant numbers were being reduced, leading to an increase in mean holding size. This was accompanied by the breaking up of multiple-tenant farms and the consolidation of holdings out of runrig. The organisation and techniques of agriculture were undoubtedly becoming more efficient and there seems to have been an increase in prosperity, particularly on the east coast where the production of grain to supply urban markets at home, and for export, appears to have grown substantially during the later seventeenth century (Whyte 1974). In this sort of climate it is likely that houses of this type were becoming more common.

The increases in holding size due to reductions in tenant numbers would have caused a decline in co-operative husbandry on multiple-tenant farms. As individual holdings became larger, they would have needed to be more self-sufficient. This would have created a need for more and larger outbuildings to house the increased number of draught and carriage animals and equipment which would have been needed, and to store the greater quantities of grain and winter fodder which would have been produced. This appears to have caused the gradual replacement, in arable areas, of the simple long-house plan by the courtyard farmstead where the outbuildings formed two wings adjoining the dwelling house and enclosing a courtyard.

Some indications of this are discernible in one of the earliest estate plans surviving for Scotland. On the Clerk of Penicuik estates in Midlothian, the farm of Over Mosshouses is shown in 1717 as having a main dwelling house flanked by two service wings, with the fourth side enclosed by some sort of boundary, possibly a wall (S.R.O. RHP 3834). A much earlier example, at West Gagie in Angus in 1649, can be reconstructed from the inventory which includes the compass orientations of the various buildings and indicates which ones were under the same roof. Here the dwelling house and some of its offices were laid out round three sides of a courtyard with a wall and gate on the fourth. Adjoining this, the remaining outbuildings, four byres, a stable, three barns and a hen house, formed a separate cluster, possibly enclosing a second yard (S.R.O. GD 188 2).

However, the buildings described above were still cruck-framed and were subject to the limitations of plan, height and width which the use of crucks imposed. Perhaps the most significant development in rural housing in Lowland Scotland at this time was the increasing use of lime mortar. For the first time, tenants' houses with fully load-bearing

walls were constructed without the use of crucks. This made possible the building of houses with two or even three stories, instead of a single storey with, at best, a low, cramped loft. It also switched the emphasis and cost of construction away from the roof timbers and towards the walls. A saving in the quantity of timber used would have partly offset the extra work and expense involved in building a house with lime-mortared walls. However, the introduction of houses of this type appears to have been associated with a new outlook towards agriculture in general which favoured long-term capital investment rather than short-term saving. Despite the high initial cost of such houses, there would have been a long-term saving in the tenants' time and the proprietors' money with a reduction in the constant repairs which were a feature of less durable structures. The concept of permanency in rural housing was changing from a dwelling that would stand for the duration of a short lease to one which might last two generations or more. The spread of such houses may have been encouraged by the growing tendency to grant written leases for periods of up to nineteen years, particularly in arable areas, giving tenants more security and a greater stake in the land they farmed (Whyte 1974: ch. 6). Lime-mortared houses may have reflected the proprietor's desire to increase his rental by encouraging the better tenants with more congenial conditions. It could also indicate a willingness on the part of the tenant to sink more capital into his holding once his tenure was guaranteed.

Although there is widespread evidence for the use of lime mortar for tenants' houses, as has been discussed above, only one inventory gives sufficient detail to allow the full implications of its use to be appreciated. This is a survey of the barony of Lasswade, near Edinburgh, undertaken in 1694 (S.R.O. GD 18 722). It indicates that the houses of the larger tenants, on holdings with 65–130 acres of arable land, were of two, and in one case three, stories, with lime-mortared walls. They had several rooms with up to four on the first floor, and glazed windows. Sketches of the plans of some of the farmsteads accompany the survey. They show that while traces of the long-house plan survived in the layout of the main block, some of the outbuildings were grouped into separate wings forming L-shaped steadings or, in one instance, a Z-plan. It is significant that the best of these houses had been built as recently as 1693. It is also interesting to note that the descriptions of the cottars' houses associated with these farms do not differ materially from those found elsewhere. This suggests that, with the increasing trend towards commercialisation in agriculture, rural society was becoming more distinctly stratified.

This estate was notable for its advanced attitude towards agriculture. The farms associated with these houses were set in long lease and improvements such as liming had been in use for some time (S.R.O. GD 18 695,722). The presence of a large and probably expanding market for grain in the city of Edinburgh, within easy carriage of Lasswade, may have helped both tenants and proprietor to prosper.

However, care must be taken not to view this example out of context. The advanced design of these houses was probably uncommon in Scotland at this time and may have been unique. The combination of advantages enjoyed by the tenants of Lasswade—

fertile soils, a large market nearby, a progressive proprietor, and a supply of coal and limestone close at hand—cannot have occurred widely. In pastoral areas it has been suggested that the economic developments which correspond to the growth of grain production, namely the droving trade in sheep and cattle, were concentrated in the hands of the proprietors and that profits did not filter down to the tenants in the same way (Whyte 1974:269–70). As a result, there was less need for proprietors to grant their tenants longer leases, and consequently, tenants in pastoral areas are likely to have possessed houses of more modest appearance. As there was less need for large clusters of specialised buildings on such farmsteads, the long-house plan probably continued to be standard in pastoral areas after it had been replaced by the courtyard farmstead in arable districts.

Nevertheless, the new types of houses and farmstead layouts which developed in some areas in the latter part of the seventeenth century may be justly considered as the immediate forerunners of the improved farmsteads which became increasingly common in Scotland towards the end of the eighteenth century. The wide cross-section of house-types and standards of construction which have been described, as well as the regional variations in building techniques, indicate that it is misleading to present an over-generalised picture of the peasant house in Lowland Scotland before the eighteenth century. As in most peasant societies, there were richer and poorer husbandmen and this appears to have been closely reflected, in this area, in the character of their dwellings. There were major contrasts in the size and layout of farmsteads between arable and pastoral districts as a result of the storage requirements of different rural economies. Differences in the pace and character of agrarian change between such areas, together with the contrasting roles of the tenantry in increasing the profits of the estate, led to variations in the quality and durability of houses. Superimposed upon this were differences caused by inequalities in the access to building materials. Further work, particularly among estate papers still in private hands, will almost certainly clarify this picture and will establish some of the regional variations much more securely than has been possible in this introductory survey.

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