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Commercialisation, Change and Continuity: an archaeological study of rural commercial practice in the Scottish Highlands

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MLitt with distinction (University of Glasgow)

Submitted in fulfilment of the requirements for the Degree of Doctor of Philosophy

University of Glasgow Archaeology College of Arts

January 2014

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Abstract

This is a study of the movement of cattle and grain out of the Scottish Highlands in the period before and during Improvement. It uses the combined approach of historical archaeology (archaeological, documentary and cartographic research) to focus on the growth and implications of commercial practice in a predominately rural region.

The growth of the cattle trade is evidenced in archaeological terms by drove roads and associated structures such as cattle stances, enclosures, bothies and inns. The thesis studies two droving routes. One is through central Sutherland, and the other in Cowal and west Loch Lomondside. The case-studies trace the route of cattle towards distant markets outside of the Highlands, and record and analyse overnight stopping places along the way.

The development of a trade in grain from certain low lying fertile areas of the Highlands is evidenced by the building of grain storehouses or 'girnals' which were related to jetties, anchorages and harbours from which the grain was exported. The thesis considers the archaeology of the grain trade in Easter Ross, and also in the southern Highlands.

Practice is central to everyday life, and the practices associated with moving cattle and grain have embedded themselves into the archaeology of the landscapes through which they passed. The seasonal routines by which drovers moved herds of black cattle or estate tenants brought grain to the girnals, and thence onto ships, were indicative of a mesh of social relationships. The material culture of the cattle and grain trades both structured and was structured by that routine practice. Thus the archaeology gives evidence of past social relationships and how they changed over time.

This thesis considers for the first time the archaeological evidence for cattle and grain export from Highland Scotland. Therefore it gives a new understanding of the increasing impact of markets and market forces on social relations, as well as the tension between change and continuity in those relationships. It does not deny political or cultural drivers of change in the Scottish Highlands, but does emphasise what might be termed economic factors. It has something to say about the rise of the individual over community, and how individuals dealt with change in the light of asymmetrical power relationships. These issues still resonate in contemporary Scotland. Ultimately this study is about how people, mostly unnamed in documentary records, dealt with change, and it is about the archaeological legacy of their actions.

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Acknowledgements

My thanks are due to many, many people who have contributed to the creation of this thesis. I hope that those who are not named individually know that I am very grateful for all the help and assistance that I have received from them.

First and foremost I acknowledge the huge debt that I owe to my supervisors Dr Chris Dalglish and Dr Michael Given. I could not have been more fortunate. They have inspired, challenged, encouraged and informed my thinking. I hold them in the highest regard.

I have received considerable help and encouragement from a range of academics and archaeologists both in the University of Glasgow and in other institutions. In particular I must thank Professor Stephen Driscoll, Dr Tony Pollard and Dr Ewan Campbell who assiduously kept tabs on my progress and sparked many interesting lines of thought. In addition, I received advice and suggestions from Dr Iain Banks, Dr Kenny Brophy, Professor Peter van Dommelen, Professor Bill Hanson, Gilbert Markus (University of Glasgow); Dr Carolyn Anderson (University of Edinburgh); Dr Annie Tindley (Glasgow Caledonian University); Professor Hugh Cheape, Dr Karen Cullen (University of the Highlands and Islands); Chris Fleet (National Library of Scotland); Piers Dixon (Royal Commission on the Ancient and Historical Monuments of Scotland); Dr Malcolm Bangor-Jones (Historic Scotland); Paul Duffy (Discover Bute Landscape Partnership); Dr John Atkinson (GUARD Archaeology) and Dr Sarah Janes. A large number of institutions have helped my research but in particular I must mention the staff of the National Library of Scotland, the National Archives of Scotland, the Mitchell Library, Glasgow and especially Andrew McLean and Barbara McLean, archivists at Mount Stuart, Bute.

I spent much time in the case-study areas, and received help from estate owners, estate managers, ghillies, farmers and crofters. In particular I must mention two local history societies being the Clyne Heritage Society, Brora, and the Strachur and District Local History Society in Cowal whose members rendered great help, advice about the locality and wise counsel. In Sutherland and Easter Ross I would like to thank Jackie Aitken, Elizabeth Beaton, Bertie Boa, Alec Campbell, Janey Clarke, David Glass, Dr Nick Lindsay, John Macdonald, Alistair Maciver, Donald Mackay, Jean Mackay, John McMorran, Hector Munro of Foulis, Liz and Geoff Smyth and Sir Michael Wigan. In Cowal and Bute, I would like to thank Fiona Campbell, Dr David Dorren, Sue Furness, Angus Hannah, Tom and Vivien Hill, Nina Henry, Fiona Jackson, Alastair MacCallum,

Ian MacEachern, Iain and Mavis McGregor, Alistair McIntyre, John McNaughton, Jean Maskell, John Mirilees, John Mitchell, Cathy Montgomery, Willie Montgomery, Adhamh O'Broin and Mairi Paterson. An essential part of the droving case-studies was walking the routes. As I was frequently in some pretty isolated areas I always walked with a companion, and would like to thank Allan Burnett, John Craig, Eric Gunn, Neil Ramsay and Malcolm Watson, for carrying assorted poles, tapes, forms and cameras, as well as the odd tent.

I would like to acknowledge the supportive and fun-loving Archaeology postgraduate community at the University of Glasgow, and in particular Adrian, Amanda, Anthony, Bill, Carmen, Courtney, Dene, Elizabeth, Jen, Kevin, Louisa, Morgana, Owen, Rebecca, Ryan, Tom and most of all the late Kenny Macrae whose pungent views on anything and everything are sadly missed.

Thanks are due to my history and economic tutors at the University of Oxford being the late Dr Gary Bennett, the late Professor Max Hartwell, the late Roger Opie and the late Dr Penry Williams; as well as Dr Eric Christiansen and Chris Allsopp. I realise now that I was supremely fortunate to be exposed to such intellects at an early age. I would also like to acknowledge my grandfather, Douglas Thomson, the man who started a life long love of archaeology with discussions on Roman engineering techniques.

Finally, most thanks, and love, are for my wife, Susan Smith who has demonstrated tolerance, good humour and resilience in the face of six years of research in the Highlands of Scotland, not to mention both sheep ticks and midges. I thank her with all my heart.

Author's Declaration

I declare that, except where explicit reference is made to the contribution of others, that this thesis is the result of my own work and has not been submitted for any other degree at the University of Glasgow or any other institution.

Donald Beck Adamson

1 Introduction

1.1 Research Questions

This is an archaeological study of the movement of cattle and grain out of the Highlands of Scotland in the period before and during Improvement. No such archaeological study has been attempted before.

The growth of the cattle trade is evidenced in archaeological terms by drove roads and associated structures such as cattle stances, enclosures, bothies and inns. The development of a trade in grain from certain parts of the Highlands is shown by the building of grain storehouses or 'girnals', which were related to jetties, anchorages and harbours. Unusually for an archaeological study this work is centred on movement. The cattle walked to markets sometimes hundreds of miles distant from where they were raised. Grain is a bulky commodity, and bearing in mind the lack of road infrastructure, it was most efficiently moved by sea.

The development of trade in commodities such as cattle and grain points to a growing commercialisation of social relationships in the seventeenth and eighteenth centuries in the Highlands. Other goods, mainly primary products, such as timber, slate and fish were sold outside the Highlands in the period under review but, in researching the process of commercialisation, I have chosen to focus on the main exports of the region: cattle, which was the principal export of the Scottish Highlands as a whole, and grain, which was the primary product of certain low lying, fertile areas.

Through the combined approach of historical archaeology (archaeological, documentary and cartographic research) my objective has been to study the growth and implications of commercial practice in the Scottish Highlands. In order to facilitate the research, this aim has been broken down into a series of related questions:

How did the logistics, infrastructure and practices of the cattle and grain trades operate in practice?

What did the development of these trades mean for Highland society and how did society change as a result? What were the implications of the growth of these trades for farming communities, pre-existing social relationships and the landed estates of the Highlands?

What does the archaeology reveal in terms of the tension between change and continuity in those relationships?

Were there significant differences in practices between estates and between different parts of the Highlands? Did the social impact vary, and if so, why? Did the pace and nature of change differ in different parts of the Highlands?

How might the insights deriving from an archaeological analysis of the cattle and grain trades relate to recent historical research on this topic? More generally, what does it imply about changes in patterns of social relationships the Highlands in the seventeenth and eighteenth centuries?

This study is closely linked to the process of Improvement, and the growth to dominance of capitalism in the Scottish Highlands.

By Improvement I mean that process in the eighteenth century and later which profoundly altered the social relationships of people by emphasising "the individualized relationships of capitalism over those of community and kin" (Dalglish 2003: 1). In terms of physical expression, Improvement altered the physical environment on many levels from the wider landscape, the layout of agricultural enterprise, settlement patterns, and domestic architecture through to the use of domestic space. It has many aspects, but I am particularly interested in how it impacted individual practices, routines and relationships between people. There is a much longer tradition of commercial markets and trading in Scotland which extends at least as far back as the early Middle Ages and the creation of burghs (Duncan 2000: 465-473), as well as during the Viking period, which is particularly relevant to the Highlands (Ritchie 1993). However, my focus is on the post medieval period prior to and during Improvement, although I do recognise the existence of commercialised relationships much earlier in particular circumstances. Indeed this is one of my critiques of simplistic accounts of the pre-Improvement Highlands (see 2.2.2).

In terms of capitalism, I focus particularly on its ideas around personal ownership, privately owned assets and the emphasis on the individual as opposed to broader social groupings.

1.2 Structure

Chapter 2 reviews literature in relevant fields, thereby putting the current work into a wider context. I consider literature which deals with the changing nature of social relationships in the Highlands, and in particular the perceived shift from a society characterised by communal relationships to one with an individualised nature. I do this by juxtaposing recent historical discussions of social relations in a clan-based society with discussions of the post-Improvement Highlands. I highlight the complexity of the situation with a tension between change and continuity even before Improvement takes place, and very considerable differences in various parts of the Highlands. I suggest that this exposes to criticism previously dominant static models, which suggested an unchanging or 'traditional' way of life in the Highlands, with very little adaptation over many centuries until the second half of the eighteenth century. Further I argue that artificial barriers of geography and time should be challenged when considering societal change. By this I mean treating the Scottish Highlands in isolation from other geographic areas, and also focussing on certain events, usually of a political or military nature, such as the '45 Rebellion, as hermetically sealing the past from the future in a sharp and decisive manner. Secondly, I look at the various drivers of change which have been used to explain why social relationships in the Highlands changed. I divide these into those giving political, economic and cultural explanations, but note that modern scholarship increasingly perceives all three as linked. I reject an alternative analysis which splits the explanations between 'people's histories' and 'economic histories' as being likely to remove agency from the population at large, whilst portraying landlords and their tenants as homogeneous entities bound in inherently oppositional relationships. Thirdly, I consider previous scholarship, both archaeological and historical, for commercial activities in the Highlands before Improvement. I suggest that a focus on the archaeological evidence of changing agricultural practices, the principal economic activity, would have wide implications. One aspect of that might be the export of cattle and grain.

In Chapter 3, I set out the theoretical constructs which inform the thesis and which I believe give the study a depth of insight which would otherwise be lacking in a purely empirical work. I use practice, resistance and agency theory at a micro level to understand the actions of individuals and their consequent impact on the landscape. This is about untangling the social relationships arising out of moving cattle, corn and people through the landscape. At a macro level, I use economic theory to help understand the growth of global markets which had a dramatic effect on patterns of personal relationships in the

Scottish Highlands (as elsewhere) as a result of changes in economic activity. Specifically I use comparative advantage and market theory to explain why the micro-level relationships of the individual are always subject to change. I then use landscape theory to look at how roads, pathways and the related buildings, structures and sites of importance to those routeways, can be regarded as not only visible products of change but also conduits of that change. I argue that societal change and continuity, as observed by archaeologists through material culture, should not be seen as binary opposites. Instead an analysis which embraces complexity is preferred, and this is one where society is in a constant state of flux, albeit one where the pace of that change varies. This creates new relationships in the landscape but does not necessarily discard the old all at once. There are aspects of both in play at all times. The methodology and research agenda which underpins the thesis has been created by marrying these different areas of social and economic theory.

Chapter 4 covers the methodology used to answer questions about the changing nature of social relationships arising from the passage of cattle and grain through the landscape. This chapter explains, firstly, why and how I selected the routes and sites discussed in the four case-study chapters. I looked at two broad regions (one north, one south) within the Highlands, with each region having a droving and an adjacent grain exporting case-study. This facilitated an analysis of similarities and differences between cattle droving and grain exporting in the northern and southern Highlands. In turn this enabled a discussion on change and continuity in social relationships before and during Improvement. The specific case-studies were identified using information from archives, maps, local information, secondary sources and indeed the archaeology in each area itself. In total, seventy individual route sections were recorded and twenty-two sites. In chapter 4, I explain how this evidence was identified and recorded including some of the practical considerations it was necessary to take into account. Thirdly I explain how the evidence was analysed. This was based on a research agenda which was centred on context, physical attribute and form, and agency and practice.

Chapters 5-8 present the results of the case-study research.

Firstly I consider two droving routes which are studded with cattle stances suitable for overnight stays. Chapter 5 is concerned with a route running through the centre of Sutherland from upper Strath of Kildonan to the crossing over the Kyle of Sutherland to Easter Ross. Improvement came late to the Sutherland estate relative to the southern Highlands, but made a dramatic entrance when the population was cleared between 1810

and 1820. As a result of this Clearance, the routeway largely ceased to be used at that time. Many parts of the 75 kilometre route require considerable stamina to walk, and indeed some camping, because of the nature of the drove road and its present-day remoteness. On the other hand, the quality of surviving archaeology is very good, and there were five stances surveyed on the route. Chapter 6 traces the route of cattle from the island of Bute along the route to Crieff Tryst, as far as Inverarnan at the head of Loch Lomond. Crieff was the dominant Scottish cattle market until 1770. In addition, the chapter follows cattle along the route to the lowland markets at Dumbarton, Glasgow and Falkirk, as far as Luss. This case-study covers a more complex series of routeways than Chapter 5, stretching across southern Argyllshire (Cowal) and western Dunbartonshire (west Loch Lomondside). In researching the chapter, a further 75 kilometres were walked, and five stances surveyed in detail. The area has been subject to substantial afforestation, especially in southern Cowal. This is an area where there was no experience of widespread forced Clearance, and with a series of estates which were early adopters of Improvement values.



Figure 1 Image of Scotland showing case study areas.

Secondly, I look at two grain-growing areas in the Scottish Highlands. Easter Ross (Chapter 7), in the north-east Highlands, has a unique series of grain storehouses or girnals which were connected with the export of barley and oats by sea. I consider nine of these seventeenth and eighteenth century girnals and the related anchorages and harbours. I then look in Chapter 8 at the island of Bute, in the southern Highlands, where there was a substantial grain export trade in the eighteenth century. My work in Easter Ross has

allowed me to identify what I believe to have been the site of the island's girnal. I also consider the position in other fertile parts of the southern Highlands where no known girnals or grain export trade existed.

Whilst I make comments and observations on the archaeology in the four case-study chapters, I reserve Chapter 9 for a deeper, more general discussion which seeks to extend my interpretation of the evidence on a thematic basis, including comparisons and contrasts between case-study areas in the northern and southern Highlands. It is there that I seek to examine the research questions posed at the start of the thesis.

I draw matters to a conclusion in Chapter 10 referring back to the research question posed at the outset and the archaeology considered in the thesis.

1.3 Approach

My approach from the outset has been unashamedly inter-disciplinary in nature. This is probably coloured by my background. My first degree was originally in history but I broadened it to do joint honours in history and economics because my interests at the time demanded, I felt, a broader perspective. Later in life I ran a successful professional services business. One of my biggest challenges was to get specialists to work together in a holistic manner to address the problems of clients. Breaking down silos was a business imperative. Consequently, this thesis draws on economic as well as archaeological theory; information from archives and maps; input from documents and oral sources, as well as the core archaeological field-work.

Happily this sits very well with the modern Scottish academic movement of rural settlement and landscape studies. Starting out from solid foundations in archaeology and geography, this has recently grown to encompass planning, economics and policy specialists. So for example, in the 1990s conferences were held in Scotland, involving a range of contributors from inside and outside archaeology, which led to publications including Medieval or Later Rural Settlement (MOLRS) Study: Recommendations Towards a Policy Statement (Atkinson 1995), and Townships to Farmsteads: Rural settlement in Scotland, England and Wales (Atkinson et al. [eds.] 2000).

A growing emphasis on inter-disciplinary landscape research has also been seen more widely. Such an approach has, for instance, been promoted by the Landscape Research

Group, and its journal 'Landscape Research' (http://www.landscaperesearch.org), in publications such as 'The Routledge Companion to Landscape Studies' (2013) (Howard et al. [eds.] 2013) and indeed in academic courses which are deliberately inter-disciplinary in character. Archaeology has long been teamed with ethnology, cultural studies, geography, economics, town and country planning, as well as history in its many guises, such as social, oral, cultural and economic in this academic tradition.

I hesitate to locate myself within any particular tradition of interpretation or practice. However, it would be fair to say that I find myself at least adjacent to several. These include historical archaeology, landscape archaeology, the archaeology of practice and the archaeology of capitalism.

I have been influenced by the work of Matthew Johnson, especially with regard to his call for a research agenda in respect of the archaeology of historic landscapes (Johnson 2007: 149-161). This involves an assessment of the context of the archaeology. The historical context helps to put the everyday realities of social practice in the landscape into perspective. So attention is brought to bear on why and how movement occurs around and over the landscape on an everyday and seasonal basis. This impacts landscape in a physical way with the rutting of drove tracks, the building of harbours, the creation of turf dykes to keep cattle from the crops and the beaten path between a bothy and a stance. In addition, as the shape or form of the archaeological evidence changes over time this gives clues to changes in social practice and relationships. Thus questions are raised, for example as to why cattle stances, which were previously melded into the landscape in an irregular but very practical way, give way to rectilinear enclosures, as the eighteenth century progresses. This work also has some resonance with developments in American historical archaeology, especially with calls to consider not only what was happening locally, on site and nearby, but also how local developments interacted with developments at a wider, even global, scale. This is what has been referred to as the "dialectics of scale" (Orser 1996).

My belief is that practice is embedded in everyday life and, in the specific contexts considered by this thesis, the practices of moving cattle and grain through the landscape and resting at certain locations have embedded themselves into the landscape and into the archaeological record. Whilst the archaeology of practice is perhaps more commonly associated with prehistoric rather than post-medieval archaeology there are now many examples of it being applied in post-medieval situations (for example Rackham 1990; Dalglish 2003). In this case, the seasonal routines in which drovers collect cattle from

landlords or tenants and then set off with the herd to market, passing by many other people is indicative of a network of social relationships. The related material culture both structures and is structured by that routine practice (Hodder and Hutson 2003: 90-106). So the archaeology gives evidence of the constitution of past social relationships and how they may have changed over time. Having walked over 150km on rough droving-related routeways, I can testify that the engagement with the landscape was very direct (Roberts and Wrathmell 2002), with constant checking of sightlines, assessment of river crossings, and the avoidance of unnecessary ascents.

One of my main themes is the rise of the individual over the community in the Highlands. Indeed this is discussed at the very outset of Chapter 2. This places the work in the area discussed by archaeologies of capitalism, however that term is understood (Leone and Potter [eds.] 1999; Hall and Silliman [eds.] 2006; Orser 2009). Capitalism is interpreted (in this thesis at least) as a type of social relationship whereby people position themselves to others as autonomous individuals. The exact form is governed by existing social practice, and it is accepted that a capitalist society can encompass other ways of looking at the world, and other, older, relationship patterns, such as the clan system, may subsist at the same time. Equally in a capitalist society, it is given that social relationships are asymmetrical in power terms. At the heart of this study are markets, and for them to operate there must be the possibility of market exchange. Cattle and grain go to market, are exchanged, and then value is returned in cash which is a bearer of options for the holder. How that value is shared is indicative of the asymmetrical nature of those social relationships.

2 A research context: situating the current research within relevant literature

2.1 Introduction

The research, which I have just outlined, is centred on commercial practice and changing social relationships in the Scottish Highlands before and during Improvement. It considers these issues by studying the archaeology of cattle and grain export in different parts of the Highlands. As such, it is a new area of research. That is not to say, however, that there has not been work done on closely related fields. Indeed the literature, and especially the historical literature, on life and events in the Scottish Highlands is enormous. The archaeological literature is not as extensive, although it is growing. In this chapter I will review literature relevant to my area of study, using it to set the wider context of the research. I will show some of the gaps in existing knowledge, as well as some of the problems which it has in explaining the changing nature of social relationships at this time in the Highlands. At the end of the chapter I show how this review helped me to begin to develop a research agenda, by indicating the need for new research in specific areas, which would make an original contribution to the existing body of knowledge.

In the first section, I look at the changing nature of social relationships in the Scottish Highlands by focussing on a perceived shift from community (clanship) to individualism. I analyse the literature in terms of what it has to say about the nature of Highland society, and particularly the question of the extent to which this was communal or individualistic. I use recent scholarship to describe some features of what Allan Macinnes refers to as "the traditional basis of clanship" (1996: 1-29). I then juxtapose this view of life with a picture of society as it emerged, apparently transformed, in the post-Improvement Highlands. I highlight the complexity of the situation whereby some features of clan-based society were far from communal in nature, and may be argued to be precursors of later commercialisation. This complexity also extends to the differing speed and nature of change in different parts of the Highlands.

In the second section, I look at the various models of change which have been used to explain changing patterns of social relationships in the Scottish Highlands. For convenience, I have divided these into political, cultural and economic explanations. I argue, however, that modern scholarship is increasingly seeing all three as connected. It should also be noted that the great majority of narrative histories make little attempt to

explain why change happens at all, but describe it in a non-theoretical, empirical manner. I critique these models, and show that they have a lasting resonance in current-day Scotland, being often used for political ends. It is an irony that such contemporary use often results in the removal of personal agency from those being discussed.

Thirdly I consider the evidence that there was increasing commercialisation in the Highlands before Improvement. I draw upon both archaeological and historical sources in this discussion, but specifically look at the role of archaeology. I suggest that the evidence does exist, but may have been marginalised by an understandable focus on the dramatic events related to Clearance. Might an archaeology of rural commercial practice be of use?

Finally, my research is placed against these themes, together with their gaps and problems, in order to consider how it might make a positive contribution to enhancing knowledge. In so doing I begin to develop a research agenda which is explored further both theoretically and methodologically in the following chapters.

2.2 Community and individualism

2.2.1 Introduction: simplicity and complexity; static or changing?

It is frequently asserted that at some point in an undefined past that a self-sufficient, communal, albeit backward, society existed in the Highlands before Improvement (Gray 1957: 3-54). This was a clan based society. At a later time, after Improvement, a different society emerged in the Highlands. This was one, it is claimed, where individualism had come to dominate social structures (Hunter 2000: 1-30). These represent essentially static models which have been used to express idealised and simplified positions. Here, I wish to consider these contrasting societies. I focus on recent scholarship which has begun to shift away from static representations of society to representations which seek to embody change within their descriptive accounts. I suggest that this points to a position of considerable complexity in social relationships, where there is also a tension between continuity and change, and where artificial geographic and temporal boundaries should be challenged.

2.2.2 Clanship: a communal society?

Books about Scottish clans and tartans are ubiquitous on Scottish family bookcases.

Johnston & Bacon have been producing such works on Highland clans, their organisation

and tartans since at least 1896 (Adam 1970). They are still produced today in large numbers, and are intimately connected to heraldry, patriotism, tourism and the Scottish diaspora. In fact, it has been recognised that much of what is written about Highland history in general, and the clans in particular are "a myth, a set of ideologically laden signs and images" (Withers 1992: 143). One aspect of this notion of a clan was that it was a utopian, communal society, which was cohesive, and was not characterised by inequality, notions of private property or relationships of power. This popularly held idea of 'the clan' is one which hampers our understanding of the past, and yet is difficult to escape (Womack 1989). What has modern scholarship to contribute to our understanding?

Alan Macinnes gives an account of clanship in his book Clanship, Commerce and the House of Stuart 1603-1788, (1996) and argues that clanship changed over the seventeenth and eighteenth centuries as a result of a series of political events. He shows that ideas of clanship and activities for 'the common good' of the clan certainly existed, but they did so in tension with ideas of individual ownership. So the clan was understood at the time, ideologically speaking, in a communal way, but this was not a simple concept. This is well illustrated by the distinction between 'duthchas' and 'oighreachd'. Macinnes argues that the chiefs' main roles were in providing protection, hospitality and justice. This constituted a form of trusteeship or duthchas, on behalf of the clan members (Macinnes 1996: 2-4). However, within Gaeldom, as was the case in the rest of Scotland, the granting of charter giving legal title to land was accepted as part of the royal prerogative. In other words, the clan system operated within the general rule of Scots Law. As a result, an important distinction emerged between 'duthchas', which represented trusteeship exercised over the lands occupied by the clan, and 'oighreachd' or the legal title to a chief's estates and property, which represents the land over which the clan chief and gentry held legal title. Thus a clan might have adherents living and working land that was not in the ownership of the clan gentry, or clansmen who did live on lands owned by the clan hierarchy. The lesser clan gentry or tacksmen held their land by lease (oral or written) from the chiefs or senior clan gentry or 'fine'. These were the middle managers of the socio-economic system, and as such managed one or several townships ('baile' in the singular and 'bailtean' in the plural in Gaelic). These were largely multi-tenant farms or steadings. If the tacksman occupied land held by lease from his own clan fine or chief, then he would pay both rent and manrent (or calp) to the same person. However, it was possible that he might pay rent to another clan hierarchy where he leased land from another clan or landowner, but continue to pay manrent to his own clan chief (Macinnes 1996: 14-16). This points to a tension, from at least the sixteenth century, between the well understood concept of

property ownership and the rather less well defined idea of the clan as a mutually supportive institution.

By contrast, Robert Dodgshon's book, From Chiefs to Landlords: Social and Economic Change in the Western Highlands and Islands c 1493-1820 (1998) adopts a rather different strategy in his account of the socio-economic system, as it evolved between the late fifteenth century and the early nineteenth century. His focus is with the broad institutional forms, trends and processes rather than individual events and situations. In particular he centres his analysis on firstly the system of ideology and behaviour that surrounded clan chiefs, and secondly, the ordinary farming community. Dodgshon notes that the chiefly system was based on food renders from the townships. I use the term 'township' to imply the connotation that the settlement in question was organised as a joint-tenancy farm (Dalglish 2003: 82-90). By receiving food in the form of either rent, cuid-oidhche (hospitality food renders or more literally 'share the night'), and sorning (forced contribution of food), clan chiefs were able to turn this into socio-political capital by using it to maintain chiefly display based on a retinue of professional fighting men, specialist tradesmen and courtiers such as musicians and poets, all based upon the food resources of the clan as held in central food stores or girnals. Thus a society developed of feuding, feasting and fighting designed to develop the prestige and standing of the clan, possibly via alliances (Dodgshon 1998: 7-101). I would suggest that this indicates a society structured along lines of relationships of power, subordination, hierarchy, the control of agricultural resources to meet the needs of an elite, and the production of agricultural surpluses (notably black cattle) to be sold for cash. In many respects this is far from a communal society.

From the perspective of the township sub-tenant, that is not to say that there were not benefits accruing from the clan system. Some of these arose from communal activities and some not. Land would be allocated within a township. Breeding stock, seed corn and tools might be lent at the start of a sub-tenancy, with repayment on death (as a "heriot"). In times of shortage, some support might be looked for from clan resources and girnals. An extended kin grouping gave support for both the elderly and the young. Access to specialist services, such as milling, was made possible at regulated prices. Work for common benefit, for example the building of dykes, or the in-gathering and care of grazing livestock, which required substantial labour input might be arranged in a joint-tenancy township. Above all, protection was afforded by the clan's fighting resources. The alternatives of not belonging

to a clan (being a 'broken man') or being a day labourer in a society which substantially lacked money or means of exchange was not attractive (Macinnes 1996: 20-22).

So it would seem that whilst 'clan society' had features which might be classed as communal, there were also other aspects which were of importance in the emergence of commercial activity long before the Clearances and Improvement. These include concepts of private property, hierarchical social organisation and of extracting surplus value from the work of others. For example, it might be argued that the extraction of food from the farming activities of the clan folk in the medieval period converted over time into the generation of profit from agricultural activities, for the benefit of the clan gentry, in the early modern period.

2.2.3 Rampant individualism: diverging interests

I now consider the picture of Improvement society in the Scottish Highlands, as shown by modern scholarship.

Tom Devine has argued in *Clanship to Crofter's War* (1994) that although Gaelic society and clanship were in decay long before the late eighteenth century, the basic structure of Gaelic society in most areas remained unaltered. It was the last quarter of the eighteenth century which saw a decisive change of pace and "unleashed irresistible forces" which transformed the Highlands (Devine 1994: 32).

The transition of clan chiefs and clan gentry to landlords, which had been underway for a long time, was completed by the early nineteenth century (Nenadic 2007: 205-212). The heritable trusteeship of the clan elites ceased to have meaning. As a result, land allocation came to be made by competitive bidding which ensured the highest returns for the landowner when existing tenancies came to an end. The consequence was a dramatic rise in land rentals throughout the Highlands between 1745 and 1815. This was driven by specialisation in first cattle and then sheep, which anchored rentals to the rising prices of those commodities. The old order of arable subsistence farming, supplemented by small-scale cattle breeding, was swept away (Devine 1994: 32-37). The land-owning classes were also able to absorb for their own benefit, the profit margins of the tacksmen in subletting the land. Moreover the other functions of the tacksman class were no longer required in the new society. The new economic priorities of the clan elite meant that their clansmen could not rely on the concept of *duthchas* to provide protection and security of

tenure. Those who remained in the Highlands often found themselves living on coastal strips in newly created crofting townships and dependent on sources of income other than agriculture to survive. They were thus providing their labour for enterprises designed to provide additional sources of profits for the landowners (Devine 1994: 45-52). The new social structure came to be characterised by a polarisation between a small sheep-farming elite on one hand and the mass of crofters on the other. With this came a loss of social accord. In effect a proletarianisation of the great majority of the work-force had been achieved by the landlords who had created relatively few capitalist tenant farmers and a much larger number of labourers (Richards 2007: 99).

James Hunter observed in *The Making of the Crofting Community* (2000) that having adopted the value-set of a capitalist society, the chiefs-turned-landlords had substituted a commercial rent economy for the kindred-based economy that had gone before. This process opened the way for an individualistic scramble for land, encouraged by rising land rentals, and linked to the land-owning classes' kelp, fishing and commercial interests. The consequences for the crofting tenants, who formed the majority of the population who had not migrated to either the Lowlands or abroad, was that "their holdings were too small, their rents too high, and their security almost non-existent" (Hunter 2000: 70). Many were now located on the coast in new settlements designed to facilitate fishing and commercial activities, thus further disrupting long established patterns of life and social relationships (Hunter 2000: 72-90). Resistance was often split between active emigration and implicit resistance through the medium of such activities as illicit whisky production or poaching (Devine 1994: 119-146).

2.2.4 Recognising differences within the Highlands

It has been pointed out that it is a mistake not to recognise the significant differences in land quality, climate and speed of social change within the Highlands itself (Devine 2006: 169-170). In other words, the Highlands should not necessarily be conceived of as a homogeneous unit.

Commercialisation developed significantly faster in Argyllshire than it did in the northern or western Highlands. Tenurial reform through competitive bidding for leases were introduced in Kintyre around 1700 and became systematic on the Duke of Argyllshire's estates from 1737. Campbell gentry such as the Campbells of Shawfield and the Campbells of Ardchattan developed many commercial enterprises and helped to make Glasgow the

"principal city facilitating consumerism among the clans" (Macinnes 1996: 221-228). Commercial sheep farms which were introduced into Argyllshire and Dunbartonshire in the 1750s did not begin to make a substantial appearance into Sutherland until after 1790 (Bangor-Jones 2002). The Sutherland Clearances which resulted from the large-scale redirection of resources and the application of Improvement values were a phenomenon of the early 19th century (Richards 2008). In other words a temporal boundary of rather more than fifty years divides the arrival of wholescale Improvement on the Argyll Estates compared with the Sutherland Estates, with its implications for dramatically changing the nature of relationships on those Estates. It should also be noted that in Argyllshire and the eastern Highlands, arable and mixed farms continued to be found in the 19th century, albeit often of quite small (40 to 60 acres) scale, and this helped to promote an emerging farming class which did not exist to the same degree in other parts of the Highlands, such as the western Highlands (Devine 2006: 169-170).

It has been observed that "political, social and cultural developments within Scottish Gaeldom were not antipathetic to, merely differing in emphasis from, contemporaneous Lowland values where the pace of commercialisation was more advanced" (Macinnes: 1996: 24). This is an understandable simplification, but it is worth asking whether the political, social and cultural developments in parts of the Highlands, such as Cowal, more or less similar to what was going on in lowland Dunbartonshire rather than in Sutherland or in the Hebrides?

So it is apparent that when mapping changing patterns of social relationships in the Scottish Highlands, that it can not be assumed either that change happened at the same time across the Highlands or indeed happened in the same manner even over time.

Having analysed the picture of Highland society which is drawn by recent scholarship, I have, therefore, had to accept a degree of complexity. Nevertheless, it may be helpful to see that society in terms of the tensions between communalism and individualism, and a broad shift from one to the other. My own research includes case-studies in very different parts of the Highlands and in two significant areas of commercial practice which will help to explore this. I now move on to consider how the literature deals with the underlying reasons for changes in Highland society.

2.3 Explanations of models of change in Scottish Gaeldom before Improvement

2.3.1 Introduction: a debate obscured by current political issues?

A number of authors have sought to identify models which describe and explain change in the Scottish Highlands in the seventeenth, eighteenth and nineteenth centuries, although they are in a minority amongst predominately narrative histories. Carter argues that two main explanatory models exist (Carter 1981: 9-15) for the changes in the Highlands of Scotland since 1700. He characterises these as political, which broadly covers traditional, supposedly non-theoretical narrative histories, where explanation is based on specific events, such as the Act of Union or Culloden, and also more modern scholarship which often has an explicit political model of change; and economic, in which change is seen as the result of impersonal economic forces. Charles Withers adds a third model of change (Withers 1988: 1-56) which he termed a model of cultural transformation, which centres on the retreat of the Gaelic language.

More provocatively, Macinnes has noted that the debate is often polarised between apologists of the clan elite and those who condemn them (Macinnes 1988: 70-90). This is a highly charged area, not least because the issues being argued about are perceived as leading directly to the removal and relocation of the Gael, and the on-going retreat of Gaelic culture to the brink of extinction. Sharon MacDonald has divided the literature, accordingly, between "people's histories" and "economic histories" (MacDonald 1997: 69-75), whilst noting the limitations inherent in such broad labels. Dalglish has taken this further in a review of literature relating to themes of Improvement and related social change (Dalglish 2003: 195-199). He argues that the debate can easily descend into stereotypical aggression whereby clear analysis is lost in favour of caricatures. This, on the one hand, portrays the tenants as virtuous victims and the landlords as selfish and greedy; whilst on the other, the tenantry are represented as non-commercial and backward members of an over-populated cultural region, which will inevitably be brought into the modern economic system with or without their agreement. Both perspectives remove agency from the population at large. Equally damaging, both camps frequently represent both landowners and their tenants as homogeneous entities and assume that their relationships are necessarily oppositional (Tarlow 2007: 87). Dalglish shows us that the position, at least at the time of Improvement, was varied and complex, depending on a web of different relationships, cultural practices, regional variations and ways of working the

land (Dalglish 2003). At base, whatever its benefits for other analyses (for example, studies of 'resistance'), I would argue that this binary dichotomy between 'people's history' and 'economic history' is not helpful for understanding change in the Scottish Highlands. This is especially because, in the last two decades, authors have begun to synthesise the arguments. Thus Macinnes can note that the Clearances were at once the product of commercialisation and cultural assimilation which go back to at least the early seventeenth century, whilst at the same time holding to a convulsive (and event driven) rather than an evolutionary view of that process (Macinnes 1996: ix-x). Equally, Dalglish notes the similarity between advocates of both sides of the argument in their apparent acceptance of two homogeneous and competing social groups, the landlords and the people (Dalglish 2003: 197), which he argues is simplistic. I therefore propose to review the relevant literature in terms of models of change which derive from political, economic and cultural theory, acknowledging that all three models are inter-related.

2.3.2 Political Models of Change

There can be few books which have so dominated a subject as A.R.B. Haldane's *The Drove Roads of Scotland*. The research began in war-time Britain, and the book was published in 1952. Since then the book has remained continuously in print, and passed through the hands of no fewer than three publishing houses. Haldane traces the development of droving in Scotland from the times of the early drovers (Haldane 1952: 6-20) through to the decline of the drove roads (Haldane 1952: 204-223). So to what does Haldane attribute the changes in the droving trade, which was so central to the Highlands of Scotland?

The approach is clear from the very outset when the Introduction (Haldane 1952: 2-3) sets out a narrative which is based on time-lines and the belief that major political events such as the Union of the Crowns (1603), the Act of Union (1707) and the defeat of the Jacobite rebellion (1746) were the major influences upon the development of droving. This view is reinforced (Haldane 1952: 68-69) when Haldane speculates that the reason why cattle breeding rose to be so important in the Hebrides and the North-West Highlands was the very remoteness which isolated those areas from the troubles of the country as a whole, such as the Civil War and border cattle raiding. Other matters such as the development of a market economy, changes in Gaelic society and increases in cash rents in the Highlands are seen as secondary to constitutional changes which allow prosperity, the rule of law, stability and trade to flourish. The benefits of Whig, Enlightenment, Unionist values to the

cattle trade of the Highlands are implicit throughout the book and indeed strikingly explicit in places (Haldane 1952: 190-192). Haldane attributes the growth of Highland agriculture to the defeat of the Rebellion of 1745 and the Act of Union with England. He argues that the consequent (he believes) expansion of trade abroad and industry at home meant a greater flow of money in circulation, fed by increasing commerce and stimulated by the growth of banking. This led directly to demand for Highland livestock, an agricultural revolution with specialisation first in cattle and then in sheep, which precipitated the change in relationships between landlord and tenant in the Highlands. Thus, this was a "countryside where political and economic change had shaken loose the fetters which had bound it to an old way of life" (Haldane 1952: 192).

In 1953, a year after Haldane published "The Drove Roads of Scotland"; James E Handley published *Scottish Farming in the 18th Century*. This book, the first modern history of the Scottish agricultural revolution, charts what it argues to be the rise of Scottish agriculture through the eighteenth century. However, the condition of agriculture in the Highlands is cast in a far more pessimistic light. In a chapter, tellingly entitled, "Problems of the Highlands and Islands" (Handley 1953: 234-265), Handley states that the most important event in the history of the Highlands, from an economic standpoint, was the end of the clan system brought about by Culloden. He goes on to argue that this ushered in a revolution in social conditions. As such "it draws a cleavage line between the old and new systems with much more accuracy than can usually be assigned to any single date in history" (Handley 1953: 234).

This view of political events as the driving force of change in the Highlands is rooted in a long tradition of regional histories. The nineteenth century saw a large number of histories of the Scottish Highlands including those by D.Gregory (1836); J. S. Keltie (1877) and D. Mitchell (1900). They have at their core the struggle of the Scottish Crown and government to deal with the perceived 'Highland problem', being one of lawlessness, barbarity and lack of civil control. This external analysis of Gaeldom therefore tends to rest on the attempts by those outside the Highlands to make them and their inhabitants more like the rest of the kingdom. Consequently a whole series of crown initiatives are emphasised as things which created change. This might range from royal expeditions of pacification, through the establishment of sheriffs, the confiscation of estates, the imprisonment of malefactors, to legislation by the government, such as the Statutes of Iona in 1609. This gathers pace with the Union of the Crowns in 1603, and the Act of the Union in 1707, whereby the 'Highland problem' was effectively passed from Edinburgh to

London. No matter that government intervention was frequently more a statement of intention rather than the effective implementation of central authority. Under this model, the collapse of the Jacobite rebellions in 1715 and 1746 are given great import because now the writ of parliamentary authority could run unchallenged throughout the Highlands, without challenge from the periphery, the malcontents and those who did not necessarily want to adopt the current values of the Lowlands and England. Culloden is therefore seen as the critical event which allows the operation of institutions calculated to promote education in English throughout the Highlands (The Society in Scotland for Propagating Christian Knowledge, founded in 1709), the improvement of farming and estate management (The Commissioners of the Annexed Forfeited Estates in Scotland, whose first meeting was in 1716), and the establishment of industry and fisheries in the Highlands (The Board of the Trustees for the Encouragement of Manufactures and Fisheries in Scotland which was founded in 1727).

In the twentieth century, this model of change has been repeated consciously or unconsciously in many apparently non-theoretical histories of Scotland and the Highlands. However, I would argue that they do in fact have a political theoretical model implicit within them. There is a clear logic in following a chronological narrative which implies that change is caused by political events. This has been refined constantly and made more complex. Much detailed work has been carried on the limitations of state power, action and central authority, suggesting that political drivers for change might be somewhat more limited in practice than in theory. For example, the Scottish Crown was largely unable to sustain settled civil administration in the Highlands in the fifteenth and sixteenth centuries (Nicholson 1974: 45); central government was little more successful after 1707 in imposing a system of local management based on English models (Mitchison 1970a: 24-46); and the real importance of the various Acts of Parliament ensuing after Culloden have been argued to be more in their ideological intention than their direct consequences (Withers 1988: 8).

In recent years, a sophisticated political model of change has been developed by Allan Macinnes (Macinnes 1996). He argues that there was "an inexorable and convulsive shift from a traditionalist to a commercialised society in the seventeenth and eighteenth centuries" (Macinnes 1996: ix). Taking political events as his corner-stone he then melds in economic and cultural factors. Thus he concludes that Gaelic society was not "monolithic, static and undeveloped prior to the 'Forty-Five" (Macinnes 1996: 210). Rather, it is argued that Scottish Gaeldom was "harnessed to commercial developments

that wholly transformed estate management, settlement patterns and economic horizons" (Macinnes 1996: 210). Nevertheless, it is political events which drive change, and these allow cultural and economic forces to come into play, rather than those being the primary engines of that observed change. Macinnes argues that there were five great convulsions which took Gaeldom from a traditionalist position pre-1603 to one of commercialism after 1788. Thus there was "an irrevocable switch from resource-management under clanship to demand-management under commercial landlordism" in the late eighteenth century (Macinnes 1996: 210). By emphasising events as turning points, Macinnes creates a stochastic model where political and military happenings usher in forces of commercial and cultural change. Convulsion is preferred to gradualism.

2.3.3 Economic models of change

One might assume that economic theory might have a prominent role to play in histories which place economic factors at the forefront of reasons for change. In fact it is very rarely overtly stated and then usually in generalised statements such as "our study has shown that the impersonal forces —of price and available technique - were more potent than the conscious will to destroy or preserve," (Gray 1957: 246). More modern historians such as Richards and Devine have referred to the clan system adapting and changing to commercial influences long before the eighteenth century (Richards 2008: 51; Devine 2006: 166), and despite impressive statistical analysis of source documents have still not defined what they mean by "commercialism" or market forces in theoretical terms. In particular the underlying economic explanation for change being a constant feature of life in the Scottish Highlands is missing.

The earliest economic histories of Scotland sit comfortably with the then dominant Whig tradition of narrative history (Marwick 1931: 117-137; Grant 1934). After World War II, the seminal work of Malcolm Gray in *The Highland Economy 1750-1850* (1957) took the analysis of the Highlands in a period of rapid change onto a modern basis by arguing that a market-based economy was forming which could be seen to be paralleled elsewhere in situations of rural transformation. However, there is little or no economic theory overtly deployed. Instead, he teases out various parts of Highland economic life and subjects them to detailed analysis. His study emphasises both regional differences within the Highlands and also the factors which either encouraged or hindered the growth of that particular economic activity. There is, however, no general theoretical underpinning.

This was followed in subsequent decades by a series of academic histories of Scotland which adopted Gray's belief in the growing dominance of a capitalist economic model as the prime engine of change in the Highlands. This model was perceived as impersonal, irresistible, and the inevitable application of the laws of economics, although not overtly argued by reference to economic theory (Pryde 1962, Campbell 1965; Mitchison 1970b, Youngson 1973, Lenman 1977). For example, Smout contended that economic forces at play in the Highlands were so powerful that the Clearances were the inevitable end-game of a cultural clash which had begun much earlier. Resistance subsisted into the nineteenth century only in the remaining (and shrinking) Gaelic cultural areas, where there continued (he argued) to be a rejection of economic rationalism. This was represented by the purported belief of the Gael that "occupation of a traditional area of land and not acquisition of new wealth was the greatest good that life had to offer" (Smout: 1969; Smout 1986: 62-69). This does not mesh with the modern scholarship of Devine and Richards, who point to a commercially astute Gaeldom from an early period (see below).

In 1976, a significant contribution was made by James Hunter in his book *The Making of the Crofting Community* (1976; 2000). This had a Marxist analysis at its core, but shared the same analysis that it was economic rationality, or otherwise self-interest, that was the chief engine for change. This key point was stated thus: "The commercialisation of the region's agricultural structure in response to chieftains' financial necessitousness......is the great fact of eighteenth-century Highland history. From it all else follows. But it was not something that could be achieved within the context of traditional Highland society" (Hunter 2000: 40-41). In his work Hunter uses an economic model of change. The "Base" represents the forces and relations of production. It is that which is impacting upon and changing the "Superstructure" of social and political organisation. Hunter differed from the then mainstream orthodoxy also in his emphasis on sources of evidence generated by those at the bottom of society, combined with an overt moral perspective on the activities of the land-owning classes. (Hunter 2000: 24).

Historical geographers have also pursued economic models of change, and inserted these into narratives of Highland history. For example, I.D Whyte has advanced a core/periphery model as the rationale for the changes in agriculture and rural society in Scotland during the seventeenth and eighteenth centuries (Whyte 1983: 122-124). The argument is that a capitalist society spreads out to the periphery from the core area of the eastern and central Lowlands. The model takes a range of influences such as central authority, the nature of agriculture, urbanisation, and soil types as the starting point for two-speed economic

development. A range of other factors (for example coastal transport, cattle droving, farm structures and the changing nature of rental payments) are then brought into play, and these allow the periphery, whilst lagging behind, to begin to catch up with the core area in terms of the development of capitalism.

Robert Dodgshon, most notably in *From Chiefs to Landlords: Social and Economic Change in the Western Highlands and Islands, c.1493-1820* (1998) perceives the Highlands as being in a state of continual flux and adjustment from before 1493 until after 1820. This leads him to caution against notions of continuity between the mediaeval and early modern periods (Dodgshon 1998: 4), but rather to emphasise gradual change. At the core of this are the increasing consideration, evaluation and rationalisation of the resources of the estates of the Highland gentry in purely economic terms by their owners. This led to the economics of comparative advantage being applied to their estates, which in turn caused the gradual shift to commercial stock production (Dodgshon 1998:27). These were placed for sale in a national market-place which progressively developed over time. At the core of what Dodgshon does is the examination of surviving sixteenth and seventeenth century data and the placing of this in context against later material so as to examine the trends and gradual changes which were shaping the Highlands, prior to the dramatic large-scale disruptions of the Clearances (Dodgshon 1998: 2). By approaching matters in this way, Dodgshon is able to give an account of how a market based economy came to form.

Eric Richards in his 1982 work *A History of the Highland Clearances* and his more recent *The Highland Clearances* (2008) maintained the predominance of the market economic model as the rationale for change. "This (clan) system was in the grip of long-term transformation, most of all in the mentality of the leadership which, like those of the south, became progressively commercial long before the 18th century" (Richards 2008: 51). Tom Devine in a series of books and articles has sought to address this problem by detailed statistical and demographic analysis. This has led him to the conclusion that it was in the 1760s and 1770s that there was a dramatic revolution in the Highland way of life (Devine 1994a: 32). He also asserts that "commerce was, of course, an integral part of Highland Society long before the eighteenth century" (Devine 2006: 166), and further "the huge expansion in the cattle trade reflected the ability of the peasantry to adjust to new demands. Market connections between Highlands and Lowlands in the meat, fish, timber, and slate trades were flourishing." (Devine 2006: 169). However neither Tom Devine nor Eric Richards, whilst advancing an economic rationale for change, is explicit about the economic theory which justifies their assertions. Instead, these histories are largely a-

theoretical, relying instead on analysis of source documentation relating to the social, commercial and economic life of the Highlands.

There has been very recent work carried out on the agricultural, social and economic impact of poor weather and harvest failure in Scotland in 1690s (Cullen 2010). This led to a devastating famine which was particularly severe in the Highlands (Cullen 2010: 52), but should be seen as part of a wider pattern of poor climate affecting northern Europe, and also something which was related to the worsening climactic conditions "for something in the region of 150 years prior to 1695" (Cullen 2010: 32). The famine years of 1695-1699 might reasonably be regarded as a catalyst for change, emphasising the need for Agricultural Improvement and the commercialisation of subsistence farming practices, as marginal farmland was deserted as a result of the famine (Dodgshon 2005: 321 – 337; Cullen 2010: 49-55). There is thus an economic rationale for change which was made starker by the impact of the 'Little Ice Age' (Grove 2004) across northern Europe, but which was being particularly keenly felt in the more marginal agricultural areas such as the Highlands.

2.3.4 Cultural Models of Change

Charles Withers argues that economic motives should not be perceived as leading agents of change (Withers 1988: 27-43). To do so, he believes would be to relegate both political and cultural elements to a secondary role, in favour of determinist impersonal economic forces. Instead, using a Marxist analysis, he believes that the transformation of the Scottish Highlands in the post-mediaeval period can be said to be "both the result and agent of hegemonic class control" (Withers 1988: 42). In this analysis, the removal of Gaelic by the intervention of "superiors" becomes critical because it is believed (by those who hold power) to allow education, religion, civil government and material improvement, as well as various ideological virtues such as civility, industry and personal improvement. The transformation of the native culture including its symbols, values and ideologies, along with the institutions and language through which that culture was transmitted and adjusted becomes the key engine of change (Withers 1988: 42-43).

This focus on the importance of the Gaelic language is echoed by Michael Newton (Newton 2009) in his work which is primarily about the mental and social world of the Gaels between the twelfth and eighteenth centuries. Newton argues that the forces of central authority focussed their attack on Gaelic culture. This was the best way to create

change by seeking to replace the values and mores of clan society with equivalents which were based on the English language and a value-set which aligned itself with central power (Newton 2009: 1-6). Thus there is perceived to be a close identification between the survival of the Gaelic culture and language and resistance to the intervention of alien practices into the Highlands (Newton 2009: 327-332). It is striking that a book which is subtitled "the world of the Scottish highlanders" has nothing about commercial or business practices which were developing or extant within Gaeldom.

Even people who might be assumed to accord economic factors a dominant role in creating change acknowledge the importance of cultural factors. Thus Eric Cregeen, in a study on the increasing commercial awareness of the House of Argyll, comments "What destroyed the old Highland social and political structures was its growing involvement in the general cultural influence of their neighbours to the south, which is England and the Scottish Lowlands. This influence expressed in speech, manners, clothes, religion, political sympathies and activity, trade, seasonal migration and so on, was at work in the Highlands long before 1745 and reached its climax considerably after." (Cregeen 1968: 8-9).

It may be possible to accept the argument that in the eighteenth and nineteenth centuries the British ruling classes sought to remove the culture and language of the people in order to permit economic, social and political Improvement, which they judged to be beneficial to their own long term interests (Withers 1988: 42). However, is it really sustainable to believe that Gaelic culture was necessarily hostile to commercialism? A study of the Campbells in the medieval period (Boardman 2006) would suggest otherwise. When allied to the recent work of Devine and Richards noted above, the suggestion that Gaelic culture needed to be replaced before economic growth could be pursued may be perceived as stereotypical, and in need of challenge. The intriguing possibility then emerges that it might have been possible for a commercially vibrant Gaelic society to develop without the eradication of its cultural base.

2.3.5 Synthesis

Recent studies may emphasise one factor over another as the primary cause of change in the Highlands in the modern period, but tend to acknowledge, as we have seen above, that political, economic and cultural factors will all arise to some degree. The work of Devine, Richards, Withers, Dodgshon and Macinnes would seem to suggest that various factors are intertwined to cause change. For example, it can be argued that economic factors, such as

the formation of a market economy, inevitably caused cultural and social turbulence. Alternatively, a focus on political events can be seen to be permitting economic and cultural change. It is perhaps a matter of emphasis as to which one is perceived as the primary engine of change.

By their very nature, theories of political change will tend to be more stochastic, uneven and event-driven. Studies which emphasise economic and cultural causes will tend to be more gradualist in their analysis. However modern scholarship recognises that no school of thought can afford to ignore the others. "We need to recognise the complexity of change in the Highlands in a relational sense" (Withers 1988:42).

I have considered recent scholarship in relation to various models used to explain changes in social relationships in the Highlands. My own research will explore this further by applying archaeological and economic theory to the problem of understanding what was causing change in the Highlands. I now look at the question of commercialisation in the pre-Improvement Highlands.

2.4 Commercialisation in the Highlands before Improvement

2.4.1 Introduction: a truth only recently acknowledged

The evidence of contemporary travellers in the Highlands in the late seventeenth century and early eighteenth centuries (Burt 1998; Martin 1999) suggests a rural economy which was backward in relation to the Lowlands and England. This is reinforced by a modern scholarship (Smout 1969; Devine 1994a; Richards 2007). However, is this to deny that there were indications of commercialisation within the Highlands before the late eighteenth century? If so, have the implications of this been adequately recognised?

There is a powerful historiography of the Scottish Highlands that downplays the commercial aspects of Highland society in favour of the notion of a conservative people wedded (it is said) to 'traditional practices' which were unchanging until destroyed by Improvement and the related Clearances (Devine 2006: 164). It has been argued that this may be traced back to Adam Smith's *The Wealth of Nations* (1776) (Richards 1985: 18), thence into nineteenth century histories, and that it was adopted, substantially unaltered, by historians up to the later part of the twentieth century (Hunter 2000: 1-36). More recent academic studies (Devine 2006: 164-174; Richards 2008) have been sceptical of the idea that, for example, the key difference between Lowland and Highland society was that the

Lowland society was prepared to work with the new agrarian regime (Smout 1969: 308-331); that the Lowlands saw dynamic change in the late eighteenth century whilst the Highlands were "an area of settled economic nonconformity" (Gray 1957: 80); and that clanship and commerce were necessarily incompatible (Youngson 1973).

Thus it is still revelatory when Devine writes "During this age of Improvement (1760-1815) the people developed forms of enterprise and innovation which belie the traditional image of a conservative society and which would repay more attention from scholars than they have received in the past" (Devine 2006: 174). So the question arises what is the archaeological and historical evidence for such an assertion, and can the same view be advanced for the period before 1760? This is especially relevant as Improvement was introduced at different times in the eighteenth century in different parts of the Highlands.

2.4.2 Archaeological and historical evidence for commercialisation in the pre-Improvement Highlands

Commercial activities take many forms. At one end of the spectrum might be industrial activities, such as iron working or cloth manufacture. At the other may be the adaptation of agriculture to produce surpluses which can then be sold. Adam Smith observed that a central issue was the specialisation of activities, which brought the attendant economic benefits of division of labour. "In the lone houses and very small villages which are scattered about in so desert a country as the Highlands of Scotland, every farmer must be butcher, baker and brewer for his own family" (Smith 1976: 16). Linked to this is the ability and desire to produce surplus goods which can be sold in a market economy. So what is the evidence for these activities and is Smith's characterisation of the Highlands wholly accurate?

One of the Highland areas closest to major lowland markets was Argyll. As early as the end of the fifteenth century, it has been observed that here a number of local landowners, most notably the Campbells, but also other local chiefly families, were active in promoting and exploiting trade (Boardman 2006: 304). This was regardless of cultural or linguistic affiliation. Commercial contacts with the Clyde ports and Ireland influenced even small landowners such as MacNeill of Carskey in Kintyre. Daniel Campbell of Shawfield, a younger son of Campbell of Skipness, became a successful Glasgow merchant, and purchased Islay in 1726, immediately setting out to improve the land and set up small-scale industry, such as linen weaving (Macinnes 1994b: 22). The Campbells of Ardchattan created a large number of companies from 1688, starting with being agents for recovering

debts owed to Clyde merchants, and moving into general trading activities including imports from the colonies, the marketing of black cattle, the export of tan bark, and the shipping of grain and tobacco spinning. This was not merely a Campbell attribute. The Stewarts of Ballachulish began the mining of slate in the 1690s very successfully. Equally, the MacNeills of Lossit, the MacAllisters of Balinakill, the MacTavishes of Dunardry, the Clarks of Braleckan, the Malcolms of Poltalloch and the Maclaines of Lochbuie all became involved with colonial enterprises in the West Indies, the Americas and India with varying degrees of success in the early eighteenth century (Macinnes 1994: 22-26).

It has been noted that in the seventeenth century that the Highlanders had already begun to follow the herring shoals southwards in summer, ending up at the packing and preserving centre of Greenock where they bartered their catch for products produced in the lowlands (Smout 1963: 14). The Argyllshire gentry developed inshore fishing in the Firth of Clyde, with its ready access to Greenock, Dumbarton and Glasgow (Macinnes 1996: 224). This had begun as early as the late fifteenth century, and at first the focus seems to have been on trade in herring which was central to the development of the burgh of Inverary from 1474 onwards (Boardman 2006: 295-305). However, this soon developed into a wide ranging pattern of trade in the Firth of Clyde.

Three types of commercial demand for wood from the Highlands were evident in the seventeenth and early eighteenth centuries. These were emanating from timber merchants, who were primarily interested in the pinewoods, and then ironmasters, and tanbarkers, both of whom were focussed predominately on oakwoods (Smout, MacDonald & Watson 2005: 193). There are a number of examples of pine being sold for use as masts for the Royal Navy. For example, David Ross of Balnagowan sold 1,000 trees to Captain Phineas Pett in 1665, and when this came to an end in 1669, switched to supplying timber to the reconstruction of Holyrood, and more generally selling timber to the central parts of Scotland (Smout, MacDonald & Watson 2005: 197). Equally, there was considerable exploitation of the oakwoods in the early eighteenth century by Irish tanning interests who sought to exploit Scottish bark from the Highlands for the booming Irish tanning industry. For example, an Irish partnership sought to purchase extensive oak woodlands in the period 1721-23 and concluded no fewer than thirteen deals with Gaelic gentry, who were very keen to market this natural resource, and thus obtain cash (Smout, MacDonald & Watson 2005: 343).

Bloomery mounds abound in the Scottish Highlands (Photos-Jones et al 1998: 15). They are tangible evidence of iron working, which has a long history in the area, originally starting with farmer-smiths associated with relatively localised production or even clan armourers in certain locations (Atkinson 2003: 39). In recent years, considerable archaeological work has been undertaken in the Highlands, and three phases of traditional bloomery making have been identified being the small-scale production (associated with farmer smiths), large scale (possibly related to clan armourers) and advanced large scale production, making use of water power. An example of the latter is found at Fasagh on Loch Maree (Photos-Jones et al 1998: 30) in Wester Ross. It is likely that iron working had been going on around the Loch for a very long time, and many older sites have been identified (Dixon 1886), but three sites in particular have been identified with Sir George Hay, a prominent political figure under James VI and Charles I. Hay seems to have spent considerable amounts of capital on the site at Fasagh and especially two blast furnaces sites, the first in Scotland, at Poolewe and Letterewe (Photos-Jones et al 1998: 30). These are situated on the north shore of Loch Maree. The technology for the blast furnaces was brought to the site by Englishmen brought north by Hay. After Hay ceased operations, two Englishmen, James Galloway and Nathaniel Edward, in partnership with the Earl of Seaforth (the clan chief of the Mackenzies), took on the patent for iron working, and started production again around 1629. Whilst it is true that the initial impetus for the industrial complex was from outside the Highlands, it is believed that production continued under Mackenzie ownership until the middle of the seventeenth century, and this would also have required considerable management of the local woodland (Photos-Jones et al 1998: 17).

Woodland continued to be exploited to provide charcoal for the new blast furnaces in the central western Highlands in the late seventeenth and early eighteenth centuries. For example, the Camerons of Lochiel entered into a contract in 1674 to develop a furnace at Achnacarry in 1674; the Graham estates in Menteith saw the creation of a small ironworks in 1718; an Irish partnership set up an ironworks in Glen Kinglass in 1725 to exploit the woods of Campbell of Lochnell; and John Macdonell of Invergarry contracted to sell his wood to Thomas Rawlinson and partners of Lancashire who set up operations at Invergarry in 1727 (Smout, MacDonald & Watson 2005: 236-238). Very considerable amounts of wood were required to provide the charcoal needed to supply these blast furnaces which were to be added to by yet larger concerns such as Bonawe just after the '45. Archaeologically these enterprises can be traced by both looking at the evidence for charcoal making in the woodlands, such as platforms, and, secondly, by noting the

continuing existence of trees modified for commercial purposes (Quelch 2007). These are trees that have been managed by coppicing or pollarding in order to increase the amount of available woodland for charcoal burning in the woodlands which were supplying the blast furnaces noted. It has been estimated (Stewart 2003: 112) that the average rotation of woodland for harvesting was twenty four years, and these were in all likelihood managed using coppicing with enclosures (to prevent re-growth being reduced from the grazing of deer and sheep). Bonawe ironworks employed 600 seasonal workers at its height, of whom only about a dozen worked at the furnace itself. Most of the rest were working in woods stretching as far north as Morar, and south to Knapdale (Stewart 2003).

The making of linen and woollen textiles, other than for subsistence use, was established in parts of the Highlands well before the eighteenth century. In Easter Ross, the industry was based on flax and its associated fibre, hemp, and went back to at least the sixteenth century. The spring market at Fortrose had long supplied the north of Scotland with linen. By the second quarter of the eighteenth century, Easter Ross produced over eleven thousand yards of linen each year (Mowat 1981:53). In Atholl, by 1700, linen production was the staple industry to produce cash for rents. Efforts were made to grow the industry in 1708, 1712 and 1719, for example, by the provision of spinning wheels and the increased growing of lint seed. "In the market of Moulin, held 1st March, the yarn is sold for ready money; and the payment of rent depends on that market" (Leneman 1986: 25-31).

The primary form of commercial activity in the Highlands was, however, agricultural. This has been argued to be evolving from the sixteenth to the nineteenth centuries onto systems of production more aligned with the selling of agricultural surpluses, notably grain or cattle, to the general market (Dodgshon 1998). This was fundamental, it is said, in replacing clan systems based on socio-political control and behaviour which had hitherto determined agricultural practice (Dodgshon 1998:233). Now the owners of land focussed on maximising cash income by the introduction of specialised stock production (at first cattle and then increasingly sheep from the mid-eighteenth century onwards) or alternatively grain in parts of the Highlands more suited to arable production. The landlords could either market the surplus produce themselves or convert the rents in kind into cash and attempt to get the tenants to market the produce (Dodgshon 1998: 234-237). This gradual change long pre-dated the dramatic impact of Improvement, clearance and the creation of new crofting townships.

In recent years there have been archaeological studies which have highlighted the shift between a pre-Improvement material environment (settlement forms, landscape, field patterns and domestic space), and what was created by Improvement in the Scottish Highlands (for example Dalglish 2003; RCAHMS 2008a: 215-231). However, as yet there have been only limited archaeological studies of the more subtle changes which were happening in Highland agriculture before Improvement. Archaeology has been used to analyse the transformation of clan territory into landed estate, including how land-use changed and evolved. In this approach, emphasis is placed on tensions and complexity within society, running counter to notions of an orderly transition from one state to another (Dalglish 2005a: 243-266). Another approach has involved large scale landscape projects such as the Ben Lawers Historic Landscape project, which have been used to look at the evolution of landscape and settlement forms, with an implication for agricultural change (Atkinson 2000; Atkinson 2010: 316-340). As yet, however, a more comprehensive approach to evidencing specifically agricultural change is awaited. My own study will address this by reference to the movement out of the Highlands of grain and cattle for cash. As a result of the pivotal importance of agricultural activities, any such study would be central to understanding changing relationships in the pre-Improvement Highlands.

2.4.3 Missing evidence: cattle stances and grain girnals

"The union opened the market of England to Highland cattle. Their ordinary price is at present (1776) about three times greater than at the beginning of the (eighteenth) century, and the rents of many Highland estates have been tripled and quadrupled in the same time" (Smith 1976: 135).

The thrust of modern scholarship has been to emphasise the increasing sale of agriculture surplus in the pre-Improvement era, as pressure on landowners to maximise cash receipts intensified. The two largest agricultural exports from the Highlands, based on documentary evidence, were cattle and grain (Devine 1994, 2005, 2006; Macinnes 1996; Dodgshon 1998). If this was the case, there should also be archaeological evidence, and this should serve to illuminate changing patterns of relationships in the Highland landscape.

Cattle walk to market and, bearing in mind the remoteness of many parts of the Highlands from Lowland and English markets, this gives cattle a great cost advantage over grain (Dodgshon 1998: 236). The skill of the drover then becomes the ability to move cattle over long distances without losing value. Consequently cattle were infrequently moved much

more than ten to twelve miles a day, and were brought from all parts of the Highlands to local markets, the great Trysts at Crieff (replaced around 1770 by Falkirk) and potentially all the way to Smithfield in London (Haldane 1952: 85-89). The repetition of movement over routeways, the need to stop at designated places where fodder, an enclosure and overnight accommodation might be provided, and the common end destinations at a market implies that archaeological evidence of the trade would be created. What is the evidence for this? Did the nature and form of the cattle stances change over time? What archaeological evidence may there be of a droving route?

The Drove Roads of Scotland by A.R.B.Haldane was first published in 1952. It remains after more than sixty years the great classic history of droving and drove roads in Scotland. Perhaps the greatest problem with the book was that it was regarded at the time of publication as such a seminal work that it seems to have inhibited further research rather than encouraging it. For example, Haldane states "Without doubt these (routes) changed from time to time according to the political and social conditions of the time, the market requirements, the type of beasts forming the drove, the weather or even individual tastes, prejudices and idiosyncrasies of the drovers" (Haldane 1952:4). He further goes on to say, in respect of the multiplicity of routes, that he decided to show only the main routes in the accompanying map (Haldane 1952: 4), and these self-defined "main" drove roads are what he writes about. This is surely an invitation to look in more detail and in different ways at the myriad of droving routes which exist across the Highlands. As yet, however, there have been no archaeological studies of the evidence.

Grain needed to be shipped by sea if it were to be easily and efficiently moved long distances from the north of Scotland. This is as a result of the general lack of roads in the Highlands suitable for wheeled transport. Things might be easier if the arable areas were on the eastern or southern borders of the Highlands, but transport costs might still be an incentive to convert the grain into more efficiently transported whisky. Thus grain was more likely to be marketed outside the Highlands by the landlords themselves, rather than by the tenants who could not afford to market the grain directly. Indeed some landlords continued to uplift grain payments-in-kind as rental income from the better arable parts their estates down to the late eighteenth century. It might remain the tenants' responsibility to assemble the grain at a specified point, but from the appointed store-house (known as a girnal in Scotland) it was usually the landowner, laird or chief who arranged the sale with a grain merchant (Dodgshon 1998: 234-236). Most lairds sold the grain to the Lowland merchant at the girnal to avoid the costs and risks of transport altogether, but others such as

the Earl of Cromarty hired their own ships in order to maximise profit (Richards and Clough 1989: 42-43). Fertile estates specialising in grain production and export, especially in places like Caithness and Easter Ross would likely have a girnal for grain export, and that girnal would most likely be adjacent to either a harbour or a suitable anchorage.

Elizabeth Beaton's study of girnals in Easter Ross is from an architectural and historical perspective (Beaton 1986: 133-151). These are important buildings in their own right, frequently larger than nearby churches or houses. However, their importance as a representation of agricultural change, their role in the landscape and their impact of those who worked in and around them is yet to be recognised. In many ways these represent the physical evidence for the grain trade in the same way that drove roads and overnight cattle stances do for the export of cattle out of the Highlands.

When the National Monuments Record of Scotland (NMRS) is examined in relation to cattle droving and grain export some interesting facts emerge. There are only 39 entries relating to drove roads and 11 entries linked to cattle stances. Many are in the Lowlands. If cattle travel only ten miles per day, there should have been, at one time, several thousand former stance sites across Scotland on many hundreds of droving roads. Many will have disappeared, but this is a surprisingly low return on what might have been expected. This suggests that many have yet to have been recorded. As regards the outstanding collection of eight grain girnals in Easter Ross, only four, are recorded in NMRS. Not only is there no recognition of them as a related group, but half are ignored altogether. The girnal at Alness was recently demolished by Highland Council. Indeed if *The Archaeological Sites and Monuments of Easter Ross* (RCAHMS 1979) is consulted, then there are no recorded sites relating to either cattle droving or grain export listed, despite having rich examples of both.

2.5 Developing an archaeology of (rural) commercial practice

I have concentrated in this chapter on three linked questions around change. This should not be taken to imply that the interweaving of continuity and change is not a key issue. This tension between the two will be further developed later in the thesis

The questions explored have been firstly whether patterns of social relationships were disrupted by an adoption of what might be termed Improvement values, and if so, how can this be characterised? Is it wholly correct to see a communal society replaced by one with individualistic values, and if not how should this be nuanced (2.2)? A complex picture

emerges from a review of literature which suggests a tension in all periods between individualism and communal relationships, but with a broad shift over time from one to the other.

Secondly, what is the underlying explanation for change in the Scottish Highlands in the period under review? In looking at models of change, should these be considered in isolation or synthesised (2.3)? Modern scholarship emphasises the need to synthesise apparently different causes of change whether economic, political or cultural. As such it may be better to recognise that the change impacting the Highlands can be interpreted using a number of different approaches, which are not mutually exclusive.

Thirdly, is there evidence for the view that the Highlands already had evidence of developing commercial practice long before Improvement? What is that evidence and particularly what is the archaeological evidence for changes in agricultural practice which were happening before the second half of the eighteenth century (2.4)? Whilst acknowledging that commercial practice in the Highlands was not as well developed as in the Lowlands or England, there is growing historical literature and some limited archaeological material to suggest that commercial practice was by no means absent from the Highlands well before Improvement. A focus on archaeological evidence of changing agricultural practices, the principal economic activity, which allowed the marketing of surpluses, would have wide implications.

This review of research has therefore pointed me towards the need for further work in the area of rural commercial practice. There is a paucity of work in the Scottish Highlands from an archaeological standpoint, and none at all in relation to either cattle droving or grain export. In taking on cattle droving and grain export the intention is to enhance and develop some of the work commenced by A.R.B. Haldane over sixty years ago, as well as that of Elizabeth Beaton in the 1980s, neither having been written from an archaeological perspective, and link the two together as part of a coherent picture. By revealing the archaeological evidence, a better understanding of the processes, nature and reasons for change in the Highlands should be revealed.

3 Theoretical Routes and Directions

3.1 A personal journey

The aim of this chapter is to establish the theoretical framework which I can use to address the archaeological study of cattle droving and grain export in the Scottish Highlands. My focus has been on social relationships, and how and why those relationships may have changed over time as people and goods move through the landscape.

I have found it helpful to construct that framework in two scales or dimensions. In micro analysis, individual actors, whether engaged in the cattle droving trade, or the export of grain, populate the landscape, leaving their mark, and that needs to be made sense of. At a macro level, I argue that innumerable numbers of those actors are adrift on the tectonic plates of globalisation, and this too needs to be understood and explained, as well as being related back to the complex weave of relationships which are thus impacted.

The theoretical lens through which I view my fieldwork has been shaped by life experiences. There are many drawbacks to being well on in one's sixth decade, and having had an academic career interrupted for thirty years by the need to earn a living, but there are also some advantages. One of those is that what appeared certain and clear-cut to my younger self, now emerges as more complex, nuanced and multi-faceted. So it is not sufficient to select a given theoretical approach, and then seek to apply it to my field-work. It is important to recognise at the outset that that very theory has itself been self-selected by me as a result of my life experiences, and not just as an academic exercise. In short it is a reflection of how I have come to view the world in which I exist. So this chapter will argue that theory does not just inform and shape field-work, but is itself shaped, selected and made sense of by time in the "field". This process never stops. So my theory is an explicit, structured, systematic and critical expression of a philosophy which accords with my life experiences.

This realisation is a version of the double hermeneutic circle, coined by Anthony Giddens, which he defines as "a mutual interpretative interplay between social science and those whose activities compose its subject matter" (Giddens 1984: 348). So I acknowledge that I (as the relevant social scientist) have approached the subjects of my research with an existing body of pre-knowledge (and prejudice), shaped by previous experiences, and that that pre-knowledge has itself been further shaped by my engagement with the research,

such that it forms part of the pre-knowledge for the next piece of research. In so doing, I attempt to make my philosophy explicit, critically analyse it and justify it through argument.

At the micro level, I use practice, resistance and agency theory in order to understand the actions of individuals, and their consequent impact on the landscape. This was not easily arrived at. In the early 1970s, when I thought that I might study Politics, Philosophy and Economics at university, I was initially influenced by the existentialist phenomenology of Sartre. On arriving at university in 1975, where I actually read Modern History and Economics, this was rather overtaken by structuralism, as expressed through the writings of such as Levi-Strauss. This was a powerful movement at the time, across the social sciences, and when I applied to do post-graduate work in archaeology in 1978, it was New Archaeology, as articulated by Renfrew (1973), Clarke (1978) and Binford (1972), that was dominant in my thinking. When I returned to university life in 2007, in order to study for a MLitt, it was therefore something of a shock to realise that New Archaeology and processual archaeology was eclipsed, and had apparently become overtaken by a postprocessual orthodoxy. However, many would deny that anything as coherent as a postprocessual orthodoxy ever existed, and it has been argued that in recent years we have entered a phase of theoretical pragmatism (Johnson 1999). Many aspects of this I have found to be in tune with my life experiences, where multi-faceted complexity has often replaced structured certainty in my thinking. I consider all of this in more detail at section 3.2 below.

At a macro level, I use economic theory in order to understand the growth of global markets, which had such a dramatic impact on the relationships within the Scottish Highlands as a result of changes in economic activity. I start with the writings of Adam Smith, a contemporary observer of the archaeology which I now wish to consider, and progress to modern market theory. I then consider World-Systems theory, which has had some impact on archaeological thinking, especially in the United States of America. I illustrate the powerful impact of global markets on the Scottish landscape and people in relation to my own experiences of multi-national business in late twentieth century Scotland. I develop this macro level theoretical discussion at section 3.3 below.

I then discuss how landscape theory and the theoretical concerns behind archaeologies of capitalism have informed my conclusions. This is especially the case with regard to changing and continuing relationships within the landscape. As part of this, I consider the

role of buildings, as being material culture in their own right, as well as having economic, social and cultural significance. Similarly, I view the roads and pathways through the landscape as material culture. Some might consider these routes as not only symbols of change but also the conduits of that change. Others might uphold them as totems of continuity and tradition. This thesis will argue that societal change and continuity, as observed by archaeologists through material culture, should not be seen as binary opposites. This is a false dichotomy (Silliman 2005:66). Instead, I see the position as much more complex, whereby society is constantly developing and emerging from what went before. Nor does this happen at a constant rate, but instead there are periods of convulsive change, such as the Sutherland Clearances, and periods of relatively more continuity. There are thus new relationships being forged in the landscape, but at the same time, much is unchanged from the past. Equally, I am sceptical of clear and sharply defined borders, whether they are geographic, temporal or cultural. This is discussed in more detail at section 3.4 below.

I draw matters to a conclusion in section 3.5. Starting with practice, agency and resistance theory, I seek to untangle the social relationships resulting from moving cattle, corn and people through the landscape. I then use comparative advantage and market theory drawn from economics to explain why those relationships were subject to constant change. Finally, I apply landscape theory to explain how and why differing traditions in British landscape study can be brought together to give a richer contextual account of the social activities occasioned by these journeys. Thus by marrying together economic and archaeological theory, I am enabled to produce a methodology and research agenda (see Chapter 4).

3.2 Practice, Resistance and Agency

One of the most appealing things about the work of Bourdieu, to my mind, is his rejection of the "absurd opposition between individual and society" (Bourdieu 1990: 31). By this he was referring on one hand to the subjectivism of Sartre and the existentialists, in opposition to the objectivism of Levi-Strauss and the structuralists. Bourdieu believed that the work of Satre produced what was "essentially a descriptive model of the social world as it is believed to be experienced" as opposed to the work of Levi-Strauss, which represented "the search for the sociological equivalent of Descartes' mechanical universe, functioning according to rules, if not laws" (Jenkins 2002:49). Whilst finding matters of merit in both approaches, he found neither in itself satisfactory. So he developed a dialectical middle

way. This is based on two realisations. Firstly, that the act of observation pursued unreflexively produces a static and unreal view of social life, and that, secondly, social practice is about strategies and improvisation rather than an adherence to rules and laws (Bourdieu 1977: 1-30).

In England, Giddens also looked at the relationship between structure and practice, developing the theory of "structuration" where there is a recursive relationship between the two, such that they constantly influence each other (Giddens 1979). In Giddens' work, the individual is knowledgeable, competent and creative, and the material culture which is thus created is itself highly dynamic, constantly creating, changing and re-creating society (Hodder and Hutson 2003: 94).

3.2.1 Practice theory

Bourdieu uses the concept of "habitus" to illuminate the relationship between structure and practice. Although Bourdieu himself preferred the term to be defined and explained by its practical usage, I have found it helpful to accept that habitus consists of "strategy generating propensities enabling agents to cope with unforeseen situations" (Hodder and Hutson 2003: 90). In other words, it relates to that instinctive knowledge of how to do things, and how to cope and amend when the unexpected or unusual is encountered. This type of problem cannot be navigated by a set of rules, but is dealt with by adaption based on practical experience and know-how. Thus the good golfer knows that he or she is expected to hit down the fairway, but on certain holes they might decide to hit across to an adjoining fairway to avoid a burn at the distance of a good drive or an inviting bunker. They apply a strategy outside the social and cultural norm.

Regular and recurrent patterns of behaviour inculcate practices through habitus, which is not based on pre-designated sets of rules. This is a much more flexible response to the world, and one in which the individual is at the core. Bourdieu assigns more importance to unconscious action over rationalised, conscious practices (Bourdieu 1977: 73). He considers how this unconscious know-how is passed down the generations, and by so doing it becomes enculturated. Indeed it begins to amend and shape that society in the future. In effect, this is the recursive relationship between practice and structure observed by Giddens.

Bourdieu argues that both the use of space (that is the physical setting) and the use of material culture serve to drive home practices which enable people to learn their place in the world (Bourdieu 1977: 87-94).

Taking as an example, and looking back rather more than fifty years to circa 1960, the spatial layout of Scottish working class living space and its relation to the process of making tea might serve to illustrate how I came to understand something of the world in which I was born. As was common in my generation, my grand-parents lived within a couple of miles of each other in Dunfermline (which is in West Fife, Scotland). Another fifteen sets of great uncles and aunts lived within a twenty mile radius. Within working class homes in Scotland, in an age when heating was produced by coal fires, there were some discernible patterns relating to the living room and kitchen arrangements. Within this space, the making and drinking of tea was a constant background activity, perhaps unacknowledged or unconsidered; it set the rhythm which I recall from my visits to my grand-parents' houses.

The houses were not identical (Figure 2 and Figure 3), but the basic lay-out was similar. My grandfathers' chairs were to the left of the fire-place and looking towards the kitchen. My grandmothers sat opposite, and closer to the kitchen. In front of the fire-place, with its tiled surround, was a rectangular rug. Opposite the fire and behind the rug was a settee for visitors. Grand-children were not allocated seats but had their own stools, which were placed against the arms of the chairs or settees. Ideally books were read from these vantage points. Toys could be played on the rug but only one at a time, and only with the fire-guard on. Outside the settees and the chairs, the room maintained an unwelcoming cold. One grand-father was a coal miner, and one a charge-hand engineer in the dockyard. Both had small black and white television sets on stands behind them, with radios underneath. However, the engineer had a full floor to ceiling mahogany book-case to his left shoulder (Figure 3), by the chimney–breast, whilst the miner had some much smaller oak book-shelves. The engineer's living room had a fitted carpet, whilst the other had linoleum surround to a central Axminster carpet.

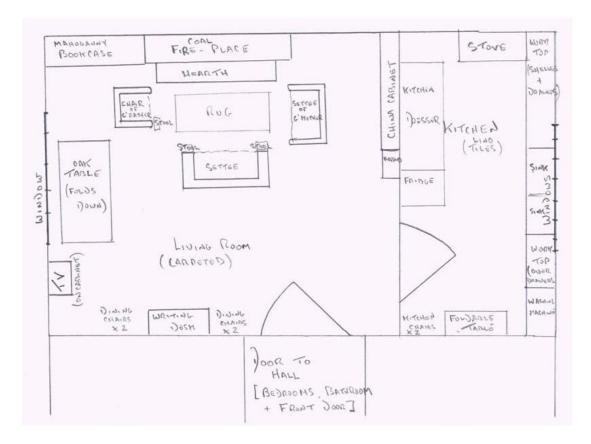


Figure 2 Plan of Living Room and Kitchen of 53 King's Place, Rosyth (1956 -1970). Sketch plan of the flat occupied by Mr and Mrs D.J. Thomson. Mr Thomson was a journeyman engineer in Rosyth Dockyard until retirement in 1962.

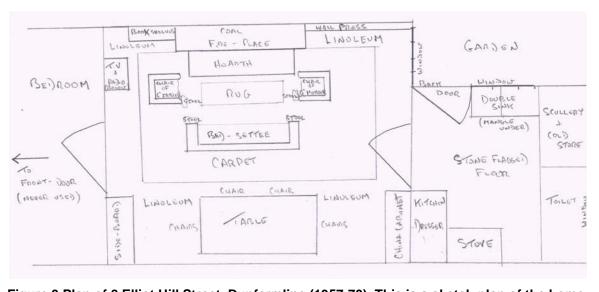


Figure 3 Plan of 8 Elliot Hill Street, Dunfermline (1957-70). This is a sketch plan of the home of Mr and Mrs J McL Adamson. Mr Adamson was a retired coal miner.



Figure 4 Mr and Mrs Thomson, December 1962. This picture is taken looking towards Mr Thomson's armchair, which for the purposes of the picture is occupied (most unusually), by his wife. The mahogany book is behind. The hearth is just by his feet.

The route from kitchen to fireplace was the same, for my grandmothers made the tea in the kitchen in a practised, unthinking manner, and the cups and saucers were carefully brought out from the kitchen, ready made, and placed on the fire-place surround, by my grandfathers left ankle. One grand-mother had been a cook in a "Big House" before the First World War, and the other maintained hand-written recipe books and was an expert baker. I never saw either grand-father make anything in the kitchens. The procedure was essentially similar, with big, metal kettles being heated by gas. Tea leaves were added, according to numbers of cups required, to a pre-warmed tea-pot. The miner's wife used a huge brown earthenware teapot, whilst the other had both a "Royal Albert" white and gold ceramic teapot and a silver tea-pot for certain important visitors (Figure 4). This was left to "mask" (or brew, or mash, or infuse if you were an outsider) for a pre-determined amount of time, before being poured into the cups, which were again of varying quality (Figure 5). One grand-mother was partially blind in one eye from a childhood accident, and this affected her depth perception. She therefore adopted a strategy of placing the tea-cups on a towel,

and ensuring that the saucers were close together. The tea was then brought through to the living room with appropriate milk and sugar already added, and then either placed by my grandfathers or otherwise handed directly to any guests. Conversation never ceased, All the while that this was happening. It was a background, subliminal, "weel-kent" routine or practice.



Figure 5 Silver Teapot, circa 1923. This teapot belonged to Mrs Joan Thomson. It was only ever used on grand occasions, and in fact suffers from a very poor pouring spout.



Figure 6 Two cups and saucers used by Mrs Joan Thomson, being a Royal Albert trio from 1923 (wedding china), and the more informal Susie Cooper design of the 1950s

From my stool I learnt about the habitus of that society, at that particular time in its development, something of its implicit relationships (for example in terms of class or gender) and all without even being aware of it. In this society, women dominated the kitchen, and everyday transactions such as tea-making took on ritual and well-rehearsed patterns, which were enforced by them. The male, provider of family wealth though work, was placed in the honoured chair by the hearth and away from the kitchen door. To his side lay books which were an access to knowledge. Conversation took place within the warm rectangle created by chairs and couches which looked towards the coal fire. As yet, the small television was not the focus of the room. If it is possible for archaeology to derive some knowledge about such spatial relationships, or material culture, then the implied practical knowledge revealed should be able to render useful interpretations of the past. Michael Shanks in his book, "Experiencing the Past" has some interesting things to say about how to encounter and interpret the past from present day sources and methodologies (1992). Of course it is important to situate that interpretation in the light of careful consideration of historical and contextual meanings which will shift over time, otherwise that interpretation may be partial or incorrect (Hodder and Hutson 2003: 156-205). For example, when I was a boy I asked my mother why neither she nor either of my grandmothers took sugar in their tea, despite everyone else doing so. She said that they had all given up sugar at the beginning of World War II, when it became rationed. They had reserved the limited rations for the men-folk who were working double-shifts in the dockyard or the coal mine. That particular aspect of the tea making practice had been altered by external forces operating at a macro level, and also reveals something about the

complex web of relationships and social attitudes within a Scottish working-class family in wartime. I was still observing the consequences twenty years later.

The consideration of practice, in effect a theoretical tool, is directly relevant to the research questions posed at the start of this thesis. By observing and recording, for example, a dyke with a hollow outside it, representing the passage of innumerable cattle, to the former open field system on the other side of the dyke, we say something about the relationship of the drovers and those working the fields. This is because that relationship would have been lived in the context of a habitus, a practical context of structuring dispositions which are reflected in, and were in no small part produced by, the material environment.

3.2.2 Agency

I start with the rational sense of agency which emphasises intentionality and cultural specificity; however, I want to go farther. I want to recognise the wider relationships of humankind to the environment, material culture and nature, and theirs to each other. These are entwined and constantly interacting. As such, I cannot accept a narrow definition which denies non-human agency. Agency and intentional action are not equivalent, I believe, although the latter is one aspect of the former. Agency is also evident in the unintentional, the implicit and non-conscious action.

I want to be clear what I mean by agency. Initially, I was attracted by the idea of human agency which involves in some respect intentional action (Hodder and Hutson 2003: 101). That is not to say that I discount the importance of the structuring conditions needed for action, and I agree with the need to historically situate agency at every stage. I certainly do not associate agency with "individualism" or neo-liberalism (Dobres and Robb 2000), because I do not think that in any period an individual's thoughts or actions can be separated from the society in which they are situated.

I place my emphasis on culturally constituted knowledge, which primarily flows from mental representations. This does not necessarily rule out biological processes whereby humanity is impelled to recreate life, such as advanced by Barrett as a driver for agency (Barrett 2012). However I see such processes as one of the many influences which create uncertainty in agency, and are subject to, and modified by, culturally constituted forces, which will vary over time and culture. For example, the need of a family unit to reproduce and have offspring is very different in the Europe of the twenty-first century compared

with the medieval period. Equally an agent's knowledge may be incomplete, or the power to assemble and use the necessary resources may be lacking. All create unpredictability. Overall I remain comfortable with the assertion that:

The cultural framework within which we act, and which we reproduce in our actions is historically derived and...each culture is a particular historical product (Hodder 1982: 4-5).

However, is this enough? There is no reason why material culture cannot have agency (Gell 1998). It may be that material culture not only actively constructs the world within which people act, but also impacts on the people themselves in a recursive relationship (Dobres and Robb 2000: 12). So in that sense it may be said to have independent agency and indeed a biography of its own (Gosden and Marshall 1999: 169-178). Does there really need to be a binary opposition between "nature" and "culture"? Is that dichotomy helpful? Environmental processes, the contours of the land, animals (whether domesticated or otherwise) and vegetation can be powerful agents. They interact with humans in a complex web of responses to each other, which can be observed in the landscape. Indeed within the cosmology of Gaelic culture, humans are fully integrated into their environment and both interact on and with each other (Newton 2009: 202-243).

3.2.3 Resistance Theory

I hope to develop a nuanced approach which embraces the complexity and richness of the lives of purposeful actors who have full agency. This includes but goes beyond "the binary lens of domination and resistance" (Hodder and Hutson 2003: 98). To do so, I acknowledge that I need to consider both elite structures and public monuments, but also the secret arenas and hidden transcripts within the landscape (Paynter and McGuire 1991: 13). I look at the evidence of a range of activities in the landscape, set into a multi site context (Given 2004: 12), seeking to tease out evidence of power and resistance. This gives the potential for a complex and rich understanding of agency to emerge, which might be understood as habitus enacted.

I find Giddens' realisation that power involves the reproduction of relations of autonomy and dependence helpful. "Even the most autonomous agent is in some degree dependent, and the most dependent actor or party in a relationship retains some autonomy" (Giddens 1979: 93). So each player has free will to choose to obstruct or delay the actions of another, as well as to co-operate and assist. Thus the dominance of those perceived to be

powerful can not be taken for granted, because the compliance of those perceived as dominated cannot be taken for granted (Hodder and Hutson 2003: 96). In the tea making example, a guest requesting that their milk be placed first into the cup, may have had their wish grudgingly accepted in the kitchen or indeed not at all, especially if out of sight. "Where there is power, there is resistance" (Foucault 1981: 95).

Archaeology lends itself to studies of resistance, especially when they take the form of the everyday, the insignificant, and point to a physical record of actions which are not documented (Hodder and Hutson 2003: 97). Some of these studies have focussed on how material culture can point to complex and nuanced relationships in the colonial era between "native" and the "colonialists", which cannot easily fit into a simplistic domination/resistance lens (for example Gosden and Knowles 2001, Shackel 2000, Brumfiel 1996). They point to a world where politics are complex, and relationships multidimensional. Seductive though it is to focus on material culture which acts as symbols of oppression, this can be an unhelpful simplification of colonial relationships (Van Dommelen 2002: 122-126).

When considering the oppressed, it is tempting to remove their agency by portraying their resistance as hopeless (though virtuous and commendable), or otherwise representatives of a society which is "traditional", "ancient" or evokes "continuity" with the past (Given 2004: 10-11). A particular problem with the former is that it evokes a simplistic picture of the "noble savage" (Ortner 1995: 176-180). A significant problem with the latter is that it lends itself to the "Improving" literature, only too prevalent in western society from the eighteenth century onwards, to justify the removal of the "backward", and the insertion and promotion of the "progressive" (Paynter and McGuire 1991: 1-3). The landscape can then be populated by either victims or those doomed to be removed from their land by the inevitable logic of economics, according to taste. In other words, agency has been removed from the people. The reality is that this is a denial of the complexity of human life and its attendant relationships, where people are making active decisions and constantly refine their self-definitions (Given 2004: 11).

When looking at the former township of Achamor, with its well preserved stance, in the cleared glen of Skinsdale, does the archaeology speak necessarily of victims or otherwise a backward people ripe for Improvement? Or had the people of Skinsdale been moving for generations? Did they meekly accept their placement on the coast by the Sutherland Estate or did they go further; perhaps to the Lowland cities or to Canada? By so doing, was this in

fact resistance to the apparent power over them held by the Sutherland Estate? The complexity of Highland emigration continues to be well studied and defies simplistic explanations (Harper 2003). Another example might be in relation to the direction of barley from the arable fields of Easter Ross. Did all of it find its way to the girnals, there to be weighed, recorded and bagged, or might some have been diverted to produce illicit whisky outside of the reach of the estate owner (Given 2004: 151-156)?

3.3 Adam Smith, markets, World-Systems and globalization.

It is, I suspect, unusual to have economic theory in an archaeological thesis. I believe that economic theory can help to explain why change in social relationships was happening in the period on which I am focussed. I am looking at social relationships in the landscape as evidenced by archaeology. However, I believe that those relationships are always in a state of flux, adaption and change. This was certainly happening at dramatic speed in the Scottish Highlands in the seventeenth, eighteenth and nineteenth centuries, and I would be surprised if change was not a factor both earlier and later. I therefore employ economic theory to explain why this might be so. I work also with both documents and maps in this thesis. They have often been seen as the preserve of other disciplines. Breaking academic silos of knowledge is one of the things which have most attracted me to this subject.

My interest in the economic theory behind market capitalism, whether expressed in the words of an Enlightenment economist like Adam Smith or alternatively in the terminology of Karl Marx, relates to "social relations in human production" (Wolf 1982:76). In other words, when labour is applied to capital and raw materials to produce goods and services, then "men and women work together to create relationships using what they have, what they know, who they know and what they can make" (Orser 1996: 74). More than that, they seek to exchange some of those goods and services, which they have produced, in order to satisfy other wants and needs. This process also creates and orders relationships, as supply is matched with demand in a market. If the economic system of market capitalism is dynamic and always changing, then it is always changing those relationships, which it originally created. These changing relationships are represented archaeologically.

I begin with microeconomic theory in relation to two insights first revealed by Adam Smith (1723-1790) in eighteenth century Scotland, and their implications for the market. I then look at the macroeconomic consequences of this theory in general terms, and how it relates to modern World-Systems theory (and the alternative global modernisation theory),

which has been used by some archaeologists in the past thirty years. Finally I suggest that an understanding of the macroeconomic forces shaping globalisation (today as in the past) is relevant to understanding changing relationships in the eighteenth century Highlands of Scotland, and why they were changing.

3.3.1 Adam Smith and friends

Adam Smith, like Karl Marx, developed a four part "stadial" theory of human development (Broadie 2007: 75-76). Smith's four stages of human development were hunter-gatherer, pastoral, agricultural and commercial. Marx also labelled four stages of human evolution. These were Asiatic, ancient, feudal and modern bourgeois (Marx 1970:21). Whilst having some similarities, they do not precisely map across to each other. However, it is of interest to note that both start from similar perspectives on cultural evolution, and are the starting points for their consideration of what has come to be labelled "capitalism". In broad terms, Smith argued in An Inquiry into the Nature and Causes of the Wealth of Nations, first published in 1776, that a free market system was the most efficient means of production, and that when an economy ran efficiently, the rest of society was usually healthy as well (Smith 1976). In fairness, he also argued that for the free market to operate, it must be placed in the framework of moral values and social justice (Lenman 2009: 258). Karl Marx, of course, pointed more directly to inherent injustices which he believed existed within capitalism in "Das Kapital", first published in 1867, and which would lead to a worker's revolution, after which everyone would own the means of production (Marx 1967).

My particular focus is on Adam Smith's two key economic theories which lie at the heart of his work. These are the doctrine of absolute advantage (Smith 1976: Book IV), and the concept of division of labour (Smith 1976: Book I). David Ricardo significantly advanced Smith's thinking on advantage, and coined the term "comparative advantage" in 1817 (Ricardo 1817).

Absolute advantage is an easy enough concept to grasp. Let us consider the upland and lowland parts of the Highlands. Assume that the upland parts can produce 400 cattle or 10 bolls of barley, whilst the lowland parts can produce 100 cattle or 40 bolls of barley. If they do not trade through a market, each could produce cattle and barley, and if they devoted half of their resources to each, then the uplands would produce 200 cattle and 5 bolls of barley whilst the lowlands would produce 50 cattle and 20 bolls of barley. Total

production is therefore 250 cattle and 25 bolls of barley. Imagine instead that the lowlands (let's call it Easter Ross or Bute) specialise entirely in barley, and then 40 bolls of barley are produced. Equally the upland parts (let's call them Cowal or Sutherland) specialise in cattle production, and then they produce 400 cattle. Overall total production is now 400 cattle and 40 bolls of barley. Of course a market will be required since the inhabitants of the uplands will need barley, whilst those in the low lying areas will need cattle products. Overall however, the Highland area produces an extra 150 cattle and 15 bolls of barley.

However, let's take it further, and apply the argument of David Ricardo. Today areas like Bute and Easter Ross are renowned cattle country, so let's imagine that whilst the upland areas can continue to produce either 400 head of cattle or 10 bolls of barley, but now the lowland areas can produce 500 head of cattle or 40 bolls of barley. What to do for maximum advantage? If both areas carried on producing both products from half of their resources then 450 cattle would be produced and 25 bolls of barley. However, if the upland areas continue to produce only cattle, then 400 would result. If the lowlands however used 80% of their resources to produce barley and 20% to raise cattle, the production would be 100 cattle and 32 bolls of grain. Overall, production is 500 cattle and 32 bolls of barley.

In this latter example, the low lying areas of the Highlands are absolutely more efficient than the uplands in both line of production, but its greatest margin of advantage is in grain. Against this, the upland areas have no absolute advantage, but do have a comparative advantage over the lowlands in cattle production – where its margin of disadvantage is least. Specialisation allows more cattle and more grain to be produced. Again a market is required to exchange products.

Economic theory would conclude:

- 1. When two trading partners or countries or regions have a comparative advantage over each other in one of two traded products, there is an obvious gain from each specialising in their most productive activity, and then trading to obtain the other product.
- 2. Absolute advantages are not necessary for there to be gains from specialisation.
- 3. Gains from specialisation occur when there are differences in the margin of advantage that one producer/region/country enjoys over another in various lines of production.

(Lipsey and Chrystal 2007: 10)

This is reinforced by Adam Smith's related insight. This was that a division of labour leads to greater productivity. On an individual level, it is not just sensible to do what one is best at, but that very act of specialising allows people's abilities to change when doing something all the time, rather than being a jack-of-all-trades. Adam Smith described this in relation to craft production (in his case in relation to making pins), but this applies equally well to industrial processes (or indeed service organisations), where mass production is an amalgam of many small processes done by individual in order to manufacture a complex item. Greater productivity is one of the drivers of economic growth for people, regions and countries. In other words the economic cake (output) is enlarged when using the same economic inputs (Lipsey and Chrystal 2007: 9).

Adam Smith came to the view therefore that where markets were allowed to form without interference or bias (by what he referred to as the "invisible hand") then national wealth would be enhanced. This, however, implies a changing pattern of human relationships. Comparative advantage is never permanent. Skills are learnt, technology advances, competition emerges. Where once it might have been economically rational to produce cattle, then it becomes more beneficial to produce sheep, or indeed move out of agricultural production altogether, and into leisure. Each shift implies a disruption of pre-existing relationships and the formation of new ones.

3.3.2 Markets

In order to benefit from the economic theory discussed above, markets are required.

There are two key points here:

- 1. Specialisation must be accompanied by trade. People who produce only one thing must trade most of it to obtain all of the other things they require.
- 2. The existence of money greatly expands the possibilities of specialisation and trade, because otherwise barter and a "double coincidence of wants" is required (Lipsey and Chrystal 2007: 11).

Market forces are, however, not benign. Producers and consumers compete to fix a market price, and this determines where the benefit of increased regional, national or international

production accrues. So, for example, if an area specialises in sheep production, there is then a struggle between the providers of land, capital and labour, all of which are required to raise sheep. The sheep farmer takes a lease from the landowner, but what are its terms? How much of the benefit is passed to the landowner in the form of higher rents? One determinant of this might be the length and conditions of the lease given. Equally, the sheep farmer will require shepherds, but what wages will be offered? An influence on this might be the organisation of labour, such as happened in the early nineteenth century with agricultural combinations and the "Tolpuddle Martyrs". The providers of land, capital and labour struggle to retain for themselves all, or most, of the benefit from specialisation. That struggle itself shapes relationships between individuals.

Moving to a macroeconomic analysis, it is evident that the Highlands, and in particular the north and western Highlands, such as Sutherland, were forced to specialise in sectors in which they had a comparative advantage in the context of an emerging British and global economic system in the post-medieval period. This meant primary production, such as cattle raising, and later sheep farming, and the provision of casual labour for the Lowland economy (Devine 2005: 84-92). The problem with this, long-term, was that the Highland economy became locked-in to supplying foodstuffs, raw materials and labour to the industrial centres of Britain, and in the context of globalisation, alternative (and cheaper) sources for these were emerging. In other words, the consumers (of the raw materials) could exercise their economic power in the market. When this happened, the prices of Highland-sourced commodities fell or stagnated, and the pressure on relationships within the Highlands intensified, which in turn created further change. Again, social relationships, evidenced in archaeology, are impacted.

3.3.3 World-Systems theory and modernisation theory

Immanuel Wallerstein defined the modern capitalist world-system as an economic entity integrating multiple socio-cultural subsystems through division of labour and the exchange of staple products (Wallerstein 1974a). Following the doctrine of comparative advantage, the economy of outlying cultural subsystems, often referred to as "peripheries", becomes commoditised and specialised towards the export of raw materials, labour and staple goods that are consumed in the system "core" (Alexander 1999:103). This core then exports manufactured goods back to the periphery in a way which fosters periphery dependence on that core. The classic example of a world-system is the extension of European colonial control over Africa and the Americas from the sixteenth century to the mid twentieth

century (Stein 1999: 153). Wallerstein argues that this ever expanding trade system resulted in a division of labour between cores and peripheries that fostered periphery dependence and exploitation (Wallerstein 1974b: 387-415). The parallels to the relationship between the Highlands of Scotland and the industrial heartlands of Britain in the eighteenth and nineteenth centuries are obvious.

Another way of looking at the same issue is known as "modernisation theory" (Orser 1996: 83). Like world-systems theory, it derives much of its economic theory from Adam Smith and David Ricardo, but does not then apply Wallerstein's Marxist social structuring analysis. It starts from the assumption that economic growth comes from the application of free market principles, and that that generally is a good thing for the people of those countries and regions being "modernised". However, this modernisation process requires the right conditions for the global market to operate (Black et al 1991:18). For example, this might imply political stability or the application of state funding to build infrastructure such as roads (Billet 1993: 4). Again parallels can be drawn to the development of the Scottish Highlands after 1707, and the Act of Union.

Eric Hobsbawm and Max Hartwell debated in the 1960s and 1970s whether or not the industrial revolution in Britain raised or lowered working-class living standards. Both acknowledged that the industrial revolution, fired by expanding global markets and free trade increased dramatically the gross national product of the United Kingdom.

Hobsbawm, however, argued that the process was an exploitative disaster for certain areas and classes (and specifically the working-class) within the British Empire (Hobsbawm 1968). Hartwell countered by showing that multifarious quantifiable sources piled up evidence against this assertion (Hartwell 1974: 3-22). However, he did make a crucial caveat, "an increasing proportion of the total population was lifted above any defined poverty line by economic growth and the more equal distribution of incomes." This is an important point because the fruits of economic growth are not necessarily distributed equally.

From the narrow perspective of this thesis, it does not matter whether Hobsbawn or Hartwell was correct, or whether world-system or modernisation theorists more accurately describe the consequences of globalisation. What is important is that they all implicitly accept that the economic theories of comparative advantage and division of labour account for global economic growth, but how that growth is shared both socially and geographically is a matter of struggle, determined by market forces, and social and

political constraints imposed upon the market. The specialisation of labour implied by the doctrine of comparative advantage has profound impacts on social habits, routines and customs. The struggle to obtain benefit from that specialisation also impacts social practice, as the providers of capital, labour and land compete to maximise their benefit. So bringing this back to the micro level of the individual, the laird, the tacksman, the new incoming sheep farmer, the former joint tenant of a township are all engaged in strategies which are designed to maximise their share of the enlarged economic cake, possibly leaving others worse rather than better off. This takes us back to the theory of power and resistance in relationships as discussed in section 3.2.

3.3.4 Globalisation

Economies constantly change as a result of new products, political issues impacting on market stability and confidence, and what is going on elsewhere in the world. This is a general statement, but what it means is that the comparative advantage, previously discussed, enjoyed by every economy is constantly changing, and this impacts individuals' habits, routines and practices. International trade is not new, and goes back thousands of years. Since the late medieval period, there has been a pattern of raw materials and primary products flowing into Europe and North America, and manufactured goods being sent back in trading relationships. Globalisation has now gathered even more pace, with much manufacturing now happening in China, India, Brazil and South-East Asia (Lipsey and Chrystal 2007: 9).

Globalisation, which has been with us since at least what Wallerstein has called "the long sixteenth century" (Wallerstein 2000: 71-105), and possibly long before, depends on three key enabling factors (Lipsey and Chrystal 2007: 9-11). Firstly, there must be political stability, but not necessarily democracy, for markets to function with confidence over time. For example, China dominated by war-lords could not become the manufacturing heartland of the world, but one which allowed foreign investment with confidence, post the Cultural Revolution, could and did. In the period after 1603, and especially after 1707, cattle could and were moved hundreds of miles from the Highlands of Scotland with diminishing risks of cattle being rustled (Haldane 1952: 45-67). Secondly, transport costs need to be minimised. An example might be that the cost of moving products by container ships greatly reduced the cost of moving manufactured products round the world in the later twentieth century. Equally, the possibility of moving trade goods into and out of the Highlands was greatly assisted by the construction of roads after 1801 by the

Commissioners for Highland Roads and Bridges (Haldane 1973: 31-43). Thirdly, for a market to function, knowledge of the participants in that market needs to be enabled. Information and communication technology has transformed modern markets, allowing multi-nationals to coordinate complex manufactured products around the world with components sourced from many countries. In the eighteenth and early nineteenth centuries, newspapers played a key part in informing buyers and sellers of cattle markets. Indeed the struggle between rival locations of markets was often played out by newspaper advertisements. For example, there was a dispute between Kilmichael Glassary and Dumbarton Muir regarding the intention to hold a Whitsuntide cattle market, in the pages of the Glasgow Journal in April and May 1762.

Globalisation is fast moving and alters relationships, working practices and domestic routines. My experience as a partner in a global accounting firm is illustrative of this. When I trained as a chartered accountant in the late 1970s, much effort, energy and government investment was lavished on "Silicon Glen" on the basis that the production of micro electronic equipment and components would be the future for central Scotland. My own firm serviced such household names as Motorola, Fuji and National Semi-Conductor. By the time that I became a partner, inward investment in this sector had levelled off. With the opening of new facilities in China, the Far East and Eastern Europe, production facilities began to close in ever increasing numbers. On April 24 2001, Motorola announced the closure of their mobile telephone factory at Bathgate, Scotland. I was the lead tax partner within KPMG for Motorola in Europe and planned its fiscal disengagement from the UK. It was something of an irony that among the 3,000 job loses were a number of people that I knew well. I had no illusions that their pattern of life, routines, relationships with family and place would not be profoundly changed. Road systems and landscaping had been carried out to accommodate the vast Motorola manufacturing facility. Now they needed to be altered and re-deployed, with the factory broken into more manageable sub-units, although the famous "pyramids" earth sculpture alongside the M8 still exists.

My interest in economic theory is because it gives a theoretical explanation for why change is ubiquitous, and promotes globalisation. This was as true in eighteenth century Argyllshire, Sutherland or Easter Ross as it is today. That process of globalisation needs to be navigated by individuals, and has profound implications for their routines, social relationships and day to day practice. For example, one of my cousins is an engineer like

my grand-father. He has worked for most of his career in the Far East. Global events impact individual practice. He no longer drinks tea at all.

3.4 Landscapes: change, continuity, edges and lines

3.4.1 Unity is strength

I now move from the theory which helps explain why social relationships are subject to constant change to a section which considers the theory relevant to placing those relationships not only in the landscape but, crucially, moving across the landscape.

I can describe, measure, record, survey and photograph girnals and their relationship to harbours, beaches and piers. I can walk across the hinterland of Sutherland or Cowal and do likewise for cattle stances in the hills and the linking ghostly shadows of droving tracks long abandoned. I can research their documentary and cartographic pasts. I can delve into estate archives, largely although not totally created for and by the landowner, and apply the written records which survive in relation to those structures and routeways. But is this enough to reveal their stories, how they were used and what meanings they conveyed? What were the stories of those who used them and created them, and the bigger story of how mankind and material culture interacted with each other?

By applying appropriate theory to a given physical setting, it might be possible to view landscapes in a manner which is more rewarding and meaningful (Johnson 2007:149). For example, the theory of practice applied to a survey of a stance might explain why the entrance was where it was, the social significance of such an enclosed field to a township which otherwise used open field systems, and how the stance was used, day to day and season by season.

Matthew Johnson draws a distinction between two ways of thinking about landscape in England (Johnson 2007: 193). I do not think that it is materially different in Scotland. If anything the divide might be argued to be even starker (Sharples 1996: 77-89). On the one hand, Johnson points to an academic community of postprocessual archaeologists with close links to anthropology, sociology, philosophy and human geography, who are comparative, theoretical and interested in processes, albeit less rigidly so than in New Archaeology. Looking at the same landscape is a rather larger community whose concerns are humanistic, empirical, particularistic, rooted in the locale, and with close links to history and particularly local history (Johnson 2007: 192-202). His challenge is that both

camps should avoid "disabling relativism", whereby they simply acknowledge each other's existence, but do not learn from each other, stimulate each other, and engage with the other's concerns (Johnson 2007: 202).

Johnson gives two definitions of "landscape" which might appeal, more or less, to either way of thinking. On the one hand landscape might be defined as:

The land itself, however defined; the humanly created features that exist "objectively" across space, and their natural context (Johnson 2007: 3).

This has factual overtones, and largely avoids theoretical concerns. This might be called landscape as object.

On the other hand, landscape might be defined as:

How the land is viewed – how we, and people in the past, came to apprehend and understand the landscape, and what those systems of apprehension and understanding are, the cognitive systems and the processes of perception (Johnson 2007: 4).

This is clearly a much more theory laden view, and one which invites us to think about the meanings given and received from land about us now and in the past. This might be called landscape as perception.

Instead of seeing these definitions as in some sense opposed to each other, it might be helpful to think of them as complementary, and embrace both. In this way, the strengths of the two ways of looking at the landscape can be synthesised to produce a richer whole (Johnson 2007: 1-17). Thereafter a methodology can be derived from that synthesis.

There is however, I would argue, a third component missing. This is landscape as relationship. By this I mean a landscape which is not only perceived from various perspectives, but also goes further and seeks to understand relationships in and passing through the landscape. This links directly to practice theory and could also be described as a landscape of practice.

I believe by including this component to the mix, the methodology which emerges is even more contextually rich.

3.4.2 Change and Continuity; Boundaries and Edges

Building on this nuanced multi-definitional concept of landscape, but emphasising a landscape of practice, takes me to a realisation that at the centre of this thesis is the idea of change and persistence in social relationships. By looking at habitual routines, both daily and seasonal, I apply practice theory in the belief that individuals act out and build their underlying organisational principles, world views and indeed social identities through their daily and seasonal habitual actions in the landscape (Bourdieu 1977, 1990; Giddens 1979). This touches upon and is related to cultural change and continuity, where "culture" is defined broadly as a repeatedly recurring assemblage of traits, encompassing both material culture (for example artefact or building forms) and social practices (Johnson 1999: 189). I deal with the relationships between people and their material surroundings and vice versa.

It is tempting to perceive change and continuity as comprising two different outcomes. Instead, the thesis argues that change and persistence in social relationships, as observed by archaeologists through material culture, should not be seen as binary opposites (Silliman 2005: 55-74). This is a false dichotomy. Instead it is argued that societies are in a continual adaptive process, with aspects of new practice and continuity existing at any one time (Silliman 2009: 211-232). The ever-growing intrusion of capitalism into the Scottish Highlands, for the reasons given in the economic theory section, is therefore a messy, gradual and piece-meal business. It does not begin or develop in a coherent form. Capitalism, like other cultural, economic and social formations, is always in the process of emerging, forming, and evolving. It develops and evolves from what went before, but also transforms it, changing and taking different forms in different contexts and sub-areas (Johnson 1996: 1-19).

There are problems with looking at landscape archaeology in a particular area. That area will have edges. It will have boundaries. This problem is enhanced when that physical area, as defined, has, or had, a distinct cultural heritage and language. Deetz has argued that a culturalist view should be applied to all areas, so that for example, the English recreated a sub-region of England in the Cape of South Africa (Deetz 1990: 1-2). Orser develops this view by envisaging cultural regions, sometimes in disparate parts of the world, linked by an intricate web of relationships, which might extend across oceans. Thus Jamestown, Virginia, in the early seventeenth century is part of an English cultural region (Orser 1996: 138-140). Whether considering physical regions or cultural ones, it must be recognised that, depending on one's perspective and definitions, the centre or core of one

region may be perceived as the periphery of an adjoining one (Soja 1989: 111). Neighbouring areas or regions do not just neatly abut one another. They overlap and collide. Regions have been defined as a spatial expression of relations that "exhibit recognisable areal distribution" (Marquardt and Crumley 1987: 3). These relations include both human-human and human-nature associations (Marquardt and Crumley 1987: 1-18). On the peripheries of those regions, however, they are influenced by (and influence in turn) neighbouring regions. They do not exist in isolation (Orser 1996: 139). Borders therefore must be allowed to be soft, permeable and fuzzy.

Equally borders can be formed diachronically. Silliman has argued that the sharp time barrier offered by the European colonisation of North America is unhelpful. It is too often used as a hard base-line against which change over centuries is measured. Set against unrealistically long time-frames, the landscape is apparently littered with wholesale change in social relationships and material culture, which serves to hide and obscure continuity and adaptation (Silliman 2009: 211-215). Regions can also be perceived as existing within time barriers, such as in central Mexico during the Aztec era, but have an enduring cultural footprint over time (Parsons 1990: 10-11). I am therefore as sceptical of hard diachronic boundaries as I am of sealed social and cultural borders.

Instead, my approach has been to adapt and modify pre-existing methodologies used for culture contact studies in colonial settings, but emphasising the permeability of edges and boundaries, and the long-felt transformative nature of capitalism (Sahlins 1981, Hall 1999, Lightfoot 2004, Van Dommelen 2006) and Loren 2008).

3.4.3 Moving through the landscape

Accepting that landscapes and regions have complex boundaries and edges, many of the social relationships which I study in terms of archaeology are bound up with moving through the landscape. Indeed, not just moving, but moving something, whether a herd of cattle or a cargo-load of grain. This impelled me to think about how I move across the same landscapes, and whether the wayfaring of drovers or the seafaring of folk transporting grain was in any way different. I have found myself constantly resorting to maps old and new, briefings from landowners, game-keepers, foresters and knowledgeable locals, as well as satellite technology. I have become conscious of how present-day roads guide the feet, and shape the mind, so that alternative routes disappear from ken without trace. The compilation of a data-set of all this travel forced me to break this movement into

smaller gobbets. I seemed to be either travelling or otherwise at a location, and my data-set resolved itself into recordings of either a line or a dot.

A theoretical divide has been drawn between trail-following (sometimes short-handed as wayfaring or seafaring) and pre-planned navigation across land or sea (Ingold 2007: 15-16).

In the former, a path, a route, a trail is followed that has been established in the past, and travelled with groups of people, perhaps following in the footsteps of previous generations whether linked by blood or otherwise. Knowledge is acquired and passed on. The wayfarer is constantly on the move, and becomes his or her movement. For example, travelling with the Inuit has been described as not being about just going from one point to another, but was a way of living, so that it self-defined the wayfarer (Aporta 2004: 13). It might be said that Chaucer's Pilgrims were doing just this on their way to Canterbury. They were following a well-worn route, but the journey was far more than just arriving at the shrine. Equally a seafarer who calls at a small harbour to collect a cargo is engaged in a way of life, for which this is only one stop in his life experience at sea. This is very different from the merchant who plans the voyage. For a wayfarer or seafarer, the destination is not the crucial matter; rather it is the life at sea or on the move (Ingold 2007: 77). In New Guinea, the Foi tribes-people work as well as travel along their paths through the jungle. They take accessible fruit, insects or material as they move along their trails, in a manner described as "conduits of inscribed activities" (Weiner 1991: 38).

The wayfarer and seafarer will go on travelling as long as they are able. An arrival point is just a matter of resting before moving onwards. For them, the trail or voyage is their life (Ingold 2007: 81). The Navajo of Arizona and New Mexico used place-names in sequence to tell the story of the route, and create a memorable mind map which could be passed from generation to generation. This mental picture included alternative stopping places and branches dictated by seasonal factors or natural phenomena such as drought (Kelley and Francis 2005: 85-111). The Kaluli of Papua New Guinea use intensive naming of places along their trails to create a remembrance of their inhabitation of that pathway (Feld 1996: 103). It has been argued that the knowledge that we have of our surroundings is forged in the course of moving through them and the changing horizons along the way (Ingold 2000: 227). The use of place-names is one way of recalling easily that inhabitation of the path. The inhabitant knowledge of their surroundings is sequentially integrated along the trail (Ingold 2007: 89).

In the latter case, for the navigator and the transported traveller (by contrast) every destination is a terminus (Ingold 2007: 77). They are wrapped in an incubus which seals them from the environment and landscape through which they move. In a car, a train, an aircraft, they transport the environment with which they started (Ingold 2007: 72-103). Modern ships cross the sea by navigation satellite guidance. They turn at preset map references. The relationship with tide, wind, currents and coast becomes less dominant in the way they move from Point A to Point B. When the traveller arrives at the dot, having travelled down a line, it is there that his or her activity is concentrated. For example, this might be a tourist destination, an airport terminal or a hotel (Ingold 2007: 79). One key development in permitting this functional mode of travel, the advent of map-making, has shaped the relationship of modern man with landscape (Mercer 2002: 16). The advent of the Ordnance Survey maps, for example, enabled the new hobby of hill-walking. To engage with the land, one might be encouraged to "read" the map (Hoskins 1955); although a description of what one is supposed to be seeing is often supplied in the text. Maps and surveys might be interpreted as a key tool of Improvement where surveys often lead to re-distribution of land, enclosure and control of the landscape by the landlord (Adams 1980: 167-169). Military surveys and map-making, combined with naval charts were a key enabler of imperial ambitions, and can thereby rub-out the myriad of trails below them from current knowledge (Ingold 2007: 75). Maps also became a central tool in a "Romanticist" view of landscape, for much the same reasons as William Wordsworth had climbed Lakeland fells to appreciate and interpret the landscape. They enable the reader to fly over the intended route, and gaze down onto the land (Johnson 2007: 20-21). Maps are just an artefact, an aide, on one level, but on another, they represent the separation of subject from object. The reader of the map is not in the landscape, but rather sees it from above. This is a form of Cartesian Dualism, and is at the heart, I would argue, of how modern man perceives landscape. Mind is separate from Body; People are separate from Things, including land (Darvill 2002: 69).

The way in which individual people's biographies have been associated with objects has been explored in a number of ways (Gosden and Marshall 1999: 169-178). This may be the biographies that objects acquire over time (Thomas 1991), but equally it may be that objects create and sustain meanings in people's lives. For example, Hoskins has shown this in relation the Sumba people of Indonesia (Hoskins 1998: 7), where particular objects operated as aids to self-definition, and helped to organise an individual's life story. If we take a roadway as that object, then the agency of this piece of material culture (the road) upon the traveller can be examined. Similarly a number of studies have looked at the role

of particular building types within a landscape which carry meaning for various groups of people. For example, it has been argued that English building styles had very different impacts on English immigrants and native people in colonial Australia (Burke 1999). Alternatively, church buildings in the landscape have been observed to have considerable economic, cultural and social influence on those within whose sight-lines they appear (Graves 2000). It is also a very direct projector of unequal power relations in the landscape (Johnson 2007: 133). How was the construction of the grain girnals of Easter Ross perceived by those around them?

Economic theory has itself a landscape component. For the doctrine of comparative advantage to operate, the safe movement of goods to market must be facilitated. In this context the creation of droving routes with numerous overnight stances, or the building of girnals next to safe anchorages can be perceived as conduits allowing regional, national and international markets to form. Indeed a key component of globalisation has been transport infrastructure (see Section 3.3.4 above). Material culture such as roads, or structures facilitating the passage of goods, can be argued to directly lead to changes in social relationships as a consequence.

3.5 Conclusions

The focus of this chapter has been social relationships in the landscape. I have used the theory of practice, resistance and agency to tease apart the web of such relationships. I have examined relevant economic theory to explain why those relationships, at least in the seventeenth, eighteenth and nineteenth centuries, would have been in a constant state of flux, development and re-development. I then brought those relationships into dialogue with the landscape through which they were formed and played out. There I explained why a combining of the empirical, traditionalist school of British landscape studies with modern archaeological theory can be brought together to produce a more holistic understanding of change and continuity in the landscape. However, my emphasis throughout has been on a landscape of practice. By focusing on the pathways (lines) along which people, animals and objects moved, and places of archaeological interest (dots), where they rested, as one moves through the landscape, then a methodology and research agenda can be developed with which to explore the themes of the thesis.

I set out the practicalities of how I apply the theoretical concerns discussed in this chapter, in the next chapter which deals with methodology (Chapter 4). As I then consider each

case study in turn (Chapters 5-8), theory has shaped the research undertaken. For example, in relation to Sutherland, I consider the archaeology of a small tryst and stance in the hills in relation to its position within the emergence of a national market for beef in the United Kingdom. In relation to Argyll, I consider the agency of drovers moving routes to suit new markets (Falkirk), which are eclipsing old ones (Crieff), and also taking advantage of improved roads built by the army. In relation to Easter Ross, for example, I discuss the impact of the construction of the girnals on those living around them in terms of changing their daily and seasonal habitual practices in order to serve an export trade. In each case the focus of the work undertaken has been shaped by theoretical considerations, as well as using theory to illuminate and give insight into what was actually happening on a daily, seasonal and annual basis in relation to social relationships in the landscape.

4 Methodology

4.1 Introduction: Moving down the lines; Resting at the dots

Tim Ingold (2007) has likened wayfaring through the landscape on a regular, habitual basis to moving along lines and resting at dots. My research methodology has been designed to answer questions about the changing pattern of social relationships revealed by the passage of two of the most important cash crops of the Highlands (black cattle and grain) through the landscape. They rested in stances and girnals before moving onwards towards the great markets of Lowland Scotland and England. By studying those lines and dots, and contextualising the lives and routines of those involved, it is possible to see a picture of an ever-changing matrix of social relationships emerge in the landscape.

In order to answer the research questions which I posed at the start of the thesis, I needed to develop an appropriate methodology. As work on the case-studies moved forward so the methodology developed and the research questions were refined in an iterative process. So pre-existing knowledge was shaped by field-work research, such that it then became part of the pre-knowledge for the next piece of field-work. For example, forms were drafted, and then altered. Techniques were employed and then their role and purpose were re-assessed. Case study areas were defined in advance and then altered with the experience of walking the ground. At the core of my development of a methodology was the realisation that it was a hermeneutic process (as discussed in Chapter 3.1) where "research unfolds in a kind of spiral action in which the knowledge created by one phase of enquiry becomes the pre-knowledge for the next" (Darvill 2002: 176).

Starting with the research questions, themselves refined and developed in the light of experience, I have carried out a broad review of relevant literature and an exploration of appropriate theoretical concerns in order to help me develop a research agenda, based around context, form and practice. In order to put that agenda into practice, I have sought to apply the core empirical strengths of archaeological enquiry in several case study areas, which were chosen to compare and contrast with one another. I used cartographic and archival sources, as well as local knowledge, to identify routes and sites; all of these sources also served to enrich the contextual background. My approach has been to record and survey both routes and sites using pre-prepared data collection forms. I have put this information into a bespoke data-base which can be easily interrogated. I have developed a northern case study zone with an upland component looking at a drove route in mid-

Sutherland, and then, quite separately, a case study on a series of girnals in the adjacent lowlands of Easter Ross. My southern case study zone is situated in Argyll and Bute, and also Dunbartonshire. Again, there is an upland cattle-droving case study, which centres on the study of droving routes in Cowal and west Loch Lomondside; whilst the lowland component focuses on the location of a forgotten grain girnal on Bute. The field-work chapters contain comment, interpretation and analysis on the routes and sites. This leads to a subsequent general discussion on the archaeology. Conclusions are then drawn with regards to the research questions which were posed at the start.

Thus, methodology sits at the very heart of the thesis, being driven off pre-existing knowledge and theory, modified by time in the field, and then leading to comment, analysis and conclusions. The methodology itself is centred on why and how I identified, recorded and analysed the routes and sites contained in the case-studies. I start with an explanation of why the case study areas were selected, and then discuss how the routes and sites within the case study areas were identified in detail, with reference to source material. I then consider the recording of the information, including some practical considerations, before explaining the research agenda which I used to analyse the recorded information.

4.2 Identifying the case study areas

4.2.1 Why were the case studies selected?

The case study routes and sites were selected to facilitate a consideration of changing social relationships in the landscape in the Highlands in the period before and through Improvement and Clearance, and test the nature and speed of that change.

My focus has been on the practice of work in relation to two key areas of economic activity for the Highland economy. These were the raising of cattle in the upland zones, and the growing of corn (principally barley and oats) in the lowland zones of the Scottish Highlands. My particular archaeological study relates to the movement of cattle and grain to market. In the case of cattle, these were driven along a myriad of droving routes, some small, some very extensive. Both stock and drovers stopped each night to rest. A series of stances developed, and these stock enclosures were usually associated with nearby accommodation for the men. In the case of grain, a series of estate grain store-houses developed near the sea. Barley and oats were brought by pannier, pack-horse or cart to these great stone edifices. There the grain was bagged, weighed and stored until moved down to the beach, bay or harbour, where it was shipped onwards.

In the time available to me I wanted to select two droving case studies and two relating to the export of grain from the Highlands. I wanted these to come from very different parts of the Highlands in terms of geography, social experience and proximity to the Lowlands in order facilitate comparisons and contrasts in the archaeology, and then unpick the reasons for this in the analysis and discussion. One case study was selected from the northern Highlands and one from the southern Highlands, in relation to both cattle and grain, for reasons outlined below.

Central Sutherland had been subject to aggressive and rapid Clearance in the early nineteenth century. This opened up the prospect of good archaeology in what had become substantially deserted areas, and also a chance to study relatively late cattle routes which were operative until the end of the first quarter of the nineteenth century. By way of contrast, Cowal and west Loch Lomondside were subject to Improvement much earlier, but still had cattle moving through them in the nineteenth century. However, the great autumn cattle sales changed from Crieff to Falkirk around 1770, and because of the situation of Loch Lomond, this gave the chance to look for routes which fell out of use in the third quarter of the eighteenth century at the latest. The area was also subject to considerable social dislocation in the mid eighteenth century as sheep farming was introduced, but this had largely fallen short of forced Clearance. It was also much closer to Lowland markets and centres of population. Good archival and cartographic evidence was available in each case, as was the opportunity to walk with the flow of cattle towards the principal markets on relatively undisturbed routes. So Sutherland and Cowal were selected to give opportunities for both contrast and comparison.

I was aware from an article by Elizabeth Beaton (1986) that a series of coastal grain girnals dating from the late seventeenth and early eighteenth centuries existed in Easter Ross. This was written from an architectural and historical perspective. It seemed to me that these buildings and their locations, indicative of a substantial grain trade, might also be linked by me to the droving of cattle from more upland parts of the Highlands, insofar as they also represented archaeological evidence of a major export trade from the Highlands. Easter Ross represents a substantial tract of arable land in the Highlands, and was adjacent to my northern droving case-study in Sutherland. The work of Robert Dodgshon (1998) had emphasised that in many parts of the Highlands, especially those with better arable land, the sale of grain was as important as the sale of black cattle for the economy. The movement of that grain was a major issue in an area with a poor network of roads. Critical to any substantial grain trade must be the collection, drying, weighing and bagging of grain

that could then be loaded onto ships, which provided the most economic mode of transport to market. I then began to think of the girnals and their environs not just as buildings, ruins or conversions but as archaeology which indicated both practice and agency. Archival work on Bute confirmed the sort of analysis that Dodgshon had found in the Western Highlands. This pointed to the importance of barley and oats in paying rentals, whether in kind or as a result of selling grain for cash. Grain provided about two thirds of the Stuart of Bute estate income from the late seventeenth until the early nineteenth centuries. Therefore I added a second case-study on grain export, which was part of the wider Argyll and southern Highlands area, and again adjacent to a droving case-study area. This enabled a comparison of similarities and differences both with an adjacent upland area in the southern Highlands, but also with another arable area (Easter Ross), which was in the northern Highlands.

By looking at the archaeology of drove roads and girnals in different parts of the Highlands, and recognising that the experience, nature and timing of Improvement was very different in those areas, the case studies were selected to make an analysis of similarities and differences possible. This could then be considered further in the light of historical, cartographic and other contextual information. This was designed to inform a discussion on change (and continuity) in social relationships in the Highlands.

4.2.2 How the case studies were identified, defined and researched: archives

In conducting this research, I wanted to link the archaeological evidence on the ground to primary sources in archives, and vice versa. If at all possible, I wanted this to be done with reference to an examination of papers which had not been used in this way before. The availability of relevant and strong archival evidence was therefore important in the selection of case studies. The papers which I found in the archives also helped to define and give a context for those case studies.

Accordingly, I went to the extensive Sutherland Estate papers held at the National Library of Scotland in Edinburgh and looked for papers relating to droving and the cattle trade, which would inform the Sutherland case study. Similarly, I looked at the newly opened Stuart Estate archive at Mount Stuart, Bute, and studied the rental books which begin in 1695. These revealed information on both cattle and grain trading, which gave a firm basis for both the Cowal droving case study, and the search for a possible grain girnal on Bute. I looked at a number of other estate papers, including those of the Fletchers of Dunans, the

Colquhouns of Luss and the Cromartie Estate, as well as primary material in local museums. I was fortunate in finding new documentary evidence which complimented the archaeological evidence, and provided a rich historical context for my work.

The thrust of this study is to consider changes in the social relationships of "the many" through archaeology. This is a very different perspective from constructing a history based on the wishes of the landowning few as contained in documents. Nevertheless in the way that archaeology can be designed to give an account of an elite structure or place, so can documentary histories be used to give a perspective on the routine, the hum-drum and the life experiences of ordinary people? In each case study I used primary evidence from papers in archives to assist and inform the work in ways which have not been done before.

A couple of examples will serve to illustrate how I used archival evidence to guide and contextualise archaeological research:

The Sutherland papers are frequently about relationships between employees of the Sutherland Estate and the business affairs of the Estate. In bundle 313/963 at the National Library of Scotland, a piece of paper, with writing on both sides, was unattached to anything else. This proved to a financial record compiled by Alexander McKay, drover and tacksman of Morness, dated 1 October 1771 (Figure 7 and Figure 8) as he moved down a droving route from upper Strath of Kildonan to Rogart and then on towards Easter Ross. This is the route which I then followed two hundred and forty years later. One side is a list of cattle and oxen taken from tenants in upper Kildonan, at an agreed valuation. These monies were to be paid to James Campbell, Factor for the Countess of Sutherland "against the terms of Martinmass next". The other side of the piece of paper makes it clear that he had received these cattle from the tenants, and obliged himself to pay cash to Campbell once the cattle have been sold at market. McKay therefore takes on the financial risk of the drove, and can keep any profit over and above the agreed prices listed. The list provides considerable social context. Nineteen tenants provide twenty three cattle and four oxen as part payment for their next rents due. Nobody would seem to be farming cattle on any scale other than subsistence. Only one of the nineteen named tenants is a woman, Janet Gordon. Six of the tenants are called Sutherland and a further four are Gunns. Overleaf from the list of tenants, the drove is joined by £21 worth of cattle (probably 14 cattle at the standard price of £1 10s for a good cow) from Captain George Sutherland. Presumably Captain Sutherland is a tacksman in his own right, with a military rank, possibly in the militia, or otherwise having retired from the regular army.

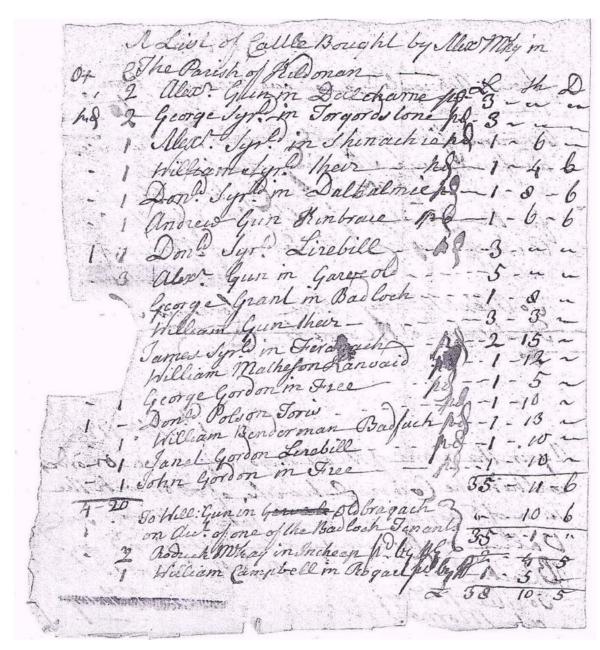


Figure 7 A drover's account of cattle bought from tenants of the Sutherland Estate in the Upper Strath of Kildonan by Alexander McKay, 1771. (National Library of Scotland Dep 313/963).

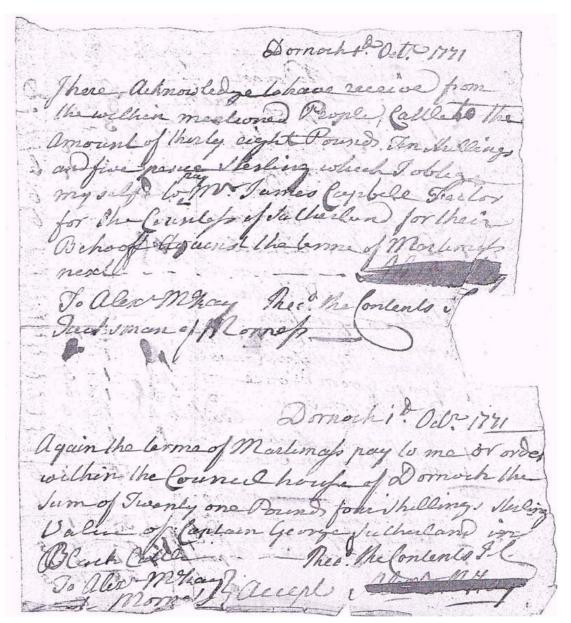


Figure 8 Reverse of drover's account, showing that Alexander McKay had received cattle from the listed tenants (see Figure 7), and would account for £38 10s 5d to be paid to James Campbell, Factor for the Sutherland Estate against rentals, plus £21 4s for black cattle received from Captain George Sutherland. (National Library of Scotland Dep 313/963)

Why is he listed differently from the tenants? Is he farming cattle as a specialist operation, or does this merely reflect his larger land holdings? The list has two properties added at the bottom, and these are on the case study drove road at Rogart and Inchcape. This strongly implies that the drove takes the road from Dalcharn in Upper Kildonan, by way of the Achamor stance in Skinsdale, and thence on to Rogart and Inchcape, and then over to Monbuie and the crossing of the Kyle of Sutherland. So there is evidence of a drove, timed to make the great trysts at Crieff or Falkirk in early October 1771 of at least four oxen and thirty seven cattle. It is led by Alexander McKay of Morness, a man of some substance who may have added his own cattle to the drove. There will likely be two or three men

helping him. This is a business venture, and he is bound to account for £59 10 5d in due course to the Factor of the Sutherland Estate. Any surplus he keeps, but anything less is a loss to him which will need to be made up, for the Factor will expect to be paid in full. The skill of keeping the cattle fit and well grazed on the drove becomes starkly evident. However, it is not all about business, for it is noted that he has agreed to drop off half a guinea to William Gunn of Oldbragach, on the way, on behalf of one of the Badloch tenants, presumably as a result of an on-going relationship. All of this context can be gleaned from one piece of paper, and relates directly to the archaeology of the Sutherland droving case-study. More particularly, it helped me to define the route that I would walk, following past various townships (all deserted now) in Upper Kildonan, the valley of the River Frithe, Skinsdale, down to Rogart, and then across the River Fleet to Inchcape and onwards to Monbuie and the crossings into Easter Ross.

Another example comes from the beautifully written late seventeenth century Stuart rent book held at Mount Stuart. All the tenants' rental obligations are carefully set out at the front of the book, township by township, with separate accounts for each joint tenancy, for each year. However, look at the rear of the book, and informal accounts appear to have been kept running throughout the year. These accounts suggest a much closer relationship between tenant and Factor than the formal record. Advances of cash and grain are made, and accounted for against regular small payments of cash, animals, grain and service rendered. This is not a situation where there is simply a formal queue of tenantry once a year when rents needed to be paid. Rather there is frequent contact, with monies being borrowed and then paid back on a widespread basis, with formal accounts being drawn up annually. The rent books informed the archaeology in a number of ways including the identification of a droving trade organised by the Estate in the mid eighteenth century. This began with the assembly of cattle outside Rothesay, in estate owned paddocks, under the supervision of drovers named in the rent books. The provision of additional fodder for these cattle before the drove commenced was allowed against the farm rentals, and the timing would suggest that these cattle were intended for the great autumn tryst at Crieff. The case study follows the route of the cattle on such a drove for part of the way, after the cattle were swum across the Kyles of Bute at Colintraive and then travelled north through Cowal before rounding the northern end of Loch Lomond at Inverarnan. The rent books also refer to the provision of sheaves of straw for re-roofing the estate girnal. Separate financial papers refer to forward grain contracts with merchants in Port Glasgow, across the Clyde, for both barley and oats. This fact points to the location of the girnal being near

a suitable harbour or beach, as in Easter Ross, with the grain being shipped out from a central storehouse.

Archives were therefore an important consideration in selecting the case studies. They have guided the archaeological research, and well as contextualising that work.

4.2.3 How the case studies were identified, defined and researched: maps

I used maps extensively to help identify my case study areas, and refine my knowledge of the routes, stances and girnals. I also applied cartographic information to consider how and why the selected routes and sites changed over time. This is not merely a question of following through the various editions of Ordnance Survey maps, but also integrating these with earlier military, estate and general maps.

Firstly, there was the evidence contained in the military mapping of Scotland during the eighteenth century. I was fortunate to have had access to an integrated catalogue for the Board of Ordnance maps and plans which are located in a number of different collections. This was compiled by Dr Carolyn Anderson as part of the work for her doctoral thesis between 2006 and 2010 (Anderson 2010), under the auspices of the National Library of Scotland and Edinburgh University. This allowed me to focus on the work in particular of two military surveyors which carried out surveys and route plans which were particularly relevant to my case study areas. William Edgar (died 1746), an Edinburgh burgess, compiled a number of maps for the Board of Ordnance, of which the ones which were relevant are "The Course of the King's Road making betwixt Dumbarton and Inverary (so as to cross no ferries) with the country circumjacent" (1745), "A new and correct map of Loch-Lomund, with the country circumjacent, being part of Dumbarton-shire, Argyll-shire and Stirling-shire" (1743) and an unfinished map "A drawn map of the district of Cowal in the shire of Argyle" (1745). These maps are in the collection of the British Library. I used Edgar's work, which was virtually contemporary with the period under review, to help select and define various routes that I wanted to follow from Cairndow, going north to Inverarnan, and also eastwards to Luss, which were part of the Cowal droving case study. William Roy (1726-1790) was responsible for the "Military Survey of Scotland" between 1747 and 1755. This was known as "the Great Map" to his contemporaries, and forms an important cartographic document, which recorded the whole of the Scottish mainland. It has had considerable influence over the development of British military mapping and the early years of the Ordnance Survey (Tabraham 2007). It is possible to consider these maps

as not just objective attempts to record the world for military purposes, but also as symbols of political power (Anderson 2009: 4-21). I used the Roy map to indicate the general line of recorded routes as well as the approximate location of settlements and townships. I did not use it beyond these general high level applications. Nevertheless it was useful in both Sutherland and Argyllshire case studies, as it is an early detailed map which pre-dates much, but by no means all, of the impact of Improvement. However I do not regard it as either exhaustive of all routes or wholly accurate on all the details shown. It has been said of the map: "without doubt, Roy's Map is one of the most intriguing and at the same time infuriating documents available to researchers into Scotland's past landscapes" (Whittington and Gibson 1986: 61). William Roy himself said, "no geometrical exactness is to be expected, the sole object in view being, to shew remarkable things, or such as constitute the great outlines of the Country" (Roy 1785: 387). It should perhaps be best regarded as a military intelligence gathering exercise, rather than a carefully measured and detailed survey (Fleet 2007: 37-41; Hodson 1987:21-31; O'Donoghue 1977; Roy 1785: 385-478; Whittington and Gibson 1986).

Secondly, the First Edition Ordnance Surveys, especially the 25 inch and 6 inch maps, were studied for all four case study areas. The Ordnance Survey 25 inch map series provided the standard topographic authority in Victorian Britain. This includes, for example, great detail on all buildings including their precise shape, fences, turf and stone dykes, streams, free standing trees, and all man made features in the landscape down to minor pits and quarries. The first series of 25 inch maps (1855-1882) is the earliest detailed mapping for Scotland and covers virtually all significant towns, villages and cultivated rural areas. It, however, comprises only just over one third of the total land area of Scotland. In particular, whilst all of Easter Ross and Bute is covered, only parts of the two droving case-study areas are so mapped. It was therefore necessary to consider the 6 inch scale, the largest available which covered all of the Scottish land area. The First Edition 6 inch series (1843 – 1882) covered the same information but in less detail. It did, however, distinguish, for example, between grassland, rough grazing, marsh and bog; had over ten symbols for types of woodland; and it did show all walls, fences and stone or turf dykes. In addition, the maps were accompanied by Name Books and also Books of Reference which include detailed land use information. Sutherland was surveyed between 1871 and 1875, with the maps published between 1878 and 1879. Argyllshire and Bute had a bigger spread being surveyed between 1863 and 1878, and with the maps being published between 1869 and 1882. I used the Ordnance Survey maps to consider the evidence for routes and sites as existed in the second half of the nineteenth century, recognising that many changes may

have occurred in the previous century. Nevertheless the detail is impressive. For example the ruined townships on the Sutherland drove route were recorded in sufficient detail for me to be able to confirm the shape of buildings and turf dykes already ruinous when recorded in the 1870s. The Name Books yielded evidence for particular buildings such as a ruined inn, Tigh Caol, associated with a cattle stance, in the Cowal droving case study. Also the changes in subsequent editions provided vital clues for what may have happened to the physical remains of sites and routes down to the present day, such as the apparent dismantling of a cattle stance adjacent to a new ducal shooting lodge at Sciberscross in Sutherland.

Thirdly, estate maps, often available in the estate archives or from the National Archives of Scotland, were invaluable sources of local evidence. They were often compiled as part of the process of Improvement, and vary hugely in detail and accuracy. Many of the eighteenth century estate plans are extremely accurate. For example, two estate plans of Bute, held in the archives at Mount Stuart, are outstanding (Foulis 1758-1759; May 1780-82). I was able to locate a possible drawing of the disappeared Bute grain girnal from the Foulis map. The Sutherland Estate map of the parishes of Loth and Golspie (1772) by John Kirk, in the National Library of Scotland, provided information on the Sutherland Estate grain girnal at Littleferry. At the other extreme are sketch maps, such as that by Patrick Sellar (1815), which shows his intention to turn the Sutherland Estate into a series of major sheep farms and move most of the inland population to the coast (Sutherland Papers, National Library of Scotland). There are, however, important and interesting implications arising from this informal sketch map. For example, the vicinity of Rogart was shown as occupied by small tenants, and was noted as not to be addressed initially for eviction of these tenants. In the event, it was never cleared of its people, and this may account for some of the dramatic difference between the landscape around Rogart and the immediate areas to north and south (all being on the Sutherland case study drove road, and reflected in my route data-base) which were cleared of their people at this time.

Lastly, I made extensive use of the map collection of the National Library of Scotland. I looked at both the collection of maps of Scotland (1560-1928) and also the collection of county maps (1750-1928). When I began the thesis, many of these maps were not yet digitised and available on the web-site. I therefore paid several visits to the Map Room of the National Library of Scotland in Edinburgh. However, by 2010, virtually all the maps were available on-line. The advantages of this are that it is possible to focus in on small details of the maps, which is particularly relevant to the level at which I am working, and

also print these with ease. In addition, I was able to make completeness checks by looking at all relevant maps in the county sections relevant to my case-studies (Argyllshire, Dunbartonshire, Sutherland, and Ross-shire). At a national level, I found a section of mapping by Timothy Pont in the late 16th century especially relevant to the Cowal case study, being the map of the area westwards from Loch Lomond to Loch Fyne, but much of the seventeenth century work of Robert Gordon of Straloch and John Adair was of insufficient detail to be of much help. This therefore applies also to the atlases of Scotland by Blaeu and Moll who drew much of their work from Adair, Gordon and Pont. From 1750 onwards, a series of land surveyors, often working for the larger landowners began to produce county or regional maps. By the end of the 18th century, surveyors like John Ainslie, George Langlands and William Crawford were making maps which showed relief, rivers, woodlands, lochs, routes and local estate boundaries. In the Sutherland case study, I found the maps of Aaron Arrowsmith (1807), John Thomson (1832) and Burnett and Scott (1855) to be particularly helpful. In Argyllshire, I found George Langlands (1801) interesting as this map pre-dated the building of new roads by Telford and the Commissioners for Highland Roads and Bridges by less than ten years, and gives an indication of earlier road alignments, which were used by drovers in Cowal.

Therefore cartographic evidence helped to identify, select and define the case study areas. It also offered information regarding both routes and sites within those case studies, including how and why they may have changed over time.

4.2.4 How the case studies were identified, defined and researched: local information

In the course of this work, I have particularly benefitted from one aspect of oral history, which is "recovery history", whereby information has been sought from a range of local people in the case study areas with relevant knowledge. The point was to recover knowledge which could not be retrieved from conventional historical sources, usually written ones (Abrams 2010: 5). I used this to locate and evaluate archaeology or physical remains which validated the memory or knowledge of the individual. It also provided a rich contextual background to the archaeology.

I have worked with several local history and archaeology groups, as well as having had the benefit of advice from many individuals. Broadly they divide into three: local history societies, estate owners, managers and workers, and interested and knowledgeable local people. However, each group overlaps with each other, sometimes in unexpected ways.

Firstly, there were two key local history societies. The Clyne Heritage Society is based in Brora, Sutherland. They are an active local society with a considerable interest in archaeology, having won awards for their excavation of the sixteenth century Brora salt works. They produce a magazine, which I have contributed to, and hope to develop a new museum in Brora in the next few years, which will feature the droving history of Sutherland. Their members were very helpful in guiding me to relevant maps and documents, as well as giving me practical advice on how to access the mid-Sutherland drove route at various points. The Strachur Local History Society is connected to the Strachur Smiddy Museum in the centre of the village. They directed me to several sites in Cowal, and introduced me to a wide range of local contacts with relevant knowledge. I have given public talks on both the business and cultural aspects of droving for the society, and found some of the resulting feed-back to have been most valuable.

Secondly, there were a number of estate managers, factors, farmers and landowners who were very helpful. This extended far beyond mere permission to walk through their land on a given day, but sometimes entailed a real engagement with the aims of the thesis from people who currently work the land. In Cowal, for example, I got help from Tom Hill, a retired stalker, in identifying a stance site in the hills associated with a former inn. In Sutherland, I was informed about the cleared Achamor township, with its cattle stance, by John McMorran, the manager of the Balnacoil Estate, as well as the routes through Skinsdale. These inputs often provided a practical insight into landscape issues, but also a sense of how the landscape was changing rapidly in reasonably short time-frames. For example, the reduction in sheep numbers has had a major impact on the ability to walk over sections of rough pasture, and this has happened in the past twenty years. In turn this has led to a tendency to seek mechanical solutions such as quad bikes and all terrain vehicles. These have a considerable impact on the fragile indications of routeways in the landscape.

Thirdly, I have received much help from knowledgeable local people. Some of these are very interested in local archaeology, as well as being extremely proficient, after many years practice in the field, and were able to guide me to several sites of interest or along former droving routes, which they themselves had recorded. For example, Dr David Dorren and Nina Henry in Cowal, have been carrying out an extensive district archaeological survey for nearly twenty years, as recorded in 'Discovery and Excavation in Scotland', and guided me to the animal enclosures in upper Glen Kinglass. Others were more interested in local history, but their knowledge led to written references which were

of great help. John Macdonald in Rogart told me about the droving account of his ancestor Major John Macdonald in 1739, published in the nineteenth century in the Transactions of the Gaelic Society of Inverness which helped to give me the line of the droving route from Rogart to Invershin via Monbuie. Both in Strachur and in Rogart I spoke to a number of people whose families had lived in the area for generations and they had inherited knowledge of droving routes and sites which were otherwise unrecorded. I was able to verify subsequently, by dint of archaeological investigation, several bits of information that were passed to me. For example I was introduced to ninety year old Jean Mackay in Little Rogart whose great uncle, Alexander Cormack, had been a drover in the nineteenth century. She told me of a droving route which by-passed the stance at Sciberscross, which on subsequent investigation appeared to have been deliberately de-constructed by the Sutherland Estate because of its near proximity to a new (1874) shooting lodge.

Information that I was not able to corroborate I have not used. I have sought to use local information in very much the same way as secondary documentary sources. That is to say with a degree of scepticism, and only after independent verification. In addition, I have sought to disregard information relating to the last phase of droving in the Victorian era, although this often overlays both physically and in local memory the earlier periods. Nevertheless, I believe that oral evidence based on local knowledge should not be disregarded simply because it is not in written form.

4.2.5 How the case studies were identified, defined and researched: secondary sources

Neither of the droving routes which I followed has been written up in books or articles. The Easter Ross girnals have been recorded in a book section by Elizabeth Beaton in 1986 (Beaton 1986), although one was omitted from that study, and others have been substantially modified and in one case demolished since then. The Bute girnal had entirely disappeared from memory before work in the Mount Stuart archives confirmed its existence, and there is no secondary literature on it.

The seminal work on cattle droving, *The Drove Roads of Scotland* by A.R.B. Haldane (1952) suggested that the main route of cattle through Sutherland, prior to the Clearances, was down the east coast, broadly following the route of the A9 today. This was augmented by a flow of cattle down the Strath of Kildonan, which joined the main droves heading south at Helmsdale. Based on extensive cartographic, and archival evidence, as well as local knowledge, I formed the view that Haldane's warning that "it was decided to show

only the main routes used by the drovers, with such subsidiary routes as appeared to be of substantial importance or interest, and no claim is made that the map is in any way exhaustive" (Haldane 1952: 4), could not be ignored. I therefore identified an inland route, about 20km inland from the coast, and running through central Sutherland, as having been of some considerable importance before the Clearances. This route dwindled in use after the Clearances which removed most of the people from the hinterland of the county. This was combined with the improvement of the coastal road (now the A9) by Telford, including bridge building (for example at Bonar Bridge) and the damming of Loch Fleet (Haldane 1973: 188-189) in the early nineteenth century. The ancient inland trackway, known as the Ca-na-Catanach (Way of the Sutherland Men) in Caithness (Glass 2009) took cattle from Caithness and the north coastal areas of Sutherland, collecting beasts all the way, until it reached the crossing into Easter Ross at the Kyle of Sutherland, near Invershin. The northern section from Thurso to Kinbrace has recently appeared as an article by David Glass, in the Caithness Field Club Journal (Glass 2009), who walked this northern section. I continued this walk from Kinbrace to Invershin, being effectively the southern section, as my case study.

Similarly, in relation to the Argyllshire case study, A.R.B.Haldane (1952) only considers the present A 82 road line from Cairndow to Loch Lomond. This was certainly used in Victorian times and follows the military road between Inverary and Dumbarton. However what was the position before this road was constructed in 1749? The archaeological, archival and map evidence suggests that there were alternative routes being followed at least up until the building of the road, and for some decades thereafter. Moreover, a booklet published in 2000 by John Mitchell which covers the droving routes of Loch Lomondside, was useful in confirming the multiplicity of routes to the west of the loch.

The National Monuments Record of Scotland (NMRS) data-base contains all the Easter Ross girnals although four are to be found under the term 'girnal' and the others under the more generic term of 'storehouse'. It does not contain any information on a grain girnal on Bute. There are very few cattle stances in the NMRS, and only one of those (at Kinbrace in upper Kildonan), in my two case studies, is in NMRS. The other ten are not. Equally neither droving route is recorded.

Overall, secondary documentary sources were of some assistance in determining the detailed location of sites and routes, but not central to the process.

4.2.6 How the case studies were identified, defined and researched: archaeology

My original intention was not to use archaeology to identify or define the case study areas. My idea was to simply to define the area or route and then go out and record the archaeology whether it was there or not. However on reflection, try as I might to reach towards some form of 'objectivity', I have to concede that the identification process was an iterative one.

Thus I was careful to record the non-existence of certain sites, such as the de-constructed stance at Sciberscross or the Bute girnal, pulled down to make way for the new harbour at Rothesay. However, in practice I did allow myself some flexibility in defining areas according to the archaeology. For example, I went much further north in Cowal than I had intended because of the blanket forestry plantings in southern Cowal. This prevented me from walking north from Colintraive as I had hoped to do. Instead I focussed on sites until I got to Cairndow. From there I was able to walk droving routes both north to Inverarnan, and east to Luss. Equally, the important set of girnals in Easter Ross drew me to this area because of the very richness of what I came to regard as archaeology rather than architecture.

So what was intended to be an objective account of a given route or area became in fact a much more flexible, iterative and subjective process. The archaeology, as well as several other factors, played a role in the identification and definitional process of selecting the case studies.

Having considered why and how the case studies were selected, I now explain how they were recorded.

4.3 Recording the case studies

4.3.1 How the case studies were recorded: recording forms and data-base

In order to create, store and then interrogate a data-set of relevant information, two recording forms were devised, and then linked to a bespoke data-base. The forms went through much iteration and were field tested on walks over the Pentland Hills, outside Edinburgh, including visits to a number of scheduled monuments in the regional park. I wanted to create the forms to standardise the information collection as I knew that I would

be collecting data over four case study areas and stretching over several years. Once the data was captured in a consistent format, I wanted to be able to manipulate and analyse that information via a data-base.

The archaeological route record sheet was created to capture consistent and relevant information, as the droving routes were followed in the same direction as the cattle moved from where they were raised to market. An example of this form is shown here.

Drove Roads Walkover Survey Archaeological Route Record Sheet	Donald Adamson Department of Archaeology University of Glasgon
Road No. DR/_ Section No Road Name	
Parish Scotways ref. NN	fRS/SMR ref
Grid references	Maps (tick all that apply)
Start WP E N	Roy Map
End WP E N Reason S / W / J	1st Edition OS
	Estate Map
Source Map / GPS	Other 🗌
Access / Directions	
Landscape Setting	
Topography	
Aspect & slope	
Vegetation	
Modern Land Use	
Description — Extent, morphology, character etc.	Sketch plan overleaf
Surface G / D / M Width 0-10 / >10	
Side Boundary	
N/S/E/C/W/O	
N/S/E/C/W/O	
Consent Impacts - Basilian humaning amilian transation at	
Current Impacts – Bracken, burrowing, erosion, truncation, etc.	
Condition Good / Fair / Poor / Eroding	
2000 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Interpretation	
Photographs Drawings D	

Figure 9 Archaeological route record sheet used during research.

The road was identified by a unique numeric reference, which represented a road walked on a particular day. This was further broken into sections. The road reference was also

used for the hand-held GPS for the given day. Reference was made to the relevant parish in which the road was located for subsequent documentary research purposes. If the route was reflected in either the Scottish Rights of Way or RCAHMS data-bases, then the relevant references were noted. The grid references for the start and end of each section were noted, and whether these were derived from a GPS or a map. The reason for ending a section was recorded. This could be because there was a change in slope, a change in width or a junction had been reached. Maps showing the route were noted, and categorised into four groups, being William Roy, 1st Edition Ordnance Survey, Estate map, or other. A note was made of access used and relevant directions. The landscape setting was noted in terms of topography, aspect and slope, vegetation cover and modern land use. The droving route was described in relation to surface, width, and nature of the boundaries on either sides of the road. Current impacts on the route were recorded. Finally, a section was devoted to preliminary interpretation and discussion.

The effect of this approach was to record the route as a linear feature, with dimensions, nature and boundaries set out in a consistent manner. I also wanted to set the route in the wider landscape and relate it to settlements and other features, including vegetation, in that landscape, because that might give a clue to relationships between those on the route and those who the route passed by. Additionally I hoped that consistent recording would give a context and possible explanation for the nature of the routeway.

The archaeological site record form was used to record sites, such as stances, on the droving routes, and also the girnals. An example of this form is shown below. Each site was given a unique numeric identifier, and also a name. In the case of the droving sites associated with linear routes, the road and section numbers adjoining each site were recorded. The RCAHMS type of site was noted, along with relevant NMRS and Highland Environmental Record references, and the relevant parish. The grid reference and the source of that grid reference were recorded on the form, as was whether the site was marked on a map and, if so, which map. The statutory status of the site, whether scheduled or listed was noted. The landscape setting was described in terms of topography, aspect and slope, vegetation and modern land use. The structure was described, including extent, morphology, character and dimensions. It was then discussed, with an initial interpretation, including an estimate of the periods of activity at the site. Condition and current impacts upon the site were described. A note was made of any photographs, sketches or plans taken at the site.

	oads Walkove logical Site Re	The same of the sa			Donald Adamson Department of Archaeology University of Glasgon
Site No. Road No.			Sec	tion No. (End)	
RCAHMS	'type of site'	*****	NMRS N	0	SMR No
Site Type	************		Parish:		
Grid Ref.	N_	E N .		Source Map /	GPS
Marked on	map Yes / No	Scheduled Yes /	No	Listed Yes / N	No
Aspect & Vege Desci	graphy				
	on – Extent, morpho				Sketch plan overleaf
Current Ir	mpacts – Bracken,	burrowing, erosion, truncation,	etc.	D	ate (tick all that apply) Pre-Improvement □
Condition	Good / Fair / Poor	/ Eroding			Post-Improvement Modern/contemporary Unknown
	ation				
Interpreta					

Figure 10 Archaeological site record form used during research.

I was particularly concerned with 'form' of the sites as I wanted to make comparisons not only within the case study area, but also between case studies. For example, did the girnals have common architectural features? Were stances in use later more regular in shape? If so, why might that be? I also wanted to place the site in the context of the landscape in which it was situated whether this was on a coast or near a settlement or alone in a glen, and again be able to easily compare or contrast examples of location in order to test possible explanations. The intention was also to be able to easily access background

information pertinent to the site through the medium of the form, such as NMRS information or references to illustrations or photographs.

A bespoke data-base was constructed for me by CRISP, an IT consultancy, specialising in archaeology, which used Microsoft Access. A copy of this data-base is attached on a disc and forms an appendix of this thesis. Examples of the data-base output pages are shown below (Figure 11 and Figure 12). It can be interrogated. The data-base has fields which match the input sections on the manual forms. This was because the data-base was constructed after the forms were designed, and deliberately designed to facilitate easy data lift from one to the other. Accordingly manipulation of the captured data was facilitated, and the data-base could be easily interrogated as required. The information recorded in the manual forms was input into the data-base, within a short time of the actual work. I had actually contemplated taking a lap-top with me, and doing direct input in the field. However this turned out not to be practical, due to a combination of Scottish weather (and midges), the poor state of much of the routes walked, my physical condition (usually very tired, and not able to add to the weight carried), and the time frame for walking 15km or more over rough moors in one day. The intention of the data base is to facilitate data retrieval on topics which invite comparison or contrast. For example, how many girnals are associated with a harbour or beach? Alternatively, how many routes have a turf dyke as a boundary on one or both sides? Analysis and comment are made more effective by an easy ability to retrieve relevant information from the mass of data recorded.

SITE IDENTIFICATION	
Site No. 105	Site Name Kinbrace Farm Route No. DR001/01 Section No. at start 0 Section No.
RCAHMS Site Type	Stock Enclosure NMRS Ref. 72589 SMR Ref. Site Type Stance
Grid Reference:	Map Sheet No.: NC Easting 8656 Northing 2868 Source: Marked on Map Scheduled Listed
LANDSCAPE	
Access/Directions	On east bank of Helmsdale River, just south of a burn entering the river, 850m west of the modern Kinbrace farm, and about
Topography	In river valley
Aspect/Slope	Flattish land by side of river
Vegetation	Grassland
Description	Upper valley of Helmsdale River
Modern Land Use	Grazing land for sheep or cattle
DESCRIPTION	
Description of Site	This is a rectangular enclosure on the east bank of Helmsdale River. It is 70m (nw-se) by 35m (ne-sw). There are two compartments being 40m x 35m; and 30m x 35m. Banks are max 0.75m high by 2.5m in thickness.
Current Impacts	Condition Fair
Current Impacts	
Current Impacts Interpretation	A pre-Clearance cattle stance, which gathered cattle from Strath Naver, Strath Halladale and Caithness. Probably used by post-droves until railway extended in the 1880s
	A pre-Clearance cattle stance, which gathered cattle from Strath Naver, Strath Halladale and Caithness. Probably used by post-
	A pre-Clearance cattle stance, which gathered cattle from Strath Naver, Strath Halladale and Caithness. Probably used by post-droves until railway extended in the 1880s
	A pre-Clearance cattle stance, which gathered cattle from Strath Naver, Strath Halladale and Caithness. Probably used by post-droves until railway extended in the 1880s
	A pre-Clearance cattle stance, which gathered cattle from Strath Naver, Strath Halladale and Caithness. Probably used by post-droves until railway extended in the 1880s
Interpretation	A pre-Clearance cattle stance, which gathered cattle from Strath Naver, Strath Halladale and Caithness. Probably used by post-droves until railway extended in the 1880s
Interpretation	A pre-Clearance cattle stance, which gathered cattle from Strath Naver, Strath Halladale and Caithness. Probably used by post-droves until railway extended in the 1880s
Interpretation	A pre-Clearance cattle stance, which gathered cattle from Strath Naver, Strath Halladale and Caithness. Probably used by post-droves until railway extended in the 1880s
Interpretation	A pre-Clearance cattle stance, which gathered cattle from Strath Naver, Strath Halladale and Caithness. Probably used by post-droves until railway extended in the 1880s Photograph Drawing Date Entered ###################################
Interpretation SITE IDENTIFICATION Site No. 115	A pre-Clearance cattle stance, which gathered cattle from Strath Naver, Strath Halladale and Caithness. Probably used by post-drives until railway extended in the 1880's Photograph Drawing Date Entered ###################################
Interpretation SITE IDENTIFICATION Site No. 115 RCAHMS Site Type	A pre-Clearance cattle stance, which gathered cattle from Strath Naver, Strath Halladale and Caithness. Probably used by post-drives until railway extended in the 1880's Photograph Date Entered ##################################
Interpretation SITE IDENTIFICATION Site No. 115 RCAHMS Site Type	A pre-Clearance cattle stance, which gathered cattle from Strath Naver, Strath Halladale and Caithness. Probably used by post-drives until railway extended in the 1880's Photograph Date Entered ##################################
SITE IDENTIFICATION Site No. 115 RCAHMS Site Type Grid Reference;	A pre-Clearance cattle stance, which gathered cattle from Strath Naver, Strath Halladale and Caithness. Probably used by post-drives until railway extended in the 1880's Photograph Date Entered ##################################
SITE IDENTIFICATION Site No. 115 RCAHMS Site Type Grid Reference;	A pre-Clearance cattle stance, which gathered cattle from Strath Naver, Strath Halladale and Caithness. Probably used by post-drives until railway extended in the 1880's Photograph Date Entered ##################################
SITE IDENTIFICATION Site No. 11S RCAHMS Site Type Grid Reference:	A pre-Clearance cattle stance, which gathered cattle from Strath Naver, Strath Halladale and Caithness. Probably used by post-droves until railway extended in the 1880's Photograph Drawing Date Entered ############ Date Recorded Site Name Achamor Route No. DR002/01 Section No. at start 2 Section No. NMRS Ref. SMR Ref. Site Type Stance Map Sheet No.: NC Easting 781 Northing 227 Source: Map Marked on Map Scheduled Listed Listed
SITE IDENTIFICATION Site No. 11S RCAHMS Site Type Grid Reference: LANDSCAPE Access/Directions	A pre-Clearance cattle stance, which gathered cattle from Strath Naver, Strath Halladale and Caithness. Probably used by post-droves until railway extended in the 1880s Photograph Drawing Date Entered ############ Date Recorded Site Name Achamor Route No. DR002/01 Section No. at start 2 Section No. NMRS Ref. SMR Ref. Site Type Stance Map Sheet No.: NC Easting 781 Northing 227 Source: Map Marked on Map Scheduled Listed Achamor is a cleared township at the upper (northern) end of Strath Skinsdale. It has a stance on its western side.
SITE IDENTIFICATION Site No. 11S RCAHMS Site Type Grid Reference: LANDSCAPE Access/Directions Topography	A pre-Clearance cattle stance, which gathered cattle from Strath Naver, Strath Halladale and Caithness. Probably used by post-drives until railway extended in the 1880k Photograph Drawing Date Entered ############ Date Recorded Site Name Achamor Route No. DR002/01 Section No. at start 2 Section No. NMRS Ref. SMR Ref. Site Type Stance Map Sheet No.: NC Easting 781 Northing 227 Source: Map Marked on Map Scheduled Listed Achamor is a cleared township at the upper (northern) end of Strath Skinsdale. It has a stance on its western side. The upper part of Skinsdale is a shallow north-south valley with lateral burns entering from both west and east.

Figure 11 Database entry for archaeological site record.

Road Number DR	001/01 Section	1 No. 1	Road Name	nbrace to	Alltandu Parish	Kildonan	Scotways Ref	.: [
Start WP	Ε [8	365 N	287 R	teason for en	d Slope	Roy M	an 1st Edition	Map [
End WP				ource Ma	1	Estate M	044	Map
						Estate M	шр	
LANDSCAPE				in the second			May 1	
Access/Directions	Moving up-slope	from Helmsdale R	iver to south	of crest of C	noc Dail-Chairn; st	tarting from river b	ank oppositie cattle	stance o
Topography	Western side of	river valley of Heli	msdale River					
Aspect/Slope	North-east faci	ng slope gentle						
Vegetation	Heather, rough	grass on peaty soil	and boulders	S				
Modern Land Use	New saplings pl	anted 2009 being	turned into	woodland fro	m rough shooting			
DESCRIPTION								
Surface	Grassed	Road Width	0-10	Side	Boundary Type	Other Descrip	tion	ME
				n	None			
Description of Route				S	None			
Current Impacts Interpretation	Visible as a chan Dail-Charn's north	n-eastern flank.	ing (opposite	stance at Kin	brace farm on eas	at side of river), and	then westwards up a	
Vide III except	Visible as a chan	nel from river crossi n-eastern flank.		stance at Kin			then westwards up a	nd acros
WASHING STORY	Visible as a chan Dail-Charn's north	nel from river crossi n-eastern flank.	ing (opposite	stance at Kin	brace farm on eas		then westwards up a	nd acros
WASHING STORY	Visible as a chan Dail-Charn's north	nel from river crossi n-eastern flank.	ing (opposite	stance at Kin	brace farm on eas		then westwards up a	nd acros
WASHING STORY	Visible as a chan Dail-Charn's north	nel from river crossi n-eastern flank.	ing (opposite	stance at Kin	brace farm on eas		then westwards up a	nd acros
WASHING STORY	Visible as a chan Dail-Charn's north	nel from river crossi n-eastern flank.	ing (opposite	stance at Kin	brace farm on eas		then westwards up a	nd acros
WASHING STORY	Visible as a chan Dail-Charn's north	nel from river crossi n-eastern flank.	ing (opposite	stance at Kin	brace farm on eas		then westwards up a	nd acros
Interpretation	Visible as a chan Dail-Charn's north	nel from river crossi n-eastern flank.	ing (opposite	stance at Kin	brace farm on eas		then westwards up a	nd acros
Interpretation SITE IDENTIFICATION	Visible as a chan Dail-Charn's nortl Photograph	nel from river crossi n-eastern flank.	ing (opposite	stance at Kin	brace farm on eas	28 October 2010	then westwards up a	nd acros
Interpretation SITE IDENTIFICATION Road Number DR	Visible as a chan Dall-Charn's north Photograph 001/02 Section	nel from river crossin-eastern flank. Dra n No.	ing (opposite awings	stance at Kin Di	brace farm on eas	28 October 2010 Kildonan	Date Entered Scotways Ref	nd acros
SITE IDENTIFICATION Road Number DR Start WP	Visible as a chan Dail-Charn's north Photograph 201/02 Section	nel from river crossin-eastern flank. Dra No. 2	Road Name	nbrace to	Alltandu Parish	28 October 2010 Kildonan Roy M.	Scotways Ref	27 J
Interpretation SITE IDENTIFICATION Road Number DR	Visible as a chan Dail-Charn's north Photograph 201/02 Section	nel from river crossin-eastern flank. Dra No. 2	Road Name	stance at Kin Di	Alltandu Parish	28 October 2010 Kildonan	Scotways Ref	27 J
SITE IDENTIFICATION Road Number DR Start WP End WP	Visible as a chan Dail-Charn's north Photograph 201/02 Section	nel from river crossin-eastern flank. Dra No. 2	Road Name	nbrace to	Alltandu Parish	28 October 2010 Kildonan Roy M.	Scotways Ref	27 J
SITE IDENTIFICATION Road Number DR Start WP	Visible as a chan Dail-Charn's north Photograph 2001/02 Section E E E	nel from river crossin-eastern flank. Dra No. 2	Road Name 278 R 276 S	nbrace to teason for en	Alltandu Parish d Slope	28 October 2010 Kildonan Roy M.	Scotways Ref	27 J
Interpretation SITE IDENTIFICATION Road Number DR Start WP End WP LANDSCAPE	Visible as a chan Dail-Cham's north Photograph 001/02 Section E	nel from river crossin-eastern flank. Dra No. 2 S58 N S337 N S	Road Name 278 R 276 S	nbrace to teason for en	Alltandu Parish d Slope	28 October 2010 Kildonan Roy M.	Scotways Ref	27 J
Interpretation SITE IDENTIFICATION Road Number DR Start WP End WP LANDSCAPE Access/Directions	Visible as a chan Dail-Cham's north Photograph 001/02 Section E	nel from river crossin-eastern flank. Dra No. 2 S58 N S37 N S37 Dependent of hill	Road Name 278 R 276 S	nbrace to teason for en	Alltandu Parish d Slope	28 October 2010 Kildonan Roy M.	Scotways Ref	27 J
SITE IDENTIFICATION Road Number DR Start WP End WP LANDSCAPE Access/Directions Topography	Visible as a chan Dail-Cham's north Photograph O01/02 Section E	nel from river crossin-eastern flank. S Draw No. 2 SSB N	Road Name 278 R 276 S	nbrace to teason for en	Alltandu Parish d Slope	28 October 2010 Kildonan Roy M.	Scotways Ref	27 J
Interpretation SITE IDENTIFICATION Road Number DR Start WP End WP LANDSCAPE Access/Directions Topography Aspect/Slope	Visible as a chan Dall-Charn's north Photograph O01/02 Section E E E Moving down sla South and west South-west faci	nel from river crossin-eastern flank. In No. 2 S58 N S337 N Sope on South-Wester facing side of hill ang down slope upg grass	Road Name 278 R 276 S	nbrace to teason for en	Alltandu Parish d Slope	28 October 2010 Kildonan Roy M.	Scotways Ref	27 J

Figure 12 Database entry for archaeological route record.

4.3.2 How the case studies were recorded: GPS and GIS technology

GPS was used via a hand-held Garmin set. This enabled the position of sites to be recorded accurately and checked against map references. It also enabled readings to be taken on the move, which is helpful when walking along a lengthy linear feature.

I had contemplated using the GPS "tracks" facility, which can then be imported into a GIS system such as ArcGis. This allows an exact record of the route, speed, elevation and distance covered to be plotted on a map. This can then be shown as a 3D route journey through the landscape, showing ascents and descents of the route, with these quantified, together with sight lines as the route progresses. In the event, I found that this was much more easily and accurately achieved by using the commercially available "Memory-Map" software, which uses Ordnance Survey software. Routes followed were entered onto the maps, and some of the outputs used to illustrate the field-work chapters, as well as producing statistics on the routes followed. This produced accurate information on the elevation of the routes over defined distances, and thus the efficiency of the route from the perspective of energy expended. Comparison between routes and possible alternatives was therefore made possible.

4.3.3 How the case studies were recorded: the practical bit

The droving route case studies both comprised lengthy walks taking a number of days travel over rough terrain. The ground has deteriorated even in the past twenty years with the wholesale removal of sheep from the hills after the ending of subsidies, and in addition the routes have not been regularly followed in most cases for over two hundred years. The result is often a very slight groove or depression through clumps of heather and rough grass, which is extremely tiring to walk any distance across. Each route was broken into sections by stances at regular intervals. I found that taking into account the poor terrain and the need to record as I went, a maximum of fifteen to twenty kilometres a day was all that I was capable of. Happily this often matched the daily droving distance of the herds. However, it was often necessary for practical reasons to finish one section and then re-start it some time later and this meant planning carefully access to the walk and also the availability of transport at either end. Only on one occasion did I camp over night (in the old stance at Achamor in Skinsdale which is about fifteen kilometres from the nearest public road and ten kilometres from the nearest estate tracks). In all cases I sought permission from the estates through which I walked.

Health and safety considerations dictated that I recorded the droving route with a companion in case of accident, although happily nothing major did occur. I managed to survive falling into a bog, wading rivers in spate, navigating some rickety 'bridges' and tumbling into a hole hidden by bracken. Surveying the sites was helped by having a second person, where I used two poles and a 50m surveying tape. It was also helpful in recording

the route sections, where discussion is important to ensure consistent application of definitions, and in taking photographs.

The grain girnals presented a rather different challenge, as many have been converted into dwellings. However, I found the occupants to be unfailingly helpful when I explained what I was doing. Measurements of both the structures and also their proximity to the sea were taken.

4.4 Analysing the information recorded in the case studies

I started my work with some ideas on how I wanted to address my research questions. Over time this evolved into a research agenda. Why develop a research agenda? A significant influence on me from the outset has been Matthew Johnson and his call for an approach to landscape study in post-medieval Britain where "both the archaeological and historical 'records' emerge as products and mediators of social action, rather than as 'evidence' about a past to be "reconstructed" (Johnson 2007: 152). My intention was to develop an approach based on context, form and agency (Johnson 2007: 149-161), although I have slightly widened this approach in practice.

What do I mean by these terms and how do they knit together into an agenda?

The archaeological context for droving routes and their associated structures, and the building of estate girnals for grain, is the wholescale change in the Highland landscape from before the seventeenth century until after the nineteenth century. What I am interested in is "the everyday realities of social life in the landscape" (Johnson 2007: 150). Firstly, I have sought an understanding of my case-study areas at a period when joint-tenancy farming townships dominated the landscape. Then I have sought to understand the nature of changes that were brought to patterns of life as specialisation in cattle rearing and grain production in different parts of the Highlands took a grip. This then led to the seismic shift in every day life as sheep farms were introduced, especially in the upland areas of the Highlands, accompanied by a substantial clearance of people, and arable farms continued to improve their production techniques and operated with fewer and fewer farm workers. Selecting appropriate case-study areas, I consider whether this specialisation, and then dramatic disruption, happened at different times and in different ways in various parts of the Highlands by analysing the evidence from droving routes and sites, as well as grain girnals.

The form and physical attributes of droving or grain related structures are important in deriving a full account of the archaeology. Lots of questions arise. For example, why are some cattle stances much more rectilinear than others? Do they change over time or are they regionally located? Might they have more than one purpose? Why have some got bothies attached? Why do some stances use natural features in their design, and what does this imply? What does the form of a stance say about the relationships which are constituted around and in them? In addition, I consider the form of existing girnals and their characteristics. What does this say about their manner of use and the relationships built around and within them? Can a use of 'form' be used to locate girnals which other evidence suggests once existed but are now no longer apparent?

Agency (but also Practice and Resistance) theory has helped in analysing the recorded information. For example, the manuring of cattle dung on township lands appears to be related to the distinctive patches of improved grassland (known colloquially as "The Greens") in Highland landscapes and reflects the agency of man. The nature of the vegetation in cattle stances was recorded to facilitate this discussion. In another example, in relation to turf dykes, my recording of routes helped me to focus on the everyday movement through and across the landscape. I was interested in both the daily, seasonal, annual routines played out in the landscape. Archaeological evidence was marshalled by recording the turf dykes which were created to keep cattle from moving over open arable field systems. Hollowed out routeways beyond those boundaries might indicate the seasonal passage of cattle, as they made their way from the townships where they were bred to markets where they were sold. The evidence of these extra-mural routes was recorded and entered into the data-base for analysis and comment. A further example might be the case of the late nineteenth century ducal shooting lodge at Sciberscross which was built close to a much earlier cattle stance in Sutherland (see Chapter 5). The stance was deconstructed, on orders from the Factor, but the skeleton of the dykes were left in the ground in the form of great boulders. The former roadway around the stance was etched in a hollow on the outside of the dyke, in what becomes a horse paddock. It was not wholly expunged from the landscape. Did this deliberate leaving of the remains of the stance in place indicate a form of passive resistance?

4.5 A methodological conclusion

In this chapter I have focussed on explaining the why and how of three things. Firstly, I set out why and how the case studies were selected. In particular I have explained why the

four case studies were selected, as well as how archives, maps, local information, secondary sources and archaeology were used to identify, define and research the detailed routes and sites of each case study. Secondly, I explain why and how the information was recorded in the way that it was. Thirdly, I give a brief explanation of how and why the information was analysed using a research agenda.

Having previously set out the research context, literature and theory which I regard as relevant to answering my research questions, I now go on to apply that methodology and theory to four separate case studies. Two are devoted to the archaeology of cattle droving and two to the archaeology of grain export from the Scottish Highlands.

5 Fieldwork on a droving route in central Sutherland

5.1 Introduction

5.1.1 The coastal droving route through Sutherland

Chapter 6 of Haldane's book The Drove Roads of Scotland (1952) is entitled "The Drove Road from the North". Haldane begins his account with a description of the droving trade starting out from Caithness, and although giving some negative evidence as to the hardiness of Caithness cattle when it came to droving, nevertheless cites several sources indicating that between two and three thousand cattle were driven south each year from Caithness in the eighteenth century (Haldane 1952: 103-104). He assumes that the cattle were driven by the east coast route which is today followed by the A9 trunk road. He says "as the stream of cattle from the far north moved down the East Coast by Helmsdale and Brora, it was augmented by droves coming from Strath Naver and Strath Halladale and the glens immediately to the westward and by other cattle driven across the hills from the north-west coast" (Haldane 1952: 104). The accompanying map bears this out with a route starting at Georgemas, just south of Thurso, which follows the line of the present A9 past Helmsdale and Brora, and then swinging west of Loch Fleet before heading for Clashmore, inland of Dornoch. From there, the route runs, per the map, west along the north shore of the Dornoch Firth with crossings at Creich and Bonar Bridge. It is joined at Helmsdale by a route from Strath Halladale, which runs south down the Strath of Kildonan (Figure 13).



Figure 13 A.R.B. Haldane's map of main droving routes in Northern Highlands of Scotland. Map showing main droving routes in Caithness and Sutherland. Note particularly the routes from the far north using the line of the present A9 from Thurso to Bonar Bridge, joined at Helmsdale by a route down the Strath of Kildonan (Haldane 1952).

5.1.2 An alternative route south?

In addition to this route, local tradition, in Rogart, combined with map and archaeological evidence would suggest that a central route through Sutherland was much used as a major droving route southwards for livestock. The advantage of taking Sutherland as a case study area is that the interior was substantially cleared of people in the twenty years after 1800, and turned over to huge sheep farms. As such, the drove roads which ran through the county are exceptionally well preserved. This is especially the case as the tradition of long distance droving lasted until the advent of a railway through the county in the late nineteenth century, albeit that this moved from droving cattle to droving sheep after the Clearances. More than that, an unintended consequence of the removal of the people was that relatively few modern roads were required, and that pre-existing drove roads and their related structures were not as frequently destroyed by development as elsewhere.

This droving route goes from the north of Sutherland and Caithness through the county to a crossing point into Easter Ross at Invershin (Port-na-Lice). This route has been walked and recorded for a distance of about 75 kilometres. It drew cattle from Caithness via the Ca-na-Catanach (Glass 2009), from Strath Halladale and from Strathnaver (Figure 14).



Figure 14 Kinbrace to Port-na-Lice. The route (direction shown in red) leaves the Strath of Kildonan at Kinbrace and moves south west to the Kyle of Sutherland at Port-na-Lice. Cattle were brought down to the route from the north coast via Strath Naver, Strath Halladale and from Caithness via Ca-na-Catanach (directions shown in black).

These roads converge on a substantial cattle stance, west of Kinbrace Farm, the former site of the old Kinbrace township, in the upper Strath of Kildonan, one of the very few stances to be recorded in the records of the National Monuments Record of Scotland (NMRS). From there it went south of Cnoc Dail-Charn to Feranach and on to Altanduin and Brenachoille, before crossing into Skinsdale, and making for another substantial stance at Achamor. The drove road then continues south to Sciberscross and then Muie to the west of Rogart. It is likely that there were stances at both Sciberscross and in the Muie district, possibly at Bad Leathan. From Muie, it continues south to the stance and tryst (market) site at Monbuie, which is about 15 kilometres south. The site is in the hills, just above the crossing point of the Kyle of Sutherland at Port-na-Lice, where evidence of a small jetty remains (Figure 15).

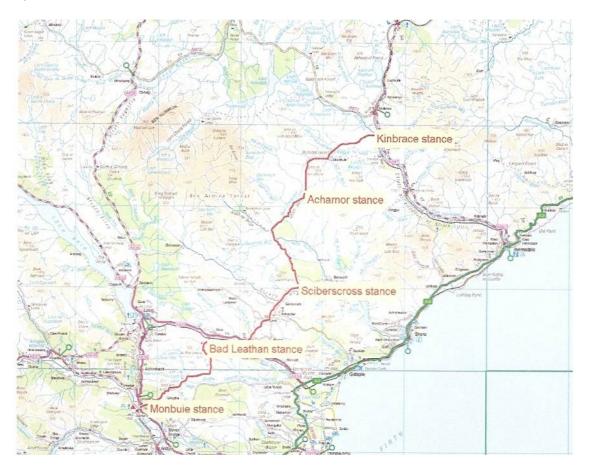


Figure 15 Kinbrace to Port-na-Lech in detail. This section of droving route encompasses five stance sites as shown (Ordnance Survey).

The drove road is very obvious in places but becomes indistinct in others. It is typically between 5 and 10 m wide. It adopts a route designed to avoid either steep ascents or descents, which characterise the coastal route. Considerable care is taken to avoid areas of arable cultivation, including the positioning of the stances and the appropriate use of turf dykes. It would further appear that the present road network was substantially realigned with the building of the bridge at Bonar Bridge in 1812, and the construction of the Mound across Loch Fleet in 1816. This had the effect of making the inland route less relevant, just at the point that people were being cleared from the hinterland, and the cattle trade was coming to an end. Consequently, the route has been little disturbed over the past two hundred years, as traffic between Easter Ross and Caithness shifted to the coastal road, now the A9. It seems likely, from oral history, that the route continued to be used for sheep droving until after 1870 when the Sutherland railway began to take away the need for the long distance droving of animals.

5.2 Fieldwork: following the drove road through central Sutherland

5.2.1 The stance at Kinbrace (NC 2866 9287)

The stance is recorded as a stock enclosure in the National Monuments Record of Scotland (NMRS). The rectangular enclosure lies at the upper (north) end of the Strath of Kildonan. It is on the east bank of the Helmsdale River, just south of a small tributary burn, 850m west of the modern Kinbrace farm, and 350m north of where the Kinbrace Burn enters the Helmsdale River. It occupies flattish land by the side of the river, and today forms good grassland, being grazed by sheep and cattle. It is noticeably better grassland and much greener than the surrounding land (Figure 16), and as such stands out in the landscape.



Figure 16 The stance at Kinbrace in the Strath of Kildonan. This photograph looks northwards from whence cattle came from Strath Halladale and Caithness (via the Ca-na-Catanach). Cattle from Strath Naver would arrive from the north-west, following the River Helmsdale (from left of photograph).

This is a roughly rectangular enclosure on the east bank of the river, with turf dykes on all sides. It is maximum 70m (nw/se) by 35m (sw/ne), tapering to a width of 20m at the south-

east end, being divided into two compartments which are approximately 30m by 35m, and 40m by 35m (tapering to 20m at south-east end). The dykes are a maximum of 0.75m in height by 2.5m in width. Entrances to the compartments are on the north-east side, away from the river, being approximately 2m in width (Figure 17).



Figure 17 Measured sketch map of stance at Kinbrace. This sketch map shows the details of the two compartment stance near Kinbrace Farm, adjacent to the River Helmsdale.

The Roy Map (1747-1755) of upper Strath of Kildonan (Figure 18) shows the settlement of Kinbrace (Karnvraig). It stands where Kinbrace Farm is today. In other words the stance was in all probability about 1 km away from the nearest dwellings, and situated by the river at a point that it could be forded. This suggests that the primary rationale for the situation of the stance was as a gathering point for the three routes coming south, rather than proximity to the township. This might also indicate that the stance was for beasts travelling on the long distance route rather than animals owned by the township of Kinbrace. It is notable that the stance is on the northern bank of the river, rather than on the south bank which would have been adjacent to the township of Dalcharn. It would not be sensible to cross a significant river at the end of a day's droving, but much more prudent to rest them overnight and cross the next morning. In addition, the two entrances are on the

northern side (away from the river). The predominant direction of flow of cattle was southwards, as they moved towards markets, starting from where they were bred on the north coast or in Caithness. The stance is well positioned to keep the animals away from any open field systems around the township. At the same time, it is close to a source of water which is important for cattle having walked long distances. There is no evidence of a bothy or bunkhouse, so it may be that the drovers took shelter with the people of Kinbrace. Assuming no night herdsmen, it would imply a confidence in the peaceful and settled nature of the neighbourhood, where theft was not anticipated. The double compartment nature of the stance would allow for two droves to use the stance at the same time, or alternatively for sorting of the cattle herd to take place. The form of the stance is quite rectilinear in shape, well shaped to fit into the flat land by the river and indicates a degree of planning.

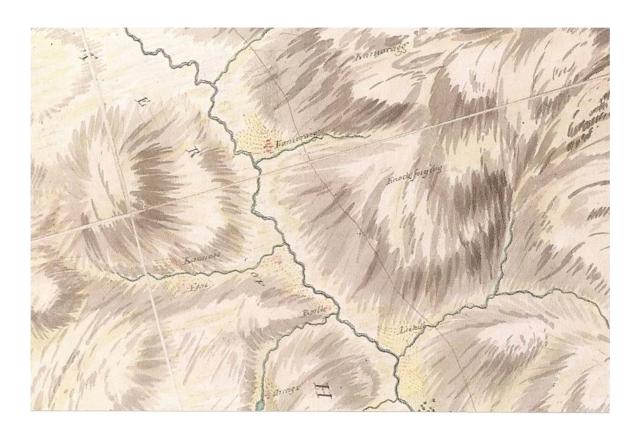


Figure 18 Roy Map 1747-55 of upper Strath of Kildonan. Kinbrace is shown as "Karnvraig". A route runs through the strath, but there are no tracks shown west of the Helmsdale River. (By permission of the British Library).

5.2.2 The route from Kinbrace to Achamor

This route is shown on a series of early, detailed maps of Sutherland, starting with Aaron Arrowsmith 1807 (Figure 19), Hebert 1823 (Figure 20), Thomson 1832 (Figure 21),

Carrington 1846 (Figure 22) and ending with John Arrowsmith 1875 (Figure 23). It is not present, as a route, on the Roy map (1747-1755), but there is a route shown going down the Strath of Kildonan. Both Kinbrace (Karnvraig), which is on that route and Achamor (Achomore) are shown as townships with associated arable land in strips (Figure 24) by Roy. The Blaeu Atlas (1654) has no settlement or routes in this area of Sutherland, but only hills and lochs.



Figure 19 Map by Aaron Arrowsmith 1807. Map shows joining of routes from Strath Naver and Strath Halladale north of Kinbrace (Kinbress), and route into Skinsdale. (By permission of the National Library of Scotland).

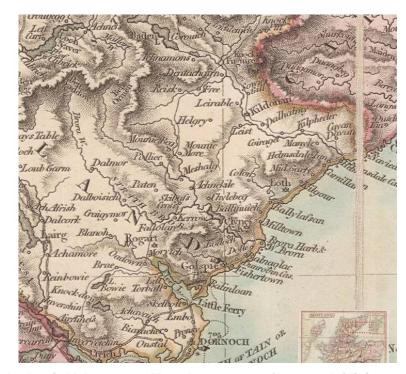


Figure 20 Map by Lewis Hebert 1823. Map shows routes from north joining east of River Helmsdale (Kinbrace unmarked. Route runs north of Dalcharn (Dentachairn) after crossing the Helmsdale River and thence into Skinsdale. (By permission of the National Library of Scotland)

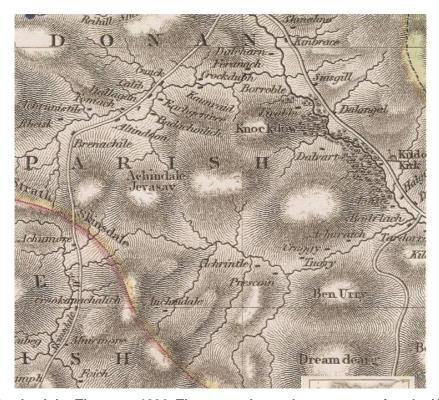


Figure 21 Map by John Thomson 1832. The maps shows the route crossing the Helmsdale River, north of Kinbrace, and passing over Dalcharn Hill to Alltanduin (Altindoon), and thence to Achamor (Achumor) in Skinsdale. (By permission of the National Library of Scotland)

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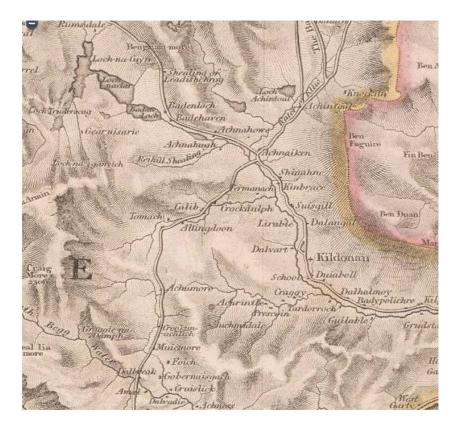


Figure 22 Map by Frederick Charington 1846. Map showing the route from the stance at Kinbrace, which is north of Kinbrace township, to Achamor (Achumore). (By permission of the National Library of Scotland)



Figure 23 Map by John Arrowsmith 1875. Map showing the Skinsdale route, even after the introduction of the railways to the county of Sutherland in 1870 (railway shown as black and white line). (By permission of the National Library of Scotland)

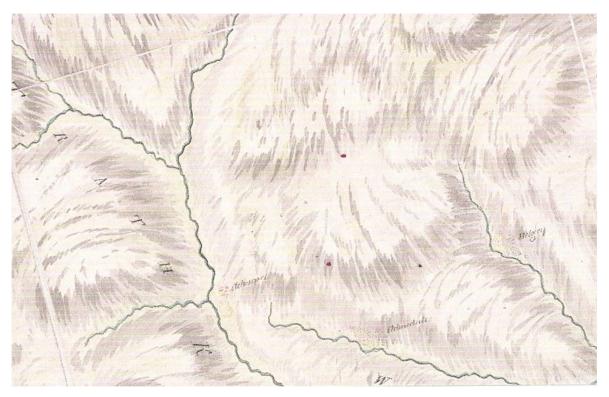


Figure 24 Roy Map 1747-55 of Skinsdale. Map showing settlement of "Achomore" (Achamor) in Skinsdale. No route through the glen is marked on the map. (By permission of the British Library)

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Some of the townships on the route are recorded in an inconsistent manner and with spellings often dramatically different. These are often rendered in a phonetic form. For example, the Thomson map of 1832 uses the place-name of Kaunvaid, which is spelt Ceannabhaid on the present Ordnance Survey maps. It is an irony that the townships recorded by Aaron Arrowsmith and his successors were cleared and largely deserted (apart from a few shepherds) by 1820, as a result of the Sutherland Clearances, and yet the maps continue little altered into the mid nineteenth century, leading one to conjecture that either that the mapmakers were working from earlier working papers, or simply copying from earlier maps.

The Helmsdale River is fordable by cattle at Kinbrace, providing it is not in spate. From the western river bank the route lies up and diagonally across Dalcharn Hill. This is the manner in which Sir Michael Wigan, the local landowner, describes the route "Just a coincidence, but last night travelling down from the north in the evening light, I looked across at Dalcharn and spied very clearly the drove-road marked on the map where it starts (north side) on Dalcharn Hill. It is straight, double-track (width) and clear in the evening light after rain. It is the first time I have ever noticed it, despite having looked at this view often and having walked this piece of ground many times. From further scrutiny of the mapping, I am starting to think the route is exactly correct, if not always precisely mapped. If you were looking for a starting point for the drove road on Dalcharn on the north side, you can use the rail bridge across the Helmsdale as a good marker." (pers. comm. 8 June 2010). The way in which the passage of cattle and travellers has imprinted itself in the landscape as a consequence of repeated practice is one of the questions considered earlier in the thesis at a theoretical level.

The history of this small farm of Dalcharn illustrates many of the changes which were to so dramatically alter the way of life in Sutherland. This farm extended to little more than Dalcharn Hill, and the flat land around Dalcharn House. Documentary evidence begins only in the late eighteenth century when the stochastic impact of Improvement and the ensuing Clearances, which have so coloured modern perceptions, had not yet happened in this part of Sutherland. One of the earliest pieces of documentary evidence for Dalcharn points to a nexus of commercial relationships already at play. In 1771, the then tenant Alexander Gunn is on the Sutherland Estate Rental as having satisfied part of his rent by supplying two cows (value £3) to Alexander McKay (National Library of Scotland, Dep 313-963). Alexander McKay of Morness was a drover and cattle dealer, acting on behalf of the Sutherland Estate, but in all probability acting as a principal. In other words having

agreed a price with the Estate for cattle, it was at his risk to turn a profit on those cattle. The Sutherland Estate would expect their £3 whatever the price struck at Crieff or Falkirk or another tryst.

Starting about 100m north of the modern railway bridge, the route followed climbs the north-east shoulder of Dalcharn Hill (Figure 26). The route moves up-slope from the Helmsdale River to south of the crest of Cnoc Dail-Charn (Dalcharn Hill). Moving through rough grass and heather, the route goes past a series of eleven hut circles marked on the modern OS map, two burnt mounds and some small enclosures, at the top of the steepest section of slope. These are tucked away from the prevailing westerly wind, which catches the walker in the face as one approaches the top of the slope. The drove road is visible as a wide channel or groove on the eastern slope of the hill, and is especially evident on the steepest section. The hut circle grouping attests to the antiquity of the route, ascribed to Bronze or Iron Age (Lindsay 2008), but soon much of the hillside will disappear under new tree planting, although the archaeology on the hill has been recorded in advance of this (Lindsay 2008) and Sir Michael Wigan, who commissioned the report, has not planted on the archaeologically sensitive areas. It may be that this droving road is in fact a very ancient routeway linking settlements over millennia and attesting to continuity in the landscape. The drove road disappears as it reaches the gentler slope just south of the crest of Cnoc Dail-Charn. From there it is possible to look south east to where Dalcharn House Figure 27) stands below, in the midst of several fields, just north of the River Frithe, and a few hundred metres west of the Helmsdale River.

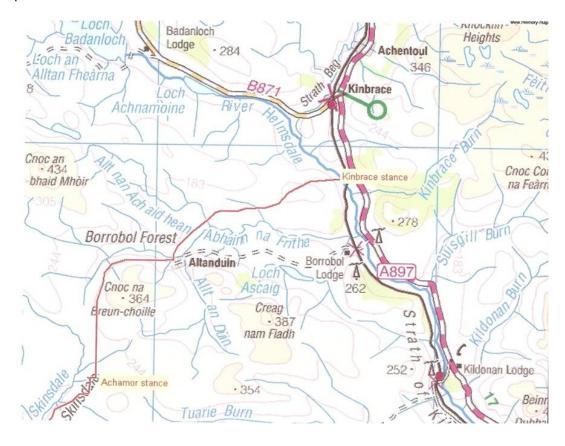


Figure 25 Kinbrace stance to Achamor stance. Following the old droving route between Kinbrace and Achamor (Ordnance Survey).



Figure 26 Dalcharn Hill, eastern side. Wide channels or grooves on the line of old route across the hill from Kinbrace stance. Photograph taken looking westwards towards the top of the hill.

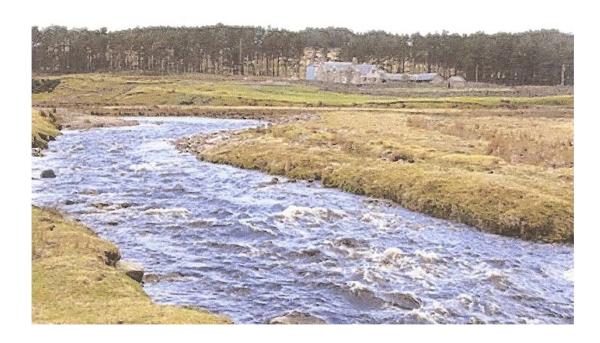


Figure 27 Dalcharn House, with Dalcharn Hill behind the trees. In front runs the River Frithe. Photograph taken looking north west.

By 1793, the tenancy of Dalcharn appears to be held by the Gordon family, for in that year, Gilbert Gordon of Dalcharn is listed as one of the Sutherland Fencible Regiment (Lindsay 2008). Certainly by 1798, the Dalcharn tenant is Alexander Gordon. In "Memorabilia Domestica", the Reverend Donald Sage (born 1789), whose father was the Minister at Kildonan, gives a full account of having stayed with the Gordon family at Dalcharn when he was a boy. They were treated well (Sage 1889: 134-135). Sage describes Gordon as "a wealthy and substantial tenant, as well as a most hospitable man". William Young, the Sutherland Factor and an agricultural improver, visited Dalcharn in 1810 and had a somewhat different view (Adam 1972: i 32). He commented "Came to Mr Gordon's Dalharn, an industrious man, his possession seemingly very poor soil. Crops of black oats and hay bad in the extreme, and so is his mode of farming. Rotation twelve years natural grass, dunged, ploughed up for oats of which he takes three crops running. Still with his superior management of cattle, he contrives to do better than his neighbours, and he might be induced to alter his plan of farming".

In 1813, the Sutherland Clearances began to empty the Kildonan strath of people and cattle and crops in favour of sheep. In September 1815, Patrick Sellar, agent of the Sutherland Estates, noted that Alexander Gordon's lease was held at will on the Sutherland Estate Lease Map (Figure 28). In other words, Gordon could be removed at any time, and had no security of tenure. The land (Figure 29) was already adjacent to the huge new sheep farm

of Kilcalmkill, leased to Gabriel Reid, a southern sheep-master in 1813. By 1819, the State of Leases on the Sutherland Estate (National Library of Scotland Acc 10853-264) shows that Reid had taken over Dalcharn (and other land in Kildonan). The document has an appendix which states that there were two families from Dalcharn "to be brought from the interior of the Estate of Sutherland to the Coast". The rhythm of the seventeenth and eighteenth centuries by which Dalcharn tenants would bring cattle over the hill to join the droves heading south, and thus satisfy part of their rent, was broken. The commercial practice of this Gaelic speaking area which had bound cowherds to tacksmen to drovers to estate owners in order to produce a cash influx into a fundamentally subsistence economy, was moving to a different beat.

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Figure 28 List of Sutherland Estate Leases 1815. This listing compiled by Patrick Sellar as a planning document for the estate shows property 28, Dalcharn, held at will by Alexander Gordon. (By permission of National Library of Scotland)

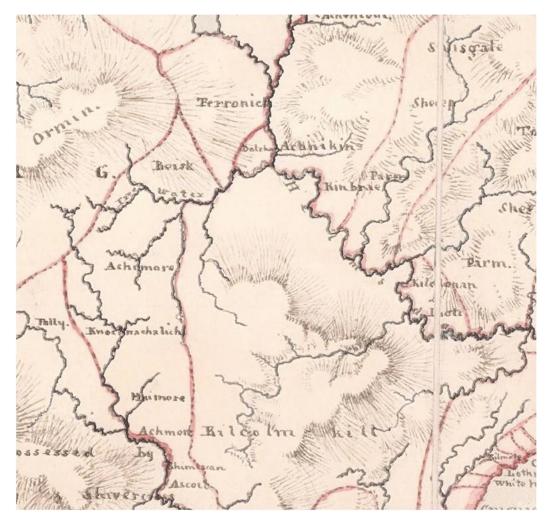


Figure 29 Sutherland Estate Map 1815. Map drawn up by Patrick Sellar, showing the small farm of Dalcharn, just north of the "Free Water", where it joins the Helmsdale River. By 1819, it is absorbed into the new sheep farm of Kilcalmkill to the south. (By permission of National Library of Scotland)

The droving route is not much in evidence as Cnoc Dail-Charn is descended. However, on steeper sections at the crossing of burns, the old track reasserts itself, and becomes visible. Nowhere is it more than 20m wide, showing as a slight depression or better grass amidst the heather and bracken. The route takes us north of the Feranach broch (Figure 30), more evidence suggesting the antiquity of the route, and a suggestion of continuity which is one of the themes of the thesis, down to the Feranach Burn just north of where it meets the River Frithe. The droving route stays outside the head dykes of Feranach, beyond which can be seen the ruins of the former township.

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Figure 30 The Feranach Broch. Droving route runs just north and upslope of the Feranach Broch and also the later township. It stays just outside the head dykes.

Like Dalcharn, Feranach (Ferronich) was a separate farm in 1815, leased to Hugh Sutherland on a six year tack. Sellars notes (Figure 31) that it was occupied like Dalcharn by people and sub-tenants. The lease expired in 1819, and the land was then taken over by sheep. Sellars has already noted in 1815 that this whole area would be turned over to sheep "when 33 and 34 can be got for people" (Figure 32). On the Sutherland Estate Plan of 1815, 33 and 34 were the lands of East and West Helmsdale on the coast, and soon to be a planned fishing community. Farming people were to be turned into fisher folk. Once the Feranach Burn is crossed, the drove road again stays outside the turf head dyke which has been adopted in this area to form the northern wall of a small post-Improvement rectangular enclosure. The dyke carries on beyond the enclosure and so does the drove route (Figure 33). All the way it runs just outside the head dyke, skirting the flanks of the hill. On one side runs the long distance route, and on the other side lies the infield of the Ferenach township which would have contained arable crops, animals and human dwellings (Figure 34).

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27 Hookfin - George Menro -		Della
Kin Himbran Sundries small tent	at will-	Della.
18 Dulcharn - Mexander Gordon -	do de	Della
29 Snisgill shapfor Mr Thos Houston	10 1807. 19 years 1826	Sheep
30 Ribalmkill da Gabriel Reid Cog!	11. 1813 19 d: 1832	216
m 31. 1 Torrish - d'. Major M. Clunes -	10-1813 19 d: 1832	· Dulor
2 Wildown allating Sundries Sunants -	at Will	People
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- Cam & Reffidder - dello		
33 & Helmodale (Wadsoll)		Quelos Termos
34 W. Helmodale Moved Machay) -		Tillage
35 Gartymore - sundries small tents	- at Will -	Frehers
	1812 99 years 1911.	Fishers
36 Por Gower - d: de Sous	1812 19 de 1831.	Tilland

Figure 31 Extract from Sutherland Estate Leases 1815. Extract shows Feranach (Ferronich) as occupied by people and sub-tenants, as opposed to cattle, sheep, tillage or fishers (as shown in the various categories in the right-hand column). (Permission of National Library of Scotland)

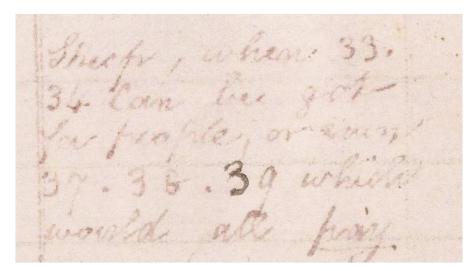


Figure 32 Comment on list of Sutherland Estate leases 1815 "Sheep when 33, 34 can be got for people". These hand written comments, by Patrick Sellar, reveal his plans for the interior of Sutherland, which was currently under "people and sub-tenants". Properties 33 and 34 were situated along the coast, being east and west Helmsdale. (Permission of National Library of Scotland)



Figure 33 Feranach Head Dyke and droving route. This shows the droving route heading westwards and descending across the slope. It follows the outside of the dyke.



Figure 34 Feranach township infield. Photograph taken from droving route on head dyke. The outfield can be seen immediately below, and then the infield with some evidence of residual rigs and furrows.

At Achan, the route passes close by a series of hut circles, before crossing the Allt nan Achaidhean just above where the burn enters the River Frithe. Immediately another dyke divides the route from the river (Figure 35), and the route follows this dyke towards the deserted township of Tomich. On the hill above are the sheilings of Auchnasheenish. In the post Improvement era, Tomich had several enclosures built to turn the area into a series of paddocks or enclosures. These enclosures took over more land than the original head dyke contained. This was done by building an impressive stone wall about 40m further up the hill. In late October, the grass, which is already dying back, starkly shows both the existence of the old rigs, and also how they ended within the present field (Figure 36). The route passes above the old dyke, but below the nineteenth century wall, and then drops down to a ford at Alltanduin (Figure 37), which crosses the River Frithe below the site of an Iron Age dun.



Figure 35 Droving route at Achan. This photograph (facing eastwards) shows route running just upslope of a linear dyke which separates it from the River Frithe.

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Figure 36 Tomich parks. This was the site of a pre-Clearance township, and the rigs are clearly shown by the dying autumn grass. They end well within the present nineteenth century paddock as shown here. The route runs north of the pre-Clearance head dyke, but below the nineteenth century stone wall of the enclosed paddock.



Figure 37 Ford at Alltanduin. The route crosses from the north bank of the River Frithe at Alltanduin. The gable end of the post-Clearance shepherd's house is at the top left, with the

ridge line of a pre-Clearance threshing barn to its right. The land in front of them, on top of the slope across the river, contains the remains of a broch.

The route then follows an estate track which according to Sir Michael Wigan was built in the early nineteenth century to give wheeled access to the upper part of the valley of the River Frithe. It gradually peels away from the river meadows on the south side of the Frithe, and gently climbs over the shoulder of Cnoc na Breun-choille towards the former township of Branachoille. About 1km from Alltanduin stands a large boulder by the side of the track (Figure 38). It is known as "The Irishman" in tribute to the strength of the Irish navvies who constructed the track, but it might also have served an earlier purpose as it gives a positive route alignment on the way to Branachoille which is tucked on the western flank of the hill and otherwise invisible to the traveller approaching from Alltanduin. If there was an earlier Gaelic name for this stone, it has been lost with the Clearances.



Figure 38 "The Irishman" stone. Between Alltanduin and Branachoille, stands this prominent stone on the side of the track. It acts as a route marker from both directions.

Looking across the glen to the north, one can see the tenancy of Reisk, which included all the land north of the river Frithe from Achan, past Tomich to the township of Achrimsdale and onto Reisk itself. Reisk lies about 1km north-west of Branachoille. It lies on a south

facing slope, like a green island of grass in a sea of heather and whins, with a distinctive circular dyke. In 1813, Alexander Gordon's son, Robert, had the tenancy and was accused of being one of the ring leaders of the Kildonan Riots (Adam 1972: i 135). These abortive demonstrations sought to resist the removal of tenants and the introduction of large scale sheep farms. He was replaced on a six year tenancy by Alexander Murray and Angus McBeath. When this expired in 1819, the land became part of a sheep farm, and the people were removed.

The estate track stops at Branachoille, a small township with a ring dyke and the remains of two dwellings. From there the route becomes indistinct as it moves south into Skinsdale. The route lies on the western flanks of Cnoc na Breun-choille. The watershed between the Rivers Frithe and Skinsdale is passed about 2km south of Branachoille and the route begins to re-emerge more distinctly as it comes closer to Achamor. The land is flat with very few features and the route heads for a distinctive eminence about 250m west of Achamor (Figure 39). This hillock is about 30m above the surrounding moorland. At this point it meets a better defined west-east track, marked on the six inch 1st edition OS map (1879), moving from the river to the western side of the township of Achamor. The track then goes directly towards the entrance of a large stance which is situated on the west of the township. It would be out of sight to travellers coming from the north along the droving route, until the hillock is reached.



Figure 39 Route heading south in Skinsdale. The trackway heads not to Achamor directly, which is out of sight on a south facing slope to the top left of this photograph, but rather to a small hillock. This is shown on horizon, directly above the ranging rod.

Mrs Jean Mackay (90) of Little Rogart was informed of the Skinsdale route by her Great-Uncle, Alexander Cormack of Strathnaver. He is believed to have been born around 1855, and came to live with Mrs Mackay's family in the 1920's and 1930's. He died on 10 February 1940, aged 85, and the death certificate was signed by Jean's father. He was one of the last generations of sheep drovers who drove large flocks from Strathnaver, following the cattle droving routes. She states that he used the route along the River Frithe, and then south by Skinsdale to Rogart.

5.2.3 The stance and township at Achamor (NC 2781 9227)

Achamor is a deserted township or baile. It is an area of improved grassland about 350m (W-E) by 150m (N-S). This lawn-like grassland is surrounded on all sides by rough grass, heather and moss. It is situated about 100m north of the Allt Acha Mhor, and about 500m east of the River Skinsdale. An annotated map is attached (Figure 40).

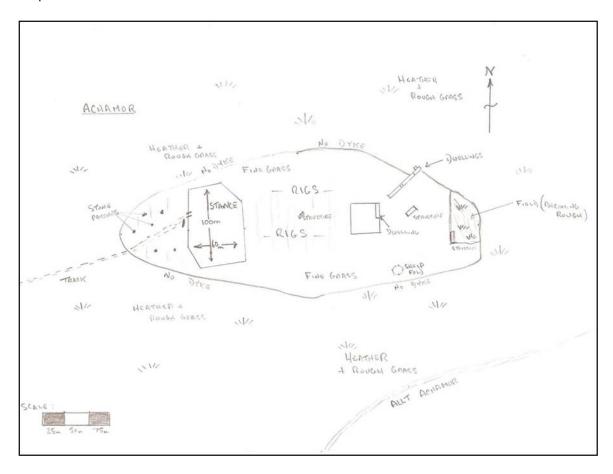


Figure 40 Measured sketch plan of Achamor. Skinsdale was first surveyed by the Ordnance Survey in 1872. Achamor was cleared in 1818. After that date a circular sheep fold was built, but the nearest habitation (now ruined) was a shepherd's house at Cnocan, about 4km away.

It is situated on a gently sloping, well drained, south facing slope. There is no dyke surrounding the grassland. The site is grazed by herds of deer. There are no sheep on the Estate at the present.

The lack of a ring dyke is interesting. It would appear from cartographic evidence to be the only township in upper Skinsdale. As such, there were no neighbouring settlements within more than 5km. Perhaps the lack of dykes (other than around the stance) implies that there was no need for such a labour intensive activity with no territorial disputes in prospect? If so, this would suggest that dykes around settlements are as much about territorial demarcation as they are about containment of animals, or for other agricultural purposes. Despite the lack of any wall or dyke, the demarcation between good grassland and rough going remains stark nearly two hundred years after the settlement was abandoned.

To the west of the stance is an area of grassland with some signs of ridge and furrow agriculture but far less distinct than that to the east of the stance. This is aligned north-

north-west to south-south-east. There are also some half a dozen patches of stone and turf, spread throughout this area. These are three to four metres square, other than a larger patch of stone and turf to the south of the entrance to the stance (10m x 6.2m) (Figure 41).



Figure 41 Achamor stance from the south-west. The line of the stance dyke runs down the slope in the top right hand corner. The entrance is to the right of the human figure.

Cultivation ridges run up the slope in the fore-ground.

The stone patches may be reduced clearance cairns, but they may also be potato pits, used for the storage of what became part of the staple diet from the seventeenth century onwards. Further work is required to determine their nature. The routeway into the stance goes through this area, and there appears to be no containment dykes. Thus large herds could trample crops grown in this area, although the major movement of cattle to market was in the autumn and the arable crops would already have been harvested.

The stance is an irregular hexagon, and runs roughly north-south. The north-south axis is about 100m and the west-east about 60m (Figure 42). The bank is currently about 0.7m high and 1.3m wide. The entrance is about 2m wide, and is on the west side of the stance (Figure 43). There are no signs of ridge and furrow agriculture within the stance. The bank appears to be turf built with stones set into it.



Figure 42 Stance at Achamor. This photograph shows the stance dyke (of cut turf with a stone core) from about half way along the western side. The southern side is shown curving round to the left in the distance.

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Figure 43 The stance entrance at Achamor. The entrance to the stance is set about midway in the western side of the enclosure. It is about 2m across.

The stance is massive for a township such as Achamor, and could hold up to a hundred cattle for a short time, according to John McMorran, the present estate manager. A township such as this would rear and retain only a small fraction of this number. Therefore the stance, which would have been a considerable undertaking to build, must have been for passing trade. The stance is situated on the west of the township, with its entrance on the west side. This prevents cattle herds from straying onto the main arable system which is east of the stance. There is no sign of a bothy, and it must be presumed that the drovers stayed in the township houses, as guests whether paying ones or not. The relationship between those travelling on the route, such as drovers, and those travelled past, such as the people of Achamor, is one of the key issues of the thesis. It will be considered further in the discussion chapter. The regular nature of the stance suggests planning, and the significant investment in time, effort and space within the cultivated area would seem to suggest an economic advantage to be derived from its construction.

To the east of the stance there is an area of ridge and furrow cultivation with well defined ridges. These run north-south, up and down the slope (Figure 44). There are a number of

clearance cairns at the ends of the ridges. There is one structure approximately 6m by 4m in the centre of the field system.



Figure 44 Cultivated area in centre of township. The ridges and furrows run up and down the slope. There are clearance cairns at the bottom ends of the ridges. This photograph looks up a furrow towards the north, with ridges on either side.

This appears to be the main area of arable production, and presumably raised both oats and barley. The structure at the centre requires further investigation. It might be a corn drying kiln for example, but this is speculation without further work.

To the east of the cultivation rigs is an enclosed area about 30m square. This is delineated by a row of massive stones or rocks. In the north-east corner of this enclosure is the remains of a dwelling, built of large stones, significantly reduced, with the walls standing about 0.8m high. This is 14m long by 4.9m wide (Figure 45).

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Figure 45 Domestic structure within an enclosure. Domestic structure, built of very large irregular stones, (14m x 4.9m) running down the slope, and set within a larger enclosed area, about 30m square. The nineteenth century sheepfold is in distance to the south.

The enclosed area would appear to be a garden or kailyard associated with a significant building. This stands on its own in the centre of the township, and may have been the residence of the tacksman.

Within 10 m to the north-east of this dwelling (Figure 46) is another structure which appears to be two, or possibly three, long and narrow dwellings with a later shelter or bothy inserted in the middle of the row. From the south (lower) end, the first room is 18m long by 4m wide. This is built of relatively small stones, well aligned although irregular in shape, which only stand about 0.5m high. Next is a square room, with a considerable amount of tumbled stone. This is approximately 4m square, and the stone stands about 0.8 m high. The next room in the row is 12m by 4m. It is similar in construction to the first structure, with well embedded stones but only 0.5m high. At the north (upper) end of the row is a structure 8m x 4m. This is of similar construction to the room next to it. It has an extension on its west side. This is 3m long by 3.5m wide.

This would appear to be a row of domestic accommodation, housing perhaps three families. It is uncertain without further work as to whether all of the structure was for human habitation, or contained animals. The later shelter or bothy inserted into the houses would suggest temporary, informal accommodation for shepherds using the sheep fold, in the period after Clearance.



Figure 46 Row of domestic structures looking southwards. This photograph is taken from near the top (north) of a row of structures which are 4m wide. In the foreground, is a structure 8m x 4m with a small extension to the west (bottom right corner). The higher cross wall in the distance represents the northern wall of a small bothy which appears to have been constructed within the ruins.

To the south-east of this long range are two further structures. One of these is about 8m long by 4m wide, and is built in a similar style to the long range. The other is about a further 30m south-east and lies on the south-west of a field or enclosure which is roughly 50m long by 30m wide. This building is built of large boulders (6m x 4m), which stand only 0.5m above the ground. The field is barely visible, and is being invaded by heather, bracken and rough grass (Figure 47).

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Figure 47 South-west corner of a small field. Field (50m x 30m) is delineated by an eroding turf dyke on eastern side of township. It is beginning to be invaded by heather, bracken and rough grass.

The first building may be associated with the row of domestic accommodation, but its function if hard to ascertain without further study. The other building seems to represent a structure of some age, together with a field of uncertain purpose. Again further work is required in order to be more precise.

About 70 m south of the lower end of the long range is a circular sheep fold. This is substantially intact. It is 10m in diameter. The wall is 1.5m high and about 0.8 m thick. There is an entrance on the south-east side which is 0.6m wide (Figure 48).



Figure 48 Circular nineteenth century sheepfold. Sheepfold is substantially intact, 10m in diameter, with 1.5m high wall, and an entrance which is 0.6m wide.

"Papers on Sutherland Estate Management 1802-1816", edited by Robin Adam (1972) offer some clues as to what happened to end Achamor as an inhabited working township, with an active cattle stance, on a significant communication route.

William Munro of Achany owned Strath Skinsdale, in which Achamor was a major settlement, prior to selling it in 1808 to the Sutherland Estates. The consideration was paid in two tranches being £1700 in 1808, and £1800 in 1809 (Adam 1972: i 256). He then took a ten year tack or lease of Strath Skinsdale at a rent of £150 per year (Adam 1972: i 218).

In April 1811, Patrick Sellar compiled a list of Sutherland estate rentals when he and William Young took over as estate factors from Cosmo Falconer. This showed that William Munro, now termed of Uppat, still held the tack of Strath Skinsdale at a rental of £150, and this was due to end at Whitsunday 1818 (Adam 1972: i 91).

In April 1812, Munro sold Uppat to the Sutherland Estates for £8104, and at the same time appears to have given up the lease of Strath Skinsdale (Adam 1972: i 257). On 29 December 1812, William Young writes about the setting of new short leases in Strath

Skinsdale to cover the period to 1819. The Strath has been broken into seven lots. Achamor, spelt Achumore, is one of these. There was however a problem in relation to Achamor because according to Young, "the present Tenant produced a Letter of Lease granted by Mr Munro for five years longer continuance which was not before known of" (Adam 1972: ii 175). This seems to have been the Widow McPherson, who in 1815 was shown as paying a rental of £50 for Achamor (Adam 1972: i 219). It would thus seem that Munro had granted Mrs McPherson a sub-lease to run concurrently with his tack which would have expired at Whitsun 1818, had he not terminated it early in 1812.

The map of sheep farms as they existed in 1816 (Figure 49) shows that Strath Skinsdale was not yet part of the great sheep farms into which the Sutherland Estates were being divided. It lies between the sheep farms of Lairg and Kilcalmkill. The physical remains of the sheep fold at Achamor however indicate that this merely delayed the incorporation of the township into the sheep economy. Presumably this happened shortly after the expiry of Widow McPherson's lease in 1818, or the other leases in Strath Skinsdale in 1819. At this point the people were cleared and thus ended their commercial enterprises at Achamor. This had included not only the raising of cattle and the growing of arable crops, but also the creation of the substantial stance for the overnight accommodation of herds being driven south to the trysts.

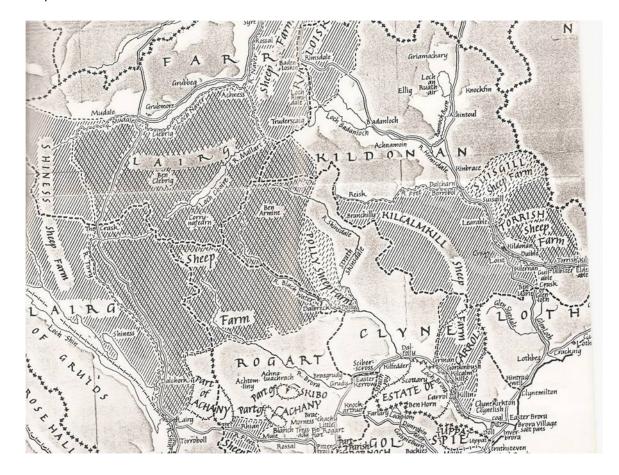


Figure 49 Map of eastern part of Sutherland Estate in 1816. This map (Adam 1972) shows the position in the middle phase of the Sutherland Clearances in 1816. It shows that Strath Skinsdale, including Achamor, was not yet consolidated into the great sheep farms which were being created. This was complete by 1819.

John McMorran, Manager of the Balnacoil Estate, which owns Strath Skinsdale, believes that the stance at Achamor was used for both cattle and then sheep droving. He draws this conclusion from his detailed knowledge of the glen, its tracks and ruined structures, and also from discussions with retired shepherds in the 1980's, when he first came to the estate.

5.2.4 The route from Achamor to Sciberscross

From Achamor (Figure 50), the route goes back to the river, and then southwards along its eastern bank. After about 1 km, the ruined shepherd's cottage of Cnocan is passed on the other side of the river at the site of a ford. This is an early nineteenth century building, and was abandoned in the mid twentieth century. It was the only habitation in Strath Skinsdale after the Clearances. The droving route is quite evident and has been maintained by the Balnacoil estate, originally for their shepherds and also for stalking parties. The land is flattish, and the vegetation is rough grass, with some heather.

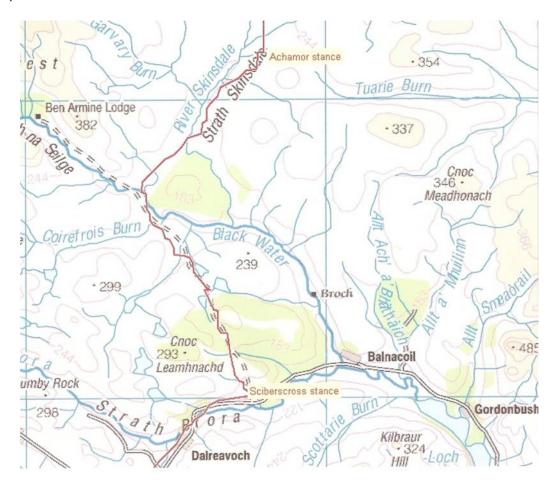


Figure 50 The route from Achamor to Sciberscross. This shows the route from Achamor to Sciberscross. It goes south along the east bank of the River Skinsdale, and then crosses the river to the north-east of Pollie Hill (now wooded). Once the Black Water is crossed, the route heads south-east towards Sciberscross (Ordnance Survey).

After a further two kilometres, the route comes to Muiemore Stables, which is a nineteenth century stable block used by the ponies of stalking parties. From there the route went down to the extensive ruined township of Muiemore, which sits in a bend in the river, amidst flat grassland. The area is known as Lub Mor or the great bend. Across the river is another substantial ruined township, Lubeag. The early nineteenth century maps show the route running across the river at this point and then west of Pollie Hill to Dalbreck.

In a dry July the Skinsdale River is easily forded, but in a wet October it would have taken a little care, with a water level in excess of 1m, and moving rapidly in sections.

There were Macdonalds in occupation of Pollie in the eighteenth century (Adam 1972: i 93), but their lease expired in 1813, and they were then outbid by John Cleugh on 15 December 1813 for the Pollie lands which Cleugh converted into a sheep farm (Adam 1972: i 145). However, the transition to sheep was not without resistance. On 19 December

1813, William Young, the Factor, wrote to the Marchioness of Stafford (the future Duchess of Sutherland) saying "I heard of an attempt to way lay a poor Northumberland Man, John Cleugh, who took the Polly Lot, but they did not fall in with him.....These Macdonalds are a worthless set and many acts of trespass could be brought home to them, we shall however I expect now get clear of them and such characters" (Adam 1972: ii 204-205).

Moving away south from Lubeag and the River Skinsdale, the route crosses a burn and then goes towards the corner of a modern plantation of trees across flat land. At this point the route becomes unclear due to extensive modern tree planting on Pollie Hill. However, there is a gently climbing terrace set into the western side of Pollie Hill and this appears to be on the route of the early maps. It gently rises across the side of the hill for nearly two kilometres, but the land has been deep ploughed for tree planting, but not actually planted. This has removed any indications of a route. On the south-west side of the hill, the route goes down a deep-ploughed slope to the Black Water, and across to the grass fields of Dalbreck and Dalbhan. This flat grassland lies at the confluence of the Coirefrois Burn with the Black Water.

From here the old route-way has been converted by the Sutherland Estates into a substantial sanded estate road. It links the Ben Armine shooting lodge, which is in the hills to the west of Pollie, with the public road at Sciberscross, where there is another substantial nineteenth century shooting lodge built by the Dukes of Sutherland. The road ascends from Dalbhan to Loch na Glaic (about two kilometres), and from there it descends gently for a further three kilometres to Sciberscross. The estate road is wide, and has been straightened in recent years, but some of the old, unimproved sections are still visible (Figure 51).



Figure 51 Estate road from Ben Armine to Sciberscross. The modern estate road overlies the original route, and has been extensively improved in modern times. This photograph shows how the track has been straightened recently.

5.2.5 A possible stance at Sciberscross (NC 2775 9103)

Sciberscross is just over 11 miles from Achamor by way of the droving route. This would be a reasonable day's droving. It is also the first settled area for more than four miles, with a long history of agriculture. Extensive entries in NMRS show the Sciberscross area to have been intensively farmed from at least the Iron Age onwards with many surviving hut circles and field systems (Lindsay 2009). Sciberscross would be a logical place to have a stance, but at first observation there are no physical remains. More than that, the Boa family who have been in residence at Sciberscross Farm for about a hundred years, first as shepherds and then as tenant farmers from 1930, have no knowledge of such a stance site (R Boa *pers comm.* July 2010).

However, using cartographic, documentary and physical evidence, a possible stance can be located. Sciberscross was surveyed for the Ordnance Survey for the first time in 1872, and from this both one-inch and six-inch maps were later published. The six-inch map (Figure 52) shows both Sciberscross Farm, and also an irregular rectangular enclosure just

to the north of the farm, which straddles a burn in its south-west corner. This enclosure stands out as being different from the surveyed and regular field system established after the area was cleared and the Sciberscross sheep farm was established in 1818. More than that, the old route down from Skinsdale, Ben Armine and Pollie is shown coming directly down to the farmhouse itself. This routeway respects the east side of this enclosure. At the same time, a linear and evidently new cut-off section of the track goes well to the west of the farmhouse and the enclosure. This cut-off seems to be designed so that people going along the track do not have to pass close by the front of Sciberscross Farm, and Sciberscross Lodge.

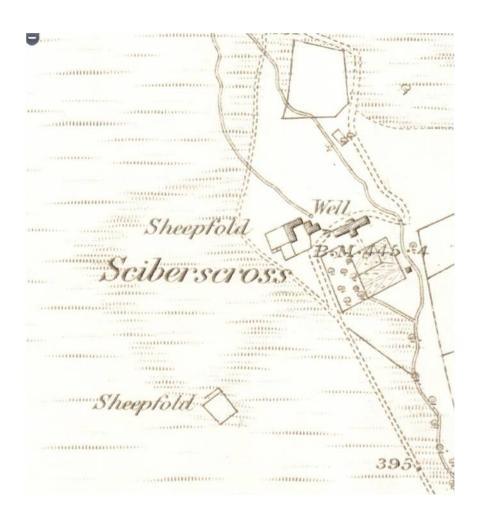


Figure 52 First Edition OS map –from Survey 1872. Sciberscross Farm, before the building of the Sutherland ducal lodge in 1876. Original routeway runs past the front door of farm, but already a cut-off has been built to the west of the buildings (left). Old track respects the dykes of the enclosure to the north of the farm

The enclosure site is adjacent to the site of Sciberscross Farm (about 100 m), which was in all likelihood the residence of the Sutherland tacksmen of Sciberscross since the early eighteenth century, if not earlier (Lindsay 2009: 7). The township of Sciberscross provided ten men in the 1745 Muster Roll (Lindsay 2010: 8), of whom seven were named

Sutherland. It was first mentioned in documents as early as 1360 (Lindsay 2010: 6), and mapped by Roy as "Shiboskagg" (1747-55). It appears to have been a substantial and flourishing farming township prior to the Clearances of 1819, and a stock enclosure would have been a natural accessory for a township on the route south.

It is known that Captain John Sutherland had the lease of Sciberscross until 1818 and was opposed to the Improvement plans of the Sutherland Estate (Adam 1972). By August 1819, the new sheep farm of Sciberscross was leased to James Hall, and at least three families from Sciberscross were removed to the coast. Some Sciberscross people were certainly relocated to Brora (Lindsay 2009: 8). James Hall was succeeded by his son, John Hall, who died aged 72 at Sciberscross Farm in 1871. This ended their connection with the farm which was thereafter put in the hands of several managers, until Peter Boa took on the lease around 1930 (Lindsay 2009: 9). The Boas first came to Sciberscross in 1892 as shepherds (Macdonald 2002: 161). The Duke of Sutherland built Sciberscross Lodge in 1876 as a shooting lodge. However, the Duke preferred Ben Armine Lodge, further up the track, past Pollie, and the lodge was frequently let (Macdonald 2002: 161). The lodge is a substantial stone building of six bedroom and five reception rooms.

It would appear that both the original line of the routeway, and the enclosure were out of use well before the First World War. The original line of the track (but not the enclosure) is still shown on the 2nd Series of OS maps (surveyed in 1894) (Figure 53). The old route has wholly disappeared by the 3rd Series of OS maps (surveyed in 1909) (Figure 54).

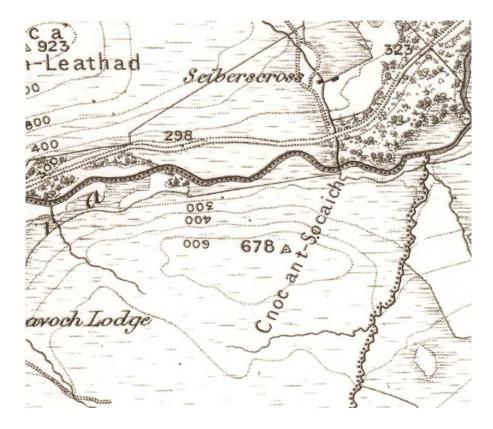


Figure 53 Second Edition OS map –from Survey 1894. The original line of the track is still shown, but the enclosure has disappeared. Archaeological evidence would suggest that the dykes were deliberately de-constructed, and the enclosure removed.

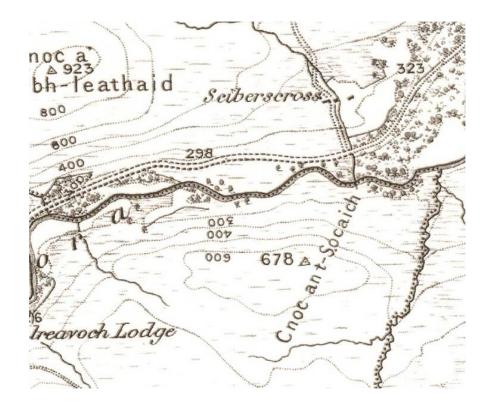


Figure 54 Third Edition OS Map –from Survey 1912. The old route has wholly disappeared, and the new route (originally a cut-off) which takes the route to the west of the ducal lodge has become the only route. This remains the case up until today.

From this it might be inferred that a stock enclosure so close to a new ducal residence was not to be permitted. This was probably also the cause of the re-routing of the old routeway, with Sciberscross now being passed at a respectful distance by any people on the track. At the same time, the Sutherland Railway was pushing north to Thurso from Invershin in the 1870s, and within a few years, the days of the long distance sheep droves which had succeeded the cattle drives, would be over.

The remains of the old enclosure can still be located on the ground (Figure 55). This is largely because the old turf dyke had a core of substantial stones, and the lines of these stones still remain embedded in the grass and heather. The enclosure is 90m by 60m and includes a burn in its south-west corner. (Figure 56 and Figure 57) as shown by the 1st OS survey. This survey appears very accurate. There is now no sign at all of any turf dyke, or any elevation on the ground where it ran. It would appear that the enclosure was not simply abandoned, but actively removed, leaving behind only the heavier stones at the core of the turf dyke, as an outline on the ground. If so, then this deconstruction must have happened between 1872 and 1894, and probably before the Boas came in 1892. In all likelihood, it was removed around 1876, when the shooting lodge was constructed.

The old droving route ran to the east of the enclosure wall as shown on the 1872 survey. It is still quite distinct as a hollow in the ground. (Figure 58) Confusingly a new grassy track runs right through the centre of the old enclosure, but this track is only shown on post World War 1 maps, and runs at right angles to the old trackway which here ran north-south, and the two should not be confused.

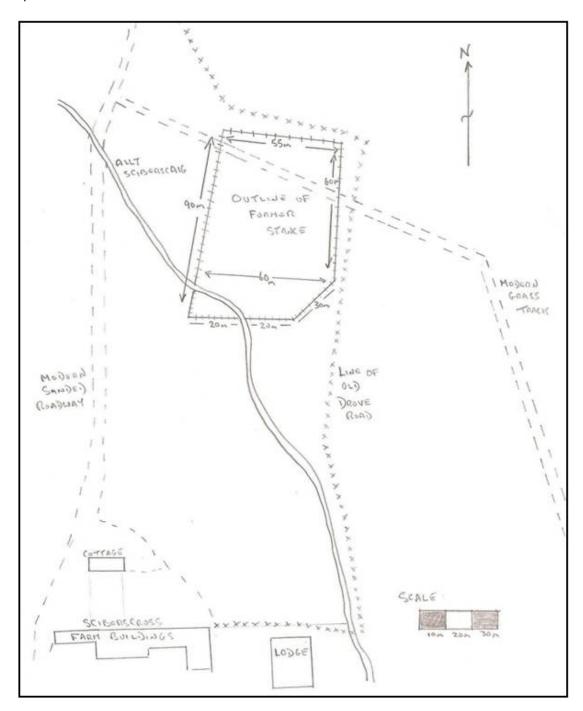


Figure 55 Measured sketch map of a possible cattle stance at Sciberscross. It would appear that the stance at Sciberscross was actively deconstructed at the time of construction of Sciberscross Lodge (1876) for the Duke of Sutherland. At the same time the old routeway was also moved westwards and away from the Lodge.



Figure 56 South-East corner of possible stance at Sciberscross. The figure is standing at the point that east dyke of enclosure turns off-line to the west, and effectively creates a fifth side to the enclosure (see Fig 5.40). The dyke has gone, but a line of large boulders remains to mark the 1872 OS map outline.



Figure 57 Northern edge of enclosure looking westwards. New track is visible in background. The old routeway lay in the hollow to the right of the ridge, which runs between pole in foreground and second pole/human figure in distance. The ridge has a run of stones along it between the two poles – some are visible.



Figure 58 Original routeway to the east of the enclosure. This routeway is as shown on the 1872 OS map (Figure 52). It runs to the east of the former enclosure's eastern dyke which is on left of photograph, and again is marked by a line of large stones and small boulders. The routeway forms a hollow in the ground just outside the old dyke.

It would seem that notions of privacy and power led to the removal of the stance at Sciberscross, along with the re-alignment of the routeway. The archaeology speaks of human agency, a concern of the thesis, which was considered in Chapter 3 from a theoretical perspective and will be further analysed in the discussion chapter. The reason for this seems to be the creation of a new ducal shooting lodge at Sciberscross (1876), after the ending of the lease to the Hall family in 1871. It says something about the power and wealth of the Sutherland family that in a county littered with redundant dykes and walls, the Estate should have gone to the length of deconstructing the enclosure. Presumably they wanted neither animals nor travellers anywhere close to the new Lodge. Further up the hill, there is a tumbled stone wall (still in situ) which is on the same axis as the removed turf dyke which formed the western edge of the enclosure. This stone wall may have been from the period of the Hall tenancy (1818-1871). However it seems likely that the enclosure itself dates from the period of Captain John Sutherland's tenancy and probably for some time before that. The enclosure may well have been a cattle stance based on size, access to

water, shape, proximity to a township (for drover accommodation) and distance from Achamor.

5.2.6 The route from Sciberscross to Bad Leathan

From Sciberscross, it is only a few hundred metres to the River Brora. From here, the route heads west and then south towards Rogart. The present road which links Brora with Rogart via Loch Brora was built between 1817 and 1828 (National Library of Scotland, Dep 313-3205). This road runs along the north side of the river as far as Dalreavoch Bridge, which also dates from this time. The road may originally have run on the south side of the river as it is depicted thus on William Roy's Military Survey (1747-55). Modern archaeological field survey has found a section of pre-Clearance roadway north of the river, but also a Clapper Bridge south of the River Brora (Lindsay 2009: Appendix II). In any event, it is clear that almost the entire valley floor was cultivated under rig and furrow in pre-Clearance times. It is likely that the drovers picked up cattle from the various townships as they headed south (Figure 59). From Dalreavoch, the route lay south by Rhilochan to Garvoult, past land which was never cleared and retains some of the dispersed settlement patterns which characterised Sutherland in the 18th century and before (Figure 60).

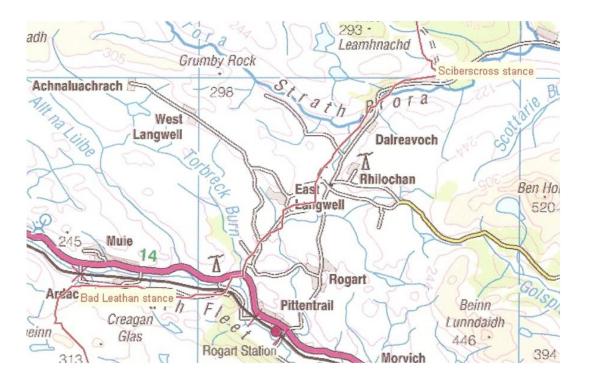


Figure 59 The route from Sciberscross to Bad Leathan. Route according to oral tradition in Rogart. It passes west of Rogart, and crosses the River Fleet before climbing transversely across hills to the south of the river. These hills drop in height towards the west, and the

route then turns south to Bad Leathan, at Ardachu, south-west of Muie. This is only a very short climb (Ordnance Survey).

The early 19th century maps such as Arrowsmith (1807) (Figure 60), Thomson (1832) (Figure 61) and Burnett and Scott (1855) (Figure 62) show the route continuing to Rogart Kirk, and then on to Pittentraill and the River Fleet. From there the road goes to Eiden on the south of the river, and then makes a steep ascent of the range of hills lying south of the Fleet via a series of hairpins, to Dalnamain by Loch Buie. However, local tradition suggests a different route for the cattle. This suggests that the cattle went south-west from Garvoult to the River Fleet at Dalmore, and from there made a long but gentle ascent of the hills by heading west on the south side of the River Fleet. This route follows the present minor road which links Dalnamain to Inchcape to Ardachu and from there to Acheilidh, climbing barely 120m in 4 kilometres (Figure 63). The route then climbs about 100m in height over one kilometre, and reaches a stance at Bad Leathan (Figure 64). Alex Campbell's family has been associated with Eiden for a very long time, and a Campbell was in residence in 1815 (Adam 1972: i 231). Alex is emphatic that whilst there was a route through his farm, the drovers went by a more westerly route. This is supported by Alistair Maciver of Inchcape, who is secretary of the crofting association at Acheilidh, who still use Bad Leathan, "the Acheilidh Greens", as common grazing. Interestingly the drover's document, shown at Figure 7, shows cattle being picked up from both William Campbell in Rogart, and Roderick McKay at Inchcheap (Inchcape).



Figure 60 Arrowsmith map 1807. Route comes down from "Skibo's Cross" in top right of map to Rogart Kirk, and thence crosses the River Fleet between "Kinald" and "Oaden" (now Eiden). (By permission of National Library of Scotland)



Figure 61 Thomson map 1832. This map shows the route from Sciberscross "Syborscross", at the top right, to Rogart and then on to the River Fleet Crossing between Kinauld and Rovie, which is near to Eiden. A west-east route runs north of River Fleet. On the south side, a series of townships from Dalmore to "Achulie" (Acheilidh) are named. (By permission of the National Library of Scotland)

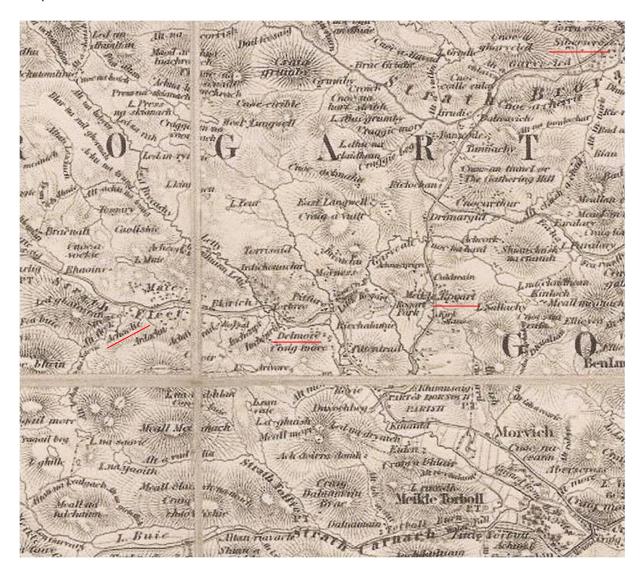


Figure 62 Burnett and Scott map 1855. This map again shows the route from "Syberscross" (top right) to Rogart, and thence across the River Fleet to Dalmore. From there a minor route goes south-east to Eiden. For the first time, a marked route connects the townships south of the river from Dalmore to "Acheillie" (Acheilidh). (By permission of National Library of Scotland)



Figure 63 Acheilidh, looking eastwards down Strath Fleet. The photograph is taken on south side of River Fleet above Acheilidh. The gentle road, which gradually ascends from Dalnamain (which is just out-of-sight below the forestry plantation centre right in distance) is shown in the centre. The township of Muie, north of the river, is shown in centre left in distance.



Figure 64 Track from Acheilidh to Bad Leathan. The first part of the track has been adopted for use by a mobile telephone mast, but the old hollows on the ground are also shown, above and left of this. Above the mast, the route becomes a grassy track.

There is also a piece of documentary evidence which supports this route. This comes from the Celtic Magazine of Inverness, Vol 10, 1884. In this, a manuscript is published which was written by Major John Macdonald of Muie between 1782 and 1792. Macdonald had a lengthy military career in the British Army, and was born in 1722. His family held land at Muie, which is just across the River Fleet from Acheilidh and Bad Leathan (see Figure 63). In later life, he continued in ownership of this land, and indeed held a wadsett of the lands of Muie, Achvelie (Acheilidh), Achvreal, Dalnessie, Marlick and Rossal from the Sutherland Estate. This wadsett was redeemed by the Sutherland Estate in 1811, from his grandson, John Small Macdonald (Adam 1972: i 239). The manuscript begins with recounting how in 1739, he (aged 17) and his cousin, William Macdonald, were engaged to drive cattle to Moinbuy (Monbuie). This droving route is from Bad Leathan to Monbuie. At Monbuie, they were paid for their work, and went down to the Balchragan Inn (close by the present Invershin Inn) at Port na Lice where the cattle were swum across the Kyle of Sutherland. There they met a recruiting party of the 32nd Foot, and by the next morning they were enlisted as soldiers. John Macdonald's direct descendant is also John Macdonald, recently retired postman in the district, and is the author of "Rogart: the story of a Sutherland crofting parish (2002). The full story of Major Macdonald is reprinted in that book (Macdonald 2002: 443 – 456).

5.2.7 The stance at Bad Leathan (NC 2657 9029)

The site is out of use and ruinous by the first survey by the Ordnance Survey in the area in 1872 (Figure 65). It has however continued to be regarded as common land, and subject to crofting rights down to the present.

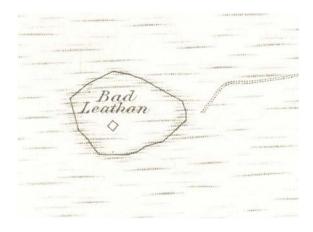


Figure 65 First Edition OS Map - 1872 Survey. The track approaches Bad Leathan, as today, from the north-east. However, it stops short of the dyke, whilst now it enters and exits the enclosure. The kailyard within the enclosure is identified on the map but the attached dwelling is not separately shown, possibly indicating its ruinous state.

The ring dyke is nearly circular and has a diameter of about 120m (Figure 66). This is extremely small for an isolated farming township. Near the eastern side of the enclosure is a ruined dwelling which is 11.5m by 5.75m, with an attached garden or kailyard which is 10m by 8m (Figure 67). This is much reduced and stands only 0.3m or less in places. The route runs into the north eastern side of the stance, and out through the south eastern side, passing up-slope and close by the dwelling (Figure 68). The turf dykes are substantial and well preserved. They are still over 1m in height on all sides and sometimes higher and 2.5m wide (Figure 69). The entrances into the enclosure are quite narrow on both sides, being about 2m (Figure 70).

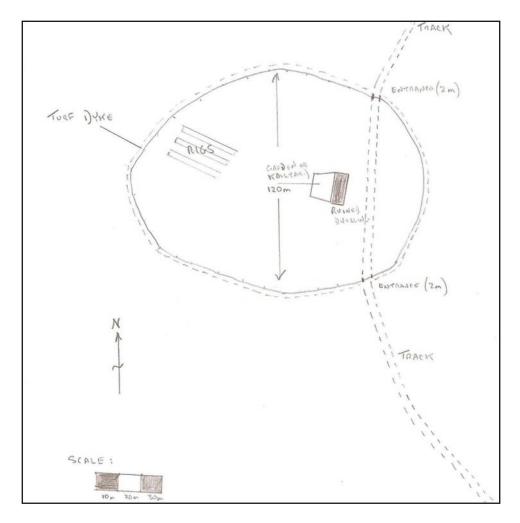


Figure 66 Measured sketch plan of Bad Leathan. This plan shows the enclosure at Bad Leathan. There is a ruined dwelling in the centre, and the routeway goes through the turf dyke at two places.



Figure 67 Bad Leathan dwelling and kailyard, looking north. The two poles indicate the southern side of a dwelling (5.75m) and kailyard (8m) which is situated on the eastern side of a circular enclosure or stance. The gable end of the dwelling is up-slope to the right of the picture.



Figure 68 Routeway through the Bad Leathan enclosure. The route runs though the enclosure between the eastern (up-slope) edge of the dyke and the dwelling house (off-picture to right). The track continues south into the distance, becoming gradually fainter and less defined.



Figure 69 Bad Leathan: ring dyke. Substantial ring dyke forms an almost circular enclosure with a diameter of about 120m. In the photograph, the dyke runs north and westwards, gradually curving round in the distance. The dyke is subject to minor kinks.



Figure 70 Bad Leathan exit. The enclosure has two exits, on the north-east and south-east sides. This shows the south-eastern exit at top, with track running left to right. In the foreground, the sheep have made an informal exit, probably to avoid the muddy condition on the track at this point.

The site is on a gently sloping, grassy slope, with good quality grass, and little heather. It faces the north-west. The grass is considerably better quality than the surrounding area, and has evidently been heavily fertilised at some point. Locally the site is known as "the Acheilidh Greens", or lawns, as a result. In the north-west corner, below the house, there appears to have been several rigs running 30m downhill to the dyke. These rigs are about 20m wide in total (Figure 71).



Figure 71 Bad Leathan: patch of rig and furrow. This small patch is in north-western corner of enclosure, below the dwelling, and is about 20m wide by 30m long.

It would seem that this enclosure had a dwelling within it, whether permanently occupied or just in the summer is hard to gauge. The enclosure could hold up to a hundred head of cattle overnight. The turf dykes are still substantial, and with no nearby settlements were presumably for keeping animals in or out. There does seem to be some limited evidence of arable cultivation in one area and possibly a kailyard associated with the structure within the enclosure. There is a long tradition of common grazing on the site. It may be that this formed a cattle stance with a dwelling within the stance. If so, any crops grown would have to be harvested before the autumn droves, although the kailyard seems to have had its own stone wall. It would appear that the routeway enters and leaves the enclosure on its east side. The shape is almost circular and quite different from the rectangular forms elsewhere. This will be discussed further in Chapter 9. Presumably the dwelling could have provided accommodation for the drovers, and this relationship is also picked up in the discussion chapter.

5.2.8 The route from Bad Leathan to Monbuie

Beyond Bad Leathan the track continues south towards Loch na Saobhaidhe, but begins to disappear as the crest of the hill is reached (Figure 72). However, turning east between the loch and the shoulder of the hill, there is evidence of stock movement with multiple small terraces and cuts in the hill side. The route continues along the southern flank of Meall Meadhonach, above Lochan na Gaoithe. Then the Allt Lochan na Gaoithe is crossed and the northern slope of Meall na Tulchainn ascended. Heading westwards along the 250m contour line takes one directly to the old Broch of Dun-garbh-airigh, and an adjacent ruined pre-Clearance dwelling. The now unoccupied Garvary Cottage is on the other side of the Allt Garbh-Airigh, and on the site of what was once a very extensive pre-Clearance township, which is delineated by a head dyke, nearly 1 km north to south and 0.5 km east to west (Figure 73).

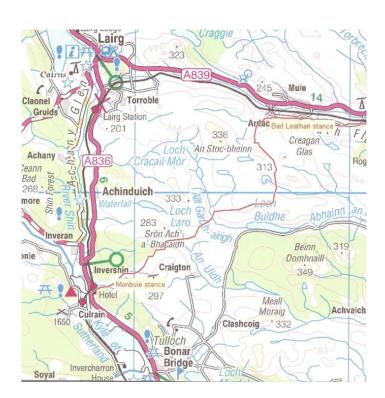


Figure 72 The route from Bad Leathan to Monbuie. The route (in red) runs eastwards round three small lochs south of Bad Leathan to avoid very marshy ground. It then heads southwest towards Monbuie, passing numerous cleared townships (Ordnance Survey).



Figure 73 Garvary. The photograph shows the extensive township of Garvary, including the recently abandoned Garvary Cottage (to which the modern track goes) on the hill towards the top left. The picture is taken from the droving route, which crosses the modern track at this point, and is looking north-westwards.

In the 1980s the cottage was occupied by Mrs Lowe, the widow of the last resident shepherd. Her son, Robbie Lowe of Bonar Bridge, told Donald Mackay of the Scottish Rights of Way Society, that the drove road had run around the three lochs (Loch na Saobhaidhe, Lochan na Gaoithe, and Loch na Faolaig) to Meall na Tulchainn, and thence to Garvary, on its way to Monbuie (D. Mackay *pers comm.*). This corresponds with the oral tradition in Rogart.

The route would appear to go from Bad Leathan to Garvary but swings to the eastwards to avoid marshy going in the natural bowl occupied by the three lochs. The route follows the flanks of low rounded hills, and is much drier and easier going than at the base of these hills.

The route south is marked by a massive boulder in the eastern head dyke of Garvary, and thence to Clais na Faire (Figure 74), a marshy plain at the meeting of the Allt Clais na Faire and the Allt Loch Leisgein, with another boulder marking the route. Crossing the burn and heading south west takes the route to the cleared township of Coirshellach

(Figure 75), which has about a dozen ruined structures. The Henman's Burn then takes the route down to the drover's stance at Monbuie.



Figure 74 Clais na Faire (Defile of the Watching). The photograph is looking south, along the line of the old route which has entirely disappeared into the soft ground. The stone gives a good line for the most direct route to firmer ground.



Figure 75 Coirshellach. The ruined township of Coirshellach has about a dozen structures. This being one of the better preserved. It was cleared before 1820. The photograph looks south-west towards the valley of the Shin and the Kyle of Sutherland in the top right.

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5.2.9 The stance at Monbuie (NC 2598 8965)

The township and market stance of Monbuie consists of two structures; one inside the stance and one outside the stance, together with a substantial turf dyked enclosure, and also a dam and pond on the Henman's Burn (Figure 76). The upper structure seems to be two dwellings or possibly a dwelling with byre attached. The northern dwelling of the upper structure is nearly 20m long with a door on the east side, and just over 4m wide. This is the side sheltered from the prevailing wind. There is a small roundel of stones set into the turf (Figure 77), outside, also on the east side. This would appear to be too small for a threshing floor, and might represent a base for stacking corn or alternatively be an external camp fire. The walls are 0.7-0.8m thick. The southern dwelling (Figure 78) of the upper structure is about 13m long, again with a 1m door on the east side. Interestingly the lengths of the gable-ends of both the northerly and southerly buildings are less than the centre wall which divides them both -- this is 4.8m, whilst the end walls are 4.2 m. The southerly building is not fully keyed into the central wall -- suggesting that the northerly building is older.

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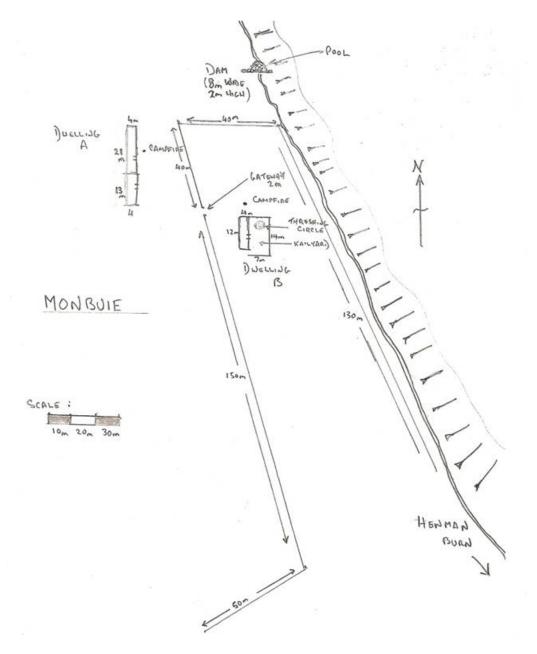


Figure 76 A measured sketch map of Monbuie. The site appears to have two dwellings. One is outside the turf dykes and on slightly higher ground. This has two sections. The other is within the enclosure and has a kailyard or garden attached. There are turf dykes on three of the four sides of the enclosure. There is no southern dyke to the enclosure because this end runs into a boggy area, which becomes progressively worse.



Figure 77 Monbuie. Roundel of stones just outside the longhouse on its eastern side. There is a similar roundel of stones to the north of the other dwelling. They may represent camp fire sites for passing drovers.



Figure 78 Monbuie. This is the south gable wall of a longhouse, which is situated just outside the stance.

The lower structure sits within the stance itself. The building (Figure 79) is 12m long by 4.4m wide. Like the other structure, it has a door of 1m on the east side. Within the structure is an exceptional hearth-stone (Figure 80) being about 1m square and about 10cms thick. This sits in the middle of the floor, opposite the door, and is now substantially covered by grass. To the east of the gable, is a similar small roundel of stones to that outside the first building, set into the turf -- about 1m in diameter. There is also a much larger (2.5m) roundel of stones, which may be a threshing circle, to the east of the house, within an enclosure or kailyard. This garden or kailyard is 14m by 7m and lies to the east of the dwelling, with an entrance or gate at the south-east corner of the dwelling. It is similar in size to that at Bad Leathan, and presumably the walls were built to prevent the trampling of root crops when the stance was occupied.



Figure 79 Monbuie. This photograph looks north towards firstly the dwelling and kailyard within the stance, and then on to the substantial longhouse in the background. A turf dyke (invisible due to long grass) lies between them.

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Figure 80 Monbuie. This shows the hearth-stone, still in position, within the dwelling inside the stance.

The stance or grassy field is contained on three sides by dykes. It runs southwards into boggy ground. The dykes are of stone and earth, and form a rough parallelogram with sides of 150m and 40m. The southerly side is missing as the land runs into the moss, (Moine meaning mossy or boggy) although there is a 50m extension, running south-west of the westerly dyke. The easterly dyke skirts a burn. The dykes stand between 0.5 and 0.7 m high, and are 0.7 m wide. There is a 2.4m gate in the dyke, on the line of a path between the two structures (Figure 81). Presumably there was no need to build the fourth side, combined with the difficulty of finding an adequate foundation on such soft ground. The extension of the dyke may have been intended to keep cattle from straying westwards and back onto firmer ground. The entrance via the westward side leads from firmer ground to the north and west of the stance. It may suggest that the herds were predominately coming from the north as it would be awkward to navigate round the boggy ground to the south. It also gives easy communication between the two dwellings.



Figure 81 Monbuie. The photograph looks south from the longhouse outside the stance to the dyke which runs from right to left across the middle of the picture. The entrance to the stance is in the centre left. Beyond this lies the dwelling and kailyard within the stance.

There is an earthen and stone dam on the burn, just east of the stance, and the dam still stands about 2m high (Figure 82). There is a pond behind it (Figure 83). An adequate supply of water in all weathers would be important for a stance or market.



Figure 82 Dam across the Henman's Burn. Dam standing 2m on Henman Burn. Probably maintained by shepherds into the twentieth century.



Figure 83 Pond created by dam, adjacent to cattle stance. The dam created a substantial pond (even in summer) just a few metres to the east of the stance site.

In 1811, in Patrick Sellar's listing of the entire Sutherland Estate's landed assets, Invershin is shown as held on a 19 year lease by Gilbert McKenzie for an annual rental of £50. The lease was to expire in 1820. The Sutherland Estate, however, held under reservation "the Market and resting place of Monubuie and dues uplifted thereat" (Adam 1972: i 55). So there is documentary evidence of Monbuie being used as a cattle market and stance. In 1814, Gilbert McKenzie went bankrupt and by 1815, the land had been converted into a sheep farm at the annual rental of £220 (Adam 1972: i 152). It is unclear whether the market stance continued to be operated by the Estate after this time.

5.2.10 The route from Monbuie to Port na Lice

The route continues for about 1 km towards another cleared township at Shian, just upslope of a boggy plain, and thence down a hillside to Invershin and Port na Lice. Port na Lice was a crossing point of the Kyle of Sutherland at the narrows where the railway now crosses from Culrain, by way of an 1867 iron bridge with a 70m central span. It is directly across the road from the Invershin Inn. Some remains of a rough stone jetty remain. The crossing into Ross-shire across the Kyle is about 100m at this point (Figure 84).

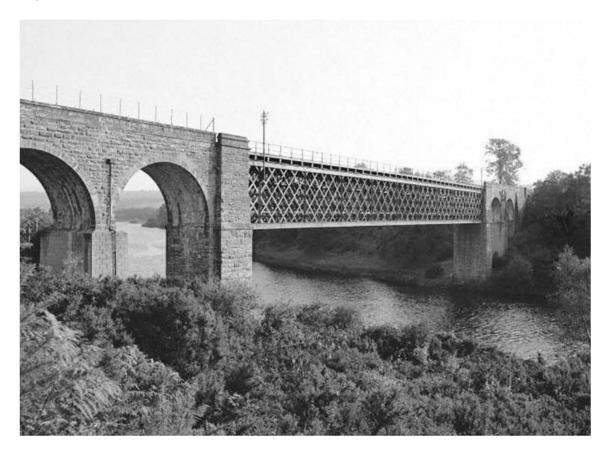


Figure 84 Invershin Railway Bridge and Port na Lice. The main span of the bridge is 70m. It was built by Joseph Mitchell for the Sutherland Railway Company. This photograph is taken from the north bank of the Kyle of Sutherland, looking eastwards. Port na Lice, the historic crossing point is just a few metres to the east, through the span of the bridge.

In 1801, the lease to Gilbert McKenzie for Invershin also reserved for the Sutherland Estate, "power to resume possession of 30 acres next adjacent to Portanlick, tenant having a fair deduction of rent therefor" (Adam 1972: i 55). Presumably this reservation of right was in relation to the crossing, and the possibility of a bridge being built there, (which actually was constructed just down the Kyle, by Thomas Telford, at Bonar Bridge in 1812).

In the Old Statistical Account (1791-99), the Minister of Criech commented thus: "There are no bridges in this parish; but there are four or five ferries between it and that of Kincardine (Easter Ross), which are crossed by cobbles or yawls, and boats that can ferry over two horses each or more. The people in this parish and neighbourhood have been amused from time to time with hopes that a bridge was to be built over the Kyle, at Culrain, about four miles above the church at Criech, at the expense of the government. It would be a great advantage to the inhabitants of this district in particular, besides the emolument that would accrue to the community at large, if the public road around the

ferries were brought this way by a bridge. Such a bridge would be particularly convenient for drovers; all the cattle driven to the south from Sutherland, Caithness and Lord Reay's country. Except the parish of Assynt, having hitherto been obliged to cross the Kyle by swimming; which, when the weather is bad, and the Kyle much swelled by rains, hurts the cattle greatly, especially when the night following proves cold. Sometimes they refuse to swim, in which case they must be ferried over by the cobble. The people pretend to foretell whether they shall have a good market or not by their readiness to swim" (OSA 1791-99a: Vol 8 372).

There is also a reference in the New Statistical Account 1834-45 for Criech Parish that suggests that the market may have moved from Monbuie to Bonar Bridge sometime just before 1834. It comments: "The great Kyle markets, as they are called, for the sale of cattle of Sutherland and Caithness, are now held here, in the months of July, August and September. A suitable piece of ground is enclosed for the purpose, and the convenience of the public will be greatly promoted by the desertion of the very inconvenient place at Portenleik, where they have hitherto been held" (NSA 1834-45, Vol 15: 20-21). It might be surmised that this refers to Monbuie, which would now indeed be very inconvenient. It stands above Port-na-Lice. By 1834, the hinterland of Sutherland had been largely cleared of people, and the routes past the various townships to Monbuie were falling out of use. Sheep had taken over from black cattle as the main export product of the county, and they could not swim the Kyle of Sutherland at Port na Lice. At Bonar Bridge, by contrast, there was a new bridge, suitable for the transport of sheep southwards.

5.3 Conclusion: The end of the road

At one time, this route was part of a nexus of well-used tracks through central Sutherland. At its northern end, it linked to a major communication artery coming southwards from Caithness along the Ca-na Catanach. This drew people and cattle from Thurso and Halkirk, and moved across the Flow Country via Rumsdale to a stance above Forsinard at "Am Bealach" (Glass 2009). Here it joined with the traffic from Strath Halladale. Further south, just north of the Kinbrace stance, the route was joined by another from Strath Naver. At Kinbrace, there was a choice of either going down to the coast at Helmsdale or continuing through central Sutherland along the routeway outlined above. Up until 1800, this was a vibrant and important communication link, and it flourished because it was useful.

The route disappeared because it ceased to be useful and that disappearance was as dramatic as any in British history. It only remains known via oral tradition, early cartographic evidence and the archaeology on the ground.

As is well known, between 1810 and 1820 there was a huge demographic change with the vast majority of the people of inland Sutherland being removed to the coast, the Lowlands or abroad, as a result of the Sutherland Clearances (Richards 2008: 152-235). As a result, the many local tracks and paths, from hundreds of townships, which connected with this route through the centre of the county, were no longer required.

A series of communication improvements made the coastal route dominant after 1816. Firstly, the Kyle of Sutherland was bridged at Bonar Bridge by Thomas Telford in 1812. No longer did passengers have to cross the Kyle by boat, or indeed cattle swim the crossing. Telford then went on to build a dam, carrying a causeway, across Loch Fleet between 1813 and 1816. As a result, the treacherous ferry crossing at Little Ferry was bypassed. This was combined with extensive works carried out between 1803 and 1821 by the Commissioners for Highland Roads and Bridges building new roads connecting Bonar Bridge with Thurso and Wick along the east coast, as well as a route from Bonar Bridge to Tongue via Lairg.

The replacement of cattle by sheep, which was already well under way by 1800, did not of itself mean the end of either droving or the use of this route. In fact the last drovers, such as Alexander Cormack, to use the stances at Kinbrace, Achamor, Bad Leathan and Monbuie would have been driving sheep until the construction of the Sutherland Railway in the 1870s. This then began to undermine the need for the long distance movement of animal stock by foot. With the disappearance of the great sheep drives, the route also became a memory. It had no other useful purpose. The valleys of the Rivers Frithe and Skinsdale became cul-de-sacs with no through traffic. The direct route from Rogart to Invershin was lost. Port-na-Lice became not a crossing point but a fishing beat below the new (1868) railway bridge at Invershin.

I will discuss the major themes revealed by the archaeology of this case-study in the discussion chapter, but it served well to illustrate some of the concerns of the thesis. Linking the content of this case-study back to the main arguments, there were archaeological examples of both continuity and change in the nature and shape of the cattle stances. Some were overtly rectilinear, whilst others such as Bad Leathan were very

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different in form. The route itself appears to reflect an ancient trackway, but at the same time was amended by such things as the deconstruction of the Sciberscross stance. Indeed the whole routeway disappears in quick order as a result of human agency in the early nineteenth century; for the context of this case study are the Sutherland Clearances of 1810-1820. The seasonal practice of driving cattle long distances is left imprinted on the ground in many parts of the route, as the drovers made their way through the landscape as wayfarers. At times the route respects open field systems and invites a consideration of the relationships between travellers and those travelled past. This is reinforced by the situation of the stances near or adjacent to townships and dwellings. All of these points will be discussed in more detail in Chapter 9.

6 Fieldwork on a droving route in Cowal and Loch Lomondside

6.1 Introduction

The research agenda applied to this study of the archaeology of cattle droving in Cowal was exactly the same as that used in Sutherland, being based on context, practice and agency, and form (see Chapter 4: Methodology). The research remained centred on commercial practice and changing social relationships in the Scottish Highlands before and during Improvement. At the centre of this is the tension between change and continuity. The context for the study is the growing specialisation in cattle rearing in upland areas of the Scottish Highlands during the seventeenth and eighteenth centuries. The seasonal patterns of droving, as revealed by the surviving archaeology, are the focus of the study. The analysis of the form and nature of that evidence then builds towards a wider ranging discussion later in the thesis.

This droving case study area was selected to compare and contrast with Sutherland, and thus further explore the research questions posed by the thesis. This area is very different from central Sutherland. It is in the southern Highlands, and quite close to Lowland markets. Argyllshire as a county was an early adopter of Improvement (Devine 1994: 32-54), led by its greatest landowner, the Campbells of Argyll. The case study area saw extensive sheep farms introduced from the mid eighteenth century onwards, especially on the Colquhoun and MacFarlane Estates in Dumbartonshire (MacFarlane 1922). There was little forced Clearance, however, and the rural areas were never totally depopulated (Campbell 2004). As with Sutherland, I had access to an archive (in this case, that of the Stuarts of Bute at Mount Stuart) which had records relating to the cattle trade going back to the late seventeenth century. Finally, the removal of the huge autumn Tryst from Crieff to Falkirk around 1770 gave the possibility of studying certain routes, especially to the west and north of Loch Lomond, which fell out of use relatively early in a way which did not happen in Sutherland. All of this pointed to the possibility of an interesting comparative exercise in relation to the field work previously carried out in Sutherland.

Haldane's account of droving in Cowal and Bute is remarkably sparse (Haldane 1952: 98-99). The only route shown on his map, for example, connects Strachur and Dunoon, and would seem to relate to the nineteenth century, when cattle was certainly shipped in large quantities from Dunoon. Even this is problematic, as he shows the route going west of

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Loch Eck. This is challenged by Angus McLean, who has produced a rather more comprehensive map of the "ancient drove roads of Cowal" (McLean 2001: 163). Another excellent map, based on local tradition, is in Dunoon museum and was drawn by the late Archie McNaughton. Not surprisingly, this seems to relate to the last phase of droving in the nineteenth century. From Cairndow, at the northern end of Cowal, Haldane shows both the north-easterly route to Inverarnan, through the Larig Arnan, and also the easterly route to Luss, via Loch Lomondside. He does not, however, show the alternative routes south from Arrochar which ran either down Loch Long or through the hills via Glen Douglas.

This case study area starts on Bute, and then seeks to follow the cattle as they made their way off the island at Rhubodach, heading either to Crieff Tryst or to Dumbarton Market, the crossings of the River Leven (Figure 85) and Glasgow. I am largely concerned with the period before Falkirk supplanted Crieff as the greatest cattle market in Scotland (around 1770). Both were held in the second week of October each year. As such, many of the cattle coming off Bute went north through Cowal and around the northern end of Loch Lomond with Crieff as their destination. For example, it is known from the Minute Book of the Argyllshire Commissioners of Supply that cattle from southern Cowal were being moved through the Larig Arnan to Inverarnan en-route to Crieff (Argyllshire Commissioners of Supply 1772). Equally, it is clear from documentary records that many cattle went to Dumbarton cattle market, or indeed to other lowland cattle markets, held throughout the summer months from the seventeenth century onwards, such as Doune and Stirling (Argyllshire Commissioners of Supply 1762), as well as to the growing city of Glasgow.

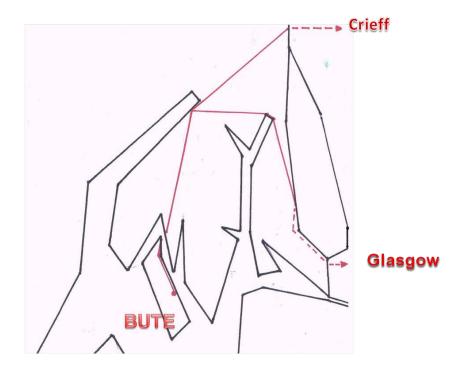


Figure 85 Bute to Crieff and the lowland markets. Stylised map showing approximate direction of flow of cattle from Bute to Crieff and lowland markets (such as Glasgow) before the rise of Falkirk Tryst (circa 1770). Continuous red line indicates the route of this case study. Dotted lines indicate a continuation towards markets.

It should also be noted that some cattle from Bute are known to have been rendered to the Royal Court at Stirling in the fifteenth and sixteenth centuries according to the Exchequer Rolls of Scotland, and these may have been ferried from Scoulag to Largs (Markus 2012: 434), rather than being driven via Colintraive. There is, however, no record of extensive export of cattle from Bute across the Firth of Clyde.

Firstly, I looked at sites relating to the droving of cattle on Bute, from the collecting point outside Rothesay to the crossing at Rhubodach, across the Kyle to Colintraive (Figure 86).

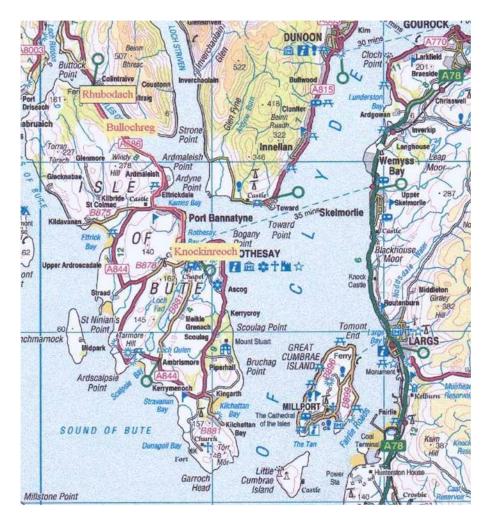


Figure 86 Sites on Bute which may have had cattle droving associations. In the mid 18th century, the fields at Knockinreoch, to the west of Rothesay, were used to gather cattle on behalf of the Stuart Estate, and place these into the hands of Alexander McGregor, drover. Bullochreg and Rhubodach may also have droving associations (Ordnance Survey).

Secondly, from Colintraive northwards to Cairndow, in Cowal, I did not attempt to walk the droving route because the intensive afforestation in southern Cowal made this both difficult in practical terms and also had destroyed much of the ephemeral evidence of the droving routes. Instead I surveyed a number of droving related sites (Figure 87), which may have seen cattle from Bute heading either northwards to Cairndow, or eastwards to the crossings of Loch Long. These are the possible stances at Coille Mhor, Tigh Caol, and Cairndow and the crossing point at Port Dornaige over Loch Long.

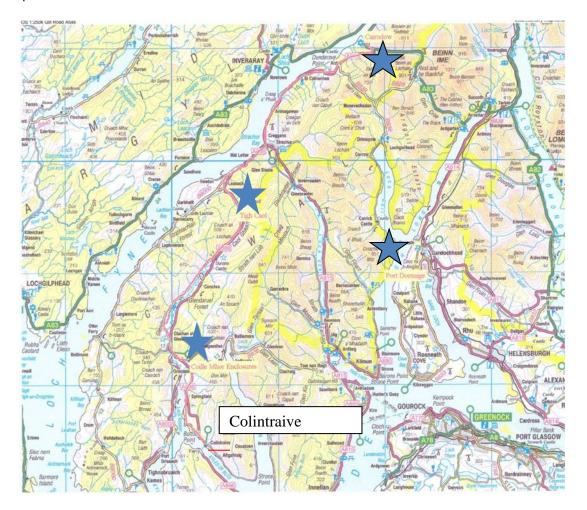


Figure 87 Colintraive to Cairndow. Map showing possible stances at Coille Mhor and Tigh Caol, as well as at Cairndow. In addition, a ferry shipping cattle across Loch Long is indicated at Port Dornaige. Sites marked by blue stars (Ordnance Survey).

Thirdly, going north from Cairndow, I walked north-eastwards through the Larig Arnan and stopped at Inverarnan (Figure 88), with its droving-related inn.

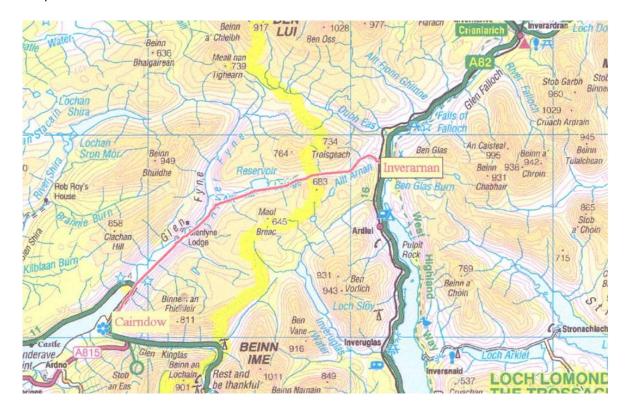


Figure 88 Cairndow to Inverarnan. Route of major droving road (marked in red) from Cairndow to Inverarnan via the Larig Arnan. This fell out of use in last quarter of eighteenth century (Ordnance Survey).

Fourthly, I walked eastwards from Cairndow to Luss on Loch Lomondside (Figure 89). This route leads directly to the crossings over the Leven at Balloch and Bonhill, as well as Dumbarton with its ancient Lammas (August) cattle market, later supplemented by a Whitsun market on Dumbarton Muir (from 1762). I also explored alternative routes to the Rest and Be Thankful descent into Glen Croe (which was engineered by the British Army, and was completed in 1749). There are possible stances at Stronafyne, Invergroin, Upper Glen Kinglas, Inbhir-Laraichean and Luss.

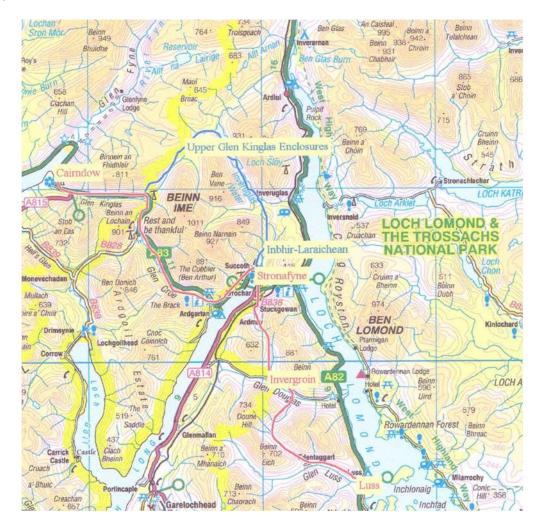


Figure 89 Cairndow to Luss. This map shows the route of a droving road walked via the "Rest and Be Thankful" pass from Cairndow to Luss (red). It also shows an alternative route via Loch Sloy (blue). Cattle stances are indicated by name and appropriate colour (Ordnance Survey).

Lastly, I draw some conclusions on this case study area in relation to the research questions posed at the outset of the thesis.

6.2 Bute

Documentary evidence in the archives at Mount Stuart indicated some specific areas worthy of attention. Detailed work was undertaken on the rent books, 1695-7 and 1746-48 (MS, Papers of the Stuarts of Bute).

6.2.1 Knockinreoch (NS 0801 6501)

The rental books (1695-7 and 1746-48) suggest that several thousand cattle were kept on the island in the early eighteenth century, and that at least five hundred, and possibly more,

were driven off the island annually. References in the 1746-8 rental books would indicate that cattle were gathered by the estate at Knockinreoch. In 1746, an allowance is made for fodder provided for Alexander McGregor and James More's cows in individual farmer's rental accounts with the Stuart Estate. In 1747, a list of allowances is made against rentals, which include cattle "being put into Knockinreoch". In 1748, the rental book is more specific with a provision of "hay for the grazing of Alexander McGregor's cows on My Lord's account". Presumably cattle given to the estate, allowed against rentals, and placed into Knockinreoch (which is on the west side of Rothesay), would have required grazing until moved off Bute in a drove to market. When the estate cattle were moved, it may be they would be joined by cattle from the estate tenants. Detailed estate maps from the eighteenth century survive (Fig 90). Knockinreoch today (Fig 91) is much improved grass pasture, with modern fencing. It is not possible to discern any sort of dykes, and the subdivisions have been removed in order to form a substantial field which is flattish at the top and slopes progressively more steeply down to backs of Victorian villas which fringe the bay. Interestingly the road past Knockinreoch to the immediate south, is called "The Common Lonning" in the Peter May Estate Map of 1780. This commemorates the regular movement of cattle from the town to the west common pasture land inland. The road is shown as exceptionally wide being approximately one chain (approximately 22m) in width, and thus suitable for the movement of cattle. This may account for why Knockinreoch was selected by the Bute Estate for the gathering place for cattle to be driven to market.

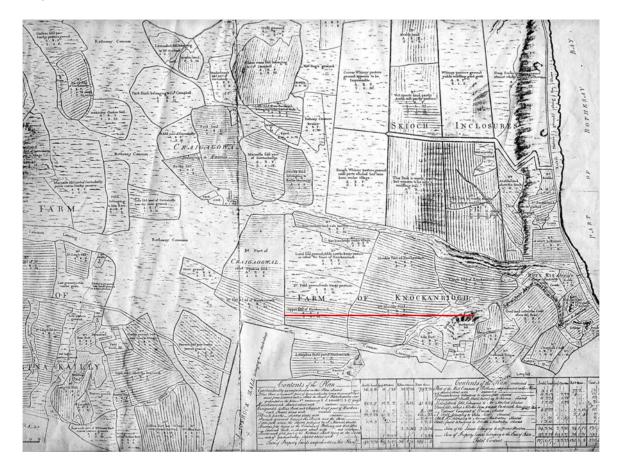


Figure 90 Bute Estate Map, 1780-82, by Peter May. This shows the Farm of Knockanreoch (underlined in red) which is partly arable and partly grazing. This was where cattle was collected in the mid eighteenth century according to the Estate rent book. The wide road to the south is labelled "Common Lonning" and connects Rothesay with common grazing land. (By permission of the Bute Estate).



Figure 91 Knockinreoch. This shows the large field of Knockinreoch sloping eastwards down to Rothesay Bay. Cattle was gathered here in the mid eighteenth century prior to being driven to market.

6.2.2 Bullochreg (NS 0385 7235)

Bullochreg is an old, deserted farming township on the most likely route to the crossing, and about 1km south of it. Place name evidence suggests that this might have been associated with herds heading to Cowal. "More likely therefore is buaile-chreag (as McLea clearly thought from his spelling of the name), 'cattle-fold rock', the specific element being in this case the first one – which is unusual for Gaelic place-names" (Markus 2012: 420). Again, a detailed estate map of the area by John Foulis in 1759 survives, and shows the township (Figure 92). Today the physical remains of the township have been largely obscured by tree planting. "In 1864 Bullochreg was described as 'an old farm steading recently added to the farm of Rhubodach'. The site is now mostly covered in forestry, but footings of some buildings can be seen, and a corn-kiln survives upstream from where the houses were (Hannah 2000: 55). The buildings and nearby field-systems of rigs (which are easily identified) are about 600m upslope from the coast, and about 200m

above the line of the raised beach which runs parallel to the sea here. The road to Rhubodach ran and still runs along the coast and below the cliffs of the raised beach, which might form the rocks referred to in the place-name. It would be a logical matter to have a cattle-fold or stance between these low cliffs which are about 20m high and well-rounded and the real beach. This land continues to be reasonable pasture, watered by several burns (Figure 93). There is, however, no indication of where such an enclosure may have been.

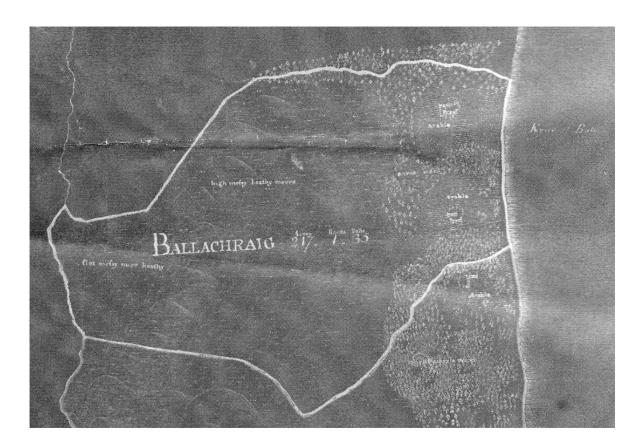


Figure 92 Bute Estate Map, 1759, by John Foulis. The farming township of Ballachraig, south of Rhubodach. The road to the crossing ran along the shore, with the township dwellings, slightly inland, above the raised beach, with arable land adjacent. (By permission of the Bute Estate)



Figure 93 Bullochreg. The photograph, looking north, shows the land between the coast and the raised beach to the left. The dwellings and arable land of the township were above this raised beach, in what is now a wooded area.

6.2.3 Rhubodach (NS 0275 7433)

Oral history (Hannah, A. *pers.comm.*) and a modern place name study (Markus 2012: 432) suggest that cattle were swum across the Kyles of Bute at the north end of the island. The crossing is less than 400m. Colintraive is derived from the Gaelic, Caol-an-t-snaimh, the narrows (caol) of the swimming (snaimh) (Markus 2012: 432). Equally, the old name for Rhubodach was Rhuantraive, first identified in a legal document in 1540. Again this refers to the point (rhu) of the swimming. Above the crossing point, on the Cowal side, is a farm named Ardentraive, or heights (ard) of the swimming. The something that was doing all this swimming was black cattle coming off or onto the island of Bute. In the nineteenth century, as ferry boats got bigger and thus more economic for moving large numbers of cattle, an attractive option to swimming the cattle was to ferry cattle over in boats. However, drover margins were notoriously tight and it is unlikely that much money was wasted on the luxury of boats before the Napoleonic wars. Even in modern times, cattle have been known to swim the crossing (Markus, G. *pers.comm.*).

There are no signs of cattle stances here, but both on the Bute and Cowal sides, there is ample flat land to marshal and collect cattle before and after a crossing. The fields around Rhubodach have been much improved and are either fenced or have rectilinear stone walls from the late eighteenth or early nineteenth centuries.

6.3 Southern and Central Cowal

Crossing the water at Colintraive, and bearing in mind that cattle may well have been coming the other way also for winter pasture on the low lying paddocks of Bute, a gathering-place or stance might well have been expected at or near Colintraive, but the situation is similar to that at Rhubodach.

6.3.1 Northwards from Colintraive

When heading north from the crossing at Colintraive, it is apparent from cartographic evidence that the route has altered several times.

The Roy Map (1747-55) shows no route north from the crossing, but rather a route south, around the promontory at South Hall and then northwards up the west side of Loch Striven, where it stops. There is a route north up Glendaruel, but this only starts at the mouth of the River Ruel at the head of Loch Riddon. From there the route crosses the River Ruel at Clachan of Glendaruel, and then goes north up the west side of the glen. This appears to echo the sketch map of William Edgar (1745) which also shows the river crossing at the Clachan (Figure 94), as well as settlements at the head of Loch Riddon, including Auchinbreck.

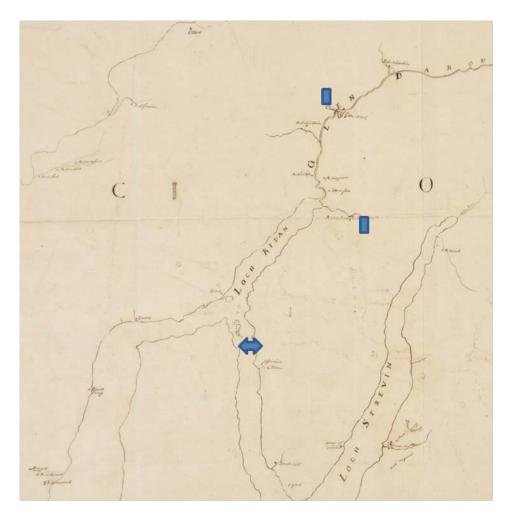


Figure 94 Sketch Map of Cowal by William Edgar, 1745. This map shows both Auchinbreck and Clachan of Glendaruel (blue rectangles) and the crossing place at Colintraive (blue arrows). (By permission of the British Library)

Clearly there was a connecting track between Colintraive and Glendaruel, and this is first shown by Langlands in 1801 (Figure 95). However, according to the memorial addressed to the Commissioners for Highland Roads in December 1804 there was then no adequate communication between Colintraive and Inverary, especially for the movement of herring from Loch Fyne southwards, which would have required wheeled transport (Haldane 1962: 211-12). By 1812, the new road along Loch Riddon, up the east side of Glendaruel, along the Caol Glen, past Leanach and Strachur and up to the military road in Glen Kinglas, above Ardkinglas was virtually complete (Haldane 1962: 93). The importance of the Langlands map is that it shows the road position prior to this major piece of road-building and it is noticeable that from Colintraive the route runs along the coast as far as what is now Ardachuple Farm (then Ardincaples) and thence on a line past the site of Auchinbreck (then Achinbreck), with its important medieval castle, now largely disappeared. This is the drove road shown by Angus McLean's sketch map of Cowal drove roads (McLean2001:

163). Just north of Auchinbreck, and south of Taunich (then Taunach), the road meets the major east-west route taking traffic from Otter Ferry to Dunoon and the Holy Loch.

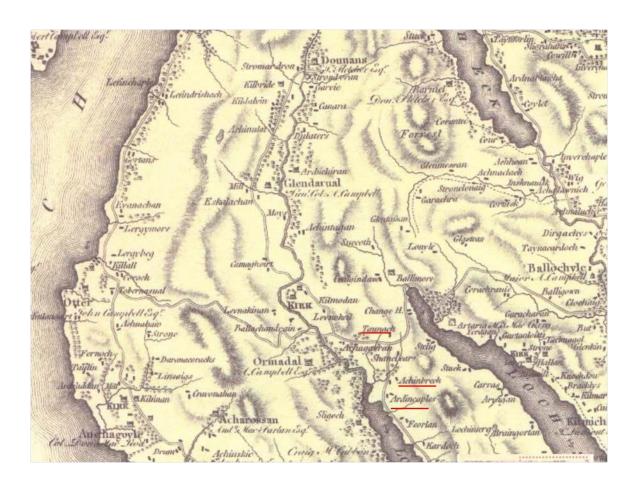


Figure 95 Langlands Map of Cowal, 1801. This map was drawn just before the construction of the new road (1804-1811) by the Commissioners for Highland Roads. It shows the road from Colintraive turning inland at Ardincaples, going past "Achinbreck" before meeting the main east-west road at a junction, south of "Taunach". All are underlined in red. (By permission of the National Library of Scotland)

John Thomson's map of 1832 shows the new road then being quite close to the present road position but being to the west of the original line of the track between Ardachuple and Auchinbreck (Figure 96). This is compounded by other road alterations, for by the time of the 1st Ordnance Survey map survey of 1863/64, the Otter to Dunoon road has moved perhaps 0.5km to the south, (Figure 97). There is archaeological evidence for the original line of this old road just south of Taunich and Coille Mhor in the form of a deeply incised trackway (Figure 98). This is one of the ten principal routes of Cowal noted by the Commissioners of Supply for Argyllshire as needing repair in May 1710 (McLean 2001: 168).

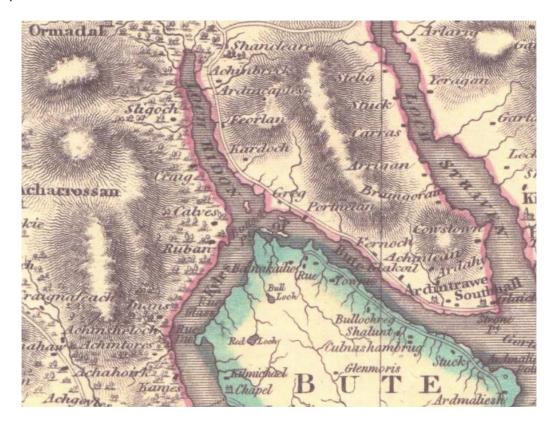


Figure 96 Thomson's Map of Cowal, 1832. Map after the completion of the new road in 1811. The north-south road now sticks closer to Loch Riddon, before meeting the east-west road at the top of the map. (Permission of National Library of Scotland)

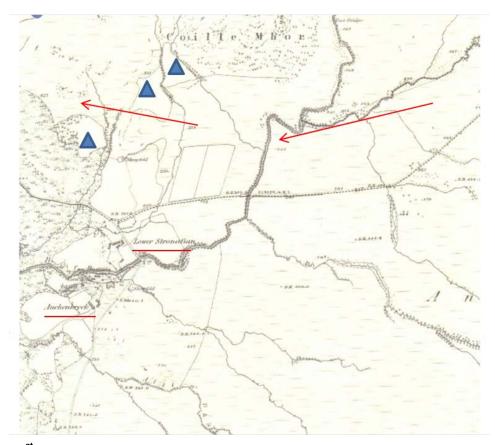


Figure 97 1st Edition OS Map, 1865. Road from the south (Colintraive) goes past Auchinbreck, and meets the east-west road just north of Lower Stronfian (both underlined

in red). This road has moved south in the early nineteenth century, formerly running between the irregular enclosures (marked with blue triangles) as indicated by the red arrows.

It is on this route that Betty Rennie had noted a complex of enclosed fields below and slightly to the west of Coille Mhor as a possible site for a stance (Dorren *Pers.comm*), and this makes sense given that it appears to have been close to the intersection of the line of the old route from Bute, via Auchinbreck, with the original line of the major routeway across southern Cowal from Otter to Loch Long.

6.3.2 Coille Mhor enclosures (NS 0235 8235)

The site at Coille Mhor (Figure 98) reveals a complex of three irregular enclosures on the upper south-facing slopes of the hill, immediately below what was the *Coille Mhor* (the 'big wood'), which is now swallowed up in modern forestry planting. Fortunately, the modern planting over two of these enclosures has very recently been cut down, whilst the third (the lowest) enclosure was never planted over in modern times, although it is now quite densely covered in unmanaged natural woodland.



Figure 98 Old routeway between Otter and Dunoon. This photograph shows the incised (east-west) routeway between Otter Point and the Holy Loch (Dunoon), looking westwards. This is immediately below the two irregular enclosures (Marked A and B), shown on Fig 99,

and the Coille Mhor wood. This is close to the original intersection with the route southwards to Bute, running past Auchinbreck Castle.

The best cartographic record of these enclosures is on the six-inch 1st edition Ordnance Survey map (Argyllshire Sheet CLXXII) which was surveyed in 1866 and published in 1869 (Figure 99).

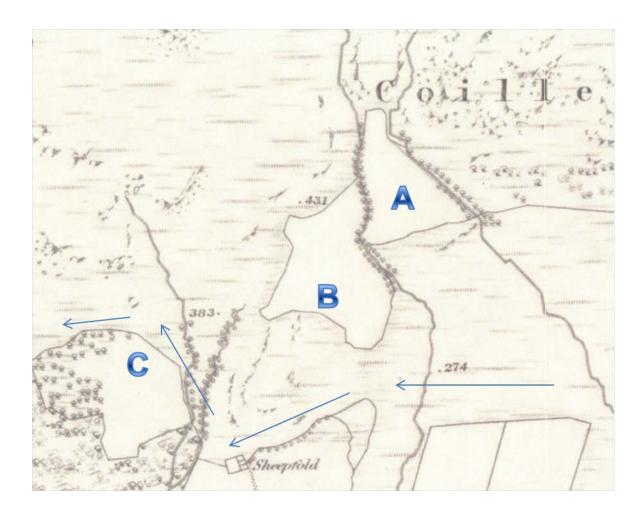


Figure 99 Enclosures at Coille Mhor. There are three enclosures just south of the Coille Mhor wood (A, B and C). The old routeway between the Holy Loch/Dunoon and Otter Point runs between them, as indicated by the blue arrows.. This is incised on the ground. Auchinbreck Castle was about 0.5km to the south, and on the line of the old routeway from Colintraive and Bute.

The most northerly (and highest) enclosure is three sided and marked A on Fig 6.15. It is shaped like an equilateral triangle. Each side is approximately 150m, with two sides running along the sides of burns descending from the upper slopes. These burns are joined at the most northerly point by a well preserved turf and stone dyke which is 1.3m high and 22m long (Figure 100). It is now heather covered but is comprised of a mixture of boulders, stones and turf. The dykes along the burns are much lower, and no more than

0.5m high, whilst the bottom dyke is even lower than this, with only a line of prominent boulders remaining. There is considerable damage from the modern planting and very recent felling. In the south-east corner of the enclosure and entirely within the enclosure is the remains of a small structure (NS 0243 8231) which is 4m by 3m. The walls are 0.5m wide and about 0.7m high. This may represent a bothy (Figure 101). It would seem that this enclosure takes advantage of the natural topography by sectioning off the land between two burns descending the slope, giving it a highly irregular shape. As it is situated in relation to routes that fell out of use by 1811, and is near Auchinbreck Castle which became ruinous in the late seventeenth century, the origins of the enclosure are likely to be at least eighteenth century and possibly considerably older. There is a ready source of water for any stock in the enclosure. There would appear to be a bothy within the enclosure, and this might represent a shelter for drovers or those minding the stock.



Figure 100 North Dyke on Enclosure A, Coille Mhor. This photograph is looking southwards, down and across Enclosure A, with Enclosure B off to the right of the burn seen on the centre right of the photograph. The stone and turf construction is still substantial, and has survived modern tree planting and felling.



Figure 101 Possible rectangular bothy structure within Enclosure A, Coille Mhor.

Photograph is in south-east corner of Enclosure A, and represents a small rectangular structure, just within the enclosure and free standing from the dyke. North wall is closest to camera, with west and east walls visible. Somewhat obscured by recent tree felling.

The second enclosure, marked B on the map, is an irregular quadrilateral. It is adjoining, to the south-west and largely below enclosure A. It is 160m from west to east, and approximately 100m from south to north (with an additional spur of 30 m on its northern side). This enclosure had been badly disrupted in places, by not only the tree planting and felling, but also the creation of a forestry track through it. The southern dyke is best preserved being about 1m high and composed of turf and boulders (Figure 102). The enclosure occupies a saddle of flattish land north of (and just above) the west-east routeway. Again it would appear that the topography is dictating the irregular nature of the enclosure. Once more there is access to water, but no obvious structure within the enclosure. It is comparable in size to the Sutherland stances.



Figure 102 Southern turf dyke of Enclosure B, Coille Mhor. This photograph looks southwards to the southern dyke of Enclosure B which just skirts below a small knoll in the mid-distance. The roadway in foreground is a modern forestry road, and is indicative of the considerable damage to the enclosures caused by tree planting in the very recent past.

Enclosure C lies about 150m from enclosure B. It is a turf dyked oval shape being about 200m from west to east and 150m from north to south. In 1866 it was only partially wooded, largely on its western half. Today the enclosure is wholly covered in mature natural woodland. The enclosure has grassed turf banks which stand just over 1m high and 1.5m wide (Figure 103). A burn runs along its eastern side. The old road from Otter Ferry to Loch Long runs along the northern dyke of Enclosure C, and thence past a sheep-fold, along a linear dyke, and then below (and south of) enclosures A and B. The route is deeply incised in the ground and about 10 m wide (Figure 104). The enclosure is irregular and does have access to water. The dykes are particularly massive adjacent to the routeway. This may represent a long standing dyke designed to divide stock from passing travellers and herds. Again there is ready access to water.



Figure 103 Northern section of Dyke of Enclosure C, Coille Mhor. This shows the turf dyke of Enclosure C, which is now entirely filled with unmanaged native woodland, as compared 1865, when the Ordnance Survey shows it only having trees in its western half. The old Otter to Holy Loch/Dunoon routeway lies outside (left) of the dyke and is heavily incised.



Figure 104 The old Otter to Holy Loch/Dunoon routeway, Coille Mhor. This photograph is looking eastwards and is taken below (south) of Enclosure B. It shows the deeply incised

nature of the routeway, which was said to be one of Cowal's main roadways in 1710 (and in need of repair).

These enclosures are where the west-east routeway across Cowal meets with the old south-north route from Bute. They are about 0.5km north and 200m above the site of Auchinbreck Castle, a principal power base of the Campbells in southern Cowal. They are about 10km north of Colintraive. This would represent an easy day's droving after the crossing of the Kyles of Bute at Colintraive. It may be that the complex of enclosures represents a resting place not only for north-south traffic but also those making their way across Cowal west-east. As such a complex of relatively large enclosures would be useful. They may also have been associated with Auchinbreck Castle and its associated estate.

6.3.3 Northwards from Coille Mhor

Following the route of cattle that were heading in late September for the great Michaelmas Tryst at Crieff (in the period up until 1770, when it dwindled and died), cartographic evidence, noted previously, points to a crossing of the River Ruel at Clachan of Glendaruel, close by Kilmodan Kirk. This is as noted in a 1745 sketch map of Cowal (Figure 94) by William Edgar, and also on the Roy Map (1747-55). From there the route goes along the west side of the glen and north past Dunans which was the seat of the great cattle dealing and droving dynasty of Fletcher. They bought Dunans in 1745 (NAS, Papers of the Fletchers of Dunans, 1745, GD1/1184), and were certainly driving cattle from Dunans to Crieff as late as 1772 (ABCA, Argyllshire Commissioners of Supply, 1772, CA/1) via Cairndow, Glen Fyne, Larig Arnan and Inverarnan, when this was documented as a result of a dispute. Beyond Dunans, the route enters the narrow Caol Glen, where a stance has been identified by the late Archie McNaughton, a local farmer, and shown on his map in Dunoon Museum. From there the route carries on northwards to Lianich, Strachur and St Catherine's. The McNaughton map appears to show droving routes in Cowal in the 19th century, when the direction of the flow of cattle was predominately north-west to south-east, as they headed for Falkirk, and were increasingly shipped across Loch Long from Dunoon and other ferries (McLean 2001 161-315). However, the route from Bute northwards to Crieff must have been in operation from an early period. Indeed the part from Kilmodan (now Clachan of Glendaruel) to Lianich is one of the ten principal roads of Cowal requiring repair by order of the Argyllshire Commissioners of Supply in 1710 (McLean 2001: 169), and the Caol Glen is towards the northern end of this stretch of road.

6.3.4 Possible stance in Caol Glen (NS 0635 9585)

The site is identified locally (Hill, T. *pers. comm.*) with the Cailleach Glas (The Grey haired Old Woman or Witch) Stone (Figure 105) and nearby "Witch's Bridge" (Figure 106), which can be dated to about 1810 (Haldane 1962: 93). The Cailleach is the old woman, earth-goddess, witch figure of Celtic legend (Newton 2009: 227). The only company that she was reputed to keep was that of wild creatures or cattle. Indeed she is often associated with cattle in Scottish Gaelic oral tradition (Newton 2009: 227-230). Nearby, on the high moors, west of Glendaruel is another massive stone, the Cailleach Bheathrach (or the Old Woman of the Beasts). Indeed there are Cailleach stones widely spread in the Scottish Highlands and as far as the south west of Ireland (Newton 2009: 230).



Figure 105 The Cailleach Glas stone. This stone now lies on the east side of A886 road at Caol Glen. About 150m to the west lies the ruins of a former inn, which is associated with a cattle stance.



Figure 106 The Witch's Bridge. This bridge is on the former road between Inverary and Colintraive, engineered between 1804 and 1811 by the Commissioners for Highland Roads. It is associated with the nearby (50m) Cailleach Glas stone, and is about 150 m from Tigh Caol, a former droving inn. It lies on the east side of the present A886 at Caol Glen.

The stone and bridge lie within 150m of the site of an old inn, and both are immediately on the east side of the modern road. The site of the inn is on the west side of the modern road in the bottom of the valley of an incised burn (Figure 107). The ruins of the structure lie just above the burn on a flat piece of ground, which is naturally enclosed by three or four metre high banks. This would appear to be the stance site identified by Archie McNaughton. No turf dykes have been identified, and it may be that the natural features obviated the need for an enclosure.

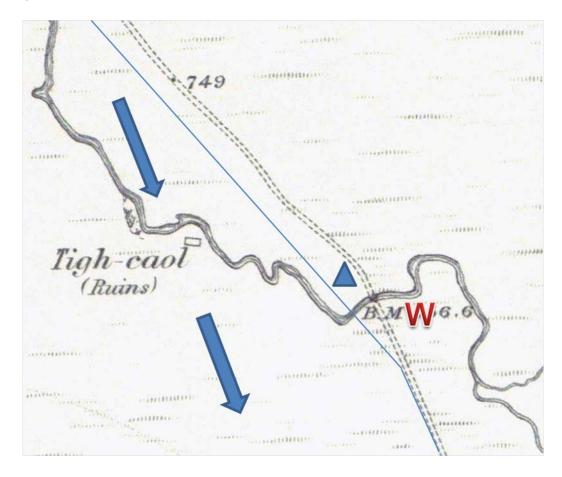


Figure 107 1st Edition OS Map of Tigh Caol, 1865. The road shown on the map is the 1804-1811 road built by the Commissioners for Highland Roads. Witch's Bridge is marked "W" (red). The modern road is shown by the blue line. The Cailleach Glass stone is marked with a blue triangle. The blue arrows show the approximate line of the droving road past Tigh Caol, as revealed by Google Earth.

The site is described by the RCAHMS (NMRS number: NS09NE 5) as "the ruins of what was formerly an inn" Name Book 1870.

A single unroofed building is depicted on the 1st edition of the OS 6-inch map (Argyllshire sheet clii) but it is not shown on the current edition of the OS 1: 10000 map (1977).

The site was marked on Ist Edition 6in OS map as "Tigh-caol (Ruins)". This area was surveyed in 1865 and the map published in 1870. It does not appear on the 2nd Edition or subsequent maps. The name 'Tigh Caol' may suggest that the best translation is House of the Narrow (Glen) situated as it is in Caol Glen ("the narrow glen"). Certainly at 5.5m the building is not particularly narrow. The name also suggests that it was the most significant domestic structure in the glen.

The inn building externally is 18.5m long (east-west), and 5.5m (north-south) wide. At the western end is an internal division by way of a stone wall, which is approximately 5m from the western gable. The walls are of stone and stand to a height of about 0.5m (Figure 108).

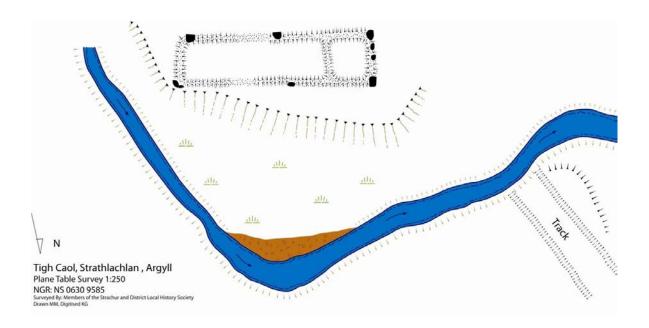


Figure 108 Tigh Caol plan. This is the result of a plane table survey carried out by members of the Strachur and District Local History Society facilitated by Kevin Grant and Donald Adamson of the University of Glasgow in 2013.

In construction, the building appears to be little different from many others in the vicinity. An excavation is planned in 2014 by the local history society. This should answer questions about the nature of the building such as the construction of the walls and floor levels, whether there was a central drain, the location of the hearth and midden. Any artefacts recovered may be able to confirm its status as an inn, and when it ceased to be occupied. It may be that there were never turf dykes around the structure, as it is set in a natural bowl, and well tucked down out of the prevailing westerly winds. There is ample water on site (Figure 109).



Figure 109 Tigh Caol Inn. This former inn was abandoned and roofless when surveyed by the 1st Edition Ordnance Survey in 1865. It was not recorded on subsequent maps. This photograph is looking north-east, from the top of one of the surrounding banks, and shows the rectangular structure of the building.

Google Earth reveals a linear feature running past the western end of the building and up a hollow in the bank (Figure 110). This runs for at least 500m in both directions before disappearing under new forestry planting. This is assumed to be the line of the old track referred to in the 1710 minute Book of the Argyllshire Commissioners of Supply. It was replaced by the road built by the Highland Commissioners of Roads (1804-1811), and this in turn was replaced by the current road in the 1970s. It may be that the building owes its existence to this routeway which links Glendaruel to the south with Strachur to the north. It passes within a few metres of the western gable.



Figure 110 Route past Tigh Caol Inn, looking northwards. The arrows show the line of a routeway past Tigh Caol. The rectangular outline of the former inn is just visible on the flat land, south of the burn, and north of the clumps of gorse which line the top of banks above the site (circled in blue). The route goes between two of these, ascending the embankment.

6.3.5 Caol Glen to Cairndow

If heading for Crieff Tryst, it is about 22km from Caol Glen to the stance at Cairndow. Although this is a fair stretch, the terrain is fairly gentle, and should be well within the compass of professional drovers. They would be joined by cattle coming from Strath Lachlan and also from Loch Eck in the pre-1770 period. It seems likely that, as now, the route avoided the immediate policies of Ardkinglas Castle (House) and followed the contour to join the route through Glen Kinglas at or around Bad Darroch. From there, it is only a short descent to the village and stance at Cairndow.

6.3.6 Eastward from Coille Mhor stance to the Loch Long shore

Of course, not all the Bute cattle would have been heading for Crieff, even in the period prior to 1770. Dumbarton had an ancient Lammas (August) cattle market that was certainly in existence before 1600 (MacPhail 1979: 84-95), and also imposed tolls on cattle crossing the River Leven heading for Glasgow and other lowland cattle markets, such as Doune and

Stirling. The Dumbarton market was supplemented from 1762 by Dumbarton Muir tryst (Mitchell 2004: 22-24) which was held in the first week of June. By 1770, Falkirk had replaced Crieff as the great cattle tryst, with its major fair being in the second week of October. These cattle would either have been driven around the head of Loch Long at what is now Arrochar, and thence south of Loch Lomond to the River Leven, or alternatively were driven to the west side of Loch Long, and then swum or ferried across the loch, and thence south of Loch Lomond by way of Glen Fruin to Dumbarton and the other Leven crossings such as at Balloch and Bonhill.

On Loch Long, the wider crossing in the south would probably demand the cattle being ferried in order to prevent stock losses, and certainly Dunoon and district had several ferries taking cattle (Mclean 2001: 292-313) from at least the seventeenth century onwards, and some of these crossed over the Clyde to Renfrewshire. However, it would seem that it was only around 1800 that the trade began to increase in volume, and this led directly to a House of Lords case (1810-1819) when there was a dispute between Campbell of Ballochyle and Campbell of Glendaruel over the latter's attempt to establish a port at Kirn to rival that at Dunoon. Glendaruel stated in that case that the transport of cattle between Argyllshire and Renfrewshire had lately grown so much that he was intent on building a new harbour at Kirn for both cattle and passengers (McLean 2001: 304).

To the north, there were two main crossing places of Loch Long. These were between Ardentinny and Coulport, and between Mark and Portincaple. Both were ancient ferries, and both had the possibility of cattle swimming the loch, which narrows towards the northern end, and would be highly attractive to the drovers. This was not only a matter of money, but also the time spent on ferrying a large drove across Loch Long on a small boat. The more northerly of the two seems unlikely for cattle from southern Cowal and Bute since it connected to a droving route coming from Loch Fyne and running south-east to Lochgoilhead, and thence to Mark (where a ferry inn once stood) via a central ridge with an area of flat ground on top, known as the Duke of Argyll's Bowling Green, but perhaps more properly 'Buaille-an Grian' (the sunny cattle fold or stance) (Mitchell 2000: 25-26). Instead, the other crossing between Ardentinny and Coulport seems more likely for the Bute cattle. Just north of Ardentinny, the loch narrows markedly and there was a ferry from Port Dornaige to Port an Lochain.

6.3.7 The ferry at Port Dornaige (NS 2012 8990)

Port Dornaige is first shown on the Pont map 16 (1583-1601) when it is called Portindornaig (Figure 111). The name is said to refer to the nature of the small harbour, being 'Port' (a harbour) of the 'Dorn' (fist, or stones the size of a fist) (McLean 2001: 276). This is an accurate description of the site. It is mentioned in a legal document of 1669 as "Portindornock with ferry boat"; in the Argyllshire Commissioners of Supply Order of 1710 for improving roads; in a court case in 1749 in relation to unpaid ferry dues of corn; and in a Petition of 1772 to increase the ferry charges including those for "bound and laid" and standing cattle (McLean 2001: 275-278). It is also shown on the 1801 map by Langlands (1801), but by the survey by the Ordnance Survey in 1865, it was in ruins (Figure 112).

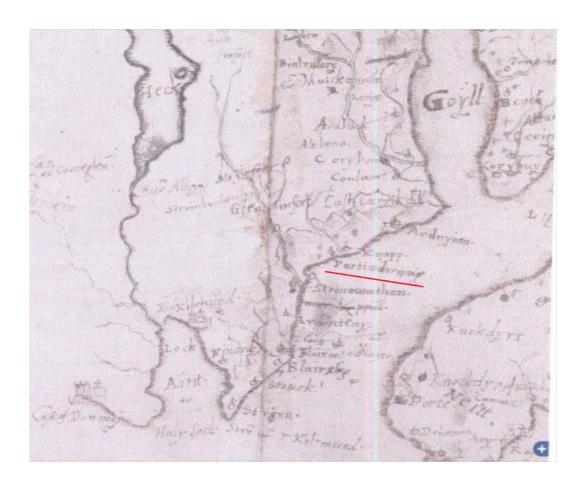


Figure 111 Pont Map 16, 1583-1601. Map by Timothy Pont showing Loch Long. "Portindornaig" is shown in centre of map underlined in red. (Permission of National Library of Scotland)



Figure 112 Port Dornaige, 1st Edition OS map, 1865. This shows Port Dornaige in 1865 when first surveyed by the Ordnance Survey. Buildings are ruined, but the enclosure to the south has not yet become overgrown. The buildings survive in a degraded state as marked, but the burn to the north of the dwelling appears to have shifted, and now comes down to the beach between the house and the enclosure.

Port Dornaige is a ruined dwelling with attached enclosure, on the west side of Loch Long, and is situated on a small, rocky bay (Figure 113). The main structure is 8.2m x 5.6m externally and runs roughly north-south facing the shore and natural harbour (Figure 114). It is built of rough undressed stone. There would appear to be a fireplace built into the north wall, and a blocked-in doorway at the south end of the east (shore) side. The walls stand to approximately 0.6m. There appears to be an out-house or store 7m to the south, although this is badly degraded. A burn now runs between the dwelling and the enclosure although this appears to have happened since 1865, when it ran to the north of the dwelling. This makes the back (west side) of the enclosure very boggy. The enclosure is bounded by turf and stone dykes. These stand to a maximum height of 0.5m, and are about 1.5m in width (Figure 115). It measues 50m (east-west) and 30m (north-south), and is heavily overgrown. The new course of the burn also appears to have made it quite wet in places. South of the enclosure, the open meadow shown in the 1865 map is now heavily

overgrown by natural woodland (Figure 116). Opposite, across Loch Long, was Port-an-Lochain, but this lies just within the perimeter fence of the Coulport naval base, and the shore here has been greatly altered and no structures are evident. The crossing is about 400m at this point (Figure 117).



Figure 113 Port Dornaige. This photograph is taken looking north. Two small promontories create a small natural harbour on the west side of Loch Long at one of the most narrow places to ferry (or swim) across. On the opposite shore is the reciprocal Port-an-Lochain.



Figure 114 Remnants of Port Dornaige. Photograph looking south-west from north-east corner of structure at Port Dornaige, showing the remains of the east wall. The dwelling house is set up on a small shelf above the rocky beach.



Figure 115 The stone and turf dyke of the enclosure at Port Dornaige. The dykes of the enclosure stand about 0.5m, and are now about 1.5m in width. The enclosure is heavily overgrown by trees and shrubs.



Figure 116 Meadow, south of Port Dornaige. This field, which was still open grazing land in 1865, has been reclaimed by unmanaged native woodland.



Figure 117 Looking eastwards across Loch Long to Port-an-Lochain, from Port Dornaige. The sea loch is about 400m wide at this point. Port-an-Lochain has disappeared under the Coulport naval base, but was formerly to the left of the white canopy.

The ruins would appear to be those of the house of the ferryman mentioned in the legal papers of 1749 and 1772. The enclosure to the south would be ideal for the marshalling of livestock prior to a crossing, whether by boat or by swimming the animals across the loch, which narrows to about 400m at this point. The ferry seems to have fallen out of use at some point in the early nineteenth century.

6.4 The route from Cairndow to Invergran

This is the first part of the case-study where a droving route was actually walked. This consists of the one day journey from the stance at Cairndow to the equally well known stance at Inverarnan. The route goes by Glen Fyne and the Larig Arnan into Glen Falloch at Inverarnan, to the north of Loch Lomond, and is 20km in length. The route was an important droving route on the way to Crieff for cattle not only from Cowal and Bute, but also for cattle from western Argyllshire and Kintyre (although an alternative route via Glen Shira existed for those). After 1770, when Crieff was supplanted by Falkirk, the route

would have dwindled in importance. Cattle would now be heading for Arrochar and thence to the south of Loch Lomond.

6.4.1 The stance at Cairndow (NN 1835 1115)

It is fortunate to have a description of the Cairndow stance in operation before the First World War. Dugald MacDougall gave a remarkable taped interview in November 1956, when he was ninety years old. It is held at the Sound Archive at the School of Scottish Studies, Edinburgh University, and was further turned into an article, *Recollections of an Argyllshire Drover* by the interviewer, Eric Cregeen of the University of Glasgow (C1959: 143-162).

"There's a place - I can see the opening yet - where we went...The stance came down to the road, but halfway up the hill it was fenced off. They couldn't get out of it altogether but they had plenty of room, yes, they had plenty of room. But it will likely be getting into disrepair now like every other thing. It's never used as a stance now." (Cregeen 1959: 153)

The stance itself is bounded by two streams, which at one time were fringed by much degraded turf banks. The southern boundary was already further delineated by a fence by 1870 when the six-inch 1st Edition Ordnance Survey map was surveyed (Figure 118), and by 1914, there appears to have been a fence on the northern side of the stance when the 2nd Edition was revised (Figure 119). The southern boundary still has a substantial wire fence (Figure 120), whilst the northern one appears to have been removed. There is a turf bank at the top of the slope -- but again much degraded and with a stone wall and fence now on top of it (Figure 121). There are some large trees in the stance just below this boundary, and a stone dyke has been built through the centre of the stance (Figure 122). It is approx 150m wide (along the road, N-S) by 100m long (up the hill, W-E). However, there would have been the possibility of extending up the hill to a fence-line (which sounds like the fence recalled by MacDougall) which gives another 300m west to the east. This huge area (150m x 400m) may have been pressed into use at peak times. The modern road has cut out a small section at the south-west corner of the stance.

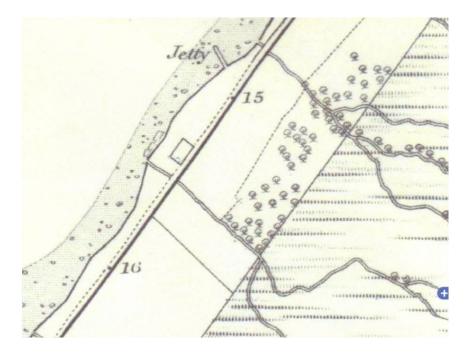


Figure 118 Cairndow stance, 1st Edition OS Map 1870. The stance was situated between the two burns running down the hill, but a new fence appears to have been erected beyond the burn to the south. The cattle fank or sorting pens are indicated by the rectangle west of the road, and next to the loch.

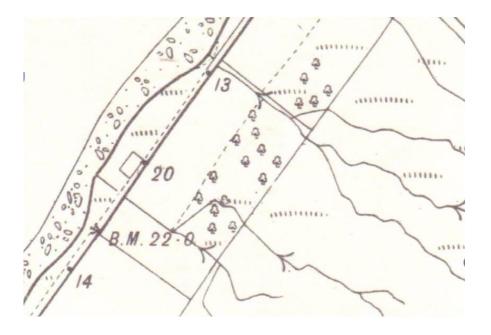


Figure 119 Cairndow Stance, 2nd Edition OS Map 1914. By 1914, which is pretty much at the end of the stance being used for droving, a new fence has been erected north of the northern burn. The fank remains across the road (rectangle) and this land became the War Memorial after the First World War.

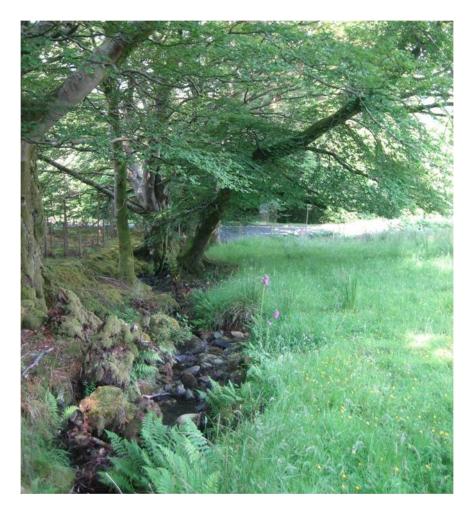


Figure 120 Cairndow Stance. This is the burn making the southern end of the stance, with an ancient dyke (on which substantial trees are growing), and more modern fence beyond it.



Figure 121 Cairndow Stance. This is the turf dyke at the top of the slope, which forms the east side of the stance. The dyke has had a stone wall, and then a modern fence erected on top of it.



Figure 122 Cairndow Stance. This photograph is looking southwards across the stance. The wall in the centre appears to be relatively modern. The southern end is indicated by the line of trees in the distance, with the line of trees, upslope to the left, indicating the east dyke and wall.

It would appear that very old turf dykes once bounded the Cairndow stance. However, by the late nineteenth century these were being reinforced by both stone walls and metal fencing. The shape is a regular rectangle. It also appears that additional capacity was possible by allowing cattle to graze further up the hill. The stance had burns running through it at both ends, and provided plenty of water for the livestock. It was immediately adjacent to Cairndow village, so accommodation should not have been a problem.

There is a rectangular structure, adjacent to the stance, which is approximately 20m by 10m, marked on the 1st Edition Ordnance Survey six-inch map (1870), and still present in 1914 on the 2nd Edition map. The site is now the Cairndow war memorial. It is across the road, on the west (or loch) side of the stance, and between the road and the loch. This may have been a cattle fank. Fank comes from the Gaelic 'fang', and is a pen for sorting animals. Alistair MacCallum (retired shepherd on the Ardkinglas Estate) says that his father told him that site of the present war memorial was the cattle fank. This was independently confirmed by Mr John Mirilees of Glaschoine, which is the neighbouring

croft. As long distance droving ceased after the First World War, this area would have been a convenient site for the war memorial (Figure 123).



Figure 123 Cairndow Stance. The War Memorial at Cairndow is built on the former cattle fank, or sorting pens. The photograph is looking westwards across Loch Fyne. It is taken from the former cattle stance, which went out of operation just before 1914.

6.4.2 Cairndow to Invergrnan

In the days of Dugald MacDougall, in the late nineteenth century, all the cattle would have left the Cairndow stance and headed eastwards up Glen Kinglass, and thence south of Loch Lomond. However, up until the 1770s, significant amounts of cattle, especially in late September, would have left the stance and headed north along the shores of Loch Fyne, and thence by the Larig Arnan, to the stance at Inverarnan. From there they would have gone north of Loch Lomond to the great cattle market at Crieff, held in the second week of October each year. This route ceased to be of importance after the demise of Crieff.

From the stance, the route follows what is now the A83 for about 1.5 km. This is built upon a section of the Military Road, built between 1743 and 1749 by Major William Caulfield and extending the 71 km between Dumbarton and Inverary (Ang and Pollard

1984). At Inverfyne, the droving route leaves the main road, and stays on the east bank of the River Fyne. It then follows the route shown on the Roy Map (1747-55) up the east side of Glen Fyne by Achadunan to Auchreoch (about 2 km). This section is a single track, metalled road with stone walls or wire fences along both sides. To the west, between the road and the river, are a series of rectangular, flat, enclosed fields suitable for either arable or grazing. To the east, the ground rises steeply. It was here that a series of disputes arose in the 1770's between the landowner, Sir James Campbell of Ardkinglass, and drovers (Figure 124).

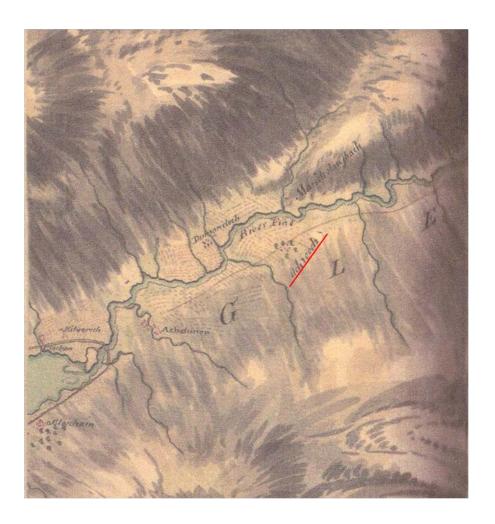


Figure 124 Route through Glen Fyne, Roy Map 1747-1755. This shows the route along the east bank on the River Fyne, passing through the township of Auchreoch (Achreoch). This is underlined in red. It was here between 1772 and 1777 that the Ardkinglas Estate attempted to block the route to drovers. This resulted in complaints and a case in the Court of Session. (By permission of British Library)

In 1772, Angus Fletcher of Dunans and John Fletcher of Bernice complained to the Argyllshire Commissioners of Supply that the ancient droving route had been blocked at Auchreoch by the tacksman, Duncan McPherson, under instruction from the landowner,

Sir James Campbell. This was said to be the route by which cattle were taken to Crieff, Doune and Stirling markets and also by which cattle was brought south from Skye into Cowal. McPherson and Campbell were ordered to desist (Argyllshire Commissioners of Supply 1772). This appears to have had little impact. In 1774, Duncan Mowat, tacksman of Woodside in Argyllshire was on his way to "lowland markets" with a drove of cattle when the route was again barred at Auchreoch, this time by James Campbell himself. This forced Mowat and his drover, Neil MacGibbon, to take the cattle "through very rugged rocks, by a steep hillside, quite out of the Common Road" and "nine or ten beasts were lamed or otherwise much hurt". This can only be up the very steep slopes to the east of the now disappeared township of Auchreoch (Figure 125). The Commissioners agreed that Mowat had been on a "Common Drove Road" which was a day and a half shorter than driving the cattle on the Military Road through Glen Croe, Tarbert and thence northwards to Inverarnan in Glen Falloch (Argyllshire Commissioners of Supply 1774). Campbell was again ordered to let the cattle pass unhindered. Finally in 1777, Sir James Campbell was taken to the Court of Session in Edinburgh by "certain gentlemen dealers in cattle", from the "lower or southmost parts of Cowal", of the name of Campbell, who insisted that they had rights to the drove road, and the associated resting and feeding places, which Sir James was seeking to deny them, as they sought to bring cattle into Cowal from the Western Isles (Tait 1826: 599).



Figure 125 The steep slopes east of Auchreoch, Glen Fyne. This was the site of disputes between 1772 and 1777, when drovers were obstructed in using the drove road. Duncan

Mowat of Woodside, a drover, had "nine or ten cattle lamed or much hurt", when forced up this hillside in 1774.

From Auchreoch, the droving route continued along the east bank of the River Fyne to the western mouth of the Larig Arnan, where the Allt na Larig descends to the River Fyne (about 3 km). This is the route as shown on the Roy Map. In the present day, this route is blocked by modern forestry planting on the eastern bank, and the road crosses the River Fyne at Glen Fyne Lodge. This has been the case since before the Ist Edition Ordnance Survey was mapped in the glen in 1870, and is probably related to the Victorian shooting lodge on the west side of the river. It is then possible to re-join the original route, after 2 km, by re-crossing the River Fyne on a modern bridge built in association with the hydroelectric works in the glen. The final 1 km climbs steadily, as it always did, into the western end of the Larig Arnan (Figure 126), albeit that there is now a well maintained track, created in relation to a substantial reservoir. This was built at the western end of the Larig, by damming the Alt na Larig. This track continues to the southern end of the dam (Figure 127).



Figure 126 West end of Larig Arnan, above Glen Fyne. This photograph is looking westwards back into Glen Fyne. A modern hydro-electric track ascends (off picture to the

left) into the Larig Arnan, and goes as far as the dam of a new reservoir. The burn in the centre of the photograph, the Allt na Larig, was dry because of this dam.



Figure 127 Larig Arnan, the dam at west end of reservoir. This photograph is looking eastwards towards the dam, and into the Larig Arnan. The modern track is on the right, and the route marked on the Roy Map (1747-1755) is just below the poles in the centre.

Although there was no observable track through the Larig Arnan, the route outlined on the Roy Map (1747-55) was followed (Figure 128). This turned out to pass close by three previously unrecorded shielings or settlement sites. The route followed went south of the modern reservoir. At the south western corner of the reservoir is a settlement (NN 2595 1744), which consists of two rectangular structures (5m x 3m, and 4m x 3m) and one circular structure which is 2m in diameter. They are composed of rough stones, and the structures are much degraded (Figure 129). The Allt na Larig was then crossed onto its northern bank. There are two circular markings on the current Ordnance Survey map just over 1km from the east end of the reservoir. There is no entry for this in National Monuments Record of Scotland maintained by RCAHMS. This feature (NN 2726 1793) is in fact a rectangular structure 4m by 3m (Figure 130), with two circular structures to its south and west, each 2m in diameter (Figure 131). All are built of loose stone courses and stand to about 0.5m. There is also what might be a corn stack, although very small, which

is 1m in diameter, and comprising a series of stones placed in circles set into the ground (Figure 132). Going eastwards, the route re-crosses the burn just west of the watershed, in order to pass south of the Lochan. It then stays on the southern bank of the Allt Arnan for about 1 km, until crossing back onto the northern bank in order to avoid some boggy terrain. After about 1 km it picks up the modern estate track which runs down into Glen Falloch. Just before this junction, there is at NN 2951 1823, a further settlement, with a 3m by 2m rectangular structure above a flat grassy rectangular platform, which is 4m by 3m. The Roy Map would suggest that all of these settlements were linked by an early routeway, which has now disappeared. To these can be added two other sites of rectangular structures noted in the Larig Arnan, which are in the Canmore data-base. One is about 200m north of the routeway at NN 2861 1819, and the second is close to the modern estate track as it descends into Glen Falloch at NN 3010 1843.



Figure 128 Larig Arnan, William Roy 1747-1755. This shows the routeway passing through the Larig Arnan pass, with the small Lochan an Larig in the centre of the pass. This was a major droving route from Argyllshire to Crieff. (Permission of British Library)



Figure 129 Larig Arnan, south of reservoir. This appears to be a sheiling site, with two rectangular structures and one circular one.



Figure 130 Larig Arnan, shieling structures. This photograph is looking westwards from the centre of the Larig, just west of the Lochan. This shows a rectangular structure with a circular one beyond. The reservoir is in the distance.



Figure 131 Larig Arnan, Circular shieling structure associated with Figure 130



Figure 132 Larig Arnan, shieling. This circular group of stones, whilst small, appears to be for a corn stack. It is associated with the structures in Figures 130 and 131

It would seem that whilst the Larig Arnan today is deserted and uninhabited, in the eighteenth century this was far from the case. A defined routeway connected the top of Loch Fyne with Inverarnan. From here travellers could move northwards up Glen Falloch to Crianlarich, eastwards to Balquhidder, or south along Loch Lomond. There is abundant evidence of summer shielings in the Larig Arnan, along the route recorded by William Roy. Whether there was any permanent settlement at such an altitude may be uncertain. The size of the dwellings suggest not. Nevertheless, the well used pass was far from desolate for summer travellers, and there would have been opportunities for both shelter and discourse as people and livestock moved past.

The estate track descends from the Larig Arnan, in the valley of the Allt Arnan, as far as NN 3035 1910, where it strikes northward before dropping into Glen Falloch around the present Glen Falloch Farm. The original track, as mapped by Roy (Figure 133), also recorded on the 1st Edition Ordnance Survey map (surveyed 1860-1871) stuck roughly to the banks of the Allt Arnan and passed by the Inverarnan Farm to the Inverarnan Inn (which claims a foundation date of 1705).



Figure 133 Inverarnan, William Roy 1747-1755. This shows the route from the Larig Arnan, top left, descending north of the Allt Arnan, and coming to Inverarnan, where the route meets the main road running through Glen Falloch, and south to Loch Lomond. This is just north of where a route crosses the River Falloch by a ford to Stuck. This is the road to Balquhidder and Loch Katrine via Parlane Hill.

6.4.3 The stance at Inverarnan (NN 3185 1835)

The stance is said to have been across the road from the Inn (Figure 134), and adjacent to Inverarnan Farm (Mitchell 2000: 22). This is hard to assess, as a possible area to the south of the farm is now hard standing for cars, whilst the area up-slope from the road has been extensively impacted by new developments associated with a motel facility. 1st and 2nd Edition Ordnance Survey 6 inch maps show the area linked to the Larig Arnan by a track (now disappeared) coming down the hill. Another possible area for the stance is a large enclosed field between the inn and the River Falloch. This field is on the former route across the river by way of a ford, which is marked on the 1st Edition map (Figure 135). It is about 300m by 80m, which is very substantial indeed for a stance, even of this importance.



Figure 134 Inverarnan Inn. This inn is colloquially known as "The Drovers". It is situated where the route through the Larig Arnan meets the main north-south route running up the west side of Loch Lomond and then north up Glen Falloch. Another route continues eastwards over Parlane Hill and into either Balquhidder or to Loch Katrine. This modern car park is a possible site for the stance, opposite the inn.

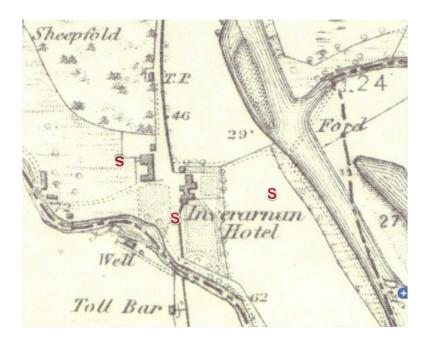


Figure 135 Inverarnan Inn, 1st Edition Ordnance Survey Map, 1860-1871. Possible stance sites at Inverarnan marked with "s" (red). The area west of the former Inverarnan farm (the building to the west of the road, across from the inn) is now part of a motel development, with the area to the south of the farm buildings being hard standing for cars.

Droves seeking to reach Crieff had the choice of either going up Glen Falloch to join with other herds coming down Glen Dochart, and thence via Glen Ogle and Lochearnhead to Crieff. Otherwise the drovers could and did take cattle into Balquhidder. This was done by crossing the River Falloch at the ford noted above, and thence by a track which sets out northwards, and goes behind Beinglas Farm, on the east side of the River Falloch, before doubling back southwards, above Beinn Glas falls, and thence north of Parlan Hill (Mitchell 2000: 23) and into Balquhidder, en-route to Crieff (Stewart 1990: 107). Later on, as Falkirk supplanted Crieff after 1770, the flow of cattle through Inverarnan was more north to south, and thence along Loch Lomondside. However, the option remained to climb Parlan Hill, but this time the summit was skirted to the south and thence into Glen Gyle, south of Loch Katrine to the *Bealach nam Bo* (Pass of the Cattle), heading for Aberfoyle, and in due course to Falkirk (Mitchell 2000: 24).

6.5 The route from Cairndow to Luss

This section of drove road starts at the stance at Cairndow, and ends at Luss on Loch Lomond, just north of the crossings over the River Leven. This is a distance of 55 km. Alternative routes are considered, as well as the options open to the drovers at various points along the route. Some of these routes were rejected as impractical, having walked them, but one was noted which appears both to be a viable alternative, and has two possible stances on it.

The likelihood is that some of the cattle from Bute and Cowal, as well as the cattle from west Argyllshire, went to lowland markets, by going round the head of Loch Long and thence to the crossings over the River Leven, even in the period when Crieff was the great cattle tryst, and before it was supplanted by Falkirk in the third quarter of the eighteenth century. This route is the alternative to swimming or ferrying the cattle over Loch Long, previously considered, if heading for the lowlands. Important markets at Dumbarton, Doune and Stirling were reinforced from 1762 by the introduction of a new market at Dumbarton Muir (Mitchell 2004: 22-24), and the growing importance of Falkirk Tryst. Beyond these cattle markets there was also an increasing demand for meat from the rapidly growing urban centres of Glasgow, Edinburgh and the lowland towns. Dues were levied by the Governor of Dumbarton Castle for crossings of the River Leven from the sixteenth century, and this continued until 1673, causing the fleshers of Glasgow to complain in 1627 about the toll of 8d per beast, levied by Dumbarton (MacPhail 1979: 94-95).

6.5.1 Cairndow to Stronafyne

This is the drove road apparently debated in the dispute between Duncan Mowat, drover, and Sir James Campbell of Ardkinglas in 1774, when Cairndow, Glen Croe and Tarbet (on Loch Lomondside) are specifically mentioned as part of an alternative route to going through the Larig Arnan (Argyllshire Commissioners of Supply 1774). It was certainly followed in the nineteenth century by Dugald MacDougall and his family (Cregeen 1959: 153) as he drove cattle from Kilmartin in west Argyll to Falkirk via the route to the south of Loch Lomond. This droving route was used until the First World War.

The route from Cairndow follows the military road from Inverary to Dumbarton, complete by 1749, up Glen Kinglas as far as Butterbridge. Much of this road survives in Glen Kinglas, between the modern A83 road and Kinglas Water, including the bridge at Butterbridge. From there, it ascends the climb to Loch Restil by the Bealach an Easain Dubh. Passing the loch on its east side, it comes to the 'Rest and Be Thankful', where the military road and droving route departs from the A83. Here Major William Caulfield supervised the construction of the military road down into the head of Glen Croe using a massive bend on the road (Figure 136) in order to reduce the steepness of the rapid descent which is over 100m (Osborne 2005). No doubt the drovers were pleased to avail themselves of this safer descent for their cattle, although concerned about the impact of the harder surface on the hooves of the cattle. The road surface has recently been upgraded and repaired (Figure 137), and it is planned to use the original 'Rest and Be Thankful' road as a relief route for the modern A83, opened in 1937, but subject to subsidence on the slopes of the glen.

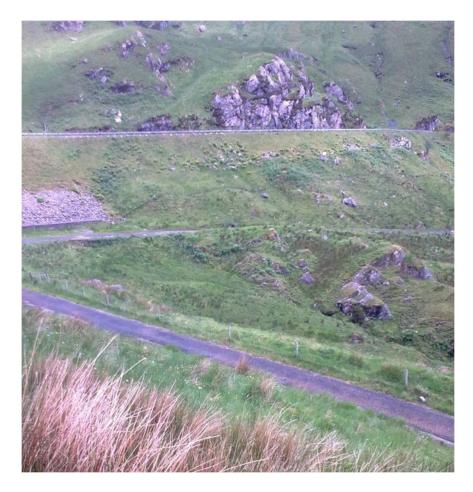


Figure 136 'Rest and Be Thankful' pass. Photograph is facing north, and is taken from the top of the "Rest and Be Thankful" pass. It shows one of the hairpin bends by which the military road descends into Glen Croe. Above the eighteenth century road is the modern A83.



Figure 137 'Rest and be Thankful' pass. This photograph shows the very recent repairs to one of the hairpin bends on the old military road.

The military road continues past High Glencroe farmhouse (Figure 138) and the ruins of the township of Laigh Glencroe (Figure 139). The descent is gentle. It rejoins the modern road after about 5km, and then continues down to Loch Long near Ardgartan. From there it is about 3 km along the side of the loch to the head of the loch and the nearby stance at Stronafyne. There was long a stance at or near Arrochar, and it is noted in the Dewar Manuscripts that there was a market stance at Arrochar, jointly owned by MacFarlane of Arrochar and MacFarlane of Gartartan, which "remained a common where any person might put his cows or horses until about 1805 or 1806" (MacKechnie 1964: 19).

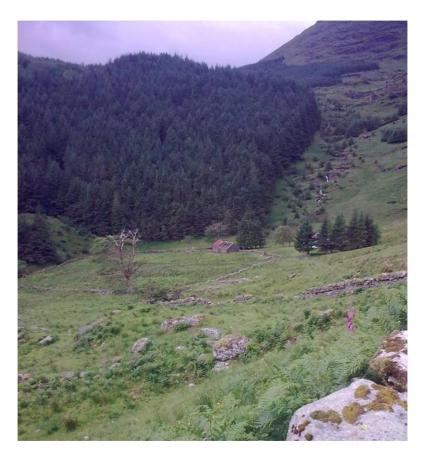


Figure 138 Glen Croe. This photograph is looking westwards from the military road, towards High Glencroe farmhouse, which is immediately below the 'Rest and Be Thankful' pass.



Figure 139 Glen Croe. This shows the remains of the former township of Laigh Glen Croe. This is shown on the map by William Roy (1747-1755). The road surface is currently metalled, and in reasonable repair.

6.5.2 Stronafyne stance (NN 3011 0527)

This stance is immediately to the east of the farm house and steading at Stronafyne, and was certainly in use in the last days of droving, during the nineteenth century. It was described by Dugald MacDougall as being bounded on its lower side by a wall but above only by steep rocks. The 1st Edition 25 inch Ordnance Survey map (surveyed in 1860) shows such a wall (Figure 140), and this appears to be the massive stone and earth dyke on which the modern footpath is now built (Figure 141). The hillside is now very thickly forested, but the map shows that this was not the case in 1860, with only patches of open native woodland being shown.

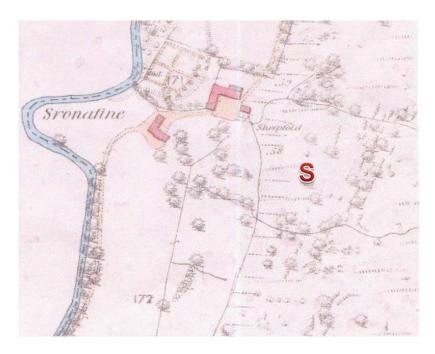


Figure 140 Stronafyne, 1st Edition OS map 1860. The stance at Stronafyne was said to be between a wall, and the rocks on the steep slope. The possible stance is marked on the map ("s" red), although this area is now very heavily wooded, and it is hard to be certain.



Figure 141 Stance at Stronafyne. This is the stance that was used by Dugald MacDougall as late as 1914. The stance lay on the very heavily wooded slopes to the left, which were then

much less heavily forested. A massive dyke runs along the bottom of the hill. The photograph is looking south-east.

The thick forestation makes it impossible to measure the stance with any accuracy. However the cartographic evidence would suggest that it was about 150m north to south (and bounded by two burns). It was possibly 100m west to east before the steep rocks made it impossible for the cattle to work any higher up the hillside. The lower dyke on the western side is about 2m high and 3m wide. Water would not be a problem. The topography appears to have delineated the eastern side to the enclosure. Presumably the burns had dykes along them as at Cairndow, but this is hard to verify due to the modern forestry plantings.

6.5.3 Alternative routes to the Rest and Be Thankful and Glen Croe

The iconic nature of the 'Rest and Be Thankful' pass above Glen Croe is so powerful that it is difficult to conceive, in the present day, that alternative routes ever existed for droving cattle down into Glen Croe, and thence to the lowland markets. However, the route was only complete by 1749, and it is worth considering if there were alternative routes prior to the military road. In particular, without the engineered hairpin, there is a steep descent into the floor of Glen Croe, and this could have caused cattle losses.

The Pont maps (1583-1614) name "Glen Kro" but also identify some of the mountains such as Ben Vane and Beinn Chorranach. Interestingly there is no definite suggestion of a route through Glen Croe. Instead in upper Glen Kinglas there is marked "Lairg Garris". This seems to be heading eastwards, north of Beinn Chorranach and Ben Vane towards Loch Sloy, which is also marked on the map, and Loch Lomond (Figure 142) at Inveruglas. This is the route of Kinglas Water, and it may be that "Lairg Garris" refers to Larig Kinglas, or the pass of the Kinglas Water. The Roy map (1747-55) is related to the construction of the military road, and shows only the route down into Glen Croe, via the 'Rest and Be Thankful' pass. Other early maps are insufficiently detailed to be of help.

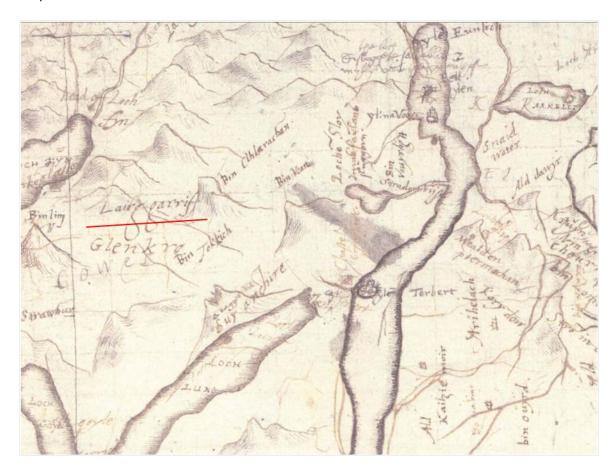


Figure 142 "Lairg Garris", Timothy Pont Map 1583-1601. This shows the area between the top of Loch Lomond, Loch Long and Loch Fyne. It shows a pass, "Lairg Garris", underlined in red, which might relate to Larig Kinglas. This may connect with Loch Sloy, shown on the map to its east and Loch Lomond. (Permission of National Library of Scotland)

In 1762, a dispute broke out between the Argyllshire landowners who wished to continue using the Whitsuntide fair at Kilmichael Glassary, and the burgh of Dumbarton, supported by cattle dealing interests in Glasgow, who wished to move the market to Dumbarton Muir, which was much more convenient for the buyers.

Copies of the two rival adverts appeared in the Glasgow Journal -- the Dumbarton one on 22 April and the counter-blast from Argyllshire on 6 May. They are exactly as stated in the Minute Book of the Argyllshire Commissioners of Supply (Argyllshire Commissioners of Supply 1762).

The Argyllshire meeting really tried to undermine the Dumbarton market by doing two things. They undertook to buy any unsold cattle at Kilmichael, and they set out a route from Kilmichael to the crossing over the River Leven, with six stances at which grass could be obtained at reasonable prices. This is perhaps a unique example of a drove road being officially defined. The third stance from Kilmichael was at "Cairndow on

Glenkinglass". This was "the property of Captain James Campbell Esq of Ardkinglass". The fourth stage was at "Invervallichorn". This was "The property of Lieut Col Campbell of Strachur" (Argyllshire Commissioners of Supply 1762). So starting from Cairndow, the day's droving ended at "Invervallichorn" (before moving down the east side of Loch Long to Finnart). This is Inbhir-Laraichean, which is three km up Glen Loin from Arrochar and the head of Loch Long. It lies on land which was part of the Campbell of Strachur estate, which is on the west side of Loin Water. This formed the county boundary between Argyllshire and Dunbartonshire, and was adjacent to the MacFarlane lands, which were situated between Loin Water and Loch Lomond in this area. If Glen Croe was used to access it, then the cattle were being driven an extra six km. Alternatively they were coming by a different, older, route.

Starting from Butterbridge in Glen Kinglas, there are a number of options. For example, the Bealach a' Margaidh (Pass of the Market) is one possibility and may have been used to avoid the hard surface of the military road (Mitchell 2000: 25). There are two objections to this, however, since it involves ascending and descending an extra 500m for a very small saving in distance. It also does not address the issue that Inbhir-Laraichean is three km up Glen Loin. Alternatively, by continuing up Glen Kinglas from Butterbridge, there are two further routes to Inbhir-Laraichean for cattle. One of these is via the Lag Uaine, which lies between Beinn Chorranach and Ben Vane. Intriguingly, there are a series of enclosures which might have formed a stance (or alternatively a gathering point for cattle entering or leaving the sheilings) situated where the track into Gleann Uaine starts from Glen Kinglas (see below). There is a relatively steep climb into the Lag Uaine and plenty of evidence of sheilings in this alpine hollow (Starbuck 2011: 50-70). The descent eastwards into Glen Leacann is also relatively steep, although by no means impossible for cattle. The climb and descent are each in excess of 300m.

However, there is a third and more attractive route. From the enclosures in upper Glen Kinglas it is just about 1 km to the present headwaters of Loch Sloy. The ascent to the enclosures from Butterbridge is a mere 140m over a distance of 4 km. A further rise and descent of 20m takes one into the valley of Loch Sloy. The loch was nearly doubled in size in 1950, when the glen was dammed as part of a huge hydro-electric complex. 1st Edition Ordnance Survey maps, 1860, (Figure 143) show a settlement at the north end of Loch Sloy and a track down the west side of the loch which are now both submerged, but it was a gentle descent over 6 km. The route descended about 250m to Coiregrogain via the track. From there it is 2 km either east to Loch Lomond at Inveruglas, or south into Glen Loin

and Inbhir-Laraichean (with a 50m rise over the watershed into Glen Loin), via the track shown on the 1st Edition map. This would seem to be an alternative which avoids any major ascents or descents, and is no longer than the route taken by the military engineers in 1743-49.

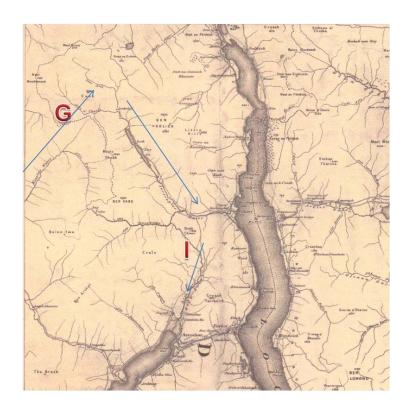


Figure 143 West Loch Lomond, 1st Edition OS 1860. This map shows a possible, earlier, alternative to the route of the military road down the "Rest and Be Thankful" pass and Glen Croe. There are cattle stances at G (Upper Glen Kinglas), and I (Inbhir-Laraichean). The route follows the Kinglas Water, and then the track down the west side of Loch Sloy and into Glen Loin.

6.5.4 The enclosures in Upper Glen Kinglas (NN 2633 1292)

At the south end of a broad open area upon which five glens converge (Glen Kinglas, Gleann A' Mhill Beag, Srath Dubh-Uisge, Glen Sloy, and Glen Uaine) is a complex of three large adjacent stock enclosures (Figure 144).

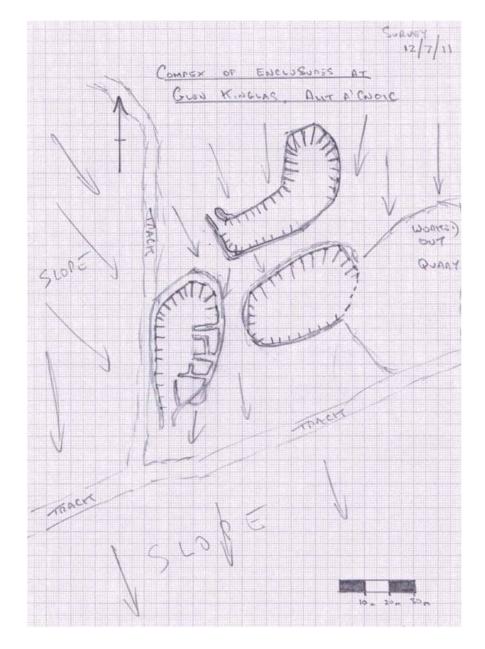


Figure 144 Upper Glen Kinglas Enclosues. This shows a sketch of the complex of three enclosures at Allt a'Cnoic in upper Glen Kinglas.

The most southerly of these enclosures (Figure 145) has three sub-enclosures within it, which are in an approximate north-south line, and situated against the east wall of the main enclosure. The main enclosure (approximately 60 x 25m) is in a hollow bounded by a broad stone and turf bank, approximately 2m wide and no more than 0.75m high, which forms the east side of all three sub-enclosures. On the west and north sides, the enclosure walls are partly enhanced by being built into the slope. The entrance to the enclosure is to the south side, and 6.5m wide (Figure 146).

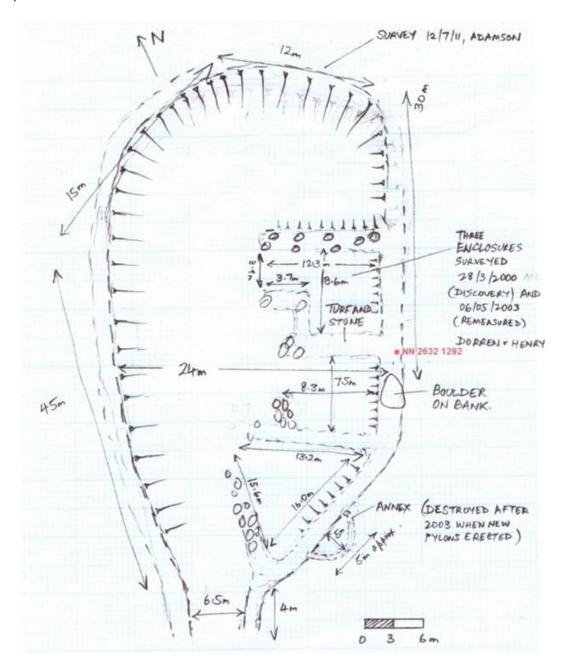


Figure 145 South enclosure at Upper Glen Kinglas. This shows the southernmost of three enclosures at Allt a'Cnoic in Glen Kinglas. This enclosure has itself three sub-enclosures within it, which may have formed a fank or animal sorting pens. There was an annex on the south-east side, destroyed by the erection of pylon poles between 2003 and 2011. This may have been a bothy. Original survey was by Dr David Dorren and Nina Henry (2000 and 2003), and updated by Donald Adamson in 2011.



Figure 146 Southern enclosure at Allt a'Cnoic, Glen Kinglas. Photograph taken (2011) from north looking southwards to entrance, with three sub-enclosures on left. The boulder is on the eastern dyke of centre sub-enclosure. The track to Loch Sloy, and forestry plantations, is beyond the enclosure

The sub-enclosure to the north is L-shaped (8 x 12m); the central sub-enclosure is rectangular (7 x 8m); the southern sub-enclosure is roughly triangular (13 x 16 x 15m). These sub-enclosures all have entrances on their W sides into the main enclosure.

On top of the east bank of the central sub-enclosure is a large upright boulder, roughly triangular, about 2m high and 2m broad at the base. The prominent boulder may have acted as a location marker, as it is visible along the track down Glen Kinglas for long distances. Alternatively it may, like the similarly sized boulder at the Caol Glen stance, have had an association with the Cailleach.

The sub-enclosures might represent a cattle fank (Gaelic: *fang*) or sorting pens, to enable the sorting and inspection of the cattle.

Outside the enclosure, but built into the E wall, was a semi-circular structure which was approximately 5m long and of a roughly similar width. This was recorded in 2000 and

2003 (Dorren and Henry 2004: 37), but destroyed after 2003 when replacement pylons were erected to carry a new power line from the Loch Sloy Hydroelectric scheme. This may have represented a bothy for drovers and summer cattle-herds (Figure 147).



Figure 147 Southern enclosure at Allt a'Cnoic, Glen Kinglas. The photograph to the left shows the southern end of this enclosure, with a possible bothy built into the dyke wall on the outside. The photograph on the right is of the same view in 2011, by which time two wooden poles have been erected on this structure, and ground bull-dozed flat.

The next large enclosure is adjacent to, uphill from, and north of the first enclosure described (Figure 148). It is in an irregular sub-rectangular shape, running approximately south-west to north-east, and approximately 60 x 15m. It is considerably degraded, but forms a terrace above the first enclosure, and uses the contours of the slope to minimize dyke construction. The entrance in the south-west corner is well preserved being 2.5m wide (Figure 149).

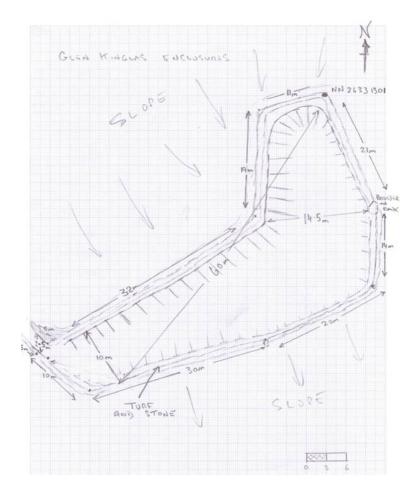


Figure 148 North enclosure at Upper Glen Kinglas. This shows the northern enclosure at Allt a'Cnoic, Glen Kinglas. It is dug into the slope, with an entrance in the south-west corner which is well preserved. The southern dyke is badly eroded.



Figure 149 Northern enclosure at Allt a'Cnoic, Glen Kinglas. This photograph is looking north-eastwards along the length of the enclosure. It has been dug into the prevailing slope (left side), with the dyke to the right much eroded by erosion.

The third enclosure lies to the east of the first enclosure (Figure 150). It is roughly oval in shape (45 x 28m), although the north wall appears to have been largely removed by a small quarry, presumably used to provide stone for the nearby estate track. Again it is much degraded, set into the slope and the turf and stone dykes are no more than 0.5m high and 2m wide. There is a 15m wide gap at the south end (Figure 151).

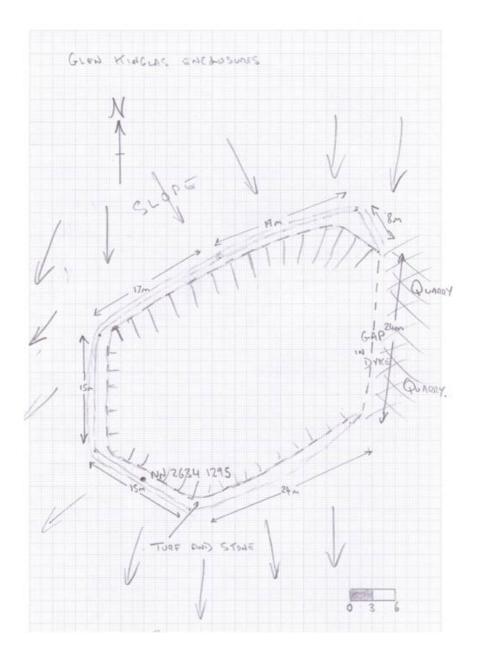


Figure 150 This shows the eastern enclosure at Allt a'Cnoic, Glen Kinglas. It has been partly removed on its eastern side by a small quarry, associated with the nearby track. enclosure at Upper Glen Kinglas.



Figure 151 Eastern enclosure at Allt a' Cnoic, Glen Kinglas. Photograph is looking southwards down to the eastern enclosure, from the northern one. A small quarry eats into it on its eastern (left) side. In the distance, the pylons come from Loch Sloy which is just over the ridge line at the top left hand corner.

Given the location, irregularity and size, the enclosure complex is interpreted as possibly representing a cattle gathering centre for the neighbouring five glens (Clan MacFarlane lands) in the period before commercial sheep farming took over in the area (circa 1750). As such it would be part of the transhumance practiced as cattle were brought to and from the summer sheilings. It may also represent a stance site on the long distance droving route via Loch Sloy to either Loch Lomond at Inveruglas, or down Glen Loin to Inbhir-Laraichean and the head of Loch Long. This would have been in use before the military road, via the 'Rest and Be Thankful' pass and Glen Croe, was completed in 1749 (see above).

Less likely, although not impossible, is a through route to Inverarnan, via the Strath Dubh-Uisge. However, the drop into Glen Falloch from the Strath Dubh-Uisge is extremely steep and represents a fall of over 300m in altitude. Having walked down this route it seems improbable that herds of cattle could have been safely brought down the descent. However, this was the route followed (in reverse) by James Hogg in 1803 when he climbed up from

Glen Falloch, and stayed with a cousin from the Borders, who had been newly appointed to be a shepherd, in a house above Loch Sloy (Hogg 1981:55-57).

6.5.5 The stance at Inbhir-Laraichean (NN 3082 0694)

The site of the stance is just south of the dwelling house (ruined) of Inbhir-Laraichean, on the west bank of Loin Water. It is about 2.5km north of the head of Loch Long and Stronafyne. The walls of the house stand to about 1.2m. It is about 18m by 5m, with three compartments or rooms (Figure 152). There is a kale-yard to its north, and this is a rectangular area about 30m by 20m, with eroded turf dykes about 0.5m high.



Figure 152 Inbhir-Laraichean. This photograph shows the dwelling house, west of Loin Water, at Inbhir-Laraichean in Glen Loin. The land was owned by the Campbell of Strachur in the eighteenth century.

The stance is a roughly rectangular piece of flat ground between hill-slope and burn which comes to a point below the house. On the south side is a dyke (about 0.7m high) running diagonally across the flat ground (Figure 153) and with a further degraded dyke on the burn side (which has a late 19th metal fence on it). This encloses a piece of land with maximum dimensions of 150m (N-S) and 100m (W-E), with a 2m entrance mid-way along

south side. There may not have been a dyke on the western side which ran along the hill-side towards the defile of a burn above the house, but rather the enclosure relied on the steep topography of the hillside to keep the cattle from straying. Certainly there is no evidence of such a dyke. The area narrows towards its northern end, which is against a burn, running into Loin Water, and with the dwelling house of Inbhir-Laraichean beyond. The southern dyke is not marked on the 1st Edition Ordnance Survey map (1870 survey), but the dyke (or at least the fence on top of it) along the river is (Figure 154). This stance would appear to be the on the route from Kilmichael Glassary to the lowland markets suggested by the Commissioners of Supply of Argyll in 1762, being the fourth stage from Kilmichael to the crossings of the River Leven. The land to the west of Loin Water formed part of the Campbell of Strachur estate in 1762 when the Argyllshire Commissioners of Supply Minute book refers to the stance at "Invervallichorn, the property of Lieutenant-Colonel Campbell of Strachur".



Figure 153 Inbhir-Laraichean. This photograph is taken from the east (Dunbartonshire) side of loin Water, looking south across the stance, which is on the west (Argyllshire) side of the burn. The line of the lateral dyke forming the southern edge of the stance is just visible as a dark line running through the centre of light grass in the centre foreground (marked).

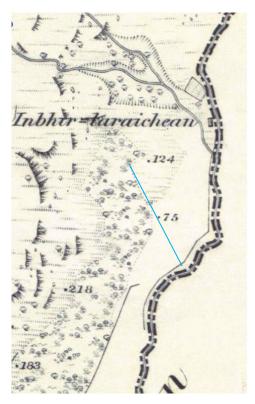


Figure 154 Inbhir-Laraichean. The blue line shows the line of a turf dyke which runs down from the hill-side and across the flat land by Loin Water. There is a 2m entrance about half way along the dyke. It joins with a dyke, marked on the OS map, running along the burn, which has an old metal fence on top of it.

From Inbhir-Laraichean, it is about 2km to Stronafyne, southwards down Glen Loin.

6.5.6 Stronafyne to Luss

Stronafyne stance is about 0.5km north of the present village of Arrochar.

From Arrochar, the drovers had three options. Firstly, they could follow the military road to Dumbarton along Loch Lomond, by way of Tarbet, Firkin Point, Inverbeg, Luss, Cameron, to Balloch and the crossings of the River Leven. In the nineteenth century there were stances at both Firkin and Inverbeg (Cregeen 1959: 154-155). There was also a possible crossing of Loch Lomond from Inverbeg to Rowardennan by swimming the cattle, although this appears to have ceased by about 1800 (Cregeen 1959: 154). It should be noted that the road became turnpiked at the beginning of the nineteenth century, and this remained the case in Dunbartonshire until tolls were abolished in 1883 (Mitchell 2002: 21). However, this route was certainly being used by Dugald MacDougall in the last years of the Falkirk Tryst, in the period up until 1900 (Cregeen 1959: 154).

Secondly, they could go south down Loch Long to Whistlefield, which is south of Tombuoy and Finnart, where there was a stance. From there, the route went into upper Glen Fruin at Strone, by way of a road skirting to the north of Garelochhead (Mitchell 2000: 25). Droves passing down Glen Fruin would meet the Loch Lomond traffic at Cameron. This is the road suggested in the official droving route proposed by the Argyllshire Commissioners of Supply in 1762 (see previously) as a counter to the proposals to set up a market on Dumbarton Muir. The stances after Inbhir-Laraichean were:

"The fifth stage to the Muires of Tombuy and Finart about seven miles distant. The property of Mrs Arbuthnot.

The sixth stage to the Muir of Monichira and Cameron about seven miles distant, the property of Mr Donaldson of Mussack and Mr Chast

And then across the waters of Leven."

(Argyllshire Commissioners of Supply 1762)

The Duke of Argyll's coastal road, down Loch Fyne, was completed in 1787. However, this was also quickly turnpiked, and it seems likely that the older track, further up the hill-side, past Morlaggan and into Glen Culunach, and thence down to Tombuoy, Finnart and Whistlefield, was the preferred route. This remained in action until the West Highland Railway chose the drove route, for its lack of gradient, in the late 1880s (Mitchell 2000: 25).

There was a third route and this goes from Arrochar to Glen Douglas using the *An t-Streang* (the String Road). From Glen Douglas, the route goes south by Glen Mollochan, into Glen Luss and thus to Loch Lomond at the village of Luss. It is this central route through the Luss Hills which was followed. This has been claimed to be an ancient droving route (Mitchell 2000: 25).

The droving road left the present A 83 road in the middle of what is now Arrochar village, just by the Catholic Church (Cregeen 1959: 153), and re-emerges on the same road just before the Ballyhennan Toll. The route can be traced on the 1st Edition Ordnance Survey map. From Ballyhennan it is a little less than 1km across the valley to the track, on the flanks of Ben Reoch, which runs besides the West Highland Railway. This track runs at a high level towards Loch Long and then down the loch side, and might be taken to be the

remains, after the railway was built, of the old Loch Long long-distance route. Just above the present parish church of Arrochar, a burn descends between Ben Reoch and Tullich Hill to Loch Long at Tighness. From the ruined house of Tynalarach (House of the Pass) (Figure 155) on the track, a route ascends for just over 2 km via a series of sheiling sites to a pass over into Glen Douglas (359m at watershed). The route then slopes down into a large corrie, past the ruined house of Ashmore (probably meaning "great field") to the farm of Invergroin in Glen Douglas (Figure 156). This is a distance of 2.5km. All the settlements and the pass are named by William Edgar in a map of 1745. There is now no path, and the terrain is much overgrown by bracken as the number of sheep on the hills have been considerably reduced in recent years.

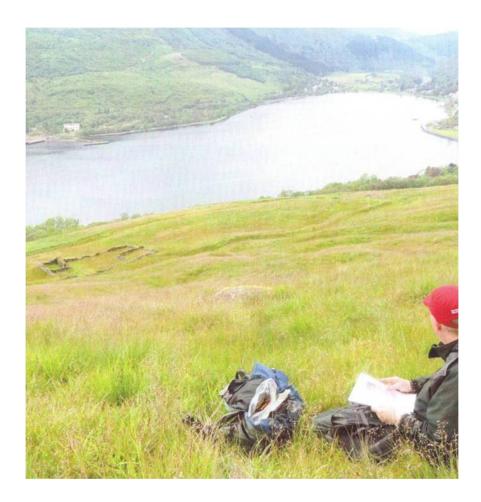


Figure 155 Tynalarach. Tynalarach (House of the Pass) is on the northern end of the route known as An t-Streang (String Road). The An t-Streang climbs uphill from Tynalarach, which itself is at the junction with the routeway running south along Loch Long, which was replaced by a new road at the side of the loch in 1787. The pre-1787 trackway can be seen running past the ruins of Tynalarach.



Figure 156 Corrie above Invergroin. This photograph is taken, looking south, from the ruined dwelling house of Ashmore, recorded by William Edgar in 1745 on the An t-Streang (String Road), travelling into Glen Douglas, which runs east-west (left-right) in the distance.

As well as a droving route, this was also a kirk road until Arrochar church was built in 1733. Until then the MacFarlane's and their tenants had to travel to the church at Luss. They left their weapons at a knoll in Glen Luss, still known as '*Cnoc nan Airm*' (Knoll of the Weapons), near the Kirk of Luss, and retrieved them on the return journey, before crossing over the String pass (MacKechnie 1964: 102).

Invergroin was, and remains, a substantial farm in the centre of Glen Douglas. The farmhouse was re-built in 2005. It is 4km from Inverbeg on Loch Lomond, and about the same to Craggan on Loch Long. It lies on the String route to Arrochar, and is about 0.5km north of Douglas Water. There are a complex of substantial turf dykes around the present bungalow, and up-hill from it. These dykes stand over 1m in height (Figure 157). There was certainly a cattle stance there in the nineteenth century, as there was at the neighbouring township, Doune of Douglas, south of Douglas Water, (Cregeen 1959: 154), The river formed the boundary between the MacFarlane Estates and those of the Colquhoun family, until the forced sale of MacFarlane lands in 1784.

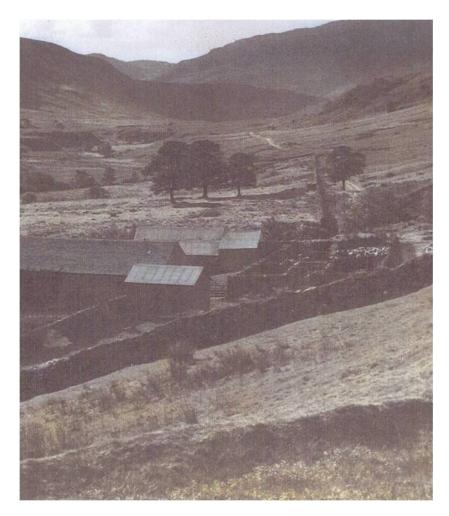


Figure 157 Invergroin Farm. This photograph, looking west along Glen Douglas, from the 1940's shows the old farm at Invergroin, now re-built with a modern bungalow. Note the substantial turf dykes in the foreground.

Interestingly Invergroin also appears to have been at the centre of a substantial cattle rearing and droving enterprise in the mid eighteenth century. This was run by Dugald MacFarlane of Auchrossan, described in leases, in 1757, as "drover of Invergroin". Dugald MacFarlane was the great-great-grandson of John MacFarlane, 12th Chief of the Clan MacFarlane. He was able to buy Auchrossan, a small estate in Cowal near Kilfinan, and was a commissioned army officer (MacFarlane 1922). He still held the lease of Invergroin in 1780 and in all probability was still the tenant of Invergroin, along with the neighbouring townships of Gartanfearn, Choilechorran and Greitnein, in 1784 when they were part of the sale of the MacFarlane Estates. All four townships were leased together for an annual rent of £65 19s 2d, with an increase expected on this expiry to £88 4s 9d (MacFarlane 1922: 142-145). It would seem that Dugald and his son Walter were gentlemen drovers, engaged in cattle rearing and trading, on a large scale. Not only did he have the leases on the McFarlane Estates but until 1757, he had a number of leases south of

Douglas Water, on the Colquhoun Estate as well. These comprised at least four townships around Cona Glen, on the south-west side of Glen Douglas (Colquhoun Papers 1757).

The droving route then crosses the river at Doune of Douglas, about 2km from Invergroin, still a working farm (Figure 158), and goes south on a grassy and well marked track into a valley between Doune Hill and Mid Hill for a further 2km (Figure 159). The watershed into Glen Mollochan is only 227m (Figure 160), and then there is a gentle descent for 4km until Glen Mollochan meets Gleann na Caorainn and Glen Striddle, just below Edentaggart Farm. Gleann na Caorainn provides a reasonably gentle routeway of about 10 km to the upper part of Glen Fruin, where any droves using it would join with cattle coming down Loch Long from Whistlefield. Glen Striddle was home in the late seventeenth century to one Adam Fudater (or Walker), who is listed in a Minute Book of the Earls of Argyll as being one of the drovers approved to drive cattle from the county of Argyll in 1684 (Campbell 2004: 38-39). This would suggest that this route was well known to drovers in the seventeenth century. On the south side of Glen Luss, across from where it is joined by Glen Striddle, and just at the start of Gleann na Caorainn, is the ruined dwelling of Killoin. This is a rectangular structure, with stone walls still standing over 1m high. It is 15m long by 5m wide (Figure 161). In 1760, it was occupied by John Runnickman, a vintner of Luss, and is believed by local tradition to have been an inn associated with droving (Ian MacEachern *pers.comm*. August 2011).



Figure 158 Glen Douglas. This photograph, looking back north-west towards Invergroin Farm, from just above Doune of Douglas farm. The An-t-Streang to Arrochar goes up the hill behind Invergroin.



Figure 159 Route to Glen Mollochan. This route climbs through a small glen in the southside of Glen Douglas, and links into Glen Mollochan, which then leads to Glen Luss and Loch Lomondside.

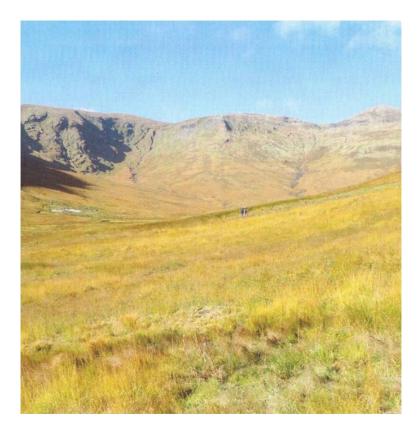


Figure 160 Glen Mollochan. Photograph is looking north-west up Glen Mollochan to the watershed. The route goes round to the right, and into Glen Douglas.

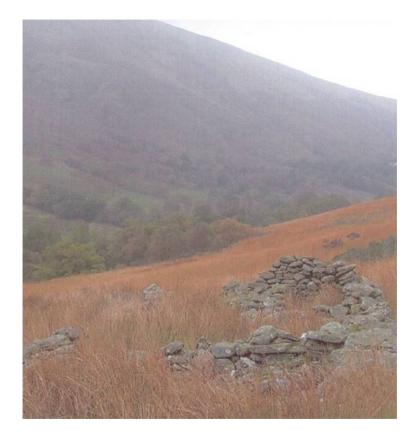


Figure 161 Killoin. The photograph is looking northwards over the ruins of Killoin towards the head of Glen Luss. The droving route to Luss goes down Glen Luss (to the right) towards Loch Lomondside and Luss village.

The land south of Douglas Water in Glen Douglas, Glen Mollochan and Glen Striddle was leased in 1757 to an Ayrshire sheep-master, John Campbell of Lagwine, by Sir James Colquhoun. In part, this land had previously been leased to Dugald MacFarlane for his droving and cattle rearing enterprise, and in part had been held by individuals with no known connection to either cattle or sheep rearing on a large scale. It would seem that Campbell, on the back of profits from sheep, was able to outbid MacFarlane and his cattle raising enterprise, never mind those tacksmen who carried on a mixed farming enterprise without specialisation in either sheep or cattle. By 1765, Campbell of Lagwine also had the lease of Gleann na Caorainn, and then possessed the lease of eleven properties within the parish of Luss (Colquhoun Papers 1765). Eric Richards in "The Highland Clearances" recounts the assertion that Campbell was the first person to introduce black-faced sheep into the Highlands. He is said to have come in 1755 from the parish of Cumnock in Ayrshire to the Ardkinglass Estate at the head of Loch Fyne, where he leased a farm, before coming to the Colquhoun estates in 1757. It was said that the rents tripled compared to what could be paid if black cattle was raised on the land (Richards 2008: 99-100). As such, this route through Glen Douglas, and south to Luss, saw the first struggle between the specialisations of cattle and sheep breeding, which would quickly turn in the favour of

sheep. MacFarlane held on north of Douglas Water until the sale of the MacFarlane Estates in 1784, presumably shielded by his relationship to the clan chief. However once the land was held by others (Fergusson of Raith, and then from 1821, the Colquhouns), the introduction of sheep here also would not be long delayed.

From Edentaggart, there is a gentle descent through what becomes Glen Luss to Cnoc an Airm, Luss Parish Church, and Luss village on Loch Lomondside.

The village of Luss saw in 1772 an attempt to establish a cattle market, presumably based on cattle moving both down Loch Lomondside and also via the String Road and Glen Mollochan. A advert was placed in the Glasgow Journal of 7 May 1772. It read:

The market for Black Cattle usually held on Dumbarton Muir on 4th and 5th June is now proposed by the Dealers of Cattle in Argyllshire and others, to be held at the Dikes of Dochlaye in the Parish of Luss, upon the 1st Thursday and Friday of June next, being the 4th and 5th days of the said month, where no charges whatever will be exacted, excepting paying for the grass upon the muir of Loch Lomond as usual. N.B. The above is to be a free market, and Sir James Colquhoun is determined to give every encouragement in his power to those resorting to this fair. (Glasgow Journal 1772)

The advert was not repeated in 1773 or 1774, and the attempt to displace the Whitsuntide fair at Dumbarton Muir, itself only started in 1762, appears to have failed.

From Luss it is only a short walk to the crossings over the River Leven at Balloch and Bonhill, as well as the cattle markets at Dumbarton.

6.6 Full Circle: Some Conclusions

This case study has produced evidence which illuminates many of the research questions posed at the outset of the thesis which centre on the subtle balance between change and continuity in the landscape, particularly in relation to social relationships. It also provided a number of interesting comparisons with the Sutherland case-study.

The context of this case study is an Improvement movement which was well underway by the mid eighteenth century in Bute and Argyll. The specialisation in cattle rearing was then followed by a significant shift towards sheep farming after 1750, which was more than sixty years before the Sutherland Clearances.

The archaeology reveals several stock enclosures, for example those at Coille Mhor, Tigh Caol and Glen Kinglas, which appear to pre-date Improvement. These are both irregular in form and carefully placed in the landscape to take advantage of natural features such as banks, slopes and burns. Equally those stances which subsisted through Improvement such as at Cairndow and Inbhir-Laraichean had a much more regular and rectilinear form, which is much more similar to those surveyed in Sutherland.

It would appear that water crossings were not prohibitive for droving, but that drovers made considerable efforts to minimise the distance of any swimming of livestock such as Rhubodach and at Port Dornaige. This is not dissimilar from the observations made in Sutherland where the inland routeway crossed out of Sutherland across the narrow Kyle of Sutherland at Invershin, and avoided the problematic crossings at Little Ferry and Creich.

As in Sutherland, it would appear from archaeological evidence that droving routes would not necessarily have followed modern road alignments, which were determined by British army engineers of the eighteenth century. For example, alternatives exist to the Glen Croe route, and there are cattle stances on those alternatives in upper Glen Kinglas and at Inbhir-Laraichean. So it would seem that as in Sutherland, external intervention (in terms of road-building) has changed pre-existing route-ways. It may also have impacted on some stance sites with the old inn at Tigh Caol, near Strachur, falling out of use about the time that the road was re-aligned by Telford after 1800.

The question of accommodation for the drovers and the relationship between them and local inhabitants is highlighted by the archaeology. Structures which appear to be bothies are related to the stances in remote stances such as Coille Mhor or in Glen Kinglas. However others which have no such structures related to them are either close to inns (Tigh Caol) or existing townships (Cairndow). This might suggest a close engagement with the local populace where practical, but not in every case.

These and other themes will be further developed in the discussion chapter (Chapter 9).

7 The Girnals of Easter Ross

7.1 Introduction

The research agenda which I developed for the field-work (see Chapter 4: Methodology) was based on context, practice and agency, and form. The methodology was designed to capture the form and nature of the evidence which could then be analysed and discussed later in the thesis. This is as relevant to the movement of grain (to and from girnals) as the movement of cattle (to and from stances) which has discussed in the previous two chapters.

Girnal is the Scots word for a storehouse. It is often applied to a building used for grain storage, i.e. a granary. These girnals are to be distinguished from estate threshing barns which were also built in this period, such as the one at Balnagowan around 1700. Threshing barns have opposing winnowing doors to facilitate a through draught. They also needed a high internal flooring to allow the arm stretch with flail of the threshers. The priority for the girnals was rather different. They needed to be secure, well ventilated, dry and with facilities for handling and loading (Beaton 1986: 135).

There is a concentration of eight girnals in Easter Ross and a related one in south-east Sutherland (Figure 162) which date from the late seventeenth to the mid- eighteenth centuries. Almost all are adjacent to the coast. Due to geology (Figure 163), climate and elevation, the coastal lands of Easter Ross and south-eastern Sutherland were especially good land for growing either bere barley or oats. In contrast to the pastoral hinterland of northern Scotland, the low-lying land of Easter Ross increasingly supported an agrarian society as commercialisation took hold. It is the changing and adaptive nature of that agrarian society which concerns this thesis.

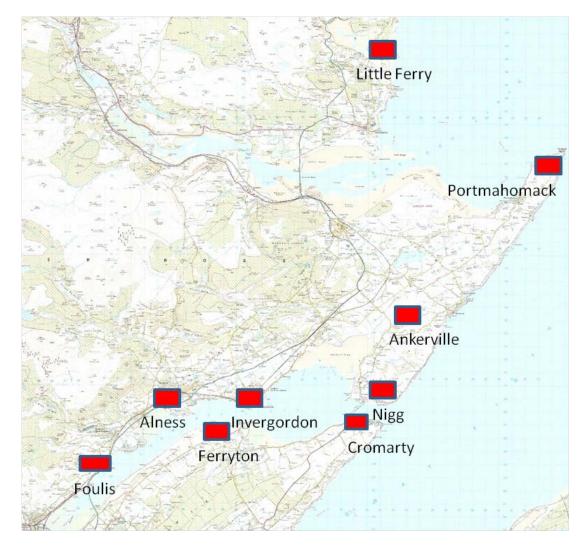


Figure 162 The girnals of Easter Ross and south-east Sutherland. The map indicates the important grouping of nine coastal girnals, dating from the late seventeenth to mideighteenth century (Ordnance Survey).

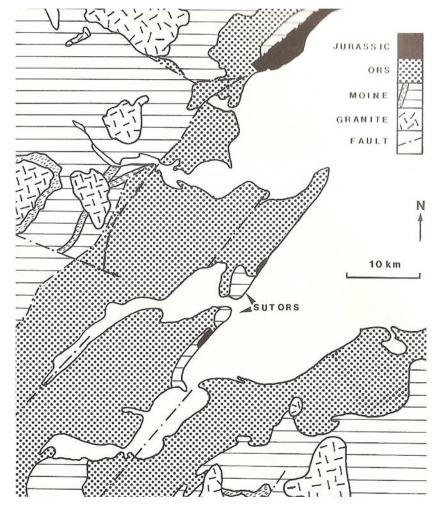


Figure 163 The geology of Easter Ross. The lowlands of Easter Ross are formed from Old Red Sandstone (ORS), in contrast to the predominate Moine Schists, with granite intrusions, of the uplands of the interior (Beaton 1986).

The evidence would suggest that rentals paid in grain, and transported to these estate girnals, survived into the nineteenth century. Sir George Steaurt Mackenzie of Coul noted that there were leases still exsting in 1810 which direct the rents to be paid in grain (Beaton 1986: 135). The accounts of the Foulis girnal show that rents in kind were being paid into it until the very end of the eighteenth century (Beaton 1986: 135), whilst Mowat shows that the same thing was happening on the Tarbat estate (Mowat 1981: 24).

The purpose of the girnal was to receive the grain paid as rentals by the tenants of the estate, store the grain safely, and then disburse it either as stipends to ministers, school-masters and other local officials, or as part of a salary to family retainers, or sell as cash crop. It is this latter function on which I focus. There is a high concentration of girnals based along the coastline of Easter Ross. These are, with one exception, adjacent to jetties, small harbours and shelving beaches. Bulk goods such as grain which needed to be moved any substantial distance would require to be shipped by sea (Beaton 1986: 133) in the

period before Telford and the Commissioners for Highland Roads and Bridges began to create a road network north of Inverness in the early nineteenth century. Consequently, the existence of a network of coastal girnals points to the export of grain from the locality as a significant trade.

Movement of a cash crop is central to this study. In this sense, the movement of grain from the low-lying, arable areas of the Highlands can be matched with the export of black cattle from the upland, pastoral areas. In this case, the grain initially travelled down a system of lanes and routeways from the arable fields of an estate to the girnal. It did so by pack-horse or rudimentary cart or even in wicker panniers on the backs of workers (Fenton 1984: 105-123).

Each girnal served an estate, and as an example, in relation to the Foulis Ferry Point Girnal (7.3.7), which served the Munro of Foulis estate, I have mapped the movement of grain from the field systems and townships which produced the grain to that girnal. I also touch on this with regard to Bute in the next Chapter. Chapter 3 explored the theoretical construct of 'moving down the lines and resting at the dots' based on the work of Tim Ingold (2007). The movement of grain by rudimentary cart, pack-horse or on the backs of farm workers, is the movement down 'the line' in terms of Ingold's theory. The grain 'rests' at the girnal ('dot'), having been moved down a myriad of routes ('lines'). From here it was moved onwards (along other 'lines') to market by way of a harbour or a beach to a ship, and thence to the Lowlands or abroad.

An architectural or historical study of these girnals might tend to emphasise the construction details of the buildings or the motivations of the estate owner in constructing such a significant building. Instead, this archaeological study places a different focus on the Easter Ross girnals, in order to answer questions posed at the outset of the thesis. For example, what are the implications for the changing social relationships of those who supplied the girnals and those who worked around and in them when they were constructed? Do the girnals say anything about the rise of individualism over community which is at the very heart of the archaeology of capitalism? Can they give any clues to the actors promoting and driving change in this Highland society, outside the well documented tiny minority of gentry and merchants? Is it possible to employ the dialectic of scale, and straddle both the micro situation of Easter Ross with the macro position of what was happening in the wider world? What impact was there on the landscape from the construction of these very substantial buildings? Did they develop a distinctive form,

arising from the nature of their function, which might be compared with other similar buildings elsewhere? By looking at the context in which these buildings were constructed, the form of the girnals themselves, and the impact of their construction on long prevailing local practice, I hope to address these and related questions. I comment on these issues in this chapter and further develop the major arguments in the Discussion Chapter (Chapter 9).

7.2 The Easter Ross grain trade

Easter Ross had developed as a grain exporting region from the beginning of the seventeenth century with both national and international trade links. For example, it is recorded that Tain exported 10,000 bolls of bere between 1621 and 1631 to Norway (Richards and Clough 1989: 464). Substantial amounts of grain were also making their way to Edinburgh and the Forth Estuary, although the lairds of Easter Ross had competition from other grain producing areas such as Orkney (Richards and Clough 1989: 42). This trade continued to grow throughout the eighteenth century and into the nineteenth (Mowat 1981: 73), although the Ferintosh Distillery took increasing amounts of grain in the eighteenth century, as did other licensed and unlicensed stills in Easter Ross.

Taking the Mackenzie Estates of Cromartie as an example for the purpose of explaining how the grain trade worked, it is apparent from archival information that this formed part of a sophisticated trading pattern established in the Highlands well before 1700. The Cromartie Papers (NAS GD 305), now in the National Archives of Scotland, allow an insight into how the trade was organised in the late seventeenth century. The estate was just one of many who were exporting grain from Easter Ross.

The Cromartie Estate in the seventeenth century was highly acquisitive, and consisted of three main baronies which were themselves built up of many acquisitions (Richards and Clough 1989: 6-8). Coigach in Wester Ross was mainly grazing country where the main cash crop was black cattle. The district never grew enough grain for its own requirements, and until the middle of the eighteenth century there was no corn mill anywhere in Coigach (Richards and Clough 1989: 8). Strathpeffer had both corn lands and upland grazing country, and was centred on Castle Leod which was re-built in 1606. The grain was originally brought to the castle (in the absence of a girnal) and stored in the ground floor (Clough 1986: 92). From there, the grain was exported via the burgh of Dingwall (Richards 1989: 464). The third barony was New Tarbat which incorporated the original Mackenzie

holdings around Portmahomack and the castle of Ballone, and was extended by purchase and inheritance in the mid seventeenth century of lands around Milton, Tarbat and Fearn. This was rich grain growing land, with a substantial output of barley-bere and oats. The grain was brought to the Barony Court building at New Tarbat, and in due course to the two newly constructed girnals at Portmahomack and Cromarty (Beaton 1986: 133-152).

The rental records (NAS, Cromartie Papers GD305) for the late seventeenth century show that whilst the rents from Coigach were increasingly paid in silver coin (because the tacksmen were able to sell their cattle at such markets as Beauly or Crieff trysts), the rents from Easter Ross were paid in kind. There are good rental records from 1680 until 1705. These show that George Mackenzie (1630-1714), later Earl of Cromartie, acted as an entrepreneur for the grain paid to him as rental income of his eastern estates in Strathpeffer and New Tarbat. The rentals show that this grain was disposed of by way of a repeated annual cycle.

George Mackenzie inherited the estate from his father in 1655. However, it was not really until the Restoration of Charles II in 1660 that he began to organise a substantial grain trade with the lowlands. He went to Edinburgh in 1672 to pursue a successful legal and political career there and in London, but by this time had established a successful grain trade with the assistance of his chamberlains in the baronies of Strathpeffer and New Tarbat (Richards and Clough 1989: 42). The annual cycle began with the payment of grain rents by the tenants at Candlemas on 2 February. This may seem an unusual time of year but it was because the grain had been winnowed and dried in kilns during the autumn. It was then in a state to be transported to estate collection centres or girnals.

Once the grain had been ingathered by the chamberlain, a letter was sent to either an agent or Mackenzie himself in Edinburgh (Clough 1986: 91). This covered both the quantity and quality of the grain. It was measured in bolls, with 16 pecks to a boll. Clough, however, points to a potential ruse as it turned out that the Tarbat Boll (a copper vessel or cauldron) was more than twice the size of the more commonly used Linlithgow Boll (Clough 1986: 91). It would appear that the 600 to 1,000 bolls of grain ingathered by the estate from the tenants in Easter Ross became 1,200 to 2,000 bolls, available for sale, on arrival in Edinburgh. There it was typically sold to one of the master-brewers (Richards and Clough 1989: 42) on a forward contract in March. Mackenzie then chartered a ship from Edinburgh or Fife to go to Easter Ross. In the meanwhile the grain had been not only weighed and assessed but also bagged and stored in the girnals, with potentially more grain

bought locally, if required to fulfil a contract. When the ship arrived, in early summer, it was normally given ten working days to load, and small boats and boatmen were hired to assist (Richards and Clough 1989: 464). Mackenzie usually chartered his own vessels in order to get a better price in Edinburgh, but this involved taking risk on the shipment. Alternatively the purchaser could arrange shipping, at a lower price, for delivery in Easter Ross.

At first, most of the grain was exported via the Royal Burghs of Dingwall, Tain and Cromarty but these levied dues for the government by law. Consequently, Mackenzie managed to convert his own ports, Portmahomack and New Milton into burghs and ports of barony which enabled them to escape these taxes. It was the impetus for the construction of the harbour wall and grain girnal at Portmahomack. Otherwise, the ships were capable of beaching in sheltered bays such as Nigg Bay, off New Milton. It was also one of the drivers, in all probability, for his take-over of the former Royal burgh of Cromarty (Richards and Clough 1989: 43). Here too he built a girnal next to the harbour. After payments to both the men for completing the loading on time, and payment of perquisites to the ship's captain (Clough 1986: 92), the ships sailed back to the Forth, largely keeping close to the coast.

In the early autumn (by mid September), the joint-tenancy farms of Easter Ross would produce their grain harvest and the annual cycle would repeat. That is not to say that there were not fluctuations in the trade. Indeed the years 1695 to 1699 were years of crisis in the Scottish grain trade (Cullen 2010: 54-93). In 1741, a sloop which was to take oats to Greenock from Portmahomack was broken up by a mob in the harbour to prevent the export of the grain (OSA 1791-1799c Tarbat: 433). No doubt, the girnals needed to be both strong and secure. The Foulis girnal was marched on by a mob as late as 1796 during food riots in Dingwall (Munro 1996: 32-33).

7.3 The archaeology of the Easter Ross grain trade

7.3.1 Portmahomack Girnals (NH 915 846)

The small harbour of Portmahomack was at the heart of the Mackenzie lands of Easter Aird, where George Mackenzie's father died at his castle of Ballone in 1655 (Richards and Clough 1989: 11). This was part of their barony of New Tarbat. It comprised a series of

rich, corn-growing townships such as Wilkhaven, Tarrell, and Arball, to which were added the adjacent Abbey lands of Fearn in 1654. Also added in the mid seventeenth century were the lands facing south onto Nigg Bay around the mansion house of New Tarbat House, built in the late seventeenth century. This house was at the centre of good arable townships such as Blackhall, Priesthill, Meddatt and Milton (Richards and Clough 1989: 7). It would appear (Clough 1986: 92) that there were two collection points for grain in the barony of New Tarbat. One was at the Barony Court building at New Tarbat, and the second was at Portmahomack. The first was adjacent to the sands of Nigg Bay where a ship could safely beach and load grain via small boats. At Portmahomack, George Mackenzie built the first of his purpose-built girnals in the last decade of the seventeenth century along with a harbour wall to improve the safety of the anchorage. It is not part of this study, as previously explained, to trace the movement of grain from the farms to these collection points but it would seem likely that the grain was brought by either wheelless transport such as pack ponies, sleds or on the backs of individuals (Fenton 1984: 103-123); or alternatively by rudimentary carts and wagons using a network of local lanes (Fenton 1984: 124-140). It was part of the rental obligation of the tenants to "lead the bere" or bring the grain from their township to the girnals (Clough 1986: 92).

The first girnal at Portmahomack was built for George Mackenzie, Lord Tarbat, and later first Earl of Cromartie, by Alexander Stronach, a local mason. It was built together with a pier, and they were complete by 1698 (Clough 1986: 93). When the grain arrived at the girnal, to satisfy the rental obligations of the tenants, there is a level piece of ground at the rear of the girnal (now a garden). This area would have been ideal for taking the grain off the packhorses or carts, checking its quality, weighing it and then bagging it. The bags – known as 'sarks' (the Old Scots for a shirt) – are known to have come from Dundee, and as they were provided by the Estate would presumably have been all the same size.

The building is 19m x 6.4m. It has recently been converted into a dwelling house, reharled, had a small extension in the middle of the east (rear) side. There is a blocked loading door at first floor level served by a forestair in the north gable, and similarly a blocked loading door also in the south gable. Presumably for security there was only one access point to the first floor, but two exit points from which the bags could be lowered when the ship arrived. Unlike a winnowing barn, the roof levels within a girnal could be reasonably low, and the two storey building has a first floor, which extends into the roof space. The building retains its original oak-framed roof which is slated (Beaton 1986: 138). The roof is steeply pitched, with a stone ridge, crowstepped gables and square apex

terminals. There are two doors and six small windows at ground floor level, and two vents at first floor level on the west side of the building (Figure 164). It was important to keep the grain well ventilated, dry and aired, hence the slit vents on the side of the prevailing wind, and the small windows at ground floor level which were presumably capable of being shuttered and barred when the girnal was in use. There is a supporting buttress on the west side at the southern end. This might imply that the west wall facing the harbour/beach had shown signs of subsiding outwards, which is not surprising given the sandy nature of the strand between the girnal and the sea. The building appears to have been harled from the start (Beaton 1986: 138), using a lime mortar, and this would have protected the rubble masonry which is evident in an internal photograph of 1983 (Beaton 1986: 139), from weathering.



Figure 164 17th Century girnal at Portmahomack. This girnal has recently been converted into a dwelling house

In the late eighteenth century a second and larger girnal was constructed to the north of the original one (Figure 165). This has a date stone of 1779. It is a longer and taller building, being 31.8m x 5.5m, and has three floors (Beaton 1986: 138). On the west side there are seven windows on both the first and second floors, with the ground floor having six

windows and a central door. This building has recently been re-harled and converted into flats. It has a slate roof, and has a modern Coastguard hut attached on the east (rear) side, where presumably the unloading of grain and its weighing and bagging took place on flat ground which runs back to a slope. There are several blocked doorways on this east side. The roof is of a shallower pitch than the earlier girnal, has a stone roof ridge, and ball finials at the top of each gable. The windows show evidence of having been barred on the ground floor and shuttered on the upper two levels (Beaton 1986: 138). Presumably increased agricultural production through the eighteenth century, arising from new agricultural methods, necessitated the need for a second girnal. The obvious place for this was adjacent to the existing one and next to the harbour.



Figure 165 Eighteenth century girnal at Portmahomack. This girnal is at the north end of the earlier girnal, and has recently been converted into flats.

The New Statistical Account states that Portmahomack consisted of "two storehouses for the reception of rents in kind and three houses" and "a handsome little pier" (Beaton 1986: 136). This pier is immediately adjacent to the girnals (Figure 166), and now forms part of the new harbour planned by John Rennie (NAS Rennie 1793), and built by Telford between 1811 and 1816 (Hume 1977: 296). When the original pier was built by Stronach

between 1690 and 1698, it was "three score yards in length and three ells broad and four ells high". A Scots Ell is 37 inches. This was supplemented by a sheltering wall of six feet along the length of the pier, paid for in a second contract given to Stronach (Clough 1986: 93). It is very much of the same design today, being somewhat wider and slightly taller. It is likely that that the seventeenth century pier forms the base layers of the later construction. The distance from the girnals to the harbour is less than 30 metres, and the beach piles up on the landward side of the harbour giving an easy beaching for flat-bottomed vessels. With a harbour wall capable of taking hand-carts, the loading would be straight-forward.

From the harbour, the cargo could be carried efficiently to any of the east coast Scottish ports, down to England or across the North Sea to Norway, Holland or the Baltic (Mowat 1981: 73).



Figure 166 Portmahomack Harbour re-built in 1816. This harbour probably has the original seventeenth century pier at its core.

7.3.2 Cromarty Girnal (NH 786 677)

At the rear of the Cromarty harbour, immediately in front of the University of Aberdeen field centre, and below the lighthouse complex stands the remains of another girnal belonging to George Mackenzie. Indeed this may have been completed before the Portmahomack girnal, as Mackenzie had effectively gained control of Cromarty by 1683, and was eclipsing the sea-borne trade of the royal burghs of Dingwall and Tain (Clough 1986: 92). The same extensive bills and accounts relating to its construction do not exist as they do for Portmahomack.

The grain flowing into this girnal appears to have come from two main sources. The first and most obvious was from the former Urquhart lands which surrounded the tiny royal burgh of Cromarty. As with Portmahomack, the grain would have arrived at the girnal from the surrounding townships via a complex of tracks and paths into the burgh, probably on a mixture of carts, sleds, and pack-ponies. The second source of grain in the Cromarty girnal was from the Mackenzie lands of Strathpeffer, via Dingwall (Richards and Clough 1989: 42-47). When George Mackenzie inherited the estate in 1655, one of his problems was that grain from Strathpeffer was exported via the Royal Burgh of Dingwall, where shipping dues were levied. Mackenzie's answer to this, over time, was to work with several partners to buy up the bankrupt Urquhart family's bonds and eventually foreclose on them. This gave him both the cornlands which formed the hinterland to Cromarty on the Black Isle, but also control of the burgh of Cromarty itself, which he succeeded in making a royal burgh no longer, and thus saving himself customs dues (Richards and Clough 1989: 43). After this, it would appear that grain was moved over to Cromarty from Strathpeffer via Dingwall in small boats, ready for shipping out from the girnal (Clough 1986: 93).

The remains of the girnal appear to consist of two walls, (Figure 167) which form part of an enclosure now used for the storage of lobster pots and related detritus (Clough 1986: 93; Beaton 1986: 144). These walls are 2m high and constructed of massive red sandstone blocks. They are about 0.75m wide. The walls run about 5m north-south on the eastern side of the enclosure, before being interrupted by modern walling, and 8m east-west on the southern side. They are keyed together at the corner (Figure 168). On the western (harbour) side of the enclosure the wall appears slightly later, is built of smaller stone blocks and rubble. This western wall is not keyed to the earlier southern wall (Figure 169). There is no northern side to the enclosure. The land is flat, but on the eastern side, the wall abuts the rising ground of a small hillock on which the 1846 lighthouse was built. This would

suggest that the girnal ran east-west with gables at each end. The eastern wall of 5m (internal measurement) corresponds closely to the width of the Portmahomack girnal at 6.4m (external measurement). Whether the girnal matched the 19m length of Portmahomack is hard to say, with only 8m surviving, but is possible given the available room before the pier is reached. An east-west alignment would also give flat land on both the north and south side of the girnal for loading and work yards.



Figure 167 Remains of seventeenth century girnal at Cromarty. This shows the remnants of two walls of the girnal. Looking south, the longer wall is about 8m. The wall to the left (east) is about 5m in length. A more modern wall juts out at the left.



Figure 168 The east and south walls at Cromarty. The east and south walls appear to contemporary and are properly joined.



Figure 169 Join of south and west walls at Cromarty. The south wall is not properly joined to the west wall which appears later in construction.

Cartographic evidence would suggest that the girnal had had been dismantled before 1832, (NAS Great Reform Act Plans 1832) by which time a row of cottages (now gone) existed immediately inland from the harbour, and in front of the girnal enclosure. This fronted the harbour and may have been built at right angles to the original girnal.

The harbour was constructed in 1785 (Mowat 1981: 82), and there appears not to have been a pier similar to that at Portmahomack in the seventeenth century. Instead it would seem that ships were beached where the harbour now is, adjacent to the girnal, and that they proceeded from Cromarty across the Firth to pick up further grain from New Tarbat by beaching on the sands of Nigg Bay (Richards and Clough 1989:43). Mackenzie's contracts specified that the loading was to take 'ten weather-work days' (Clough 1986: 91) and was carried out using small boats and local boatmen (Richards and Clough 1989: 464). Presumably it is no coincidence that when a harbour was eventually constructed at Cromarty, even though the girnal may not have been in use, or was at least coming to the end of its active life, the selected location was immediately adjacent to it. The girnal is adjacent to the beach (now harbour) and is within the protection of the Cromarty Firth. Just

a few hundred metres north lies the entrance to the Firth, which is about 1500m wide. From here the grain ships would have entered the Moray Firth on their way to markets in the Lowland and England; seafaring their way along 'well kent' routes to the south.

7.3.3 Nigg Girnal (NH 796 687)

This is a girnal about 50m from Nigg Pier, which serves the ferry to Cromarty. There is a date, on a lintel stone above the door, of 1712 (Beaton 1986: 144), but this appears to have been recently covered by re-harling of the stone walls. It is no longer visible.

It is situated on flat land at the south end of the Nigg peninsula. The oil rig construction yards lie adjacent and to the west. The girnal is the most westerly of a row of three cottages which formed the Nigg Ferry Hotel until it ceased trading in 2007. It faces south towards the pier, the entrance to the Cromarty Firth, and across to Cromarty town. The former hotel has now been converted into one or more domestic dwellings, which occupy not only the girnal but the connected buildings to its east side.

The girnal is 21.9m x 6.4m (Beaton 1986: 144) and consists of a ground floor plus an attic (Figure 170). There is crow-stepping at the east end only. There is a walled yard to the rear, giving considerable flat space for loading into the storehouse, and associated activities. There is a door and four windows in the (front) south side which are metal framed and appear to date from the period of WWII when the construction yard was a naval base. They are of a size that suggests that they were inserted in recent times. There is also a modern patio door incision to the east, and beyond that a small window (also now metal framed) which might be an original early seventeenth century aperture, being similar in scale to those at Portmahomack.



Figure 170 Nigg Ferry Girnal. Girnal built in 1712. Subsequently used as an inn from before 1871 until 2007. It is now used as a dwelling house.

Although the pier is modern, there are remains of a jetty on the beach, next to a WWII pillbox. The First Edition Ordnance Survey 25 inches to the mile survey of 1871 shows the jetty. It also shows the girnal and its associated buildings operating as an inn, or public house.

The girnal may have been built by one of the Ross families who owned most of the parish of Nigg. A survey of Easter Ross estates in 1756 shows the largest landowners to have been Sir James Ross of Balnagowan, David Ross of Inverchassley (see below), Alexander Ross of Pitcalnie, George Ross of Pitkerry, along with James Fraser of Pitcalzean and Roderick Macleod of Cadboll (Mowat 1981: 244-249). If the girnal was built by the Rosses (who were mainly Whigs, Presbyterian and Hanoverians), then this is understandable because their great rival for power in Easter Ross were the Mackenzies (who were largely Tories, Episcopalian and Jacobites). The Mackenzies had already developed Portmahomack and Cromarty for the grain trade. The girnals were substantial buildings of the period, and might be interpreted as symbols of power, wealth and prestige. They dominated the shoreline, and were frequently larger than the parish churches. The

political rivalry between the two families was intense in the shifting political and religious environment of the late seventeenth and early eighteenth centuries (Clough 1986: 90). More research will be required to confirm the builder, but it seems unlikely that that the Rosses would not have sought to compete with the Mackenzies in the grain trade, and thereby left a competing statement of power in the landscape.

7.3.4 Ankerville Corner Girnal (NH 818 744)

One girnal which can certainly be attributed to the Ross family is that at Ankerville Corner. This is an early eighteenth century girnal (Beaton 1986: 143) which was converted circa 1900 into three farm cottages. It appears in an undivided state in the 1st Edition of the Ordnance Survey, which was surveyed in this area in 1872.

It was built by the Inverchassley Estate, and may have pre-dated the ownership of David Ross (1727-1805), later Lord Ankerville, a noted Scottish judge, Enlightenment thinker and Improver. Lord Ankerville owned a considerable land in Easter Ross, and was Provost of the burgh of Tain three times in the eighteenth century. His land was spread among several parishes in Easter Ross (Mowat 1981: 245).

Ankerville Corner girnal is the only one of the group which is not built on the coast. The girnal is situated on flat arable land which was subject to several drainage schemes in the eighteenth century, including an ambitious one in 1759 (NAS RHP 239). It is to the east side of the head of Nigg Bay. However, there is no obvious access to the sea, as the bay is flanked by saltings and mud-flats in this area, and there are no apparent jetties or harbours nearby, with the girnal being about 1500m from the nearest tidal water. It may be that the clue is on the central location of Ankerville Corner. Prior to the road re-alignment of the B9175 in recent years, the girnal stood on a significant cross-road, and as such would have been a good collecting point for grain for the dispersed Inverchassley Estate. From there it is about 5km to the girnal at Nigg. If this was to work efficiently, it implies that the tracks were probably suitable for carts, even in the eighteenth century. The road to Nigg is very flat, and skirts Nigg Bay. It is possible that loading of boats lying on the sands of Nigg Bay, beyond the saltings, was possible, or alternatively the grain was moved all the way down to the girnal at Nigg for shipping outwards.

The building is 24.4m x 6.4m with crow-stepped gables (Beaton 1986: 143). The alterations have inserted three windows and three doors at ground floor level and six

dormer windows on the first floor, and there are two domestic chimney stacks (Figure 171). Today the building is surrounded by domestic gardens, but the 1st Edition Ordnance Survey map appears to show a working yard arrangement between the road and the girnal in 1872.



Figure 171 Ankerville Corner Girnal. An early eighteenth century girnal on the Inverchassley Estate. It was converted to cottages around 1900.

7.3.5 Invergordon Girnal (NH 709 685)

This early eighteenth century girnal (Beaton 1986: 144) is situated in Invergordon, down Mill Street, off High Street, and is separated from Shore Road by a new stone wall, built after a recent road re-alignment along the sea-front.

This girnal would seem to date from the early eighteenth century, and may have been built by Sir William Gordon, who bought the Inverbreakie Estate in 1704. Sir William Gordon re-named the area Invergordon (Mowat 1981: 19). Certainly by the time that his son, Sir John Gordon, began to lay out an impressive modern estate at Invergordon, and plan a new model village, the girnal seems to have been established as shown by an estate map circa 1750 (Figure 172), which shows the "storehouse" in the same area of settlement as

reflected on the Roy Map of 1747-55. This is just to the east of Invergordon Ness. Sir John, a prominent Improver and Whig MP, contemplated a model village including a new girnal complete with cupola, weathervane, crane, ventilators and an enclosure (Beaton 1986: 145). This appears to have never been built. Instead, the old girnal was gradually subsumed within the nineteenth century urban development of Invergordon. It sits on a gentle slope down to the Cromarty Firth, and originally was adjacent to the beach, although land reclamation now means that it is perhaps 150m from the sea.



Figure 172 Invergordon Girnal from estate plan of circa 1750. The girnal is also shown by Roy Map of 1747-55. It was subsequently subsumed within the town of Invergordon.

For much of the twentieth century it was used as a garage, but it was converted about 2000 into multi-occupancy dwellings. This development has some curious features such as a canopy to a small building to the south of the girnal, and an addition to the west end of the structure. These probably reflect alterations when the building was used as a garage. In addition, the front (south) side has been heavily altered by the addition of many doors and windows (Figure 173). The back (north) side has been much less altered. The gables are crow-stepped. It is a long building of two stories, being 38.8m x 6.4m (Beaton 1986: 144).

There is a car-park at the rear of the building on flat land (Figure 174). This would appear to be the area used by the girnal to receive the grain, weigh it, and bag it.



Figure 173 South side of Invergordon Girnal. The girnal has been heavily altered on its southern side by its previous use as a garage, and its present conversion to housing. This has led to the insertion of many doors and windows, although the widows on the upper floor may represent the original openings.



Figure 174 North side of Invergordon Girnal. The northern side remains much less altered than the southern side, other than by the insertion of a row of windows inserted into the roof. The car park occupies the former yard area associated with the girnal.

Although the Gordons of Invergordon owned lands in many parts of Easter Ross (Mowat 1981: 19), these were not conveniently sited for the girnal, and it must be assumed that the grain came from the hinterland of the small burgh, probably making use of the trackway shown on the estate map (Figure 172) which led to the nearby ferry, which crossed the Cromarty Firth to the Black Isle.

The ferry was developed in the nineteenth century into a considerable harbour and dockyard based partly on reclaimed land. It would seem likely that in the early eighteenth century, however, the ships calling at the girnal would have simply beached immediately in front of the building, in an anchorage which was sheltered to the west by Invergordon Ness.

7.3.6 Alness Point Girnal (NH 656 679)

The Alness Point girnal was not built until 1774 by Captain James Munro of Teaninich. This makes it the most recent of the Easter Ross girnals. It stood on the grassy links north of the Cromarty Firth, south of Teaninich House, and to the west of the position where the

Alness Ferry ran to the Black Isle. Today it exists only as a tumble of used stone behind a metal palisade fence.

It was unusual not only for the lateness of its construction, but also because it was unusually short and tall. It measured 11.8m x 6m (Beaton 1986: 145). It was also of four stories. Indeed the walls were only 0.6m in thickness. The height, proximity to the sea on sandy ground and thinness of wall seems to have been an early problem and old photographs of it show the north-east gable wall and the longer south-east wall both being heavily buttressed (Figure 175). This wall had a forestair to a first floor door, and two further loading doors above this. The seaward or south-eastern front had three small openings on each of the floors, whilst there were small vents on the north-west wall. The ground and first floors were very low, whilst the upper two floors were more generous in height.

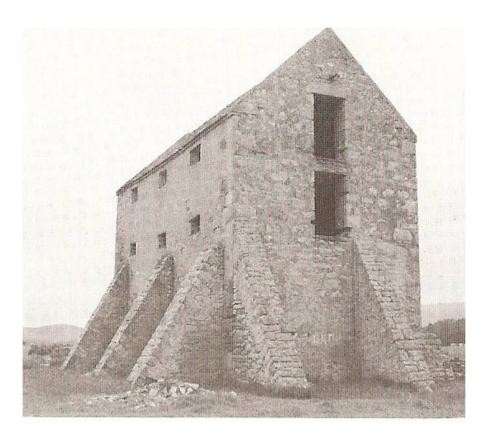


Figure 175 Alness Point Girnal in 1983. This girnal was both remarkably short and tall. This seems to have contributed to early problems with the stability of the building as shown by the substantial buttresses (Beaton 1986).

The building appears in the 1st OS survey of the area in 1874 to be intact. However, Hugh Munro, the son of James Munro, founded the Teaninich Distillery in 1817. The distillery is still in production. This would have consumed considerable amounts of barley, and might

have made the export of grain from the girnal redundant, although the import of grain then becomes an option (Mowat 1981: 58-63). The change to whisky production might be seen as an adaption to changing market circumstances after the end of the Napoleonic Wars, when grain prices fell. The girnal went out of use and by 1983 was gutted of all floors and with a deficient roof (Beaton 1986: 146). The Highland Council failed to find an alternative use for the structure and consequently, as it was judged unsafe, it was demolished (Figure 176).



Figure 176 Alness Point Girnal in 2010. Demolished remains of girnal remain on the original site. The debris is protected by a steel fence.

The site is a flat grassy one, about 50m from the Cromarty Firth. It is sheltered by being in an inlet from the Cromarty Firth, just west of where the River Alness reaches the sea. As such it enjoys a sheltered anchorage immediately offshore from the storehouse.

7.3.7 Foulis Ferry Point Girnal (NH 599 636)

This girnal is situated on a flat grassy site, immediately next to the Cromarty Firth (within 10m). It has recently been restored as part of the "Storehouse" restaurant and shop complex, which itself occupies nineteenth century farm buildings to the west of the girnal.

It now houses an interpretation centre explaining the role of grain girnals in Easter Ross (Figure 177), along with the Clan Munro centre.



Figure 177 Display of working girnal within Foulis Ferry Point Girnal. Part of the ground floor is now an interpretation centre explaining the role of girnals in Easter Ross. (By permission of Hector Munro of Foulis)

It faces south across the Cromarty Firth, The site also is adjacent to the Foulis Ferry (NH 600 635) which was operated up until WWII (Beaton 1986: 150). In 1987, it was noted that the ferry was connected to its hinterland by a track (running by the side of the girnal) which led to the foreshore which had many fragments of dressed stone and 30 tree trunks driven vertically into the shore (Graham 1987: 281). This ancient jetty has been restored at the same time as the girnal. Presumably the grain reached the girnal along this trackway from the townships of the Foulis estate.

How might the grain may have moved from these townships to the trackway which leads to the girnal? The Foulis estate in 1756 according to the valuation roll was only the fourteenth most valuable estate in Easter Ross and was nucleated around Foulis Castle in

the parish of Kiltearn (Mowat 1981: 245). This is still very much the case. The eighteenth century farming townships became very largely the post Improvement farms of the nineteenth century (*pers. comm*.Hector Munro of Foulis September 2013). Looking at the first edition Ordnance Survey map of the area (published in 1881), the relationship of the various farms to Foulis Point girnal via a nexus of local lanes and paths can be seen. There is a dendritic network of routeways from the hinterland to the girnal. These lanes flow around and past Foulis Castle down to the shore. There were estate mills at both Kateswell and Drummond (Munro 2005: 33-34), but in all probability the grain sent to the girnal would not have been milled, in order to prevent early rot. It is down these lanes and paths that the grain would have moved by cart, pack-horse or on the backs of farm workers (Fenton 1984) towards the short track which leads directly to the side and rear of the estate girnal at Foulis Point (Figure 178).

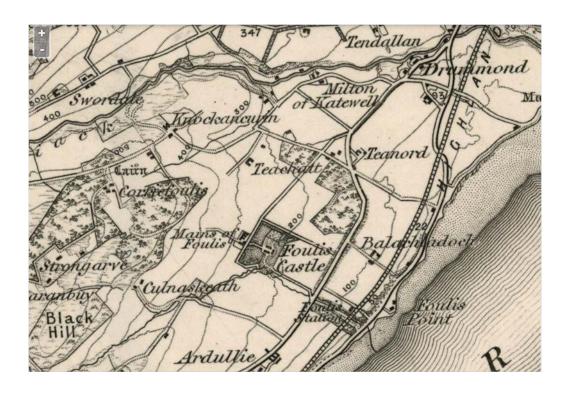


Figure 178 First Edition Ordnance Survey showing the farms on the Foulis estate and the road network relating them to the estate girnal at Foulis Point.

There is flat land to the west (rear) for a yard, where the grain might be assessed, weighed and bagged before being placed in the storehouse. After storage, it could then be shipped out using the jetty which is adjacent to a short shingle point or headland. This provides a safe anchorage in the Cromarty Firth.

The girnal consists of two main floors and an attic. It is a six bay structure of stone, and it is also harled. There is an exterior stair giving external access to the first floor on the east

side. The windows are notably small, especially on the ground floor where they are little more than vents. This allows a through draught for ventilation but also ensures security. Even the windows on the upper floors are easily shuttered and barred. There are three doors on the seaward (east) side of the ground floor, and one on the west. The roof is of slate and there is a chimney at the south gable end. The building is 28.8m x 6.4m, and dates to about 1740 (Figure 179) (Beaton 1986: 146-149).



Figure 179 Foulis Ferry Point Girnal. This shows the west side of the girnal, and is looking south. The restored jetty is just to the right of the building, beyond the trees.

Along with the Rosses, the Munros were a leading Whig family in Easter Ross, and have occupied the substantial estate of Foulis since the early Middle Ages. Munro of Foulis is chief of the clan, and at the time that the girnal was built, this was Sir Robert Munro who was subsequently killed fighting on the Hanoverian side at the Battle of Falkirk in 1746. The Storehouse dominates the shoreline between Dingwall and Alness and is highly visible from the Black Isle. As such, it may be interpreted not only as an important economic asset for the estate but also a high profile statement of wealth, modernity and power.

7.3.8 *Ferryton Point Girnal (NH 680 670)*

This is the estate girnal belonging to the Newhall Estate, which was owned by the Urquhart, Gordon, and Lockhart families in turn through the eighteenth century (Mowat 1981: 244-256). It is situated on the north side of the Black Isle, facing across the Cromarty Firth to Alness. It is adjacent to a ferry crossing (Graham 1987: 267) and is linked to the hinterland by a roadway, curving down to the shore between steep banks on either side. The ferry linked to the mouth of the Alness River, and Alness Point Girnal is directly opposite.

The stone building is 30m x 6.5m and is of two floors. There were seven small windows at first floor level on either side providing ventilation. Direct access to the first floor is provided by a forestair on the west gable wall, and there was a loading door at first floor level in the east gable (Figure 180). Similarly small windows (capable of being shuttered) were present on the ground floor, along with several doors, of which the one at the west end of the north side has been greatly enlarged, presumably for more recent agricultural use. There is plenty of flat land at the rear (south) for a yard. The girnal was roofed (presumably by slates) at the time of the first OS survey in 1874, but by 1989 was ruinous. It was then restored for use as a dwelling house (Figure 181). It is dated (NH66NE 39) by the RCAHMS as seventeenth or eighteenth century.



Figure 180 Ferryton Point Girnal. This picture was taken in 1989, before restoration to provide a dwelling house.



Figure 181 Restored Ferryton Point Girnal. This picture was taken in 2011. The beach is about 50m to the left of this picture down a short trackway.

The land is flat and grassy and slopes gently northwards towards the Cromarty Firth, where a short track (50m) goes down to Ferryton Point which is a spit of shingle (Figure 182) which is partially submerged at high tide. This provides a natural breakwater for an anchorage off the girnal for both grain ships and also the local ferry craft.



Figure 182 Ferryton Point. This shows the prominent spit of land which provides a safe anchorage in the Cromarty Firth for boats beaching at Ferryton Point.

7.3.9 Little Ferry Girnal (NH 802 957)

This is the most northerly of the group, and is in the county of Sutherland. It stands at Little Ferry at the entrance to Loch Fleet. It dates from the early eighteenth century, and was the Sutherland estate girnal.

The girnal stands about 300m north-west of Little Ferry Pier. This pier, first constructed in 1808 (Beaton 1986: 149) is on the site of the original crossing point as shown by the route of the rowing boat, or 'coble', in the Kirk map of 1772. This was the main crossing point for the north-south highway from Inverness to Wick until the building of the Mound in 1816. The girnal is just off this route, but connected to the highway, in the 1772 map, by a minor track running north-east from the rear of the building across Golspie Links to join the road (Figure 183). This would seem to suggest that primary consideration in selecting the site of the girnal was a sheltered anchorage. The fact that this was adjacent to a significant roadway by which grain might be brought from the cornlands around Golspie and Dunrobin belonging to the Sutherland estate was also likely to have been of importance.

The building is rectangular, being 24.4m x 6.7m (Beaton 1986:142). It is situated on a flattish grass sward between a curving pebble beach and a modern wood. The flat land to the hinterland of the girnal would have provided a convenient working area for the delivery of grain. The storehouse faces south-east towards the entrance of Loch Fleet, being just inside a significant headland on the north side of the sea loch. This provides a sheltered anchorage. The girnal is a two storey stone building which has been harled. The first floor entrances in the gables are served by forestairs providing easy access to and from the upper floor. The gables are crow-stepped. The steeply pitched roof is slated, and originally would have been unencumbered by the Victorian chimney stacks.



Figure 183 Little Ferry Girnal. This Detail is taken from John Kirk's plans for the Sutherland estate, 1772, and shows the Storehouse, or girnal, to the north-west of the ferry crossing point. The line of the crossing is indicated by a rowing boat or "coble" (By permission of National Library of Scotland).

The building was converted in 1859 into five estate workers cottages, when considerable alterations were made including the insertion of three doors, many large windows especially on the south-east front, four gabled dormer windows at first floor level, and four substantial chimney stacks (Figure 184). It has since been converted into a single holiday home (Beaton 1986: 142).



Figure 184 Little Ferry Girnal. This early eighteenth century girnal was built for the storage and export of grain from the Sutherland Estates. The chimneys and windows were added in the 1859 conversion to estate workers cottages.

It appears to have been used throughout most of the eighteenth century for the export of grain, with estate factors' accounts referring to it on a regular basis (Adam 1960: xxvii – xxviii). In addition, the 1772 Kirk map shows it, without the later chimney stacks and windows, as a very substantial building. This would have been a significant statement in the landscape, especially when viewed from the south side of Loch Fleet, rising above the shoreline.

7.4 Some Conclusions: similarities and differences

In looking at the group of girnals as an entity, there are certain similarities, albeit with some exceptions. No doubt 'function' dictated 'form' to some extent. The pressing need of all girnals is to be dry, secure and ventilated. The girnals were receiving grain down a complex network of local lanes and paths, and would require flat land around them which could be used as a yard. Equally if they were then to be used as the starting point for the export of bulky goods, such as grain, then a location near a suitable beach, bay or harbour would be expected. However, the estates might also be tying into both wider patterns of

architecture (for example, the preponderance of carved finials on the roof-tops might suggest this), as well as competing in terms of statements of power and modernity in the landscape. This will be explored further in the discussion chapter (see Chapter 9).

The widths of the girnals seem to have been fairly standardized at around 6.5m. Their lengths varied but in general they were between 20 and 30m long. The major exceptions being the remarkably short one at Alness (which was, however, exceptionally high with four floors) at just 11.8m and Invergordon which is exceptionally long at 38.3m. The vast majority were two stories high, sometimes with an attic in addition, except for Alness which had an extra floor.

They are all constructed of stone. When maintained, they appear to have been harled. This is a common practice on the east coast of Scotland and often done to protect soft or poor quality stonework. The roofs are of slate. Presumably this made them both dry and secure. The number of doors and windows vary, but the original windows appear to have been small. They were frequently opposite each other in order to facilitate ventilation. There are often loading doors at first floor height, sometimes in the gable walls. Forestairs to the first floor are a common feature.

They tend to be constructed within a 100m of the shore, and adjacent to gently shelving beaches. In eight out of the nine (Ankerville being the exception), they are adjacent to ferry crossings, and in each case there is a foreland, promontory or shingle spit which protects the anchorage. The importance of this is not only in its implications for the maritime transport of bulky goods, but also in the network of roads, tracks and paths which led to those crossing points. These girnals can therefore be seen as nodes from which both local networks such as ferries make limited crossings in relation to the local seascape, as well as being the 'jumping off' point for much more ambitious seafaring. The girnals seem positioned so as to connect the 'local' (estate grain production and localised movement of barley and oats) with the 'global' (wider networks of trade moving to other parts of Scotland, England and the Continent).

The buildings are large in relation to other domestic buildings of the time such as churches. Indeed, Ferryton Point Girnal was used as a church in 1843 at the time of the Great Disruption in the Church of Scotland. They are situated on the foreshores and must have been a prominent landmark in the landscape from both land and sea.

They owe their origins to estates, and in that sense were built at the behest of the estate owner. However, they would have impacted many people – not only to operate them, but also to construct them. Many people were involved in producing the grain, bringing it to the girnal, weighing, bagging and storing it, and then sending it onwards by sea as part of a trading transaction (or retaining it for use on the estate). Once operational, the girnal would also have begun to exercise a pull on the agricultural hinterland. If the granary was to be full and the onward contracts fulfilled, then a landowner might conclude that farming must be improved to give him more grain to export. This would further impact the landscape around the girnal. Thus the girnals can be seen as both representations of change but also the conduits though which change happens. The tendency to monoculture and the growing of specialist crops (in this case, barley and oats) is emphasised, whilst older practices which favoured more general forms of agricultural production are marginalised as being inefficient and out of date.

Several of the girnals saw riots in the eighteenth century when the harvests were poor and it was perceived that grain was being exported from these granaries without leaving the necessary amounts for the people to feed themselves adequately. This raises the question of what is meant by a 'surplus' which might be traded. How useful a term is this? From whose perspective is this defined?

These girnals were only a small part of the North Sea grain trade from the seventeenth century onwards. It is possible to see the experience of Easter Ross as a microcosm of what was happening more globally, as regions and areas specialised in certain forms of agriculture, and then sought to export their specialised product. This was entirely in line with the theories of Adam Smith (see Chapter 3).

These themes will be developed further in the Discussion Chapter (Chapter 9).

8 A possible girnal on the island of Bute

8.1 Introduction: was there an export of grain from any part of the southern Highlands?

Given the existence of the Easter Ross girnals, and the extensive North Sea export trade that they supplied in the seventeenth and eighteenth centuries, was there anything similar in the southern Highlands? A search of the National Monuments Record of Scotland (NMRS) revealed just twelve named girnals and thirty-one grain stores or storehouses in Scotland, which might suggest an incomplete picture. Not one is located in the southern Highlands. Would it be possible to use the research agenda which had been developed for Easter Ross, together with the information that that had produced, in order to see if there really were never any girnals, similar to those of Easter Ross, in this part of Scotland?

It might well be, of course, that there was no grain in this part of the Highlands that could be extracted by way of rentals from tenants, and thus be available to export. This was certainly the case elsewhere in the Highlands. In Coigach, in Wester Ross, part of the Cromarty estates, rentals from 1660 reveal that they were paid in cash based upon cattle sales. Grain was actually shipped from the Easter Ross baronies within the Cromarty estate to Coigach to meet grain deficits (Richards and Clough 1989: 41). Would this be the case further south on the western seaboard?

The point has been made that a simplistic review of rental accounts, which are necessarily computed in cash terms, would suggest at first reading that most rentals were paid in cash from the seventeenth century onwards, but this might be misleading (Dodgshon 1998: 108). The position would appear to be more complex with references to the ability of the landlords to take rents in kind, and particularly grain, persisting through the eighteenth century, if it was to the landlord's advantage. Examples given include the Campbell of Barcaldine and the Campbell of Bredalbane Estates in Lorne (Dodgshon 1998: 109), but no substantial export trade appears to have developed such as in Easter Ross. It has been suggested that this was because as the eighteenth century progressed, townships "burdened by high tenant numbers" or less well endowed in terms of arable resource, could ill afford to hand over even part of their grain output for rentals (Dodgshon 1998: 110). They therefore switched the rent burden to the livestock sector, and in particular the raising of cattle. This appears to have been the response on both the Macdonald and MacLeod estates in Skye (Dodgshon 1998: 111).

However, another response was possible for areas which were "capable of producing bere (barley) which, however, felt the handicap of distance from markets and that was to raise the value of their produce by processing it into whisky" (Dodgshon 1998: 111). Tiree was a particularly fertile island, but its rental records show that from 1541 to 1768 its payment of rentals in grain progressively shrank. However, by 1768, it was noted that the island had over 50 distilleries (Dodgshon 1998: 112). This also seems to have been the response in southern Kintyre (Glen 1970: 67-83). In 1761, the Duke of Argyll ordered his chamberlain for Kintyre to stop illegal distilling "by which His Majesty's revenues is greatly hurt" (Dodgshon 1998: 112).

Two low-lying areas in the southern Highlands which might have produced a sufficient quantity of grain, over and above what was required for domestic consumption, and thus create a grain export trade, were Islay and Bute.

A modern, detailed archaeological study of Islay reveals no export girnal for grain (Caldwell 2011: 183-221), although, as common elsewhere in the Highlands, there are substantial numbers of corn-kilns and barns. The rental records of the Islay Estate in the eighteenth century show the rentals being paid in cash (Ramsay 1991). Indeed it would seem likely from a memorial of 1780, following an estate survey, that there was no grain export trade, and that the rentals were met by the export of around 3,000 cattle per annum from the island (Ramsay 1991: 180-181). The memorial says "The above survey affords evidence that the island is but in its infancy of improvement, is naturally fertile and on account of the variety of manure is particularly adapted for grain of all sorts, of which indeed it produces in general sufficient to serve itself, though hitherto its chief commodity has been black cattle." So it would seem that the grain produced on Islay was used for domestic consumption. From the early nineteenth century onwards it is also notable that the island began to produce significant quantities of (legal) malt whisky (Storrie 2011: 210-232). The movement of whisky had lower transport costs than shipping grain, and distilling on the island added considerably to its value. There is also a suggestion that earlier than this, significant quantities of illegal whisky were produced (Storrie 2011: 210-211), and it may be that this took any available excess grain production in the eighteenth century.

Bute however was rather different. In the late nineteenth century and into the twentieth century Bute became well known for the quality of its cattle herds, with an emphasis not only on beef production but also on dairying. However, during the seventeenth and

eighteenth centuries, modern documentary evidence suggested that the agriculture of Bute was based around grain production, especially barley and oats, combined with the raising of black cattle as a subsidiary source of income (Geddes and Hale 2010: 37-46; Geddes 2012). In particular, it appeared on a 'prima facie' basis that grain was exported from the island. However, there was no record of a girnal, which would have been required for such a trade. Therefore further research was carried out.

8.2 Evidence from the Archives

Detailed work on the rent books of the Stuart Estate, held at Mount Stuart, for 1695-7 and 1746-48 has been undertaken (MS Stuart of Bute Papers 1695 and 1746; Adamson 2013: 115). In addition, an analysis of factorial accounts of John Blain, for the Bute Estate 1803, has been carried out (MS Stuart of Bute Papers 1803).

In 1695-7, it is estimated, based on this archival work, that the proportion of farm income coming from grain production was about 75%, with most of the balance coming from the sale of cattle (Adamson 2013:115). This proportion remained very much the same when farm rentals for the period 1746-48 were analysed. This is remarkably in line with the Old Statistical Account (OSA) assertion in 1793 (OSA 1791–1799b: 308-318) that barley met half of the rents paid, and the other half was split between oats and cattle. By 1803, the factorial accounts for the Stuart Estate show that grain production accounted for nearly 80% of estate income. It would not be unreasonable to conclude that if Bute was a predominately grain producing economy in 1803, so it was in 1695.

The evidence from the Stuart rental books points quite clearly to the existence of a girnal or storehouse on the island, or perhaps more than one. There are frequent references of deliveries to "the girnal". Even allowing for personal consumption, seed corn and the diversion of some barley into whisky production (although Bute never developed a similar legal whisky industry to that which arose on Islay), several thousand bolls of grain were exported annually from Bute. A boll is an archaic Scots dry measure. The standard measure is equal to 145 cubic litres, although there were significant regional variations. All of this grain would need to be stored securely, adjacent to a harbour, where it would be weighed, bagged and put onto ships.

In 1695-7, the rent books show that a 13 year contract with Rothesay merchants was in place for grain, or cash could be paid to the Estate instead of a physical delivery of grain by the tenants to the girnal.

By 1746, there was a contract with the merchants of Port Glasgow, although cash in lieu was accepted, as well as direct deliveries of grain to the girnal. In that year, the tenants of the Stuart estate were also allowed an offset against their rentals for providing shieves of straw to re-thatch the girnal. This entry occurs in several joint tenancy farm accounts in the rental book for that year.

So the archives show that there was a girnal on Bute, but the question then arose as to whether archaeology might locate the site of this unknown building?

8.3 Archaeological evidence

Based on the considerable body of evidence of shape, form and size from the Easter Ross girnals, it was possible to look for the sort of building which an eighteenth century girnal might resemble. Indeed it would be of such a scale that there could not be many candidates. It was to be expected that the girnal would be two storey, and approximately 30m in length with a depth of around 6m. In addition, a limited number of narrow windows would be expected to provide ventilation without compromising security. However, there might be local variations and indeed it was known that the building was thatched, which is unlike the Easter Ross girnals which all seem to have been slated.

This substantial building would be situated on flat land adjacent to a harbour or sheltered beach. There is a modern book on the piers and harbours of Bute (MacLagan 1997), and this shows ten possible harbours, quays or suitable landing spots around the island. I considered each in turn with the help of useful comments from the author, without finding any surviving building which replicated what I was looking for. However, the references to Port Glasgow merchants suggested a site on the east side of the island nearest to the Clyde estuary. The only harbour on the island which has had substantial redevelopment from the eighteenth century onwards, including the reclamation of land is that at Rothesay (MacLagan 1997: 63-138). This had a nexus of routeways from the hinterland into it from all directions along which the grain might be transported, a sheltered anchorage complete with early stone quay, and flat land behind the harbour around a building (now deconstructed) which appeared to be of a suitable type and scale.

8.4 Cartographic and Place-Name evidence

A building of the scale, form and location which I was looking for is pictured in the earliest detailed map of Rothesay (Figure 185) by John Foulis (1758-9). The map shows a two storey substantial building with a central doorway and nine windows on its southern frontage. It is just behind the then harbour frontage, in an ideal location for a girnal. Inland of it appear to be four additional sheds or single storey stores or barns.



Figure 185 Possible girnal adjacent to Rothesay harbour. From Foulis, J. 1758-9: *A Survey of the Island of Bute.* Bound Volume of sheets and text held in the Mount Stuart Archives, Bute. Blue arrow points at possible Bute Girnal. Blue line shows the line of what became Store Lane. (By permission of the Bute Estate)

It is situated on what is now West Princes Street, just east of where Store Lane meets it today. The site was formerly on the edge of the harbour but has been heavily re-developed in association with the re-building and expansion of the harbour from the late eighteenth century onwards. The development of the harbour from 1752 onwards (albeit quite slowly and spasmodically) may have been the end of the girnal. By 1767, a map by Robert

Mackell shows "the new houses" built in front of the building, (Maclagan 1997: 71) and these houses appear to have been in position as early as 1764 according to a map in the Town Council Minute book of 7 September 1764 (Maclagan 1997: 70). Where once boats may have drawn up adjacent to the building, now construction of new property made the site redundant as a girnal, and redevelopment took place. Today the site supports substantial Victorian tenements (Figure 186) which are one street, and approximately 100m, back from the harbour front.



Figure 186 Store Lane, Rothesay, Isle of Bute. The site of the possible girnal or storehouse is below the Victorian tenement on the right side of the photograph. This fronts West Princes Street, which at one time was the beach.

The street name of Store Lane may also be significant in this context, as it may refer to a storehouse or girnal. In 1768 the council minuted (ABCA, Minute Book of Rothesay Burgh 1768, BR/1/4) that, among many others, the following name should be applied: "Lane from Princes Street southwards – Store Lane". This is the roadway running south or inland from the site of the building noted above.

It has been shown that Bute's landscape was wrought anew by Improvement in the second half of the eighteenth century (Geddes and Hale 2010), with substantial rebuilding of farmsteads and the regularisation of field boundaries and roads. Before Improvement, the road network which brought the grain to the Rothesay girnal by cart, pack-horse or on foot (Fenton 1984) was complex, even chaotic. The estate map of Peter May (1780-82) gives some idea of the existence of 'common loanings' or routes used for the movement of cattle into and out of Rothesay to common grazing areas, and it would seem likely that these were also used for the movement of grain from inland townships to the Rothesay girnal. The map (Figure 187) captures the position just before Improvement regularised field boundaries and road networks on Bute. Once within the burgh, the final approach to the girnal situated on the harbour seems likely to have been down what became Store Lane.

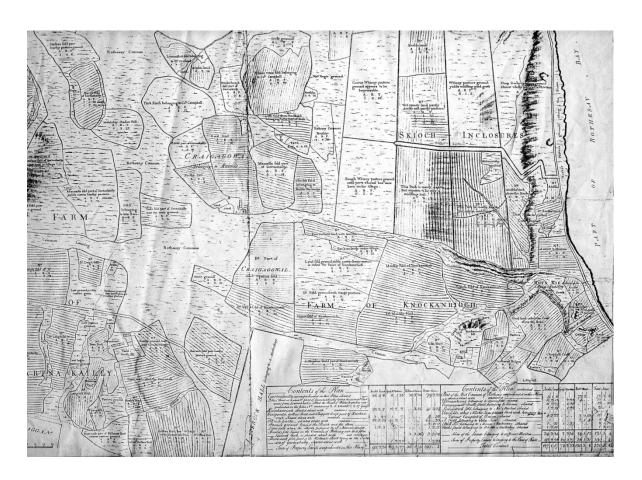


Figure 187 Bute Estate map by P. May 1780-82, showing the complex pre-Improvement field systems and routeways immediately inland from Rothesay. By permission of the Bute Estate.

8.6 Conclusion

The Bute girnal has disappeared. There is no mention of it on the extensive nineteenth century plans of Rothesay and it does not linger in any folk memory of recent times.

It certainly existed as can be demonstrated from the archives of the Marquis of Bute at Mount Stuart. The practical consideration of how substantial amounts of grain were exported off the island also points to a storehouse or girnal. The work done in Easter Ross on girnals of a similar age, combined with cartographic evidence, revealing what is a drawing of the building, together with place-name evidence, suggests that the disappeared building, which was located just off the line of the former beach at Rothesay harbour, is a suitable candidate. There can be no certainty. However, the building parallels the location and form of such buildings as the Mackenzie girnal at Portmahomack, and the Gordon girnal at Invergordon. I suggest that archaeological investigation holds the key to locating what would have been one of the most important buildings on the island prior to the late eighteenth century. The evidence garnered from Easter Ross suggests that this building, behind Rothesay harbour, was a girnal or storehouse. However, only an archaeological examination of the site would be able to confirm this putative identification.

Further work requires to be done to see whether the Bute girnal was an exception in the southern Highlands or were there other girnals, geared to exporting grain from the region, which have yet to be recognised? This is discussed further in Chapter 9.

9 Discussion around the research questions

9.1 Introduction

At the start of the thesis, I set out my over-riding objective which was to study the growth and implications of commercial practice in the Scottish Highlands. In particular I focussed on cattle droving and grain export. I have employed the combined approach of historical archaeology, using archaeological, documentary and cartographic research. I broke down the general aim of the thesis into a series of related questions, and I now re-visit those questions. These are grouped into questions concerning operational matters, social relationships, similarities and differences within the Highlands, and the relationship between this study and current historical research. Within each of these broad headings, I use the evidence produced by my research to suggest answers to the questions posed at the outset. One recurrent theme which emerges throughout the discussion is the central, active role of the drover and tenant farmers in the process of change and commercialisation. Finally I suggest possibilities for further study which would enhance our understanding of these questions.

9.2 Operational Matters

"How did the logistics, infrastructure and practices of the cattle and grain trades operate in practice? What is the specific archaeological evidence for the cattle and grain trades?"

At its most fundamental, cattle droving and grain export are both about moving primary products (grain and beef) from where they were grown/raised to market. In the case of both, they originate and then they move, they rest or are stored, and then move onwards again. They may be purchased in the course of that movement by persons other than those who raised or grew the product. Eventually they reach an end market where a consumer buys them and they are consumed. My methodology (set out in chapter 4) encompasses a number of research sources to follow that journey.

9.2.1 Operational Matters: an overview of the implications of the archaeological evidence

The archaeological evidence for the movement of cattle is both widespread and yet to be fully recorded. I was able to find chains of cattle stances on both the Sutherland and Cowal case-study routes (Chapters 5 and 6). The National Monuments Record of Scotland

(NMRS) records 109 stock enclosures but it is unknown how many are related to cattle droving. Of the eleven enclosures that I have surveyed, only one was previously recorded (Kinbrace, and this as a result of a detailed landscape survey of the Strath of Kildonan carried out by the RCAHMS itself). This would suggest that there are many hundreds of cattle stances surviving across Scotland but not recorded. There are 52 entries for drove roads in the NMRS but only 12 relate to the Highlands and these do not include the routes set out in the case-studies. From my field-work, it is clear that the recorded position is only a small fragment of the surviving archaeology of cattle droving. These stances and the connected droving routes can be regarded as forming conduits of commercial activity into and though the Highlands. My research would indicate that these routes are not neat preplanned chains, but rather they divide and on occasions duplicate themselves with alternative routes and options regarding where to rest the cattle drove for a night according to the preference of the drover, and the initiative of the land owner or lease holder. For example, there are three routes from Arrochar to Dumbarton, as discussed in Chapter 6. It is unusual for an officially recommended route to be outlined but on occasions this did happen, such as that suggested by the Argyllshire Commissioners of Supply in 1762 between Kilmichael and the crossings of the River Leven (Chapter 6.5.3). In this case, there were six suggested cattle stances on the route, at fifteen to twenty kilometre intervals, at which both cattle fodder and drover accommodation was available. In general, however, it was part of the commercial skill and contacts of a drover to pick his route across the landscape with his cattle, stopping at suitable stances by agreement. The goal is to bring them in good condition to market. Equally, the archaeology such as at Achamor, Monbuie, Cairndow would suggest that cattle stances were economically and socially important for the nearby residents, bringing money for shelter and the sale of animal fodder, news and gossip, manure for the arable field systems, and the possibility of selling cattle to the drover. This seems to have justified the economic effort of constructing a stance.

The archaeological evidence for the large-scale movement of grain is the location of the girnals adjacent to anchorages, harbours and sheltered beaches where vessels might safely embark the grain. The methods used to move the grain from township to girnal and then from girnal to ship, along with the activities which would have been associated with the girnal itself, are set out in chapter 7. The profits of the trade were shared with merchants and ship-owners from the Lowlands who predominately purchased the grain from the estate girnal and provided the shipping to move such a bulk commodity towards its ultimate market. However, the implications of the grain trade for all aspects of society in Easter Ross were profound. Many people were bound up in the trade, whether by growing

the crops, moving the produce, working around the girnal or profiting from the sale of the grain, in the case of estate owners.

9.2.2 Operational Matters: an overview of the implications of the documentary evidence

In relation to cattle droving, I have looked at two major archives in order to see how the cattle trade was organised at an estate level. These are the Sutherland papers in the National Library of Scotland and the Bute Estate records at Mount Stuart (Chapter 4.2.2). In both cases, the estates worked with cattle drovers to turn the cattle raised by their tenants into cash. In Sutherland, a document of 1771 in the Sutherland Papers (NLS 313/963) shows that Alexander Mackay of Morness, a tacksman, holding land near Rogart, came south down the drove road described in Chapter 5, collecting cattle from tenants at an assessed value from over twenty tenants of the Sutherland Estate. He pledges himself to pass over the total value to the factor of the Sutherland estate having sold the cattle at market. Any profit that he can make by selling the cattle for more than the assessed value is his, but equally the costs and risks of moving the cattle to market are also his to bear. A similar position is revealed by the Bute rental books, where cattle are collected in the hinterland of Rothesay, at Knockinreoch, on behalf of the estate. Presumably they are taken to there from all over the island by the tenants, and the rental books reveal that each township has the value of cattle credited against its rental obligations. Alexander McGregor is the drover who then takes them to market (1748), and the wording of the rent books (Chapter 6.2.1), "hay for the grazing of Alexander McGregor's cows on My Lord's account", would suggest that the cattle are now the property of McGregor but an agreement has been arrived at that they will be provided with fodder before the drove commences in the autumn. So it would seem that this reflects a similar situation to that of Alexander Mackay, with McGregor being the principal, who owns the cattle, takes them to market, and hopes to make a profit from them. Alexander McGregor's obligation is to return with money to pay the Bute estate the assessed value of the cattle. If the drovers were merely the employees of the estate then the risk of moving the cattle to market and obtaining a satisfactory price would lie with the estate. In both of these cases, the estate seems to have foregone the possibility of additional profit in order to not take the risk. This allows a middleman (drover) to emerge who is effectively dealing in cattle on his own account, and creates a category of person, who is highly commercialised, within Highland society. The drover has an active role in the process of change and commercialisation.

There is a danger in merely looking at documentary evidence from estate archives. The financial relationships revealed may be relevant to the estate interests only. Documentary evidence (Dodgshon 1998: 55-83; Richards and Clough 1989: 41) indicates that in areas where a grazing economy dominated, and the main output was cattle, then high percentages of the rentals were paid in cash from the mid seventeenth century onwards. This implies that tenants were not only giving cattle to the estates as rentals in kind, but also able to realise cash by selling cattle on their own account. This might have been via droves taking their cattle to market but potentially also by selling direct to the drovers. These cattle would not be in estate records. If the drover could not pay cash for the cattle, then his Bill could be left with the tenant, to be redeemed on his return from market. The emergence of drover/cattle dealers would seem to be an important aspect of the commercialisation of the Highlands, and one which was not being driven solely by estates and landowners. In addition, the expansion of the cattle trade was impacting people at all levels of society from the daily-paid drover's men, with their sticks and their dogs, urging the herd onwards, to the old woman at the fireside with her cauldron of broth waiting for them to arrive at the next stance, to the sub-tenant accepting a drover's bill in order to obtain cash in due course. It is not surprising if estate archives reveal their experience only at a tangent, or not at all.

The mechanics of the Easter Ross grain trade was outlined at Chapter 7.2. This understanding was based on the estate records of the Cromartie Estate for the late seventeenth and early eighteenth centuries. The Bute Estate records (Chapter 8) reveal how a substantial grain trade in the Clyde estuary was organised (1700-1750) with contracts with merchants in Rothesay and then Port Glasgow for the supply of grain from the Island of Bute. In both cases, the tenants were expected to bring the grain to estate girnals from their townships. In most cases the sale of grain by the estate appears to have happened at the girnal with merchants, usually from the Lowlands, acquiring ownership of the grain, and thus taking both the risk and profit of shipping to markets outside the Highlands. These might be regarded as the equivalent of the drovers, and do not appear to have been predominately based within the Highlands. However, this was not always the case, for George Mackenzie, 1st Earl of Cromarty, organised his own shipping from Portmahomack and Cromarty to the Firth of Forth in the late seventeenth century. In either eventuality, the trade was controlled by the estate, who invested (considerably) in building girnals as central collection points. There was no ability for individual tenants to ship grain because of transport issues and the need to collect a cargo for a vessel under contract. Consequently grain producing areas such as Easter Ross had a considerable percentage of

their rents paid in kind (grain) throughout the eighteenth century and into the nineteenth (Beaton 1986: 135). However, again, the specialisation in the grain trade was impacting people at all levels of society and in particular the tenant farmers producing the grain, as well as those transporting, milling, weighing and storing it ready for shipping. They were increasingly exposed, directly or indirectly, to national and international grain markets. The estate archives, however, do not centre on their individual experience.

9.2.3 The interaction of droves with landscape

I now want to look at specific aspects of the archaeological evidence and discuss what this tells us about how the cattle and grain trades worked in practice. I start with the interaction between the movement of cattle droves and the landscape through which they moved, whether it was by climbing, descending, moving around contours, crossing water or navigating by landscape features.

Throughout the Sutherland routeway considered in Chapter 5, it was on the ascents or descents that the route was most incised in the ground and most apparent. For example, on Dalcharn Hill (Fig. 26) the route is etched into the ground in a series of grooves or hollows. This effect is repeated on the short upward section between Acheilidh to Bad Leathan (Fig. 64) and on the down slopes going past Feranach (Fig. 33) or round the now dismantled stance at Sciberscross (Fig. 58), where it left a pronounced hollow in the ground. It is apparent that the cattle as they sought to climb or descend slopes had a significant impact on the landscape. This might have been reinforced by the ongoing impact of water, as it drains down these furrows with the effect of cutting them ever deeper over time. In other places the roadway is quite ephemeral or submerged by modern activity. For example, the estate track (Fig. 51) from Ben Armine to Sciberscross would seem to lie on top of the pre-Clearance routeway mapped in the early nineteenth century, and has probably been the subject of many upgrades since a shooting lodge was built at Ben Armine in the nineteenth century. Elsewhere, such as in the valley of the Frithe and in Skinsdale, the use of estate all-terrain vehicles has served to reinforce the line of the old routeway, but at the same time (Fig. 37) obscured the more subtle evidence of what went before on foot. This is evident when the vehicle tracks are seen to leave the routeway, leaving just an indication of a slightly hollowed linear feature moving across the landscape in the distance (Fig. 39). Overall, however, the archaeological evidence for this droving route though central Sutherland is of a high order, possibly as a result of the removal of

most of the population to the coast by 1820, and the consequent lack of development compared to other parts of Scotland.

Cowal has been subject to considerable afforestation, especially in the southern parts. This combined with a range of other human interventions means that the fragile evidence of the pre-Improvement roadways can only be seen in limited stretches. For example, at Coille Mhor (Figs. 98 and 104) the old route between Otter Point and the Holy Loch runs between a complex of three enclosures and is deeply etched into the ground by the passage of humans and animals. The old trackway is revealed again near Tigh Caol, just north of Glendaruel (Fig. 110), although quickly submerged by tree planting and modern road development. There is also some evidence of the droving route to Crieff at the eastern end of the Larig Arnan. In Glen Mollochan, a glen leading from Glen Douglas to Luss, there are again signs of an old trackway being inscribed on the ground (Fig. 159), especially on slopes. More generally, however, many sections of routeway are now impacted by modern roads, development (recent or otherwise) and tree planting.

The routeway from Kinbrace to Port na Lice, through central Sutherland, is adept at using the topography. It starts at 100m above sea level and after climbing to just less than 200m by going over the shoulder of Dalcharn Hill, it never exceeds 200m until reaching the River Fleet some 40 km south. There it is confronted by a range of hills but the routeway deals with this by heading westwards up the valley where the hills are lowest, and climbing 120m in altitude obliquely over 4 km, past Inchcape, until it makes a near 100m climb over 1km to the stance at Bad Leathan (which is just over 230m in altitude). From there is a gentle descent all the way to Port na Lice and the Kyle of Sutherland. Generally significant ascents and descents are managed by moving round hills on roughly the same altitude line, which implies that distance was preferred to ascending or descending. This is a sensible policy when moving cattle, bearing in mind that the drover's profit margin rested on the condition of the cattle at market.

There is another feature of the drove road which is notable, and that is the use of major boulders, rocks and natural features as directional aids. For example, upper Skinsdale is a particularly flat and featureless area, and when the trackway heads south from Branachoille, skirting round a shoulder of Cnoc na Breun-choille (Fig 25), it then heads not directly for Achamor (which is tucked out of sight on a south-facing slope), but rather for a small hillock (Fig. 39). After that, the track swings almost due east so as to approach the settlement from the west. It would appear that the hillock is being used as a navigational

feature. Similarly, 'the Irishman' boulder between Alltanduin and Branachoille points the way to the settlement of Branachoille which is out of sight from the traveller coming from Alltanduin.

There are two notable stones on the Cowal droving route. One is the Cailleach Glas (Grey haired Old Lady) Stone in Caol Glen (Fig. 105), near the old inn site of Tigh Caol, which was associated with a stance. Particularly heading north from Glendaruel, Tigh Caol is quite difficult to see from a distance as it is set down next to a burn in a small, natural hollow which faces north-west. The boulder, however, is on a small ridge above the site. Although slightly obscured now by some trees and a modern fence, the boulder would have been visible for at least a kilometre, south along the trackway, as the drovers and travellers came towards Tigh Caol. The other notable boulder is positioned on a turf dyke forming part of the stance at Upper Glen Kinglas (Fig. 146). Again it is visible from a long distance when moving along the track through upper Glen Kinglas. It may be that these stones fulfilled a dual purpose. Firstly is the very practical one of indicating where the next stance or resting position was to be found when moving along the routeway. Secondly both boulders may be associated with the Cailleach, although the one in Glen Kinglas has lost its name if it ever had one. Therefore this must remain in doubt. The associations between the Cailleach (or witch or shape-shifter) and cattle are discussed at Chapter 6.3.4, and it may be that her presence at or near stances, as signified by the boulders, was a comfort to the drovers using those locations. In addition, the association between the stone and the inn site has continued in local memory. For example, in 1981, the Argyll branch of the Red Cross published a booklet Tales of Argyll which had this entry on 'The Grey Lady' or Cailleach Glas: "On the road to Glendaruel near the roadway are the ruins of an old Inn. The translation from Gaelic is the Inn of the Grey Lady, and many people have seen the figure of a woman crossing the road and heard some-one whistle an old tune. Many swear the Grey Lady still walks from time to time" (Nelson 1981).

The droving routes in my case-studies appear to be related not only to significant stones and boulders, but also to man-made features of some antiquity. For example, the Sutherland drove route passes by a series of broch sites at Feranach, Alltanduin and Garvary (see 5.2). Indeed the northern extension of the Sutherland routeway, which runs towards Thurso, goes by the early medieval chapel of St Ciaran at Rumsdale (Glass 2009). The Cowal route is associated with the Campbell castles at Auchinbreck (Coille Mhor) and Ardkinglas (Cairndow) (see 6.3). It seems likely that these 'droving' routes are ancient trackways being adapted and used by the passing cattle herds. As such, notions of long use

and memory should be attached to the routes. The drovers can then be regarded as just another group of wayfayrers moving between points of significance in the landscape. The knowledge of the drovers may have its origins even before the movement of increasingly large herds of cattle along the routeways, with that knowledge being passed down the generations and then applied for commercial use in the cattle trade.

9.2.4 The interaction of droves with settled farming communities

I now move onwards to discuss the specific archaeological evidence for the interaction between the cattle droves and the settled farming communities through which they passed. This centres on my survey of a large number of previously unidentified stances, but also my recording of dykes, bothies, dwellings and inns.

There are sections of the Sutherland route where the through traffic on the track was kept apart from what was going on in the adjacent townships by way of linear turf dykes. This is particularly the case along the valley of the Frithe (Figs. 33 and 35). Here the roadway goes north of long lateral dykes that shielded the open field systems of Feranach (Fig. 34), Achan and Tomich (Fig. 36) from the passage of men and animals. Although there were a series of local markets, the major movement of cattle was timed to produce cattle for the great cattle tryst at Crieff in the second week of October. These dykes therefore became the fragile divide between those who followed a seasonal migratory pattern, driving their animals to a distant market, and those others whose routines were the daily work required within the township. This work has its own seasonal variations but does not include leaving the township and wayfaring across the landscape. How often did the ploughman in autumn look up and see a herd of cattle beyond the dyke, moving slowly past his township?

These walls are relocated over time. At Tomich, the turf dyke that kept the passing travellers safely off the rig and furrows of the township seems to have been dismantled, and a new series of massive two metre dry-stone walls built to enclose a larger space (now known as Tomich paddock) in the nineteenth century. The evidence for this is that (Fig. 36) the arable rigs and furrows are revealed, by the autumn grass, to be stopping well short of the new north wall, and the routeway (formerly outside the dyke) runs across the top of the paddock and thence down to the ford (Fig. 37) via a gateway in the west wall. The routeway therefore seems to have respected the head dyke in the pre-Clearance landscape, but in the nineteenth century the new wall is built across the track with no gateway on the

east side, so that it cuts across the routeway. The trackway now meets a major man-made obstacle. This suggests that the ending of long distance travel along this road is closely associated with the Clearance of Tomich township and the redundancy of the turf dyke which was associated with that township.

The Sutherland case-study (Chapter 5) has identified five possible stance sites. These are where the cattle rested overnight in an enclosure before proceeding onwards to market the next day. Looking at the features of the stances, four are rectilinear in shape whilst one (Bad Leathan) is almost circular or at least ovoid.

Maximum sizes and approximate areas are as follows:

Kinbrace (Fig 17): 70m x 35m; 2,000 sq m.

Achamor (Fig.40): 100m x 60m; 6,000 sq m.

Sciberscross (Fig. 55): 90m x 60m; 5,000 sq m.

Bad Leathan (Fig. 66): 120m in diameter; 10,000 sq m.

Monbuie (Fig 76): 150m x 40m; 6,000 sq m.

Four of the enclosures are or were broadly rectilinear in shape, and as such are imposed on the land, rather than working with natural contours. This proportionality is somewhat reminiscent of the way in which field systems were brought into being by estates in the Highlands in the eighteenth century, when surveyors were first employed. For example, John Kirk was employed by the Sutherland estate in 1772 to propose an enclosure system of the coastal lands of the estate on rectilinear lines (NLS Map Room: Kirk 1772). The site at Kinbrace is the smallest one and has two sub-enclosures. This might suggest the ability to house two herds of cattle or alternatively sort out cattle from the herd for any given purpose. Achamor is particularly interesting because here a stance is incorporated into the township (Fig 5.28). The actual township itself has an oval irregular shape, but on its western side, the much more regular stance suggests that it has been planned and imposed on part of the township lands. Sciberscross stance has been deconstructed, but Ordnance Survey map evidence from the nineteenth century would suggest a rectangular shape. Finally Monbuie was both a stance and a tryst site, and has a long rectangular enclosure which is missing its fourth (southern) side. This is because the site edges into a boggy

plain. 'Moine' in this context means peat bog in Gaelic. There was presumably little need to keep the cattle from straying into the soft ground on this side, although there is an extension of the turf dyke on the western flank to stop the cattle working their way out of the stance.

Bad Leathan appears to be the odd one out in the sense of being both larger in area and also nearly circular in form. However there is both a dwelling house (as at Monbuie) and evidence of rig and furrow cultivation in one part of the enclosure, so it is possible that the space actually available was actually somewhat less. It sits in a north-west facing fold in the ground, just above the ascent from the valley of the River Fleet. It is large for a stance but at the same time very small for a township. Perhaps this represents an earlier form of stance which was never re-planned. Its lack of symmetry is notable.

The entrances to the stances are all around 2m wide, although that at Monbuie was measured at 2.4m. This width is suggestive of being used originally by cattle rather than sheep, although sheep may have used them in the post-Clearance era. I assume that the entrance was capable of being blocked either by a wooden or wicker gate.

It would appear that accommodation was available at or near all of the five Sutherland stances. At Achamor, the large stance is within the township itself. It would seem logical that the drovers found shelter with the people of Achamor, and perhaps this was a subsidiary form of income, with a charge being made for the provision of a bed and a meal Perhaps news and gossip was imparted along the way, and goods might be ordered in advance and acquired at the Crieff Tryst for delivery on the drover's return journey. At Achamor there are three or four domestic buildings to the east of the stance where the drovers might have lodged. There are also farming townships with multiple dwellings near to the stances at Kinbrace and Sciberscross. Monbuie and Bad Leathan do not have such settlements nearby, but both have what seems to be a domestic building within the stance (and Monbuie has a second just outside the dyke). This suggests that domestic accommodation was a priority near or around a stance site. The social relationships implied by this are further discussed later in this chapter.

Turning to the Cowal stances, this case study (Chapter 6) identified ten possible stance sites in Cowal and West Loch Lomondside. However, only at Coille Mhor, Cairndow, Upper Glen Kinglas, Inbhir-Laraichean and Port Dornaige were measurements of the enclosure possible. At Inverarnan, Stronafyne, Knockinreoch and Bullochreg there were no

enclosures remaining which were suitable for measurement, mainly because of modern development. Tigh Caol seems to have no enclosure as such, but instead relies on a natural hollow around a former inn site.

Only at Cairndow and Port Dornaige are the stances largely rectilinear, although in addition Inbhir-Laraichean has one straight side. The other stances are highly irregular, and make use of the terrain. Upper Glen Kinglas and Coille Mhor each have three enclosures in what amounts to complexes.

Maximum sizes and approximate areas, where it is possible to derive them, are as follows:

Coille Mhor (Fig. 99): 3 irregular enclosures; 5,000 sq m in total

Cairndow (Fig. 118): 150m x 100m; 15,000 sq m

Upper Glen Kinglas (Fig. 144): 3 irregular enclosures; 2,500 sq m in total

Inbhir-Laraichean (Fig. 154): 150m x 100m (tapers); 7,500 sq m

Port Dornaige (Fig. 112): 50m x 30m; 1,500 sq m

Tigh Caol (Fig. 110): 50m x 40m (approximate); 2,000 sq m

Cairndow stands out as a huge cattle stance. Many of the herds using it came from western Argyll and the southern Hebrides, such as Islay. The stance remained extremely active right through the nineteenth century and up to the outbreak of World War I in 1914. As such, it shows signs of being expanded and re-defined (Chapter 6.4.1). The core of the stance was between two burns with turf dykes along these burns and also linking the burns at top and bottom of a gentle slope (Figs. 120 and 121). Port Dornaige also has a rectilinear stance but it is much degraded, partly by the action of a burn which has changed its course at some point since 1865, and has caused the area to become extremely boggy and waterladen (Fig. 112). On two sides the stance is defined by rocky slopes moving steeply down to the flat land. The ferry seems to have gone out of operation in the early nineteenth century. The enclosure was presumably for collecting animals either using the ferry or swimming across Loch Long at this narrow point. The stance at Inbhir-Laraichean has one straight side formed by a turf dyke cutting across the flat land between river and hill-slope (Fig 153). On the river side is another dyke which follows the river. The third side is

defined by a steep slope, and the fourth tapers to the site of a dwelling. It was in operation in the late eighteenth century. In all three cases, natural features such as burns, rivers, hill-slopes have been adapted by placing dykes and fences along them so that there is a compromise or adaptation of the topography.

Coille Mhor (Fig. 99) and Upper Glen Kinglas (Fig. 144) are complexes of three highly irregular enclosures. In both there is no attempt to impose any uniformity on the terrain, and the dykes follow natural features or define pre-existing hollows in the ground. This gives a series of triangular, circular or even crescent shaped enclosures. The most southern of the three enclosures at Coille Mhor (Fig. 103) and the enclosure with the subcompartments at Upper Glen Kinglas (Fig. 146) both have much more substantial dykes around them than the other two enclosures in each complex. Placing a date on when these enclosures is extremely difficult and must be approached with caution. The Upper Glen Kinglas cattle enclosures may have gone out of commission as a result of the introduction of sheep farming into the area (circa 1760), and/or the creation of the 'Rest and Be Thankful' alternative routeway by the British army. It is hard to be certain about when the Coille Mhor enclosures ceased to be used but they lie at a junction of routeways just above the former power centre of Auchinbreck Castle. It may be that the lack of any form of rectilinear form indicates a pre-eighteenth century date for these enclosures? The fact that at each site there are not one but three enclosures might also indicate that they had grown or expanded over time, presumably in relation to an increasing demand for putting stock into them. Might the enclosures with much more massive dykes around them represent the original enclosure in each complex of three? It is notable that at Upper Glen Kinglas one of the enclosures has three sub-stalls within it, which is similar to sorting pens (known as fanks in the area). Perhaps this might point to a use for sorting out cattle from the summer shielings which surround the site?

Two of the stances (Coille Mhor and Upper Glen Kinglas) have/had bothies within or attached to the stances (Figs. 145 and 101). In both cases there is no alternative accommodation nearby. At Inbhir-Laraichean and Port Dornaige, the stances have a dwelling adjacent (Figs. 152 and 114). Again there is no township associated with the stances. Tigh Caol was an inn, associated with a stance, whilst the village of Cairndow is next to the stance there. It would therefore appear, as in Sutherland, that a feature of cattle stances is accommodation of some sort immediately on hand. In some cases the enclosure is associated with a village or township, but in others the stance seems to include a bunkhouse or bothy. It may be that these bothies were built where alternative permanent

domestic accommodation was not available. It also suggests the need to have the drovers reasonably close to the stock, presumably for security purposes.

9.2.5 The archaeology of the girnals – functionality and impact on practice

Grain moved on a seasonal basis, in increasing quantities through the seventeenth and eighteenth centuries, to a series of storehouses or grain girnals near the shores of Easter Ross (Chapter 7) and Bute (Chapter 8). It travelled from the township fields via a myriad of lanes, pathways and roads to these buildings which were significant statements in the landscape. From the girnals the grain was exported by sea to markets, some of which were many hundreds of kilometres away from where the grain was grown.

A summary of the girnals surveyed in Chapter 7 is as follows:

Portmahomack (1) (Fig. 164); 19m x 6.4m; 2 floors; 243 sq m; presently a house; complete by 1698

Portmahomack (2) (Fig. 165); 31.8m x 5.5m; 3 floors; 524 sq mpresently flats; 1779

Cromarty (Fig. 167); dimensions unknown; presently ruined; late seventeenth century

Nigg (Fig. 170); 21.9m x 6.4m; 1 floor plus attic; 280 sq m; presently a house; 1712

Ankerville (Fig. 171); 24.4m x 6.4m; 2 floors; 312 sq m; presently three houses; mid eighteenth century

Invergordon (Fig 173); 38.8m x 6.4m; 2 floors; 497 sq m; presently flats; early eighteenth century

Alness (Fig. 176); formerly 11.8m x 6m; 4 floors; 283 sq m; presently ruined; 1774

Foulis Point (Fig. 178); 28.8m x 6.4m; 2 floors plus attic; 553 sqm; presently exhibition space; 1740

Ferryton Point (Fig. 180); 30m x 6.5m; 2 floors; 390 sq m; presently a house; mid eighteenth century

Little Ferry (Fig. 183); 24.4m x 6.7m; 2 floors; 327m; presently a holiday home; early eighteenth century.

In the case of the Southern Highlands there is nothing obvious or visible about grain girnals. There are no records of such buildings in the National Monuments Record of Scotland (NMRS). However, the archive rental records of the Bute Estate show that such a building did exist on the Island of Bute. There were active commercial contracts taking grain off the island, using the girnal, from the very start of the eighteenth century onwards. So where was the girnal?

In Chapter 8, using knowledge gained from the study of girnals in Easter Ross, I was able to identify a possible site for the missing girnal. This was adjacent to Rothesay harbour as it existed in the eighteenth century. The site mirrors such girnals as Portmahomack and Cromarty which commanded a prominent site immediately next to a harbour. The scale of the building is also similar, being a two storey building of considerable length. Street name evidence also points to the identification. The girnal disappears with the extension of the harbour in the 1770s, when land was reclaimed along the beach, advancing the harbour frontage considerably. It created a considerable amount of flat land in front of the girnal which then re-developed as part of the building of a new harbour frontage.

The girnals were highly functional buildings. They kept the grain dry and secure, and allowed it to be weighed and bagged. They were constructed to allow transportation by sea. This allowed the grain produced by the estates to be exported to markets at a considerable distance. The doctrines of absolute and comparative advantage (see Chapter 3) could not operate without markets. By enabling market forces to operate the girnals might be regarded as catalysts for change. In that sense their functionality encompasses not only the day to day matters of routine and process, but also the creation of a market which brings specialisation in grain growing to Easter Ross. This causes changes in long established agricultural and social practices as the focus shifts from a wide range of agricultural activities, including pastoralism, to an emphasis on growing barley and oats. The tendency to keep rentals being paid in kind (Beaton 1986: 135) into the nineteenth century, whereas in the cattle raising areas of the Highlands rentals shifted more rapidly to cash, is not a representation of backwardness. Rather it is a feature of specialisation and transport economics. Grain is being grown in increasing quantities because it can be stored, ready for export, in the girnals. However, unlike cattle droving, it is only the estate owners who have sufficient financial capital to contract with ship-owners and thus move the grain from

the girnals (an estate asset) to market. Consequently the payment of rentals in kind lasted longer in Easter Ross, but an equivalent specialisation was still happening. The girnals therefore are an asset which allows change to enter the economy and society of the related areas because it is an essential part of the supply chain which took the grain to market. It might be possible to look further up the supply chain and see how agricultural practice was amended to allow that specialisation. For example, did this specialisation in grain necessitate a more thoughtful use of the land through applications of lime? In which case is there evidence of local limekilns? Were more corn-kilns constructed? Is there any evidence of the improvement of local roads so as to allow carts? Each of these developments would imply a change in practice from what had gone before.

The girnals can be placed at the heart of seasonal patterns of work as the people of Easter Ross increasingly specialised in grain production through the seventeenth and eighteenth centuries. The seasonal pattern of work, implied by growing barley or oats, transporting it to the girnal and then sending the grain onwards by sea to market, was of great importance to the routine practice of many in Easter Ross. Firstly the ground was prepared in late March or April with ploughing. Dependent on the quality of the plough, this might require it to be ploughed over twice using oxen (or horses if available, on lighter soils). Spring barley and oats was then sown, using seed corn retained from the previous crop, or otherwise bought in. The ground was then harrowed with the intention of covering the seed corn with soil (Grant 1924: 39-75). Through the summer attention would be paid to weeding the crop of invasive grasses and weeds. September seems to have been the main month for harvesting and it still is in Easter Ross (pers.comm. Hector Munro of Foulis: September 2013). The grain was then threshed, winnowed and often dried in corn-kilns during autumn and winter (Grant 1924: 56). It was milled in local mills, with the tenants being thirled, or forced to use estate mills. For example, the Munro of Foulis estate had two mills at Katewell and Drummond in the immediate hinterland of the estate girnal at Foulis point, and all the tenants of the estate were forced to use these mills (Munro 2005: 33-34). As has been discussed, the grain trade then began its annual cycle (Chapter 7.2) with the payment of rents in kind to the girnal at Candlemas on 2 February. This would have necessitated tenants bringing the grain, probably by cart or pack-horse, to the girnal. There the grain would have been weighed and assessed by the factor, before being bagged and stored in the safety of the girnal. It would then await the arrival of a ship in the safer weather conditions of early summer. At this point further labour would be needed to assist with loading of the ship, typically over a ten day period, using boatmen and small craft. The cycle would be complete with, for example, an Edinburgh brewer receiving barley

under a contract, in the summer following the original planting of the seed. This is a gap of fifteen to eighteen months (Clough 1986: 92).

9.3 Social relationships

What were the implications of the growth of the cattle and grain trades for farming communities, pre-existing social relationships and the landed estates of the Highlands? What does the archaeology reveal in terms of the tension between change and continuity in those relationships? More generally, what does it imply about changes in patterns of social relationships in the Highlands in the seventeenth and eighteenth centuries?

I will seek to answer these questions through a series of vignettes based on my case-studies. The archaeology is as set out in the case-studies but I have populated the landscape for the purpose of the discussion. One of the key themes of this thesis is the way that relationships changed as a result of the growth of the cattle and grain export trades from the Highlands. However, at the same time many of the daily and seasonal practices continued as before, so there is a tension between change and continuity to be seen in the archaeological evidence. I seek to unpick some of these subtleties by the means of scenes based upon the archaeology, and documentary and cartographic evidence, previously set out in the field-work chapters. I refer to historical figures which are documented as carrying out the roles that I assign to them. After each vignette I give appropriate references before carrying on the discussion.

This use of narrative follows on from a number of examples in contemporary writing (Gibb 2000: 1-6; Conkey 2002: 166-168; Joyce 2002; Given 2004: 20-25). It has been said that when focusing on human agency and experience, it is helpful to define narrative more closely as a story (Plucienik 1999: 654; Given 2004: 21). This permits a focus on both people and actions, and the variables that impact on those actions. It also allows social relationships to be viewed from the perspective of the agent rather than the hindsight of the historian (Carr 2001: 163-165).

"A cattle drove in Sutherland comes into the northern part of Skinsdale, and heads towards Achamor by following the trackway towards a prominent hillock, and then swinging west into the township. Dogs run back and forward, hurrying up a couple of straggling beasts. The routeway running through Skinsdale is a feature engraved on the landscape, linking as it does Branachoille, the last township in the valley of the River Frithe, with Achamor, the

most northerly of the farming settlements in Skinsdale. Cattle pass along it, inscribing the pattern of their hooves into the ground, and creating gentle furrows on the hillside as they pass along a contour line. Widow McPherson, the Achamor tacksman, comes in sight of the leading drover. She is directing three men who are building a huge new enclosure on the western part of the township. The drover on his horse waves a greeting while his men drive the stock into the new enclosure with its squared sides. The cattle make their way up the slope and into the stance by an entrance on the west side guarded by a wicker gate. Their work for the day done, the drover and his men join Mistress Mackay on the far side of the enclosure where rigs of barley stand ready to be harvested. Old acquaintances are renewed, and the drover and Mackay adjourn to her house, leaving the others to gather in front of the row of three cottages beyond. A fiddle tune breaks out..."

References are to Chapter 5.2.3 (archaeology of Achamor *baile* and stance), Chapter 5.2.2 (archaeology of the route between Branachoille and Achamor), and the Widow Macpherson, tacksman of Achamor 1812-1819 (Adam 1972 i 219).

What has this scene, based on the archaeology the township of Achamor, with its impressive stance, got to tell us about patterns of relationships?

The routeway through upper Skinsdale aligns itself to a hillock, which then guides the traveller into Achamor, which is otherwise invisible from the north (Chapter 5.2.2). This is unlikely to have changed much over a prolonged period, other than the volume of cattle traffic on the road increasing over the seventeenth and eighteenth centuries. At some point in the eighteenth century it is likely that a decision was taken to build or re-build, on roughly rectilinear lines, the cattle stance in Achamor township. This is huge in relation to the numbers of cattle being raised in the township, and appears to reflect a conscious decision to invest in the cattle trade, as it removes good land which could otherwise be ploughed or planted. It is built on the west side of the settlement and its eastern dyke shelters the arable rigs from the cattle. The cattle can come and go without trampling on the township corn (Chapter 5.2.3). It is known that in the early nineteenth century, the 'Widow McPherson' was paying £50 (in cash) for Achamor to first Willie Munro of Achany and then, after he sold out, to the Sutherland Estate (Adam 1972: i 219). In order to pay this rental, she was in all probability not only selling cattle to the drovers who passed Achamor, but also charging for the use of the stance, charging for food and accommodation and charging for any cattle fodder provided, as well as making use of the manure left behind by the increasingly large droves. The relationships around the stance

might reasonably be assumed to be changing and moving to a more commercial basis in response to the growth of the cattle trade and the consequent investment in it by the township. The drovers made their money by buying cattle at an agreed value, and then seeking to exceed this value when selling at market. It is unlikely that their hosts at the stances would have been less commercial in their attitude to the herds passing through. That is not to say that news did not still pass, hospitality was not dispensed, nor goods obtainable in the southern markets were not brought back by the drovers on their homeward journey. It is merely to argue that the commercial awareness of the drover did not exist in a vacuum. It is also interesting to note that not everyone holding a lease was a man. Simplistic gender-based assumptions should be challenged.

I now turn to relationships forged in the landscape as the drovers moved along their routeways from stance to stance.

"This was the end of September when the great drives set out for Crieff and the Lowland markets beyond. Some of the cattle would even be bought by English dealers and taken as far as London. The cattle have moved along a routeway which is well known to the drover, Alexander Mackay of Morness (near Rogart) and his father before him. Like his father he has navigated by landscape features thus far, and detects with ease the rutted outline of the drove road as it ascended Dalcharn Hill, and then drops down into valley of the River Frithe, passing by the Broch of Feranach. At the same time every year, he collects cattle from the half a dozen townships in the valley of the Frithe on behalf of the Sutherland Estate, and carefully notes his valuations for the cattle on a piece of paper. He also buys cattle from them on his own account, giving the joint-tenants his Bill or promissory note, which he will redeem when he returns from Crieff. Sometimes the promissory notes have not been retained by the tenant but traded on to another farmer who approaches him for repayment. All the way from Dalcharn Hill down to the ford over the river at Alltanduin marches a turf dyke and this keeps his cattle from straying on to the open field systems below the roadway. At Tomich he meets Willie Gunn, who has a two cows and an ox for him to assess and take in lieu of rentals for the Sutherland Estate. He also has a further five cows which he wants sold for cash. All need to be inspected. Mackay crosses the ford over the River Frithe below the broch at Alltanduin. The threshing barn next to it can just be seen from the riverbank. As the herd begin their gentle ascent, he looks for the great white boulder which will mark his route to Branachoille..."

References are to Chapter 5.2.2 (the archaeology of the route from Kinbrace to Achamor) and the droving record of Alexander Mackay of Morness (NLS, Sutherland Estate Papers Dep 313/963).

The droves were a seasonal matter, timed to take the herds to specific markets on specific days. For example the great Tryst at Crieff started on the second Tuesday of October. Allowing for the time to move the herd down to Perthshire, the drover (in this case Alexander Mackay) was collecting cattle in mid Sutherland in late September 1771 (NLS, Sutherland Estate Papers, Dep 313/963). The townships in the valley of the Frithe were jointly tenanted, with part of their rentals being met by selling cattle to Mackay at an assessed value. In addition, they could sell cattle to him on their own account. In either respect, a close relationship between tenant and drover was to be expected.

In this area, the droves moved outside a dyke which runs laterally down the hill (Fig 5.21). This serves the purpose of keeping the cattle from the rigs of the open field systems which run down to the river. September is harvest time in Sutherland, and it is easy to envisage the harvesters pausing to watch a passing cattle drove beyond the dyke (Fig 5.22), an oxen team ploughing in the stubble bellowing at their fellows up the hill, or a tenant meeting the drove with cattle to be inspected by the drover as part of his rentals or for a cash sale. This annual rhythm must have been repeated year after year.

There is an eighteenth century threshing barn at Alltanduin (Fig. 37), and it is debateable whether there was any shift in production from grain to cattle. Perhaps the barn saw less grain or perhaps the needs of the population prevented this specialisation from taking further effect? If there was a shift in production then that would have impacted everyone in the valley of the Frithe as new daily and seasonal rhythms are established. The cattle droving route then provides the conduit by which market forces shift production from a subsistence crop such as oats, to one which can yield cash (black cattle).

The passing of promissory notes becomes widespread in the eighteenth century, further locking the relationship of drover and farmer together (Checkland 1975: 227). The tenant is reliant on the drover returning from trysts such as Crieff or Falkirk with cash to redeem the note. If in the meanwhile there is a need for credit, the farmer might well pass the note to the person from whom credit is sought. Such is the origins of banknotes (Checkland 1975: 13). Any default by a drover has serious consequences, not only for the drover, but

also for anyone holding his promissory notes. Consequently there has to be a high degree of trust in the drover.

It is at Tomich that the most obvious interruption of the roadway happens after the Clearances. It is here that a great stone wall (Chapter 5.2.2) is built over the route which effectively seals off the route from the ford at Alltanduin. This is a physical statement of the severing of relationships which were never restored. The 'great white boulder' probably lost its Gaelic name at the time that the valley was turned into a sheep farm, and the people cleared to the coast. It is known as the 'Irishman' today (Fig. 38). This is indicative of a cultural cessation with a related loss of meaning and understanding of the past.

Change and continuity in relationships can also be pointed to in the landscape of Cowal, but I also want to consider the impact of the British state on the development of routeways.

"Alexander McGregor emerged from the bothy in the upper stance at Coille Mhor on a fine autumn morning. He looked across to where Lachie Roy and the Bodach were checking the cattle. It was as well to make sure that none of the Bute cattle had disappeared into the large Campbell herd that occupied the lower enclosure, which stood with its massive dykes, just below the road from Otter Point to the Holy Loch. No doubt the Campbells would be taking their cattle to Port Dornaige and from there swim them across Loch Long, en-route for the crossings over the River Leven at Balloch and then Glasgow. It might be rare these days for whole herds to be rustled but he wouldn't put it past the Campbells to augment their drove with other folk's beasts.

McGregor and the cattle from Bute would be making their own way north for the great market at Crieff. He mentally checked the itinerary: tonight at Tigh Caol, where the cattle would graze in the natural hollow around the inn, then tomorrow at Cairndow, with its fine modern stance, before heading through the Larig to Inverarnan. From there it was a steep climb over Parlane Hill and in to his own country, Balquidder, before making the last push to Crieff. His father might have made this journey many times, but never with over a hundred cows. That was a lot of capital tied up and a lot of risk. He'd successfully got them over the Kyle and off Bute, but could he get all of them there in good condition, and what if the prices at Crieff were poor? Would he pay off his promissory notes held by the

farmers first, or try and keep in with the Bute Estate? Hopefully it wouldn't come to that, and with luck a good profit could be made.

McGregor had heard that the military road from Dumbarton to Inverary was almost complete and just two years after the end of the Rebellion. The bridge over River Fyne was under construction – not that that he would need to cross it but he would be coming close to it after he left the stance at Cairndow. He hoped the new road would not damage the feet of the cattle too much, but he'd only be on it for a mile or so before heading north up Glen Fyne. However, it was said that some of his competitors were already using the new route down Glen Croe. He'd leave that to the army and the carriages of the Duke of Argyll. On the other hand, there was talk of a new coaching inn at the village of Cairndow, and that would certainly be useful for him."

The references are to Chapter 6.3.2 (the archaeology of the enclosure complex at Coille Mhor), Chapter 6.4 (the archaeology of the route from Cairndow to Inverarnan), Chapter 6.5 (the archaeology of the route from Cairndow to Luss) and the role of Alexander McGregor as drover to the Earl of Bute (MS, Bute Estate Papers, Rent Books 1746-1748).

The Rental Books of the Bute Estate show that an Alexander McGregor was acting as the Drover for cattle collected from the Bute Estate between 1746 and 1748. The road from Dumbarton to Inverary, via Glen Croe, was complete by 1749 under the direction of Major Caulfield of the British Army (Osborne 2005) (Fig. 89). However it would not be until 1811, that a roadway capable of taking wheeled transport would run from Bute to Cairndow (Haldane 1962: 93) (Fig. 87). The track from Otter point ran through three enclosures at Coille Mhor, of which the one closest to the road has massive dykes, in contrast to the more modest dyking around the two enclosures up the hillside. One of these has the remains of a possible bothy within it. All three are highly irregular in form. At busy times of the year, it is likely that more than one herd might use the stance, especially as it was on a cross-roads between north-south, and east-west routes through Cowal.

McGregor was taking a considerable business risk himself, whilst employing other men to assist on daily rates. His most significant risks were loss of cattle on the drove, the poor condition of his herd when it arrived at the market, and prevailing prices to be got at that market. His business capital for the venture was likely to have been provided by issuing promissory notes, unless he was exceptionally wealthy in his own right, and he was always at risk of personal bankruptcy (Checkland 1975: 227-228). Against that, there were

considerable profits to be made by expert drovers, and the Fletchers, cattle drovers from Rannoch, were able to buy the Dunans Estate at the top of Glendaruel in 1745 out of the profits of the trade (NAS, Fletcher Estate Papers, GD1/1184). The drovers represent an important and growing group of entrepreneurs in Highland society at this time.

There is a considerable variance in the form of Cowal stances (Chapter 6). They range from little more than natural amphitheatre around the inn at Tigh Caol to the rectilinear stance at Cairndow, which was on the military road, and was a stopping point also for herds rounding Loch Fyne and moving along the line of this road, when coming from western Argyllshire. However Tigh Caol, Inveraran and Cairndow are connected to inns and a staple of their trade were the passing cattle herds. The commercial and social relationships between drover and inn-keeper were re-forged every year. Inveraran and Cairndow inns still exist, but Tigh Caol was by-passed by the road constructed between 1805 and 1811 from Inverary to the Colintraive, and was abandoned.

Finally, the construction of the girnals in Easter Ross was just as potent a cause of change as the growth of the cattle trade. Here again there were aspects of continuity, but many relationships would change permanently as a result of the specialisation in grain production.

"Sir Robert Munro stood to one side of his new girnal at Foulis Point, and watched yet another cart of grain come into the yard at the rear of the storehouse. This one was from the township of Drummond, a couple of miles away. The last couple of years had been turbulent ones for Robert with the loss of the parliamentary seat of Tain Burghs, the completion of the girnal, and his appointment as Lieutenant-Colonel of the Black Watch. War had broken out in Europe and he was likely to be posted to the Continent shortly with his regiment, although he wondered how well protected Scotland was against another Jacobite rising. Looking down the firth he thought about the recent bankruptcy of the Mackenzie laird at Cromarty, and the frequent gossip that the Mackenzies and the Gordons would rise for the Young Pretender if called upon. If true, these Episcopalians would be soon using the money from their grain contracts to support rebellion. The building of his own girnal had given him entry into the grain market, and for that he was thankful.

Within the week he expected a boat from Leith to drop anchor just off the point in the sheltered bay. Then all of his tenants would be working hard to load the ship. The great building had been filling with oats and barley since the early Spring. The grain was

inspected, weighed in the great cauldron, bagged and then stored safely. A contract had been made with an Edinburgh brewer, and his ship was coming to collect the barley."

The references are to Chapter 7.3.7 (the archaeology of Foulis Point girnal), Chapter 7.2 (the workings of the grain trade from Easter Ross) and the life of Sir Robert Munro (Mackenzie 1898: 132-133))

The building of a coastal grain girnal might be regarded as the estate getting access to a national and international grain market (Chapter 7.2). This then begins to change relationships all the way through the supply chain. The farm tenants are encouraged to grow grain, and thus their daily, weekly and seasonal regime shifts. They carry out less work with animals, and more in the seasonal cycle of grain production. The arable rigs might require more fertiliser or lime being applied to increase the yield. Work is created in bringing the grain to the girnal down a myriad of local paths and lanes, probably by cart, pack-horse or even on foot with wicker panniers (Fenton 1984: 105-123). Once at the girnal, an array of new, centralised tasks take place such as inspecting for quality, weighing, bagging and placing in the store so that the grain is kept dry and ventilated. New relationships and work patterns are created. Ships arrive to beach next to the girnal and then ten days of hectic activity ensue with locals and strangers working together. The estate owners, or their Factors, have to agree commercial contracts with distant customers. Whilst the girnal is a conduit for changing relationships, continuity should not be overlooked. Grain has been grown for centuries in Easter Ross, the fields are not immediately enclosed, and the methods used do not alter abruptly. The grain is still milled as before. Change and continuity exist side by side.

These buildings were of a scale that put them on a par with the parish churches of the area, and were considerably bigger than most domestic dwellings. For example Foulis Point girnal is larger than the nearby parish church of Kiltearn (built 1791), also situated next to the shore. More than that, they were new in the landscape, and can be regarded as a visual statement of modernity and power. In this sense they may be thought of as symbols. They represent, visually, trade networks far beyond Easter Ross, and with that come an implication of wealth, modern practice and good management of the Estate with which they were connected. In this area, from the Restoration of 1660 onwards, there was a religious and political struggle between adherents of the Presbyterian form of worship and Episcopalians (Richards and Clough 1989: 34-37). After 1688, the Presbyterians became linked firstly with King William and then the House of Hannover (post 1714). The

identification of Episcopalianism with the Jacobite cause after 1688 served to reinforce this divide. In Easter Ross, the division was reflected in the rivalry between the Rosses and Munros who were solidly Presbyterian, and the Episcopalian Mackenzies of Cromarty and their relatives the Gordons of Invergordon (Clough 1986: 90). For these purposes the Mackenzie girnals of Portmahomack and Cromarty can be linked to the Gordon one at Invergordon. The two Munro girnals at Foulis Point and Alness can similarly be joined by the Ross one at Ankerville. The girnals contested the landscape in a way which was both religious and political. Sir Robert Munro, who was killed commanding his British Army regiment at Falkirk in 1746, had built the girnal at Foulis Point, and was directly opposed in the '45 by the Jacobite, George Mackenzie, 3rd Earl of Cromarty, who was harrying the Hanoverian lairds of Ross and Sutherland at the time of Culloden. He was subsequently attainted, and his estate confiscated. He was the owner of the Portmahomack girnal (Richards and Clough 1989: 57-68). Clearly the buildings had a direct economic importance but they also represented prestige, political allegiance and religious affiliation. Lord Cromarty's cousin, Sir George Mackenzie, had inherited the Cromarty girnal but went bankrupt in 1741, and lost his land and assets (Richards and Clough 1989: 56). At some point around the end of the eighteenth century the Cromarty girnal became ruined, and this can be seen as a metaphor for the decline of the Mackenzie fortunes in the eighteenth century.

The case studies in this thesis reveal that the growth in the seventeenth and eighteenth centuries in the cattle and grain export trades of the Highlands impacted social relationships in a myriad of ways because it altered the daily and seasonal practice of all levels of society. Farming patterns were altered by specialisation; new work habits and routines came into place to facilitate the trades. Droving encouraged the development of entrepreneurship and risk taking by many, and emphasised the commercial nature of relationships associated with the movement of stock. Specialisation in grain production impacted far more than the owners of the girnals, as it had a profound impact on all of the population associated with agriculture. As a result of either cattle or grain export the daily routines of many in the Highlands were altered over time.

It should also be noted that archaeology points to themes of continuity, with knowledge of routes, farming methods and stock management not easily discarded or forgotten. There is therefore a balance to be struck between change and continuity.

External forces such as the power of the state, and political events impact relationships too, but it would be the contention of this thesis that the greater and more profound impact came from the micro adjustments prompted by growing commercialisation.

9.4 Variation and similarity within the Highlands

Were there significant differences in practices between estates and between different parts of the Highlands? Did the social impact vary, and if so, why? Did the pace and nature of change differ in different parts of the Highlands?

Firstly I draw out comparisons and contrasts between the two cattle droving case-studies (Sutherland and Cowal) and follow this with a similar exercise on the two grain exporting case-studies (Easter Ross and Bute). In each case, one of the pair is situated in the southern Highlands and the other in the northern Highlands. Secondly, I use these exercises of comparison and contrast to come to a view on the research questions (posed above) in relation to regional variations in practice, social impact and the nature of change in different parts of the Highlands.

9.4.1 Comparing and contrasting the archaeology of cattle droving in Sutherland with that in Cowal and Loch Lomondside

The surviving archaeology of cattle droving in central Sutherland is of a very high order. This is probably as a result of the removal of the people from much of the case-study route between 1810 and 1820. I expected as a result to see examples of quite early cattle stances, and hoped that I might be able to associate them to the late medieval period. It turned out that this was not the case. In fact, when Kinbrace, Achamor, Sciberscross and Monbuie were examined the stances were rectilinear, and the turf dykes, although degraded with time, were remarkably straight. The exception was the stance at Bad Leathan which was nearly circular. By contrast, two of the sites in Cowal were actually complexes of three enclosures each (Coille Mhor and Upper Glen Kinglas), and each enclosure was highly irregular being shaped to suit the immediate topography, rather allowing straight sided dykes to form anything amounting to a rectangle. In effect these dykes are highly practical in the sense that they make use of the contours of the hillsides or reflect the path of burns coming down those hillsides. The largest enclosure at Coille Mhor is virtually circular, whilst the other two are triangular as they respect the sides of burns coming down the slope. At Upper Glen Kinglas the main enclosure is set into the side of the hill, and in turn has three sub-enclosures or sorting pens which are even more irregular in shape. The other

two enclosures are also set into the slope, with one being almost crescent shaped as a result. It is only at Cairndow that anything approaching a complete rectilinear form of stance can be seen in Cowal, although Inbhir-Laraichean and Port Dornaige have one or more straight sides as part of their enclosures.

Does the more rectilinear form of cattle stance, as is common in Sutherland but not wholly absent in Cowal, represent a chronologically later animal enclosure? This would seem possible as the Sutherland enclosures were in use for cattle until the wholesale Clearances of the early nineteenth century. In Cowal, large scale sheep farms were introduced before 1760, which is considerably earlier than in Sutherland. Cairndow, however, survived as a major cattle stance until the First World War because it was housing cattle from west Argyll and the southern Hebrides on their way to Falkirk Tryst. However, it may be that Coille Mhor and Upper Glen Kinglas come from an earlier period, when sheep had not yet been introduced in large numbers into Cowal. This would then date them to before the mid-eighteenth century. In the case of Upper Glen Kinglas this dating is reinforced by it not being on the military road which was completed in 1749, and which then became the main route between Cairndow and Arrochar. It may also be that the enclosure complexes of Coille Mhor and Upper Glen Kinglas developed over time, with the number of enclosures being added to as volumes of cattle using them increased. This in turn might indicate dates in the seventeenth or early eighteenth centuries, which reflect the reported increase in sales through Crieff Tryst (Haldane 1952: 5-19). Does the existence of Bad Leathan stance in Sutherland, with its circular form, suggest some but not all Sutherland stances were re-built on 'improved' rectilinear lines in the late eighteenth or early nineteenth centuries? If so, those carrying out the reconstructions must have thought it economically worthwhile. It is unknown who might have done this, but there is nothing in the Sutherland papers to suggest that this was the Sutherland Estate itself. It is possible that it was those holding the tacks (leases) on the townships related to the stances, such as the Widow Macpherson at Achamor in Skinsdale.

The evidence from both Sutherland and Cowal is that the drovers did not habitually sleep in the open, despite what earlier literature might suggest. When discussing a drove to England, an early nineteenth century writer said "In this journey, he scarcely ever goes into a house, sleeps but little, and then generally in the open air, and lives upon his favourite oaten bread" (Youatt 1834: 163). Haldane (1952: 42) quotes with approval Cunninghame Graham's suggestion that drovers very frequently slept close by their cattle in the open "wrapped in their plaids on which the frost showed white or the dew shone just as it does

upon a spider's web, with their sticks near their hands, they slumbered peacefully" (Cunninghame Graham 1913: 212). Instead the evidence is rather more prosaic. In Sutherland, the stances at Achamor, Sciberscross and Kinbrace had townships either adjacent or within a few hundred metres. Monbuie and Bad Leathan actually had dwellings within the stance itself. In Cowal, Cairndow is next to a village; Inbhir-Laraichean and Port Dornaige have dwellings at the side of their enclosures, whilst both Inverarnan and Tigh Caol are adjacent to inns. The two stances which are most remote (Coille Mhor and Upper Glen Kinglas) have structures which may have been bothies within the stances. So it is hard to accept that, at least in these areas, that there was much sleeping in the open except by choice. In fact, Dorothy Wordsworth gives an interesting account of the sort of scene that might have been found at the inns at Inverarnan or Tigh Caol when she describes an inn at Inveroran, by Rannoch Moor, in 1803 "seven or eight travellers probably drovers, with as many dogs, sitting in a complete circle round a large peat fire in the middle of the floor, each with a mess of porridge in a wooden vessel on his knee" (Wordsworth 1924: 318-323). If this is the case, then there would have been considerable interaction between those passing along the drove road, and those on the route that supplied food and shelter (presumably at a charge) for the drovers. It is known that in the mid eighteenth century (see Chapter 6) that the Argyllshire Commissioners of Supply set out a suggested route for drovers from Kilmichael Glassary to Dumbarton whereby stances and fodder were available for a cost at each night stop on a seven day journey. In the case of the two stances within my case-study (Cairndow and Inbhir-Laraichean), there is accommodation readily available adjacent to the enclosures. As the trysts were held at the same time each year, it would then be implied that relationships would develop over time, with news, gossip and other business transactions being transacted as the drovers sought accommodation for the night. Perhaps goods were brought back to the township on the return journeys from the markets, or cash was carried down the droving route by the drover, as seems to have happened in Sutherland, by Mackay of Morness, according to his droving record (see Chapter 4.2.2), or maybe the relationship was simply a charge for shelter and food.

Both in Sutherland and in Cowal where it is possible to measure daily distances covered, it seems to have been in the range of 15km to 20km according to the topography. Wherever possible, steep ascents or descents were avoided, even if it meant a slightly longer route. Thus in Sutherland, Cnoc na Breun-choille is avoided by going further west around this hill and into Skinsdale to the north of Achamor, while in Strath Fleet, the route works its way gradually and obliquely up the hillside on the south side of the glen towards the stance

at Bad Leathan. In Cowal, for example, the route to Inverarnan from Cairndow makes use of the Larig Arnan by going northwards up Glen Fyne.

Some modern road alignments seem to derive from the action of the state, and to some extent seem to have less concern for topography than the trackways used by the drovers. Thus in Cowal, the British military were responsible for the Dumbarton to Inverary road via the Rest and Be Thankful engineered ascent at the top of Glen Croe. This ignores the much gentler route via Loch Sloy and upper Glen Kinglas which is less steep but somewhat longer if travelling between those two important eighteenth century political and military centres. Similarly in Sutherland, the inland route which I followed avoids the considerable ascents and descents on the coastal road, now the main trunk road (A9) between Inverness and Thurso. This road was reconstructed in the early nineteenth century by the Commissioners for Highland Roads and Bridges. They built the bridge at Bonar Bridge and the mound across Loch Fleet which made the coastal route much more viable at almost precisely the time that the interior of the county of Sutherland was being emptied of people. One of the casualties of this was the route through the centre of the county which I follow in Chapter 5.

The archaeological evidence would seem to suggest that swimming cattle or even taking them across significant rivers was not undertaken lightly. In Sutherland at Kinbrace and Monbuie, stances exist just before water crossings, as the cattle were predominately moving south to market. This is mirrored in Cowal at Inverarnan (where part of the droving traffic went across the River Falloch towards Balquidder by way of a ford) and Port Dornaige. The crossings after Monbuie (across the Kyle of Sutherland) and Port Dornaige (across Loch Long) involved a significant swim on the line of a ferry crossing, and there is documentary evidence that the option remained of ferrying the cattle across (OSA 1791-9a: Vol 8 372; McLean 2001: 275-278), although this was both expensive and slow due to the small size of the available boats. Nevertheless any loss of stock was extremely damaging to the profitability of the venture where the drovers were acting as principals in their own right having bought the cattle at an assessed rate to take to market and make a surplus.

I note a number of significant boulders on the droving routes in both Cowal and Sutherland. It may be that these had a practical function as landmarks for the drovers. However it may also be that they had a cultural significance which is now largely discounted. Although some of the stones have lost their individual names or been

anglicised, the boulder next to Tigh Caol retains the name of the Cailleach Glas. This would seem to be a reference to the goddess of life and landscape in Gaelic legend. The Cailleach is said to be an archaic female figure associated with wild nature and the landscape, which has the ability to change shape from an old hag to a cow, and is particularly associated with large boulders (Newton 2009: 227-231). This earth-mother figure, providing she was well treated, was said to have protective qualities for herds of animals. This tradition appears to have been widespread throughout the Highlands (Newton 2009: 322-325).

9.4.2 Comparing and contrasting the archaeology of grain export in Easter Ross with that in the southern Highlands

The form, location, dimensions and function of the Easter Ross girnals seem to match what little is known of the girnal on Bute. The one difference is the fact that the girnal at Rothesay had a thatched roof (shieves of straw were provided for re-thatching and allowed against rentals in the 1748 Stuart of Bute Rent Book) whilst the Easter Ross girnal all appear to have had slated roofs. However, without better evidence on the Bute girnal it is difficult to take this discussion further forward.

Further work needs to be carried in relation to the southern Highlands more generally, and I have made suggestions regarding this later in the chapter (9.6). However there is sufficient knowledge to begin to pose some questions in relation to the different experiences of Easter Ross and areas of the southern Highlands such as Bute, Islay and Kintyre. The evidence would suggest a much more vibrant and widespread trade in corn from Easter Ross. This moved along the eastern coast of Scotland and on occasions across the North Sea. The Bute girnal apparently served only the Clyde estuary, with barley and oats moving towards Glasgow. However this is a coastal trade of short duration. Glasgow was experiencing rapid population growth during the seventeenth and eighteenth centuries, and it may be that the grain coming from Bute was a part, but probably only a small part, of the required grain supply. The girnal on Bute is the only one known which was supplying the city in the seventeenth and eighteenth centuries from the southern Highlands. It might be that in large measure the grain supply of Glasgow was met from its lowland hinterland, even if much of its beef was coming from the Highlands, but this is speculation without further work.

Both in Easter Ross and in the southern Highlands the growing of barley was associated with brewing and whisky distilling. In Easter Ross, there was the great distillery at

Ferintosh which enjoyed an exemption from excise duties between 1690 and 1786 (Mowat 1981: 58), as well as many much smaller legal and illegal stills. However, distilling in Easter Ross never challenged the primacy of agriculture, being often a part-time venture in the farming townships, and the archaeological evidence would suggest that grain was exported in significant quantities other than being turned into whisky (Mowat 1981: 58-63). In the southern Highlands the picture is less clear, but there are suggestions that from an early period substantial amounts of barley were converted into whisky in Islay (Storrie 2011: 210-232), and this may account for the lack of a girnal. If barley is converted into whisky there is both an added value product created, and one that has less onerous transport costs. From the Napoleonic Wars onwards very substantial whisky industries developed in both Islay and Kintyre (Glen 1970: 67-83), but this may be merely reflected a pre-existing illegal industry in the eighteenth century (Storrie 2011: 210-211). On Bute, by contrast, with its girnal and grain export trade, a legal whisky industry failed to take root. Is it possible that the two are connected?

9.4.3 Regional variations in practice, social impact and the nature of change within the Highlands

The case-studies have revealed that there are significant regional variations in different parts of the Highlands, whilst pointing to themes of commonality at the same time.

In central Sutherland, the well documented Clearances are reflected in the archaeology of cattle droving. The introduction of large sheep farms and the removal of most of the population to the coast took place between 1810 and 1820 along the route discussed in Chapter 5. Precise dates within this time-frame can be placed on the Clearance of specific townships associated with stances, as noted in Chapter 5. In contrast, the introduction of large scale, specialist sheep farms into Cowal came earlier and quickly followed John Campbell of Lagwine's first major tack from the Colquhoun family in 1757 (ML Colquhoun of Luss Estate Papers, CL/1). In Sutherland, perhaps because the period of subsistence farming continued into the early nineteenth century, the stances show a degree of planning and rectilinear form which are largely absent from Cowal, other than the long lived stance at Cairndow. In Cowal by contrast, there are two complexes of highly irregular enclosures which are shaped largely by the topography, and other more informal stances such as that at Tigh Caol. These may represent stances from before the mid-eighteenth century which were never re-planned before falling out of use. Whilst the use of the stances remained the same, it would seem that the later stances took on a more rectangular

or balanced plan which imposed itself upon the landscape rather than using natural features such as burns or slopes to mould themselves into the land. The existence of the circular stance at Bad Leathan might suggest that this process was not yet complete at the time of the Sutherland Clearances.

In the Cowal complexes of enclosures (Coille Mhor and Upper Glen Kinglas), the scale of the dykes suggests that one enclosure was supplemented over time with the other two enclosures, which may reflect a growth in the cattle trade, which is also suggested by secondary sources (Haldane 1952: 6-19). This may also have been the case in Sutherland, where the construction or reconstruction of stances such as at Achamor indicates a willingness to invest time and effort in attracting droves to stop at the township. All of this suggests that the changes in the cattle trade were gradual with the adding of irregular enclosures to stances sites; the re-development of the stances into more regular forms; and a willingness on the part of land-owners or lease-holders to invest in servicing the cattle trade. This gradual nature of development is somewhat masked by the dramatic events of the Sutherland Clearances which are well documented, and which substantially moved the balance of animal husbandry from cattle to sheep in the early nineteenth century. This happened less dramatically and perhaps fifty years earlier in Cowal. The rapid translation from cattle rearing to sheep should not, however, serve to obscure the much slower development of the cattle trade in the preceding centuries.

In terms of the evidence relating to navigation through the landscape, the length of sections between stances and the impact on the land, there is little difference between the northern and southern Highlands. However, the quality of evidence is better in Sutherland because of the lack of human development in the interior of the county. This implies that the business of droving was much the same, with the same challenges of moving efficiently across the landscape in a way which does not harm the quality of the stock. Equally, water obstacles seem to be managed in very much the same way, with a stance near the water crossing so as to rest the cattle before the stress and challenge of a river or short sea crossing, whether it is the Kyle of Sutherland or Loch Long.

A significant grain export trade developed in Easter Ross in the seventeenth and eighteenth centuries in a way that it did not in the southern Highlands, other than possibly in Bute. The reasons for this are likely to be complex and would require further work. There is no archaeological evidence to suggest that the development of a specialisation in grain production had any different drivers or operational differences between the northern and

southern Highlands. In Easter Ross, a sophisticated group of buildings was constructed at the same time that a girnal, built for similar purposes, was in existence on Bute. The buildings appear to have been of similar dimensions, function and location in relation to a harbour or anchorage. Documentary evidence indicates that the trade was based predominately around long term contracts with merchant interests in the Scottish Lowlands, whether in Bute or Easter Ross. However the trade from Bute appears to have been a more localised one, serving the needs of the growing population of Glasgow.

In both Cowal and Sutherland the stances are associated with some form of domestic dwelling or shelter for the drovers, whether a nearby township, an inn or a simple bothy. This suggests a close relationship with the people through which the cattle drives were passing in both areas. The likely social impact of a gradual growth in the cattle trade is reinforced by the emergence of the drovers as a commercialised and entrepreneurial group within Highland society. The drovers dealt in cattle, buying from the estates or the tenants and attempting to sell at markets for a profit. Thus there is a series of commercial relationships, and these business relationships are supplemented and reinforced by social contact as the cattle move across the landscape. The drovers pay for fodder and accommodation; they buy cattle, leaving their Bills to be redeemed in due course; men may be hired on daily rates to assist the drove; other commercial transactions are facilitated as the men return from market; the stances are well manured by the passing herds; and news and information is transmitted along the personal networks created by the trade.

In terms of the grain trade, the estates who invested in coastal girnals now traded directly in a national grain market, securing contracts, whether this was done by the chief, estate owner, factor or steward. The trade could also expose the tenants now specialising in grain production to the vagaries of the market, albeit that they may be paying their rentals in kind. Rentals fixed in cash terms must be met from the current monetary value of oats or barley, or more commonly a set agreed price for the grain (as in the case of the Bute Estate). In practice, even leases set in terms of quantities of grain (as was the case with the Cromartie Estate) increasingly had an option for the estate to switch to a cash payment (Dodgshon 1998: 107-113). This option could be exercised in times when the market price fell below the set exchange value. In effect a supply chain was formed, and the farmers were directly impacted by the market price of grain, whether the grain was marketed and sold by the Estate or not. As with the cattle trade, a series of commercial relationships developed, which were reinforced by routines and practices as the specialisation in grain production increased.

9.5 An archaeological insight relative to recent historical research

How might the insights deriving from an archaeological analysis of the cattle and grain trades relate to recent historical research on this topic?

In Chapter 2 I looked at the research context of this archaeological study. In particular I looked at how recent historical commentary had dealt with changing social relationships in the Highlands, and the perception that society had shifted at some point from one where it was characterised by communal relations to one where it was perceived to be dominated by individualism. I followed this by a survey of recent historical work around possible drivers of that change, and broadly categorised them into those emphasising political, economic and cultural reasons for change. I concluded with a review of previous scholarship, both historical and archaeological, into commercial practice in the Highlands before Improvement.

This study has been into one aspect of changing agricultural practice, the export of cattle and grain. Agriculture was the principal economic activity of the Scottish Highlands.

My archaeological research in Sutherland, Easter Ross, Cowal and Bute, as discussed in this chapter, has emphasised both the complexity and gradualism of change. Whilst new structures appear in the landscape such as rectilinear stances or large stone grain girnals, old practices, routines and ways of working still continue around them at least for some while. Improvement impacts the Highlands not at one time or necessarily in the same way. For example, the experience of Improvement in mid Sutherland is both later chronologically and more disruptive than that which occurred in Cowal and Loch Lomondside. There are similarities but also differences in its archaeological legacy as a result, as shown in this thesis.

There is nothing in the evidence that I have found that rules out political or cultural factors as being important drivers of change. The stochastic impact of political events and interventions by central government into the Highlands are noted and reflected in the fieldwork. For example, the importance of the Commissioners of Highland Roads and bridges is undoubted. Their activities along the east coast of Sutherland served to not only emphasise the importance of that coastal route but also correspondingly diminish the route across the interior of Sutherland (Chapter 5). In terms of the impact of political events, it is

possible to review the construction of the Easter Ross girnals in terms of local Jacobite and Hanoverian power politics (Chapter 7). In Cowal, I believe that Major Caulfield's completion of the Dumbarton to Inverary road, via 'The Rest and Be Thankful' pass was a political and military imperative in the context of Jacobite unrest, but it also altered droving routes in the areas through which it passed, such Glen Kinglas (Chapter 6). Equally, the erosion of both Gaelic language and culture has had considerable implications. For example, the practice of navigating through the landscape by named and meaningful geographic features becomes much more difficult when the name is lost or the language not properly understood (Chapters 5 and 6), and new modes of informing travel, such as maps, become important. Therefore I do not discount the importance of cultural (Withers 1988) or political factors (Macinnes 1994) as drivers of change.

However my work does tend to emphasise economic factors, and particularly the increasing penetration of market forces into the Highlands as being the principal driver of change. This is perhaps to be expected given this is a study of commercial practice, but the archaeological evidence would also suggest a strong relationship between economic activity and daily, weekly and seasonal practice which dominates the lives of people, and is the bed-rock of social relations. A number of recent historical analyses (Devine 1994; Richards 2007) have discussed economic factors without having an explicit economic rationale for that change. My own explanation for change is set out in Chapter 3, and is centred upon the doctrines of absolute and comparative advantage as well as market theory. More closely allied to this work, are studies which link particular aspects of how agricultural practice is organised with documentary analysis (Dodgshon 1998; Dalglish 2003).

I have found evidence in the Highlands of commercial practice at all levels of society. This ranges from the inn-keeper at Tigh Caol providing accommodation for passing cattle droves; to the drover in Sutherland taking considerable financial risk in conducting a drove on behalf of the Sutherland Estate down the drove road from Kinbrace southwards; to the nobleman building Portmahomack girnal to open up the possibility of exporting grain from his estate. This therefore makes me sceptical of histories which constrain the individual agency of a person by characterising them either as victims of a class war (Hunter 2000: 1-36) or otherwise exemplars of a backward and uncommercial society (Smout 1969: 308-331). I find these explanations one-dimensional and ultimately sterile. I believe that the evidence points to a much more nuanced position than these studies would allow.

The research in this thesis leads me to a view that economic, political and cultural factors were intertwined to create change in the Scottish Highlands before and during Improvement. If I emphasise economic factors in that process, then I do not discount the others. I would certainly agree that "we need to recognise the complexity of change in the Highlands in a relational sense" (Withers 1988: 42).

9.6 Possible areas of further research

There are three main areas of further work which I would suggest are relevant to the conclusions drawn in this thesis.

Firstly, I would like to look at similar droving case study areas in the Lowlands of Scotland, England, Wales and Ireland, using the same methodology as I have employed in the Highlands. Much of the work of identification has already taken place in different parts of Britain (Bonsor 1970; Toulson and Godwin 1988; Smith 2013; Fox 2012), but it tends to be from either a historical or walking perspective, rather than via a consistent archaeological methodology. Whilst there are differences in the archaeology of droving between Sutherland and Cowal, as shown in this study, there are many more similarities. This has served to increase my scepticism over the idea of hermetically sealed borders. Without further work beyond the Highlands, I am unable to comment further at this stage. However, my starting hypothesis would be that the issues that I have highlighted in this thesis might be reflected in other parts of Britain to a greater or lesser degree. Where there are differences, then exploring these differences further would be useful.

Secondly, it would be interesting to explore whether the building of a girnal impacted the development of localised paths and roads to that girnal, and the agricultural practice on that estate. I would advocate selecting a couple of estates in Easter Ross with good archives and estate maps and seeing if the communication routes from the townships to the girnal might be traced. Is it the case that the building of the girnal leads to new agricultural practice such as the application of lime to fields or the enclosure of open field systems? What is the evidence for specialisation in grain production on an estate basis?

Thirdly, more field-work is required in places like Islay, Kintyre and other fertile parts of the southern Highlands to determine why Bute apparently supported a trade in the export of grain when Islay, for example, did not? Is this accurate? The records of the Campbells of Shawfield (Ramsay 1991) suggests that whilst the land is flat, with major areas being

fertile and possible for the growing of grain, the production was restricted to meet domestic consumption on the island, whilst the export trade was predominately cattle, with around 3,000 being taken off the island each year in the late eighteenth century. It is clear that more work is required on this but perhaps it is worth considering some possibilities? Firstly, could it be that the very proximity of Bute to Glasgow by sea stimulated the export of grain from the island? Any shipping from Islay would have to round the Mull of Kintyre if going to the Clyde. Secondly, could some of the Islay grain production have been recycled into whisky production both illegal and then increasingly legal from the start of the nineteenth century? Islay is today one of the most important malt whisky centres in the world. Equally southern Kintyre, which has fertile land around Campbelltown, does not have a girnal. However, again it was the centre of a great whisky producing area from the Napoleonic Wars onwards (Glen 1970: 67-83). Perhaps the very existence of an eighteenth century girnal on Bute suggests that the illicit whisky trade of the eighteenth century did not divert all exportable barley into distilling at least on that island? Thirdly it might simply be that levels of grain production, like many places in the Western Highlands, were just insufficient to develop a grain trade, and that consequently Islay and Kintyre specialised in cattle rather than grain. It has been suggested that most land in the western Highlands and Islands produced insufficient grain in terms of quantity or quality to make it attractive to the estates to market it (Dodgshon 1998: 110-11). Of course it could be a circular argument and perhaps the investment in a girnal on Islay might have stimulated a trade? It may be, however, that the requirements of the population for domestic consumption purposes, as population levels rose in the Highlands (Dodgshon 1998: 111-113) were of such a level that insufficient grain existed to justify building a girnal for export purposes. In any event, further work is required to answer these questions.

10 Conclusions

10.1 A Walk into The Past

I have sat on an old turf dyke at Achamor, fifteen kilometres from the nearest occupied house, and watched the sun break over a deserted *baile* or township. The long shadows of the dawn pick up the humps and bumps that are overlain by an island of turf. It has the quality of a garden lawn, but is surrounded on all sides by heather and rough grass. I marvel that after two hundred years of abandonment that the cattle stance could still host a five-a-side football match. I look over to the series of wide rigs that run down the centre of the township and note the corrugated symmetrical nature of a place that has not seen oats or barley since 1819. Beyond them lies the stump of an old house and next to it the outline a row of cottages reduced to knee height. I think about the patterns of life and work that have produced this distinctively shaped landscape.

A walk along a drove road makes one conscious of the sheer number of people impacted by the cattle trade. In upland districts of Sutherland, like Skinsdale, cleared townships abound. Each has its houses, ring dykes or head dykes, and the nutrient improved grassland of the in-field, locally known as "Greens". They are named for the way that they stand out like lawns from the surrounding sea of heather and gorse. The drove route snakes through the glen, picking up cattle at each township, and affecting each household in the area. At intervals of twelve to twenty kilometres or so, cattle stances exist, which speak of an interaction between the passing drovers and the township people. Usually there are houses, bothies or even an inn (such as at Tigh Caol in Cowal) connected to the stance. Charges are made for use of the stance and the provision of food and shelter for the drovers. Perhaps the stance was constructed for that very purpose? Information, ideas and money are spread by the trade.

Some stances, such as Monbuie, also serve several times a year as markets or "trysts". Buyers of cattle come to purchase the Highland cattle, and in turn take them further south towards lowland pastures where they can be over-wintered and fattened in the spring. Bargains are done, money changes hands, and the drovers return up the roads to redeem their bills of exchange rendered to the owners of the cattle. Alternatively, the drover decides that better prices can be obtained further south, possibly at the great tryst at Crieff, and the drove continues south. This is a trade which ties in the population at all levels, and a reliance, like-it-or-not, on the market system of economics. The banking system develops

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on the back of the need to provide liquidity and safe redemption for the bills of exchange rendered in the trade. This is not the hallmark of a primitive society, barely changed since the Iron Age. These are indicators of a sophisticated Gaelic-speaking society, adapting to new opportunities.

10.2 A Straw in the Wind

Sheltering by the exterior stair on the east side of the great girnal at Foulis Point, I note that the pebbles of the promontory run far out into the sea. At high tide this is not obvious, but now in the teeth of strong westerly gale I can see that the water on the leeward side is sheltered by this natural breakwater. Boats can draw up within a few metres of the solid, stone-built, double storied storehouse. I step inside and benefit from the dryness and the calm, although the small windows leave the interior surprisingly dark. This was a place of work. It was a node on the long supply chain which took grain from the fields of the hinterland, and onwards across the sea. It took the efforts of many to make that happen.

The girnals of Easter Ross and south-east Sutherland were created by the estates and their owners, but were the focus for a commercial system which involved the great majority of the population in the grain producing farmlands, next to the North Sea coast. Land is leased to tacksmen, and then sub-leased to a multiplicity of small farmers, operating under the runrig system, and producing bere-barley and oats. The grain is dried and then taken down a myriad of paths, lanes and tracks to the estate girnals by pack-horse, travois or cart. There it is weighed, bagged and kept dry. It satisfies the rentals demanded by the estate owner who has built the girnal. A proportion of the grain is consumed domestically or used for seed. The surplus is moved onto ships from either adjacent jetties or otherwise taken out to the ships by shallow-draught coble. The grain might be taken to an Edinburgh brewery on a leased ship, or perhaps it has been sold to a lowland merchant who arranges the transport.

The great girnals and related jetties stand testimony to commercial enterprises which will increasingly change society. They dictate a rhythm of life for all those (and their families) working in the production of an agricultural product, which requires to be grown, moved, stored and moved again. They also finance the political, legal and military careers of the local Highland gentry in Edinburgh, London and beyond, but my primary interest is the way in which the archaeology of the grain trade can touch on the ordinary, the everyday,

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the humdrum. By so doing, it opens a window onto the life experiences of ordinary people who otherwise have no voice. This is not ordinary at all.

10.3 Final thoughts

My over-arching objective has been to study the growth and implications of commercial practice in the Scottish Highlands in the period before and during Improvement. I have used the combined approach of historical archaeology (archaeological, documentary and cartographic research) to do this, and focussed on two activities (grain and cattle export) which I believe impacted the lives of many.

In this thesis, I have sought in each case-study to give an appropriate context to the archaeology which I note and record. This has necessitated considerable work in archives, libraries, and map rooms, as well as in talking to local people with relevant knowledge.

Practice is central to everyday life, and the practices associated with moving cattle and grain have embedded themselves into the archaeology of the relevant landscapes through which they passed. The seasonal routines by which drovers moved herds of black cattle or estate tenants brought grain to the girnal, and thence onto ships, is indicative of a mesh of social relationships. I have shown that the related material culture of the cattle and grain trades has both structured and is structured by that routine practice. Thus the archaeology gives evidence of past social relationships and how they changed over time.

I believe that this study shows how the increasing impact of markets and market forces in the Highlands led to changes in social relations with profound implications for the inhabitants. It has much to say about the rise of the individual over community, and how some individuals positioned themselves to take advantage of those changed realities in a way which impacted all others. It does not deny political or cultural drivers of change in the Scottish Highlands in the period under review, but does emphasise what might be termed economic factors. However, at no time does my analysis narrow the individual agency of the people in responding to those changed circumstances. Individuals made autonomous decisions in the light of asymmetrical power relationships. They should, in my view, be characterised neither as 'victims' nor as 'backward'. They were simply people dealing with change, forced upon them by impersonal market forces, in a way which is now common in the post-industrialised western world. This thesis has focussed on those unnamed people and the legacy of their actions.

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