

Property in Care (PIC) ID: PIC249

Designations: Scheduled Monument (SM90174)

Taken into State care: 1925 (Guardianship)

1938 (Guardianship extended)

Last Reviewed: 2019

STATEMENT OF SIGNIFICANCE

JARLSHOF PREHISTORIC AND NORSE SETTLEMENT



DP 260623 © Historic Environment Scotland.

We continually revise our Statements of Significance, so they may vary in length, format and level of detail. While every effort is made to keep them up to date, they should not be considered a definitive or final assessment of our properties.



© Historic Environment Scotland 2020

You may re-use this information (excluding logos and images) free of charge in any format or medium, under the terms of the Open Government Licence v3.0 except where otherwise stated.

To view this licence, visit http://nationalarchives.gov.uk/doc/open-government-licence/version/3 or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or email: psi@nationalarchives.gov.uk

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

Any enquiries regarding this document should be sent to us at:

Historic Environment Scotland Longmore House Salisbury Place Edinburgh EH9 1SH

+44 (0) 131 668 8600

www.historicenvironment.scot

You can download this publication from our website at www.historicenvironment.scot

HISTORIC ENVIRONMENT SCOTLAND STATEMENT OF SIGNIFICANCE

JARLSHOF PREHISTORIC AND NORSE SETTLEMENT

CONTENTS

1	SUIVIIVIARY	2
1.1	Introduction	2
1.2	Statement of significance	3
2	ASSESSMENT OF VALUES	5
2.1	Background	5
2.2	Evidential values	7
2.3	Historical values	10
2.4	Architectural and artistic values	11
2.5	Landscape and aesthetic values	12
2.6	Natural heritage values	12
2.7	Contemporary/use values	13
3	MAJOR GAPS IN UNDERSTANDING	14
4	ASSOCIATED PROPERTIES	15
5	KEYWORDS	16
BIBLIOGRAPHY		
APPENDICE	S	
Appendix 1: Timeline		
Appendix 2: Summary of archaeological investigations		
Appendix 3: Full site description		
Appendix 4: I	Brochs – theories and interpretations	40

SUMMARY

1.1 Introduction

Jarlshof prehistoric and Norse settlement occupies an area of some two hectares and comprises an extensive area of excavated remains including Neolithic, Bronze Age, Iron Age and Norse structures, with the most recent structure a laird's house dating from the late medieval period. The name Jarlshof ("Earl's House") was invented for the site by Sir Walter Scott who visited in 1814. At that time, only the ruin of the laird's house was known to exist, the rest of the site lay buried under sand and turf.

Jarlshof is situated near the southernmost tip of Shetland, close to Sumburgh Airport. The south-western boundary of the site is formed by the rocky shoreline, and the action of storms, coastal erosion and wind-blown sand have successively buried and revealed the site. Subsurface remains were revealed by a storm in 1897 and excavations began soon after. The site was taken into State care in 1925 and further excavations followed in the 1930s and 1950s, with consolidation work to allow the continued accessibility of the structures.

The site was first scheduled in 1928. The scheduled and guardianship areas are the same (at 2018): the coast forms the boundary to the south and west, and straight fences to the north and east.

Jarlshof has a high public profile in Shetland and beyond, and is described by tourism operators as Shetland's best-known prehistoric site. It is the only staffed Historic Environment Scotland (HES) property in Shetland, and received over 23,000 visitors in 2018. This includes both independent visitors, and those on organised coach tours, for which Jarlshof is a popular attraction.

Site entry includes an audio tour and access to a small visitor/interpretation centre. It is reached by ramped access from a surfaced parking area adjacent to the nearby Sumburgh Hotel. A number of interpretation panels guide the visitor around the site; access to which includes uneven surfaces and protruding archaeological remains in places¹.

¹ For further information, please see the HES Access Guide, available at: <u>www.historicenvironment.scot/archives-and-research/publications/publication/?publicationId=792edbb6-5c20-40cd-9460-a5b600ecfd11</u>



Jarlshof Scheduled area and PIC boundary, for illustrative purposes only. For further images see Appendix 2.

1.2 Statement of Significance

Jarlshof has justifiably been described as one of the most remarkable archaeological sites ever excavated in the British Isles. It has produced evidence for prolonged human occupation now known to extend from as early as 3600 BC to the early modern period. A substantial part of this timespan is represented by well-preserved structural remains which are now accessible to visitors. Each period's remains display a variety of upstanding building types, almost all of which may be regarded as remarkable in their own right. Together though, they form a truly exceptional resource for the study and understanding of the "deep" past in Shetland and northern Europe. Within this context some key aspects of Jarlshof's significance can be summarised thus:

Jarlshof is a nationally and internationally important archaeological resource. The site has produced evidence for what may be the longest semi-continuous sequence of human occupation so far discovered in the British Isles; with evidence of almost 5000 years of human activity in a single location. There are substantial unexcavated areas of the site which adds to its archaeological potential; this was demonstrated in 2004, when new dates were obtained for the earliest levels of occupation.

The quality and completeness of the remains is also unparalleled in a British context and demonstrates the typological evolution of domestic architecture over several millennia, all within one single site. This is enhanced by the quality and variety of the artefacts recovered during

excavation², which proved consistently richer, in almost every period, than those from other sites of comparable date excavated elsewhere in Shetland.

It is difficult to identify one particular period in which Jarlshof's contribution to Scotland's archaeology is most significant. Accepting that all the remains are highly significant, the highlights are probably the Iron Age wheelhouses and the Viking/Norse longhouses, both representing the finest examples of their type known anywhere in the British Isles. The latter are internationally outstanding as arguably the finest example of this type of Viking/Norse settlement in the whole North Atlantic.

The relative positioning of the main groups of structures, from Neolithic through to Medieval, means that each can be appreciated in close relation to earlier and later structures, thus enabling a coherent presentation of distinct time periods. The interpreted "route" through the site encourages this and provides an unparalleled display of the changing nature of human occupation of the site over 5000 years.

Allied to the above point, the exceptional degree of completeness of, for instance, the wheel houses, enable the visitor to enter into a three-dimensional Iron-Age interior. More commonly such structures are experienced as footings or in a much more fragmentary state.

The last building in the site's long sequence is the late 16th/early 17th century laird's house which towers above the prehistoric remains. It is currently not well understood and is likely Shetland's earliest surviving laird's house. It has a particular association with Sir Walter Scott, who visited in 1814 and later featured the ruined laird's house (all that was visible at that date) in his 1822 novel *The Pirate* under the invented name of Jarlshof.

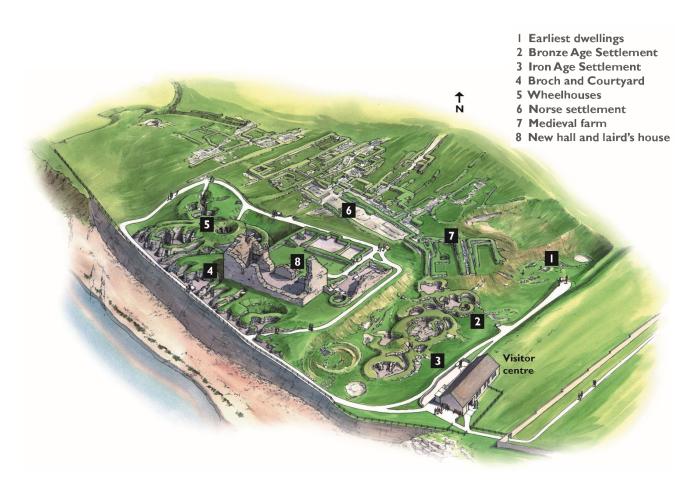
The complex story of the appearance and accessibility of the site over millennia as it was successively buried under sand and exposed by coastal erosion (and later excavation) is fascinating. It is an ongoing story as coastal erosion continued to threaten the site's southern and western boundaries in more recent years. In response, coastal defences were first constructed for the site's protection in the 1950s, with further additions in the 1980s and 1990s. These defences, and the adjacent areas of coastline, are regularly monitored in order to understand and manage any potential threat to the site³.

The experience of the site is dominated by the weather conditions, the dramatic coastal location and ferocity of winds and weather is often apparent. Descending into the comparative snugness of the wheel-house is a striking sensory experience for many visitors.

Visitors, both independent and those on organised tours, are more likely to visit Jarlshof than any other heritage site in Shetland – this applies particularly to organised coach tours serving cruise liners which visit Lerwick. For the latter audience, who may be time-limited, Jarlshof provides the opportunity to view evidence from a considerable breadth of Shetland's pre/history at a single location.

² The National Museum of Scotland holds (in Edinburgh) a major collection of finds from the site.

³ See too the Climate Change Risk Assessment, available at: https://www.historicenvironment.scot/archives-and-research/publications/publication/?publicationId=55d8dde6-3b68-444e-b6f2-a866011d129a



On-site interpretation panels guide visitors around the structures in chronological order. The same route is followed in the detailed site description, provided at Appendix 3. Image: © Crown copyright, used by permission of HES.

2. ASSESSMENT OF VALUES

2.1 Background

Seen from the distance as a large grassy mound, crowned by the roofless remains of a substantial late Medieval house (which was dubbed Jarlshof by Sir Walter Scott), the underlying archaeological remains began to be revealed by coastal erosion in the mid-1890s and were first excavated in 1897.

A series of excavations followed, revealing poorly-preserved Neolithic structures overlain by a succession of well-preserved drystone structures of the Bronze Age, Iron Age, Viking, Norse-Medieval and late Medieval periods. Within each period there are several building types, with clear evidence for the history of the site's development. The most remarkable features are the Iron Age broch and wheelhouses (the latter still standing to near roof height) and the Viking/Norse longhouses with associated outbuildings, which are internationally outstanding. The buildings have been selectively consolidated for display and can be inspected in chronological order.

The total assemblage is without parallel in Britain in terms of the variety and longevity of occupation, which extends for over 5000 years (albeit with some breaks) from around 3600 BC to the early 1600s AD. During excavation, the unusually deep and well-stratified deposits produced

many artefacts of interest, including several unique finds. A small selection of artefacts and replica objects are displayed on site, with the majority of finds held within the collection of the National Museum of Scotland in Edinburgh.

Jarlshof is located near the southern tip of Shetland. It is inter-visible with the Iron Age site of Ness of Burgi (also in State care) to the south-west, and Sumburgh Head to the south-east. The recently excavated Iron Age and Viking/Norse site of Old Scatness lies 1km to the north-west.

The site came into State care in 1925, with the guardianship area extended in 1938. It was first scheduled in 1928.

Various changes and additions were made to the site in preparation for its presentation to the public. The modern, Bruce family Mausoleum (visible in image included in Appendix 2, with the burial ground noted on the first edition Ordnance Survey map⁴) was demolished in 1936, before its total removal in 1951. A memorial was built at the western extreme of the site.

The site today is conserved largely as it was left after the last major excavations ended in 1952. There is a stone-built visitor centre which houses an interpretive display including a small selection of artefacts. Jarlshof is the only staffed property operated by HES in Shetland.

Discovery and Excavation

Except for the upstanding ruin dubbed "The Jarlshof" by Sir Walter Scott, the site was not known to contain archaeological remains until 1897. The landowner (John Bruce of Sumburgh) had seen signs of masonry in the eroding coastal edge some years before, but had "thought it might prove to be merely cellars in connection with the Jarlshof"⁵. In 1897, two guests of Bruce (Mr Nelson and Professor Gunther) visited the site after a storm and found large structures eroding on the shoreline: "...soon their interest and enthusiasm led them to cast off their coats and begin excavating" 6. Workmen were engaged, and digging continued until the two men had to leave Shetland at the end of their holiday, resolving to return next year.

Bruce took over the exploration in 1898, when his guests found themselves unable to return, and his workmen were on site until 1906. By this date he had cleared out the broch and wheelhouses as well as one of the later Iron Age passage houses. He built a seawall to protect these remains from further erosion.

The site was passed into State care in 1925. While the intended Guardianship boundary was being marked out, further remains were noticed. These led to excavations from 1931 onwards, under the direction of Alexander O. Curle until 1936. His work revealed the Bronze Age and earlier Iron Age houses as well as the souterrains, and recovered a rich haul of artefacts including abundant evidence for bronze working. In 1937 Professor V. Gordon Childe, by then Britain's leading prehistorian, was invited to excavate a small area below the Bronze Age remains, which was believed, correctly as it proved, to be of Neolithic date, although poorly preserved. In parallel, and at least as early as 1933, James S. Richardson had begun the excavation of the Viking/Norse structures on the part of the site furthest from the sea, and continued this work until 1939 and the cessation of work during the War.

⁴ Visible at: https://maps.nls.uk/view/74430967#zoom=7&lat=3401&lon=7062&layers=BT

⁵ Bruce 1907 p11

⁶ Ibid.

In 1950 John R. C. Hamilton arrived at Jarlshof and was to spend three seasons excavating. The ruined west wing of the Jarlshof complex was removed to allow access to Iron Age remains below, which Hamilton excavated, proving them to post-date the broch and pre-date the wheelhouses. He also worked on the Norse houses and the medieval farm.

Hamilton then drew together all the work to date into a Monograph which was published in 1956. The fact that the site was dug at various dates and to very different standards, and that not all the excavators left a full written record of their own work and conclusions, made Hamilton's task far from easy, but his coherent narrative and the detailed chronological sequence which he produced have been accepted with relatively few quibbles – mostly over the exact sequencing of the Viking/Norse structures.

It is clear that there is much buried archaeology on the site. Modern scientific methods offer the potential for gaps in knowledge to be addressed, as in 2004 when small-scale excavations (directed by Stephen J. Dockrill, Julie M. Bond and Colleen E. Batey) focussed upon unravelling the site's stratigraphy, produced radiocarbon dates⁷ for the earlier Neolithic occupation as well as demonstrating the extent and quality of the surviving deposits. But modern methods also involve a whole range of detailed techniques and often take longer to bring to completion: the full appraisal of results from 2004 is still ongoing, and is likely to have far-reaching implications for our understanding of the site, especially during the Viking/Norse period.

In recent years the site has been recorded by terrestrial laser scanning. This provides an objective digital record which will underpin future site management and conservation works as required.

2.2 Evidential values

The evidential values of Jarlshof, centre around its remarkable sequence of deposits and structures, spanning substantial parts of 5000 years.

While the structures have been rebuilt to some extent in the course of excavation and consolidation, they nonetheless represent excellent examples of structures, mainly habitations, dating to different periods. While some caution should be exercised in any judgments based upon the details of the stonework now visible, Jarlshof appears to have been less extensively reconstructed than many other managed sites.

The Bronze Age and earlier Iron Age houses at Jarlshof are fine examples of their type, and illustrate the wide variety of constructional forms adopted for simple houses in Shetland's pre-broch period. Investigations at other sites strongly suggest that the simple linear development of house-form (once proposed for all of Shetland on the basis of Jarlshof alone) is unlikely to be a valid model, with a variety of forms probably in use across Shetland at any one particular date⁸.

The broch at Jarlshof is an interesting example of the type, if only in that it is a 'typical' example amongst its many comparators – it is of average dimensions and appears to be well constructed. Its main peculiarity is the solid courtyard wall, slightly later in date, which is attached to the broch on its western side: enclosures which do not fully circumscribe brochs are very rare throughout the whole territory in which brochs occur.

⁷ (a technique not available to Bruce, Curle, Childe, Richardson and Hamilton)

⁸ Moore and Wilson 2014, 87-240, for discussion of Bayanne, Yell; a site with similar but not identical house-forms spanning a similar period.

Jarlshof is the type site for Iron Age wheelhouses; a type of structure which appears to be restricted to Scotland. The internal perimeter of these circular, stone-built structures were divided by radial piers, creating compartments for perhaps storage and sleeping, but also helping to support the span of the roof.

For the Viking/Norse buildings, it is one of the key reference sites in the North Atlantic area of Scandinavian colonisation. This group includes the **Brough of Birsay** in Orkney, Brattahlíð and other sites in Greenland, L'Anse aux Meadows in Newfoundland and several sites in Iceland. In Iceland, the house at Hofstaðir appears to date from almost exactly the same time as the earliest Viking farmhouse at Jarlshof⁹, while that at Stöng, like the Greenland examples, is closely comparable in date with the later houses at Jarlshof¹⁰. More recent excavations in Shetland and elsewhere have expanded the range and variety of known Viking/Norse house-types, and dating by field characteristics is now recognised as unreliable without the support of dating from other sources.

When Jarlshof was excavated, the decision was taken not to remove overlying structures¹¹, so that they could be understood and appreciated by later researchers and visitors. As such, the site retains considerable archaeological potential: unexcavated deposits exist below the laird's house, the medieval farm and the Viking/Norse houses, and possibly also in the lower-lying western part of the guardianship area. Thin deposits containing some Iron Age and Norse archaeological material appear to run out under the field to the east of the guardianship area and are occasionally exposed by erosion.

The continuing potential of Jarlshof is illustrated by the results of very limited exploration in the north-east part of the site in 2004, which obtained dates for barley grains which pushed the Neolithic occupation back to around 3600 BC. This is rather earlier than had previously been thought likely, although in retrospect such a date offers a rather better fit for the distinctly idiosyncratic pottery recovered in Childe's excavations.¹²

In time, new scientific techniques may offer new ways of examining the structures: for example, the technique of geophysical "pseudo-profiling" may already be sufficiently advanced to consider whether the buried portion of the site could be cross-sectioned non-invasively.

The majority of the rich assemblage of artefacts recovered during excavation is curated in the National Museum of Scotland, and the quality of the stratigraphic record means that they retain considerable potential for further research. The highlights are perhaps the items from the Norse period: among them are small pieces of slate with scratched incisions, including two depictions of male heads, domestic animals and a number of drawings of ships¹³ (see photograph in Appendix 2).

Jarlshof's location near the southernmost point of Shetland has fostered the belief that it may have been one of the first localities settled by any incoming groups. The location is well-placed for maintaining long-distance contacts forth of Shetland, which would have become ever more important over time. — The neighbouring headland would have acted as a prominent landmark, and likely a lookout and beacon point. The beach would have provided a limitless source of building material with water-worn stones, and driftwood, with good harbourage provided in the voe. That

⁹ https://visitreykjavik.is/hofsstadir-historic-park-viking-longhouse accessed 28 November 2018

¹⁰ http://www.thjodveldisbaer.is/en/buildings/fyrirmyndin---stong/ accessed 28 November 2018

¹¹ With the exception of the Bruce mausoleum, and west wing of the Laird's House

¹² Dockrill et al 2015, 33

¹³ Hamilton 1956, 121 and Plate XXI

said, access to the shoreline is not easy, with fierce tidal currents (known as the Sumburgh Roost) and strong winds combining to make any close approach to the shore dangerous. The relatively fertile land of this area might not have been willingly given up by its existing residents.

Work elsewhere has cast new light on the question of early Viking settlement in Shetland. Excavations at the nearby multiperiod site of Old Scatness¹⁴ have found that Viking-period artefactual material first appears in the late Iron Age buildings which pre-date the first "classic" rectangular houses¹⁵. Jarlshof may have been similar, as there are Norse period finds from within the late Iron Age houses, and particularly the "huts" which lay below the first longhouses: in short, Jarlshof may indeed have seen some of Shetland's earliest Norse settlement, but the visible longhouses are not the evidence for this.

In addition, an extensive programme of work on the rich Norse period remains scattered across the island of Unst (and not recognised as such when Jarlshof was being excavated) has so far produced longhouse foundation dates which are consistently a century or so later than the first evidence from Old Scatness and probably also at Jarlshof, with limited Norse occupation before the late 10th century AD¹⁶. Of particular interest here is evidence from Hamar, Unst, of a pit-house structure underlying the first phase of longhouse construction, with Norse material culture and probably dating to the early 11th century¹⁷.

The suggestion has been made that the earliest Norse presence in Shetland would logically have focussed upon pre-existing high status Pictish "estates", a possibility also extended to the **Brough of Birsay** in Orkney¹⁸. The site of Norwick, Unst, may indicate Viking presence associated with an Iron Age domestic complex, and dates of 7-11th century could support an earlier than anticipated date for Scandinavian arrival¹⁹.

It is possible that early contact consisted of a few small trading posts, set up by negotiation, with any full-scale takeover coming later: but the topic of the dynamics of the eventual Norse acquisition of the islands continues to be hotly debated²⁰.

Jarlshof is inter-visible with a number of other archaeological sites, including the Iron Age blockhouse fort at **Ness of Burgi** and the almost vanished Iron Age fort on Sumburgh Head. During the period of brochs, the broch at Jarlshof was probably inter-visible with that at Old Scatness, lying only 1km to the north-west.

The surrounding geology is a flaggy sandstone of Middle Old Red Sandstone (Devonian) age, although this is largely obscured by blown sand, except along the foreshore. It is not known if the fine slate-like sandstone, used for artefacts and graffiti, is local or was brought from elsewhere: it is not obvious on the shoreline today, but there has been extensive coastal erosion. The

¹⁴ N.B. Jarlshof's significance has been amplified by excavations at Old Scatness (1995-2006), the prehistoric sequence for which has broadly confirmed that proposed for Jarlshof, both structurally and in terms of material culture, while adding new dating evidence. In addition, scientific techniques, which were not available at the time Jarlshof was excavated, have offered a richer and more detailed picture of changes in the local area's environment and economy over time.

¹⁵ Bond and Dockrill 2016, 7-13

¹⁶ Turner at al 2013, multiple papers

¹⁷ Bond et al 2013, 129

¹⁸ Bond and Dockrill 2016, 12

¹⁹ Ballin Smith 2013

²⁰ Bond and Dockrill 2016, 7 (and bibliography) for a short list of references to recent papers on this topic

soapstone/steatite used in making vessels and as backing in pottery in prehistoric times, and used for vessels, loom-weights, spindle whorls and other artefacts in Viking/Norse times, must have been brought in, since the nearest outcrop lies 14km to the north²¹. (Few would nowadays go so far as Hamilton did, in imagining a subservient "labour force" population coming to Jarlshof, carrying their possessions, including their "indigenous steatitic ware" pots, to build the broch for their new masters²².)

Obtaining sufficient fresh water might have been an issue, with only a single well noted in excavations. This lay in the centre of the broch and is unlikely to have remained open for very long after the wheelhouse (later built within the broch) was abandoned, perhaps around AD 200. It is possible that there was a reliable well within the part of the site which has since been eroded but, on balance, it may be assumed that fetching water to the site is likely to have been a feature of everyday life.

2.3 **Historical values**

The principal historical value of the site lies in the coherent way in which it illustrates the changing nature of human occupation over 5000 years. While there are some significant gaps in what was found during excavation (notably the later Neolithic and earlier parts of the Bronze Age), and while the finer details of some parts of the sequence may be open to alternative interpretations (the exact phasing of the Viking/Norse buildings has been questioned), the overall architectural assemblage is still without parallel in the British Isles for its longevity and variety.

The site is also an important location in the story of the Stewart Earls of Orkney, in particular Earl Patrick ("Black Patie"), who is remembered in Shetland as an oppressor, who imposed an onerous feudal system on top of the traditional udal system of tenure and taxation which derived from the period of the Norse settlement²³.

In 1814 Walter Scott visited the site and incorporated the ruined laird's house (all that was then visible) in his novel *The Pirate* (1822), dubbing it "Jarlshof" – the name was soon adopted locally.

Since its exploration and subsequent taking into State care, Jarlshof has been a significant site in the development of approaches to the conservation and display of prehistoric structures. The monograph of 1956 contains a short section which appears to be one of the first published statements explicitly setting out, albeit briefly, how such a site was consolidated for public display. It sets out the overall approach thus:

"The first and overriding consideration was to retain the archaeological features in the condition they were found as far as this was practicable. The second consideration, based on the fact that, with the exception of mediaeval Jarlshof, all the structures were dry stone built, was their consolidation against the elements and the danger of collapse owing to the removal of protective subsoils and infilling."

²³ Anderson 2012

²¹ Bray et al 2009; MacSween 2009

²² Hamilton 1956, 48

The report then outlines the work done to each group of structures, including details of hidden works such as concrete backings. Jarlshof is unusual in having such information available, since it was not usual practice at the time to "publish the workings" in this manner²⁴.

The archive of the 1930s and 1950s excavations survives in HES collections, and the photographic archive in particular would merit careful study, both as regards the detailed progress of works towards the site as it appears today and for the social history of the practice of archaeology.

2.4 Architectural and artistic values

The Bronze Age houses are among the best of their kind. Such houses are undoubtedly widespread as a field monument type in much of upland Britain, where they are often termed "hut circles", and also feature among the many structures found across Shetland's landscape (which are usually referred to as "Neolithic houses" but have been shown to span a much longer period²⁵). But few have been consolidated and laid out for visitors – Grimspound on Dartmoor in south-west England being one of the few examples²⁶.

The Bronze Age and earlier Iron Age houses at Jarlshof also serve to illustrate the wide variety of constructional forms adopted for simple houses in Shetland before the advent of brochs. Investigations at other sites strongly suggest that the simple linear development of house-form (once proposed for all of Shetland on the basis of Jarlshof alone is unlikely to be a valid model) with a variety of forms probably in use across Shetland at any one particular date²⁷.

The broch and its associated courtyard are interesting: while the broch is a fairly standard example in terms of its basal plan, the attached courtyard is of a form not currently known elsewhere, not surrounding the broch entirely but apparently butting onto the broch wall at its two ends (though this is not absolutely proven). The bisection of the broch and outer courtyard by coastal erosion offers the rare opportunity to "walk through" a broch and appreciate just how thick its walls are.

The wheelhouses represent the best examples of their type anywhere. There is continuing debate as to whether the wheelhouses of Shetland may be a rather different phenomenon from the wheelhouses of the Western Isles (with one outlier on the north-west Scottish mainland). The western examples were generally built as subterranean or semi-subterranean features, whereas the Shetland examples seem to have been built either as free-standing structures or else inserted within brochs. The type is (so far) apparently absent in Orkney.

Jarlshof's Viking/Norse houses represent the best examples of their type known in Britain, and indeed one of the finest groups of such remains visible anywhere in the North Atlantic zone. This area was colonised by Scandinavians from the early 9th century AD onwards, though the earliest extant Jarlshof examples probably date from some decades after the Vikings first settled here²⁸.

²⁴ Hamilton 1956, 216-7

²⁵ Cracknell and Smith 1993

²⁶ Chapman 1996

²⁷ Moore and Wilson 2014, 87-240, for discussion of Bayanne, Yell, a site with similar but not identical houses forms spanning a similar period.

²⁸ Bond and Dockrill 2016, 7-13

While not unique, the medieval farm and the late 15th- / early 16th-century laird's house are unusually well-preserved examples and both building types are not otherwise well-represented in the HES portfolio of properties in care.

2.5 Landscape and aesthetic values

Jarlshof is located on a low, grassy headland which rises to its highest point below the laird's house. A substantial part of the mound has been lost to the sea – quite how much, is unclear. In what survives, there is little evidence for any reliable fresh water supply.

The location is open to gales from the south, while the tidal race of the Sumburgh Roost lies offshore and can frequently be heard from the site. It can never have been a simple matter to land near or at Jarlshof, and in recent times the normal landing place for the extreme south end of Shetland has been at the more sheltered Grutness Voe, just under 1km to the north-east.

The site looks across the West Voe of Sumburgh towards **Ness of Burgi** and along the shore to the tall cliffs of Sumburgh Head (site of a largely destroyed fort of unknown type). In middle Iron Age, the tops of the brochs at Jarlshof and at Old Scatness (1km to the north-west) were probably intervisible, as may also have been the broch at Eastshore (1km to the north).

The visitor experience today begins with a short walk to the gate and the visitor centre. Once on site, it is usually windy, with the sound of waves and the more distant tide-race. Modern aural intrusions are ever-present in the noise of helicopters and propeller aircraft using the nearby Sumburgh Airport, Shetland's main gateway by air.

The cluster of dwellings of many different dates combine to give the impression of a peaceful and settled location, and the intricate passageways and sheer quantity and scale of the built remains has something of the character of a maze. In providing shelter from the wind, the structures offer an immediate sensory contrast from the 'wild' outdoors, with shadowy corners contrasting with intense light filtering in through the roofless structures. The overall effect is of a sense of awe and discovery, as the site continues to sprawl and unfold upon exploration.

2.6 Natural heritage values

At the time of writing (March 2019) Jarlshof was not covered by any natural heritage designations.

Depending on season and weather, the site may offer sightings of seabirds, typically fulmars *Fulmaris glacialis* and black guillemots *Cepphus grylle* which nest on the rocky coast nearby, arctic terns *Sternus paradisaea*, great skuas *Stercorarius skua*, arctic skuas *Stercorarius parasiticus*, and a variety of gulls.

Seals of both resident British species, grey seal *Halichoerus grypus* and harbour or common seal *Phoca vitulina*, can often be seen offshore. Porpoises *Phocoena* and other cetaceans, notably orcas *Orcinus Orca*, have resident breeding groups in the area, but these seldom venture into the relatively shallow waters close to Jarlshof.

2.7 Contemporary/use values

Jarlshof has a high public profile in Shetland and beyond, and is currently listed on both Trip Advisor and Lonely Planet's 'Top things to do in Shetland'. It is described by tourism operators as Shetland's best-known prehistoric site (although the nearby and recently excavated Iron Age site of Old Scatness offers seasonal 'living history' activities as well as site tours, and has ambitions to develop an offer to complement that of Jarlshof²⁹).

Visitors, both independent and those on organised tours, are far more likely to visit Jarlshof than any other heritage site in Shetland – this applies particularly to organised coach tours serving cruise liners which visit Lerwick. The site is visited regularly by school parties: most children educated in Shetland will visit the site more than once during their passage through primary and secondary school. The proximity of the site to the nearby hotel results in its occasional use for wedding photoshoots³⁰ for couples holding receptions at the hotel.

School groups are able to visit the site through the HES Education Scheme³¹.

All who visit the site appear to respect it and its surroundings, with littering and vandalism almost unknown.

The view of Jarlshof's near-intact wheelhouses, as seen from above, is by far the most widely used image, vying with the broch of Mousa as the "iconic image" of prehistoric Shetland. The laird's house and the Viking/Norse houses also figure frequently – the latter being particularly used by companies who seek to market tours which focus on the Viking / Scandinavian aspects of the islands. The finds from the site have inspired occasional artwork and souvenir items, including locally-manufactured silver jewellery, though none seem currently to be in production. The interest in all matters Viking has been boosted in Shetland in recent years by extensive excavations on the island of Unst and also at nearby Old Scatness.

There is strong local pride in the site, perhaps most of all in its Scandinavian aspects – Shetland has a long tradition of deploying this aspect of its history to demonstrate difference from Scotland. Shetland was an active participant in the creation of the Destination Viking tourism collaboration³², although Jarlshof is not formally part of this. The international gathering of scholars working on this period, the Viking Congress, met in 2013 in Shetland, which was also where the Congress met for the very first time in 1950³³.

The Iron Age elements of Jarlshof, along with Old Scatness and the Broch of Mousa, form a proposed UNESCO World Heritage Site: "Mousa, Old Scatness and Jarlshof: the Crucible of Iron Age Shetland" was accepted onto the official UK Tentative List for World Heritage Status in 2011³⁴. This is being driven forward by Shetland Amenity Trust, collaborating with HES, but it will be some years before it becomes clear if this will progress to UNESCO designation.

²⁹ https://www.shetlandamenity.org/old-scatness accessed 28 November 2018

³⁰ There is an associated fee. For more information, see: https://www.historicenvironment.scot/visit-a-place/venue-hire/weddings/wedding-photography/

³¹ For information on free education visits, see: https://www.historicenvironment.scot/learn/education-visits/

³² https://www.destinationviking.com/ accessed 28 November 2018

³³ Turner et al 2016; Simpson 1954

³⁴ https://www.shetlandamenity.org/world-heritage-status accessed 6 September 2018

3. MAJOR GAPS IN UNDERSTANDING

Despite having been extensively excavated, Jarlshof still has much to contribute to a range of questions, all of which would fit firmly within the period frameworks outlined in SCARF's research recommendations³⁵. It will also have a significant presence in the ScARF Regional Research Framework for the Islands on which work commenced in 2019 (with Shetland likely to come into particular focus in 2020).

Some of the key gaps in knowledge, and areas for research include:

- Improving the site chronology, both in terms of construction dates for individual structures and
 of the prevailing environmental conditions, especially the nature and timing of the repeated sand
 incursions methods of dating, not available to the excavators, could add much. [The potential
 here is illustrated by the results of the very limited exploration on the north-east part of the site
 in 2004, which obtained new dates which pushed the Neolithic occupation back to around 3600
 BC).³⁶]
- Missing details for which answers may lie in archive documentation. As one example, were the wheelhouses standing empty when entered in Bruce's excavations, or were they filled with deposits? There is precedent for buried Iron Age buildings of similar height being found empty (at Howe of Howe in Orkney³⁷), but if this were the case, it might be an indicator of the site having been abandoned and then re-occupied after some considerable passage of time had allowed the structures to become covered in blown sand or rubble. None of the published sources are clear on this vital point. More generally, it is not clear how far the 1930s excavations involved reconstruction, and the photo archive could offer answers.
 Missing details which might be revealed by targeted site investigation. For example, was there really no occupation between the known Neolithic occupation (which is earlier in that period than previously thought) and the later Bronze Age houses (dated fairly reliably by artefacts) might undiscovered early Bronze Age levels exist? [Although this apparent 'gap' in the Jarlshof

sequence was paralleled at nearby Old Scatness³⁸ and at Sumburgh³⁹, with the period from the end of the Neolithic to the late Bronze Age (approx. 3000 to 1500 BC) marked by layers of marine

- Environment and landscape at time of construction and subsequent change, including sand accumulation and coastal erosion. Jarlshof is one of a number of sites which has produced evidence, and could produce more, towards such studies.
- Wider questions of economy, demography and social organisation, relationship to neighbouring sites and communities Jarlshof offers a rare chance to examine such questions in relation to a single site at multiple, widely-spaced time periods. It would be good to see the story of changing subsistence patterns set out clearly in a way which was not entangled with the description of the architectural features: this might offer new insights. New techniques might also be applied to excavated material to explore emerging ideas, for example the picture which seems to be

³⁵ http://www.socantscot.org/research-projects/scarf/ accessed 28 November 2018

³⁶ Dockrill et al 2015, 33

³⁷ Ballin Smith 1994

³⁸ Dockrill et all 2015

³⁹ Downes and Lamb 2000

- emerging from research in Orkney and elsewhere that, for some periods in prehistory, local populations depended surprisingly little on marine resources for food⁴⁰.
- The arrangement of the courtyard outside the broch. Did the earlier excavations (undertaken in small keyholes so as not to disturb overlying structures) not go deep enough, missing an outer wall running completely around the broch, with its re-appearance at the coast misinterpreted as part of the structure labelled Wheelhouse 4? Or does the broch at Jarlshof possess a feature which is unique among the many excavated and well-studied brochs of Scotland's north and west?
- The excavation since the 1950s of many more Viking/Norse sites in Shetland and across the North Atlantic has thrown up ways by which the sequence at Jarlshof may be refined, though Jarlshof itself still has much to offer to ongoing studies: unfortunately, due to its early date of excavation, evidence from Jarlshof must always be treated with a degree of caution. Jarlshof is often cited as the type site in Scotland for Viking houses and farmsteads, but in truth the nature of the earliest Viking buildings and the subsequent development of the settlement is poorly understood. Untangling the Viking structures at Jarlshof would be a significant contribution to our understanding of Viking settlement in Scotland⁴¹.
- Little research has been focussed on the latter history of the site, and its use as a burial ground. Questions remain e.g. regarding the duration of this practice, and the identities of those interred. Was it exclusively for use by the 'Bruce Family', as annotated in the first edition Ordance Survey map⁴²?
- HES files reference a bomb having been dropped near the custodian's hut in 1942, leaving a large crater, but with no visible damage to the archaeology. Further research may elucidate this further.
- The so-called laird's house is an anomalous structure, without known surviving parallels, and may warrant further consideration in its own right.

4. ASSOCIATED PROPERTIES

Associated properties managed by HES:

- **Clickimin** (broch and associated remains, Shetland) which includes a few other buildings which may be of Iron Age date, though these are much slighter than those at Jarlshof
- Ness of Burgi (blockhouse and ramparts, Shetland) only about 2km away; walkable distance
- Mousa (broch, Shetland)
- **Scalloway Castle** (castle, Shetland) built by Earl Patrick and completed in 1600, so historically linked to the latest buildings at Jarlshof
- **Gurness** (broch and associated remains, Orkney) the other site in State care with an extensive suite of Iron Age buildings surrounding a broch
- Midhowe (broch and associated remains, Orkney)
- **Brough of Birsay** (Pictish and Viking/Norse settlement, Orkney) the other key site in State care from the period of Scandinavian colonisation of the North Atlantic.

⁴⁰ At Jarlshof as at several other sites e.g. Old Scatness, Howe and The Cairns, there appears to be a fluctuating dependence on marine resources, with a lot of marine material at some points, and very little at others.

⁴¹ Olwyn Owen, pers.comm., February 2019; Owen 2002

⁴² Available at: https://maps.nls.uk/view/74430967#zoom=7&lat=3401&lon=7062&layers=BT

- Earl's Bu, Orphir (Norse-Medieval church and farmhouse, Orkney) comparator for the last Norse houses and the medieval farm at Jarlshof
- Càrn Liath (broch, Highland)
- **Dun Dornaigil** (broch, Highland)
- Dun Beag (broch, Highland)
- Dun Telve (broch, Highland)
- **Dun Troddan** (broch, Highland)
- **Dun Carloway** (broch, Comhairle nan Eilean Siar)
- Edin's Hall (broch and associated remains, Scottish Borders)

Associated property managed by Shetland Amenity Trust:

 Old Scatness (broch and associated remains, Shetland) – only about 1.5km away; walkable distance

KEYWORDS

Jarlshof; Shetland; Broch; Wheelhouse; Souterrain; Longhouse; Laird's house; Prehistoric; Neolithic; Bronze Age; Iron Age; Pictish; Viking; Norse; Medieval; Inter-visibility; Drystone

BIBLIOGRAPHY

Anderson, J 1883 Scotland in Pagan Times (Volume 2: The Iron Age). Edinburgh.

Anderson, P 2012 The Stewart Earls of Orkney. Edinburgh (Birlinn).

Armit, I 1991 'The Atlantic Scottish Iron Age: five levels of chronology', *Proceedings of the Society of Antiquaries of Scotland* 121, 181-214.

Armit, I 2003 *Towers in the North: The brochs of Scotland*. Stroud (Tempus).

Armit, I 2005a 'The Atlantic Roundhouse: a Beginner's Guide' in V Turner et al, 2005, 5-10.

Armit, I 2005b 'Land-Holding and Inheritance in the Atlantic Scottish Iron Age', in V Turner et al, 2005, 129-143.

Armit, I and Fojut, N 1998 *Dùn Chàrlabhaigh and the Hebridean Iron Age*. Stornoway (Urras nan Tursachan)

Ash, M 1984 "So much that was new to us:" Scott and Shetland, in B E Crawford (ed) 1984, 193-207.

Ballin Smith, B (ed) 1994 Howe: Four Millenia of Orkney Prehistory: Excavations 1978-1982. Edinburgh (= Society of Antiquaries of Scotland Monograph Series, 9)

Ballin Smith, B and Banks, I (eds) 2002 In the Shadow of the Brochs. Stroud (Tempus).

Ballin Smith, B 2013 'Norwick – Shetland's earliest Viking settlement?' in Turner, VE, Bond, JM and Larsen, A-C (eds), 217-232.

Barber, J.W. 2018 References are to the Rhind Lecture series delivered to the Society of Antiquaries of Scotland in Edinburgh in July 2018 under the title *Drystone Technologies: Neolithic tensions and Iron Age compressions*. Videos available online at www.socantscot.org/resources/

Barrett, JC 1981 'Aspects of the Iron Age in Atlantic Scotland. A case study in the problems of archaeological interpretation', *Proceedings of the Society of Antiquaries of Scotland* 111, 205-19.

Bond, JM 2013 'Excavations at Hamar and Underhoull' in Turner, VE, Bond, JM and Larsen, A-C (eds), 123-180.

Bond, JM and Dockrill, SJ 2016 'Viking settlement and Pictish estates: new evidence from Orkney and Shetland', in Turner et al (eds) 2016, 7-13.

Bray, I, Forster AK, Clelland, S-J 2009 'Steatite and Shetland: a geological introduction and gazetteer of sites' in Forster, AK and Turner, VE (eds) 2009, 4-17.

Bruce, J 1907 'Notice of the excavation of a broch at Jarlshof, Sumburgh, Shetland', *Proceedings of the Society of Antiquaries of Scotland* 41, 11-33.

Chapman, L 1996 *The Ancient Dwellings of Grimspound & Hound Tor.* Newton Abbot (Orchard Publications).

Childe, VG 1935 The Prehistory of Scotland. London.

Childe, VG 1938 'Excavations carried out by HM Office of Works in the Bronze Age levels at Jarlshof in 1937', *Proceedings of the Society of Antiquaries of Scotland* 72, 348-363.

Clarke, DV 1971 'Small finds in the Atlantic Province; problems of approach', *Scottish Archaeological Forum* 3, 22-54.

Cracknell, S and Smith, B 1993 'Archaeological Investigations at Mavis Grind, Shetland', *Glasgow Archaeological Journal* 10, 13-38.

Crawford, BE (ed) 1984 Essays in Shetland History. Lerwick (Shetland Times).

Curle, AO 1921 'The Broch of Dun Troddan, Gleann Beag, Glenelg, Inverness-shire', *Proceedings of the Society of Antiquaries of Scotland* 55, 83-94.

Curle, AO 1932 'Interim report on the excavation of a Bronze Age dwelling at Yarlshof [sic], Shetland, in 1931', *Proceedings of the Society of Antiquaries of Scotland* 66, 113-128.

Curle, AO 1933 'Account of further excavation in 1932 of the prehistoric township of Jarlshof, Shetland, on behalf of HM Office of Works', *Proceedings of the Society of Antiquaries of Scotland* 67, 82-136.

Curle, AO 1934 'An account of further excavation at Jarlshof, Sumburgh, Shetland, in 1932 and 1933, on behalf of HM Office of Works' *Proceedings of the Society of Antiquaries of Scotland* 68, 224-319.

Curle, AO 1935 'Account of the excavation, on behalf of HM Office of Works, of another prehistoric dwelling (No. V.) in the summer of 1934 at Jarlshof, Sumburgh, Shetland', *Proceedings of the Society of Antiquaries of Scotland* 69, 85-107.

Curle, AO 1935b 'An account of the excavation of a dwelling of the Viking period at "Jarlshof", Sumburgh, Shetland, carried out on behalf of HM Office of Works', *Proceedings of the Society of Antiquaries of Scotland* 69, 265-324.

Curle, AO 1936 'Account of the excavation of a hut circle with associated earthhouse at Jarlshof, Sumburgh, Shetland, carried out on behalf of HM Office of Works', *Proceedings of the Society of Antiquaries of Scotland* 70, 237-251.

Curle, AO 1936b 'Account of the excavation of further buildings of the Viking period (Viking House No. II) at Jarlshof, Sumburgh, Shetland, carried out on behalf of HM Office of Works', *Proceedings of the Society of Antiquaries of Scotland* 70, 251-270.

Dockrill, SJ 1998 'Northern Exposure: Phase 1 of the Old Scatness Excavations 1995-8', in R A Nicholson and S J Dockrill (eds) 1998, 59-80.

Dockrill, SJ, Bond, JM, Turner, VE, Brown, LD, Bashford, DJ, Cussans, JEM and Nicholson, RA 2015 *Excavations at Old Scatness, Shetland; Volume 2: The Broch and Iron Age Village*. Lerwick (Shetland Heritage Publications).

Downes, J and Lamb, R 2000 *Prehistoric Houses at Sumburgh in Shetland: Excavations at Sumburgh Airport 1967-74*. Oxford (Oxbow Books).

Dryden, Sir H 1872 'Notes of the Brochs of "Pictish Towers" of Mousa, Clickemin, &c., in Shetland, illustrative of part of the series of Plans and Sections deposited in the Library of the Society', *Archaeologia Scotica* 199-214.

[Note: The exact dates of printing and publication of the volume containing the above paper remains unclear. Containing a range of longer papers about brochs by different authors, with illustrations of a quality much superior to that possible at the time in the Society's Proceedings, it may have appeared in sections, only being bound up as a composite volume some years afterwards: research into the records of the Society of Antiquaries has so far failed to clarify this. Dates ranging from 1875 to 1890 have been offered by different commentators, but this account cites the known date on which Dryden presented his paper to the Society, 13 May 1872.]

Fergusson, J 1877 'On the Norwegian origin of Scottish brochs', *Proceedings of the Society of Antiquaries of Scotland* 12, 630-69.

Flinn, D 1989 Travellers in a Bygone Shetland. Edinburgh: an Anthology. (Scottish Academic Press)

Fojut, N 1981 A Guide to Prehistoric Shetland (1st edition). Lerwick (Shetland Times).

Fojut, N 1982a 'Towards a Geography of Shetland Brochs', *Glasgow Archaeological Journal* 9, 38-59. [Reprinted in V Turner et al, 2005, 144-165]

Fojut, N 1993 The Brochs of Gurness and Midhowe (1st edition). Edinburgh (Historic Scotland).

Fojut. N 1998 'How did we end up here? Shetland Iron Age Studies to 1995' in R A Nicholson and S J Dockrill (eds) 1998, 1-41.

Fojut, N 2005a 'Any closer towards a geography of Shetland brochs?', in V Turner et al, 2005, 166-71.

Fojut, N 2005b 'Brochs and Timber Supply – A Necessity Born of Invention?', in V Turner et al, 2005, 190-201.

Forster, AK and Turner, VE 2009 Kleber: Shetland's Oldest Industry. Lerwick (Shetland Amenity Trust)

Fotheringham, W 1908 'Notes on the old Crosskirk at Quendale, Dunrossness, Shetland, and its monumental stones', *Proceedings of the Society of Antiquaries of Scotland* 41 173-180.

Gilmour, S 2005 'Complex Atlantic roundhouses: chronology and complexity', in V Turner et al, 2005, 78-96.

Graham, A 1947a, 'Some Observations on the Brochs', *Proceedings of the Society of Antiquaries of Scotland* 81, 48-99.

Graham, A 1947b Discussion. In Scott 1947, 35-6.

Hamilton, JRC 1956 Excavations at Jarlshof, Shetland. Edinburgh (HMSO)

Hamilton, JRC 1968 Excavations at Clickhimin, Shetland. Edinburgh (HMSO)

Hamilton JRC 1970 The Brochs of Mousa and Clickhimin. Edinburgh (HMSO)

Hedges, JW 1987 Bu, Gurness and the Brochs of Orkney, Part 1: Bu, Part 2: Gurness, Part 3: The Brochs of Orkney. Oxford (BAR: British Series 163-5).

Hedges, JW and Bell, B 1980 'That tower of Scottish prehistory – the broch', Antiquity 54, 87-94.

Hibbert, S 1822 A Description of the Shetland Islands, comprising an account of their geology, scenery, antiquities and superstitions. Edinburgh

Hingley, R 1992 'Society in Scotland from 700 BC to AD 200', *Proceedings of the Society of Antiquaries of Scotland* 122, 7-54.

Lamb, RG 1980 Iron Age Promontory Forts in the Northern Isles. Oxford (BAR: British Series 79).

Lockhart JR 1839 *Life of Sir Walter Scott* (10 volumes). London. [Pages 125-162 since republished in freestanding volume as W Scott 1982, to which references here refer.]

Love P 1989 'Recent excavations at Càrn Liath Broch, Golspie, Sutherland', *Glasgow Archaeological Journal* 15, 157-69.

Low, G 1978 A Tour through Orkney and Schetland in 1774 [Facsimile reprint of 1879 original]. Inverness (Melvin Press).

Macdonald, G 1933 'Note on three seventeenth-century Shetland tombstones', *Proceedings of the Society of Antiquaries of Scotland* 67, 53-69.

MacKie, EW 1965 'The origin and development of the broch and wheelhouse building cultures of the Scottish Iron Age', *Proceedings of the Prehistoric Society* 31, 93-143.

MacKie, EW 1971 'English migrants and Scottish brochs', Glasgow Archaeological Journal 2, 39-71.

MacKie, EW 1992 'The Iron Age semibrochs of Atlantic Scotland: a case study in the problems of deductive reasoning', *Archaeological Journal* 148, 98-157.

MacKie, EW 2002b The Roundhouses, Brochs and Wheelhouses of Atlantic Scotland c.700 BC-AD 500: architecture and material culture, Part 1 The Orkney and Shetland Isles. Oxford (BAR Brit Ser 342).

Mackie, EW 2005 'Scottish brochs at the start of the new millennium', in Turner, V, et al (eds) 2005, 11-31.

MacKie, EW 2007 The Roundhouses, Brochs and Wheelhouses of Atlantic Scotland c.700 BC-AD 500: architecture and material culture, Part 2 (II) The Northern and Southern Mainland and the Western Islands. Oxford (BAR Brit Ser 444(II)).

MacKie, EW 2008 'The broch cultures of Atlantic Scotland: Origins, high noon and decline. Part 1: Early Iron Age beginnings c.700-200 BC', Oxford Journal of Archaeology 27(3) 261-279.

MacKie, EW 2016 Brochs and the Empire: The impact of Rome on Iron Age Scotland as seen in the Leckie broch excavations. Oxford (Archaeopress).

MacSween, A 2009 'A note on the use of steatite as temper' in Forster, AK and Turner, VE (eds) 2009, 37-38.

Main, L 1998 'Excavation of a timber round-house and broch at the Fairy Knowe, Buchlyvie, Stirlingshire, 1975-8', *Proceedings of the Society of Antiquaries of Scotland* 128, 293-417.

Meyer, K 2016 *The Romans in Shetland*. Report accessed online, 7 September 2018, at http://www.smdchs.co.uk/docs/romansinshetland.pdf

Moore, H and Watson, G 2014 Ebbing Shores: Survey and Excavation of Coastal Archaeology in Shetland 1995-2008. Edinburgh (Historic Scotland = Historic Scotland Archaeology Report no 8).

Mykura, W 1976 British Regional Geology: Orkney and Shetland. Edinburgh (HMSO).

Nicholson RA and Dockrill SJ (eds) 1998 *Old Scatness Broch, Shetland: Retrospect and Prospect.*Bradford (University of Bradford / Shetland Amenity Trust / North Atlantic Biocultural Organisation).

Oram RD, Martin PF, McKean CA, Neighbour T and Cathcart A 2010 *Historic Fraserburgh: Archaeology and Development*. Edinburgh (Historic Scotland – The Scottish Burgh Survey).

Orkneyinga Saga *References are to the Penguin edition:* Pálsson H & Edwards P 1981 *Orkneyinga Saga*. London (Penguin)

Owen, O 2002 'Les Vikings en Écosse : quel type de maison les colons vikings construisaient-ils ? [The Vikings in Scotland: what sort of houses did Viking colonists build?]', in Ridel, É (ed), *L'héritage maritime des Vikings en Europe de l'Ouest*, 137-70 (= Colloque international de la Hague 1999, Office Universitaire d'Études Normandes, Université de Caen Basse-Normandie).

O'Neill, BHStJ 1954 'The date and purpose of the brochs', in W D Simpson (ed) 1954.

Parker Pearson, M, Sharples N and Mulville, J 1996 'Brochs and Iron Age society: a reappraisal', *Antiquity* 70 (267), 57-67.

Pennant, T 1774 A Tour in Scotland and Voyage to the Hebrides in 1772. Warrington.

RCAHMS 1946 Inventory of Ancient Monuments in Orkney and Shetland. Edinburgh (HMSO).

Ritchie, JNG 2005 'Brochs: a Long View', in V Turner et al, 2005, 1-4.

Romankiewicz, T 2011 *The Complex Roundhouses of the Scottish Iron Age. Volume I – Text and Illustrations*. Oxford. (=BAR Brit Ser 550 (I))

Romankiewicz, T 2016 'Land, Stone, Trees, Identity. Ambition: the Building Blocks of Brochs', *Archaeological Journal* 173, 1-29 http://dx.doi.org/10.1080/00665983.2016.1110771.

Scott Sir L 1947 'The problem of the brochs', Proceedings of the Prehistoric Society 13, 1-36.

Scott, Sir L 1948 'Gallo-British colonies: the aisled round-house culture in the north', *Proceedings of the Prehistoric Society* 14, 46-125.

Scott, Sir W 1820 *Ivanhoe*. Edinburgh and London (Ballantyne and Constable). *References here are to the 1996 Oxford University Press: Oxford World Classics edition.*

Scott, Sir W 1822 *The Pirate*. Edinburgh and London (Ballantyne and Constable). *References here are to the 1931 John Dent and Sons (London) edition*.

Scott, W 1982 *Northern Lights*. Hawick (Byway Books). [= Facsimile extract from J R Lockhart 1839 with added (later) illustrations].

Sibbald, R 1711 Description of the Isles of Orknay and Zetland... Edinburgh (Andrew Symson) [References here are to a recent facsimile reprint, by Scholars Choice, of the 1845 facsimile reprint issued by Thomas G Stevenson of Edinburgh.]

Sharples, N 1998 *Scalloway: a broch, late Iron Age settlement and Medieval cemetery in Shetland.* Oxford (Oxbow Books: Oxbow Monograph 82).

Simpson, WD (ed) 1954 The Viking Congress. Aberdeen.

Smith, B 2014 'How not to reconstruct the Iron Age in Shetland: modern interpretations of Clickhimin Broch', *Northern Studies* 47, 1-31.

Smith, B 2016 'Did the broch of Mousa have a roof? - and why not!' New Shetlander 276 (Simmer 2016), 4-17.

Stewart, J 1956 *An Outline of Shetland Archaeology*. Lerwick (Shetland Times). [Reprinted in 2008 with a Foreword by Val Turner. Lerwick (Shetland Amenity Trust).]

Stuart, J 1857 'Remarks on the Ancient Structures called Picts' Houses and Burghs, with especial reference to the Burgh of Mousa in Shetland', *Proceedings of the Society of Antiquaries of Scotland* 3, 187-195.

Stuart, J 1867 'Report of the committee of the Society... a fund ...for excavating early remains', *Proceedings of the Society of Antiquaries of Scotland* 7, 289-307.

Thomas, D 2011 'An Investigation of Aural Space inside Mousa Broch by Observation and Analysis of Sound and Light', *Internet Archaeology* 30. https://doi.org/10.11141/ia.30.4

Turner, V, Nicholson, RA, Dockrill, SJ and Bond, JM (eds) 2005 *Tall stories? 2 Millennia of Brochs,* Lerwick (Shetland Amenity Trust).

Turner, VE; Bond, JM and Larsen, A-C (eds) 2013 *Viking Unst: Excavation and Survey in Northern Shetland 2006-10*. Lerwick (Shetland Heritage Publications).

Turner, VE; Owen OA and Waugh DJ (eds) 2016 Shetland and the Viking World: Papers from the Proceedings of the Seventeenth Viking Congress, Lerwick. Lerwick (Shetland Heritage Publications).

Weeks, P 2017 Jarlshof. Edinburgh (Historic Environment Scotland).

Wolfson, S 2008 *Tacitus, Thule and Caledonia: The achievements of Agricola's navy in their true perspective.* Oxford (BAR: British Series 459).

Worsaae, J 1852 *An Account of the Danes and Norwegians in England, Scotland and Ireland.* London (John Murray).

Further Resources

Canmore ID: 513

Site Number: HU30NE 1 **NGR:** HU 39819 09551

Scheduling Description: http://portal.historicenvironment.scot/designation/SM90174

Details of artefacts from Jarlshof within the National Museum of Scotland collections can be found at: www.nms.ac.uk/explore-our-collections/search-our-collections/

APPENDICES

APPENDIX 1: TIMELINE

(revised to take account of recent research) all prehistoric dates approximate

Early Neolithic

3600-3000 BC Construction of small houses and occupation by a community who grew

barley.

Late Neolithic to mid Bronze Age

3000-1500 BC Site unoccupied – possibly a period of higher sea level and/or storminess,

with deep sand accumulation.

Later Bronze Age to early Iron Age

1500-600 BC Establishment of a settlement with several houses, occupied and rebuilt

over several centuries.

Arrival of a bronze-smith who worked on site. c. 800 BC

after 600 BC Construction of several simpler, circular houses, two with souterrains.

Early Iron Age

500-400 BC Site abandoned, accumulation of blown sand.

Middle Iron Age

After 400 BC - AD Establishment of a broch; addition of a walled outer courtyard with at least 200

one roundhouse; construction of four wheelhouses.

Later Iron Age / Pictish

AD 400 onwards Gradual abandonment of older structures, construction of small houses

partly dug into the mound.

Viking / Norse

c. AD 850-1200 Arrival of Scandinavian settlers, an early part of colonisation of Shetland,

> Orkney, Western Isles and northern Scottish mainland. Large house and outbuildings constructed, and rebuilt successively over many generations, with maximum of three or four dwellings at any one time. Fishing becomes

a major occupation only towards the end of this period.

Medieval – post-medieval

AD 1200-late 1500s	Farm rebuilt in new style (in parallel with changes in Scandinavia at this time). Continued occupation with occasional refurbishment and changes to plan.
Late 1580s	"New Hall" built for Earl Robert.
c. AD 1593-1594	New residence (later to be dubbed "Jarlshof") built for Earl Patrick, Earl Robert's "New Hall" downgraded to ancillary status.
c. AD 1595-1614	Remaining sides of quadrangle added.
Late 1600s	Site abandoned and Bruce family relocates to new Sumburgh House (on site of present hotel).
<u>Modern</u>	(major events only – many minor interventions not detailed below)
1814	Walter Scott visits, sees the ruined laird's house and invents the name "Jarlshof", used in his novel <i>The Pirate</i> (1822).
1897	Earlier levels of site rediscovered after several years of coastal erosion.
1897-1905	John Bruce of Sumburgh excavates Iron Age structures.
1925	Site taken into State care by means of a Minute of Agreement between Robert Hunter Bruce Esq and The Commissioners of Works This covered Jarlshof itself and the surrounding ground.
1928	Site first Scheduled.
1931-9	A.O. Curle (1931-6) and V.G. Childe (1937) excavate prehistoric and Viking / Norse structures and publish accounts. Removal of Bruce mausoleum as part of the works. J. S. Richardson continues the excavation of Norse structures (1936-39) but does not publish.
1938	Guardianship area extended to include the excavated prehistoric remains and surrounding ground.
1950-2	J. R. C. Hamilton excavates remaining areas of site in parallel with an extensive consolidation exercise. Sea wall extended and visitor centre built.
1956	Hamilton publishes monograph drawing together the results of all earlier excavations as well as his own.
2004	Small scale excavations near Neolithic structures provide first radiocarbon dates for this phase – pushing it several centuries earlier than previously accepted.
2018	Terrestrial Laser Scanning undertaken.

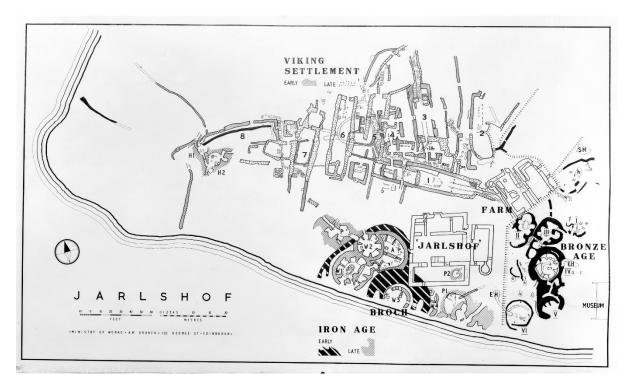
APPENDIX 2: IMAGES



Aerial view of location, with Sumburgh Hotel in foreground



Aerial view of site (north is towards top of image)



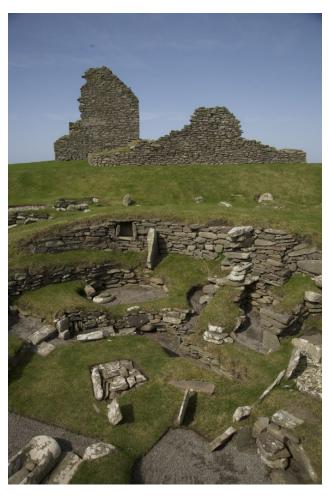
Site plan. SC 1222137 © Crown Copyright: HES



Remains from the Neolithic period are not substantial



"Early" middens with shell (regularly refreshed!)



Bronze Age house in foreground, with laird's house beyond



Early Iron Age house



Access to souterrain [not publically accessible]



Souterrain interior [not publically accessible]



Broch interior, with laird's house above



Broch interior showing scarcement ledge on inner edge of broch wall, and inserted freestanding wheelhouse period structure (left), with ruined laird's house above. Note: the careful positioning of the laird's building in relation to this wall, suggests some awareness of the structures below.

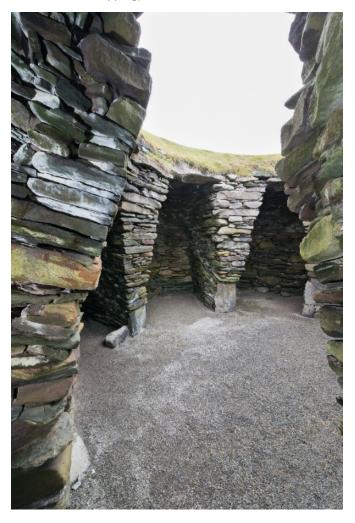


Broch enclosure and aisled round house



SC 1222270 © Crown Copyright: HES.

Wheelhouses: the earliest version of the "classic view" (note extent of consolidation by 1938 and the extensive use of turf wall capping).



Wheelhouse interior



Viking "parent" house



Aerial view of site, showing truncation by coastal erosion



Kiln in corner of Medieval farm



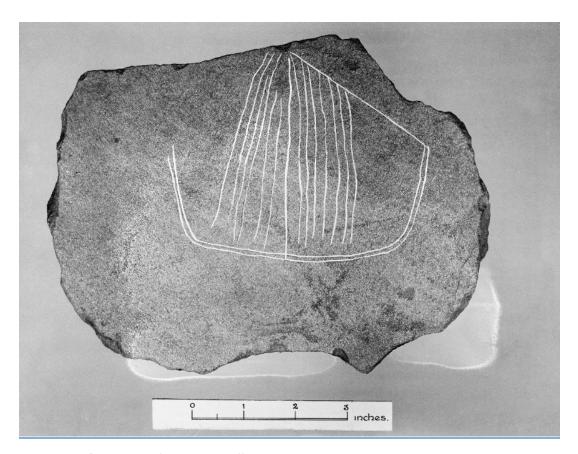
"New" Hall (also shows later burials in courtyard)



Laird's house (shows modern cast-iron viewing platform



View of the site during excavation in 1932. Note: Bruce mausoleum still extant.



SC 1221187 © Courtesy of HES. Ship graffiti.

APPENDIX 3: FULL SITE DESCRIPTION

Introductory notes:

• A key aspect of Jarlshof's long occupation was frequent episodes in which sand from the adjacent beaches of the West Voe of Sumburgh was deposited across the site. These events were a repeated problem for its occupants, leading to the abandonment of the entire settlement, sometimes for extended periods. However, this has been of huge benefit to those who later came to excavate the site; layers of sand formed invaluable reference horizons across the site, with the result that an unusually high level of confidence can be placed on the sequence established during successive excavations from 1897 onwards⁴³. Unlike many other sites excavated over 50 years ago (notably **Clickimin**) the narrative proposed for Jarlshof's development over time, published in full in 1956⁴⁴, has not been subject to radical revision since: many details have been refined and some dates have been adjusted, but the broad picture continues to stand up well to scrutiny.

⁴³ For individual excavation reports: Bruce 1907; Curle 1932, 1933, 1934, 1935a, 1935b, 1936, 1936b; Childe 1938, Hamilton 1956

⁴⁴ Hamilton 1956

A second important aspect is that the artefactual assemblage excavated at Jarlshof has proved
consistently richer, in almost every period, than other sites of comparable date excavated
elsewhere in Shetland. This applies both in quantity as well as quality of finds: the clear
impression is that Jarlshof's location made it a prosperous settlement from its early days, and
despite occasional interruptions by sand-blows. This may account for its repeated re-occupation
after each environmental calamity.

The layout of the site facilitates a description – and also site tour – in chronological order, which greatly assists in unravelling what might otherwise be a bewildering experience. This description follows that route, and embeds a very brief description of the principal structures associated with each phase of the site's history into a chronological narrative⁴⁵.

On-site interpretation is provided by a staffed visitor centre and a series of interpretation panels at viewpoints around the site. The following description should be read in reference to the illustration included on page 5, above, which notes the location of each Viewing Point.

[Viewing Point 1.] The earliest human presence on site has been dated by pottery and other finds to the early Neolithic period (around 3600 BC). The site was used as a settlement (perhaps seasonally) over several centuries, interrupted by a number of episodes in which sand blew over the site. Only slight remains of the walls of houses from this period can be seen on site. These are located in the easternmost corner of the site, and the recommended circuit for visitors begins here.

[Viewing Point 2.] Immediately to the south-west of the Neolithic remains, an extensive area contains the remains of at least five Bronze Age houses (established sometime between 2000 and 1500 BC). These were in use for an extended period and demonstrate a history of structural change: the earlier houses have an oval plan with a number of lobes, possibly bed-recesses, opening off a small central space which in some cases contained a hearth. As time went by, some of these houses were remodelled to a more nearly-circular plan, with the central space expanding and the recesses being removed. As presented on site, the remains of the older plan can be seen directly below the remodelled version. One of the houses was adapted to form the workshop of a bronze-smith, engaged in casting weapons and tools which included swords and axes. This activity has been dated to around 800 BC by comparison with similar objects found outside Shetland, particularly in Ireland.

[Viewing Point 3.] Not long after this, several of the Bronze Age houses were remodelled into simple circular houses. These have been dated to the early part of the Iron Age (perhaps around 600-400 BC) on the basis of artefacts found within them. Two have small underground passages and chambers associated with them. Known as souterrains, these may have been used for storage or held ritual significance.

The visitor route now reaches the shore, which is protected by a massive seawall erected in the 1950s, and turns to the north-west to enter remains of middle Iron Age date (perhaps 400 BC to 0 BC). Much of the settlement mound has been lost to the sea – the eroded area to the left of the path may once have been as extensive as that which survives today.

⁴⁵ More detailed accounts can be found in the current HES guide booklet (Weeks 2017) and in the excavation monograph (Hamilton 1956). The latter is still of great value, although its author relied heavily on the repeated immigration of new people into the area as a means of explaining significant changes in material culture and architectural forms, an approach that is no longer accepted by the majority of archaeologists.

[Viewing Point 4.] The most massive structure on site was a broch: a tall drystone-built structure of circular plan. Jarlshof's broch seems to have been quite a typical example: about 20m in external diameter and 10m across its inner space. Like most Shetland brochs, the wall was built solid in its lower portion, with small, corbelled chambers set into the wall-base. Above this it was double-skinned, with a gallery running around within the thickness of the wall, though little of this survives today. A scarcement ledge of protruding stones runs around the inner wall-face and is believed to have anchored a long-vanished, raised, wooden floor. A 4m-deep well descends from the centre of the broch. Although now only about 2.5m tall, the broch is assumed to have been much taller — perhaps a total height of 10m.

Soon after the broch's construction, a stout wall was erected to enclose a courtyard area to the west of the broch. This wall curves round to abut the north side of the outer wall of the broch. The broch and its outer courtyard have been sliced through by coastal erosion, which by chance has cut a natural cross-section through the line of the entrance passage of the broch and also the gateway into the outer courtyard. It is assumed that the broch's internal stair was in the portion lost to the sea, which has removed an unknown proportion of the courtyard and possibly much more beyond. Within the outer courtyard, a number of sub-circular houses were built, including one with upright stone piers to help support its roof. These were soon followed by at least four wheelhouses, three to the north of the broch and one within the broch's inner space – this suggests the broch may have been reduced in height.

The visitor route passes through the neatly-halved gateway to the outer courtyard and curves around to reach the access passage into the best-preserved wheelhouse.

[Viewing Point 5.] This is the best-preserved example of wheelhouses so far discovered anywhere. (The characteristic wheel-shaped plan, with a central space or "hub" flanked by radial divisions or "spokes," gives rise to the name of this type of dwelling.) The side chambers, perhaps bed recesses, are partly corbelled and roofed with large stone slabs: this is how they were found on excavation — the only missing feature was the thatched wooden roof which is assumed to have covered the central space, in which there was a central hearth. Initially dated to AD 100 to 300, evidence from recently excavated examples at nearby Old Scatness suggests the wheelhouses may be at least a century earlier.

After an extended period of use, during which the site mound built up quite markedly due to further sand-blows, the wheelhouses went out of use and a number of simpler houses were constructed into the mound: the latest of these contained artefacts, including some stones with incised designs of the artistic style associated with the historical Picts. A small house of this phase lies at the extreme western end of the site.

[Viewing Point 6.] After initial small-scale contacts, perhaps involving trade, the site acquired new inhabitants. Incoming Viking settlers, possibly from southern Norway, established a farm on the northern flanks of the settlement mound, perhaps around AD 900. It is believed that the first house they built is the long, rectangular house with slightly bowed side walls, aligned west-north-west to east-south-east. This contained housing for cattle in its lower end. This house, repeatedly modified and rebuilt, was to form the core of a small village for about 400 years. Other buildings were added, including what has been claimed as a small "hof" or temple (most Vikings remained pagan until around AD 1000). Over the generations, new houses were built to the north and west of the original: the many lines of low walling which represent the remains of these can be more than a little confusing but there seem to have been no more than four houses in use at any time, and usually no more than one or two. Each house had a kitchen area at one end and a larger living area at the

other. There seems to have been a period when animals were housed in separate byres, either purpose-built or in abandoned houses. However, as time went by, the original pattern of byres incorporated in the downslope ends of houses seems to have re-asserted itself, showing the origins of the longhouse plan which was still in use in much of rural Shetland until well into the 1900s. It is interesting that the houses which seem to follow the supposed "founder's" house are oriented at right angles to it. This change of plan has been seen on other Viking/Norse sites, such as the **Brough of Birsay** in Orkney: this has been attributed to a shift in the direction of the prevailing winds, but might simply be due to the desire to site new buildings so as to create a sheltered courtyard. (Please note that the sequence published by the original excavators is currently being reviewed in the light of new evidence, and the narrative outlined above may change once this work is completed. (46)

[Viewing point 7.] In the later 1200s, a new house was built to the east of the longhouses, aligned north-west to south-east, with outbuildings including a barn with a corn-drying kiln. The building style was different – shorter but broader, with stouter walls. It may be that stacked turf had been used for the upper walls of the earlier Norse houses, but that this ceased – reflecting changes which took place in Norway at the same time. (Shetland did not become part of Scotland until 1469). This new farm was rebuilt on at least four occasions, and the visible remains are largely of the last period of rebuilding, around 1500 – by which time Shetland had become part of the Scottish kingdom. In 1469 the site and the land around it belonged to Sir David Sinclair of Sumburgh, and the farmhouse may have been his home when in Shetland⁴⁷. Over the next century the well-connected Sinclair family, whose various branches held lands and titles in both Scotland and the now united kingdom of Denmark and Norway, gradually lost power and influence: their former earldom of Orkney was abolished. In 1581 King James VI of Scotland appointed his illegitimate uncle, Robert Stewart, to a new Earldom of Orkney, which included Shetland.

[Viewing point 8.] On the summit of the mound, to the south-west of the Medieval farm, stands an impressive set of ruined rectangular buildings, set around a courtyard. Earl Robert now held the lands of Sumburgh around Jarlshof, and set about building himself a suitable residence. The remains of which form the north side of the rectangle of ruined buildings: called the New Hall, this was in place by 1592. It was leased to William Bruce of Symbister (in Whalsay) who lived there and had the dubious delight of accommodating Earl Robert when he visited (though he spent most of his time in Orkney or further afield). In 1593 Robert died, to be succeeded by his son Patrick. It was probably he who had built the new house on the south side of the courtyard. Like his father, Patrick spent little time here, renewing the lease to William Bruce with the condition that Bruce had to vacate the house when Patrick visited. Patrick soon began work on a more appropriate residence, the castle in Scalloway, which was completed in 1600. Known locally as 'Black Patie', Earl Patrick was a quarrelsome and overbearing man, and fell out with many, eventually including Bruce. In 1608 he broke into Bruce's rooms in the house, stole property and destroyed what he did not steal. In time, Earl Patrick fell from favour, being too robust even for those far from gentle times, and the ill-judged efforts of his son (also Robert) led to his final downfall. Robert was hanged for rebelling in Edinburgh in 1614 and his father, Earl Patrick, was beheaded in early 1615, his advocates having gained a few months stay of execution on the ingenious grounds that the Earl was so ignorant he did not know the Lords' Prayer.

By the end of the 1600s the house lay abandoned, and the Bruce family had moved to a new house nearby (on the site of the present Sumburgh Hotel). The courtyard of the roofless house was used as

⁴⁶ Colleen Batey, pers. comm. March 2019

⁴⁷ Sinclair also served as captain of the Palace Guard in Bergen

a temporary burial ground in the 1700s, when sand had overwhelmed the parish graveyard at Quendale. Small upright stones stand witness to this final use of the site.

To complete the site tour, a modern metal spiral staircase attached to the west gable of the laird's house, offers a panoramic view across the site: the only place in Scotland where the physical remains of more than 4000 years of history can be seen from a single vantage point.

Note: modern additions:

At the end of his 1897-1905 excavations, John Bruce had built a solid wall on the seaward side of the broch and wheelhouses, to protect them from further erosion. At the same time, Bruce had built a small, square enclosure at the western end of the site, to house three ornamental tombstones which were moved there from the former church at Crosskirk, Quendale, which had been inundated with blown sand and abandoned many years previously.

The stone-built visitor centre was constructed in the 1950s, one of several in the Northern Isles: Skara Brae and Gurness in Orkney have similar examples.

At this date, the Ministry of Works built a more extensive seawall, subsuming the earlier example by Bruce. This coastal defence has been repaired on a number of occasions and has also been extended, in response to continuing erosion, which has in the past exposed deposits with archaeological material to the east, outside the guardianship area. It is not entirely clear whether this is in situ material or spoil dumped after excavations.

APPENDIX 4: BROCHS: THEORIES AND INTERPRETATIONS

Brochs have been much studied, and although the broch at Jarlshof is not the most immediately outstanding of the many structures at that remarkable site, this standard background may be of use to those with a particular interest in brochs.

1.3 Defining brochs

For the purpose of this and other similar documents, the term "broch" is used to refer to what some researchers have called "fully formed" or "tower" brochs. There is no way of knowing exactly how many such structures once stood to heights approaching Mousa's 13 metres plus, only that the visible surviving remains of many sites do not rule this out.

Dryden first attempted to define brochs in 1872:

"A broch is a circular tower formed of wall 10 to 16f thick at the base, enclosing a court from 24 to 38f diameter, with one entrance from the outside into the court. The usual thickness of wall is about 15f, and the usual diameter of the court about 28f. All were in outline truncated cones – that is, the outside of the wall "batters" or inclines inwards. The wall is also decreased in thickness towards the top by set-offs inside. The chambers of the broch proper are in the thickness of the walls, but there are usually partitions in the court of later construction. The original height of these towers of course varied, and except Mousa, we have no broch more than 20f high, but Mousa is still 40f high and was somewhat more. No mortar was used in them, but probably the chinks were stopped with moss or mud just as in modern Shetland cottages."⁴⁸

-

⁴⁸ Dryden 1872, 200

There have been a number of definitions over intervening years, of which, that by MacKie in 1965, refreshed in 2002, remains the most influential. MacKie offered a tight definition of brochs, to distinguish them from other drystone structures of broadly similar date. For MacKie, for a structure to be classed as a broch required five essential characteristics which must all occur in combination: (1) a circular ground-plan, (2) a thick wall, (3) large size, (4) a ledge (or scarcement) on its inside wall face and (5) at least one "hollow wall feature" from a list of four: (5a) an upper gallery (that is, a hollow wall at a level higher than the ground level), (5b) a chamber over the entrance passage, (5c) a void or voids in the inner wall-face and (5d) an intra-mural stair at an upper level.

MacKie noted that some "classic" features of brochs, such as their narrow and well-built entrance passages, occur in other types of structure. He also excluded from broch-defining characteristics the possession of a hollow wall at the ground level only, and also the possession of a stair which starts at ground level unless it rises to a much higher level.

As MacKie noted, relatively few of the c.600 sites referred to as brochs can be shown to possess this set of features, and he proposed that "probable" brochs could be defined as possessing features (1) to (4) but not demonstrably possessing any of the hollow wall features, with possible brochs having "no diagnostic features exposed but which seem likely from their situation to be brochs" ⁴⁹.

The features of MacKie's "brochs" and "probable brochs" are known to be present at no more than 15 percent of the 600-plus suggested broch sites in Scotland, and there is no knowing how many of the remainder might, or might not, reveal such features on excavation. This means that Scotland is known to possess at least 80 brochs but could in fact possess many more, not to mention sites lost or destroyed over the centuries before antiquarian interest.

Stepping back from technical structural definitions, it is common practice, where a broch has proved on excavation to be surrounded by a complex of smaller structures and sometimes also by outer walls and ditches, to refer to the entire site simply as a broch. For example, the Broch of **Mousa** is a (more or less) solitary broch, whereas the Broch of **Gurness** comprises a broch surrounded by an extensive settlement and set within large ditches

Brochs are unique to Scotland, and one of Scotland's few "endemic" prehistoric architectural forms. Their greatest concentration is in Orkney, Shetland, Caithness and East Sutherland, with more examples scattered rather more thinly across the Western Isles, Skye and the adjacent mainland, a few further south on the west coast and a handful of outlying examples in central, south-west and south-east Scotland.

1.4 A brief account of broch studies

Brochs have been the subject of more research and discussion than perhaps any other type of ancient monument. It is necessary to review these antiquarian and archaeological debates in some detail, because the significance of Mousa (and other brochs in State care) lies to a considerable extent in how each site offers, or could offer, evidence in support of competing definitions of "broch-ness" and towards competing narratives about the origins, date, nature and purpose of these enigmatic sites. The outcome of a huge amount of study appears to be that very few of the key questions about brochs have been resolved, while at the same time new and even less answerable questions have been stimulated. All narratives rely to some extent on assumptions, and the most which can be hoped is that these are made explicit.

-

⁴⁹ MacKie 2002, 1-2

The word "broch" was being used by antiquarians alongside "brough", "burgh" and "Picts' House / Castle" by the early 1800s, and the "broch" spelling was formally adopted by the Society of Antiquaries of Scotland in the early 1870s, though older usages lingered for a generation. Initially it signified a structure which was either, like Mousa, a tall-standing tower, or which had a lower height but showed sufficient structural detail for its similarity with surviving tall-standing examples to be asserted with confidence.

It is worth noting in passing that "broch" does not seem to have been in <u>popular</u> usage for this class of structure: the only pre-1800 use of "broch" was in relation to the town of Fraserburgh, where Scotland's first planned "new town" was created in the late 1500s and early 1600s, and referred to as "Fraser's broch" or "Fraser's burgh" ⁵⁰, suggesting that broch was a northern synonym for burgh. The nickname Broch is still in popular use today, especially in local newspapers, where it allows for a larger typeface and more striking headlines than does Fraserburgh ⁵¹. And in the Western Isles and wider Gaelic-speaking area, the term "broch" was not used locally, even though the Old Norse root "borg" appears as "barp"- and "borve" in many place-names. The word dùn, a generic Gaelic word for fort, was used exclusively for all man-made prehistoric sites which appeared to be of a defensive nature.

As archaeological research and fieldwork progressed, the number of "possible" broch sites has risen to about 600^{52} , although as time passed, the majority of sites so designated were usually no more than large grass-covered mounds of masonry of approximately the right dimensions, which in their physical appearance and siting appeared to informed observers less like a large burial cairn and more like a broch – a rather unsatisfactory approach, but one which persists in modern research.

A recent estimate is that only about 150 of 600+ "possible" broch sites show <u>any</u> details of built masonry at all, with about half of these, 70 or 80, either surviving as towers or showing sufficient structural evidence to suggest they could once have achieved such a height.⁵³ That said, when "possible" broch sites have been tested by full or partial excavation, or otherwise disturbed, they do prove more often than not to reveal features allowing them to be counted as brochs⁵⁴. Additional "possible" sites continue to be added, and in some cases demonstrated to be brochs⁵⁵. In summary, Scotland has at least 80 brochs, but may have many more.

It has been accepted from the early days of serious study that few other brochs had ever stood quite as tall as **Mousa** and the other partially surviving towers such as **Duns Telve**, **Troddan** and **Carloway**, though views vary radically as to just how many were towers at all. Scott in 1947 argued that only a dozen or so tall towers had ever existed across Scotland, with the rest simple solidly built low-rise farmhouses⁵⁶. Graham immediately disputed this, based on data from Royal Commission surveys, and his view, that the majority of brochs were tall enough to be imposing, if not as lofty as Mousa, has tended to prevail since then⁵⁷.

⁵⁰ Oram et al, 5

⁵¹ One memorable headline from the Press and Journal, in 1980: "Broch man told lies to gain credit"

⁵² Armit 2003

⁵³ Barber 2018

⁵⁴ E.g. Cloddie Knowe, trial trenched in 1988 (MacKie 2002 p 82)

E.g. Channerwick, revealed in winter 2013/14 http://scharp.co.uk/shoredig-projects/channerwick-broch/
 accessed 6 September 2018 (illustration also shows Mousa used as the archetype of a broch)
 Scott 1947

⁵⁷ Graham 1947a and 1947b

Attempts to define "true" or "tower" brochs as distinct from a wider class of drystone forts and duns have tended to centre on the presence of specific constructional features: near-circular ground plan, hollow or galleried wall construction, single narrow entrance passage, staircase within the wall thickness, a wall thick enough to have supported a sufficient height to act as a defence, etcetera⁵⁸.

Although early commentators tended to agree that brochs were originally unroofed towers, over time, opinion has shifted to the extent that most commentators, while disagreeing about details, accept that brochs contained significant internal fittings, typically including one or more raised floors and some form of a roof, and that timber was the major component of these "now vanished" elements. However, such features are in all cases inferred, based on what makes best sense of surviving stone-built features, such as scarcement ledges. Initially, it was suggested that broch roofs were "obviously" annular, lean-to structures leaving the centre for the inner space open to the sky (for light and smoke to escape)⁵⁹. More recently, broch reconstructions have tended to feature conical roofs sitting on the wall-head or just below it, with the weight taken by stout posts⁶⁰. Fojut (sceptically) and most recently Romankiewicz (more optimistically) are among those who have recently published on possible roofing structures⁶¹.

Physical evidence for such features is extremely rare amongst excavated broch sites, and even at the only two brochs where evidence of really substantial floor-set timber posts has been found, **Dun Troddan** (Highland)⁶² and Leckie (Stirlingshire)⁶³, these cannot conclusively be confirmed as having been constructed at the same time as the brochs⁶⁴. The need for caution is emphasised by the substantial post-rings found at Buchlyvie (Stirlingshire)⁶⁵ and Càrn Liath (Highland – Sutherland)⁶⁶ which in both cases can be shown to relate to pre-broch roundhouses⁶⁷.

If all brochs were indeed fitted out in timber, this would have interesting implications for wider relationships and poses the question of how quality timber for construction was obtained by those living in relatively treeless areas such as Shetland or the Western Isles. 68 The earlier view, that brochs as first constructed were not intended to be roofed, still has adherents, who offer an alternative view of brochs as a network of defensive lookout towers built in response to the threat of raiding or invasion. Smith has recently re-opened this debate by suggesting that Mousa and some other (although not all) brochs were never intended to be roofed 69.

1.5 Broch origins

The date and antecedents of brochs have been pushed progressively earlier. The idea that brochs were built by the Danes or Vikings⁷⁰ persisted for some decades, despite the outright rejection of

⁵⁸ MacKie 2002, 1-2

⁵⁹ Curle 1921, 90-92

⁶⁰ For example that by Alan Braby, widely reproduced, e.g. in Armit and Fojut 1998, 15

⁶¹ Fojut 2005b, 194-6; Romankiewicz 2016, 17-19

⁶² Curle 1921, 90-92

⁶³ MacKie 2007, 1312-3 (see also MacKie 2016 for more detailed account)

⁶⁴ Fojut 2005b, 192-3

⁶⁵ Main 1989, 296-302

⁶⁶ Love 1989, 165

⁶⁷ In this respect, the conjectural plans offered by MacKie for Dun Carloway are perhaps unhelpful. MacKie 2007, 1204

⁶⁸ Fojut 2005b, 196-9

⁶⁹ Smith 2016, 15

⁷⁰ Fergusson 1877, 630-9

this idea by Scandinavian antiquarians as early as 1852⁷¹. The alternative, that they were built by the native population as watch-towers against the Vikings, was also popular⁷² and led to them being called "Picts' House" or "Pictish Castle". However, by the 1880s, it had become generally accepted that brochs were somewhat earlier, dating to what had come to be termed the Iron Age and constructed at a time when the Romans were actively expanding their Empire, further south⁷³. As the discipline of archaeology developed, and in the absence of direct dating evidence, efforts were made to fit brochs into wider perspectives. The idea of a series of "cliff castles" along the west coast of Britain, originating in Cornwall and gradually spreading north as they increased in architectural sophistication and complexity, was proposed⁷⁴, and led to the dominance of various "diffusionist" models, in which brochs were seen as the strongholds of an incoming elite⁷⁵. Elaborate "family trees" of Iron Age fortification across western Europe were drawn up, culminating in the broch, and these carried some influence well into the 1980s.⁷⁶

The discovery, in excavated broch sites, of some types of artefacts with similarities to those found in southern England and Brittany was held to support this idea, with any thought that their presence might have arisen through trade being rejected. Clarke and others warned that many of the artefact types cited were much more broadly distributed and in some cases near-ubiquitous⁷⁷ in the middle Iron Age, and could not be relied upon to demonstrate large-scale invasion. That said, most would accept that there were contacts between Iron Age communities living along the European northwestern seaboard, so ideas might have been shared, and individuals may have moved from area to area.

The observation has been made that brochs are unlikely to have arisen locally in north and west Scotland because the preceding local Bronze Age seems poor, but this may well be a mis-reading of the evidence: a lack of monumental building does not necessarily imply an impoverished culture. The fundamental problems for the immigration/invasion hypothesis as an explanation for the appearance of brochs, are (a) why the arrival of people from an area which held no structures anything like brochs should lead to their construction in their new homeland, and (b) why the limited amount of "exotic" pottery which is held to mark their arrival in the area (supposedly at Clickimin) might not have been obtained by trade or by gift exchange.

The idea that brochs were built by "warlike chieftains" to "overawe a subject population", remained popular⁷⁸, although not with all commentators. Stewart in 1956 was typically concise in this respect with regard to his homeland:

"Shetland at its best had two feudal castles, and all the local lairds of later times (very small fry indeed) would not have added up to the fraction of her hundred brochs, so it is useless to think of a lord controlling a group of serfs... We have a form of life based on a group much larger than the family, and a communal effort to meet some unprecedented sort of danger." ⁷⁹

The older, alternative view, that brochs were a unique local invention, began to be revived in the 1950s, notably in Shetland⁸⁰. Broad contemporaneity with the Roman presence was still supported,

⁷¹ Worsaae 1852, 233

⁷² Stuart 1857, 191-2

⁷³ Anderson 1883

⁷⁴ Childe 1935

⁷⁵ Scott, 1948

⁷⁶ Hamilton 1968, 51

⁷⁷ Clarke 1971

⁷⁸ RCAHMS 1946 (visited/written 1930), 48-55

⁷⁹ Stewart 1956, 15

⁸⁰ O'Neill 1954

but now with the added idea of brochs as refuges against slave-raiding, possibly by the Romans or by war-bands selling slaves into the Roman Empire. The persistence of immigration, if not invasion, as a stimulus was maintained, with the invention of brochs, probably in Orkney, by a "mixed" population⁸¹. At the same time, the idea was revived that brochs were built over a very short period and then abandoned or converted into non-defensive structures.⁸²

The period of broch construction was still assumed to be in the last century BC and the first century AD (largely on the basis of a few Roman artefacts found in and around brochs). This theory allowed for several centuries of experimentation to "perfect" the broch, wherever it first emerged in its ultimate expression as a tower, although there was a tendency to push this date a little earlier, perhaps into the second or third century BC, with an increasing preference for local invention over external inspiration. There was general agreement that brochs as well-built as Mousa came late in any sequence of structures⁸³.

The search for the architectural antecedents of brochs produced two competing theories. A 'western origin' school saw brochs developing from simpler D-shaped enclosures with some broch features which occur in Skye and the neighbouring mainland, and which MacKie termed semi-brochs, via the "ground galleried" brochs of the west into the "solid-based" brochs of the north⁸⁴. A competing northern origin school of opinion saw brochs arising in Orkney or Caithness (or even in Shetland, where a small number of so-called "blockhouse forts" contain broch-like features, such as wall-base cells, stairways and scarcement ledges)⁸⁵. Dating evidence emerged in Orkney during the early 1980s for a few thick-walled roundhouses (such as that at Bu, near Stromness, dating to 600 – 500 BC) which some claimed as forerunners to brochs⁸⁶, although these possessed few, if any, of the classic defining features of brochs.⁸⁷ Nonetheless, this led some to believe that brochs might go back as early as 600 BC⁸⁸.

Until recently there have been few secure radiocarbon dates for the actual construction of brochs, since few excavators had dug under their massive walls. Almost all dates from broch sites related to deposits within and around them, and almost by definition later than the construction of the brochs on each site – and usually later by an unknowable length of time. This changed with the dating of Dun Vulan (South Uist) from carbonised grain within the matrix of the wall. Taken with other material nearby, this suggested a construction date in the late 2nd or the 1st century BC. Slightly less securely, the construction of a broch at Upper Scalloway (Shetland) appeared to have taken place in the 1st century AD⁸⁹.

The radiocarbon dating of the construction of a fully-formed Shetland broch to the period 400 - 200 BC, at Old Scatness in southern Mainland 90, has forced a radical re-thinking of broch origins. The date, from well-stratified animal bone which was fresh at the time of its burial and lay directly under the well-built primary wall of the broch, has confirmed the growing suspicions that brochs were a considerably earlier development than had generally been supposed, at least in the north.

⁸¹ Stewart 1956, 15-16

⁸² Stewart 1956, 15

⁸³ Fojut 1981, 226-7

⁸⁴ MacKie 1992: also MacKie 2007, 1094,

⁸⁵ Lamb 1980, Fojut 1981

⁸⁶ Hedges and Bell 1980, Hedges 1987

⁸⁷ Armit 1990 p 195

⁸⁸ Fojut 1981, p 34

⁸⁹ Parker Pearson et al 1996; Sharples 1998

⁹⁰ Dockrill et al 2015, 168-171

This has not entirely banished an attachment to the idea of immigration as a stimulus for changes in society which led to the appearance of brochs, although its continuing adherents now place the hypothetical arrival of the supposed highly skilled incomers into northern Scotland much earlier, perhaps even at the start of the local Iron Age (around 700 – 600 BC), the new date MacKie has suggested the arrival of the supposed high-status southern immigrants to Shetland⁹¹.

The arguments for this are problematic in the extreme, due to the disturbed nature of the structures and deposits at Clickimin, which Hamilton largely failed to take into account⁹². At Clickimin, key pottery forms with internally fluted rims and sometimes black burnished exteriors, were held by both Hamilton and MacKie to mark the arrival of southern immigrants well before the broch was constructed. It was suggested as early as 1980 that these particular forms of pottery appear not before, but in fact well after, the building of the broch at Clickimin and probably elsewhere in Shetland⁹³.

This interpretation has now gained strong support from the extensive excavations at Old Scatness, where these pottery characteristics consistently appear from the 1st century BC onwards – long after the construction of the broch. A similar date has been ascribed to comparable pottery at Dun Vulan in South Uist. This change – which may or may not mark the arrival of incoming settlers – is therefore no longer relevant in terms of dating the first appearance of brochs, either in Shetland or in the Western Isles.

MacKie's recent suggestion that brochs were invented first in the north, possibly even in Shetland, and then later reinvented in the west⁹⁴ seems improbable, and the scenario suggested by Parker Pearson and collaborators more likely⁹⁵, with the broch tower invented in the north and only spreading to (or being adopted in) the west considerably later. This is consistent with the fact that in the west brochs are fewer in number and occur interspersed with other small stone forts which were unlikely to have stood as tall. The dating evidence from Clachtoll broch in West Sutherland, currently (2018) under investigation, should shed light on this, occupying as it does what might be seen as a step on the journey from north to west (or vice versa).

Reinforced by the new dating evidence, and following detailed architectural and engineering analysis, plus his own work at Thrumster broch and other sites in Caithness, Barber has suggested that, in the north at least, "classic", "fully-formed" or "tower" brochs such as Mousa may in fact all be of relatively early date and built over a short span of time short duration ("perhaps only a single, say 35 year, generation...in the early fourth century BC" ⁹⁶), often being reduced in height not long after their construction and in some cases incorporated as the cores of more extensive settlements. This latter phase of conversion Barber sees, with many caveats, as being already underway in Caithness by 200 BC and continuing perhaps until AD 200⁹⁷.

So, while the date of origin for some brochs has been pushed earlier, there remains good evidence that some were still being built around the turn of the millennia in Shetland, and possibly built for the first time then in the west. There is also some evidence which may suggest direct contact with

92 Smith, 2014, 4

⁹¹ MacKie 2008

⁹³ Fojut 1989, especially 29-31 (first discussed in unpublished PhD thesis 1980)

⁹⁴ MacKie 2008, 272

⁹⁵ Parker Pearson et al 1996, 58-62

⁹⁶ John Barber pers. comm. August 2018

⁹⁷ Barber 2018

the 1st - 2nd century AD Roman occupying forces in central Scotland on the part of the inhabitants of Leckie in Stirlingshire, one of the "outlying" brochs which have always proved problematic to fit into the mainstream of broch theories. These have tended to be regarded as among the very last brochs to be built, and the broch at Leckie appeared to have been recently built at the time of the suggested Roman contact 98 .

The wide span of dates now available suggests that the narrative which best fits the evidence is that the broch was a successful structural form which was first developed in the north, where it was quickly built in sizeable numbers. Brochs continued to be built in the north in appropriate circumstances over several centuries, and the architectural form was adopted further afield in later centuries. The artefactual evidence from Dun Vulan does not suggest the Western Isles were colonised in force from the north, being instead more consistent with limited contact. The idea that Shetland may have been taken over by Orcadian broch-builders, as floated by Stewart in 1956, similarly lacks artefactual support. But this returns us to the core of the problem; that we still have next to no excavated evidence for Iron Age culture at the point of broch building, but only from later centuries.

That is probably as much interpretation as the available evidence can currently support, and debate will continue as to exactly what the "appropriate circumstances" were which made building a broch a suitable response.

1.6 How special are brochs, and what was their purpose?

Many writers, including MacKie⁹⁹ and more recently Barber¹⁰⁰, have emphasised the <u>combination</u> of architectural features which they felt pointed towards what Barber has termed "canonicity" – the intention of the builders of each broch to conform to a model which was clearly defined closely resembled other such towers so far as geology would allow. MacKie posited a "professional" architect cadre¹⁰¹ while Barber has recently pointed to the engineering knowledge involved in constructing so close to the physical limits of buildability¹⁰².

Others have seen brochs simply as one end of a much wider spectrum of enclosed drystone structures which were all intended to serve the same broad purpose, presumed to be that of a defensible and impressive dwelling¹⁰³. Armit developed the idea of the "Simple" and "Complex Atlantic Roundhouses" to emphasise similarities within a larger class of approximately circular structures¹⁰⁴, while Romankiewicz has since taken this further to include all thick-walled structures, regardless of plan form, which contained intra-mural spaces and could have been roofed¹⁰⁵, though to refer to such a wide range of structures as brochs seems unhelpful¹⁰⁶.

These contrasting views are interwoven with debate and with assumptions about how brochs "worked" in practical and social terms: about whether they represented the communal homes of whole communities or only of landlords or chieftains; whether they were defensive at all, or solely intended to demonstrate status¹⁰⁷, and also about how and when the tower form emerged: possibly

⁹⁸ MacKie 2007, 1314-5 (See MacKie 2016 for more detailed discussion)

⁹⁹ MacKie 1965

¹⁰⁰ Barber 2018

¹⁰¹ MacKie 1965

¹⁰² Barber 2018

¹⁰³ Barrett 1981, 207-17

¹⁰⁴ Armit 1991

¹⁰⁵ Romankiewicz 2011

¹⁰⁶ Romankiewicz 2016

¹⁰⁷ Armit 2005b

early and as a brilliant stroke of creative genius, or possibly late and as the product of a gradual process of experimentation. (Although, as Barber has recently observed, the frequent use of the term "evolution" is inappropriate in a Darwinian sense – ideas may evolve but structures cannot.)¹⁰⁸

1.7 Brochs and Iron Age society

A further source of continuing debate has been the nature of contemporary society, ranging from early visions of a near-feudal society with immigrant overlords and their armed warriors living in brochs and levying rent and other support from subservient native, peasant farmers ¹⁰⁹, through one of embattled local communities seeking to defend themselves against raiders or invaders ¹¹⁰, to one of peaceable, hierarchical farming communities building brochs not for defence at all, but as a symbol of their possession of the land, their prestige, and safe storage of accumulated wealth in the form of surplus grain ¹¹¹. Several commentators have observed that many brochs occupy locations where large-scale arable agriculture seems unlikely to have been any more viable in the Iron Age than it would be today ¹¹² and the assumption of grain surplus is not certain.

Almost all of the dated evidence for life in and around brochs relates to their <u>occupation</u> in primary and subsequent forms, and not to their <u>construction</u>, and this is likely to remain the case. We have no way of knowing whether society at the precise time brochs were built was similar to that in subsequent centuries, from which most of our excavated evidence derives.

The explanation for the regional distribution pattern of brochs probably lies in the nature of Iron Age 'tribal' groupings, but there is insufficient evidence to provide a satisfactory explanation. The types of artefact found in broch excavations also occur on non-broch sites and also beyond the so-called "Broch Province", and brochs do not appear in some adjacent areas where physical conditions suggest they might, for example, in mid and south Argyll or Arran.In short, brochs do not align with a single distinctive "material culture". Stuart in 1857 expressed things pithily: "there must have been something peculiar in the circumstances of the inhabitants to have given rise to these peculiar erections." ¹¹³ We are still far from understanding what this peculiarity might have been.

It seems likely that each broch represents the work of a substantial community, larger than a single extended family, which controlled a distinct area of land (and perhaps sea) and that the broch represented a visible token of their possession, willingness to defend that holding, and the social status of the group or at least its leaders. People must also have continued to make their living from the land and sea, so access to resources would have been a constant concern. However, how their society was organised is not self-evident, and the unanswered question remains: what combination of circumstances led to the building of a broch?

So far as can be ascertained from excavated evidence, Iron Age society at the time of the brochs appears to have been relatively "flat"; composed of largely self-sufficient groups, which over time became associated into wider regional groupings that might loosely be termed "chiefdoms". These various groups doubtless interacted, both productively (trade, social exchange and agreed marriage) and negatively (raiding to steal livestock and perhaps to take prisoners, and even to take over territory). Brochs presumably provided enough defensibility to offer a degree of deterrence against the less desirable forms of interaction which might be expected locally, though they would not have

¹⁰⁸ Barber 2018

¹⁰⁹ Scott 1947, 1948

¹¹⁰ O'Neill

¹¹¹ Hingley 1992, 19; Dockrill 1998, 493-7 et passim; Armit 1996, 129-130

¹¹² Smith 2014

¹¹³ Stuart 1857, 192

withstood prolonged siege warfare – which in itself says much about how the builders perceived their wider world.

It is possible to imagine economic models for communities living in and around brochs, and while this might have been possible in the more favoured parts of Orkney or Caithness (both of which exported grain in late medieval times), neither the Western Isles or Shetland seem likely to have been able to support a subsistence economy founded principally on the cultivation of grain, though what grain could be produced would have been a valuable resource. Reliance on pastoralism and on the use of coastal and marine resources would have balanced such an economy more broadly, especially if exchange or barter operated between nearby communities with access to different resource bases ¹¹⁴.

However, the feasibility of theoretical economic models is inter-twined with the particular model of social structure which is assumed. Primitive communalism, client-elite relationships, inter-group collectivities (very close to a chiefdom society), a proto-feudal or even a full-blown feudal system have all been suggested at various times. Each would have made subtly, sometimes radically, different demands upon the resources available. The sole indisputable fact remains that each broch must have been built by a locally-available workforce, sustained by locally-available resources for at least as long as it took to build.

Once built, brochs may well have served a variety of functions, or at least acted as bases for a mix of activities which varied widely from site to site and from time to time. Some brochs went on to become the cores of more extensive settlements, while others seem to have been abandoned not long after they were constructed. Many brochs undoubtedly served as farmhouses in later years, but whether any brochs were built primarily as farmhouses is likely to remain an open question. It is hard to escape the impression, especially when standing next to a broch such as Mousa or Dun Carloway, that brochs were originally defensive, if only in that they were intended to offer outward vantage, impress the viewer and suggest the invulnerability of their possessors, and that thoughts of agrarian domesticity were not paramount in their builders' minds. On the other hand, the broch at Edin's Hall gives much more of an impression of having been influenced by broch architecture but remaining rooted in a different tradition of very large wooden roundhouses – though if Edin's Hall's "broch" was roofed, which has been doubted, it would have been one of the largest roundhouses ever identified in northern Britain.

1.8 Conclusion

In conclusion, despite two centuries of study, most of the basic facts about brochs, beyond physical measurements of surviving structures, remain conjectural, with interpretations usually based upon a very small sample of evidence, selectively interpreted, fitted to "off-the-shelf" social models. The revision of explanatory narratives will continue as new evidence emerges and as old evidence is reviewed: every few years brings another brave attempt to present a unified and coherent account of the issues discussed here¹¹⁵ ¹¹⁶ ¹¹⁷ only to see each effort, rather than unifying the field of study, simply add fresh fuel to debate.

It remains true, as Stewart sagely remarked in 1956, that "it is easier to guess why the broch came into being than how" 118. But neither question has yet been answered conclusively.

¹¹⁵ Hedges and Bell 1980

¹¹⁴ Fojut 1982a

¹¹⁶ Armit 2003

¹¹⁷ Most recently, Romankiewicz 2016.

¹¹⁸ Stewart 1956, 21