

# The Deserted Settlement at Lix, West Perthshire

by Horace Fairhurst

## INTRODUCTION

Small clusters of ruined dwellings are scattered widely along the lower slopes of the glens of the Scottish Highlands, and form a characteristic feature of the landscape. The rural depopulation, of which these deserted settlements are a reminder, has been discussed widely, although all too often in the popular mind forceful eviction of the tenantry by ruthless landlords in the early nineteenth century is held to be the simple cause. A complex process is involved, covering many decades and with many local variations on the general theme. Rural depopulation in any case has been widespread in Britain and Ireland, and the Highlands present in one sense only a regional, if intense and even catastrophic, aspect of a general problem.

In a previous paper, the characteristics and significance of these ruined dwellings have been indicated.<sup>1</sup> Briefly, the the arrangement in small clusters or clachans appears to have been associated with the old group farms in which the land was cultivated in run-rig, jointly by the tenants. After the Rising in 1745, the old way of life began to change with the organisation of peaceful conditions within the Highlands and with the penetration of new ideas as the Agrarian Revolution progressed in the Lowlands. As an immediate reaction, population in the glens increased considerably, at least until the early decades of the nineteenth century, but in time the elimination of the old group farms, the coming of the sheep farmers, the evictions and the attraction of the growing industrial centres in the south and of the developing colonies, all led to a decline. This had become general by the end of the century, and acute in the districts which had been earliest affected.

It was suggested in the earlier paper that the individual buildings in the ruined clusters probably belong for the most part to the period of vigorous but unhealthy growth of population in the period between 1750 and the general decline setting in somewhere about 1820 or 1830. The need for morphological study of these ruinous clachans in the Highlands is obvious; they offer an opportunity of studying the folk life of the period with few parallels in Western Europe. They may also offer a key to the settlement-morphology of a phase earlier than the short period to which the present ruins appear to belong, for they are undoubtedly survivals of what may be presumed to be a much older tradition. Details of the settlement pattern for the period before 1750 are remarkably scarce in the present state of our knowledge, but a consideration of the Irish evidence led Proudfoot to suggest an origin for these clachans as far back as the Dark Ages,<sup>2</sup> and Gailey has supported this thesis for Scotland.<sup>3</sup>

At first sight the deserted settlement at Lix seems to have no claims to warrant special study

<sup>1</sup> Fairhurst, H., 'Scottish Clachans', *Scot. Geogr. Mag.* 76 (1960), 67-76, with a more recent discussion in Fairhurst, Horace, 'The Archaeology of Rural Settlement in Scotland', *Trans. Glasgow Archaeol. Soc.* xv (iv) (1968), 139-58.

<sup>2</sup> Proudfoot, V. Bruce, 'Clachans in Ireland', *Gwerin* 2 (1958-9), 110-22.

<sup>3</sup> Gailey, R. Alan, 'The Evolution of Highland Rural Settlement', *Scottish Studies* 6 (1962), 155-77.

and in fact it was selected as an average *type site*, as one of many possible choices.<sup>1</sup> The ruins of the houses, although extensive, are nothing like so impressive as those for instance of Tirai in Glen Lochay (NN 527366), nor of Tomtayewen near Aberfeldy (NN 886503). Lix, however, had been deserted since at least the middle of last century, apart from the three very distinct modern sheep farms, and it was thought that unnecessary complications might be avoided as compared with many other similar sites where occupation had lingered on to a later period. Moreover, a preliminary search had brought to light the existence of a useful body of documentary evidence on this little district. It must be emphasised, however, that very little had been written on these old Highland settlements; it was not known, for instance, how far back in time the ruined houses could be traced, and the whole investigation was very much of an exploratory nature.

So much help and advice have been given from so many quarters that acknowledgment in full is out of the question. In particular, however, I am indebted to Mr Gordon Petrie whose efforts have made possible this report in its present form. He undertook both the large-scale survey, with the help of his students from the Geography Department of the University of Glasgow, and later plotted the smaller-scale plans from air photographs. His advice and comments, and his help in the search for documentary evidence at Register House, Edinburgh, have been invaluable. Dr Bruce Proudfoot, then at Durham University, and my colleague Dr Alan Gailey, now at the Cultra Folk Museum in Northern Ireland, were of great personal help in the excavations and gave much advice and encouragement.<sup>2</sup> My sincere thanks are due to Mr McNabb for permission to excavate, to the tenants of Lix, Mr Campbell and Mr Willison, for their kindness and patience with us, and to Dolores McBride and Michael Wood for the care and skill in preparing the plans for publication. Mr MacInnes and Dr Imrie at Register House gave us every facility and their invaluable guidance. Finally, it is a pleasure to record that this work as a whole has been made possible by the generous financial assistance of the Court of the University of Glasgow during three seasons of field work and in other subsequent visits to Lix.

## GENERAL CHARACTERISTICS•

### *Situation and limits*

The place-name according to Watson<sup>2</sup> is an Anglicised plural of a Gaelic word *lic*, the dative of *leac*, meaning a flagstone or hard slope. The latter interpretation seems appropriate in view of the steep side of Glen Dochart which overlooks the site. The name has many variants in the records such as *Licks*, *Lycks*, *Leeks*, *Leaks*, and a very early example *Lik*, in the Register of the Great Seal of Scotland for 1573. The latter might be significant as indicating an older singular form in use before the Anglicised plural, while the district was still a simple unit.

At present, three sheep farms carry the name as East, Middle and West Lix; the first belongs to Mr McNabb and is worked as part of the larger farm of Acharn to the east; the other two are in the possession of the Earl of Dundee. This division of ownership is scarcely twenty years old and previously Lix had been part of the Breadalbane Estate. Before the mid-eighteenth century, however, it was a small independent barony comprising the three farms.

The district lies within the parish of Killin, three miles to the west of the village. The lands of Lix stretch from the River Dochart up to the watershed with the Earn drainage some three miles away to the south (fig. 1, Pl. 19a). The boundaries to east and west are marked only by small burns so that the old barony was not a naturally demarcated unit. Through the middle

<sup>1</sup> A preliminary discussion appeared in Fairhurst, Horace and Petrie, Gordon, 'Scottish Clachans II: Lix and Rosal', *Scot. Geogr. Mag.* 80 (1964), 150-63.

<sup>2</sup> Watson, W. J., 'The Place Names of Breadalbane', *Trans. Gaelic Soc. Inverness* xxxiv (1927-8), 248-79.

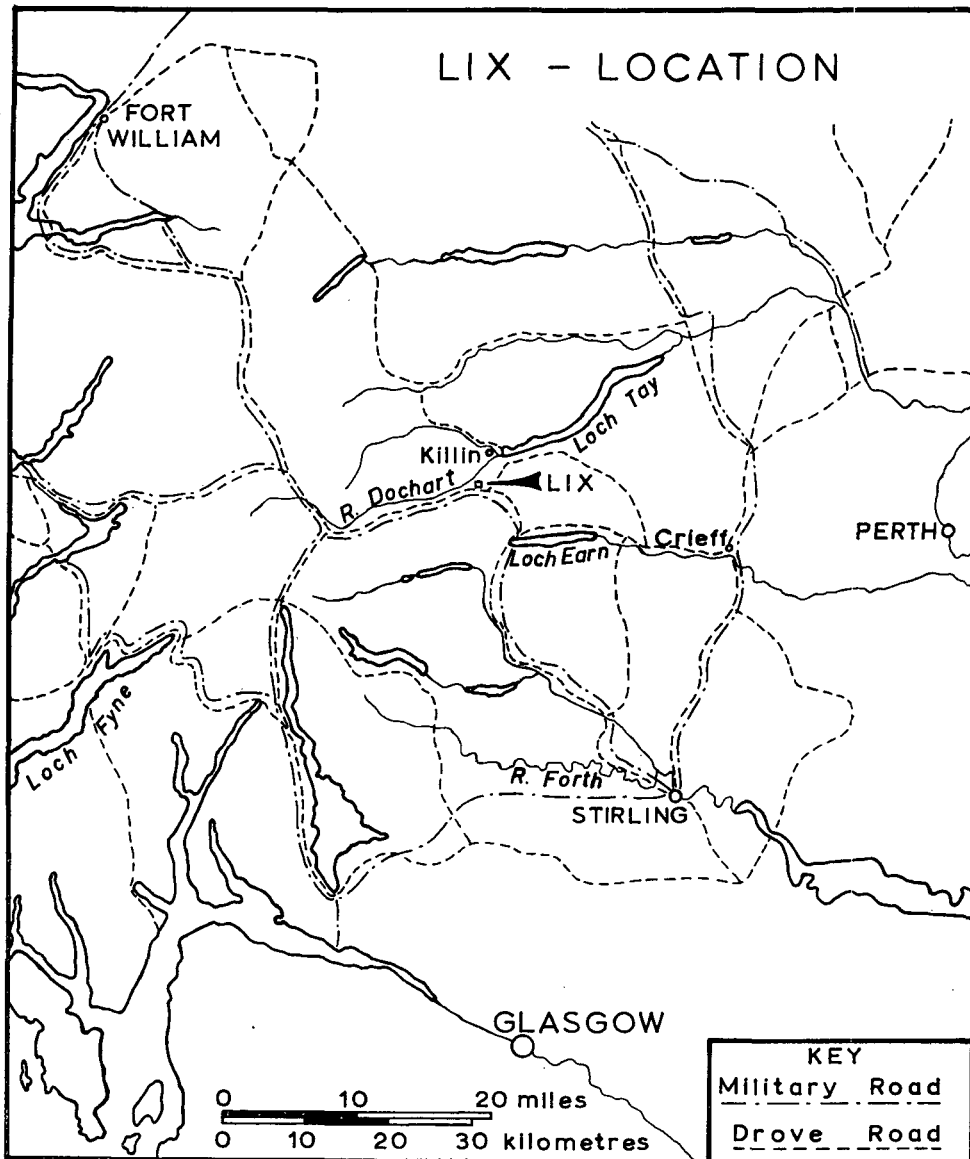


FIG. 1. Lix: location.

flows a larger river, the Allt Lairig Cheile, coming down from the south and draining a loch in a steep-sided pass over to Glen Ogle.

Placed at the T-junction where this routeway from the south via Glen Ogle joins the broad east-west corridor of the Tay-Dochart, Lix appears to be at a strategic centre in this part of the Highlands. Main roads, a railway and high tension cables all cross the ground today, and in the past it acted as a nodal point for communications but it was too high and exposed to develop as a population centre as against Killin (fig. 1).

During investigation of the site, information on the older routeways through Lix has come

to light from various sources: some of this detail appears in Appendix I. In brief, the Military Map of Scotland (Roy's Map) shows one track passing up Glen Dochart past Lix from Loch Tayside, and another which is probably a drove-road from further north, leads southwards above the arable lands of Lix from the direction of the old bridge at Killin. A military highway was built northwards through Glen Ogle and Lix immediately after the 'Forty-Five' under the direction of Major Coulfield, Wade's successor, and was completed by 1752. This was joined just west of the present Middle Lix farmhouse by another new road from along Loch Tay; there the Military Highway turned westwards up Glen Dochart. Both of these roads may be distinguished in places within Lix where the routes diverge from those of the present main roads.

### *The terrain*

The general characteristics of the Barony of Lix are shown on two period maps (figs. 2 and 3), reproduced from an earlier paper<sup>1</sup> by kind permission of the Royal Geographical Society.

On each side of the pass at Glen Oglehead, the massive shoulders of Beinn Leabhain to the east and Meall Sgallachd to the west, rise in steep grass and heather slopes, broken by rock outcrops, to an irregular summit plateau at about 2,000 ft. This elevated ground forms poor grazing, but it was important formerly for the shielings; three groups of these temporary dwellings have been located at heights between 1,150 and 1,800 ft. Below the level of the pass over to Glen Ogle, the downward slope flattens out between about 800 and 550 ft. in a terrace-like feature diversified by great mounds of moraine belonging to the last phase of the Highland glaciation. This deposit is characteristic over long distances up Glen Dochart, especially on the southern side. At Lix, the smooth mounds vary considerably in size and shape from small hillocks to low drumlin-like features three hundred yards or so in length. The lower end of the morainic terrace occurs at about 550 ft. where the ground begins to fall away more sharply towards the Dochart; here, the burns are dissecting the terrace edge, and the ground becomes rough and very stony. Along the river, there are extensive but discontinuous stretches of haughland at a general level of about 450 ft.; they must have been very liable to flood in the old days.

The north-western facing slope of the Lix area, the exposure to east and west winds along the Dochart trough, the high rainfall of somewhere about 40 in. to 60 in. annually, the leached and rather acid soils developed over stony moraine, all contribute to make farming difficult. In detail, too, the better grazing and the very much restricted arable land occur only as discontinuous patches.

Traces of former cultivation begin to appear as high as about 850 ft. in the form of small isolated areas of smoother ground, often surrounded by old low turf dykes, amid the coarse grass, heather and bracken. They occur on the better-drained mounds, while the hollows between are damp and often filled with peat which has been cut for fuel here and there in times past. Below 750 ft. and as far north as the edge of the terrace at about 550 ft., much of the land on the numerous mounds is smooth and grassy. Faint traces of ridging are often apparent, when the light happens to be in the right direction, even on quite steeply sloping ground. The present farmhouses of Middle and West Lix lie in this zone as well as the ruined structures of the earlier settlement. Many of these grassy areas have obviously been cleared of stones which have been used in building the dwellings and dry stone dykes, and only rarely have been heaped into 'clearance cairns'. In one place at East Lix, there is a great boulder *in situ* which has been bored in preparation for blasting it apart, and stones used in the older buildings sometimes show the characteristic groove where they have been drilled for splitting. Pennant, speaking of the eastern part of the Breadalbane estates in 1769, remarks that 'A blaster was in constant employ to blast the great stones

<sup>1</sup> See p. 161, n. 1 above.

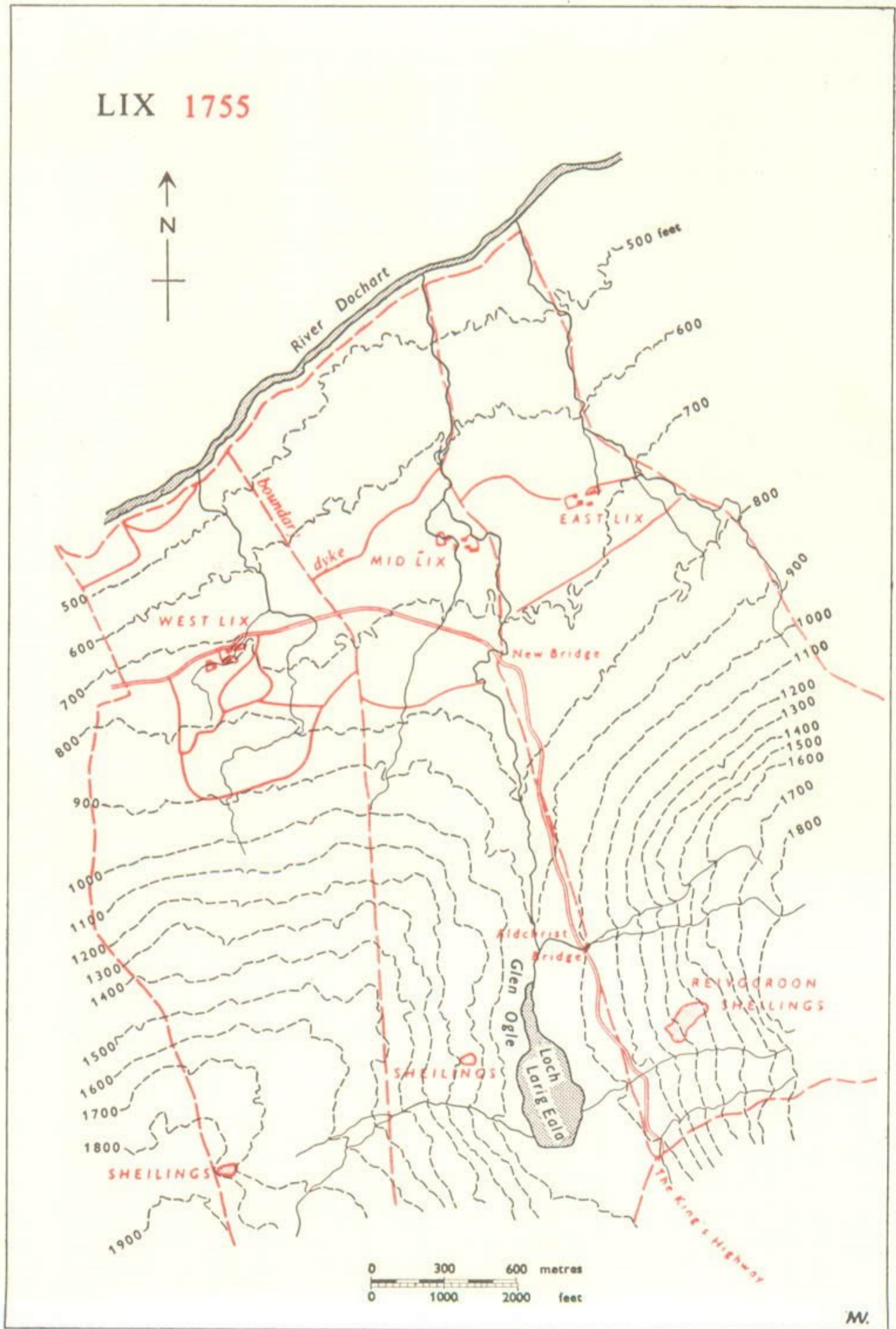


FIG. 2. Lix in 1755.

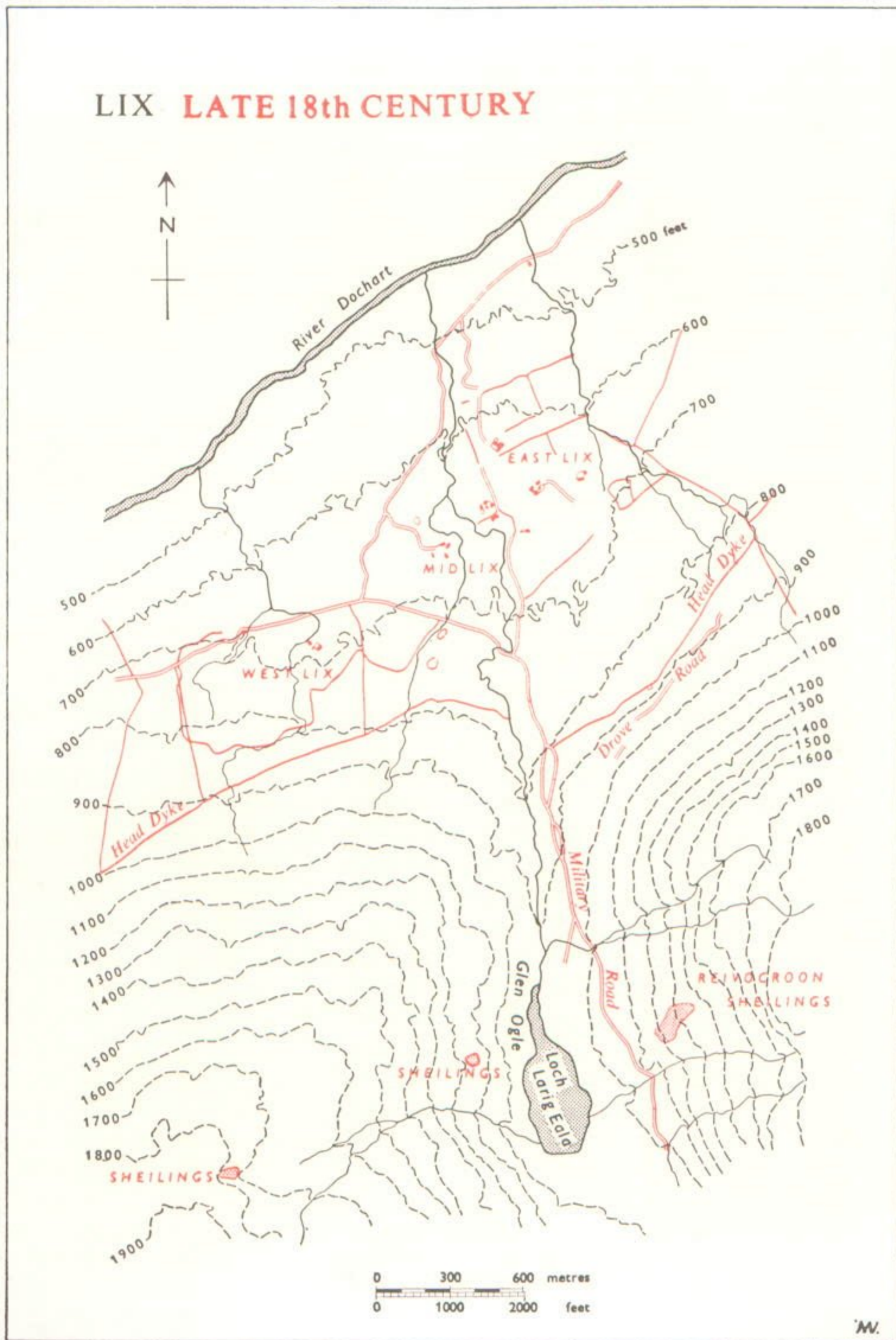


FIG. 3. Lix in the late eighteenth century.

with gunpowder; for by reason of their size, there was no other method of removing them.<sup>1</sup>

Between the drier mounds, especially on East Lix, are damp peaty hollows which may even contain reeds and standing water. In some cases the old dykes cease at the edge of the marsh, suggesting that these damp areas have always been impassable for stock more or less, but sometimes, for instance in the broad hollow running across East Lix from the direction of Middle Lix farmhouse, both the dykes and the old trackways are now partly submerged through a rise in the water level after the old drains had become choked.

On East Lix the rolling surface of the broad terrace-like feature is a rather dreary expanse of rough grazing, but both Middle and West Lix are drier, and with the occurrence of patches of arable and improved grassland, there is a far less neglected air. A few alders, birches and willows appear along the larger burns, and one huge sycamore in complete isolation on East Lix shows how vigorous tree growth can be at this altitude.

#### *The older settlement pattern*

Survivals of a settlement older than the present sheep farms at Lix occur in the form of numerous clusters of ruinous buildings distributed along the morainic terrace described above. The clusters vary in form, size and degree of dilapidation and are described individually below, but many characteristics are common to all.

The ruins are best preserved amid the grazing land on East Lix where they form a striking feature. Four main clusters are scattered at 200-50 yard intervals around a dominating knoll at 700 ft. in the central part of the terrace (fig. 4). Across the broad marshy hollow to the south of the knoll, another very small site is to be noted. Again, a single building which is still in use as a storehouse down at the present East Lix farm steading, on the main road to Killin, must also belong to the same complex. Just across the Allt na Lice, on the neighbouring farm of Acharn, yet another cluster must also be recorded, although it lies just outside the Lix boundary. Many of these buildings on East Lix seem to have been but little disturbed since they were abandoned, and the stackyards, old field dykes, trackways and kilns form something in the nature of a museum piece in an open-air setting. Around the present steading of Middle Lix and much confused with it, there is another small group of ruins which have suffered badly from stone robbers. Finally, half a mile away at West Lix, there are the vestiges of two more clusters, again rather close to the modern buildings and but poorly preserved (fig. 3).

Each of the clusters consists of up to eight buildings, together with walled enclosures which were yards, either for stacks or for stock, or perhaps even kailyards. At Lix, buildings and yards are arranged normally on a roughly rectilinear pattern (Pl. 19b). With very few exceptions, the individual structures are similar in general form. The buildings are rectangular, although perfectly straight walls were not normal. The masonry rarely stands more than 2 to 3 ft. high except that in a few cases, usually at a corner, it may still rise to 6 ft., giving an indication of the original height. Walls, dykes and kilns are invariably dry-stone built; many of the stones have been used as they were collected from the boulder clay, but the wall-faces both inside and out often incorporate the straight sides of split stones.

Huge blocks may be used in the foundations of the dwellings, especially at the corners where the walls can be over 3 ft. thick. Higher up, the masonry narrows to about 2 ft., and there is a distinct batter on the outer face. Nowhere is there any sign of regular coursing. The stones forming the inner and outer faces of the walls are normally of much the same size and meet together at a linear division along the centre of the wall. This may be filled up with small chips,

<sup>1</sup> Pennant, Thomas, *A Tour in Scotland. MDCCLXIX.*  
Third edit. (1774), Warrington, Vol. I, p. 83.

but there is no sign of a clay core to keep out the wind. It is very probable that the roofs were carried on crucks in the form of pairs of curved beams slotted into the long walls. Numerous examples of the use of this technique are known locally, usually through the survival of the slots in otherwise ruinous structures. Good examples occur at Tirai in Glen Lochay (NN 527366) where they are well preserved, but occasionally the timbers themselves survive as described by Dunbar at Camsernay and Lawers.<sup>1</sup> At Lix, only one cruck recess was recognisable for certain, and that was in an exceptional building at West Lix. In general, the walls seem rarely to stand sufficiently high for the characteristic slot to have been preserved; this may not commence until as much as 4 ft. above ground level. The end walls of the buildings appear to have been gabled. The evidence is not conclusive but the amount of tumbled stone would seem to preclude hip-ended structures in general.

Nowhere on Lix are there vestiges of chimneys at the gable ends, nor of windows of any description. Even an entrance may be difficult to locate amid the tumbled stones. In only one case was a cupboard-like recess detected in an end-wall. In spite of much variation in size, it is very difficult to recognise with much certainty the purpose served by the majority of buildings without excavation.

Certain long structures of 50 ft. or more by about 13 ft. wide, without any cross wall whatsoever, with a single entrance a little off-centre in one of the long walls, suggest the farmhouse of the period. This might be expected to have the byre at one end and the living quarters at the other around a central hearth, with the doorway leading into the byre. In only two cases, however, could signs of a central byre drain be detected and strangely, in both instances, the drain was at the higher end of the floor.

At the opposite extreme are certain small structures measuring perhaps 25 ft. by 9 ft., with one of the short ends open; these were almost certainly barns or implement stores and were often rather poorly constructed. A number of short buildings measuring about 30 ft. by 12 ft. may be interpreted as either outhouses or cottages; in no case is there any sign of a central drain. In some instances, the construction is better than that of the typical farmhouse as though they had been built later. Sometimes during investigations, location seemed to be a guide; the presence of one of these short buildings close to a farmhouse and associated with the same large yard, suggested an outhouse. In other cases, an example in isolation with a small yard of its own pointed to a cottage. Sometimes, too, the presence of a low stone platform at one end, forming a peat store, indicated a dwelling. A former inhabitant of one of these dry-built house clusters at Tempar, near Kinloch Rannoch in north-western Perthshire, had explained the purpose of these platforms. In addition, some small single-roomed cottages must be noted, either in a row of two or three, or else in what had been originally a byre-dwelling.

Any classification is obviously difficult, partly because clear-cut distinctions do not exist and also because the use of one particular building could have changed in the course of time.

Running out from, or passing close by each of the clusters, there is normally a grass-grown track. It may be quite deeply hollowed with usage, or on the other hand, built up as a causeway when crossing damp ground. When traversing land which looks as though it were once arable, the tracks are often flanked by lines of large boulders on end, as though to prevent animals from straying into the crops. The tracks do not normally connect neighbouring clusters and the direction taken is often puzzling, although the main direction is uphill towards the south (fig. 4).

There are as many as seven kiln-like structures scattered somewhat indiscriminately over

<sup>1</sup> Dunbar, J. G., 'Some Cruck-framed Buildings in the Aberfeldy District of Perthshire', *Proc. Soc. Antiq. Scot.* xc (1956-7), 81-92.



the area occupied by the clusters. They vary in form but at least five are clearly small, ruinous lime-kilns.

The land around the clusters on East Lix is subdivided into a rectilinear pattern by very straight but discontinuous dry-stone field dykes (fig. 4) which quite certainly represent boundary lines laid out by a trained surveyor. Although the straight dykes have an air of some antiquity, they are apparently much more recent than a series of more straggling turf and stone field-dykes to be seen further up the hillside. There is no similar pattern on Middle Lix, but other rectilinear dykes occur on West Lix as boundaries to fields still in use. The problem is too complex for discussion at this stage, but the dykes must be noted as an integral part of the settlement pattern associated with the house clusters just described.

In general, the striking feature of the deserted settlement at Lix is the fundamental homogeneity of the ruined structures which remain. The ground is not littered with traces of older buildings going back to a distant past, and only occasionally does some feature suggest a phase preceding the last occupation. The existence of what appear to be enclosed fields unlike any reminiscent of a group-farm in run-rig, the appearance of the straight dry-stone dykes, and the roughly rectilinear pattern of the clusters themselves, all point unmistakably to the period of the 'Improvements' of the later eighteenth and early nineteenth centuries. This raises some very fundamental problems.

The buildings at Lix do not seem to differ very materially from those of many deserted settlements in the south-eastern Highlands – are they, too, of comparatively recent origin, in spite of the general air of antiquity and of the fact that many of the sites are known to have been occupied for long periods? If the Lix clusters are as late as the 'Improvements', why was the clustered form of settlement, surely traditional from the days of the old group farms in run-rig, so carefully preserved? What and where are the indications of earlier settlement than the last occupation just before the site was depopulated?

Before attempting further detailed analysis of the individual clusters and buildings, and of the limited excavations undertaken, a survey of the documentary evidence may be attempted to throw some light on these problems, and to bring the general picture into focus.

## THE DOCUMENTARY EVIDENCE

### *Before 1745*

In the middle of the sixteenth century, when the first references to Lix occur, it was a small territorial unit which had belonged to the Carthusian monks in Perth. Possibly it represented a grant from the royal estates when the monastery was founded in 1429.<sup>1</sup> In 1569, in a charter preserved in Register House amongst the Drummond Papers, George, Prior of the Charterhouse, granted Lycks to Ewan Campbell *alias* Glas of Lochdochart, and this was confirmed by the King in 1573; in the Register of the Great Seal for this date, the spelling is 'Lik'. That it was subdivided into the three farms of West, Middle and East or Nether Lix at this time seems clear from a specific reference to the 2½ merklands of Middle Lix in a grant from Ewan to John Campbell in 1585.<sup>2</sup> Rent-rolls of a much later date show that West Lix was also assessed at 2½ merks in the Old Valuation, but East Lix ranked as a 4 merkland.

Little can be learned of the next century and a half in the history of the settlement. It belonged to the Campbells of Lix until 1684 when Hugh Campbell made a disposition of it to

<sup>1</sup> Christie, John, *The Lairds and Lands of Lochtayside*, Aberfeldy (1892), p. 63.

<sup>2</sup> Preserved in the Breadalbane Titles, Register House, Edinburgh.

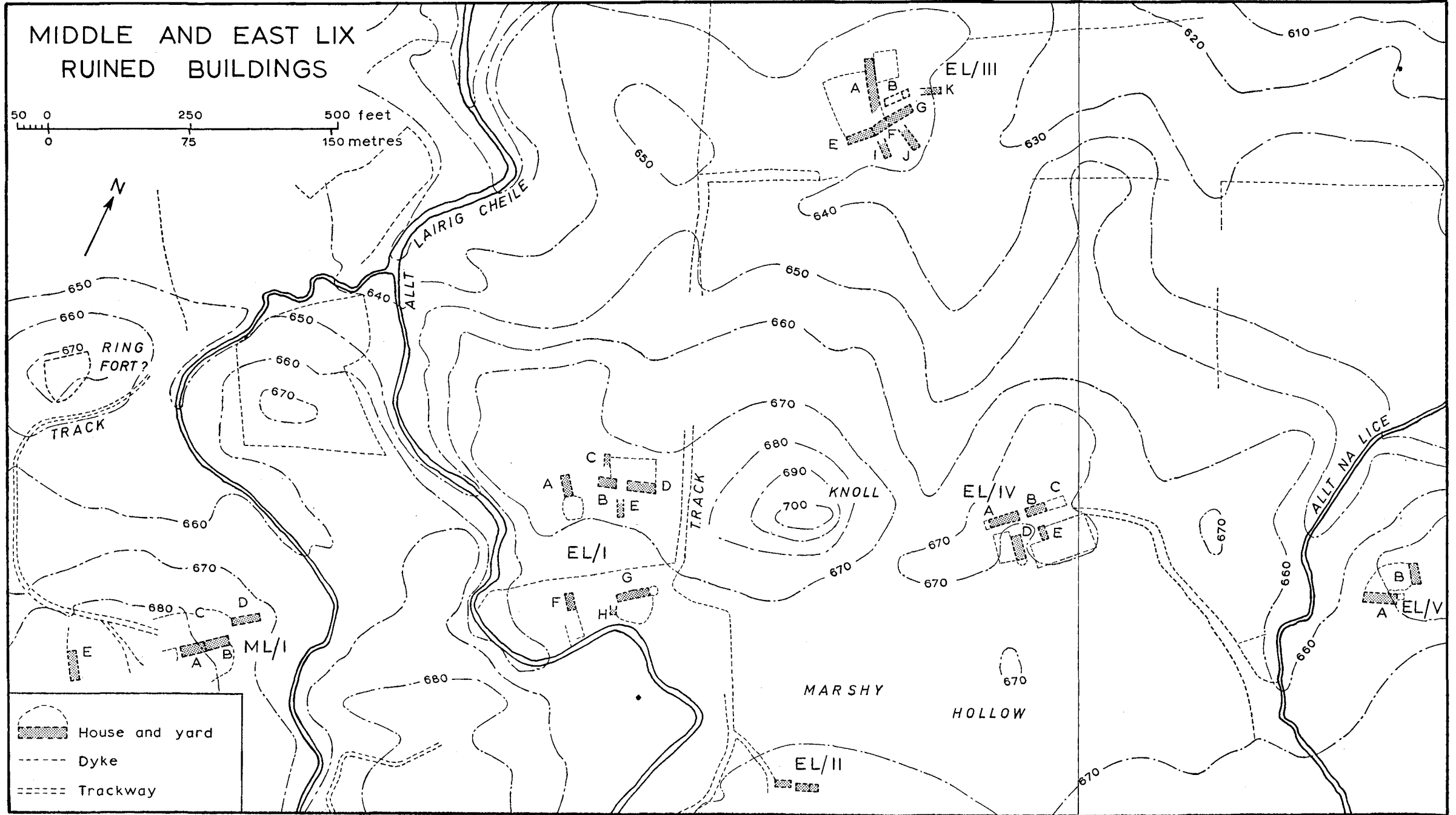


FIG. 4. Middle and East Lix.

Lord Drummond Earl of Perth.<sup>1</sup> Campbell of Glenorchy who became Earl of Breadalbane in 1677, appears to have been claiming some form of superiority, and the disposition was perhaps the result of this confusion over the title. The Campbells of Lix, however, continued to act as tacksmen until 1744. Thereafter they transferred or returned to Argyll and in the Valuation Roll of the shire in 1751 for Strachur and Stralachlan Parish, there is mention of Hugh Campbell of Lix for his property.<sup>2</sup>

#### *Lix as a Forfeited Estate*

After 1745, Lix is mentioned frequently in the papers of the Commissioners for the Forfeited Estates.<sup>3</sup> Breadalbane now tried to exchange his holding of Pitkellony near Muthill for the lands of Lix and Fernan which were adjacent to his main estate. Several attempts at a valuation had to be made before an agreement was reached on the *excambium* which was finally legalised by an act of Parliament in 1766. During the correspondence, reference is made for the first time to the tenants of Lix. Most revealing were statements made to the deputy sheriff at Killin by some of the tenants in person, called to state what precisely were the rents and dues they paid to Lord Drummond in 1744.<sup>4</sup>

It emerges that there were four joint tenants on West and Middle Lix and eight on East Lix. Until 1744, they had paid *grassums* on entry and rent afterwards to the tacksmen (the Campbells of Lix). In that year, however, Lord Drummond eliminated the tacksmen and the tenants were told to pay directly to the factor. Gilbert Robertson, a joint tenant of East Lix, said that he possessed an eighth part of the farm for which he paid (in 1744) 'Sixteen pounds thirteen shillings and four pennies Scots of Money Rent, four pounds of butter and one year old Wedder and that he performed yearly two days service in making Leading Peats . . .'. John Carmichael possessed a fourth part of Middle Lix for which he paid twenty pounds Scots *grassum*. Although it is nowhere explicitly stated, the three farms were almost certainly still in run-rig.

In the Factors' Reports<sup>4</sup> John Campbell of Breadalbane describes Lix about 1755. Tenants were burning limestone and had plenty of peats. The soil was cold and 'fronting the North, that their Corns never ripen except in a dry hot season; they sow some Potatoes and Flax Seed . . . the Grain they sow is usually Oats and Bere and it is reckoned a good crop with them; with anything less than three Bolls of Oats yield one Boll of Meal . . . so that the only benefit they have from their labour is to get Fodder for their Cattle in Winter'. Flax was spun by the women of Lix, some being imported, 'the produce of which and the sale of some Cattle is the only fund they have for making Money for Payment of their Rents and other uses'.

Finally, 'The Houses are all built with Stone, and considering the Poverty of the Inhabitants, are tolerably good'. There was a changehouse at West Lix, but it was bad, and 'Something of a better publick House would be Necessary at Lix . . .'. There is a further mention of a public house at West Lix elsewhere.<sup>5</sup>

#### *The estate plan of 1755*

This plan is preserved in Register House; Dr MacInnes gave permission for a detailed examination and made available a photostat copy which has been reproduced by permission

<sup>1</sup> Preserved in the Drummond Writs, Register House.

<sup>2</sup> Pointed out by Dr Alan Gailey.

<sup>3</sup> The papers of the Commissioners for the Forfeited Estates are preserved in Register House and have not as yet been published. There is a valuable discussion of the Factors' Reports to the Commissioners in

Mason, John, 'Conditions in the Highlands after the Forty-Five', *Scot. Hist. Rev.* 26 (1947), 134-46.

<sup>4</sup> Forfeited Estates Papers, Factors' Reports, 1755.

<sup>5</sup> Forfeited Estates Papers, General Management, Minutes of Commissioners for 14th March 1760.

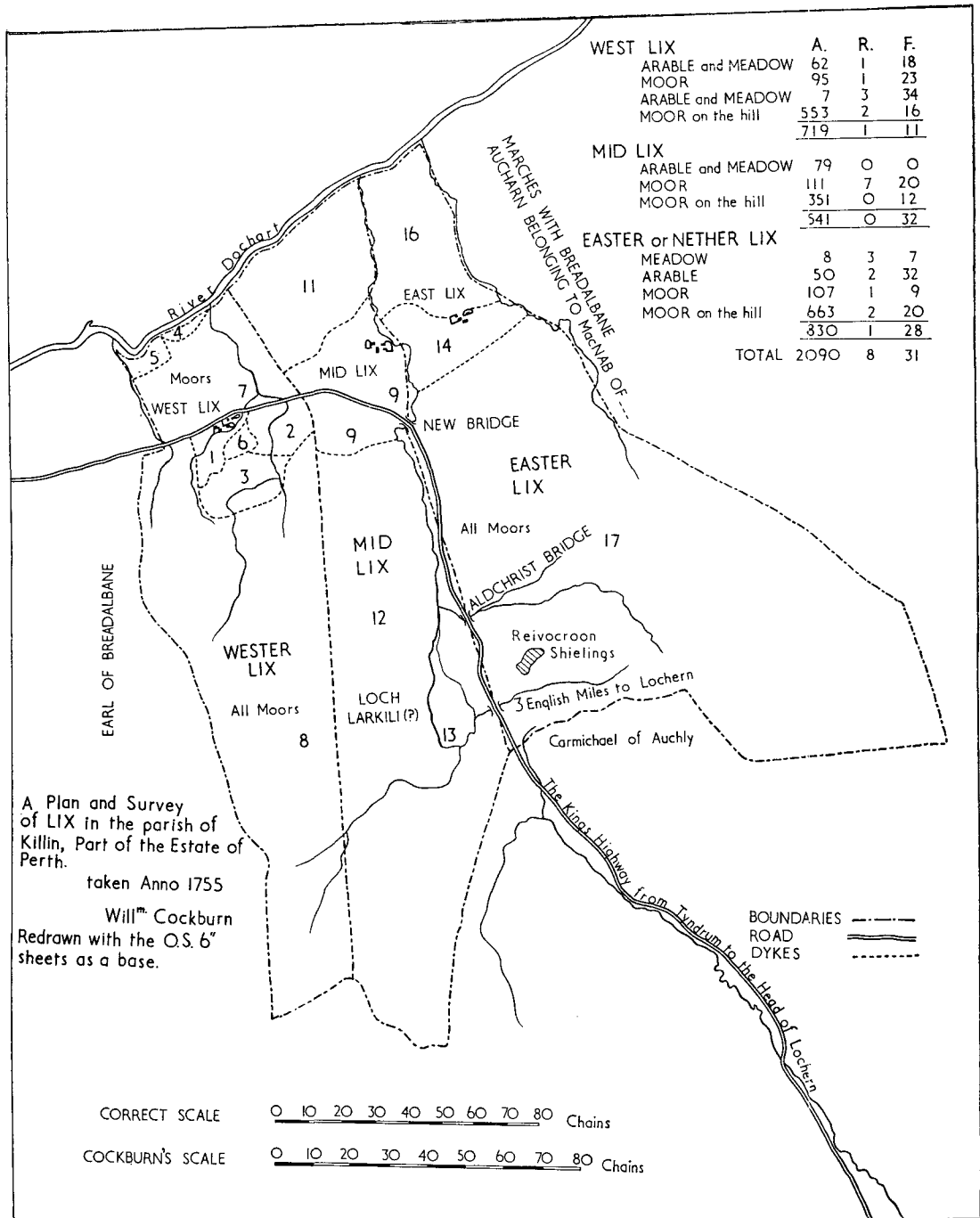


FIG. 5. Plan of Lix in 1755 redrawn on base of 6-inch O.S. map.

(Pl. 24). The survey was undertaken in 1755 for the Commissioners for the Forfeited Estates and is an early example of numerous estate surveys made in the Highlands later in the eighteenth century as a prelude to 'Improvement'. The existing plan had been mounted on a roller so that the northern edge became badly stained and cracked; it measures 23 in. by 18 in.

Very little is known about the survey; a letter from William Cockburn in 1755 speaks about the progress of his party only in very general terms, but he specifically mentions the theodolite. The plan is in colours and on a scale of about 8 in. to represent one mile. Little attempt is made to show relief but the courses of the burns though generalised are substantially correct. As the original is difficult to decipher, the data has been replotted (fig. 5) on the base of the 6-inch O.S. map, Perthshire Sheet LXXX NW (1901). It is at once obvious that the pattern of settlement is completely different from that of the ruinous clusters on the ground today. Each of the three farms must be considered separately as the various parcels of ground shown on Cockburn's plan are not continuous across Lix as a whole.

Turning first to East Lix, the area numbered '17' on the plan clearly comprises the extensive moorland slope up to the southern boundary on the watershed. The 'Reivocroon Shealing' which appears is demarcated so vaguely that the site could not be found after repeated searches until Mr Petrie detected it when plotting from the air photographs. 'Oldchrist Bridge', where the Military Highway crosses a burn, may also be located, although there is no sign of stone-work. Below this moorland comes the arable ground '14'; it must have commenced well within the moorland of today at what is in fact the line of an old dyke at about 750 ft. On the other hand, the northern or lower limit of the arable where it gave place to more moorland, '16' stretching down to the Dochart, is indicated by a curving line which is well within the present area of improved ground lying around the extant clusters of ruined buildings. Breaking this boundary line, which may be followed with some confidence on the ground today (see p. 177 below), the plan indicates a group of four buildings with two associated yards. This clachan is neatly drawn but bears no relation to the present lay-out of Clusters IV and V (as indicated on fig. 4) and probably lay between the two. There is no sign on the ground of this older grouping.

It is apparent at once that the four buildings plotted by Cockburn cannot correspond to the homes and outhouses of all the eight tenants who are known to have occupied East Lix at this period. No explanation can be offered, unless Cockburn omitted another cluster on East Lix. The plan is badly damaged in the northern part, but no suggestion of another grouping can be detected here, and this area would appear to have been moorland.

On Middle Lix in what is presumably the old arable lands '9', Cockburn shows four buildings and two yards, as might be expected for the four Middle Lix tenants. This group seems to have lain to the east of both the present steading and the existing ruined cluster, nearer to the burn and opposite East Lix Cluster I. Again, nothing can be distinguished on the ground.

As regards West Lix, two patches of haughland, '4' and '5', had been reclaimed along the Dochart in 1755, but they cannot now be recognised within the greatly extended area of improved land on the river flat. Between a head-dyke to the south and the northern limit of the arable at the military road, Cockburn showed several parcels of land, but the plan is so vague in detail that nothing much can be said about them; the boundaries seem to have followed small burns in places. The situation is confused by the existence of a pattern of turf and stone dykes which predate the present field boundaries, yet do not appear to be very old. The cluster of houses shown on the plan appears to be more or less on the ground now occupied by the extensive modern steading; the only possible survivals are two small buildings, one of which has a round end and traces of cruck recesses in the wall. Cockburn showed four yards and six rectangular buildings forming a roughly rectilinear pattern. This constitutes the largest cluster of 1755, and

it is perhaps relevant to recall that the documentary evidence suggests the existence there of an inn.

Reviewing the position of Lix as a whole, a more or less continuous head-dyke of turf and stone well above the limits of the ground cultivated in the recent past, seems to be the main survival of any man-made feature shown on Cockburn's plan, apart from the military road. Nevertheless, the care with which it was plotted, and the recognisable nature of the boundaries of the three Lix farms, indicate that the plan was drawn with some accuracy. Although no trace survives of the three clusters of houses which are portrayed, there can be no reason to believe that Cockburn fabricated the settlement pattern and drew imaginary houses with meticulous care in arbitrary positions.

The conclusion must be that a very radical alteration in the settlement pattern occurred at Lix after 1755, during which the old house clusters were replaced by what are now the ruined clusters of today. On East Lix, the rectilinear pattern of stone dykes must be associated with this change, and perhaps too, some of the dykes on West Lix. One major problem must be to date this transformation.

#### *Rent rolls and the Improvements: 1765-1850*

At the completion of the *excambium* in 1766 the Lix which Cockburn's plan portrays became an entailed part of the Estates of Breadalbane. According to Gillies<sup>1</sup> the third Earl was familiar with the more advanced methods of farming of the day and was organising surveys of various of his possessions. The well known Survey of Lochtayside of 1769<sup>2</sup> did not include Lix, presumably because Cockburn's work rendered it unnecessary. On succeeding to the title in 1782, the fourth Earl introduced extensive reforms and Gillies states that '... he had the run-rig system done away with; and compact farms were laid out. . . . The infield and outfield arrangement was brought to an end.'<sup>3</sup> In passing it might be noted that Pennant, when he visited the Earl in 1769, remarked that the country produced a great deal of linen thread; a lint mill existed at Killin.<sup>4</sup>

For the ensuing age of Improvements, evidence for the state of affairs in Lix becomes available from a number of rent-rolls which cover, at intervals, the period from 1765 to 1827-8. All except the first are preserved in the Breadalbane Papers. Selected examples are reproduced in Appendix II and an attempt has been made to compare the data from certain critical rolls in diagrammatic form (fig. 6). Information is lacking between 1828 and 1844, but thereafter the Breadalbane Factors' Accounts for Perthshire allow the end of the depopulation to be followed in terms of decreasing rent-returns until 1853, by which time the modern sheep farms had come into being.

The earliest roll known to the writer is amongst the Forfeited Estates Papers and refers to 1765; it may have been the first of the series as a whole, since it also places on record the amounts formerly paid to the tacksman (i.e. before 1745). The comparison is interesting because in the interval the former payments in kind and services due had been abolished; the roll gives a monetary valuation of these old additional payments. Judging by the fact that on each of the three Lix farms considered separately the full shares payable by the tenants were equal, it seems safe to assume that the traditional joint tenancy farm in run-rig was still in operation.

The rents due from each of the three seem anomalous when the acreages are compared. Utilising the figures given in Cockburn's plan (see fig. 5) the position can be summarised as follows:

<sup>1</sup> Gillies, William A., *In famed Breadalbane*, Perth (1938), 199.

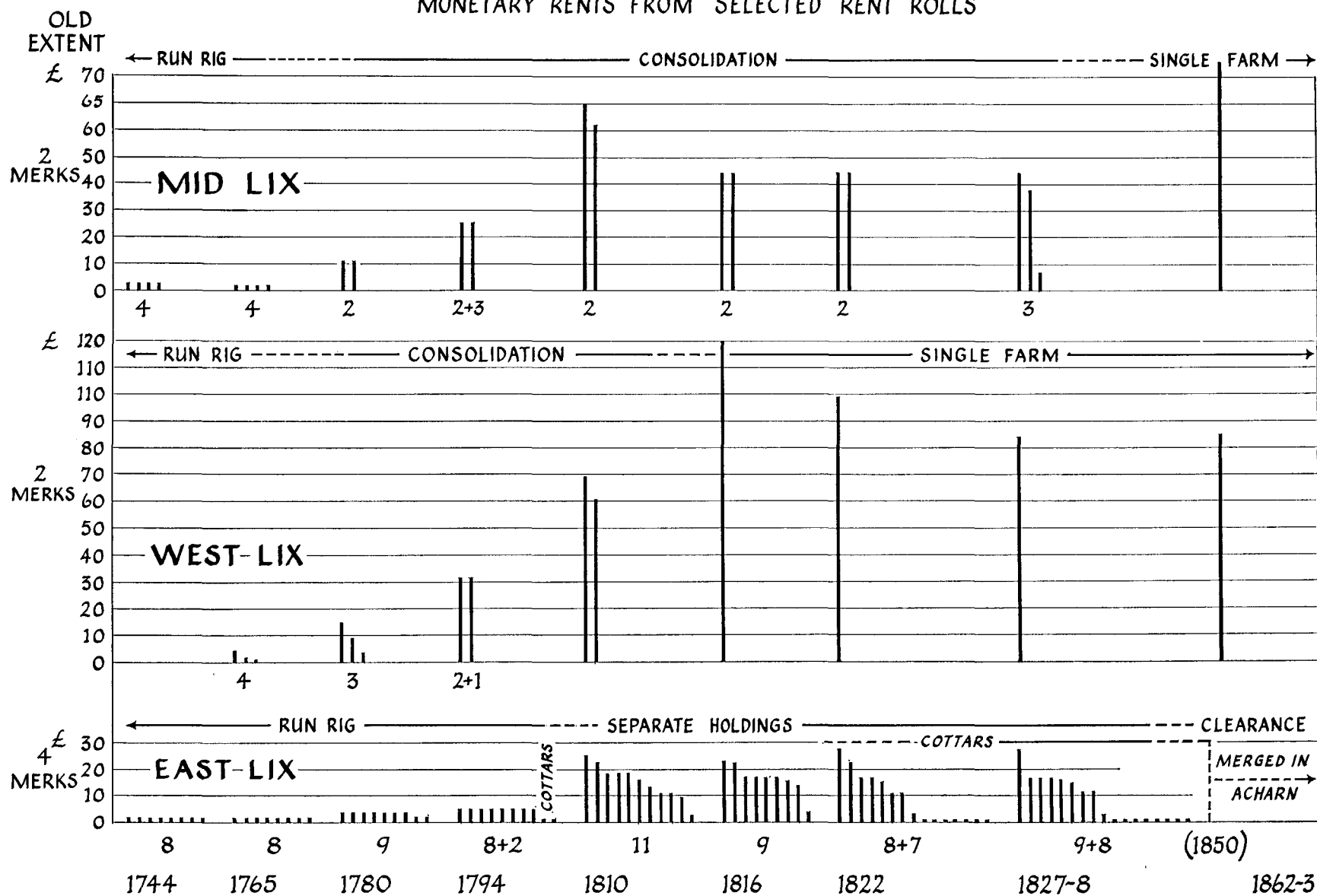
<sup>2</sup> McArthur, Margaret (ed.), *A Survey of Loch Tayside 1769*, Scot. Hist. Soc., Edinburgh 1936.

<sup>3</sup> Gillies, William A., *ibid.*, 199.

<sup>4</sup> Quoted by Gillies, William A., *ibid.*, 187.

# LIX

## MONETARY RENTS FROM SELECTED RENT ROLLS



Note1: Period 1744 to 1755 (possibly later) also involved payments in kind and public burdens, e.g. road money

Note2: Covers the inflationary period of the Napoleonic Wars

FIG. 6. Lix: monetary rents from selected rent rolls.

## LIX: RENTS AND ACREAGE FOR 1765

Farm	Number of shares	Acres		Rent per tenant		
		Arable and meadow	Moor	£	s	d
Middle Lix	4	20	116	1	19	2
West Lix	4	15	154	1	19	2
East Lix	8	6	97	1	5	0

Either the arable land on East Lix was much more productive or the tenants were poorer. The latter case seems probable from the writer's observations, but a distinction is also to be noted in terms of the Old Valuation (as stated on a later rent-roll) where East Lix was assessed at 4 merks as against 2 merks each for the other two.

A further problem arises at West Lix in that a separate croft is listed to a John Campbell, who also seems to have held two shares. Perhaps he was a descendant of the old tacksman, who may have resided at West Lix in a somewhat superior dwelling. It may be recalled that Cockburn showed six buildings there in 1755, including the inn.

The next rent-roll available is for 1780-1 when money rents had increased threefold. Consolidation of holdings had commenced on Middle and West Lix (fig. 6), but East Lix seems still to have been in run-rig. A special feature of this rent roll is the detail of the sowings and the animals possessed (Appendix I). Oats dominate here by 5:1, and very noticeable is the sowing of linseed and potatoes. Rather obvious too is the number of sheep reared especially on Middle and West Lix; this would seem to be a change from 1755 when the factor emphasised the dependence on black cattle.

From now on, it is necessary to treat the three Lix farms separately. Middle Lix had been reorganised into two holdings by 1780-1, perhaps with the abolition of run-rig and the replacement of the clachan of 1755 as shown on Cockburn's plan. In 1794, however, there were still three crofters as well as the two tenants, and it is apparently to this period that the four or five buildings of the existing ruinous cluster must be dated (ML on fig. 4). There continued to be two more or less equal holdings until 1845 when a decrease in rent is noted in the factor's account, and the farm was finally consolidated.

On West Lix, the three tenants of 1780-1 already paid unequal rents, but consolidation into two farms was not achieved until 1794. The two ruinous clusters at the present time could again belong to the last decade or so of the eighteenth century, for a single farm had emerged as early as 1816.

East Lix developed along different lines. As late as 1796, there were still eight tenants paying an equal rent, together with two crofters. By 1810, which is the date of the next rent roll to become available, there were as many as eleven small holdings, all assessed at different amounts. The inference is that this was the period of the rectilinear dykes and the small enclosures, which are such a characteristic feature of East Lix. To this period must also belong the byre-dwellings whose ruins in the various clusters have been noted earlier. Cockburn's clachan and the older settlement pattern could have lasted as late as 1796, and may even have continued into the nineteenth century.

Between 1810 and 1828, the tenants of the new holdings on East Lix were joined by an increasing number of people paying a nominal rent, including single women and a widow. To this stage it would seem appropriate to date at least some of the small cottages which have been noted amid the ruined clusters of today. These cottages seem to have been placed in close proximity to the newly established byre-dwellings, so that in effect a regrouping occurred into a clustered pattern on the traditional lines. By 1828, there were eight tenants with small holdings and seven



of these presumed cottagers. From this time on, however, no new leases were arranged and the occupants all became tenants 'at will'. The end of the clearance may be seen in the Factors' Accounts during the period 1845-56, when various decreases in rent were recorded. Finally, East Lix was joined to Acharn to form a single very large sheep farm in 1853. The last person to be born on East Lix seems to have come from one of the better cottages in the ruined clusters EL/1. This was told to the writer by an old lady in Killin; she remembered the man himself who must have been born about 1860.

In summary, it is clear that the oldest of the ruined buildings still to be seen today at Lix cannot date to a period much before the end of the eighteenth century. The characteristic clusters on East Lix are later still; they are not to be associated directly with farms in run-rig.

#### *Marshall's description of highland houses, 1794*

A detailed description of the type of dwelling which was characteristic broadly of the area comprising the Tay drainage within the Highlands, is available in Marshall's *General View of the Agriculture of the Central Highlands* of 1794. The writer's attention was drawn to this by a colleague, Mr Alexander Morrison. The book in question is not readily available, and the extract is of such significance in this report as a whole, that it is quoted in full.

'Formerly sod huts were the common habitation of the tenantry of the Central Highlands, and they are still in use in the more northerly districts. These huts were built with sods or thick turf, taken from the pasture lands, and having a few years in the capacity of walls, were pulled down and spread on the arable fields as manure. . . . At present, the building material is stone, but no cement as yet, is in use, except in particular cases. The house and office buildings of ordinary farmers are of dry stone; the dwelling-house being stopped on the inside with loam, to prevent the wind blowing through the walls; which are seldom more than five or six feet high; perhaps without glass; the windows, and with doorways so low, that even a middle-sized man must stoop, not into the house only, but into the barn. The roof is set on with "couples", or large principal rafters, steep in the walls two or three feet above the foundations; generally upon large stones set to receive their feet. Upon these couples lines of "pantrees" or purlines are fixed, and resting on these rough boughs (stript, however, of the leaves and smaller twigs) are laid, rafter-wise, and termed "cabbers" (formerly wattled or interwoven with other rods or twigs): upon these, "divot", or thin turf, laid on in the manner of slates; and upon this sod covering, a coat of thatch; composed of straw, rushes, heather or fern; the last being drawn up by the roots, or cut close to the ground, in the month of October, and laid on with the root ends outward; making a durable thatch. The gables and the ridges are loaded with "feal", thick sods taken from the deepest best soil no matter where in another vile practice.'<sup>1</sup>

## THE MATERIAL REMAINS OF THE OLDER SETTLEMENT - GROUND OBSERVATIONS

### *General*

In the light of the earlier general remarks on the ruinous buildings and with the background provided by the documentary information, it is now possible to describe in detail the material remains of the older settlement pattern at Lix - primarily, buildings dating to the late eighteenth, early nineteenth century. The recent excavations are considered later, for although they throw

<sup>1</sup> Marshall, William, *General view of the agriculture of the central Highlands of Scotland*. London (1794), pp. 19-20.

light on individual structures now to be discussed, it seems advisable to concentrate on one method of approach at a time.

Constant reference should be made to the plans (figs. 4 and 9). Dimensions of buildings are internal unless otherwise stated. Overall size of most of the structures may be obtained roughly by adding 7 ft.; to obtain this latter measurement directly was frequently difficult because of a distinct batter on the outside face, and the existence of upstanding masonry. Some discrepancies from the dimensions as given below might be noted if minute examination were to be made of the plan; this was surveyed largely by students without a detailed knowledge of vernacular architecture and using tachymetric methods. Frequently too, the fallen masonry made it difficult to trace outlines precisely. Unless otherwise stated, reference to the Ordnance Survey will normally be made to the 6-inch sheet Perthshire LXXX SW, surveyed in 1860 and revised in 1898-9; the 1:2,500 sheet shows no more details of the ruined clusters (Perthshire Sheet LXXX 10).

#### *East Lix Cluster I (EL/I)*

- A 39 ft. by 13 ft. Cottage with small yard.
- B 28 ft. by 12½ ft. Cottage.
- C 21 ft by 9 ft. Open-ended outhouse, robbed to foundations.
- D 51 ft. by 13½ ft. Byre-dwelling (excavated) (fig. 7); backs with B and C on a large rectangular yard.
- E 26 ft. by 8 ft. Open-ended outhouse facing B and D.
- F 30 ft. by 12¾ ft. Cottage with small yard.
- G 58 ft. by 13 ft. Byre-dwelling adjacent to a yard; stone platform at E end.
- H 16 ft. by 9 ft. Open-ended outhouse.

The cluster lies immediately across the Allt Lairig Cheile from Middle Lix; there is no sign of any former stone bridge. The group is shown on the O.S. sheet. It is on a gentle southerly slope but much of the ground is now rush-grown (Pl. 19b). The two farmhouses D and G which closely resemble each other, are separated by a continuous dyke; they seem to have formed the nucleus of the cluster. Cottages A and F are well built and possibly later. A small ruinous kiln just north of the Cluster might have been used for corn drying. A deeply worn, grassy trackway flanked with large boulders, passes immediately to the east, coming up from the main Killin road west of the bridge over the Lairig Cheile and joining the old Military Highway to Glen Ogle just above the 'New Bridge' as shown on Cockburn's plan.

#### *Cluster EL/II*

Across the marshy hollow on the southern side of the prominent knoll at 700 ft. which dominates the scene at East Lix, and about 100 yds. south-east of Cluster EL/I, there is a confusing ruin on a low mound, reached by a short branch from the grassy trackway just described. Two structures each comprising a room and open-ended outhouse adjacent, seem to lie end to end, but there may be an earlier building underneath measuring 46 ft. by 11½ ft. The site is not shown on the O.S. sheet.

#### *Cluster EL/III (fig. 9)*

- A 85 ft. by 13 ft. Elongated dwelling (excavated) much altered during occupation; between two yards.
- B 44 ft. by 13 ft. Poorly aligned structure subdivided into three; at least one of these divisions at the south-west end was a one-roomed cottage (excavated).
- (C-D) (Open space).

E 46½ ft by 13 ft. Subdivided dwelling (partly excavated); backs with F on the large rectangular yard.

F 26½ ft by 13 ft. Cottage between E and G.

G 52 ft. by 13½ ft. Byre-dwelling (partly excavated), with stone platform at east end.

(H) (Open space).

I 30 ft. by 9 ft. Outhouse robbed to foundations.

J 40 ft. by 12 ft. Open-ended outhouse.

K 39 ft. by c. 12 ft. Sub-rectangular alignment of boulders, function not known.

EL/III lies to the north of the central knoll across a marshy hollow and occupies the southern slopes of a broad mound. Although it forms the largest group of ruined buildings on Lix as a whole, it was omitted from the O.S. sheet. This cluster was selected for further examination and excavation (see below p. 186), and has been planned in detail (fig. 9). It is suspected that the nucleus of the cluster commenced in the period of improvement about 1800, as the byre dwellings A and G, but the group continued long in use. The circular hay or corn rick bases shown on the plan represent a very late phase. The cluster was reached by a trackway branching off from the one north-south passing EL/I, but at some stage both the main trackway and the branch had been walled off.

#### *Cluster EL/IV*

A 45½ ft by 14 ft. Probable byre-dwelling with stone platform at west end.

B-C 34 ft. by 12½ ft. and 34 ft. by 13 ft. Two cottages, possibly the subdivision of a single dwelling. (There is a small recess in one end wall.)

D 40 ft. by 12 ft. Probable byre-dwelling with yard attached and stone platform at south end.

E 23½ ft. by 9 ft. Outhouse associated with yard.

This group lies east of the knoll on a slight slope down to the marshy hollow to the south; the buildings are shown on the O.S. sheet. The two yards might suggest a nucleus of two farm-houses. A sunken track flanked with boulders leads across the marsh to the south as a causeway, and then opens out as though to collect stock moving into the cluster from the hillside.

#### *Cluster EL/V*

A 36 ft. by 13 ft. Cottage.

B 52 ft. by 13¾ ft. Probable byre-dwelling with small outhouse at E end (12 ft. by 7 ft.) attached with A to a yard.

This diminutive cluster occupies the steep south-west slope of a morainic mound; it is indicated on the O.S. sheet. Passing just to the west, there is a grassy track coming from far out on the moor to the south. It follows in this area the general line of a burn which is bridged in places with flagstones, and the track is sometimes flanked with boulders. It runs towards the main road to Killin at the modern East Lix farmhouse; it has not been shown on the plan.

Across a reed bed south of the yard, there is a low ridge with a kiln (excavated) built into the northern side. Immediately behind and on the crest of the ridge are two lines of natural rock 6 ft. apart, with some artificial packing; on the same alignment at the west end of the ridge there is a trench-like hollow 17 ft. by 8 ft. and 3 ft. deep. The purpose of this arrangement is obscure.

#### *The East Lix steading*

The modern dwelling near the main road to Killin stands in isolation nearly one-half mile north of EL/III. In front, however, there is an old building, still in use as an outhouse but much

modified, which may be of the type found in the East Lix clusters; traces of a characteristic yard also occur. This building is shown on an estate plan of 1855 in the possession of Mr McNabb at Kinnell House, Killin.

#### *Cluster on Acharn*

Across the Allt na Lice which forms the east boundary of East Lix, there is another cluster of ruined buildings only 350 yards north-north-east of EL/V, but far removed from any known cluster on Acharn. On an estate plan of 1825, again in the possession of Mr McNabb, three buildings are indicated and the place is named Coilachromy; only one structure and a yard are shown on the O.S. sheet.

#### *East Lix house sizes*

There is no clear-cut distinction to be drawn from field observation at East Lix between the houses of the nine tenants who became small-holders after the reorganisation about 1800, and the group of cottagers who paid a nominal rent, and who had reached a total of eight in 1828–9. The situation is confused by the doubt over the one house or two cottages comprising EL/II, by the possibility of a dwelling at the modern East Lix steading, and by various anomalous features in EL/III and EL/IV. Four houses 51 ft. to 58 ft. long internally would definitely appear to have been small-holders' dwellings and probably consisted of living-end and byre under the one long roof (EL/I/D and G; EL/III/G; EL/V/B). To bring this total of probable byre-dwellings up to that of the nine small holders on the rent rolls would seem to involve one dwelling at 45½ ft. (EL/IV/A) and three doubtful examples (EL/II; EL/III/A and E). It is fairly clear, however, that a group of six dwellings measuring 27 ft. to 36 ft. must be classified as cottages (EL/I/B and F; EL/III/F; EL/IV/B–C; EL/V/A), together with several anomalous examples representing small, one-roomed dwellings (EL/III/B).

It is noteworthy that apart from the 4 or 5 open-ended structures (EL/I/C, E and H; EL/III/K and perhaps I) and one small building (EL/IV/E), outhouses in general were exceptional. It is probable that as the settlement was evacuated gradually after 1828, a number of former dwellings were converted to other uses. The open-ended structures were at first suggestive of implement sheds, but Mr A. Fenton has drawn the writer's attention to a reference clearly indicating a form of barn.<sup>1</sup>

#### *Middle Lix*

- A 43 ft. by 14½ ft. Byre-dwelling with vestiges of a rectangular yard to S.
- B 38 ft. by 14½ ft. Byre-dwelling or cottage end on to A.
- C 26 ft. by 11 ft. Cottage.
- D 27 ft. by 10½ ft. Cottage.
- E 52½ ft. by 14½ ft. Vestiges of a byre-dwelling.

The present farm buildings are near the crest of a broad morainic mound and obviously have replaced an older cluster whose ruins lie mainly to the east (fig. 4). Four deserted dwellings are visible and a fifth is faintly traceable on top of the hillock behind the farm; only the structure A–B is shown on the O.S. sheets. A grassy track, now in discontinuous sections, winds through Middle Lix from the Killin road just west of the bridge over the Allt Lairig Cheile, towards the Military Highway below the 'New Bridge.'

It will be recalled that Middle Lix had become two separate farms as early as 1870, but in

<sup>1</sup> Erskine, J. F., *General view of the agriculture of the County of Clackmannan*, Edinburgh (1795), 29.

1794, 3 crofters were also recorded; a single crofter was still present in 1827-8. It would seem as though these five houses noted above must belong to about 1794 and that two or possibly three might have been byre-dwellings (ML/A, E and ? B).

### *West Lix*

In the time available, West Lix could be covered only in broad outline and no ground-survey was attempted. Two house clusters seem involved and an inn is known to have existed.

#### *Cluster WL/I*

A 69 ft. by 14 ft. Byre-dwelling.

B 38 ft. by 12 ft. Open-ended barn.

C 50 ft. by 14 ft. Subdivided into three.

This cluster lies 360 yds. east of the present farm house beside an old sheep-fold overgrown with trees. It has been robbed extensively of stones and no useful comment can be made; it is not shown on the O.S. sheet.

#### *Cluster WL/II*

A 23 ft. by 9 ft. (?) Traces of yard to S.

B 24 ft. by 10 ft. (?)

These two problematic buildings occur on top of a steep hillock immediately east of the modern farmhouse on the south side of the Military Highway, and are marked on the O.S. sheet. Building A is unique on Lix. It is at present in use as a refuse dump, but sufficient remains for cruck slots to be identified in one long wall and while one end is rounded, the other is rectangular. Other examples of houses on this plan, although larger in size, have been noted locally at Tirai (NN 527366) in Glen Lochay and at Craggan (NN 664358) on the south side of Loch Tay. More of the old cluster may have been destroyed in the construction of the modern buildings, and it is useless to speculate as to the position of the inn except that it is likely to have been near the highway rather than in WL/I.

### *Field Boundaries*

At least three systems of field boundaries occur at Lix.

1. The present-day dry-stone dykes and the wire-fences which supplement them, presumably date to the period of consolidation about the middle of the nineteenth century, and probably came into being somewhat piecemeal. An outstanding feature is the continuous and straight dry-stone wall which traverses the three Lix farms at an elevation of 800 ft. to 900 ft. It lies amid rough heather and grass moor, and there is a rectangular sheep-fold now disused on the upper side on East Lix ground. This would suggest an association with sheep farming.

2. Dykes in rectilinear pattern built in dry-stone and clearly older than the above are a characteristic feature of the old arable land on East Lix (see fig. 4). There is, however, another series of rectilinear dykes which occurs uphill to the south-west of the present house at West Lix. The latter have not been studied in detail and are scarcely visible on air photographs.

On East Lix, the dykes obviously have been aligned very carefully, presumably with a theodolite, but the integrated system envisaged does not seem to have been completed. In many places, only the foundations appear and the walling normally stops short at all marshy hollows, but may continue on the far side in strict alignment. In addition, long inexplicable gaps preclude any attempt at interpretation of the system as a whole. The dykes do not traverse the existing

ruinous clusters and seem to mark out small holdings. The stone-work has obviously been robbed in places, particularly near Cluster III, so presumably the dykes were obsolete before development had ceased entirely somewhere about 1828. Uphill the system may be traced towards, but not up to, the old head dyke as marked on the estate plan of 1755. Clearly, the purpose of the walls was to demarcate holdings rather than actually to impede the movement of stock, and they must surely belong to the period of reorganisation about 1800.

3. The older turf and stone dykes of the eighteenth century have very largely been obliterated within the area under cultivation following the Improvements, but the boundaries at the edge of the moor as shown on Cockburn's plan may be traced in part. Looking first to the downhill limit bordering the unimproved ground towards the river Dochart, a short stretch of rough walling occurs on the approximate line running eastwards from the yard wall of Cluster EL/V; this does not fit into the pattern of the rectangular dykes. Further west, the division would seem from the plan to have swung around the northern slope of the prominent knoll at 700 ft. on East Lix, along the edge of some marshy ground; apart, however, from a vague stretch of walling crossing the marsh north-west of Cluster IV, there is no other sign of this boundary. Across on West Lix, the line is followed by the straggling remains of a turf and stone dyke in two places on the north side of the Military Highway; the first stretch occurs just west of the Middle Lix boundary and the second beyond the present farmhouse.

The upper head-dyke is easier to locate as it lies largely in unimproved moor. On East Lix, a continuous and relatively straight turf and stone dyke runs north-east/south-west at an elevation of about 750 ft. It is duplicated for no apparent reason just east of the Allt Lairig Cheile. It then disappears until half way across Middle Lix land where another low straggling dyke may be traced, as shown by Cockburn, to the far limit of West Lix, at one stage reaching 850 ft. No clear trace may be found of Cockburn's subdivisions in the vicinity of the West Lix clachan of 1755.

A very significant feature especially of East and Middle Lix is the appearance of old, isolated patches of cultivation both above and below the turf and stone head-dyke, and even uphill beyond the straight stone wall at about 850 ft. In general the ground is heathery or infested with bracken, and peaty hollows intervene between the drier ground. The former cultivation patches are rarely more than about a quarter of an acre in extent. Some are outlined by vague turf and stone dykes, and all have been partially cleared of stones. Changes in the vegetation still indicate the existence of these areas; the local shepherd was anxious to draw the writer's attention to this point. The maze of disconnected intakes from the moor is on such poor soil and in so exposed a position that intermittent or even temporary cultivation seems involved, possibly as part of the outfield, in the days of the group farm in run-rig. Perhaps pressure of population is indicated just prior to the Improvements.

#### *Old kilns at Lix*

No less than seven kilns in various stages of delapidation have been noted in the area of the old arable land. One on West Lix is marked as a lime-kiln on the 6-inch O.S. map of 1860; several others are similar including one each at the following points: 100 yds. south of Cluster ML/: 300 yds. south-south-east of ML/: 200 yds. north-north-west of EL/III: 200 yds. east-north-east of EL/III. The latter may serve as a sample; it is strongly built, dry-stone, oval in shape measuring 5 ft. by 7 ft. internally and there is a flue at the base 2 ft. 6 in. across and 3 ft. high. It is built on sloping ground so that the kiln could be charged from behind.

Two others require further comment; one was excavated (see page 191). The other occurs on level ground near the summit of the morainic mound just behind Cluster EL/I; the very vague traces might represent the only example of a corn-drying kiln.

These numerous examples of lime-kilns seem to be related to the clusters of the early nineteenth century, although lime was being burned on Lix half a century earlier.

### *The shielings*

Time was not available for the arduous task of searching the whole of the moorland within the limits of Lix except by means of the air photographs. From these Mr Petrie located three groups of shielings, the sites of which were visited subsequently. The only detailed examination attempted was while surveying the largest of the groups on East Lix land, which was the most accessible.

1. *The East Lix shielings* (fig. 5). These are named on the estate plan of 1755 as the 'Rievocroon Shealing'. The huts lie in a south-west facing hollow (NN 563282), the only one with that aspect on the high moorland of East Lix; even so, the site is fearfully exposed to the wind at an elevation of 1,200 to 1,300 ft. The vegetation is predominantly grass with heather and patches of sphagnum moss; a tiny burn drains the hollow. In a direct line, these shielings were not more than  $1\frac{1}{4}$  miles from the houses at East Lix and not more than three-quarters of an hour's walk by a practical route uphill. A string of twelve ruined huts runs up the hollow, each being on a dry patch of ground. They are roughly rectangular, measuring 12 ft. to 13 ft. by 6 ft. to 7 ft. internally, and are marked out by a bank of stones up to 2 ft. 6 in. high; overall, the measurement is of the order of 24 ft. by 14 ft. A doorway 1 ft. 6 in. wide is usually traceable near the downhill end of one of the long walls. There is little sign without excavation of any built wall-faces, and a mixture of stone and sod must have been used for these very simple shelters. In addition, however, there are in several places, traces of oval structures measuring about 5 ft. to 8 ft. across internally. These may be the remnants of much older huts, but seem rather to indicate a form of pen to keep calves from the cows at night.

2. *The Middle Lix shielings*. Another group of six huts is located across Glen Ogle (NN 554280) on hummocks rising above a slight shelf at about 1,150 ft. As with the East Lix group, the site would be hidden from the bottom of the glen, and was about the same walking distance from the parent settlement.

3. *The West Lix shielings*. These are as high as 1,800 ft. in an easterly facing hollow at the base of a steep rocky slope (NN 544275). Six roughly rectangular huts occur and again there are traces of sub-circular structures. The walking distance from West Lix is slightly further and the additional uphill climb would probably take rather more than an hour.

The sub-rectangular structures on all three sites are in much the same state of preservation. They may have continued in use until the parent settlements became modern sheep farms, but as one of the primary uses of the shieling system was to get the cattle away from growing crops on unenclosed land, the practice may have been abandoned, perhaps gradually, after the group farms in run-rig were subdivided at the end of the eighteenth century. It is noticeable that the number of huts on the three sites (12, 6 and 6) is in the same ratio as the number of tenants in the mid-eighteenth century - 8, 4 and 4. The relatively short distance from the main settlement is not at all unusual, and the sub-rectangular form of the huts may be matched on many sites in the Highlands generally.

### *Prehistoric sites*

During investigations, a watch was kept for signs of settlement in earlier times than have so far been discussed.

1. *A cup-marked stone*. This has been noted before<sup>1</sup> but was incorrectly sited. It is located

<sup>1</sup> Cash, C. G., 'Archaeological Gleanings from Killin', *Proc. Soc. Antiq. Scot.* XLVI (1911-2), 267-8.

on a morainic mound about 80 yards south of the railway line and 450 yds. east of the main road to Glen Ogle, at a height of 640 ft. (NN 552302).

2. *Walled enclosure* (fig. 4). About 180 yds. north-west of Middle Lix farmhouse, there is a pear-shaped enclosure about 20 yds. across (NN 552301). It is formed by what appear to be the foundations of a stout wall of boulders, perhaps about 5 ft. thick; there is a possible entrance in the south-west. The enclosure is grass grown and uneven inside, and slopes up to the crest of a morainic mound which lies at an elevation of about 670 ft. The site seems to have been chosen with a view to drainage rather than defence, but it might conceivably be a south-westerly outlier of a group of so-called 'ring forts', occurring mainly in West Perthshire, and first described by Watson.<sup>1</sup> This interpretation perhaps seems rather far-fetched as both the shape and wall thickness are atypical, but the site is peculiar in any case. Dr M. E. C. Stewart has drawn attention to a number of eighteenth-century settlements within Strath Tay which have 'dun' names, e.g. Dun Taylor and Duntaggart near Aberfeldy;<sup>2</sup> the remnants of a 'dun', similar to a ring-fort, are visible at Lundin (formerly Lundun). The site at Lix would be of considerable significance in this enquiry if these Perthshire 'duns' could be regarded as forerunners of the later joint-tenancy farms.

## EXCAVATIONS AT LIX: 1959-61

### *General*

Excavation is rarely employed on sites as late as the ruined clusters at Lix. The writer's intentions were threefold; to establish the form and functions of characteristic buildings, to verify the late date of the ruins as suggested by the documentary evidence, and to discover if possible, indications of an older settlement pattern. It must be emphasised that the significance of much data relating to the settlement at Lix became apparent only during the course of several years of work on ground observation and survey, the study and plotting of air photographs, excavation and the documentary evidence. It was difficult to escape from the idea that the ruinous buildings, with their primitive form and appearance of antiquity, were far older than 1800; Cockburn's plan was long thought to be misleading – even now it has some curious features. Viewed in this context, excavation proved both reassuring and a further stimulus; a bald statement of results scarcely indicates in retrospect the impact made at the time.

In 1959, one carefully selected dwelling was excavated; fortunately Dr Bruce Proudfoot was able to bring his experience of excavation on a somewhat comparable late site in Northern Ireland at Murphystown.<sup>3</sup> Next year, a number of places were examined, in the main searching rather fruitlessly for evidence of Cockburn's clachans. Finally in 1961, a more detailed study of one selected cluster (EL/III) was decided upon. The excavation-team rarely exceeded six, and there were no paid labourers, but nearly all had worked previously on a number of prehistoric or medieval sites. Experience has shown only too clearly how difficult the task would have been on a site without some documentary evidence.

### *The East Lix byre-dwelling EL/I/D*

The building D in Cluster EL/I (figs. 7 and 8) was selected as representative of a type which occurred in each of the clusters at Lix; it seemed from its considerable length to be a byre-dwell-

<sup>1</sup> Watson, William J., 'The Circular Forts of North Perthshire', *Proc. Soc. Antiq. Scot.* XLVII (1912-3), 30-60. Watson, William J. 'Circular Forts of Lorn and North Perthshire', *Proc. Soc. Antiq. Scot.* XLIX (1914-5), 17-32.

<sup>2</sup> Stewart, Margaret E. C., 'The Ring Forts of Central Perthshire', *Trans. Proc. Perthshire Nat. Science* 12 (1969), 21-32.

<sup>3</sup> Buchanan, R. H., Johnson, J. H. and Proudfoot, Bruce, 'Excavations at Murphystown, Co. Down', *Ulster J. Archaeol.* 22 (1959), 130-3.



ing. Most unexpectedly the byre proved to occupy the higher end, into which led the single entrance; there was a stone-built drain or sump centrally placed. To the right of the door, only a low mound of clay separated this byre from the living-end where the hearth was located in the middle of the floor. Around the fireplace was a flagged pavement, but further away towards the far end, only a simple earth-floor appeared. There was evidence neither of windows in the walls, nor of window-glass. A trimmed slate or two were recovered and although puzzling in themselves, these fragments cannot be taken to indicate that the roof was anything other than thatched. Quantities of pottery, glass and even fine china were recovered amongst other refuse, but there was nothing to suggest a date earlier than 1800 or later than about 1830. A dark, smoky dwelling of a very unhealthy and primitive form must be envisaged, in spite of its very late date.

When excavation began, the intention was to work in the first place in alternative squares along the central line, but divergence from this scheme became advisable almost at once (fig. 7). Internally the long house measured 51 ft. east-west, with an average width of 13 ft. 6 in., although a strict rectangle had not been achieved. The walls were about 2 ft. 3 in. thick near the foundations, but there was considerable variation especially on the south side where some massive blocks had slipped outwards. The single doorway on the south side was ruined almost to foundations and was set off-centre just where the ground inside began to rise more steeply to the higher end. The walls were constructed of slabs and blocks of irregular size, set without coursing and showing little sign of trimming, but usually placed so that an even surface appeared at the wall-face. The slabs of both the outer and inner face were of such a size that only a small and irregular space separated them at the centre, and this was filled with angular stone fragments. The foundation-blocks were sometimes massive, although not on quite the same scale as in some of the other East Lix buildings, and they normally projected slightly on the outside to give a distinct batter to the outer face of the wall.

The western or byre-end was rather more roughly constructed than the east. The wall foundations rested directly on the natural boulder clay with only a thin peaty layer intervening in places – possibly the old turf line. On the inside face just west of the entrance, the lower part of the wall consisted merely of large stones set on end, which had tended to slip. In the centre and east of the building, where the stones were of a better shape, traces of a very shallow foundation trench could be detected. In the byre-end experiment showed that the total volume of fallen masonry was not sufficient to raise the height of the ruined wall to more than 4 ft. to 5 ft. As part of the walling rose to as much as 6 ft. in other buildings on East Lix, some stone robbing may be suspected, unless the upper part of the wall had been turf. There was no sign of recesses in the walls to house crucks for the roof; the walls, however, rarely survived to a height of more than about 2 ft.

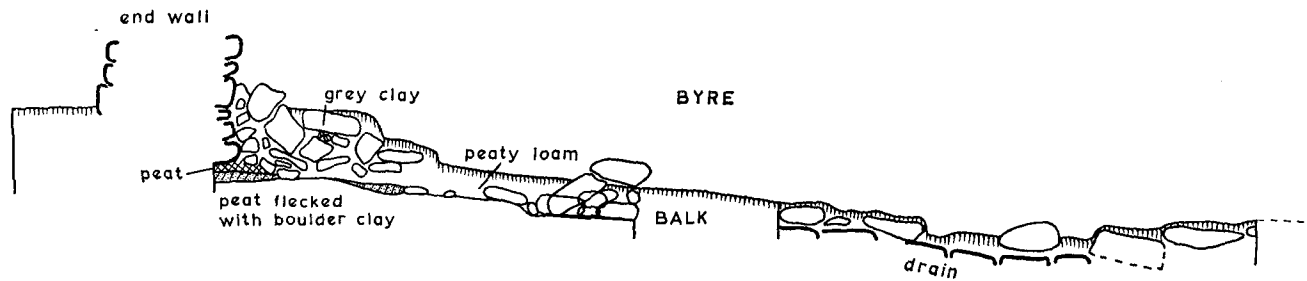
A dry-stone wall 2 ft. to 3 ft. thick is far from wind proof, but no indication of clay mortaring showed superficially. Patches of grey clay, however, occurred very commonly on the floor inside when the building was excavated, and this clay thickened and became a continuous deposit as much as 3 in. deep near the inside foot of the wall. It was clearly traceable, too, packed between the stones at the lowest part of the wall. In some cases, the grey clay was faintly laminated, presumably as a result of downwash from the walls. There is no doubt that during occupation the interior face was at least pointed and probably well plastered with clay.

The single doorway was 2 ft. 8 in. wide, and was placed approximately one-third of the length of the long wall from the west. The entrance consisted of large flags, and a pavement continued outwards to the south in front of the house for a distance of 8 ft. where it ended at a shallow drain-like depression cut into the subsoil (Pl. 20a). The pavement was carefully laid with large stones and was stepped here and there as it passed gently downhill.

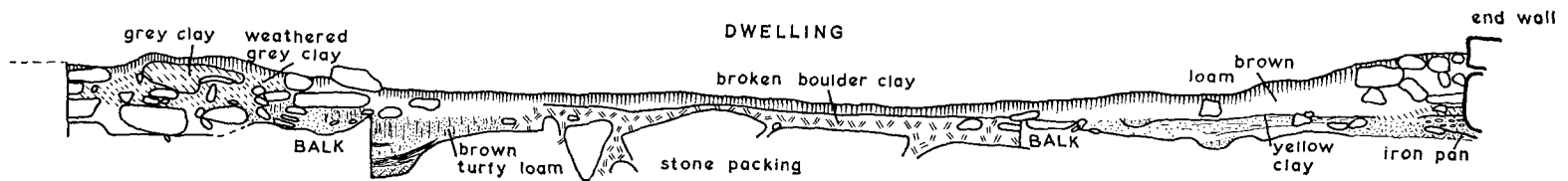


# THE HOUSE AT EAST LIX GLEN DOCHART (EL/I/D)

## CENTRE LINE SECTION



## CENTRE LINE SECTION



## CROSS SECTION

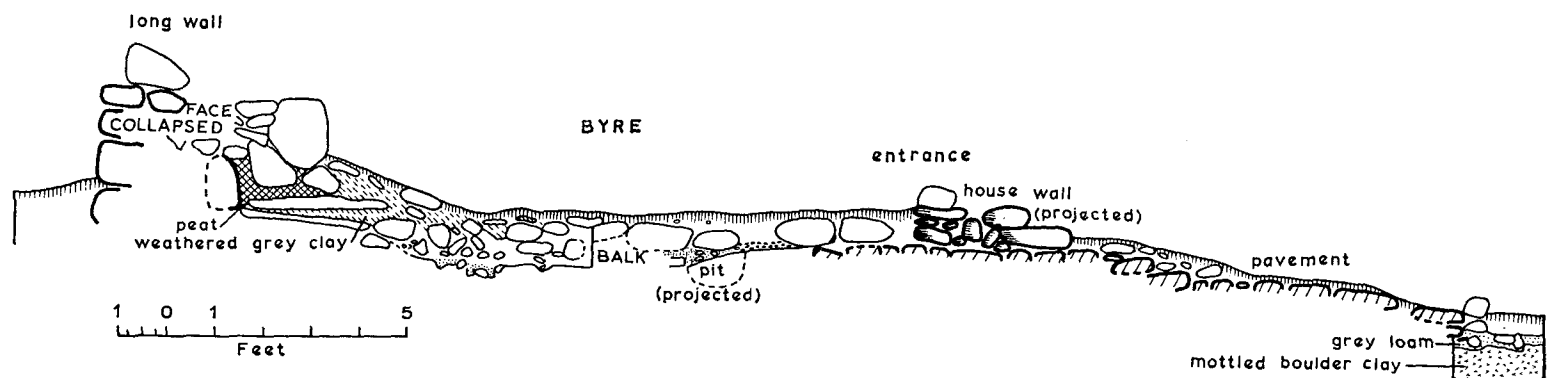


FIG. 8. House at East Lix (EL/I/D): sections.

Against the south-west corner of the byre, there was a stack of peat to a depth of about 1 ft. ; the individual peats had not been placed against the inner face of the wall, but against tumbled stones so that this end of the building was in use as a store after it had become ruinous. Much peaty material occurred in the doorway, and a slab at a high level may have belonged to this late phase. With very little sign otherwise of occupation, the clay floor of the byre rose steeply towards the south and west corner, both from the entrance and the central line of the building. This was so marked a feature that a clay platform was suspected, but it was no more than the natural boulder clay. Passing down eastwards towards the centre of the building, there was a drain or sump which had been carefully built of large blocks and paved with slabs; it was about 1 ft. 10 in. wide and some 5 in. deep (Pl. 20b). It commenced 8 ft. from the western wall on the central line of the building, but when opposite the doorway, showed signs of having been filled with stone slabs, possibly in the last ruinous phase. Here, there was a mound of grey clay running right across the building from wall to wall, just east of the entrance and forming the only apparent division between the byre and living quarters. In places the clay was as much as 8 in. deep but had obviously spread outwards and a total width of 8 ft. was noted. It overlay stones and occasional twigs and even branches occurred within, but there was no sign of any wicker-work partition wall. The seepage from the byre drain or sump seemed to have been turned round at right angles under this mound where there was a V-shaped cut in the ground, 10 in. across, filled with rounded stones, and roughly covered with flags. It was joined at the bend by a short subsidiary drain (Pl. 21a). How far the mound was intended to prevent superficial drainage into the living quarters from the byre, and how far it was meant to seal down the drain, it is difficult to say.

The floor of the byre between the central drain and the walls consisted of orange yellow boulder clay. Besides rising steeply from the entrance, the floor formed a very irregular surface indeed, with hollows, shallow 'scoops' and pits. In several of the minor depressions, some dark earth occurred and this also appeared beneath the stones forming the drain. In addition, there were two distinct pits which had been disturbed in the construction of the drain; the first was 18 in. across and 12 in. deep, while the other which was partly under the drain, was 16 in. in diameter and 16 in. deep. Both contained very dark earth and some burnt material. Yet another shallow pit was suspected near the inner corner of the entrance on the west side and appeared to lie partly beneath the wall. Quite different in character was a post hole 5 ft. from the western gable and 1 ft. inward from the southern wall; it was 13 in. in diameter, about 11 in. deep and there were packing stones near the bottom. It was filled with boulder clay into which peaty water had seeped. The hole would have taken a post perhaps 6 in. square.

In spite of the vague traces of an earlier occupation in the form of these pits, there is no doubt that this western end of the long house was built as a byre in the first place; a fragment of china from under slabs forming the base of the drain seems to confirm this. The choice of the upper end of the building for the byre, the absence of any obvious partition wall, and hence of any built doorway into the living quarters, together with the open byre drain or sump leading into a narrow covered drain at right angles, which left the building alongside the only entrance, all appear as extremely clumsy efforts to deal with fundamentally simple problems.

The hearth for the dwelling was centrally placed with the back close to what must have been the position of the clay mound before it spread outwards (Pl. 20b). The back and two sides were formed of upright slabs or flags, but only the southerly one was in true position. The hearth measured 3 ft. 5 in. by 2 ft. 9 in. and was flush with the general floor of the living-room which was roughly paved in the vicinity. The slab forming the base of the hearth was reddened and cracked with heat, but there was little ash to be seen. Underneath there were 3 to 4 in. of brown earth and stones representing a careful packing and directly under the front of the hearth, there was a

pit-like depression similar to those which had been encountered under the byre drain, and presumably belonging to an older occupation.

Some disturbance of the natural boulder clay had occurred in setting the retaining slabs of the hearth in position and this had extended the disturbed ground already caused by the pits. Now the end of the stone-lined byre drain occurred at the edge of this disturbed ground and some seepage from the earthcut continuation drain might well have occurred. At any rate, another covered drain, similar to the first, curved round from the vicinity of the hearth to run out under the south wall some 4 ft. 1 in. east of the first (Pl. 21a).

Three yards east of the hearth, two rock boulders just broke the surface of the floor, and two long grooves in the stone showed that blasting operations had been used to level the floor space. The rocks had been bored probably with a hammer and rotating chisel, in one case to a depth of 13 in. The holes were 1 in. across, and were concave at the bottom. A brass base for one of the explosive cartridges was found nearby. Excavation showed that the explosions had disturbed a considerable area around, and the main rock mass had become separated from two other masses by a deep trough-like cleft. This cleft and the disturbed ground generally had been packed carefully after the explosions with stones and a dark brown loam flecked with carbon, and covered over with broken-up boulder clay. Deep down, cavities appeared in the packing. A very considerable blast had taken place, probably on a much larger scale than had been planned.

The northern and eastern parts of the floor of the living quarters were formed simply of trampled earth at approximately the same level as the hearth. Grey clay again occurred in patches and as a very thick deposit in the north-east angle where it clearly overlay some tumbled stone and showed the laminations due to downwash. Against the east wall on the edge of the excavation in the mid-line of the building, there was uncovered a foot square of boarding on the floor, obviously extending southwards. In the north-east angle, 2 ft. 6 in. from each wall, there was a probable post hole, 8 in. deep and 10 in. across, filled with black loamy deposit. It suggests comparison with the post hole in the south-west angle of the byre, and might have some structural significance.

Immediately north of the hearth-area, the grey clay extended as a thick deposit from the mound separating the byre. Horizontal flagstones were exposed by excavation, lying almost like steps; they may have formed the normal entry from the byre, but showed little sign of usage. Anyone familiar with the plans of the Norse long-houses at Jarlshof will recall the flagstones in a similar position which have been interpreted as marking off sleeping places.

In the south-central part of the living quarters, east of the covered drain, the excavated area showed an irregular pavement rising towards the south wall. A complete quern was found here, the two stones lying side by side at the top of the trampled floor material (Appendix III). Two other stones also came from the same area, both rough and rather irregular flags, but bored in the centre with a neat hole 4 in. across. In this connection, it might be relevant to quote from the paper of Ivison Macadam in 1886-7 on the ancient iron industry of Scotland. 'Up to the beginning of the present century a great many people in the Highlands made peat and wood charcoal in their kitchens. A flag with a hole in the centre was placed over a deep circular pit sunk in the earthen floor, and into this pit the embers of the evening fire and any superfluous wood was thrown. A plug was fitted over the hole in the covering flag, and thus the contents of the pit were converted into good charcoal for smithy work, etc. These domestic charcoal pits have been filled up long ago, but the covering flags may still be observed in some of the old houses, in Strathdearn, etc., where the flags form a part of the kitchen pavement. They measure about three feet diameter, and the hole in the centre of each flag about 3 inches diameter.'<sup>1</sup> On the whole the flags found at

<sup>1</sup> Macadam, Ivison, 'Notes on the Ancient Iron Industry of Scotland', *Proc. Soc. Antiq. Scot.* xxi (1886-7), 94-131.

Lix seemed too small for this purpose, as did the pits themselves. Mr A. Fenton of the National Museum of Antiquities, Edinburgh, suggests that the flags held upright stakes in place in the byre, as the walling was rather loose to withstand the tugging of tethered animals. Still, the description of peat-charcoal production is worth recalling.

Numerous small finds, fragments of pottery including china, glass (never window-glass), coal, slate and rusted iron objects, occurred frequently in the trampled floor of the living quarters which was of dark-brown, carbon-flecked earth, flagged in places. A square-cut slate was also found on the floor. Glass and pottery fragments and several old bottles were collected amongst the tumble from the walls, presumably thrown away after the dwelling had become a ruinous store place. All form a homogeneous group dating from the early and middle of the nineteenth century, with the possible exception of the quern and holed stones. Very few of these objects had penetrated below the level of the earth floor, except in the ground disturbed by the explosion.

There is, however, some reason to suspect an earlier occupation of the site, though the evidence is extremely tenuous and no date can be suggested (fig. 8). The earth-filling in the ground affected by the explosion was in part a brown stained loam and a similar deposit has already been noted in the 'pits' beneath the floor of the byre. Away from the disturbed ground in the living quarters, both the trampled floor and flagging could be seen in places to lie above a dark-brown loam, flecked with carbon and suggestive of occupation material. It was best exemplified in the north-east angle of the building, where fine bedding as from floor-levels was clearly traceable, although not for any distance. No finds which could not be associated readily with the floor above occurred in this deposit. Elsewhere, it passed both under the south wall and under the north-east angle, where a shallow foundation trench had been cut into it. In places, there were traces of podzolisation as though the deposit had been long *in situ*. At the maximum depth, as under one of the quern stones, it was as much as 8 in. but in general the thickness was about 3 in.

Beneath lay the orange-brown boulder clay, with patches of grey in it; there were clear traces of podzolisation with indications of iron pan. The surface of the clay was curiously pitted; some depressions were almost certainly fortuitous, but several suggested stake-holes quite irregularly spaced. In addition there were small patches of cobbles near, but not going under, the south wall. A small but distinct post-hole about 6 in. diameter was cut into the boulder clay just above the northern edge of the hearth; it was filled with brown loam. Another deep pit on the line of the mid-section just east of the hearth has already been mentioned; it contained a considerable amount of burnt material probably washed in.

The discovery that such a crude structure as this byre-dwelling was erected little if any before the year 1800 is remarkable in itself. The almost careless choice of site by the builders, the inept use of explosive, the position of the byre at the higher end of the dwelling, the poor arrangement of the drains, the untidy clay mound which alone separated byre and living-room, all provide a most curious picture of farmhouse construction at a very late date.

#### *The possible cottage EL/I/B*

In alignment with the dwelling just described, there was a building measuring 28 ft. by 12 ft. associated with the same yard to the north, and which was opposite to an open-ended structure nearby (fig. 4). It was not so well-built as another two structures in the same cluster which have been tentatively classified as cottages (EL/I/A and EL/I/F).

Two trial cuttings were made, one near each end, which revealed an earth floor with no central byre drain; there was little occupation debris. More of the curious 'pits' were discovered in the floor, one being 18 in. to 20 in. across and 10 in. deep, the clay at the edges being smooth

and hard as though with heating; the other was a shallow oval. There was also a suggestion of a drain covered with small flags, near the east end.

*Cluster EL/III*

In the last season (1961), it was decided to concentrate upon Cluster III in East Lix (fig. 9); the results are most conveniently considered at this stage. It appeared necessary to sample, as it were, another group of buildings, if only to provide an adequate check on the early results from EL/I. As Cluster EL/III was not recorded on the 6-inch map of 1867, there was a possibility that it had gone out of use at an early date.

*Elongated structure (EL/III/A)*

Dominating the group, there was an exceptionally long building measuring 85 ft. by 13 ft. 6 in. which was slightly out of alignment with the other structures (Pl. 22a). At first, two buildings placed end to end were suspected to have been joined together, but a visit to the abandoned settlement of Tirai in Glen Lochay nearby, showed that Perthshire byre-dwellings could be at least that length without any internal partition. The walls were 2 ft. to 3 ft. thick and stood as much as 4 ft. high in the southern short wall; they were by no means straight. Partly this was due to slip but partly careless alignment was indicated. The whole building ran markedly downhill from the north for about two-thirds of its length, but the southern portion was level.

Traces of a cruck slot were found on the eastern wall; the base was only about 8 in. from floor level, which was much lower than expected. Had there been many other cruck slots in the buildings on Lix so near the floor level, traces of them would surely have been recognisable at the present day. On the opposite wall, when the tumbled stones were removed, indications of the complementary slot could be distinguished, and also there was evidence of burning both on the wall and floor; presumably the roof had been on fire at some stage.

There were four doorways into this long building. Only the one in the south-east opening into the space between the yard and the building EL/III/B had a paved entrance comparable with that of the byre-dwelling in Cluster I. Here, however, there was an elaborate apron of large flagstones and quite fine cobbling. This passed beneath the nearest of four circular settings of stone which had attracted some speculation (see fig. 9); they must represent the bases for cornstacks, of comparatively recent date.

Both of the other two doors at the southern end of the long building had at some stage been roughly blocked with stones slightly smaller than those used in the walling (Pl. 22a). In neither case was there any suggestion of an outside pavement; indeed, the door in the western wall seemed scarcely to have been used, and it might have been constructed simply to give a through draught with the opposite door to the east, across a threshing-floor. In other words, the southern end of the long building perhaps was used latterly as a barn. The doorway in the south end opened into an extension of the yard, and excavation here showed that a depth of nearly a foot of dark-brown soil mixed with stones had been superimposed on the old soil surface. In and beneath this soil were two fragments of cream glazed chinaware. This collection of earth seems to represent the scrapings from the inside of the building, possibly at some stage when it had been used as a byre or pound. The fourth door near the northern end of the long west wall had only a very little cobbling outside, as though stones had been thrown down to level some soft place. It is in a curious position opening to the relatively sunless and exposed quarter.

Inside the long building as a whole, there was an earth-floor with surprisingly little sign of occupational debris. Apart from a shallow hole in the extreme north-west corner where there were some remains of a glass bottle and a glazed and decorated china dish, only the odd fragment

of glass or a potsherd occurred, with nothing whatsoever in the southern third of the building. Grey clay was found at the foot of the wall most of the way round indicating that the interior had been plastered over to keep out draughts, but this clay was obviously lacking in the extreme southern end. Down the centre of the building, the earth-floor itself was missing and raw clay was encountered directly beneath the turf. The explanation for this apparently curious anomaly lies in the fact that grazing animals had wandered through the ruined building along a path between the tumbled stones. On each side of this worn central area, the floor surface was traceable as a thin layer of dark-brown earth. On top was another very thin layer of peat which underlay the grey clay along the foot of the wall. Dr Proudfoot suggested that this peaty material, which still preserved intact its vegetable structure, might have originated as divots under the thatched roof, which had fallen on to the old floor as the roof decayed and had been subsequently covered by the grey clay as it slumped down from the interior face of the wall.

These details with regard to the character of the floor of the long building seem trivial enough in themselves, but appear to be worth recording if only to throw light on the variety of deposit which can occur on an archaeological site, and which, in fact, give very little clue as to the function of the structure involved.

Although the interior of the building was not excavated completely, the only suggestion of a cross wall came roughly midway, where there were inconclusive remains of masonry against the east side and a vertical slab on the west (which might in fact represent a ruined cruck slot), with vague traces of footings in the floor between. A flimsy partition might be involved.

It remains to note the presence of no less than three hearths in the northern part of the building, two being in uncomfortable proximity to the north-west facing doorway (Pl. 22b). The best preserved was in the extreme north where there was a flat slab with signs of burning, surrounded by a low kerb of upright stones. The middle hearth was similar except that the kerb was largely ruined, while the third hearth had no trace of a kerb. There was no sign of ash apart from quite minute and rare indications of charcoal. It can only be assumed that the building had been repeatedly swept or scraped to remove the ash.

The three hearths must indicate some domestic occupation, and yet the rest of the evidence would suggest that at least in its latest stages the building had been used as a barn or a pen. It is also remarkable that there was no sign of a central byre drain throughout the length of the building. It is possible that the structure originated as a longer but cruder variety of farmhouse than EL/I/D (with a small hearth at one end and barn and byre at the other), which subsequently was used as a stock pen after some of the doorways had been blocked. There was nothing in the material obtained from the floor to suggest a date other than the earlier nineteenth century.

What this long building clearly illustrates is the relative ease with which these dry-stone structures could be modified and adapted for other uses than the original, with very little evidence of the complicated changes involved.

#### *The byre-dwelling EL/III/G*

This building suggested a very close parallel with the farmhouse which was excavated in Cluster I. Internally, it measured 52 ft. by 13 ft. 3 in. to 13 ft. 6 in. wide. There was one doorway on the south side a little off centre to the west, and the structure as a whole was slightly higher in the west. In this upper end there were clear indications of a byre drain, which began 2 ft. from the western end wall. Unlike EL/I/D, however, the building G was in direct connection with the next building to the west, structure F which was presumably a cottage measuring 26 ft. 3 in. by 13 ft. Only a partial excavation was undertaken, and no attempt was made to clear away the tumbled stones along the lines of the walls.



A section across the byre drain showed that it was 2 ft. 8 in. wide and 6½ in. deep, and was very carefully constructed of slabs. It came to a neat rectangular end opposite the western jamb of the doorway, without any sign of an underground covered drain leading away from the byre. Some well-laid flag-stones about a yard across provided a passage way in from the doorway, past the end of the drain. Outside the house this flagging was replaced by quite inferior cobbling as compared both with the interior and with the pavement in front of EL/I/D. A large flat slab in the byre on the south side of the drain had a round hole about 2 in. in diameter, not unlike the holed slabs found in EL/I/D. It rested directly on the natural clay, and probably supported an upright stake.

On the east side of the doorway and the paved entrance to the byre, there were the living quarters, which were as much as 6 in. below the level of the lower end of the byre. Adjacent to the paving leading in from the entrance, there was first of all a strip of earth some 9 in. wide which might conceivably be some form of drain but could scarcely represent the site even of the flimsiest partition. Immediately to the east and 1 ft. south of the central line of the building, lay the hearth. It consisted of a slab 27 in. by 22 in. which was cracked by heat into small fragments; once again, there was no sign of ash. The hearth was open to the east, but on each side there was a low kerb formed of flagstones set on end. The back, towards the byre, had obviously been formed by a large flagstone which had fallen forwards over the square hearth and had broken into two pieces, but originally had measured 25 in. high by 40 in. wide and some 5 in. thick; it again showed traces of heat. The stone was lifted back into position and the restored hearth was then photographed (Pl. 22c). In general, it was very similar to the ruinous hearth in EL/I/D, and in contrast to the smaller hearths at the upper end of EL/III/A. In front, the floor had been very neatly paved with flagstones upon which were found numerous small fragments of nineteenth-century pottery and pieces of iron, together with a broken cast-iron frying pan.

This floor offered a very sharp contrast indeed to that of the Building EL/III/A, both as regards the excellence of the paving and the number of small objects recovered. As compared with the byre-dwelling EL/I/D, the general similarity of plan was remarkable down to details, but this house in Cluster III showed far better construction of hearth, byre drain and paving. On the face of the evidence, it would be tempting to suggest that the dwelling EL/III/G was occupied to a late period but the 6-inch Ordnance Survey map is a clear indication that the whole cluster had gone out of use by the middle of the last century, so that this explanation cannot be maintained. The house must have belonged to a relatively prosperous household, and have been occupied at much the same period as the byre dwelling EL/I/D.

#### *Structure EL/III/B and a one-roomed cottage*

The elongated structure EL/III/B was slightly smaller than G and was divided into three by dry-stone cross-walls of a rather flimsy nature. It was obvious before excavation that the latter were not bonded into the outside walls; nothing in the investigations, however, appeared to justify a conclusion that these were secondary features. The building B as a whole was very poorly constructed and the outside walls had been built directly upon 7 to 9 in. of peaty turf.

The western compartment was excavated and proved to have been a one-roomed cottage; the other two divisions were probably similar. Internally, it measured 15 ft. 6 in. long, but was only 8 ft. 9 in. to 9 ft. 8 in. wide. The doorway on the northern side was 4 ft. along from the cross wall dividing off the room from the central compartment of EL/III/B, allowing just sufficient space for a bed on the left. In the extreme north-east corner of the room, there was a distinct depression in the clay floor, hard packed at the bottom, containing several loose stones and rather less than one quarter of an iron pot some 9½ in. high by about 10 in. in circumference. Mr

A. Fenton who excavated this hollow, suggested that the iron pot might have been used to accumulate lye as a supply of ammonia for dyeing purposes or washing blankets. Curving across the floor from the far wall to the entrance (see fig. 9) was a covered drain about 6 in. wide and 6 in. deep, of the type already known from the house EL/I/D (Pl. 23a).

Against the short outside wall in the west, there were traces of a fireplace of a type not as yet encountered at Lix. For a distance of about 7 ft. from the south-west corner, there were indications of burning in the form of reddened clay, and a flat slab adjacent to the wall seems to have been a hearth-stone. Some 1 ft. 6 in. out from the wall, and 5 ft. apart on each side of this slab, were two post-holes which Mr Fenton thought were for the supports of a canopy chimney against, but not built into, the gable end. From the north-east corner came some fragments of what appeared to be the iron bars of a grate.

Fragments of pottery and glass occurred commonly on the earth floor of this room, and there can be no doubt that it represents a dwelling of a very poor type.

#### *A cottage EL/III/E*

Rather than excavate another compartment of building EL/III/B, it seemed more economical to investigate building EL/III/E in the extreme south-west corner of the Cluster, as it also appeared to have been similarly subdivided. Unfortunately the work was undertaken at the very end of operations when wet weather interfered, and no definite answer was obtained.

The building was a curiosity in several ways. It measured internally some 46 ft. 6 in. by 13 ft., but it was divided into two by a partition wall some 16 ft. along from the west, and the western compartment was about 1 ft. lower at floor level than the eastern. The whole structure seems to have been added to the end of buildings F and G which may have been built together as a unit. The part of the site occupied by this presumed extension E is now very damp and much overgrown with reeds.

A strip 3 ft. wide was excavated along the middle of the floor of the western compartment. Beneath the turf, and set in dark damp soil containing fragments of china and other debris, there was a row of large slabs on the northern side of the narrow excavation, and cobbling on the southern half, the two being divided by a fairly definite line. The dark soil continued downwards between the paving stones, and there appeared to be another layer of stones below. It would seem rather reasonable to suppose that the paving and cobbling had been renewed, possibly because of subsidence in soft earth. Investigation along the cross wall showed that there was no doorway on this side; the only entrance lay 1 ft. inwards from the south-west corner, on the south side. A suggestion of a hearth with some trace of burning was located against the short outside wall, identical in position with the fireplace of the building EL/III/B.

There can be little doubt that this poorly built compartment was another one-roomed cottage, and the eastern compartment was yet another. Assuming two here and one in building F, with the three compartments in building B, there appear to have been about six one-roomed cottages in this cluster alone.

#### *The Clusters of the mid-eighteenth century*

A major objective at Lix was to locate precisely the sites of the houses shown on Cockburn's plan. Nothing could be attempted at Middle Lix owing to lack of detail on the plan itself, but at East Lix, a convincing position for the small group of houses portrayed there, was to be found in the hollow west of Cluster V on either side of a burn where it leaves the marshy east-west depression (see fig. 4). Appropriate sites could in fact be selected for each of the two yards and four houses depicted by Cockburn. The easterly yard might have corresponded in position and shape

to the yard of Cluster V, and the relative position of an associated dwelling would then have lain near a curious rectangular stone-lined pit against the north wall of the house EL/V/B. This pit was accordingly cleared out to foundations and the natural boulder clay, but the lining walls proved to be later than the wall of the dwelling. A second and third house (in association with a yard) as shown by Cockburn, were suspected to lie on a dry terrace across the burn. Trial sections revealed nothing. A fourth house could be envisaged as lying slightly apart on a low ridge to the south, and there were superficial traces of what might have been a tiny yard. A trial section right across the 'yard' and hillock showed only the natural ground except for about 6 ft. adjacent to the steep southern slope of the ridge where there was a very shallow carbonised layer immediately beneath the turf.

While it might have been a satisfying academic exercise to find definite traces of Cockburn's clusters, it became abundantly clear that a very prolonged effort was required even to find a vestigial site and it was increasingly obvious that little or no data on house form in the eighteenth-century could be expected. The task was regretfully abandoned.

#### *Two small enclosures – bloomeries*

Indications of anything even remotely suggestive of domestic sites older than the byre dwellings of about 1800, had now become of paramount importance in this late stage of the investigations; with more curiosity than expectation, two small rectangular enclosures were excavated (fig. 10).

The first lay on top of a steep hillock at about 750 ft., 200 yds. south of Cluster EL/V. A regular earthen bank about 2 ft. high and 5 to 6 ft. wide enclosed an area with parallel sides and markedly round corners, measuring 27 ft. by 19 ft. from crest to crest of the bank. The south-east corner was a waterlogged depression below the general level of the top of the hillock and a drain had to be cut to get rid of standing water.

The north-west sector of the enclosure was stripped of turf and immediately below was a mass of black earth containing fragments of charcoal and of iron slag, pieces of bog-iron ore or iron-pan (or both), and heated and even fused stone. These occurred in variable proportions, but the mass in general was structureless. It stretched from the bank as far as a roughly laid row of boulders running midway across the enclosure on the long axis. The deposit was about 6 in. thick over the natural boulder clay. The bank was built of earth scooped out of the interior and was a dark orange-brown in colour; the outline was very smooth and only a little downwash on top of the black mass had occurred. This did not suggest any great antiquity and the depression in the south-east had only become partly filled with soggy peat to a depth of about 10 in.

At the same time, a second enclosure, 300 yds. south of Middle Lix, and which appeared to bear superficial resemblances to the first, was examined. It was at just about the same altitude, again within the old head dyke of the eighteenth century, and was at the southern end of a long mound with an old turf dyke along the side. The enclosure was again sunken, and bounded by a bank of earth and large boulders but was very ragged in appearance; internally it measured 26 ft. by 12 ft. to 14 ft. Outside to the south, a few widely spaced boulders vaguely suggested the outline of a small yard.

Excavation immediately revealed another mass of black earth, iron ore, slag and heated stones, all packed hard together. This mass lay against the north bank of the enclosure which was faced on the inside by large boulders in alignment; the other sides were much less clearly defined, and sods had clearly been used in places. Inside the enclosure, against the dark mass, was a chaotic collection of large smooth boulders which seemed to have been placed together but conformed to no pattern. Amongst them, the black mass thinned out and became patchy; its greatest

# EAST LIX Cluster III

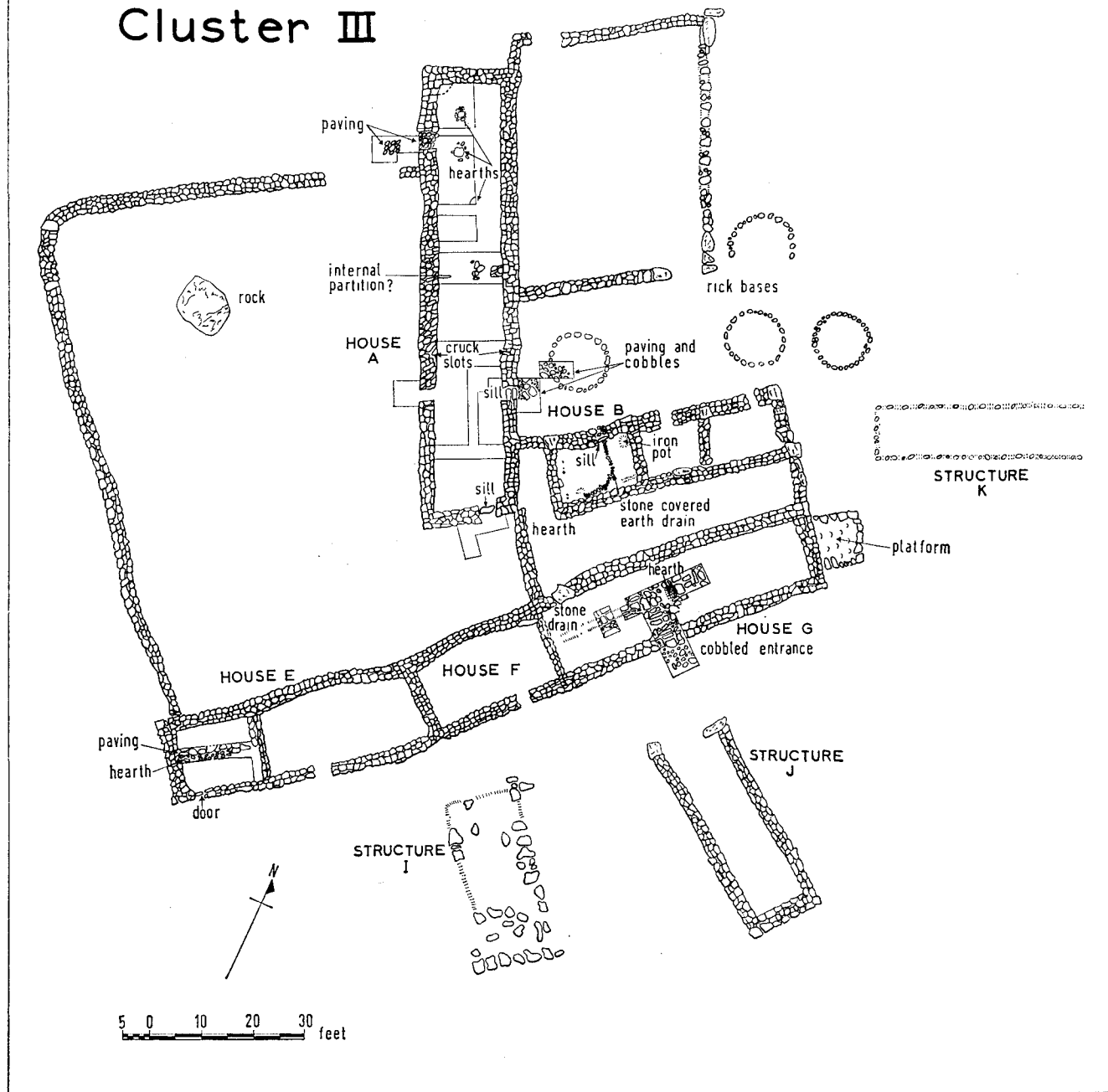


FIG. 9. East Lix, Cluster III: plan.

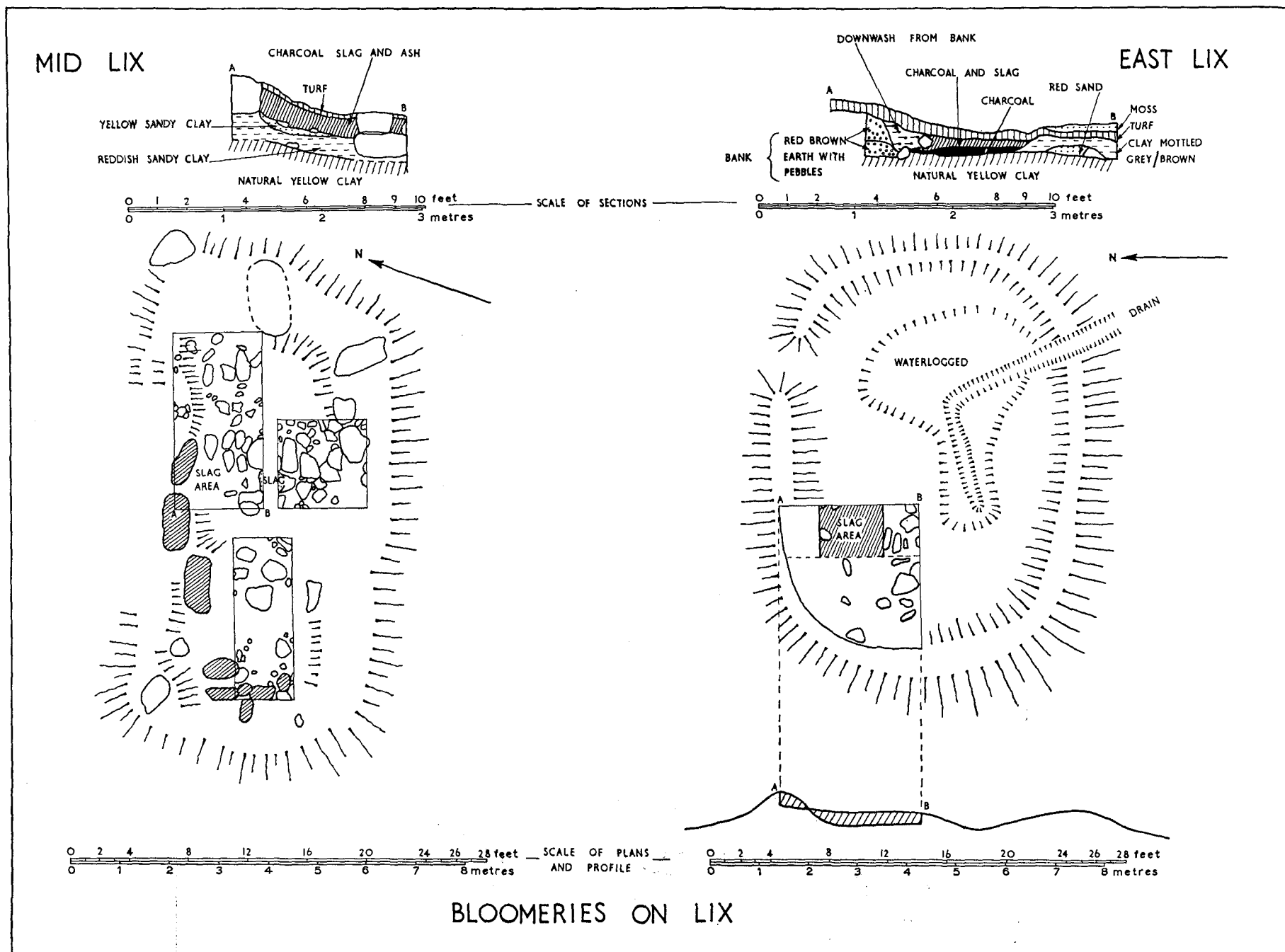


FIG. 10. Lix, bloomeries: plans.

depth was near the north side where there was as much as 14 in. on the irregular boulder clay beneath. On top, immediately below turf, were some fragments of nineteenth-century pottery.

It is quite clear that both structures were bloomeries for roasting iron-ore with wood-charcoal, purposely placed in a very windy locality. There is a third structure of this type on East Lix just east of the first but on flatter ground. Yet another example occurs on top of a hillock to the south west of the steading at West Lix.

#### *A kiln on East Lix at Cluster V*

Another very different problem involved some investigation. At first sight, the seven kilns found on Lix seemed excessive if all were to produce lime, but nowhere was there any sign of the long flue to avoid excessive heating, usually found in a corn-drying kiln. It was a short task to clear one of the most problematical of the structures, just south of Cluster EL/V, which contained only a little tumbled stone.

In plan this kiln resembled a horseshoe (Pl. 23b) and was built into the north side of a low ridge, on the edge of a reedy hollow; the water level had obviously risen in recent times so that the floor of the kiln was flooded. The entry was badly ruined, but seemed to have been a simple opening 2 ft. wide with no lintel. Inside, there was a paved floor about 5 ft. across and roughly circular, where the stones had been reddened with heat. At its maximum at the back, the enclosing wall rose to a height of 4 ft. where it must have been nearly complete. The top of the kiln was about 1 ft. wider than the base. The floor showed no recognisable deposit other than silt, but several sherds of nineteenth-century pottery lay directly on the stones under the tumble.

A small and simple lime kiln is indicated, perhaps modified from an older corn-drying kiln.

### LIX: A GENERAL REVIEW

The primary objective of the investigations had been to provide a detailed morphological study of a rural settlement, deserted in the recent past, within the southern part of the Scottish Highlands. The choice of Lix provided more complexity than was anticipated. It was found that the undisturbed ruins on East Lix could not in fact be studied in isolation, as originally had been anticipated, and unfortunately in the time available it was not possible to survey West Lix in the detail of the other two. Yet this very complexity has perhaps made possible an advance on a wider front. East Lix in some respects was apparently unusual in its economy, and the involvement with Middle Lix seems in fact to have provided a more normal sample of the rural settlement pattern in the late eighteenth and early nineteenth century.

One of the disturbing aspects of the investigations has been to find how difficult it can be to discern any trace of the settlement pattern before the middle of the eighteenth century on a site known to have been occupied since medieval times. The clachans of Cockburn's plan of 1755 have vanished; all that survives from that period are the traces of straggling field-dykes very difficult to interpret, the shielings, some trackways, the Military Highway, and perhaps the ore roasting sites which were located. The probable reasons for the destruction of so much of the settlement pattern before about 1800 have been discussed elsewhere.<sup>1</sup> Briefly, however, there may be mentioned the dry-stone building which tends rapidly to become obsolete, the absence of foundation-trenches and the prevalence of earth floors, and the possibility that such flimsy materials as turf, wicker-work, earth and branches, perhaps wood, may have been in use in earlier days. Any buildings in dry-stone which became obsolete would rapidly disappear, as the stones could be re-used in later structures.

<sup>1</sup> Fairhurst, H., 'Scottish Clachans', *Scot. Geogr. Mag.* 76 (1960), 67-76.

Perhaps an exceptionally clean sweep occurred with the Improvements at Lix, but personal observation on other deserted settlement sites of this period has led to a conviction that the 'traditional' type of house is going to be difficult to find and to excavate. There must surely be sites where more than vestigial traces exist of a settlement pattern earlier than the mid-eighteenth century but extensive excavation may be involved even with localities known to have been in continuous occupation for a very long period. It might be possible to locate settlement sites for extensive excavation which are known to have a long history, where the terrain is such that the dwellings were probably always built within a compact area, far less open than with the three farms at Lix. It must be admitted, however, that in general there was a marked preference at this period for the more spacious sites. Perhaps the best hope is to concentrate upon those settlements for which a plan exists for the eighteenth century, giving more specific details than Cockburn supplied at Lix, or else portraying a less thoroughly destroyed clachan where the older foundations can still be recognised.

Over and above all this, however, there is the fact that *two* radical transformations of the settlement pattern occurred at Lix between the late eighteenth and the mid-nineteenth century.

Turning to the old joint tenancy farms on Middle and West Lix, when enclosure took place soon after 1780, the old clachans were broken up and two compact farms at first came into being on each. To the short period of these small farms belong the much ruined clusters seen on the ground today. As a second stage came further amalgamation and further depopulation; the large modern sheep farms and the present farm buildings date from this period of the mid-nineteenth century. This type of change is far removed from the much publicised evictions on the Sutherland pattern, but it may well represent the norm in the southern Highlands generally, especially for the Breadalbane Estates.

East Lix seems to provide an alternative method of adjustment. Here, the eight tenants of the old joint-tenancy farm were in the first stage given small-holdings – those marked out by the incomplete, rectilinear stone dykes. These 'crofters' built new byre-dwellings loosely in groups of two or possibly even in three over the potentially arable land. The old clachan had been, as it were, fragmented. Subsequently came an increase in the number of cottagers. Some may well have been the old or infirm for whom a refuge was found when they were displaced elsewhere, while others could be weavers in linen, since flax was grown at Lix. The dwellings now began to gather once more into small clusters with the addition of the cottagers, reverting to the old clachan tradition. This expansion could not continue long on the small area of arable available at East Lix, and in the third decade of the nineteenth century, the process was obviously reversed. Old leases were not renewed, holdings were steadily consolidated and depopulation continued until the middle of the century. Finally East Lix was merged with neighbouring Acharn into a modern sheep farm.

Much more field work within the southern Highlands generally will be required to show whether this process at East Lix was as anomalous as it might seem at present. What has emerged is that at both East Lix and the other two units, the situation is not one but two stages removed from the settlement pattern of the group tenancy farms. The ruined houses which exist today may be typical of a period not much longer than a single generation.

Looking back to the excavation of these ruined buildings, the results seem somewhat bizarre. Undoubtedly several were built as byre-dwellings. Two of them, both without any partition separating hearth and byre, with an open drain or sump in the upper end of the floor, proved to be dark and unhealthy to a degree. The building in dry-stone was shoddy and incompetent. The one-roomed cottages examined had even less to commend them. The whole situation may perhaps indicate the orders of some improving factor – that the tenants were to rehouse themselves

in a type of dwelling to which they were not accustomed. Perhaps some of the free-standing structures which were not examined in detail might have given a better impression. Some were undoubtedly better built than the byre-dwelling excavated, but they may well have been later, and could have continued in use when the older buildings were becoming obsolete or were being turned into byres, stables and barns. This latter fate seems to have overtaken the elongated dwelling (A) in Cluster III. It is suspected that the last building to house a family on East Lix was one or other of the relatively well-built, free-standing cottages in Cluster I (A or F).

Two minor points raised in the investigations deserve mention. The discovery of three or four bloomeries for ore-roasting at Lix suggests that this type of site may occur commonly on deserted settlements in the Highlands. A characteristic location would appear to be on a hillock on the edge of the moor. The small enclosure could easily be mistaken for some prehistoric feature, especially in the absence at the surface of any sign of burning. Secondly, the numerous lime kilns and the apparent absence of corn-drying kilns rather suggest that at Lix, the former were developed out of the latter. The old lime kilns perhaps are taken too much for granted as an eighteenth-century innovation.

A comment seems called for on the nature of the outfield. Cockburn's plan gave no lead in differentiating infield and outfield, and from the Loch Tayside Survey of 1769 it is known that one or other could be lacking. At Lix, small patches of arable below the old head-dyke and the small isolated and possibly temporary intakes which have been reported up on the moor, may have constituted *en masse* the outfield. A clear-cut distinction between the two methods of land utilisation may in fact have been less common than is usually stated.

Investigations at Lix were never on a scale sufficient for the excavation of extensive areas, and indeed the site was not selected with this in mind. At the end, a stage had been reached in what was after all a pioneer venture, when decreasing returns for the effort expended indicated a move elsewhere. Meanwhile, the ruined buildings on East Lix remain as a striking museum-piece in its natural setting, where there is still wide scope for further investigation should new techniques make these desirable.

## APPENDIX I

On General Roy's Military Map of Scotland which was surveyed immediately after 1745, two tracks are shown passing through the district; one coming from Killin and Loch Tayside continues past Lix up Glen Dochart, while the other leads up Glen Ogle from the direction of Callander, and then turns north-east at about the 1,000 ft. contour above 'Leaks'. This latter track may be identified from here onwards on the air photographs,<sup>1</sup> and also may be picked up on the ground as a faint and discontinuous depression as though produced by the trampling of animals. The track descends slowly past an old sheep-fold on Acharn and then becomes rather more obvious near what is now the rubbish dump at Killin; it joins the line of the main road just above the old bridge. It is probable that this was an old drove road, utilised by the black cattle coming from further north on their way to the markets at Crieff or Stirling; as such, it may have continued in use long after the construction of the military roads. Haldane's map of the drove roads<sup>2</sup> shows two routes concentrating on Lix from west and north-east, but the stance where the cattle from the west and north-west normally passed a night was at Luib, about five miles up the Dochart, whence there was an alternative route southwards over the Lairig Earne. As regards the beasts coming down through Killin from Glen Lochay and the north, there was also an alternative route in use which first passed along the southern shore of Loch Tay and then turned southwards across the hills from Ardeonaig. Viewed in this way, Lix was hardly the concentration point which Haldane's map suggests at first sight.

<sup>1</sup> 541 A 391: 18th May, 48 - Nos. 4330-2, 3331-3, 3340-1.

<sup>2</sup> Haldane, A. R. B., *The Drove Roads of Scotland* (1952).



In the archives of the Royal Scottish Geographical Society, there is an interesting document relating to the old trackways in this area, which is undated but is the preliminary survey for a road to be constructed up Glen Ogle in the middle of the eighteenth-century. There is a rough sketch map of the district but the notes are more illuminating and are quoted in full for the Lix area.

'6. From this to 7 [i.e. Lochearnhead to Glen Oglehead] is one of a rising hill but not high, all dry, no precipices, by viewing it, and changing the road a few yards in some places, may save a good deal of trouble. I have brought a light 2 wheel chaise up it, it is about a mile in all, belongs to Campbell of Funnal, this being a pass to the countries about, should be mended is called Glen Ogle.

'7 to the 8 [i.e. Glen Oglehead to Luib] is a road to be viewed and altered, it must come straight down from the hill by the houses and cornland of Lix and so to the Water of Dochart, and then turn up the side of the water all the way to the Inn at Guy, this makes a good flat road; for commonly they turn off from the top of the descent, not down by the houses, but to the left of a hill; all bogs and very hard and not worth mending, is but a quarter mile nearer to the Guy, I have marked it common road, is called Lix, belongs to Lord Perth, about three miles in all to Guy.'

The Guy in question must have been somewhere near the modern Leskine, but there is documentary evidence of another inn at West Lix. Lord Drummond, Earl of Perth forfeited his estates in the rising of 1745, so presumably the description refers to a slightly earlier year.

A military road must have been constructed over Glen Ogle soon after the completion of the survey for Roy's map. Salmond<sup>1</sup> quotes from J. T. Findlay's *Wolfe in Scotland*, as follows: 'In 1749, a larger muster of military road makers, about 1500 men, was sent under Major Caulfield to drive a road from the Pass of Leny north west from Callander to Lochearnhead in Perthshire. . . .' The completed road is marked on the plan of Lix by Cockburn dating from 1755.

The old military road with its bridges largely intact, is quite clearly traceable, usually below the level of the present main road up Glen Ogle, but once within Lix territory the old road crosses to the higher side. South of the present Middle Lix farm buildings, the old and new highways coincide, and then the old road diverges to west-south-west, passing just north of West Lix steading.

At this divergence, another old road joins the military highway. It can easily be traced (as a graded but grass grown surface, often flanked by great boulders on end), in a north-easterly direction until it joins the line of the present main road to Killin just west of the Allt Lairig Cheile. This route is not shown by Cockburn in 1755, but it may well be the termination of a road which Gillies says was constructed by the third earl of Breadalbane<sup>2</sup> and which was admired by Pennant in 1769.<sup>3</sup>

Precisely when the highways were re-aligned to form the present T-junction, at the so-called Lix Toll is not at all clear but this had certainly taken place at the time of the first 6-inch Ordnance Survey map in 1861 (Perthshire, LXXX). The Callander–Oban railway and its branch line through Lix to Killin were constructed in the seventies of the nineteenth century.

<sup>1</sup> Salmond, J. B., *Wade in Scotland*, Edinburgh (1952).

<sup>3</sup> Pennant, *ibid.*, 91-2.

<sup>2</sup> Gillies, William A., *ibid.*, 189.

APPENDIX II

RENT ROLL: LIX 1765

*Abstract Rent Roll of the Barony of Lix in the parish of Killine, part of the annexed Estate of Perth, taken in December 1765*

<i>Farms</i>	<i>Tenants</i>		<i>Net Rent payable to the Commissioners</i>	<i>Rent payable by Subtenants to the Tacksman Money Rent</i>	<i>Wedders at 2/6d each Nos.</i>	<i>Butter at 6/8 per stone Stones</i>	<i>Total Rent</i>	<i>Days Work Nos.</i>
Wester Lix	John Campbell	$\frac{1}{2}$	£3 18 4d	£- 10 -	4	1	£10 16 8	6
	do. for a croft		1 13 4					
	Finlay Fisher	$\frac{1}{8}$	19 7					
	Arch'd Fisher	$\frac{1}{8}$	19 7					
	Hugh McCannish	$\frac{1}{4}$	1 19 2					
Middle Lix	John McNab		1 19 2	- 10 -	4	1	9 3 4	6
	John Carmichael, Senior		1 19 2					
	John Carmichael, Junior		1 19 2					
	John Fisher		1 19 2					
Easter Lix	Gilbert Robertson		1 5 -	1 2 2	8	2	12 15 6	24
	Duncan Campbell		1 5 -					
	Alex. Robertson		1 5 -					
	Duncan Carmichael		1 5 -					
	John McCallum		1 5 -					
	Janet Campbell		1 5 -					
	Malcolm McNaughton		1 5 -					
	Walter McFarland and Hugh McD.		1 5 -					
Pendle of Do.	Duncan McNaughton		1 - -	-	-	1 - -	-	
Inverardon	Isobel Aikmann		10 3 4	4 16 8	-	-	15 - -	-
	<b>Total</b>		<u>£38 10 -</u>	£6 18 10	16	4	48 15 6	36
				36 days service converted at 3d per day as in Pit Cellony			£- 9 0d	
				Grassum for the 3 farms of Lix yearly			1 16 1d	2 5 1
							<u>£51 0 7</u>	



RENTAL OF THE EARL OF BREADALBANE'S LANDS IN PERTHSHIRE, 1794

<i>Merks</i>	<i>Easter Lix</i>	<i>Merks</i>	£	s	d	<i>Total</i>
4	Allan MacKay	$\frac{1}{2}$	5	5	-	
	Walter McFarlane	$\frac{1}{2}$	5	5	-	
	Angus McNaughton	$\frac{1}{2}$	5	5	-	
	Robert McFarlane	$\frac{1}{2}$	5	5	-	
	Malm MacCallum	$\frac{1}{2}$	5	5	-	
	John Carmichael	$\frac{1}{2}$	5	5	-	
	Dougal McDougal	$\frac{1}{2}$	5	5	-	
	Donald Crerar	$\frac{1}{2}$	5	5	-	£42 - -
	2 Crofters	1 Horse	2 Cows	6 Sheep		
<i>Middle Lix</i>						
2	John MacLaren	1				
		1				£25 - -
	3 Crofters	2 Horses	4 Cows	24 Sheep		
<i>Wester Lix</i>						
2	Patrick MacMartin } Donald Christie }	Equally				£32 - -
	1 Crofter	2 Cows				

## RENT ROLL: LIX 1822-3

*Breadalbane Rentals for Grass Crop 1822 and Corn Crop 1823*

	<i>Rent</i>	<i>Roadmoney</i>	<i>Total</i>	<i>Abatements</i>	<i>Payment</i>	<i>Arrears at Martin. 1823</i>	<i>Paid 1824</i>	<i>Arrears due at Mart. 1824</i>
Wester Lix Peter Clark	£100	£1 5 -	£101 5 -	£20	£81 5			
Mid Lix John McLaren	44	12 6	44 12 6	17	21 -	£6 12 6	6 12 6	
Donald Christie	44	12 6	44 12 6	17	27 12 6			
Easter Lix Dun McFarlane	15 10	5	15 15	4 5	11 10			
Dougal McDougall	27 1 6	7 6	27 9	8	19 9	9 -		9 -
Wid. McDiarmid	9 -		9					
Kath. Crerar	7		7			7 -		7 -
Eliz. McPherson	8		8		8 -			
Margt McVean	9		9			9		9 -
Janet and Kath Campbell	7 6		7 6			7 6		7 6
Catherine McIntyre	7 6		7 6			7 6		7 6
Ann McIntyre	7 6		7 6			7 6		7 6
Duncan Ferguson	16 5	5	16 10 -	4 10		12 - -	11 - -	£1 - -
James McLaren	16 5	5	16 10 -	4 10	12 - -			
Peter Crerar	22	7 6	22 7 6	6 10		15 17 6	15 17 6	
Duncan McMartin	11 10	4	11 14	3 3		8 11	2 19 6 5	11 6
Archd McDiarmid	11 10	4	11 14	3 3	8 11			
Peter Sinclair	3	3	3 3	12	2 11			

## APPENDIX III

## A Pair of Quern Stones

Two complementary quern stones were found side by side on top of the debris covering the floor of the byre-dwelling (EL/I/D) on the south side of the central hearth. Although slightly damaged, perhaps in the original construction, the pair is in excellent condition and appears worth a note in view of the probable late date.

The stones are of garnetiferous mica-schist which occurs locally in the Lawers region, and have a markedly uneven surface. Basically they have a similar form, being 1 ft. 3 in. to 1 ft. 4 in. in diameter and just over 2 in. in thickness. Externally, the stones thin slightly towards the edges which are rounded to the grinding surface.

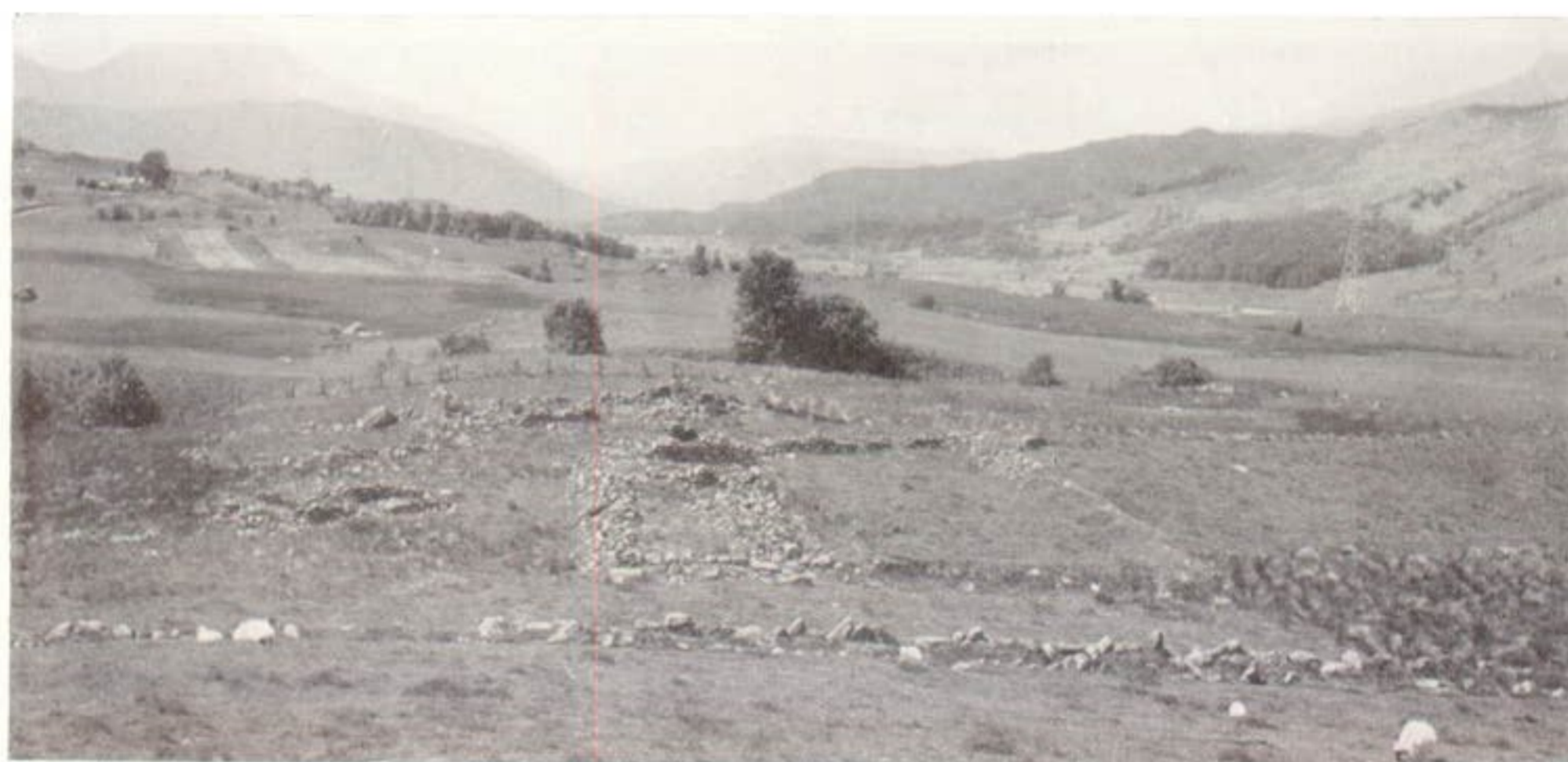
The upper stone has a central perforation which is 2·4 in. diameter and hour-glass in section. The grinding surface is very slightly concave, with a cut-away slot to wedge in the rhind which was 4·8 in. across. Externally, there are four cup-shaped holes set 1·2 in. to 2·2 in. inwards from the periphery, and almost forming a cross. These would receive the end of the pole-like handle which would be fastened loosely at the other end to a wall so that it could be used to rotate the quern with both hands. The lower stone is slightly thicker and has a central perforation cylindrical in section, 1 in. in diameter. The grinding surface is slightly concave, matching that of the upper stone.

The stones may have been discarded some time before they were placed on the floor of the nineteenth-century byre-dwelling.

*The Society is grateful to the Court of the University of Glasgow for a grant towards the publication of this paper.*



a General view over Lix, with Ben Lawers on the right, from near shielings at Middle Lix



b The deserted cluster on East Lix (EL/I) with byre-dwelling D in centre



a Paving leading to byre-dwelling EL/I/D



b Byre-dwelling EL/I/D: foreground; central hearth, background; byre drain





a Byre-dwelling EL/I/D: drains leading from hearth under S. wall



b EL/I/D: pits and hollows of earlier occupation surviving below hearth



a EL/III/A: modified byre-dwelling, blocking of S. doorway removed



b EL/III/A: two hearths at upper end



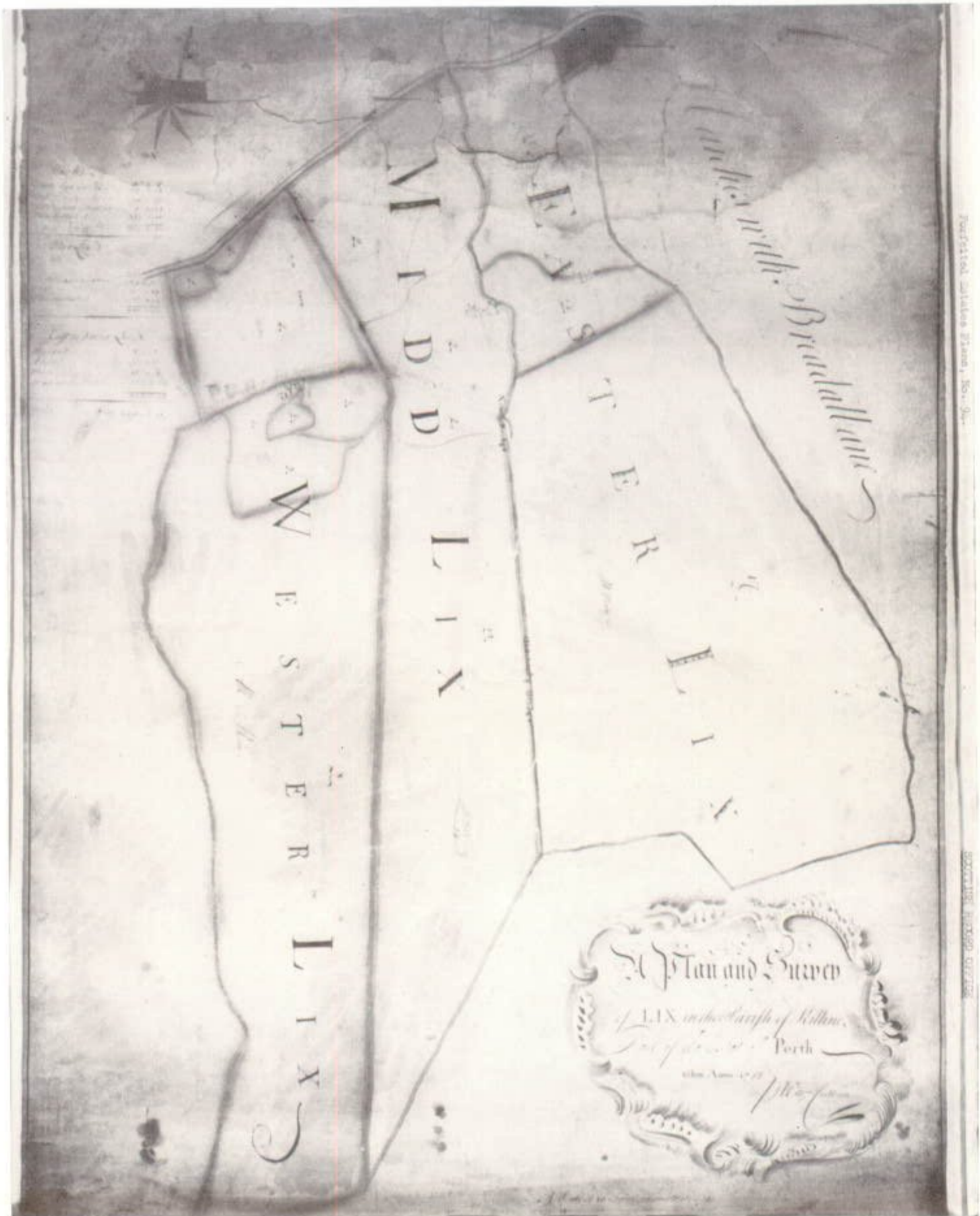
c EL/III/G: central hearth with back-slab restored



a Single-room cottage EL/III/B, with covered drain curving towards doorway



b Kiln on East Lix, possibly converted from corn-drying to lime-burning



Estate Plan of 1755