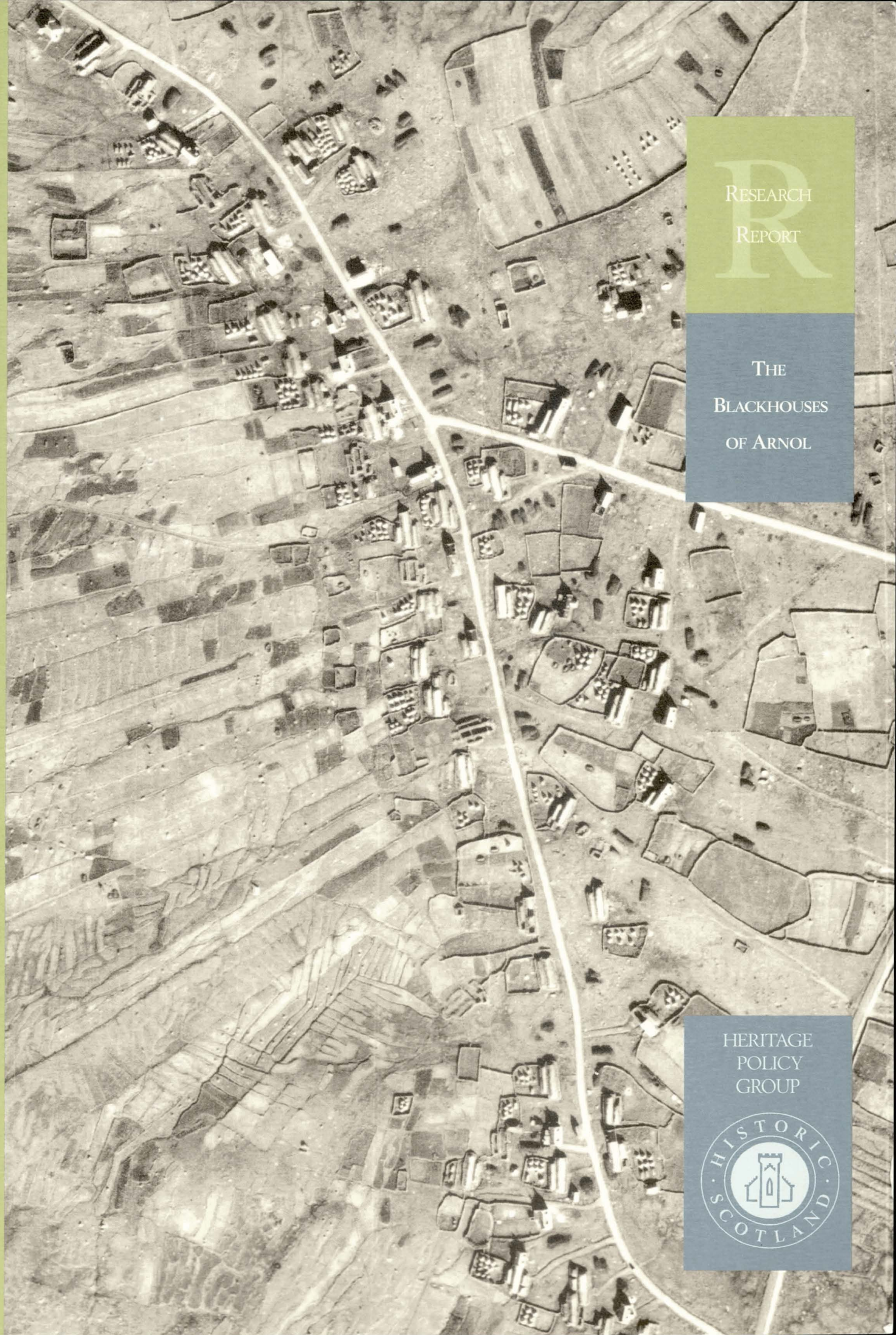

RESEARCH REPORT

THE BLACKHOUSES OF ARNOL

HERITAGE POLICY GROUP

HISTORIC SCOTLAND

RESEARCH REPORT

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RESEARCH

REPORT

THE BLACKHOUSES OF ARNOL

by
Timothy G Holden
with contributions by
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Cover photograph

Arnol from the air in 1951. Crown copyright 1951/MOD. Reproduced with the permission of the Controller of Her Majesty's Stationery Office.

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Blackhouses and their associated crofts are the product of the agricultural improvements of the 19th and 20th centuries in Highland and Island Scotland rather than symbols of a traditional, rural, timeless or a backward way of life. This does not mean they are any less important; indeed they represent an extremely important and dramatic phase of Scotland's history.

Arnol township in Lewis, Western Isles, with its well-preserved blackhouses and distinctive layout of crofts, is one of the best-known and most iconic examples of such a township. The Blackhouse Museum at No. 42 has further helped to stamp Arnol's significance on the map. No. 42 passed into Historic Scotland's care in 1965 after the then Minister expressed and actively pursued the desire to preserve a blackhouse in Scotland. After an extensive search for a suitable candidate, Arnol was selected.

Historic Scotland initiated a wider study of the significance of Arnol township after it acquired No. 39, a ruined blackhouse and its associated whitehouse, in 1996. We commissioned survey, excavation and related documentary and ethnographic research to understand more fully the development of settlement in Arnol, and of its blackhouses in particular. Our aim was to be able to interpret and present Nos 39 and 42 to the public to best effect. The result is also an invaluable snapshot of the nature and condition of the blackhouses in 1998. We hope this Report will highlight the wider value of blackhouses and historic township settlements elsewhere in the Western Isles, and beyond.

The study enables us to understand how important individual blackhouse structures are in providing unique evidence for past life styles and how, as a township group, they can enhance our appreciation of how settlement evolved in any one place: how the fabric of the past contributes to our modern appreciation of the sense of a place.

Very few blackhouses are now being actively restored or conserved as ruins. The ruins we do still find on crofts are therefore vulnerable to natural decay and destruction by human action. Taking a long-term perspective it is important for Scotland and for local communities alike to ensure that significant and well-preserved examples of buildings, and settlement patterns as a whole, survive the passage of time. It is all too easy to eradicate all traces of such settlements. Such a loss would prevent our being able to pass on an understanding, and examples of, an architectural tradition that represents the culmination of over 5000 years of outstanding drystone architecture in Scotland. Yet active destruction is happening even in Arnol.

I therefore hope that this report will generate further interest not simply in the history of settlement at Arnol, but will promote an awareness of the importance of surviving blackhouses and early township settlements to present and future generations. What to preserve of such settlements, and how, is a subject that requires active consideration, particularly by relevant local authorities, and Historic Scotland looks forward to further discussion with interested parties about this.

Sheenagh Adams
Director of Heritage Policy
Historic Scotland
June 2004

1 INTRODUCING BLACKHOUSES AND ARNOL

T HOLDEN AND L BAKER

1.1 The blackhouse

The Lewis blackhouses with their low, stony profiles project an air of permanence in the rocky terrain in which they stand. One could believe that they had stood for centuries, the stone and earth walls often provoking comparisons with Skara Brae, one of Scotland's most famous Neolithic monuments (illus 1). Yet most of the ruined blackhouses that can still be seen in Arnol and many other places on Lewis were built less than 150 years ago. Despite their recent age they are themselves rapidly turning into archaeological monuments, the thatch and timberwork have largely gone and any iron fittings will quickly corrode beyond recognition. The stark stone and earth walls are in most cases the only remains of what were, even within living memory, family homes.

This publication has offered an opportunity to stand back and take stock of the rapidly disappearing field evidence relating to Lewis blackhouses as exemplified by those at Arnol (illus 2). It also provides a follow-up to the conservation work undertaken at No. 42 Arnol (Fenton 1978; Walker and McGregor 1996) and excavations recently undertaken at the blackhouse at No. 39 (Holden *et al.* 2001).

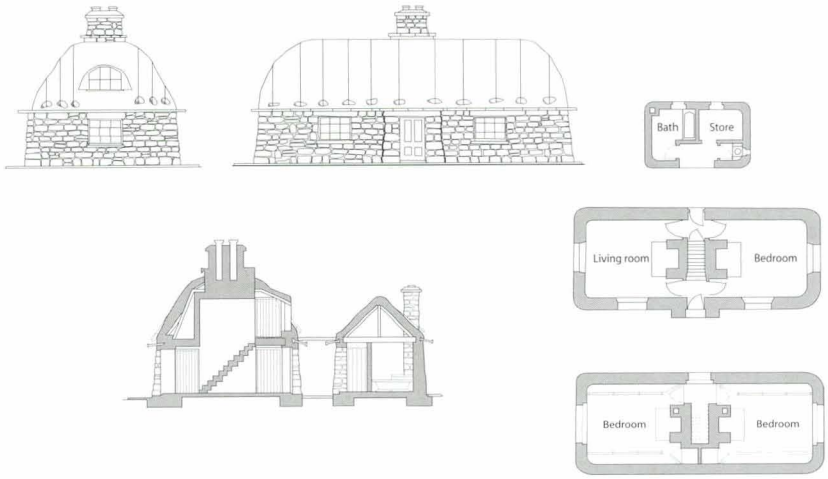
Blackhouses on Lewis can be characterised as having thatched roofs and thick, stone-lined walls with an earthen core that are often shared by a series of parallel rooms. The roof timbers rise from the inner skins of the walls, so providing a characteristic ledge at the wallhead (*tobhta*) that gives access to the roof for thatching. Both the animals and occupants shared the same door, living at different ends of the same space. The apparent permanence of the blackhouses is deceptive. The township at Arnol has been moved at least three times in the last two hundred years with materials being robbed and re-used from earlier structures. Few of the surviving buildings were lived in for more than 50 years and during that time many were considerably modified, extended and partially rebuilt. However, materials for construction were readily available and the methods used well-known. With adequate labour, therefore, during the quiet times of the year, such alterations could be made with minimal disruption.

Illus 1 Skara Brae, the remains of a 5,000-year-old village in Orkney.

Illus 2 Nos 4 and 5 Arnol in 1937, from the northeast (photograph by EC Curwen, reproduced by kind permission of Mrs E Saville).

The immediate origins of the Lewis blackhouse are unclear as few pre-18th century examples have ever been excavated. One reason for this is that they may have been constructed of turf and, following abandonment, have been ploughed back into the ground. The Danish architect and archaeologist Aage Roussell (1934) considered the Lewis blackhouse to represent one of the most primitive forms of the North Atlantic longhouse tradition in which cattle and humans shared the same roof. There are parallels with excavated Iron Age buildings in southwest Norway that were copied in the 8th and 9th centuries by Norwegian migrants to the Scottish Islands, the Faroes and Iceland (Brekke 1992). It is probable, therefore, that the roots of the blackhouse lie in a tradition that is well over 1000 years old. However, it also clear that they have, over the years, become well-adapted to their present location on the Outer Hebrides with low, rounded roofs of roped thatch to resist the strong Atlantic winds and thick walls to provide insulation and to support the sideways forces of the short driftwood roof timbers.

The origin of the term blackhouse (*tigh dubh*) is a point of some debate. It is possibly less than 150 years old and in early written references (Report 1885) it seems to have been synonymous with inferior. On Lewis it seems to have been used to distinguish the older blackhouses from some of the newer whitehouses (*tigh geal*), with their mortared stone walls (Fenton 1978). Behind all of this, however, is a possible confusion arising from the phonetic similarity between the adjectives *dubh*, black and *tughadh*, thatch (Sinclair 1953). In many ways the use of the term was a reflection of the blackhouse's perceived primitiveness and, although there are many stories of people's resistance to leaving their old houses, they are variously loved and hated by the present population. For these reasons many of the most valuable photographs and accounts of blackhouse life are by visitors such as Roussell (1934) and Curwen (1938) who, like the present authors, could never fully understand what it was like to live and work in places like Arnol. Nevertheless, some visitors clearly saw value in things that were otherwise taken for granted and Werner Kissling, a German aristocrat, was able to see a future for the Lewis blackhouse (Kissling 1943 and 1944; illus 3). But his ideas were never developed and the majority of blackhouses are ruins the fate of which remains uncertain (illus 4 and 5).



Illus 3 An attempt from 1944 to develop the local blackhouse tradition to meet modern needs (drawn by Laura Speed after Kissling).

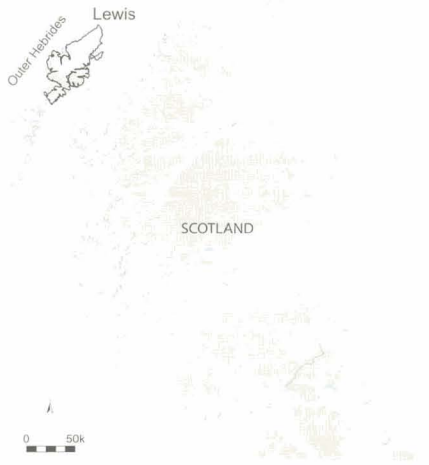
Illus 4 Arnol in 1937 looking towards Nos 7 and 10, from the southwest (photograph by EC Curwen, reproduced by kind permission of Mrs E Saville).

Illus 5 Arnol from the air in 1951. Note the number of blackhouses that are still roofed at this time. The shot must have been taken in the autumn: the cereals and peat have been neatly stacked (Crown copyright 1951/MOD. Reproduced with the permission of the Controller of Her Majesty's Stationery Office).

1.2 The geography of Lewis

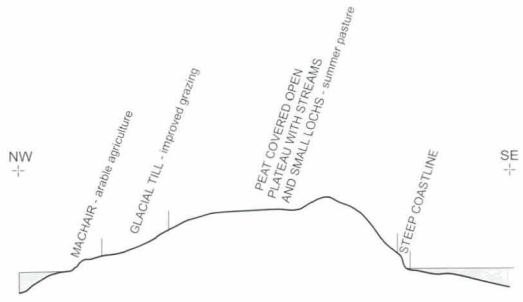
The Isle of Lewis is the largest and one of the most northerly of the island chain of the Outer Hebrides (illus 6 and 7). Its location to the west of mainland Scotland on the fringe of the Atlantic Ocean gives it a cool, moist climate interspersed with powerful winds that reach gale forces on an average of 50 days per year. The driest months are May and June when the days are long in contrast to the high rainfall and short day length seen during the winter months.

The island is largely treeless and dominated by bog and exposed rock. Much of the land is covered by blanket peat where the high rainfall and low evaporation rates have promoted the growth of sphagnum moss and associated peat. Only in the south are there large tracts of land over 200 m above sea level.



Illus 6 The Outer Hebrides (drawn by Laura Speed).

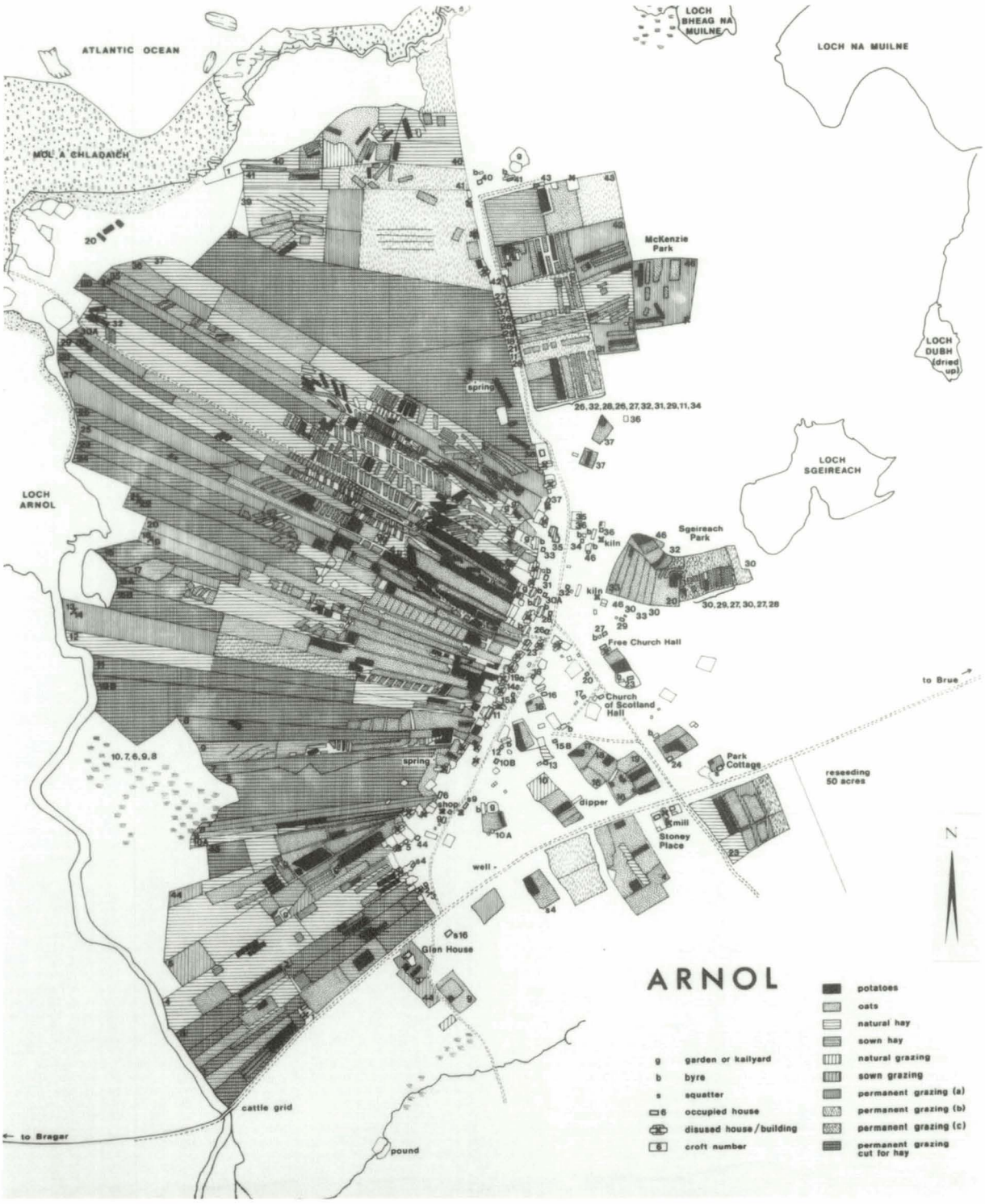
Illus 7 The Isles of Lewis and Harris showing the location of Arnol (drawn by Laura Speed)



Illus 8 Section through Lewis showing the major topographic zones (drawn by Laura Speed).

Good agricultural ground is at a premium and the sandy, base-rich and free-draining soils on the low-lying land adjacent to the coast are a valuable resource (illus 7 and 8). These areas are known as the *machair* and they have been the focus of both arable agriculture and grazing since prehistoric times. During the population boom of the 19th century small crofting townships were widespread (on both east and west coastlines, sited close to areas of *machair* in the west and northeast) although today the townships are mainly to be found on the west coast. Stornoway is the only ferry port and acts as the main commercial, fishing and transport centre for the region. It is by far the largest concentration of population. The traditional economy is based around fishing, weaving and crofting but more recently tourism, fish farming, the oil industry, sporting estates and former military activity have brought new, if transient, sources of income to the island (Ritchie 1991) (the local government and health service are now the major employers).

The present township of Arnol is one of the many small settlements on the northwest coast of Lewis. The original settlement was built close to the sea on one of the patchy tracts of low-lying *machair* typical of that part of the coast. Directly inland from this the terrain rises sharply up to the gently undulating rocky fields (*gearraidh*) and improved grazing much of which is divided into distinctive narrow strips formed as part of the croft allocations of the last century (illus 9). These strips range in size from 1.5 to 15 acres and within them row upon row of sinuous grassy ridges can be seen. These are the last traces of now-abandoned lazybeds (*feannagan*), raised agricultural ridges that provide evidence of the intensive farming once practised there. Active crofting in the area has declined dramatically over the last 50 years. At its peak towards the end of the 19th century over 40 crofts were actively managed but by 1960 only eight of the men were full-time crofters, eight were crofter-weavers, 13 were weavers and 12 were in the merchant navy (Gordon and Ross 1960). By 1977 this had dropped to four full-time crofters, three having regular employment and two periodic employment elsewhere (Bramall 1978). Today there are only a handful of crofters still actively working the land at all, and very few still weave on a regular basis.



Illus 9 Plan showing crofts and land use around Arnol, c. 1960 (Gordon and Ross 1960; © The Department of Geography and Geomatics, The University of Glasgow).

1.3 Crofting

The history of crofting is a complex one that has witnessed a number of changes in the tenurial, social and economic status of crofters since its inception in the early 19th century (see for example Hunter 1976). Prior to the 19th century the settlements were run along the lines of the old runrig system of land management. In this, the land was periodically re-allocated such that each person had a share of the best land. Most occupants were sub-tenants of the tacksman who held their land direct from the proprietor. By the end of the 18th century the economy of the Highlands and Islands was in a state of flux. On many estates tenants were being evicted in order to make way for larger sheep farms and the resulting emigration to America of the most able bodied eventually became a cause for concern many in the ruling class. The loss of one of the Britain's most important military reserves was one thing but the kelp industry relied on manpower and the potential depopulation of the highlands and Island would dramatically effect the potential of this industry and the profits of the landlords. As a result, in 1803, an Act of Parliament was passed that increased fares to America and this had the intended result of severely restricting levels of emigration (Hunter 1976). The options of the tenants was greatly reduced and it was in this climate that the first crofts on the Outer Hebrides were allocated.

Arnol, like most settlements on the west coast of Lewis, is a crofting township that was dependent on a mixed agricultural system with a strong emphasis on livestock. The small size of the crofts and difficulty of agriculture in the Hebrides today, as in the past, has meant that the crofters have always needed additional sources of income to provided an adequate standard of living. Kelping was very important in the 19th century, as were fishing and weaving, but these have since been replaced.

Some lotting of runrig lands was undertaken in 1811 to form individual crofts but this was not universal. It was not until the island was bought by Sir James Matheson that final lotting of the land by surveyors was undertaken and the present character of the crofting alignments fixed. At Arnol the 1st edition Ordnance Survey (OS) map, published 1853, shows the allocation of the new 'Matheson crofts' in place with the location of earlier attempts at allotment shown only by the position of ruined buildings and dykes closer to the coast.

In spite of the setting out of the crofts the crofters still suffered badly because of the insecurities of tenure and rising population numbers. There was little incentive to improve the croft as this was quite likely to meet with increased rental demands without any of the benefits of secured occupancy. It is because of this insecurity, together with the pressure on landlords to clear the land of the less profitable tenants in favour of larger sheep farms, that a Royal Commission was set up in 1883 to investigate the Condition of the Crofters and Cottars in the Highlands and Islands. This resulted in the Crofters Holdings Act which, although amended by further legislation, forms the basis of the legal status of the crofter. The essential elements of the Crofting Acts are as follows:

1) A right to a fair rent fixed by the Scottish Land Court

2) A right to compensation on leaving a property for any improvements that they or their predecessors had made

3) Security of occupation including the right to: assign the tenancy to a member of their family in their lifetime; assign it to someone else for a monetary consideration; bequest the croft tenancy to others on their death

However, if, as a part of these transactions, the croft was to leave the immediate family, then approval of the Crofting Commission would be needed.

A characteristic of crofting is its communal nature and in places such as Arnol, in addition to the land in his own holding, the inbye, the crofter has a right of access to the common grazings managed by an elected committee. Each tenant is *soumed* (told by the grazings clerk) how many animals they are allowed to send to the common pastures. Thus the control of the immediate environment is to a large extent undertaken by the crofters themselves in agreement with the Crofters Commission. However, in spite of changes in crofting legislation, only 5 % of registered crofts now provide full-time employment and the croft itself is providing an increasingly small part of the household income.

Livestock	Milk cows	Cattle > 2 years	Cattle < 2 years		Sheep > 1 year	Sheep < 1 year	Pigs
No. of head	2360	948	1049		14167	6683	130
Crops	Oat	Barley/ bere	Potatoes	Turnips/ swedes	Fallow or uncropped	Clover/ artificial grass	Pasture excluding heath
Acres	1255	1273	1211	14	36	38	2342

Table 1 A breakdown of crops and animals raised in Barvas parish (including Arnol) for the year 1867 (taken from the Record of the Dept of Agriculture and Fisheries for Scotland - Agricultural statistics).

1.4 Agriculture

Crofting agriculture in this part of Lewis has traditionally been an inseparable mixture of arable and livestock (Table 1). In recent centuries at least, cultivation of the peaty soils has been through a system of lazybeds, spade-dug ridges which provide both a deeper topsoil for plant growth and also drainage in the furrows between (illus 10 and 11). Before the general introduction of potatoes in 1756 the barley and black oats grown on the crofts often barely supplied sufficient for the tenants' own needs, and extra grain had to be imported from Caithness and Ireland (MacDonald 1978). Although originally resisted, the potato eventually gained in popularity and was admirably suited for growing in lazybeds, where it tended to replace cereals. A basic system of rotation was employed, potatoes in freshly-manured ground followed by barley and then oats in subsequent years. Manures used included cow dung from the animals overwintered in the byre, seaweed and also the soot-laden thatch periodically removed from the blackhouse roofs. In the rocky terrain around Arnol the lazybeds can be seen winding between rocky outcrops so that every available piece of better-drained land was utilised. Most of this was cultivated by spade, it being too rocky for the plough. Today most of the deeper peat deposits around the crofting townships have been cut back for fuel and at Arnol there are many stories of how the ground levels have been reduced as the village has moved gradually inland. Within these areas and following liming and re-seeding, large fields have been opened up to the east of the main road.

*Illus 10 An aerial photograph from 1951 of the coast at Arnol showing the extent of lazybed systems (*feannagan*) close to the coast. Note also the traces of early banks and ditches close to the coast (Crown copyright 1951/MOD. Reproduced with the permission of the Controller of Her Majesty's Stationery Office).*

Prior to the Second World War plots were marked by stones and other natural boundaries. In the 1950s, however, with the availability of government grants, there was a drive for fencing and by 1960 (Gordon and Ross 1960) only two remained unfenced. This restricted the movement of animals over land which, for parts of the year at least, used to be part of the common pasture.

*Illus 11 Lazy beds (*feannagan*), South Uist in 1928 (photograph by RM Adam, courtesy of the University of St Andrews Library).*

Animals were a major part of the local economy. The main elements of livestock were cattle, sheep and horses. In the winter when there was little shelter and food, the milk cows and their calves were brought into the blackhouses to remain there until the spring. The remainder of the animals roamed over the inbye and the shore feeding on what vegetation and seaweed they could find. In some years animal mortality rose to one in every five (Macdonald 1978). Cattle housing became more common in the late 19th century when fewer were kept, the animals being fed on straw, boiled chaff, potato peelings and fish bones. Once the worst of the weather was over, the animals were allowed out of the byre, but as planting started they were taken to the common grazings, often some distance from the winter town. Here they would spend the next three months along with the village girls and older women who tended and milked them. The women and girls periodically brought the milk, cheese and butter back to the blackhouse. On the open hillside the milk-maids lived in small bothies known as shielings, which ranged from stone-built, corbelled, beehive-like structures to turf-built replicas of the blackhouses themselves (illus 12 and 13). In the autumn, the animals were brought back to the main settlement and the cycle would start over again. In 1960 re-seeding of land close to Arnol had already eliminated the need to send stock to the shielings in the summer (Gordon and Ross 1960).

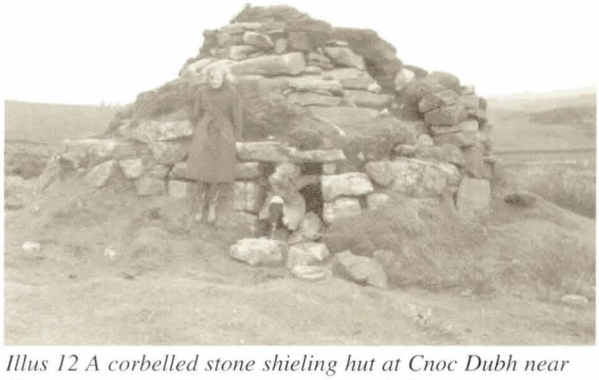
This agricultural system has been in a period of decline for many years. In 1960, for example, there were 48 cattle and 27 calves in the township. The last survey of the area in 1977 showed there to be just eight cattle left (Bramall 1978). Hay was the most important crop, grown predominantly from natural grass and the small amounts of fertiliser applied were chemical. In its heyday, Arnol would have been intensively cultivated but sheep and grassland management are now the main focus of the farming regime. Very little cereal is now grown on Lewis and even straw has to be imported from the mainland to re-thatch the Historic Scotland Blackhouse Museum at No. 42 Arnol. Potatoes and other crops are cultivated for home consumption and vegetable gardens are common. Some of the blackhouse ruins have even been adapted as raised beds for vegetables and makeshift greenhouses (illus 14).

1.5 Fishing

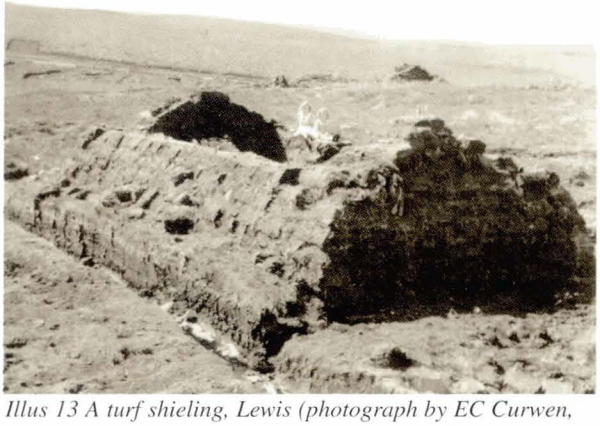
Fishing from the shore with long poles has been, and still is, a source of fish for the islanders, but fishing by boat on the exposed west coast is more problematic. The main centres of fishing on Lewis were Stornoway Bay, the eastern lochs and Ness, with its direct access to fishing grounds to the north, east and west. Fishing was, however, of some economic importance at Arnol, although it was probably not undertaken along the strictly economic lines pursued elsewhere. As in most of Lewis, fishing in Arnol declined from its peak in the late 19th century and was largely destroyed as a result of the First World War (Geddes 1955). By 1960 only one or two boats were available for line fishing during the calmest days of the summer (Gordon and Ross 1960) although, when interviewed in 1977, Mr Smith of Croft 10a remembered a time when there were seven fishing boats on the shore (Bramall 1978).

1.6 Weaving

For over a generation before 1914, the women of Harris had been spinning and weaving hand-spun yarn for sale. An occasional weaver was also to be found in the villages of Lewis, spinning a hand-spun weft with a mill-spun yarn. By 1939 there were about 1200 looms on the island, chiefly weaving mill-spun yarn from the two principal mills in Stornoway (illus 15). By 1960 there were 13 full- and eight part-time weavers in Arnol (Gordon and Ross 1960), but a decline in demand for natural fibres and increasing mechanisation have resulted in a dramatic reduction in these numbers. The remains of cast-iron looms can be seen in many of the Arnol blackhouses.



Illus 12 A corbelled stone shieling hut at Cnoc Dubh near Gearrannan in 1937 (photograph by EC Curwen, reproduced by kind permission of Mrs E Saville).

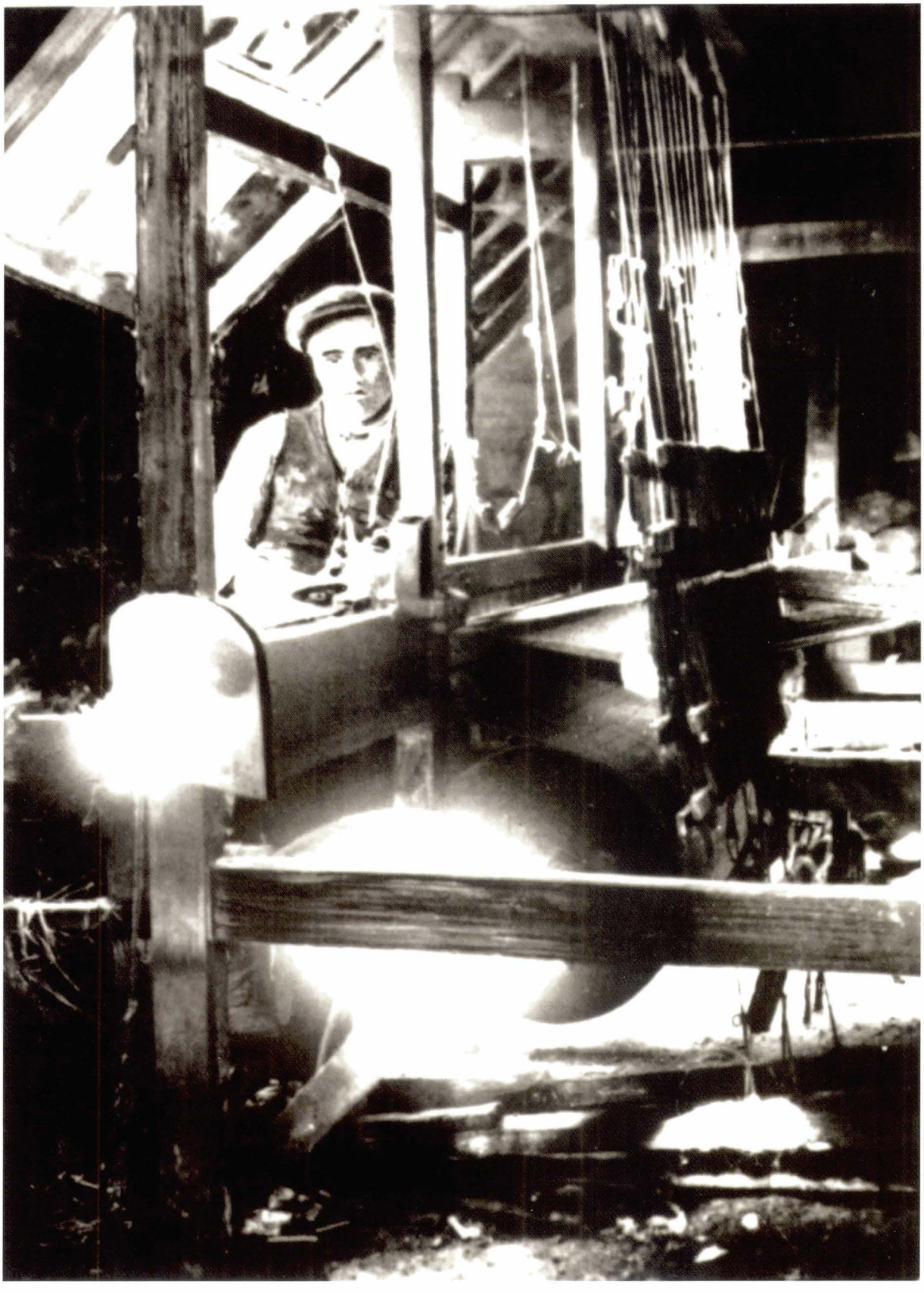


Illus 13 A turf shieling, Lewis (photograph by EC Curwen, reproduced by kind permission of Mrs E Saville).

Illus 14 No.12 Arnol now used for growing strawberries (photograph by Headland Archaeology Ltd).

1.7 Kelp

Between 1760 and 1836 the kelp industry greatly affected the life of the Lewis people. The industry required the collection of seaweed from the beach. This was then burnt in shallow pits or kilns to produce soda and iodine. The work was arduous at all stages and the burning process was bad for the eyes. In many places the estate therefore had to put pressure onto the inhabitants to encourage them in kelping, sometimes making them choose between this and the army. In 1821 the inhabitants of Barvas were still resisting (Macdonald 1978). At about this time, however, following the end of the Napoleonic Wars, legislation protecting the industry form foreign competition was repealed. The industry went into sharp decline and this imposed severe hardship on the crofters in some kelp-producing areas.



Illus 15 Weaving on a hand loom, Shawbost (from a late 19th-or early 20th-century postcard).

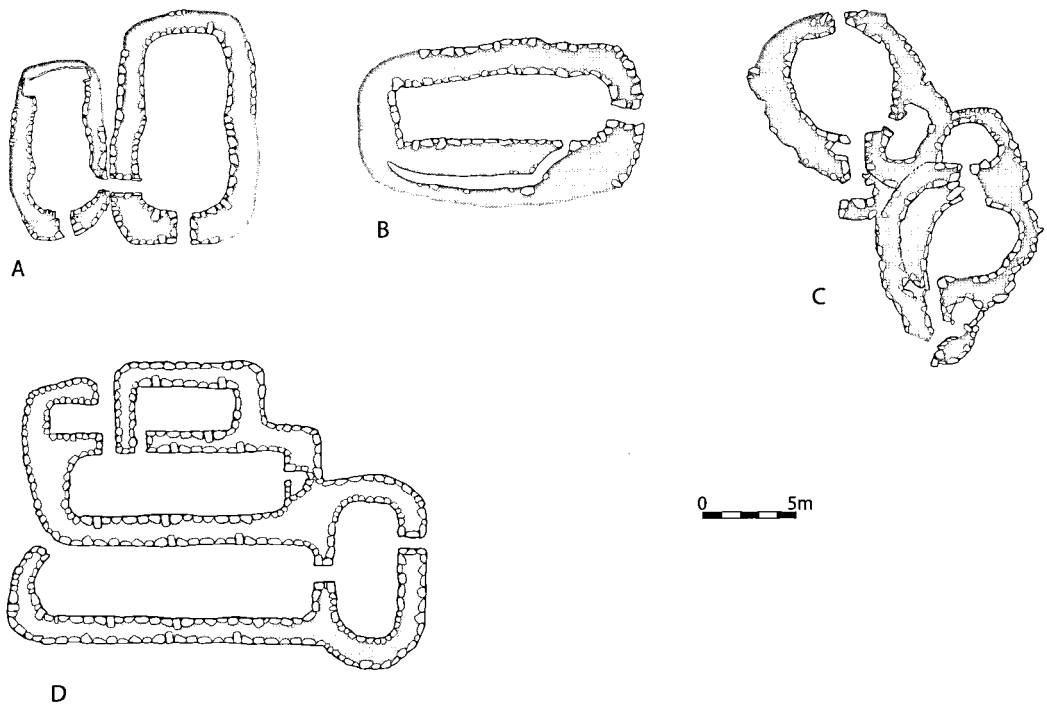
2 HISTORICAL BACKGROUND TO THE CROFTING TOWNSHIP

T HOLDEN AND L BAKER

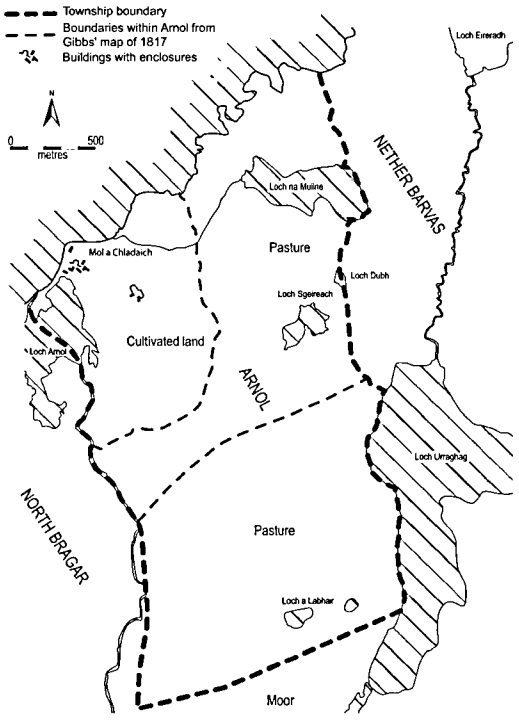
2.1 Archaeology and history prior to the 17th century

The blackhouses that can be seen in so many places on Lewis today are very much the result a of long period of evolution in which older building traditions have been adapted to suit the location, the materials available and the political framework within which they operated. From the last 200 years a certain amount of evidence is available in the form of the maps, travellers' accounts, government documents and estate papers, such as rent books and letters to and from the factors. From these it is clear that the siting and management of the townships and the form of the buildings themselves have been strongly influenced by the estate via tenancy agreements and the desire of the owners to improve the long-term productivity of their land. During this time the present form of the blackhouses, with their two to three parallel rooms, seems to have developed from the more irregular cellular building or *creaga* (illus 16; see Section 3.3).

Links to Scandinavian building traditions have been made by Roussell (1934) and others. Some features typical of Lewis blackhouses, such as the roof timbers resting on the inner edge of the otherwise exposed wallhead, were recorded on some Norwegian houses. Other similarities were noted in 1000-year-old excavated byre dwellings of Norway and Jutland. Certainly the Norse influence on Lewis is well known from place-names and clearly there are obvious similarities in these buildings. However, archaeological sites of the Norse period are elusive. Armit (1996) suggests this may be because they are somewhat disguised by later settlements with similar building styles and also because they have been obscured by later settlement at the same location. To this might be added the probability that, as in many other parts of Scotland, turf may have formed a significant building material in the Norse period and subsequently. One only has to look how quickly the mapped 18th-century buildings of Arnol (Gibbs plan of 1817; illus 17) have become obscured under the combined pressures of coastal erosion and agriculture.



Illus 16 Comparable structures: a) Knap of Howar, Orkney – Neolithic; b) Tungadale, Skye - Iron Age; c) Traigh Bostadh, Lewis - Iron Age; d) Creaga, *Lewis c. early 19th century (drawn by Laura Speed).*



Illus 17 Settlement and boundaries of 'Old Arnol' based on data from Gibbs' map of 1817 (drawn by Laura Speed).

In many ways it would seem unnecessary to evoke an entirely diffusionist view of the blackhouse, deriving them directly from building traditions brought from Scandinavia. The earliest blackhouses in the present township at Arnol (eg. No. 7ii; illus 21 and 22) are multi-cellular comprising, in some cases, numerous small, sub-rectangular or even oval rooms. Similar potentially earlier structures were recorded by Thomas (1868) who refers to them as *creaga*, although it is unclear where the term derives from. These, and the contemporary shieling complexes inland, bear strong similarities to earlier agglomerated sub-rectangular structures excavated in the Hebrides and Orkney and dating from as far back as the Neolithic (eg. Eilean Domhnuill, North Uist and Knap of Howar: Armit 1996; illus 16). Even during the Iron Age, so often characterised by the Atlantic Roundhouse traditions which include the broch, the dun and the wheelhouse, buildings described as sub-rectangular or cellular are commonly encountered. At Tungadale, Skye a sub-rectangular building contemporary with the roundhouse was found to have thick stone-lined earthen walls (Miket cited by Armit 1996). Slightly further afield, in the Northern Isles, excavated brochs have been shown to have satellite settlements comprising numerous small oval and sub-rectangular buildings (eg Upper Scalloway and Howe: Sharples 1998 and Smith 1994 respectively). On Lewis itself a series of sub-circular buildings with thick stone-lined walls with a sand and midden core were recently uncovered at Traigh Bostadh, Uig (Neighbour and Burgess 1996). These buildings, thought to relate to the later 1st millennium AD, have a number of features in common with the shieling complexes and *creaga* illustrated by Thomas in 1868, but such early examples are rare in the Hebrides. It is possible that the missing link in blackhouse evolution has not been found because of the materials in which they were built. Any predominantly turf building would be very difficult to identify and will require exceptional circumstances of preservation under, for example, blown sand. The coastal settlement at Arnol could potentially fall into this category. There are no obvious signs of substantial, round, stone-built structures on the machair (see illus 10). These could have been consumed by the sea, but over 1 m of archaeological stratigraphy is still actively eroding at this point, providing a strong indication that Iron Age occupation was both extensive and long-lived.

In the absence of any controlled archaeological excavations around Arnol, the only evidence available regarding this early settlement comes from unstratified pottery recovered from the eroding coastline. A recent analysis of this has been undertaken by MacSween

(2000). The assemblage comprises mainly undiagnostic body sherds and it is not possible to provide an accurate date for these. There are, however, elements of the assemblage that are comparable with sherds from other Western Isles assemblages dating broadly to the early/middle Iron Age (c. 500 BC to AD 200). These findings are in keeping with earlier discoveries of similar pottery on the beach at Arnol (MacRae and Ponting 1983; Ponting *et. al* 1984).

A series of sites dating from the Norse period through to the early 19th century are presently being excavated on Barra and Uist (eg. Sharples 1999; Symonds 1998; Branigan and Foster 1995; Armit 1997). These tend to indicate a tradition of broadly rectangular buildings lacking both the massive walls and irregular cellular structure of the early Lewisian blackhouses. They are in fact much closer to the early 20th-century houses found on the Uists which differ significantly to those on Lewis. It is possible that these highlight a regional variation in styles between Lewis and the Uists, even on pre-19th-century sites.

The evidence for the direct origins of the Lewis-style blackhouses is very patchy with a major gap in our understanding in the centuries just prior to their appearance as we presently know them. However, it would seem perfectly reasonable to suggest that they represent an amalgam of Norse and earlier construction traditions, the thick walls, low roof, the complicated multi-cellular ground plan potentially having very old roots. In many respects the building techniques must have been dominated by the resources available. The absence of large diameter timber would, for example, have precluded the building of timber cruck-framed buildings as seen elsewhere in Scotland. In the absence of a cruck frame the small-diameter wood used as roof timbers and cabers would have had a strong tendency to splay, and the thick walls with the trusses resting on the inner face would have acted as buttresses against this. Adding to this the low profile and insulating properties of the roped thatch and thick battered walls, the buildings would be admirably adapted to survive the ferocity of the winds so typical of the Hebridean winter.

2.2 The Mackenzies of Seaforth (1610-1844)

2.2.1 The Seaforth Estate

The Macleod chiefs of Lewis held their land successively from the Earls of Ross, the Stewarts, the Macdonald Lords of the Isles and the Crown. They steadily gained in importance during the 15th and 16th centuries but were severely weakened by a disastrous family feud in the 1590s. Added to this, James VI made an attempt to civilise Lewis by settling it with lowlanders, so extending what had already been an unhappy period in the island's history. The culmination of this was that Lewis came into the hands of the Mackenzies of Kintail in 1610 with the earldom of Seaforth being created in 1623 for Colin Mackenzie, 2nd Lord of Kintail (Macdonald 1978). The first written and mapped references to Arnol date from the period when Lewis was one of the large estates in the hands of the Mackenzies.

The Mackenzie estates were forfeited in 1716 following the Jacobite rising in the previous year. The Earldom was not restored, but the estate was and it remained in the hands of the family until it was sold in 1844. Before the end of the 18th century the Mackenzies of Seaforth had looked upon Lewis as a source of revenue and manpower for military service and during this period the day to day lives of the ordinary people probably altered little. By the late 18th century, however, Francis Humberston Mackenzie began to make some improvements on the island and took a keen interest in the kelp industry. The local economy, coastal settlements and ports would have seen significant changes as a result of this and the management of the estate would have impacted dramatically on the crofters circumstances. Although deaf, Francis was a Colonel in the British Army, a member of Parliament and, having been made a peer in 1797, was given the post of Governor of Barbados from 1800 to 1806. Lord Mackenzie's death in 1815 was just one of a string of family crises. Lady Hood Mackenzie, to whom the estate fell, had been the toast of London Society and, following a return from a trip to India, lost her husband, her father and her brother within the space of six months. The young widow eventually married James Alexander Stewart who took about administering the estates on his wife's behalf. They resided on Lewis for a while and, in attempt to raise funds for development, even issued their own currency. J A Stewart Mackenzie became Governor of Ceylon and later British High Commissioner to the Ionian Islands and the affairs of the estate were left in the hands of Trustees who spent little on improvements. As a result of recurring famines, the failure of the kelp industry and ever increasing population levels, the estate was heavily burdened with debt and the decision was eventually made to sell Lewis.

2.2.2 Estate management

For many of the 235 years that Lewis was owned by the Mackenzies of Seaforth, the land was managed through a modified kinship system. The landowner rewarded kinsfolk and friends for their support by allowing them to rent farms or groups of farms. They kept some of the land in their own hands and sub-let the rest. These areas were known as tacks and were managed by people known as tacksmen. The sub-tenants worked

the land and paid using a combination of cash and services but the level of these services, and the fact that the tacksmen were Mackenzies and the tenants Macleods, often led to the former being hated. The tacksmen were finally abolished by Lady Hood Mackenzie in the first half of the 19th century.

There were also larger farms in some areas. Often some of the family of the main sub-tenant would work a portion of the rented land, so sub-dividing the land again. Less fertile areas of land were rented directly from the Mackenzies by small tenants. Usually the landowner did not deal directly with the tacksmen or conjoint tenants, but employed a factor or chamberlain to carry out the majority of the management work on his or her behalf. The factors were often much hated by the populations they dealt with and little was invested by the landowner in the land of Lewis due to the financial problems of the estate.

In spite of their attempts at improvement, during the latter part of their occupancy the Mackenzies of Seaforth managed Lewis as a satellite of their mainland estates and the fate of the islanders was very much in the hands of the influential estate factor. These were men with legal backgrounds who usually also acted as the Seaforths' legal agents. Often, in the absence of other legal representation on the island, they held the position of Procurator Fiscal. This gave them immense power and influence which was often abused.

Few of the men of power seem to have been overly sympathetic to the plight of the agricultural tenants but all had designs on improving the fortunes of the estate in one way or another. For one Procurator Fiscal in the 1830s the solution was clear. The 'idleness and misery' of the inhabitants could be cured by importing Irish navvies to show them how to work and the image of the Isle should be improved by changing the name of Stornoway, which 'sounds harsh to the ear of all lowlanders' (Grant 1992, 17) to Port Royal. By contrast, this same influential official did realise that improved roads and communication with the mainland, together with a jail house and court room, were urgently required and also advocated the restructuring of the crofts and farms. Perhaps typical of a bureaucrat with little practical experience of crofting, however, he proposed a layout organised with mathematical precision which took little account of topography. Although the crofts were re-allocated during this time, it is uncertain whether the advice of the Procurator Fiscal was taken into account. The new land management system appears to have done little to better the condition of the people of Arnol and the fortunes of the Seaforths did not improve during this period.

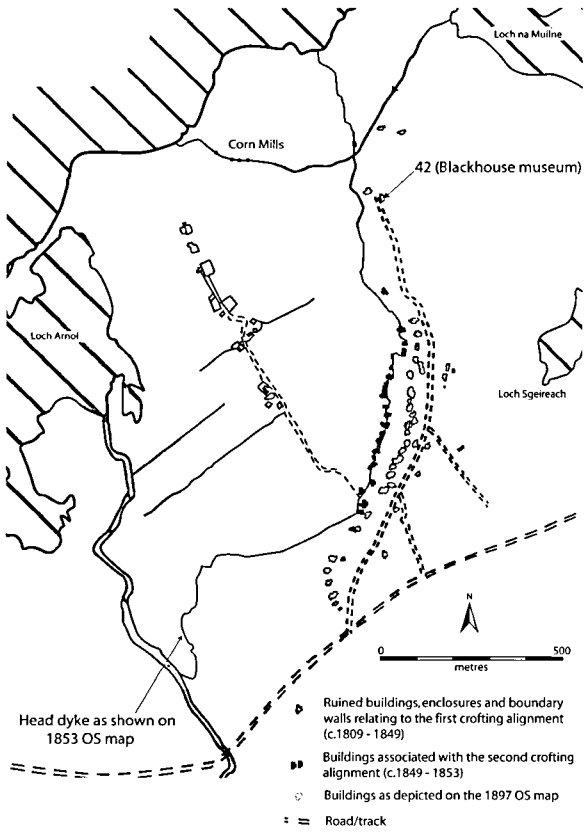
2.2.3 Arnol under the Mackenzies

The name Arnol may derive from *'hraun-holl'*, meaning stony hill or ridge (Maciver 1934). It is referred to in written records from at least the 18th century, but the settlement was not mapped until the early 19th century. On maps dating to this time (Gibbs 1817) the settlement is indicated by a small cluster of buildings and an enclosure on the coast to the north of Loch Arnol (illus 17). A few further buildings are scattered over an area slightly inland. The buildings illustrated give an indication of the location and density of settlement, although they may not accurately represent individual structures.

In 1753 the Seaforth estate records show that there were 12 small tenants living in this early nucleated settlement or *baile* (NAS - GD 46/1/267 1). However, between the production of the first maps of the area in the early 19th century and the publication of the 1st edition OS map in 1853, radical changes in land management and the number of crofts took place. The changes were instigated by Articles of Set issued by the Mackenzies of Seaforth in 1795 (Dodgshon 1993) as an initial attempt at estate improvement. These specified that the coastal settlement, and the system of runrig by which it was managed, should be broken up and replaced by individual crofts upon which the crofter would now construct his dwelling. This enabled the landowner to more easily calculate annual rents based on a fixed area and, in theory at least, should have encouraged the improvement of crofts held from one year to the next.

The first lotting of land into crofts at Arnol resulted in a dispersed settlement with buildings located on either side of a track running approximately northwest/southeast and with the croft boundaries running approximately perpendicular to this. These are depicted as ruins on the 1853 OS map (illus 18). The area rented on each croft was now fixed rather than being re-lotted every three years as it had been under the old runrig system. In places permanent boundaries were constructed and the previously nucleated settlement was dispersed as houses were built on the land of each croft.

This first crofting settlement included a schoolhouse which was completed by 1835 and would have been built in much the same way as the dwelling houses with thick stone-faced walls, a thatched roof and a beaten earth floor. This was one of the few early buildings that continued in use well into the second half of the 19th century.



Illus 18 Map showing the development of the Township of Arnol between the 1830s and 1897 (drawn by Laura Speed).

The boundaries associated with the pre-crofting settlement and the management of the surrounding area are known only from the early 19th-century maps (illus 17) and they appear to have been maintained, or at least respected, following the move away from runrig. The crops grown and animals kept did not change. The form the boundaries took on the ground is uncertain but it is likely that they were marked by stone dykes, turf banks or ditches designed to keep the livestock away from the cultivated fields during the summer months. The innermost boundary would have enclosed the cultivated land or *inbye* surrounding the settlement and the cultivated ground on the machair, the most fertile and best drained land close to the coast. Further boundaries are shown inland from the cultivated area. The innermost area is described as 'fine pasture' and was suited to the controlled management of livestock in the grazing cycle. Beyond this a further boundary to the south defined the rough hill pasture, 'moorish and mossy, wet in places', which formed the common grazing used jointly by the settlements of Nether Barvas, Brue, Arnol, North Bragar, South Bragar and Melbost.

The land divisions illustrated supported a system of subsistence agriculture. Oats, barley (bere) and potatoes were cultivated and cattle, sheep and horses were kept. During winter the livestock was kept on land nearer the houses and the cows and young stock were often stalled at one end of the house while people were in the other. During the summer months the cattle and sheep were grazed on the common pasture to the southeast of Arnol, bounded to the north by Barvas River and to the south and east by 'march' boundaries. The crops and livestock provided the majority of the food and other needs of the inhabitants of Arnol, but peat was also used for fuel, clay for vessels and fish for food and oil. Any surplus could be traded or sold and wool, fish, fish oil, kelp and whiskey all formed a part of the local economy. Any money obtained could be used towards the rent due to the landlord which was often paid partly in cash and partly as meal or livestock. Rents were collected by the factor on specified dates at locations close to the settlement. Access to Arnol at this time was by small tracks and footpaths. The only road on Lewis at this time was from Stornoway to Barvas, although by 1835 a road from Callanish by Carloway to Barvas had been built. This is likely to be the same road that is illustrated on the 1st edition OS map of 1853.

2.3 The Mathesons (1844-1917)

2.3.1 The Matheson family

During the 1830s and 40s the financial problems of the Seaforth Estates became more acute and in 1844 Lady Hood Mackenzie sold the Island of Lewis to Sir James Matheson for £190,000. The Matheson family was originally from Sutherland, and James entered a business career firstly in London, and later in Calcutta, before entering into partnership with William Jardine in c.1827, forming Jardine, Matheson and Co. Through this company he made a considerable fortune from trade in tea, opium and other goods from China and Hong Kong. He returned to Britain in 1842, later to be made a baronet. Matheson invested considerable amounts of money in improving his estates. These improvements were to have a significant impact on the location and layout of settlements and on the crofters lives which were, as ever, intimately linked to the policies of estate management. In this area Matheson's reputation suffered somewhat because of the often harsh treatment handed out by his estate factors under his orders. The most notorious of the factors, Donald Munro, is still remembered for his bullying tactics and the foundation of what has been called a legal mafia on Lewis (Grant 1992). On Matheson's death in 1878 his estate was left in life-rent to Lady Matheson and later passed to Donald Matheson, his nephew, and then to Donald's son Duncan Matheson.

2.3.2 Estate management

James Matheson was resident on Lewis for a large part of each year and directed considerable amounts of money into the development of schools, road making, and other industrial projects such as a brick works and a chemical works designed to make paraffin from peat. Not all, however, were a great success. Matheson believed that the future prosperity of Lewis was dependent on the development of the land as a resource and he took a keen interest in the improvement of the land. Shortly following the purchase of Lewis, and as a preliminary to improvements, he hired surveyors to survey and re-lot the land of the crofts. The setting out of the new crofts took place from 1849 having largely been completed by the time of the Ordnance Survey of 1853, which was surveyed between 1850 and 1852. For some reason he declined to heed his factor's advice and develop the fishing industry which, it was suggested, would have been one of the few ways of improving the conditions of the crofters (Grant 1992).

Despite the change in land management, the crops grown and livestock reared remained much the same although blackfaced sheep largely replaced the older breeds and improvements were made with varying success to indigenous breeds of horses and cattle. While other areas of Scotland adapted to the changes in the wake of the industrial and agricultural revolution the farming methods and lifestyle on Lewis remained largely unchanged.

Life was difficult for the crofters and as a result of the failure of the potato harvest in 1845 the four years of famine that followed hit them hard. Matheson advanced meal to the crofters alleviating the famine conditions, but this left them even further in debt than before. Oatmeal supplied by the Highland Relief Board to alleviate the famine was also distributed, but only in exchange for manual work to the benefit of the estate at the expense of the crofters. By 1851 the estate policy was clearly to evict those crofters who remained seriously in debt and in arrears with their rent. Assisted passages to Canada were offered to them and 800 left the island in that year.

The fortunes of the people of Lewis changed for the better for a short period with a good income being earned from herring fishing, but this prosperity did not continue for long. Due to the increase in population, and also to the allocation of land to the larger farms, some crofts were split, often with no associated reduction in rent.

In 1879 new Articles of Set were issued. On one level these should have improved the situation for the crofters by providing more stringent guidelines for standards in blackhouse construction and use of land by the crofters. However, in the absence of secured tenure, dissatisfaction and pressure on the available land grew. Increasing numbers of squatters wanted homes either on their parents' croft or on common pasture. Interdicts were often served to prevent building but these were frequently ignored leading to eviction and demolition of the houses. The setting up of the Royal Commission (The Napier Commission) was an attempt at addressing some of these problems in the Highlands and Islands and as a result the Crofters (Scotland) Small Holdings Act was passed in 1886. Many of the worst problems of the crofting system were at least addressed by this Act if not solved in full (see section 1.3).

2.3.3 Implications for Arnol

Following the 1849 Articles of Set and subsequent re-lotting of the crofts, blackhouses were rebuilt on a north/south alignment forming a part of the head dyke on the boundary between the cultivated land and open pasture (illus 18). Although unmapped by the 1st

Ordnance Survey and the 1897 revision, the crofts fanned out from the blackhouses towards the sea to the northwest, forming the distinctive field pattern that was re-enforced firstly by boundary stones and many years later by the erection of fences (illus 9). To the east of the settlement small areas of the pasture were also enclosed during the latter part of the 19th century. These were presumably areas of cultivated fields or improved grassland for the management of livestock associated with newly allocated crofts such as No. 39 and No. 42.

The form of the blackhouses built in the late 19th century is likely to have resembled that from the first crofting alignment. Although the buildings from the second crofting alignment are shown as roofed on the 1853 OS map few traces survive today (illus 21, Structure A and part of House 7ii), any stone used having been robbed for the construction of later houses. The early building at No. 7ii Arnol seems to have been incorporated into a later building and its surviving wall footings suggest a style not too dissimilar to its immediate successors which can still be seen in many places in Arnol (see Chapter 3).

The main emphasis of the Articles of Set issued in 1879 was that any crofter who undertook the improvements outlined in the Articles would receive a lease guaranteed until Martinmas 1893. The improvements specified improved drainage, sufficient stone fences to enclose the croft and also allowed meliorations against any improvements made at the crofters' own cost. The Articles also specified changes that had to be made to the construction of the houses as follows:

> 'The dwelling-houses to be erected by the tenants on their respective possessions, shall be built of stone and lime, or of stone and clay pinned and harled with lime, or with stone on the outside face, and turf or sod on the inside, and roofed with slates, tiles or straw, or heather with divots, which heather and divots the tenants shall have liberty to take for this purpose from such places only as shall be pointed out to them by the ground officer of the district; each house to have at least two apartments, with a glazed window in the wall of each, and a closet or small room, with chimneys in the gables, or other opening for the smoke in the roof; the thatch or covering not to be stripped off or removed for manure; the byre to be built at the end or the back of the dwelling-house, as the site may admit, and to have a separate entrance. In the byre a gutter to be formed for the manure, which shall be regularly removed to a dungheap outside. Any tenant, whether possessing a lease or not, who shall build such a house to the satisfaction of the proprietor or his factor, shall, in the event of his being removed, or otherwise quitting the croft, be allowed meliorations for the same by the proprietor or incoming tenant, at the value of parties mutually chosen' (after Macdonald 1978, 44).

Sometime between the 1st edition OS map of 1853 and the 2nd edition of 1897, we know that many of the blackhouses were rebuilt 20-30 m to the east of their original location, using stone from the earlier buildings (illus 18). The estate was obviously behind this shift and the 1879 regulations must have been the main impetus for such a co-ordinated phase of rebuilding. In many cases the rebuilt blackhouses retained older features such as the rounded corners and central hearth, but in the following years such things as the central step and partition walls between byre and dwelling and the squared gable with hearth were commonly added. It is interesting to note that No. 39 Arnol (Holden *et al.* 2001) was probably built just prior to 1879 because it was originally constructed with a central hearth and no partition between byre and dwelling. These, together with the gable window which overlooks the present museum at No. 42, were added later, presumably to take advantage of the extended lease which the new regulations offered.

The factor's diary indicates that, with the exception of three or four families, the people of Arnol were likely to be able to meet their debts to the estate. This was apparently because they owned some boats at Wick and 'make well out of fishing' (Mackenzie 1994, 120). Nevertheless that same year six families, a total of 34 people, left Arnol for Canada having been selected by the factor for emigration.

A double-sided track now connected Arnol to the main Callanish to Barvas road which passed to the south and the basic character of the present Township would have been in place by the time of the visit by the Napier Commission to Lewis in 1883. The testimony of Norman Campbell of Arnol to the Commission, gives some idea of the problems, and the grievances the crofters felt.

Norman Campbell Crofter, Arnol (67) – *(Campbell's replies in italic)*

'15421. The Chairman - You were freely elected a delegate? - *Yes.*

15422. You have a statement to make to us? – *Yes.*

'To Her Majesty's Royal Commissioners for Highlands and Islands. Statement made by the people in the District of Arnol, Parish of Barvas. - *Gentlemen, during the last fourteen years 13s. has been added to our rent. Formerly there were only nineteen families in this township, now there are forty-five who pay rent, and ten who have no land. The best of our cattle were taken from us some years ago, and very little value given us in return. We pay £5 for the right of fishing in Arnol River. That right was taken from us, but the £5 is still upon the township. Three crofters say that they had to pay £4 as a bonus before they got their lots.*

15423. You say there were formerly nineteen families and now there are forty-five. Where did the increase come from? Is it the natural increase of the families, or have people been sent in from without? - *It is the natural increase of the people. There were only one or two families from outside.*

15424. You say that the best of their cattle were taken away and very little value given in return. Why were the cattle taken away? *They were taken away from us at different times in the time of the ground officer Macdonald. There was no special reason for it. It was not rent time.*

15425. How long is it since any cattle were taken in that manner? - *About twenty years ago.*

15426 And they do not have that complaint now? - *No.*

15427. You say that they paid £5? for the right of fishing in the river, and that right was taken away but the £5 still paid. What sort of fishing was it? - *The matter was this way. Nobody remembers now when this £5 was charged against the township for the right of fishing in the river. It was a matter of so long ago that the people came to believe that the right was theirs to fish in the river, so that the nets they used had to be carried away not during the day but during the night.*

14528. Was it fishing for salmon? - *Yes.*

15429. Is that salmon fishing now let or is it in the hands of the proprietor? - *It is now let, and to tell the truth we were deprived of the right fifty-four years ago.*

15430. I am afraid it is too old a business for us to inquire into? - *It is true all the same.*

15431. You state that three crofters say they had to pay £4? a bonus on entering their crofts. Was this paid for value obtained in houses, or was it paid for the arrears of the rent of the previous tenants? It is for houses. *There were no arrears of rent upon the crofts that these men entered into. One of the lots was occupied by a bed-ridden man, 100 years of age, whose son was fifty or sixty at the time. He was not a penny in arrears except on the rent of the current year. It so happened that he was not present on the rent collection day, but he turned up a month thereafter. When this man went with his rent to Stornoway, - it was in Mr Monro's time - and offered his rent a month after the rent collection day, the rent had already been paid by the new entrant. The new entrant built a house right in front of the old man's door so that he could scarcely enter it with a creel of peats on his back. In the case of the other man there were no arrears of rent, and he paid the £4 in addition to the rent. In these cases there were no houses, and he only paid the £4 for the privilege of being entered in the rent roll of the proprietor.*

15432. To whom was the £4 paid ? - *I cannot tell but believe the ground officer handled the money first.*

15433. Have you ever heard a report that there was a ground officer who was suspected of taking these things for himself? *Certainly I did.*'

The result of the Napier Commission was the Crofters Holdings Act of 1886 which finally provided some security of tenure to the crofters. From this time onwards large, good quality modernised blackhouses were now being built yet closer to, and to the east of, the main road through Arnol (illus 21, Croft. Nos 6, 7i, 10i). These were presumably being built by crofters who now felt confident enough to improve their own crofts without the fear of eviction. In spite of these conditions, crofts in Lewis changed little and the population continued to grow. Plans to divide some of the larger farms into crofts for some of the landless population were embarked upon. The plans had not been acted upon by the time the First World War began and so arrangements were made for them to be implemented once peace returned.

2.4 Lord Leverhulme (1917-1925)

In 1917 Lord Leverhulme purchased the Island of Lewis from Duncan Matheson. Leverhulme was a successful businessman who had made his fortune through Sunlight Soap and other products produced by the Lever Brothers' company based in Liverpool. He had visited the island in his youth and on purchasing it initially stated that he saw Lewis as a destination he would visit as a retreat from his other business interests.

Just prior to the First World War the Board of Agriculture had been in negotiation about the implementation of revised land allocations as a result of new provisions in the Small Landholders (Scotland) Act of 1911 (Macdonald 1978). With a change in the ownership of Lewis, the Board had hoped to continue developing plans with Lord Leverhulme. However it soon became apparent that Leverhulme had other plans for the island in which the extension of the crofting system had no part. He felt the money offered by the Board would be a complete waste of public funds, of no lasting value and saw the prosperity of the island in the development of the fishing industry and the ancillary industries. Arnol was not one of the areas which was central to Leverhulme's plans.

By 1919 Leverhulme was pumping £200,000 a year into his improvement projects but an increasingly vocal section of islanders, led by ex-servicemen, were adamant that, before anything else, what they wanted was land (Macdonald 1978, 179). A number of the larger farms which had been assigned for division into crofts before the War were repeatedly raided. Leverhulme remained convinced that this land was needed to provide resources for the workers involved in the fishing industry. In retaliation to the raids Leverhulme dismissed many of his new employees and by the end of 1921 many of his new projects were shelved. Relief work on the island had to be aided by a grant of £38,000 from the Board of Agriculture, a far cry from Leverhulme's £200,000 a year. There seemed no solution to the stalemate and by 1923 Leverhulme had decided to redirect his main efforts to Harris and to give the Island of Lewis to the people through the Stornoway Trust and Lewis District Committee. This was not universally welcomed with the result that the estate was broken up bit by bit and sold to individuals and syndicates. In 1924 the Parish of Barvas was sold and by the end of 1925 all of Leverhulme's interests in Lewis were in the hand of new owners.

During the Leverhulme period the general pattern of settlement in Arnol changed very little. Extensions were added to some of the existing blackhouses and others were abandoned in favour of newly-built houses. On abandonment some buildings were left to decay while others changed use. The divisions of the cultivated croft land to the west of the settlement did not change. To the south and east of the settlement further small, enclosed areas were formed. With the removal of peat and improvement of land some of these areas became suitable for cultivation.

2.5 Post-First World War

During this period Arnol was managed as part of the Barvas Estates. The settlement pattern of the late 19th century endured with minor changes. Some blackhouses remained occupied but many were converted to animal shelters and weaving sheds as the owners moved into modern houses constructed to patterns provided by the Department of Agriculture and Fisheries. These new dwellings were commonly called DAF houses (illus 30) and can be seen all over the island. From what must have been its heyday in the 1890s, the 20th century represented a period of decline for Arnol, slow at first but accelerating after the Second World War. The young people left the village in ever-increasing numbers, often to join the Merchant Navy, and the average age of the residents rose. At present it is estimated that the number of households deriving a living from full-time crofting in Scotland as a whole is only about 5 %. The majority of blackhouses lie roofless and abandoned.

3 EVOLUTION OF THE ARNOL BLACKHOUSE

T HOLDEN

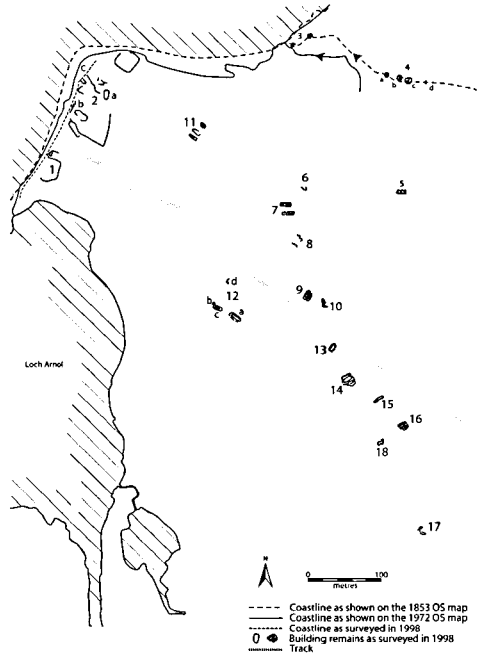
3.1 Introduction

The Lewis blackhouse is generally thought to be part of a very old building tradition but over the last 200 years basic styles have been modified and adapted to accommodate changing circumstances. Many of these changes were brought about by estate policy or national legislation designed to improve living conditions in economically poorer parts of the country. They were, however, introduced into an inherently conservative society and were not wholeheartedly appreciated by the occupants (Fenton 1985). Strategies developed over many years and that had served them well were not readily dropped and in such a harsh environment a sceptical approach to untested changes was probably a healthy one. In spite of this, from as early as the 1830s, Lord Seaforth was, for example, instructing his tenants on Lewis to erect partitions between themselves and the cattle and to introduce more light into the buildings (Report 1902, LXXXV). In 1872 at Barvas, a village close to Arnol, crofters were also requested to divide the byre from the dwelling and to put in separate entrances for cattle and humans. The laird himself provided the doors, windows and woodwork (Report 1884, XLI, 157-174), but in spite of these, and other attempts at improvement, many of the requested changes did not take place before the blackhouses were finally abandoned. Other enforced alterations were later changed back suggesting that the new systems did not work.

The basic principles of blackhouse construction, such as the thick walls and exposed wallhead remain constant, and initial observations of the Arnol blackhouses suggest that they were constructed to a series of standard patterns. While this is undoubtedly true at one level, having all being constructed of the same materials, the initial design of each house and the modifications that they subsequently underwent depended very much on the size of the families, age of the occupants and economic circumstances that prevailed. Thus, some houses were initially constructed with two rooms while others, such as the excavated house at No. 39 (Holden *et al.* 2001), were constructed with three. Families with children may have constructed houses with a *crùb* bed built into the wall. Houses where older people were the sole residents were frequently shortened by the construction of partition walls, so reducing the area of roof in need of repair and maintenance. The following chapter charts some of the main trends that can be observed.

3.2 The missing buildings of the coastal settlement

The earliest map evidence for Arnol (Gibbs 1817) clearly shows the village on the rocky beach known as Mol a' Chladaich (illus 17). This settlement is shown as having seven structures around an enclosure with a possible further two buildings and an enclosure slightly inland. The buildings are shown as rectangular but the scale of the map is such that this is probably just a mapping convention. On the ground (illus 19), and from air photographs (illus 10), this area appears as a confusing palimpsest of structures, the majority of which would appear to be walled enclosures. There are two surviving structures which probably relate to buildings shown on the 1st edition OS map (1853) but these are poorly defined and add little to a discussion of the early blackhouse.



Illus 19 Plan of pre-1853 structures surveyed in 1998 (drawn by Laura Speed).

The form of the pre-19th century structures that undoubtedly existed close to the beach is unknown and can only be identified through archaeological excavation. They may have been made from double stone walls and turf as described for Skye by Johnson (1773), although they could equally have been constructed of turf. Houses constructed of turf and stone and lined internally with stone were recorded by the OS surveyors in the 1850-52 namebooks (Fenton 1985) and, following abandonment, would quickly have been obliterated by later cultivation. If constructed of stone then they may have been robbed for construction of later field walls.

There are few published descriptions of blackhouses from the 18th or early 19th centuries, but Thomas did illustrate a number of examples from Lewis in his paper of 1868. Each house comprised at least a byre, living area and barn as in most recent blackhouses, but in these cases several such dwellings were constructed together forming an aggregation of as many as five cells. Thomas did not see any of these clusters, also known as creaga, that were occupied in the mid-19th century and considered them to largely derive from the period when the land was managed under a system of runrig.

3.3 The ruins of the first crofting alignment (early – mid-19th century)

In the first half of the 19th century the settlement was moved inland as a part of the first crofting alignment and the shift from runrig into fixed crofts. The majority of blackhouses here were probably built before 1835, the year the school house was erected, but most had already been abandoned by the time of the 1st edition OS map of 1853 (illus 18). They were constructed on an alignment that was approximately perpendicular to the coast with others scattered over the undulating slopes to the northeast. A detailed instrument survey of those buildings with surviving upstanding remains (illus 19; Appendix A) has recently been undertaken and by amalgamating this with map evidence and air photos we have some idea what these buildings would have looked like. Some, notably in Groups 7 and 11, were arranged around a courtyard and comprise several adjoining structures, possibly reminiscent of the *creaga* recorded by Thomas in 1867. Others, such as Groups 9, 12b, 13 , 14 and 16 were more similar to some of the surviving early blackhouses in the present township with their rounded end walls and multiple rooms joined along their long axis. The adjoining pattern of rooms is, however, much less regular than those seen later.

3.4 The remaining ruins of the second crofting alignment (1849-1853)

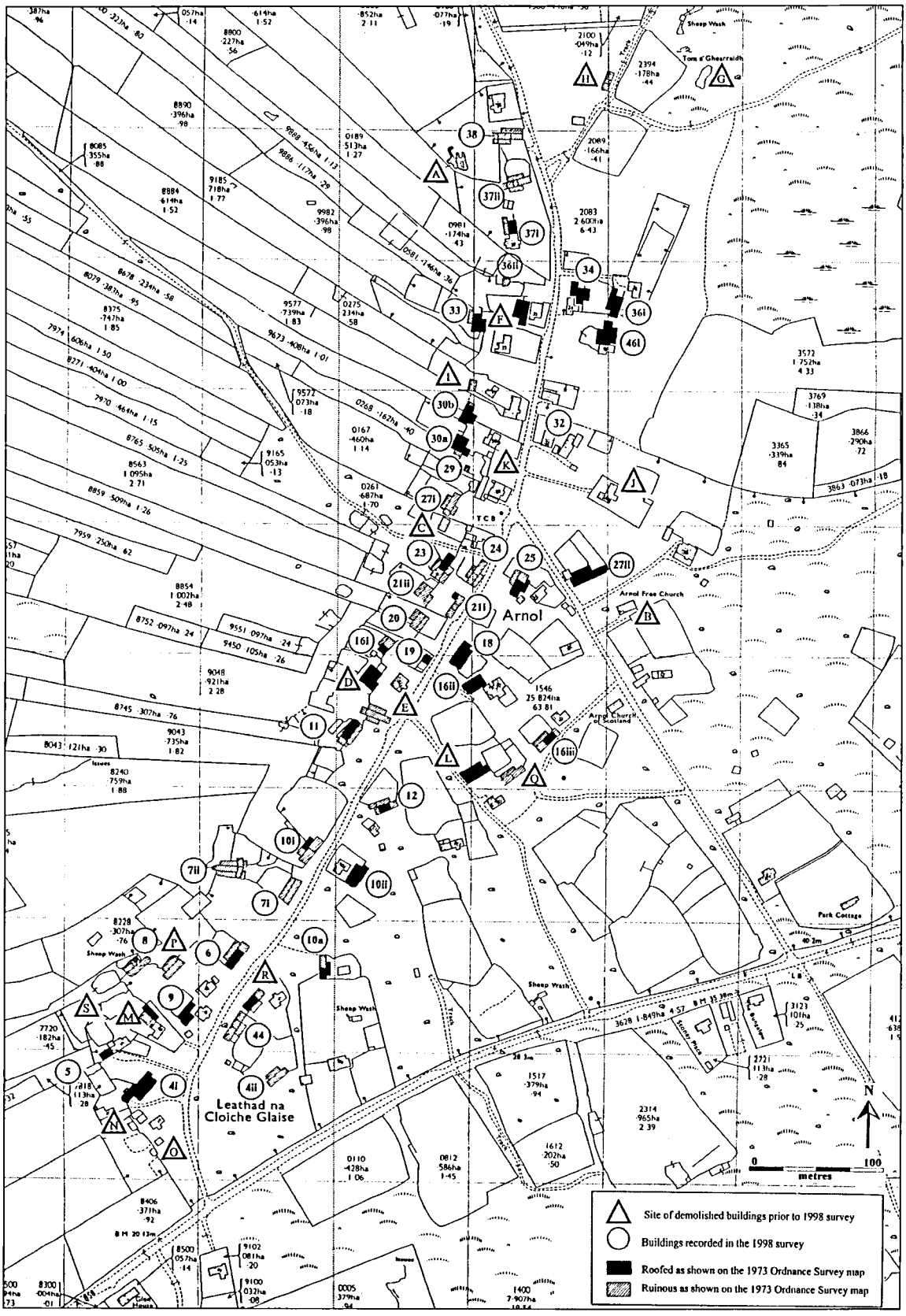
The 1853 OS map shows the alignment of the village running approximately north-south, just to the west of the line of the ruined buildings that can be seen today. Traces of only two such buildings still survive and can be identified by their grassy footings. The first lies just to the west of Croft No. 12 and is identified by a series of low banks defining a two celled structure (A on illus 20). Better preserved, and unique within Arnol, is No. 7(ii). This comprises the grassed, but readily identifiable remains, of an early blackhouse orientated east-west and joined to one of the houses seen on the 1897 OS map (illus 20a and b). The size and form of these two buildings with their rounded end walls would appear to be similar to that of the ruined buildings from the first crofting alignment (see Section 3.3).

3.5 The most recent ruins (1879-present)

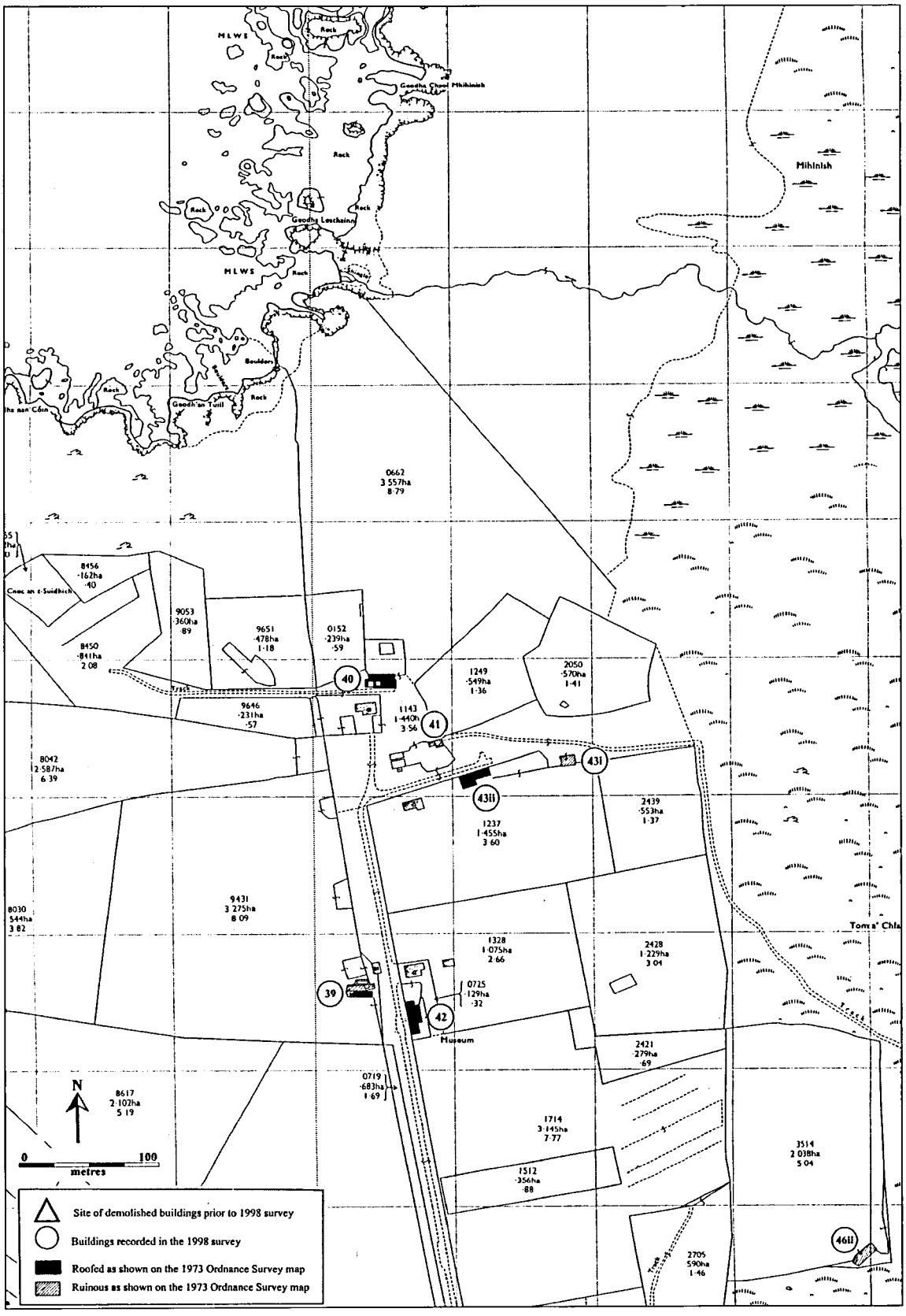
In 1879 revised Articles of Set were issued by the Matheson estate. These specified numerous improvements that should be made to the blackhouses and in return tenants would receive a lease until 1893. Many of the crofters made the changes, but it would appear that in most cases it was easier to rebuild than to modify the old house. This must be the reason why the first (1853) and the second (1897) OS maps show that the buildings were moved 20-30 m to the east during that time (illus 18). The reuse of stone from the earlier houses would account for the complete disappearance of the earlier buildings from the landscape.

This section of the publication is based upon a recent survey of all of the surviving blackhouses in Arnol (illus 20). It is the result of measured sketches and photographs of the surviving blackhouses in Arnol, the footprints of which are shown in illustration 21 with summary descriptions in Appendix B.

The condition of the buildings surveyed was variable. At one extreme they were represented by low stone footings and heaped wall core material following years of stone robbing or recent bulldozing. At the other extreme walls stand to their full height throughout and some structures are still roofed. The Blackhouse Museum at No. 42 is the only well-maintained roof; No. 30a (illus 49) and No. 9 (illus 50) were maintained until recently. A number of houses contain roof timbers and furniture that is decaying *in situ*. Others have been used for many years as dumps for a variety of rubbish. In some cases parts of buildings have been removed to make way for later development or roads. The demolition rubble has, in a number of cases, been dumped in the surviving rooms.



Illus 20a Location plan based on a 1972 Ordnance Survey map showing all the blackhouses surveyed as part of this project in the southern part of Arnol, together with those known to have been demolished (see Appendix B). The numbers in circles are the croft numbers (drawn by Laura Speed; reproduced by permission of Ordnance Survey on behalf of Controller of Her Majesty's Stationery Office. Historic Scotland Licence No. 100017509 2004).



Illus 20b Location plan based on a 1972 Ordnance Survey map showing all the blackhouses surveyed as part of this project in the northern part of Arnol, together with those known to have been demolished (see Appendix B). The numbers in circles are the croft numbers (drawn by Laura Speed; reproduced by permission of Ordnance Survey on behalf of Controller of Her Majesty's Stationery Office. Historic Scotland Licence No. 100017509 2004).

A proportion of the buildings have been modified for other purposes such as animal enclosures, vegetable gardens, storage areas or for parking. One has even been modified for used as a sheep dip. Several have been partially roofed with corrugated iron or asbestos and have been used, at least in the recent past, for storage or as loom sheds (illus 50).

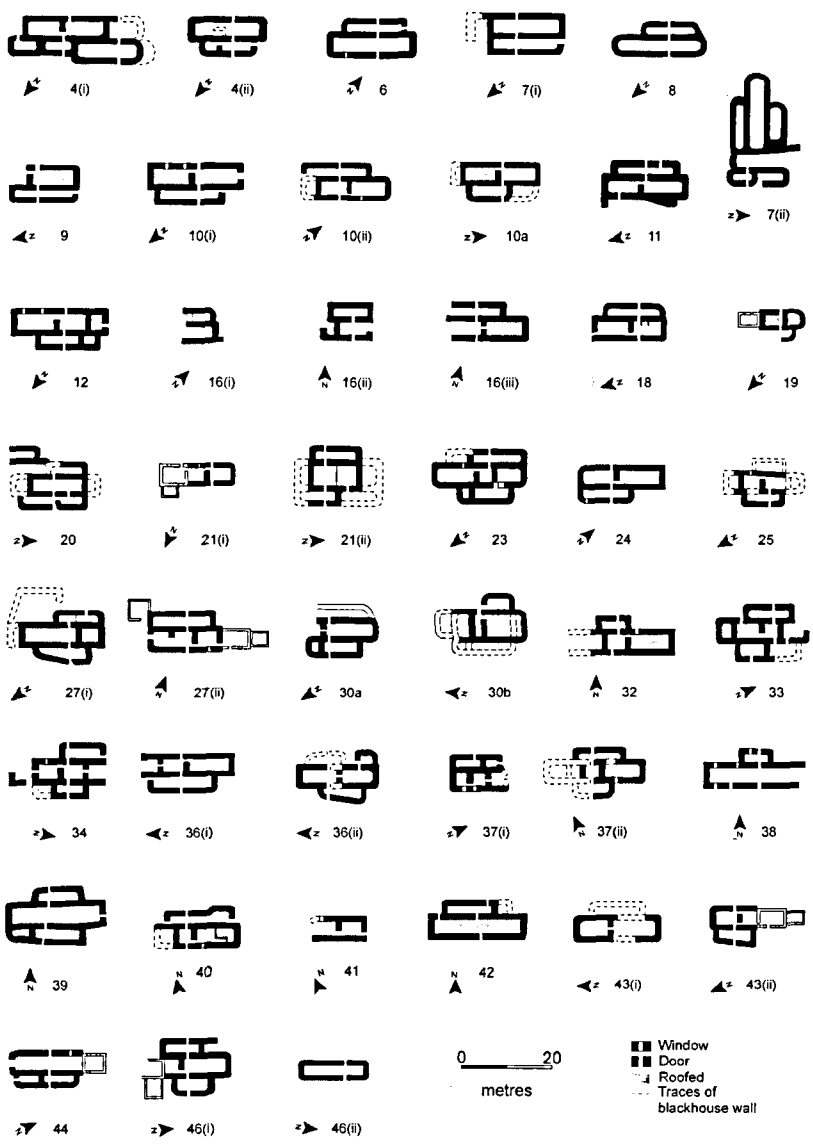
The survey identified several different stages in the development of these buildings, but this does not preclude elements from several different stages occurring in different buildings. The stages are outlined below:

3.5.1 Stage 1 - Early Blackhouses (pre-1897)

This phase of construction is characterised by the following features:

1) Rounded corners both on the interior and exterior
2) Curved end walls (illus 22)
3) Battered walls constructed of rounded field clearance or beach stone (illus 22 and 23)
4) Two or more adjoining rooms comprising barn, *fosglan*, dwelling/byre (illus 24)
5) Wallhead commonly at or below 1.6 m
6) Rudimentary internal corbelling sometimes present where walls meet
7) Stone-lined wall recesses (Section 4.11)
8) Occasional bed recesses (*crùb* beds) constructed within the wall (Section 4.1)

The most distinctive features of these houses are the rubble masonry, much of it derived from field and beach stones, and their relatively small rooms with rounded corners. The majority are located on the western side of the main road through Arnol and most appear on the 1897 OS map. Some at least were



Illus 21 Schematic diagrams of footprints of upstanding buildings surveyed in 1998 (drawn by Laura Speed).

undoubtedly built as a direct result of the 1879 Articles of Set. In their original form they would be expected to comprise a combined living area and byre with a barn annex, identified by the presence of a winnowing hole, and possibly a *fosglan* (entrance area). Windows were present in some houses, and, although not visible from the upstanding remains, they probably originally had a central hearth and may have had internal wooden partitions. Many of these houses have been substantially modified since their construction and some of their early features have been obscured.

No. 7(ii) is of particular interest (illus 22). It is an early blackhouse with relatively small rounded rooms that were still occupied at the time of the 1897 OS map. It is, however, joined to a series of grassy footings thought to represent the remains of one of only two buildings that survive from the alignment seen on the 1853 OS map (see Section 3.4).

3.5.2 Stage 2 - Later Blackhouses (1890s – c. 1914)

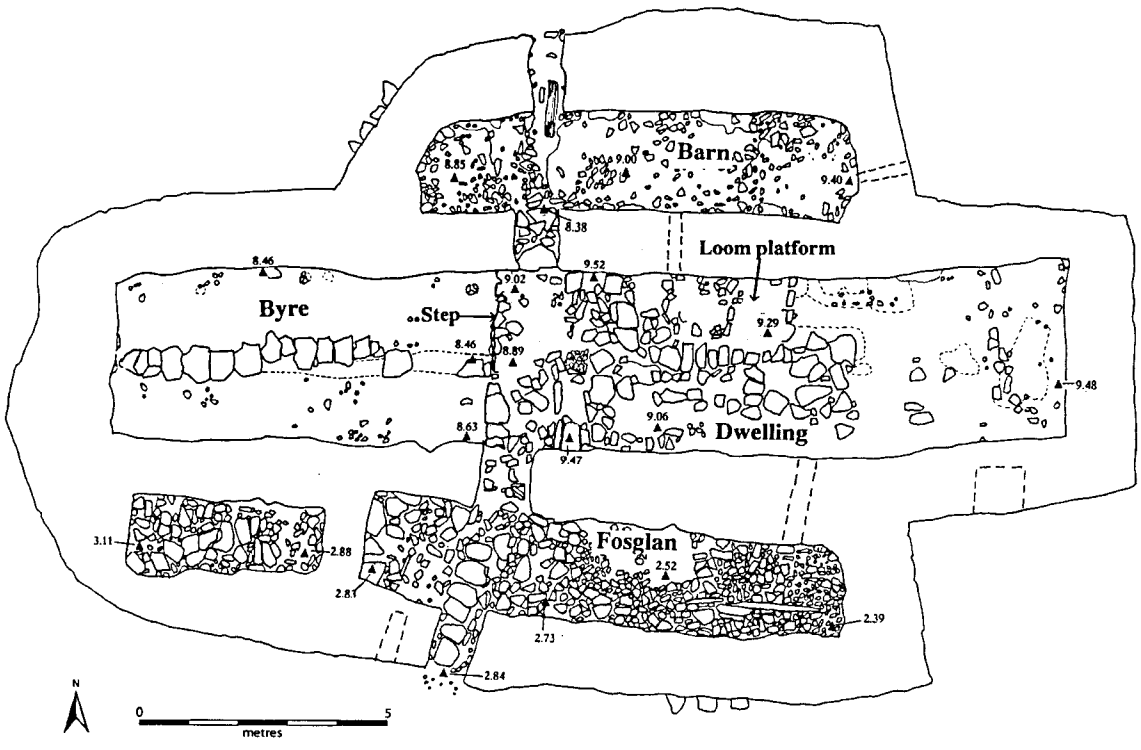
Throughout much of the township, the early blackhouses, which stand back from the road, were abandoned and replaced by later blackhouses closer to the road. The main features to be found in these building are:

1) Wallhead commonly to a height of 2 m
2) Dwelling area/byre sometimes over 20 m in length (internally)
3) Use of split boulders/crudely worked stone throughout most of the structure
4) The majority are two roomed (living area/byre and barn - illus 25)
5) Frequently with a well-made opening or horse hole in the end wall of the byre (see Section 4.8)
6) Vertical internal wall faces with squared internal corners
7) Exterior corners commonly rounded and battered.

These buildings with their squared corners, vertical internal wall faces and higher walls have a much more modern, spacious feel to them. The majority, 19 in total, were built after the 1897 OS survey map and indeed one, House 7(i) (illus 25), is shown as being only partially built on that map. It would appear that most were not originally constructed with gables or with stone partition walls but many had these features added later (see Section 3.5.3). Most were substantially modified at a later stage but some, for whatever reason, remain largely unaltered.

Illus 22 No. 7(ii) A view of the rounded end walls of an early blackhouse constructed of field stones (photograph by Headland Archaeology Ltd).

Illus 23 No. 39 Field boulder construction with an additional room abutting the byre/dwelling (photograph by Headland Archaeology Ltd).



Illus 24 No. 39 After excavation (drawn by Jaki Hawker).

3.5.3 Stage 3 - Modified Blackhouses (1890s onwards)

Following their construction many of the surviving early blackhouses and the later blackhouses were modified over the next 50 years. These modifications are characterised by:

1) Insertion of windows
2) Insertion of stone partitions between the byre and living area (see Section 4.9)
3) Addition of gables (illus 26, see Section 4.6)
4) Insertion of fireplaces within partition walls and gables (see Section 4.7)
5) Use of split boulders/crudely worked stone
6) Use of mortar in extensions, particularly the gable ends
7) Insertion of wood-lined wall recesses in partition walls and gables
8) Insertion of a step between the living area and byre

Few of the later blackhouses escaped modification in one form or another. Nearly all had a stone partition built between the byre and the living areas. A step just to the byre side of the doorway also enabled the separation of the animals from the occupants.

These improvements frequently required the rebuilding of parts of the walls. This can often be identified by the use of split boulders which give a flat face to the wall in contrast to the rounded, unprepared stone of the early blackhouses. Clay or lime mortar was used to provide sufficient stability for the building of gable ends with integral fireplaces (illus 26).

3.5.4 Stage 4 - Single-pitch extensions (c. 1918 onwards)

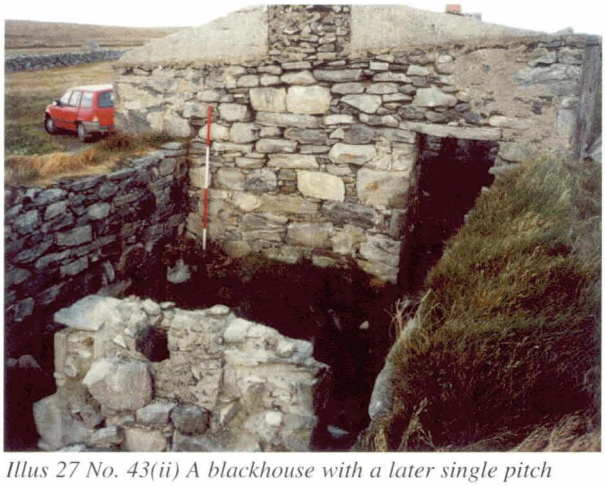
A further development, thought to have happened at about the time of the First World War, was the addition of single-storey whitehouse extensions onto the end of some of the blackhouses. These extensions were constructed of prepared stone with gently sloping single-pitch roofs of corrugated iron or asbestos. In most cases the walls were harled on the outside, with two windows and a central door in the same wall face. The extensions were usually used as bedrooms with the best surviving example of this, No. 43(ii), having had a fireplace in each of the two bedrooms (illus 27).

3.5.5 Stage 5 - Double-pitch extensions (1920s-30s)

In some cases the single storey extensions were extended upwards into two storey, gabled whitehouses. In other cases new structures were built directly abutting earlier blackhouses. These were usually two-storey structures, frequently with dormer windows in the upper rooms (illus 28). They were commonly used as bedroom areas and in some cases the main living area remained within the blackhouse part of the building until their abandonment in the post Second World War period. In only one case (illus 29) have parts of a blackhouse been incorporated into a building that is still lived in. In this case the exterior walls of the blackhouse have been mortared and harled.

Illus 25 No. 8 A later blackhouse (photograph by Headland Archaeology Ltd).

Illus 26 No. 10(i) A modified later blackhouse with gable (photograph by Headland Archaeology Ltd).



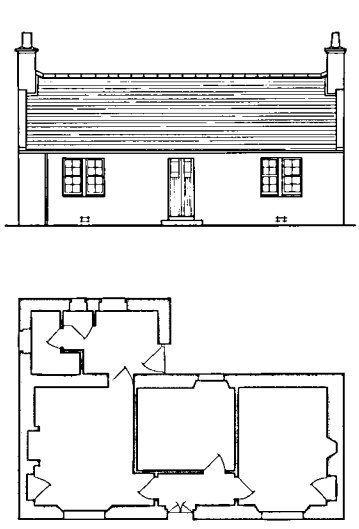
Illus 27 No. 43(ii) A blackhouse with a later single pitch extension (photograph by Headland Archaeology Ltd).

Illus 28 No. 27(ii) A blackhouse with double-storey DAF extension (photograph by Headland Archaeology Ltd).

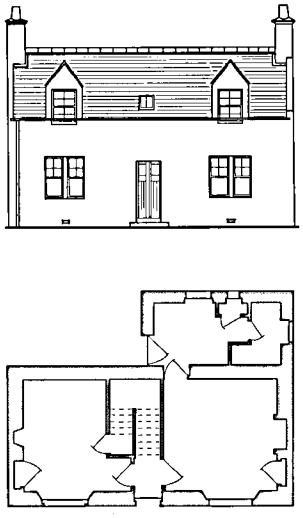
Illus 29 No. 40 A blackhouse, roofed and harled and still a used part of the building (photograph by Headland Archaeology Ltd).

3.6 Abandonment

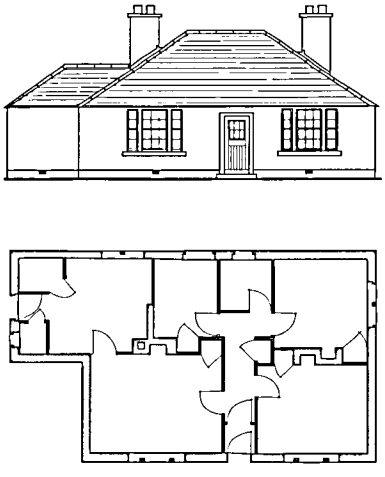
After the First World War the blackhouses were gradually abandoned as dwelling houses in favour of newly built houses, or as people moved away. Many blackhouses found use as weaving sheds, animal shelters and tractor sheds. Thatched roofs began to let in water through lack of heat from the hearth and lack of regular maintenance. Parts of some buildings were re-roofed with asbestos or corrugated iron sheets and are still in use. The majority, however, were gradually abandoned. Certainly No. 42 was still in use as a dwelling into the 1960s, but some of the more modern examples, such as House 9, were occupied somewhat longer. Up until recently most of the houses that replaced the blackhouses were what are known as DAF houses. These were houses constructed to standard patterns of the Department of Agriculture and Fisheries and enabled crofters to build new homes without the expense of paying for detailed architects drawings. Each of these was known by its own DAF number and a selection are illustrated here (illus 30). These will be very familiar to anyone who has visited the Western Isles, but many of the older ones now lie abandoned themselves alongside the blackhouses they once replaced.



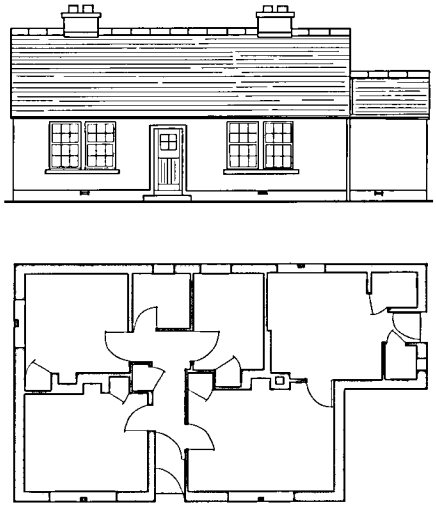
House type H.17 (5.3.1936)



House type H.18 (5.11.1937)



House type No. 80 (C.H.) (14.12.60)



No. 42 Arnol - Custodian's House (6.7.1962)

Illus 30 Department of Agriculture and Fisheries (DAFs) houses (drawn by Laura Speed).

4 ARCHITECTURAL FEATURES

T HOLDEN

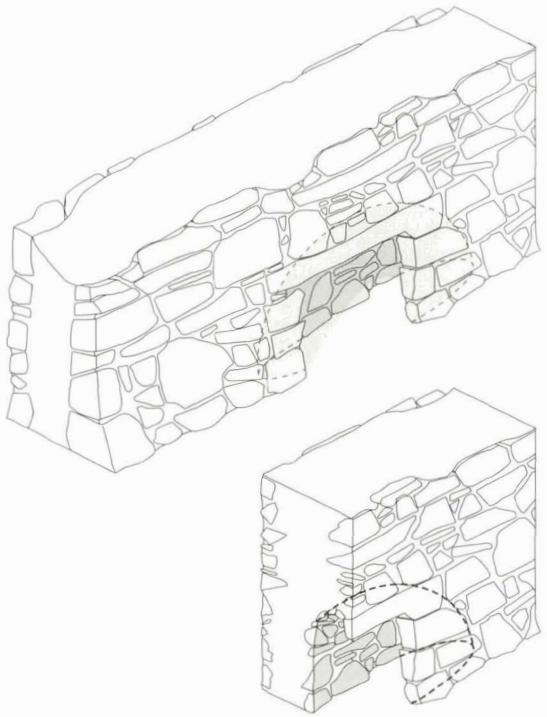
4.1 Bed recesses (*crùb* beds)

In some of the older blackhouses a characteristic feature seems to have been the presence of beds within the thickness of the wall. This kind of structure was known as a *crùb* bed and even by the mid-19th century these must have been rare. Thomas (1868) thought it particularly interesting that they had met someone who had slept in one of the wall beds at the farm at Dun Carloway. The majority of such beds were located close to the hearth but Thomas records that at least one of his informants used to sleep in such a *crùb* bed in the byre.

Only two of the blackhouses, Nos 23 and 37(ii) (illus 31), were built with these 'early' features. These are small, well-built compartments contained within the core of the wall with corbelled roofs and a thick lintel over the entrance. In No. 37 the *crùb* bed is located in the living area and had an entrance 0.6 m wide and 0.6 m high which then opens out into an intra-mural space 1.2 m long and 1 m deep. In No. 23 the recess is also located in the wall of the living area and is 0.8 m wide, 0.85 m high and 0.65 m deep (illus 32). In their present state both of these features appear to be very close to ground level but this may be illusory, the build-up of debris and later levelling of interior surfaces having altered the original level of the floor.

It is difficult to assess why *crùb* beds such as these were built into just two of the Arnol blackhouses. It would imply a degree of conservatism within these families. Possibly an elderly member preferred these sleeping arrangements or possibly these families had young children at the time of building.

Illus 31 Crùb *bed within the wall of No. 23 (photograph by Headland Archaeology Ltd).*



Illus 32 Sections though the crùb *bed in No. 23 (drawn by Margaret Engl and Mike Middleton).*

4.2 Doorways

One of the most striking features of many blackhouses is the alignment of the doors that enables an uninterrupted view through the building from the main entrance in the *fosglan* to the winnowing hole in the barn. The principal idea behind this alignment was to control the flow of air through the building. With this arrangement it was possible to sit next to the winnowing hole in the relative comfort of the barn and use the through-draft to separate the lighter cereal chaff from the threshed grain. Winnowing would have been undertaken, as required, in order to provide sufficient cereal for the household's immediate use. The winnowing holes would also have allowed sheaves to have been fed in from the stackyard to the barn.

The doorways themselves range in width from 0.65 m to 1.0 m with the average height to lintel being approximately 1.7 m (illus 33 and 34). Most are wider at the base than at the top. In some of the later buildings wooden lintels were used but stone lintels were more traditional. These long flat stones were evidently in short supply and were usually one of the first stones to be removed for re-use after abandonment. In many cases doorways were blocked, indicating changes to the basic organisation of the building. This could have happened in order to rectify unsuccessful or imposed 'improvements'.

Illus 33 No. 40 View through three opposing doorways (photograph by Headland Archaeology Ltd).

Illus 34 No. 10(ii) Partition with door, hearth and shelves (photograph by Headland Archaeology Ltd).

The main entrance (*dorus*) to the traditional blackhouse was used by the people and the cattle alike. It was, however, apparently common for the door between the byre and the barn to be slightly narrower than the main entrance in order to prevent the cattle straying into the barn (Norman Campbell, pers. comm.). This was not always borne out by field observations, but there may be some differences between later and more recent buildings in this respect.

In modified blackhouses other doors may have been cut into end walls or side walls, particularly of the barn and byre. Partitions were also erected in which there was a door to the side of the fireplaces. These doors were commonly 1.7 m high and 0.7-1.2 m wide.

4.3 Drains

A high proportion of blackhouses are constructed on gentle slopes with the byre located downslope from the habitation end of the building. This arrangement is designed to enable waste from the byre to run down the slope and away from the living areas. A central drain, covered by a series of capstones, is a common feature in most byres and this directs liquid out through a small opening in the end wall (*toll lodain* - illus 35). It is difficult to determine the true depth of many of these openings because of the build-up of material within them and vegetation cover. However, 11 of the buildings had visible internal drains, 0.25 - 0.45 m wide. The opening in No. 39 was 0.20 m deep.

Around the periphery of the buildings external drains can also be seen, usually in the form of narrow, shallow channels, sometimes stone-lined. One of the drains from the excavated blackhouse at No. 39 had been cobbled on either side, presumably to provide some stability in what would otherwise be a very boggy area directly adjacent to the building.

*Illus 35 No. 39 - The byre drain running downslope and exiting the building through a small opening (*toll lodain*). The capstones in the foreground have been dislodged (photograph by Headland Archaeology Ltd).*

4.4 Floors

Areas of exposed flooring can be seen in very few buildings and where it is visible it is usually of modern construction in rooms adapted for storage or as loom sheds. If the excavated example at No. 39 and the Blackhouse Museum at No. 42 are typical, however, the living areas in blackhouses from around the turn of the century would have consisted of roughly flagged floors set into the natural green/grey silty sand. At No. 39 a later skim of cement had been added to protect worn areas in passageways or between the box beds in the dwelling area. This was also seen in the barn but a much more crude cobbling was seen in the *fosglan* (illus 36). At No. 42 a clay floor had been laid at the point where threshing was done and other areas had been lined with planks upon which sheaves could be protected from the damp of the floor (Fenton 1978). In cross-section, the byre floor of No. 39 was distinctly concave with the flagged drain set at the lowest point (illus 35 and 37). The floor surface itself is made up of a hardened, yet wholly natural, layer of silty sand. The concave profile may, in some part, have been exaggerated by the repeated clearing out of byre debris every spring. However, in view of the siting of the drain, it was probably an original design feature.

In many of the surviving blackhouses there is a well-defined, stone-faced step between the byre and the living area (illus 37). At No. 39, the excavation showed this to be approximately 0.5 m deep and very clearly a secondary feature, having been constructed over the original central hearth. It was built to correct the slope of the original floor, thereby providing a more level living space and would also have provided a dry route between entrance and barn. It would also have helped to retain the accumulating debris in the byre end of the building. This step was probably a part of a general package of late 19th- early 20th-century modernising features, such as the gable end with integral fireplace and the insertion of windows.

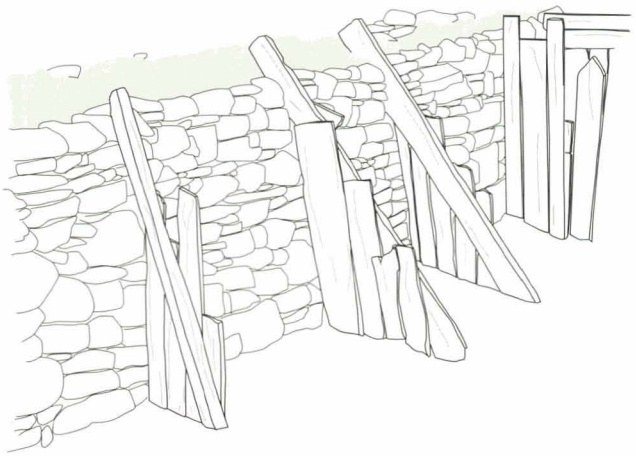
4.5 Furniture

Most of the ruined houses have been abandoned for many decades and most of the wooden fittings have long gone. Several houses did, however, contain the last traces of wooden furniture. These included bed frames, dressers, butter churns, long benches and animal stalls, many of which still lie *in situ* and all of which are rapidly decaying. With regard to the location of the furniture seen within the houses, most adhere to the pattern seen in the museum at No. 42 Arnol. Benches and dressers were set against the side walls in the living area, beds at the opposite end to the byre. Surviving animal stalls (*buabhall-na-bà*) were also consistent with those seen at No. 42, being formed by vertical wooden planks nailed to an angled timber running from the floor to a purlin (illus 38).

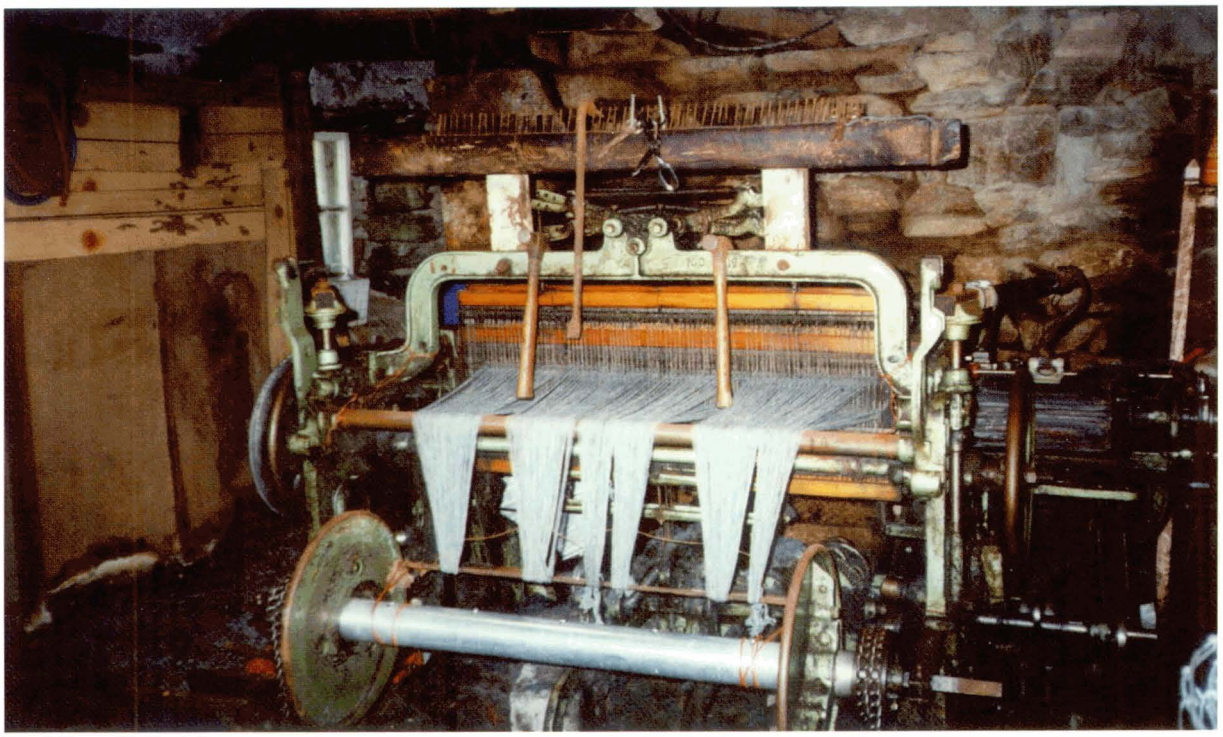
The remains of looms were encountered in several abandoned blackhouses but better preserved examples were seen in a number of the roofed loom sheds at the time of the survey in 1998 (illus 39).

Illus 36 No. 39 Crude cobble flooring in the fosglan *(photograph by Headland Archaeology Ltd).*

Illus 37 No. 39 The central step exposed during excavation (photograph by Headland Archaeology Ltd).



*Illus 38 No. 42 The stalls (*buabhall-na-bà*) in the byre (drawn by Margaret Engl).*



Illus 39 No. 37(i) A loom still in use in 1998 in a a roofed part of a blackhouse (photograph by Headland Archaeology Ltd).

4.6 Gables

Nine of the blackhouses surveyed have gables with integral fireplaces. Six of the gables are modifications to earlier buildings, the other three original features. The gables are commonly over 3 m high with the chimney rising somewhat higher still. In contrast with the earlier walls, the gables do not have an earth core and are, in all cases, constructed of crudely faced stonework comprising split boulders or quarried stone, sometimes with roughly squared quoins. The stonework is also mortared with either clay or lime and would undoubtedly have been unstable if built using the traditional drystone techniques.

Several types of feature are associated with the gables. Fireplaces are found in most and are similar in style to those seen in the internal partitions. Windows and doors in gables are uncommon but No. 36(i) (illus 40) and No. 41 (illus 41) are exceptions to this.

One alternative to the gable and integral chimney was to have a fireplace within the end wall of a hip-roofed structure. No. 6, for example, has a fireplace built into the southwest end wall. The wall at this point is a typical turf-capped blackhouse wall and would probably have had a short chimney stack on the wallhead.

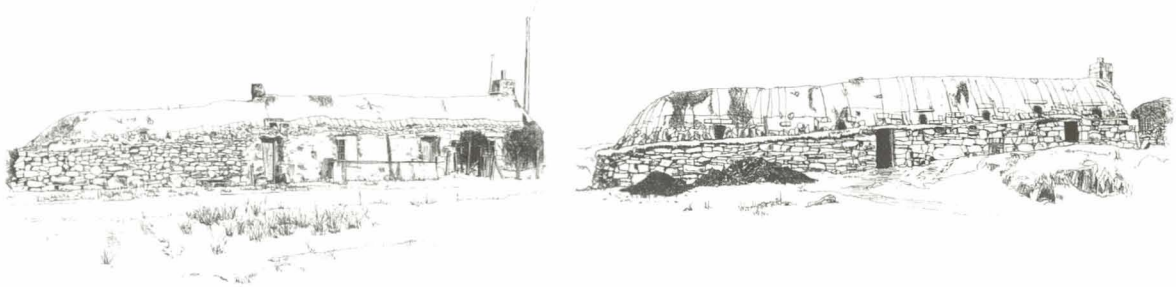
Illus 40 No. 36(i) A gable wall with window (photograph by Headland Archaeology Ltd).

Illus 41 No. 41 A gable wall with door (photograph by Headland Archaeology Ltd).

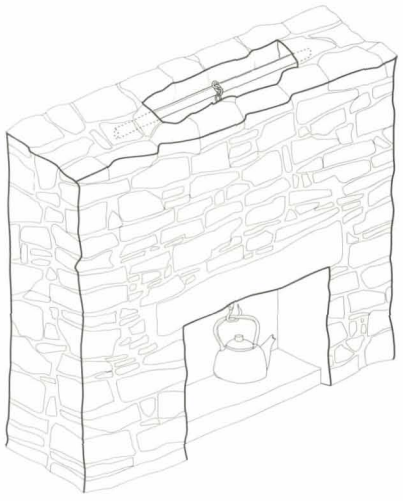
4.7 Hearths

The hearth was essentially the heart of the blackhouse and it was considered very bad luck to let the fire go out. Not only was it necessary for cooking and warmth but also to provide a sufficiently dry environment to keep the thatch dry and prevent it becoming sodden. Prior to the development of the gable or partition fireplace, a central hearth (*cagailt*) located in the living area would have been standard. This can still be seen in No. 42 and one was excavated beneath the central step of No. 39. No chimney or smokehole was required when the central hearth was in use as the smoke would pass slowly up through the thatch leaving its sooty residue adhering to the straw. Eventually, however, the central hearth was replaced in many houses by a fireplace constructed in the thickness of partition walls or an end gable. In most cases the chimney flue was fully enclosed but many would have supported a canopy of timber or a linen-covered framework. Where present these have now rotted leaving a flue which is open to the room from the hearth to the chimney (illus 34). Since stonework of the partition walls never seems to have been carried beyond the height of the outer walls, the smoke must have been conveyed via a wooden flue or purely by finding its own way to a smokehole or primitive chimney. Two different types of chimney in the appropriate position can be seen in illustration 42.

Once these fireplaces became fashionable then they might be found in both the living areas and the bedrooms. The fireplaces themselves are generally simple affairs comprising a recess within which is commonly a raised step around a central depression, generally at floor level. The actual fireplace recess is commonly in the order of 1 m high, 1 m wide and 0.45 m deep. In many cases the fireplaces are surmounted by a large stone lintel (eg. illus 41). Very few buildings have surviving fire surrounds but these commonly consisted of plain timbers with mitred corners. Where present the fireplaces were centrally positioned in the gable or partition wall and, in several of the surveyed houses, an iron bar or rantle tree can be seen within the chimney. This cross-piece supported the chain (*slabhraidh*) for the cooking pot and there are a number of examples where pieces of an old cast iron loom had been used for this purpose (illus 43).



Illus 42 Blackhouses with central chimneys - Callanish (upper), Dun Carloway (lower) (© Chris McGregor).



Illus 43 The iron cross-piece up the flue of the partition chimney used to suspend the cooking pot (drawn by Margaret Engl).

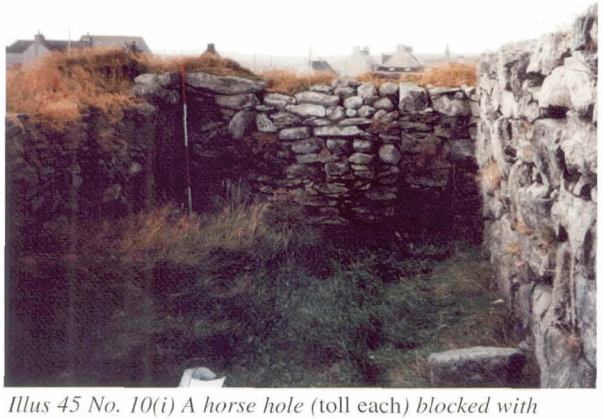
Illus 44 No. 44 An unblocked horse hole (toll each) *(photograph by Headland Archaeology Ltd).*

4.8 Horse hole (*toll each*)

In most blackhouses animal manure was allowed to accumulate on the byre floor throughout the winter when the cattle were stalled indoors. In the spring it was the custom to break through an opening in the end of the byre wall through which the manure could be shovelled directly into awaiting carts or creels outside. The use of horses to carry away the manure led to it being given the name of *toll each*, the horse hole (Fenton 1985). In many of the Arnol blackhouses there is evidence that the end wall of the byre was completely dismantled and rebuilt using the same materials. One such example can clearly be seen in the poorly built end wall at No. 39.

In later houses the entrance into the byre is constructed to make dismantling and rebuilding easier. In many cases the edges of the permanent wall are deliberately faced so that when the entrance was unblocked it would have a stable piece of wall on either side (illus 44). The masonry in the end walls is often constructed of smaller stones, for ease of removal and is different in character to the more permanent parts of the wall (illus 45). Turf was used in some areas to block the horse hole but this was not seen in Arnol itself.

Many of the horse holes at Arnol survive as blocked entrances and can be identified by the straight line joints between them and adjacent wall. In some cases the entrance walls have been completely removed so that the buildings can now be used as animal pens, tractor- or cart-sheds. These openings range in size from 1.1 m to 4.9 m wide.

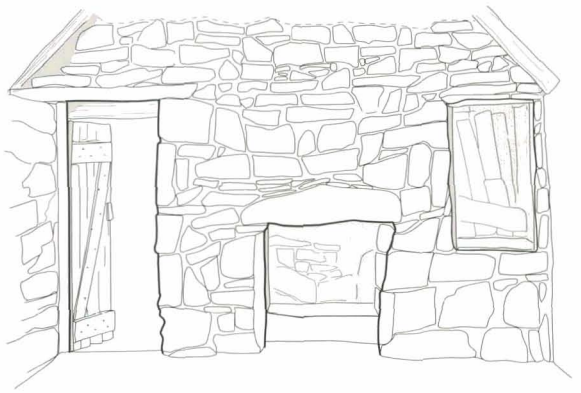


Illus 45 No. 10(i) A horse hole (toll each) *blocked with smaller diameter stones (photograph by Headland Archaeology Ltd).*

4.9 Partition walls

One of the most common modifications to the buildings was the insertion of a partition wall. In many cases these were erected to separate off collapsed areas of wall from the remainder of the building. These are commonly double-skinned and similar in style to the other exterior walls. In other cases partition walls were erected to deliberately shorten or divide rooms for a change of use. One of the most common modifications was the insertion of a wall between the byre and living area, in many cases replacing an earlier wooden partition (*tallan fiodha*), such as the one that survives at No. 42. These walls are usually only carried up to the same height as the external walls and were generally constructed of crudely faced masonry comprising split boulders or quarried stone, sometimes mortared. The gap between the wallhead and roof apex was often filled with timber panelling.

The partition walls were usually inserted on the living area side of the opposing doorways. The living area itself was then usually entered by a door located to one side of a stone fireplace (illus 34). These later partitions were universally made of stone with the chimney flue running within the partition, commonly with a shelved recess and a door on either side (illus 46).



Illus 46 A typical partition wall with door, fireplace and shelves (drawn by Margaret Engl).

4.10 Roofs

Only the Blackhouse Museum at No. 42 retains a well-maintained thatched roof. No. 30a, apparently re-thatched within the last 20 years is now no longer maintained (illus 47). It was constructed of cereal straw laid randomly and is held in position with fishing net. In 1988, No. 9 retains some of its thatch, but the roof had mostly fallen in (illus 48). These buildings illustrate the techniques of roof construction and, as originally at No. 42 Arnol, much of the timber used consists of small planks of driftwood (discussed in detail by Fenton 1978; Walker and McGregor 1996; illus 49). These were supported by simple couples of cut timber standing on the inner edge of the wall-head. Heather (*sìomain*) and coir rope fixings for the timbers can be seen in places. The thatch is evidently of cereal straw, but no substratum was noted. This stands in contrast to No. 49 which even in the 1970s (Fenton 1978) had a substratum of turf (*sgrathan*). This point is of interest because in many blackhouses the smoke permeated through the thatched roof and there was no requirement for a smokehole. In some areas the soot-filled thatch was regularly removed and used as a top-dressing for the young potato crop. This is referred to, for example, in the evidence Sir James Matheson gave to the Royal Commission on Housing for the Working Classes (Report 1885). The sooting of straw would, however, also be affected by the presence of a turf substratum and it is probable that houses with this turf layer were smokier and may have required a smokehole. The evidence from James Matheson, seems to suggest that the use of turf may have been a modification brought about by the disapproval of the landlord to the practice of manuring with sooted thatch.

Although in recent times the use of fishing nets and chicken wire is commonly used to keep the thatch on the roof, traditionally a variety of roping techniques using straw or heather and later coir rope were used (see Walker and McGregor 1996). Other roofing materials have been used in more recent times and examples of corrugated iron and asbestos sheeting can be seen (illus 50).

Illus 47 No. 30a One of two thatched roofs surviving in the township in 1998 (photograph by Headland Archaeology Ltd).

Illus 48 No. 9 Collapsed thatch roof (photograph by Headland Archaeology Ltd).

Illus 49 No. 30a Roof timbers (photograph by Headland Archaeology Ltd).

Illus 50 No. 10a Corrugated iron roof (photograph by Headland Archaeology Ltd).

4.11 Shelves/recesses

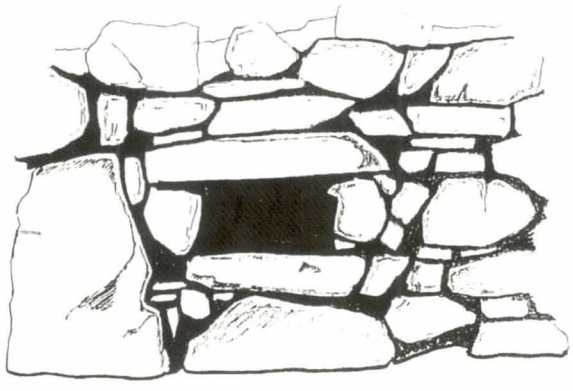
It is common to find recesses or shelves built into the walls of blackhouses. In the earlier houses small, stone-built recesses were built into the wall. Single recess shelves in the order of 0.35 m high, 0.30 m wide and 0.45 m deep (illus 51) can be found in many of the rooms, and in a variety of different locations. Double shelf recesses are less common and are present in only four of the houses (illus 52).

In later modifications, partition cupboards or shelves, commonly 0.9 m high and 0.6 m wide, are situated to one side of the fireplace, usually abutting one of the side walls. These features are generally wood-lined and can still be seen in some houses (illus 34).

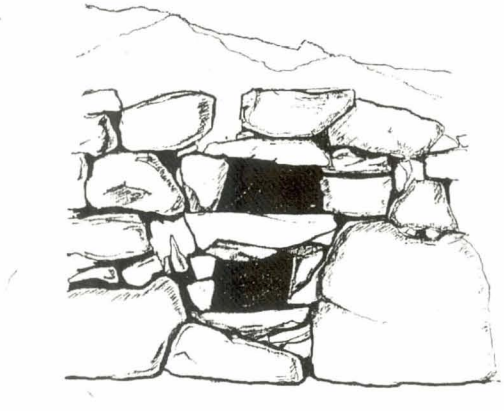
4.12 Wall construction

The walls of blackhouses are one of their most distinctive features. They are typically, battered and stone-lined on both sides with an earth core (*uatabac*). The wallhead is exposed and forms a ledge around which it is possible to walk (*tobhta*). This can be used as a platform from which to re-thatch the roof. The walls are commonly in the order of 1.5 m wide at the base tapering to about 1.2 m at the wallhead. Below ground level they sit on a 'friction course', a series of pebbles hammered into the subsoil in order to prevent wall slippage at the exterior.

A number of the less well-preserved buildings reveal areas of exposed wall core. Illustrations 53 and 54 show just how variable this can be within the same building. Although of variable composition most exposed areas of wall were dominated by peat containing lesser or greater quantities of gravel, sands and silts. During the excavation at No. 39 (Holden *et al.* 2001) soil thin-section analysis was undertaken on the sediments from the wall (illus 55). From this it was concluded that there was no deliberate mixing of materials to form the bulk of the wall sediment. The composition of the wall core was entirely consistent



Illus 51 A single-shelved recess (drawn by Margaret Engl).



Illus 52 A double-shelved recess (drawn by Margaret Engl).

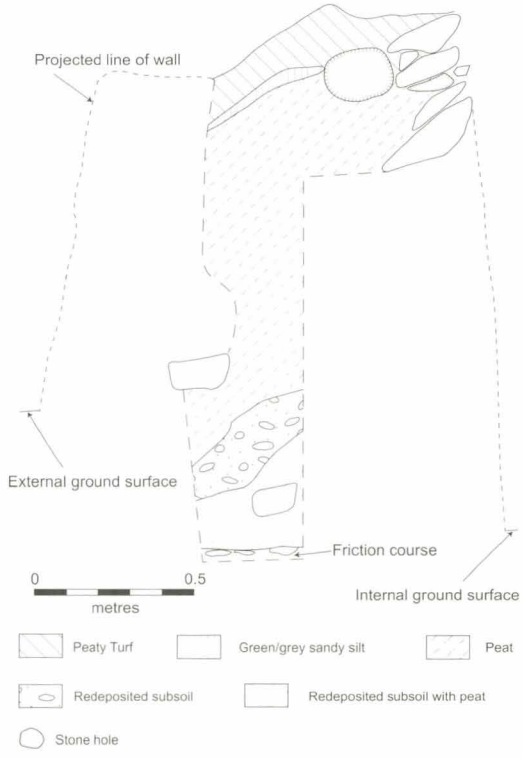
with the peaty topsoil material stripped during the construction of the house. The only exception to this was the deliberate application of a thin layer of sandy silt at the wallhead, particularly on party walls. This is thought to have helped improve the run-off of water from these walls.

Today, local crofters are of the opinion that wallheads of these buildings should be capped by a thick layer of turf. These are deliberately placed there as a part of the construction process in order to stabilise the wall. Elsewhere the evidence is somewhat contradictory and some informants indicate that the wallheads were kept free of turf. If this is the case than the present observations of turf at the wallhead is a result of the rapid growth of turf over the last 20 years of more.

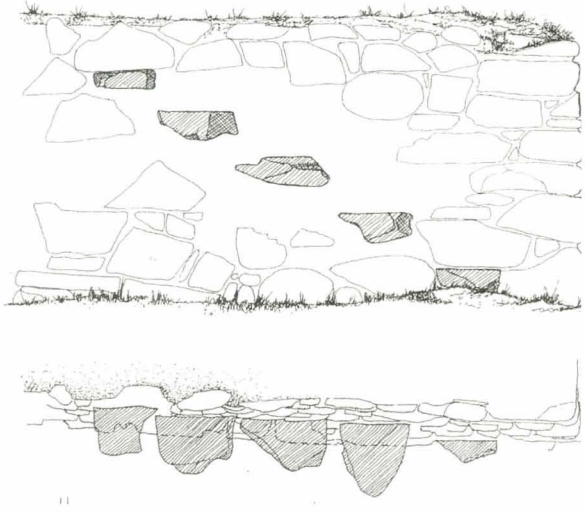
Most of the houses have one or two sets of crude external steps (*staireachan*) that lead from the ground to the wall-head and provide access for thatching purposes (illus 56). On No. 42 they are approximately 0.3 m wide and 0.15 - 0.3 m deep, with the longest used at the bottom, the shortest at the top. There would appear to be few fixed rules as to the location of these with some examples even traversing the rounded corners of buildings.

Illus 53 No. 20 Exposed section through the wall (photograph by Headland Archaeology Ltd).

Illus 54 No. 20 Exposed section through the wall (photograph by Headland Archaeology Ltd)



Illus 55 No. 39 Excavated section through the wall (drawn by Laura Speed).



Illus 56 No. 42 Survey sketches of cantilever steps (staireachan) *(drawn by Bruce Walker).*

4.13 Windows

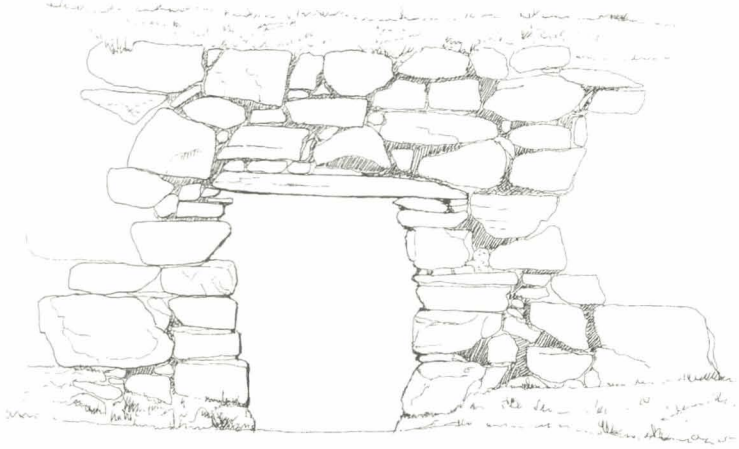
From what is known about early blackhouse construction it is clear that they had no windows or were lit using oiled lambskin stretched on a wooden frame set into the thatch (Bruce Walker pers. comm.). More recently panes of glass may have been set into the thatch, resting on the bottom purlin (*uinneag tughaidh*). Traces of such glass can still be seen lying on the wallhead of some buildings. Windows set within the walls (*uinneag*) are more recent still. At No. 42 a small window with two fixed panes was set into the inner face of the wall at the bedroom end of the house (illus 57). Approximately half of the surviving blackhouses have windows, but most of these are features of the modernised examples (illus 40). At No. 39 the whole end wall of the bedroom end of the building was rebuilt specifically to accommodate a window which was seated in a well-made opening surmounted by a stone lintel (illus 58). Such windows are typically 0.5 - 1.0 m wide and 0.7 m - 1.6 m high. Many have been blocked in recent times since the ruins have been used for animal stalls. A few still have frames and glass *in situ*.

4.14 Winnowing holes (*toll fhasgnaidh*)

This feature consists of a small opening leading from the barn annex to the exterior of the house (see also Section 4.2). They are generally narrower at the top than the bottom, as with the doors, and commonly 0.8 - 1.5 m high and 0.5 - 0.9 m wide. Often constructed in line with the other doors of the house (illus 59), the winnowing hole was used to control the draught during the winnowing of crops in the barn. The opening and closing of the doors could be used to control the draught under different conditions.

Illus 57 No. 42 Window to room exposed during the replacement of the roof and wall turves (© Chris McGregor).

Illus 58 No. 39 A window inserted in the bedroom end of the building, from the interior (photograph by Headland Archaeology Ltd).



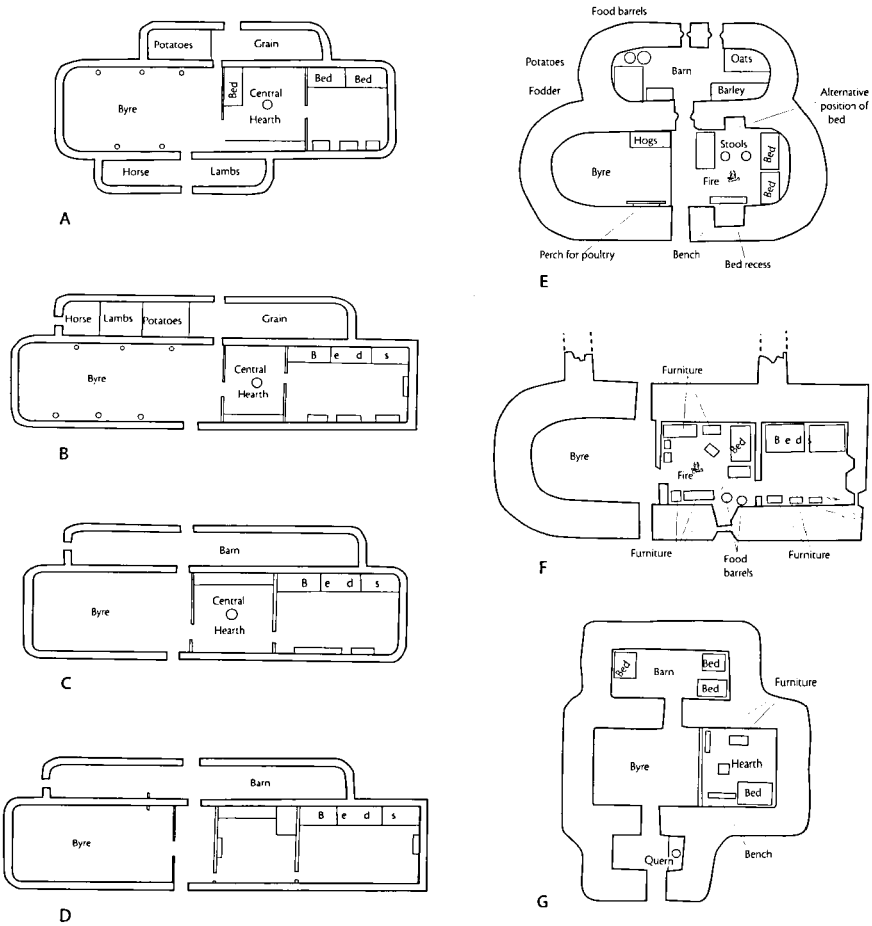
Illus 59 No. 42 Winnowing hole (toll fhasgnaidh) *(drawn by Bruce Walker).*

5 LIFE IN A BLACKHOUSE

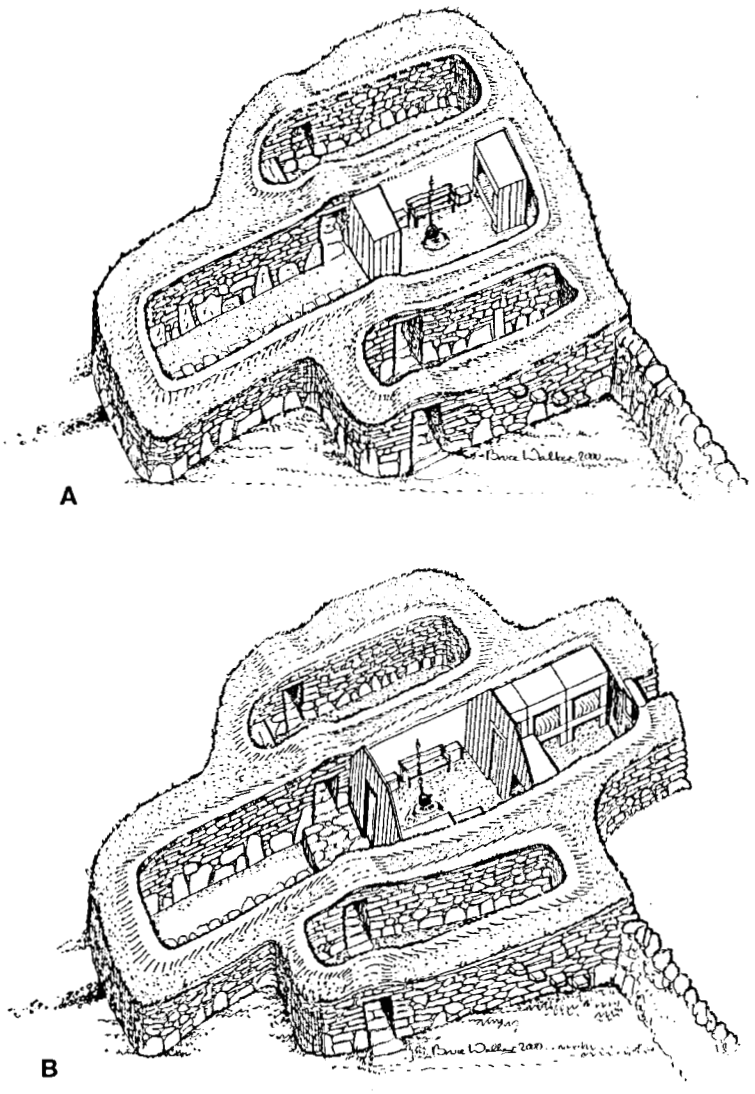
T HOLDEN AND L BAKER

5.1 Use of space

There are few published plans of the interior of Lewis blackhouses, but by combining the available oral history with the archaeology of the surviving ruins and written accounts of travellers and the various Royal Commissions, it is possible to piece together a picture of how the internal space was divided (illus 60 and 61). The majority of Lewis blackhouses are either two- or three-roomed units comprising either a byre/dwelling and a barn or a porch or *fosglan*, byre/dwelling and barn. In the three-celled units, entry for both animals and humans alike was *via* the *fosglan*, although in some an additional, human-only entrance was constructed in the barn, possibly in compliance with the 1879 estate regulations. The *fosglan* was essentially the blackhouse utility room and housed a wide variety of functions. The horse might be brought in during bad weather, as would calves, lambs and lambing ewes. It was also often the home of the chickens. A quern for grinding the corn would also commonly be set on a fixed board at one end of the *fosglan* while near the entrance agricultural tools would undoubtedly find a home. At No. 39 the floor was of rough cobbles, but these would have rapidly become covered by compacted earth, animal and domestic debris providing a smoother surface to work on. Larger flags were often set around the entrance area to protect the passage between the *fosglan* and byre from the heavy tread of the cattle.



Illus 60 Internal layout of a number of west coast blackhouses: A-D (after M Mackay of Lionol, unpublished) A – Bragar; B - Barvas, including gable fireplace; C- South Dell, Ness; D - Lionol, Ness, with hearths set into gable and partition wall. E-F (after West Side Story) E - older type; F - more recent type; G (after Thomas 1868) - West Side, Lewis (drawn by Laura Speed).



Illus 61 Reconstructions of the living space at No. 39 Arnol based upon 1997-8 excavations (drawn by Bruce Walker).

Whether from the exterior or from the *fosglan*, the door into the main byre-dwelling gave access directly into the byre. This was frequently commented upon by visitors to the unimproved blackhouses. A description of a crofter's house in Lewis, presented as a part of the Report of the Royal Commission on the Housing of the Working Classes (Report 1885 Appendix E, 137) provides a graphic description of conditions.

> 'You stoop your head as you enter by the only door, and if your visit is in July, you make an unexpected descent of a foot down to the earthen floor. If you visit in March the inside level is higher than the surface of the ground, for you step upon a thick mass of wet cattle-bedding and dung, which has accumulated since the previous summer. Coming in from the light of day you stumble in the deep obscurity which is barely relieved by the single window of a foot square. You make your way over the spongy surface, and at length find yourself on firm ground as you approach the large peat fire burning on the middle of the floor, the smoke from which fills the whole house, and finds partial egress through the thatch for there is no chimney. You receive a hospitable welcome from the host, who courteously invites you to take a seat. Overhead the cackling of hens, which are striving for the warmest roost near the fire, attracts your notice. Near the window there is a deal-table, and dimly visible through the smoke are two pallet beds at the inner end of the apartment. The lowing of the calf at the far end of the house, beyond the door by which you enter, leads you to grope your way thither, and you are told that at present the rest of the bestial are grazing outside.'

Once inside, some of these byre/dwellings must have felt cavernous. Most were open to the roof timbers and thatch with no ceilings whatsoever, although in later years some had wallpaper pinned over parts of the bedroom area. Some houses had no chimneys, the smoke permeating through the roof, a feature that was positively encouraged by the inhabitants because the tar and soot laden thatch was used as a top dressing of fertiliser on potatoes and barley. Later, smoke holes and canopy or stone chimneys were introduced.

The floors in the older houses usually sloped downwards towards the byre to aid drainage away from the living area. A row of stones was often all that divided the two spaces. In the second half of the 19th century, however, many of those built on the most sloping ground were modified by levelling the living floor and thus providing a step down into the sloping byre. This had a number of significant advantages for the occupants in that it allowed a dry path into the dwelling and restricted the cattle debris within the byre. It would also have provided a level surface to accommodate box beds and other furniture which became fashionable during this period. The disadvantage, however, was that animals now had to be coaxed down this step into the byre each autumn.

For many of the occupants there was a comforting familiarity in the closeness of the cattle. It was considered lucky for the cattle to have sight of the hearth. They would have provided warmth in the winter months and a suite of familiar smells and sounds that were remembered with fondness many years after this style of living had gone forever. To outsiders these conditions were intolerable and often derided. At worst they must have been desperate places to live in and it was often the poorest houses that were described by visitors. At best, however, they must have been warm comfortable homes within the context of 18th- and 19th-century Hebridean life. Towards the end of the 19th century the estate was trying to encourage people to separate the byre and the dwelling. In many houses the line of stones that had previously marked the boundary between animals and humans was replaced by a wooden screen, as in No. 42, or by a more substantial rubble wall. The remains of these additions, usually also accommodating a door and fireplace, can be seen in many of the houses in Arnol.

The byres themselves were usually divided into two parts by a central drain. Down the sides were wooden partitions or tethering posts to which the beasts were tied. The bedding and dung lay where it fell and gradually accumulated over the winter months when the animals were kept indoors. To this was added the human waste from the kitchen and chamber pot with fire ash and peat dust used to absorb excessive moisture. In the spring, one of the first jobs of the year was to empty the byre. In most places the easiest way of doing this was to dismantle the whole end of the byre and fork the byre waste into awaiting creels or a cart. In some cases the byre was big enough to allow a cart to be driven in and some had turf or specially constructed end walls to make the process less labour intensive. The manure was removed to the field where, along with seaweed from the beach, it was used to fertilise the crops.

By the 19th century the dwelling area was commonly divided into two parts, the living or kitchen end and the bedroom, these being separated either by a wooden partition or by placement of box beds. The living area and its ever-burning hearth was the heart of the house and in the earliest houses the hearth was located centrally within the room. Sometimes this was surrounded by a circle of small stones. Around it, against the walls were arranged stools, benches, dressers and undoubtedly a chest in which oat and barley meal was stored ready for use. Over the hearth would have hung the pots or a kettle suspended by a chain from the roof (illus 62 and 63). In later years the same chain would have been used to suspend the pots up the stone chimney in the partition or gable walls. In larger families a box bed might also be accommodated in the living room, but these were usually confined to the bedroom. Here two to three curtained or shuttered box beds usually lined the walls, together with chests and cupboards.

The final essential element in blackhouse construction was the barn. Here the barley and oats brought in periodically from the stacks outside would be piled against the wall ready for threshing. Potatoes and fodder would be stored, along with barrels of salted food. The floor would usually be of beaten clay suitable for the threshing of the cereals.

5.2 Furnishings

A number of the houses surveyed in 1998 had the decaying remains of furniture within. Beds and settles were common although unsalvageable. In one building the remains of butter churns and barrels are still deteriorating *in situ*. A few years hence only the metal fittings will remain and these too will corrode with time. The remains of what were once the crofters homes are quickly becoming archaeology.

Above all, the blackhouses were practical spaces and life revolved to a large extent around the hearth. Close to this the family worked, ate, played and rested. Over the fire and around the walls drying fish, pieces of fishing gear and agricultural implements would have been hung. Large stones set around the fire served as seats in the early houses (Mitchell 1971), but by the 1860s the living room often had a bench of wood, stone

Illus 62 The living room in a blackhouse at Arnol in 1937 (photograph by EC Curwen, reproduced by kind permission of Mrs E Saville).

Illus 63 A blackhouse hearth (photograph by Åke Campbell, courtesy of The Institute of Dialectology, Onomastics and Folklore Research, Sweden, ULMA 37510).

or turf against the wall on which the men sat. At that time chairs and tables were almost unknown (but see quote in 5.1) but bedsteads and dressers were common, if recently introduced, innovations.

Initially at least, much of the furniture was hand-made utilising drift wood, but later craftsman-made settles, dressers, shelves and cupboards were brought from further afield. Every house would have had at least one chest (*ciste*) to store clothes, fishing gear and the like. Processed meal and flour was packed into the wooden meal chest. Later, barrels and tea chests were used for the same purpose. All were kept close to the fire to avoid them going damp. Chairs made from barrels were considered the most comfortable and commonly used by the older people. Otherwise plain wooden chairs with high backs and short legs were used, as were three- or four-legged stools for the children.

The sleeping arrangements changed dramatically during the course of the 19th century. One feature that is much commented upon is the intramural bed or *crùb* bed (see Section 4.1). These were constructed using the same technology as that in the beehive shieling huts with their corbelled stone roofs. By the time Thomas (1868) visited Lewis he could find nobody still using them. However, an acquaintance remembered visiting a house as a child and having to be carried to the *crùb* bed in the byre by a servant girl so that she would not soil her feet. In spite of their apparent redundance in Thomas' time, the tradition can not have fully died out as two were identified in relatively recent houses at Arnol (illus 31 and 32).

Before the introduction of box beds it is certain that many crofters slept on the beaten earth floor in areas defined by stones or timber and lined with skins, blankets or straw (Report 1885, 109). The younger men often slept in a circle with feet towards the fire (Williams 1900) while others, in bigger families, were sometimes forced to sleep in the barn. Some beds were evidently erected on small trestles, but by the later 19th century most houses were furnished with box beds (illus 64), a tradition that continued into the 1920s and 30s and was subsequently adapted for use in the whitehouses, as can be seen in the Blackhouse visitor centre at Arnol.

Even though the box beds with their curtains or shutters offered some extra comfort and privacy, other aspects of the bedroom, even in the better houses, might be less satisfactory. On his journey to the Western Isles in 1773 Samuel Johnson, for example, recounted visiting the house of a gentleman where,

> 'after a light supper, when I was conducted to my chamber, I found an elegant bed of Indian Cotton, spread with fine sheets. The accommodation was flattering: I undressed myself, and felt my feet in the mire. The bed stood on the bare earth, which a long course of rain has softened to a puddle...' (p. 89)

This must have been a common problem, especially in the winter, and at No. 39, the excavated blackhouse, there was clear evidence of crude subsurface drains designed to combat this problem.

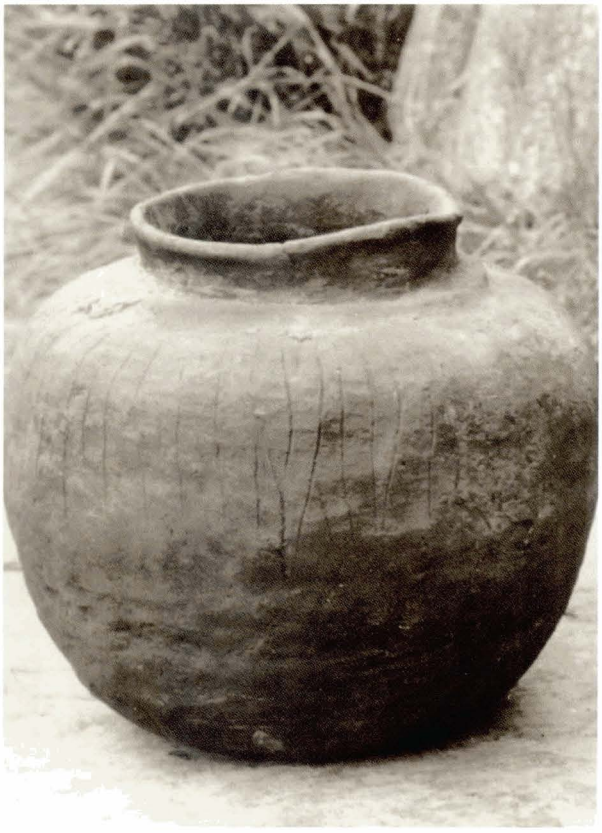
After his visit to St Kilda, Mackenzie (1905) made a short inventory of some of the household items in use. These included an iron pot, a chest, wooden dishes, a straw vessel like a large battered beehive (probably used for drying corn in), an iron lamp, a quern and various barrels, some hooped with a kind of twisted willow. In later periods this would also have included things like butter churns. In the earlier houses light was provided by oil lamps. These were initially of stone and later of metal, in which fish or seal oil was burnt with a wick comprising a cinder of peat, string or the pith of rushes. The so-called tinkers lamp, using oil or paraffin, was used in the byre during milking (Fenton 1978) and later paraffin-burning lamps, especially the Tilley-lamp, became universal.

By the late 19th century printed glazed pottery and stoneware jugs from the mainland were present in most houses and would have adorned the newly acquired dressers. Before this vessels of clay made locally were used. In his evidence to the Napier Commission in 1883 John Matheson recalled that one woman still made pottery in Barvas. She could not 'make jars with narrow necks but would make crocks for butter' (Cameron 1986, 28). Matheson later sold one of these to Lord Napier himself (illus 65).

5.3 Food and fuel

The crofters were largely self-sufficient in food. From the time that potatoes were introduced in the late 18th century they, together with oatmeal eaten as porridge, brose and oatcakes/scones, were the main staples. Fish and meat were eaten when available. Occasionally a chicken, sheep or a cow would be slaughtered and possibly shared between several families. Sheep's head broth, now a rare delicacy, was a favourite in the rural communities and gannets from the offshore islands are seasonally taken for food. Then, as now, shellfish were taken from the rocks and the beaches. Eggs and dairy foods were important with both butter and cheese being made in the home. Evidently salmon from the local rivers was, at one point, also on the menu but, as

Illus 64 A box bed, from the living area (photograph by Åke Campbell, courtesy of The Institute of Dialectology, Onomastics and Folklore Research, Sweden, ULMA 37510).



Illus 65 A craggan of the type made at Barvas (photograph by EC Curwen, reproduced by kind permission of Mrs E Saville).

Norman Campbell's testimony to the crofting commission illustrates, fishing rights were eventually taken from the locals (see Section 2.3.4).

Well into the 19th century foreign products such as tea, coffee and sugar were rarely bought, although an inventory of the debts of a crofter in Stornoway from 1823 indicate that the use of roll tobacco was common at that time (Macdonald 1978, 138). In his evidence to the Crofting Commission, however, John Matheson from Upper Barvas said:

> 'Milk and butter are scarce now, and we give the children tea now to make up for the loss of milk. I was a father of a family before I could distinguish between tea and coffee. Children can now tell the difference before they are four years of age' (Cameron 1986, 28).

Traditional cooking implements included the kettle, the three legged-pot and the girdle and these would have been hung on a chain from the roof or in later years down the chimney. The height over the fire could be varied by raising or lowering the crook on the chain. The fuel universally used in the fire was peat. This was cut in the summer months and brought back to the house in large creels for stacking close to the blackhouse (illus 66). The flame given off was not great so the risk of setting light to the thatched roof was minimal.

5.4 Health and Welfare

There are various commentaries regarding the health of the people during this time. That given by Donald Macdonald, the Barvas Parish Minister in the Statistical Accounts for Scotland, gives a graphic account (Macdonald 1791-99, 264).

> 'Rheumatism, the general complaint of all moist climates, is very common. It is rather a matter of surprise that it is not more frequent, considering their damp and dirty houses, how much the inhabitants are exposed to rain and cold, and their clothing poor. Flannel-shirts, which are in general worn by the common people, may be a good antidote against it.'
>
> 'Infants die of five-night sickness - they are dead by their fifth night. No one knows what causes this.'

The commonest diseases were fevers, diarrhoea, tuberculosis, dysentery and jaundice.

Illus 66 Returning from peat cutting, Arnol in 1937 (photograph by EC Curwen, reproduced by kind permission of Mrs E Saville).

5.5 Education

In 1680 John Morrison of Bragar writes about a school in Stornoway, but this was for gentlemen's sons and daughters only (Macdonald 1978, 41). By 1709 the Society in Scotland for Propagating Christian Knowledge was formed by a number of philanthropic gentlemen in Edinburgh. This encouraged education with an emphasis on learning to read the Bible. By 1711 five schools were in operation and by 1800 the number was 200. Their schools were ambulatory, staying in each place for two years. Teaching in Gaelic was forbidden under threat of instant dismissal. This ban was removed in 1767.

In 1811 the Edinburgh Society for the Support of Gaelic Schools was set up and by 1815 there were eight Gaelic schools on the island, including one at Shawbost and one at Barvas. In Bragar the school initially met in a barn. The school buildings were often much like the houses with few windows and a central fire (Macdonald 1978). The scholars would bring peats for the fire. Scholars were of all ages and both sexes. In 1835 the Schoolhouse at Arnol had just been newly built (NRO - GD/46/12/145). Attendance at school depended on the agricultural calendar because of the need for children to help on the land. Initially there was some opposition to learning as people thought it would encourage youngsters to move away and break up the villages.

5.6 Daily routine

One of the first jobs on waking would be to revive the embers of yesterday's fire that had been covered with ashes the previous night. Milking was undertaken morning and evening. This might take place in the byre or around the blackhouse except during the summer months when the girls and the cattle would be out at the shielings (illus 67). Some milk would be given to the calf and some put for use at the table with the rest kept in earthenware basins. The cream would be skimmed off, possibly using a scallop shell or later a strainer. The cream was then put into the churn, such as the ones seen at the Blackhouse Museum at No. 42 Arnol, for the production of butter. The buttermilk was drained off and used at the table or in baking. Any remaining skimmed milk was often heated slowly to produce a soft cheese. This could be shaped and pressed into a harder cheese if required (Anon nd.).

Illus 67 At the shieling (photograph by EC Curwen, reproduced by kind permission of Mrs E Saville).

Breakfast would usually comprise oats, milk or potatoes and before the use of tables would have been eaten off a wooden or china bowl on the lap. During the day much of the work was undertaken outside. The animals would have to be tended, fishing undertaken and the fields cultivated (illus 68). In bad weather and in the evenings the men had creels to make for carrying or fishing, nets to mend, heather rope and other implements to make. More recently much of their time might have been spent weaving. Similarly the women had carding and spinning of wool to be done and also weaving, knitting and the making of clothes (illus 69). Children still had to be tended, the house to be kept and clothes washed. Once a week pulverised peat was brought into the byre for bedding. At the end of the 19th century clothes washing was likely to have occurred beside the river or loch. Large iron pots were used to heat water and wash the clothes. These were also used to dye wool. Saturday was always a busy day for everyone in order that minimal work would be required for the Sabbath.

Threshing and winnowing of the oat crop would be undertaken throughout the year. In bad weather sieving and winnowing of the crop could be undertaken in front of the winnowing hole in the barn as and when required. Locals in Arnol still remember their grandparents talking of the times they spent sitting in front of this using the draught from the opened doors to remove the lighter chaff from the grain. In later times larger quantities of grain would be dried and milled at the local mill, but smaller amounts for use in the house were ground on the quern that was normally sited on a wooden board in the *fosglan*. Here the women of the house would spend many hours preparing the oatmeal for the family.

Illus 68 Harvesting oats by hand (from a 20th-century postcard).

Illus 69 Spinning outside the house (from a late 19th-or early 20th-century postcard).

Before the days of electricity the crofters made all their own entertainment. The focus of this was the ceilidh, an informal gathering around the fire to tell stories, sing, play and discuss. As late as 1949, the young folk of the township sometimes entertained themselves with an impromptu dance to a concertina on the smooth flat surfaces of the new concrete bridges (Atkinson 1995). The Elders would come out and harangue them.

5.7 The move into the whitehouse

As a result of the improvements imposed by the estate and the various commissions into the state of housing, extremely few blackhouses can have been built after the First World War. Rather, the trend was for the construction of whitehouses, often joined to the blackhouse. One can detect the frustration at the tenacity of the occupants for the old ways in some of the Minutes of Evidence to the 1917 Royal Commission (Report 1917):

> '.... they have the old black house connected with the modern one, and very often they live in a bit of the old black house. They have the peat fire in the centre of the floor. They keep the other part of the house for show' (p. 436).

> '.... Every white-house that has been built to my knowledge has been built with a black house next to it, and where the black house exists it is the real living house; ... it is the house in which all the food is cooked and eaten. The other part of the house is kept as a sort of place to take the minister. Of course beds are better in the white-house. Very often the marriageable daughters have the beds in the black house so that local courting customs may be maintained more easily' (p. 459).

> '...When I came here my sewing mistress lived in a very small house, and by and by she got enough money together to build a white-house. The two houses were detached for some time, and during all that time she and her family lived in the white-house. By and by the old lady thought the trouble of going out the white-house door and in by the byre door before they could get into the blackhouse was too much, and she got the two houses knocked together, and from that day the byre door has been the door they go out and in at. And the black house has become the real living room. That is what happened when a white-house is built as an annex to a black house while they are in that position the black house is the main house. The improvement is more apparent than real' (pp. 459-60).

Even with their improved sanitation and comfort, the DAF houses evidently lacked much of what the occupants considered important about their old houses. The close proximity of the animals and the open hearth were too important to people to abandon quickly. But as aspirations of the crofters changed within the social and economic climate of the 20th century the blackhouses were all abandoned. This publication has aimed to address just a few aspects of the blackhouse tradition, primarily from an archaeologist's point of view, and it is hoped that it has added something to our understanding of the structures and the settlements within which they operated.

APPENDIX A SURVEY OF THE PRE-20TH CENTURY LANDSCAPE AT ARNOL. GAZETTEER OF SITES SURVEYED IN 1998 (HOLDEN *ET AL.* 1998)

Site No. 1
NGR: NB 3018 4925 (site centre)
NMRS No: NB34NW 2.01
Location: Old Arnol
Site Type: Buildings and enclosure

Description
The footings of two buildings/platforms linked by a sweeping semicircular bank. The building to the S is seen as a low mound, that to the N as a hollow and a low bank. The enclosure appears as a low terrace. Shown on 1st edition 6" OS map (1853) as two small buildings on either side of an enclosure. Locals report that cists and human skeletal material have been eroding into the sea at this point.

Condition
Grass covered with some exposed stone but a local informant tells us that the centre of the northern of the two buildings has recently slumped. The site is under imminent threat from coastal erosion.

Site No. 2
NGR: NB 302 493
NMRS No: NB34NW 2.01
Location: Old Arnol
Site Type: Buildings and enclosure

Description
A series of features on the low-lying ground close to the shore to the S of Mol a Chladaish. Hearths, pottery and midden deposits can be seen in the eroding west-facing sections on the shingle beach.

2a - Linear/rectangular features seen as grassy banks with some scooped features and conspicuous breaks in slope which form an edge to the site. The majority of these are probably enclosures.

2b - stone footings, some mortared, and heavily eroded by the sea lying to the W of the majority of 2a (NGR NB 3022 4934).

2c - rectangular building seen as grassed stone footings (NGR NB 3023 4938).

Condition
Grass covered with some exposed stone but under imminent threat from coastal erosion.

Site No. 3
NGR: NB 3052 4942 and NB 3054 4944
NMRS No: NB34NW 2.13
Location: Allt na Muilne
Site Type: Two water mills

Description
Two water mills seen as circular stone structures with a central depression and fed by a leat running downslope from the E. The leat is 2 m wide and at approximately the same height as the walls of the mills which presently stand at 0.7 m in their ruined state. Both mills are shown on the 1st edition OS 6" map (1853).

Condition
Grass covered with occasional exposed stone. They lie close to the beach and may soon be exposed to erosion by the sea.

Site No. 4
NGR: NB 306 493
NMRS No: NB34NW 2.13
Location: Allt na Muilne
Site Type: A series of water mills

Description
Four water mills (a-d) arranged in a line down the slope on the Allt na Muilne and similar in form to No. 3 (above). Three of these mills are in the same position as mills shown on the 1st edition 6" OS map (1853) but one seems to have been inserted upslope from the bottom-most example. A possible fifth mill can just be seen at the location of the highest of the four mills as shown on the 1st edition 6" OS map (1853) but this has been severely disturbed by later agricultural activities (NB 3073 4938).

NGR 4a - NB 3065 4939
4b - NB 3067 4938
4c - NB 3068 4938
4d - NB 3070 4938

Condition
Grass covered with occasional exposed stone.

Site No. 5
NGR: NB 3067 4922
NMRS No: NB34NW 2.11
Location: Old Arnol, Cnoc na Glas Bhuaile
Site Type: Building

Description
Low turf and stone footings of an approximately rectangular building much altered by a later animal pen inserted over it. Shown as a ruin on 1st edition 6" OS map (1853).

Condition
Grassed over with occasional exposed stone.

Site No. 6
NGR: NB 3054 4923
NMRS No: NB34NW 2.02
Location: Old Arnol, Cnoc na Glas Bhuaile
Site Type: Building

Description
The stone footings of what was probably a rectangular building. The walls are only of any height in the SW but much is obscured by later clearance stone which is evident all around the building. Shown as a ruin on 1st edition 6" OS map (1853).

Condition
Grassed over with occasional exposed stone.

Site No. 7
NGR: NB 3051 4920
NMRS No: NB34NW 2.02
Location: Old Arnol, Cnoc na Glas Bhuaile
Site Type: Farmstead

Description
The stone footings of a group of adjoining buildings with possibly 7 rooms around a central courtyard and with an associated enclosure to the E and flat enclosure/drove-way to the W. Walls stand to 0.8 m in places and are commonly 1 m wide. Shown as a ruin on 1st edition 6" OS map (1853).

Condition
Mostly exposed stable stone and turf footings.

Site No. 8
NGR: NB 3053 4915
NMRS No: NB34NW 2.02
Location: Old Arnol, Cnoc na Glas Bhuaile
Site Type: Building

Description
The turfed stone footings appearing as grassy banks of what looks like a two-roomed rectangular building, possibly with a larger room running at 90° to it to the W. A ruined building is shown on the 1st edition 6" OS map (1853) close to this location but it is orientated E-W. To the S of the present enclosure wall are two further scooped features which could represent the eastern ends of two buildings that had been cut into the slope.

Condition
The footings are mostly grassed with little exposed stone

Site No. 9
NGR: NB 3054 4908
NMRS No: NB34NW 2.02
Location: Old Arnol, Cnoc na Glas Bhuaile
Site Type: Farmstead

Description
The stone and turf footings, standing to 0.7 m in places, of a two-roomed building similar in form to many of the surviving blackhouses. The larger room is probably the living area and byre with the smaller room to the E being the barn. Shown as a ruin on 1st edition 6" OS map (1853).

Condition
Turfed with some exposed stone

Site No. 10
NGR: NB 3056 4906
NMRS No: NB34NW 2.02
Location: Old Arnol, Cnoc na Glas Bhuaile
Site Type: Building/enclosure

Description
The stone and turf footings of a poorly preserved house/enclosure. It consists of one long wall with a return and short stretch of wall at the S end. This could easily represent the remains of a building but none is shown on the 1st edition 6" OS map (1853).

Condition
Grassed footings with occasional exposed stone.

Site No. 11
NGR: NB 3039 4930
NMRS No: NB34NW 2.02
Location: Old Arnol
Site Type: Building/enclosure

Description
The stone and turf footings, standing to 0.5 m, of at least three buildings aligned NW-SE and separated by courtyards. Two enclosure walls run to the NW on either side of the main courtyard and a recent shooting butt has been constructed of stone at the end of each of these. Three ruined buildings within an enclosure can be seen at this point on the 1st edition 6" OS map (1853).

Condition
Grassed footings with occasional exposed stone. Recent dumping of clearance stone in places.

Site No. 12
NGR: NB 3043 4904
NMRS No: NB34NW 2.01
Location: Old Arnol, Cnoc Mor Arnoil
Site Type: Building/enclosure

Description
The turf footings standing to 0.3 m with only the larger stones remaining to mark the position of a rectangular stone building (12a). To the NW of 12a lies a second rectangular building (12b) with thick, turfed walls up to 0.5 m in height. This has a possible extension or additional room to the N (12c). 12d consists only of a single line of stone footings which appears to represent the remains of an end wall of a large, but substantially destroyed building. 12b is marked as a ruin on the 1st edition 6" OS map (1853), 12a is not marked and 12d could represent the end wall of a building surveyed at the time.

Condition
Grassed footings with occasional exposed stone.

Site No. 13
NGR: NB 3057 4900
NMRS No: NB34NW 2.02
Location: Old Arnol, Cnoc na Glas Bhuaile
Site Type: Building

Description
The turf footings, standing to 0.3 m, of a rectangular building. Some of the larger stones are still in position. The building is not shown on the 1st edition 6" OS map (1853) so was either hardly visible at the time or had not yet been built. The site lies within an enclosure that was recorded at that time.

Condition
Grassed footings with occasional exposed stone.

Site No. 14
NGR: NB 3060 4896
NMRS No: NB34NW 2.02
Location: Old Arnol, SE of Cnoc na Glas Bhuaile
Site Type: Building

Description
The turf footings of a building with three parallel rooms orientated NE-SW, standing to 0.3 m. The robbed-out walls can be seen as double lines of stone in some places and single lines elsewhere. The building is shown as a single rectangular roofless structure on the 1st edition 6" OS map (1853).

Condition
Grassed footings with occasional exposed stone.

Site No. 15
NGR: NB 3064 4894
NMRS No: NB34NW 2.02
Location: Old Arnol, Cnoc na Glas Bhuaile
Site Type: Building

Description
Traces of the stones of a double-skin wall largely buried beneath a substantial clearance cairn. Shown as being a large roofed building on the 1st edition 6" OS map (1853).

Condition
Orthostats within grassy area covered by clearance cairn.

Site No. 16
NGR: NB 3067 4889
NMRS No: NB34NW 2.02
Location: Old Arnol, Cnoc na Glas Bhuaile
Site Type: Building

Description
Stone and turf footings of a building with two rectangular rooms standing to 0.5 m and partially filled with rubble. Thought locally to have been the site of the old schoolhouse. Shown as a ruin on the 1st edition 6" OS map (1853).

Condition
Stable grassed footings with some exposed stone.

Site No. 17
NGR: NB 3070 4875
NMRS No: NB34NW 2.02
Location: Old Arnol, SE of Cnoc na Glas Bhuaile
Site Type: Building

Description
The turf and stone footings of a single roomed rectangular building. The double-skinned wall survives to 0.7 m in the S, W and parts of the N but has been demolished to the E. The building is not shown on the 1st edition 6" OS map (1853) but a small enclosure and a smaller building just to the SE are both shown.

Condition
Standing masonry and low grassed footings.

Site No. 18
NGR: NB 3064 4887
NMRS No: NB34NW 2.02
Location: Old Arnol, SE of Cnoc na Glas Bhuaile
Site Type: Building

Description
A pile of stones covering possible evidence for a badly robbed double-skinned wall. A building and enclosure are shown at this point on the 1st edition 6" OS map (1853).

Condition
Possible stone footings, largely robbed and covered by clearance stone.

Site no. 19 (House no. 65 on 1998 Blackhouse Survey)
NGR: NB 3108 4888
NMRS No: NB34NW 2.03
Location: Arnol township
Site Type: Building

Description
Grassed footings of a two-roomed blackhouse orientated N-S. Although walls are standing to 0.2-0.3 m this is only poorly visible against the surrounding grassland. This building is the remains of one of the houses seen on 1st edition 6" OS map (1853).

Condition
Poorly visible but stable.

Site no. 20 (House no. 8a on 1998 Blackhouse Survey)
NGR: NB 3092 4834
NMRS No: NB34NW 2.03
Location: Arnol township
Site Type: Building

Description
Grassed footings of a three-roomed blackhouse orientated N-S. Walls are standing to 0.5 m and are joined at 90° to the ruins of a surviving blackhouse (House no. 8 on the 1998 Blackhouse Survey). This building is the remains of one of the houses seen on 1st edition 6" OS map (1853).

Condition
Grassed and stable

APPENDIX B - SUMMARY OF MAIN FEATURES OF THE SURVEYED BLACKHOUSES AT ARNOL

For location of blackhouses see illustration 20.

Croft/ house	OS map	Air photo	Surveyed	Interpretation	Description	Condition	Present use
Nos.	1897	1951	1998				
4(i)	Y	Y	Y	Early blackhouse with modifications	Four rooms possibly making up two separate houses. Main/living area/byre with later central partition and collapsed extension to the SW. Second living area to the SW has been shortened. Rounded corners throughout, walls stand to 1.6 m.	Stands to full height more or less throughout. Roof timbers, furniture, loom all decaying. *in situ*	Abandoned
4(ii)		Y	Y	Later blackhouse with few modifications	Two rooms. Essentially unmodified except for some poorly made modern partitions. Walls to 1.9 m	Stands to wall height except in N end of annex.	Abandoned
5	Y	Y	N	Not surveyed	Harled and incorporated into modern house.	The surviving building stands to full height and is roofed.	Occupied
6		Y	Y	Later blackhouse with few modifications	Two rooms. No partitions. Rounded internal corners. Hearth set in end wall of living area/byre. Stands to 2 m.	Stands to full height throughout.	Abandoned
7(i)	Y	Y	Y	Later blackhouse with some modifications	Two rooms. Large rectangular rooms with walls up to 2 m. Aborted attempt to construct gable to the NW of living area/byre. Part-built on 1897 OS Map.	Stands to full height throughout	Abandoned
7(ii)	Y	Y	Y	Possible remnant of the early crofting alignment (1853)	Three rooms seen as low grassy mounds.	Low grassy walls - substantially robbed.	Abandoned
7(ii)	Y	Y	Y	Early blackhouse little modification before abandonment	Probably two original rooms but the annex has been divided/ extended at some point. Walls to 1.6 m.	Stands to original height except in N end of living area/byre.	Abandoned
8	Y	Y	Y	Early blackhouse little modification before abandonment	Two rooms . Rooms with low rounded end walls (to 1.4 m). An early example.	Annex largely destroyed (0.3 - 0.7 m) and grassed over. Living area/byre survives to original height.	Abandoned/ Sheep dip
9		Y	Y	Later blackhouse with modifications	Two rooms with decaying thatched roof on annex and corrugated iron on remainder. Living area/byre has central partition but has been demolished to N. Walls stand to 1.7 m. Furniture and timber decaying in annex.	Stands to full height where surviving but living area/byre has been demolished to N to make way for whitehouse. Thatched roof collapsing.	Storage/ Abandoned
10(i)	Y	Y	Y	Early blackhouse substantially modified	Two rooms with walls up to 1.9 m. Living area/byre with central partition, step and gable inserted in NE end. Large entrance at SW end of byre.	Stands to full height except to SW of annex.	Abandoned / Dump
10(ii)		Y	Y	Example of a small later blackhouse significantly modified	Two rooms. Living area/byre has later central partition and a partition at the SW of the byre to separate collapsed area. Height 1.4 - 1.8 m. Squared corners.	Stands to full height throughout with roof timbers, animal stalls and furniture decaying where abandoned.	Abandoned
10a	Y	Y	Y	Early/late blackhouse with substantial modification	Two roomed. Living area/byre with added central partition. Collapse and rebuild/shortening of S wall of living area. Walls to 1.9 m	Stand to full height in most places with living area roofed with corrugated metal.	Storage
11	Y	Y	Y	Early blackhouse with modifications	Two rooms but possibly more rooms originally. Living area/byre has central partition. Stands to 1.9 m. There are wall features to the W which could be the remains of a more complicated series of rooms shown on 1897 OS map.	Stands to full height throughout.	Abandoned
12	Y	Y	Y	Early blackhouse substantially modified	Two rooms with walls up to 1.9 m. Living area/byre with partition wall and gable inserted in NE. Byre and annex have been shortened to SW with partition walls.	Standing to original height except in collapsed areas to the SW.	Vegetable garden and storage
16(i)	Y	Y	Y	Early blackhouse with modifications	Two surviving rooms - three to four shown on 1897 map. Largely destroyed to SW. Only evidence for partitions is the NW annex. Rounded walls stand to 1.8 m.	Standing to wall height where surviving but SE and E parts have been demolished	Abandoned
16(ii)	Y	Y	Y	Early/Late blackhouse	Two rooms. Living area/byre has had a partition wall put into NE end to separate an area of collapse. Walls stand to 1.5 m.	Surviving to wall head in most places rooms filled with scrap metal and other rubbish.	Dump
16(iii)		Y	Y	Later blackhouse with modifications	Two rooms. Living area/byre has a breeze block partition, E end has a corrugated roof. Walls stand to 2.1 m.	W end of building demolished. E end of Living area/byre is roofed. Walls stand to original height.	Storage and loom shed

Croft/ house	OS map	Air photo	Surveyed	Interpretation	Description	Condition	Present use
Nos.	1897	1951	1998				
18		Y	Y	Later blackhouse with modifications	Two rooms. Living area/byre with central partition and gable at N end. Roof timbers, animal stalls and furniture surviving. Height of walls to 1.9 m. with squared internal corners.	External NW corner of gable collapsed the remainder stands to original height.	Abandoned
19		Y	Y	Later blackhouse with modifications and additional whitehouse	Two rooms with two storey whitehouse addition. Roofed portion has been used as slaughter house and has a concrete floor. The whitehouse is full of pieces of loom. Height to 1.8 m.	SW end end of byre is unroofed and has been backfilled with rubble from the demolished SW annex. The middle section of living area/byre roofed with corrugated iron Whitehouse unroofed.	Dump
20	Y	Y	Y	Early blackhouse with modifications	Five rooms. Main living area/byre with no central partition. Shortened with partition walls at N and S end. E annex has a small partition wall. SW annexes are in poor condition and demolished to S. Walls to 2m.	Walls in living area/byre to full height but all rooms on W side is in poor condition.	Abandoned
21(i)		Y	Y	Later blackhouse with modifications possible with substantial rebuilds	One long room with central partition wall and single pitch whitehouse extension to the NE. Wall height to 1.9 m with squared corners.	Stands largely to original height. Whitehouse extension unroofed.	Abandoned
21(ii)	Y	Y	Y	Early blackhouse with modifications	Three rooms. Living area/byre with no central partition but with partition walls at both ends shortening the room. W annex shortened. E annex largely demolished. Walls rounded with height to 1.8 m.	Where standing it is to full height but E annex and N and S of all rooms largely destroyed.	Animal pen and storage
23	Y	Y	Y	Early blackhouse with substantial modifications	Three rooms. Living area/byre with central partition, gable in NE and shortened to SW by further partition. SE annex shortened to NE. NW annex reduced to NE. Crib in wall of living area. Wall height to 1.5 m with rounded corners throughout.	Walls standing in most places to full height apart from NE end of SE annex.	Abandoned
24	Y	Y	Y	Later blackhouse with modifications	Three rooms but NW annex had been removed. Living area/ byre has partition wall of shuttered concrete and gable at NE end. Wall height to 1.9 m in Living area/byre, 1.5 in annex. Squared internal corners.	To full height but NW annex has been removed and the stone dumped in SW end of living area/byre. Scars can be seen where annex removed.	Abandoned/ dumping
25	Y	Y	Y	Early blackhouse with modifications	Three rooms. Living area/byre with central partition, shortened in N by partition wall and largely destroyed in the S. E annex destroyed. Walls stand to 1.6 m.	Remaining wall stand to full height. E annex and S end of building destroyed during landscaping.	Abandoned
27(i)	Y	Y	Y	Early blackhouse with some modifications	Three rooms with possible remains of fourth to the NE. Living area/byre stands to 1.5 m except at ends where they are c. 0.5 m. Living area/byre shortened at both the N and S by partition wall because of collapse. Fireplace inserted in N partition wall.	W annex substantially intact E annexes largely destroyed.	Abandoned
27(ii)		Y	Y	Later blackhouse with added whitehouse and modifications	Originally two rooms with added double pitch extension to the E and small room to the NW. Living area/byre with central partition, walls squared and to 1.9 m. Furniture, roof timbers and a plough decaying in rooms.	Standing to original height in most places. Substantial collapse in S face of internal wall of annex.	Abandoned
29	Y	Y	Y	Early blackhouse with modifications	Three rooms seen as low grassy mounds.	Seen only as grassed wall footings largely destroyed by tractor track.	Abandoned
30a	Y	Y	Y	Early blackhouse with modifications	Three rooms. Living area/byre possibly with central partition, has been shortened to SW, largely demolished to NE. W annex has partition shortening it to NE. E annex largely destroyed. Wall height to 1.7 m. Thatched roof over SW end of living area/byre.	Stands to full height in SE. Largely demolished to NW and E annex. Has a maintained thatched roof over SW end of living area/byre.	Storage/ Abandoned
30b	Y	Y	Y	Early blackhouse with modifications	Three rooms. Living area/byre with central partition added. Has been reduced by partition walls twice to N and once to S. W annex shortened to N. Wall height to 1.5 m.	Stands to full height except at S and of E annex. Ends of living area/byre beyond partitions largely destroyed.	Abandoned
32		Y	Y	Later blackhouse with modifications	Two rooms. Living area/byre with central partition. S part is still roofed with corrugated iron. It has been shortened to the N and may have originally run to the field dyke. There was a gable to the S but this has fallen down. Height of walls to 2.1 m.	Walls to original height where standing. In extreme N, however, it has been reduced to a grassy bank.	Animal stalls/dumping
33	Y	Y	Y	Early blackhouse with modifications	Three rooms. Living area/byre has central partition and has been shortened at both the north and south ends. E annex is shortened at N end. Small bulge/bank attached to the exterior wall to the NE of the W annex. Walls rounded and to 1.9 m.	Walls standing full height through most of the building but the N end of the E annex and the living area/byre has been demolished.	Abandoned

Croft/ house	OS map	Air photo	Surveyed	Interpretation	Description	Condition	Present use
Nos.	1897	1951	1998				
34		Y	Y	Later blackhouse	Three rooms. Living area/byre has been shortened at both ends by partition walls. Central partition wall also present. E annex shortened. W annex probably shortened to make way for adjacent whitehouse.	Stands to full height in most parts various many areas of collapse were noted. Part has been demolished to make way for later whitehouse. N and S ends of living area/byre have collapsed.	Abandoned/ Dump
36(i)	Y	Y	Y	Early blackhouse substantially modified	Two rooms with walls up to 1.9 m. Living area with added gable to S. Central partition added then later partition to shorten byre.	Standing to full height except for small collapse at byre end. Gable to 4 m. Some roof timbers remain.	Abandoned
36(ii)	Y	Y	Y	Early blackhouse with modifications	Three rooms. Traces of possible central partition. E annex has a partition wall dividing off an area of collapse. Walls with rounded corners to 1.5 m.	Walls to original height in S half of the buildings. Reduced to grassy footings in the N.	Abandoned
37(i)	Y	Y	Y	Early blackhouse with modifications	Two rooms. Living area/byre is roofed to the S with corrugated metal it has a central partition. W annex has a partition wall at the N end separating off an area of collapse. Wall height to 1.6 m.	W annex is badly disturbed and both rooms are collapsed in the north End. The S end of living area/byre is roofed.	Abandoned/ loom shed
37(ii)	Y	Y	Y	Early blackhouse with modifications	Three rooms. Living area/byre has three partition walls shortening the room to the W. Walls are rounded and to 1.6 m. Crib in living area wall.	Walls to original height in central part of the living area/ byre but deteriorated badly to the W where it is represented by grassy footings.	Abandoned/ Dumping
38	Y	Y	Y	Early blackhouse largely rebuilt	Three rooms - one demolished. Large living area/byre with added gable to E with walls up to 1.9 m. Has been substantially rebuilt in parts with worked stone. Squared corners internally and externally.	Standing to full height in remaining parts The northern annex has been demolished as has western end of byre.	Parking/Animal shelter
39	Y	Y	Y	Early blackhouse with modifications	Two rooms with wooden partition between living area and byre.	Extensively renovated and roofed	Part of new visitor centre
40		Y	Y	Later blackhouse with modifications	Two roomed. Living area/byre with added central partition. Collapse and rebuild/shortening of W. Living area is roofed with asbestos, it has a wooden partition in side. Annex is 1 m wider at E end. Walls to 1.8 m.	Walls stand to full height in most places. Roofed in E part of living area. W part of byre is part demolished.	Garden, storage and loom shed
41		Y	Y	Later blackhouse with modifications	One, possibly two, rooms with second largely destroyed. Gable at E end of living area and central partition.	Mostly destroyed with only remaining part the E end of living area(gable).	Abandoned
42	Y	Y	Y	Early blackhouse with modifications	Three rooms. Living area/byre has step but no stone partition.	Extensively renovated	Museum
43(i)	Y	Y	Y	Early blackhouse with modifications	Two rooms. Living area/byre with central partition. Rounded corners with original wall height to 1.6 m.	Living area/byre stands to full height to the N. Byre end and annex largely destroyed and grassed over in most places.	Abandoned
43(ii)		Y	Y	Later blackhouse with whitehouse extension	Two rooms with added single pitch extension. Living area/byre with central partition. Walls stand to 1.7 m with squared internal corners.	Stands to full height throughout. Roof missing from single storey extension.	Abandoned
44		Y	Y	Later blackhouse with modifications	Two rooms with additional double story whitehouse. No central partition but with wide byre entrance to SW. SE annex has a partition wall separating off area of collapse to S. Walls square internally and standing to 1.7 m.	Standing to original height except in SW part of the annex. Whitehouse has no roof.	Storage and tractor park
46(i)	Y	Y	Y	Later blackhouse with added whitehouse and modifications (shown with two rooms on 1897 OS map)	Three rooms. Living area/byre central partition. W annex has been shortened with added partition. Walls stand to 1.8 m. Added whitehouse extension to the S but this is largely demolished. Later single storey extension to the SE.	Walls stand to full height but collapsed in N end of W annex. One whitehouse extension part demolished other still roofed.	Abandoned
46(ii)		Y	Y	Later blackhouse with modifications	One room. No partition walls. All corners are square and walls stand to 1.1 m but this is not original height.	Poor, not surviving to full height with extreme collapse along eastern wall.	Abandoned
Poorly defined or demolished buildings							
A			Y	Early blackhouse	Two rooms seen only as low grassy mounds. Shown on 1853 OS map.	Low grassy walls - substantially robbed.	Grazing
B	Y	Y	Demolished		One room with two internal partitions.	Free Church constructed over the top.	
C	Y	Y	Demolished		Three rooms.		

Croft/ house	OS map	Air photo	Surveyed	Interpretation	Description	Condition	Present use
Nos.	1897	1951	1998				
D	Y	Y	Demolished		Four rooms on map three on AP.		
E	Y	Y	Demolished		Three rooms on AP with partition wall in living area/byre.		
F	Y	Y	Demolished		Four rooms on map two on AP.		
G		Y	Demolished		One room. Does not show up well on maps but is more convincing on APs.		
H		Y	Demolished		One room with apparently two partitions.		
I	Y	Y	Demolished		Three rooms and roofed on AP. Four rooms shown on 1897 OS map.		
J		Y	Demolished		One room divided into two areas on AP.		
K	Y	Y	Demolished		Three rooms with squared ends on AP.		
L		Y	Demolished		Two rooms.		
M			Demolished		Building as seen on Dewar AP (1973) possibly modern		
N	Y	Y	Demolished		Three rooms.		
O	Y	Y	Demolished		One room.		
P	Y	Y	Demolished		Two rooms.		
Q		Y	Demolished		Two rooms.		
R		Y	Demolished		Two rooms.		
S	Y		Demolished		Three rooms.		

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GLOSSARY

Articles of Set – A series of rules and regulations that the estate imposed upon its tenants.

Baile - An irregularly shaped cluster of houses characteristic of pre-Clearance settlements (often also called a clachan).

Battered - used primarily regarding walls and meaning wider at the base than at the wallhead.

Ceilidh – literally 'visiting', a gathering where stories are swapped, sometimes with singing and music.

Craggan - A large pot for carrying milk and other liquids.

Creaga - a multicellular building formed of a series of aggregated sub-rectangular rooms. The precursor of the modern blackhouse.

Croft - The basic agricultural unit of the Crofting system comprising the house and the land.

Fosglan (Fosgalan) - The porch or entrance area in a blackhouse.

Runrig - The system of land management that preceded the crofting system. Under this system the land was re-apportioned at regular intervals so that individuals within the settlement would have equal access to the good and bad agricultural land.

Inbye - the land directly around the crofts that is cultivated every year.

Shieling - A small building or shelter occupied only during the summer months while the cattle are put to grazing on the open moor (*bothan-airigh*).

Winnowing - The removal of light cereal chaff from the grain by throwing or pouring the grain when there is a stiff breeze.