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**Scotland's First Settlers,**  
**Project Work**  
**And**  
**Sea Loch Survey**  
**2002**

**Data Structure Report**

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## CONTENTS

1. Summary
2. Introduction
3. Coastal survey, Rona
4. Sea Loch Survey
5. Post excavation
6. Discussion and future work
7. Publication and dissemination
8. Archiving and finds disposal
9. Bibliography

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## **TABLES**

Table 1.	Sites recorded on Rona.
Table 2.	Nature of threats to sites, Rona.
Table 3.	Sites recorded around Loch Carron.
Table 4.	Sites recorded around Loch Torridan.
Table 5.	Nature of threats to sites, Loch Carron.
Table 6.	Nature of threats to sites, Loch Torridan.
Table 7.	Radiocarbon determinations from Sand.
Table 8.	Total number of new sites recorded by the SFS project.
Table 9.	All sites, Inner Sound and Sea Lochs.

## **FIGURES**

Figure 1.	Sites on Rona
Figure 2.	Church Cave, plan
Figure 3.	Location of Sea Loch Survey.
Figure 4.	SFS 171, plan of cave.
Figure 5.	Location map of shovel pit sites.
Figure 6.	Location of SFS 183, Nead an Eoin.
Figure 7.	Location of SFS 184, Fernaig.
Figure 8.	Location of SFS 185, Achintee.
Figure 9.	Location of SFS 186, The Mains, Torridan.
Figure 10.	Location of SFS 187, Araid.
Figure 11.	Adult incisor, Sand.

## **APPENDICES**

Appendix 1.	List of coastal survey sites, Rona.
Appendix 2.	List of coastal survey sites, SLS.
Appendix 3.	List of photographs, Rona and SFS sites.
Appendix 4.	List of photographs, SLS.
Appendix 5.	List of field drawings, Rona, SLS.
Appendix 6.	Samples register, Rona, SLS.
Appendix 7.	List of specialists currently working on SFS material
Appendix 8.	SFS bibliography

## 1. SUMMARY

### 1.1 Background

- 1.1.1 This report presents the results of Scotland's First Settlers (SFS) project work in 2002. It includes a new element of survey around the sea lochs of Loch Carron and Loch Torridon (SLS). This was funded by the British Academy as an add on to the original SFS survey in order to assess and compare the Mesolithic occupation of the adjacent sea lochs with that around the outer coastal lands. The coastal survey and test pitting of the Island of Rona was to have taken place in 2001 but had to be postponed until spring 2002 due to Foot and Mouth Disease.
- 1.1.2 This report also considers ongoing post excavation work related to the project as a whole (Hardy & Wickham-Jones 2000).

### 1.2 Objective

- 1.2.1 The aim of SFS is to investigate the early settlement (Mesolithic) of the coast and islands of the Inner Sound, W. Scotland through survey, test pitting, excavation and associated specialist analysis.
- 1.2.2 A new project, the Sea Loch Survey (SLS), aimed at extending SFS work up the adjacent sea lochs Carron and Torridan, has as its objective the comparative study of these different environmental and topographical areas, both of which have great potential for a closer association with the hinterland.

### 1.3 Methods

- 1.3.1 The Rona coastal survey and test pitting followed standard SFS procedures (Finlayson et al 1999) in order to look for evidence for the Mesolithic occupation or use of Rona. Methods employed include blanket coastal survey and recording of all rockshelters and caves (both with and without obvious archaeological remains of any age), lithic scatters and any identifiable open-air middens followed by shovel pitting and test pitting in selected caves and rockshelters.
- 1.3.2 The Sea Loch Survey also followed standard SFS procedures and was designed to look for evidence for the Mesolithic occupation or use of the Sea loch areas. In addition to the standard survey a shovel pitting programme was carried out in selected areas, as allowed by the different topography, which includes large stretches of raised beach.
- 1.3.3 Post excavation work from the 1999 and 2000 field season (Hardy & Wickham-Jones 2000) has been ongoing since March 2001. All finds, both artefacts and ecofacts are currently undergoing specialist analysis.

## **1.4 Results**

### **1.4.1 Rona.**

1.4.1.1 The coastal survey of Rona took place between the 7<sup>th</sup>–13<sup>th</sup> May 2002. It was to have taken place in 2001 but was postponed due to the Foot and Mouth outbreak.

1.4.1.2 The survey recorded eleven new caves and rockshelters. Due to the remoteness of Rona **caves were shovel pitted as they were recorded**, in order to characterise their deposits. At the same time, 2 sites, considered particularly interesting, were test pitted. One of these, a rockshelter with shell midden, contained lithics suggestive of early prehistoric activity.

1.4.1.3 The entire coastline of the Inner Sound area, including all **islands, has** now been surveyed. A total of 159 lithic scatters, rockshelters and caves **has** now been recorded **around the Inner Sound**.

### **1.4.2 Sea Loch Survey.**

1.4.2.1 New survey, encompassing the coastlines of Sea Lochs Carron and Torridan has recorded 31 caves, rockshelter and lithic scatter sites **and in future these will be considered as part of SFS**.

### **1.4.3 Post Excavation**

1.4.3.1 Post **excavation is ongoing**. As a result of the **initial** animal and fish bone **work**, two human teeth have been recorded from midden **deposits at Sand, dated to the Mesolithic**.

## **1.5 Further work**

1.5.1 Residues from SFS sites test pitted in 2002 will be sieved and sorted, and finds analysed during 2003 – 4.

1.5.2 Finds from SLS work will be processed and analysed in 2003-4.

**1.5.3 Initial specialist work on finds from Sand and previous SFS survey work will be completed in 2003.**

1.5.4 **A seminar is planned for September 2003, to which all specialists will be invited. This will enable initial results to be collated and from the discussion a clearer picture of the direction of final specialist work should emerge.**

- 1.5.5 Shovel pitting in selected areas of raised beach around the Inner Sound would be a useful addition to previous survey in order to clarify the comparison of SLS within SFS.
- 1.5.6 Five sites recorded on Raasay in 2001 were identified as potentially of Mesolithic age, based on the presence of lithic and midden material. Test pitting of these sites would be in line with overall SFS methodology (Finlayson, *et al.* 1999; Hardy & Wickham-Jones 2000).
- 1.5.7 A programme of shovel pitting between An Corran and the Kilmartin river would be useful to determine the nature, preservation and possible date of the lithic scatter sites.
- 1.5.8 Analysis of the raw materials in use in the Mesolithic is important to SFS. Raw materials not only have a part to play in lithic technology, they also help with the interpretation of wider issues such as mobility, contact, and territory among the early population of the Inner Sound. Geological analysis of the raw material samples is important to determine the precise nature and formation of the chalcedonies which are so abundant along the various burns in Staffin. Many of the raw materials in use seem to have specific and limited sources and this needs to be checked against factors such as glacial or marine movement so that their use as indicators of movement can be verified. In this respect, further geological work is necessary to rule out the possibility of other local baked mudstone sources. More detailed work on local quartzes may also be worthwhile.
- 1.5.9 The inland worked lithic sites are an important indicator of human activity. Though inland sites do not fall within the remit of SFS, the contribution of the inland ecosystems to the early settlement cannot be ignored and SFS aims to liaise with other local work in these areas.

## 2. INTRODUCTION

### 2.1 General

2.1.1 This report presents the results of the archaeological survey of the Island of Rona, carried out in May 2002 as part of the Scotland's First Settlers project (SFS).

2.1.2 It also presents the results of the Sea Loch Survey (SLS) in which lochs Carron and Torridan were surveyed, selected sites were test pitted and a programme of shovel pitting was undertaken on selected areas of raised beach. This work was carried out between May and October 2002

2.1.3 This report also provides an account of ongoing specialist work from SFS sites including Sand.

### 2.2 Objectives

#### 2.2.1 SFS

2.2.1.1 The primary aim of SFS is to examine the Mesolithic occupation of the seascape of the Inner Sound, which lies between Skye and the mainland of Scotland. It forms an enclosed body of sea and islands. Specific questions include:

1. The nature and use of shell middens both within the Mesolithic and with later periods;
2. The location of Mesolithic sites and the possible seasonal nature of their occupancy;
3. The dating of shell midden sites;
4. The seamanship of Mesolithic people;
5. The relationship of sites to the Mesolithic shorelines;
6. How the dynamic climatic change of the early Holocene is reflected in the middens and how the human population adapted to this.

#### 2.2.2 SLS

2.2.2.1 The primary aim of the Sea Loch Survey is to examine an area adjacent to the Inner Sound, yet with a very different environment and topography. The Sea Lochs Carron and Torridon stretch inland from the Inner Sound but comprise a very different eco-zone. In contrast to the Inner Sound they are protected from the sea and vegetation is more abundant. From the Mesolithic point of view they offered a quite different environment, and they also provided access to a broader hinterland within the Scottish mainland. Survey work here offers the possibility to examine a broader range of use, not only within the Mesolithic round but also through time. This area is also more populated today so that there is scope for comparison between present conditions and the recovery and current state of the archaeological sites.

## **2.3 Background**

- 2.3.1 In August 1999, a two week season was undertaken (Finlayson *et al.* 1999). Trial trenching took place on four known shell midden sites; the coastal survey started in three selected areas and preliminary post excavation was carried out on all finds.
- 2.3.2 In April – May 2000 a 5 week field season was undertaken (Hardy & Wickham-Jones 2000) on the Applecross peninsula. This included completion of the survey of the Applecross peninsula and excavation of a Mesolithic shell midden at Sand. In addition, all sites on the Crowlin Islands and most sites on the Applecross peninsula were test pitted.
- 2.3.3 In April – May 2001 the coast of the islands of Raasay and Scalpay were surveyed. In addition the numerous lithic scatters in Staffin Bay were visited and assessed. The Suarbie Burn and outcrops of baked mudstone at An Corran were also visited for preliminary raw material assessment work and collection of samples.
- 2.3.4 Following the success of **SFS in** detecting sites, a new project, the Sea Loch Survey was begun in 2002 to assess the Mesolithic use of the Sea Loch areas and compare this with use of the coastline around the Inner Sound.

## **2.4 Acknowledgements**

- 2.4.1 In addition to the sponsors the project directors would like to thank the following people for their help during 2002: Steven Birch; George Kozikowski; Geoff Stephenson; and Martin Wildgoose who carried out the fieldwork and the many landowners who permitted access to their land. All those specialists who have not only begun to make sense of our data but also helped considerably in raising financial support for the project. Kevin Hicks of CFA Scotland who produced a new poster to complement our information boards. Q Banting... Rona access....



### 3. COASTAL SURVEY AND TEST PITTING ON RONA.

#### 3.1 Location of surveyed areas (Figure 1).

3.1.1 The coastline of the Island of Rona (Appendix 1).

#### 3.2 Method

3.2.1 Prior to survey, all visible raised beaches were identified and their locations marked on 1:25000 OS maps. A search of relevant archaeological archives was carried out including the NMRS and local SMRs. *I hope...*

3.2.2 Both the present shore level and fossilised shore levels were walked. All caves and rock shelters, with or without midden, were recorded and all erosions, animal rubs, ditches and molehills were inspected for lithics and midden materials.

3.2.3 Small shovel pits (200 - 300mmsq) were dug in sites that appeared to be of particular archaeological potential in order to extract material for a basic analysis of date and preservation (Appendix 1).

#### 3.3 Results.

##### 3.3.1 Survey.

3.3.1.1 A total of 11 caves and rockshelters were recorded around the coast of Rona.

Only two (you need to get used to putting numbers up to ten in words, that is a general convention) had evidence of past occupation. This is in sharp contrast to rockshelters and caves in other areas where a greater proportion of sites show evidence of previous use.

*Actually going through the 2000 dsr there are 27 caves and rockshelters without visible midden and 24 with so it is not most but more - we need to be careful*

3.3.1.2 The reason for this lack of evidence for past human use of caves and rockshelters on Rona is currently unknown. A lack of fresh water on the island may have been problematical. Other archaeological work on Rona has recorded three abandoned townships and Church Cave (see below 3.3.3) (RCHAMS *ref needed*). Lithic scatter sites were not visible at the time available for survey due to the height of the vegetation.

Site types	Numbers of sites
caves or rockshelters with midden	1
caves or rockshelters with midden and lithics	1
caves or rockshelters, no visible midden	9
lithic scatters	0

<b>Total</b>	<b>11</b>
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**Table 1. Sites recorded on Rona.**

### 3.3.2 Threats

3.3.2.1 Based on Historic Scotland's coastal survey threat categories (Ashmore 1994), the following results were recorded.

<b>Condition of site</b>	<b>Number of sites</b>
Accreting or eroding	1
Fully eroded	1
Stable	9
<b>Total</b>	<b>11</b>

**Table 2. Nature of threats to sites, Rona**

### 3.3.2 Test pitting.

3.3.2.1 SFS 17. Church Cave NG 6270 5696. Church Cave (*elsewhere you give height OD and distance to sea, that would be useful for each site*) was used as the island church regularly until 1912. It was last used as a church in the 1970's (Canmore). It is a large east facing cave 28m deep by 17m wide by 4m high. It contains rows of stone used as pews and a low stone pillar at the entrance which was used as a pulpit. Towards the rear of the cave is an area of shell midden and another area, currently empty with a floor of cave earth. One test pit was dug in each of these areas.

Test pit 1 was located in the area of cave earth immediately in front of the rows of seating. It contained 5 contexts.

- Context 1 Sheep dung
- Context 2 Black ash and charcoal, burnt shell, bone fragments and pieces of quartz (unworked).
- Context 3 White ash, part burnt shell and charcoal fragments.
- Context 4 Black ash and charcoal with burnt shell and bone. Quartz (unworked).
- Context 5 Compacted stone fragments of parent rock in clean sandy matrix.

Test pit 2 was located in the shell midden. It contained 5 contexts

- Context 1 Loose dry midden material containing stones and bones.
- Context 2 Loose midden material, slightly wet, containing pot sherds, bone and stones.
- Context 3 Loose dark compact midden material containing bones and stones.
- Context 4 Angular stone fragments lying on bedrock.

Context 5 Bedrock.

Interpretation. Church Cave shows no evidence of early prehistoric use, though some pieces of pottery may be diagnostic of use in later periods. Test pit 1 seems to have been located in a hearth area.

3.3.2.2 SFS 152. Doire na Guaile. NG 6211 5487. This is a north facing rockshelter containing shell midden lying 35 m above sea level and around 80m from the present coastline. Following an initial shovel pit, in which lithics were found, one test pit was dug at the entrance to the rockshelter, in the midden, to the east of the shovel pit. It contained 5 contexts.

Context 1	Turf and soil.
Context 2	Build up of stones and soils between and over the shell midden.
Context 3	Shell midden containing mix of limpet and periwinkle. Finds include lithics, pottery and bone.
Context 4	Stone fragments lying between massive rocks.
Context 5	Bedrock.

Interpretation. The lithics suggest a prehistoric presence, though the presence of pottery suggests that the midden may also be later. More detailed interpretation of this site will be possible once the pottery and lithics have been analysed.

Figure 1. Sites recorded on Rona.

Figure 2. SFS 17, Church Cave, plan

4

## 5 SEA LOCH SURVEY

### 4.1 Extent of surveyed area

The Sea Loch Survey covered 191 Km.

### 4.2 Location of surveyed areas (Figure 3).

The Sea Lochs Carron and Torridan.

### 4.3 Method

4.3.1 Prior to the survey, all visible raised beaches were identified and their locations marked on 1:25000 OS maps. A search of relevant archaeological archives was carried out including the NMRS and local SMRs. *I hope...*

4.3.2 Both the present shore level and fossilised shore levels were walked. All caves and rock shelters, with or without midden, were recorded and all erosions, animal rubs, ditches and mole hills were inspected for lithics and midden materials.

4.3.3 Small shovel pits (200 - 300mmsq) were dug in sites that appeared to be of particular archaeological potential in order to extract material for a basic analysis of date and preservation (Appendix 2).

4.3.4 All newly recorded sites were given an SFS number. In this way the results could be incorporated into the existing SFS programme.

### 4.4 Results

#### 4.4.1 Coastal survey.

4.4.1.1 A total of 30 sites was recorded. 22 were caves and rockshelters but, only two of these contained archaeological evidence: both had shell middens and one also contained lithics. It is not clear at this stage whether the lack of evidence in caves and rockshelters is because they were not used, or is caused by other environmental, climatic or geological factors. The situation contrasts sharply with that in the Applecross peninsula, which lies between the two sea lochs, and where a higher proportion of caves and rockshelters contain some evidence of past human use in the form of shell middens (Hardy & Wickham-Jones 2000). Environmental conditions up the sea lochs differ to those of the Applecross peninsula, they have a less vigorous and more sheltered environment and, as will be seen below (xxx), the lack of archaeological evidence in cave and rockshelter sites is not upheld by a general lack of early evidence. There is other material indicative of human activity in the early prehistoric period and a cultural explanation is more likely.

Figure 3 Location of Sea Loch Survey.

*Del para - said above*

<b>Site types</b>	<b>Numbers of sites</b>
caves or rockshelters with midden and lithics	1
caves or rockshelters, no visible midden or archaeological remains	13
lithic scatters (including shovel pits)	6
<b>Total</b>	<b>20</b>

**Table 3 Sites recorded around Loch Carron**

<b>Site types</b>	<b>Numbers of sites</b>
caves or rockshelters with midden	1
caves or rockshelters, no visible midden or archaeological remains	7
lithic scatters (including shovel pits)	2
Findspot	1
<b>Total</b>	<b>11</b>

**Table 4 Sites recorded around Loch Torridan**

#### **4.4.2 Threats**

4.4.1 Based on Historic Scotland's coastal survey threat categories (Ashmore 1994), the following results were recorded *for the caves and rockshelters*.

<b>Condition of site</b>	<b>Number of sites</b>
Eroding or stable	4
Definitely eroding	2
Stable	11
<b>Total</b>	<b>17</b>

**Table 5. Nature of threats to sites, Loch Carron**

<b>Condition of site</b>	<b>Number of sites</b>
Eroding or stable	1
Definitely eroding	1
Stable	6
<b>Total</b>	<b>8</b>

**Table 6. Nature of threats to sites, Loch Torridan**

#### **4.4.2 Test pitting**



4.4.2.1 SFS 10 Allt na Uamha NG 7679 6490 is a northwest facing boulder shelter with a large shell midden in front (see also Gourlay 1984) . One test pit was dug in the shell midden and it contained 5 contexts.

*Heights etc...*

- Context 1 Lying immediately below the turf, a layer of crushed shell (limpet and periwinkle).
- Context 2 Whole limpet and periwinkle midden in a black soil matrix. Contains charcoal, pottery and bone fragments,
- Context 3 Clean whole limpets and periwinkle, possibly lying in stacks, in a matrix of soft greyish ash. Contains bone and charcoal.
- Context 4 Black gritty soil with large stone and shell. Contains charcoal and bone.
- Context 5 Stone blocks with some voids set in a matrix of decayed sandstone. Basal deposit.

Interpretation. During the test pitting, no lithics were found, though the residues remain to be sorted. On a subsequent visit, lithics were recorded from the surface of the shell midden, a second small shovel pit was made, and further lithics were recovered. This suggests that the midden is likely to be early prehistoric.

4.4.2.2 SFS 171 Meall na h Airde 2 NG 8269 3629 is a south west facing old sea cave lying at the foot of old sea cliffs. It lies at 2m OD and is susceptible to sea ingress at very high tides through about half of the cave. A small area of midden lies at the rear of the cave. It is possible that this may be all that remains of a larger midden that has been washed out. As the site is remote and the walk in difficult, samples were dry sieved on site. A test pit was dig into the midden and contained 4 contexts. A 50% sample of excavated material was dry sieved using a 300mm sieve.

- Context 1 Loose shell and dry black soil containing lithics, bone fragments and charcoal.
- Context 2 Loose stones with context 1 running through voids.
- Context 3 Small pebbles and marine gravels.
- Context 4 Bedrock.

Interpretation. The presence of lithics in the shell midden suggests an early prehistoric age. Analysis will hopefully clarify this.

Figure 4. SFS 171 plan of cave.

#### 4.4.3 **Shovel pitting, raised beaches (with Martin Wildgoose).**

4.4.3.1 The shovel pitting campaign was designed to test raised beaches and river terraces for lithic scatters which may suggest an early prehistoric presence around the Sea Lochs (Figure 5).

4.4.3.2 Transects were laid out across 5 selected raised beaches and river terraces. Shovel pits were dug at 10 metre intervals, (in the case of SFS 183 partially at 5 metre intervals). The shovel pits (250mm x 250mm) were dug down into the underlying beach deposit and the contents of each pit was sieved through a 4mm wire sieve. If lithics were recovered the pit was recorded as a hit. The location of the transects was recorded using a Wild RK 1 Self Reducing Alidade and Plane Table at a scale of 1:1000.

4.4.3.3 SFS 183 **Nead an Eoin, Plockton NG 7890 3310** (Figure 6) is a small, sheltered, raised beach (10 metres OD) with a westward aspect. A minor lithic scatter (SFS 147) had been recorded at the south end of the beach during coastal survey.

4.4.3.4 A single transect of 35 shovel pits was laid around the bay, just behind the crest of the beach. The first 22 pits were at 5 metre intervals while the remaining 13 pits were at 10 metre intervals.

4.4.3.5 The sampled area proved to have been heavily and probably recently cultivated producing from 190mm to 380mm of unsorted plough soil. Pebbles, derived from the underlying beach deposit, were present throughout the plough soil. Hits were recorded in two distinct groups. Pits 2, 5 and 12 were close to the recorded lithic scatter and pits 21, 22 and 24 were located 115 metres to the north-east of the recorded scatter.

4.4.3.6 SFS 184 **Fernaig, Achmore NG 8440 3390** (Figure 7) is a well developed terrace (9 metres OD) lying in a sheltered position on the north side of the mouth of the River Ascaig. The terrace lies on a north-west to south-east alignment and has been cut through at its seaward end (north-west) by the Inverness – Kyle of Lochalsh railway line. The north west part of the terrace was examined during the coastal survey, while under plough. It produced a negative result.

4.4.3.7 A single transect of 31 shovel pits, at 10 metre intervals, was laid along the crest of the terrace using the steading buildings at the south-east end as an anchor point.

4.4.3.8 This terrace has been heavily and continuously ploughed for many years producing a plough-soil which is from 190mm to 300mm deep. Pebbles, derived

from the underlying beach deposits, were present throughout the plough-soil. One lithic was collected from shovel pit 6, **but it may be natural.**

- 4.4.3.9 SFS 185, **Achintee, Strathcarron. NG 9430 4180** (Figure 8) is a massive river terrace (20 metres OD) on the south-east side of the river delta at the point where the River Taodail and the Allt an t-Sagairt join the River Carron. It has not been ploughed in recent memory.
- 4.4.3.10 Two transects of 12 and 18 shovel pits were laid out in adjoining fields, each set at 10 metre intervals.
- 4.4.3.11 A well sorted plough-soil of between 90mm and 300mm in depth was found to overlie angular and rolled local geology with no beach deposit present.
- 4.4.3.12 Hits were recorded in pits 9 and 11 with a third lithic being recovered from an open ditch. The recovered lithics formed a distinct group on a slightly raised section of the terrace.
- 4.4.3.13 Shovel pit 30 produced a heavy concentration of charcoal at the interface between plough-soil and the underlying wash deposit.
- 4.4.3.14 SFS 186, **The Mains, Torridon village. NG 9020 6670** (Figure 9) is a well defined raised beach (12 metres OD) lying on the north shore of the eastern end of Loch Torridon. It shows signs of cultivation but has not been ploughed in recent memory.
- 4.4.3.15 A single transect of 25 shovel pits were laid to run east to west across the level surface of the raised beach. Shovel pits 1 – 6 lay on a slightly raised green knoll while the remainder of the pits ran through an area of wet, rush covered, ground. The underlying deposit differed in that pits 1 – 6 lay over a sorted pebble beach deposit while the remainder of the pits lay over compacted yellow sand with occasional boulders. Pits were dug through a well-sorted plough-soil, from 80mm to 300mm deep, which was slightly peaty and wet in pits 7 – 25.
- 4.4.3.16 Shovel pit 5 produce 3 lithics. The recovered lithics lay at the interface of the plough-soil and the underlying pebble beach.
- 4.4.3.17 SFS 187 **Araid, Lower Diabaig. NG 7950 5890** (Figure 10) is a well defined raised beach lying at 20 metres OD in a sheltered position on the north side of a narrow neck of land to the south of Loch Diabaig. It appears not to have been ploughed.

- 4.4.3.18 A single transect of 20 shovel pits were laid to run the length of the beach. The shovel pits were dug through a wet peat deposit from 150mm to 350mm deep, which lay directly on a compacted sand and gravel, post-glacial, surface.
- 4.4.3.19 No lithics were recovered. Shovel pits 3 and 5 encountered waterlogged tree roots at the interface between the overlying peat and the sandy, post-glacial surface. Shovel pits 12 and 16 revealed traces of burnt wood (charcoal) at the interface.
- 4.4.3.20 **Discussion.** Shovel pitting is a fast and effective way of recovering a snapshot of archaeological potential and a useful addition to survey work. This shovel pitting campaign has shown that a lack of occupied caves and middens within the sea loch environment does not necessarily mean a lack of early prehistoric activity. Of the 5 sites sampled, 4 produced evidence for lithic scatters. These 4 'hit' sites coupled with the 4 lithic scatters recovered during the coastal survey may be evidence of a different regime of activity within the more sheltered confines of the sea lochs. Overall the results of the SLS are vindicated as a useful addition that will broaden the interpretations provided by SFS.

Figure 5. Location map of shovel pit sites.

Figure 6. Location of SFS 183, Nead an Eoin.

Figure 7. Location of SFS 184, Fernaig.

Figure 8. Location of SFS 185, Achintee.



Figure 9. Location of SFS 186, Mains, Torridan.

Figure 10. Location of SFS 187, Araid.

## 5 POST EXCAVATION WORK, SFS.

- 5.1 Finds from Sand and the SFS test pitted sites are currently with XXX specialists for initial analysis. One report has been received (animal bone from Sand, Gamble 2002) and all others are expected by April 2003.
- 5.2 Analysis of a sample of the Sand animal bone assemblage has identified two human teeth. One, an adult incisor from B1A spit 3 is currently being radiocarbon dated (Figure 11). The other, a child's molar is from a securely dated context (B25A NE spit 4, context 013). The teeth are currently being examined for wear traces, by Dr Rick Schulting of the University of Belfast.

OxA no.	Location	Context	Sample ref	Radiocarb on age (BP)
OxA-10152	B25ANE, spit8	013	Bone, mammal	8470+ 90
OxA-10175	B25B NE, spit 7	013	Bone, mammal	7825+ 55
OxA-10176	A1B NE,spit 9	022	Bone, mammal	6605+ 50
OxA-10177	A2B SW, spit 10	022	Bone, mammal	6485+ 55
OxA-10384	B25A NE, spit 4	013	Bone, mammal	7855+ 60
OxA-9280	9/8		antler	7520+50
OxA-9281	9/8		bone, deer	7715+55
OxA-9282	9/7		bone, deer	7545+50
OxA-9343	9/8		charcoal ( <i>Betula</i> )	7765+50

**Table 7. Radiocarbon determinations from Sand.**

- 5.3 General environmental reconstruction is important to SFS and paleoenvironmental analysis of the Inner Sound, and more specifically the Applecross peninsula, including pollen and soil analyses, is ongoing at the universities of Aberdeen, Durham and Newcastle under the guidance of Professor Kevin Edwards, Dr Alan xxx and Dr Robert Sheil respectively. Preliminary examination of sea level change is due to begin in November 2002 with the extraction of a core from the intertidal site on Raasay (SFS 144) and its analysis by Drs Alastair and Sue Dawson at the university of Coventry.

## 6 DISCUSSION AND FUTURE WORK

### 6.1 SFS survey

- 6.1.2 The survey of the Inner Sound coastline is now complete (Longay TO ADD).  
Table 8 shows the total number and type of sites recorded around the Inner Sound

Type of site	No. of Sites.
Rockshelter/cave	116
Lithic scatter	22
Open midden	8
Findspot	5
Raised beach shovel pitting	4
Raw material source	2
<b>Total</b>	<b>158</b>

**Table 8. Total number of sites recorded by the SFS project**

### 6.2 Sea Loch Survey

- 6.2.1 The sea loch survey is now complete. The total number of sites is 31 (Tables 3 and 4).

### 6.3 Inner Sound and Sea Loch survey.

- 6.3.1 The total number of sites recorded by SFS around the Inner Sound and the Sea Lochs stands at 189 and the total number of sites with lithics is now 73 (Table 9).

Type of site	Without lithics	With lithics
Cave/rockshelter	106	33
Raw material source	1	2
Findspot	1	5
Lithic scatter		25
Raised beach shovel pits	3	6
Open midden	5	3
Total	116	73

**Table 9. All sites, Inner Sound and Sea Lochs.**

- 6.3.2 A detailed analysis and comparison between use of the Inner Sound coastline and the Sea Loch areas will be undertaken once information from all of the test pitted sites, both from the Inner Sound and the Sea Loch areas has been processed. Further shovel pitting of raised beaches around the Inner Sound will be needed to assess comparative use these areas.

## **6.4 Future Work**

6.4.1 Future work is detailed in section 1.5

## **7 PUBLICATION AND DISSEMINATION**

### **7.1 Discovery and Excavation in Scotland**

7.1.1 A summary of the results of SFS and SLS in 2002 will be submitted to *Discovery and Excavation in Scotland 2002*.

### **7.2 Academic publication**

7.2.1 A list of interim publications can be found in Appendix 8 (SFS Interim publications and reports list). A comprehensive academic publication will be prepared once the post excavation work is complete. Specialist reports and publications will be produced as relevant.

7.2.2 A poster session, including a new information board, was presented in Edinburgh at the Chags conference (9th International Conference on Hunting and Gathering Societies), September 2002.

### **7.3 Public Information**

7.3.1 Final publication will also include preparation of material for the public.

7.3.2 During the seminar in September 2003, a programme of evening lectures will be prepared for specialists to present their work to a general audience.

7.3.3. A talk will take place for Glasgow Archaeological Society in March 2003.

7.3.4 Liaison over other presentations including Orkney Science Festival is ongoing.

7.3.5 The 1999 Newsletter is available on the Internet ([www.pabay.org](http://www.pabay.org)) and a dedicated web page can be found at: <http://www.moray.ac.uk/ccs/settlers.htm>. This should be up-dated during 2003.

7.3.6 Information from SFS is now on display at the new Heritage Centre in Applecross, run by the Applecross Heritage Society.

## **8 ARCHIVING AND FINDS DISPOSAL**

- 8.1 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. Electronic archiving will take place according to AHDS guidelines.

## 11. REFERENCES

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**APPENDIX 1 List of coastal survey sites, Rona,**

GRID REF.	SFS NO.	SITE NAME	SITE TYPE
<b>Portree Parish</b>			
<b>NG 65 NW</b>			
NG 6089 5672	SFS 160	Acairseid Mhor 7	Rockshelter
NG 6089 5680	SFS 161	Acairseid Mhor 8	Rockshelter 2,3
NG 6161 5723	SFS 158	Acairseid Mhor 5	Rockshelter 3
NG 6179 5723	SFS 159	Acairseid Mhor 6	Rockshelter
NG 6182 5725	SFS 157	Acairseid Mhor 4	Rockshelter 3
NG 6185 5727	SFS 155	Acairseid Mhor 2	Rockshelter 3
NG 6189 5721	SFS 156	Acairseid Mhor 3	Rockshelter 3
NG 6190 5734	SFS 154	Acairseid Mhor 1	Rockshelter 3
NG 6193 5544	SFS 153	Rona 3	rockshelter
NG 6391 5853	SFS 151	Rona 1	rockshelter
<b>NG 65 SW</b>			
NG 6211 5487	SFS 152	Doire na Guaile	Rockshelter 1,2,3

Note 1\* Rockshelters containing visible midden

Note 2\* Sites with lithics

Note 3\* Due to difficult of access to Rona, small shovel pits were used to test caves during survey, for their archaeological potential.

**APPENDIX 2**

**List of coastal survey sites, Sea Lochs Carron and Torridan**

<b>Lochalsh Parish</b>			
<b>NG 73 SE</b>			
NG 7858 3383	SFS 148	An Dubh-aird	Rockshelter
NG 7865 3296	SFS 147	Cnoc na Celpeirein	lithic scatter 2
NG 7890 3310	SFS 183	Nead an Eoin	raised beach 2
<b>NG 83 SE</b>			
NG 8761 3294	SFS 150	Alt Cadh an Eas	lithic scatter 2
<b>NG 83 SW</b>			
NG 8440 3390	SFS 184	Fernaig	raised beach 2
<b>Applecross Parish</b>			
<b>NG 75 NE</b>			
NG 7946 5864	SFS 182	Loch Diabeg 2	Rockshelter 3
NG 7950 5890	SFS 187	Araid	raised beach
NG 7974 5887	SFS 181	Loch Diabeg	boulder shelter 3
NG 7998 5968	SFS 188	Diabeg	Findspot 2
<b>NG 85 NE</b>			
NG 8953 5630	SFS 179	Am Ploc	Rockshelter 3
<b>NG 85 NW</b>			
NG 8186 5531	SFS 168	Camas an Leim	Rockshelter 2
<b>NG 85 SE</b>			
NG 8594 5467	SFS 180	Ob Gorm Beag	sea cave
<b>NG 95 NW</b>			
NG 9099 5563	SFS 178	Uamh an Oir 2	group of boulder shelters 3
NG9114 5572	SFS 177	Uamh an Oir	Rockshelter 3
<b>NG 96 NW</b>			
NG 9020 6670	SFS 186	The Mains	raised beach 2
<b>Gairloch Parish</b>			
<b>NG 76 NW</b>			
NG 7222 6791	SFS 176	Red Point headland 2	Cave 1
<b>Lohcarron Parish</b>			
<b>NG 83 NE</b>			
NG 8540 3539	SFS 165	Port A Mheirlich	Rockshelter 3
NG 8708 3609	SFS 164	Mid Strome	Rockshelter 3
NG 8853 3764	SFS 163	Rhunamore	Rockshelter 3
<b>NG 83 NW</b>			
NG 8148 3679	SFS 174	Reidhleacach	fissure cave
NG 8150 3697	SFS 175	Reidhleacach 2	rockshelter

NG 8220 3635	SFS 173	Meall-na-h-Airde 4	fissure cave	
NG 8261 3631	SFS 172	Meall-na-h-Airde 3	old sea cave	
NG 8269 3629	SFS 171	Meall-na-h-Airde 2	old sea cave	1,2
NG 8297 3627	SFS 170	Meall-na-h-Airde 1	cave	
NG 8316 3596	SFS 167	Rubha Alasdair Ruaidh	old sea cave	
NG 8327 3625	SFS 169	Reraig cottage	rockshelter	
NG 8491 3551	SFS 166		old sea cave	
<b>NG 93 NW</b>				
NG 9246 3933	SFS 149	An Maman	old sea cave	
<b>NG 94 SW</b>				
NG 9351 4094	SFS 162	Teanga Fhiadhaich	lithic scatter	2
NG 9430 4180	SFS 185	Achintee	raised beach	2

Note 1\* Rockshelters containing visible midden

Note 2\* Sites with lithics

Note 3\* Shovel pitted sites

**APPENDIX 3            List of photographs, Rona and SFS sites**

<b>SFS NO.</b>	<b>Shot No.</b>
Rona (general)	2002/1
Rona (general)	2002/2
Rona (general)	2002/3
Rona (general)	2002/4
SFS 17	2002/5
SFS 17	2002/6
SFS 151	2002/7
SFS 151	2002/8
SFS 152	2002/9
SFS 152	2002/10
SFS 152	2002/11
SFS 153	2002/12
SFS 153	2002/13
SFS 158	2002/14
SFS 159	2002/15
SFS 160	2002/16
SFS 161	2002/17
SFS 149	2002/18
SFS 149	2002/19
SFS 162	2002/20
SFS 163	2002/21
SFS 09	2002/22
SFS 09	2002/23
SFS 115	2002/24
SFS 115	2002/25

#### **APPENDIX 4 List of photographs, SLS**

SFS NO.	Shot No.
SFS 167	2002/1
SFS 170	2002/2
SFS 171	2002/3
SFS 171	2002/4
SFS 171	2002/5
SFS 171	2002/6
SFS 172	2002/7
SFS 173	2002/8
SFS 176	2002/16
SFS 178	2002/22
SFS 171	2002/23
SFS 171	2002/24
SFS 180	2002/25
Loch Diabeg	2002/26
SFS 181	2002/27
SFS 182	2002/28
SFS 10	2002/29
SFS 10	2002/30
SFS 10	2002/31

**APPENDIX 5            FIELD DRAWINGS REGISTER, TEST PITS, RONA, SLS.**

1	SFS 17	Plan	Floor plan of cave	1:200
2	SFS 17	Plan	Surface of C 3, TP1	1:10
3	SFS 17	Plan	TP 2 after excavation	1:10
4	SFS 17	Section	East face TP1	1:10
5	SFS 17	Section	North face TP2	1:10
6	SFS 17	Section	Church Cave	1:200
7	SFS 152	Plan	Surface of C2 & C3	1:10
8	SFS 152	Plan	After removal C2	1:10
9	SFS 152	Section	W face of TP1	1:10
10	SFS 152	Plan	Floor	Sketch
11	SFS 152	Plan	Floor	1:100
12	SFS 171	Plan	Floor	1:50
13	SFS 171	Plan	TP 1	1:10
14	SFS 171	Section	TP 1	1:10
15	SFS 10	Plan	Surface plan	1:50
16	SFS 10	Section	Contexts 1 – 5	1:10

**APPENDIX 6            SAMPLES REGISTER, TEST PITS, RONA, SLS.**

Site and context	No	Description	Comments	Size
SFS 152 – 11	1	Midden	50%	6Kg
SFS 152 – 13	4	Midden	50%	6Kg
SFS 10 –11	1 x bag	Midden	12.5%	8Kg
SFS 10-12	2 x bags	Midden	12.5%	16Kg
SFS 10-13	2 x bags	Midden	12.5%	16Kg
SFS 10-14	1 x bag	Midden	12.5%	8Kg
SFS 171 – 2	1 bag	Midden	50%	1Kg
SFS 171 – 3	1 bag	White ash & shells	50%	3 Kg
SFS 171 – 4	1 bag	Black ash & shells	50%	4 Kg
SFS 172 - 1	4 bags	Midden	100%	4 x 6 Kg
SFS 172 - 2		Midden	100%	6 x 6 Kg
SFS 172 - 3		Midden	100%	1 x 6 Kg

**APPENDIX 7.  
LIST OF SPECIALISTS CURRENTLY WORKING ON SFS MATERIAL**

**Shell**

Dr. N.J. Milner  
Dept of Archaeology,  
University of Newcastle upon Tyne

**Animal bone, Sand**

Rachel Gamble (Supervisor Dr James Barrett)  
Dept of Archaeology  
University of York

**Animal bone, test pits**

Dr Jacqui Mulville  
Dept of Archaeology  
University of Cardiff

**Human teeth**

Dr. Rick Schulting  
Dept of Archaeology  
University of Belfast.

**Coarse Stone**

Ann Clark  
Rockville Lodge  
Drem  
East Lothian

**Pottery**

Dr Ann McSween  
Historic Scotland  
Longmore House  
Salisbury Place  
Edinburgh

**Metal**

Dr Fraser Hunter  
National Museums of Scotland  
Chambers St.  
Edinburgh

**Lithics**

Caroline Wickham-Jones



Cassie  
St Ola  
Orkney

**Bone and shell tools**

Dr Karen Hardy  
The Old Toll  
Kirkurd  
Peeblesshire

**Paleoenvironment (Sand and test pits).**

Supervisors: Alan Clapham and Peter Rowley Conwy

Dept of Archaeology  
University of Durham

**Paleoenvironment, regional**

Fraser xxxx (Supervisor Pr. Kevin Edwards)

Dept of Geography  
University of Aberdeen

**Soils analysis, Sand and regional**

Andrew xxxx (Supervisor Dr.Robert Shiel)

Dept of Agriculture  
University of Newcastle upon Tyne

**Sea level change, Inner Sound**

Drs. Sue and Alastair Dawson

Dept of Geography

University of Coventry.

## APPENDIX 8. SFS BIBIOGRAPHY

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