

WRITTEN STATEMENT OF INVESTIGATION

In respect of

ARCHAEOLOGICAL
RECORDING

at

JARLSHOF
GROUND MAINTENANCE

for

Historic Scotland

by

Kirkdale Archaeology



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INTRODUCTION

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A programmes of work conducted (in part) by Kirkdale Archaeology is required in order to monitor the work associated with the realisation of a new ground maintenance plan for Jarlshof (Fig. 1). The proposals are an extension of an earlier programme of work to improve access, interpretation, presentation and management of the site, begun around 2008. There have been recommendations to review the presentation and maintenance of the site since at least the 1970's, which include laying gravel within the interiors of all structures.



Figure 1: Jarlshof, Mainland, Shetland Isles.

The primary objective is to produce an informed ground maintenance plan for the whole site, clearly identifying archaeological features and defining their maintenance regime to assist the District Architect and MCU in future management of the site. The proposals are intended to reduce staff time and costs involved in managing the site, particularly in terms of grass cutting and vegetation control. At present the archaeological sensitivity of certain areas of the site is unclear when carrying out general site maintenance and a considerable amount of time is invested in careful management of vegetation around stonework and other features where this does not necessarily need to be the case.

In addition to this, the proposal also seeks to improve the overall presentation of the site to the public, by creating a consistent approach to the way in which interiors, exteriors and wall lines are presented and covering miscellaneous stonework or features which do not add to visitor understanding. It is anticipated that this will make the various structures easier to understand and interpret on the ground as there will be a greater distinction between wall-lines and interiors and exteriors.

A number of site visits have been undertaken to discuss the nature of issues on site in terms of presentation and management of the structures and to determine a set of options going forward. Desk-based research has also been undertaken by the Historic Environment Scotland (HES) Cultural and Natural Resources Team to determine the extent and nature of previous investigations and consolidation and to establish the basis of past management regimes; this has been taken into full consideration when determining the proposed changes. The conservation of the monument has been the foremost consideration at all times in the process of determining the new maintenance plan and opportunities to improve the conservation of the archaeological remains have been included in the proposals.

Given the scale and complexity of the site, several phases of work are proposed. The first phase of work will be the most straightforward, with more complex labour and cost intensive tasks being completed at a later date. Once complete, the works will result in a coherent and consistent presentation of the structures with a sensible maintenance regime that will be easier to maintain.

Details of the work proposed for Phases 1 and 2 are outlined below, with specific examples for illustration. An assessment of the archaeological sensitivity and potential impact is outlined alongside each of the proposed changes. Phase 3 works are only covered briefly here, as separate more detailed documentation will need to be developed in advance of these works. Upon completion of the works an annotated aerial photograph plan of the site will be produced detailing present management and presentation across the site and highlighting areas of archaeological sensitivity.

HISTORICAL BACKGROUND

The earliest remains date to the late Neolithic, *c.* 2700 BC and consist of fragmentary walls, midden material and hearths situated at the north-east end of the site. A settlement seems to have been established at the east end of site by the late Bronze Age (*c.* 800 BC) which included a smithy and a series of cellular houses.

Roundhouses and two *souterrains* were constructed on top of the Bronze Age village between about 500 and 200 BC. This settlement fell out of use and the site was abandoned for a period before the construction of a broch and courtyard to the south-west, between *c.* 200 BC and 100 AD. An aisled roundhouse was constructed in the space between the broch and the courtyard wall soon after the completion of the broch. Following this, a series of wheelhouses were inserted into the central space of the broch, which by this time seems to have been reduced in height. At a later date, sunken passage-houses were dug into the sand/midden deposits to the east of the broch.

The first Norse settlement was established at the site, to the north of the Iron Age remains, around 850 AD. The earliest settlement was comprised of a house, a possible temple or bathhouse, a smithy, byre and servants quarters. The small settlement developed and changed numerous times between about 900 AD and 1275 AD. A farmhouse and corn-kilns were built at the south-east end of the Norse settlement in the later 13th or early 14th century, which remained in use and underwent numerous modifications up until the 16th century.

The final phases of occupation at the site comprise the substantial laird's house built to the north-east of the broch in the 16th century. This was occupied and expanded by Earl Patrick in 1604, however, the house and its associated buildings had fallen into ruin by the later 17th century.

The property was taken into guardianship in 1925 and excavation and consolidation works undertaken. The recent history and precise nature and extent of 19th and early 20th century reconstruction of the site is not fully known.

The extended time depth of settlement remains at Jarlshof is one aspect of the site that makes it hugely significant. For such a constrained site, its sequence of development is extraordinarily complex, with a range of surviving prehistoric settlement and building forms.

It displays an unrivalled range of surviving settlement and building forms stretching from the prehistoric period into the medieval. The Norse settlement is of international significance,

providing a type site for Norse colonial settlements throughout the North Atlantic. The wheelhouses are the only examples in state care anywhere in Scotland.

The excavations at Jarlshof have provided a wealth of artefactual evidence (now mostly in the NMS, although some artefacts are in the on-site museum and the Shetland museum) which tell us much about how people lived at Jarlshof over a time-scale of several thousand years. The archaeological assemblage from the site is therefore of great cultural significance and the site retains potential for further significant artefacts and archaeological deposits.

ARCHAEOLOGICAL BACKGROUND

The site was discovered in 1897 by the landowner after severe storms removed part of the shoreline, exposing the remains of Iron Age structures. It was partly explored between 1897 and 1905, revealing a major part of the Iron Age settlement including the broch, two wheel-houses on the north-west side and a portion of the courtyard wall. Conservation and consolidation works were also undertaken at this time, which involved partial rebuilding and stabilisation of some of the broch and wheelhouse walls and the construction of buttresses to strengthen partition walls in Wheelhouse 1.

Further excavations were undertaken alongside consolidation works after the site came into guardianship in the mid 1920s. Discoveries were made on the east side of the mound during the erection of a boundary fence. This led to a series of excavations directed by Dr A O Curle between 1931 – 1935 in the area of the Bronze Age settlement. In 1937 an additional area immediately to the north of these remains was chosen for further investigation, directed by Professor V G Childe: this revealed the earliest occupation levels.

The Norse settlement was revealed in 1933 during exploratory excavation by Curle. Three phases of excavation then followed, with two seasons in 1934 and 1935 (under Curle) and between 1936 – 1939. Between 1934 to 1935 Curle's excavations focused on House 1 and the outbuildings immediately to the north; Richardson's excavations in 1938 focused on House 2. The methodology adopted during the latter phase of excavations was to grid and strip the entire slope across an area of approximately 1ha, down to foundations and floor levels. The excavations were halted by the Second World War and the structures and finds excavated up to this point were not fully analysed. These excavations revealed extensive deposits underlying the majority of the newly exposed house floors. The medieval farmstead was first discovered in 1932 during excavation of the Bronze Age settlement, but was not fully excavated until 1937.

The final phase of significant excavation was undertaken by Hamilton between 1949 – 51 and were largely concerned with investigating the extensive midden deposits and stratigraphic sequences of deposits underlying the Norse house floors to establish a development history of the settlement. Hamilton's investigations found earlier 9th century remains beneath the previously excavated houses, and evidence for pre-Norse occupation in places. In 1951 further excavations were carried out in the area of the Iron Age settlement. In 1952 one of the later medieval outbuildings which overlay earlier structures was completely removed during extensive excavation.

While we have a good record of Hamilton's excavations, the full extent of earlier investigations is not clear, although research could shed light on this. The archaeology was selectively explored to different levels on different parts of the site. Furthermore, the excavations were not undertaken to modern standards, and as such we have few absolute dates from the site and our understanding of certain building sequences, particularly the early levels, is poor.

The majority of interventions since the early 20th century have taken place for conservation purposes or to improve access to the site. As such, these have been minimal and have not greatly advanced our understanding of the archaeology. There has been little in the way of systematic excavation since these early investigations. Geophysical survey was undertaken in 1993 across much of the north-west portion of the site which indicated significant archaeological potential in areas which have not been fully excavated. The quality of the data, given the early date of the survey, is not ideal – future geophysical survey using a technique such as GPR could provide us with valuable new information on the survival and the extent of the settlement remains.

An eight week excavation took place in the summer of 1998. It intended to investigate the broch and surrounding settlement; the main North-South section of the broch was excavated. In 2004 three trenches were excavated in order to assess the degree of survival at the site and to provide scientific dating and environmental evidence for the sequence recorded in the 1950s. These excavations confirmed that archaeological remains do survive intact, despite its lengthy history of archaeological investigation, and provided us with a better understanding of the site's stratigraphy.

Minor archaeological works in 2008 and 2009, ahead of improvements to access to the west of the area of current proposed works (see Appendix A), revealed evidence of modern disturbance and landscaping. This has been similar elsewhere on site, where there has been previous disturbance during the construction of the original paths and steps. A watching brief was carried out in 2009 for the removal of turf and topsoil from the interiors of three structures around the

16th century laird's house to replace with gravel to improve consistency of presentation across the site. The turf and topsoil levels varied from around 80 - 200mm thick. No significant archaeological deposits were encountered during this work; past excavation reports suggest that much of the interior floor surfaces were excavated completely, though the extent of this varied from structure to structure.

FIELDWORK¹

PHASE 1

Reburial of selected exposed areas of midden

There are a number of exposed areas of midden at Jarlshof, both around the earlier prehistoric settlement and within the Norse settlement. The middens are presented as open circles of earth covered with broken shells and surrounded by grass. It is proposed that the middens in the area of prehistoric settlement in the east of the site remain as they are at present, as they are an important element of the archaeology of the site, and add to visitor interest – they are also included in on-site interpretation and the audio guide. However, the small sections of exposed midden within the Norse settlement will be reburied, to prevent further disturbance of these exposed deposits and to remove a layer of complexity from the site.

Archaeological mitigation

The work involves no ground disturbance and no archaeological mitigation or monitoring is required for the completion of this work. The location of each of the middens to be covered will be recorded prior to reburial, through aerial photography and site plans. The exposed midden locations are clearly shown on existing aerial photographs and attached plans (Appendix A); as such it is recommended that a photographic record be kept of the middens before and after burial, which will be included in the DSR for archaeological monitoring at Jarlshof, but no further recording is required. A layer of geotextile membrane will be laid over the exposed midden deposit before turf is laid, to provide a clear distinction between the archaeological layers and to provide additional protection.

Reburial of exposed stonework/features with no identification and removal of selected individual loose stones

There are exposed or loose individual stones across the site at Jarlshof, and a number of stone features which are not obviously associated with a structure, and where there is no longer a clear record of the feature. This is particularly true of exposed stonework and features in the Norse

¹ The annotated site plans in Appendix A should be read alongside these proposals. Details of the archaeological background and assessment of the sensitivity of areas affected by the proposed works are included in a separate document.

settlement and early prehistoric areas of the site. The most problematic areas are those which are not interpreted on existing site plans, or not clearly recorded in past excavation reports. As far as possible these areas have been identified, their context and significance investigated and the archaeological sensitivity assessed.

There are also miscellaneous loose individual stones, along with piles of stones, which do not appear to be *in-situ* or have an obvious context. Some of these stones are likely to be archaeological, although no longer in their original context in many cases. It is recommended that miscellaneous loose stones, where the original context is unknown or has been lost, are removed.

It is proposed that exposed stonework or features which are in-situ but do not obviously relate to a known structure should be turf-covered; these are clearly defined on the supporting plans.

Archaeological mitigation

Loose stones will be checked by an archaeologist to assess their significance prior to their proposed removal, an action that will only be undertaken with advice from HES Cultural and Natural Resources and Heritage Management, on a case by case basis.

Areas to be reburied will be recorded on site plans prior to reburial; where features are not already shown on plan a record will be taken prior to reburial, with a plan, brief description and photographs included in the DSR.

Building differentiation: exposed walls/turf covered walls

In certain areas, different phases of development or sections of different structures are obscured by encroaching or extensive turf cover. While it is recommended that all wall lines remain turf covered, it would be beneficial to retain some distinction between multiple wall lines and phases of construction where these are overlapping, intersecting or adjacent to one another. In cases where turf cover has encroached to obscure this distinction, the turf will be cut back enough to define the different phases of construction, without compromising the protection of the underlying wall line.

Archaeological impact and mitigation

This work will involve no ground disturbance beyond removal of turf in the areas defined on the supporting plans. There will be no disturbance of any underlying deposits, and as such no archaeological mitigation is proposed. However, work should stop and HES Cultural and Natural Resources should be consulted immediately if there is any uncertainty over the extent of turf cover to remove, or if anything of archaeological significance is uncovered or disturbed during

turf removal. The extent of turf removal in areas where it has encroached to obscure different phases of construction or wall lines will be determined on site between HES MCU and a member of Cultural and Natural Resources prior to work commencing. This will ensure that turf is not removed from sensitive areas or cut back to an extent that it may have a negative impact on the conservation of the monument.

Additional works

In the area of prehistoric settlement, beyond dwellings II, III and IV is a grassed area with patches of exposed midden and partially exposed wall lines relating to the settlement. The existing turf cover is thinning in places, due to visitor footfall, and the ground is often wet. To reduce erosion and improve the management of this area of the site is proposed to restrict access. By reinstating turf cover and clarifying the distinction between interiors, exteriors and modern paths it is hoped to discourage visitor flow in this area. In addition to this a small sign will be added in the location shown in Fig. 6 to discourage access.



Figure 2: Location for new sign.

Archaeological impact and mitigation

The sign will be a small stone plaque in the style of the audio guide number plaques. It will not require any ground disturbance for installation, and as such will not impact upon any underlying archaeological deposits. The exact location of the sign will be determined in consultation with HES Cultural and Natural Resources to ensure that it is not placed on top of any sensitive features.

PHASE 2

Building differentiation: gravel/turf interiors

In selected areas turf will be removed and replaced with gravel to define the interiors of buildings; there will be a few exceptions to this in areas of greater archaeological sensitivity. Where possible, this should be different from that used for modern paths so as to distinguish between modern and historic surfaces. Red gravel will be used for hearth features within structures. Details of the proposed changes are shown on the supporting plans.

Maintenance of paved areas

It is recommended that historic paving be retained, consolidated and weeded, where it is already present within structures or along pathways. Vegetation around the paving stones will be removed by hand. Consolidation of the paved areas will require a small amount of ground disturbance to create a level foundation for the re-laid stones, with excavation extending to a maximum depth of 100mm. The paving stones will be carefully lifted by hand, the ground will be levelled and a geotextile layer laid, the paving stones will then be re-laid in their original position² as far as possible, with voids between the stones filled with fine gravel. In the Norse settlement, where paving is found on interior and exterior surfaces, different gravel will be used to differentiate between interiors and exteriors as far as possible, adding greater consistency to the presentation of structures across the site.

Proposed Archaeological Response and Mitigation

While it is anticipated that much of the sensitive floor deposits within the interiors of the structures at Jarlshof have been removed during previous excavations, there remains high archaeological potential. As such, the removal of the turf and topsoil and levelling within interiors will be undertaken under an archaeological watching brief to ensure that any disturbance does not impact upon underlying archaeological deposits, and to take a photographic record of the works. Plans and written descriptions of the interiors should be produced and included in the DSR where appropriate. Where turf is removed a layer of geotextile membrane will be laid down and covered with a layer of fine gravel, or whin dust, to protect the underlying surface and provide a clear distinction between the modern surface and the archaeological layers below.

Archaeological monitoring will also be undertaken for the lifting, weeding and levelling of all paved areas across the site. Care will be taken to ensure that the paving is re-laid in the same position as far as possible, though paving across the site has already been lifted during previous

² The stones will be re-laid in the same position as prior to the works; none of the paving stones are believed to be *in-situ*, as they have been lifted and re-laid previously, during past excavations and conservation work.

excavations so that the precise original location of many of the stone slabs may already have been lost.

Most of the interiors of dwellings IV and V are already gravel covered, however small areas of turf exist in places which could be removed to clarify presentation without impacting upon the upstanding structures or sensitive underlying deposits. However, there are potentially sensitive areas within these dwellings as certain areas of turf are protecting low wall lines and piers; as such the exact areas of turf to be removed will need to be determined on site in consultation with a member of HES Cultural and Natural Resources prior to work commencing. This work will be carried out by hand and under archaeological watching brief.

As above, much of the interiors within the broch and wheelhouses are already gravel covered; only small areas of turf will be cut back or stripped within these structures. Given the minimal level of intervention and the extent of previous archaeological investigations, no archaeological monitoring is necessary for the work in these areas. However, the area and extent of turf to be removed will be determined on site in consultation with a member of HES Cultural and Natural Resources. If any significant archaeological finds or deposits are encountered during any of the works, work will cease immediately and HES Cultural and Natural Resources and Heritage Management will be consulted on how to proceed. In discussion with HES CNR and HM the works will then be amended to ensure that any archaeological remains are preserved *in-situ*.

M O N I T O R I N G

This will entail:

- The presence on site of at least one site archaeologist during all ground breaking works.
- The archaeologist should be able to direct rate, location and method of excavation employed by contractor.
- The archaeologist should suspend excavation if necessary, in order to examine / clean / retrieve any archaeological features, surfaces, structures or artefacts that may be exposed during excavation.
- All spoil will be suitably stored for examination before backfill/reinstatement.

ARCHAEOLOGICAL RECORDING & EXCAVATION

This will entail:

Drawing

- Confirmation of site plan as supplied by the Client.
- Location plan of all interventions at a suitable scale, 1:50/1:100.
- Detailed, individual area plans of all interventions – at significant stages of excavation if appropriate and on completion of excavation, drawn at a scale of 1:20.
- All sections, or a representative selection, will be drawn in detail at a scale of 1:10.
- All drawing will be annotated with site feature numbers, site code, scale, date and name(s) of staff.

Photography

- Still photographs will be colour digital and will record general location of works, plus detailed coverage during, and on completion of, excavation. In particular, before and after photographs will be taken to document areas where features are reburied, turf is cut back/removed or loose stones are removed.
- All photographs will have a suitable scale visible.
- All photographs will be listed in a full photo register (describing content, orientation and date).
- 'Documentary' photographs will also be taken in order to represent site conditions, constraints and resources.
- If appropriate, digital moving coverage will be taken for further illustration of site conditions, constraints and resources.

Site Recording: Buried Archaeology

- Description of all excavated material will be expressed in terms of archaeological features, each of which will be assigned a unique three-digit number. The numbering will also reference the site code and any individual trench number.
- Each discrete feature will be described on site *pro forma*, which will cover stratigraphic relationships, finds, physical description, location, drawing references and interpretation.
- Each feature will also be listed in a feature register – comprising a brief description, date, and feature number.

Sampling

When required, three levels of sampling are proposed for above and below ground investigations:

- **General:** Bulk sample per context removed.
- **Special:** Specific sample identified for later specialist study (charcoal, industrial waste, environmental, infestations, organics).
- **Specialist:** Monitoring of any independent sampling strategy from external specialists (dendrochronological, mortar, paint, *etc.*)

GENERAL ISSUES

In the event of the discovery of significant remains and/or artefacts, which may be impacted by the proposed works, excavation should be suspended until further instruction is received from relevant agencies. At this point the Historic Environment Scotland CRT should be informed and consulted, who will discuss and agree a way forward with HES Heritage Management Directorate.

All artefacts, faunal remains and samples will be processed off-site. Disposal and/or examination/conservation of this material will be assessed in the light of results of fieldwork. Any programme of specialist post-excavation work on finds, faunal remains and analysis of samples will be assessed on completion of the fieldwork

Any human remains revealed during the excavation will remain *in situ*. All discoveries of human remains will be reported to the local police and Historic Environment Scotland CRT.

If human remains are to be excavated during any subsequent work, this will be completed in line with Historic Scotland policy on the treatment of human remains.

REPORTING

The results of the Fieldwork and DBA will be presented in an illustrated Data Structures Report (DSR) with accompanying digital documentation as specified by the Historic Environment Scotland CRT.

Copies of the report and digital files will be produced as specified. Typically this comprises:

- Four bound paper copies.
- Two digital versions on CD including all photographs (the latter in tiff or jpeg format).

This will include an assessment of all assemblages and recommendations for any further specialist work.

A costed programme for the full sample analysis towards publication of the findings will be included if appropriate.

A short note will be submitted to 'Discovery and Excavation in Scotland' and OASIS

The position of all trenches, excavation areas *etc.*, will be supplied on CD disk, as a georeferenced .dxf file.

Reports will be submitted within 20 working days of completion of the fieldwork.

ARCHIVE

If there is no further requirement for reporting beyond the DSR and D&E entry, the report and site records will be compiled in a suitable archive comprising primary data and digital documentation as appropriate, suitable for submission to local and national archives.

The archive will follow current guidelines for archival standards set by the Archaeology Data Service and RCAHMS.

The project archive will be deposited with the NMRS within six months of completion of fieldwork and relevant post-excavation analyses. Finds will be subject to the Scots laws of Treasure Trove and *Bona Vacantia*, and will be reported to the Crown Agent for disposal. Appropriate conservation of finds will be conducted before disposal.

Gordon Ewart
29th February, 2016

R E F E R E N C E S

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SC 21871/2A - Jarlshof Shetland, Excavations by A O Curle, 1932 & 1933 including consolidation work.

SC 21871/2F – Jarlshof Shetland, Excavations by J C R Hamilton 1949-1952 and consolidation work.

SC 21871/2D – Jarlshof Shetland, Excavations by Prof Childe & Miss B Laidler 1937-1939 and consolidation work.

SC 21871/2B – Jarlshof Shetland, Excavations by A O Curle 1934-1935 & J P Grant 1936 including conservation work.

APPENDIX A: GROUND TEXTURE RE-INTERPRETATION PLANS 1 - 6











