VERNACULAR BUILDING 13

Scottish Vernacular Buildings Working Group

1989
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Cover: Riasg Buidhe settlement c.1910. Drawn by Bruce Walker from a photograph taken by M E M Donaldson. The first two cottages have been reroofed with corrugated iron and the third and fourth have partially collapsed. The photograph is part of the M E M Donaldson collection in the Scottish Ethnological Archive of the National Museums of Scotland [Ref. C.18395]
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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 - this year the spring conference was held at Rosemarkie in the Black Isle, and a one-day conference on Vernacular Interiors was held in Edinburgh in the autumn. The spring conference in 1990 will be centred around Berwick-on-Tweed.

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 1990 at the address below.

Dorothy Kidd
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Sonia Hackett - an appreciation

As many of you will know by now, our treasurer Sonia Hackett was killed in an accident in Austria in July this year. She had been treasurer since 1985 and had worked extremely hard and successfully at improving SVBWG's financial position. Those of us who spent a glorious autumn weekend on Colonsay last year, wonderfully organised by Sonia and her husband Mike Scott, will remember eating our lunches with her in the warm sun watching the seals playing in Riasg Buidhe bay - our work of recording the settlement temporarily abandoned. Two of the articles in this issue of VB are a reminder of that weekend.

The following is an account of Sonia's professional career by Liz Whitfeld, one of her friends and colleagues:

Sonia was a senior architect with Historic Buildings and Monuments, Scotland (Scottish Development Department).

She trained at Newcastle University from 1969 until 1976, receiving a BSc in 1973 and her architecture degree in 1976. During this time she had two years' practical training, 1970-71 with Bristol Corporation and 1973-74 first working with her father (a mechanical and electrical engineer) at Oscar Faber in Glasgow and later with what was then the Ancient Monuments Branch of Property Services Agency (Department of the Environment) - now HBM, Scotland - in the drawing office. After completing her university training, she was employed for some months in Mary Tindall's architectural practice, before returning to the Ancient Monuments Branch, this time permanently.

For nearly two years Sonia was attached to the North Area drawing office, but on passing her professional exams and becoming a registered architect in mid-1978, she was promoted to act as assistant architect in the Edinburgh Area. She took a particular interest in and responsibility for Holyrood Park (newly taken over by AM) and often spent time in it at weekends - starting her career-long habit of allowing her commitment to her work to overflow into her own time. About half her time from this point on was given to dealing with a caseload of Historic Buildings grant applications, including some of the most complex and controversial Glasgow buildings, street schemes etc.

In September 1980 Sonia was promoted again to an Area Architect post, taking responsibility for the Central Area, which stretched from Argyll to Fife and included such differing facets as Callenish stones in Lewis and Stirling Castle. She remained in charge of this area until her death, although she had planned to transfer in the near future to a district in the South of Scotland. Although she had become very attached to her monuments in the Central Area, which she protected - fiercely at times - for almost 9 years, I think she felt it was time for a change and was looking forward to it. There were many careful conservation projects carried out at monuments during her period of responsibility and it is difficult to point out particular works as having been more successful or important than others, but among those she felt had been especially worthwhile were the harling at Argyll Lodgings (Stirling Castle) - which was a very considered attempt to recreate the original specification and appearance - the refurbishment at King's Old Buildings (again
Stirling Castle), and the consolidation work at Castle Sween—where too she went to great pains to ensure retention of original pointing and matching of the new specification to the old.

In addition to her Area responsibilities, she became closely involved in particular working parties on policy (for instance Historic Buildings grant procedure and policy) and controversial issues (for example stone cleaning). She wanted to have an involvement in these wider facets of HBM's role, and was committed enough to give up her own time to achieve this. She said herself that although she often complained at being given extra items of work, she could not bear to turn down the opportunity to comment, or to be involved; the result being that she worked incredibly long hours to manage this, and was a trusted advisor often consulted on such questions.

Her B Arch thesis in 1976 was on Scottish Parliamentary Churches and Manses, built to the design of Thomas Telford, and this was also the subject of her only major published paper, written with Neil Livingston, a former colleague in the HBM drawing office, in Studies in Scottish Antiquity (ed D Breeze; 1984). Vernacular buildings were always a major interest, maintained strongly through her work. For most of her period as area architect for central area she was responsible for the Black House at Arnol, Lewis, and she had also visited almost all the existing thatched houses in Scotland, as part of her Historic Buildings responsibility. She was applying her considerable botanical expertise to investigate how thatching methods varied according to locally available plants, and an internal paper on this had been proposed for HBM.

She was a perfectionist, not easily able to compromise nor willing to reduce her standards, and this made her in some ways a demanding person to work with. But she was always generous with her time and professional advice when asked by colleagues to explain her views or discuss how to tackle a problem. Her death is a great loss to the Directorate professionally and a great loss to her friends personally. We all miss her.
Elizabeth Beaton

Riasg Buidhe (Gaelic: Riasg = Morass with sedge or dirk-grass: buidhe = yellow). 1

Colonsay was green with grass, brown with bracken and set between brilliant blue sea and sky on Saturday, 22nd October, 1988 when visited by various members of SVBWG to record the former fishing settlement of Riasg Buidhe. This is sited above, and about a quarter of a mile from, Port a' Bhata (port or haven of boats) on the east side of the island. Tuition in the use of a plane table was expertly and patiently given by Ian Gray (HBMD) with Graham Douglas (RCAHMS).

Eight single storey cottages lie in linear plan forming a south facing terrace stepping down the eastward sloping site, each dwelling of three bays with slightly off-centre doorway. The asymmetrical frontages are the external indication of a two-room plan, the west room slightly larger than the east which in some cases was lit by a smaller window. Some of the cottages also had a small rear window. It is doubtful that the rooms were partitioned by walls for box beds would have sufficed as dividers.

The building material was random rubble with roughly tooled dressings. Mural slots in three of the cottages indicated cruck framing (from west to east, one slot with remains of cruck truss in no. 1; two mural slots in rear wall of no. 5; one in no. 6). Most of the buildings survive to the wallhead; nos 1 and 2 (at west of range) have gable end stacks served by hearths and flues abutting the gable walls; these appear to be later improvements and may have superseded former 'hanging lums' or chimney canopies constructed of less durable wood and clay. There is no evidence in the remaining cottages of hearth or flue, but these probably had hanging lums serving wooden chimney cowls encased externally in thatch and clay. 2

A few Easdale slates were found by the first two cottages at the west end of the terrace, which were generally of more substantial build and slightly larger than the others. That these two had been slated was borne out by photographs (c.1900) hung in the Colonsay Hotel; the remainder were thatched. Slates would have been readily available from the Easdale quarries off Seil, approximately 10 miles to the north-east across the Firth of Lorn. The cottages were fronted by a roughly paved path.

Dating of such traditional buildings is always difficult; an early-mid nineteenth century date would not be amiss.

To the north of the terrace stands a roofless, more architecturally conscious, later nineteenth century estate-style cottage of one and a half storeys, also now roofless. A small square rubble building, probably earlier than the terrace, stands in a damp hollow by the stream south of the row of cottages and we came to no conclusion as to its original function. There was evidence of dry-stone dykes enclosing a yard (garden) in front of the terrace; also to the north a dyked field with entrance...
flanked by square rubble gatepiers wide enough for the entry of a small cart.

Two circular rubble kilns were identified, presumably for drying grain. On the shore there were two dry-stone bothies, both roofless; these were probably for the storage of fishing gear.

Riasg Buidhe settlement c.1900. All the cottages are still standing and all are thatched. The cottages are numbered 1-8 going west to east down the slope. Reproduced with the permission of the National Museums of Scotland [Ref. SEA C.5859]

One of the cottages at Riasg Buidhe (probably No 5 from the west end) c.1900. Reproduced with the permission of the National Museums of Scotland [Ref. SEA 30/14/26]
Other Buildings on Colonsay

Though the principal project during the Group's weekend was to be introduced to the use of a plane table and recording the cottages at Riasg Buidhe, there was ample walking and visiting time during which other aspects of the island's built environment could be observed.

Pink-washed Colonsay House has grown like Topsy over the years, but the symmetrical, plied-roofed 'laird's house' of 1722 forms the core linked to single storey pavilions by curved quadrants. The substantial Mains farm associated with Colonsay House at Kiloran has a courtyard steading entered through an arched gateway. This steading has a large, octagonal horse engine house; there are similar horse engine houses at Balnahard (NR 405992), Machrins (NR 366962) and at Priory House (formerly Oronsay farm, NR 349888). Also an open horse walk at Balerumindubh (NR 386923). The concentration of substantial horse engine houses was surprising; at Oronsay with a diameter of approximately 35 feet. The steading ranges are also large, at Oronsay and Balnahard built around a centre court. There must have been much more arable land on the island than now and the nineteenth century O'Neill lairds have made considerable investment in their farm buildings. But no religious house would have been established on the island unless it were fertile. We tramped and paddled our way to medieval Oronsay Priory, beautiful even in the pouring rain. The collection of grave slabs in the former barn was particularly rich and varied; besides the usual recumbent figures many were carved with boats in full sail. The size and quality of this barn was yet a further indication of the good agricultural land. It was worth being curious - peeping over the Priory wall into Priory House garden I noted a small louvred game larder supported by four beautifully carved medieval capitals!

Many of the party stayed in the Colonsay Hotel, a somewhat overgrown former manse. The dignified little rectangular church dates from 1802 and stands on a raised platform overlooking the sea. The principal east front is lit by single round-headed windows each side of a slightly advanced and pedimented bay supporting a birdcage bellcote and fronted by a bowed minister's porch. The doorways in the side elevations were formerly oversailed by gallery stairs. Not vernacular, some will argue, but distinctly traditional as well as distinctive.

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1 RCAHMS Inventory v, Argyll (1984), nos. 389, 426.
3 Groome's Ordnance Gazetteer of Scotland i (1882), 280.
4 Ibid.
5 Photographs in Colonsay Hotel.
Between the deserted buildings of Riasg Buidhe and the shore field walking indicated several acres of rigg-and-furrow. The southern area consisted of riggs running west-east down the slope to the shore. These were joined by traces of riggs on their north, running north-south. This tends to confirm a normal pattern of rigg-and-furrow running with the drainage. The two possible small corn kilns near the houses would fit with this simple agricultural setting.

Following from this, a walk around the inner ring of Colonsay from Scalasaig to Machrins, round the west to Kilchattan, Kiloran, and back to the pass from Loch Fada over the hill to Scalasaig, revealed numerous examples of small cultivation areas. Between Scalasaig and Machrins these lay on the north of the modern road, being cut by it. Between Rubh' Aird Alanais and Port Mor they lay inland of the road, with possible traces into the macher of the golf course. A remarkably steep set of riggs lies on the hillside above the entrance lane to Kiloran Hall, north of the double bend by the reservoir, associated with a deserted building. The riggs occupied small areas of flatter land, lying into the hillsides, and often interrupted by rocky outcrops. This tends to indicate high pressure for arable land at some stage in the island's history. They must have been associated with settlements some of which have disappeared. The more extensive areas of cultivable land have been improved for the larger farms of the modern era, such as Machrins. Processes of change elsewhere in the Highlands suggest a thinning out of settlement in the early nineteenth century, with replacement of older key settlements by extensive farms and new steadings, and the disappearance of several older clachans incorporated within the improved territory.

Deserted settlements are more than collections of visible ruined buildings. They are a complete system by which a particular society organised itself for survival and social cohesion. This must include agricultural, artisan, and pastoral activities in the landscape. Colonsay's population peaked at just under one thousand in the middle of the nineteenth century, and is now a little over one hundred. The implication must be a considerable settlement loss over the last century. One would also expect a transhumance system to have existed, and to have left traces. The hypothesis for arable desertion is supported by the coincidence of bracken invasion in and around rigg-and-furrow areas. Bracken tends to colonise following the withdrawal of cattle grazings and regular cultivation, and their replacement by sheep. The vegetation around old cultivated areas and shieling sites also contains dominant grasses inherited from the last land use. In parts of the Highlands where shieling systems have been extinct for over two centuries this herbage still clearly indicates the old sites.

Settlements around Kilchattan show at least three generations of building. The characteristic pattern is for an old clachan house, often semi-ruined, to stand near a nineteenth century cottage, which in turn has either been replaced by a more modern house, or extended and improved in recent times. These may
represent building activity from the eighteenth century onwards in certain cases. The settlement sites and their lands are probably much older than any visible remains of buildings on them. The development of Kiloran Hall and its policies, the estate mill, and the improved farms, suggests a major period of environmental and social change, which has partly obliterated older patterns which might make an interesting study. This would revolve around the process of change itself; including physical, social and administrative reorganization; and accompanying cultural and socio-economic changes. The Island has a long history of continuity of occupation, not only from pre-historic archaeological evidence, but also in relation to the Columban settlement c.AD 563. Colonsay House dates from 1722, enlarged around 1830, and the development of the new estate farms would seem to fit with the latter date from their architecture. This, interestingly, places the evolution of the present environment parallel to that of Highland Perthshire. The self-contained nature of Colonsay and Oronsay, and their distance from the mainland, suggest an interesting field of study of a particular unit of ancient estate.

1 Ordnance Gazetteer of Scotland i (1882), 280.

Riasg Buidhe as it was in October 1988. Reproduced with the permission of the National Museums of Scotland [Ref. SEA 54/61/24]
Flatfield : An Independent Scottish Farm

Kate Walker and Bruce Walker

Flatfield is unusual amongst Scottish farms in that from its formation in 1785 it has always been in private ownership.

The farm is situated in the parish of Errol in the Carse of Gowrie, Perthshire, a distinctive area of marine and alluvial deposits forming an esturine clay, 4.5 metres deep in places, on the north bank of the tidal estuary of the River Tay. The climate is cool but dry as the area lies in the rain shadow of the Grampian Mountains and the Sidlaw Hills.

Roy's map of 1746-1754 shows the site of Flatfield as an area of unimproved land to the west of a large area of enclosure. In 1785, Alexander Clark purchased ground, partly from Mr Lindsay of Arnbothy and partly from the lands of Ardgaith, for the sum of £500. These lands totalled fifty-five Scots acres and were known as 'Myres of Errol'. The name was changed to Flatfield in 1789.

Alexander Clark died in 1818 and the farm was sold to Patrick Richardson for £2,200. Andrew Cochrane purchased the farm after Richardson's death in 1825 and from that date onwards the farm has remained in the same family (see diagram).

Flatfield is a mixed farm of thirty hectares and as the name suggests the arable land is almost completely level. The farmhouse is centrally placed on the farm land with the steading to the north and a walled garden and orchard to the south. Round this group are six fields of almost equal area. The whole farm is bordered by trees forming wind breaks. Unlike most areas of Scotland, orchards are common on farms in the Carse of Gowrie, and in the nineteenth century Flatfield appeared in advertisements as one of a consortium of farms offering to supply fruit to the neighbouring towns. Flatfield's orchard may be as old as the farm, as the trees are planted along the ridges of 'ridge and furrow', a type of field drainage that tended to disappear in this area soon after 1830, and its position has certainly remained unchanged since the first edition of the Ordnance Survey in 1866. The drainage on the rest of the farm is provided by underground tile drains leading into deep drainage ditches, known locally as 'pows' which in turn discharge into the River Tay. Owing to the flatness of the carse lands, the pows are extremely important and form the subject of many disputes between adjoining owners and owners and their tenants.

At Flatfield, the farm buildings in the eighteenth century took the form of four separate ranges round the sides of a square. As was common in eastern Scotland at that time the ranges were detached. The farmhouse formed the south side; the barn and stable, the north; the existing cart shed, the west; and the former poultry house, the east. In the south-west corner of the square is a well of an eighteenth century type, which, until the comparatively recent introduction of mains water, provided the water supply for the farmhouse. Three cottages also appear to date from this period. One was situated to the north west of the steading at the north end of the farm road. The other two were situated one on either side of the farm road where it met the Dundee-Perth turnpike. The original use of the east and west
ranges presents certain problems as there is no known comparable farm layout to Flatfield in east central Scotland, but both ranges were low two-storey buildings the ground floor of which was too low to stand upright in. Entry to the upper floor was by a forestair to a gable doorway. Normally the only farms with substantial improved pattern buildings in the eighteenth century were the 'mains' or 'home' farms of the estates and even the smallest of these is considerably larger than Flatfield. The nearest type of farming unit of similar acreage from the late eighteenth century is the manse and its glebe farm but not enough work has been done on this subject to make direct comparison acceptable. Most survivals of glebe farms tend to be somewhat smaller in layout and also considerably later in date. As it stands today, Flatfield gives the appearance of being the house and steading for a two hundred acre farm (80.94 hectares).

The eighteenth century farm steading and cottages at Flatfield were built using natural materials found on site. Roofs on better class buildings in the Carse of Gowrie were traditionally thatched with straw, poorer class buildings were thatched with broom. In the eighteenth century reed beds were planted in the
River Tay to counteract soil erosion and as these beds established themselves the reeds were harvested and used for litter in cattle courts. It is interesting to note that cattle courts in this area are still known as 'reeds'. Later, reeds were used to thatch stacks in the stackyards but it was not until the mid-nineteenth century that they began to replace straw as the thatching material on houses and farm buildings. This change would coincide with the introduction of mechanical reapers and the increased use of threshing machines, which would destroy the straw. Some reed thatch still survives on an early nineteenth century part of the steading on a roof now enclosed by the covered cattle court roof. Old photographs show the cottages and other parts of the steading as having reed thatched roofs in the 1930s. Ridges on reed thatched roofs in Angus and Perthshire are almost always formed in situ concrete indicating the late introduction of reed thatching in this area. Concrete was readily available in the Carse of Gowrie from about 1850 onwards - about the same date as reed thatch appears in documentary sources. On the south side of the River Tay the Fife thatchers continued to use turf as a ridge material - an apparently unbroken tradition only disappearing in 1968 when the last thatcher in Fife died.

The walls of all of these eighteenth century buildings, with the exception of the farmhouse, were built of pise. Clay was dug from the field to the south east of the farmhouse (the depression can still be seen today) and mixed with chopped straw and small stones or gravel. Shuttering was used to form the walls, in lifts not exceeding twenty-two inches (0.550m). The pise walls stood on base courses and foundations were built of rubble stonework. The rubble appears to be field stones from the farm or brought from the Braes of Carse - only a kilometer from the farmyard to the north. The base course normally projects approximately eighteen inches (0.450m) above ground level. The internal surfaces of the pise have been stugged; possibly as a preparation for a lime plaster finish which has never been applied. The external surface of the pise was rendered with a lime based harl, now replaced by cement render. The barn has a constructional feature unique in Scottish clay buildings. The building is 1 1/2 storeys in height and a number of the upper floor joists have been carried through the thickness of the wall to project from the external wall face. Round these joist ends are timber plates, and a tapered timber peg has been driven through a hole in each joist so that the back surface of the peg is in contact with the face of the surrounding plate along its entire length. This may be intended to prevent the walls from falling outwards under the weight of the granary floor. Similar details can be found on timber framed buildings in northern Europe and Scandinavia, and the detail gives the impression of belonging to medieval timber frame construction.

The farmhouse has a symmetrical single bank plan with a two-storey, three-bay frontage with twelve-pane sash and case windows, gabled roof and gable chimney heads. The milk-house and scullery were contained in a lean-to against the west end of the north facade and appear to be contemporary with the house. These were originally entered from the square and were not connected to the house interior; but some years ago the rear door through the east elevation was closed and a new rear entrance cut from the kitchen into the milk-house/scullery passageway.
The house is dated 1785 on a stone built into the original garden wall and there appears to be no reason to doubt its authenticity as many houses of similar plan and proportion were built in this area in the late eighteenth century. What is different and can only be explained by Flatfield's independent status is the size of the house in relation to the size of the holding. Usually, these houses appear on 'mains' or 'home' farms to the large estates, or exceptionally on particularly large holdings such as the group of farmhouses on the Glamis estate built between 1772 and 1776 where each farm is around six hundred acres (243 hectares) in area.

The Flatfield farmhouse is built of handmade clay bricks reputed to have been made on site in clamp kilns. Brick is not an unusual material in the Carse of Gowrie, the earliest documented brick building in the area being the garden offices at Megginch Castle where building accounts date the structure to 1707. The Megginch estate adjoins Flatfield and the garden offices in question are only a little way south of the Dundee-Perth turnpike.

In both of these buildings, the brickwork appears to have been used as a direct substitute for pise without appreciation of its special qualities. The brick walls are the same thickness as those of pise, are built off a rubble stonework base course and have stone dressings to all the openings and a continuous stone eaves course for the roof to rest on. Another feature found in eighteenth century brick buildings in east central Scotland is the use of a relieving arch in brickwork over the stone lintels. This is a traditional detail in rubble stonework but completely unnecessary in a brick building.

The walled garden at Flatfield is constructed entirely in brickwork whereas at Megginch the garden walls are constructed in rubble stonework faced internally with brick - a common detail in Scottish walled gardens.

The farmhouse roof is at present covered with Welsh slate but the detailing of the roof suggests an earlier thatch covering. The privy at the back of the garden wall is roofed with grey slate, split sandstone flags hung on slating battens using oak pegs - a common roofing material in Angus and east Perthshire. The gig house built against the east gable of the farmhouse was roofed with pantiles but this building showed evidence of having been altered and re-roofed. The gig house, milk-house and scullery were removed during recent alterations.

The first major extension to the steading took place in the early nineteenth century. This extension was built in whin rubble bound with clay mortar and had thatched roofs. The buildings erected at this time included a horse engine house attached to the north side of the pise barn, a small U-plan block containing byres and having an open cattle court on its south side, a detached building to the east of the barn range and a one-room extension to the north-west of the farmhouse and a similar room on the west end of the farm cottage.

The second major extension took place between the publication of the first and second editions of the Ordnance Survey, that is between 1866 and 1901. This involved the formation of a covered
cattle court between the U-plan extension and the pise barn, a two-storey extension to the pise barn extended the barn to the east and the heightening in whin rubble of the east end of the pise barn to a full two-storeys. This extension was constructed in a similar way to the first extension but had brick relieving arches over all the larger openings and a Welsh slate roof. It is likely that the farmhouse roof was also slated at this time.

As can be seen all the materials used in the construction of the first two phases of building were obtained locally, apart perhaps from the roof timbers of the farmhouse, which were probably shipped from the Baltic to Dundee or Perth and from there, after sawing, to Port Allen, the harbour for Errol. Welsh slate was the only other imported material but was so common in this part of Scotland after the introduction of the railways, as to become the principal roofing material in the district. The drainage tiles, pantiles and bricks used for the second extension were all available locally from the brickworks at Inchcoonans or Pitfour, about a kilometer to the south of the turnpike road. The blue whin for the rubble walling would have been quarried on the Braes of Carse about the same distance to the north.

The whole farm is remarkable both in terms of its early improvement and its small size, and remains as it always has been a truly independent farm.
TRAVELLERS' TENTS

Roger Leitch

Tents are not man's earliest dwellings, but in essence they represent the truest architecture: the actual word architect is derived from the Greek archi, 'one who directs', and tectos, the 'weaving'.1 Tibetan nomads - 'the people of the black tents' - wove their tent covers from the black belly hair of yaks.2 Any study of traditional tents cannot but pay tribute to human ingenuity and man's resourcefulness.

The use of tents in Britain and Ireland has often been associated with Irish and Scots tinker-folk rather than with English gypsies. This is a misnomer in more ways than one. According to the Irish folklorist, Padraig MacGreine, tents were not used by Irish tinkers until the late 1800s. Moreover his informants claimed that the art of tent construction was borrowed from English Romanies.3 Before the nineteenth century, Irish itinerants slept in the kitchens and out-buildings of small farmers and labourers, or in roadside hedges.4 Similarly in England and Scotland, not all travellers made use of tents, but would skipper in barns and sheds etc. The word skipper, now current in dosser's usage, is actually old cant for a barn or out-house, possibly derived from the Cornish sciber for barn, or ex-Welsh, ysgubor. The Scottish nineteenth century historian, Walter Simson, once visited a large group of itinerant tinsmiths who were 'bivouacked' in fields about half a mile from Inverkeithing. Three families shared two pairs of old blankets for three frosty nights. Children with the group slept inside old chests (used for storing sheet tin and tools), 'the lids being raised a little to prevent suffocation.'5

Corn-drying kilns in Glen Lyon were regularly used by travelling tinker groups numbering thirty and upwards,6 and an early nineteenth century reference mentions Fife 'gypsies' occupying tents, kilns, or out-houses.7 The famous tinkler-gypsies of Kirk Yetholm slept in barns and byres on their rural circuits throughout the borders, 'and when they cannot find that accommodation they take the canvas covering from the pottery cart, and squat below it.'8 Arthur Mitchell described a colony of four families living in a cave on the south side of Wick Bay in 1866. 'The beds on which we found these people lying, consisted of straw, grass and bracken, spread upon the rock or shingle, and each one was supplied with one or two dirty blankets or pieces of matting.'9 At one stage rats forced the colony to flee, taking with them their entire stock in trade - tools and sheet tin.10 At various intervals, numerous sea-caves around the Scottish coast have provided travellers with shelter. Caves at Auchmithie near Arbroath are noted as having been used in the 1820s by Argyll-based tinkers who came in their 'hordes' on a direct traverse through the Perthshire uplands.11

In the early days of Sylvester Gordon Boswell's great-great grandfather, the Romany people had tents consisting of 'young ash or hazel saplings covered with felts or blankets' and travelled throughout the countryside with pack donkeys and horses.12 It is worth noting that the tents of the ancient Samaritans were on portable frames and covered with felts. In the words of Gordon Boswell:
'I was born in a rod tent with a barricade to it. It was made of ash rods or saplings, with a ridge pole that joined the rods together, and that was the rear half. Joined to the front of this was the barricade, which was much bigger around. It was covered with all wool blankets. My father got them usually from paper mills, mostly Blackburn, Lancs. It was the material that was on the rollers for the paper pulp to be rolled on.'

A written description of gypsy tents in 1879 revealed that their tents were 'oblong and simple. Rods are stuck in the ground, and bent over to form a sort of wagon-shaped roof, tied together by strings, and covered with coarse brown cloths pinned or skewered together, and pegged to the ground.' Such an account underlies the wealth of resourcefulness in traveller material culture. For instance, skewers were made from a tough log wood, almost like mahogany, or dog wood, but especially the long sharp thorns of the blackthorn or sloe bush.

'The means used to secure the blankets to the frame is by pinning either with pin-thorns or small wooden skewers. If thorns are to be used, the Gypsy way is to cut them from a blackthorn bush, close to the stick, selecting those about 3 inches long, scrape the rind off, and then lay them in the sun for the sap to dry out. They are then placed in a frying-pan with plenty of fat over a very slow fire, but not too long or they will become brittle. Through heating, the fat gets right into the wood and preserves it, besides making the thorns go more easily through the felts or blankets.'

It is likely that none of the Egyptians or Gypsies who advanced across Europe in the fifteenth century seem to have used tents, backing up Groom's contention, that tents were not used by Western gypsies until they were introduced into England towards the end of the eighteenth century. In East Anglia and the North of England were found large oval tents of the beehive type, with a wagon-tilt type common in the South of England and the Midlands. It has been suggested that the former may be developments of a kraal. Horse-drawn wagons did not appear in significant numbers until around the middle of last century, and were thus a relatively short-lived phenomenon. The 'barrel-top' wagon associated with English gypsies was adopted by Irish travellers from gypsies who left England for Ireland at the time of the Great War so as to avoid conscription. Certain types of carts such as the four and two-wheeled 'Pot' carts, had detachable hooped frames covered with a waterproof material. The frames of these poorer types of cart could thereby double up as tents. Wealthier travellers with proper living-wagons often slept between them in good weather, and for overflow purposes where they had large families, they kept 'wattles' and small lean-to tents.

In 1841, an East Lothian sheriff was demanding the introduction of 'a new law for the suppression of the numerous Gypsy tents in the Lothians.' A government report of 1895 was comparatively tolerant of tinkers but reflected proposals that their tent-
dwelling be made illegal.\textsuperscript{23} One member of the Perthshire Committee on Vagrancy was at this time to describe tinkers' tents in that area as 'nothing but a few potato sacks or old rags over some upright poles...It is almost like living in the open air with an umbrella, little more than that.'\textsuperscript{124} The customary shape of tinkers' tents both in Scotland and Ireland was oval rather than upright. Ex-army tents and gateleg tents were occasionally used by gypsies, and one report makes mention of a 'nine-stick' tent used by tinkers.\textsuperscript{25} The gateleg tent was almost medieval in appearance, having a pyramidal roof with a scalloped overhanging edge at the junction of the roof and walls.\textsuperscript{26}

Padraig MacGreine writes of the tents used by Irish tinkers:

'The tent is semi-circular in cross-section, and usually from nine to twelve feet in length, and about four in breadth...A ridgeboard about three inches wide and an inch in thickness runs the whole length of the tent. In this ridgeboard, beginning at either end, holes about an inch in diameter are bored in pairs, each pair being about three feet from the next. A series of strong hazel rods on either side, one end of the rod being stuck in the ground, and the other in a hole in the ridgeboard, complete the framework.'\textsuperscript{27}

This was the more usual type of tent known as the bow, bender or humpie tent. Rods were changed every six months or so and seasoned by continuous steaming over a strong hearth.\textsuperscript{28} A comparison can be made with the frame of the Thares mat tent which comprises long acaia roots that make the covered pieces for the arches. 'The roots are heated over a fire, bent, and held in position with ropes; when dry they hold their shape and are then trued up with a knife.'\textsuperscript{29} English gypsies likewise shaped their rods over a cart wheel by sticking them six inches into the ground as close under the wheel as possible, then bending them over the tyre of the wheel and tied down at the top. Two rods at a time could be bent in this manner, finding their shape after three or four days.\textsuperscript{30} After the framework was completed the next step was to put on the covering.

Tent covers have always moved in pace with the times. They could be blankets, felts, or canvas, and gypsies on the Isle of Man were noted for their 'hooped, scarlet tents'.\textsuperscript{31} Felts as already seen, could be obtained from paper mills. Paper mills at Flint were where Welsh Romanies used to get their tent felts.\textsuperscript{32} Canvas was often old discarded shop-blinds or awnings bought from the makers second hand. In Scotland, travellers used duck cotton or sailcloth which was stitched together by the men using a special rounded seam that was water resilient. Upwards of twelve square yards was needed for a sufficient cover.\textsuperscript{33} More recently the heavy duty tarpaulin used to cover lorries made an effective tent cover.

The recurring feature of these tents is the streamlined half-moon shape which gave the wind no flat corners on which to take grip. The two mostly widely used types in Scotland were known as the tent with barricade, or simply the barricade (sometimes pronounced as 'barrakit'), and the gelly.

'The barricade was better than some caravans today.
Ye had your living room, then ye had your bedrooms. Not like the gelly nowadays - ye see its all one. But the barricade hed the roon bit in the middle and wee-er tents on the ootside: this was your bedrooms.

Thir was no tank or drum or anything like that. Just a fire on the ground. Then ye had a big filler like a grammiephone horn. That went up anneath the roof and drew the reek up...It hung fae inside the roof an wes tied tae the sticks. A thin chain come doon fae the middle o this reek-pipe and this was your sway.34

These Scottish barricades are not unlike the 'shelter' tents that were used by poorer Irish tinkers in Connaught. The winter tents could seat upwards of a dozen people and were characterised by an open stick fire that lay bare on the ground. The Irish coverings were oil-soaked bags or canvas.35

'With light sacks the smoke would go out through and the heat of the big stick fires would keep the rain out. These were oat sacks. The flour bags were no good. They were real close - you'd be smoked.36

Whereas the barricade had smaller tents off a central living space, the gelly was a single unit that resembled the upturned hull of a boat. The word gelly may be an adaption of galley. For winter needs the gelly had an enclosed tank-fire or 'drum' resting on bricks. From this a vertical flue-pipe or salvaged hot-house pipe provided the vunnel as it is known in cant, being onomatopaeic for 'funnel'. One oral source refers to the gelly as being first used on Skye and later adopted by mainland travellers.37 Indeed, its low whale's back shape is very much in keeping with the old low-lying dwellings found in Benbecula. Here the vernacular shape of house and tent is surely influenced by climate, in particular the response to a wind-blasted environment where there was little natural shelter. Yet these mainstay tents of both Scottish and Irish tinkers show a good deal of borrowing from English Romanies, if not perhaps vice-versa.

Hazel, ash, birch, and rowan, have all at times provided the tent framework. Saplings could be anything from nine to fifteen feet in length, and a fairly small gelly would require twelve boughs at least. These were inserted for about six inches into the ground with the aid of the tip of the metal pot crook known as the snottum. The boughs were then bent over and attached to the firmer 'riggin-stick' or horizontal roof spar. Hand-trimmed, the boughs were usually cut when green. One old traveller family from the north of Scotland, used to peel and twice dry their tent-sticks before use. A door flap could be down the sides or at one end depending on wind direction, and another feature of the gelly and barricade was the lack of any tent pegs. Along the sides of the tent there was generally a foot or so of the cover to spare, and this was weighted down with stones or sodos. Irish tinker tents were also similar in that respect.38

Come the summer months, travellers slept in the open or used smaller 'wattles', again taking the characteristic bow shape but without the need for an internal fire. Wattles facing one another allowed a space between for the camp-fire which was necessary for cooking purposes. A screen sometimes linked these
tents on the windward side, and such an arrangement was certainly in use by travellers at the end of last century.39

A 1965 census of travellers in England and Wales revealed that only one per cent used tents as their only dwelling. Nowadays, the once common gelly is already a museum piece in Scotland. Little provision has been made by the bureaucrats for what they term 'haphazard camping'. Some of the new local authority sites for travelling people strictly prohibit open fires, and concrete pitches are hardly suitable for the tent-dweller. George Borrow's 'wind on the heath' is largely a romantic memory and the reality for today's travelling folk is very different indeed.

GROOME, F. H. *In Gypsy Tents* (Edinburgh, 1880), 57.


VESEY-FITZGERALD, B. *Gypsies of Britain* (London, 1951), 166.


Ibid., plate IV.

Bealoideas III (1932), 171-2.


FAEGRE, T. (1979), 68.


Ibid.

Duncan Williamson in Tocher 33 (1979), 186.

See *Bealoideas III* (1932), 172.

11. The Caledonian Mercury 22,8.1829.
16. GROOME, F. H. In Gypsy Tents (Edinburgh, 1880), 57.

26. Ibid, plate IV.


29. FAEGRE, T. (1979), 68.


36. Ibid.

POSSIBLE BYRE-DWELLING at BORVE, BERNERAY, HARRIS

Dallas Mechan and Bruce Walker

Byre-dwellings, also known in Scotland as 'long-houses' and 'cattle-housing' were at one time a common building type throughout northern Europe, and their use was still widespread in nineteenth century Scotland. By the early twentieth century, local sanitary inspectors had condemned most of the Scottish examples, particularly those where the cattle occupied the same volume as the human inhabitants. This course of action was not practical in every instance as there were so many byre-dwellings in some communities and the level of farming was so poor that, to condemn this class of house would simply have rendered the majority of the population completely homeless. These marginal communities were mainly situated in the Western Isles and the adjoining mainland but this distribution was far from exclusive as individual examples of deserted single-volume byre-dwellings were still being recorded in comparatively rich counties, such as Angus, in the early 1950s. The situation in the Western Isles ameliorated when the squatter class in these island communities began to find employment in the then booming herring fishery. The squatters who had previously lived in abject poverty found they had sufficient funds to build new white-houses. The crofters, not to be outdone but unable to pay for a white-house from the proceeds of the croft, encouraged their sons to emigrate or take employment in Glasgow, usually at the gas-works, and to send money home to pay for the new house which they would inherit in due course.

Byre-dwellings were far from standard in form or construction and they ranged in size from the large aisled timber hallen-haus of northern Germany and the Netherlands to a single roomed cabin with a stall at one end for the cow examples of which can be seen in the buildings collection of the Ulster Folk and Transport Museum. An 1806 description gives some impression of the layout of a Scottish byre-dwelling of similar dimensions to the possible byre dwelling at 19 Borve, Berneray.

We found it to consist of three different apartments, one for the cow, another for the peats, and a third for the family. A chimney is a luxury unknown here, and there is no such thing as a vent for the smoke. The fire of peats is made in the middle of the house round which squat the family and the pigs, and a pot, the only kitchen utensil they are prepared of, is hung over the fire by a rope from the roof. The smoke passes through the apartment where the peats are kept into the byre and there part of it is discharged by a window [likely to have been a hole in the thatch or the wall just above or below eaves level]. The rest oozes through the roof. Though cleanliness is a thing unknown in these huts, the children seem'd to be remarkably healthy. This which appeared to us a most wretched habitation was considered by its fair owner as very comfortable, superior to common. For when we complimented her on the snugness of her dwelling which we were bound by common civility to do, she said it was to be sure a very good house for it was a new one. A remarkable instance of the emptiness of luxury.
had indeed frequent opportunities...of observing the
justness of this woman's remark to another hut
particularly which we entered to shun a shower at
Connel Ferry this of hers, miserable as we may think
it, was a perfect palace.12

After passing through that part of the house
appropriated to the peats...met the landlord...he
conducted us into the inner room, where his wife was in
bed, if bed that could be called...comprising...some
branches of trees laid across and covered with straw
without either blankets or sheets.  The poor woman,
when we entered, made an attempt to get up and reeled
from her hole with difficulty...We
observed a number of
children and pigs tete a tete by the fire, who seemed
to thrive well in this abominable place.  The byre, I
suppose, had not been cleaned since it was built, and
there is no such thing in this country as litter to
give the dung a consistency, it was in all cases ankle­
deep, and in some knee-deep in ordure.  All over the
house too, it required some dexterity to keep yourself
free from getting living marks of 'Highland
hospitality'.13

The materials utilised in the construction of the dwellings
-described above are not mentioned but on reaching the road
between Ballachulish and Fort William the same author comments:

The hutts are much worse than those in Argyleshire,
most of them built entirely of turf which after the
first year comes green.

They stand only three or four years but they are
easily rebuilt for a couple of men will make one of
them in two, at all events, three days.  Some of
them...are built, the lower part of stone and the upper
of turf and all consist of but one apartment for the
proprietors are not rich enough to be possessed of a
cow.

In all this country, except at Fort William, I do not
suppose there is such a thing as a chimney or a pane of
glass.  Some of the doors are even made of
wickerwork.14

Wickerwork doors or holes in the thatch were absolutely
essential in houses of this type where there was no flue and the
fire burned continuously since without these features the
inhabitants would suffocate in their sleep.

The use of byre-dwellings was not restricted to the remote
Highland areas. A description of farm buildings in
Stirlingshire in 1812 reads:

The byre and stable were generally under the same roof
[as the dwelling] and separated from the kitchen by a
partition of oziers, wrought upon slender wooden posts, and plastered over with clay.\textsuperscript{15}

Change took place soon after these reports and by the 1830s cottages with windows and chimneys were being erected in the counties of Cromarty, Nairn and Ross. This did not always meet with the wishes of the inhabitants and:

In many places where they [chimneys] have been constructed the people do not use them, but prefer breaking a hole in the roof of the house, and lighting a fire on the floor. Smoke, they say, keeps them warm.\textsuperscript{16}

The Swedish ethnographer Dr. Ake Campbell together with Calum McLean, later of the School of Scottish Studies, recorded a similar situation in 1948. They visited a retired schoolteacher, Murdo Matheson of Skye, to survey his blackhouse. Matheson had by that time vacated the blackhouse and had moved into an abandoned RAF garage. He had ignored the existing cast-iron stove and was using an open hearth on the floor, vented by a hole slapped in the roof.\textsuperscript{17}

Improvements in the standard of housing gradually took place throughout the nineteenth century but some areas remained particularly backward, often for very good reasons. A Carnegie Trust Report of 1917 illustrates this wide divergence in housing standards, it reads:

...lay aside for the moment those rigid ideas about stone and lime, or bricks and mortar, or wood and iron, or stones and peat, or stones and sand, or even about caves in the rock. All of these types of houses are, in Scotland at least, found to be occupied by human beings.\textsuperscript{18}

The same publication, referring to a mainland district of the Highlands states:

In the middle eighties a turf hovel with thatch roof, earthen flooring, small fixed pane windows, and a single opening in the top for the egress of peat- and wood-smoke was the traditional habitation of the quite respectable crofter and fisherman.\textsuperscript{19}

It was not unusual to find that the cattle byre communicated directly with the dwelling by detachable or hinged door: calves, pet lambs, and poultry being freely admitted into domestic fellowship. Organic emanations were deemed to possess wholesome rather than insanitary properties...\textsuperscript{20}

The same author reporting on Lewis states:

...In many hundreds, perhaps thousands, of the blackhouses, the cows are housed practically with the people, entering often by the same door. This is technically known as 'cattle-housing' ... it is still extremely common.\textsuperscript{21}
Against this background it is easy to see why that, when Borve was settled between 1900 and 1904, the crofters built byres first and lived in them with their cattle until their croft houses were completed. Until recently, the outbuildings at 19 Borve were used as a byre and a stable but the end of the byre, lacking a byre-drainage channel in the floor, was originally furnished with two small case-and-sash windows, features that would be unusual in a byre even on a comparatively large farm on the rich farmlands of eastern Scotland and can be taken as an indication of a formerly habitable room. The owner of 19 Borve, Mrs. Mary MacAskill, was aware that the byre was built circa 1900 by her grandfather. This byre is remarkably similar in plan form to another, built about the same time at Bays Loch, Berneray and to a byre-dwelling on St. Kilda, reported by Captain F. W. L. Thomas RN in a paper to the Society of Antiquaries of Scotland in 1867. He states:

My next example is the cottage of Betty Scott in the remote island of St. Kilda. About thirty years ago [circa 1835] the old houses, described by Martin and Macaulay, were pulled down and new ones built in another situation: windows, bedsteads, and other furniture, were supplied to the people gratis. This cottage has no peculiarities, except in having a more than ordinary degree of comfort: it will be seen to be full of furniture, and to exhibit the reverse of poverty.
Thomas does not appear to see anything unusual in this building being a byre-dwelling or in the open hearth in the middle of the living quarters. He simply considers it as a major improvement on the type of blackhouse formerly inhabited on St. Kilda.

The crofters who settled Borve came from Ruisgarry, Berneray. At that time Ruisgarry was extremely overcrowded there being about six hundred people living on an area split into twenty-four crofts. Many of them were squatters and lived by fishing and gathering seaweed, particularly those living along the foreshore. The Merchant Navy also provided employment for some of the men. Borve was laid out in twenty-two crofts, and those chosen to settle there built their byres first and lived in them with their cattle until their dwelling-houses were completed. To build the byres, they collected stones which were pulled to the appropriate site on slips or sleds which could carry about a hundredweight at a time. This amounted to six or seven building stones. It is not known how long these buildings took to erect but there is a local adage that dictates:

When you have a pile of stones and think that is enough for your house, collect two more piles of the same size and then you will have enough.²⁶

This same rule of thumb method was also recorded in the Uists.²⁷ Masons were brought from Harris and Uist to help build the houses but it is unclear whether this only applied to the one-and-a-half storey croft houses or to improved type blackhouses and whitehouses. Only two of the houses in Borve have thatched roofs,²⁸ although most of the outbuildings were thatched in the past. Gradually the thatch has given way to corrugated-iron and other readily available materials that require less maintenance. This was the fate of the similar building recorded at Bays Loch in 1986 and Mrs. MacAskill is contemplating a similar replacement in the near future. With this in mind, it was decided to produce a drawn, photographic and written survey.

The survey of the byre and stable at 19 Borve was carried out by Dallas Mechan, Christopher Paterson, Annette Ratcliffe and Brian Watts. Bruce Walker and Michael Walker carried out the photographic survey. The survey was funded by the Architects Registration Council of the United Kingdom.

The byre and stable range stands to the north of the storey-and-a-half croft house. Although the byre and stable form a single range on a south-east/north-west axis the two buildings have separate hipped roofs. It shares this feature with a range of domestic buildings sited at Ruisgarry in the north-east of the island. There three dwellings form a single range but each has a separate roof.

The roof over the stable is slightly lower than that over the byre, the ridge height being 3.15m compared to 3.50m. Both roofs are hipped and comprise a series of timber trusses, resting on the inner edge of the wallhead, and half-checked and nailed at the apex. In the stable the three trusses run north-west/south-east spanning 3.00m, whilst in the byre the trusses span 4.00m from north-east to south-west. The trusses vary slightly in form but all have a nailed collar fairly close to the apex and one has a second lower collar. The timbers are
irregular obviously utilizing whatever timber was available at the time.

The hipped roof is of quite different construction to the peind roofs of lowland Scotland there being no pean to carry the common rafters, which simply rest against the last truss. There is no ridge tree and rather than purlins supporting common rafters, the horizontal members could be described as heavy thatching battens since they support a layer of pegged turfs as an undercloak to the thatch. The turfs are simply lapped over the upper battens and as there is no ridge piece, the roof takes a soft rounded profile.

Marram grass or bent is gathered from the sand dunes on the seaward side of the machair and is laid over the turf without any kind of fixing and is held in place with netting. The grass is placed lengthwise up and down the slope but is laid thicker in the centre of the slope to accentuate the rounded profile of the roof. The reason for this is to allow the nets to be pulled tight by the weight of the stones added to the bottom of the netting, thus creating a roof which is less vulnerable to the effects of the wind. The nets are weighted with stones and pieces of scrap metal held in rope loops made by passing a rope through the netting near the bottom of the roof, placing the weights in the loops and twisting these to hold the weight firmly in place. The weights must always remain suspended and in this case they sit just above the wallhead. At the valley where the two roofs meet, there is no form of guttering and the water simply percolates down through the fill of the double skinned wall.

Due to the scarcity of timber on Berneray, the roof timbers are a combination of undressed poles, reused dressed timbers, planking from crates, staves from barrels and any other available driftwood. Similarly, washed up fishing nets are used to hold down the thatch although in some cases chicken wire is used as an alternative if suitable salvaged nets are not available. Formerly hand-made ropes of bent, heather and horsehair were used for this purpose. At that time the roofs required a projecting stick at each end of the ridge to allow the ropes to be secured round the hipped ends of the roof.

The turf undercloak on this roof was last replaced about forty years ago when Mrs. MacAskill's husband took over the croft from her father. The thatch has been replaced or patched every one or two years since then depending on its condition. This constant maintenance requirement has led Mrs. MacAskill to consider covering the roof with bituminous felt as she is no longer able to maintain the thatch. The availability of grants from the local authority for re-roofing has accelerated the move from thatch to other materials in both Berneray and the Uists. The walls are constructed of drystone rubble approximately 0.8 metres thick. All except the southwest wall have a slight batter to the external face with the walls widening to about a metre thick at the base. The stones are roughly squared around the window and door openings and at the corners of the building. All the corners are slightly swept but none of them are built to large radius curves.
The building sits on a north-west/south-east axis with openings to the south-east and south-west. The ground round the building is relatively flat but falls away slightly to the north-west. The walls are built to a running level, the wallhead being a constant 1.65m above the floor level. The door and window lintels are formed of thin flat slabs of stone, spanning the thickness of the wallhead and laid on top of it.

The internal dimensions of the building are approximately 15m by 4m, of this the stable accounts for 3m by 4m and is entered from the south-west adjacent to the mutual wall between stable and byre. The stable is lit by a rooflight at the bottom of the south-east roof slope. A gutter runs across the floor from south-east to north-west, draining through a slightly offset opening in the north-west wall. The gutter and the floor to the south-west are flagged but to the north-east the floor surface is packed earth. Formerly three horses were tethered in this section and it seems probable that the structure and partitions against the north-east wall, now used for storage, were formerly trevises.

The byre is 10.50m long and is entered midway along the south-west side. The south-east end is partitioned off by an eaves height timber screen. This is made up of irregular timber planking set into the floor and restrained at the top by being nailed to a split timber pole, spanning the room just above eaves level. This in turn is checked over a short timber nailed to the underside of adjacent trusses. A plank door hung on leather hinges gives access to this compartment.

19 Borve: Side door into byre section
A T-shaped gutter is set in the floor of the byre and drains out to the north-east through the back wall of the byre. The floor and gutter are flagged except for a strip of packed-earth flooring along the north-west wall. Year old calves were tethered along the north east wall and cows along the north-west wall. Again it seems likely that the structure now used to support shelves includes the remains of the trevises for the three cows. The byre is lit by a rooflight set at the bottom of the south-west slope of the roof. The south-east compartment is lit by a window in the south-west wall. The doorway in the south-east wall is a slapping of a former window opening. This compartment is completely flagged and undrained.

The layout of this building is almost identical to that of a byre-dwelling surveyed at Bays Loch, Berneray in 1986 by Douglas Cawthorne. The Bays Loch byre was slightly longer measuring 12 metres internally. It was laid out with a drained flagged area to the west and approximately a quarter of the total area in a separate compartment at the east end. Three trevis boards at the west end and seven along the north wall were still extant when surveyed. The partition was slightly more substantial, being fixed to a roof truss and carried up to the collar. There was a doorway in the centre of this partition. More importantly, there was a second entrance to the building directly into this compartment, through the south wall. There was also a window opening in the byre, midway along the south wall, and while there was no window in the separate compartment, the fact that it had its own entrance gave it further separation from the cattle and allowed in light.
As it stands today, the byre at 19 Borve also has two separate entrances into the living compartment through the south-east wall and into the byre through the south-west wall. In its original form however, the living compartment would have been entered through the byre by the south-west entrance. The south-east entrance was formerly a shuttered window and was converted by Mrs. MacAskill's husband when they took over the croft from her father. In Mrs. MacAskill's time this compartment - 'the corn end of the byre' - housed a loom for weaving Harris tweed. Corn was kept in the yard at this end of the building and was, in her father's time, kept in this room.36

It seems likely that, the provision of a room with two windows partitioned off from the remainder of the byre, was intended as a habitable room to be used by the crofter's family whilst waiting for their new house to be built. The physical evidence also ties in with local belief as to the practice when moving to a new croft.


3. Personal observations on a visit to Fresia in 1984.


Barry Harrison and Barbara Hutton, Vernacular Houses in North Yorkshire and Cleveland (1984).


5. Parliamentary Papers (C8731) xiv: *op cit* (1918).

6. Ibid.


8. Parliamentary Papers (C8731) xiv: *op cit* (1918 and 1921).


Kaiser and Ottenjann: *op cit* (1978), 30-32, 44-48, 70-75, 94-95, 113-114, and 147-151.

Kai Uldal, *op cit* (1972), 4 Ostenfeld, South Schleswig.


12. Anon: "Diary of a Tour Through the Highlands' Manuscript MS1023 King's College Library, Aberdeen (1806)."

13. Ibid.

14. Ibid.


19. Ibid., 399.

20. Ibid.

21. Ibid; 428.


23. Mrs Mary MacAskill, Verbal information given in an interview to Dallas Mechan (1988).


27. Mrs Tosh, Verbal information given in an interview to Bruce Walker (1988).


29. Ibid. 'When all the crofters on Berneray were using bent for thatching it became relatively scarce because of demand.'

30. Ibid.

31. Ibid.


33. Ibid.

34. Ibid.

35. Ibid.

36. Ibid.
Introduction

We live in an age where education to the age of sixteen is taken for granted. However, this is a recent phenomenon. Dundee, a city with a great industrial heritage, the city of the three J's - jute, jam and journalism - will not be remembered for its ready acceptance of early educational policies. The mill owners were reluctant to see their cheapest form of labour denied them, and fought the introduction of compulsory education as best they could.

Only journalism survives with any power in the city today; the jam industry has collapsed and jute is now largely replaced by imports and synthetic materials which are both cheaper and easier to produce. Dundee is still noted for its enterprise, but today the emphasis is on computer technology, laser science, and medicine. The days of the jute barons controlling large empires are long gone. Fortunately, however, the memories and machines remain; and it is proposed to use these as the basis of a textile museum within the fabric of the city's Seafield Works jute mill.

Seafield is particularly distinguished by the High Mill, which has one of the finest Italianesque facades to be found in the North. The High Mill is to form the basis of a luxury housing development, by Charles MacGregor, Edinburgh, but the lower two floors and an external area have been devoted to the creation of a museum.

Dundee Heritage, the organization which secured the RRS Discovery for Dundee has acquired the necessary exhibits and funding for the museum. One of the main exhibits will be the small, stone-built school building which operated from 1885 to 1918. Although the building in later years saw service as a dance hall, bakery, engineering workshop and finally as a design studio, it is hoped to recreate an authentic Edwardian schoolhouse; not only in general appearance but also in furniture, fittings and dress, so that the visitors may experience school life one hundred years ago, in as interesting a manner as possible.

History of Seafield Works

Seafield Works, latterly under the ownership of Thomson Shepherd and Co, was founded in 1848 by David Thomson who set up business in a hand-spinning and hand-loom weaving shed. The firm prospered and in 1852 Thomson was granted a patent from Queen Victoria for jute carpeting and in 1855 the carpets won a diploma at the Paris Exhibition. Upon Thomson's death in 1858, the works were taken over by his younger brother, John and the company continued to grow, aided by a demand for jute from both the Crimean and American Civil wars. By 1862, the company had grown so much, despite a slack period between the wars, that John Thomson was able to form a partnership with Walter Shepherd. During the early 1860s, expansion was rapid and by 1864 the works contained some 6,000 spindles, 600 looms and employed around 2,000 people.
Initially, jute was considered inferior to cotton, flax and sisal, prompting the Dundee Advertiser of 1835 to write: 'The use of this and other substitutes would tend to lower the character of our manufacturers very much, although it is to be hoped the necessity for using them will not continue long enough to ruin it altogether.' This view, however, changed with improving manufacturing techniques, and today jute is the most commonly-used textile fibre with the exception of cotton.

The Seafield Works continued to thrive until the early 1970s, but then suffered major upheavals and declined, until 1976, when the company changed hands. The new mill owners found the property unsuitable for modern machinery and eventually all Dundee manufacturing ceased in 1986, with the land being sold for housing development.

The school from the north west, the High Mill building is immediately to the right.

The school from the west, showing its simple form.

The small extension to the right contained separate girls and boys entrances.
Background of Half-time Schools

Included within the Works stands the school that was used by the children of mill workers, who were themselves employed by the company. The school was not there simply through the generosity of the mill owners, but rather because of an 1833 Act of Parliament which set down strict laws relating to minimum working ages and to hours of education. The 1833 Act was amended in 1844 and as a result the mill owners set up establishments known as Half-Time Schools where children spent half their day before or after working in the mill.

The system was not favoured by the mill owners, depriving them, as it did, of their cheapest source of labour, but nevertheless, by 1860 a Half-Time School was firmly established at Seafield. The present building is not the original school - early street plans suggest that the works' stables were initially used for the purpose. The present building was opened sometime between 1885 and 1895 and operated as a school until 1918.

Life in the Half-time School

The 1844 Act of Parliament, introduced by Sir James Graham, allowed children between the ages of eight and thirteen to work half of each day and attend school for the other half. As an alternative, children could work ten hours on three alternate days and attend school for a minimum of five hours on the three other days; on the Sabbath no work was done.

In addition to Thomson Shepherd, the Dundee firms of A & D Edwards and Baxters operated the scheme, but neither of these firms had as many pupils as did Seafield Works school. An examination of the School record books of 1868 shows that E Mann, Headmaster, recorded sixty-two morning pupils and fifty-nine afternoon pupils. Lessons were given in reading, writing and arithmetic, as well as history and scripture. The pupils attending the half-time school did not appear to suffer compared to their full-time contemporaries and a school inspector's report of 1889, commenting on Baxters' school, states, 'The number of passes and general character of the work is much above what I get at a good full-time school and are astonishing for a Half-Time school.'

Importance of Preserving the last Remaining Example

The Thomson Shepherd school is the last remaining example of its kind in Dundee that is largely intact; and, conscious of the role jute played in Dundee's history, it has been decided to include the school in the proposed Textile museum complex at Seafield Works.

The school occupies an important part of the housing development site, and its position to the south commands fine views over the River Tay. Naturally, the value of its position for high-quality housing outweighs any possible advantage the developer may gain from building around it. Fortunately, the builder is sympathetic to the aims of the Dundee Heritage Trust and is allowing the school to be moved from its present site to a position just north of the High Mill building, directly adjacent to the proposed Textile museum.
To move such a building is a major undertaking and obviously it would be cheaper to construct a museum-type period classroom within the fabric of the Textile museum. However, to do this would be to lose the character and feeling that are associated with such a small school building. Because so many of the mill workers passed through the school it represents a link in Dundee's textile history that should not be omitted. The jute industry was one of the major employers within the city as well as providing much of the city's wealth and fine architecture, and so it is fitting that efforts are made to preserve at least some of this heritage, particularly now that so many of the mills are facing demolition or conversion.

History of Moving Buildings

While moving a building is perhaps a one-off occasion for this museum, the practice has a long history dating back several centuries. The Scandinavians have for many years been in the habit of moving their timber-built barns and houses, and the practice is not unknown in Britain. In the early days of timber-framed buildings, it was relatively common to dismantle the major components and re-erect them on a different site. An early example of this can be found in seventeenth century correspondence: 'Brother Paston, I recommend me unto you, praying that ye take the labour to speak with Thomas Ratcliffe for the deliverance of part of a house which lyeth in the wood at Fransden, which house the owner hath carried part there of to Oxford, which, so departed, the remnant that remaineth there in the wood shall do him little good and it shall hurt greatly the workman and owner thereof also, which is my tenant and the house should be set upon ground.'

This quotation relates to the moving of a house over a distance of twenty or more miles. Other early correspondence tells of buildings being moved because tenants approved of the house but were unhappy with the location. The removal of such buildings was relatively easy because often the original joiner would have marked the timbers, so that the dismantling and re-erection was an easy-to-follow process. Nor was it unheard of for buildings to be moved intact, dragged on rollers from one site to another by teams of horses.

The movement of buildings was not, however, confined to timber structures. Eighteenth century records report the re-siting of masonry buildings. When Capability Brown was landscaping the park at Milton Abbas for the Earl of Dorchester, it was decided that a row of single-storey almshouses were in the way, so the Earl had then moved to a site in the new village.

In recent years, there have been many instances of buildings threatened with destruction being dismantled and re-erected in an open-air museum context.

Open-Air Museums

The Europeans have pioneered the concept of open-air museums, where the contents AND the buildings form the exhibits. There are now over three hundred such museums in Northern Europe.
The first Open-Air Museum was the Nordiska Museet, conceived in 1873, in Stockholm. Initially the museum dealt with tools, furnishings and costumes of everyday life, but in 1891 the museum was expanded to include an open-air section known as Skansen. Its influence was such that all open-air museums in Eastern Europe are now known as 'Skansens'.

In 1897, a Dane, Bernhard Olsen, created the 'Frilands Museet' in the Royal Danish Gardens in Copenhagen. The museum is now one of the largest and certainly the most publicised of its type in the world, with over one hundred exhibits.

The concept has caught on in Great Britain, with museums in England, Wales and Scotland, all of which contain good examples of both timber-framed and masonry buildings. The best-known example is 'Beamish Open-Air Museum', just south of Newcastle-on-Tyne, where an entire street has been successfully moved and restored.

The 'Highland Folk Museum' at Kingussie has an excellent display of vernacular building, from fish-curing sheds to turf blackhouses and future expansion is planned to increase the range of exhibits.

Ethics of Moving Buildings

It is the duty of the architect to consider all the ethical questions raised by a proposal to move a building and, should the proposal be acceptable, to ensure that the operation is carried out in as sympathetic a manner as is possible.

While the most likely reason for such a move will be for the purpose of conservation, it must be remembered that this is the most radical form of conservation and should only be considered as a last resort. The matter is subjective and is dependant upon each particular building and its unique set of circumstances.

The main points in favour of moving a building are:

a. The site on which the structure stands may already have been earmarked for redevelopment and the move will be the only way to save the building from destruction.

b. It may be possible for a disused building, such as a church, or a water mill, to regain its former role on a new site.

c. Some buildings, such as timber-framed barns have an established precedent for removal. This is particularly so in Scandinavia.

d. A building 'lost' in the midst of a modern development may be moved to a more sympathetic environment.

e. It may be possible to learn something of the history and construction of a building during the dismantling
process. This is particularly useful if a building has, over the years, undergone changes that substantially alter and obscure its appearance.

In opposition to those arguments, it must be admitted that a building can lose some of its character and authenticity following a move. The Society for the Protection of Ancient Buildings expresses this view further, saying that buildings have a certain 'ethos' which is immovable, arguing that a building is better destroyed than moved. In similar vein, it is argued that many buildings have a strong, local character and their removal may be to an inappropriate site. There is, too, a danger that once a building has been demolished, financial restraints will not permit the planned rebuilding. Such a situation arose in Newcastle's Royal Arcade, where it proved more economical to rebuild using new stone, and the original stonework became an adventure playground.

Ethics of Moving Seafield Works Half-time School

Careful consideration has been given by the client, Dundee Heritage Trust, to the question of the removal of the Works school; and it would appear that in the broadest sense the move can be justified and will allow full restoration work to be carried out. The developer will build his housing on the site in any case, leaving no alternative but to move or lose the building in the subsequent clearance of the site. The argument of the building losing its 'ethos' does not apply in this case - the interior and exterior have changed so much that any restoration work, even on a new site, can only help to restore the school to its former glory.

Removal of Seafield Half-time School

As in any dismantling and re-erecting of a building, work on the Seafield project must begin with an accurate recording of the school as it stands, by means of photographs and drawings. It is the responsibility of the architect to make the measured drawings, and these should be constantly updated as the building is dismantled and must be cross-referenced to the photographs. Every stone and timber must be identifiable, and here a system of alpha-numeric labelling, already well tried and tested at Beamish Open-Air Museum, is being used. Every corner and opening has been given a distinguishing letter, and in addition, every faced stone forming part of the corner has been given a number. Corners are numbered from the eaves down, thus ensuring that the eaves will remain horizontal, and allow for the ground level on the new site being different from that on the existing site.

Openings are numbered from bottom up, so that reconstruction is straightforward, with the stone numbering corresponding to the order in which it is bedded. The numbers work up on alternative jambs, allowing for the normal construction system to be followed.

The stones for every corner and opening are palletted, so that the pallets can be packed and stored in logical order for reconstruction. The stones themselves must be labelled with a marker that will not wash off during the period between dismantling and reconstruction. Of the various marking mediums
that have been tried the most successful appears to be gloss paint, applied to either the top or the back face of the stones, so that no marking will be seen when the building is reconstructed, as was the case in some earlier projects.

Infill rubble, which cannot be numbered, and of which there is likely to be a shortage at the time of reconstruction, should be made up of stone quarried locally, to match the existing stone as best as possible.

All timberwork must be recorded in as much detail as possible. Exact dimensions must be taken for replacement parts, or, if the timber is re-usable, it must be labelled and stored carefully in dry conditions.

Windows must be stored and labelled according to their code in the drawings. The roof slates require careful removal and assessment as to their potential for re-use. Replacements of a similar size and colour must be found for those beyond repair.

The iron roof vents have corroded beyond repair, but must be removed and stored to serve as reference, although the new vents may be constructed of a more durable, maintenance-free material.

Internal recording of any building being moved has to be as detailed and complete as the external work. In the case of the school, much of this will be done as the building is being dismantled and details become more obvious. In addition, however, a letter was sent to the Dundee Courier and Advertiser seeking information from anyone who had attended the school. Sadly, only one reply was received; this from a lady who lived next door to the school in the 1920s, but the information proved useful in clarifying the heating of the building and its subdivision (Figs. 10 & 11). She also remembered a platform in the schoolroom, varnished panelling - now painted - and stencilwork around the walls at dado level. Questions still remain about the form of lighting used; but a commemorative photograph of 1887, marking fifty years' rule by Queen Victoria, showing a Half-Time school at Greens Mill and Baltic Works, in Arbroath, suggests gas lighting, and if nothing is found to contradict this, then a similar system will be exhibited in the reconstruction.

Removal, Storage and Repair of Components

At the stage of removal and storage, it is easy to examine the components of the building - masonry, timber, roofing material and metalwork - and to identify pieces that require attention or replacement. Any such pieces can be catalogued, drawn, photographed and measured; ensuring sufficient information for an expert to give advice on repair, or for a craftsman to fashion a replacement. The stone, once numbered, can go into storage after dismantling. As the project time scale requires that the building be stored for about a year, it is essential that all recording is complete and accurate.

Initial investigation of the stone has revealed that it is from a local quarry, very soft and susceptible to weathering and impact damage. This places great emphasis on protecting the stone
adequately during storage, preferably on pallets and protected with waterproof covers to keep it free from frost damage.\textsuperscript{13}

Many of the stones have been laid 'face bedded', that is with the natural strata of the rock laid vertically, instead of horizontally. This is apparent from the mica particles which are a clue to face bedding, and also from the way the stone is delaminating in vertical panels from the face back. Face bedding was a way in which masons could extract more usable stone from the quarry, to the long-term detriment of the building. Because of the condition of the stone, the advice of a stone work expert (Mr R Heath) is being sought; but initial investigation suggests that a large quantity of stone will have to be replaced. Normally, to acquire stone for such a relatively small scale project would be prohibitively expensive, but a local quarry is being opened to provide stone for the restoration of Dundee Custom House, and stone from this quarry may well be suitable for restoration work at the school.\textsuperscript{14}

The school was in a poor state of repair, with considerable water damage.

Face bedding, with the stone laid at 90° to its natural position has caused severe weathering. This was not helped by lack of regular attention to rone pipes.
Moving a building requires as much administration, or even more, as the completion of a new building project.

The people involved are, in the case of the Half-Time School:

1. The Client: Dundee Heritage Trust
2. The Architect: Gauldie Wright and partners
3. The Contractor: J B Hay
4. Unskilled labour, with contractor: Manpower Services Commission
5. Local Authority Bodies: Planners, Building Control

Also, less directly, involved, but equally important:

1. The Site Owner: Charles MacGregor Developers
2. The Financier: A Sponsor, as yet undecided

Working with the above are numerous people not directly linked with client, architect or contractor, including:

1. Recording Building and Researcher: C J Paterson, Scottish Buildings Study Group
2. Photography related to Recording building: M Walker, Photographer for Dundee Photographic Workshop
3. Stonework Specialist: Mr R Heath

The client, architect, contractor and local authority have to work together with a higher degree of commitment and interaction than would be found with a new building project. In this particular case the site owner is not directly involved, as a piece of land has been donated to the Heritage Trust, but the owner has no interest in the school itself. This differs from most projects where the landowner and client are one and the same. The financier(s), although proving crucial to the go-ahead of the project, will not actually have any dealings with architect or contractor and will gain his/their return from advertising once the school is re-created; although a certain amount of media coverage and advertising is to be expected at the dismantling stage.

Of the others involved, those with information to offer have been found in libraries, archives, museums and as responses to newspaper advertisements; but they have dealt only with the Scottish Buildings Study Group recorder, and have not dealt directly with either client or architect.

The SBSG recorder and the DRCU Photographer have made large scale photographic records of every cut stone and piece of ornamentation, which have been cross-referenced with the architects drawings and assembled into a logical order.
This process of surveying will continue during the dismantling; recording new information as it becomes available, particularly of details presently hidden by modern internal finishes. Throughout the duration of the project the SBSG recorder has endeavoured to find as much general information as possible on moving buildings, as well as researching Half-Time schools. The purpose of the study has been to assist the architect, client, and possibly contractor, in a field that they are not generally familiar with. To date several visits have been made to both architect and client, and some useful contribution has been made. No approaches have yet been made to contractor, but this may prove to be the biggest challenge.

Since becoming involved with this project in October 1987, there have been a number of major meetings which have been attended by the representative of the Scottish Buildings Study Group.

1. November 1987 Initial Meeting, at offices of J B Hay (Contractor)

   Present: Dundee Heritage Trust (clients J B Hay (Contractors)
   Gauldie, Wright & Partners (Architects)
   C J Paterson (SBSG)

   This initial meeting established an overall sense of enthusiasm to succeed with the job.

   J B Hay's representative advised on the need for additional labour. Dundee Heritage Trust's representative informed the meeting of their intention to use Manpower Services workers.

   The new location of the building was established.

   The architects invited the representative of the Scottish Buildings Study Group to visit their offices and view the drawings that had been done so far.

2. 4th December 1987 at DHT Offices

   Present: Dundee Heritage Trust
   J B Hay
   Gauldie, Wright and Partners
   C J Paterson
   Manpower Services Representative

   This meeting was to investigate the possibility of Manpower Services involvement. This was particularly relevant to unskilled and basic mason work. After discussion about the requirements and process, it was decided in principal to proceed, although the Manpower Services representative felt that the timescale was somewhat too rapid for his department.

3. 22nd December 1987 DHT Offices

   Present: Dundee Heritage Trust
   Mrs E Gauldie (local historian)
   C J Paterson
   Mr G Fenton (Representative of the Bank of Scotland, Sponsorships)
The meeting provided an opportunity for the client, aided by Mrs Gauldie, a well-known local historian, and the representative of the SBSG, to put forward a case for sponsorship to the Bank of Scotland. The result of the application is not yet known, but Dundee Heritage Trust are pursuing alternative means of sponsorship.

During the meetings a valuable insight was offered into the methods of running and funding a medium-size job that is unusual in that its profit-making potential is low, but its value to a sponsor may prove considerable.

**Time Scale of Job**

The job has been split into four distinct phases.

1. Recording information and dismantling
2. Storage
3. Re-construction
4. Interior refurbishment and use as a museum exhibit

The recording information process is at this point (February 1988) up-to-date and the dismantling process could commence at any point. It is expected that the dismantling process will take approximately six weeks, with further recording of information as new evidence becomes available.

The building may be in storage for one year. The storage facilities are adjacent to the new site and are secure from theft or vandalism. This period gives time to find replacement stones for those beyond repair. The time scale for re-construction is unclear but will depend upon site conditions, the skill of the contractor and the Manpower Services workers.

Refurbishment of the interior ought to be a speedy affair, with sufficient time to locate period furniture and to decide on finishes. Thereafter the school will open as a living exhibit and pictorial example of life for city children in the Edwardian era.

**Postscript**

The dismantling process took place between May 23 and July 10, 1988.

Although there had been a request by SBSG at the first meeting with Dundee Heritage and the architects, that the interior be stripped before the remainder of the dismantling process commenced, this was ignored. The result is a complete lack of information on the original layout of the school, original floor levels and finishes and position of fireplaces, fittings and furnishings.

Work started with the stripping of the slates from the roof and the removal of the main roof trusses. There was no attempt to scaffold the building to make the removal of the stonework a controlled exercise. Stones were dropped from the wallhead level.
to the adjoining ground, resulting in damage. It rapidly became apparent that the contractors main consideration was for speed of removal. This attitude was in direct conflict with the requirement that this building be re-erected at a later date, and with the need for accurate labelling and storage of the components. Facing stones were marked with yellow crayon, then with gloss paint after they were removed from the wall. Some walls were pushed or pulled over using the bucket of a tracscavator. The dressed stones were retrieved from the debris while the rest were shoved up by the tracscavator and dropped into a tipper lorry for removal to the storage area. Much seemed to depend on who was in charge on any particular day and the SBSG representative and the photographer from the DRCU Photographic workshop noted variations in procedure; but generally the need for care seemed to be abandoned as the work progressed.

Despite the somewhat haphazard and unsupervised approach to dismantling, record photographs have been taken by the DRCU and SBSG reporters. These photographs attempt to show construction and interior details; the most significant finds being three fireplaces, one in the middle of each north and south gables, and one in the corner of the headmaster's study. Unfortunately, due to lack of supervision the surrounding stones have been damaged beyond repair.

Unfortunately SBSG had no direct responsibility and were unable to do anything other than record the process photographically.

We are however concerned regarding the storage arrangements as frost damage could reduce much of this rubble and the facing stones to a completely unusable state. Those in authority should insist on checking that all the key elements are intact and in a usable state, stored in such a way that they can be retrieved easily when required and making sure that they are adequately protected from persons who might use the stones for rock gardens or garden walls.

Extract from the book of record photographs and drawings, illustrating alpha-numeric labelling next to a large scale photograph of the window in the drawing. A similar page exists for every corner, window and decorative feature.
1. Dundee University Library Information sheet on Thomson Shepherd Carpets published by Saunders Carpets.

2. The Story of Jute Sidlaw Group PLC.


5. G E Evans, Pattern under the Plough (1966) 33.


7. The Interpretation of Vernacular Architecture in Wales.

8. IBID p.8.


10. Verbal Information from Staff at Beamish Open Air Museum, Co Durham.

11. Verbal Information from Mrs Villa Money.

12. Arbroath Herald Centenary Number.

13. Verbal Information from Mr R Heath, Stonework Expert, Edinburgh University.

Dr Ake Campbell of the Landsmalsarkivet, Uppsala, Sweden visited the Hebrides in July 1948. He was accompanied on this visit by his wife and Calum Maclean who acted as a guide, and scribe. Dr Campbell arrived in Glasgow on Friday June 25, 1948 and appears to have spent some time meeting Scottish colleagues and carrying out research in various institutions in Glasgow and Edinburgh. It is unclear as to the circumstances of his arrangement with Maclean but Maclean’s journal does not start until July 6, 1948 when he and Campbell were already on the island of Canna. They travelled together until July 20 when Campbell returned to Glasgow.

In this paper the author's comments appear in bold type. Extracts from Maclean's journal are in standard type and their informants' comments are indented.

Canna. July 6, 1948

... visit to Compass Hill to see a site on which circular houses had stood ... In the south field ... a row of ruins of circular houses. In the field to the north were small mounds marking the site of circular houses and farther to the north was an irrigation system which did not seem as old as the two inhabited fields. The drainage of the hill was made about fifty years ago according to John Lorne Campbell of Canna House.

The mounds were nearly the same size. Number nine was measured. The outside measurement was about 620 by 590cms and the inside measurement was about 205 by 220cms.

The site of the circular houses is called Bual Thial-sqer according to a map printed for John Lorne Campbell by Oliver and Boyd, Edinburgh.

Calum Maclean asked Angus Macdonald, c.85, of Sanday, Canna about this site and was told that there was a sheiling there.

Ake Campbell, with the help of Calum Maclean, collected the following information on booleying (bothering) from Annie Macdonald of Sanday, Canna. She was born and brought up at Lochboisdale, South Uist and it was there that she experienced life on a sheiling at the age of fifteen. She was well over twenty when she ceased going and was about sixty at the time of the interview.

Her information on sheiling life, equipment and products will be published elsewhere but she described the buildings as follows:

The sheiling to which I went had only one door. The roof was of supporting couples [ceangalaichean] and rafters. Over them were placed sods with the grassy side facing downwards. Over the sods there was a covering of heather. The heather was tied down by means of heather ropes [siomain fravich]. Sometimes bracken [raineach] was used instead of heather. The heather ropes were tied to wooden pins which
were fixed well down into the sods, through the heather. The heather ropes were twisted by means of a twist-handle [corr-shugain]. Some people twisted heather ropes with their hands.

The sheiling hut had a hole beside the door. It was between the wall and the roof. In wet weather the hole was closed up with a sod or with heather. The wall was made of sods of turf [pluic]. They were dug with spades and were taken from as near as possible to the place where the hut was being built. The sods were placed evenly on top of each other. They were in the form of cubes and were so placed that the grassy side faced inwards and the earthen outwards.

The room inside was square. The doorway was in the middle. The fireplace was at one end. At the other end were beds of heather, on the bare floor. There was no partition [hallan] inside the hut. They had wooden doors but the doors were not on hinges.

Booleying ceased in Uist about fifty years ago.

Campbell and Maclean had obviously enquired about wattle doors as there is a small post-script reading: NB They saw no doors of wattles.

CANNA. July 7, 1948

The following information about booleying was collected from Angus Macdonald of Sanday, Canna. Mr Macdonald was approximately 85 years old and it was his father who had gone to the sheiling with calves when still a young man. The Sanday people stopped using the sheilings about 1888.

Sometimes the both was built of turf, sometimes of stone. They were often circular. They were thatched with rushes [luachair]. The roofs had a ridge pole and rafters.

On the sheilings the fireplace was always outside. It was in a place where the wind was suitable.

They had beds of straw or heather on the floor inside the bothy.

RAASAY. July 10, 1948

Ewan Nicolson, a retired fisherman of about 80 years living at West Suisnish, Raasay gave a very different account of the sheiling system adopted at Raasay. They sent their cattle to the adjoining island of Rona.

They erected a roofless enclosure for the calves -cro [cro laoigh]. These enclosures had stalls for the calves.

They did not have huts in which they lived during the sheiling time. People in the township were responsible for the cattle on a particular day of the week. If it fell to your lot to go to herd the cattle on a Monday, you had to go every Monday after that. The same was true in the case of other days.
UPPER DUNTULM, SKYE. July 16, 1948

Information from Mary Maclean of Harris, who was employed as a cook in the house of Seton Gordon at Upper Duntulm.

Sheiling huts were dismantled when the season was over to prevent animals going into them to take refuge.

They place a sod against the smoke hole in the hut to prevent the wind from blowing the smoke in again. When the wind is from the other side they place the sod at the other side of the hole. They sometimes have great difficulty in making the smoke go out through the hole.

The turf placed to the windward side of the smoke hole would act in the same way as a 'wind skew' by creating a vacuum behind the turf thus pulling the smoke from the roof space.

I have seen a sheiling in Harris. It had only one doorway when I was there. I was very young then. There are no sheilings in Harris now, not in the south of Harris.

HERBUSTA, SYKE. July 16, 1948

Information from William MacInnes, Herbusta.

The sheiling huts were built of sods and stone and sticks. It is 120 years since they stopped going to the sheiling. The hut had one doorway. There was a fire in the middle of the floor. There was always a well near the sheiling.

CARLOWAY, LEWIS. July 19, 1948

There were about forty sheilings on the road from Stornoway to Carloway. We could see, from the bus, that most of the huts were modern buildings of wood and corrugated iron. Some were of turf with roofs of felt and tarpaulin. We could see no huts with thatched roofs.

GEARRAIDH, BEINN A'BHUINNE, LEWIS. July 19, 1948

Sheiling site a few miles west of Achmore. The first hut visited was built of wood and had two rooms. In one room were two modern iron beds. Next visited a hut of stone with a roof of corrugated iron. It was built on a huge flagstone, which served as a floor. The interior furnishings were quite modern. Here again were two iron beds. The fireplace was built of cement and was placed at one end of the hut. There was only one doorway.

The third house was occupied by an old man of over eighty who had been going to the sheiling since he was fourteen.
When I went to the sheiling first there were no beds, but only rushes on the floor. There was a row of stones between where the beds were and the fireplace. It was called 'cip'.

The roofs of the huts are sometimes covered with pieces of soil. They take the roof off at the end of the season to save it for the next year.

On this hut there were two doorways. The windward door had been filled with turf sods. They (the old man and his daughter) said that the other door had been similarly closed up the previous day and that one open. The wind had changed.

On the forty sites between Carloway and Stornoway there was no sign of cattle in July 1948. The sheiling huts visited were not occupied by herdsmen or dairy maids but by people who were there for health reasons. Campbell was obviously disappointed and returned to Glasgow immediately. It is unclear as to whether this was the planned end of the excursion or a sudden decision, but Campbell had been in that area some nine years earlier when he recorded a number of sheiling huts. These were published during the war years but, owing to Sweden's neutrality the paper was written in Swedish.1

Section and Plan of a sheiling hut at Airidh, south-west of Loch Tongavat, Lewis; surveyed by Ake Campbell in 1948
An undated typescript in the archive of the Landsmals-och Folkminnesarkivet, Uppsala, Sweden entitled 'The Lewis Sheiling: the most interesting house in the world: Swedish Professor's Views' gives some indication of Campbell's views on this subject:

It has been said that the old beehive type of house found in Ireland, Sweden and the Hebrides has nothing to do with the living style of house. They say it is purely a prehistoric type. That is wrong. I have found the link in Lewis and I will write a paper to show that in the Lewis summer sheiling we have the same house type existing up to the present day.

In the district round Callanish and Uig there are still the remains of these old sheilings but most of them are broken down, and I am sorry to see that nowadays the sheilings are being built of wood and corrugated iron.

It would be terrible if all these sheilings were to disappear and I hope one at least can be preserved and kept in the old fashioned way. The Lewis sheiling is the only living link between the Bronze Age and modern times which exists in Western Europe, and from the architectural point of view the Lewis sheiling is one of the most interesting house types in the world.

The above abstract was written during Campbell's visit to Lewis in 1939. The disappearance of the last of the old sheilings and the destruction of the black house museum at Callanish were obviously major disappointments.

Possibly the most important factor to emerge from this small collection of sheiling hut descriptions is the obvious differences existing from one community to the next. The range of solutions to very similar problems is highly significant as it shows that these people were capable of thinking for themselves and not blindly following the dictum of fashion. Far from being a group of backward communities as often portrayed they formed an inventive group of individuals responding to a harsh climate and severe economic pressures. This is an aspect seldom comprehended by those studying vernacular building. Unfortunately the range of solutions tends to diminish with improved communications and the development of self consciousness. Persons not conforming to the accepted pattern are often branded as 'backward' and are ridiculed by unthinking critics, usually applying a completely alien set of values.

1 Ake Campbell, 'Keltisk och Nordisk Kultur i mote pa Hebriderna' Folkliv Acta Ethnologia et Folkloristica Europaea 1943-44, (1944), 228-252.
II - BLACKHOUSES, CRUCKS AND OUTBUILDINGS

CANNA. July 7, 1948

The terms below were supplied by Angus Macdonald, approximately 85 years, of Sanday, Canna; Agnes Currie, approximately 60 years, of Lochboisdale, South Uist and Miss J MacRae, Uig, Lewis, a nurse who was in Canna on July 7th.

CREAGAN - a good foundation of rock on which houses are built
CABAIR - rafters - (Lewis)
THOBHAIN - rafters - (Uist)
FOSGALAN - lobby - (Lewis)
TRANNSA - lobby - (Uist)
TOBHTA - a ruin (Uist)

CULAIST - a roofless house that is falling down
part of the wall (-head) that thatching does not cover (Uist)
part of a boat (Uist)

BALLAN - (Lewis)
TALLAN - (Uist)
also BALLA-TARSAINN

SPALLAI - (Lewis)
GLUTADH - (Uist)

CEANGAL - couple (Uist)
MAIDE-TARSAINN - collar (Uist)
MAIDE-DROMA - ridge pole (Uist)
MAIDE-FEUNNAIG - projecting pole at each end of the ridge to support the thatching ropes (Uist)

CLACHAN ACAIRE - stones tied to secure thatch (Uist)

Thatching Material in Uist:

RAINEACH - Bracken
FEUR - Grass
FRAOCH - Heather
SEASG - Sedge
LUACHAIR - Rushes
SEILEASDAIN - Yellow Iris

TIGH LAIR - an underground house. There is one such at Loch nan Arm, South Uist.

CREAGA was defined by Miss J MacRae as a cluster of houses, dwellings, forming a village.

Angus Macdonald saw houses in Canna, where the household and cattle were under one roof.
Eyre, Raasay. July 9, 1948

We then proceeded to Eyre (Oire) where we met Roderick Macleod, approximately 45 years, crofter. He brought us to see the house there which had been most recently used as a dwelling house. It was vacated in 1930, when the family that lived there moved to a modern slate roofed house.

The house had in oldentimes been the home of the MacKay family of pipers. They were pipers to Macleod of Raasay. When Eyre was cleared of its people circa 1850, the landlord gave instructions that this house was to be left intact. Roderick Macleod was of the opinion that the intention was to have the house preserved as an example of the old house-type. Part of the roof of the house remained intact. Roderick Macleod gave the terms applied to different parts of the roof. Ake Campbell sketched, measured and photographed this house. He did the same with an adjacent barn. The barn was built 20 years ago. In the barn the couples went well down into the wall, and at the gable ends the two couples rested on ground stones. The couples were bent. This type of couple is called CEANGAL LUIGEACH. In Rona, Roderick Macleod said, he had seen couples resting on the floor. The couples were in two parts and spliced and fixed with wooden pins near the top of the wall. The name applied to such couples is GAIBHLEAN. The name was supplied by Mr Ewen Nicolson, c.80, West Suisnish, Raasay.

The couples referred to in the previous paragraph are obviously 'crucks' and 'end crucks' partly confirming a long held belief that these are to be found in the Hebrides and that earlier forms of black house may well have been cruck framed in a similar manner to the houses of the Sea-Lapps of West Finnmark, Norway.
According to Roderick Macleod the hole in the roof of the black house was called ARLAS. According to other sources this hole was not always at the ridge of the roof but more often at the eaves. Sometimes there were two holes, one in each side of the roof, the leeward one being left open and the windward one closed. This utilised the vacuum created by the wind to suck the smoke from the roof space of the house.

The stones used to secure the thatch are called ACRAICHEAN. He also gave the names of other parts of the roof.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEANGAL</td>
<td>Couple</td>
</tr>
<tr>
<td>GATH DRAMA</td>
<td>Ridge pole</td>
</tr>
<tr>
<td>TAOBHAIN</td>
<td>(collars) the horizontal beams placed across the couples</td>
</tr>
<tr>
<td>CABAIR</td>
<td>rafters</td>
</tr>
</tbody>
</table>

The pole fixed to the gable cross-beam and pointing through the roof is called CRAGASTAIR. It is used to tie the ropes, which secure the thatching.

FEARNS, RAASAY. July 10, 1948

Accompanied by Mr Ewan Nicolson, 680, retired fisherman, West Suisnish, Raasay.

Ewan Nicolson said that the first thing to do when building a house was to dig a foundation.

Some houses had spliced couples, GAIBHEAN. The couples were in two parts and spliced and fastened by means of wooden pins, SGROGAGAN. The splicing came at the top of the wall. The couples were put in position right away, they were placed on a ground stone. The wall was built up around the couples. There was a house a Fearns, which had couples of this kind. The couples were much strengthened when spliced and were very good in gales and storms.

We then met Duncan Macleod, 660, crofter, Fearns. Ake Campbell measured, sketched, photographed and examined three buildings on his holding, a cow shed, a barn and a shed for calves. The barn had a double stone wall, except that there were apertures at both gable ends which were filled in with single stones. These apertures were opened completely when corn or hay was put into the barn at harvest time. The apertures were again filled in when the barn was full. These apertures are called CAILIDHEAN. All three buildings were erected 20 years ago. The calves shed is used to house calves until they are a year old. That shed had only two couples. The barn and cow shed had four couples. In the calves shed the couples were fastened with wooden pins, SGROGAGAN.

DUNTULM, SKYE. July 13, 1948

In the morning we visited the house of a crofter who lives beside Duntulm Lodge Hotel. He, for some reason or other, would not disclose his name. He showed us his steading which consisted of a cow-shed, a barn and an old dwelling house used now to house hens and cattle. In the cow shed we saw a spliced couple. The couple was in two parts but did not extend very far down the
wall. This junction of two parts is called GLUN, knee. The two parts were fastened with wooden pins. The couples were of larch, LEARAG, from the wood at Uig, Skye. The pins were of oak, DARACH. Ake Campbell measured and sketched the splicing of the parts of the couple.

In the afternoon we visited the house of another crofter named Nicolson, who also lives in Duntulm. He also showed us over his buildings. The old dwelling house which at one time housed both human beings and cattle is now used as a cow shed. In a barn at this croft we again saw the spliced couple. Nicolson informed us that the splicing was done in the case of couples which did not have a natural bend.

Duntulm, Skye

KILMALUAG, SKYE. July 14, 1948

Mr Ewan MacPhee:

They took some of the thatch and sods [SGRATHAN] off a certain part of the roof where it was well covered with soot. They put it in little heaps on the potato ground and it made excellent manure. It took about three years to use all the thatch and sods from a single roof as manure. They took a third of it every year. They replaced what they took away with new sods and thatch.

We proceed to CEANN DRAMA, and we found Murdo Matheson living in a disused RAF garage. In this, despite the fact that there was a modern iron range, Murdo Matheson had built a fireplace in the middle of the floor. The smoke found its way through the roof. Murdo Matheson had vacated the black house quite recently.
We spoke to Murdo Matheson and found him very helpful, very pleasant and most intelligent. He spoke English very well. He told us that he had once been a schoolteacher but had to resign owing to poor health. Murdo Matheson is unmarried and lives alone. He is about 60 years of age.

He said that between Staffin and Portree there was a house which had couples right down to the floor. It was called TAIGH A'LOIN FHEARNA. Only a roof of it still stands.

Murdo Matheson said that they made couples of larch from the wood at Uig, Skye. The wooden pin used to fasten couples was called CRAG.

Murdo Matheson then brought us up to his house and showed us both the inside and outside. Ake Campbell sketched the roof construction of the gable end. Murdo Matheson told when new additions were made to the inside and pointed out where new couples had been put up once in wintertime. He then gave the terms applicable to different parts of the roof.

The ridge pole is called GATH DRAMA. The couples are called CEANGAIL. The cross-beam (collar) connecting the couples is called SPARR. The beams running horizontally across the couples (purlins) are called TAOBHAIN. The rafters are called CABAIR. The beams from the gable wall up to the couple are called CORRAN. The stick projecting from the roof (at each end of the ridge) is called CRAGAISGEAN. One side of the gable couple had a splicing - GLUN. The other side had a natural bend - CEANGAL LUGACH.

Murdo Matheson said that the splicing, GLUN, put the couple out on the wall. They did not require so much thatching when the couple was put out. The couples were fastened to the cross-beams (collars) by means of wooden pins. As well as that they were fastened with ropes. The couples and side beams, TAOBHAIN were also fastened with ropes. The ropes were generally made from rushes. They cut the rushes in the beginning of winter and late autumn. They made good strong ropes. Such ropes were used for carrying hay, corn, etc. A rope of this kind was called GADAG.

At the gable end of the house, where the cattle were housed, there was a hole at the bottom of the wall. It was there to allow the urine of the cattle to run off. It is called FEADAN. The cows were kept inside at the time of calving, perhaps for six weeks. He saw five cows at one time inside the house.

In the living room the fireplace, a flagstone CLACH AN TEINNEIN. There was a stone at the back of the stone on which the fire was kindled. Its purpose was to rest the turf sods against it when the fire was being built up.

The usual furniture of a living room was: a bench, SEISE; a dresser for dishes; a table, BORD; a stool, FURM. Across the room and tied to beams on either side was a rope, SIOMAN. It was used to hang clothes across two of the cross-beams and at right angles to them was another thick beam. It was called MAIDE NA SLABHRAIDH. From this beam the chain for hanging pots, kettles was suspended and reached down over the fire. The chain SLABHRAIDH was in two parts, the chain itself and an iron hanger...
for the pots etc. The chain was taken from a Spanish ship, which was wrecked at Duntulm many generations ago.

The house had been built before the time of Murdo's grandfather. Before that the grandfather had lived in a house to the east of the gable end of the present house. The walls of it are standing still. Murdo converted part of the old house into a stable for horses.

Between the living room and bedroom there was a stone wall going up to the roof. This wall was built in 1908. They did not interfere with the roof of the house when building this wall except that they removed some of the SGRATHAN. When this wall was built the fireplace was moved from the middle of the living room and placed against the wall. The chain was then suspended from one of the cross beams instead of it being suspended from the chain beam, MAIDE NA SLAGHRAIDH, as was the case before.

In the bedroom there was a fireplace in the wall. It had a mantlepiece taken from an old house in Kilmaluag. The smoke vent was slightly curved and on the roof there was a box-chimney. Before the wall was built two box-beds placed end to end formed a sort of partition between the living room and the sleeping quarters. The beds faced towards the gable end. When the wall was built the box-beds were placed end to end against the gable wall and faced outwards towards the new wall.

There was a rope along the bottom of the thatch slightly above the wall. The ropes from the top came down double and were twisted over this rope to form a loop to hold the anchor stones, ACRAICHEAN. The rope was called DRAGH. The ropes down the sides were right across over the top of the roof. The ropes at the gable end were looped round the CRAGAISGEAN. This was called BREIST.

The house was measured both inside and out.

July 15, 1948

Ake Campbell continued to sketch and measure the interior of the house. Murdo Matheson told us where the different articles of furniture were.

At the gable end of the house outside there was a wall. It was, Murdo Matheson said, for protection. It is called UDABAC. There is often a similar wall built out from the doorway. It is also called UDABAC.

The foundation of the house is called STEIDH. The stones of the foundation usually come further out than the stones of the actual wall.

Flat stones were placed as pavement in the floor of the end of Murdo's house, where the cattle were housed. This is called CABHSAIR. There is also a pavement of flat stones out from the outside front wall of the house. This is called STARRAN. The floor of the living room and sleeping quarters was of clay.
When we had finished measuring and sketching Murdo Matheson showed us the old dresser, which had been thrown out. It was partly broken, but it was held together and measured. Ake Campbell was also able to sketch it ... also a pair of tongs, CLOBHA and ... the pot hanger. We then returned to Murdo's present abode and there we found one of the box-beds, which Murdo still uses. As well as that we found the bench that had been in the old house. These were sketched and measured along with a pan and frying pan on which bread is also baked (girdle).

The fire was kept going all day. At night they put peats round the fire. The fire would not burn so quickly then. It was kept burning all night. Before they went to bed they placed peats all around the burning embers and the fire smouldered all night. This was called SMALADH.

Murdo Matheson said that when planting potatoes they took some of the sods and thatch from the roof of the house and put it along with the manure.

He also said that the new house, ie the house which we examined, was built before his grandfather's time:

It was built for a man before my grandfather. It was built for his son, when he married and got part of the croft. I was born in that house and lived in it most of my life.

July 16, 1948

We returned to Murdo Matheson's house to take some photographs—inside and outside.

Mr Seton Gordon introduced us to Miss Mary Maclean of Harris who is employed as cook at Upper Duntulm. She gave some information on houses:

The chain hanging down over the fire is called SLABHRAIDH.

They usually have a corner in the house where turf is kept. It is called CUlL MHONA.

In Harris there is a certain place where houses are grouped together and one or two are actually joined together. That grouping of houses is called CLACHAN.

Houses in Lewis:

In certain parts of Lewis in houses where the people and cattle are under one roof there is a hole behind the fire into the part of the house where the cattle are. The ashes are put through this hole for the purpose of keeping the cattle warm. The hens also are kept warm by the same ashes and lay well.

I have not heard of any special part of the house being regarded as holy. But when Christian people come to some houses they say to them that they can always have the CLOSAID, small closet or bedroom, to say their prayers.
In Harris when the fire is against the wall they have a box-chimney 3 feet broad and 2 feet out from the wall. It tapers towards the top and goes out through the roof in the form of a box-chimney. It is called MOP.
HERBUSTA, SKYE. July 16, 1948

The following information was collected from Donald MacArthur, £.35, crofter, Herbusta.

Donald MacArthur referred to the spliced couple, GLUN.

SPARR - cross-beam.

GLUN - spliced couple - was made when they could not get couples with a natural bend.

GATH DRANA - the ridge pole.

I have always seen the ridge pole in the fork of the adjoining couples.

CRAGAISGEAN - is used to hold the ropes of twisted heather.

We started to use wire netting about 50 years ago. About 50 years ago there was not a house in Kilmuir that had netting over the thatch. The heather used for making ropes is fine long heather. It is called FRAOCH SIOMAIN.

The anchor stones, ACRAICHEAN, were above the wall when thatch was secured by heather ropes, but below when it was netting.

Donald MacArthur then described an old house he had seen when a young boy. He remembered the house clearly and showed Ake Campbell the ruins. From his description Ake Campbell was able to make a sketch of the house. The ruins were measured and it was clear that the house was exactly of the same type as the house of Murdo Matheson in Kilmaluag. The walls of the house were built 100 years ago. There was a fireplace in the sleeping quarters but the smoke vent was straight.

CARLOWAY, LEWIS. July 19, 1948

At Carloway we were told that the black house at Calleranish which had been preserved as a museum, was now demolished.

We arrived at Carloway and just where we alighted from the bus there was a typical black house. The owner was quite willing to allow Ake Campbell to photograph the house, and allow us to look at it from the outside. From his manner we gathered that he was not too anxious to let us see the inside.

The following day Campbell returned to Glasgow.

This survey is interesting on a number of counts. It shows: that genuine black houses still existed on Skye in the late 1940s; that cruck frames were known on a number of sites on both Raasay and Skye; that building types, considered by many researchers as being static over hundreds of years, were in a constant state of change as new building techniques and features were introduced and earlier ones discarded. It also shows what can be achieved by two dedicated researchers over a period of fifteen days.

There is not room in this journal to publish all the Campbell drawings relating to this paper but arrangements are in hand to
have copies of the Campbell papers deposited with the Scottish Record Office. This cannot be done immediately as agreement on access and copyright has to be finalised between SRO and the Landsmals- och Folkminnesarkivet, Uppsala, Sweden.

The author is indebted to the Carnegie Trust for the Universities of Scotland and the Royal Incorporation of Architects in Scotland for financial assistance in visiting the Landsmals-och Folkminnesarkivet and to Anders and Dr Asa Nyman for their kind hospitality and assistance. This is the first of a series of articles using material from the Campbell archive.
PAPER ROOFS

Elizabeth Beaton

I have recently come across nineteenth century references to paper roofs. I suggest that the paper used was rope paper, manufactured from ships' old ropework, and reputedly very strong. My grandfather was a paper-maker in Exeter, Devon, at the turn of this century and purchased this raw material from Plymouth dockyard.

The following account for the making of a paper roof is in the Gordon Castle, Moray, papers.¹

17 August, 1809; to John Mackenzie, Inverness, for a paper roof to the Gatekeeper's house. For covering with paper a roof for a gatekeeper's House. Workmanship, putting up couples, sarking the same with tarred paper at 2/6 per yard. For paper, 1 1/2 ream at £2.15. Expenses of Self and Man from Inverness and returning. £21.10.0 £4.20 £2.00 £27.12.0

Less ream of paper unused. £2.15.0

At Gordon Castle the paper appears to have been used as sarking. At Amondell (Almondale), Linlithgow, it was used as roofing. After his retirement from the legal profession in 1812, the Earl of Buchan turned architect and improver on his estate at Amondell. His son (somewhat scathingly) described his various undertakings, including that¹ Lady Minto persuaded him to adopt a new sort of roofing just invented, paper covered with pitch: whenever any flaw occurred, which was as often as there came extreme heat or frost, or heavy rain, the laundry maid had to be sent up with a hot iron to iron the peccant places in the roof, which was then supposed to be as good as ever. Perhaps it was, but it was never very good.²

In 1811 John C Loudon published on paper roofs used in Oxfordshire, but I have not been able to trace a copy of his essay.³

Tarred paper appears to have been in vogue for estate buildings in the nineteenth century: it was the forerunner of roofing felt or felt tiles, now frequently used to replace thatch at the vernacular level. As a roofing material felt is cheaper than slate, and easier to lay on piended roofs of the type found in Skye and Tiree. However, in Tiree in this century, it was known to have been preferred to thatch for a new house, though more expensive.⁴

¹ SRO GD44/51/390.
² John Smith, The Castles and Mansions of the Lothians i (1883), no. page nos. I am grateful to Richard Emerson for drawing my attention to this passage.
ICE-HOUSE AT SOUTH VILLA, MOSS STREET, ELGIN, MORAY

W A Bartlam

South Villa, built in 1830 and ascribed by Elizabeth Beaton to William Robertson (1786-1841) has an Ice-House in its garden. 1

In itself this is perhaps unremarkable but it is interesting to see how this humble structure follows the pattern published in Rees' Cyclopedia of 1820.

The only departure from the specification and description 'Summer Ice-House' seems to be in the siting of the entrance which should have 'an aspect towards the east or southeast for the advantage of the morning sun to expel the damp air as it is more pernicious than warmth'. The entrance in this instance faces north and the damp air not being expelled as described, has tended to keep the fore-chamber permanently damp. As the ice-house has never been filled with ice, at least within living memory, it is not possible to say whether this has had a pernicious effect on the intended function.

Apart from this small but seemingly important discrepancy the finished article is virtually identical with the old illustration. There was no scale or size on the original but from the small figure of the man, shown tamping down and consolidating the ice, the sizes would appear to be approximately double those of the South Villa example.

Plan and section of the ice-house in Rees' Cyclopedia
Plan and section of the ice-house at South Villa
The whole affair was most ingenious and labour effective. The ice chamber was constructed below original ground level by excavation; allowing the chamber to be built, like the dwellinghouse itself, in local stone completed with domed vault and loading hatch. The level of the fore-chamber is three steps below the original ground level and was closed off from the ice compartment by double hatch doors. It was constructed with a rough vaulted roof and equipped with a stone slab shelf along one side for the cool storage of items. The whole structure was then covered over with the excavated material topped up, no doubt, with further material from the formation of the dwellinghouse cellars. Finally a Cedar of Lebanon was planted to supply shade to the ensuing mound.

Ice would have been obtained from the nearby River Lossie, in season, and loaded into the ice chamber through a manhole in the dome which was formed of double doors between which straw or bracken was probably packed to improve the insulation. The manhole was covered with a large stone slab surmounted with a plinth which may have had a sun dial or something similar on it to camouflage its true purpose. The illustrations show the original published pattern and the ice-house as existing and provide a nice example of the use of pattern books prevalent amongst builders before architecture became a closed profession - an early example of DIY.

1 E Beaton, Architect in Elgin (1984)
SCOTTISH LINEN HANDLOOM WEavers' HOUSES

Gavin Lloyd

Handloom weavers have for a considerable time provided an emotive subject for Scottish historians, poets and folk musicians. Constant references are made to the 'Weaver's Cottage'; however no serious attempt has been made to describe the range of buildings covered by this term. Usually, but not always, the reference is to the dwelling place of a linen handloom weaver as distinct from the industrialised weaver or 'mill worker' or the more traditional weaver of tweeds. Strictly speaking the term 'cottage' is also wrong in a generic context since many handloom weavers occupied a pendicle or croft and a 'cottage' is a house without land.

Linen production in Scotland was traditionally a part-time craft which, after the Act of Union in 1707 and the subsequent establishment of the Board of Trustees for Manufactures, grew into the country's staple industry. As the trade developed, weavers worked increasingly for merchants and manufacturers who provided the yarn and collected the cloth. However, subsequent industrialisation resulted in a gradual shift to power looms, coinciding with the provision of improved houses. As a result many handloom weavers continued to operate from the type of house that was being swept away and most weavers' houses which do survive tend to be on estates, where the improvements were early, or in early manufacturing villages.

The houses are generally of a similar size and external appearance to small farmhouses but internally comprise a single dwelling room, the other room usually being occupied as a loomshop. The ideal loomshop had an earthen floor and no hearth as a slightly humid atmosphere was considered best for weaving, although often detrimental to the weavers' health. The absence of a chimney stack in the loomshop encouraged the adoption of a peind roof with a single central flue serving the kitchen. Where houses were part of a row, kitchens could be placed back to back sharing a central chimney stack as exemplified in the late eighteenth century weavers' houses at Jericho on the Glamis estate in Angus. Despite grade B listing these were altered at the end of the 1970s, now bearing only passing resemblance to their original appearance. Alternatively this layout could be reversed to utilise gable chimneys and provide a long unbroken roofline over central loomshops. There are a number of variations which include rows of repeated layouts with a single kitchen chimney in each dividing gable, or three-roomed houses with a loomshop under a single peind roof beyond the internal gable. Later houses were occasionally built with a narrow weaving gallery on the north wall behind the best room.

English weavers' houses differ from their Scottish counterparts particularly in urban situations where looms were often located in upper storeys. Here the 'weaver's windows' developed, comprising a continuous range of windows with minimal piers or timber supports between the sashes. In Scotland the weaver's window was rarely used, the only apparent concession to improved lighting being the provision of double or triple windows. However this feature was by no means exclusive to the weaver's house, and examples with double windows to dwelling rooms and a
1 Two roomed house with kitchen and loomshop at Dairsie, Fife.

2 Two roomed houses with loomshops at ends of row and double chimney from central kitchens at Jericho, Angus.

3 Two roomed houses with central loomshops at Craigie, Perthshire.

4 Three roomed house with loomshop under peind roof at Auchtermuchty, Fife.

5 English town weaver's house with handlooms on top floor at Trowbridge, Wiltshire.

6 Two storey Scottish weaver's house with single roomed dwelling above loomshop at St Andrews, Fife.

7 House with semi-basement loomshop under dwelling rooms at Forfar, Angus.

8 Large house built for an 18th century weaver at Kilbarchan, Renfrewshire.

9 House split into single roomed dwellings, as a result of the decline in the industry, in which the weaver lived and worked at Kirkpatrick Durham, Kirkcudbrightshire.
single window to the loomshop are not uncommon. Double windows are often associated with planned weaving villages and linen manufacture appears to have been responsible for these settlements more than any other single factor.

In Scotland, the majority of urban weavers occupied buildings vacated by the nobility and rich merchants who were moving from their former town houses into Georgian terraces or suburban villas. In these situations the former byre/stables and merchant's store on the ground floor became the loomshop whilst the weavers' families occupied the upper storeys. The outside stair to the dwelling was considered a suitable place for the weavers to hold their 'parliaments'. Basement loomshops were a feature of some English towns where land values were high but apparently rarely adopted in Scotland. However in Manor Road, Forfar there are some weavers' houses with loomshops in the semi-basement.

As the industry expanded, physically larger looms and increased numbers of looms had to be accommodated. Existing cottages were extended or back properties converted for this function. Weaving sheds were the next development, built as separate units at the rear of the house, an intermediate stage before the factory systems to follow. In every case there are exceptions, and the weaver's house can range in size from the purpose-built property at Kilbarchan, Renfrewshire, now owned by the National Trust for Scotland; to the single-roomed cabin with living and loom in a single volume, usually in part of a larger house, split up as a result of the decline of the industry. The Kilbarchan house is perhaps the best known example of a preserved weaver's house, for urban houses were seldom specifically built for weavers, and therefore is only architecturally representative of a limited sector of the industry.

This gives a general but rather incomplete picture of the linen handloom weaver's house in Scotland. The study is on-going and the author is anxious to contact persons who have buildings of this type or who know of other types of weaver's house not mentioned here. He can be contacted at the Department of Architecture, Duncan of Jordanstone College of Art, 13 Perth Road, Dundee. Telephone 0382 23261, Extension 315.

QUERY: OHIO HOMESTEAD

Ohio Homestead is situated near the small town of Walcha in northern New South Wales, Australia. It was built in stages between about 1842 and 1865 by a Scottish migrant who came from Dumfriesshire to Australia in 1839 (Fig.1).

The home is lived in today by a descendant and research is being done into the family history and into the architectural features of the house.

The house has several characteristics which seem to relate it to the Dumfries area - its walls are of rendered stone rubble, and it has dormer windows in the upper level. The roof structure is, however, something of a mystery at the moment because it seems to be a structural type not known in Australia or in England.
The roof rests on a low added wall, built on top of the original wall of the house when the large dormer roof was being added. The timber frame of the roof is not tied by the floor joists, as is normal, but by short jack joists, about six feet long, each held rigid by being secured by a tusk and tenon joint into a six inch square beam. This beam runs horizontally, parallel with the walls, around three sides of the house (Fig. 2). (The fourth side is a stone gable wall.) The total roof span is 38 feet.

We would appreciate help to understand the house and particularly the roof structure. Is the structural type common in Dumfries? Was it used particularly at one period or in one region? Did it evolve from barns or other farm buildings?

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