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Scotland's First Settlers 1999

Data Structure Report

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0.2 Objectives

0.2.1 The fieldwork was conducted as an initial trial season for a long term research project to investigate the early settlement of the lands around the Inner Sound.

0.3 Results

0.3.1 Four middens were sampled, and large quantities of ecofactual material were recovered. Artefactual material was also recovered, including microliths and bone tools.

0.3.2 The survey identified a surprisingly large number of additional lithic scatters, rock shelter and middens.

0.3.4 Preliminary analysis of finds and ecofacts confirmed that although the sites examined were variable, elements relating to early prehistory were present. Preservation of organic material was excellent.

0.3.5 This initial two week season has demonstrated that the evidence for early settlement in the study area is substantial, and enough evidence is present to support the regional and environmental approach planned.

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0.4.1 Preliminary recommendations are made for further research to fulfil the detailed objectives of the project.

1 INTRODUCTION

1.1 General

1.1.1 This report presents the results of trial trenching, field survey and preliminary analysis undertaken on Skye, Raasay, the Crowlin Isands, and the Applecross peninsula. The work was carried out in August 1999 as part of the University of Edinburgh's Scotland's First Settlers (SFS) Project.

1.2 Background

1.2.1 This project is designed to be a small scale regional study of the area of the Inner Sound, from the eastern coast of Skye, to the western shore of the mainland. The principal chronological focus of the project is on the Mesolithic and the earliest evidence for the Neolithic, however we recognise that cultural and economic continuity are significant, and that we cannot ignore more recent developments. We consider the regional approach to be most suited to studying this period, a period where mobility was important, and where the examination of isolated sites is likely to result in a very partial picture. We have kept this regional approach small scale however, as we believe that we must address issues of local mobility and resource exploitation, rather than attempt at this stage to look at larger regional patterns and social networks. The seascape defined by Skye and the mainland provides a contained space for the study and will allow us specifically to look at the relationship between people and the sea. That all Mesolithic studies so far have been terrestrially based, even where the sites examined have been on small islands, is surprising, and perhaps reflects archaeological attitudes to landscapes.

1.2.2 The West coast of Scotland is well known for the preservation of a series of shell middens dating to the later Mesolithic. These preserve a set of artefacts often referred to as "Obanian" after the town of Oban where a number of middens were located. Few archaeologists would now argue that such a distinct cultural entity exists, and most prefer to consider the remains as part of a single mesolithic culture, possibly representing a functional grouping of artefacts and environmental material. Dating programmes have been used to infer that the organic artefacts preserved in the middens are chronologically indistinct from the microlith rich lithic scatters that are the most common type of site from this period. The organic material, which includes aretfacts, economic and environmental data, means that these middens remain important as one of the best resources for studying the Mesolithic and the mesolithic environment within Europe.

1.2.3 Recent research at Carding Mill Bay and at Ulva Cave has shown that the middens apparently continue to be formed into the Neolithic. Furthermore, many of these sites show evidence of use as burial sites in the Bronze Age. Indeed, much of the dating evidence suggests that the middens appear late in the mesolithic sequence. Early dates are few and far between, and mostly associated with unusual circumstances.

1.2.4 One of the most striking features of the early midden excavations was the complete absence of microliths, despite the intensive sieving for environmental data. The absence of Obanian type organic artefacts from the lithic scatters is more easily

explained as a result of preservation conditions. Recent work has, however, highlighted possible exceptions to the microlith distribution.

- The lower layers at Ulva Cave contain a few blades and associated lithics, indicating a technology similar to that of the microlith makers.
- Early accounts of work at Risga indicated that a microlith might have been found in the midden. Recent excavations have located a microlithic lithic scatter beside the original location of the midden. The relationship between the midden and the lithic scatter is not clear, however, - nor is it clear whether enough now survives for excavation to determine this.
- Recent rescue excavations at An Corran discovered microliths within a midden. Unfortunately the circumstances of the excavation mean that only a small sample of the relevant layers was excavated, and the interpretation of their stratigraphy is difficult.

1.2.5 The relationship of the microliths to the midden sites clearly needs further work to clarify it.

1.2.6 Part of the problem is certainly an absence of modern research excavation conducted to answer modern research questions. The most famous excavations on the midden sites, those on Oronsay, were conducted against a background of little other Mesolithic research in Scotland. Their excavation was undertaken with the specific goal of recovering economic data, so that questions concerning some of the artefactual content, the immediate context of the sites, and their relationship with other Mesolithic facies were largely left unexplored. In nearly all other cases excavations of middens have been either carried out before the development of modern archaeological methods (most of the Oban sites and Risga), by amateur projects (Raschoille Cave, Carding Mill Bay), or where little survived of the midden (Carding Mill Bay 2).

1.2.7 A number of basic problems therefore exist with this archaeological resource:

- The cultural relationships of the middens remain problematic, both within the Mesolithic and with later periods.
- The dating of the middens remains simplistic, generally assuming that they are a single phenomenon lasting throughout the Mesolithic.
- If they are a later Mesolithic phenomenon, is this the result of changing economics (as the result of intensification or new strategies) or is it because changing shorelines have removed earlier midden sites?
- The relationship of middens to the shoreline is interesting, they nearly all appear to lie just above the old shore line, suggesting transport to a central midden site, but not away from the coast.
- This is a time of significant climate change, is this reflected within the middens, and if so can information be derived on how it affected the mesolithic population.
- If the middens continue into the Neolithic, are they evidence of continuity with the Mesolithic, or are there detectable changes in the resources represented by the middens?

1.2.7 Related to these questions are a number of associated issues. Arguments have been made regarding the skill of Mesolithic seamanship. Was travel between the Hebrides confined to the good months of the year, and did it represent a major undertaking? Or were the mesolithic seafarers competent year round navigators? This has important ramifications for our understanding of mobility, regionalisation, and social behaviour. As part of an attempt to resolve this issue, this project has taken the study of the seascape of the Inner Sound as its area of focus, to consider whether the middens around this area represent a single entity, or whether they are more likely to represent the coastal activities of largely land based people. The issue of territoriality and territory size have so far not been explored, and we wish to examine these through an analysis of resource exploitation.

1.3 Objectives

1.3.1 The overall objectives of the Project are:

1) To conduct a series of small scale soundings on a number of middens to obtain material for dating in order to determine their broad chronological affinities;

2) To conduct survey, to identify additional middens and to identify any other traces of Mesolithic activity;

3) To undertake excavations on suitable middens to obtain information regarding their composition, complexity, and chronological phasing. Excavation will focus on sites under threat, and the extent of excavation will be carefully controlled to avoid the collection of unmanageable quantities of samples.

4) To recover and analyse environmental data and to look for evidence of environmental change through time within the middens.

5) To examine the areas around the middens for evidence of associated settlement or other activity.

6) To obtain management information regarding the sites, both in terms of their archaeological value and in terms of their stability.

7) To undertake post-excavation analysis to establish dates, economic data and cultural affiliations.

8) To provide a show case project for wider public consumption, both at the level of community council and local involvement, and at the level of national interest.

1.3.2 The initial season in the summer of 1999 was conducted to begin to collect data to achieve these objectives, and also to confirm that sufficient good quality evidence was present to make the fulfilment of these objectives realistic.

1.4 Layout of this report

1.4.1 This report is the Data Structure Report. It summarises the excavation work undertaken, the interim results achieved and the interim conclusions drawn from these results. Location maps and illustrations are included to support the textual descriptions. Recommendations for further work are presented in Section 9. Provisional stratigraphic relationships, lists of finds, drawings, samples and photographs are supplied as appendices. These appendices provide full lists of artefacts and samples recovered during both the evaluation and the excavation stages.

1.5 Discovery and Excavation in Scotland

1.5.1 A summary of the archaeological results of the excavation will be submitted for publication in Discovery and Excavation in Scotland 1999.

1.6 Wider Publication

1.6.1 Academic reports have been prepared for submission to Mesolithic Miscellany and Glasgow Archaeological Journal.

1.6.2 A successful Open Day was held during the field season, this included the opportunity to visit the Crowlin 1 site and view finds and processing demonstrations. Public reports have been submitted to a variety of local newspapers and journals and the project was reported on the radio. A series of lectures in the study area is planned for November 1999 and posters detailing the results of the 1999 season are in preparation.

1.7 Archiving and finds disposal

1.7.1 A copy of this report and all the site records will be deposited with the National Monuments Record of Scotland. Copies of the reproducible elements will be deposited with the Highland Council Sites and Monuments Record. Finds disposal will be conducted according to Historic Scotland Policy.

1.8 Acknowledgements

1.8.1 The directors of the Project wish to thank the Applecross Trust, Sir Iain Noble, and the Crown Estates for allowing access to their land. Invaluable local help was given by Janice Adamson, Catriona McKeowan, Lorna Lumsden, Kati Kohler, George Kosikowski, Gordon MacIntyre, Sir Iain Noble, Bill Ramsay, Jimmy Watt. The illustrations are the work of Kevin Hicks. Steven Birch and Martin Wildgoose are owed a special debt of thanks for alerting us to the presence of the rockshelters and for many hours of hard work out of time. Finally thanks to the project team, who braved the midges to work with us.

2 SAMPLING STRATEGY

2.1 The Project Directors undertook an initial inspection visit in the company of a local archaeologist in 1998. This visit established that several of the known sites appeared to be unstable. During this brief inspection one additional site was located, suggesting that detailed survey was likely to find more. Against this background it was not considered prudent to decide in advance precisely which sites would be subject to more detailed work. Instead a broad outline of approach and methods was determined.

3.2 The 1999 season was planned as a trial season. During this season a number of the middens identified to-date were sampled to collect material for dating. There are visible differences in the shell composition of the middens, and this has sometimes been assumed to reflect chronological variability. We anticipate that a number of middens will produce early Historic to Historic dates, but consider that this has to be demonstrated.

3.3 In addition to the dating programme, three of the most recently identified middens on the Crowlin Islands, at Sand, and on Raasay were examined. These sites appeared from surface indications to be early Prehistoric middens that were largely untouched by more recent activity. This is unusual as all lie in rock shelters, locations which have often been reused over time, typically by recent shepherds. The Crowlin 1 site has, however, been damaged by rock falls in the past, and it was considered possible that future falls might further damage the site. Of more immediate concern is evidence that all sites are now subject to disturbance. The Crowlin 1 site is in use as a picnic and campfire spot, with surface features being moved around. The site at Sand is located close to a well-used public car-park and has evidence of recent human use as well as animal burrows in the archaeological zone. On Raasay, the site is situated near to a popular mountain bothy and again attracts attention from the public. We considered that these circumstances make these sites an ideal point to commence excavation work while the survey established other priorities.

3 METHODS

3.1 General

3.1.1 The objectives of the project will be achieved using a variety of both invasive and non-invasive archaeological methods. All work will be conducted with regard to the IFA Standards.

3.2 Assessment of desk-based sources

3.2.1 An assessment was made of the available vertical aerial photographic record held by the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) to investigate the presence of hitherto unidentified sites and sites with low relief not readily visible on the ground.

3.2.2 An assessment of the records held by the National Monuments Record of Scotland (NMRS) was undertaken. These records consist of a computer database and card index of all the known archaeological sites in Scotland and associated oblique aerial photographs where appropriate. Even if no monuments are listed within the potential development area, information can be obtained on the range of monuments present within the general vicinity. A check has been made to establish whether the Highland Sites and Monuments Record contains additional information on known archaeological remains.

3.2.3 An examination of Ordnance Survey First Edition 6" map coverage was made, together with any other readily available cartographic information on pre-recent land use in the area. Accessible documentary sources and other early maps and charts pertaining to the survey area, or any known sites within, were examined.

3.3 Field inspection

3.3.1 Potential sites identified from desk based sources were inspected to determine their likely potential.

3.3.2 Consultation has taken place with local sources to identify additional sites. Indeed local amateurs and members of the public have an important place in the project and played a key role in the 1999 season.

3.3.3 Over the course of the project blocks of coastal land will be surveyed to examine the coast, the intertidal zone and the immediate hinterland. In 1999 this started with three areas: Staffin; Crowlin and Applecross. In addition, island survey encompassed Longay and Pabbay. All sites are recorded using the Historic Scotland criteria for coastal geomorphology and erosion, and reports will be output in the Coastal Survey report format.

3.3.4 In conjunction with geomorphological work we intend to consider the potential of below current sea level sites, commencing with an initial underwater inspection to assess the potential of survival of relevant deposits. This may prove crucial in our understanding of the development of the later Mesolithic, as at present aspects of the

preceding phase may have been lost during sea level rises. This was not, however, seen as crucial to work in 1999 and has been held over for a subsequent year.

3.5 Trial trenching

3.5.1 Trial trenching occured in various guises. It included small sondages made to acquire controlled dating samples; larger trenches to determine the character of individual sites; and test pitting to identify artefact scatters around midden sites. All excavation proceeded according to standard stratigraphic principles, all artefactual material was collected, and appropriate samples of ecofacts and soils were taken. Recording followed standard CFA methods, and included record taking, drawing and photography.

3.5.2 In 1999 we excavated a series of small sondages to collect dating material from a number of midden sites and to excavate trial trenches in the Crowlin Island rock shelter site. In all cases the rock shelters were surveyed and planned. A series of small trenches, mostly measuring 1 by 0.5m, were then excavated to locate the extent, depth and preservation of deposits and to obtain a sample of material. Excavation proceeded as a series of horizontal 0.5m spits, unless clear stratigraphic units were encountered. Where such units were located they were excavated in stratigraphic sequence. All artefacts were retained. Bulk samples were either sieved or kept from every spit and stratigraphic unit. Sections were recorded for most trenches, although where multiple sterile pits were excavated only representative sections were recorded. Context sheets were completed and photographs taken. On completion trenches were backfilled.

3.6 Palaeoenvironmental assessment

3.6.1 Detailed environmental and geomorphological reconstruction is an important part of the project. In the first season a preliminary field inspection was made. This targeted key areas for further work in the following seasons. There have been relevant studies made of the area as postgraduate projects, and these will be assessed along with any other existing research results.

3.7 Sample processing

3.7.1 Samples were brought back to the field base as bulk samples. They were hand floated using buckets and the material washed through a stack of three sieves: 4mm; 2mm and 1mm. The environmental indices trapped from each of these mesh sizes were air dried and retained for sorting. The finest retent (<1mm) attained from the floatation process was not kept but was scanned for lithics and other features of archaeological interest. Generally this fraction was sterile of biological remains and lithics.

3.8 Sample sorting

3.8.1 When dry the samples were sorted into type. Animal bone and fish bone were separated. Charcoal, fish otoliths and worked stone were also removed from the fractions at this stage. The smallest 1mm fraction was not sorted owing to time

constraints. For some contexts, a 25% sample was extracted from the dried 2mm fraction to speed up the sorting process while retaining an index of content.

3.9 Analysis

3.9.1 The project consists of a collection of identifiable tasks, each of which informs the others. Post-fieldwork analysis will therefor be undertaken year by year to ensure that information can be played into the following field season. Tasks include: stratigraphic analysis; specialist assessment and appropriate conservation of any artefacts collected; processing and assessment of environmental samples; preparation and submission of radiocarbon samples; cataloguing of all finds, samples, drawings, photographs and other site records; and preparation of illustrations.

3.9.2 The nature of the types of site being investigated, means that the post-fieldwork analysis will represent a substantial part of the project. The simple processing of shell midden and artefact scatter material is a substantial task. However, we are concerned to ensure that returns from this material are maximised and thus a range of techniques will be employed. The project team has been chosen for its wide research expertise, and a wide range of approaches will be followed. These include for the lithic material: petrological sourcing to establish likely contacts (there are several locally distinctive materials, such as baked mudstone from Staffin, and bloodstone from Rum); technological analysis, which may prove particularly important in relating midden material to non-midden material; and functional analyses. For the bone tools technological and typological analyses will be particularly important.

3.9.3 The post-excavation work will include economic analysis and reconstruction. This should contribute significantly to the archaeological interpretation in response to the main research issues described above.

3.9.4 In addition to the new fieldwork proposed the project hopes to be able to produce final reports for the publication of Michael Walker's unpublished excavation of Sheildaig on the mainland. Here a small rescue excavation was conducted in a gravel pit during road improvements. A typescript report exists, and there is a collection of c 6000 artefacts, predominantly quartz but including bloodstone and flint, held by the National Museum. Analysis of this material would be of value to the current project. This element will need further consultation between the National Museum, who hold the material, and Historic Scotland.

4. ARCHAEOLOGICAL RESULTS

4.1 Crowlin 1

4.1.1 The rockshelter at Crowlin consists of a large overhang sheltering a small level platform with evidence for numerous previous rock falls. The rockshelter is visible from Skye, showing as a dark shadow on the island. Past rock falls have clearly reduced the size of the shelter. Midden material was abundant on the surface, mostly comprising loose material with apparent clusters of limpets and in some places oysters. In 1998 some chipped stone was recovered from the surface of this loose material. Some shelly material could be seen between and below some of the larger rock fall elements. Towards the back of the shelter more consolidated material could be seen, almost exclusively made up of limpets.

4.1.2 Three test pits were opened at this site. Trench 1 was opened at the back of the cave to investigate what was thought likely to be the best preserved part of the midden. Trench 2 was opened at the front of the cave to expose a section in the talus material in an area rich in oyster shells. Trench 3 was opened in the area where chipped stone pieces had been recovered in 1998.

4.1.3 Trench 1 was opened as a 1 by 0.5m trench. The surface consisted of a layer of dung, c 0.5m thick. When this was removed a compact, very dark, and greasy horizon was exposed. This was excavated and proved to be made up of a series of laminated deposits alternating between organic rich layers and largely mineral layers. The upper organic layers were largely sterile of shell and bone, though both became more frequent with depth. Under these alternating layers a deposit of loose shell with bone but with little soil matrix was encountered. Below this were a series of lenses of organic rich dark greasy soil with bone and shell and sterile mineral soils. With depth, angular stones became more frequent, and the shell bone component more rare. Excavation stopped when no more shell and bone were visible, although the matrix still appeared quite dark and greasy.

4.1.4 Trench 2 was opened to create a 1m wide section in the talus slope. The loose bone and shell was removed from the surface before excavation in spits commenced. The deposits here consisted of a layer of loose mixed shell overlying a c 0.10m thick band of oyster shell. This capped a layer of rocks with large voids between them, with some midden material, mostly limpets present. Excavation ceased when the rocks became too large to move and little shell material appeared to have penetrated.

4.1.5 Trench 3 was a 1 by 0.5m trench. The area was dominated by limpets on the surface. A gun flint was found lying loose on this surface. A layer of midden composed of varied shells, mammal and fish bones in a silty sand matrix with small angular stones was excavated. Below this was a layer of large angular rocks with small stones, sand, and broken shell in some voids.

Interpretation

4.1.6 The evidence from trenches 2 and 3 suggests that the visible remains of midden material post-date the rock fall events. It was impossible within the time, resources, or

safety issues to remove the substantial quantities of rockfall material that would have been required to demonstrate any earlier use of the site. Trench 1 indicates that the midden is a complex accumulation of material with periods of abandonment, and that different episodes of use have left different traces, suggesting that the rockshelter has not had a single function over time. The accumulation of material cannot be dated on the basis of the artefactual material recovered.

4.2 Sand 1

4.2.1 The rockshelter at Sand lies above what appears to be a late glacial coastline. It consists of a shallow, but wide overhang, with a large terrace in front. The limited areas of bare soil within the overhang contained a number of shells, while the terrace was entirely obscured by bracken and grass. In this area a mole hill had previously been found to contain much shell and lithics, including one microlith. The mole hill disturbance was still visible, as were an area of nettles and an area of yellowed bracken. A series of test pits were excavated to sample the midden, locate its extent and determine whether there was any evidence for activity beyond the midden limits. A small number of additional test pits were excavated in front of a nearby shallow rockshelter, and between the two shelters. All test pits measured 1 by 0.5m.

4.2.2 Trench 1 was placed half way down the gentle slope of the terrace to assess the extent of the midden. Little shell or bone, but common pieces of chipped stone were found. A layer of what appeared to be fire cracked rock was also encountered.

4.2.3 Trench 2 was placed beside the mole heap in attempt to examine the midden. Surprisingly little chipped stone or shell were found. The area had been heavily disturbed by moles. Excavation stopped at a sterile layer of rock.

4.2.4 Trench 3 was placed under an area of collapsed overhang to examine what was hoped would be an area with good preservation. Bedrock was reached rapidly with little archaeological material encountered.

4.2.5 Trench 4 was placed near the edge of the terrace to see whether the artefact spread located in Trench 1 continued. Some artefactual material was recovered, along with a few fire cracked stones, but the density of all material was considerably lower than in Trench 1.

4.2.6 Trench 5 was excavated within the main rockshelter to assess the depth of deposits. Bedrock was reached rapidly with little archaeological material encountered

4.2.7 Trench 6 was excavated half way between the two rockshelters. A thick layer of peat overlay a mineral soil. No artefacts were recovered.

4.2.8 Trench 7 was placed in an area of yellow bracken. Shell material was encountered immediately. Limited evidence of stratigraphic complexity was located. Excavation was stopped on reaching a sterile layer of rocks.

4.2.9 Trench 8 was excavated on the talus in front of the second rockshelter. A shallow soil profile was encountered with no artefactual material.

4.2.10 Trench 9 was excavated in the nettle patch above trenches 2 and 7. A very rich midden deposit was encountered. Material identified during excavation included large fragments of antler and bone. The shells included limpets, mussel and crab. At least one discontinuous layer of shattered rock was located within the midden. Excavation was stopped where the base of the trench contained fragments of rock fall and the matrix appeared largely eco- and artefact free, although it was still quite dark and organic.

4.2.11 Trench 10 was opened in front of the second rockshelter to reveal bedrock.

4.2.12 Trench 11 was excavated within the second rockshelter. Two pieces of quartz and one piece of china were recovered from a shallow soil profile.

Interpretation

4.2.13 There appear to be no deposits surviving within the shallow rockshelter. The terrace in front of the shelter has a discrete midden deposit preserved up to 0.70m thick, containing well preserved organic remains. In addition there appears to be evidence for activity around the midden in the form of a lithic scatter and fire shattered rocks.

4.3 Raasay, Loch a Sguirr

4.3.1 This is a substantial rockshelter with a large platform above the sea cliff at the north-western tip of Raasay. The shelter is cut into a vertical rock face, made quite distinctive by the coloured bands running through it. Inside the shelter the floor is very level, with some shell visible towards the back of the cave. The entrance to the shelter has a lip of large boulders, in front of which is a talus covered with nettles. A number of test pits were excavated within the shelter, within a small immediately adjacent shelter, on the talus slope, and on the platform in front of the shelter.

4.3.2 Trench 1 was excavated in the back of the small shelter, where lithics had been recovered on an initial visit to the site. A substantial depth of midden and artefacts was located here. Trench 3 was subsequently opened near the mouth of this shelter, but little additional material was recovered.

4.3.3 Trenches 2, 4 and 10 were opened in the centre, mouth, and back of the large rock shelter. Below the layer of recent dung little evidence for occupation was found above rock. A deposit of fish bones in Trench 10 appears likely to be related to animal disturbance at the back of the cave.

4.3.4 Trenches 5, 6 and 7 were opened on grassy parts of the platform. Trench 8 was opened in heather at the edge of the platform above the sea cliff. All of these trenches appeared to be largely sterile.

4.3.5 Trench 9 was opened on the talus, in a patch of nettles. Little evidence for midden deposits was located, although a number of pottery sherds were recovered. The horizon containing the pottery was near horizontal, suggesting it is unlikely to be outwash from the cave, and is possibly an *in situ* deposit.

Interpretation

4.3.6 The only trench to produce significant anthropogenic material, trench 1, was located in a small area almost entirely surrounded by boulders. Trench 3, although in the same small rock shelter, lies outwith the protection of these boulders. It appears likely that the material here is a surviving fragment of the evidence of former occupation. The very level surface in the large cave suggests that water action may have repeatedly scoured out any deposits accumulating in here. The rock lip to the cave is only deep enough to retain the current dung layer. However, the absence of significant quantities of shell midden material from the trench excavated in the talus suggests that, surprisingly for such a good rockshelter, the occupation of the site was never particularly major.

4.4 Ashaig 1

4.4.1 There is a substantial shell midden associated with the ancient cemetery at Ashaig. This lies both outside the cemetery wall (Ashaig 1) and within it (Ashaig 2). A small trench measuring 1m by 0.5m (Trench 1) was opened to obtain a sample for dating and determine the depth of midden deposits at the base of the escarpment on the east side outside the Ashaig cemetery wall where shell was locally exposed by cattle erosion.

4.4.2 The trench exposed shell immediately below the turf-line down to a section depth of c.0.35m. This deposit overlay a series of large boulders of varying size but in general these appeared to be sub-rounded and around 0.40m by about 0.30m in size. Midden material was extensive and present within the soil matrix between the sandstone boulders. The shells were located to a depth of 0.76m where rock impeded any further work and excavation ceased.

4.4.3 The midden material is well preserved and dominated by Periwinkle shell (c.90%) with occasional fragments of animal bone and limpet shell. No other finds such as pottery were located to help provide a relative date for the site. Coring with a post auger established that some shell was present about 1m from eastwards from the test section thus showing that the site is very extensive indeed.

Interpretation

4.4.4 The large boulders uncovered in Trench 1 appear to have been displaced from further up the slope and may have originated from a collapsed revetment from earlier structures pre-dating the present cemetery.

5. SURVEY RESULTS

5.1.1 The long-term objective of the survey is to cover the whole of the coastline round the Inner Sound and all islands within it, and also to follow raised beaches and early postglacial shorelines in order to identify Mesolithic sites within the study area.

5.2. Aims

5.2.1 There are two main aims to the survey. First, to assist the management of the resource by identifying the location of mesolithic sites and recording potential threats so that some measure of protection may be given in the event of any future development or change in land use. Second, to expand our understanding of the mesolithic occupation of the Inner Sound. This is important because mesolithic sites functioned within a sophisticated system in the landscape and yet many previous studies have tended to emphasise key sites.

5.2.2 The SFS project aims to encompass a broad seascape perspective which emphasises the importance in the Mesolithic of the marine route-ways and the marine resource while allowing a broad range of questions relating to the Mesolithic occupation of the area to be addressed. The survey seeks to identify two main types of site: shell middens which occur both in the open air, and in caves and rockshelters; and lithic scatters which generally occur in the open air. As a part of this it is intended to record every extant rockshelter and cave, with or without archaeological remains.

5.3. Method

Desktop survey

5.3.1 An initial assessment was made of the records held by the National Monuments Record of Scotland (NMRS) for the whole survey area. Two rockshelters and one cave were found, but it is unknown whether these contain midden. In addition, 1st edition maps and charts were checked for likely landing places, information on old shorelines and other detail likely to be of relevance to early settlement. No further sites were found on these.

Fieldwork

5.3.2 Three levels of survey were implemented:

- Preliminary survey from the sea to identify ground conditions, caves, rockshelters and old shorelines;
- Detailed survey on foot.
- General boat survey conducted by local amateur archaeologists.

5.3.3 The areas which were subject to preliminary survey include the islands of Longay and Pabbay, Scalpay and Raasay, and the coastline from Breakish to Kyleakin.

5.3.4 The detailed survey concentrated on three distinct zones within the study area:

- Trotternish. The first area of intensive survey started at the northernmost tip of the Trotternish peninsula on Skye and continued down the eastern side,

including the area around the only known Mesolithic site within the survey area, An Corran.

- Toscaig. The second area began at Toscaig, Wester Ross, and ran north towards the village of Applecross.
- Crowlin Islands. The third area consisted of the entire coastline of the Crowlin Islands.

5.3.5 The general boat survey concentrated on the islands of Raasay and Scalpay.

5.5 Results

5.5.1 In the study area, three sites of known mesolithic age had been recorded prior to the SFS survey. In addition, 9 sites were previously recorded either as middens of unknown date or as rockshelters. The SFS survey identified 35 new sites between 1998 and 1999, 23 of these during the field season in August, 11 between 1998 and 1999 and one in September 1999. Previously known sites of definite mesolithic age such as An Corran, Shieldaig and Red Point were not visited. Four of the sites identified by SFS prior to August 1999 were selected for test trenching and surface collections of artefacts, mostly lithics, were made at 6 sites.

Known Mesolithic sites	3
Known sites of unknown date	9
Potentially Mesolithic sites found by SFS prior to August 1999	11
Potentially Mesolithic sites found by SFS during August 1999	23
Potentially Mesolithic sites found by SFS in September 1999	1
Total at end September 1999	47

Table 1: Location of sites by Scotland's First Settlers to end August 1999.

5.5.2 Of the 35 sites found by SFS, 28 are located in the three areas of intensive survey. Table 2 identifies the sites that were found by SFS prior to and during 1999.

5.6 Threat

5.6.1 In order to assess the threats posed to these sites, the categories used in Historic Scotland's coastal surveys were recorded. 29 sites were found to be under at least one type of threat, while several were under multiple threats (table 3). Many of these sites contain shell midden (table 2) and some have already produced artefacts from the surface layers. These sites are particularly at risk and trial excavation to assess the nature of the deposits, quality of preservation and dates is recommended.

Figure 1, Survey Areas

Figure 2, Sites Located by SFS 1999

Date found	Site No.	Site Name.	Location	Type
1998	SFS 2	Crowlin 1	Crowlin Isles	Rockshelter +
1998	SFS 3	Crowlin 2	Crowlin Isles	Rockshelter +
early 1999	SFS 8	Loch a Sguirr 1	Raasay	Rockshelter +
early 1999	SFS 18	Loch a Sguirr 2	Raasay	Rockshelter +
early 1999	SFS 4	Sand 1	Applecross	Rockshelter +
early 1999	SFS 5	Sand 2	Applecross	Rockshelter +
early 1999	SFS 11	Sand 3	Applecross	Sand dune +
August 1999	SFS19	Toscaig 1	Applecross	Rockshelter +
August 1999	SFS 20	Toscaig 2	Applecross	Rockshelter +
August 1999	SFS 21	Strollamus 3	Skye	Open Midden +
August 1999	SFS 22	Crowlin 3	Crowlin Isles	Boulder shelter+
August 1999	SFS 23	Crowlin 4	Crowlin Isles	Rockshelter
August 1999	SFS 24	Crowlin 5	Crowlin Isles	Rockshelter +
August 1999	SFS 25	Crowlin 6	Crowlin Isles	Old sea cave
August 1999	SFS 26	Crowlin 7	Crowlin Isles	Rockshelter +
August 1999	SFS 27	Longay 1	Longay	Sea Cave
August 1999	SFS 28	The Aird	Aird	Rockshelter
August 1999	SFS 29	An Corran B	Staffin	Lithic scatter+
August 1999	SFS 30	An Corran C	Staffin	Lithic scatter+
August 1999	SFS 31	An Corran D	Staffin	Lithic scatter+
August 1999	SFS 32	Brogaig	Staffin	Lithic scatter+
August 1999	SFS 34	Toscaig 3	Applecross	Rockshelter +
August 1999	SFS 35	Toscaig 4	Applecross	Rockshelter +
August 1999	SFS 36	Staffin Island	Staffin	Lithic scatter +
August 1999	SFS 37	Toscaig 5	Applecross	Cave
August 1999	SFS 38	Toscaig 6	Applecross	Rockshelter +
August 1999	SFS 39	Toscaig 7	Applecross	Rockshelter
August 1999	SFS 40	Toscaig 8	Applecross	Rockshelter
August 1999	SFS 41	Toscaig 9	Applecross	Rockshelter +
August 1999	SFS 42	Toscaig 10	Applecross	Rockshelter
August 1999	SFS 43	Toscaig 11	Applecross	Cave
August 1999	SFS 45	Cave of the Pigeons	An Corran	Cave
Sept 1999	SFS 44	Rubha'an Droma Bhain,	Scalpay	Lithic Scatter +

Table 2. Sites found by the Scotland's First Settlers project.

NB + = sites with visible archaeological remains

Type of threat	Number of Sites Threatened
Animals	19
Wind	8
Humans	8
Natural Erosion	6
Sea	3

Table 3. Threats to sites.

6. ARTEFACT STUDIES

6.1 Worked bone.

6.1.1 Eight pieces of worked bone and one fragment of bone with cut marks were found during the 1999 season. All of these artefacts came from excavated contexts (table 4). Five pieces of worked bone are both bevel ended and pointed, two are indeterminate pointed pieces and there is one broken off point fragment.

Artefact No	Type	Site	Trench	Spit
N11	Point	Crowlin 1	1	5
N 25	Bevel ended & pointed	Loch a Sgurr 1	1	2
N 14	Bevel ended & pointed	Sand 1	2	1
N 15	Bevel ended & pointed	Sand 1	2	1
N23	Point	Sand 1	7	1
N24	Cut marked fragment	Sand 1	7	1
N 20	Point	Sand 1	9	6
N 18	Bevel ended & pointed	Sand 1	9	7
N19	Bevel ended & pointed	Sand 1	9	8

Table 4:Scotland's First Settlers 1999 The Bone Tools

6.1.2 Bevel ended tools are common in Western Scottish coastal mesolithic sites, though it is not clear for what they were used (Connock *et al* 1992). It is interesting to note that all the bevel ended tools found were also pointed and that in several cases the pointed end displays clear evidence of polish. The presence of flake scars on several of the bevelled ends suggests that the bevel was created initially by the removal of small flakes and that the rounded nature of the bevel emerged through use. This is contrary to Clark (1956) and Saville (forthcoming)and in agreement with Foxon (1991) and Reynolds (1983). One piece (N 25) appears to have had its bevel prepared and then have been used primarily on the pointed end. The bevel is still covered in flake scars and is not smoothed while there is substantial polish on the pointed end, continuing almost the entire length of the tool.

Figure 3, SFS Bone Tools

6.2 Flaked Lithics

6.2.1 *Introduction*

6.2.1.1 Work to the end of August 1999 has resulted in the recovery of a total of 667 pieces of flaked stone. These come from a number of sites (table 5), some of which have been excavated while others relate to surface scatters.

Site Name	Total Lithic Assemblage
An Corran	1
An Corran B	60
An Corran C	14
An Corran D	5
Brogaig	17
Crowlin 1 *	31
Flodigarry +	1
Loch a Sguirr 1 *	79
Ob Gavscavaig +	2
Sand 1 *	450
Staffin Island 1	7

Table 5: Lithic Quantity by Site

NB: * = excavated site; + = raw material sample**.**

6.2.2 Raw Materials

6.2.2.1 A variety of raw materials are represented in the assemblage (table 6), and all are relatively local. The most common stone used is a Baked Mudstone first recognised during work on the site at An Corran (Hardy & Saville forthcoming). The high temperatures necessary for the formation of this material mean that sources are likely to be rare and isolated, and it is probable that the outcrops in the cliffs at An Corran, above the original archaeological site, were the main source in the area. Plentiful cobbles of baked mudstone may be collected here, from the grassy slopes associated with the cliffs. When first collected and flaked the baked mudstone varies in quality from black and glossy to paler colours, and it degrades rapidly in comparison to other materials such as chalcedonic silica, so that many of the archaeological pieces are abraded and corticated.

6.2.2.2 Quartz is the second most common raw material and this varies greatly in quality from fine grained homogeneous pieces that appear to approximate chalcedonic silica to coarse “sugar-grained” pieces. Not surprisingly the quality of the flakes and tools varies greatly with that of the material. Quartz use was most common at Sand 1, Applecross, where tiny quartz pebbles were present throughout the excavated midden suggesting that it was derived from a local source. Quartz is a ubiquitous material and it is likely to be common elsewhere in the study area though this has yet to be documented.

	Chalcedonic Silica	Baked Mudstone	Bloodstone	Quartz	Quartzite	Flint	Agate	Jasper	Rock Crystal	Coarse Stone	Unknown
An Corran	1										
An Corran B	31	28		1							
An Corran C	10	4									
An Corran D	3	2									
Brogaig	10	6		1							
Crowlin 1	25	1		3	1	1					
Flodigarry	1										
Loch a Sguirr 1	5	22		52							
Ob Gavscaivaig	2										
Sand 1	70	192	31	140	3		4	4	2	3	1
Staffin Island	6	1									
TOTAL	164	256	31	197	4	1	4	4	2	3	1

Table 6: Raw Material by site, absolute numbers.

6.2.2.3 The next most common material is a Chalcedonic Silica that is generally a variety of shades of grey, though some reddish and orange pieces were also recorded. This material is superficially similar to flint, but it has been related to pebble nodules of volcanic silicas that are found along the course, and at the mouth, of the Stenscholl River in the Staffin area (Hardy *et al* forthcoming). There are other pebble sources in the area such as the silicified limestones of western Eigg (Wickham-Jones 1990) and local pebble sources of chert have also been recorded (Wickham-Jones & Collins 1978). It is therefore possible that some genuine pebble flint and chert has been included in this class as noted by Hardy *et al* (*op cit*). The marine movement of pebbles of flint and other materials is well attested and it is clear that more work is needed in this field, to establish the likely sources.

6.2.2.4 The artefacts of Bloodstone are also worth a mention as the use of this material has been documented in some detail on the source island, Rum (Wickham-Jones 1990). Like the chalcedonic silica, bloodstone is a volcanic silica formed in the gas bubbles in a cooling lava flow, it varies in both colour and texture according to the minerals present and the speed of formation. Geologists have assigned a series of names to the "bloodstone" family (generally referred to as plasma), but there is no evidence that they were distinguished in prehistory so that archaeologically it is common to lump them all under the generic: Bloodstone. Outcrops of bloodstone do occur elsewhere, but Wickham-Jones' work tied the archaeological material in to the Rum source. Bloodstone was used in prehistory across a fairly well defined area (*ibid*) and the Inner Sound lies towards the northern bounds of this area. There has been little detailed work on the use of bloodstone away from Rum, a gap that the present project should be able to fill.

6.2.2.5 The other raw materials all occur in very small quantity. The Rock Crystal is likely to be associated with outcrops of quartz, and the Quartzites and Agates are also fairly common and likely to be found generally throughout the study area. Jasper is another volcanic silica that may be associated with the bloodstone though it could also have other sources.

6.2.2.6 The single artefact identified as of Flint deserves special mention. This is the gunflint (F12) picked up from surface cleaning at the main Crowlin 1 rockshelter. Although it adopts the same principals, gunflint working is much more recent than prehistoric flintknapping and the two are quite unrelated. This piece is of an orange flint that was likely to have been imported from elsewhere in recent times. Sources of orange flint are well documented in the east of Scotland and elsewhere in Britain (Wickham-Jones & Collins 1978)

	Pebbles	Bipolar Cores	Platform Cores	Debitage Flakes	Chunks	Regular Flakes	Blades	Microliths	Edge Retouched	Scrapers	Gunflint	Barbed and Tanged Point	Misc. Retouch	*TOTAL*
An Corran									1					***1***
An Corran B		1	1	7	23	26	1			1				***60***
An Corran C				4	5	5								***14***
An Corran D				3	1	1								***5***
Brogaig				4	3	8			2					***17***
Crowlin 1 *		1		16	6	7					1			***31***
Flodigarry +	1													***1***
Loch a Sguirr 1*				9	45	20	5							***79***
Ob Gavscavaig +	2													***2***
Sand 1 *	11	6	1	67	121	210	18	8	4	2		1	1	***450***
Staffin Island 1			1			6								***7***

Table 7: Assemblage Content by Site

NB: * = excavated sites; + = isolated raw material sample

6.2.3 *Assemblage Content*

6.2.3.1 Of the three excavated sites only Sand 1 produced lithic material in any quantity (table 7). The knappers here were mainly working baked mudstone and quartz with some chalcedonic silica and a range of other incidental materials (table 6). A total of 439 pieces of flaked stone were recovered from this site, plus 11 pebbles. 45% of the assemblage was debitage, 51% regular flakes and blades, and 3.5% was retouched. The presence of seven cores, plus a considerable amount of debitage indicates that the waste from stone working had become incorporated within the midden, whether from knapping directly in the vicinity or from the clearance of waste from further away. Interestingly most of the cores were bipolar cores: two of chalcedonic silica and four of quartz, though there was also plenty of evidence for knapping from a platform: there were only fourteen recognisably bipolar flakes in the assemblage, in baked mudstone, bloodstone and quartz. Bipolar flaking is a technique that has been reported from many sites. It has often been associated with later period material, though it is also a particular response to the use of small, often intractable, pebble nodules as on the island of Jura where a number of mesolithic sites yielded considerable evidence for the bipolar working of small quartz nodules (Mithen forthcoming).

6.2.3.2 The knappers at Sand 1 were clearly producing a successful range of flakes and blades (table 3). 50% of the assemblage is comprised of blades and flakes, the ratio of which is 1:11.5 (in all materials). While many of these were no doubt useful without further work, some were retouched. The most common category of retouched tool is the microlith, of which there are five well defined narrow blade tools: four fine points (one in baked mudstone, one in quartz, one chalcedonic silica, and one in bloodstone); and one backed bladelet. In addition there are three small pieces with microlithic retouch. Other retouched artefacts include four edge retouched pieces, two small scrapers, a barbed and tanged point and one broken piece with miscellaneous retouch. The presence of regular blades and flakes, and retouched tools, as well as debitage in the assemblage suggests that it is not only derived from tool manufacture, but also from the use of stone tools.

6.2.3.4 Excavation at Loch a Sguirr 1 resulted in the recovery of 79 lithics. The knappers here were heavily reliant on quartz, and quartz chunks make up much of the assemblage (60%). There are some pieces of fine quartz from this site, including two regular blades, but the quartz is of such variable quality that much of it has flaked into small chunky pieces, hence the general over-representation of chunks, some of which may be natural. The assemblage also includes some regular pieces (32%) comprising five blades, and 20 flakes, so not all the material is waste debitage. This provides some indication for the use of stone tools as well as their manufacture here. There are no retouched artefacts from this assemblage. Baked mudstone and a little chalcedonic silica was also used at this site.

6.2.3.5 The Crowlin 1 site was also excavated, but it only yielded 31 pieces, mainly of chalcedonic silica, of which the majority is made up of tiny debitage flakes and chunks (71%). There was also one core from this site. The only retouched piece was the gunflint which is probably much more recent. Regular flakes comprise only 23% of this assemblage which would appear to have resulted mainly from tool manufacture and alteration, though most of the useable pieces have been removed.

Figure 4, SFS Cores and Retouched Pieces from the survey sites

6.2.3.6 The surface collection at An Corran B yielded 60 pieces, of which 53% was debitage (table 3). Like Sand 1 there were some cores (two) with evidence for both bipolar and platform work. Regular blades and flakes comprise 45% of the assemblage, with a ratio of 1:26, and there was one scraper.

6.2.3.7 The other sites all relate to surface collections and produced only small collections of material, mainly regular flakes and chunks, no doubt reflecting the easier visibility of larger pieces, especially in the dark friable soil conditions that often prevail in a midden.

6.2.4 *Cultural and Chronological Affiliations*

6.2.4.1 It is hard to assign any chronological value to the lithic material. The five classic narrow blade microliths in the midden at Sand 1 must indicate a mesolithic date. Although they do not define any precise period within the Mesolithic. Similar microliths were found at Kinloch on Rum (dated to c. 8500 BP uncal, Wickham-Jones 1990), and at An Corran, Staffin which has provided a range of dates from 7800 to 2045 BP uncal(Hardy *et al* forthcoming). Elsewhere in Scotland narrow blade microliths are a common element on many mesolithic sites of varying age.

6.2.4.2 In support of the mesolithic date indicated by the microliths at Sand 1 there is the presence of unaltered blades, albeit in small quantity, on three sites: Sand 1; Loch a Sguirr 1; and An Corran B. The technology to produce blades such as these has generally been associated with mesolithic sites. Although blades continued to be made into the early neolithic, those from later sites are often wider.

6.2.4.3 One other chronological indicator at Sand 1 is the barbed and tanged point. This is associated with more recent, bronze age, assemblages. It was, however, a surface find and is a type of tool commonly associated with isolated loss so that its presence does not necessarily indicate more recent activity. The presence of an isolated barbed and tanged point in the surface collection from Kinloch, Rum, should also be noted.

6.2.4.4 Unfortunately, none of the other pieces is of specific chronological value. Both edge retouched pieces and scrapers are to be found throughout stone using prehistory. The presence of both bipolar knapping and platform knapping is of interest, however, as it has been assigned chronological significance (Mithen forthcoming), though this is something that needs further exploration. It may be of particular relevance to this project that the Oronsay middens are only reported to have contained bipolar knapping. It may well be that it represents a response to the particular raw materials in use in the study area.

Gunflints are more likely to relate to isolated loss, though it is important to check for the presence of recent midden material at Crowlin 1. Gunflints were most in use from the sixteenth century onwards, and as some were made industrially there are some regional and chronological differences, though many were also made at home. The raw material of the Crowlin 1 gunflint suggests that it is not an import from Brandon in eastern England, where the industrial production of gunflints from local black flint was well established. It is impossible to source one small flint artefact, though the orange colour of the piece suggests that it may have come from eastern Scotland or England.

Figure 5, Sand 1
1-3 Bipolar cores; 4 edge retouched; 5 scraper resharpening flake; 6 microlithic edge retouch; 7-11 microliths; 7 backed bladelet, 8-10 fine points, 11 crescent; 12 barbed and tanged point

6.3 Coarse Stone Tools

6.3.1 A total of seventeen pieces of coarse stone were collected during the project. These came from four different sites and they comprised a variety of artefacts and manuports (table 8). These tools are made of a variety of raw materials, though sandstone predominates. The six manuports were collected because they stood out dramatically from the angular pieces of rock which provided the background material in the rockshelters and middens.

6.3.2 The collection of tools and manuports is very diverse. Hammerstones, however, are ubiquitous on archaeological sites so that it is not possible to provide more detailed information at this stage. It is interesting to note, nevertheless, that stone bevel ended tools are commonly associated with mesolithic sites, thus confirming the general period indicated by the flaked stone assemblage at Sand 1.

Figure 6
Coarse stone tools: 1 Bevel ended tool, Crowlin 1; 2 ground edge tool, Crowlin 1; 3 Anvil, Crowlin 1; 4 Manuport, Sand 1

	Rounded hammerstone	Long hammerstone	Hammerstone flake	Ground edge tool	Bevel ended tool	Smoothed stone	Rubbing stone	Anvil	Manuport	*TOTAL*
Ashaig	1									*1*
Crowlin 1	1			1	1	1		1	2	*7*
Sand 1			2		1		1		4	*8*
Toscaig 1		1								*1*
TOTAL	*2*	*1*	*2*	*1*	*2*	*1*	*1*	*1*	*6*	***17***

Table 8: Coarse stone tools.

7. ENVIRONMENTAL STUDIES

7.1 General

7.1.1 The environmental studies conducted so far fall into two main categories. The first is preliminary work on the geomorphological context of the various sites, in particular their relationship to sea level change. The second is the on site studies, based on the environmental data, especially the ecofacts recovered from the middens.

7.2 Geomorphological Study

7.2.1 Preliminary visits to the area have now been made, and a desk-based search has been undertaken, examining map data and existing research. Preliminary contact has also been made with geomorphologists already conducting research in the general area. Unfortunately, little work has been done on the Inner Sound. Because of the complexity of sea level changes within this area it will be necessary to reconstruct the sea level sequence at a number of points.

7.3 On-site studies

7.3.1 Large samples of ecofacts were recovered, especially from Crowlin 1 and Sand 1. These have been subjected to a rapid scan assessment to determine their potential for further work. The results of this assessment are discussed in the following section.

8. PALAEOENVIRONMENTAL ASSESSMENT OF THE ECOFACTS (Charcoal, Faunal Remains and Fishbones).

8.1 Rapid scan assessment of the charcoal assemblage

(Mike Cressey)

General

8.1.1 A rapid scan assessment was conducted on the floatation samples in order to establish the frequency of carbonised remains and other palaeoenvironmetal indices contained therein. During the course of the survey a large quantity of charcoal was recovered from the bulk samples. These need to be examined to assess their potential for radiocarbon dating and to establish whether they allow for the determination of species. The rapid scan assessment followed the DAFORS scale (Williams 1987) where D= Dominant, A= Abundant, F=Frequent, O = Occaisional, R = Rare and S = Sterile. The results of the assessment are listed in Appendices 11-14. The relative weights of charcoal are based on estimates and are not true weights. The purpose of the estimate is to allow us to target samples that have sufficient volume of charcoal for examination and to discount samples that are sterile. Other ecofacts such as non-marine molluscs (NMM), marine shell (MS) and fish bone are included in the assessment.

Observations on the Crowlin Assemblage

8.1.2 Concentrating on the 4mm fraction which is the optimum size for charcoal identification, the Crowlin assemblage has variable amounts of charcoal, finer carbonised plant stems, NMM with samples in the range of between 5-10 grams total weight. Only one spit (Spit 13 Trench 1) was sterile of any carbonised material. Spit 12 Trench 1 contained a fragment of carbonised nut shell (probably hazel) which may be of significance for radiocarbon dating.

Observations on the Sand Assemblage

8.1.3 Forty-nine of the floatation samples were sterile of any carbonised remains. In the remaining samples the charcoal volume is extremely rare (total weight <1g). Modern root material and the presence of non-marine molluscs show that the soil is biologically active, therefore the use of the charcoal for radiocarbon dating from some of the trenches poses the risk of spurious dates. Material will have to be collected from within sealed midden contexts.

Observations on the Loch a Sguirr Assemblage

8.1.4 Spit 2 from Trench 3 was the only sample sterile of carbonised remains. The rest of the samples have relatively low frequencies of charcoal at around <5-1g total weight. There appears to be sufficient charcoal within Spit 6, Trench 1 to provide adequate dating material for this basal layer.

8.1.5 Five of the floatation samples were sterile. The rest of the samples have a low volume of charcoal. Spit 12 the deepest within Trench 1 provided a sample with 12 fragments of charcoal and this will possibly provide sufficient >4mm material to allow an AMS radiocarbon date at the basal level.

8.2 Assessment of the fish, molluscan and crustacean remains.

(Ruby Cerón-Carrasco)

Observation on the Crowlin 1 Assemblage

8.2.1 Twenty-seven contexts with fish remains were scanned, some of these samples contained quite large amounts of fish bone. During scanning, it was possible to notice an extensive variety of fish species representation. The Gadidae species include, saithe (*Pollachius virens*), pollack (*Pollachius pollachius*), rocklings (*Gaidropsaurus sp*), cod (*Gadus morhua*) and haddock (*Melanogramus aeglefinnus*), it is possible that other Gadidae may be found in a more thorough examination of these remains. Species from other family groups include flatfishes (cf *Pleuronectidae*) and gurnards (Triglidae). Many of the fish remains were burnt white indicating domestic rubbish burning. Crustacean remains in 4 contexts were also noticed, all were burnt, and are identifiable to species. One context also contained avian egg-shell fragments which may be identifiable to species. A single context was noticed to contain landsnail which is also identifiable.

Observations on the Sand 1 Assemblage

8.2.2 Fifteen contexts contained fish remains all of which are identifiable to species or family group. The species noticed included saithe (*Pollachius virens*), pollack (Pollachius pollachius), other Gadidae, as well as wrasse (Labridae family) and Salmonids. A few of these remains were burnt white which would indicate burning at high temperature possibly as a result of domestic rubbish disposal. One context contained remains of avian egg-shell which may also be identifiable to species while landsnail remains were also found in a single context and is also identifiable to species.

Observations on the Raasay, Loch a Sguirr Assemblage

8.2.3 One single sample contained fish remains, all of which are identifiable to species. During scanning two species were noticed, cod (Gadus morhua) and wrasse (Labridae).

A note on the marine mollusca

8.2.4 Most samples from the three sites contained marine shell remains. These are all easily identifiable. It would be a mistake not to evaluate their importance according to the different species present. It is clear that during the period in question these would have made a substantial part of the diet, most samples contained burnt fragments of marine shell. Other non-edible species were also present, and in the past these have been discarded during archaeological

assessments but some, for example the common dog whelk (Nucella lapillus) have been used in later periods for the extraction of purple dye. It would be interesting to examine these to determine whether this may have also been the case at earlier stages during prehistory. Already one site in Sutherland dated to the later part of the Neolithic has been identified as a possible centre for the extraction of this dye (Cerón-Carrasco & Pollard forthcoming).

Conclusion

8.2.5 In general, the sample assessment has demonstrated that preservation conditions are excellent, especially for bone and shell, and that the sites have potential for both environmental and economic investigation, data which is so far lacking in the archaeological record for the area and period here represented.

8.3 **Preliminary analysis of the bird and mammal bone.**
(Jennifer Thoms)

8.3.1 Sixty five samples were scanned for mammal and bird bone remains. Of the thirty samples from Crowlin twenty one samples contained identifiable bone fragments. Sixteen of the thirty two samples from Sand contained identifiable bone fragments. Most samples contained fragments of burnt bone also. Only three samples from Raasay were presented for scanning, of which two had identifiable fragments of bone.

8.3.2 The mammal species identified in the samples include: red deer, cattle, pig, as well as various small mammal remains, including rodent and insectivore species. A possible human bone was also present (Crowlin, trench 1, spit 6). Bird bones were present in more than half of the samples scanned.

Recommendations for further work.

8.3.3 It is recommended that these bones be examined further, with a view to quantification and identification, and producing a catalogue. A high proportion of the identifiable bone fragments are teeth, which are generally identifiable to species

9. DISCUSSION

9.1.1 The summer 1999 season was successful in contributing towards the general research aims set out in the Project Design.

9.1.2 The survey work initiated by the project demonstrated the value of the seascape of the Inner Sound as a resource for the study of the mesolithic and subsequent periods. Preliminary assessment of the survey results suggests a density of sites around the coastline that was much higher than anticipated. It was only possible to undertake brief and limited survey work but 19 new midden sites were located as well as six lithic scatters. While the age of the surveyed sites is still unknown, their nature suggests that many are early prehistoric, quite possibly Mesolithic. Few areas of Scotland have such a known density of sites and this is particularly important for our understanding of the way in which sites operated as part of a network, something that is crucial to the Mesolithic.

9.1.3 Assessment excavations were carried out on four sites and all were shown to have good organic preservation and some stratification. This increases their value as an archaeological resource, though the identification of threats to most of the sites suggests that this resource may be at risk (table 3). The early occupation of Scotland took place at a time of dynamic environmental change. There is as yet a lack of detailed work on this as it directly affects human settlement.

9.1.4 Preliminary assessment of the ecofactual evidence indicates the great value of the sites for the analysis of the environmental history of early Holocene settlement in western Scotland. The fish bones indicate the exploitation of a variety of marine environments which needs to be examined in more detail and tied in to period and site. The mammalian bone indicates a similarly diverse range of animals and there is also preserved bird bone. The presence of one possible human bone from the midden at Crowlin 1 is not surprising, but, given the scarcity of human bone from the early Holocene, it also adds to the value of the sites.

9.1.5 Initial studies of the artefactual material demonstrate its great value as an archaeological resource in terms of both the richness and variety of material present. Good organic preservation means that a range of bone tools have been preserved as well as the more common lithics. This affords the possibility to study the interrelationship of these two materials which should help to shed light on the interpretation of previously excavated sites. Particularly exciting is the presence of classic narrow blade microliths in the midden at Sand 1 together with bevel ended bone tools. In recent years microliths have generally been regarded as scarce in midden contexts, especially in association with bone tools. The recent work at An Corran (Hardy *et al* forthcoming) suggests that this view might have to be refined and in this light the work at Sand 1 is particularly important. The role of the microlith is still not properly understood and it is only through the excavation

of sites with extensive preservation, such as Sand 1, that it can be better understood.

9.1.6 With regard to the lithics one of the most noteworthy factors of the assemblages is the wide range of materials in use. Some of these, such as the bloodstone, are likely to have been brought in from outside the study area, while others are more locally sourced. The Mesolithic has traditionally been regarded as a period of high mobility and networking between individual sites, though this is generally hard to prove. Detailed identification of the lithic materials and their sources is an important way in which human movement may be inferred. This will obviously be an important contribution of the project to mesolithic studies in Scotland.

9.1.7 It is interesting to note, even at this preliminary stage, that there are differences between the sites. It is important to remember that the individual sites differ greatly in the way they have been treated: some assemblages result from excavation while others result from surface collection. The sites appear to have distinct characteristics. The three sites where trial excavations took place produced lithic assemblages that vary greatly in size (table 4) and character. Sand 1 yielded an assemblage of over 400 lithics, made from a wide variety of raw materials. This assemblage included evidence of both tool manufacture and use. In addition there were several bone tools. Loch a Sguirr 1, in contrast, yielded a smaller lithic assemblage, mainly of quartz, and only one bone tool. Crowlin 1, also yielded a small assemblage with much less variation of raw material, and comprising mainly the evidence for tool manufacture. Again, only one piece of worked bone was recovered. Of the surface collections, only An Corran B produced a lithic assemblage of any size, and this was very mixed. It is, of course, likely that each site relates to different periods of time, but even at this stage the work demonstrates that a detailed picture of the sophisticated network of the use of the Inner Sound seascape throughout early prehistory may be reconstructed.

9.1.8 It is now clear that there was no overall Mesolithic culture across Scotland. Recent work has moved towards the identification of cultural areas in the European Mesolithic and, though the situation in Scotland is still unclear, work in the Southern Hebrides has started to address this issue (Mithen forthcoming). In order to establish the pattern of regional variation a programme of excavation and dating within one well defined area is particularly important. In this respect, identification of a suite of artefacts, lithic and otherwise, in use around the Inner Sound throughout the Mesolithic will be a valuable addition to this field. The presence in the middens of material suitable for radiocarbon determination becomes of great importance here.

9.1.9 Finally, the presence of the gunflint and the barbed and tanged point highlight the use of rockshelters such as these in more recent times. These are locations that must have stood out in the landscape at any period, and many offered shelter and other benefits such as fresh water. Incidental information on the more recent use of the sites will be an important part of the project.

10. RECOMMENDATIONS

10.1 Further Survey

10.1.1 The quantity and concentration of sites which have emerged from the 1999 work suggest that this may be a vast and valuable resource for the understanding of the Mesolithic and subsequent periods. Nevertheless many of the sites are at risk. Good management of this resource is jeopardised because of the lack of knowledge of the resource. Further survey work is clearly important together with an assessment of threat in order to assure the well-being of the resource.

10.2 Further Excavation

10.2.1 In order to understand the sites concerned some assessment by excavation of certain sites is recommended. Three strands of information are important: material for dating; artefacts; and environmental material. In this way the full value of all the sites for the interpretation of the early settlement of the Inner Sound seascape may be realised.

10.2.2 In addition, some detailed larger scale excavation is recommended as a long term objective. Detailed information on environmental change, dating ranges and artefactual developments will be invaluable for a full understanding of the study area and the part it plays in Mesolithic Scotland. Only larger scale excavation can hope to make sense of the complex sequence of deposits in a midden, and locate these within their wider context of any surrounding contemporary features.

10.2.3 Further environmental work, comprising both a detailed study of sea level change at certain locations and the analysis of excavated and other environmental samples is crucial to the interpretation of the archaeological sites in their wider context.

10.2.4 Further trial excavation is needed at those sites which appear to be most under threat (see above, section 5.6.1) to identify the present nature of the resource and determine management needs.

10.3 Post-field work

Post-survey analysis

10.3.1 Analysis of the survey material will be undertaken by Karen Hardy in conjunction with other members of the team.

Post-excavation

10.3.2 A structural analysis of the excavated material will be undertaken by Bill Finlayson together with staff of the Centre for Field Archaeology.

Radiocarbon dating

10.3.3 Once samples have been identified and relevant reports completed suitable samples will be submitted as applications for radiocarbon dating to Historic Scotland. This work will be undertaken by Mike Cressey of the Centre for Field Archaeology in liaison with the Oxford Radiocarbon Laboratory.

Bulk sample processing

10.3.4 The bulk sample processing will be undertaken by supervised University of Edinburgh Department of Archaeology undergraduates. Analysis of the samples will be undertaken by specialists from the Centre for Field Archaeology. Preliminary analysis of the charcoal, fish bones and other bones has demonstrated the excellent preservation conditions and great potential of the sites for the recovery of environmental and economic information. This is of particular value in the context of an understanding of the early Holocene in western Scotland.

Artefact analysis

10.3.5 Artefact analysis will include information on raw materials, technology and function, where relevant, in addition to the more common chronological and cultural analysis. This work will be carried out by a number of specialists including Caroline Wickham-Jones, Karen Hardy and Bill Finlayson.

10.4 Publication and Dissemination of Information

10.4.1 Academic papers will be prepared on individual aspects of the project, as well as on the project as a whole, and submitted to relevant journals. It is anticipated that electronic publication will be used as well as paper publication. In addition, papers and poster sessions will be offered to relevant conferences.

10.4.2 Popular papers will be prepared and submitted to relevant journals and media. The project intends to use a mix of in-house expertise and professional journalists and writers for this. Electronic publication also has an important part to play here as does the in-house production and distribution of newsletters and leaflets. This started in August 1998 and will continue with a news-sheet in Autumn 1999. In August 1999 there was considerable media interest in the project which resulted in both newspaper articles and radio reports.

10.4.3 Open Days and lectures are an important way in which to disseminate information particularly to those living in and around the study area. A programme of these has started with a very successful Open Day in August 1999 and a lecture tour planned for November 1999. This will be developed as the project grows.

10.4.4 While the finds are subject to the law of Treasure Trove it is intended to liaise with local bodies over the eventual preparation and display of panels relating to the results of the project. Preliminary panels are already on display at Staffin Museum and the Eilean Ban foundation at Kyleakin, and contacts have been made with the Applecross Historical Society, the Staffin Trust and the Isle of Skye Museums Service.

11. REFERENCES

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APPENDIX 1: Cartographic Sources

Geological

Raasay Scotland, Sheet 81W Drift Edition 1:50 000
Loch Torridon Scotland Sheet 81E Drift Edition 1:50 000
Kyle of Lochalsh, Scotland,71E Drift Edition !:50 000
Broadford, Scotland Sheet 71W Drift Edition 1:50 000

Topographical

Ordnance Survey Pathfinder Series 1:25000
Applecross Pathfinder 172 (NG 64/74)
Gruinard Bay Pathfinder 110 (NG 89/99)
Trotternish Pathfinder 154 (NG 45/55)
Stromferry Pathfinder 189 (NG 83/93)
Melvaig & Rhuba Reidh Pathfinder 109 (NG 78/79)
Loch Ewe Pathfinder 119 (NG 88/98)
Arinacrinachd Pathfinder 155 (NG 65/75)
Red Point Pathfinder 139 (NG 76)
Crowlin Islands Pathfinder 188 (NG 63/73)
Portree Pathfinder 171 (NG 44/54)
Rubha Hunish Pathfinder 127 (NG 37/47 and part of NG 38)
Narrows of Raasay Pathfinder 187 (NG 43/53)
Kyle of Lochalsh Pathfinder 204 (NG 62/72)
Staffin pathfinder 138 (NG46/56)
North Skye, Dunvegan & Portree Landranger 23 1:50000
South Skye and Cuilin Hills Landranger 32 1:50000

Historical

Admiralty Chart 1890s Inner Sound

ID	Site Name	Found	Site Type	Grid Ref	Aspect	Ground surface/slope	Ground cover	Estimated size of site	Sea	OD	Type of coast	Present state	Perceived threats	Finds	Erosion	Impact Type
SFS 01	**An Corran**	OLD	rockshelter													
SFS 02	**Crowlin 1**	1998	rockshelter													
SFS 03	**Crowlin 2**	A - 1999	Old Sea Cave	NG 6911 3370	S	Boulder scree	nettles and boulders	2m square	25m	5m	Boulder	Overgrown with nettles, some sea borne rubbish	sea ingress at storm tide	-		Wave attack
SFS 04	**Sand 1**	E - 1999	rockshelter	NG 6841 4934	E	40-45	Pteridium, festuca/ flying bent grasses	c.10m x 20m ?	500 m	42m	Sheltered bay with sand and dunes	Eroding	Deflation, animal and human	lithics and midden	Definitely Eroding	Deflation, animal and human
SFS 05	**Sand 2**	E - 1999	rockshelter	NG 6837 4936	E	sloping moorland	grass, bracken & nettles	1.5 x 2m	400 m	42m	Sheltered bay with sand and dunes	eroding	Deflation, animal and human	lithics and midden	Definitely Eroding	Deflation, animal and human
SFS 06	**Ashaig 1**	1998	Open shell midden	NG 6866 2420	NE by E	Crest of slope	Short mown turf	Unknown	20m	5m	indented marsh and shingle	Stable	Possible rabbit burrowing	None visible	Stable	Animal and human
SFS 07	**Ashaig 2**	1998	open shell midden	NG 6871 2424	N	exposed bank	turf	unknown	20m	6m	indented marsh & shingle		cattle erosion	hammerstone	definately eroding	animal
SFS 08	**Loch a Sgurr 2**	E- 1999	Rockshelter	NG 6084 5286	W	Sloping rocky outcrops - steep to sea	nettles, bracken, sorrel, grass	?	50m	25 m	steep, rocky, small cliffs	some surface midden with bone, shell, a few lithics	animal & wind erosion, possible limited human use	lithics, bone tool, pottery SHERDS	accreting & eroding	deflation, animal burrows, poss. human impact
SFS 09	**Red Point**	OLD														
SFS 10	**Craig River**	old	cave	NG 767 648	NW	GRASSY SLOPE	GRASS	3m diameter		85M		SURFACE MIDDEN	?		?	?
SFS 11	**Sand 3**	E- 1999	sand dune	NG 6840 4890												
SFS 13	**Strollamus 1**	OLD	Open Midden	NG 5942 2674	NE by N	Undulating/hummocks	Grass, heather, reeds	5m of exposed section	250 m	50m	Tidal sand, boulder beds	Eroding to NE by sheep, 35cm eroding section	Sheep	Charcoal flecks	Definitely Eroding	Animal, burrows/track
SFS 14	**Skeabost**	1998	Open Midden	NG 4188 4869	NE by N	Underwater stream bank	None	1.5m along bank 20cm deep	-	-	-	Sealed by sub-rounded concretious sediment	iron (acidic) leaching down from bank and acidic peaty	oysters, cockle, limpet, periwinkle	Definitely Eroding	Abrasion

												water	, animal bone & tooth			
SFS 15	**Shieldaig**	OLD														
SFS 16	**Clachan**	OLD														
SFS 17	**Church Cave**	OLD														
SFS 18	**Loch a Sguirr**	E-1999	rockshelter													
SFS 19	**Toscaig 1**	E - 1999	rockshelter	NG 7168 3649	SE	at foot of sandstone cliffs	bracken & brambles	3M X 2M	500 M			stable		enclosed within wall		
SFS 20	**Toscaig 2**	A- 1999	Rock Shelter/ Cave	NG 7013 3757	W	At foot of sea cliffs	Nettles, bracken, rose	15m x 15m , 4-1.5m high	25m	8m	Rocky, open small pebble beach	stable	sheep	Bag of midden, pebble limpet hammer	Both Accreting and Eroding	Animal, burrows/track
SFS 21	**Strollamus 2**	OLD	Open Midden	NG 6040 7679	SE	Grassy recess behind boulder	Grass and yellow flag	1.5m x 1.5m	7m	1m	Shingle	Sheep track erosion and slope failure 12 x 6 and scattering along track	Sheep erosion	Tooth, charcoal, oysters, winkle	Definitely Eroding	Animal, burrows/track
SFS 22	**Crowlin 3**	A - 1999	Boulder shelter	NG 6902 3418	S	20 Boulder slope, at foot of small cliff	Large boulder scree and heather	2m square	25m	5m	Sheltered rocky	Visible dense midden inside small shelter	none	none		None
SFS 23	**Crowlin 4**	A - 1999	Rock shelter	NG 6910 3500	S	20 slope down open ground to S	Heather, bracken and grass	10m x 3m x 1.5m deep	200 m	30m	Sheltered rocky	Overgrown with bracken	none	none		None
SFS 24	**Crowlin 5**	A - 1999	Rock shelter	NG 6896 3532	SW	at foot of sea cliff	Bracken	10m x 3.5m X 5m deep	25m	5m	Rocky and Sheltered	Dry with sheep shit at S end, rest is rock, some limpets visible at S end.	none	rusty boat engine and cork floats		None
SFS 25	**Crowlin 6**	A - 1999	Old sea cave	NG 6945 3350	SW	-	nettles	12m x 8m x 3m deep	20m	6m	rocky	very wet inside	-	dead sheep (not bagged)		
SFS 26	**Crowlin 7**	A - 1999	rockshelter	NG 6840 3502	S	30 slope to sea	-	20m x 6m	20m	6m	Boulder	Very dry soil and rock	-	-		None

												midden					
SFS 27	**Longay 1**	A - 1999	Sea Cave	NG 6590 3068	SE	Rockfall	Bracken	5m x 5m	50m	12m	Rocky inlet with cliffs	wet and overgrown	none	-	Stable	Cliff/slope failure	
SFS 28	**The Aird**	A - 1999	Rock shelter	NG 4346 7640	NW	At foot of cliff	Grass and bracken	5m x 2.5m x 2m deep	400 m	50m	Rocky, open	Interior grassed over	-	-	Stable	Animal, burrows/track	
SFS 29	**An Corran B**	A - 1999	Lithic scatter	NG 4885 6850	NW	Level	Grass	60m x 30m	On coast	15m	Open rocky cliffs	Eroding soil cover on cliff edge	Erosion	Lithics in quantity	Definitely Eroding	Deflation and Animal	
SFS 30	**An Corran C**	A - 1999	Lithic Scatter	NG 4875 6841	NW	Level at cliff edge	Grass	?	15m	15m	Open rocky	Eroding	Erosion and a sheep rub	Lithics and pottery	Definitely Eroding	Deflation and Animal	
SFS 31	**An Corran D**	A - 1999	Lithic Scatter		NW	Level	Grass and rushes	?	30m	10m	Rocky and open	Running open ditch	erosion by animals and running water	lithics	Definitely Eroding	Animal, burrows/track	
SFS 32	**Brogaig**	A - 1999	Lithic scatter	NG 4728 6870	NE	Level	Grass	?	5m	8m	Open, shingle	Eroding sea cliff	Erosion	Lithics	Definitely Eroding	Deflation and Animal	
SFS 33	**Bile, Portree**	?	Rockshelter	NG 5010 4442	SE												
SFS 34	**Toscaig 3**	A - 1999	rockshelter	NG 7083 3778	SE	In Sea cliff	Scrub wood-land	4m x 4m x 1.5m	5m	6m	Rocky, sheltered	Disturbed	Human activity (kids den)	-	Eroding or Stable	Animal and human	
SFS 35	**Toscaig 4**	A - 1999	rockshelter		E	In old sea cliff	Grass and birch	8m x 4m x 3m	25	6m	Rocky and sheltered	Eroding	Children's play area, fires	masses of limpets and burnt bone	Definitely Eroding	Hu imp	
SFS 36	**Staffin Island**	A - 1999	Lithic scatter	NG 4915 6887	S	Gently to south	grass	80m long	4 m	3 m	Sheltered, pebble beach	eroding soil cliff	cattle & sheep, wave action	lithics	definately eroding	wave attack, cliff failure animal	
SFS 37	**Toscaig 5**	A - 1999	cave		S W	foot of sea cliffs	bracked	3m x 5m deep, 1.5m high	8 m	4+ m	rocky & open	sheep shelter	sheep		definately eroding	animal burrows	
SFS 38	**Toscaig 6**	A - 1999	rockshelter		NE	at foot of outsrop with 45degree slope to NE	heather	30m x 3-4m deep	500 m		rocky open	stable		limpet midden	stable, eroding	cliff slope failure	
SFS 39	**Toscaig 7**	A - 1999	rockshelter	NG 7050 3972	E	under small outcrop at top of 20degree slope to sea	bracken	4m x 3m x 1.5high	30 m	6 + m	rocky & sheltered	overgrown			stable	human impact	

SFS 40	**Toscaig 8**	A - 1999	rockshelter	NG 6987 3977	W	at foot of sea cliffs	nettles & grass	20m long terrace	10m	6 - 8 m	rocky, open with small sandy bays	grassy	-	-	stable	
SFS 41	**Toscaig 9**	A - 1999	rockshelter	NG 7010 3893	W	at foot of sea cliff, 45 degree slope to beach	grass & bare earth	10m x 6mx 4mhigh	15m	6 m	sheltered sandt beach	recent human activity, fires	human		stable	human impact
SFS 42	**Toscaig 10**	A - 1999	rockshelter	NG 7213 3974	SW	at foot of large SW facing outcrop.	heather & bracken	12m x 4m x 2mhigh	750 m		inland	sheep shelter	sheep	-	definately eroding	animal burrows
SFS 43	**Toscaig 11**	A - 1999	cave	NG 7050 4036	W	in cliff face	bracked	2.5x10x3mhigh	15m	8m	rocky, open	rubble filled			definately eroding	cliff/slope failure
SFS 44	**Rubha an Droma Bhain, Scalpay**	A - 1999	Lithic scatter	NG 6218 2742	S	steep front edge of raised beach	grass	15m long	50m	6 - 8 m	skerries & boulder shingle	front edge eroding and collapsing	animal & wind erosion	three lithics	definately eroding	cliff slope failure, deflation, animal
SFS 45	**Cave of the Pigeons**	A - 1999	cave	NG 4891 6854	NW	in cliff face		4m deepx2mhigh	4m	4m	sea cliffs	cannot be entered from land	wave action	seen from boat, not visited	eroding or stable	wave attack
SFS 47	**Druim an Aonaich,Raasay**	OLD	rockshelter	NG 5865 4295												
SFS 48	**Beinn na Leac**	OLD	rockshelter	NG 5942 3756												
SFS 49	**Creag Na H-Uamha**	OLD	cave	NG 717 609												

APPENDIX 2: Site Catalogue

APPENDIX 3 - Context list

CROWLIN ISLAND

Trench 1

101 Top layer of trench of mixed animal debris/dung
102 Thin deposit of organic material-stone free with occasional shell fragments
103 Shallow mixed deposit of burnt clay-fire patch
104 Shallow band of organic material, possible dung layer
105 Red organic material of variable depth (001-002m) decaying shell-charcoal
106 Shallow layer of organic material at 102 and 104-no visible shell or bone
107 Shallow deposit over midden-orange and pale grey 0.03-0.002m deep
108 Thick deposit of shell-rich organic material - charcoal, bone and angular stones.
109 Crushed shell layer and occasional flint fragments
110 Shallow layer of dark-grey midden material underlying (109)
111 Sand deposit containing shell and angular stones
112 Natural bedrock, with talus debris

Trench 2

201 Dry loose crushed shell with angular stones, charcoal and shell, roots common
202 Shell-rich midden deposit charcoal and small stones
203 Semi-compact medium angular cobbles underlying (202)
204 As (203)
205 As (203)
206 Large angular boulders with no intrusive material

Trench 3

301 Powdery topsoil with sand inclusions
302 Shell-rich layer with charcoal -bone present
303 Large angular cobbles and boulders with small stones.

SAND 1

Trench 1

101 Shallow layer of rich, loamy sand
102 Thick layer of dark, sand-rich soil
103 Layer of medium sized sandstone cobbles
104 Layered sandstone bedrock

Trench 2

201 Topsoil root impacted layer
202 Sand soil disturbed and mixed with roots and plant matter
203 Shell rich layer within mixed disturbed deposit
204 Deposit of small angular stones, mostly shell free
205 Soil matrix of compacted wind blown sand underlying stones 204
206 Bedrock of sandstone with pockets of yellow-flecked soil

Trench 4

401 Thin turf mat above topsoil layer
402 Blackish grey heavily rooted topsoil
403 Root free darkish layer with chipped stone tools and charcoal flecks
404 Olive-brown grey slightly peaty silty-sand
405 Natural sand with no organic inclusions
406 Possible stone setting in a distinct curve

Trench 7

701 Root mat with sandy soil matrix and small round stones
702 Loose layer of midden material with shell fragments

703 Dark brown silty sand layer underlying 702
704 Main shell deposit of midden with shell and large chunks of well preserved bone
705 Compacted brown layer around fallen stones (706)
706 Fallen stone at the base of trench sat on natural sand

Trench 9
901 Fine sandy soil with fibrous intrusions and small stones, lithics found below root mat
902 Fine light sandy soil -root material -small angular sand stone. Limpet and periwinkle present
903 Rich organic layer with marine molluscs and bone fragments overlies (904)
904 Rich organic layer of marine molluscs and bone and antler.
905 Course shell layer merging into main midden deposit (904)
906 Natural Pinkish silty -sand with degraded rock-no finds

LOCH A SGUIRR 2

Trench 1
101 Layer of sheep dung -exposed shell and tallus debris
102 Thin layer of creamy white shell-in a compact dark soil
103 Compact dark soil with angular stone
104 Organic rich soil 0.03m deep-angular stone merging with (106)
105 Discontinuous layer of gritty-sandy soil -tallus material present
106 Compact narrow lens of organic material -shell and bone present
107 Compact organic layer with marine shell and charcoal
108 Organic rich layer with abundant marine shell, chip of baked mud stone
109 Layer of shattered stone, no archaeological finds
110 large angular blocks on sterile layer of shattered stone cuts 109

Trench 2
201 Layer of sheep dung forming compact organic layer
202 Organic layer, more degraded than (201)-dense and compact
203 Natural bedrock sterile soil matrix between
204 Gritty-sand layer and angular chunks of stone
205 Very degraded stone, gritty sand with fragments of shell

Trench 3
301 Mixed surface deposit, shell and bone with fragments of stone.
302 Layer of fragmented rock and course sand 0.02m deep-shell fragments
303 Angular fractured rock fall, covers trench to a depth of 0.20m
304 Shell rich deposit containing small stones 0.03m deep

Trench 4
401 Layer of sheep dung (as 201) dried organic crust and compacted
402 Very compact organic layer-sterile of midden material
403 Fractured pink sandstone-possibly bed rock

Trench 6
601 Peaty soil-surface layer
602 Organic soil between peat and bedrock

Trench 7
701 Peat deposit above (702)
702 Mineral layer below peat layer (701)
703 Bedrock at base of test pit

Trench 8
801 Peaty layer including fibrous roots from bracken and heather
802 Layer of course gritty sand-large angular stones
803 Layer of fine grey clay-possible glacial clay

Trench 9

901 Surface vegetation with angular fragments overlying (902)
902 Well humified peat with occasional stones
903 Grey-brown peaty homogenous soil with frost shattered stone fragments
904 Cobbles and stone chips with charcoal and burnt peat in places
905 Level layer of small medium gravel
906 Angular cobbles less charcoal than (905)
907 massive and smaller angular blocks of gneiss and hornblende at base of trench

Trench 10

1001 Compact sheep dung on surface of trench 0.02-0.04m deep
1002 Organic layer mixed with angular stone
1003 Crushed fishbone in a sandy soil matrix
1004 Degraded rockfall
1005 larger chunks of rockfall

APPENDIX 4 - Finds List

4.1 Bone Tool Catalogue - all sizes are in mm, in the order length x width x thickness.

Find No	Site	Trench	Spit	Size	Description
N 11	Crowlin 1	1	5	80 x 31 x 15	A trapezoidal shaped piece with a smooth rounded point.
N 14	Sand 1	2	1	33 x 19 x 8	A bevel ended tool which may have been broken across its length. The bevel retains some evidence of flake scars but is in poor condition.
N 15	Sand 1	2	1	37 x 17 x 7	A bevel ended bone tool with a pointed proximal end. Polish occurs on the inner edge of the bevel which is smooth and rounded. The outer edge of the bevel retains some evidence of small flaked removals along its length.
N 18	Sand 1	9	7	108 x 18 x 9	A bevel ended tool with a pointed proximal end. The outer edge of the bevel retains several flake scars while the inner edge of the bevel is smooth, rounded and slightly polished.
N 19	Sand 1	9	8	57 x 13 x 6	A bevel ended bone tool with a pointed proximal end. There is some polish on the inner side, near the point and also in a small area on the outer side. The bevelled end is rounded and polished on the outer edge.
N 20	Sand 1	9	6	46 x 18.5 x 6.5	A trapezoidal shaped piece with a rounded inner distal edge culminating in a point. Some scratches on the outer side may not be natural.
N 23	Sand 1	7	1	11 x 8 x 5	A broken point showing developed smoothness and rounding.
N 24	Sand 1	7	1	24 x 10 x 9.5	A small piece of burnt bone with three parallel cut marks lying across the ridge on the outer side of the bone
N 25	Loch a Sguirr 1	1	2	44 x 14 x 6.5	A bevel ended tool with a pointed proximal end. The bevelled end shows many removal scars on both its inner and outer sides, the bevel has not become rounded. The proximal, pointed end is well polished and this polish continues up and around the whole piece, almost to the bevelled end. All sides of the artefact are also smoothed and polished

4.2: Coarse Stone Tool Catalogue
size is given in millimetres

	Site Name	Trench	Context	Retent	Material	Type	Sub-type	Classification	Condition	Broken	L	W	Th
C 1	Ashaig Midden		surface	No	Unknown	Coarse Stone	Cobble	Rounded	Abraded	No	110	109	75
C 2	Sand 1		Surface	Yes	Sandstone	Coarse Stone	Whole	Rubbing stone	Abraded	No	38	36	23
C 3	Sand 1		Surface	Yes	Sandstone	Coarse Stone	Stone Flake	Hammerstone Flake	Mint	No	32	27	6
C 4	Crowlin 1	Tr 3	302	No	Micaceous shist	Coarse Stone	Fragment	Bevel ended tool	Mint	Yes	149	37	27
C 5	Crowlin 1		Surface	No	Sandstone	Unworked	Cobble	Manuport	Abraded	No	162	54	33
C 6	Crowlin 1	Tr 3	302	No	Sandstone	Coarse Stone	Cobble	anvil	Abraded	No	89	63	44
C 7	Crowlin 1	Tr 1	Spit 2	Yes	Sandstone	Unworked	Cobble	Manuport	Abraded	No	166	64	49
C 8	Crowlin 1	Tr 1	Spit 1	Yes	Sandstone	Coarse Stone	Whole	Ground edge tool	Abraded	No	83	32	16
C 9	Crowlin 1	Tr 1	Spit 5	Yes	Sandstone	Coarse Stone	Cobble	Rounded	Abraded	No	126	69	29
C 10	Sand 1	Tr 3	Spit 3	Yes	Sandstone	Coarse Stone	Fragment	Spherical	Mint	Yes	54	53	33
C 11	Sand 1	Tr 2	Spit 2	Yes	Sandstone	Pebble	Fragment	Manuport	Mint	Yes	59	32	23
C 12	Sand 1	Tr 1	Spit 4	Yes	Sandstone	Pebble	Fragment	Manuport	Abraded	Yes	67	25	25
C 13	Sand 1	Tr 2	Spit 4	No	Sandstone	Pebble	Whole	Manuport	Abraded	No	87	49	34
C 14	Sand 1	Tr 9	Spit 9	Yes	Micaceous shist	Coarse Stone	Whole	Bevel ended tool	Abraded	No	49	15	10
C 15	Sand 1	Tr 1	Spit 7	No	Unknown	Coarse Stone	Fragment	Hammerstone Flake	Mint	No	22	16	11
C 16	Toscaig 1		Surface	No	Unknown	Coarse Stone	Cobble	Long Hammerstone	Abraded	No	175	54	30
C 17	Crowlin 1		Surface	No	Sandstone	Coarse Stone	Fragment	Smoothed Stone	Mint	Yes	80	43	29

4.3: Flaked Lithic Catalogue

Dimensions are given in millimetres

	Site Name	Trench	Context	Retent	Quantity	Material	Type	Sub-type	Classification	Condition	Broken	L	W	Th
F 413	An Corran		Surface	No	1	Chalcedonic silica	Retouched Flake	Secondary	Edge retouched	Mint	No	30	31	10
F 130	An Corran B		Surface	No	1	Baked Mudstone	Flake	Inner	Regular	Mint	Yes	0	0	0
F 116	An Corran B		Surface	No	1	Chalcedonic silica	Core	Without Cortex	Bipolar	Mint	No	29	21	11
F 117	An Corran B		Surface	No	1	Baked Mudstone	Flake	Primary	Regular	Abraded	No	36	37	20
F 118	An Corran B		Surface	No	1	Baked Mudstone	Flake	Primary	Regular	Abraded	No	42	23	20
F 119	An Corran B		Surface	No	1	Baked Mudstone	Flake	Secondary	Regular	Abraded	No	44	48	12
F 120	An Corran B		Surface	No	1	Baked Mudstone	Flake	Secondary	Regular	Abraded	No	27	22	10
F 121	An Corran B		Surface	No	1	Chalcedonic silica	Flake	Inner	Regular	Mint	No	13	13	4
F 122	An Corran B		Surface	No	1	Chalcedonic silica	Flake	Inner	Regular	Corticated	No	15	12	3
F 123	An Corran B		Surface	No	1	Chalcedonic silica	Flake	Inner	Regular	Mint	No	12	19	3
F 124	An Corran B		Surface	No	1	Chalcedonic silica	Flake	Secondary	Regular	Burnt	No	20	15	6
F 125	An Corran B		Surface	No	1	Chalcedonic silica	Flake	Inner	Regular	Mint	No	18	12	3
F 126	An Corran B		Surface	No	1	Chalcedonic silica	Flake	Inner	Regular	Mint	No	15	13	3
F 127	An Corran B		Surface	No	1	Baked Mudstone	Blade	Inner	Regular	Abraded	Yes	25	15	3
F 115	An Corran B		Surface	No	1	Chalcedonic silica	Core	With Cortex	Platform	Mint	No	36	29	22
F 129	An Corran B		Surface	No	1	Baked Mudstone	Flake	Secondary	Debitage	Mint	Yes	0	0	0
F 136	An Corran B		Surface	No	8	Baked Mudstone	Chunk	Secondary	Debitage	Abraded	No	0	0	0
F 131	An Corran B		Surface	No	2	Chalcedonic silica	Flake	Secondary	Regular	Corticated	Yes	0	0	0
F 132	An Corran B		Surface	No	6	Chalcedonic silica	Flake	Inner	Regular	Corticated	Yes	0	0	0
F 133	An Corran B		Surface	No	1	Baked Mudstone	Flake	Inner	Debitage	Mint	No	0	0	0
F 134	An Corran B		Surface	No	4	Chalcedonic silica	Flake	Inner	Debitage	Mint	No	0	0	0
F 135	An Corran B		Surface	No	6	Baked Mudstone	Chunk	Inner	Debitage	Abraded	No	0	0	0
F 137	An Corran B		Surface	No	1	Chalcedonic silica	Chunk	Secondary	Debitage	Mint	No	0	0	0
F 139	An Corran B		Surface	No	1	Chalcedonic silica	Flake	Primary	Debitage	Mint	No	0	0	0
F 140	An Corran B		Surface	No	3	Chalcedonic silica	Chunk	Inner	Debitage	Burnt	No	0	0	0
F 141	An Corran B		Surface	No	1	Baked Mudstone	Retouched Flake	Inner	End scraper	Abraded	No	33	32	12

F 142	An Corran B		Surface	No	1	Quartz	Flake	Inner	Regular	Mint	No	38	27	10
F 143	An Corran B		Surface	No	1	Chalcedonic silica	Flake	Inner	Regular	Burnt	Yes	0	0	0
F 128	An Corran B		Surface	No	5	Baked Mudstone	Flake	Inner	Regular	Abraded	Yes	0	0	0
F 138	An Corran B		Surface	No	5	Chalcedonic silica	Chunk	Inner	Debitage	Corticated	No	0	0	0
F 110	An Corran C		Surface	No	1	Baked Mudstone	Chunk	Secondary	Debitage	Abraded	No	0	0	0
F 114	An Corran C		Surface	No	4	Chalcedonic silica	Flake	Inner	Debitage	Mint	No	0	0	0
F 113	An Corran C		Surface	No	3	Chalcedonic silica	Chunk	Inner	Debitage	Burnt	No	0	0	0
F 111	An Corran C		Surface	No	1	Chalcedonic silica	Flake	Primary	Regular	Mint	Yes	0	0	0
F 109	An Corran C		Surface	No	1	Baked Mudstone	Flake	Inner	Regular	Abraded	Yes	0	0	0
F 108	An Corran C		Surface	No	1	Baked Mudstone	Flake	Secondary	Regular	Abraded	Yes	0	0	0
F 106	An Corran C		Surface	No	1	Baked Mudstone	Flake	Secondary	Regular	Mint	No	32	30	13
F 107	An Corran C		Surface	No	1	Chalcedonic silica	Flake	Secondary	Regular	Corticated	No	28	18	10
F 112	An Corran C		Surface	No	1	Chalcedonic silica	Chunk	Inner	Debitage	Mint	No	0	0	0
F 86	An Corran D		Surface	No	1	Chalcedonic silica	Flake	Inner	Regular	Mint	No	23	9	6
F 87	An Corran D		Surface	No	1	Chalcedonic silica	Flake	Inner	Debitage	Corticated	No	0	0	0
F 88	An Corran D		Surface	No	1	Chalcedonic silica	Flake	Secondary	Debitage	Corticated	No	0	0	0
F 89	An Corran D		Surface	No	1	Baked Mudstone	Flake	Inner	Debitage	Mint	No	0	0	0
F 90	An Corran D		Surface	No	1	Baked Mudstone	Chunk	Inner	Debitage	Mint	No	0	0	0
F 95	Brogaig		Surface	No	1	Chalcedonic silica	Flake	Secondary	Regular	Corticated	No	16	23	5
F 91	Brogaig		Surface	No	1	Baked Mudstone	Flake	Inner	Regular	Abraded	Yes	0	0	0
F 100	Brogaig		Surface	No	3	Chalcedonic silica	Flake	Inner	Debitage	Mint	No	0	0	0
F 96	Brogaig		Surface	No	1	Chalcedonic silica	Flake	Inner	Regular	Mint	No	26	20	5
F 94	Brogaig		Surface	No	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	33	30	7
F 93	Brogaig		Surface	No	1	Baked Mudstone	Flake	Inner	Regular	Mint	No	44	41	14
F 97	Brogaig		Surface	No	1	Chalcedonic silica	Flake	Inner	Regular	Burnt	Yes	0	0	0
F 99	Brogaig		Surface	No	1	Chalcedonic silica	Flake	Inner	Debitage	Burnt	Yes	0	0	0
F 98	Brogaig		Surface	No	1	Chalcedonic silica	Chunk	Inner	Debitage	Corticated	No	0	0	0
F 92	Brogaig		Surface	No	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	40	32	12
F 102	Brogaig		Surface	No	1	Baked Mudstone	Retouched Flake	Inner	Edge retouched	Mint	No	47	44	20
F 103	Brogaig		Surface	No	1	Chalcedonic silica	Retouched Blade	Inner	Edge retouched	Mint	Yes	25	15	4

F 104	Brogaig		Surface	No	1	Baked Mudstone	Chunk	Secondary	Debitage	Mint	No	0	0	0
F 105	Brogaig		Surface	No	1	Chalcedonic silica	Chunk	Secondary	Debitage	Mint	No	0	0	0
F 101	Brogaig		Surface	No	1	Quartz	Flake	Secondary	Regular	Mint	No	25	11	10
F 270	Crowlin 1	Tr 1	Spit 5	Yes	1	Chalcedonic silica	Flake	Inner	Debitage	Mint	No	0	0	0
F 233	Crowlin 1	Tr 1	Spit 1	Yes	1	Chalcedonic silica	Chunk	Inner	Debitage	Mint	No	0	0	0
F 273	Crowlin 1	Tr 1	Spit 12	Yes	1	Chalcedonic silica	Flake	Inner	Debitage	Mint	No	0	0	0
F 174	Crowlin 1	Tr 1	Spit 9	Yes	1	Chalcedonic silica	Flake	Inner	Debitage	Mint	No	0	0	0
F 274	Crowlin 1	Tr 1	Spit 6	Yes	1	Chalcedonic silica	Flake	Inner	Debitage	Corticated	No	0	0	0
F266	Crowlin 1	Tr 1	Spit 6	Yes	1	Quartz	Chunk	Inner	Debitage	Mint	No	0	0	0
F 410	Crowlin 1		Surface	No	1	Chalcedonic silica	Flake	Secondary	Regular	Mint	No	24	15	8
F 267	Crowlin 1	Tr 1	Spit 6	Yes	1	Chalcedonic silica	Flake	Inner	Debitage	Mint	Yes	0	0	0
F 145	Crowlin 1	Tr 1	Spit 10	Yes	1	Quartz	Flake	Secondary	Debitage	Mint	No	0	0	0
F 271	Crowlin 1	Tr 1	Spit 2	Yes	1	Chalcedonic silica	Flake	Inner	Debitage	Burnt	No	0	0	0
F 146	Crowlin 1	Tr 2	Spit 3	Yes	1	Quartzite	Flake	Inner	Debitage	Mint	No	0	0	0
F 147	Crowlin 1	Tr 2	Spit 5	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Mint	Yes	0	0	0
F 407	Crowlin 1		Surface	No	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	22	16	4
F 408	Crowlin 1		Surface	No	1	Chalcedonic silica	Flake	Inner	Regular	Mint	Yes	0	0	0
F 409	Crowlin 1		Surface	No	1	Chalcedonic silica	Flake	Secondary	Regular	Mint	Yes	0	0	0
F 411	Crowlin 1		Surface	No	1	Chalcedonic silica	Flake	Inner	Regular	Mint	No	11	14	3
F 412	Crowlin 1		Surface	No	1	Chalcedonic silica	Chunk	Secondary	Debitage	Mint	No	0	0	0
F 144	Crowlin 1	Tr 1	Spit 10	Yes	1	Chalcedonic silica	Flake	Inner	Debitage	Mint	Yes	0	0	0
F 80	Crowlin 1	Tr 1	Spit 6	Yes	1	Chalcedonic silica	Flake	Secondary	Debitage	Burnt	Yes	0	0	0
F 85	Crowlin 1	Tr 1	Spit 3	Yes	1	Chalcedonic silica	Flake	Secondary	Debitage	Mint	No	0	0	0
F 84	Crowlin 1	Tr 1	Spit 3	Yes	1	Chalcedonic silica	Flake	Inner	Debitage	Mint	No	0	0	0
F 83	Crowlin 1	Tr 1	Spit 7	Yes	1	Chalcedonic silica	Chunk	Secondary	Debitage	Mint	No	0	0	0
F 82	Crowlin 1	Tr 1	Spit 7	Yes	1	Chalcedonic silica	Flake	Secondary	Debitage	Mint	Yes	0	0	0
F 12	Crowlin 1	Tr 3	Cleanin	No	1	Flint	Retouched Blade	Inner	Gunflint	Mint	No	22	18	6
F 81	Crowlin 1	Tr 1	Spit 6	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Mint	Yes	0	0	0
F 276	Crowlin 1	Tr 1	Spit 6	Yes	1	Chalcedonic silica	Flake	Inner	Debitage	Burnt	No	0	0	0
F 78	Crowlin 1		Surface	No	1	Quartz	Core	With Cortex	Bipolar	Mint	Yes	15	26	19

F 275	Crowlin 1	Tr 1	Spit 6	Yes	1	Chalcedonic silica	Flake	Inner	Debitage	Mint	No	0	0	0
F 79	Crowlin 1	Tr 1	Spit 2	Yes	2	Chalcedonic silica	Chunk	Inner	Debitage	Burnt	Yes	0	0	0
F 272	Crowlin 1	Tr 1	Spit 8	Yes	1	Chalcedonic silica	Flake	Inner	Debitage	Mint	No	0	0	0
F314	Flodigarry		Surface	No	1	Chalcedonic silica	Pebble	Flaked	Debitage	Mint	No	135	113	66
F 8	Loch a Sguirr 1		Surface	No	1	Baked Mudstone	Flake	Inner	Regular	Mint	No	33	17	8
F 1	Loch a Sguirr 1		Surface	No	3	Quartz	Chunk	Inner	Debitage	Mint	No	0	0	0
F 2	Loch a Sguirr 1		Surface	No	1	Quartz	Flake	Inner	Regular	Mint	No	34	21	6
F 3	Loch a Sguirr 1		Surface	No	3	Quartz	Flake	Inner	Regular	Mint	Yes	0	0	0
F 4	Loch a Sguirr 1		Surface	No	1	Baked Mudstone	Chunk	Inner	Debitage	Mint	No	0	0	0
F 436	Loch a Sguirr 1	Tr 1	Spit 4	No	3	Quartz	Chunk	Inner	Debitage	Mint	No	0	0	0
F 10	Loch a Sguirr 1		Surface	No	2	Chalcedonic silica	Flake	Inner	Regular	Mint	Yes	0	0	0
F 5	Loch a Sguirr 1		Surface	No	1	Baked Mudstone	Flake	Inner	Regular	Mint	No	18	14	5
F 6	Loch a Sguirr 1		Surface	No	1	Baked Mudstone	Flake	Inner	Regular	Mint	No	42	30	7
F 439	Loch a Sguirr 1	Tr 1	Spit 4	No	1	Chalcedonic silica	Flake	Inner	Debitage	Mint	No	0	0	0
F 435	Loch a Sguirr 1	Tr 1	Spit 4	No	1	Chalcedonic silica	Chunk	Secondary	Debitage	Corticated	No	0	0	0
F 434	Loch a Sguirr 1	Tr 1	Spit 2	No	3	Quartz	Chunk	Inner	Debitage	Mint	No	0	0	0
F 433	Loch a Sguirr 1	Tr 1	Spit 2	No	1	Chalcedonic silica	Flake	Secondary	Regular	Mint	No	14	12	4
F 432	Loch a Sguirr 1	Tr 1	Spit 2	No	1	Baked Mudstone	Flake	Primary	Debitage	Mint	No	0	0	0
F 431	Loch a Sguirr 1	Tr 1	Spit 3	No	2	Baked Mudstone	Flake	Inner	Debitage	Mint	Yes	0	0	0
F 430	Loch a Sguirr 1	Tr 1	Surface	No	1	Baked Mudstone	Flake	Secondary	Debitage	Mint	Yes	0	0	0
F 437	Loch a Sguirr 1	Tr 1	Spit 4	No	1	Baked Mudstone	Flake	Inner	Regular	Mint	No	30	20	5
F 429	Loch a Sguirr 1	Tr 1	Surface	No	1	Baked Mudstone	Flake	Secondary	Regular	Mint	No	35	38	13
F 9	Loch a Sguirr 1		Surface	No	6	Baked Mudstone	Flake	Inner	Regular	Mint	Yes	0	0	0
F 437	Loch a Sguirr 1	Tr 1	Spit 4	No	2	Baked Mudstone	Flake	Inner	Debitage	Mint	No	0	0	0
F 446	Loch a Sguirr 1	Tr 1	Spit 1	No	31	Quartz	Chunk	Inner	Debitage	Mint	No	0	0	0
F 315	Loch a Sguirr 1	Tr 4	Spit 1	No	1	Quartz	Chunk	Inner	Debitage	Mint	No	0	0	0
F 440	Loch a Sguirr 1	Tr 1	Spit 1	No	2	Baked Mudstone	Chunk	Inner	Debitage	Mint	No	0	0	0
F 7	Loch a Sguirr 1		Surface	No	1	Baked Mudstone	Flake	Inner	Regular	Mint	No	19	8	2
F 441	Loch a Sguirr 1	Tr 1	Spit 1	No	1	Baked Mudstone	Flake	Inner	Debitage	Mint	No	0	0	0
F 442	Loch a Sguirr 1	Tr 1	Spit 1	No	1	Quartz	Blade	Inner	Regular	Mint	Yes	28	11	5

F 443	Loch a Sguirr 1	Tr 1	Spit 1	No	1	Quartz	Flake	Inner	Debitage	Mint	No	0	0	0
F 444	Loch a Sguirr 1	Tr 1	Spit 1	No	3	Quartz	Blade	Inner	Regular	Mint	Yes	0	0	0
F 445	Loch a Sguirr 1	Tr 1	Spit 1	No	1	Quartz	Flake	Secondary	Regular	Mint	Yes	0	0	0
F 428	Loch a Sguirr 1	Tr 1	107	No	1	Quartz	Blade	Inner	Regular	Mint	Yes	35	14	4
F 269	Ob Cayeeayaig		Beach	No	1	Chalcedonic silica	Pebble	Whole	Debitage	Abraded	No	43	39	29
F 268	Ob Cayeeayaig		Beach	No	1	Chalcedonic silica	Pebble	Whole	Debitage	Abraded	No	41	37	26
F 23	Sand 1		Surface	Yes	2	Quartz	Chunk	Secondary	Debitage	Corticated	No	0	0	0
F 238	Sand 1	Tr 1	Spit 4	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Corticated	No	13	7	2
F 237	Sand 1	Tr 1	Spit 4	Yes	1	Baked Mudstone	Blade	Inner	Regular	Corticated	Yes	12	8	1
F 214	Sand 1	Tr 2	Spit 5	Yes	1	Quartz	Flake	Inner	Regular	Mint	Yes	0	0	0
F 236	Sand 1	Tr 1	Spit 4	Yes	1	Baked Mudstone	Flake	Inner	Regular	Corticated	Yes	0	0	0
F 235	Sand 1	Tr 1	Spit 4	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	16	9	6
F 234	Sand 1	Tr 1	Spit 4	Yes	1	Baked Mudstone	Flake	Inner	Regular	Mint	No	17	14	7
F 215	Sand 1	Tr 2	Spit 5	Yes	1	Bloodstone	Flake	Inner	Regular	Mint	Yes	0	0	0
F 232	Sand 1	Tr 1	Spit 3	Yes	1	Quartz	Chunk	Inner	Debitage	Mint	No	0	0	0
F 231	Sand 1	Tr 1	Spit 3	Yes	1	Chalcedonic silica	Flake	Secondary	Debitage	Mint	Yes	0	0	0
F 230	Sand 1	Tr 1	Spit 3	Yes	1	Chalcedonic silica	Flake	Secondary	Debitage	Corticated	No	0	0	0
F 216	Sand 1	Tr 2	Spit 5	Yes	1	Bloodstone	Flake	Inner	Debitage	Mint	No	0	0	0
F 217	Sand 1	Tr 2	Spit 5	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Corticated	No	12	16	4
F 220	Sand 1	Tr 2	Spit 5	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Burnt	Yes	0	0	0
F 229	Sand 1	Tr 1	Spit 3	Yes	1	Quartz	Pebble	Flaked	Debitage	Mint	No	14	12	7
F 228	Sand 1	Tr 1	Spit 3	Yes	1	Chalcedonic silica	Flake	Primary	Regular	Mint	No	22	17	6
F 227	Sand 1	Tr 1	Spit 3	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	33	12	9
F 218	Sand 1	Tr 2	Spit 5	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Corticated	No	13	13	2
F 226	Sand 1	Tr 1	Spit 3	Yes	1	Baked Mudstone	Flake	Inner	Regular	Mint	Yes	0	0	0
F 219	Sand 1	Tr 2	Spit 5	Yes	1	Chalcedonic silica	Flake	Secondary	Regular	Corticated	No	17	11	2
F 22	Sand 1		Surface	Yes	1	Quartz	Pebble	Flaked	Natural	Abraded	No	0	0	0
F 225	Sand 1	Tr 2	Spit 5	Yes	1	Chalcedonic silica	Retouched Blade	Inner	Fine point	Mint	No	14	4	3
F 224	Sand 1	Tr 2	Spit 5	Yes	1	Baked Mudstone	Retouched Blade	Inner	Fine point	Abraded	No	17	3	2
F 223	Sand 1	Tr 2	Spit 5	Yes	1	Baked Mudstone	Chunk	Inner	Debitage	Mint	No	0	0	0

F 222	Sand 1	Tr 2	Spit 5	Yes	1	Chalcedonic silica	Flake	Inner	Debitage	Mint	No	0	0	0
F 221	Sand 1	Tr 2	Spit 5	Yes	1	Chalcedonic silica	Flake	Secondary	Regular	Corticated	Yes	0	0	0
F 239	Sand 1	Tr 1	Spit 4	Yes	1	Chalcedonic silica	Flake	Inner	Debitage	Corticated	No	0	0	0
F 262	Sand 1	Tr 2	Spit 1	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	15	10	2
F 254	Sand 1	Tr 2	Spit 3	No	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	25	29	6
F 257	Sand 1	Tr 2	Spit 1	Yes	1	Baked Mudstone	Flake	Inner	Debitage	Abraded	No	0	0	0
F 259	Sand 1	Tr 2	Spit 1	Yes	1	Baked Mudstone	Blade	Inner	Regular	Mint	Yes	22	8	4
F 259	Sand 1	Tr 2	Spit 1	Yes	1	Baked Mudstone	Flake	Secondary	Debitage	Abraded	No	0	0	0
F 26	Sand 1		Surface	Yes	1	Chalcedonic silica	Chunk	Inner	Debitage	Corticated	No	22	9	9
F 255	Sand 1	Tr 2	Spit 1	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	17	18	3
F 261	Sand 1	Tr 2	Spit 1	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	16	9	4
F 253	Sand 1	Tr 5	Spit 2	Yes	1	Quartz	Retouched Blade	Inner	Microlithic retouch	Mint	Yes	8	5	2
F 263	Sand 1	Tr 2	Spit 1	Yes	1	Jasper	Flake	Inner	Regular	Mint	No	20	22	5
F 264	Sand 1	Tr 5	Spit 1	Yes	3	Quartz	Flake	Inner	Debitage	Mint	No	0	0	0
F 265	Sand 1	Tr 5	Spit 1	Yes	1	Chalcedonic silica	Flake	Inner	Debitage	Burnt	No	0	0	0
F 27	Sand 1		Surface	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	23	19	4
F 213	Sand 1	Tr 2	Spit 5	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	14	9	3
F 163	Sand 1	Tr 2	Spit 3	Yes	1	Chalcedonic silica	Chunk	Secondary	Debitage	Mint	No	0	0	0
F 260	Sand 1	Tr 2	Spit 1	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Corticated	Yes	0	0	0
F 247	Sand 1	Tr 1	Spit 4	Yes	1	Chalcedonic silica	Chunk	Inner	Debitage	Mint	No	0	0	0
F 240	Sand 1	Tr 1	Spit 4	Yes	1	Chalcedonic silica	Blade	Inner	Regular	Mint	Yes	12	8	3
F 241	Sand 1	Tr 1	Spit 4	Yes	1	Baked Mudstone	Flake	Inner	Regular	Mint	Yes	0	0	0
F 242	Sand 1	Tr 1	Spit 4	Yes	1	Chalcedonic silica	Flake	Inner	Debitage	Corticated	No	0	0	0
F 243	Sand 1	Tr 1	Spit 4	Yes	3	Quartz	Flake	Inner	Regular	Mint	Yes	0	0	0
F 244	Sand 1	Tr 1	Spit 4	Yes	4	Quartz	Flake	Inner	Debitage	Mint	No	0	0	0
F 256	Sand 1	Tr 2	Spit 1	Yes	3	Baked Mudstone	Flake	Inner	Regular	Abraded	Yes	0	0	0
F 246	Sand 1	Tr 1	Spit 4	Yes	1	Agate	Chunk	Inner	Debitage	Mint	No	0	0	0
F 24	Sand 1		Surface	Yes	2	Quartz	Chunk	Inner	Debitage	Corticated	No	0	0	0
F 248	Sand 1	Tr 1	Spit 4	Yes	1	Baked Mudstone	Retouched Flake	Inner	Miscellaneous	Mint	Yes	17	9	3
F 249	Sand 1	Tr 11	Spit 1	Yes	1	Quartz	Chunk	Inner	Debitage	Mint	No	0	0	0

F 25	Sand 1		Surface	Yes	1	Baked Mudstone	Flake	Inner	Regular	Corticated	Yes	22	20	7
F 250	Sand 1	Tr 11	Spit 1	Yes	1	Quartz	Flake	Secondary	Regular	Mint	No	24	16	8
F 251	Sand 1	Tr 5	Spit 2	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	18	10	6
F 252	Sand 1	Tr 5	Spit 2	Yes	1	Quartz	Flake	Inner	Debitage	Mint	No	0	0	0
F 245	Sand 1	Tr 1	Spit 4	Yes	1	Chalcedonic silica	Chunk	Inner	Debitage	Burnt	No	0	0	0
F 170	Sand 1	Tr 2	Spit 3	Yes	1	Baked Mudstone	Flake	Primary	Debitage	Corticated	No	0	0	0
F 165	Sand 1	Tr 2	Spit 3	Yes	1	Baked Mudstone	Flake	Secondary	Regular	Abraded	No	24	17	8
F 301	Sand 1	Tr 1	Spit 5	No	2	Baked Mudstone	Flake	Inner	Regular	Abraded	Yes	0	0	0
F 164	Sand 1	Tr 2	Spit 3	Yes	2	Baked Mudstone	Chunk	Inner	Debitage	Abraded	No	0	0	0
F 166	Sand 1	Tr 2	Spit 3	Yes	1	Baked Mudstone	Flake	Secondary	Regular	Corticated	No	18	6	3
F 167	Sand 1	Tr 2	Spit 3	Yes	1	Baked Mudstone	Flake	Inner	Regular	Mint	No	17	10	7
F 168	Sand 1	Tr 2	Spit 3	Yes	1	Baked Mudstone	Flake	Inner	Regular	Corticated	No	18	7	3
F 161	Sand 1	Tr 2	Spit 2	Yes	1	Baked Mudstone	Blade	Inner	Regular	Abraded	Yes	0	0	0
F 17	Sand 1		Surface	Yes	1	Quartz	Flake	Inner	Regular	Corticated	No	15	11	4
F 160	Sand 1	Tr 2	Spit 2	Yes	1	Baked Mudstone	Flake	Inner	Debitage	Abraded	No	0	0	0
F 171	Sand 1	Tr 2	Spit 3	Yes	1	Baked Mudstone	Flake	Secondary	Debitage	Corticated	No	0	0	0
F 172	Sand 1	Tr 2	Spit 3	Yes	1	Baked Mudstone	Flake	Inner	Debitage	Corticated	No	0	0	0
F 173	Sand 1	Tr 2	Spit 3	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Corticated	Yes	0	0	0
F 175	Sand 1	Tr 2	Spit 4	Yes	1	Coarse Stone	Flake	Inner	Regular	Mint	No	16	31	5
F 176	Sand 1	Tr 2	Spit 4	Yes	1	Coarse Stone	Flake	Inner	Regular	Mint	No	68	33	16
F 177	Sand 1	Tr 2	Spit 4	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	40	20	6
F 178	Sand 1	Tr 2	Spit 4	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	12	20	4
F 169	Sand 1	Tr 2	Spit 3	Yes	2	Baked Mudstone	Flake	Inner	Regular	Corticated	Yes	0	0	0
F 152	Sand 1	Tr 1	Spit 2	Yes	1	Quartz	Chunk	Secondary	Debitage	Mint	No	0	0	0
F 11	Sand 1		Surface	Yes	1	Baked Mudstone	Retouched Flake	Inner	B and T point	Abraded	Yes	20	16	3
F 13	Sand 1		Surface	Yes	1	Quartz	Flake	Secondary	Regular	Mint	No	36	8	9
F 14	Sand 1		Surface	Yes	1	Quartz	Flake	Secondary	Regular	Mint	No	28	8	11
F 148	Sand 1	Tr 3	Spit 3	Yes	1	Quartz	Chunk	Inner	Debitage	Mint	Yes	0	0	0
F 149	Sand 1	Tr 3	Spit 3	Yes	1	Quartzite	Flake	Secondary	Regular	Mint	No	22	10	5
F 15	Sand 1		Suface	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	14	5	5

F 162	Sand 1	Tr 2	Spit 3	Yes	1	Quartz	Chunk	Inner	Debitage	Mint	No	0	0	0
F 151	Sand 1	Tr 1	Spit 2	Yes	1	Quartz	Flake	Inner	Debitage	Mint	Yes	0	0	0
F 180	Sand 1	Tr 2	Spit 4	Yes	7	Baked Mudstone	Flake	Inner	Regular	Abraded	Yes	0	0	0
F 153	Sand 1	Tr 1	Spit 2	Yes	1	Quartz	Chunk	Inner	Debitage	Abraded	No	0	0	0
F 155	Sand 1	Tr 2	Spit 2	Yes	1	Baked Mudstone	Flake	Inner	Regular	Mint	No	41	21	9
F 156	Sand 1	Tr 2	Spit 2	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	27	26	8
F 157	Sand 1	Tr 2	Spit 2	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Mint	No	22	23	6
F 158	Sand 1	Tr 2	Spit 2	Yes	1	Bloodstone	Blade	Inner	Regular	Mint	Yes	0	0	0
F 159	Sand 1	Tr 2	Spit 2	Yes	1	Baked Mudstone	Blade	Secondary	Regular	Abraded	Yes	0	0	0
F 16	Sand 1		Surface	Yes	1	Quartz	Flake	Inner	Regular	Corticated	No	24	29	10
F 150	Sand 1	Tr 1	Spit 2	Yes	1	Rock crystal	Flake	Secondary	Regular	Mint	No	14	7	3
F 205	Sand 1	Tr 2	Spit 5	Yes	1	Chalcedonic silica	Blade	Inner	Regular	Mint	Yes	32	16	6
F 198	Sand 1	Tr 2	Spit 5	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	39	19	15
F 199	Sand 1	Tr 2	Spit 5	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	25	19	7
F 20	Sand 1		Surface	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	15	18	4
F 200	Sand 1	Tr 2	Spit 5	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	23	16	4
F 201	Sand 1	Tr 2	Spit 5	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	14	12	2
F 202	Sand 1	Tr 2	Spit 5	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	17	15	5
F 179	Sand 1	Tr 2	Spit 4	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	26	17	7
F 204	Sand 1	Tr 2	Spit 5	Yes	1	Baked Mudstone	Blade	Inner	Regular	Mint	Yes	13	5	2
F 195	Sand 1	Tr 2	Spit 5	Yes	1	Jasper	Flake	Inner	Regular	Mint	Yes	0	0	0
F 206	Sand 1	Tr 2	Spit 5	Yes	2	Baked Mudstone	Chunk	Inner	Debitage	Abraded	No	0	0	0
F 207	Sand 1	Tr 2	Spit 5	Yes	13	Baked Mudstone	Flake	Inner	Regular	Abraded	Yes	0	0	0
F 208	Sand 1	Tr 2	Spit 5	Yes	1	Baked Mudstone	Flake	Inner	Debitage	Abraded	No	0	0	0
F 209	Sand 1	Tr 2	Spit 5	Yes	1	Baked Mudstone	Blade	Inner	Regular	Abraded	Yes	0	0	0
F 21	Sand 1		Surface	Yes	6	Quartz	Chunk	Fragment	Debitage	Mint	No	0	0	0
F 210	Sand 1	Tr 2	Spit 5	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Mint	No	24	24	10
F 211	Sand 1	Tr 2	Spit 5	Yes	1	Quartz	Flake	Inner	Debitage	Mint	No	0	0	0
F 203	Sand 1	Tr 2	Spit 5	Yes	1	Coarse Stone	Flake	Inner	Regular	Mint	Yes	0	0	0
F 189	Sand 1	Tr 2	Spit 4	Yes	4	Quartz	Chunk	Inner	Debitage	Mint	No	0	0	0

F 212	Sand 1	Tr 2	Spit 5	Yes	2	Quartz	Flake	Inner	Regular	Mint	Yes	0	0	0
F 181	Sand 1	Tr 2	Spit 4	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	16	10	3
F 182	Sand 1	Tr 2	Spit 4	Yes	1	Chalcedonic silica	Flake	Secondary	Regular	Corticated	No	30	21	7
F 183	Sand 1	Tr 2	Spit 4	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Corticated	No	21	17	4
F 184	Sand 1	Tr 2	Spit 4	Yes	1	Baked Mudstone	Blade	Inner	Regular	Abraded	Yes	0	0	0
F 185	Sand 1	Tr 2	Spit 4	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Burnt	No	10	7	2
F 186	Sand 1	Tr 2	Spit 4	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Mint	Yes	0	0	0
F 197	Sand 1	Tr 2	Spit 5	Yes	1	Jasper	Flake	Inner	Regular	Mint	No	9	20	3
F 188	Sand 1	Tr 2	Spit 4	Yes	1	Baked Mudstone	Flake	Inner	Debitage	Mint	No	0	0	0
F 196	Sand 1	Tr 2	Spit 5	Yes	1	Jasper	Flake	Inner	Regular	Mint	No	21	39	6
F 19	Sand 1		Surface	Yes	1	Quartz	Flake	Secondary	Regular	Mint	No	12	13	3
F 190	Sand 1	Tr 2	Spit 4	Yes	2	Chalcedonic silica	Chunk	Inner	Debitage	Burnt	No	0	0	0
F 191	Sand 1	Tr 2	Spit 4	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	18	10	4
F 192	Sand 1	Tr 2	Spit 4	Yes	1	Quartz	Flake	Inner	Debitage	Mint	No	0	0	0
F 193	Sand 1	Tr 2	Spit 4	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	13	9	4
F 194	Sand 1	Tr 2	Spit 4	Yes	1	Baked Mudstone	Retouched Flake	Inner	Scraper	Abraded	No	25	6	5
F 18	Sand 1		Surface	Yes	1	Quartz	Flake	Secondary	Regular	Mint	Yes	13	11	4
F 188	Sand 1	Tr 2	Spit 4	Yes	1	Baked Mudstone	Chunk	Inner	Debitage	Abraded	No	0	0	0
F 399	Sand 1	Tr 7	Spit 9	Yes	2	Quartz	Flake	Inner	Debitage	Mint	No	0	0	0
F 42	Sand 1		Surface	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Corticated	No	15	21	4
F 389	Sand 1	Tr 7	Spit 8	Yes	1	Agate	Flake	Inner	Regular	Mint	No	19	20	6
F 39	Sand 1		Surface	Yes	1	Baked Mudstone	Flake	Secondary	Regular	Corticated	No	11	30	14
F 390	Sand 1	Tr 7	Spit 8	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	16	13	5
F 391	Sand 1	Tr 7	Spit 8	Yes	1	Quartz	Flake	Inner	Regular	Mint	Yes	0	0	0
F 392	Sand 1	Tr 7	Spit 8	Yes	1	Quartz	Chunk	Secondary	Debitage	Mint	No	0	0	0
F 393	Sand 1	Tr 7	Spit 8	Yes	1	Baked Mudstone	Flake	Inner	Debitage	Corticated	No	0	0	0
F 394	Sand 1	Tr 7	Spit 8	Yes	3	Quartz	Flake	Inner	Debitage	Mint	No	0	0	0
F 395	Sand 1	Tr 7	Spit 8	Yes	1	Chalcedonic silica	Flake	Secondary	Debitage	Mint	No	0	0	0
F 387	Sand 1	Tr 7	Spit 8	Yes	1	Baked Mudstone	Flake	Inner	Regular	Corticated	No	29	12	3
F 398	Sand 1	Tr 7	Spit 9	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	20	14	7

F 386	Sand 1	Tr 7	Spit 8	Yes	1	Baked Mudstone	Flake	Inner	Regular	Mint	No	37	29	11
F 40	Sand 1		Surface	Yes	1	Baked Mudstone	Flake	Inner	Regular	Corticated	Yes	0	0	0
F 400	Sand 1	Tr 7	Spit 9	Yes	1	Baked Mudstone	Flake	Secondary	Regular	Mint	No	21	13	4
F 401	Sand 1	Tr 7	Spit 9	Yes	1	Baked Mudstone	Flake	Secondary	Regular	Abraded	No	26	16	11
F 402	Sand 1	Tr 7	Spit 9	Yes	4	Baked Mudstone	Flake	Inner	Regular	Abraded	Yes	0	0	0
F 403	Sand 1	Tr 7	Spit 9	Yes	2	Baked Mudstone	Flake	Inner	Debitage	Mint	No	0	0	0
F 404	Sand 1	Tr 7	Spit 9	Yes	1	Baked Mudstone	Blade	Inner	Regular	Corticated	Yes	12	7	4
F 405	Sand 1	Tr 7	Spit 9	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Burnt	Yes	0	0	0
F 406	Sand 1	Tr 7	Spit 9	Yes	1	Quartz	Retouched Flake	Secondary	Edge retouched	Mint	No	52	28	16
F 366	Sand 1	Tr 7	Spit 1	Yes	2	Quartz	Flake	Inner	Debitage	Mint	Yes	0	0	0
F 397	Sand 1	Tr 7	Spit 9	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	46	26	18
F 377	Sand 1	Tr 7	Spit 1	Yes	3	Baked Mudstone	Flake	Inner	Regular	Abraded	Yes	0	0	0
F 367	Sand 1	Tr 7	Spit 1	Yes	6	Quartz	Pebble	Whole	Debitage	Abraded	No	0	0	0
F 277	Sand 1	Tr 9	Spit 8	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	14	10	3
F 369	Sand 1	Tr 1	Spit 8	Yes	1	Quartz	Core	Without Cortex	Bipolar	Mint	No	22	29	10
F 30	Sand 1		Surface	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	25	11	11
F 370	Sand 1	Tr 1	Spit 8	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	Yes	0	0	0
F 371	Sand 1	Tr 1	Spit 8	Yes	1	Baked Mudstone	Flake	Inner	Debitage	Abraded	No	0	0	0
F 372	Sand 1	Tr 1	Spit 8	Yes	1	Quartz	Chunk	Secondary	Debitage	Mint	No	0	0	0
F 373	Sand 1	Tr 1	Spit 8	Yes	4	Quartz	Chunk	Inner	Debitage	Mint	No	0	0	0
F 374	Sand 1	Tr 1	Spit 8	Yes	1	Quartzite	Chunk	Inner	Debitage	Mint	No	0	0	0
F 388	Sand 1	Tr 7	Spit 8	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	18	15	4
F 376	Sand 1	Tr 7	Spit 1	Yes	1	Chalcedonic silica	Chunk	Secondary	Debitage	Burnt	No	0	0	0
F 421	Sand 1		Surface	No	1	Baked Mudstone	Chunk	Secondary	Debitage	Corticated	No	0	0	0
F 378	Sand 1	Tr 9	Spit 5	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	12	11	2
F 379	Sand 1	Tr 9	Spit 5	Yes	2	Quartz	Flake	Inner	Regular	Mint	Yes	0	0	0
F 38	Sand 1		Surface	Yes	1	Baked Mudstone	Flake	Inner	Regular	Corticated	Yes	0	0	0
F 380	Sand 1	Tr 9	Spit 5	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	Yes	0	0	0
F 381	Sand 1	Tr 9	Spit 5	Yes	1	Baked Mudstone	Flake	Inner	Regular	Mint	No	24	10	2
F 382	Sand 1	Tr 9	Spit 5	Yes	1	Baked Mudstone	Chunk	Inner	Debitage	Burnt	No	0	0	0

F 383	Sand 1	Tr 9	Spit 10	No	1	Baked Mudstone	Flake	Inner	Regular	Burnt	No	19	24	6
F 384	Sand 1	Tr 9	Spit 8	No	1	Quartz	Core	Without Cortex	Bipolar	Mint	No	34	15	14
F 385	Sand 1	Tr 7	Spit 8	Yes	3	Baked Mudstone	Chunk	Inner	Debitage	Corticated	No	0	0	0
F 375	Sand 1	Tr 7	Spit 1	Yes	1	Chalcedonic silica	Core	Without Cortex	Bipolar	Burnt	No	18	9	6
F 70	Sand 1		Surface	Yes	1	Chalcedonic silica	Chunk	Inner	Debitage	Burnt	No	0	0	0
F 41	Sand 1		Surface	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	16	13	6
F 60	Sand 1		Surface	Yes	1	Baked Mudstone	Chunk	Secondary	Debitage	Corticated	No	0	0	0
F 61	Sand 1		Surface	Yes	1	Baked Mudstone	Flake	Inner	Regular	Corticated	No	16	14	5
F 62	Sand 1		Surface	Yes	1	Baked Mudstone	Chunk	Inner	Debitage	Corticated	No	0	0	0
F 63	Sand 1		Surface	Yes	1	Baked Mudstone	Chunk	Inner	Debitage	Mint	No	0	0	0
F 64	Sand 1		Surface	Yes	2	Baked Mudstone	Blade	Inner	Regular	Corticated	Yes	0	0	0
F 65	Sand 1		Surface	Yes	1	Baked Mudstone	Flake	Inner	Regular	Corticated	No	19	22	6
F 66	Sand 1		Surface	Yes	2	Baked Mudstone	Chunk	Inner	Debitage	Corticated	No	0	0	0
F 67	Sand 1		Surface	Yes	7	Baked Mudstone	Chunk	Inner	Debitage	Corticated	No	0	0	0
F 58	Sand 1		Surface	Yes	1	Baked Mudstone	Chunk	Inner	Debitage	Abraded and cortic	No	0	0	0
F 69	Sand 1		Surface	Yes	6	Chalcedonic silica	Chunk	Inner	Debitage	Mint	No	0	0	0
F 57	Sand 1		Surface	Yes	1	Baked Mudstone	Flake	Secondary	Regular	Mint	No	33	17	8
F 71	Sand 1		Surface	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded and cortic	No	0	0	0
F 72	Sand 1		Surface	Yes	1	Chalcedonic silica	Chunk	Inner	Debitage	Corticated	No	0	0	0
F 73	Sand 1		Surface	Yes	1	Baked Mudstone	Flake	Secondary	Regular	Mint	No	34	22	11
F 74	Sand 1		Surface	Yes	1	Baked Mudstone	Flake	Inner	Regular	Mint	Yes	0	0	0
F 75	Sand 1		Surface	Yes	1	Chalcedonic silica	Core	Without Cortex	Bipolar	Mint	No	22	16	7
F 76	Sand 1		Surface	Yes	1	Quartz	Flake	Secondary	Regular	Mint	Yes	0	0	0
F 77	Sand 1		Surface	No	1	Chalcedonic silica	Retouched Flake	Secondary	Microlithic retouch	Mint	Yes	12	16	5
F154	Sand 1	Tr 2	Spit 2	Yes	1	Baked Mudstone	Chunk	Inner	Debitage	Abraded	No	0	0	0
F324	Sand 1	Tr 7	Spit 10	Yes	1	Bloodstone	Flake	Inner	Regular	Mint	Yes	0	0	0
F 68	Sand 1		Surface	Yes	4	Baked Mudstone	Chunk	Inner	Debitage	Mint	No	0	0	0
F 48	Sand 1		Surface	Yes	14	Bloodstone	Chunk	Inner	Debitage	Corticated	No	0	0	0
F 422	Sand 1		Surface	No	1	Quartz	Flake	Inner	Regular	Mint	No	26	20	14
F 423	Sand 1		Surface	No	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	30	15	5

F 424	Sand 1		Surface	No	1	Baked Mudstone	Blade	Inner	Regular	Abraded	No	22	7	3
F 425	Sand 1		Surface	No	2	Baked Mudstone	Flake	Inner	Regular	Corticated	Yes	0	0	0
F 426	Sand 1		Surface	No	1	Agate	Flake	Secondary	Regular	Mint	Yes	0	0	0
F 427	Sand 1		Surface	No	1	Chalcedonic silica	Retouched Flake	Secondary	Scraper, general	Mint	No	12	12	7
F 43	Sand 1		Surface	Yes	3	Bloodstone	Chunk	Inner	Debitage	Mint	No	0	0	0
F 44	Sand 1		Surface	Yes	4	Bloodstone	Chunk	Secondary	Debitage	Corticated	No	0	0	0
F 45	Sand 1		Surface	Yes	2	Bloodstone	Chunk	Secondary	Debitage	Corticated	No	0	0	0
F 59	Sand 1		Surface	Yes	1	Baked Mudstone	Flake	Secondary	Regular	Corticated	No	21	24	6
F 47	Sand 1		Surface	Yes	1	Bloodstone	Chunk	Inner	Debitage	Mint	No	0	0	0
F 368	Sand 1	Tr 9	Spit 8	No	1	Baked Mudstone	Flake	Inner	Regular	Corticated	No	18	11	3
F 49	Sand 1		Surface	Yes	1	Baked Mudstone	Retouched Blade	Inner	Backed bladelet	Abraded	No	14	4	2
F 50	Sand 1		Surface	Yes	1	Agate	Pebble	Secondary	Natural	Mint	No	0	0	0
F 50	Sand 1		Surface	Yes	1	Baked Mudstone	Retouched Flake	Inner	Edge retouched	Corticated	Yes	17	23	5
F 51	Sand 1		Surface	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded and cortic	No	34	21	7
F 52	Sand 1		Surface	Yes	3	Baked Mudstone	Chunk	Inner	Debitage	Corticated	No	0	0	0
F 53	Sand 1		Surface	Yes	2	Baked Mudstone	Chunk	Inner	Debitage	Abraded and cortic	No	0	0	0
F 54	Sand 1		Surface	Yes	1	Baked Mudstone	Blade	Inner	Regular	Corticated	No	26	11	2
F 55	Sand 1		Surface	Yes	2	Baked Mudstone	Flake	Inner	Regular	Corticated	Yes	0	0	0
F 56	Sand 1		Surface	Yes	3	Baked Mudstone	Flake	Inner	Regular	Corticated	Yes	0	0	0
F 46	Sand 1		Surface	Yes	1	Chalcedonic silica	Flake	Secondary	Regular	Mint	No	12	27	7
F 318	Sand 1	Tr 7	Spit 10	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	14	10	6
F 306	Sand 1	Tr 1	Spit 5	No	2	Chalcedonic silica	Flake	Inner	Debitage	Mint	Yes	0	0	0
F 307	Sand 1	Tr 1	Spit 5	No	1	Quartz	Flake	Secondary	Debitage	Mint	No	0	0	0
F 308	Sand 1	Tr 1	Spit 5	No	1	Rock crystal	Flake	Inner	Debitage	Mint	No	0	0	0
F 309	Sand 1	Tr 1	Spit 5	No	1	Bloodstone	Flake	Inner	Regular	Mint	No	13	7	4
F 31	Sand 1		Surface	Yes	1	Chalcedonic silica	Flake	Secondary	Regular	Corticated	No	17	20	5
F 310	Sand 1	Tr 1	Spit 5	No	3	Baked Mudstone	Flake	Inner	Debitage	Abraded	No	0	0	0
F 311	Sand 1	Tr 1	Spit 5	No	2	Quartz	Flake	Inner	Debitage	Mint	No	0	0	0
F 312	Sand 1	Tr 1	Spit 5	No	2	Chalcedonic silica	Flake	Inner	Debitage	Corticated	No	0	0	0
F 313	Sand 1	Tr 1	Spit 5	No	1	Quartz	Chunk	Secondary	Debitage	Mint	No	0	0	0

F 279	Sand 1	Tr 9	Spit 8	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	13	14	5
F 317	Sand 1	Tr 7	Spit 10	Yes	1	Bloodstone	Flake	Inner	Regular	Mint	No	25	12	6
F 303	Sand 1	Tr 1	Spit 5	No	1	Quartz	Core	Without Cortex	Bipolar	Mint	No	28	14	11
F 319	Sand 1	Tr 7	Spit 10	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	26	15	6
F 32	Sand 1		Surface	Yes	1	Baked Mudstone	Flake	Secondary	Regular	Mint	Yes	28	13	8
F 320	Sand 1	Tr 7	Spit 10	Yes	1	Baked Mudstone	Flake	Inner	Regular	Mint	No	29	13	7
F 281	Sand 1	Tr 9	Spit 6	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Burnt	Yes	0	0	0
F 321	Sand 1	Tr 7	Spit 10	Yes	2	Baked Mudstone	Flake	Inner	Regular	Abraded	Yes	0	0	0
F 37	Sand 1		Surface	Yes	1	Baked Mudstone	Flake	Inner	Regular	Corticated	Yes	0	0	0
F 280	Sand 1	Tr 9	Spit 8	Yes	1	Quartz	Blade	Inner	Regular	Mint	Yes	14	17	2
F 365	Sand 1	Tr 7	Spit 1	Yes	2	Quartz	Flake	Secondary	Debitage	Mint	Yes	0	0	0
F 282	Sand 1	Tr 9	Spit 13	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	15	15	5
F 316	Sand 1	Tr 7	Spit 10	Yes	2	Quartz	Chunk	Secondary	Debitage	Mint	No	0	0	0
F 293	Sand 1	Tr 1	Spit 7	No	1	Quartz	Flake	Inner	Regular	Mint	Yes	0	0	0
F 283	Sand 1	Tr 9	Spit 13	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	19	17	3
F 284	Sand 1	Tr 9	Spit 13	Yes	1	Baked Mudstone	Flake	Inner	Debitage	Mint	No	0	0	0
F 285	Sand 1	Tr 9	Spit 7	Yes	1	Baked Mudstone	Flake	Inner	Regular	Mint	No	17	13	4
F 286	Sand 1	Tr 9	Spit 7	Yes	5	Quartz	Flake	Inner	Regular	Mint	Yes	0	0	0
F 287	Sand 1	Tr 9	Spit 7	Yes	3	Quartz	Chunk	Inner	Debitage	Mint	No	0	0	0
F 288	Sand 1	Tr 7	Spit 2	No	1	Chalcedonic silica	Flake	Inner	Regular	Mint	No	15	21	7
F 289	Sand 1	Tr 7	Spit 2	No	1	Baked Mudstone	Flake	Secondary	Regular	Mint	No	24	21	11
F 29	Sand 1		Surface	Yes	1	Chalcedonic silica	Chunk	Secondary	Debitage	Corticated	No	0	0	0
F 290	Sand 1	Tr 7	Spit 2	No	1	Quartz	Retouched Flake	Secondary	Edge retouched	Mint	No	29	15	8
F 305	Sand 1	Tr 1	Spit 5	No	1	Chalcedonic silica	Flake	Inner	Regular	Mint	No	14	7	2
F 292	Sand 1	Tr 4	Spit 6	No	1	Chalcedonic silica	Flake	Inner	Debitage	Burnt	No	0	0	0
F 304	Sand 1	Tr 1	Spit 5	No	2	Chalcedonic silica	Flake	Inner	Regular	Corticated	Yes	0	0	0
F 294	Sand 1	Tr 1	Spit 7	No	1	Chalcedonic silica	Flake	Inner	Regular	Corticated	No	12	13	4
F 295	Sand 1	Tr 1	Spit 7	No	1	Quartz	Chunk	Inner	Debitage	Mint	No	0	0	0
F 296	Sand 1	Tr 1	Spit 7	No	1	Chalcedonic silica	Flake	Inner	Debitage	Corticated	No	0	0	0
F 297	Sand 1	Tr 1	Spit 7	No	1	Chalcedonic silica	Flake	Secondary	Regular	Corticated	Yes	0	0	0

F 298	Sand 1	Tr 1	Spit 7	No	2	Baked Mudstone	Flake	Inner	Regular	Corticated	Yes	0	0	0
F 299	Sand 1	Tr 1	Spit 5	No	1	Unknown	Pebble	Flaked	Debitage	Mint	No	19	15	14
F 300	Sand 1	Tr 1	Spit 5	No	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	21	11	4
F396	Sand 1	Tr 7	Spit 9	Yes	3	Quartz	Chunk	Inner	Debitage	Mint	No	0	0	0
F 302	Sand 1	Tr 1	Spit 5	No	1	Quartz	Flake	Secondary	Regular	Mint	No	15	17	5
F 278	Sand 1	Tr 9	Spit 8	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	20	24	5
F 291	Sand 1	Tr 4	Spit 6	No	1	Quartz	Pebble	Flaked	Debitage	Mint	No	19	26	8
F 355	Sand 1	Tr 7	Spit 2	Yes	1	Baked Mudstone	Chunk	Inner	Debitage	Corticated	No	0	0	0
F 345	Sand 1	Tr 9	Spit 3	Yes	2	Quartz	Flake	Inner	Debitage	Mint	No	0	0	0
F 346	Sand 1	Tr 9	Spit 3	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Corticated	Yes	0	0	0
F 347	Sand 1	Tr 7	Spit 1	Yes	1	Quartz	Chunk	Secondary	Debitage	Mint	No	28	35	3
F 348	Sand 1	Tr 7	Spit 1	Yes	1	Quartz	Flake	Inner	Regular	Mint	Yes	0	0	0
F 349	Sand 1	Tr 9	Spit 2	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	24	24	6
F 35	Sand 1		Surface	Yes	1	Baked Mudstone	Flake	Secondary	Regular	Mint	Yes	0	0	0
F 350	Sand 1	Tr 9	Spit 2	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	21	13	5
F 351	Sand 1	Tr 9	Spit 2	Yes	1	Baked Mudstone	Flake	Inner	Regular	Corticated	No	15	11	3
F 352	Sand 1	Tr 9	Spit 2	Yes	1	Quartzite	Flake	Inner	Regular	Mint	Yes	0	0	0
F 28	Sand 1		Surface	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Abraded	No	21	14	4
F 354	Sand 1	Tr 9	Spit 2	Yes	1	Baked Mudstone	Flake	Inner	Debitage	Mint	No	0	0	0
F 342	Sand 1	Tr 9	Spit 3	Yes	1	Baked Mudstone	Flake	Inner	Debitage	Mint	No	0	0	0
F 356	Sand 1	Tr 7	Spit 1	No	1	Baked Mudstone	Flake	Inner	Regular	Corticated	Yes	0	0	0
F 357	Sand 1	Tr 7	Spit 8	No	1	Quartz	Chunk	Secondary	Debitage	Mint	No	42	30	14
F 358	Sand 1	Tr 7	Spit 1	No	1	Baked Mudstone	Flake	Secondary	Regular	Corticated	Yes	0	0	0
F 359	Sand 1	Tr 9	Spit 2	No	1	Chalcedonic silica	Blade	Inner	Regular	Mint	Yes	18	12	2
F 360	Sand 1	Tr 9	Spit 2	No	1	Quartz	Chunk	Inner	Debitage	Mint	No	0	0	0
F 361	Sand 1	Tr 7	Spit 1	Yes	1	Quartz	Core	Without Cortex	Bipolar	Mint	No	14	7	6
F 362	Sand 1	Tr 7	Spit 1	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Burnt	Yes	0	0	0
F 363	Sand 1	Tr 7	Spit 1	Yes	1	Quartz	Flake	Inner	Regular	Mint	No	24	12	8
F 364	Sand 1	Tr 7	Spit 1	Yes	1	Quartz	Flake	Inner	Regular	Mint	Yes	0	0	0
F 353	Sand 1	Tr 9	Spit 2	Yes	3	Quartz	Flake	Inner	Regular	Mint	Yes	0	0	0

F 333	Sand 1	Tr 1	Spit 5	Yes	1	Baked Mudstone	Flake	Inner	Debitage	Mint	No	0	0	0
F 322	Sand 1	Tr 7	Spit 10	Yes	1	Baked Mudstone	Flake	Secondary	Regular	Burnt	No	37	20	7
F 323	Sand 1	Tr 7	Spit 10	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Burnt	Yes	0	0	0
F 325	Sand 1	Tr 7	Spit 10	Yes	1	Baked Mudstone	Flake	Inner	Debitage	Abraded	No	0	0	0
F 326	Sand 1	Tr 7	Spit 10	Yes	1	Quartz	Flake	Inner	Debitage	Mint	No	0	0	0
F 327	Sand 1	Tr 7	Spit 10	Yes	1	Baked Mudstone	Retouched Blade	Inner	Edge retouched	Abraded	Yes	16	8	5
F 328	Sand 1	Tr 1	Spit 5	Yes	2	Baked Mudstone	Chunk	Inner	Debitage	Burnt	No	0	0	0
F 329	Sand 1	Tr 1	Spit 5	Yes	1	Baked Mudstone	Flake	Inner	Regular	Abraded	No	13	14	3
F 33	Sand 1		Surface	Yes	1	Baked Mudstone	Flake	Inner	Regular	Corticated	No	38	23	9
F 330	Sand 1	Tr 1	Spit 5	Yes	2	Baked Mudstone	Flake	Inner	Regular	Abraded	Yes	0	0	0
F 344	Sand 1	Tr 9	Spit 3	Yes	1	Quartz	Flake	Secondary	Debitage	Mint	No	0	0	0
F 332	Sand 1	Tr 1	Spit 5	Yes	1	Chalcedonic silica	Flake	Inner	Regular	Burnt	No	22	10	4
F 343	Sand 1	Tr 9	Spit 3	Yes	3	Quartz	Chunk	Secondary	Debitage	Mint	No	0	0	0
F 334	Sand 1	Tr 1	Spit 5	Yes	2	Baked Mudstone	Flake	Inner	Debitage	Abraded	No	0	0	0
F 335	Sand 1	Tr 1	Spit 5	Yes	2	Chalcedonic silica	Flake	Inner	Retouching flake	Corticated	No	0	0	0
F 336	Sand 1	Tr 7	Spit 1	Yes	1	Bloodstone	Retouched Blade	Inner	Fine point	Mint	No	15	5	2
F 337	Sand 1	Tr 9	Spit 12	Yes	1	Baked Mudstone	Flake	Inner	Debitage	Mint	No	0	0	0
F 338	Sand 1	Tr 9	Spit 12	Yes	1	Baked Mudstone	Retouched Flake	Inner	Microlithic retouch	Mint	Yes	14	4	2
F 339	Sand 1	Tr 7	Spit 3	Yes	1	Baked Mudstone	Core	Without Cortex	Platform	Mint	No	25	11	8
F 34	Sand 1		Surface	Yes	1	Baked Mudstone	Blade	Inner	Regular	Corticated	No	24	11	9
F 340	Sand 1	Tr 9	Spit 3	Yes	1	Quartz	Retouched Blade	Inner	Fine point	Mint	No	14	4	2
f 341	Sand 1	Tr 9	Spit 3	Yes	1	Quartz	Flake	Secondary	Regular	Mint	No	45	35	16
F 331	Sand 1	Tr 1	Spit 5	Yes	1	Baked Mudstone	Flake	Inner	Regular	Mint	No	15	8	3
F 417	Staffin Island 1		Surface	No	1	Chalcedonic silica	Flake	Secondary	Regular	Burnt	Yes	0	0	0
F 420	Staffin Island 1		Surface	No	1	Chalcedonic silica	Flake	Secondary	Regular	Corticated	Yes	0	0	0
F 418	Staffin Island 1		Surface	No	1	Chalcedonic silica	Flake	Inner	Regular	Abraded and cortic	No	22	13	5
F 416	Staffin Island 1		Surface	No	1	Chalcedonic silica	Flake	Inner	Regular	Mint	No	28	20	6
F 415	Staffin Island 1		Surface	No	1	Baked Mudstone	Flake	Secondary	Regular	Abraded	No	35	31	5
F 414	Staffin Island 1		Surface	No	1	Chalcedonic silica	Core	With Cortex	Platform	Corticated	No	38	41	41
F 419	Staffin Island 1		Surface	No	1	Chalcedonic silica	Flake	Inner	Regular	Corticated	No	22	13	2

4.4: Other finds

Finds Ref	Site Name	Trench	Context	Quantity	Material	Type	Classification	Condition	Broken	Size	in	mms	Notes
N 16	Sand 1	Tr 2	Spit 3	1	Pottery	Body Sherd	Ceramics	Mint	Yes	51	43	6	Piece of modern pot
N 17	Sand 1	Tr 5	Spit 1	1	Pottery	Body Sherd	Ceramics	Mint	No	24	26	5	recent
N 21	Sand 1	Tr 1	Spit 7	1	Pottery	Body Sherd	Ceramics	Mint	No	12	13	5	small sherd of coarse pottery
N 22	Sand 1	Tr 1	Spit 5	1	Glass	Fragment	Bottle Glass	Mint	Yes	25	16	3	
N 7	Sand 1		Surface	3	Pottery	Body Sherd	Ceramics	Abraded	No	0	0	0	Three small fragments of pottery
N 10	Crowlin 1	Tr 1	Spit 6	1	Lead	Fragment	Unknown	Abraded	No	36	34	1	flattened piece of lead
N 12	Crowlin 1	Tr 3	Spit 1	1	Iron	Fragment	Unknown	Rusty	Yes	14	6	6	Base of iron pin - like a tent peg?
N 13	An Corran C		Surface	1	Pottery	Rim Sherd	Ceramics	Mint	No	24	28	6	Small rim sherd of coarse red pottery

APPENDIX 5 - Field Drawings List
Site: Raasay Loch A Sguir

No	Sheet	Location	Sect/plan	Scale
1		Trench 1 south facing section	Section	1:10
1	1	SB3 020 SE facing	Section	1:10
2		Trench 1 west facing section	Section	1:10
3		Trench 10	Section	1:10
4		Trench 3 south facing section	Section	1:10
5		Trench 9	Section	1:10
6		Trench 1 west facing section	Section	1:10

Site: Ashaig

No	Sheet	Location	Sect/plan	Scale
1	1	Trench 1	Plan	1:10
2		Trench 1	Section	1:10

Site : Crowlin Island

No	Sheet	Location	Sect/plan	Scale
1		Trench 1 south west facing section	Section	1:10
2		Trench 1 south east facing section	Section	1:10
3		General plan of site	Plan	1:100

Site : Sand

No	Sheet	Location	Sect/plan	Scale
1		Trench 4	Plan	1:20
2		Trench 1 south facing section	Section	1:10
3		Trench 7	Section	1:10
4		Trench 4 south east facing section	Section	1:10
5		Trench 9 south east facing section	Section	1:10
6		General plan	Plan	1:100

APPENDIX 6: Photographic list

SHOTS	DESCRIPTION	CONDITIONS/COMMENT
FILM 1	**CROWLIN & SAND.**	
1-2	Trench 3 pre-ex	Bright, from S E.
3-4	Trench 1,top of midden, spit 5.	Dull, from S W.
5-16	Crowlin site, views and working shots.	Sunshine, from N W, W, S W.
17-18	Trench 3, top of spit 3, tumbled cliff.	Bright/sun, from S E.
19	Trench 2, section.	Bright, from S W.
20	Trench 2, section, left side.	Bright, from S W.
21	Trench 2, section, right side.	Bright, from S W.
22-24	Trench 1, fully excavated, west facing section.	Overcast, from W.
25-26	Trench 1, fully excavated, south facing section.	Dull, from S.
27	Trench 3, working shot.	Overcast, from N E.
28	Trench 3, fully excavated, general view.	Dull, from N W.
29	Trench 3, close-up of S W side.	Dull, from N W.
30	Trench 3, general area shot.	Dull, from N W.
31-33	Sand rock-shelter.	Sunshine, from S E.
34-37	Panorama of Sand area.	Sunshine, from S E.
FILM 2	SAND.	
1-2	Panorama of Sand area continued.	Sunshine, from S E.
3-4	Sand rock-shelter.	Sunshine, from E S E.
5-6	Sand rock-shelter.	Sunshine, from E.
7-8	Sand rock-shelter.	Sunshine, from N E.
9-10	Sand rock-shelter.	Sunshine, from N.
11-13	Sand rock-shelter, working shots.	Sunshine, from N.
14-15	Trench 2, top of spit 6 showing burrows.	Overcast, from E.
16-17	Trench 3 fully excavated.	Dull, from W.
18	Trench 1, top of spit 5, burnt stone layer.	Overcast, from E.
19-20	Trench 2, top of spit 7, showing stones.	Sunshine, from W.
21-22	Trench 2, fully excavated showing bedrock.	Sun and shadow, from W.
23-24	Trench 2, east facing section.	Sun and shadow, from E.
25-26	Trench 1, east facing section, (25) and south facing section, (26).	Sun and shadow, from E and S.
27-28	Trench 4, base of spit 5, showing possible stone setting.	Shade, from W,(27) and S (28).
29-30	Trench 4, fully excavated, plan view.	Bright, from S.
31-32	Trench 4, south facing section.	Shade, from S.
33-34	Trench 5, Plan view looking south.	Shade, from N.
35-36	Tidemark on rock.	Sunshine from N N E.
37	Trenches 4, 7, 9, working shot.	Sunshine from W.
FILM 3	SAND & RAASAY.	
1	Trench 7, top of spit 10, showing stones.	Sunshine and shade, from N.
2-3	Trench 7, top of spit 10, showing stones.	Sunshine and shade, from E.
4-6	Behind Sand 1 rock-shelter showing cliff-line.	Sunshine, looking S (4), W (5) and N W (6).
7	Sand 3 rock-shelter, general view.	Sunshine, from E.
8	Sand 3 rock-shelter sondage.	Sunshine, from N
9	Sand 3 rock-shelter sondage, south of above.	Sunshine from N.
10-11	Trench 7 fully excavated.	Shade, from E and S.
12-13	Trench 9 east facing section detail.	Overcast from W.
14	Trench 9 south facing section.	Overcast from N.

15-16	Working shots.	
17-23	General views of native woodland around Loch Torridon and Shieldaig.	
24	Sunset view, one of many.	
25-26	Brochel castle, Raasay.	
27	Trench 2 pre-ex and cave interior.	Sunshine and shade, from N E.
28-29	Loch a' Sguirr rock-shelter, general views.	Sunshine from W.
30-31	Trench 5.	Sunshine from S S W.
32-33	Trench 9 pre-ex, general view and close-up.	Cloudy, from W.
34	Trench 2, post-ex.	Dull, from W.
35	Trench 4, final shot.	Overcast and dull in cave, from W.
36-37	Trench 1 final shots, plan and section.	Very dull, from N W.
FILM 4	RAASAY.	
1	Trench 3, final shot.	Dull, from S.
2	Trench 10 before stone removal.	Dull, from S W.
3-9	General working shots.	Overcast.
10-12	Panorama of Skye from rock-shelter.	Overcast.
13	General view of rock-shelter.	Overcast, from W.
14	Trench 7, fully excavated.	Overcast, from E.
15-16	Trench 1 showing position of kubiena tin.	Dark in cave, fromW.
17-18	Trench 10, fully excavated.	Very dull, from S W.
19-20	Trench 9, fully excavated, plan view.	Bright, from S E.
21-22	Trench 9, fully excavated, S E facing section.	Bright, from S E.
23-24	Trench 9, fully excavated, S W facing end section.	Bright, from S W.
25-26	Trenches,2, 4 and 10 in rock-shelter interior.	Bright into gloom from W.
27-28	Trenches 2, 4 and 10 in rock-shelter interior.	Bright into gloom from N W.
29-30	Trench 6, N E facing section and kubiena tin position.	Dull from N E.
31-32	Trench 8, fully excavated.	Overcast from N W.
33-37	View from Loch a' Sguirr rock-shelter south-east across to Sand (33-34), north-east over to the Torridon mountains (35), north to Rona (36) and south over Raasay.	Lovely sunshine.

APPENDIX 7: Crowlin Samples Register

Site	Spit No.	Trench No.	Volume (litres)
Crowlin	10	1	5
Crowlin	4	1	5
Crowlin	9	1	5
Crowlin	2	1	5
Crowlin	11	1	5
Crowlin	6	1	5
Crowlin	3	3	5
Crowlin	2	3	5
Crowlin	1	3	5
Crowlin	4	3	5
Crowlin	3	2	3
Crowlin	4	2	3
Crowlin	5	1	5
Crowlin	5	2	5
Crowlin	1	2	5
Crowlin	2	2	5
Crowlin	7	1	5
Crowlin	12	1	5
Crowlin	8	1	5
Crowlin	1	1	5
Crowlin	3	1	5
Crowlin	3	3	2
Crowlin	2	1	2
Crowlin	2	2	2
Crowlin	10	1	2
Crowlin	1	3	2
Crowlin	1	3	2
Crowlin	6	1	2
Crowlin	9	1	2
Crowlin	7	1	2
Crowlin	12	1	2
Crowlin	4	3	2
Crowlin	11	1	2
Crowlin	4	1	2
Crowlin	5	1	2
Crowlin	8	1	2

APPENDIX 8: Sand Samples Register

Site	Spit No.	Trench No.	Volume (litres)
Sand	4	1	2
Sand	1	1	2
Sand	4	1	2
Sand	7	1	2
Sand	3	2	5
Sand	4	1	5
Sand	1	1	3
Sand	2	3	5
Sand	3	1	5
Sand	2	1	5
Sand	2	2	5
Sand	1	2	5
Sand	3	3	5
Sand	4	2	14
Sand	4	3	14
Sand	5	2	14
Sand	8	9	5
Sand	5	9	5
Sand	9	7	5
Sand	7	9	5
Sand	13	9	5
Sand	13	9	5
Sand	8	1	5
Sand	10	7	5
Sand	6	9	5
Sand	11	9	5
Sand	18	9	5
Sand	3	9	14
Sand	6	7	14
Sand	1	9	14
Sand	5	4	14
Sand	6	4	14
Sand	2	7	14
Sand	8	7	14
Sand	2	9	14
Sand	8	1	14
Sand	6	2	14
Sand	3	5	14
Sand	5	1	14
Sand	7	1	14
Sand	2	4	14
Sand	4	7	28
Sand	4	1	14
Sand	3	7	14
Sand	5	7	14
Sand	7	7	14
Sand	4	9	14
Sand	6	1	14
Sand	9	1	5

APPENDIX 9: Ashaig Samples Register

Site	Spit No.	Trench No.	Volume (litres)
Ashaig	2	1	5
Ashaig	9	1	5
Ashaig	6	1	5
Ashaig	8	2	5
Ashaig	4	1	5
Ashaig	1	1	5
Ashaig	1	10	5
Ashaig	5	1	5
Ashaig	1	12	2.5
Ashaig	1	11	3
Ashaig	1	1	1

APPENDIX 10: Raasay Samples Register

Site	Spit No.	Trench No.	Volume (litres)
Raasay	1	1	1
Raasay	1	3	5
Raasay	1	4	5
Raasay	1	2	5
Raasay	1	6	5
Raasay	1	5	5
Raasay	3	2	5
Raasay	3	3	5

APPENDIX 11: PALAEOENVIRONMENTAL RAPID SCAN ASSESSMENT (DAFORS scale)
D= Dominant, A= Abundant, F= Frequent, O= Occasional, R= Rare, S= Sterile
NMM = non-marine molluscs
MS = marine shell

Site: CROWLIN

TRENCH	SPIT	FRACTION mm	COMMENTS
1	1	4	F small plant stems, F charcoal c. 3-5g
1	1	1	F plant stems, charcoal frags 3- 5
1	2	2	F plant stems A charcoal
1	2	1	A plant stems
1	2	4	plant stems (calluna?) A charcoal c10-15g
1	3	2	A plant stems charcoal D c.10-15g
1	3	4	O plant stems, charcoal present c.5-8
1	3	1	A small plant stems, A charcoal c.10g
1	4	2	roundwood in the 4mm fraction
1	4	4	A plant stems, A charcoal-c.15g
1	4	1	A plant stems, A charcoal c.10g
1	4	4	A plant stems A charcoal c10-15g
1	5	2	charcoal frags, R plant stems c. 15-20g
1	5	4	charcoal, R plant stems
1	5	1	A charcoal frags A small plant stems c.10g
1	6	1	D charcoal c.5-6g
1	6	2/4	O charcoal frags, plant stems, seeds c.15g
1	6	4	O plant stems A charcoal >10g
1	7	2	A charcoal frags
1	7	1	A plant stems, D charcoal c.10g
1	7	4	R plant stems Charcoal present (mouldy)
1	8	2	R plant stems, A charcoal 10 -15 g
1	8	1	A plant stems A charcoal c.5-6g
1	8	4	A charcoal frags, 1 plant stem c.4-5g
1	9	4	F charcoal, 3 rodent bones c.10g
1	9	1	O plant stems, A charcoal c.3-5g
1	9	2/4	R plant stems, A charcoal 3-5g
1	10	4	F blocky fragments of charcoal
1	10	2	D non abraded charcoal
1	10	1	A charcoal frags, R plant stems c.3-5g
1	11	2	F charcoal c.3-5g
1	11	4	non abraded charcoal 3-5g
1	11	1	D charcoal frags c.3g
1	12	2	O plant stems, seeds, A charcoal c.30g
1	12	1	Charcoal frags
1	12	4	R nut shell, R plant stems, A charcoal c4-5g
1	13	2	S
1	13	4	S
1	13	1	S
3	1	1	O NMM, A charcoal R fishbone
3	1	4	A charcoal, A fishbone c.10g
3	1	2	F NMM, A fishbone D charcoal >20g
2	2	4	A charcoal c.10g
3	2	2	F shell, F seeds charcoal present c.10g
3	2	1	A charcoal O fishbone c. 15g

2	2	1	F NMM, O fish bone, D charcoal <10g

Table 1 continued

3	2	4	A fishbone, A charcoal NMM 1 <6-8g
2	2	2	F NMM, D charcoal F fishbone c.5g
3	3	2	O fishbone, O NMM, D charcoal
3	3	4	R NMM, O fishbone D charcoal >20g
3	3	1	R NNM, D charcoal O fishbone < 10g
3	4	4	A fishbone, D charcoal F NMM
3	4	2	A fishbone, F NNM, A charcoal c.>20g
3	4	1	R NMM, D charcoal, O fish bone >20g

APPENDIX 12: PALAEOENVIRONMENTAL RAPID SCAN ASSESSMENT (DAFORS scale)
Site: SAND

TRENCH	SPIT	FRACTION mm	COMMENTS
1	1	2	S
1	1	2	S
1	1	1	S
1	1	4	S
1	2	1	S
1	2	2	S
1	2	4	S
1	2	3	S
1	2	4	R charcoal mod plant debris
1	2	1	S
1	2	2	S
1	2	2	R charcoal <0.5g
1	2	4	R charcoal
1	3	2	charcoal low < 1g
1	3	4	S
1	3	1	S
1	3	2	6 frags charcoal, D mod plant debris
1	3	2	S
1	4	1	S
1	6	4	S
1	8	1	R charcoal <0.5g
1	8	2	R charcoal 0.5g
1	8	4	8 frags charcoal < 1g
1	8	2	S
1	8	2	S
1	8	1	S
1	9	1	S
1	9	3	S
1	5	4	S
2	2	4	R charcoal 1 NMM mod plant debris
2	3	3	mod plant debris sterile of charcoal
2	1	4	S
2	3	2	F charcoal frags mod plant debris
2	2	1	S
2	2	4	R charcoal mod plant debris
2	1	1	S
2	2	2	S
2	1	4	S
2	4	2	4 frags charcoal
2	6	1	R charcoal <0.5g
2	6	1	R charcoal c.0.5g
2	6	4	R charcoal, R fishbone, R 1 frag nut shell
2	6	2	R frags bone, R charcoal <1g
2	4	4	2 NMM A charcoal
2	5	4	S
3	3	1	F frags charcoal
3	3	4	9 fragments of charcoal
3	3	2	R frags charcoal <1g
3	2	4	5 frags of charcoal <1g

3	2	4	S
3	4	4	S
4	7	7	R charcoal 3 frags
4	1	1	S
4	3	3	S
4	4	4	S
4	1	4	S
4	2	2	S
4	1	4	15 sub rounded charcoal frags
4	2	4	S
4	2	3	S
4	9	3	S
4	6	4	10 frags charcoal. modern plant debris
4	5	1	R charcoal
4	5	2	R flecks charcoal < 1g
4	2	2	S
4	6	1	S
4	2	4	S
4	2	1	S
5	3	2	R charcoal
5	3	1	A frags charcoal c.1-2g
5	3	4	8 frags charcoal
7	2	4	4 frags charcoal
7	2	1	R charcoal, mod plant debris
7	2	2	R charcoal <0.5g
7	6	1	S
7	6	2	R charcoal mod plant debris
7	6	4	3 frags charcoal, mod plant debris
7	8	4	4 frags charcoal, R MS
7	8	1	R MS frags, R charcoal flecks
7	8	2	R charcoal R frags MS <1g
7	9	1	R charcoal <0.5
7	9	4	R charcoal frags
7	9	2	2 frags charcoal
7	10	4	S
7	10	1	S
7	10	2	S
9	1	2	R charcoal mod plant debris
9	1	4	S
9	2	1	R charcoal
9	2	2	charcoal low < 1g
9	2	4	S
9	3	4	S
9	3	2	S
9	5	1	R NMM, A charcoal < 1g
9	5	4	R Charcoal frags <1g
9	6	1	R charcoal
9	6	2	R fishbone, R charcoal R NMM <0.5g
9	6	4	4 frags charcoal
9	6	4	4 frags charcoal
9	7	1	R NMM, R charcoal <0.5

9	7	4	3 frags charcoal <0.5g
9	7	2	R NMM 9 frags charcoal
9	8	1	R NMM, R charcoal <0.5
9	8	2	R, NMM, R fishbone
9	8	4	charcoal low < 1g
9	10	1	R NMM, 5 frags charcoal
9	10	4	3 NMM 5 frags charcoal
9	11	1	D NMM, R charcoal <0.5g
9	11	2	R charcoal, R NMM <0.5g
9	11	2	R Charcoal R NMM <1g
9	13	4	2 frags charcoal , 1 frag nut shell
9	13	1	R NMM, R charcoal <0.5
9	13	2	A NMM, R charcoal
9	13	4	R charcoal 1 NMM
9	13	2	R NMM, R charcoal flecks <0.04g

APPENDIX 13: PALAEOENVIRONMENTAL RAPID SCAN ASSESSMENT (DAFORS scale)
Site: LOCH A SGUIRR

TRENCH	SPIT	FRACTION mm	COMMENTS
1	5	1	R charcoal <1g
1	6	2	1 NMM R charcoal <1g
1	5	4	1 charcoal fragment
1	3	4	A charcoal c.1g
1	4	1	R charcoal <1g
1	3	1	A charcoal fragments
1	2	4	R plan stems A charcoal
1	1	1	R charcoal frags <0.05
1	3	2	A charcoal 3-4g
1	6	4	R charcoal <1g
1	1	4	2 frags of charcoal
1	6	1	A frags of charcoal
1	5	2	R charcoal <0.5g)
1	2	2	A charcoal 4-5g
1	2	1	A charcoal 2-3g
2	1	2	9 charcoal frags
3	2	1	A charcoal <1-2g
3	2	2	S
3	3	1	R charcoal 0.5g

APPENDIX 14: PALAEOENVIRONMENTAL RAPID SCAN ASSESSMENT (DAFORS scale)
Site: ASHAIG

TRENCH	SPIT	FRACTION mm	COMMENTS
1	1	1	S
1	1	2	R charcoal
1	1	4	4 frags charcoal
1	2	2	R charcoal < 0.5g
1	4	1	20 frags charcoal
1	4	2	R charcoal <0.5g
1	5	1	S
1	5	2	2 frags charcoal
1	5	4	1 frag charcoal
1	6	1	R charcoal <0.05g
1	6	2	R charcoal <1g
1	8	1	S
1	8	4	S
1	8	2	R charcoal
1	9	2	A MS, R charcoal
1	9	4	R charcoal <0.05g
1	10	4	1 frag charcoal
1	10	1	charcoal flecks
1	10	2	R charcoal <1g
1	11	2	R charcoal < 1g 1NMM
1	11	1	S
1	11	4	1 NMM, 10 frags charcoal
1	12	1	R charcoal
1	12	2	R frag charcoal
1	12	4	12 frags charcoal < 1g