VERNACULAR BUILDING 15

Scottish Vernacular Buildings Working Group

1991

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Cover: Orcadian needled simmens roof. See article by Paul and Alison Newman

CONTENTS

Preface

Souness Heather Thatching in Scotland - Further Observations 3 Paul and Alison Newman Simmens and Strae: Thatched Roofs in Orkney 27 Sam Seabrook and Brian Wilson **Rebuilding Jeannie** MacAlpine's Inn 41 Harry Gordon Slade Artamford and Greenware: Designs for Two Improved Farm Courts: 1760 and 1822 45 Graham J Douglas Closet, Gill Pier, Westray, Orkney 50 Ardnamurchan Field Trip 51 Elizabeth Beaton The Glasite Meeting House, 33, Barony Street, Edinburgh 52 Contributors 54 SVBWG - How to join 55

2

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 - this year the spring conference visited Benbecula and North and South Uist; and an autumn study weekend took place in Inverness. The 1992 spring conference will be based at Aberfeldy in Perthshire.

The Group's publications include **Vernacular Building** an annual miscellany of articles published free 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 1992 at the address below.

Dorothy Kidd Editor - SVBWG National Museums of Scotland York Buildings Queen Street Edinburgh EH2 1JD

HEATHER THATCHING IN SCOTLAND - Further Observations

James Souness

Yon heather - theekit hames were blithe, When winter nichts were lang, Wi spinnin' wheels an' jokin' lads An' ilka lassie's sang¹

Our Soverigne Lord, considering the danger that may ensue from theicking of houses within the towne of Edinburgh with Combustible matter, The Toun being thereby exposed to the hazard of fyre And that the same is nowayes decent to be seen in the Cheif City of this Kingdom, Therefore His Majesty with consent of his Estates of Parliament, Doeth Prohibit and discharge the theiking of any houses in the said Toun, Canongate and other Suburbs thereof in tyme coming with Straw Bent or Heather²

Heather or ling (Gaelic - fraoch; Latin - calluna vulgaris, family Erica) is synonymous with Scotland across the world. At a time when thatching brings to mind long, straight brittle plants like reeds and straw, it seems slightly bizarre that the short bushy flowering heather could ever be an effective weather proofing on a roof. Yet it is evident that it was used in the past for thatching throughout the length and breadth of Scotland, wherever it was sufficiently available, and that for this purpose it achieved the respect, indeed the affection, of most of those who dealt with it.

However, heather thatching is now practically extinct in Scotland and no inhabited dwelling remains with such a roof. Unfortunately, original details and research on the techniques and variations involved are also very sparse. Only a few written sources are worthy of perusal, all focusing on the North-East experience - a prize essay of 1831 'On Thatching with Heath' by John Collier of Turriff;³ a 1983 'Report on Heather Thatching' by Robin Callander of Finzean, Aberdeenshire, following extensive research and self-

³ Collier, John; 'On Thatching with Heath', in Prize Essays and Transactions of the Highland Society of Scotland, new series 2, (1831), 190-195

¹ Nicholl, Robert; **Poems & Lyrics**, (1835). This excerpt from 'The Toun where I was Born', in Gardner edition, (Paisley 1877), 71-73

² Act anent theiking of Houses in Edinburgh & some other Burghs Royall with Lead, Sclates &c., Scottish Parliament (1681)

taught first-hand experience;⁴ and a section on heather in Alexander Fenton's excellent 'Clay Building and Clay Thatch in Scotland'.⁵

It is not the purpose here to duplicate or reiterate these sources but to add some further information on this little-known subject, selected and summarised from the writer's incomplete researches in the matter and his own limited first-hand experience. In particular, it has emerged that the vestiges of a vernacular tradition of heather thatching still survive in at least two areas of Highland Scotland and detailed accounts of these will be set out. Firstly, a brief reconsideration of the wider background is necessary.

History and Distribution

I can theik wi' auld rashes, wi' heather or ling; Bent, bracken or docken, or ony wan thing⁶

Thatch for roofing was once ubiquitous in Scotland, and the songwriter's versatility gives us a sample of some of the many materials that could be employed. In no area is it likely that heather alone was used for thatching, but evidence of its past use can be found for almost every corner of the country, from Nithsdale to the Northern Isles, from Berwickshire to the Butt of Lewis. Hard facts are scarce, however. Paradoxically, when thatch was so general, it was rarely considered worthy of any mention in contemporary narratives. Historical references, commonly derogatory and non-specific, are scattered obscurely through a variety of sources and almost never include details of type or technique. Many of those known are listed in Fenton's aforementioned article⁵ or in his co-production with Bruce Walker - 'The Rural Architecture of Scotland'⁷ - which should be consulted. Ian Whyte has set out various sources of written historical evidence that can be studied,⁸ and further evidence is coming to light as archives are more thoroughly researched.

- ⁴ Callander, Robin; Report on Heather Thatching, unpublished report, (Finzean 1983)
- ⁵ Fenton, Alexander; 'Clay Building & Clay Thatch in Scotland', in Ulster Folklife, Vol. 15/16, (1970), 28-51
- ⁶ From **The Thatchers of Glenrea**, a song about south Kintyre by Hector MacIlphatrick, a thatcher of Ballycastle, Co. Antrim, (about 1900). Also recorded by Dick Gaughan.
- ⁷ Fenton, A. & Walker, B.; The Rural Architecture of Scotland, John Donald (1981)
- ⁸ Whyte, Ian D.; 'Rural Housing in Lowland Scotland in the 17th Century: the Evidence of Estate Papers', in Scottish Studies, Vol. 19, (1975), 55-68

Heather thatching was practised in the North of England where its characteristic hue earned it the name 'black thack'.^{9,10} It was also used in parts of Ireland either on its own for roofing some churches¹¹ or as a rough 'under thatch' with an overlay of straw or marram grass.¹² There can be no doubt that the inhabitants of the extensive heathlands of Denmark and Northern Germany employed heather for roofing as well as for a plethora of other purposes,¹³ and it is probable that some species of Erica could be employed on the **palloza** of Spanish Galicia.¹⁴ However, it is arguable that only in Scotland did heather form a principal and widespread roofing material, imparting a distinctiveness to the nation's buildings which has now been lost.

In any given area within its general distribution, the extent of the use of heather will have been determined by factors such as the local supply of heather of a suitable quality, the availability of labour, the attitude of landowners (see below) and by the alternative values of other potential thatching materials (eg in poorer areas, straw would be a vital fodder which would have discouraged its use as thatch). These factors would vary with time. Interestingly, for example, a major change in vegetation appears to have been yet another effect of the coming of 'The Great Sheep' - two references from several in the (Old) Statistical Account of the 1790s are worth quoting:

All the mountains, some years ago, were covered with heath, but many of them by now, by being pastured with sheep, are mostly green, and it is likely that the heath will soon be entirely extirpated The extirpation of heath, and the production of grass in its room, very much depends on a proper system of burning the heath

Inverchaolain parish, Argyll.15

- ⁹ Hartley, M. & Ingilby, J.; Life & Tradition in the Yorkshire Dales, Dent (1968), 107-110
- ¹⁰ Wright, Adela; Craft Techniques for Traditional Buildings, Batsford (1991), 119-126
- ¹¹ Gailey, Alan; Rural Houses of the North of Ireland, John Donald (1984), 96, 103
- ¹² Information from John Kelly, Lisaniska, Knock, Co. Mayo and Tomás O'Connor, Ballycorroon, Ballina, Co. Mayo
- ¹³ Gormsen, Gudrun; 'Traditional Heathland Farming in Western Denmark', in Ethnologia Scandinavica, Vol. 21, (1991), 117
- ¹⁴ Lewis, Norman & Barry; 'The Last of the Old Europe' (Cantabria) in The Observer Magazine (1980s) (date uncertain). Copy with writer

¹⁵ Statistical Account of Scotland (1792 etc), V, 465

The hills were formerly black, and covered with heath; but, by the introduction of sheep, within these 30 years, they are beginning to lose their shaggy cover, and to assume a more verdant hue.

Callander parish, Perthshire¹⁶

Writing in the same period the bard **Donnchadh Bàn** commented on Glen Orchy (north Argyll):

'N uair sheall mi air gach taobh dhìom Chan fhaodainn gun bhith smalanach, On theirig coill' is fraoch ann, 'S na daoine bh' ann, cha mhaireann iad...

(As I gazed on every side of me I could not but be sorrowful, for wood and heather have run out, nor live the men who flourished there...)¹⁷

Conversely, Collier ascribed an increase of heather thatching in Aberdeenshire of the 1830s to an improvement in techniques.³ As time progressed, however, the demise of thatch in general became rapid, and of heather especially so. While it must be true that modern aspirations, rising incomes, perceived status/stigma, building regulations and the ready availability of semi-permanent roofing materials were the prime factors in this, they may not be the whole story: heather could never be harvested mechanically or bought 'off the shelf', and heather thatching required a great deal of time and labour, so that the rapid fall in the rural population and the growing equation of time with money rendered heather an increasingly impractical and uneconomical proposition.

Surviving heather roofs might occasionally be covered with corrugated iron, or could be repaired with easier, inferior materials like bracken or rushes, as was revealed at Lonbain, Applecross, on its recent rethatching.

Anyway, by the late twentieth century, heather roofs appear to have survived in only three areas - (a) the North East between Moray and the Tay, in the form of a few summer houses and pavilions; (b) Wester Ross - isolated examples and (c) Uist - isolated examples.

¹⁶ Ibid., XI, 575

¹⁷ MacLeoid, Aonghas (Ed.); Orain Dhonnchaidh Bhàin (The Songs of Duncan Ban Macintyre), Scottish Gaelic Texts Society, 1952. This excerpt from 'Cead Deireannach nam Beann (Final Farewell to the Mountains)', 390.

Durability, Status & Cost

Anyone who knows about these houses, thatched with heather, knows it is necessary to put a new roof on every year.¹⁸

Clearly General Burroughs, proprietor of Rousay, in the 1880s, did <u>not</u> know about these houses, or perhaps it was his tyrannical methods of estate management that were to blame. Other evidence from the same source make it clear that petty estate restrictions could make it very difficult for crofters and cottars to obtain any thatch. For instance, John MacPherson of Glendale, Skye, told the Napier Commission that:

'Our dwelling houses are thatched As our crofts do not produce enough straw for fodder for the cattle as well as for thatch, and as we are prohibited from cutting rushes or pulling heather, our houses in rainy weather are most deplorable ...'¹⁹

Murdo MacLean of Valtos in Lewis claimed that the gamekeepers set apart one day only in the year when crofters might freely pull the heather, and anyone doing it at other times might be reported and fined.²⁰ Clearly under such circumstances, proper thatching was impossible! And whereas a poorly or sparsely-applied thatch of, say, rushes or straw should exclude water penetration for at least a spell, a badly-applied heather thatch is likely to leak from the word go.

Under less oppressive circumstances, however, heather was noted for its durability and superiority to other thatch. A life of up to a few decades seemed common, and from Argyll came the most extravagant claim of 100 years!²¹ Durability would vary with quality of material, technique of application and the local climate, but the writer himself was familiar with an interesting 'test case' at Camas Luinie, in rain-sodden Kintail - this abandoned house had an essentially sound, water-proof, heather thatch which, by independent accounts, was put on around 1920. The roof collapsed in 1987 from the failure of the worm-eaten timbers rather than their heather cover.

Durability gave heather a special status, at least before the period of the 'Agricultural Improvements' and it would be especially favoured for more important houses and buildings, e.g. churches. Lady Grisell Baillie's housebook of 1709 includes an entry: '...

¹⁸ Cameron, A D; Go Listen to the Crofters, Acair (1986), 107, excerpts from The Report of Her Majesty's Commissioners of Inquiry (Napier Commission) into the Condition of the Crofters and Cottars in the Highlands & Islands of Scotland, (Edinburgh 1884)

¹⁹ Ibid., 14

²⁰ Ibid., 107

²¹ Smith, J; General View of the Agriculture of the County of Argyll, (Edinburgh, 1798), 15-18

for hather and thicking of Earlston Church (Berwickshire)'.²² The Old Statistical Account records that, as late as the 1780s, the church of Flotta in Orkney: '... was (newly) roofed in, being thatched with heather, and furnished with new seats and new windows',²³ and the church in the district of Ness in Lewis: '... was enlarged and rebuilt last year (1795): it is thatched with heath.²⁴ Even in less remote areas, the kirk of Kincardine in Easter Ross must have been only one of many which: '... continues to be thatched with heather.²⁵

The writer has so far encountered few accounts of the costs of heather thatch. Certainly it was expensive, and there could be long-term cost benefits in replacement with slates if the initial outlay could be covered. In 1699, estimates were submitted to the local Presbytery for the re-roofing of ruinous Wiston Kirk in Clydesdale, wherein the tradesmen: '... sincerlie declair that to repair the quier with ane heather roof as formerly will require the sum of £115 and 8 pennies Scots (approx. £10 sterling?). To put ane scleat roof upon the quier will require £160 4s. 8d. Scots (approx. £13 sterling?)'. Times were hard, however, in 'King William's ill Years' and in this case a new slate roof was not sanctioned.²⁶ Cash costs could be reduced, with the involuntary help of the parishioners. There are many instances in old Kirk Session records where wayward youth were made to gather heather as a punishment,⁴ and the records of 1714 for Boharm, Moray, stated that: 'the minister did intimate to the congregation that there would need that every chalder's pay should bring in a load of hather for thacking the kirk.²⁷

If heather had a drawback as thatch, it was its susceptiblity to fire. Aberdeen Burgh Council in 1716 prohibited:

'the thacking and covering of houses with straw and hedder... (as it) wes very dangerous, and rendered them obnoxious to fyre... a fatall evidence thereof having falne out in the Gallowgate lately...²⁸

- ²⁴ Ibid., XIX, 268
- ²⁵ Ibid., III, 513
- ²⁶ Irving, G. & Murray, A.; The Upper Ward of Lanarkshire, (Glasgow 1864), 164
- ²⁷ Quoted in Scottish National Dictionary, Vol. v, (p. 75, under 'Heather')
- ²⁸ Extracts from Council Records of the Burgh of Aberdeen 1643-1747, Scottish Burgh Records Society, (1872)

²² Scott-Moncrieff, R. (ed.); The Household Book of Lady Grisell Baillie 1692-1733, Scottish History Society, New Series, Vol. I, (1911), lxiv, 1709

²³ Statistical Account of Scotland (1792 etc.), XVII, 317

The parish kirk of Kincardine O' Neil, Aberdeenshire, was slated in 1733 following the loss of its heather roof, which had been ignited by a young man shooting pigeons on itl²⁹ Roof fires, nevertheless, were rare unless caused deliberately, as in some notorious Clearance episodes.

Use in Combination

It is worth noting briefly that heather could be used in combination with other thatch. It might for instance be tried as a coarse 'breathing' bed for the main overthatch of, say, straw or rushes. Such an experiment was carried out at Auchindrain Museum (Argyll) in the 1970s³⁰ and the practice was certainly common in parts of Ireland.¹² More frequently it was used as a tight fringe at the eaves both to hold the main thatch clear of the wall and to discourage the entry of birds at this vulnerable point. This was the prime use for scarce thatching heather in the island of Jura within living memory,³¹ and the surviving rush-thatched house at Ardelve, Lochalsh, still exhibits this practice. Lastly, it is still recalled in the Outer Isles that, if it was in short supply, the heather might be used only on the vulnerable hip ends while the rest of the roof was thatched with inferior material,³² and this style can be seen in a 1934 photograph of Flodabay in Harris.

²⁹ New Statistical Account of Scotland, (1845), XII, 837

³⁰ Information from Robert Smith, previously curator of Auchindrain Museum

³¹ Information from Sandy Buie, Knockcrome, Isle of Jura

³² Information from John Archie MacVicar, Gearradubh, Griomsaigh/Grimsay, Uist

Heather Thatching in Wester Ross



Heather thatched house, Dornie c.1930s



Heather thatched house, Plockton, 1936 (note fixing with lathuisean - hazel laths) Heather thatching is not extinct in Wester Ross. While the last house thatched purely in this material (the home at Allt nan Subh, Kintail, of Roderick MacRae - 'the Rolachan' - a famous thatcher) was abandoned by 1960, the tradition has been continued by Duncan Matheson ('The Stalker') of Camas Luinie in Kintail, and his sons have also learnt the skills. Duncan's father in turn taught him and in his earlier years he maintained a large heather-thatched barn and other structures on his croft. In recent years, he has restarted thatching enthusiastically and completed the thatching in heather of buildings at Plockton and at Lonbain in Applecross. The following account is based mainly on Duncan Matheson's recollections and on the writer's first-hand experience of most stages of the work -

The first task, of course, is to gather the heather. This would once have been a common chore for young people across Scotland, and it crops up incidentally in old songs. For instance in one of the best-known Border ballads -

Yestreen I dreamed a dolefu' dream; I fear there will be sorrow! I dreamed I pu'd the heather green, Wi' my true love, on Yarrow³³

A Perthshire (Auchtergaven) ditty is in lighter vein -

We'll a' go pu' the heather -Our byres are a' to theek: Unless the peat-stack get a hap, We'll a' be smoored wi' reek. Wi' rantin' sang, awa we'll gang While summer skies are blue, To fend against the Winter cauld The heather we will pu'.

... I like to pu' the heather, For ane can gang awa, But no before a glint o' love On some ane's e'e doth fa'. Sweet words we daur to whisper there, 'My hinny and my doo', Till maistly we wi' joy could greet As we the heather pu'³⁴

³³ Scott, Sir Walter; 'The Dowie Dens of Yarrow', in The Minstrelsy of the Scottish Border, Vol. II, (Edinburgh 1841), 149

³⁴ Nicholl, Robert; Poems & Lyrics, 1835. This excerpt from 'We'll a' go pu' the Heather' in Gardner edition, (Paisley 1877), 85-86

Nevertheless, in the absence of romantic diversion, the job is a hard and tedious one of little pleasure, attended by dust, sweat and sore hands! As to technique, the Gaelic proverb claims:

Tha dòigh air a h-uile nì, tha dòigh air buain an fhraoich

- There's a knack to everything, there's even a knack to pulling heather!

Be that as it may, pulling involves far more graft than skill. Remaining proverbial, it is also said -

Is obair là tòiseachadh

- Beginning is a day's work.

- and that day can be profitably spent scouring the district in advance for good heather. Suitable quality for thatch is rare and the best is commonly in out-of-the-way places. An average length of up to four feet is ideal for the job and, although shorter lengths are useful at certain stages (e.g. building up the ridge), heather less than two feet long would not be employed. The heather should be relatively thin and straight or slightly bent, with a minimum of branching and bushiness. The best heather will often be found on steep north-facing slopes, where the lack of sun promotes toughness and longer straggly growth. Open forestry plantation can supply an undisturbed and lengthy source, but the 'sheltered' existence may diminish durability.



Duncan Matheson pulling heather (note cual tied on left)



Duncan Matheson pulling heather (note length of heather)

The plant is pulled out by the roots one piece at a time with both hands (protective gloves are wise), and most of any soil or moss attached should be shaken or wiped off. It is best to work uphill along a short 'face' as this continually loosens the heather above and eases the work. Once a suitable area has been found, 'the best heather is where you are standing!' - it pays to pull an area in its entirety rather than to jump from place to place in understandable frustration at variable heather quality!

As it is pulled, the heather should be laid in neat rows or small piles behind the puller as he advances. At the end of the day, these are gathered up into large bundles (cual). These will comprise perhaps four good armfuls laid in opposite directions (cas-musheach) and tied together. The tying is best done by two men - a thick rope looped through a ring at one end will be pulled as tight as possible and held that way by one man while the other secures twine near the two ends of the cual, whereupon the thick rope may be released. As the cual will receive much rough handling, the twine bands should be very tight although this can be overdone - Mar is teann a' bhann air a' chual, 's ann as dualaich' i air bristeadh (the tighter the band, the more likely it is to break) is a proverb with application to more than heather cuals! Each cual is as large as can be carried and these will be rolled, sledged, carted or carried off the hill, whatever is practical. The pulling and gathering of about eight cuals was considered a decent day's work for a man. The gabled house recently thatched in Applecross (approx. 11 x 5 yards externally) took one hundred and thirty cuals while the little Plockton house with one hip-end took one hundred and fifty cuals, or perhaps twenty man-days of gathering.



James Souness with heather cual

The best time for pulling heather in Kintail was considered to be the early Spring, when the worst of the weather was past and the bulk of the crofting work had yet to begin. The heather will be at its most dormant at this season, with no flowers and little 'sap', a condition which should promote durability on the roof. Nevertheless, it seems that heather may be gathered at any season if necessary, so long as it is left to dry for a while before thatching (Collier and Callendar concur with the foregoing³⁴). Duncan Matheson prefers to leave the heather tied in the **cual** for at least a month to 'mature' for thatching - this causes a little shrinkage and makes the heather lighter, straighter and more 'gripping'.

No other preparation is employed. Robin Callendar in Deeside spent a long while trimming the heather stems but it is uncertain if this achieved any enhancement in thatch performance, unless the heather was very bushy.

A good roof-pitch was especially desirable for heather thatch, and old photographs indicate a normal pitch of 50° or more in Wester Ross. Traditionally, a layer of tough divots (sgrathan) was fixed, overlapping, onto the rough roof timbers as a base for the thatch. With long heather this is not essential and it was sometimes applied directly on top of closely-spaced purlins or a layer of brushwood.

'Tughadh tiugh teann - a thick tight thatch' is essential with heather and effective thatching is considerably more skilled and laborious than for most other styles and materials. The method of thatching is substantially instinctive and an 'eye for the job'

is essential, but it can be described. The basic rules are that the heather is put on with the foliage outwards, in horizontal courses starting at the eaves (diabul). The eaves course is especially important - long heather is used here and should always be secured (see below).³⁵



Duncan Matheson selects thatching heather

In detail, the thatcher takes a manageable armful of heather up the ladder, holds it beside him on the roof with a fork or such like, and commences. The heather is applied in single pieces or small handfuls, and the inward-facing root ends are woven together to some extent to improve binding and to straighten out bent heather. The thatch is frequently pressed down upon and shoogled with the hand to promote tighter binding. While, as noted, the eventual pitch of a heather roof should be high, the thatch is actually applied at a much lower angle, to maximise overlap and to achieve the required thickness which can be up to eighteen inches on a new thatch. Overlap is, in a sense, almost total as it is essential for shedding water that only the outer tips of the foliage should be exposed to the weather.

³⁵ It was said in Peeblesshire that 'Heath (as thatch) is neither sewed nor stringed; excepting the first course along the heads of the walls, which is sewed to the spars. It is then laid on, in courses from gable to gable, every course being beat close with mallets ...' - in Findlater, C.; <u>General View of the Agriculture of Peebles</u> (1802), 46



Duncan Matheson thatching

Vertical junctions in heather thatch are less easily merged than with other thatches, and are likely to become a source of leakage, so the heather is applied in long horizontal courses, preferably stretching the length of the roof. A single section about two feet wide and one foot high is applied at a time, whereupon the ladder is moved two feet to the side, another section thatched, and so on. Thatching is continued up each side of the roof in turn, until the approach of the ridge (cirean) which is done last. Other than at the eaves and ridge, heather of the same average length should be used over the whole roof. The ridge, like the eaves, is of special importance and the thatch will be especially thick here, the idea being to get as sharp a ridge profile as is feasible. Ideally, two men will thatch the ridge together, one from each side. A few courses of increasingly shorter heather are applied, intertwining at the apex. Then a row of heather stems may be laid on parallel with the ridge to give it an extra sharpness prior to the final 'cap' of long, fine heather being bent over the ridge in alternating directions (cas-mu-sheach) and secured.

(Photos from Lochalsh - e.g. Erbusaig - taken earlier this century show heather roofs ridged with pegged bracken stalks. While obviously effective, such a ridge would need regular renewal.)



D. Matheson Jnr., thatching at Loubain



Approaching the ridge - viewed from ridge (note thickness and angles)

If the roof has gables, the endmost section of thatch can be splayed out to overhang the wall slightly at the gable, thus protecting this junction. At hip ends, the heather will be splayed carefully and tightly around the hip in courses diminishing upwards.

Securing might be done in various ways. Preferably, this would be done as the job progressed. In the past, it would be done either with hazel laths (lathuisean) and pegs (dromanaich; sgolban) driven into the underlying divots or old thatch, or by tying to the roof timbers with lengths of split young willow (gad sheileach) which made a tough and durable twine. As wire became available, its durability and ease of use made it popular and, for the recent work, tying with a thin, plastic-coated wire answered the purpose admirably. The wire was attached to iron pegs fixed into the stones of the upper gable and, on the completion of a horizontal course, was stretched tightly over the middle of the uppermost heather stalks to the other gable and fixed there. Then, shorter lengths of wire were pushed through the roof with a thatching needle, looping over the horizontal wire at intervals of about one yard, and were tied tightly round secure timbers by a man inside with a twisting tool. Incomplete horizontal courses could be secured in a similar fashion. Even with this tying method, an external line or two of laths and pegs is desirable on each side of the ridge and perhaps also at the eaves.



Heather thatch tied to roof with wire

In the past, some folk would simply thatch the whole roof in good weather without securing (except at the eaves) and would fix the finished product externally with parallel lines of hazel laths and pegs (points upwards) at vertical intervals of about eighteen inches over the whole roof. This was a quicker method but had threefold disadvantages -the thatch would be more likely to slip as the pegs rotted, and the wood/thatch contact would tend to retain dampness and promote rot. It ran a serious risk with the weather -people recall in Camas Luinie that a crofter had just about finished his roof in this fashion during a fine spell of weather. Omens seemed good for the final day's work, and some social diversion led the man astray for the night without taking time to secure the thatch. In the early hours, needless to say, a gale sprung up out of nowhere and all his hard-won heather was scattered over the length and breadth of several crofts! The poor man was in tears, but the neighbours felt so sorry for him that they rallied round, recaptured all the vagrant heather, and his roof was soon rethatched and secured in a convivial communal effort!

There seems no evidence of a roof-roping tradition in this part of Ross-shire. In recent times, netting of wire or plastic has been readily available and can be used to cover a heather thatch, secured at or below the eaves with pegs or stone weights. The net should not be essential to secure the thatch from wind but it does protect the roof from attack by birds and small animals which can become a pest as the thatch ages and supports an increasing insect population.

Following final securing it remains only to trim the thatch overhanging at the eaves. This is done, at an inward slant, with garden shears or with a sharp hatchet and a block of wood. Enthusiasts for neatness might also have gently raked the thatch and gone over it trimming off the more unruly wisps of heather. What has now been achieved is a distinctive, dark and shaggy roof which, even in Kintail's sodden climate, was expected to survive at least fifty years.

Heather Thatching in Uist

The surviving tradition in Uist is rather different from Wester Ross, but inevitable similarities allow a briefer description to suffice here.

To set the scene, Uist, comprising the main islands of North Uist, Benbecula and South Uist together with smaller outliers, has one of the higher population densities in rural Britain. Earlier this century, this density was considerably greater still. Poverty was widespread, the large majority dwelt in thatched buildings, and pressure on thatch sources was so great that a plethora of materials was utilised, even within living memory. Potato shaws (bàrr a' bhuntàta) were one extreme of desperation³⁶ and the range included rushes (luachair), bracken (raineach), iris (seilisdeir), reeds (cuilc), water

³⁶ Caimbeul, I. L.; 'An Dòigh a Rachadh Taigh a Thogail' air aithris le Dunnchadh Domhnallach, Peghinn na h-Aoirin, Uibhist a Deas, ann an Gairm, (1957) ('The Way a House was Built', also reprinted and translated to English in Newsletter 2 of Cairdean nan TaigheanTugha (1988)). Information supported by John Archie MacVicar, Griomsaigh/Grimsay, and others

grasses (seasgan), locally-grown straw (connlach; seagail) and wheatstraw imported in bales.



Shop at Locheport, North Uist, c.1900 - heather thatched



Sidinish, North Uist, 1980 (nearer end has since collapsed)

Most, if not all of these can still be observed on derelict roofs. Muran or bent (i.e. marram grass) was and is especially popular where it could be had from the sandy **machair**, but the most durable thatch was considered to be heather. Reflecting the predominant vegetation, heather thatching was largely confined to the hilly, peaty eastern side of the islands, although an original heather roofing can still be seen exposed beneath a later **muran** thatch in the western township of Iochdar.

It seems that no heather thatching has been undertaken in Uist since about 1980 when some houses (now abandoned) at Locheport were repaired under a Job Creation Scheme. The writer has not experienced the work at first hand, but a handful of older men survive who knew the work and the following account is based substantially on the experience of John Archie MacVicar (aged 79) of Griomsaigh/Grimsay who was raised in a heather-thatched house and did a great deal of thatching in his younger days. For visual evidence, a neatly intact heather-thatched barn can still be seen at Ard Horogay by Loch Skiport, a most interesting house at Saighdinis/Sidinish has a partially-collapsed roof with heather thatch, and it can also be seen exposed beneath other materials on several derelict buildings around Uist.



Barn by Loch Skiport, South Uist, 1991

'Fraoch à Ronaigh, muran à Bhàlaigh'

'Heather from Ronay, marram from Vallay', suggests an old song, and the said island was a favourite for the Grimsay people, along with ground below the hill of Eaval in North Uist. As usual with the best sources, these are remote and are accessible only by boat. (Further south, the island of Shillay Mór in Loch Skiport and the outer shores of Loch Eynort were cropped for heather in recent decades.)³⁷

The heather sought for thatching was thin and straight - not too old, long and rank, but preferably plants with about ten years growth since a burning. A length of eighteen to twenty four inches was thought best in Uist. Shorter thin heather would be utilised for twisting into rope but, in contrast with Wester Ross, it seems that older longer heather was considered useful only for the likes of fuel, besom-making or road-bottoming in boggy ground. The pulled heather would be gathered into bundles (eallach) of no more than two feet diameter and transported to the thatching site where it would be weighted with planks and boulders and left for several weeks to 'mature', straighten and improve its binding qualities. Contrary to most of the evidence gleaned elsewhere in Scotland, Uist sources point to a favoured gathering season of August and September - the peak of the flowering season! This at least would tie in with the popular thatching season during calm weather of early winter, but circumstances might dictate differently and one **Uibhisteach** complained to the writer of his family's winter-long toil to gather sufficient heather to thatch their Locheport home in the 1960s.³⁸



Bundles of thatching heather, North Uist

³⁷ Information from Donald MacLean, Tobha Mór/Howmore, South Uist

³⁸ The large house at Saighdinis/Sidinish took about 250 eallachan of heather, over bracken, when thatched in 1980. Information from John MacDonald, Saiyhdinis

Regarding the roof to be thatched, survey highlights significant variety in the Uist houses. A presumably typical 'older' style with three main timber elements, is described and illustrated in John Lorne Campbell's recordings,³² and this general type is still numerous, but many surviving roofs comprise only two timber elements - ie. couples overlain with closely-spaced purlins or battens and commonly overlain in turn with vertically-stretched loops of heather or coir rope. All roofs, at least in living memory, had a layer of overlapping divots (sgrathan) on top of the rafters as a base for whatever thatch, if any. Further details and explanations of Uist construction will not be discussed here, but Bruce Walker has published a summary of some recent work,³⁹ and further survey findings will be available shortly.⁴⁰

There may have been some variation in techniques, but certainly the emphasis was on applying the heather in horizontal rows, and never in vertical strips which would be liable to leak at the 'joins'. Some, it seems, preferred to thatch upwards in a diagonal or slightly-stepped line across the roof, especially if they did not expect to complete a side of the roof in one day - an exposed and unfinished diagonal face, weighted with planks and stones, may have resisted wind disturbance better than a straightforward horizontal one. On the older, thicker-walled Uist houses, much of the thatching could be done from a standing position on the exposed wallhead-ledge (tobhta) and only towards the ridge might a ladder be necessary.

Anyway, the thatcher applied the heather much as in Wester Ross, with foliage outwards and with substantial overlapping of the courses. Some would put it on in small bundles at a time, pressing, spreading and settling these with the hands, while others insisted that one piece at a time was the only proper way to thatch. Each side of the house was done in turn and the ridge last. This could be raised by laying material parallel with the ridge line before capping with long heather, applied **cas-mu-sheach**. The introduction of chimneys created a new problem of leaks and some people tried various methods such as flashing or tarring to combat this, but if the thatch is done very tightly and carefully at the chimney contact, that should be sufficient.

The thickness of a new heather thatch would vary a little with the time and material available, but six inches seems to have been a normal covering, and John Archie MacVicar claims twenty to thirty years life for such a roof done well. He also claims that performance was enhanced by an initial underlay of bent or bracken, which would help to pad out the roof to a more rounded and streamlined profile. A bracken underlay can certainly be seen on the surviving roofs at Loch Skiport and Saighdinis - in fact the Saighdinis roof shows several sequences of bracken and heather. In this case it is improbable that one material so ephemeral was alternated as a thatch with one so durable, so it is likely that the two were put on at each thatching, a view supported by local opinion.

³⁹ Walker, Bruce - 'Traditional Dwellings of the Uists', in Highland Vernacular Building, SVBWG (1989), 50-70

⁴⁰ Souness, James & Hadlington, Martin; A Survey of Thatched Buildings in Uist 1991. Available shortly

No more than rough weighting was used to secure the thatch while it was applied - the work was done relatively quickly in quiet weather. Other than weight and friction, securing of the finished job relied entirely on external roping (sìomanachadh) or, latterly, wire-netting, both weighted with a 'necklace' of anchor stones (acraichean) just above the wallhead. Heather rope (sìoman-fraoich) had a long life and would soon merge into the thatch. It was more effective than the wire-netting which would always tend to form small loose bulges, where hollows in the thatch could form. The wire's heating in sunshine and slight movement against the thatch in high winds also contribute to decay. But wire-netting is much less work!

The making of heather rope and the details of roping a thatched roof are of special interest in themselves and warrant a short article in their own right.



Heather secured with netting and stone weights, South Uist

Conclusion

It is hoped that this paper has demonstrated that heather thatching is a distinctive and valuable Scottish craft in which first-hand expertise is not yet extinct.

Heather thatching is especially appropriate for the restoration and/or continued maintenance of a number of historic buildings. Moreover, there is a sound case for its

use in the roofing of some new structures in the countryside - such as hill bothies, shelters, interpretation centres and other recreational structures.

If public and private bodies were to promote a few projects, this would allow training, development and perfection of the skills required, thereby saving another small facet of national identity from extinction.

Additional References of Relevant Interest

The Thatcher's Craft, Council for Small Industries in Rural Areas, (Salisbury 1981)

Fenton, Alexander; 'Thatch and Thatching in Scotland', in Building Construction in Scotland - Some Historical & Regional Aspects, SVBWG (1976)

Sinclair, Colin; The Thatched Houses of the Old Highlands, Oliver & Boyd (1953)

MacLeoid, Tormod; 'Taigh Comhnaidh an Innse Gall 1777' ann an Rosg nan Eilean, deasaichte le A. I. MacAsgaill, Oilthigh Ghlaschu (1966)

Boyd, Alan; Seann Taighean Tirisdeach, air fhoillseachadh le Càirdean nan Taighean Tugha, (1986)

RCAHMS - unpublished survey material on Applecross (G. Stell and others), (1975/6). In the National Monuments Record, Edinburgh

Souness, James R.; Rethatching at 12 Lower Ardelve, Lochalsh, SVBWG (1986)

Souness, James R.; Rethatching at Lonbain, Applecross 1991. Available shortly

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Endnote:

The writer would be very grateful to hear of any further historical, anecdotal or practical information that readers may encounter relating to heather thatching or, indeed, any Scottish thatching and associated building work. Such information will be fully acknowledged in current research.

SIMMENS AND STRAE: THATCHED ROOFS IN ORKNEY

Paul and Alison Newman

The old houses are roofed with straw or heath, which is twisted into a rope, locally known as 'simmons'. These 'simmons' are stretched in close parallel lines across the roof from eave to eave; and when the whole roof has been covered in this way, some loose straw is put over all, which is bound down by a second layer of 'simmons'; and alternate layers of straw and simmons are put on until it is considered that the roof is complete. The outer or last row of 'simmons' is weighted down by having long and heavy flagstones placed in the folds of the ropes immediately above the eaves. These flags prevent the thatch from being carried away by the wind.⁴¹

The roofs of the Parish of Deerness in East Mainland Orkney were so described in 1874. During our recent survey of rural buildings in the Orkney islands, among other aspects of the vernacular, we were looking for surviving examples of thatched roofs. We had in earlier years seen buildings with remnant thatch over a 'sarking' of flagstones. Fenton in **The Northern Isles**⁴² has a short description of the needled thatch roof where the sarking layer is built up of simmens (two-stranded ropes) made of twisted oat straw or heather.

We found our first, and in many ways most significant, needled roof in a cottage (part of a range of farm buildings in South Ronaldsay) in which half the roof had fallen in and the lower layer of simmens was revealed. Subsequently we found five more buildings where the needling was reasonably intact in at least part of each roof. All the latter are located in the East Mainland of Orkney. In addition to these examples we have inspected and photographed vestiges of needling in six other sites in East and West Mainland, Sanday and North Ronaldsay. There are other thatched buildings, in particular in Sanday, to which we could not arrange access, and some of these may incorporate needling. In addition to these are many buildings which have a roof pitch, gable and chimney head details which indicate the former existence of a thatched roof, subsequently re-roofed with flagstones or slates. We have also found straw thatch laid over a base of lath, lath and turf, and corrugated iron.

⁴¹ Pringle, Robert Oliphant; On the Agriculture of the Islands of Orkney in Transactions of Highland & Agricultural Society of Scotland (1874), Vol VI

⁴² Fenton, Alexander; The Northern Isles (Edinburgh, 1978) John Donald, 184-6



Former prevalence of needled thatched roofs

There is plenty of evidence to suggest needled thatched roofs were at one time widespread throughout all the Orkney islands and possibly the most common method of roofing rural buildings, except in places where suitable flagstones were readily available or where thatch was proscribed for the tenants of an 'improving' laird. The use of top simmens on the upper surface of needled roofs and thatched flagstone roofs died out in the first decade or so of the twentieth century. It is unlikely that simmens needling would have been used, except perhaps for repair, much after 1880. It is remarkable that any needled roof should have survived to 1991. Without conservation the remaining few cannot last much longer.

Thatched stone roofs

More numerous by far than thatched roofs among the remaining farm buildings are the roofs made from large flags, another area of study. Before cement became available to point these roofs, they were covered with a thatch, of straw, turf or other material to assist in draught and weather proofing including frost proofing the stone. There are many extant flag roofs. Some continue to be thatched with straw, loose laid and secured with wire netting or stack nets made of baler twine. Green grassy remnants can be seen on flag roofs all over Orkney, in most cases it is impossible to ascertain whether these are the remains of turf or straw thatch.



ORCADIAN NEEDLED SIMMENS ROOF

Wall construction

The old rural buildings are of broadly similar construction whether dwellings or steadings. The walls are mainly of quarried undressed stone irregularly coursed, built with an inner and outer skin, the heart packed with small stones and clay. Typically the buildings are of a single storey about 1.8m (6ft) high to the wall head (with a few notable exceptions). Wall heads are capped with flagstone wall plates (*aisins, ais-was* or *tekels*). Gables with skews and raggles carry chimney heads where the building is a dwelling. There are no extant roofs with a central smoke hole other than the farm museum at Kirbister, though clearly such roofs were usual before the gable flue replaced the open hearth and fireback in the nineteenth century. Roofs to carry thatch have a pitch of about 40° - roofs built to be flagged are often much shallower, 25° or so. The waterberge for an earlier thatched roof can often be seen on buildings which are now roofless or reroofed with flagstone or slate. Some gables are built with a slight but distinct curve - the silhouette of the finished thatch roof is of course quite rounded.

Timber roof structure

There is no evidence in Orkney of cruck timbers in roofs. The covering on the roof (stone or thatch) is laid over couples and laths. Couples are either set on the wall plate or else located in socket holes about 0.3m (1ft) below the wall head. In the best practice the thwartback (tie) is joined to the legs of the couple with a joint of wedged shape which tightens as the couple spreads. Thus the wooden peg which holds the members together does not take the full shearing force on the joint. (We note in passing a different roof construction in North Ronaldsay, where a maintree and rafter construction underlies some flag roofs.) Laths, sometimes spanning only one bay of couples, are required on each side of the ridge and at the eaves and at various places between. Timber has always been a valuable commodity in these almost treeless islands, and there is evidence of reuse of timber, including ship's timber (some from wrecks) and driftwood.

Needling the roof with simmens

The next stage in the construction of the roof is the 'needling' process. Simmens are taken back and forth across the roof, each strand being attached to the lowest lath near each eave.

The simmens lie side by side, secured to the lowest lath which is set within 0.3m (1 foot) of the wall head. A bay of three feet between couples was noted to require about 26-30 strands of simmen. Each strand is 4.5-5m (15-16ft) long, the bay requiring therefore about 130m (140 yards) of simmens. A but and ben dwelling some 9m (30ft) long internally would have taken some 1.2km (3/4 mile) of simmens for the needling (more is needed on top, though less than 1.2km (3/4 mile), top simmens not being laid so close).

As well as roofing, simmens were required for tying stacks. Plenty of present day Orcadians of the older generation can wind simmens and recall their use in the stack yard. A few people in their eighties can recall seeing simmens being put on the top of roofs when they were young and can describe the process, which requires one man on the ridge of the roof with the ball (Orcadian *clew* who feeds loops of simmens alternately to a colleague on each side at the eave who slips the loop over the bendlin-stane. Stacks were thatched in a similar manner. There appears to be no one alive who recalls seeing needling being put on a roof. It seems reasonable to assume that the same method was employed.







b. Estabin loop

c. Gimps knot

10 C

Securing the needling

The securing of the simmens to the lowest lath is done in various ways:

a. In five of the six reasonably intact needled roofs we have seen, the simmens are bent into loops which are laid over the outside of the lowest laths and then firmly tied with cord. Additionally there is evidence of coir cord still tied to the lowest lath in a number of roofs where only this vestigial evidence indicates a former needled roof.

- b. The drawing made by RCAHMS⁴³ in 1968 of a barn at Estabin (no longer in existence) shows the simmens in a simple loop round the lowest lath. No examples of this method were found.
- c. A third method was noted in a straw roof at Gimps in South Ronaldsay, discussed in detail in the second part of this paper. There the simmens were tied by barrel hitch to the lowest lath.

It should be noted that the second and third method both seem to require at least one end of the lath to be free from the couple until the loops have been slipped on - it is not possible to squeeze a ball of simmens through the gap between lath and wall head.

The ridge

When the needling has been applied, the top of the couples would tend to stand proud above the needling near the ridge. Ridges can be reinforced with turf, extra straw, woven straw matting (in Orkney a flackie. We heard of flag iris (iris pseudacorus, Orkney segs) being used to cover the ridge on a flag and thatch roof, but could not distinguish them in the remains of the vegetation on the roof. Sail cloth and tar paper were also to be seen in other roof ridges.

Flagstones

After the needling, a row of flags is laid at the wall head against the couples covering the gap between the lowest lath and the wall plates. Flagstones, pierced for skylights, may be incorporated in this row of stones.

Intermediate layer of thatch

The next layer of straw is laid loosely on top of the needling to a depth of 0.3m (1ft) or more, and may well have been thicker when first laid. The straw is not laid in orderly layers as in English stitched thatching but is apparently more or less randomly applied and in this respect the thatching technique is similar to that used for the black houses of the West Highlands. One may think of this layer with its random structure, as a kind of large scale felt.

Typically, in well maintained roofs, more loose straw was applied at about two yearly intervals on top of the existing thatch and fresh top simmens put on, the bendlin stanes being relocated in the loops of the new top simmens. We would have thought that the layered effect which builds up in a roof is likely to be caused by the repeated addition

⁴³ RCAHMS: illustration in Fenton, Alexander; The Northern Isles (Edinburgh 1978) John Donald, 185

of straw and simmens over time. It is noted however that both Pringle¹, quoted earlier, and the NSA⁴⁴ refer to the roof being made initially of alternating layers of straw and simmens. We wonder how the intermediate layers of simmens were secured, if that is the case.

Straw was a valuable commodity - it fed stock and from it were made ropes, furniture and basketry. Clearly therefore, alternative thatching materials to form at least part of the thick layer of material were useful. Turf, both grass and heather, is found. The history of agricultural improvement in Orkney is full of references to restrictions on turf cutting, which had destroyed large areas of grazing. Turf was used as fuel and byre bedding as well as roofing, so supplies were not unlimited. We have found hay, bent grass and heather in thatch, and in Deerness some material which had oxidised white turned out to be seaweed (eelgrass, Zostera Marina, locally known as boss). Eelgrass grows in Deer Sound. We found it on other Orkney shorelines, but it was not reported as a roofing material elsewhere.

The top layer of simmens

The roof is then completed with a less closely packed lacing of simmens, with stones (bendlin-stanes) inserted in the loops of simmens just above the eaves. Where there are roof lights, the top layer of simmens would be shorter, so that the roof light is framed above and on two sides with thatch. Photographic evidence of top simmens shows that just occasionally the technique was elaborated by the addition of single diagonal simmens at about 0.9m (3ft) intervals (or the length of a bendlin-stane), or alternatively elaborated with a horizontal simmen running the length of the roof, located a little above the bendlin-stanes and threaded above and below the strands of vertical simmens.

The only evidence of top simmens we found, other than the case study below, were some heather simmens visible from inside a very precarious roof which had flag below a turf and straw thatch. It appeared the simmens lay in the middle of the layers on the roof and represented a previous top surface which had been buried in later re-thatching. There are fortunately many examples of top simmened roofs recorded on photograph in the archive of work by Tom Kent⁴⁵ held in the Library in Kirkwall. While the application of top simmens persisted, there must have been a considerable uniformity in appearance of the roofs of the rural buildings of Orkney, despite difference in pitches and whatever type of construction and selection of materials lay underneath.

⁴⁴ NSA: New Statistical Account (1845), Vol 15, 179

⁴⁵ Tom Kent Collection: Orkney Library Photographic Archive



THE FERRY HOUSE, GRIMSTON, SOUTH RONALD SAY : from a photograph by Tom Kent in the Orkney Library Photographic Archive

Later method of securing the roof

With the ready availability of wire netting after World War I, this material was used instead of top simmens, although the bendlin stanes continue to be used to hold the wire netting in place. Occasionally old fishing net is used for the same purpose.

It is evident that thatched roofs consumed a vast quantity of straw or other thatching materials. To produce this amount of material year after year implies a style of agriculture which has been progressively eroded by the changes in agriculture during the twentieth century. A major obstacle to the conservation of these few remaining needled roofs would be obtaining regular supplies of uncrushed, long stemmed straw and the skill and amount of labour required to make and apply the simmens.

Gimps: A needled thatched roof in South Ronaldsay

The Gimps site in South Ronaldsay (HY 482935) comprises house and byre in one range. Separated by a narrow closs is a byre and calf byre. At some distance from these buildings is a building incorporating stable and barn. There is still a threshing machine in this barn (wooden carcase with double drum, of the rotary shaker type) connected through a gear train to an external overshot water wheel. The wheel is fed from a mill dam on the site. What is missing from the complex is the traditional barn with winnowing doors and threshing floor and associated kiln. That such a building possibly existed on the site is suggested by the present owner's recollections of remnant buildings at his boyhood home. The stable and barn with the water wheel were certainly built later than the house and byre, and the second byre and calf house. Although the latter two buildings were said to be thatched at one time, only the house itself now has a thatched roof. The house was in occupation until about three years ago, has been rethatched periodically until quite recently but secured with wire netting rather than top simmens. The roof has partly fallen in. Indeed, if the roof had been intact, we might never have discovered that it was a needled roof and with a method of fixing the simmens which is unique in our experience so far.







GIMPS : February 1991

Description of the house

The house is a but and ben with a central closet formed by box beds. The single external door opens into a small lobby which has no ceiling. The lobby gives access through three internal doors to the ben end, the closet and the kitchen. The kitchen has a boarded coombed ceiling sealed above with sailcloth. A gable fireplace has a stove fitted. The wall between the kitchen and the closet is formed by the side of a box bed opening into the closet and some wooden partitioning. The closet is ceiled with boards from an old box bed and the tiny room is lit only by a small rooflight.

It is impossible to examine the ben end properly because of fallen thatch and couples but it has a gable fireplace and at least one box bed, the back of which forms a wall of the closet. Both the kitchen and the ben end walls have a thin timber lining, but the interior wall of the lobby is unlined and what appears to be the original cow dung plaster is visible through the later whitewash.

There are two small iron framed rooflights above the eaves, one over the kitchen and another over the closet. There are two visible pierced flagstones above the eaves which indicate earlier rooflights, and others may be hidden behind the coombed ceiling or beneath the fallen thatch at the ben end. There is a window in the rear wall of the kitchen known to have been made since the 1930s, before this the kitchen would have been lit only from a skylight. There are two windows in the ben end, one in the back wall and one in the front.

Roof structure

The roof structure consists of couples in the Orcadian style, set at about 0.9m (3 ft) intervals with a pitch of about 40° from the horizontal. The timbers are half round in section with half lapped joints secured by timber pegs. In the best tradition, the thwartbacks (couple ties) should have joints which are keyed into the couple legs with a half dovetail joint which tightens as the couple spreads under the imposed load, so as to avoid too much shear stress on the wooden pegs. In this roof the refinement is not evident.

The couple feet sit on top of the flagstone wall plates. Fixed between the couples are six horizontal laths per side, approximately evenly spaced, with the top one near, but not at the ridge, and the lowest lath about 0.3m (1 ft) from the couple foot and wall head.

In this one case the simmens loops are knotted around the lower lath with a barrel hitch. This must be a more robust method of attaching simmens but more difficult to employ than simple tying. We cannot be sure (despite an appeal on BBC Radio Orkney) how this was done. It seems likely that one end of the lath was temporarily detached from the couple to allow the knots to be slipped on, rather than feed yards of simmens through the knot. Twenty-six to thirty strands are placed between each pair of couples with the strands being packed tightly together so that there are no gaps between them. The roof of this cottage would have required about 1.2km (3/4 mile) of simmens for the needling alone.

In this building a cross section through the thatch revealed in the collapsed part of the roof, shows a layer of felted straw thatch with successive layers of remnant top simmens.



Alterations

The walls of the house and byre block show evidence of several stages of alteration. Walled-up openings can be seen on the closs side of the house as well as variations in the character of the stonework. Some of the stonework incorporates large rounded stones without much evidence of coursing. The byre was rebuilt in 1931, probably with a thatched roof, but is now roofed with corrugated iron sheeting. It was reported⁴⁶ that the common gable between the house and the byre was also rebuilt at the time. It was also reported that the ben end of the house had been extended at some earlier date. Both gables incorporate fireplaces, flues and chimney heads complete with waterberges.

On the inside of the roof, simmens and couples are soot blackened (incidentally making the roof interior very difficult to photograph satisfactorily). We noticed a framed opening at the ridge between the second and third couples from the common gable with the byre. This had been filled with some small strips of timber. Subsequent discussion

⁴⁶ Discussions with the present owner Mr Scott whose family have occupied the house through five generations over one hundred and fifty years.

with the owner of the site establishes family memory of the time before the flued gables were built when the building had an open hearth and smoke hole. Apart from this framed opening no other features such as hearthstone, backstone or pauntree survive.



GIMPS : in 1930's



GIMPS : as it may have been around 1830's

Dating the building and the roof

Even with written archive material it is very difficult to date these rural buildings with any certainty. With the soot staining and the smoke hole we suggest the earlier parts of the building date to before about 1830-1840 (after which time one might expect new buildings to be built with flued gables rather than open hearths and smoke holes). We conclude that this building has been substantially modified at least twice without rebuilding the roof over the original core. This suggests the original roof structure is unlikely to be less than one hundred and fifty years old. The needled simmens may be original; or if not original, at least one hundred years old.

Case for conservation

This particular house, which we think has the oldest remaining thatched roof in Orkney, raises the question how, if at all, such a roof can be conserved. In 1989 the roof was intact. By the time we first saw it in February 1991 half the roof had fallen in, over the ben end. In the period of four months, further deterioration has been evident and at the present rate of decay, it will have collapsed completely in the next year or so.

For reconstruction, the roof would require a considerable quantity of long oat straw of a variety no longer in common cultivation. The crop would need to be cut and traditionally threshed to conserve straw in an uncrushed form. Very considerable hours of hand work would be required to make the simmens. There would then be a continuing requirement for fresh straw (and top simmens for authentic reconstruction) about every second year. The paradox here is that a reconstruction would be essentially, a modern replica. Much of the interest in Gimps is the age of the present roof in soot blackened state. Given these circumstances it may be difficult to argue that a new thatched roof should be made on this particular building. Nevertheless it is important that one or more examples of this needled thatching technique, once so prevalent in Orkney, should be preserved. At present, we know of no plans to preserve a roof of this kind.

REBUILDING JEANNIE MACALPINE'S INN

Sam Seabrook and Brian Wilson

The story of the renovation project underway at 'Jeannie MacAlpine's Inn', Aberfoyle, is perhaps more than a little different from most vernacular renovations, for it began with a china model cottage!

Maggie and Sam Seabrook have gathered an unrivalled collection of miniature china and porcelain cottages - produced and sold throughout Britain at the turn of the century - of such famous and popular buildings as Shakespeare's House, Burns' House, Lands End and the Fair Maid of Perth. Whilst researching material for a book - yet to be published - on souvenir cottages they discovered that 'Jeannie MacAlpine's Inn' at Milton of Aberfoyle was one of only two famous old 'souvenir cottages' whose real life equivalent had become dilapidated (the other being 'Pete's Cottage' on the Isle of Man).

Jeannie MacAlpine's Inn was a very famous Perthshire thatched cottage; featured in **Rob Roy** by Sir Walter Scott, based on facts dating to around 1750. As well as being a marvellous blend of facts and fiction, the description of Jeannie MacAlpine's Inn in chapters 28 and 30 gives a valuable description of the house:

..... I shall never forget the delightful sensation with which I exchanged the dark, smoky, smothering atmosphere of the Highland hut, in which we had passed the night so uncomfortably, for the refreshing fragrance of the morning air, and the glorious beams of the rising sun, which, from a tabernacle of purple and golden clouds, were darted full on such a scene of natural romance and beauty as had never before greeted my eyes. To the left lay the valley, down which the Forth wandered on its easterly course

..... From all we could see, Mrs MacAlpine's house, miserable as were the quarters it afforded, was still by far the best in the hamlet; and I dare say (if my description gives you any curiosity to see it) you will hardly find it much improved at the present day

In addition Sam and Maggie had the model cottage as a template and some twenty photos, postcards and pictures of the building (interior and exterior) in various states of thatch, habitation and repair during the early years of this century. They have also discovered a copy of the old 1922 film **Rob Roy** in which the cottage features.

Thus three years ago, with the building in a very dilapidated state, Maggie and Sam decided to restore Jeannie MacAlpine's Inn as a private project. It was almost completely tumbledown, and had recently been used as a sheep fank. The remains of a gable, some walling and doorways remained, but no timber or thatch; and the entire site was a litter of mud and loose stone.



With determination Sam single-handedly cleared and drained a huge amount of debris from the site, salvaging all the useful building stone for later use. They also studied any material available on local history, scoured farm roups for traditional adze and auger tools, and attended practical courses which Brian Wilson was giving in stone-walling and cruck-framing in Glen Etive, Argyllshire.

Eighteen tons of uncut oak timber were obtained from the Forestry Commission and a small grant of $\pounds 250$ from the Shell Better Britain Campaign, allowed the Seabrooks, with the help of Brian Wilson, to begin work on the building last year. The aim being to restore it to its condition in 1900 - the period about which we had most evidence.

The evidence suggests that the building was largely drystone- built in random rubble, although there has been lime mortar and pointing used on two of the front walls, and on the western gable.



We believed that unit 3 was the oldest; thus the front wall of unit 2 abuts the corner of unit 3. However we were surprised to discover that the north wall of unit 4 (continuous and without windows or doors) was tied into the two gable ends as though built contemporaneously with unit 3.

We do not yet understand why the front wall of unit 2 was built separately (the stones are smaller and lime has been used). Rebuilding the walls (which are approximately 2'6" wide and 14' high to the gable) has meant a thorough demolition and re-build from the foundations. In some cases it has been possible to reinstate certain individual stones in the locations indicated from evidence in the old photographs. And many discoveries have been made so far:

- the hearting (small stone) in the wall was in many parts poorly built originally.
- the wall was filled with an incredible accumulation of soot and dust.
- many important stones (lintels and sills) had been removed for use elsewhere around the site. These have now been largely recovered. Despite or perhaps because of the fame of the site, Jeannie MacAlpine's has largely avoided the fate of some similar cottages, ie: becoming bottoming and hardcore in road constructions.



At present we have reinstated the central gable, built two door ends and two windows and we are preparing the site for a cruck couple. The entire back wall of unit 2 has been completed and we have begun the laborious job of squaring oak trunks by hand, using adzes.

Some rafters will require to be 15' long by 8" square, and we have found that squaring one such beam per day is a taxing rate of progress.

Nevertheless we are progressing - all that hinders us at present is damage to the adzes. We have been unable to find a supplier of adzes or - more importantly - new handles.

If anyone can help us with adzes, or any other traditional tools, or if you would simply like to come and see the progress, you are most welcome to make contact and visit. For now, on with the building

Jeannie MacAlpine's Inn Restoration Project Milton Farm Cottage Milton of Aberfoyle Aberfoyle Perthshire Tel: 087 72 737

ARTAMFORD AND GREENWRAE: DESIGNS FOR TWO IMPROVED FARM COURTS: 1760 AND 1822

Harry Gordon Slade

In the course of rummaging amongst family papers in different parts of Scotland I recently found two sets of plans for improved farm courts. The first, in very outline form, from the Irvine of Artamford papers at Craigston Castle; the second, in considerably greater detail, from the surviving Heron-Maxwell papers at Springkell House. Neither drawing is in a condition to reproduce clearly, and so have been redrawn for this short note.

The two designs, one from Aberdeen, the other from Dumfries, are separated by a period of sixty years. Both lie in the same sort of flattish country given to mixed farming, but with an inclination to stock. One was built at the beginning of the Agricultural Revolution, the other almost at its peak. Greenwrae extended to 295 acres, and whilst it is impossible to identify the site of the Artamford design, it is likely to have been of much the same acreage.

Artamford, New Deer, Aberdeenshire, c. 1760

The outline sketch for this farm was found in a bathroom cupboard at Craigston. It was amongst a number of papers relating to the affairs of George Irvine of Artamford, who had inherited the estate on the death of his father in 1758. He returned to Scotland from the West Indies in 1759, and travelled in Great Britain and the continent until his return to the islands in 1764. His extensive notes show that he took a considerable and informed interest in agriculture, and this sketch is almost certainly for a steading which he wished to improve, and may be in his own hand. It is not clear whether it was for one of the tenanted farms on the estate, or for the house of Artamford itself. In favour of the latter suggestion is the formality of the plan, and an inventory of Artamford made in 1759, which shows the house to have been small and old-fashioned, probably dating from the previous century. It is evident that the sketch is the work of an amateur; symmetry and formality have led to omissions and contractions which would have to be corrected before the scheme could be considered practicable. Nevertheless, considerable thought has gone into it, and it contains all the elements that were to become standard in the farms of north-east Aberdeenshire in the second half of the eighteenth century.

The house stands forward of the farm court to which it is linked by curved screen walls. It is shown as having a window either side of a central entrance, and a single window in the middle of the rear elevation overlooking the court. This gives two rooms, each twelve feet by eighteen feet, and a central space twelve feet by eight feet. There is no indication on the plan as to whether there was an upper floor so this space could have been for the entry and staircase, or for the entry and press - or closet -, but, given the formality of the general plan, an upper floor and garret could be expected. It is in the plan of the house that there is a noticeable omission. No provision is made for three rooms - pantry, dairy and scullery (or back kitchen) -which would be essential in a house of this size, which is another reason for thinking that this sketch may be the work of

George Irvine himself: a widower and a West Indian planter he would have had little knowledge of the working parts of a house in the north.



The court, or cattle and dung yard, lies on the north side of the house and is completely enclosed either by buildings or high walls, the plan showing clearly that the two entrances are arched openings. The north range consists of a three-bay cattle pen flanked at either end by two-bay wagon sheds. There was probably a granary above these three divisions but there is nothing to suggest this on the plan. On the east side of the court is the barn with paired doors; it measures thirty-seven feet by twelve feet, and has the barnyard on its eastern side. A building of similar size is shown on the opposite side of the court; this is shown as a combined byre and stable. It is hardly big enough for both; with standing for four wagons stabling for eight horses would be needed and this would fill both halves, and only then if the stalls were at four feet three inch centres. If there were only four horses - one to each wagon, only half the building would be needed as stabling, and it would then be possible to squeeze five or perhaps six cows into the byre. This allows neither for the lack of wisdom in mixing horses and cattle, nor for the feelings of the horsemen. A hay loft could be expected above the byre and stable.

Obviously thought has been given to the orientation of the yard. Both house and cattle pen benefit from a southerly aspect, the house affords a measure of shade to one side of the yard, which itself is sheltered from the winds, and the barnyard enjoys the early morning light.

In common with all the drawings of eighteenth century farm buildings that I have studied in the north-east the span of the buildings is twelve feet. This seems to be based on two concepts. The first allows three stalls (four feet wide) or four stalls (three feet wide) to be planned across the building, or it allows for stalls six feet in depth with a walkway of the same width to be planned lengthwise, which allows the width of the stalls to be more variable.

Greenwrae, Norton, Dumfriesshire, 1822

The faint pencilled plan for this steading is to be found in the letter book of the factor to the Maxwell estate of Springkell. The plan, which is dated 1822, shows the thinking of the day on what was necessary for the steading of a moderately mixed farm of nearly 300 acres.

Greenwrae is still a working farm, and although the buildings have been savagely altered, the bones of the barn and the cattle shade, and elements of the original layout can still be identified under the later alterations. The farm house stands apart from the court, probably on the site of a house which pre-dates the 1822 steading. It has been largely rebuilt.

The court - dung court and straw yard - measures seventy-eight feet by seventy-two feet - and has ranges of the buildings on the east, west and north sides. The south is more open, enclosed only by a wall and a low range of pigsties.





איאאבוד ל צאנאטעבוד אפא (צאנאטעבוד איזאפער)

FLAN OF THE STEADING OF GREENWRAL 1022

The yard is sheltered from the north by the highest range of buildings, consisting of the barn, cattle shade and large stable. The barn, which is the full height of the range, measures forty-five feet by sixteen feet. There are double doors on the north side, and two single leaf doors, one in the west gable and one leading into the court. Next to the barn and open to the south is the cattle shade of four bays, with a granary above. The granary doors are carried up above the wall head with small dormer gablets. Beyond the shade, and completing the range is the large stable. This has standing for six horses, with single leaf doors to the court and to the lane running along the east side of the steading. Although there is no mention of it on the plan it is likely that there was a hay loft above the stable.

The east range, which opens onto the lane, consists of a small stable, cart shed, potato house and boiling house. The stable has standing for three horses, and there were probably means by which the hay in the loft above the large stable could be forked down into the racks here. Next to the stable is a three-bay cart shed. With standing for nine horses this suggests three teams of two, one spare team, and a saddle horse for the farmer. Beyond the stable are the potato house and boiling house, handily sited for the pigsties. The position of the boiler is not shown, but it was probably against the gable.

The west range is devoted entirely to the cattle and their needs. Two cattle byres, with stalls for twenty beasts in each, are separated by a turnip house, and beyond the second byre is a calf house with fourteen pens. This range has doors on both sides; all are single save that on the west side of the turnip house which is shown as being a double width opening. This has a practical purpose since a cart could be backed up to it, and the load tipped directly in.

The pigsties, each one of which consists of a house and open yard, entered from the court would have accommodated twelve pigs in reasonable conditions.

Greenwrae was only slightly altered during the nineteenth century: the first Ordnance Survey suggests that by the late 1850s a horse mill had been added to the stable - an extremely odd position, and the Springkell sale catalogue of 1892 shows that the turnip house and one of the byres had been joined to form a larger byre. This indicates the increasing importance that the milk cheque was playing in farm economics, especially in those areas with good rail links to the big cities. At that time the rent for the 295 acres of Greenwrae was £255.

It was intended - certainly it is shown as such on the original sketch - that the south side of the court should have been in a single plane. But the sketch is dimensioned and when the dimensions are added up there is a difference of one foot six inches - a wall thickness - between the east and west ranges. There used to be - there may still be - a note added to all working drawings: 'Figured dimensions are always to be taken in preference to scaled dimensions.'

CLOSET, GILL PIER, WESTRAY, ORKNEY

Graham J Douglas

Reading with interest the article by W. Ashley-Bartlam in \underline{VB} 14 about the sea-washed closet on Shapinsay, I was reminded of a similar convenience on the nearby island of Westray. It was still in use when recorded by the Scottish Industrial Archaeology Survey unit in October 1980. A five apartment type, built during the 1880s on the site of the Knoll of Skulzie, a possible pre-historical burial mound (OS ref. HY44 NW23). Constructed of thin pieces of local stone and now roofed with corrugated cement asbestos sheets, on three wooden trusses. Below the wooden seat in each apartment is an oval sheet-metal pail. These can be removed through openings covered with hinged wooden flaps in the north-east wall, and emptied onto the nearby shore.



ARDNAMURCHAN FIELD TRIP

Graham J Douglas

Plocaig was one of the abandoned settlements the group visited on a truly lovely, still sunny Sunday.

An unusual settlement plan because of its curved layout. The OS 6" map of 1872, namebook entry for the site is: 'A group of small crofts, the property of John James Dalglish Esq., Ardnamurchan and West Grange'. In the limited time available a plane-table survey was started and the following drawing shows an annotated site plan, and the scale drawing of the four buildings in the centre of the complex.



THE GLASITE MEETING HOUSE, 33, BARONY STREET, EDINBURGH

Elizabeth Beaton

At the Group's 1991 AGM, held in the Uists, those present will have heard, but possibly not fully understood, a mention of the SVBWG having its own address in Edinburgh at the Glasite Meeting House in Barony Street.

Some explanation is needed!

The Church of Christ, known as the Glasite or Sandemanian Church, was founded in 1735 by the Rev. John Glas, Minister of Tealing in Angus, who was expelled in 1728 for his belief that the Kirk should follow a path closer to the teachings of Christ. Each 'meeting' was governed by twelve elders, a minister or preacher travelling between congregations. In due course there were a dozen or so churches in Scotland, of which the 'Kail Kirk' in Dundee is a good example, together with a few in England. Glas' daughter married Robert Sandeman who took the 'faith' to America where the Sandemanian Church still exists. The Sandeman port wine family are direct descendants. Congregations included many other prosperous mercantile families such as the Bells and Pullars of Perth.

In 1989/90 the few remaining members of the Edinburgh congregation decided to hold their meetings in the home of one of their elders and to give the church to the Cockburn Association, Edinburgh. The building is to become the HQ of the Architectural Heritage Society of Scotland. By arrangement, the facilities, storage, meeting rooms, etc. will be used by other bodies with an interest in building history or conservation.

The meeting house at 33 Barony Street was built in 1836 to a design by Alexander Black (1798-1858), replacing the first Glasite church in Chalmers Close, off the High Street:

Externally it is a self-effacing building of rather domestic character at the front, with a plain stone box to the rear, enlivened only by large dummy windows. Inside, the box is revealed as a two hundred seat presbyterian church of similar austerity, lit by a large cupola, with box-pews, and a twelve-seat, three decker pulpit (by David Bryce, 1872). The other ground-floor rooms comprise an elders' room and a caretaker's flat, while upstairs there is a small suite for a visiting preacher, and a large, simply detailed room - the feast room - for the consumption of hot-pot lunches between morning and afternoon sermons.⁴⁷

The floor in the 'feast room' was of cork, an early example of this warm and well wearing material, undoubtedly provided through the trading links of the Sandemans with the Iberian peninsula. This room is to be re-furbished with funds raised in memory of the late Colin MacWilliam and will be known as the MacWilliam Room. It will be ideal

⁴⁷ Extract from the Cockburn Association Newsletter 34, May 1990

for small meetings. The 'meeting house' requires virtually no alteration for use as a lecture theatre. The caretaker's flat and ladies' retiring room will become offices.

It is worth noting that all the interior fittings are of excellent quality though unpretentious design, befitting the prosperity of many members of the congregation. George Sandeman (brother to Robert) was a Perth cabinet maker and may have been instrumental in establishing the tradition of fine wood-work. The building has a basement with large areas of dry storage which was originally intended as an hypocaust system.

Acknowledgements

I am grateful to Simon Green, a Trustee of the Glasite Meeting House Trust, for showing me round 33 Barony Street and for his help in the preparation of this note.

CONTRIBUTORS

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Graham Douglas works for the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) as a fieldworker recording Scottish industrial archaeology. Born in Australia, he has been working in Britain for two decades. After working at the Adult Education Centre in the University of Newcastle upon Tyne for several years, he took up the post of survey officer of the newly formed Scottish Industrial Archaeology Survey (SIAS) at Strathclyde University in 1978. The SIAS unit was transferred to RCAHMS in April 1985.

Alison Newman, after twenty years working in local government, enjoyed the opportunity to return to the North of Scotland to work with her husband in the study of rural buildings in Orkney.

Paul Newman lectures in the Department of Architecture of the University of Edinburgh. He has recently spent four months study-leave in Orkney recording rural buildings.

Sam Seabrook trained at the Royal Botanic Garden, Edinburgh. Most of his working life has been spent as a landscape gardener. He designed a garden for the blind in Aberdeen for which he received a civic award. He has taken early retirement in order to devote himself to the Jeannie MacAlpine Inn restoration project

Harry Gordon Slade trained as an architect. He worked as an architect and inspector of ancient monuments with the old Ancient Monuments Directorate and latterly English Heritage. He has published papers covering both castles (particularly NE Scotland) and vernacular subjects. A dilettante by inclination and bon viveur by nature.

James R Souness is currently Conservation Officer with Borders Regional Council. He is also an amateur thatcher and is researching his PhD on 'Scottish Thatching Traditions' through the School of Scottish Studies. He is secretary of Cairdean nan Taighean Tugha/Friends of the Thatched Houses.

Brian Wilson is an expert in drystone dyking. He is author of Blazing Paddles, the account of his canoeing journey around Scotland. He is about to publish a similar volume on Ireland.

Thanks also to Liz Robertson for re-drawing the plan of Jeannie MacAlpine's Inn and to Anne Grant for the typing of Vernacular Building.

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