

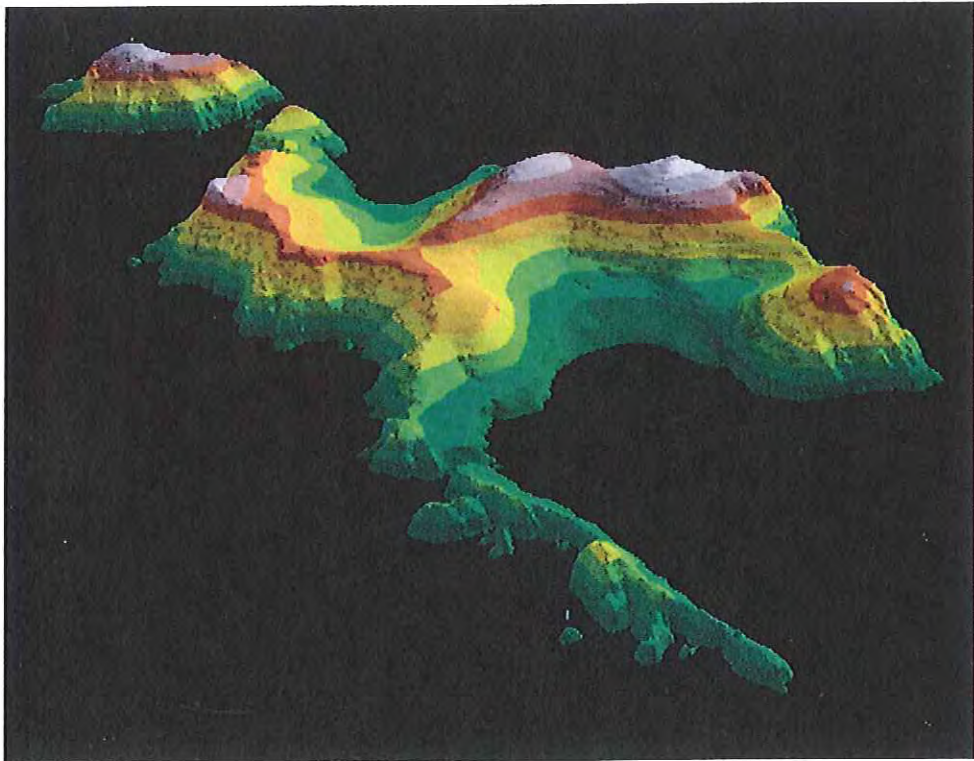


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St Kilda Archaeologist's Annual Report, February 2009 to January 2010



Glynn Barratt
January 2010

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Table of Contents

| | |
|--|---------|
| 1 Executive Summary | page 3 |
| 2 Introduction | page 4 |
| 3 On island | page 5 |
| 3.1 Conservation work | |
| Work Parties | page 5 |
| Cleit turf roof repairs | 5 |
| Clearance of drains and open watercourses | 5 |
| Drystone dyke repairs | 6 |
| Lime mortar pointing | 8 |
| 3.2 Annual monitoring programme | |
| Cleit Preservation Programme | page 8 |
| Proposals for improving monitoring systems | 9 |
| Coastal erosion | 9 |
| Proposals for improving monitoring systems | 15 |
| Other monitoring | 15 |
| SMC watching briefs | 15 |
| 3.3 Archaeological fieldwork and survey | page 16 |
| Manse | 16 |
| RCAHMS / Trust survey | 16 |
| Enclosures | 17 |
| Clash na Bearnaich | 19 |
| 3.4 Visitors | page 21 |
| 4 Off island | page 22 |
| 4.1 Desk-based initiatives | |
| 4.2 Reporting | |
| 5 Acknowledgements | page 22 |
| 6 Additional details for SKA work during 2010 | page 23 |

1 Executive Summary

This report summarises the work undertaken by the National Trust for Scotland's St Kilda Archaeologist (SKA), Glynn Barratt, during the period of June 2009 to the end of January 2010, as well as the contracted archaeological work for the hiatus between SKA appointments from February to May 2009. This latter work was covered by Samantha Dennis, George Geddes and Jill Harden.

Conservation on the island was undertaken by a mixture of skilled and unskilled volunteers forming three work parties. The programme of work was affected by a water shortage during the early summer which made turf roofing impractical from late May onwards. Even in these circumstances, a great deal of the planned work was undertaken, including several major drystone dyke repairs to the Head Dyke.

Archaeological fieldwork and survey on the island included 4 weeks of fieldwork by the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) assisted by Jill Harden during the first 2 weeks. This completed the accurate plotting, description and photography of known and new sites and buildings across the main island of Hirta and on Dun.

A group of 313 cleits has been regularly monitored since 2001 to inform a conservation programme and our understanding of cleit stability and construction. Around 60% of the cleits were visited and photographed, to record where change had occurred. Major collapses were noted in five cleits while minor collapses (sometimes of only one or two stones) and/or turf erosion was noted in around 5%.

A coastal erosion monitoring exercise has been undertaken in Village Bay since 1996. Only small areas of erosion were noted this year and it is once again suggested that the survey method be adapted to focus on impact to known sites (such as the sea dyke, store and eroding archaeological deposits), rather than the entire eroding till cliff.

More of the numerous enclosures of the Village Bay were recorded photographically, along with the location of artefacts within the dykes. This task produced digital images for over 2km of drystone dykes, enabling accurate monitoring and repair in the future. Nevertheless, there are still other enclosures to be recorded in this way.

Two watching briefs were undertaken during Scheduled Ancient Monument Consent works. Amey removed two redundant power cables between the MoD base and the radar installations at the top of the hill. The Trust stripped out the interior of the manse in preparation for its refurbishment. In addition salvagers returned to cut up and remove the wrecked trawler 'Spinningdale' which had broken up and moved from its original location resulting in a hazard to these internationally renowned waters. This work was also recorded by the Archaeologist.

The SKA also undertook a review of some of the high slopes of Clash na Bearnach, identifying areas of potential quarrying and stone tool working.

Off-island a report was produced on the manse work, as well as a detailed Conservation Statement for the jetty. Considerable work was done amalgamating the various structures databases to create an integrated SMR for Hirta, and creating a pilot cleit GIS, in advance of its transformation into a Trust / RCAHMS GIS-based data resource. Sorting digital media created in 2009 and producing papers on the summer's surveys formed the core focus of the work undertaken over the winter.

2 Introduction

This report describes the work undertaken by the National Trust for Scotland's St Kilda Archaeologist and contracted archaeologists between February 2009 and January 2010. The report covers work undertaken both on and off island. The archaeological resource of St Kilda has had a full-time or seasonally dedicated staff member since 1996 and a report has been produced annually. The present writer took over the post from George Geddes in June 2009, after a hiatus of 4 months. During this period other professional archaeologists were engaged for work specific to St Kilda. The 2009 SKA resigned at the end of January 2010.

The post of St Kilda Archaeologist is recognised in the current management agreement between the Trust and Historic Scotland (HS) as 'pivotal to the management of the prehistoric and historic structures of St Kilda'. The SKA is involved in a number of tasks listed therein, including monitoring, guidance, conservation work, fieldwork and associated administrative tasks. The position is managed from Inverness by Susan Bain, the Trust's Western Isles Manager, with archaeological advice and guidance from members of the Trust's Archaeology Team. It is funded by the Trust and Historic Scotland.

The work of the SKA for the 2009 season can most easily be understood as a combination of:

- Conservation work
- Condition monitoring
- Archaeological fieldwork or survey
- Research and report writing
- Additional tasks



One of the larger cruise ships to visit St Kilda in May 2009 – interaction with visitors is one of the additional tasks of the St Kilda Archaeologist

3 ON-ISLAND WORK

3.1 Conservation work

3.1.1 Work Parties

The SKA provides guidance and support for the Conservation Volunteer Work Parties who are led by experienced leaders. In 2009, there were three Work Parties, each of two weeks duration between mid-May and the end of June, led by Hugh Barton, David Guy and David Ackroyd. They took photographs before, during and after works and 'managed' the time of the groups, which were made of individuals with varying levels of experience but included at least one experienced tradesman. The works listed below were those most closely supervised by the SKA. Other interventions, including painting, slating and joinery, are covered by the 'Works Completed' report.

Cleit turf roof repairs

In 2009 repairs were carried out on cleits 11, 98, 99, 108 and 111 in May. However, the near-drought conditions between mid-May and early June meant that the attempt to undertake further cleit roof repairs, postponed from 2008, was cancelled. Work on cleit 14 was completed in the middle of June but dry weather necessitated a programme of watering. Cleit roofs 3, 40, 44, 47, 52, 53 and 54 will be repaired in 2010.

Since the 1950s repairs to cleit roofs has been limited to the seasonal efforts of Work Parties between May and August. Recent dry summers, perhaps relating to the onset of climate change, have accentuated problems of turf failure after the work. In 2008 no repairs were attempted. In 2009 the regime of hand watering proved necessary but by the end of May water rationing meant that this had to be restricted. As discussed previously, perhaps such repair work should be undertaken earlier in the year by a Work Party dedicated solely to turf roof repairs. This would ideally be at a time when the weather is wet and on the cusp of spring growth. It does seem on the evidence of 2008-9 that undertaking roof repairs at any other time potentially compromises the success of the repair.

Clearance of drains and open watercourses

The maintenance of the surface drainage in and around the village continued. The drainage around Houses 1-6 was checked and cleared as necessary, while the soak-aways along the backs of Houses 4-6 were emptied, cleared of silt and refilled. The open watercourses below the head dyke in the area east of the Dry Burn as far east as Blackhouse Z, as well as the course that runs southwards from Tobar Childa as far as the tarmac road, were re-cut.



Clearing out the soak-away along the rear of House 6 and the completed task

Clearing the open drains and watercourses within the head dyke is an annual task, although not all are done every year; perhaps they should be. When there are torrential downpours none of the watercourses are able to cope with the flow, and presumably have never been able to do so. But it may be that the narrowness of the cut currently made to clear the vegetation is too tight to make more than a few months difference; perhaps it could be wider. The blockage or collapse of the culvert from the vicinity of the 'camping field' continues to cause waterlogging of the street below after prolonged rain. The solution to this problem will be a huge task with major health and safety issues as well as considerable archaeological implications.



Clearing out the open watercourse from below the Factor's House and across the grazing

Drystone dyke repairs

The long standing programme of dry stone wall repairs within Village Bay was continued in 2009.

A section of revetment wall between cleit 28 / house 2 and the south end wall of cleit 17, had both collapsed over the street and these had to be repaired on health and safety grounds – further collapses could occur at any time, posing a serious threat to visitors and staff walking along the main village thoroughfare. The repair to cleit 17 was successfully completed using the available record photography. There was no available complete 'before' record photography for the revetment, however part of the wall was visible in the record photography for cleit 28 (side D) which was used as the reference. A good match was achieved, with emphasis placed on achieving a stable and secure repair, in response to its sensitive position.



Repairing the revetment wall by the streets between House 2 and cleit 28

Substantial repairs were completed to the Head Dyke, one in section A (east), another between cleits 4 and 5 and the largest by the Mackenzie Slabs. These were successful repairs with a good match in positioned stones, in essence retaining the character of dyke with an almost seamless repair.

The most substantial length of collapse, some 4m long, was that adjacent to the MacKenzie Slabs and comprised a considerable number of very substantial boulders. Record photography showed that the large boulders were used as through-stones, so that only their smaller end profiles were visible, making identification difficult. The size of the stones also put in question whether the repair could be accomplished by the group in the available time and without lifting equipment. However there was an enthusiasm to attempt it and so work commenced under the direction of WP member John Eden Parkin and supervision of SKA.

A digital composite image was made from the separate images of the dyke sides prior to its collapse. Copies of this image were supplied to the team and used to identify as much as was possible of the original fabric. The weather conditions in this period were not ideal and it is a tribute to the enthusiasm and dedication of the team that the repair was completed.



Repairing the Head Dyke behind the MacKenzie Slabs, before and after

The western-most Head Dyke repair was filmed as an example of good practice for any future work parties. The 2m length of the Head Dyke required considerable effort by the volunteers both to identify the stones and to move and lift stones of a considerable size. The appreciable slope on the downside of this dyke necessitated the use of scaffolding. SKA worked with the team on this repair assisting in the identification of stones, facilitated as per NTS practice by reference to record photography, and lifting them into place. Care was taken to ensure that the lichen faces of stones faced outwards.



The repair work to the Head Dyke near cleits 4 and 5, during and after

A variety of other minor repairs were completed, repairing small falls at enclosure dykes and the odd stone that had become displaced from various cleits.

Lime mortar pointing

The rear elevation of House 5 was re-pointed by a team under the supervision of WP member David Hewer, who had expertise in lime mortar work. Removal of loose mortar across the whole elevation revealed various large voids in the wall interior. In retrospect the procedure adopted was too thorough and over-invasive. Subsequent monitoring of the lime mortar showed it to be slow in 'going off'. Unfortunately the front far-left elevation of House 1 was similarly pointed.



House 1 before and after pointing work

A separate desk-based assessment of this pointing will be undertaken to inform the decision making-process for future work. Perhaps the way forward is to ensure that lime-pointing is led by a full-time professional mason with contractual obligations to adhere to the agreed methodology.

3.2 Annual monitoring programme

3.2.1 Cleit Preservation Project

The Cleit Preservation Project (CPP) has been undertaken since 2001 as an attempt to monitor the condition of 313 representative cleits across Hirta, and for 300 of them, feed into a programme of repair. The monitoring fieldwork is still based on paper-based records – maps, cleit photographs and paper notation – being carried into the field, usually in some form of waterproof document folder.

However, the mapping work of RCAHMS (2007-2009) has provided the Trust with accurate grid references for every cleit, enabling more rapid location of each cleit using a hand-held Garmin eTrex Vista GPS. For those cleits beyond the Village Bay RCAHMS published plots, the identity and coordinates of target cleits were entered into the Garmin as 'waypoints' in advance of a planned field trip. Using the GPS took the observer to within c10m of the target, depending on GPS resolution (usually between 3 and 10m); this varied with atmospheric conditions and the prevailing satellite constellation. Once in the proximity of the target the hard-copy photos and field plot were used to confirm the actual cleit and monitoring could proceed. This year 187 cleits were visited and recorded as necessary.

Comparing the cleits in 2009 as they were in previous years indicates that overall there has been very little change in the total resource over this period. The following will require repair in 2010:

63 sides A and B; 70 sides A and B; 346 side B; 621 sides B and C; 805 side A; 832 side A.

Roof turf where present is universally the subject of erosion particularly in the vicinity of the village infield and outfield. Several cleits within the Head Dyke with wooden entrance lintels, such as cleits 12 and 15, may be an issue for visitor safety and should be assessed.

Proposals for improving cleit and other drystone structure monitoring work

As in 2008, the advantage of using a digitally-based system was tested by the SKA using his own Panasonic CF-18 Toughbook tablet computer. In addition an Xda Exec, (similar to an HP Ipaq) was also tested as a less expensive PDA (Personal Digital Assistant) palm computer alternative. This year the use of such systems was extended, for while on island the SKA used his initiative and spent a considerable amount of time establishing his own GIS for cleit monitoring. Aspects will prove useful in the future, although it is recognised that much of this work will have duplicated that of the Commission.

Based on the work undertaken last year, the 2008 SKA suggested that the purchase and use of a portable rugged computer for field data collection could prove a much more efficient system than the traditional paper-based one used currently for monitoring work. Such equipment could prove even more beneficial once the GIS data (map tiles and databases) has been transferred from the Commission to the Trust in the spring of 2010. However, there are downsides to such equipment – the lack of day-long battery life, the reflective glare in bright sunlight, and the difficulty of use for volunteers. Perhaps both approaches should be used, dependent on weather and volunteer capabilities.

There are other ways if improving the efficiency of this monitoring work. For example, the Ricoh 500SE GPS camera combines a GPS receiver with a ruggedized 8MP digital camera designed to allow photographs to be geographically coded and associated with a series of attributes for transfer into GIS software. Such a system may be applicable. One attraction of such a robust and simple system is that it could form the basis of a methodology which could be readily assimilated by volunteer groups. A two person volunteer team could in this way make an immediate contribution to the monitoring programme. The 500SE is one of a range of GPS based hand held units some of which offer positional resolutions to sub metre levels. The Topcon GSM 2 for example is a hand held DGPS unit which allows real time mapping to a resolution of 20cm with base station or satellite correction and carries an onboard digital camera which again facilitates the geo-coding of images.

3.2.2 Coastal erosion

Monitoring of coastal erosion around Village Bay was undertaken by the SKA during September 2009, using the methodology established in 1996. Areas of coastline are labelled A to H running between NF 10430 98978 (A) in the east and NF 10084 99094 (H) in the west. A 'full' set of monitoring photographs were produced by the SKA in 1996, 1999, 2002, 2006 and 2008, supplemented by images where change had occurred in 1997, 2001, 2003, 2004 and 2007.

This year the still photography was supplemented with high-resolution digital video footage using a Canon HDD HG10 camcorder. The record therefore includes a full visual record of the coastline between the two terminals. The 2009 images were compared to those of 2008 off-island. Both the 2009 still images and the 2009 video were included in this comparison and where necessary still frames were extracted as single images to facilitate comparison. However, this methodology was not completely satisfactory. It was discovered that exact comparanda shots had not been created – the result of not having the previous monitoring images visible when the new photos and video footage were being taken. Fortunately 2009 was not a year when a 'full' set of monitoring shots were required but this issue should be borne in mind when setting out to undertake this work in future years.

The 'Spinningdale'

One very obvious change in Village Bay is the removal of the wreck of the trawler 'Spinningdale'. During 2008 the wreck was listing to starboard against the cliffs in the small inlet east of area 'A', centred at NF 10501 98997. Over the 2008/9 winter the wreck moved westwards around the coast, grounding on the west side of the inlet at NF 10408 98998 to lie on its starboard side above the low tide line. The presence of the 'Spinningdale' on the foreshore may have served as something of a breakwater to the coastline to its immediate west.

The 2009 salvage work itself had some limited impact on the foreshore between the wreck site and the crane lifting-station in the vicinity of the Manse. The programme of cutting the ship into small pieces and man-handling or winching them along the shore had some impact, creating scratch marks and rust staining on boulders. This damage was however minimal and will no doubt be removed by natural wave action and weathering. However the several cable anchor points drilled and glued into boulders are likely to survive into the future.

Section A

Small stones have been dislodged from the coastal face east of the Store, as recorded in SKA08-25-066 / SKA09-A-015.



SKA08-25-066



SKA09_A_015

Area B

Although in the past this area has been the focus of coastal erosion, the winter of 2008/9 has proved to be a stable period.

Area C

This short length of coastline shows a number of small-scale erosion changes with quite restricted areas of collapse recorded in SKA08-25-036 / SKA09-C-003, SKA08-25-088 / SKA09-C-004, SKA08-25-037 / SKA09-C-006, SKA08-25-090 / SKA09-C-007 and SKA08-25-038 / SKA09-C-008.



SKA08-25-036



SKA09_C_003



SKA08-25-037



SKA09_C_006



SKA08-25-090



SKA09_C_007



SKA08-25-038



SKA09_C_008

Area D

This short area encompasses the approach to the jetty ramp and is exposed to storms from the east, where the jetty itself creates a high energy environment. There is a single small area of change shown in SKA08-25-103 / SKA09-D-002.

Area E

No change was noted in this area. However this section is surmounted by the coastal dyke which is in some peril due to natural erosion of the beach cliff. Some form of structured, measured monitoring would be useful in this area, to provide quantitative as well as the more qualitative photographic data to inform future mitigation strategies.

Area F

This short section shows a small change with a tiny area of collapsed turf shown in SKA08-25-046 / SKA09-F-001. The exit culvert for the *Abhainn Illishgill* burn, passing through the coastal dyke is in need of consolidation. It remains unstable, with its basal courses undermining although the 2009 monitor photograph shows no change from 2008.

Area G

No change was noted in this area.

Area H

This long monitoring section shows a small area of turf slippage shown in SKA08-25-150 / SKA09-H-001.



SKA08-25-150



SKA09_H_001

Proposals for improving coastal erosion monitoring work

The dynamic of coastal erosion around Village Bay is generally slow but very dramatic change can occur in a single event. Coastal erosion can be monitored, though it presumably cannot be arrested without a major civil-engineering intervention. This has major implications for the coastal dyke and the Store. It may be that preservation by a comprehensive programme of recording will prove to be the only appropriate strategy. This should be addressed as soon as possible.

As noted by the 2008 SKA the current methodology, while providing valuable visualisation of change, is highly subjective. Perhaps it is an appropriate time to re-consider what is required from the monitoring programme and how that information might be applied to either stabilise areas of coastline, if possible, or to undertake a programme of archaeological conservation by record.

A first step in such a course would be to establish a series of permanent fixed survey marks at strategic points in the monitor zone, to facilitate repeat measurement to selected or marked monitor targets. Such stations might also enable record photography to be taken from a common point and direction. The use of digital video recording, as experimented with in 2009, does produce a comprehensive and objective visual record of the coastline which can be interrogated post fieldwork. However, whether this approach could usefully be incorporated into future monitoring is probably a matter for others – there is only any point in taking video if it will actually be used in future years.

3.2.3 Other monitoring

SMC watching briefs

Amey worked on the removal of two redundant power cables running between the MoD base and the two hilltop radar installations, a length of some 2km. SMC was in place with a minimum disturbance methodology. The cables had been laid directly onto the ground surface for most of their length and only buried where they crossed beneath the road. Turf had grown over the cables burying them to a depth of c10cm.



Cutting the visible cable within the Head Dyke, and revealing the cable up towards the hill-top radars

Where possible the cables were cut into short 5m lengths and pulled through from the exposed end, thus not breaking the surface. Where this was not possible the turf or peat was cut as a single line along the cable route, the cable lifted out and the turf tamped back along the cut, with no significant surface disruption. Where the cable crossed the road some limited excavation was necessary, though this was in disturbed ground with no archaeological implications.

Amey were advised that they would require SMC to allow the re-exposure of a short length of fuel-supply pipe on the seaward side of the diesel storage tanks, which has become turfed over. They were also advised that SMC would be required for replacing the metal grids across the tarmac road which protect the cable crossings.

The trawler 'Spinningdale' was wrecked on the N side of Village Bay in January 2007. It was broken up by a Spanish salvage crew during the summer and removed. The boat was cut up into small pieces in situ. It was then winched or man-handled along the shore, and lifted by small crane onto the low cliff top in front of the Manse. The material was then moved and stacked near to the beach ramp for loading onto the landing craft for removal. The SKA maintained a watching brief and photographic monitoring regime through the salvage programme.



The 'Spinningdale' before and after its salvage

3.3 Archaeological fieldwork and survey

3.3.1 Manse

Following detailed research, the production of a conservation statement, various consultations, and the development of a heritage impact assessment for refurbishment of the Manse, SMC for phase 1 of the project was granted by HS. Works began over the winter, with the strip-out being photographed and archaeologically monitored by Susan Bain and the necessary report on the works being produced by Jill Harden. Minor alterations were made to the proposals for phase 2 of the project and SMC granted thereafter.

Due to logistical issues of funding, delivery of goods and provision of accommodation for the contractors, the works are not now expected to commence until the summer of 2010.

3.3.2 RCAHMS/Trust survey

Two, two-week trips were made to St Kilda by 4 staff from the Commission, in May and September, to complete the fieldwork on Hirta and Dun, and attempt a landing on Boreray. They were accompanied on the first visit by Jill Harden from the Trust, who undertook the associated structure condition monitoring, as well as a member of Commission staff who recorded details as appropriate of the interior of the MoD buildings. The second visit was largely a 'mopping-up' exercise and for part of the time only 2 members of Commission staff were present. The Hirta fieldwork was completed successfully. The data is now being finalised for use through Canmore and PASTMAP, with a commitment to enabling direct Trust access to the Commission system (including the ability to add data as necessary), as well as the production of a book on the historic environment of St Kilda.

Mapping work on Dun was deemed unsafe in May, due to the density of nesting birds. It was therefore undertaken in early September and the data added to the overall project. There was only one opportunity in May for a landing on Boreray but the weather changed dramatically and only a few hours work proved possible. It is hoped that a return trip in 2010 will enable mapping of this island.

3.3.3 Enclosures

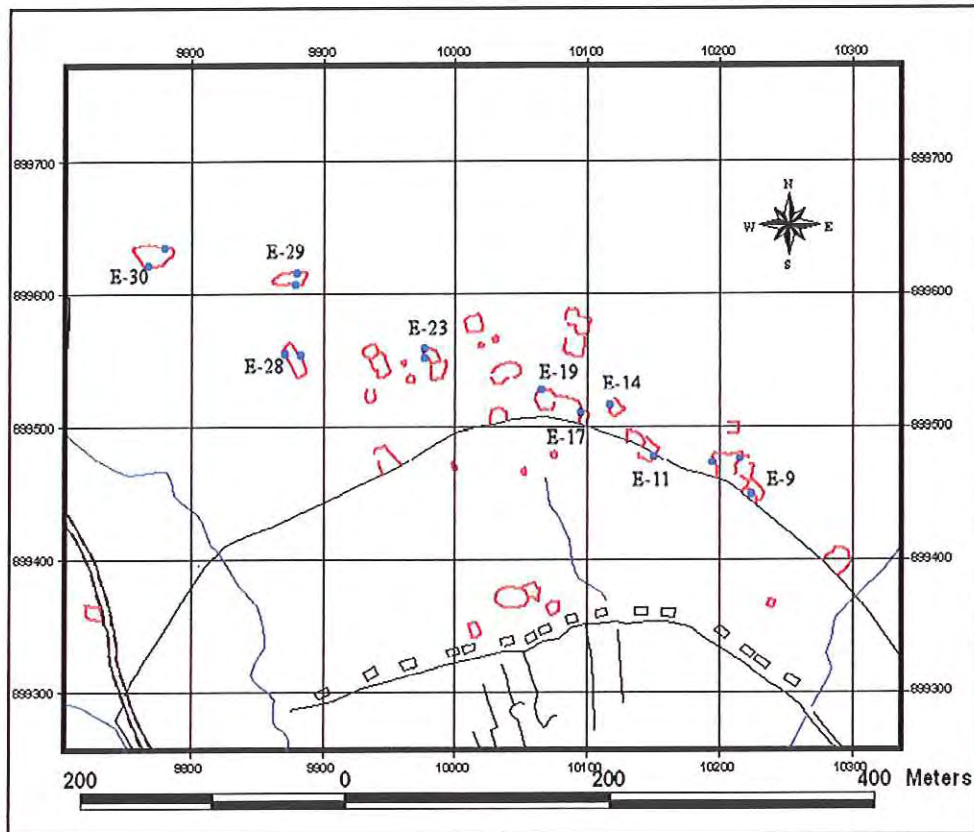
Fieldwork in 2009 included the photographic recording and condition survey of enclosures E-8 to E-30, situated beyond the Head Dyke. The external face only of the more ruinous enclosure on the east approach to Ruaival was also recorded. In total 2,525 metres of standing dyke were photographed and recorded, being all of the enclosures adjacent to and beyond the village section of the Head Dyke. This leaves 31 out of 95 enclosures and planticrues yet to be fully recorded by photography and description. Others mapped during the Commission survey also require detailed recording.

As with previous dyke monitoring photography, the faces of each dyke were recorded at 2m intervals using two standard 2m ranging rods as photographic guide and scale. Photography was commenced where possible in the south-west corner progressing in a clock-wise circuit. Start and direction are recorded for each enclosure. Also recorded are the positions of extant entrances and possible blocked entrances, as well as the location and description of any finds made in the course of the condition recording.



Following the procedures already established images are archived by enclosure, with separate folders for exterior and interior circuits. Each individual image is annotated with an identifying sequence comprised of Enclosure number, Exterior or Interior circuit and distance from origin, designated as '0'. Each start point carries the additional information of start point NGR and direction of recording sequence, clockwise or anti-clockwise circuit.

It should be noted that there are areas of substantial dyke collapse at E9, E19, E23, E28, E29, and E30. In addition there are 8 areas of lesser collapse occurring in E9a, E9d, E11, E14, E17, E28 and E29. The areas of collapse appear to have been triggered at or near the dyke tops – the most likely candidate for initiating the falls being sheep accessing and leaving the enclosures. Most of the collapses are within the accepted maintenance zone of intervention. These repairs will be included in the 2010 work programme.



Further information on the recording work related to these enclosures is provided in a separate report, to be circulated.

3.3.4 Clash na Bearnaich

Cleit monitoring in the area of Clash na Bearnaich provided the opportunity to carry out a very superficial reconnaissance of the area for any evidence of stone working, as noted by Edmonds and Fleming in the 1990s.



At NF 09612 99050 adjacent to and upslope of the highest cleit on the hillside, a small area of scree eroding out of the slope was observed and within it the edge of what seems to be a worked tool, of the type identified by Clarke as a hoe blade (see photos on previous page). The artefact is 13cm in length, 10cm wide and up to 5cm thick. It is faceted and apparently shaped to form a broad rounded blade, broken at its narrowest end.

Approximately 10m upslope, and west at NF 09609 99041, a second scree exposure was observed, lying below a small vertical face of fine basalt. The outcrop, up to 2m high is of a good quality stone and appears to fracture naturally into usable sized stone pieces with fracture planes creating an instant edge.



Examination of the scree below the exposure revealed numerous flakes which could be the residue of stone working. Four of these drew the eye as possible examples of part made tools, each of them fitted the hand comfortably. Three were flat scraper like artefacts with convex, sub-crescentic edges ranged in size from 6 to 8cm in length and with an average body thickness of 1.8cm. The fourth was a more linear edge flake, 14.5cm long by 8cm wide and again 1.8cm thick.



Higher still at NF 09461 99023 lay what appears to be a substantial quarry floor lying roughly north to south transversely across the slope over an area c16m by 12.0m. Along its uphill side a steep, partially exposed quarry face is cut to a height of 4m into the hillside while to the east a downhill terrace slope falls 2m below the quarry floor. The floor itself is flat with vegetation richer than the surrounding hill-slope, including sphagnum and iris, suggesting water retention.



This feature and others in the same area have certainly the superficial appearance of early stone quarry working, as suggested by Edmonds and Fleming. Personally the SKA has seen visually similar early quarry sites (Neolithic to early Bronze Age) in North Wales and South Shropshire. The freshly exposed, fine-grained dolerite would, from personal experience, be far more easily worked than older exposed, oxidised and weathered stone, such as that which lies in the extensive scree slopes.

However, it is also possible and likely that some of the surface hollows in this area are the result of more recent turf cutting. Similarly the possibility that geomorphological landforms may be created on such steep slopes by the effects of solifluction movements should be taken into consideration. Examination by a geomorphologist and possibly a programme of 3-D topographic survey, as suggested by Fleming may answer some of the questions that this area poses, in order to more fully understand this complex but potentially extremely important area of landscape. If Historic Scotland's proposed airborne LiDAR survey is carried out then 3-D modelling of this high resolution data as a DEM (Digital Elevation Model) would offer great potential for a quantitative analysis of this area.

3.4 Visitors

A significant part of the work on St Kilda is concerned with providing a level of support for visitors to the island. In 2009 this was a considerable part of both the Ranger's and Archaeologist's workload. Common and repeated tasks were:

- Giving guided tours for cruise ship visitors and volunteers
- Answering specific queries
- Meeting visitors at the pier or helipad
- Manning the St Kilda Club shop
- Answering media queries

There were at least 15 visits by cruise ships requiring guided walks around the village, with numbers varying from around 40 to over 400. On average each guided walk had a duration of between 1 and 2 hours depending on the enthusiasm of the visitors. The SKA met some of the day trip boats (the Orca and the Enchanted Isle) providing a brief welcome to the island when the Ranger was unavailable. When volunteers were not on island the manning of the St Kilda Club shop was a shared task with the Ranger. Particular visitors to the island included the local MSP, the MoD archaeologist and HS staff for the annual review of the Management Agreement.

4 OFF-ISLAND WORK

4.1 Desk-based initiatives

With a hiatus between SKAs during the spring of 2009, a variety of specialists were contracted by the Trust to ensure continuation of work on the archaeology of St Kilda. A Conservation Statement for the Jetty was authored and printed-off. The report on the strip-out works at the Manse was produced, providing a detailed internal record of the non-rendered masonry walls, blocked and altered openings, as well as MoD interventions for piped utilities. The details were used to inform the final plans for the refurbishment of the manse and identify any necessary additional archaeological input to the on-site work.

A new unified database had been designed by the 2008 SKA over the winter of 2008/9. However, the SMR content had not been transferred from the separate Microsoft Access databases for cleits, houses and blackhouses, enclosures and planticrues, etc. This complex work was also contracted out, resulting in a fully integrated SMR, except for the addition of the photographic records. These are currently stored in Xcel format but over the 15-20 years of filing there have been variations in the way in which the media has been recorded. This issue is being addressed to enable a fully functional database linked to maps, aerial photos, etc.

4.2 Reporting

On return from St Kilda in late September, the 2009 SKA concentrated on the filing of numerous digital photos and vast lengths of video as well as checking the monitoring photos against those taken in the summer. This Annual Report (with other paperwork not included here) and a report on the enclosures recorded beyond the Head Dyke are the main products of the year.

5 Acknowledgements

The work of the SKA and the backfill during any hiatus, would not be possible without the financial support of Historic Scotland. Staff on island – Ian Macnee the Trust Ranger, and those with QinetiQ, Amey and ESS – are to be thanked for their company. Volunteers did the vast majority of the conservation work and their enthusiasm and hard work was much appreciated.

6 Work planned for the 2010 SKA and thereafter

The work plan for the SKA is founded on the HS/NTS Management Agreement for St Kilda. In addition to the archaeological monitoring and management that are required on-island the following outlines areas of work that probably should be addressed by the SKA with the support of the Trust archaeologists. The list relates to work that could not be completed in 2009 and that which would improve efficiency of the SKA in coming years. It is obviously not all-inclusive.

Desk-based work: mainly off-island

- Confirming the accuracy of the catalogues of digital photos used for the monitoring work each year and the filing of the photos; particularly urgent is that relating to the corrections to the cleit numbers following the Commission's mapping work in 2007 and 2008
- Establishing a coherent archive of the detailed records for coastal erosion, with particular reference to the area immediately around the Store and the length of the coastal dyke
- Producing final reports on certain interventions undertaken over the past decade and dealing with the artefactual archive
- Scanning non-digital media to enhance monitoring and management procedures

Fieldwork on-island

- Continued production of monitoring photography and detailed records for the enclosures and plantigrues
- Propose a new method for recording coastal erosion in the areas where upstanding structures are most at risk, with implementation in September 2010
- Continued creation of the digital records for structures on Hirta and confirming the completion of datasets for the roofless houses and blackhouses

Supervision of conservation work

In addition to the programme of conservation works outlined in the HS/NTS Management Agreement 2007-2012, the following structures on Hirta have been identified as requiring archaeologically supervised conservation:

Drystone collapses

- cleit 26 side A; cleit 27 (side to be confirmed); cleit 63 sides A to B; cleit 70 sides A to B; cleit 152 (side to be confirmed); cleit 346 side B; cleit 621 sides B to C; cleit 805 side A; cleit 832 side A
- enclosures as follows – 1-3m lengths at E9, E19, E23, E28; in addition there are 8 areas of lesser collapse at E9a, E9d, E11, E14, E17, E28, as well as lengths in An Lag (details to be confirmed)
- the drystone revetment and culvert for the Dry Burn through the coastal dyke

Cleit roofs

- some of the roofs were not repaired in 2009 due to the lack of water. They are cleits 3, 40, 44, 47, 52, 53 and 54.

Other work

- drainage down the east gable of the Factor's House
- unblocking the watercourse that runs from behind Blackhouse Z southwards
- re-hanging the graveyard gate