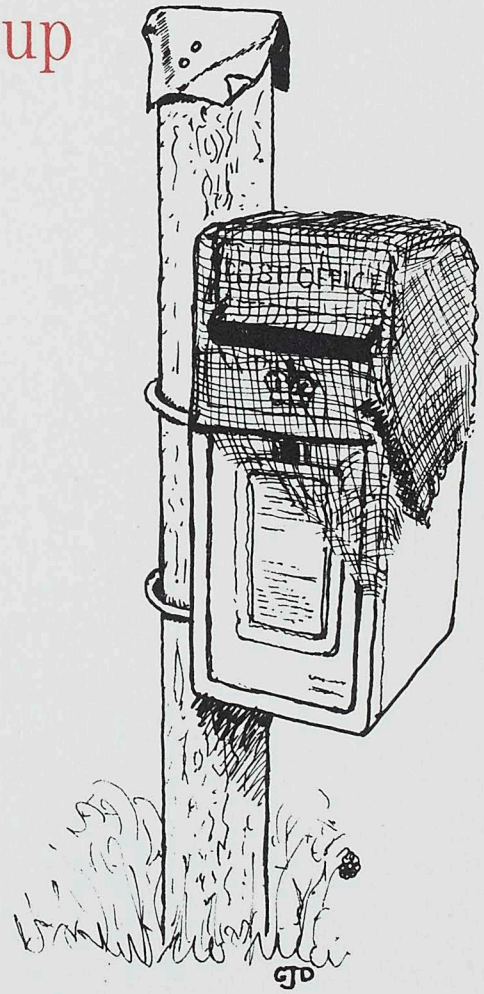
VERNACULAR BUILDING 16

Scottish Vernacular Buildings Working Group

1992



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Cover: *Post Box*: An amusing vernacular feature pointed out by Bruce Walker during the Group's visit to the Uists in April 1991. This is a letter box by the road side near Creagorry, Benbecula. To prevent small birds nesting in the letter box, a piece of fishing net is used to cover the slot. The net could be lifted by those sending post cards home, but as yet not by the wee birds looking for a nest site!

Drawing and caption by Graham J Douglas

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PREFACE

The Scottish Vernacular Buildings Working Group was set up in 1972 to provide a focus for all those interested in the traditional buildings of Scotland.

To some , Scottish 'vernacular' may mean cottages, croft-houses and farmsteads; to others, its essence may be urban tenements and terraces, industrial watermills and smithies, or even the older traditions of tower-house buildings. All - and more besides - find a place within SVBWG.

The Group embraces those whose interests are centred on general settlement and social patterns, as well as those who have a specialized interest in building function, or in traditional building trades and crafts. The subject brings together architects, surveyors, archaeologists, historians, geographers, ethnologists, and above all, those who simply want to know how and why the traditional buildings of Scotland have such variety and character. The Group thrives on this refreshing blend of interests and attitudes, all of which are quite clearly evident in its activities.

Members of the Group are invited to attend annual conferences, held at different venues in Scotland each year. In 1992 the Spring conference was based at Aberfeldy in Perthshire, and the autumn meeting at the Scottish Maritime Museum in Irvine. The 1993 spring conference, celebrating the Group's 21st Birthday, will be held on the Isle of Man from 6-10 May.

The Group's publications include **Vernacular Building** an annual miscellany of articles published fre to members and to which members and interested readers are invited to contribute.

Articles, reports on work in progress and reviews for the next issue of **Vernacular Building** are now eagerly awaited and should be submitted to the editor by the end of June 1993 at the address below.

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Edinburgh EH8 9HX

ORMICLETT (ORMICLATE) CASTLE, SOUTH UIST

Harry Gordon Slade

Visited by the SVBWG on Sunday 21 April 1991, this splendid ruin is badly in need of a full record survey and analysis before it falls victim to time, weather or the well-meant attentions of some enthusiast infected by the hysteria of SAVE.

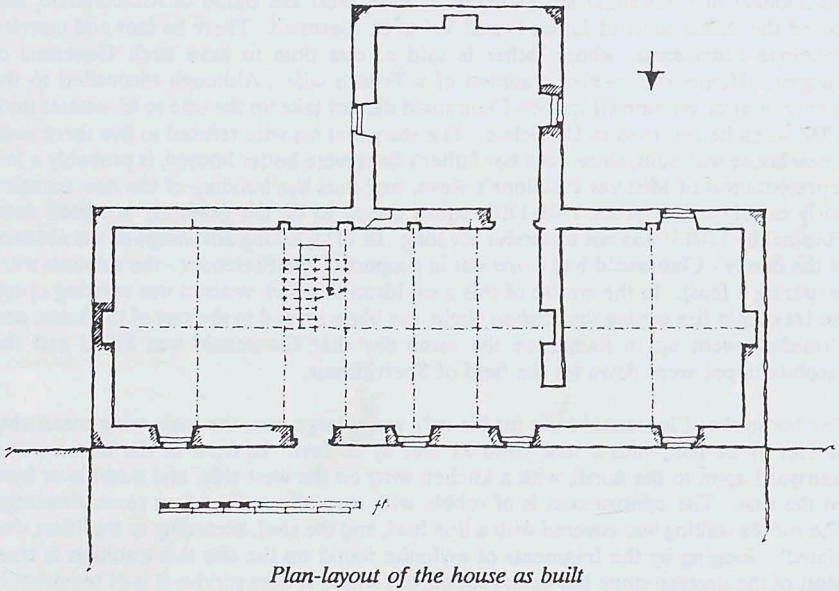
This brief note is recollected from that visit and has been supplemented by some further information and dimensions taken, under difficult circumstances, by Ian Smith.

The history of the house is fairly clear, and where history fails tradition steps in. Allan MacDonald of Clanranald left Scotland in 1689, after the Battle of Killiecrankie, and joined the exiled court of James II and VII at St. Germain. There he met and married Penelope MacKenzie, whose father is said at one time to have been Governor of Tangier. Hence the garbled tradition of a French wife. Although reconciled to the government of William III in 1696 Clanranald did not take up the title to his estates until 1704, when he returned to Ormiclate. The story that his wife refused to live there until a new house was built, since even her father's hens were better housed, is probably a fair representation of Mistress Penelope's views, and puts the building of the new mansion fairly closely to the years 1701-1703, which seems to be the generally accepted date. Finished by 1704 it was not to survive for long. In 1715, taking advantage of the absence of the family - Clanranald had come out in support of the Pretender - the servants were preparing a feast. In the course of this a cauldron in which venison was cooking upset, the fat caught fire setting the kitchen alight, the blaze spread to the rest of the house and Ormiclate went up in flames on the same day that Clanranald was killed and the Jacobite hopes went down on the field of Sherriffmuir.

The house that Clanranald built for his wife was a large one, the main wing measuring 69 feet by 24 feet, with a rear jamb 21 feet by 20 feet. In front of the house was a courtyard open to the north, with a kitchen wing on the west side, and a stable or byre on the east. The construction is of rubble with carefully worked free stone dressings. The rubble walling was covered with a fine harl, and the roof, according to tradition, was 'slated'. Judging by the fragments of mylonite found on the site this tradition is true. Most of the dressed stone has been robbed, but where it does survive it is of remarkably fine quality.

The accommodation was generous, arranged on two full and one half floors, providing twelve fired rooms, and it is possible to reconstruct the original internal arrangements with a fair degree of accuracy. A doorway with an armorial panel set in a stone frame above it led into an entrance lobby, 6 feet wide and 10 feet long. The stairs would have faced the entrance, and two flights would have been necessary to reach the first floor. To the left of the entrance was a room approximately 17 feet by 20 feet, with a fireplace in the east gable, and a window looking into the courtyard in the north wall. To the right of the entrance was another and larger room, 20 feet by 20 feet. There were two windows in the north wall, a fireplace and doorway in the cross wall, and a doorway with rebated and chamfered stone jambs - only one of which survives - in the south-west corner. Because of the junction of this jamb with the cross wall - it is straight jointed -

it has been suggested that the wall may be an insertion, but this is extremely improbable. The arrangement of both the plan and the elevation predicates a cross-wall at this point: it is the construction of the jamb of the doorway which has led to this confusion. In the north wall of this room is a much altered embrasure; the purpose of which is not clear but it may originally have been a buffet. The two remaining rooms, that beyond the cross wall measuring 18 feet by 20 feet, and that in the jamb measuring 16 feet by 18 feet, have their fireplaces in the end gables, and there are windows on both sides. Whilst this has the disadvantage of exposure to the prevailing south-westerly winds it does allow the admission of some sunlight.



Plan-layout of the house as built

A distinctive feature of the ground floor is the presence in the south wall of the main block of a series of vertical slots in the region of 12 inches wide and 9 inches deep, with traces of matching slots in the north wall. They seem to have housed wall posts, and when plotted appear to have supported a series of principal cross-beams. This is curious since the surviving evidence suggests that the intermediate joists ran parallel to these beams. The span is such that these beams would only have been necessary on either side of the entry and staircase to support the partitions. If however there were a series of longitudinal beams on the centre line of the main block, the intermediate joists could have been shortened and shallower, and the ceilings of the ground floor rooms would have been broken up into relatively well-proportioned compartments defined by deep, and possibly moulded, beams. This view is strengthened when it is realised that the spacing of the wall posts is varied to relate to the proportions of the individual rooms, rather than to the span.

The position of the doorway in the cross-wall and the likely position of the doorways on either side of the entry - controlled by the likely position of the staircase - suggest that the ground floor rooms were enfiladed, a sophistication of planning owing much to the fashions of polite architecture further south.

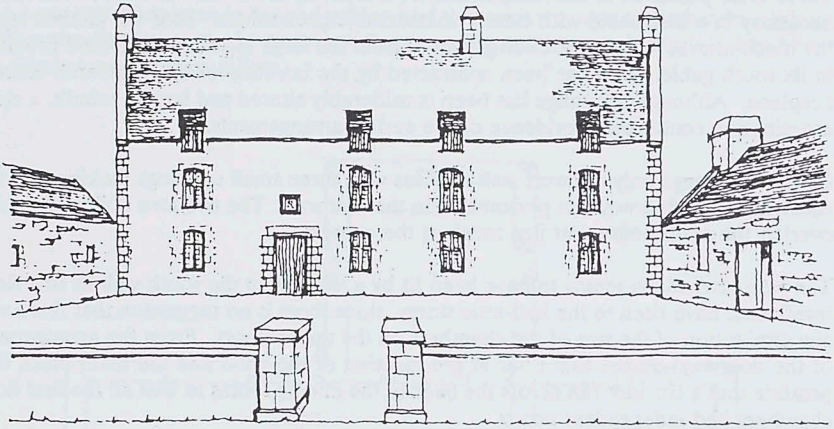
There is no provision in the main house for a kitchen, or for the various service rooms necessary in a household with clearly considerable pretensions. That the kitchen lay in the much-altered west fore-building is clear from the large segmentally-arched fireplace in its south gable. This has been contracted by the insertion of an eighteenth century fireplace. Although this range has been considerably altered and largely rebuilt, a close examination could reveal evidence of the earlier arrangements.

Of the east range only the west wall survives with three small openings looking into the courtyard - the doorway was presumably in the east wall. The two fore-buildings do not overlap the main house, but just touch at the corners.

The staircase, which seems to have been lit by a window in the south wall at first floor level, must have risen to the half-attic storey, since there is no suggestion that there was any diminution of the size of the chambers on the upper floors. From the arrangement of the doorways on the first floor at the junction of the jamb and the main block it is possible that a corridor ran across the back of the middle rooms so that all the first floor chambers had independent access.

As it stands today the main front is a ghost, robbed of most of its stone dressings, but it is possible to suggest how it may have appeared originally. The two completely unknown quantities are the pattern of the dormer heads, and the form of the windows. On the basis of what looks right, rather than what looks horribly wrong, I have suggested that the dormers - in fact they are really half-dormers - had forward-sloping or cat-slide roofs. The windows are more of a problem, for the openings have been provided with very smart segmental heads. There are three possible choices: sashes, cross frames with casements, and fixed upper lights with wooden shutters in the lower part. Given the quality of the building, the last named, even though traditional in Scotland and the Netherlands, would have seemed hopelessly old-fashioned. Sashes, gaining popularity in England and the Netherlands, but still considered new-fangled and known as 'English Windows' in Paris, were probably too advanced. This leaves the cross-frame or cloister window, widespread in Scotland, England, France and the Netherlands at this time, as the most likely solution.

What does emerge is that whoever actually built the house for Clanranald - and the clumsiness of some of the setting out suggests that it may have been a local man - he was almost certainly working from a plot prepared by someone knowledgeable in modern, if not fashionable, buildings, and with a strong feeling for proportion. Whether Clanranald supplied his own draught, or whether some competent mason, is impossible to tell. Judging by the quality of the remaining quoins the dressed stone was probably worked before it arrived on the island. The tradition is, of course, that the house was designed and built by French craftsmen. Tradition has a nasty habit of containing a grain of truth. It was certainly not intentional that in the reconstruction Ormiclate should take on so much the appearance of a *manoir*.



North, or courtyard elevation, reconstructed as it may have appeared when built

Note: The house in fact faces NE but to lessen confusion in the text it faces a liturgical N. Possibly the local man was confused too. It would have been much more rational for the house to have faced SE.

SOME NOTES AND COMMENTS FROM THE GROUP'S VISIT TO THE UISTS

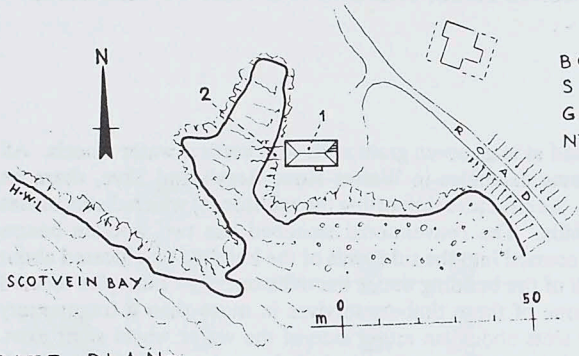
Graham J Douglas

Mill Buildings

The Uists, including Barra, had at least seven grain mills with vertical water wheels. All these mills, together with some examples in Wester Ross, Argyll and Skye, share an unusual type of stonebed (i.e. the structure supporting the millstones) which distinguishes them from other Scottish mills. The conventional stonebed has two wooden beams 300mm square, these being recessed into the side walls of the building and located about 1m apart, spanning the width of the building under the millstones. In examples located in the areas noted above, none of these timbers survives in more than a fragmentary state; however, vertical wall slots about 1m either side of the water wheel shaft exist. These held timber uprights of about 150mm square which formed part of the stonebed. This suggests a stonebed structure as follows: a box-type frame of 150mm square timbers, the wall slots giving stability to the unbraced framework. This design requires shorter-length and smaller-section timbers than were needed for the conventional stonebed. It cannot be merely coincidental that this design is found in areas of timber scarcity and excessive transport costs.

Boat Yard : Boat Builder, Scotvien Bay, Grimsay, North Uist

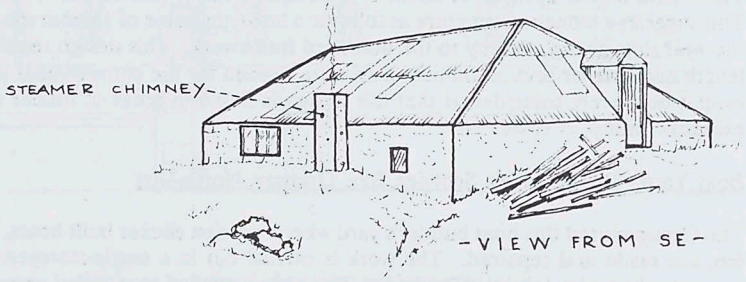
The Group visited this boat builder's yard where wooden clinker built boats, up to about 6m, are made and repaired. The work is carried out in a single-storeyed rubble and concrete shed 13m long and 7m wide. The hipped roof of corrugated cement asbestos and glass fibre sheet is fixed to wooden collar beam trusses. The floor is of earth and rock. At the west end there is a wide door which gives access to the slipway, utilising the slope of the rock outcrop. A single dormer door at the east end gives access to the shed. Along the inside face of the south wall is the plank steamer. This is an interesting example of the use of basic materials. The steamer box is of wood 0.35m wide, 0.25m deep and 4.5m long, the sides being about 30mm thick. It is mounted on a wooden stand at the west end, and a rubble pier near the east end. The box is about 0.9m above the floor. The west end has a removable cover for access. Suspended by wires below the east end is a sheet metal drum 0.4m in diameter and 0.5m high. Its top has two holes about 75mm in diameter, one used for filling the drum, the other being fitted with a sheet metal tube which carries the steam into the box above. A fire using offcuts and shavings is lit below the drum, and some of the smoke is carried off through the shuttered concrete chimney butted onto the south wall, whilst the rest filters out through the roof.



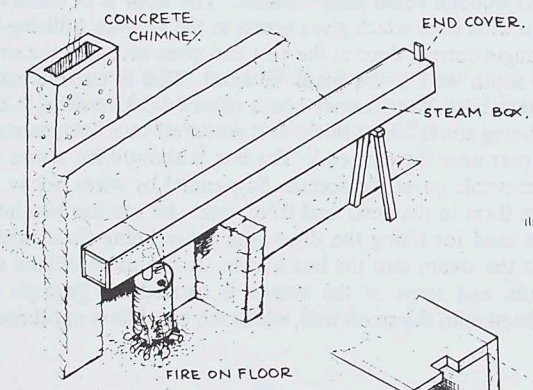
BOAT BUILDER,
SCOTVIEN,
GRIMSAY,
NTH UIST.

1 BOAT BUILDING SHED.
2 SLIP WAY.

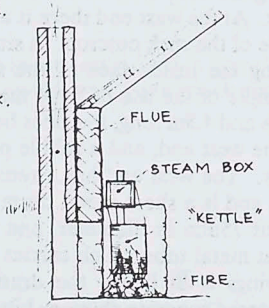
-SITE PLAN-



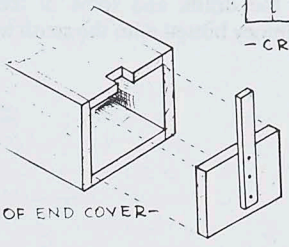
-VIEW FROM SE-



-VIEW FROM NE-
(ROOF NOT SHOWN)



-CROSS SECTION FROM E-



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GJD 1991.

WALLHEAD CHIMNEYS, NEPUS AND TIMPANY GABLES : A NEGLECTED ASPECT OF SCOTTISH URBAN VERNACULAR BUILDING

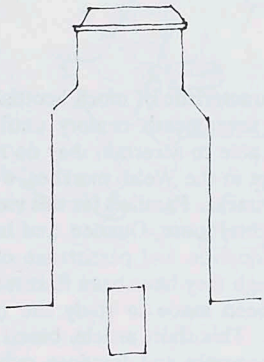
John R Hume

Wallhead Chimneys

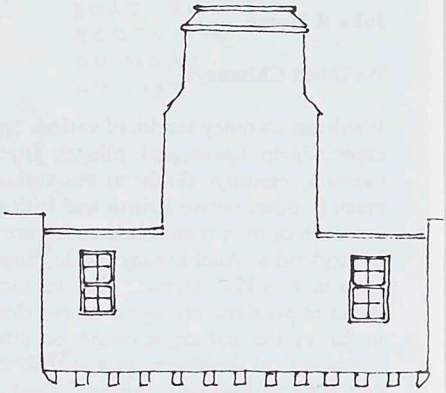
Wallhead chimney stacks of various types are characteristic of much Scottish building, especially in towns and villages, from the mid seventeenth century until the early twentieth century. So far as this author has been able to ascertain they do not feature much in other native British and Irish styles, except in the Welsh marches, where some sixteenth century manor houses feature projecting stacks. Parallels for this variant occur in Scotland at Auchanachy Castle, Banffshire; Auchterhouse, Dundee, and in corbelled form at Pan Ha', Dysart. The reasons for the adoption and persistence of wallhead stacks in Scotland are by no means clear, and though they have been illustrated widely, so far as the author is aware no attempt has been made to study the types, their chronological development and their distribution. This short article, based mainly on field observation over many years and on old photographs and drawings, published and unpublished, is a first attempt to produce a summary of available evidence and to suggest some tentative conclusions.

Emerging from a fog of ignorance about minor Scottish buildings before 1700 is the clear indication that many houses in both rural and urban settings were of relatively slight construction; sometimes timber framed, sometimes with turf or clay walls, perhaps with an admixture of stones. Where stone was used for walls, drystone construction, or clay-mortared building may well have been common. Certainly mortared dressed-stone buildings seem to have been rare, apart from houses of the upper classes, religious buildings and burgh buildings. The second half of the seventeenth century, during which serious fires took a heavy toll on property in Edinburgh, Glasgow and some smaller communities, saw an upsurge in the use of stone for urban buildings. The earlier stone buildings which survived into the nineteenth century, to be drawn and photographed, were generally adaptations of baronial dwellings to urban conditions, but from the late sixteenth century specifically urban forms develop, some of these featuring wallhead chimneys.

Wallhead chimneys are found in Scottish regal and baronial architecture at least as early as the fourteenth century (e.g. Craigmillar and Castle Campbell), but become increasingly popular in the late fifteenth and sixteenth centuries, possibly as a consequence of the use of coal, rather than wood, as a fuel. Both plain (e.g. Craig, Huntingtower) and shouldered (Affleck, Crichton) are found, and at Crichton a window below a great chimney[1] hints at the emergence of the nepus gable. In the late sixteenth and early seventeenth centuries the wallhead chimney features in burgh architecture. A simple example is Bay House, Pan Ha', Dysart (1583), where a large chimney of baronial type is base-corbelled on the seaward face.[2]

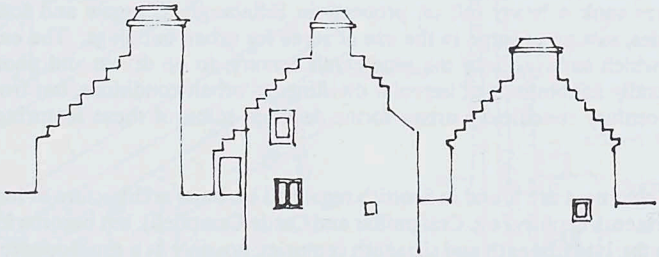


1. Crichton Castle



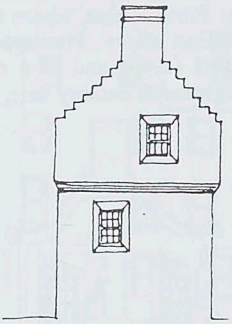
2. Pan Ha', Dysart

A splendid example is Lamb's House, Leith, with three different patterns of wallhead chimney; one asymmetric with linked window and loading door; one proto-nepus, with a tiny opening to one side, and one advanced on corbels.[3]



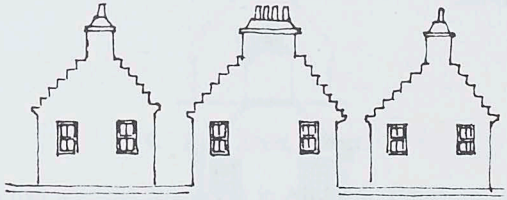
3. Lamb's House, Water Row, Leith

The latter relates to three surviving domestic buildings with projecting jambs (Kelly's Lodging, Pittenweem; the Bute Estate Office, Rothesay and The Study, Culross) with gablet chimneys, and more directly to the Abbot's Lodging, Dunfermline where a similarly profiled jamb has been absorbed into the body of the building, producing a two-storeyed nepus with no surviving parallels.[4]



4. Abbot's House, Dunfermline

These rather glamorous buildings, all recognised by McGibbon and Ross as of interest, may be seen as ancestors of some other seventeenth and early eighteenth century buildings with wallhead chimneys, including a pair of houses in Dalrymple Street, Greenock built in 1622; Brisbane House, Largs;[5] the 'Lighthouse Tenements' at Cartsburn, Greenock (probably *c.*1700) and a range of similar houses in Kelso, all demolished.



5. Brisbane House, Largs

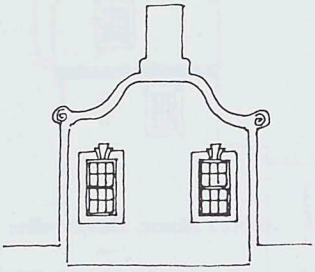
A survivor of this early style is Cannonball House, Castle Hill, Edinburgh, with three gables added in the early eighteenth century. Many similar buildings with gableted street elevations differed in not having chimneys on the gablets.

From these early examples, some probably experimental, others perhaps with vanished parallels, sprang the diversity of wallhead chimneys that have given, and in many instances still give, richness and variety to both urban and rural buildings in Scotland.

Nepus Gables

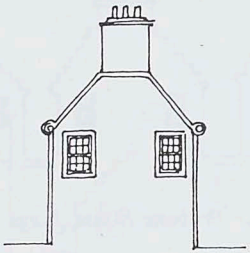
The first type of wallhead chimney to become popular in the eighteenth century was the nepus (also naip house, nep house) gable. This may be defined as a wallhead chimney stack incorporating one or more windows, in which the windows are either above the flanking wallheads or break eaves level. The proto-nepus gables mentioned above seem

to have been adapted to both richer and plainer forms from the late seventeenth century. Curvilinear treatment is found at Pilrig House, where the feature is said to be of late seventeenth century date, at 18 East Shore, Pittenweem (probably early eighteenth century), in Boyndie House, Banff (1740) and at a now demolished house in Port Glasgow,[6] apparently of early eighteenth century date.



6. 'Near the Station', Port Glasgow

Such gables became commoner in the east than in the west of Scotland, a distinctive eastern feature being the use of convex curves in the upper part of the gable, as in Dundee, Anstruther Wester, Rothiemay and Edinburgh. The plainer form of what became the 'classic' nepus is beginning to emerge in Morton House, Mortonhall (probably 1709), and at the Shore, Leith (*c.*1710)[7] Its large-scale adoption seems to have begun in the 1740s.

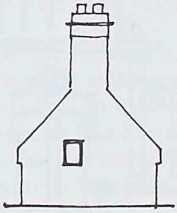


7. King's Wark, Shore, Leith

When King Street, Glasgow, was laid out in that decade it was specified that the buildings should have nepus gables. An early nepus-gabled house in Edinburgh is Chessel's Court (*c.*1748). In the 1760s more typical buildings were constructed as tenements at 240 Canongate and in Candlemaker Row. From the 1780s to the early 1800s many such were erected in the Nicolson Street/Buccleuch Street area. Nepus-gabled houses were being built in Gallowgate, Glasgow in the 1770s, and what might be termed 'standard' nepus gables, probably of the same period, are widely distributed, though nowhere, except in Perth, were they apparently very numerous. There are several, mostly now modified, in Tobermory, and large examples in Arbroath,[8] Dalkeith, Leith and (formerly) in Port Glasgow.

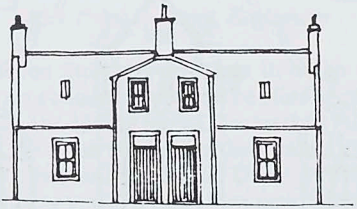
8. Marketgate, Arbroath

Smaller buildings of this type are commoner, with specimens in the East Neuk of Fife, Renfrewshire, Ayrshire, Dunbartonshire and Forres. In most cases there are or were a pair of windows in the nepus, but some, notably in Forres,[9] have one, and a few, mainly in Edinburgh, three.



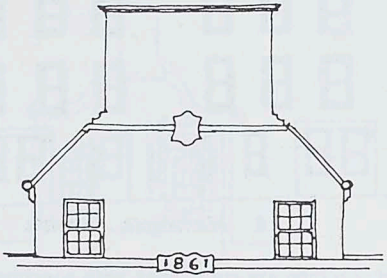
9. High Street, Forres

Occasionally Venetian windows feature, as in Arbroath, Edinburgh and Perth. A few later buildings have the gable head treated as a pediment as in Nicolson Street and Hunter Square, Edinburgh; Mauchline, Aberdeen, Kirkcaldy and Dumfries. Single-storey buildings with nepus gables are rare; the only ones known to the author are in Dundonald,[10] Dalry and Kilwinning in north Ayrshire.

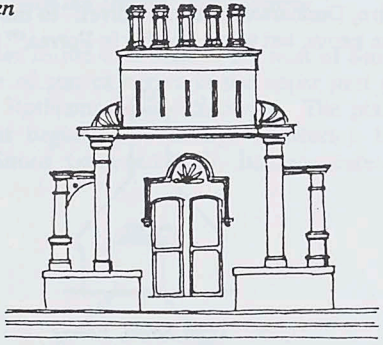


10. Main Street, Dundonald, Ayrshire

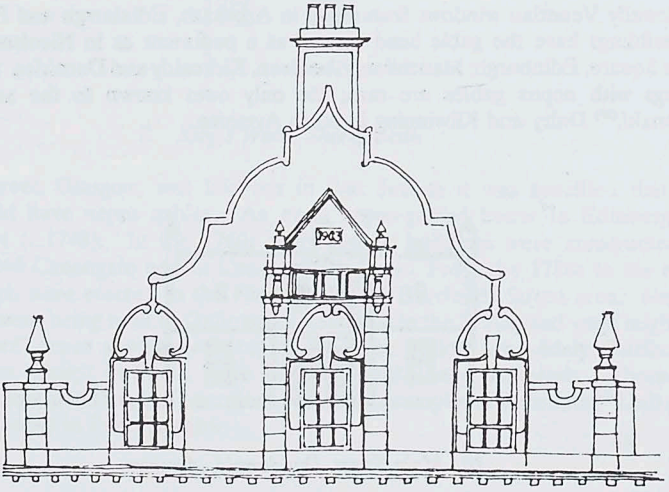
The widely distributed fashion for nepus gables seems to have declined in the early years of the nineteenth century, to be replaced by more obviously classical styles in the larger communities. The type, however, persisted, especially in Aberdeen and Peterhead, and features prominently in both domestic and commercial building in Aberdeen until the First World War, sometimes in a most elaborate fashion.[11, 12, 13]



11. Virginia Street, Aberdeen

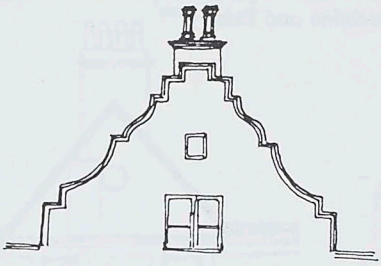


12. Guild Street, Aberdeen

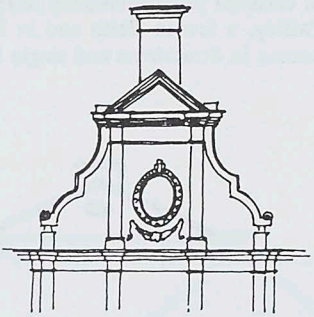


13. Market Street, Aberdeen

Elsewhere a few buildings here and there have this feature, often with vernacular revival, occasionally with free Renaissance detail.[14, 15]



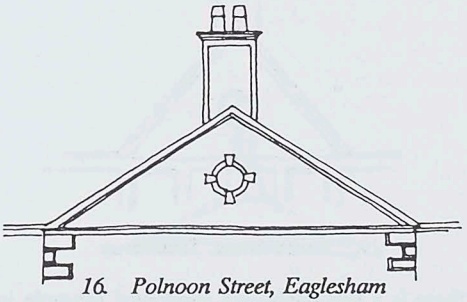
14. Stirling Arms Hotel, Dunblane



15. High Street, Peebles

There are also many odd variants, such as a pair of chimneys with a window between, or a chimney to one side of a window, the latter often an Arts and Crafts treatment.

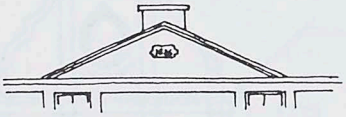
The currency of the nepus gable proper includes a period during which classically-inspired pediments were built with chimneys at the apex. Some of these are functionally related to nepus gables in having windows to light roof spaces or attics. Others are blind, and are analogous to timpany gables (see below). The former are comparatively rare, with country house examples in Newhailes and Castle Semple House (now demolished). Other survivors are in South Bridge and Hunter Square, Edinburgh, and in Eaglesham.[16]



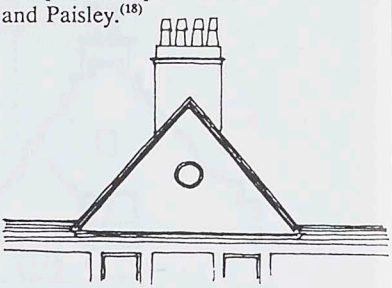
16. Polnoon Street, Eaglesham

In Fisherrow and Haddington there are buildings in which the bottom chord of the pediment is broken by a round-headed window. The blind versions are much commoner. Elaborate examples include the Manor House, Inveresk (1748) and 7-8 Market Street, Haddington (c.1760). In the same mould are the Canal Office, North Speirs Wharf, Glasgow (1812) and simpler houses in Kilbirnie; Union Street, Greenock; Main Street, Newton Stewart and Kilwinning Road, Irvine. Two now demolished buildings in Argyle Street, Glasgow had pediments with chimney stacks flanking the apex of the pediment.

All of these have or had pediments of classical proportions on symmetrical elevations of classical style. The generality of buildings with blind pedimented chimney gablets are, however, to a greater or lesser extent vernacular in character. In some the pediment is of classical proportions, but in the majority it is either flattened, as in many houses in Paisley, a few in Beith and in Bridge of Weir[17] or the pitch steepened, as in some houses in Strathaven and single houses in Mauchline and Paisley.[18]

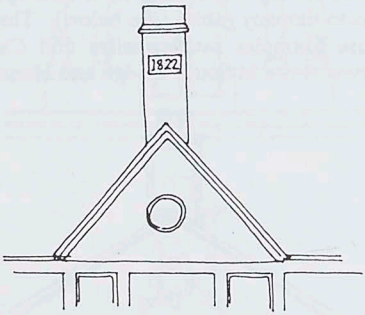


17. Main Street, Bridge of Weir



18. Silk Street, Paisley

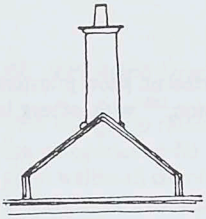
Another distortion of classical design is the raising of the pediment above the general level of the wallhead, as in buildings in Montrose and Perth. Much commoner are chimney gables triangular in elevation but with the bottom chord absent or vestigial. These are now most numerous in Strathaven,[19] the other examples (some now demolished) are or were mainly in the west of Scotland.



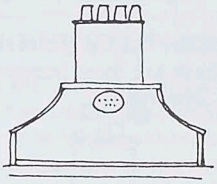
19. Green Street, Strathaven

Most are blind, but there is a fine, elaborate windowed example in the Burnett Arms Hotel, Banchory. Plain triangular chimney gables, with no vestige of pedimental treatment are rare: there are three in Houston, Renfrewshire. The use of nepus gables, and of pedimented chimney gables in buildings of primarily vernacular character is paralleled by the widespread adoption of the blind nepus, or timpany, gable, and of variants on the pediment as a base for wallhead chimneys, some of them adaptations of the pediment, others of the timpany gable. For simplicity, the discussion of timpany gables proper will be deferred until later. The simplest modifications to the pediment are cropping the ends or the top. End-cropped pediments are rare; there are two in

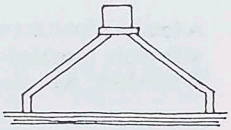
Kilbirnie[20] and one in Strathaven. Top cropping is commoner, with examples in Lanarkshire, Ayrshire[21] and Renfrewshire. There are several in Carluke. In Ayr, Crossford and Johnstone[22] there are top and end-cropped pediments.



20. Cochrane Street, Kilbirnie

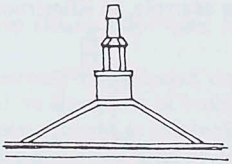


21. West Portland Street, Troon



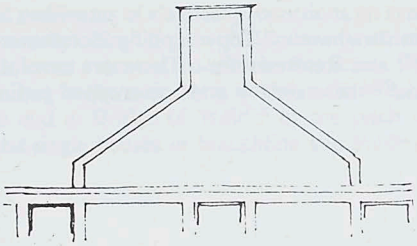
22. High Street, Johnstone

Closely related to these are top and end cropped 'pediments', with concave curves on the shoulders. With isolated exceptions in Blairgowrie, all examples are in the west, with the greatest concentration in south Renfrewshire [Bridge of Weir, Elderslie, Johnstone, Kilbarchan, Lochwinnoch and Paisley].[23] One with double concave curves exists in Eaglesham.



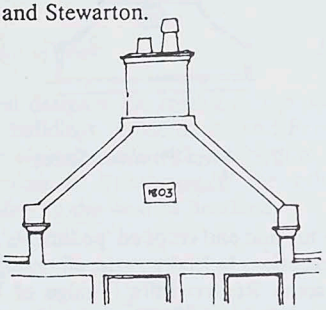
23. School Brae, Paisley

Before dealing with other types of wallhead chimney it would be appropriate to look at timpany gables. As mentioned in the last paragraphs, strictly speaking these are blind nepus gables. There are many variants in shape and size, and the type is widely distributed. They also seem to have been built over a long period, an early small example being Catherine Lodge, Inveresk (1709). The simple gabled shape is the commonest.[24]



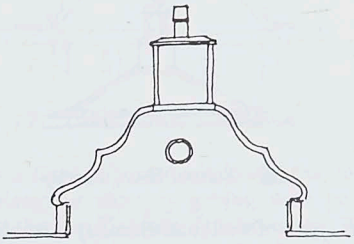
24. High Street, Haddington

A locally important variant in Ayrshire has the gablet skews supported on short pilasters with plain moulded capitals. These are most numerous in Galston,[25] with others in Auchinleck, Ayr, Newmilns and Stewarton.



25. Polwarth Street, Galston

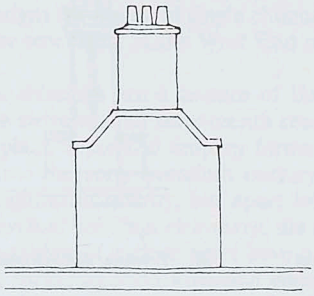
The type seems to have been popular at the same time, or perhaps a little later, than nepus gables. As with the latter, there are numerous more complex forms, built until well into the nineteenth century, often with curvilinear heads, as in Haddington, Inverness,[26] Dundee and, a late example, in Kilmarnock.



26. Bank Street, Inverness

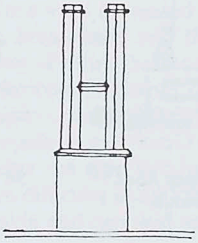
In Perth,[27] Montrose and Kilbarchan the characteristic timpany shape is sometimes reduced to vestigial proportions, and the inspiration for this design may simply be the shouldered wallhead chimneys of the fourteenth to sixteenth centuries already mentioned, as at Craigmillar, Crichton and Affleck Castles, modified to suit changing

circumstances, and sometimes with a moulded cope at the narrowing of the chimney stack.



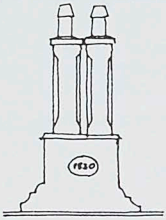
27. Off Atholl Street, Perth

This last group relates closely to the generality of wallhead chimneys which fall outside the categories so far discussed. Apart from the shouldered chimneys mentioned above, plain wallhead chimneys, usually of bold dimensions to suit large kitchen fireplaces were a feature of Scottish Baronial architecture at least from the fourteenth and fifteenth centuries. They become more numerous in the sixteenth century, for instance at Falkland Palace and Moray House.[28] In urban domestic building their general currency is from the eighteenth century onwards.

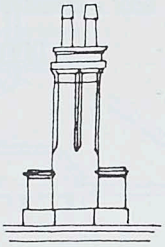


28. Moray House, Canongate, Edinburgh

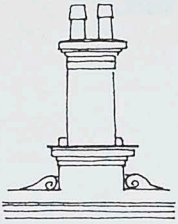
In the nineteenth century they become very general, especially on tenements, but at no time and in no place were found on a majority of buildings. They varied in scale from slender single-flue stacks to at least as many as fourteen flues in one stack. Throughout their existence as a design feature many had little or no ornamental treatment, though moulded copes with blocking courses were very common in the eighteenth and nineteenth centuries. Ornamental treatment of both bases and stacks was popular from the early nineteenth century. Popular features were broad bases, sometimes coped, often narrowing with moulded shoulders, and sometimes featuring scrolls. A Renfrewshire and Lanarkshire variant had a continuous sweep from wallhead to chimney, as in Lochwinnoch, Johnstone and Strathaven. The variety of treatments is considerable, indeed duplication is rare.[29-39]



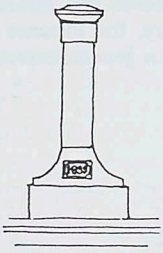
29. Marina Inn, Harbour Street Irvine



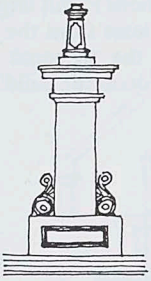
30. Cowgate, Kirkintilloch



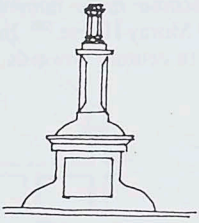
31. Causeyside and Forbes Place, Paisley



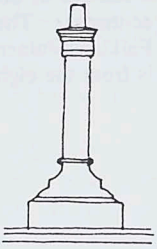
32. Common Green, Strathaven



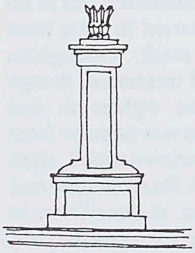
33. Off Bo'ness Road, Grangemouth



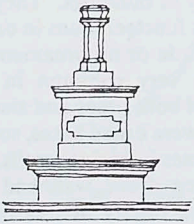
34. Railway Inn, Glengarnock



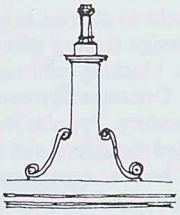
35. Waterside Street, Strathaven



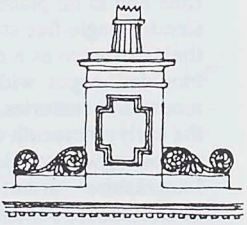
36. Sunnyside Road, Coatbridge



37. Arran Place, Ardrossan



38. Eglinton Street, Beith



39. West George Street, Glasgow

Occasionally chimneys side-by-side were linked by arches, as in Coatbridge and Maybole. In some turn-of-the-century designs the design of single chimneys is integrated with that of the wall beneath, as in a few tenements in the West End of Glasgow.

To summarise, then, wallhead chimneys are a feature of Baronial building from the fourteenth century. During the sixteenth and seventeenth centuries they are integrated into urban buildings, with the plain, nepus and timpany forms all appearing. The plain form persists generally until into the early twentieth century. Nepus gables became popular in the mid and late eighteenth century, but apart from concentrations in NE Scotland and non-standard individual buildings elsewhere, die out during the nineteenth century. Pedimented chimney gablets of various types have a currency paralleling that of classical detailing generally, spreading from Vitruvian classical buildings to those of much more modest character. Timpany gables are popular from the early eighteenth century until well into the nineteenth century. Ornamental treatment of 'plain' stacks is a feature common from the late eighteenth century until into this century.

The reasons for the widespread adoption of wallhead chimneys in Scotland and their rarity in other parts of Britain have exercised the author's mind for many years. He now inclines to the view that the paramount consideration is cost of construction, with mode of chimney-sweeping an important secondary point. By having chimneys on external walls, internal partitions could be made thinner, and of cheaper materials. The broadening of chimney bases in various walls increased the stability of these structures, and roofing the space between the broad base and the main roof further improved stability. The nepus gable gave a way of using the space thus created in the attic, and nepuses were often associated with dormers. Chimney sweeping in Scotland was usually done from the top down, using a weighted brush attached to a rope, and the flues could thus be more tortuous than a rod-propelled brush could accommodate. The persistence of nepus gables in Aberdeenshire after the type had fallen out of general use may be attributed to the expense and relative difficulty in building in granite, especially dressed granite: the combination of nepus gable and mansard roof gave a cheaper top storey to a building.

There is, of course, more to it than that. Fashion, too, dictated what was acceptable, and the flourish a well-proportioned wallhead chimney gives to a building on a street frontage is still notable. The variety of decorative treatments of such features shows that their design was partly a matter of pride and an expression of taste. It is the author's hope that this little article will raise the profile of these fascinating features of Scottish building and encourage their conservation, and where appropriate, restoration. It is very simple, in the cause of building improvement, to shear off stack and skews, and to apply inappropriate render, in such a way as to destroy a building's distinctive contribution to a townscape, and not much more difficult to take the trouble to keep or reinstate these features.

Further reading and acknowledgements

The sources for the study of the features discussed in this article are very diffuse, and a detailed bibliography would be long, often referring to one or two illustrations only in each publication. It would, however, be ungrateful not to mention the volumes published

so far in the *Buildings of Scotland* and RIAS Architectural guide series, which give information on, and illustrations of some buildings with such features. The illustrated booklets published during the past twenty years by local societies, local authorities and commercial publishers have also proved useful. Reference has also been made to the Scottish National Monuments Record, whose help is gratefully acknowledged.

CRUCK-FRAMED BUILDING, RHEANBRECK, LAIRG, SUTHERLAND
NGR : NC 600 048

Lesley Ketteringham

A late eighteenth century[1] single-storey croft house of two rooms now converted into a barn, having dry-stone walls of mixed stone and boulders and a corrugated roof, originally thatched with turf.[2]

The building stands on a hillside overlooking the glen of the River Fleet on the 170m contour. It faces N and is apparently almost identical in size and shape to other older barns in the area, many of which were also themselves once croft houses. These crofts are dotted about the hillsides on ancient land holdings and the houses may not by any means be the original buildings on the sites.

1 A building with similar roof construction is illustrated in *Exploring Scotland's Heritage - The Highlands*, (1986), RCAHMS, 65. This building is dated late eighteenth century.

2 The house was recorded by the author with the kind consent of Mr & Mrs Datlin.

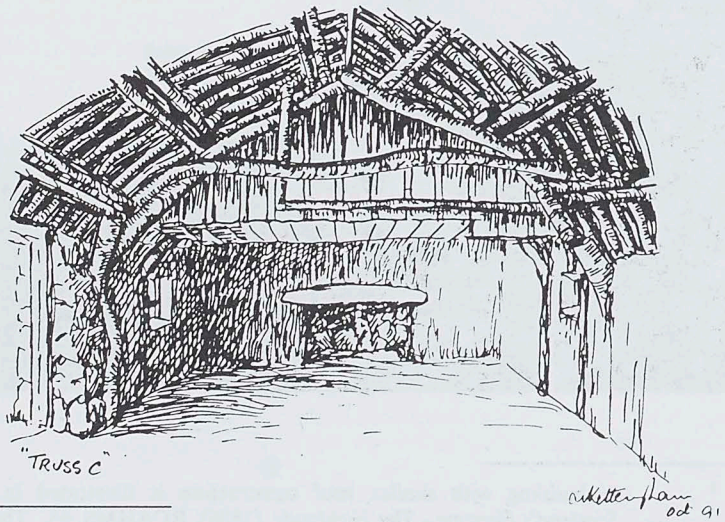
The walls are thick, of rough dry-stone and boulder construction, plastered inside and out possibly in the late nineteenth-early twentieth century. At this time an outshot existed in the east gable, the removal of which revealed the unplastered construction of the wall. This additional construction was used as a milk house.[3] The windows are very small. One of the two in the rear wall is possibly of the original size, 35cm by 40cm. The others may have been enlarged and given splayed jambs and cills but still measure only 60cm by 70cm. They are now fitted with sash frames which are likely to be a Victorian innovation.

The roof is covered with corrugated iron sheeting but was originally thatched with heather turf, some of which remains beneath the iron and no doubt improves insulation.

Although this building is now used as a barn it was a dwelling house until recently. It then consisted of two rooms, a living room to the left and a bedroom to the right entered through a wooden partition. The gable walls are thicker than the side walls and a chimney was inserted in each. A small but neat Victorian iron fireplace was built into the west end, probably at the same time as the plastering of the walls took place. At the living room end is a larger stone hearth with an iron pot-chain still in position. The floor was stone flagged throughout.[4]

Above the living room is a loft, presumably reached by a ladder no longer in existence. There were no arrangements for water or drainage in the house.

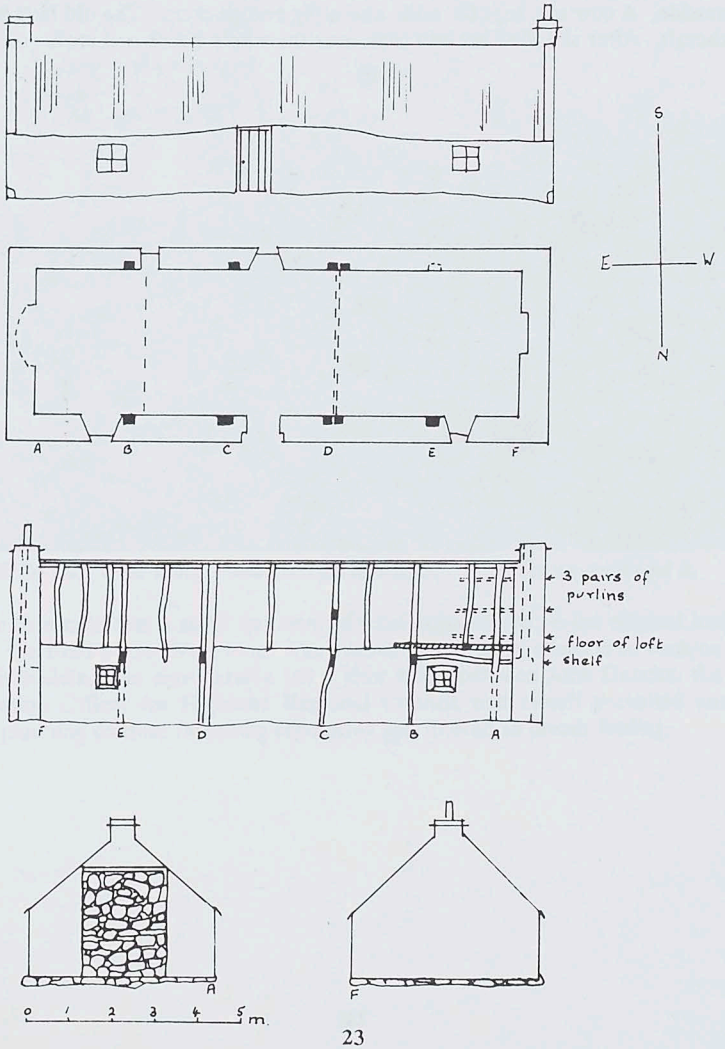
LAIRG, RHIANBRECK - BARN



[3] Information kindly supplied by a neighbour who has long personal knowledge of the house and its occupants.

[4] Ibid

The timber framing for the roof is known as Highland Couples. This consists of short pieces of untrimmed, sometimes twisted, trunks and branches, mostly of birch. The principal 'rafters' joining the posts at an angle giving the appearance of cruck construction. The posts are sometimes buried in the walls and sometimes visible to the ground. The 'rafters' of smaller branches are laid close together across three pairs of purlins on each side. The short lengths of untrimmed branches in each purlin overlap and the joins are staggered. It was not possible to see how these 'couples' were joined together as neither nails nor ties were visible. The rafters rest directly on the stone walls and there are no wall plates. The thatch would have been weighted down with ropes and stones.



Additional Information

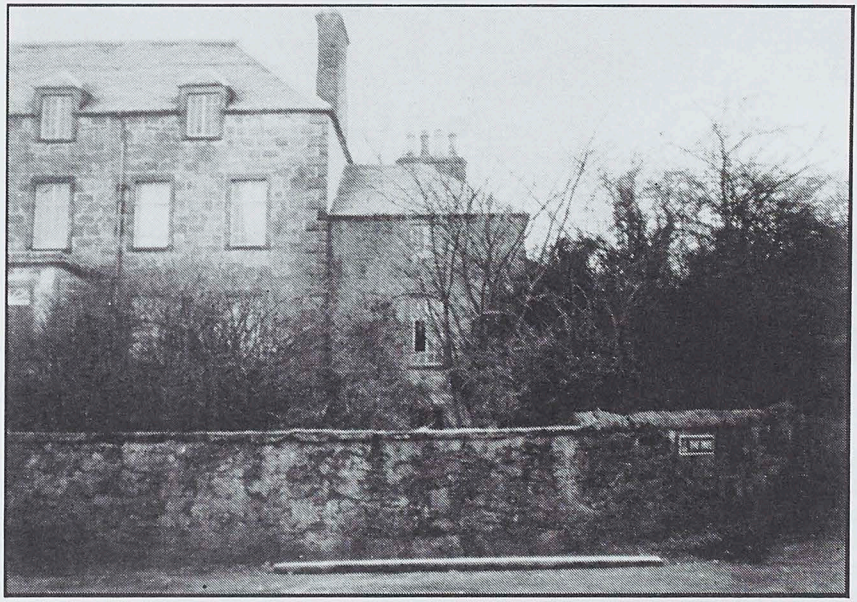
Within living memory an old lady who died in the 1930s aged over 90 and her son shared the house. At that time the mother occupied the living room and her son lived in the other room which was also his bedroom. The mother had a bed in the 'closet' along the rear wall of her room. This room was spotlessly clean and neat. The stone flagged floor was pipeclayed. There was a shelf along the front wall and presumably stores in the loft above. A chair stood by the fire.

Water for drinking was fetched in buckets from a well a few hundred yards away, but water for washing, etc. was drawn from a small burn by the house and all washing was done outside. A cow was kept for milk, also a pig and chickens. The old lady believed in witchcraft. After she died her son took over the whole house and croft.

BELLE VUE : THE WEST WING, CHURCH STREET, CROMARTY, ROSS-SHIRE. INTERIM REPORT ON THE APPLICATION OF A LIME HARL, AUGUST 1991

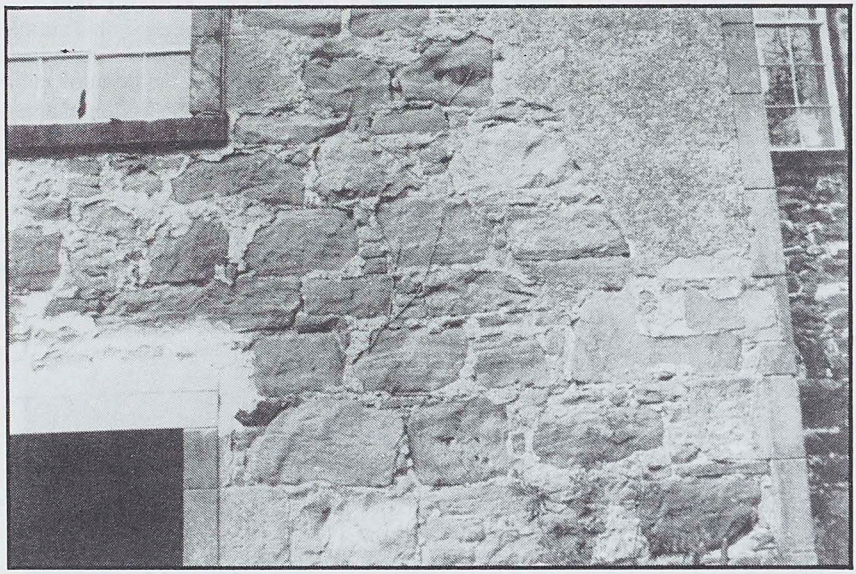
Timothy Meek

This report was undertaken in response to several enquiries about the application of lime harl. While Belle Vue is perhaps more urbane than vernacular, the general principles in method and materials are consistent for all types of traditional Scottish building.



Belle-Vue, West Wing, Front (North) Elevation : The wing as we found it.

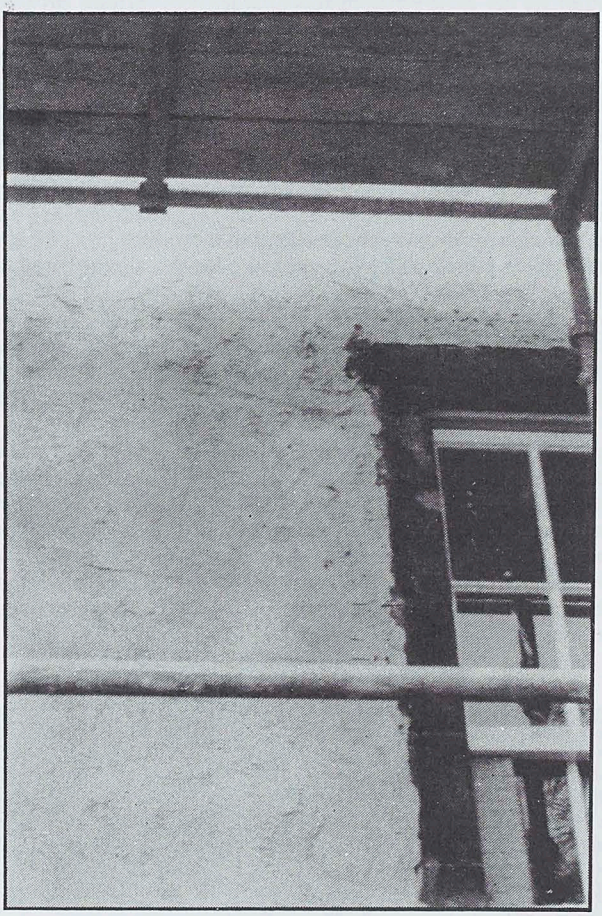
We were fortunate that a small fragment of what appeared to be the original harl was found at the front of the West wing. The pressure from many quarters to hack out and point this building was considerable but a joint effort between John Duncan, the area Conservation Officer for Highland Regional Council, and myself prevailed and the original planning consent favouring repointing was altered to favour harling.



Front Elevation : Extant harl neatly tucked into the margin

Some fragments of harl also remain on the main body of the house, c.1800. The West wing was built about 1851. On examination the original harl was made up of coarse sand, shingle, shell, and of course, lime. The extant section finished flush with the window and quoin margins. There has been a tendency in recent years for the finished cement harls to sit well proud of these margins, but clearly on these more urbane dwellings at least, this is inappropriate.

In response to this a two-part harl was produced. The backing coat was no more than smeared over the sandstone with only rudimentary making up over the joints and where significant erosion had occurred.



Front Elevation : Backing coat being applied

On the main body of the wing this backing coat consisted of:

1 part Buxton lime putty
3 parts Caplich coarse sand

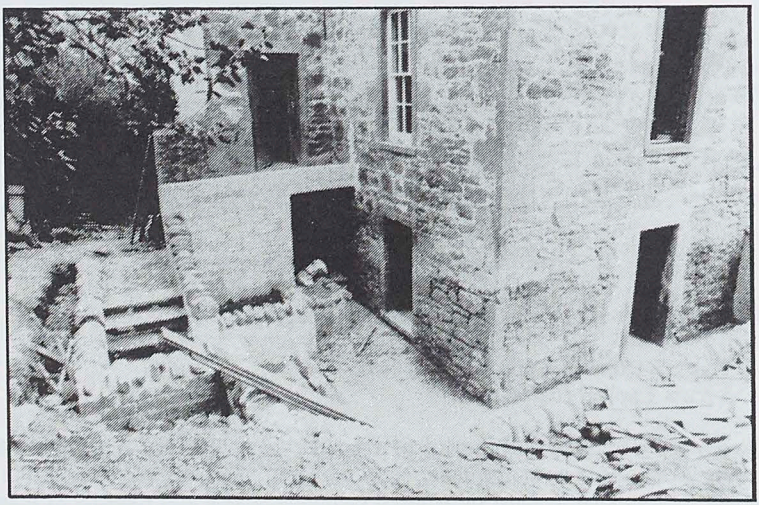
H.T.I. powder was added at one-9th part on the front elevation and one-12th part elsewhere as confidence in the material was gained. The backing coat is the most important undertaking: it must be scoured comprehensively and robustly at least four times. Because no real attempt to flatten out the wall was made, a float could not be used. In the end I protected my hands with Marigold Heavy Duty rubber gloves and

these proved to be the most efficient tools for the job. Strong circular motions were used to feel out the shrinkage cracks as and when they appeared. If these are not eradicated they eventually emerge through the harl. I know this through bitter experience. The greatest difficulty with this site is that the upper part of the building is exposed while the lower part, and in particular the basement area, gets little sun or circulating air. This results in a marked difference between the carbonation of the top, middle and bottom of the building. This was particularly marked at the rear, Southern elevation.

The harl was the same mixture as above except that two litre jugs of Barra shell and the same of shingle were added. This was dashed onto the almost cured but well wetted backing coat.

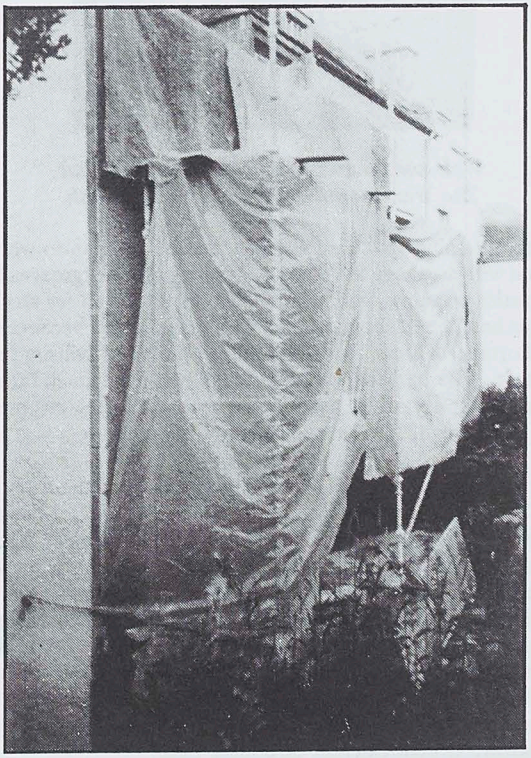
Alterations to the wing, such as the two war-time windows, on the west elevation and the addition of basement level living accommodation were not disguised in any way. Quoin margins were not extended to the path, for example, but left at the original ground level.

One of the significant lessons of technique gained from this project was in the patching and repairing of lime harl. On the western elevation, to the right-hand side and above the first floor window is an area of new harl that had to be patched due to shrinkage. The patch was not detectable even without limewash, a process which is impossible with a cement harl. The implications for repair to extant ancient harls and renders is considerable. Too many buildings are being unnecessarily denuded of their existing harl where patching and three coats of limewash would be more appropriate and of course much less expensive.



West and South Elevation : Former ground level and short margin

The South elevation was very difficult to complete because of constant, blistering sunshine. The covering of work in adverse conditions is essential but, despite being covered with tarpaulins, it still crazed in places. However, limewashing will cure this. New and old harl is incomplete without limewash because the limewash, apart from its capacity to flood and heal small cracks, also gels in the interstices formed by the larger particles of aggregate so that what remains is a small hollow rather than a jagged hole. This is significant because it is desirable with harl that a large surface area is achieved which holds moisture just long enough to allow evaporation to take place without permitting water penetration into the building. The uneven and limewashed harl meets this criterion. In addition, the use of limewash also negates the problem of ground level water marks which is so often crudely dealt with by means of a tilting fillet and base course. The limewash simply obliterates the stain. Finally limewash gives harl a patina which, if it is repeated over a number of years, gives that lovely 'onion skin' appearance only found on older buildings. Like polish on wood, limewash is a final sacrificial protective coat which improves with age if freshened up from time to time.



South Elevation. Protection against intense sunlight

West and South Elevation : Completed Harl
The West elevation finished with lime wash

The chimney stack, retaining wall, and western face of the lean-to were treated to the same procedure but with a change in material. Well soaked Hargreaves bagged hydrated lime in the same ratios as above, with white cement substituted for the H.T.I. This was because these areas had already been treated with cement, and because of the combined difficulties of a shortage of time, money and lime putty. It will be interesting to see which areas fair best. The harl was dashed straight onto the stack rather than treating it to a backing coat. It is very difficult to get a smart finish using this method as the harl tends to sag over the joints if they are not effectively made up.

Although this harling project was not entirely satisfactory, at the time it was felt to be a step in the right direction, particularly in the absence of technical guides on traditional harls. (I have since discovered the S.P.A.B. Information Sheet by Andrew Townsend, which despite its southern bias, is excellent.) In future I would place more emphasis on making up and galleting out the joints before the backing coat goes on; and add hair to the latter to negate some of the difficulties with shrinkage. The backing coat should be mixed several days before work proceeds with the hair beaten in at this stage. This is only possible with the confidence to exclude H.T.I. powder, and this comes only with experience. Slaking my own quicklime means that I now have plentiful supplies of lime water for damping down between coats, scouring and for use as gauging water: thus at every stage the mixture is kept calcium carbonate rich.

No doubt others will have different ideas and experiences, but one thing it seems is clear: the way forward must be empirical if one wants first class and sensitive repairs to ancient and traditional buildings. It is also imperative that the results are made public.

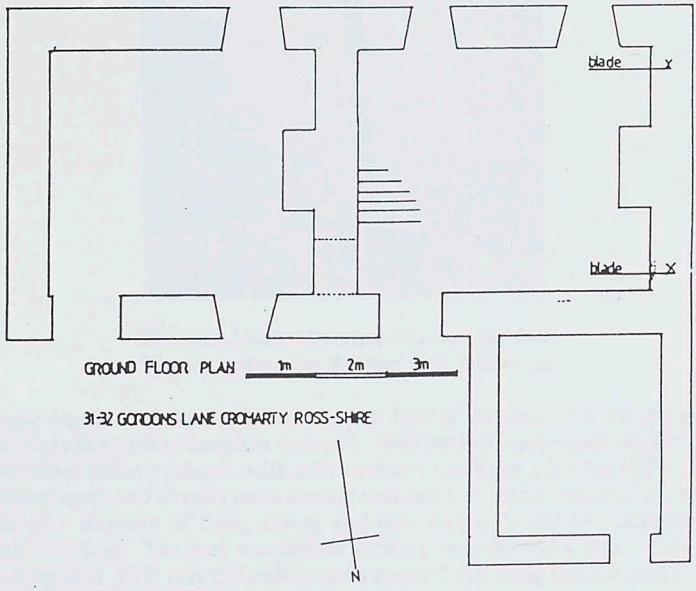
Acknowledgements

Jacqui Goddard for savage editing.
Mr. and Mrs. Brockman-Moore of Belle Vue for tea and labour.
John Duncan for support generally.

EXTANT COUPLE BLADES, CROMARTY, ROSS-SHIRE

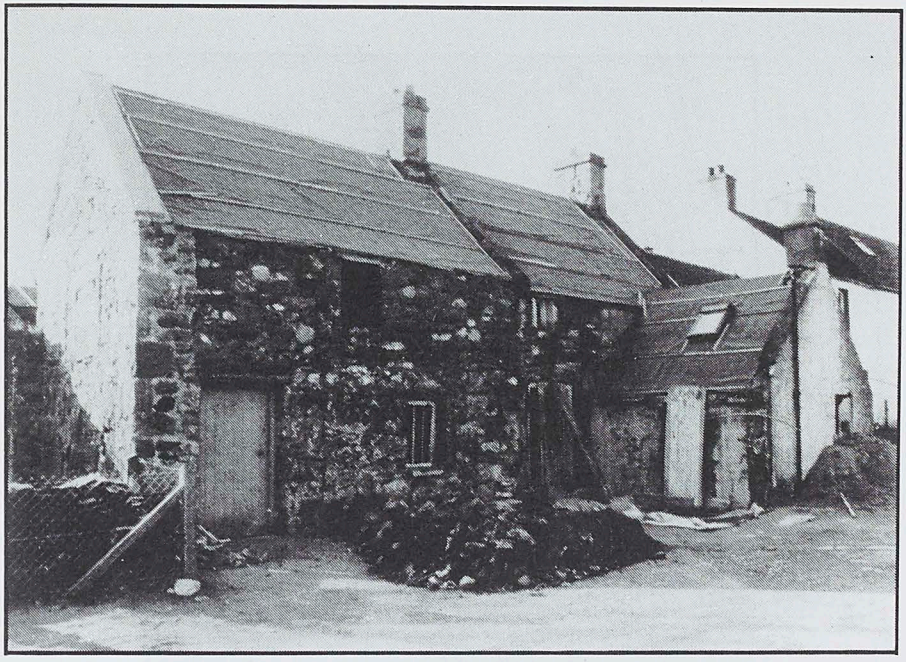
Timothy Meek

This rudimentary report is based upon building works undertaken by the writer during the summer vacation of 1988 at 31-32 Gordons Lane, Cromarty, Ross-shire. Sadly the writer became involved in the project when the works were at an advanced stage and thus, much valuable material was already lost. However the blades were saved and the building's primary features and relationships recorded.

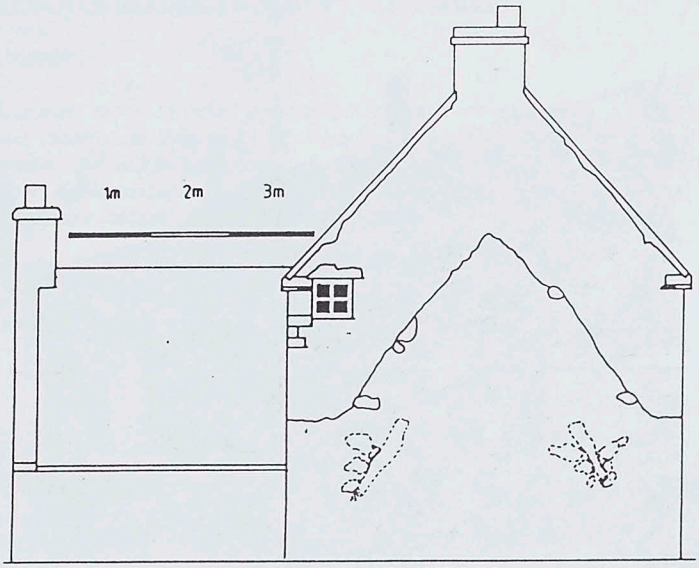


The two buildings have undergone considerable changes and additions throughout their history and the current linking of the two by internal doorways is part of this process. The dividing line between the two properties is retained by the skew and stack of 32 while internally much of the extant panelling in 31 was repaired and the cruck blades in the gable preserved in situ. Thus the integrity of two separate properties was largely maintained.

For the purposes of this paper the primary consideration will be the Western gable which with even a simple stratagraphical analysis presents three distinct phases in development.



The primary coupled structure is represented by the extant blades with clay and rubble infill. The second development in which the gable is raised and widened. A third and final stage in which number 32 is raised to its present level and provided with a stack, skew and raised at the eaves to the front and rear. The present access to the loft space above the new bathroom was presumably the first floor window when the gable and eaves were raised. All three stages are demonstrable in the undulations in the new harl and the blades themselves, if a little self-consciously, remain exposed internally.



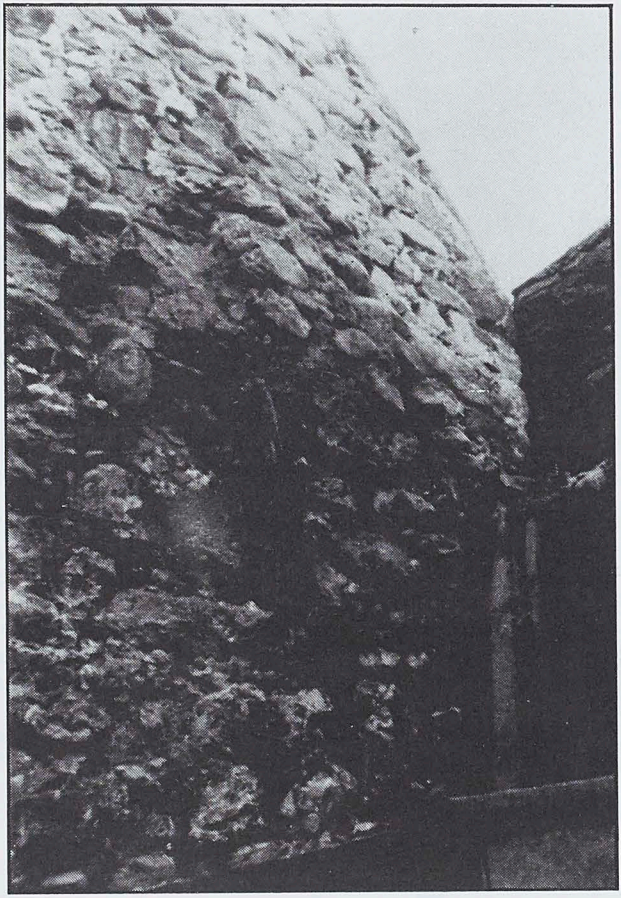
WEST ELEVATION 31 GORDONS LANE CROMARTY ROSS-SHIRE

Externally the blades appear seated in mural slots, about 1m from the ground and 3m apart. Thereafter they extend diagonally for 0.8m and 2.3m apart at their upper limit. They are about 0.250m squared. The northern joint finishes abruptly with a scarfed and pegged joint while the southern blade retains a 'V' shaped notch and pegged socket. No upper members remain. Internally they manifest themselves at about 0.350m from floor level and are then visible for about 0.750m and are canted from the bottom to the top; in short they have a 20° pitch on them from the internal to external leaf. Little working is evident other than crude adzing. They appear to be of rough oak but are well decayed and a second opinion would be welcome.

The second stage in the development was again built with clay and rubble. The eaves level appears to have been at about 1.5m above the present ground level. This material is retained within the present fabric of the front and rear elevations and the gable party wall between the two properties. The front elevation was apparently constructed in bays with timber uprights and rubble infill. The writer believes that some of the aforementioned infill is secondary because the masonry is of coursed sandstone with lime mortar and is therefore hardly commensurate with the material typology.

In the third stage the eaves are raised to 3.5m above the present ground level with rubble masonry which has a clay core and lime mortar facing. A small window is

incorporated into the gable at this stage. Despite the buildings' apparent longevity the quality of the construction is poor.



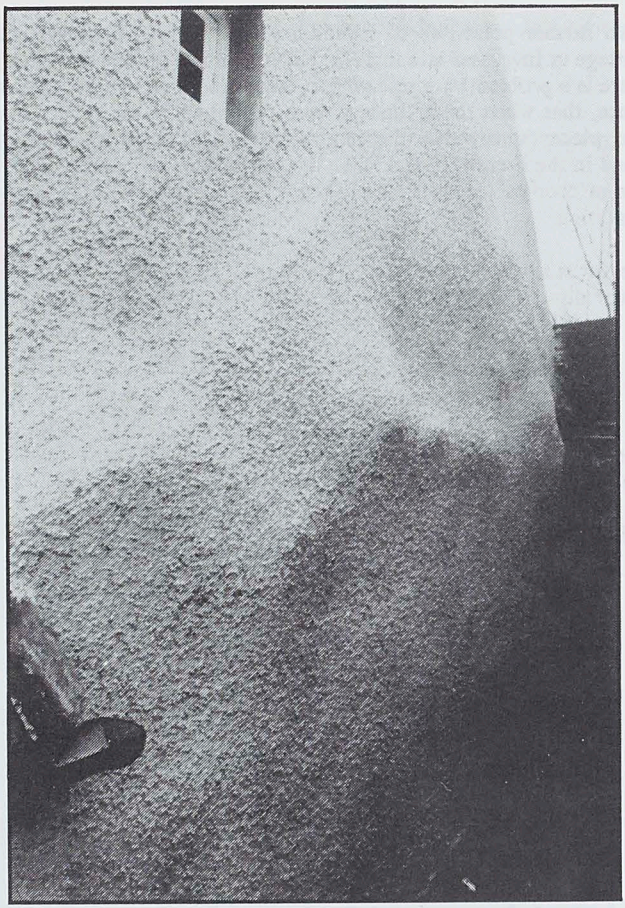
Dating this sequence is indeed problematic; artefacts found on site were not stratigraphically obtained and therefore provide no *terminus post* or *ante quem* for any development. Local historian, David Alston assures me that the properties appear only on recent maps and plans and the title deeds are also relatively new. The writer has little experience of this type of structure but a number of personal comments ascribe the coupled building construction to between 1820 and 1850. It also bears similarities to the blade described by Elizabeth Beaton in Elgin (VB 12 (1988), 14).

There are two further points worth mentioning here; at the SVBWG seminar, **The Highland Cottage** in Inverness late in 1991, Harry Gordon Slade very clearly made the point that there is a problem with referring to these blades as 'crucks'. I know from my own experience, that when these timbers were described to me in these terms I was never able to place them within the same context as English medieval cruck built buildings found in the literature; and still extant in places. Mr Slade, rightly I believe, refers to these as 'couples' (or parts thereof), thus keeping them within their own Scottish vernacular tradition.

The second point is simply a comment on the rapidity with which vernacular buildings can develop (or disappear) in quite complex ways over a short period, and how those changes may be swiftly obscured by further developments. Harl is an excellent example of this.

For the well acquainted this will come as no surprise; yet the understanding of extant relationships even at this level may not be straightforward and highlights the need for care in the removal of materials and artefacts from their contexts and, more importantly, recording the information. While this paper is primarily addressing the Western gable, the buildings as a whole are not without interest if for no other reason than that they are palimpsestual.

West Elevation : The completed harl which in this case respects rather than hides the sequence



West Elevation : The three stages clearly delineated in the harl

ROOF TYPES IN THE TRADITIONAL RURAL BUILDINGS OF ORKNEY

Paul and Alison Newman

Introduction

This paper describes roofing materials and techniques which are found in the remaining traditional rural buildings in Orkney. There are two principal reasons for concentrating on roofs. Firstly, the roof is the most vulnerable part of the building. The proportion of intact roofs decreases as buildings now out of use are destroyed by weather. Thatch is particularly vulnerable, but the timbers of stone clad roofs also rot, and once the roof has gone much technical information is lost and what was left of the interior of the building disintegrates. Secondly, there is considerable variation in the methods of roofing in traditional Orkney buildings - in contrast to other elements, such as walling where variation in the remaining buildings is much less.

Our concern in this paper is to identify and describe different types of roofs. Interesting questions arise about why such variations occur in different places over time, but that analysis is largely beyond the scope of this paper which concentrates on describing the construction of roofs which were intact at the time of our 1991 survey.

The typical traditional building on an Orkney farm steading is a rectangular single cell or multi-cellular arrangement. The buildings may be in a row, or rows, or in other configurations. The plan of the cell may be complicated by internal gables and by the addition of outshots. The end walls are gabled, the wall heads of the long walls are usually capped with a continuous row of flagstones, tilted slightly and projecting slightly over the outside of the walls to form eaves. These flagstones may be called aisins, aiswa's, tekels or wall plates. Sometimes the joints between these flagstones are masked below with smaller stones to reduce the amount of rain seeping through the joints into the interior of the wall.

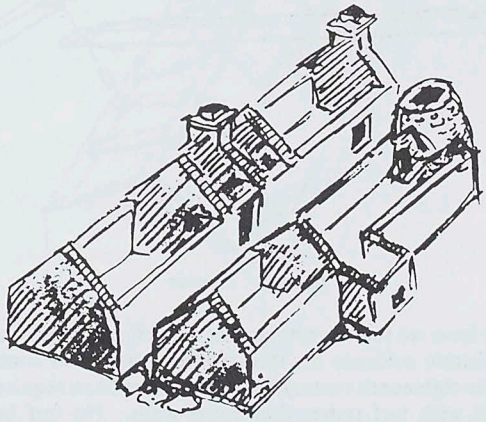


figure 1 : Cellular arrangement of typical farm range

Most buildings, but not all, conform broadly to the same standard dimensions - height to wall head (about 6ft), thickness of walls (about 2 ft), width of building (11 to 13ft). The length of the building is more variable.

Timber Structure

A roof requires a timber structure, usually this comprises couples (A-frames) and horizontal laths. The A-frame is usually made of sawn timber, although unsawn timber is also found. The joints in the A-frame are pegged with wooden pegs or in more recent roofs, nailed together. In the best practice the ends of the tie member are cut to a wedge shape which engages with a wedge shaped recess in the legs of the couple. When the couple is loaded, the legs tend to spread and this tightens the tie joints so that the wooden pegs are not overstressed. Dimensions of sawn timber members do not vary very much. In thatched roofs which have no stone sarking the spacing of couples along the roof is at approximately 3ft intervals. In a stone covered roof the couples are usually closer, even down to a spacing of 18 inches for a very heavy stone roof. The pitch of the roof is set by the couples. Entirely thatched roofs have a relatively steep pitch of about 40 degrees, whereas flagstone roofs are more variable in pitch, typically they are about 30 degrees.

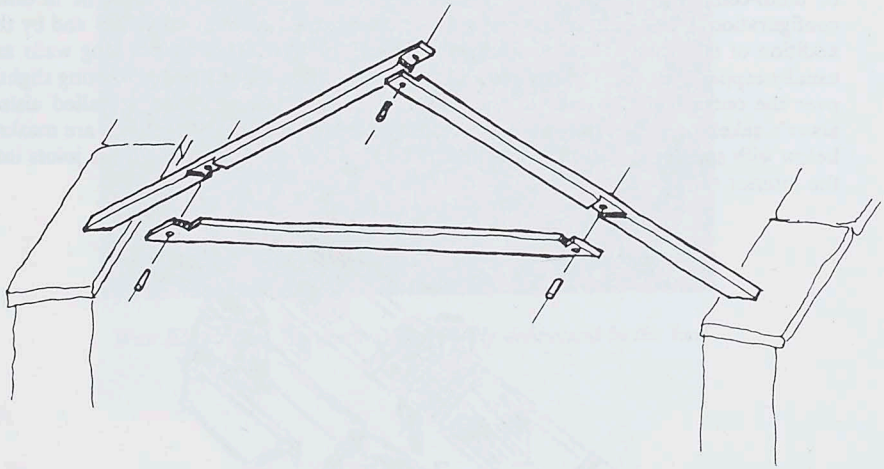


figure 2 : Couple

Nowhere in Orkney have we found anything like a cruck structure or a Highland couple; although there is historic evidence for thinking that some such construction may have been employed in the eighteenth century, and would have been required when and where buildings were built with turf rather than stone walls. No turf buildings survive in Orkney, despite surviving turf gables in buildings on the Caithness coast.

Another variation to note is the position of the feet of the couples. In all the entirely thatched roofs we have seen, and in many flagstone roofs, the couple feet rest on top of the aisins. In other roofs the couple feet rest in pockets in the stone work below the aisins. In the latter case the stone wall may help to restrain the spreading of the couple, but at the risk of gradually pushing the top of the wall outwards. It has been suggested by older Orcadians with a knowledge of building that the latter position is a later development but we have not been able to confirm this.

Horizontal laths are nailed to the legs of the couples, usually in five or six rows per side. The highest row is close to the apex of the couples but there is no ridge pole. We have been told that in constructing roofs to be covered by the very large and thick flagstones in North Ronaldsay, the top laths were substantial timbers known as 'wracking boards' which had the important function of reducing the risk of the timber structure distorting catastrophically as the great stones were placed into position. The lowest row of laths is typically about 1ft above the wall head.

Maintree Roof Structure

Roofs with couples exist in all parts of Orkney. In North Ronaldsay a second type of roof structure (maintree and rafters) occurs which may owe its origin to the frequency of shipwreck around that island. By the same token we might expect to find the same roof structure used in the north of Sanday, however excluding boat roofs, we have only found one roof outside North Ronaldsay without couples, and that is on Graemsay.

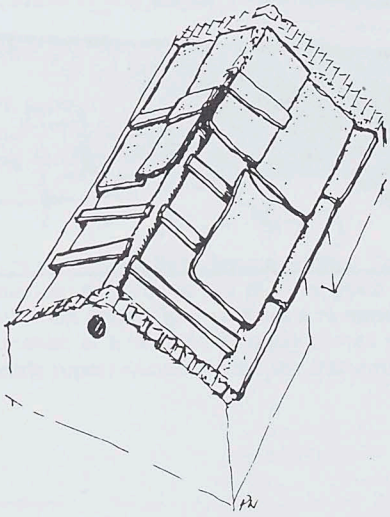


figure 3 : Over seamed flagstones on a North Ronaldsay maintree roof

The maintree roof in its simplest form, has one very stout and long ship's timber forming a ridge beam and built into the stonework near the apex of both gables. The ends of the timber may well be visible on the outside of the gable walls. Substantial rafters are then laid between the maintree and the wall heads. The rafters are not paired but placed where required to support the flagstones above. The rafters do not appear to be fixed to the maintree. Where a very long piece of timber is not available, or where the maintree might sag under the load, a cross beam is used, to halve the span of the maintree. Further complications are introduced where there are outshots. A stout piece of timber will be placed across the opening in the main wall as a lintel to take the ends of main rafters and additional rafters under the roof of the outshot. North Ronaldsay main tree roofs are always covered with flag stones. The main tree roof is specifically designed, or has evolved, to deal with the structural problems of supporting large flagstones. It can also be seen as a response to the availability of wreckage from wooden ships in a particularly treacherous area for shipping.

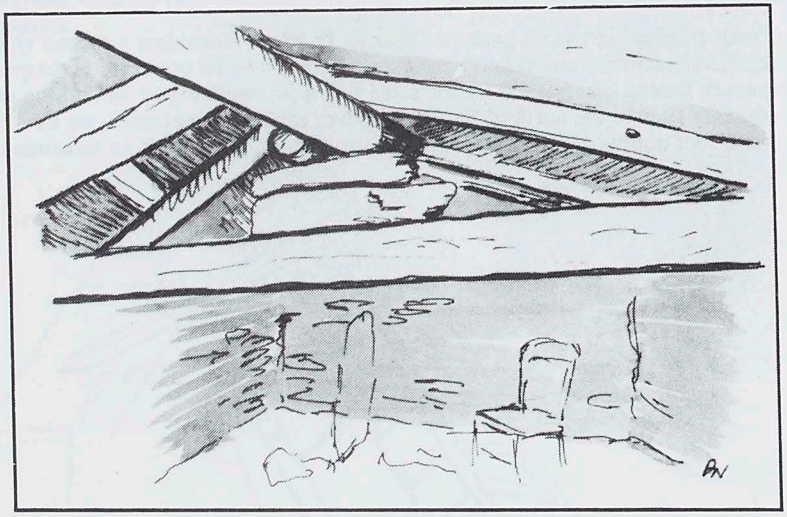


figure 4 : Cross beam in a maintree roof - North Ronaldsay, May 1991

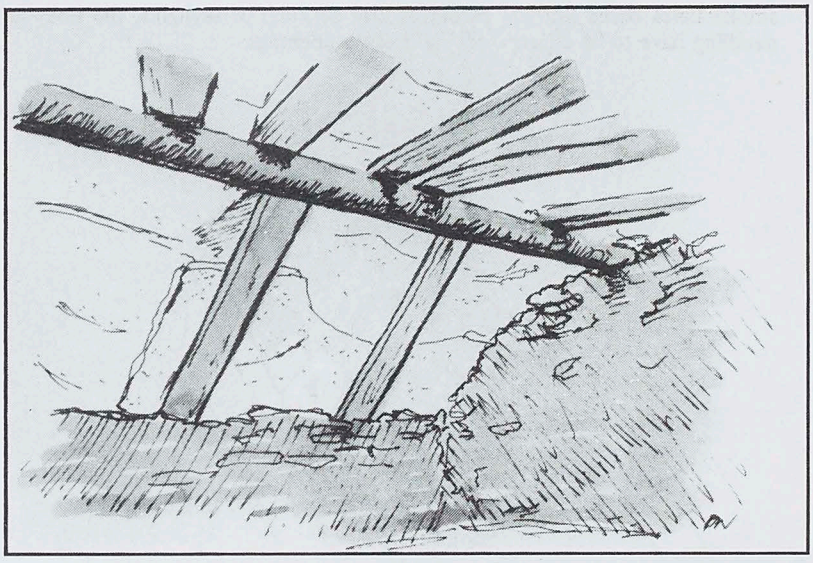


figure 5 : Maintree roof interior - North Ronaldsay, May 1991

Roof Covering - Thatch

One of the effects of agricultural improvement in the nineteenth century was the discouragement of thatched roofs. It seems probable that prior to the nineteenth century all the roofs of ordinary rural buildings would have been thatched.

Base layer

An Orcadian thatch roof is usually a three layer covering. The base layer (which could be thought of as the sarking) could be of one of three types:

a. **needling:** the creation of a 'tent' from tightly packed straw or heather simmens (two-ply handmade ropes) wound around the framework of laths.[5]

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5 Paul and Alison Newman, *Simmens & Strae: Thatched Roofs in Orkney,* Vernacular Building 15, (1991)

There are five or six horizontal laths fixed to the couple legs on either side of the roof. There is no ridge pole as such. The simmens are wound back and forth over the laths and secured to the lowest lath on either side of the roof. Where smoke holes occur (for the earlier central hearths) or skylights, the laths and needling have to be adjusted to frame these openings.

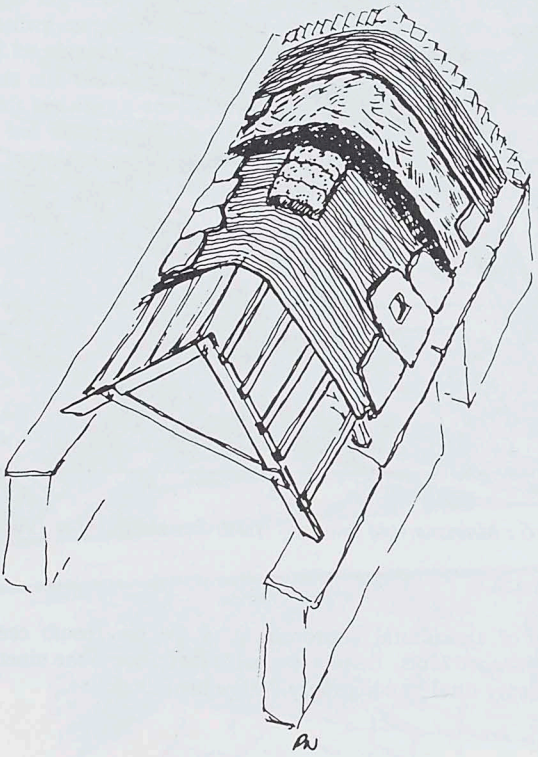

figure 6 : Needled thatched roof

b. **turf on lath:** the pieces of turf lapped and pegged to form a 'tent'.

In turf roofs there are usually more laths or broader laths to give the additional support required to hold the turf in position. The turf is carefully selected for a felt-like texture and cut about half an inch thick. The pieces of turf are usually lapped. In North Walls (island of Hoy) there are roofs made with heather turf with the heather stalks on the underside of the roof and visible between the laths. However most of the turf roofs we have seen in Orkney are made with grass turf.

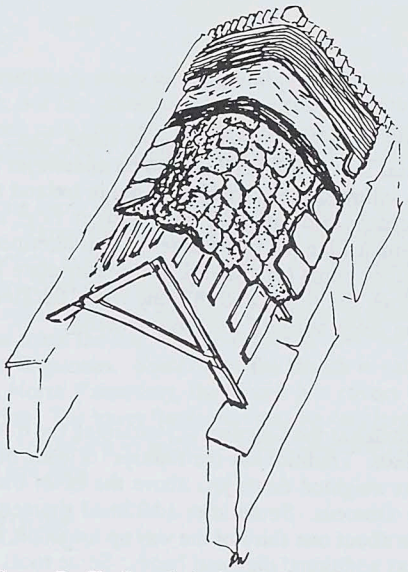

figure 7 : Turf-on-lath thatched roof

c. **stone:** flagstones laid in the overseamed manner.

The construction of roofs with flagstone as the base layer is covered later in the description of unthatched overseamed flagstone roofs.

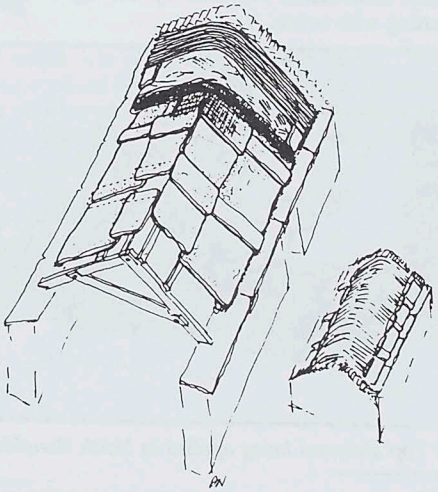

figure 8 : Flagstone and thatch roof.
Inset : The thatch may only partly cover the lowest row of stones.

Intermediate layer

In the first two cases (a & b) a thick layer of straw, bent, and maybe other organic materials is laid loose; that is, not stitched into an underlayer like English thatching, and not held down with willow or hazel rods as found in Ireland and elsewhere in Scotland. The fibres are sometimes laid with their axis between ridge and eaves, but may also be laid in a random manner (like the fibres in felt). This intermediate layer may be omitted on some thatched stone roofs (c). Where the intermediate layer is present, there may also be turfs laid along the ridge, and in stone roofs, flackies (woven straw mats) have been found over the ridge beneath the loose material.

Top layer

The top layer of thatch has the function of restraining the intermediate layer against the ravages of fierce winds. Traditionally the top layer is made of fairly closely packed straw or heather simmens weighted down just above the eaves with 'bendlin stanes' inserted in the loops of the simmens. Sometimes additional simmens were applied, sometimes as a horizontal rope about one third of the way up the slope, attached to iron pegs in the gables, sometimes as additional diagonal bands. Some roofs with a flagstone base layer may have only the top simmens, but in this case would be well made with overseamed flagstones to achieve the necessary weather-tightness without the intermediate layer.

Photographs taken around the turn of the century show many roofs with the top simmens in place. In the early part of this century, netting of various kinds became more readily available. Agriculture shifts emphasis from grain growing to cattle rearing, so there is less straw available to make simmens. Top simmens had to be renewed every few years, and steadily the top simmens is replaced by netting. The bendlin stanes are now attached to the netting with twine.

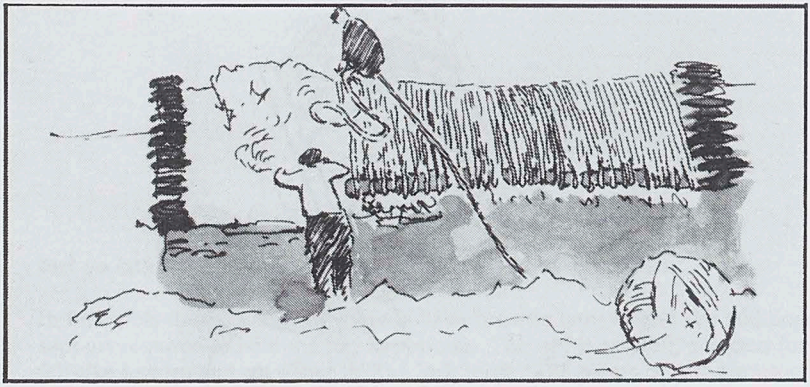

figure 9 : Top simmens being applied in North Ronaldsay around 1960[6]

[6] Drawn from a photograph in the Scottish Ethnological Archive, National Museums of Scotland. The photograph shows top simmens being applied on thatch overlying flagstone on a North Ronaldsay roof around 1960.

Some stone roofs have surprisingly steep pitches, and this indicates that the roof may have been of the needled thatch type, but has subsequently been covered with flagstone or slates. Many stone roofs can be seen with luxuriant patches of grass growing on them. This may be the vestigial remains of either turf or straw which has been colonised by the grass.

In the case of thatched stone roofs there is also some variation in the amount of cover provided by the thatch. In Orkney the overhang of aisins or flagstones over the walls is always small. From a practical point of view this may be to reduce the risk of strong winds lifting the roof. Thatch does not overhang either, in marked contrast to the deeply overhanging eaves of an English thatched cottage. The bendlin stanes which weight the top simmens or netting and mark the edge of the thatched covering, usually rest on the roof over the lower row of flagstones. Sometimes the thatch is extended down to the aisins, in other cases as in North Ronaldsay, the thatch just covers the joint where the two rows of flagstones overlap. The lower flagstones may be very large which means that only the top half of the roof is covered with thatch with an equally large area of exposed stone on the lower part of the roof.

UNTHATCHED STONE ROOFS

There are three types of flagstone covering, to which we add the roofing of traditional rural buildings with grey slate obtained from Orkney or Caithness. The types of roof are:

a. overseamed flagstones
b. underseamed flagstones
c. overhanging underseamed flagstones without aisins
d. slate roof

Overseamed flagstone roof

This is the type of roof which was often covered with thatch. With the changes in agriculture and restrictions imposed by certain land owners in the nineteenth century, the use of thatch declined from being more or less universal to a point where in some areas there was no thatch by the end of the century. There are for example no remaining thatched roofs, or even vestiges of thatch in Shapinsay.

That must be the final occasion top simmens was ever applied to a building in Orkney.

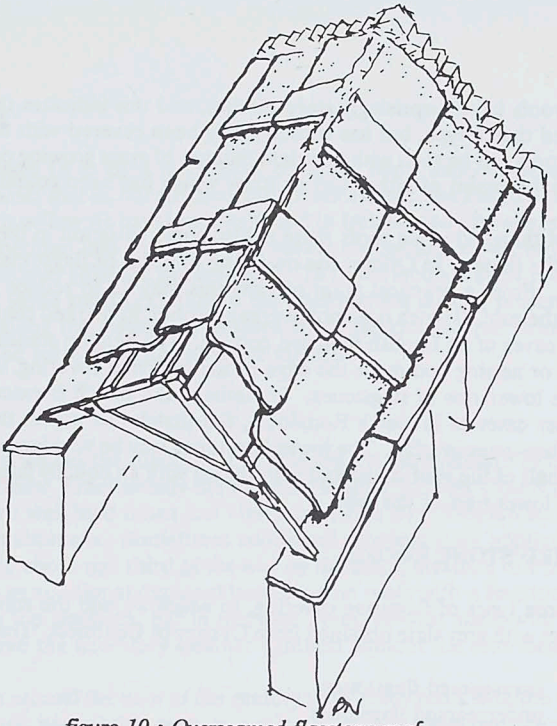

figure 10 : Overseamed flagstone roof

We think the earliest stone roofs were of the overseamed type where the vertical joints between the main layer of flagstones are covered with smaller stones which in turn are lapped. The overseamers reduce in size the lower down they are on the roof. Generally there will be two or three rows of main stones on each side of a roof, depending on the characteristics of the locally available stone. We do not know if thatched overseamed roofs had the joints filled with clay. The main flagstones and the overseamers were evidently carefully chosen so that the camber reduced the ingress of water through the joints. The overseamers step down in size the lower they are, so that water tends to be thrown onto the flagstone below rather than run along the joint.[7]

Unthatched overseamed roofs need pointing to improve weather tightness and more care has to be taken in sizing and placing stones. Joints would be pointed with lime mortar and subsequently cement mortar. The ridge is now capped with cement, or occasionally worked stone. The largest stones rest on the aisins and on two couples. If the pitch is shallow, none of the stones may be fixed with nails or pegs, being held in place by their own weight. Sometimes the upper stones are nailed into the backs of the couple legs. Skews at the gable may often be covered with more overseamer stones.

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[7] John Firth, *The Stone Mason in Harray* in Sheila Spence (ed), Old Orkney Trades, (1988) The Orkney Press. Includes a detailed account of the use of flagstones in roofing.

In some roofs where the thatch has been stripped off or where the stone can be seen from inside, the overseamed roof can seem very rough and improvised. More care has to be taken with unthatched roofs and you can see a definite concern for the appearance of the roof, with regular rows and carefully graded overseamers. In Westray there are a few examples of triangular overseamers producing a very distinctive appearance. There would be no point in this obvious concern for appearance if the flagstones simply provided a sarking for thatch.

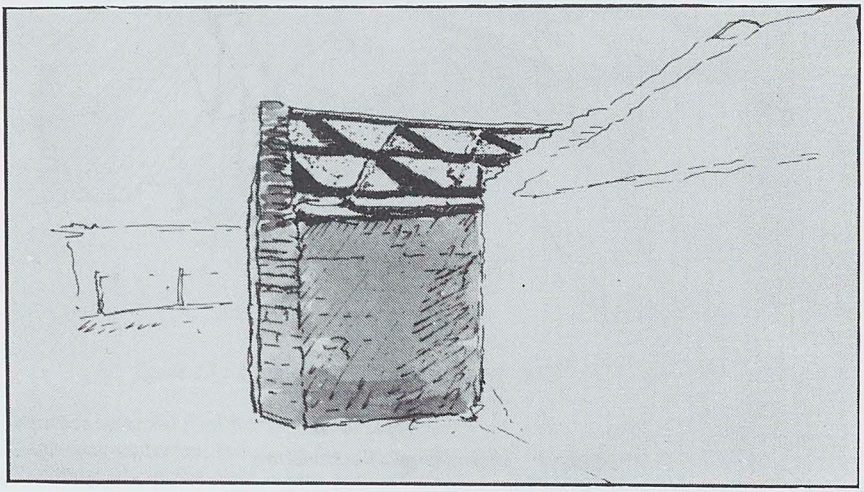


figure 11 : Overseamed flagstone roof with triangular stones - Westray, March 1991

Underseamed flagstone roof

In the underseamed roof, the main flagstones are rectangular in shape with straight edges to ensure a close fit to adjacent stones. Below the vertical joints between the main stones are the underseamer stones fitted in between the couples. The underseamers have to be held in place with wooden laths fixed to the couples. The underseamer stones are themselves lapped. The lowest stone discharges any water onto the aisins. The very low pitch of some overseamed roofs is not found with underseamed roofs and the upper rows of flagstones are pegged or nailed to the timber structure below.

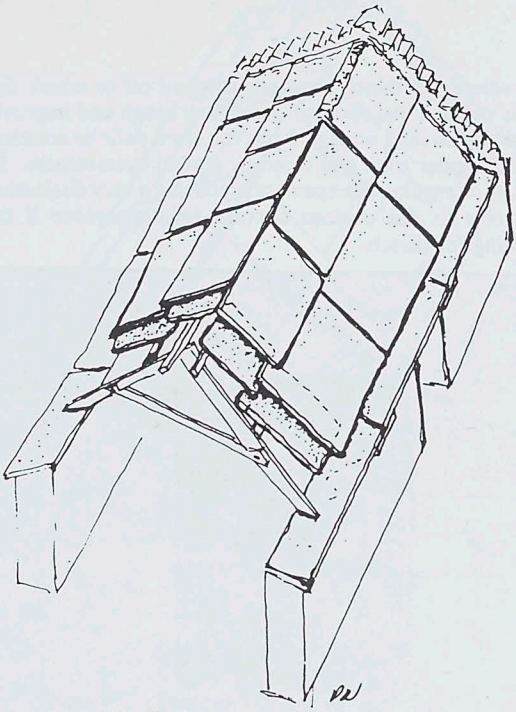


figure 12 : Underseamed flagstone roof

It will be apparent that there is a great deal more work involved in constructing an underseamed roof. There would be no point in going to such trouble if it were only going to be covered with thatch. We think these roofs reflect a growing self-consciousness on the part of the people who erected them. This may suggest that the builders were looking over their shoulders so to speak, at the slate roofs erected by the lairds. Although there is more work required in making an underseamed roof, it is hardly a technical improvement on an overseamed roof. Indeed an underseamed roof may be more likely to fail as the underseamers are inclined to slip out of position. We have noticed that pieces of galvanised iron are occasionally used as a substitute for underseamer stones.

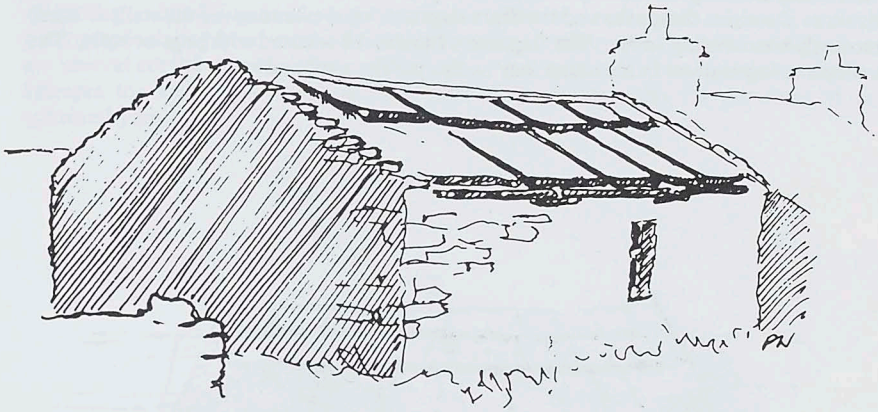


figure 13 : Underseamed flagstone roof - Westray, March 1991

The underseamed roof has aisins, and sometimes the joints between the aisin stones are themselves underseamed. This feature is easy to see when present. In Sanday there is a building where the aisin is one piece of stone 15 feet long.

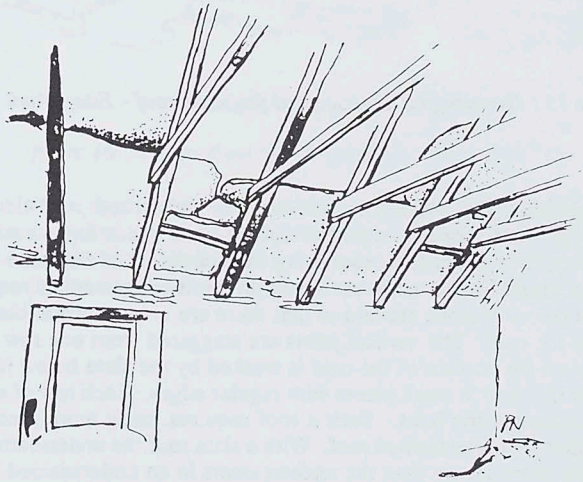


figure 14 : Interior of partly ruined underseamed flagstone roof - Sanday, April 1991
Note: two underseamers with supporting laths can be seen

Overhanging underseamed roof

This is the next step on the way to making flagstone roofs look more like slate roofs. In this case the aisins disappear and the main flagstone roof extends over the walls to make modestly overhanging eaves. The flagstones have to be secured with pegs or nails. The underseaming is done in the same way as the previous type of roof.

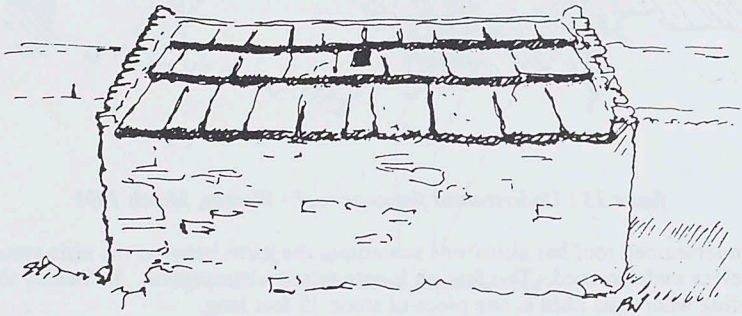


figure 15 : Overhanging underseamed flagstone roof - Eday, April 1991

Slate roof

If we are right that the vernacular tradition in unthatched roof design has been progressively influenced by the imported styles of the more aristocratic elements in Orcadian society, then the style of roof using smaller pieces of flagstone in a slate type of construction would be the most recent step in the development of roof design. In a slate roof, thin pieces of stone are laid so that there are at least two thicknesses of stone everywhere on the roof. The vertical joints are staggered from one row to the next so that each joint on the surface of the roof is masked by the slate below it. Stones have to be relatively thin and in small pieces with regular edges. Each row of stones requires to be nailed to supporting laths. Such a roof requires many more pieces of wood of small section than an underseamed roof. With a slate roof the underseaming is 'built-in' and intrinsically more secure than the underseamers in an underseamed flagstone roof. The slate roof is more prone to wind damage because of the relative lightness of the slates.

OTHER TYPES OF TRADITIONAL ROOFS

To complete the picture some other roof types should be mentioned. There is a tradition of roofing outbuildings with upturned boats. These can be seen in some archive photographs dating from around the beginning of this century. In North Ronaldsay there are several surviving outbuildings which have or had boat roofs. In the most complete example the walls have been carefully profiled, perfectly to fit the gunwales of an upturned yole.

figure 16: Boat roof on North Ronaldsay May 1991

In more recent times corrugated iron sheeting, tar-paper and other factory-made products have been applied to old stone buildings. In so far as vernacular building can be seen as a quest for the most economical way of providing shelter in the circumstances prevailing at a particular time, perhaps the use of these materials should be seen as part of vernacular tradition.

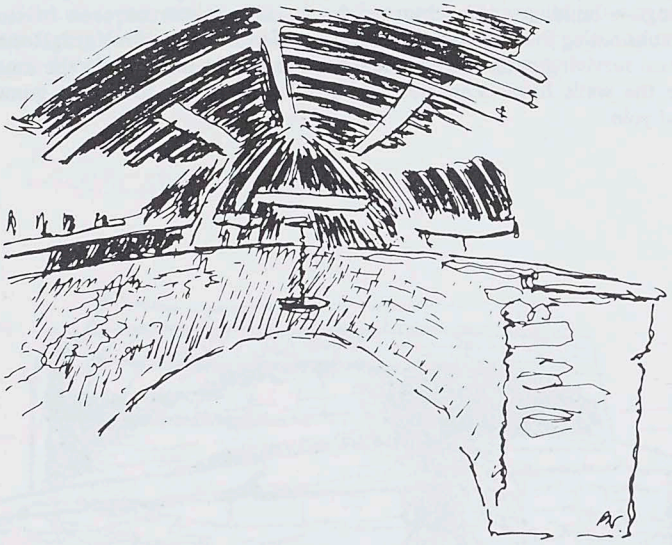


figure 17 : Interior view of boat roof on previous page

THE DEVELOPMENT OF ROOF TYPES

It would seem from archive material that there were rural buildings up to the end of the eighteenth century in Orkney with turf walls and thatched roofs, as there were throughout Scotland. If this is correct, questions arise concerning the type of roof structure used in Orcadian turf walled houses. Turf walls are of little use for load bearing, so neither the couple roof structure nor the maintree roof structure we see today could have been used. It would seem probable that the roof structure for such houses would be something akin to the highland couple with timber legs to support the roof. If cruck-like structures did exist, they have vanished without physical trace. There is considerable evidence in Caithness for cruck structures in existing buildings. It is puzzling that there is no remaining evidence in Orkney.

All building timber in Orkney was either imported or gathered from the shore. One of the benefits of stone walls is the economy in use of timber. Orkney roofs with couples are economical in the use of timber, more so than the roofs of black houses in the Western Isles, for example.

The needled roof is peculiar to Orkney. We suggest that its development may be a response to the reduced availability of turf as agriculture changed in the nineteenth century, together with the relative abundance of straw. Orkney was a grain growing area

in contrast to Shetland, the Western Isles and the North Western Isles and the North Western mainland of Scotland.

Overseamed flagstone roofs can only be associated with buildings which have load bearing stone walls. It would seem likely that these roofs were originally conceived as thatched roofs with the stone used as sarking and as an alternative to needled simmens. Underseamed, overhanging underseamed, and slate roofs would appear to be later developments where thatch is abandoned and there is a growing preoccupation with the appearance of the roof.

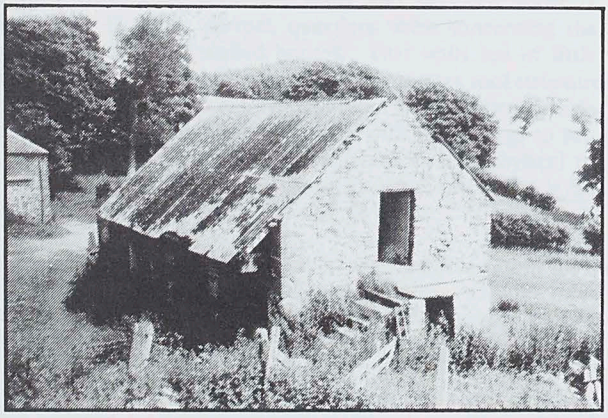
TWO UNUSUAL VERNACULAR BUILDINGS IN DUNDEE DISTRICT

Robin D A Evetts

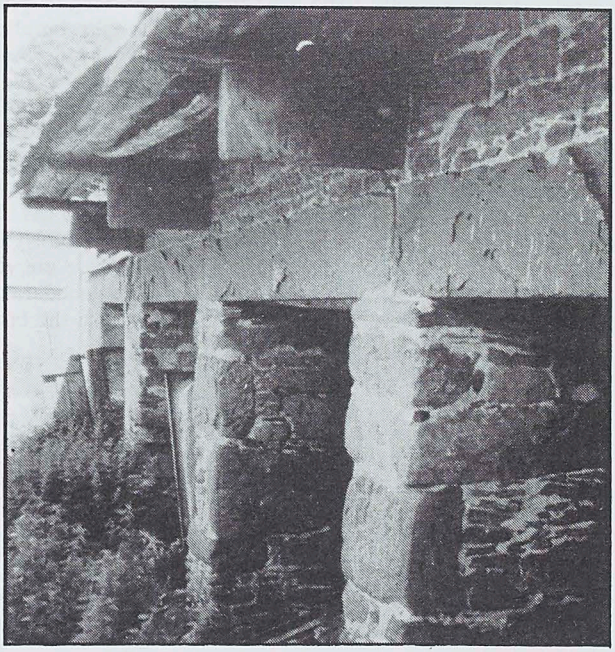
The listed building re-survey in the City of Dundee District Parishes has recently been completed, resulting in a considerable increase in the number of buildings listed. Two structures which the re-survey has revealed that are likely to be of particular interest to *Vernacular Building* readers are the cart shed and granary at Wester Keith, Lundie Parish, and the former threshing mill at South Ballo, Longforgan Parish. Both buildings are in relatively isolated and exposed positions, and apparently unknown to antiquarians and architectural historians.

The rectangular-plan cart shed and granary is of rubble construction with rough-hewn quoins and corrugated asbestos roof, which may originally have been thatched. There is a forestair and granary door to the south gable, and a window to the north, concealed by the addition of a further bay (with slate roof). The four (originally three) cart arches are formed by squared rubble sandstone piers with ashlar lintels, and the relatively small horizontal granary openings protected by top-hinged timber casements. All these features are unremarkable; what makes the building unusual is the swept roof over the west facing cart arches and granary openings, supported on long projecting stone buttresses. The most obvious reason for this feature is that it would afford some protection from the prevailing westerly weather.

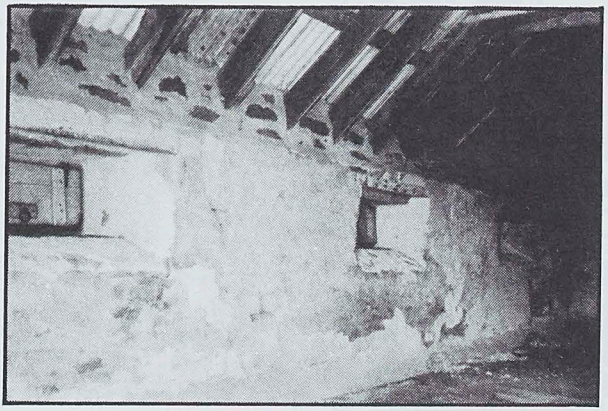
The building probably dates from the first decades of the nineteenth century, and is likely to be that shown on a map of the Camperdown Estate (1848). In the *New Statistical Account* written in 1838, revised in 1842 and published in 1845, the Rev. George Arkley mentions that the farmer, a Mr. Alexander Smith, had recently been the first in the parish to use the subsoil plough. Smith, being something of an innovator may also have been responsible for the cart shed and granary, the swept roof presumably regarded as an improvement.



Cart shed and granary

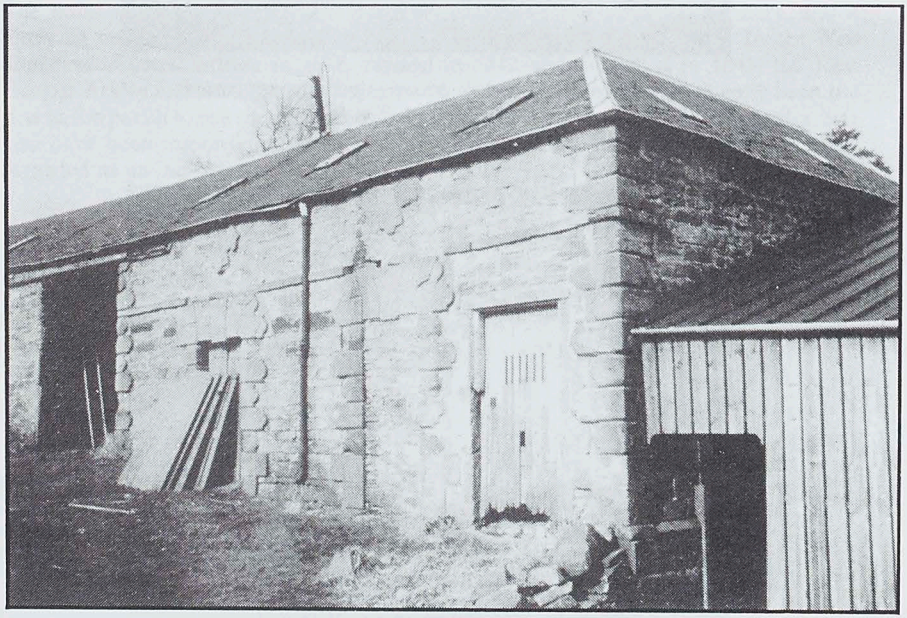


The swept roof over the granary openings, supported on long projecting corbels



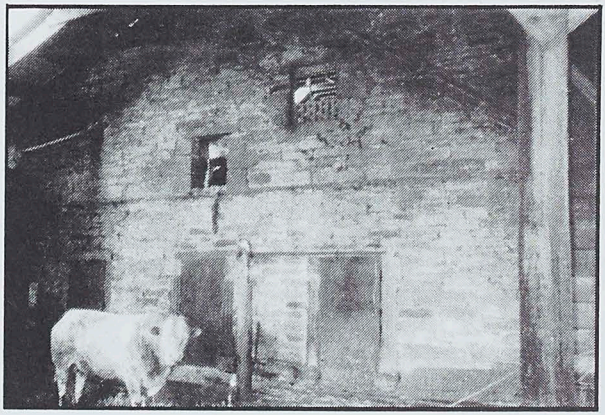
Granary interior, showing the narrow boarded openings

The former threshing barn at South Ballo is a vernacular building of quite different complexion. Examples of steadings which incorporate former farmhouses are not uncommon, but the re-use of parts of a mansion house within and subservient to the steading form is seen less often. South Ballo appears to be an example of the latter, although it is not clear precisely which part of the mansion or indeed its offices has been incorporated. An L-plan structure built on falling ground, the re-used part forming the bottom end of the down stroke of the L. There are two door-pieces with buckle-type quoins and what appears to be the remains of two oculi immediately above, and similar buckle-type quoins to the flanking angles. The right return elevation has three basement doorways with fluted jambs (but no trace of capitals or moulded lintels), leading to low segmental vaulted chambers with battered walls. Elsewhere there are various re-used dressed stones and mouldings. Other parts of the steading are modern, but there are various sculpted stones and figures on site which may date from the late seventeenth century.



Former threshing barn, South Ballo

Buckle-type quoins in the former threshing barn



Entrances to the vaults, with fluted jambs

Little is known about the former mansion house, although it appears to have been extant for about one hundred years. The *Old Statistical Account* mentions that two estates were let in the upper part of the parish in 1767 and improved, with a mansion house erected on each. The house at South Ballo is shown on Stobie's map of 1783, complete with formal tree planting, but by the time of the first Ordnance Survey in 1861, only a U-plan steading and farmhouse is apparent. At this time the property was owned by Captain Trotter of Ballindean in the neighbouring parish of Inchture, although it may have formed part of the Hallyburton or Rossie estates at different times.

The writer would be pleased to hear from members who have knowledge of these or similar buildings.

References

Wester Keith: James Bett, surveyor, *Atlas of Part of Camperdown Estate* (1848), photocopy in Dundee Archive and Record Centre; *New Statistical Account* (1845), vol.XI, 464.

South Ballo: James Stobie, *Map of the Counties of Perth and Clackmannan* (1783); *Ordnance Survey Map* (1867); *Old Statistical Account* (1797), vol.XIX, 501.

The threshing barn, showing the segmental vaulted chamber with battered walls

SWANSTON STEADING

Rachel Tilling

The History of the Farm

At the foot of the northern slopes of the Pentland Hills, Swanston remains one of the few villages of Edinburgh to retain a distinct rural setting. Most villages have been submerged by waves of urban growth, e.g. Tipperlin and Morningside, but despite the advancing residential developments of the 'Oxgangs' and 'Swanston' areas, Swanston village has managed to keep its agricultural head above water (fig. 1).

Fig. 1 : A view of Swanston taken in 1949, looking towards the Pentland Hills

The original farmhouse at Swanston existed in the mid seventeenth century and was refuge, during the tenancy of a 'true blue Protestant family', to the Covenanters when night conventicles were held in the Pentland Hills: ... 'the farm doors stood hospitably open till the morning and the dresser was laden with cheese and bannocks, milk and brandy'.

Food at Swanston is also reputed to have sustained the '45 Highlanders: ... 'the churn stood full of cream in the dairy, and with this they made their brose in high delight'.[8]

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[8] R. L. Stevenson *Picturesque Old Edinburgh*, (1878)

The farm lands of West Swanston were once the property of Sir John Cockburn, Usher to the King in 1462. In 1538 the lands passed to the Foulis family of Colinton and in 1670 to the Trotters of Mortonhall. In 1784 Trotter also acquired East Swanston and by 1806 the entire Swanston area, consisting of East and West Swanston and the Temple Lands.[9] A description of the agriculture in the area comes from the Rev John Walker in the Old Statistical Account of 1791-4, but no reference is made to buildings until the Parish account in the 1838 Statistical Account in which the Rev. Louis Balfour reported that some land had lately been subjected to the plough on the farm at Swanston, and that generally farm steadings were mostly very old with thatch or tile roofs affording very different accommodation to those recently built, some of which had slate roofs. Bonally farm had a steam engine for thrashing.

The origin of the existing steading at Swanston can be traced to a plan in *A Cyclopedia of Agriculture - Both Practical and Scientific* by John Chalmers Morton, published in 1855, in which the intended form and functional arrangement of several steadings was recorded (figs. 2 and 3).

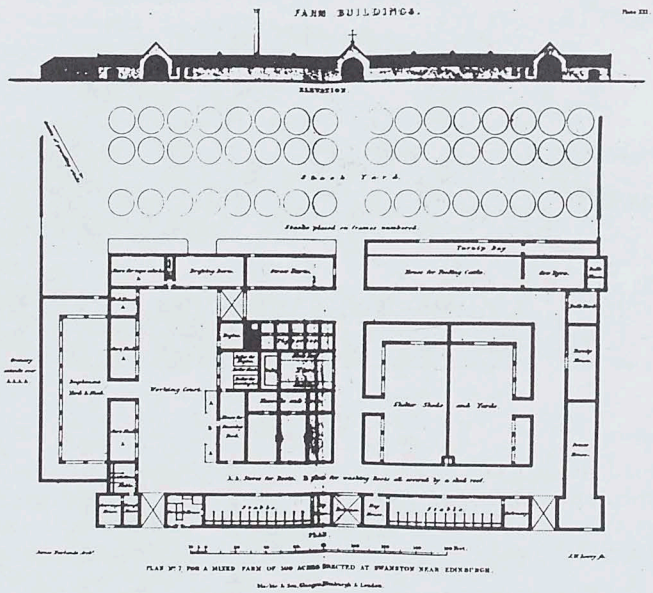

Fig. 2

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9 A Charter by James VI in 1614 in which the Templars Possessions in Scotland are listed, includes a reference which confirms their association with Swanston: 'terras templarias de Swainstoun possessas'. The location of the Temple Lands is unknown.

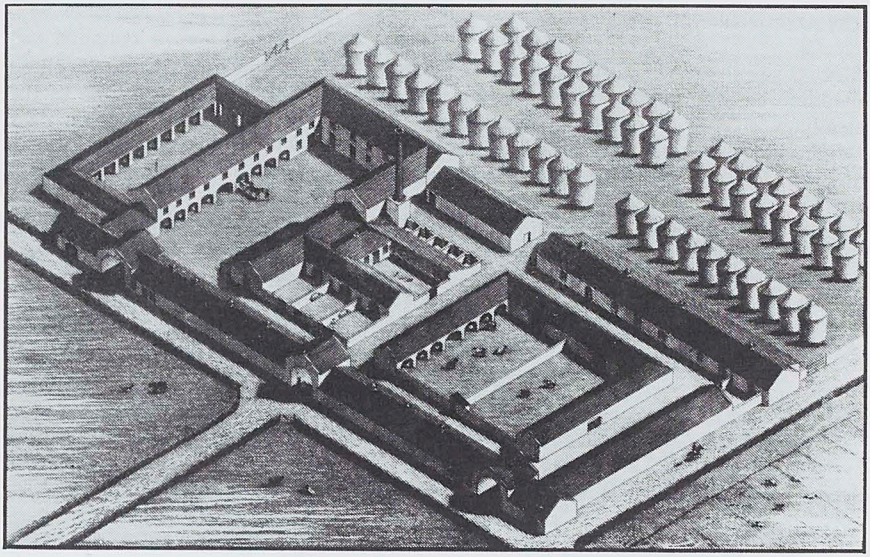

Fig. 3

Inclusion in Morton's *Cyclopedia* suggests that the steading was built before 1855 because Morton described his collection as plans of farms actually built. In the case of Swanston, the time lapse between building and Morton's description was sufficient for him to report that by the time of his writing the owners of Swanston had realised with hindsight that an implement shed was necessary, having not originally built one. Hence the steading could have been built several years earlier:

> ... some of the buildings of which the plans are here given were curtailed of some parts which the designer considered essential; and the lapse of time has shown the correctness of his views, by the buildings gradually approaching the form and completeness of the unmaimed design, by successive alterations and additions.

It is impossible to ascertain exactly when the steading was built. The 1855 Ordnance Survey map shows a comparable formal layout; but earlier maps are too small scale to identify the steading; let alone offer proof of its existence in that form. It is possible that Swanston steading was one of the improved steadings recorded as built in the 1838 *New Statistical Account*. Doubt is cast, however, by the fact that the same report makes a pointed exception of Bonally as a farm powered by steam; and Swanston steading was not mentioned for that innovation, and yet in its improved form the steading was steam powered. Exclusion from the *Account* in that capacity could have been an oversight, but it is unlikely, when Swanston was noted for its ploughed land. The steading was most likely to have been built between the late 1830s and the early 1850s.

The Architecture of The Steading

Morton selected eight farm steadings to illustrate the principles he advocated, albeit modified by local circumstances and the 'peculiar views' of the owners. One of the steadings is 'Plan No. 7 for a Mixed Farm of 500 acres erected at Swanston near Edinburgh' (figs. 2 and 3 above) designed by James Newlands. The steading reflects the ideas expressed in Morton's section about Farm Buildings:

> Regarding agriculture as in reality a manufacture, the perfect adaptation to their purpose of the buildings necessary to the carrying on of many of its most important operations will at once appear to be of the highest importance.

The main priority was to ensure economy of time and labour within the steading:

> ... keep in view that the end attained should direct the operation. Certain principles should be held in accordance with which the whole idea of the plan should be conceived and its parts disposed and constructed.

Second was to ensure a SE aspect for warmth, light, cheerfulness and shelter which:

> ... when comprised within the form of a long rectangle ensures that the rays of the sun shall visit every part of it in the course of the day.

Concerning the position of the farmhouse Morton condemned 'parlour-farming': 'the advantages of which (security) are not very apparent, the attendant evils glaringly so', recommending instead a place where the amenities of a country residence can be best enjoyed.

Convenience of function within the steading was attainable in two ways - to connect mutually dependent buildings and to arrange together houses used for analogous purposes. The barn thus governed the position of many other buildings, containing forage and litter for the stables, feeding houses and yards. The straw barn would be connected to the thrashing barn, and thence to where the motive power to drive the machinery was housed. The granary would be close to the corn and dressing barns, and houses where food was stored, prepared and consumed should be mutually accessible. A refinement of the last point was that:

> ... it is better to have the house where food is prepared and whence small quantities are taken several times a day, close to the place where food is consumed, than to have it near the store house from which the supply may require to be carried only once.

Morton recommended a working-court round which would be food storage and preparation sheds, cart sheds, tool and implement houses, blacksmith and carpenters' worksheds, all in their proper place to facilitate the labour of the homestead. The highest buildings were placed to give shelter from prevailing winds and yet not intercept the rays of the sun. Security, especially in the vicinity of a town would be maximised by having one main entrance, closed at night.

The collective form of the buildings was vital. Rather than huddled round a dirty court, the buildings should be spread out and the yards placed to receive sunshine and air, ideally in the form of a: 'long parallelogram, with buildings along three sides and its open side fronting towards the south'.

Honesty to function applied not only to practical layout but also to the appearance of the steading:

> ... any attempt to mask or disguise the character of a building ... is bad taste, and expression of character can be obtained easily. The steading can be arranged symmetrically, and where this is not attainable the extended lines of building, the archways, the varying outlines of heights and numerous gables never fail to give piquancy and picturesqueness ... no mock arches, mock doors or mock gables - let everything be real and expressive of its use, and trust to that expression as the best aesthetic principle of design in such erections.

Swanston steading as illustrated in Plan No. 7 (see fig. 3) fulfils most of Morton's criteria for a successful steading. Facing east away from the prevailing winds, the relationship of the buildings as a whole is in accordance with Morton's principles.

Swanston had several types of cattle-house. The shelter-shed and yard for young cattle to accumulate manure until the beasts were turned out, hammels for feeding two or three cattle, supplied with litter every two or three days, and feeding houses where the cattle were tied and fresh litter supplied every morning. As the plan shows, the sheds opened into the yard by one or two openings or a series of pillars: more than one opening being advisable in the event of an unruly beast! The plan implies that the yards were not roofed; although Morton advised that they should be to avoid the best manure being exhaled into the atmosphere or washed away by showers. The piggeries resemble mini-hammels, but their strength did not diminish in proportion to their size, requiring to be more strongly constructed than the sheds for larger animals in order to 'resist the grubbing propensities of the pig'.

Morton's *Cyclopedia* was intended to allow the landowner to be: 'an intelligent coadjutor of the architect in the erection of the homestead'. He stressed that the plans, including Swanston, were his principles adapted to agriculture as it is and not necessarily as it should be. The designer had to adapt his notions to practical needs and means: 'hence his works are rather the index of the intelligence of the landowner and farmer, than his own views'. Hence the belated recognition of the need for an implement shed at Swanston; and the form of the shelter sheds and yard which, according to Morton, had originally had only one side with a shed, and had subsequently been extended along the two contiguous sides, as the plan indicates.

Physical evidence today suggests that Swanston steading as built does not survive, and perhaps because of financial constraints was not initially erected on the scale suggested in the plan. Much of the construction remains to be examined, but alterations over the intervening years make direct comparison difficult. The 1855 Ordnance Survey gives a presumably accurate layout of the steading as built, and by 1894 additional sheds had been erected in the back west side and on the east façade. A 1945 aerial photo reveals

the sheds and the shadow of the chimney stalk, demolished in 1954. There was then little change to the 'original' structure until 1973 when the entire north half of the steading was gutted to put up a shed for potato storage. The flanking ranges and chimney base survive. However, the piggeries, poultry houses, hammels, shelter sheds and yard all went. The working court and main façade remained intact.

As built the entrance façade has only two arches (fig. 4), lacking the central arch in the plan, suggesting a more compact layout. The right hand arch is now blocked; but the other remains the entrance to the 'working court', with evidence of an inside gate referred to by Morton:

> ... carts are loaded (with oat straw) overnight and drawn under the arches at the right and left extremities of the front - the gates which are on the inside are then closed, and in the morning the centre entrance only requires to be opened to lead out the horses (fig. 5)

That statement suggests the existence of the central arch but there is no physical evidence of its being there in reality. The windows and doors to the servants' house and infirmary were either originally, or have since been replaced with large vehicular openings. As apparently built the main façade was almost symmetrical but lacked the impact of the design. The layout of the shelter sheds and yard was different; but the hammels and piggeries can be seen in comparable positions, and the remains of the hammel wall on the east is in evidence although much altered.

Fig. 4 : Entrance façade

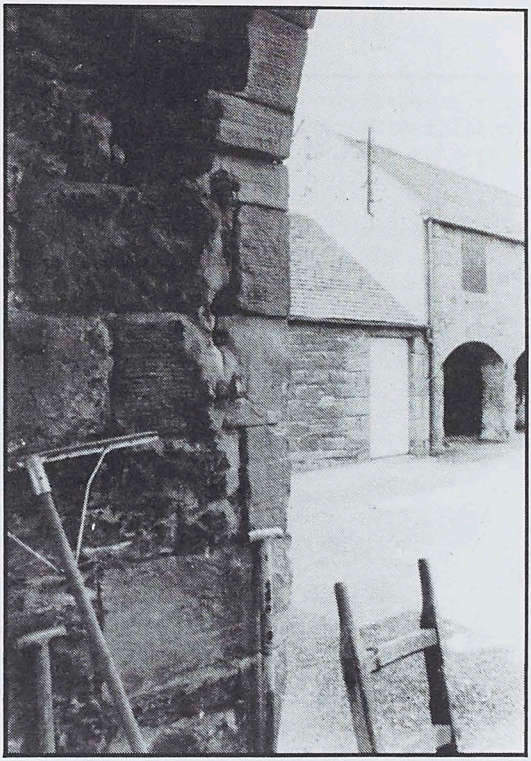

Fig. 5

The central east to west corridor is evident with access between the straw barn and feeding house, leading now into the modern shed. It was originally intended as a central avenue along which straw could be easily carried to the stables, shelter sheds and hammels. There are some differences in layout and heights in the north range (fig. 6). In reality there is no bulls' yard and no evidence of the protruding turnip bay. Inaccessibility of the modern shed meant the internal fenestration could not be compared to the design.

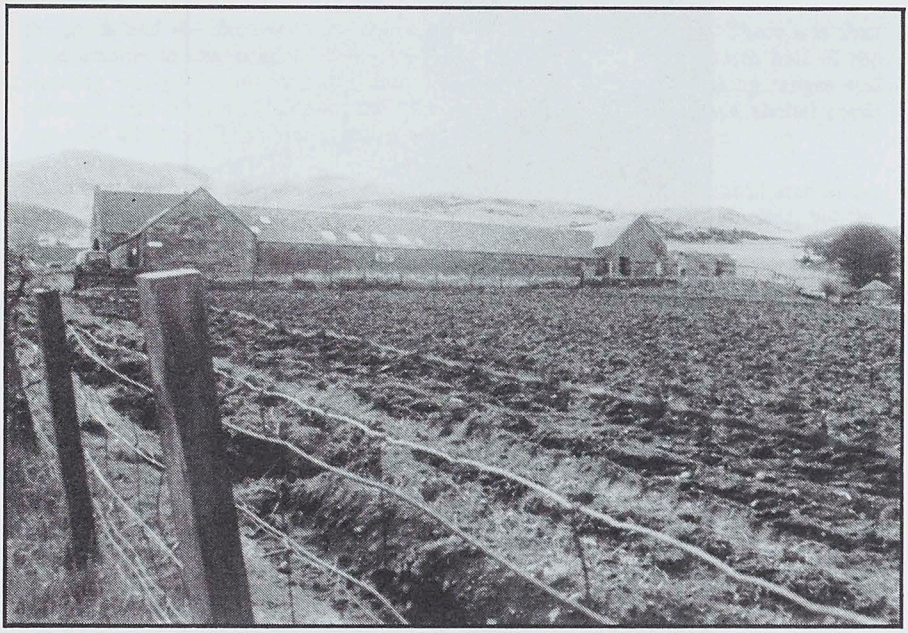

Fig. 6 : The north range

The working court on the south side resembles the plan to a great degree. Proportions are reduced - seven not eight cart sheds which fill the whole range instead of culminating in a tool shed (fig. 7).

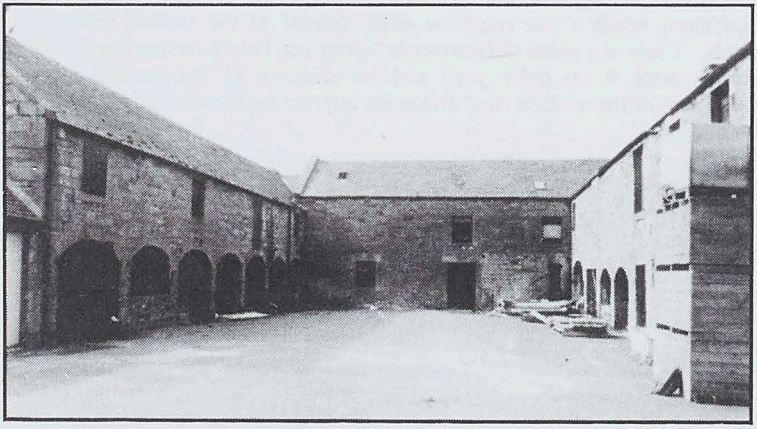

Fig. 7

The connection with the west range is different, and what may have been the equivalent of the tool house is entered from within the corner cart shed. The main discrepancy is the lack of the implement shed which Morton clearly describes, supposedly as built, and of which there is no physical evidence:

> ... from the working-court a passage leads through the middle of the cart shed range, into an implement-yard surrounded by sheds, where all the implements of the farm are stored under cover, and also space-hurdles, timber and many odds and ends which are generally suffered to lie about the corners of the steading and stack-yard.

The straw barn and dressing barn exist with some variations in fenestration and proportions and the stack yard can be seen clearly in fig. 1, although there is no sign or mention that Swanston had the rail system for transporting stacks into the barn as advised by Morton. The through-arch, now blocked, has chamfered edges (fig. 8). There is slight deviation from the plan along the north side of the working-court, but there is what appears to be evidence of the shed roof, covering ABA on the design, which was: (fig. 9) 'a penthouse roof overhanging the walls and forming a shed under which the apparatus for washing the roofs may be worked, thus keeping all slopping out of the (steaming) house itself'.

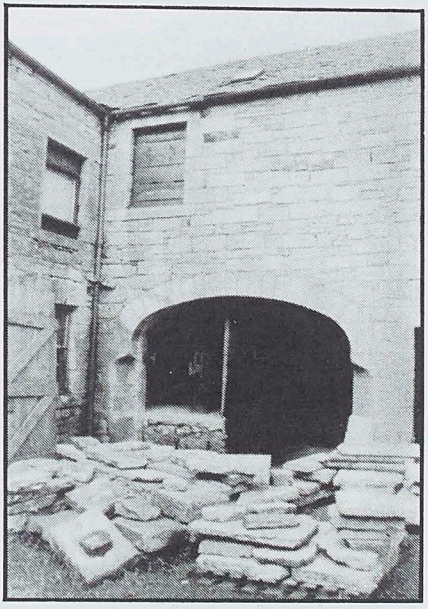

Fig. 8

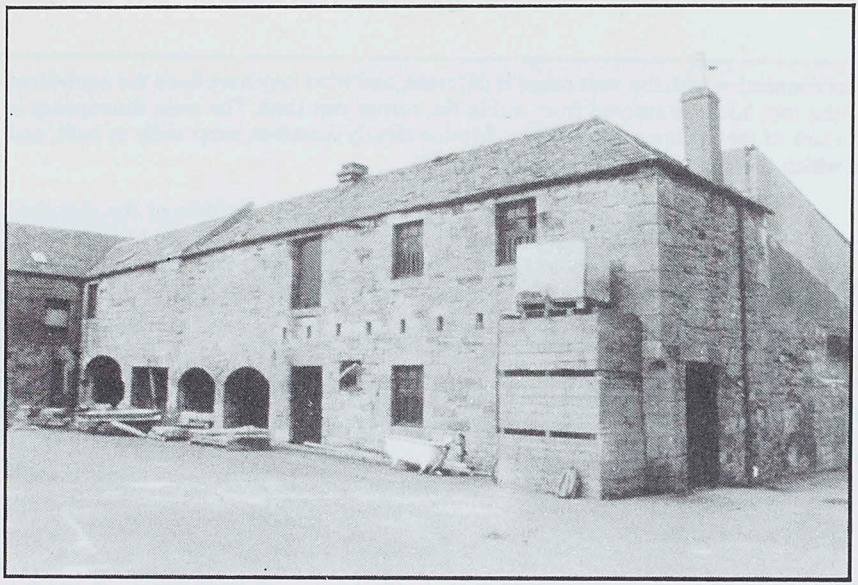

Fig. 9

Windows were generally glazed on the upper half with the lower part made of two frames of wood: the inner frame sliding to admit air (fig. 10).

Fig. 10

Tooling of sills, quoins and corner-stones is as specified (fig. 11); but the rubble walling has variations in style and quality (see fig. 9) which perhaps belies a lack of economic means to build the steading along strict lines and to the scale proposed.

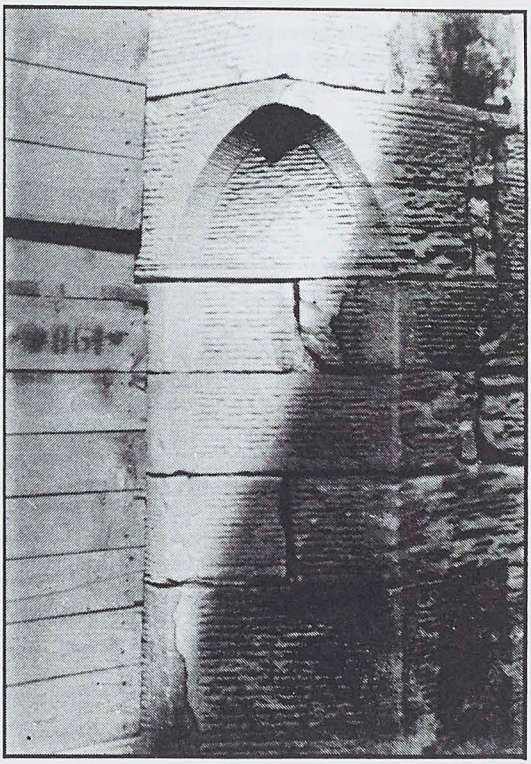

Fig. 11

Conclusion

> The farm was first a grange of Whitekirk Abbey, tilled and inhabited by rosy friars ... in the '45 some foraging Highlanders fell upon Swanston in the dawn ... and Swanston Farm has lain out of the way of history from that time forward. I do not know what may be yet in store for it.[10]

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10 R. L. Stevenson, Ibid

The idea of humans inhabiting a steading would have caused great consternation in Robert Louis Stevenson's day, but Swanston steading is currently subject to various proposals for residential and workshop conversions to the working-court.

Already completed is an office development of the stable range and the refurbishment of the 'caretaker's cottage' - previously the riding-horse stable and carriage house (fig. 4).

Such proposals ensure the steading's functional future, and although the alterations detract to a certain degree from its architectural integrity and character; within the wider context of its surroundings, the steading lies well in the landscape and will continue to stand tribute to Swanston's agricultural past.

THE RECONSTRUCTION OF HARESHOWE WORKING FARM : RATIONALE AND REALISATION

Andrew F. Hill

Aden, thirty miles north of Aberdeen, is home to the North East of Scotland Agricultural Heritage Centre, which since its foundation in 1985 has aimed:

> to acquire, conserve, research, communicate and exhibit material and oral evidence of agricultural and rural life in North East Scotland, from the eighteenth century to the present day, for the purposes of study and enjoyment by the public.

The Heritage Centre is situated within the former Aden estate home farm built originally in 1800 on a semi-circular ground plan by the Russells of Aden. Although neglected after the Russell family sold the estate in 1937, the home farm was restored in the early 1980s by the new owner Banff and Buchan District Council with substantial financial assistance from the former Countryside Commission for Scotland. As well as providing display space for museum exhibitions, the farm buildings also incorporate facilities required for the surrounding 230 acre Aden Country Park.

The Heritage Centre's most recent development has involved the dismantling of Hareshowe of Ironside farm, its transportation nine miles from the original site, and, final reconstruction within the Park. The Heritage Centre's historical *Interpretive Plan* (1986) had, as one of five interpretive themes, drawn attention to the value of reconstructing a small working farm that exhibited features of farming life between 1930 and 1959. While there is no denying that moving a building from its original context inevitably prevents a totally authentic reconstruction, it was decided that the advantages for interpretation of moving a farm to Aden outweighed the purist's view[11] that a building should never be moved. In any case the Buchan landscape has itself altered so dramatically since the 1950s that many a small farm is now surrounded by new industrial field crops and dwarfed by neighbouring modern sheds and silos, which would impinge visually on any in-situ reconstruction of earlier farm life. The *Interpretive Plan* and subsequent feasibility study identified a number of benefits accruing to a reconstruction at Aden, these included:-

1. On-site comparison between a laird's home farm and small tenant/owner occupier's farm; thereby interpreting the composition of the North East farming landscape.

2. Direct connection between the Heritage Centre's award winning synoptic exhibition, **Weel Vrocht Grun**, that explains the context of the open-air operations of the working farm in terms of farming and technological changes over time.

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[11] C. Paterson *Seafield Works Half Time School, Dundee* in *Vernacular Building 13* (1989), 39

3. Introductory video to the working farm shown in the Heritage Centre's video theatre.

4. Existing agricultural land of realistic acreage, 20-30 acres, screened by plantations ensuring the reconstruction would neither impinge upon, nor be intruded upon by the original estate buildings.

5. Existing on-site provision of necessary visitor facilities and security.

6. Finally, but importantly from a cost/benefit viewpoint, was diversifying the scope and increasing the attraction of Aden as the District's main tourist destination.

With the above considerations in mind it was decided to look for a representative north east small farm in keeping with the maximum acreage available within the park. Dr. Ian Carter has shown in his book *Farm Life in Northeast Scotland 1840-1914*[12] that the greatest proportion of holdings for central Buchan, 50.1%, were between 5-49 acres, while another 14.5% of holdings were between 1-4 acres. Coincidentally therefore the small farm was more truly representative of early twentieth century north east farming than the Aden Home Farm. Indeed, Buchan estates were composed of numerous small tenant farms. Even within this band there were still further subdivisions between those with crofts and those with farms; again tilled acreage seems to have been crucial. Anything less than 20 acres during the inter-war period would have required the family to find additional by-employment, perhaps as the local 'vricht' (wright), smith or soutar. More than 20 acres enabled the family to farm full-time, perhaps with some specialisation in poultry or dairy produce. In this case it was decided to find a farm with approximately 30 acres to match the acreage at Aden.

The choice of a suitable farm was narrowed down through the use of Dr. Bruce Walker's very helpful pilot survey *Farm Buildings in the Grampian Region*. This study sought: 'to identify the vernacular building styles most characteristic of farming in Grampian Region, or of more limited geographical areas within the region, as a first step towards ensuring the conservation of an adequate number of such buildings'.[13] The pace of farm amalgamation noted has in fact accelerated in recent years, to the extent that many a small farm is reduced to a few acres of paddock and a modernised farm house. The preface to the study added that: 'it could also be expected to produce results of value in guiding the selection of a suitable site for future development as an agricultural museum'. The study indicated that the bulk of farm buildings in the Buchan area dated from the early 1860s to the 1920s when a change in attitude by the lairds led to the rebuilding of farms originally constructed by the improving tenants themselves. Although

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12 I. Carter, *Farm Life in Northeast Scotland 1840-1914* (1979) size of holdings Table 1.4, 30

13 B. Walker, *Farm Buildings in the Grampian Region* (1979), preface

Also A. Fenton and B. Walker *Rural Architecture of Scotland* (1981), 183-210

the most common large farm steading layout was found to be a truncated 'H' plan, it was also appreciated that the type of terrain and soil quality tended to determine the proportion of large to small farms; and therefore differences in steading size and layout. In the Buchan area, where more than half the holdings were less than 50 acres, steading size reflected this fact and many smaller farms exhibit simpler 'L' or 'U' shaped layouts even though the accompanying farmhouse was often of the standard 1½ storey dormer type.

Given the interpretive benefits of reconstructing a working farm and the foregoing research into its selection, a specification of the farm sought comprised the following checklist of requirements:-

Distance from Aden:	Less than 15 miles
Acreage:	25-50 acres; preferably circa 30 acres
Building date of construction:	1860-1920
Building plan:	standard Buchan farmhouse with steading 'L' shaped with railway carriage, or 'U' shaped
Building condition:	unaltered or little changed from 1930 to 1959; oral and/or documentary evidence if possible to record and date alterations
Completeness:	Fixtures/fittings dating from the 1930s and including machinery and implements if possible
Contents:	Past house/steading objects available for purchase or donation
Tenure:	Probably owner occupier, but may have been a tenant farm owned/built by an estate in the nineteenth century
Oral and documentary evidence:	Same family's ownership throughout the era to be interpreted; estate records extant for the nineteenth century

The above specification was already in mind when the donation of an ox collar in 1986 called attention to the 30 acre farm of Hareshowe of Ironside, then owned by Miss Margaret Barron, which was situated near New Deer some nine miles from Aden. A tour of the farm house confirmed it fitted Walker's description of the standard Buchan farmhouse. This house type:

> was normally situated to the south side of the steading and had a southerly prospect. The house would have been 1½ storeys high with a two-window and central door façade, gabled roof, dormer windows, raised tabled skews, blue slate roof covering, ceramic tile or stone ridge, close cropped eaves, ashlar chimney heads, harled or squared rubble walls, four pane case and sash windows and panelled door. The dormer windows would have been stone or timber gabled or perhaps more characteristically of the five sided type with concealed flashings at the hips.[14]

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[14] Ibid., 66

The construction and exterior detailing of the 'L' shaped steading, albeit on a much reduced scale, was typical of what Walker had discovered for the Buchan area: slatted gabled roofs supported by coursed rubble walls with dressed doorway keystones and skews; ceramic ventilators in the walls and ridging, and, light and additional air circulation provided by cast-iron rooflights opened by a rope and pulley. Inside, the byre walls showed traces of limewash with a central cement greep dividing the cobbled byre stalls that were enclosed by timber trevises. Adjacent to the byre were doors to the turnip store, barn and midden (northside) thus reducing the physical effort required to maintain the cattle through the winter. Through a wood partition wall was the stable with stalls for two horses, together with a small electric water pump installed in 1955. Beyond the byre in the opposite direction was the barn that fulfilled a number of functions: to shelter the Crichton of Turriff threshing mill; to store sheaves ready for threshing; to store both the threshed grain elevated to the loft above and threshed straw ready for feed and bedding. A title deed plan showed the outline of an open horse gang, but certainly from the Barrons' time of ownership power for the mill was supplied by a five-horsepower Petters Junior engine (petrol/paraffin) housed in the engine shed through the wall. A second wooden partition divided the barn from the toolshed/workshop that contained an aladdin's cave of tools and materials that just might be handy one day; it was here in fact that the ox collar had been kept ever since the 1930s. Finally, butted onto the gable end of the steading was a hen and pig house.

Behind the steading lay the stackyard with circular stone foundations for eight corn rucks, all carefully set out so as to allow the passage of a cart between the two rows. Two cattle trucks gave shelter to the Bronze turkeys raised during the months prior to Christmas. Completing the fourth side of the farm close was a third class railway carriage from the Inverurie Loco Works that gave storage space for superphosphate fertiliser, housing hens and extra accommodation for family at hairst time.

Lastly, and very importantly for the successful documentation of the project, was the fact of the Barron family's long association with the farm since 1935 which of course coincided with the era chosen for interpretation. Hareshowe obviously matched the blueprint for the working farm. However, it was a few years later, after discussion with the Leisure and Recreation Department, that it became clear Miss Barron would herself be pleased to be associated with such an ambitious project.

In Spring 1988 a feasibility study was commissioned with funding from the former Scottish Development Agency. The consultants, Pieda and Ian White Associates, concluded that:

> The combination of the Country Park, the former Estate buildings, the Agricultural Heritage Centre with its museum collection and the nearby village of Old Deer has the potential to become the most important open air museum facility in Scotland.[15]

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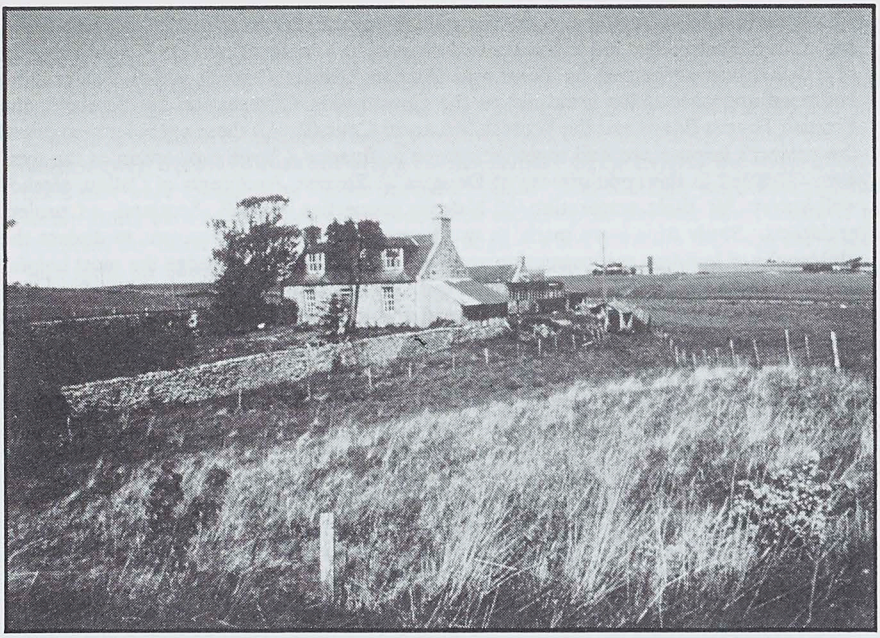
[15] D. Aldridge and I. White, *Development and Management study for a working farm at Aden Country Park, Mintlaw* (1989), para. 1.0

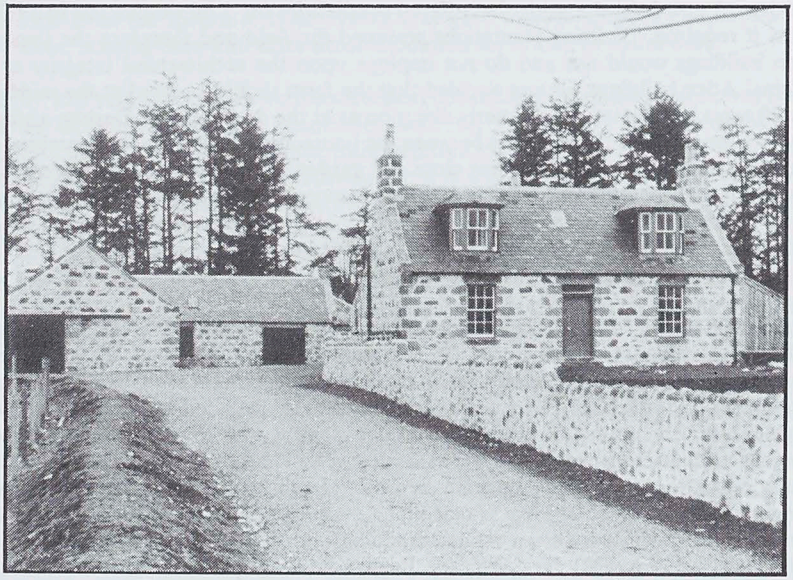
Though this conclusion was very encouraging it was the visit in June 1989 of the late Dr. Malcolm S. Forbes that led to the start of the project's fundraising. His timely donation of £10,000 was welcomed by Banff and Buchan District Council which that autumn endorsed approaches for grant-aid to the Countryside Commission for Scotland, the Scottish Tourist Board and the Scottish Museums Council. All these agencies recognised the project's importance and together agreed to finance a large proportion of the total cost. This led to the appointment of Douglas T. Forrest, Architects of Cullen, already well-known for their restoration of historic properties in N.E. Scotland, as project architects. Study trips were made to two pioneering open-air museums to discuss the philosophy of building reconstruction and I am pleased to acknowledge the most helpful assistance given by John Gall at Beamish and Dr Alan Gailey at Cultra. After discussing the different emphases given to authenticity and interpretation at these renowned museums it was decided that authentic reconstruction at Hareshowe should be taken as far as possible on those elements that could be seen by the public. With thirty years from which to choose to set the interpretation of the site, it was agreed to take the year 1955 as the base date, since it was the arrival of electricity that had last altered the farm. The changes that had occurred over the previous twenty years would be reviewed and interpreted by Costumed Interpretive Guides.

The summer of 1990 saw the farm contents inventoried and detailed plans of the buildings drawn with their keystones numbered to enable exact reconstruction. This finally left the way clear for the appointed builders, A. D. Walker Ltd. of Banff, to move onto site at the end of September. The next seven months saw the dismantling, photographic recording (of exterior and interior structures), rebuilding and landscaping of the new site at Aden. This new site had formerly consisted of a 20 acre field with another 10 acre field alongside that offered possibilities for future expansion to a full 30 acres if required. Existing plantations screened the field and therefore the imported farm buildings would not and do not impinge upon the architectural integrity of the original Aden buildings. It was decided that the farm should be sited at the middle of the 20 acres, orientated in a westerly direction as at the original site. Despite a sloping new site the previous datum levels between the house and steading were maintained and the original dimensions of the farm close and garden were retained. Moreover, it was possible to incorporate some existing mature sycamore trees (formerly a pheasant covert) as at the foot of the original garden. New field drainage, roadways, paths, fences, additional car parking and toilets were also attended to in the course of the autumn and spring work programme.

While the builders completed the farm's reconstruction on schedule at the end of April 1991, the Heritage Centre's curatorial staff with the kind assistance of Miss Barron reassembled the contents of each room in the house and put back in place all the fittings, implements and artefacts associated with the steading. Detailed job descriptions were produced for the four Costumed Interpretive Guides and four excellent staff with previous local farming experience were selected. The House and Steading Guides were then given individual training tutorials by Miss Barron herself. The whole process of dismantling and reconstruction was made into a ten minute video film entitled, *It's mair like hame noo!*, which is shown as an introduction to the site at the Heritage Centre. Finally, on 3rd May 1991 Jack Webster, Buchan journalist and television broadcaster, invited Miss Barron officially to open the new farm. Subsequent public reaction has



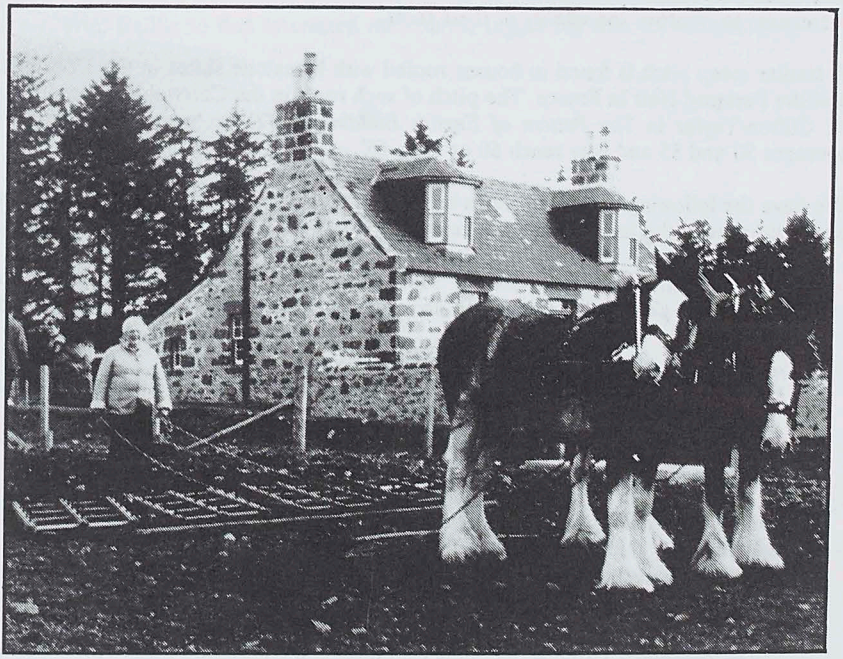
Hareshowe in its original setting



The reconstructed Hareshowe farmhouse and steading

been very favourable; most find it hard to believe it was not always there! In the course of the first season more than 14,000 visitors were welcomed and the farm was awarded a British Tourist Authority **Come to Britain** Certificate of Merit in 1992.

It should be clear that the Hareshowe project could only confidently proceed because the parameters for farm selection were rooted in the firm foundation of prior historical research carried out by Carter, Fenton and Walker. But no scheme, however visionary, can be realised without finance and in this respect the project has been particularly fortunate in its timing since the open window of economic opportunity has now closed. A great debt is owed to the S.D.A., the late Dr. Malcolm Forbes and the central government funding agencies which worked together very effectively. As to the actual reconstruction, this task would have been impossible without the positive cooperation of the architects and building squad, and far less authentic without the good humoured assistance of Miss Barron. Finally, with the working farm completed and a programme of demonstration events organised this year, Banff and Buchan District Council have not only developed a significant addition to the district's tourist attractions, but more than that, they have preserved a representative time capsule of local twentieth century rural life, the importance of which will continue to increase with the passing of the years.



Miss Margaret Barron takes the reins at a horse harrowing demonstration at Hareshowe in its new setting, in April 1992

INTERESTING SNIPPETS

STEEPLY PITCHED ROOFS OF LATE SEVENTEENTH CENTURY HOUSES IN CROMARTY

David Alston

The town of Cromarty contains two large late seventeenth century houses, both with steeply pitched roofs: the Gardener's House (sometimes called the Old Manse, recently restored by the Scottish Historic Buildings Trust); and the Retreat (restored in the 1970s). In both cases the pitch is about 55°. Townlands Barn (once the house of Sandielands, unrestored) is smaller, slightly earlier in date, but still has a steeply pitched roof. Why should these houses have roofs with such a steep pitch?

I suggest that this may have come about through the use of Caithness and Sutherland slates as a roofing material. Although the stone could have been cut in reasonably thin layers, these would still have been heavy and would require a steep pitch to support the weight. A few fragments of such slate were found during the recent restoration of the Gardener's House. The use of these slates may have been an attempt by the better-off merchants to improve the quality of their roofs.

A similar steep pitch is found in houses roofed with limestone slates in the Cotswolds and the Perigord Noir in France. The pitch of such roofs in the Cotswolds, according to A. Clifton-Taylor in *The Pattern of English Building* (1972) is: 'never less than 45°, averages 50 and 55 and may reach 60 or even 65'.

We have the following records of slates brought to the Cromarty Firth from Sutherland and Caithness in the late seventeenth century[16]:

> 1688: Contract between George Mackenzie, Viscount Tarbat and Alexander Urquhart, skipper in Cromartie to convey 6,000 'scleatts' in his bark from Dunrobin to Nigg.
>
> 1699: Contract between George Mackenzie, Viscount Tarbat and James Blair, slater at Dunrobin to ship slates in Blair's vessel from Dunrobin to Milton for £160 Scots and 1 chalder victual. James Blair, the Dunrobin slater, was also engaged to carry out work at Milton of Tarbat in 1669.
>
> 1670: Contract between George Mackenzie and John Sympsone and John Mathiesone, skippers, to ship a full loading of slate on the Christaine from the harbour of Murkle to the shore of Milton betwixt 20th May and 4th June 1671 for frieght £20 Scots, a half boll of meal and 4 gallons of ale.
>
> 1675: Alexander Urquhart shipping Caithness and Dunrobin slates in the Blessing to New Tarbat.

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16 Scottish Record Office GD 305/2/147 Nos 6-8, 11 and 305/2/152/45.

A roof of such slates can still be seen at Castle Craig on the Black Isle. Internal work was carried out here for Sir John Urquhart in the 1670s, and it is possible that the building was re-roofed in the same period. The roof of the new wing of Cromarty Castle, built in the 1630s for Sir Thomas Urquhart (father of the eccentric author of the same name), had a stone roof of some kind since, in 1756, there is an account from Andrew Watson for work on the castle: 'On Sr Thomas's work mending several holes in old roof ... To pointing the whole of old roof which measured 3 roods 35 yds 1 foot'.[17]

In the early eighteenth century there were attempts to quarry slates in Easter Ross and the Black Isle: in 1720 we find 'Skleats quarried at Ulladeall (Scotsburn) but they are few and ill winning of them and are all flags' and in the same year there was a 'skleat quarry near Skatwells house at Little ffindon'.[18] The slates quarried at Findon may have been the source of those used on the new aisle of Cromarty Church in 1739 - unsuccessfully, since they had to be replaced within a few years.[19]

Attempts to use Caithness and Sutherland stone as slates probably ended in the first half of the eighteenth century. In 1725, 20,000 slates for the new house at Newhall were imported from Easdale on the west coast, shipped by Baillie Steuart of Inverness[20] and in 1749 we find Baillie Somerville of Renfrew sending two ships with 40,000 slates to the north.[21] This was a speculative venture, since he had not found a buyer in advance but asked Wm. Baillie to find interested merchants, suggesting that they might be sold to Fort George.

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17 Craigston Castle papers, bundle 178.

18 MacGill, William, *Old Ross-shire and Scotland*, (Inverness 1909), 2 vols. Entry no. 491.

19 Kirk Session Records.

20 *Letter Book of Baillie Steuart of Inverness* (1915), Scottish History Society, p.226.

21 MacGill, *Ibid*, no. 514.

CHARCOAL MAKING : A COTTAGE INDUSTRY

Robin Callander

During recent research into the construction and features of housing in the West Highlands I came across this description of the making of charcoal on Jura in the mid nineteenth century.

> On entering one of the cottages in Jura I saw the occupant dropping burning peat through a small hole 3 or 4 inches in diameter. On asking what was the object of this, I was informed he was making peat charcoal. I examined the process and found that below this hole was a small chamber about 2 feet in diameter, built of stones about 20 inches deep, and covered with a flat stone very much like the upper stone of a quern.
>
> The peats are burned to a red heat in the open fire and then dropped in all aglow through the small hole referred to, and when the chamber is quite full sods are placed over the hole to exclude the air, and so the charcoal is prepared. This charcoal is used by the clachan blacksmith, and is said to greatly improve the quality of iron. It is not so powerful as coal but answers the purpose otherwise very well. The arrangement with the smith is peculiar. There were twelve tennants in the clachan or club farm, and each pays the smith 15s. per annum for his work, the smith being bound on his part to do all jobbing for the tennants. The crofters must each provide and bring his own fuel, blow the bellows and work the forehammer.[22]

Outlying communities, where peat was generally plentiful, frequently used peat to make small quantities of charcoal as it was the custom in the West Highlands and the West of Ireland for a crofter to bring there his own fuel for any work done for him by the blacksmith.

This feature could be worth looking for, but it might not be common as peat charcoal was frequently made in pits.

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[22] *Old Highland Industries*, a paper given by Alexander Ross, architect, Inverness on 28th April 1888 to the Gaelic Society of Inverness and reprinted in that society's *Transactions*, volume XII (1885-86), 387-415, p.409

ESTABLISHMENT OF THE BUILDING LIMES FORUM

Members will be interested to know that, on the initiative of a small number of active practitioners in the use of lime and research into the use of lime, a Building Limes Forum has been brought into being. A steering committee has been established (Chairman, Peter Burman, Director of Conservation Studies at the University of York; Secretary, John Dorrington Ward, University of York and Northern Representative of the SPAB; and with Bob Bennett, Pat Gibbons, William Holborow, Peter Hood, Bob Heath, Martin Hadlington and Paul Drury as members). The Steering Committee has organised the first annual Workshop and AGM, held at The King's Manor, York, from 22-24 October 1992.

Anyone wishing to know more about the Forum, should write for further details to: Peter Burman, Centre for Conservation Studies, IoAAS, University of York, The King's Manor, York YO1 2EP. The Aims and Objectives of the new Forum are defined as follows:

The aim of The Building Limes Forum is to encourage the development of expertise and understanding in the use of lime in building conservation, by means of:

a. Exchanging, collating and disseminating information, through publication of a regular journal, and by holding meetings and conferences.

b. Encouraging practical research and development through field studies, trials, monitoring and analysis.

c. Encouraging development of appropriate craft skills and technology, and by raising professional awareness and expertise.

d. Developing contacts with institutions and individuals in other countries who have similar aims and objectives.

e. Educating building professionals, conservators, craftsmen and homeowners in the appropriate use of lime in building through demonstrations, publications and courses.

Peter Burman

BOOK NEWS

Basil Blackwell Reference Books are to publish a two-volume *Encyclopedia of Vernacular Architecture of the World*. Edited by Paul Oliver, with the assistance of a number of 'Consulting Editors' and 'Advisory Editors' from around the world; it will look at **Theory and Principles** (Vol. I) and **Cultures and Societies** (Vol. II).

Contributors were being sought for both Main Entries and Specialist Secondary Entries and may still be required. If interested, you might like to contact either:

Paul Oliver (EVAW)
Shelter and Settlements Unit
School of Architecture
Oxford Polytechnic
Oxford
OX3 OBP

Tel: 0865 819413
Fax: 0865 819298

or

Alyn Shipton
Reference Books (EVAW)
Basil Blackwell
108 Cowley Road
Oxford
OX4 1JL

Tel: 0865 791100
Fax: 0865 791347

Jocelyn Rendall, *Papay, A Guide to Places of Interest*, (1992), Papay Publications, 44pp, illustrated, ISBN 1-874755-00-0. Obtainable from the author at Michlegarth, Papay Westray, Orkney KW17 2BU, £3.25 incl. postage.

Papay or Papa Westray, the most northerly of the Orkney Isles, is four and a half miles long and barely a mile wide. Though windswept, its fertile land has attracted settlers from early times who have left a rich and varied archaeology. The earliest site is the Knap of Howar, two houses dating some time between 3800 and 2800 BC. The 'artist's impression' of these houses indicate similarities with beehive dwellings in the Western Isles. Shards of black Unster ware point to a distinct cultural tradition, the only known Orcadian examples in a domestic rather than funerary context. Chambered cairns associated with the period are on nearby Holm of Papay, one of these the largest and most complete of its kind in Orkney. Early Christian associations with the island are revealed in its name, meaning 'island of priests'. The dedication of a disused eighteenth century chapel is to St. Boniface, well known for his missionary activities in Europe and murdered in Friesia in 754 AD. Papay may have been the centre of a mission to the Northern Picts.

Thomas Traill, a member of the extensive Orcadian Traill dynasty, bought Holland in Papa Westray in 1636. Before long the Traills of Holland were the sole landowners in the island, finally selling Holland in 1952. Thomas' original house has been demolished, but its successor at Holland, built in 1814, is still the dwelling of the principal farm. The regularly fronted house is a typical Orcadian laird's house of the period, plain with a symmetrical frontage, flanked by a range of farm buildings dating from the seventeenth century lectern dovecote, to the present day. The complex is well illustrated by Paul Symonds, with each of the buildings identified, many by traditional names, 'Sheepie Hooses', 'Kyes' Byre' and so on.

Almost all the island is now in grassland farms, the export of good quality beef cattle the island's principal source of wealth. These cattle are sent by boat to the marts at Kirkwall and elsewhere. Ferries remain the most important means of transport though Loganair serves the island twice daily, the one and a half minute flight time from neighbouring Westray the shortest scheduled flight in the world! It is ironical that improved 'ro-ro' (roll on, roll-off vehicle ferries) steamer services elsewhere in Orkney may make the heroic little 8-seater plane service uneconomical and even curtail Papay's ferry lifelines. The population of the island stands at around eighty; the primary school, built for that number, now has four pupils. Children over the age of eleven cross daily by boat to Westray or board in Kirkwall. The Papay Co-op, established in 1979, runs the island shop, a youth hostel and guest house.

Though written with the visitor in mind, this excellent guide to Papay by one of the most northerly members of the SVBWG, should appeal to anyone interested in the Orkney Isles. Paul Symonds' excellent line drawings enhance Jocelyn Rendall's informed and readable text.

Elizabeth Beaton

Tim Buxbaum, *Icehouses*, Shire Album 278 (1992). 32pp. Illustrated. £1.95.
ISBN 0 7478 0150 9

> An icehouse is a building for the storage of ice. When ice is packed together into a large mass its relatively small surface area slows down melting. An ice mass lasts even longer when protected by insulated walls and a roof. Thus ice collected in winter can be preserved (p.3).

The storage of ice in masonry vaults provided means for conserving food, an alternative to pickling, salting or drying. These simple refrigerators, both domestic and commercial, were only superseded by the advent of mechanical refrigeration at the end of the nineteenth century.

From the early seventeenth century (the first UK reference to an icehouse is in 1619 at Greenwich) the provision of the 'insulated walls and roof' (p.3) of domestic icehouses enabled the wealthy to vary their diet by prolonging the life of fresh meat and fruit and widening the range of summer deserts. *Icehouses* reveals that in 1686 James II (and VII) and his officers enjoyed a dozen dishes of ice-cream while attending a military camp!

Ice was collected from rivers or specially made shallow ponds, even imported from America and Norway, and stored in semi-subterranean pear-shaped masonry vaults, usually exploiting a natural slope. In contrast to the utilitarian nature of these vaults, the super-structures housing the entrances of domestic types ranged from simple brick domes to elegant rustic, classical and even baronial architectural creations. Gradually icehouses became more common, both for domestic use and, in the nineteenth century, commercially for grocers, confectioners and above all in Scotland, for the salmon fishing industry.

Tim Buxbaum has packed this recent Shire Album with informative and wide ranging text, numerous photographs illustrating the ornate and the practical amongst these interesting but often neglected buildings, eighteenth and nineteenth century pattern book drawings and many plans and sections which he has prepared himself. These last are of particular value, for the curious visitor may baulk at an interior that can be dank, dark and dirty, thereby failing to appreciate the form of the structure.

From the Scottish viewpoint, the coverage would have been complete had some of these excellent architectural drawings been devoted to the icehouses serving the late eighteenth and nineteenth century salmon fishing industry: these proliferate along Scottish coasts, particularly the east and north. They are usually (but not always) vaulted rather than the pear-shape favoured for domestic use, of which this publication contains so many graphic examples. In a book purported to cover icehouses in the British Isles the reviewer from north-east Scotland has to make the oft-repeated query - has the author from south of the border pursued his subject north of that border, and if so how far north? Text and illustration are devoted to the Tugnet icehouse in Moray, dated 1830 (pp.27-8), which served the rich and highly organised Spey River salmon fishings of the Dukes of Gordon. This is the largest icehouse in Scotland, possibly in Great Britain, a range of six majestic vaulted, brick-lined ice chambers, all the more remarkable because the substantial complex is constructed in a man-made mound on flat estuarine terrain at the mouth of

the Spey. Three of the chambers are said by Mr. Buxbaum to include: 'ventilators which admit a little daylight' while: 'one of (the) three additional small lobbies includes a staircase up to ground-floor level'. The former were the chutes (actually six, one to each ice store) through which the ice was shot into the icehouse, some of which are now masked by louvres; the latter is a single lobby formed by the recent insertion of a brick wall dividing one of the ice chambers to house a modern stair as emergency exit. This exit is a doorway constructed in the enlarged void of one of the rear ice chute vents. These alterations were carried out in the early 1980s to satisfy fire regulations when the building became a museum and exhibition centre. Strange that Mr. Buxbaum, a practising architect, did not recognise these features for what they are.

That said, this is a useful handbook covering a neglected subject, well meriting its place in the excellent Shire Album series. It is rendered even better by the very reasonable price.

Elizabeth Beaton

Dominique Letellier, *Pigeonniers de France. Histoire économique et sociale. Technique architecturale, conseils de restauration* (privately published, 1991)

What a delightful volume to come across by chance during a holiday in South West France viewing some of the bastide towns!

As the title indicates, this volume considers doocots in a very comprehensive way, looking first at their place in economic history. Their Middle Eastern origin is recognised, linked to the ancient civilisations and then their movement westward with the Crusades. The elder Pliny left detailed instructions on how to build the Roman *'Columbarium'* with a circular form.

A map of France before the Revolution would show the distribution of doocots related to those areas growing cereals. The right to build a doocot varied according to the province but, as in Britain, was the privilege of the local lord, hence their distribution related to the location of the feudal lords - lay and religious. It is interesting to note that while many of the buildings and possessions of the French Royalty were destroyed during the Revolution, the doocots were spared in spite of the complaints expressed by the peasants at the ravages of the lord's doos on their crops: 'Les pigeons enlèvent une partie de nos semences ... Il faut souffrir en silence que le gibier mange nos légumes'.

The importance of the doocot as a source of supply of meat, eggs and particularly droppings for fertiliser from the Middle Ages to the nineteenth century is pointed out. From that time onwards the breeding of hens replaced the doos.

From the historical introduction, the author moves to the typology of the doocot, regional and architectural. This section is illustrated with beautiful coloured pictures and detailed line drawings of examples drawn from different parts of France. Particularly exciting are the doocots on arcades and on pillars which are characteristic of the South West of

France and there is an example of a splendid circular doocot in the Calvados region dating from the sixteenth century which, with its decoration of polychrome brick and its fine ogival dome gives a Byzantine air to it.

The author then looks at the most beautiful doocots in the Quercy region. These range from one whose grandeur matches that of the Radcliffe Camera in Oxford to another which resembles a broken down circular water tower. All have charm and are skilfully illustrated or colour photographed.

Then follows a section on doocot restoration - a sign of the times in France following a long period of neglect. Different building materials and their uses are examined - brick, stone, clay; together with the different structural elements - carpentry, joints and the use of different protective wall materials and of colouring.

This is the sort of book that makes you reach for your Michelin guide to look up hotels in the Valley of the Garonne, the main area covered by this book. The author, Monsieur Letellier, the principal architect for the Department of Haute Garonne is to be complemented on a book which is a delight to either read or browse through. The quality of the illustrations - photographic and drawn - is outstanding. This is a book for doocot owners who cherish them and for those who love France and have an abiding interest in its vernacular buildings.

Alec Muir

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Alison and **Paul Newman** spent four months in 1991 examining and photographing rural buildings throughout the Islands of Orkney. Recording the variety of constructional methods in the traditional buildings of Orkney continues to be a major preoccupation.

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